# PLANNING & ZONING BOARD
# STAFF REPORT

DEVELOPMENT SERVICES DEPARTMENT

100 NW 1ST AVENUE, DELRAY BEACH, FLORIDA 33444

PLANNING & ZONING DIVISION: (561) 243-7040 • BUILDING DIVISION: (561) 243-7200

| Always Delray Comprehensive Plan: Public Facilities Element | | |
|---|---|---|
| **Meeting:** December 17, 2018 | **File No.:** N/A | **Application Type:** Comprehensive Plan Amendment |
| **Request:** Provide a recommendation to the City Commission regarding an update of the Public Facilities Element of the City's Comprehensive Plan. | | |
| **Recommendation:** Recommend approval to the City Commission to update the Public Facilities Element of the City's Comprehensive Plan for transmittal to the State of Florida, Department of Economic Opportunity. | | |

**Review and Analysis:**

The update to the Delray Beach Comprehensive Plan, which has been branded "Always Delray," began in 2016 with the creation of a Steering Committee, appointed by the City Commission. Committee members have met on numerous occasions to establish a plan for the City's future that reflects current and projected trends, identifies key issues presently impacting the community, and that maintains, updates, or eliminates current policies as a result of this in-depth review. Five new elements are proposed for the plan, and several existing elements have been renamed to better capture their role in the plan. Community workshops were held to discuss and receive public input on each element. This input was utilized to formulate the draft elements, along with the input of Subject Matter Experts on each topic, which consisted of City Staff, consultants, and community members.

The **Public Facilities Element** incorporates the City's Goals, Objectives, and Policies related to providing potable water, wastewater management, stormwater management and flood prevention, solid waste services, maintenance of the transportation system, and public offices. The proposed element provides updated environmental policies, including policies to increase reclaimed water usage to meet the Leah B. Schaad Ocean Outfall Act, and expand policies previously focused on roadways to include bicycle and pedestrian infrastructure. New policies reflect the updated Stormwater Master Plan, the recently completed sea wall vulnerability study, and new sustainability goals. Current policies such as phasing out the use of septic tanks and requiring new development to be responsible for extending water service are maintained.

The **Public Facilities Element** was reviewed by the Steering Committee on October 18, 2017.

Following recommendation by the Planning and Zoning Board, the Public Facilities Element will be scheduled for a Public Hearing before the City Commission for review and comment; no formal action will take place. Once all elements have been reviewed by the City Commission, final drafts will be prepared for a Transmittal Hearing of the full Always Delray Plan, which is tentatively scheduled for March 2019. The Transmittal Hearing, which is also the First Reading of the Ordinance for the adoption of the Always Delray Plan, is required prior to submittal to the Department of Economic Opportunity (DEO). The DEO review may take up to 180 days to provide comments to Staff. If comments are received, Staff will make adjustments as necessary; if no comments are provided, then the Second Hearing will be scheduled for final adoption by the City Commission.

| Project Planner: | Board Review Dates: | Attachments: |
|---|---|---|
| Anthea Gianniotes, Principal Planner; gianniotesa@mydelraybeach.com, 561.243.7325 | City Commission, January 15, 2018 (Public Hearing for review and comment; no formal action to be taken until March 2019.) | Public Facilities Element<br>• Proposed Draft Element |

# PUBLIC FACILITIES & SERVICES


## DATA, INVENTORY, AND ANALYSIS

*TABLE OF CONTENTS*



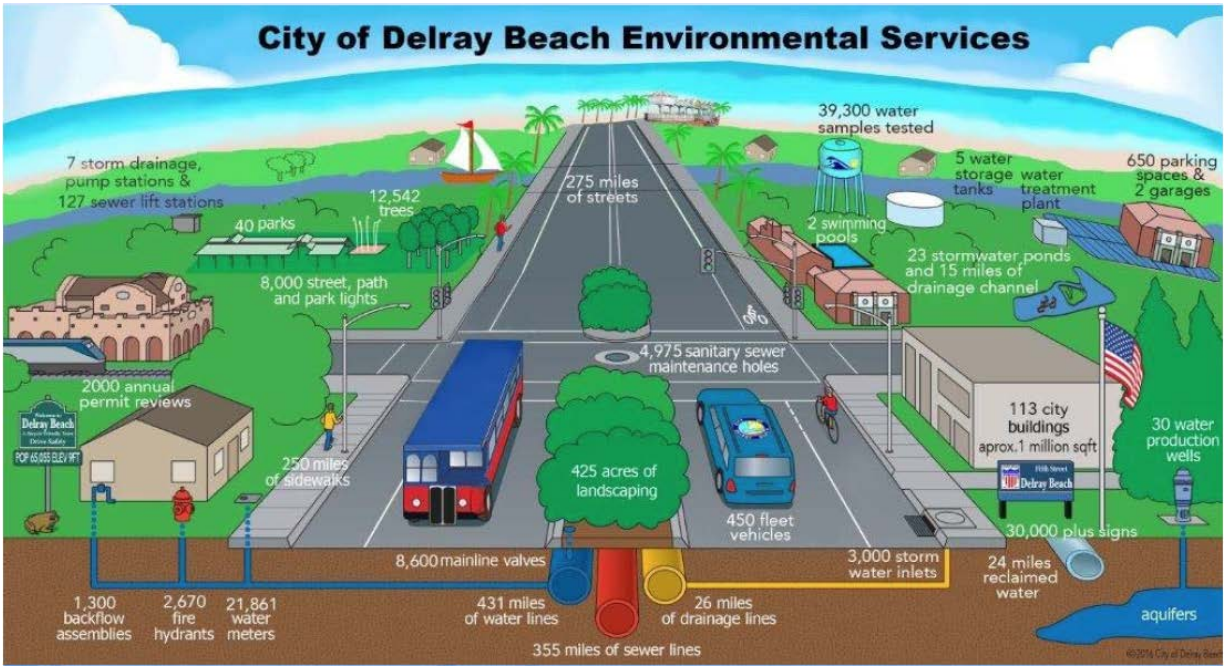
**LIST OF MAPS**

## INTRODUCTION

The purpose and objective of the Public Facilities Element is to provide cost effective total life cycle management of the City of Delray Beach's public infrastructure and key essential services to enhance sustainability and the health, safety and welfare of residents, businesses and visitors.

The City maintains extensive public infrastructure and facilities. Storm drainage systems, water treatment and transmission systems, wastewater (sanitary sewer) collection and pumping systems, City-owned buildings, landscaping, streets, trees, sidewalks, signs, parks, public parking, and street lamps are all maintained by the City. This infrastructure provides property owners, residents and visitors to the City with a high quality of life

The Public Facilities Element summarizes items of significance in the City's sanitary sewer, reclaimed water, potable water, solid waste, stormwater management system, transportation system, and public facilities. The following summaries have been prepared to facilitate review of the requirements of Florida Statutes (F.S.) 163.3177 and guide the City of Delray Beach in the creation of Goals, Objectives, and Policies to govern the provision of public facilities and services. The text of the Element is a summary of the complete inventory, analysis, and recommendations which are contained in the technical source documents. As a summary, only significant items are highlighted. The source documents should be referred to for more information.



## INVENTORY & ANALYSIS

### General Government Facilities

The City has 113 public facilities. An inventory of the major buildings and facilities owned by the City is provided in Table PFE-1:

**Table PFE-1**
**General Government Facilities**

| Location Name | Street Address | Occupancy Description | Year Built |
|---|---|---|---|
| **GENERAL GOVERNMENT BUILDINGS/FACILITIES** | | | |
| City Hall Complex | 100 NW 1st Avenue | City Hall Building | 1961 |
| City Attorney Building | 200 NW 1st Avenue | City Attorney Building | 1959 |
| Employee Health & Wellness Center | 525 NE 3rd Avenue | Employee Health & Wellness Center | |
| Swinton Operations Center | 434 S Swinton Avenue | Public Works: Facilities, Parking, Fleet Maintenance, Stormwater, and Engineering; Utilities, including the water treatment plant and elevated storage tank. | 1950s; added onto in 1980s; New Construction in 2007 |
| Federspiel Garage Building | 22 SE 1st Avenue | Parking Garage | 2007 |
| Old School Square Garage Building | 95 NE 1st Street | Parking Garage | 2007 |
| Public Library | 100 Atlantic Avenue | Public Library | 2005 |
| **PUBLIC SAFETY FACILITIES** | | | |
| Fire Rescue Headquarters Building: Fire Station HQ | 501 W Atlantic Avenue | Fire Rescue Headquarters Building: Fire Station HQ | 1993 |
| Fire Station #2 Building | 35 Andrews Avenue | Fire Station #2 Building | 1991 |
| Fire Station #3 Building | 651 Linton Boulevard | Fire Station #3 Building | 1971 |
| Fire Station #4 Building | 4321 Lake Ida Road | Fire Station #4 Building | 2008 |
| Fire Station #5 Building | 4000 Old Germantown Road | Fire Station #5 Building | 1993 |
| K-9 Police Obstacle Course | 1025 Mission Hill Road | K-9 Police Obstacle Course | |
| Ocean Rescue HQ Building: Anchor Park | 340 South Ocean Boulevard | Ocean Rescue Headquarters and Equipment Storage | 1950 |
| Police Headquarters Building | 300 W Atlantic Avenue | Police Headquarters Building | 1987 |
| Police Substation (Lessee) | 1570 S Federal Highway | Police Substation (Lessee) | |
| Seacrest Training Center | 2350 N Seacrest Boulevard | Seacrest Training Center (Lessee) | 2002 |

| Table PFE-1<br>General Government Facilities | | | |
|---|---|---|---|
| **Location Name** | **Street Address** | **Occupancy Description** | **Year Built** |
| **HISTORIC/CIVIC BUILDINGS** | | | |
| 1926 Historic Bungalow House (Lessor) | 3 NE 1st Street | 1926 Historic Bungalow House (Lessor) | 1926 |
| 1931 Cason Cottage (Lessor) | 5 NE 1st Street | 1931 Cason Cottage (Lessor) Historic Cottage | 1931 |
| American Legion Post (Lessor) | 196 NW 8 Avenue | American Legion Post (Lessor) | 1966 |
| Boy Scouts Building/Mike Macheck Boy Scout Park | 405 Lake Ida Road | Equipment/Electrical | 1962 |
| Hunt House & Archive Bunker (Lessor) | 111 NE Swinton Avenue | Hunt House & Archive Bunker (Lessor) | 1931 |
| Mae Volen Senior Center (Lessor) | 850 N Congress | Mae Volen Senior Center | 1997 |
| Monterey House / Judge Knott Center (Lessor) | 20 N Swinton Avenue | Monterey House / Judge Knott Center (Lessor) | 1935 |
| Munnings Cottage Building | 154 NW 5 Avenue | Munnings Cottage Building (Lessor) | 1931 |
| Railroad Depot Building | 80 Depot Avenue | Railroad Depot Building | 1926 |
| Spady House Museum | 170 NW 5th Avenue | Spady House Museum | 1924 |
| **RECREATION AND OPEN SPACE FACILITIES** | | | |
| Playground | 405 Lake Ida Road | Public Playground | |
| Amphitheater | SW 5 Ave & Atlantic | Public Amphitheater | |
| Family Recreation & Fitness Center Playground | 850 N Congress | Multi-Play Structure | |
| Mike Macheck Boy Scout Park | 405 Lake Ida Road | Pavilion and Restrooms Building | 1993 |
| Teen Center/Woman's Club Building | 505 SE 5th Avenue | Teen Center/Woman's Club Building | 1949 |
| Skate Park: Teen Center/Woman's | 505 SE 5th Avenue | Skate Park: Teen Center/Woman's | |
| Old School Square Crest Theater | 51 N Swinton Avenue | Theater | 1925 |
| Old School Square Cornell Museum Building | 51 N Swinton Avenue | Museum | 1913 |
| Old School Square Pavilion/Amphitheater Building | 51 N Swinton Avenue | Pavilion/Amphitheater | 2002 |
| Old School Square Loggia | 51 N Swinton Avenue | Loggia (West) | 1925 |
| Old School Square - Gymnasium Building | 51 N Swinton Avenue | Gymnasium | 1925 |

| Table PFE-1<br>General Government Facilities | | | |
|---|---|---|---|
| **Location Name** | **Street Address** | **Occupancy Description** | **Year Built** |
| Neighborhood Resource Center | 141 SW 12th Avenue | Neighborhood Resource Center | 1967 |
| Visitor Information Center Building & Sarah Gleason Park | 2 S Ocean Avenue | Visitor Information Center Building & Sarah Gleason Park | 1979 |
| Community Center/Gym Building | 50 NW 1st Avenue | Community Center/Gym Building | 1961 |
| Administration/Parks Maintenance | 320 SW 4th Street | Administration/Garage Building: Parks Maintenance | 1982 |
| Atlantic Dunes Park | 1605 South Ocean Boulevard | Public Park Facility | |
| Barwick Park | 4321 Lake Ida Road | Public Park Facility | |
| Bexley Park | 1400 W Bexley Park Drive | Public Park Facility | 2008 |
| Catherine Strong Park | 1500 SW 6th Street | Public Park Facility | 2006 |
| Currie Commons Park | 750 SE 2nd Avenue | Public Park Facility | 1980 |
| Eagle Park Picnic Facility | 55 Coral Trace Boulevard | Public Park Facility | |
| Knowles Park | 1001 S Federal Highway | Public Park Facility/Boat Ramp | |
| Lake View Park | 1100 Lake Drive | Public Park Facility/Boat Ramp | 2006 |
| Mangrove Park | 1211 S Federal Highway | Public Park Facility/Boat Ramp | |
| Miller Park/Little Fenway | 1905 SW 4th Avenue | Public Park Facility | |
| Merritt Park | 320 SW 4th Street | Public Park Facility | 1970 |
| Orchard View Park | 4060 Old Germantown Road | Public Park Facility | |
| Pine Grove Park | 400 SW 10th Street | Public Park Facility | |
| Pompey Park | 1101 NW 2nd Street | Admin/Gymnasium Building: Pompey Park | 1978 |
| Veterans Park | 802 NE 1st Street | Public Park and Community Center | 1966 |
| Playground | 2800 Albatross Road | Public Playground | |
| Beach Pavilion (Main)/Observation Ramp | Atlantic & Ocean | Public Beach Facility | |
| DB Municipal Golf Club | 2200 Highland Avenue | Public Golf Course/Club House | 1996 |
| Lakeview Golf Course | 2000 Dover Road | Public Golf Course | 1973 |
| Delray Beach Tennis Center Complex | 201 W Atlantic Avenue | Public Tennis Center/Stadium | 1993 |
| Seacrest/Hilltopper Soccer Complex | 2505 Seacrest Boulevard | Pavilion/Restrooms/ Concession | 2008 |

| Table PFE-1<br>General Government Facilities | | | |
|---|---|---|---|
| **Location Name** | **Street Address** | **Occupancy Description** | **Year Built** |
| Delray Beach Memorial Gardens Municipal Cemetery | 700 SW 8th Avenue | Municipal Cemetery & Mausoleum | 1988 |
| Delray Beach City Marina | 159 Marina Way | Public marina | |

### Wastewater Collection & Treatment Facilities

The South Central Regional Wastewater Treatment Facility is located in Delray Beach. Delray Beach and Boynton Beach established the South Central Regional Wastewater Treatment Plant and Disposal Board in 1974 as an independent special district through an interlocal agreement to treat wastewater. The City Commissions of both cities serve as the governing board and daily operations of the facility are overseen by a plant manager, who reports to the Board. Coordination is facilitated through an "Operating Committee" comprised of the plant manager and a representative of each of the cities, typically the utilities department director. The Operating Committee engages each city with the plant manager in operation of the facility, its budget and resources. The City is responsible for the wastewater collection and transmission system within the service area (See Map PFE-XX).

The utilities service area includes the City's Planning Area plus additional areas that are provided service through contract, including the Town of Highland Beach and several single and multi-family connections in the Town of Gulf Stream. The service area encompasses approximately 18 square miles.

The wastewater collection system consists of approximately 431 miles of gravity and force mains interconnected to 129 lift stations. Fewer than 100 septic systems remain within the service area. The wastewater treatment facility was constructed in 1979, with a programmed life of 50 years (2029). With the completion of the Palm Beach County Solid Waste Authority biosolids pelletization facility, which dries and processes sludge for use in fertilizer, land spreading of sludge has been eliminated.

The design capacity of the South Central Regional Wastewater Treatment Facility for secondary treatment capacity is 24 million gallons per day (MGD) but will be expanded to 30 MGD as a part of a $15 million bank loan for aeration improvements, plant expansion, and other improvements included in the five year capital improvement plan. The plant design capacity for tertiary treatment is 10 MGD, which is specifically for reclaimed water use.

| Table PFE-2<br>CITY OF DELRAY BEACH<br>SEWER CAPACITY/DEMAND ANALYSIS<br>(Includes Service to the City of Highland Beach) | |
|---|---|
| **CAPACITY** | **AVERAGE FLOW** |
| 24 MGD | 17 MGD |
| *Source: South Central Regional Wastewater Treatment & Disposal Board.* | |

The Florida Department of Environmental Protection (FDEP) 2008 Leah G. Schad Ocean Outfall Act requires the elimination of the use of ocean outfalls as a primary means for the disposal of treated wastewater (except for emergency or wet weather events) and the reuse of at least 60 percent of the annual flow by the year 2025. The City's wastewater plant was one of the first in the region to cease using ocean outfalls. Disposal is now through a combination of deep well injection and reclaimed water distribution, except for emergency situations and FDEP permitted exceptions.

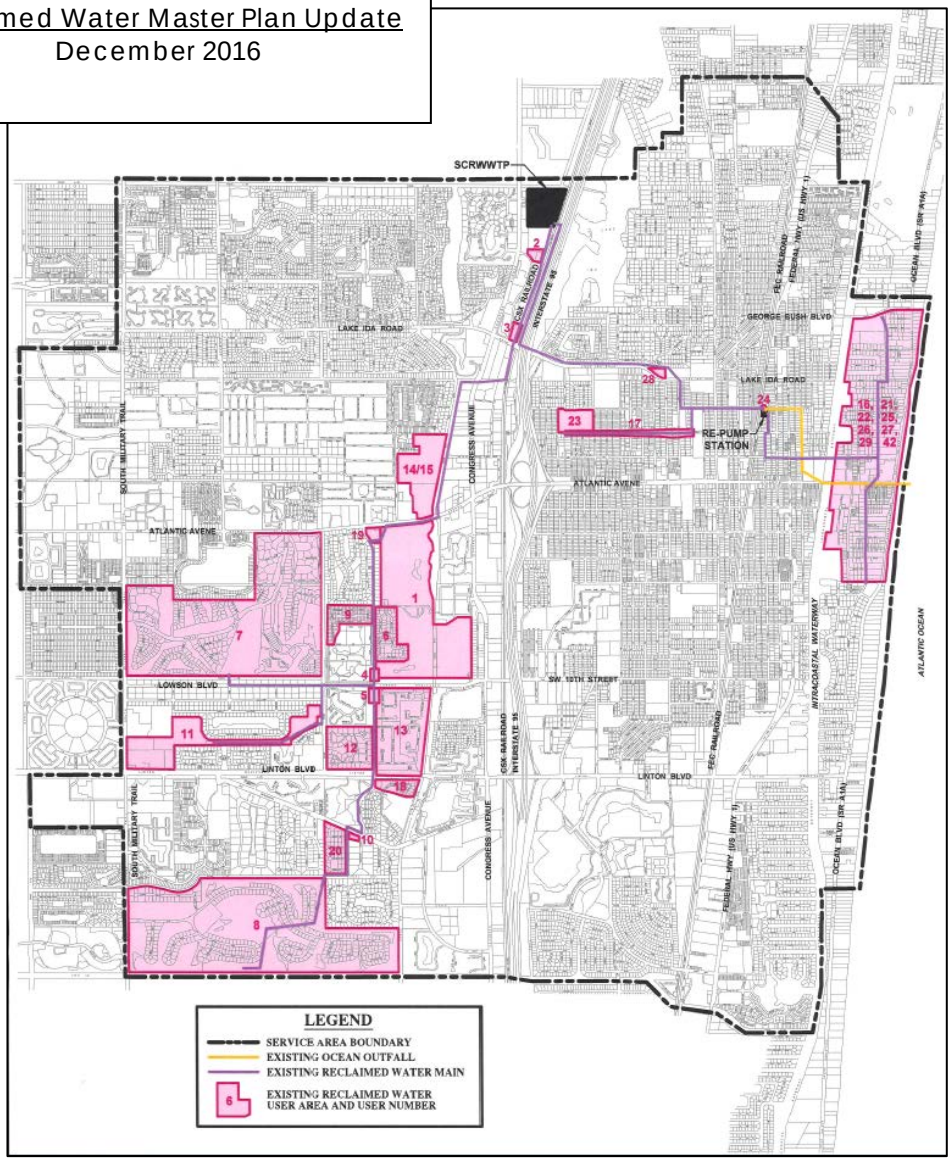
The FDEP baseline average annual daily flow is 12.9 MGD, which results in a reuse requirement of 7.7 MGD. The reuse goal is shared equally between Boynton Beach and Delray Beach, with a 3.85 MGD commitment for each municipality by 2025. Reclaimed water used for

irrigation helps shave peak potable water irrigation demands, which helps preserve limited potable water resources.

The City has 16 reclaimed water service areas with 42 existing users. The City intends to expand the users within each service area to provide an additional 40 users with reclaimed water. A map of existing reclaimed water service users is shown in below. Additional reclaimed water areas are planned for implementation and can be viewed in the Reclaimed Water Master Plan Update (Matthews Consulting, 2016).

Between 2003 and 2016, the City installed $8.7 million of reclaimed water system infrastructure, installed in eight phases. The reclaimed water system has a re-pump station adequate to serve the barrier island and future infrastructure in the south-east service area, as well as approximately 20 miles of transmission and distribution pipes, ranging from four to 36 inches. The current reclaimed water capacity is 3.0 MGD, and the average daily flow is 2.29 MGD. The City intends to expand the reclaimed water system to comply with the South Florida Water Management District (SFWMD) water use permit and FDEP Ocean Outfall Legislation.

**Reclaimed Water Users**
Reclaimed Water Master Plan Update
December 2016



## Potable Water & Groundwater Recharge Facilities

Potable water treatment is provided by the City of Delray Beach at the water treatment plant through conventional treatment processes and a lime softening system. The geographic service area coincides with the Planning Area plus service provided to the Town of Gulf Stream for 0.80 MGD, through contract as a bulk customer. The service area encompasses approximately 18 square miles, as shown on Map PFE-XX.

The lime softening water treatment plant, as noted within the 2015 10-Year Water Supply Facilities Work Plan required by the SFWMD issued water use permit, is rated at 26 MGD by the Florida Department of Environmental Protection (FDEP). The City maintains a National Environmental Laboratory Accreditation Conference (NELAC) state certified laboratory, the primary responsibility of which is monitoring potable water quality. EPA Stage 2 Standards for disinfection by-products are being met through the use of supplemental chemical treatment.

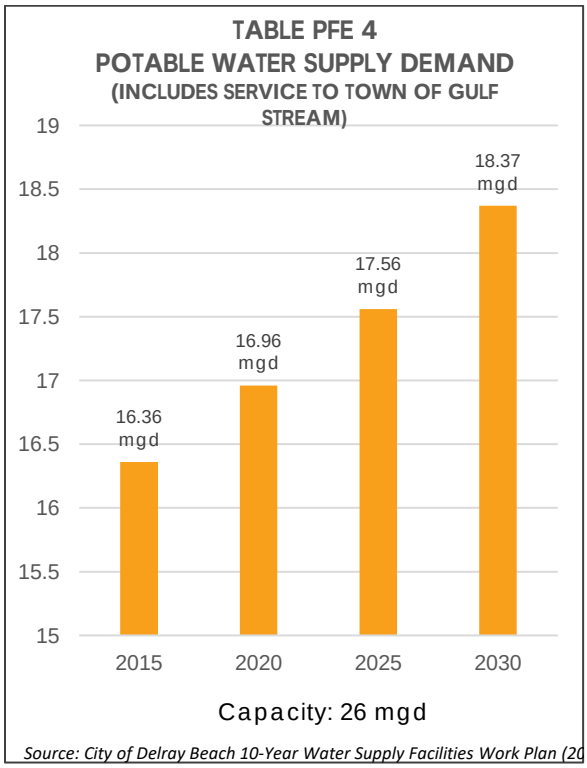
Although demand is anticipated to increase, the City has adequate capacity to accommodate the projected increase in demand.

**Table PFE-3**
**PROJECTED POTABLE WATER SUPPLY DEMAND**
(Includes Service to Town of Gulf Stream)

| CAPACITY (MGD) | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|
| 26 | 16.36 | 16.96 | 17.56 | 18.37 |

*Source: City of Delray Beach 10-Year Water Supply Facilities Work Plan (2015)*

The water distribution system includes 431 miles of water mains ranging from 2 inch to 24 inch diameter, 2,670 fire hydrants, transfer pumps, and storage facilities with a capacity of 8.5 mg.




The City currently withdraws groundwater from 30 active surficial aquifer wells in four wellfields and one (1) Floridan aquifer well 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 million gallons (MG) (19.10 MGD) and the maximum monthly allocation shall not exceed 654 MG (21.8 MGD). In addition, there are more than 1,000 domestic wells within the service area, predominantly used for irrigation. No major groundwater recharge areas are located within the Planning Area, although the entire region east of the Conservation Area is identified as a prime aquifer recharge area by the U.S. Geological Survey and the Palm Beach County Comprehensive Plan.

## Solid Waste Management

The Solid Waste Authority of Palm Beach County is responsible for the ultimate disposal of solid waste in the region. The City is responsible for collection of solid waste within the City limits through a franchise contract with a private firm.

The Solid Waste Authority's solid waste management system consists of a landfill, a 2,000 ton per day waste-to-energy facility, a 3,000 ton per day mass burn waste-to-energy plant, a recovered materials processing facility, a biosolids pelletization facility, a vegetative waste processing operation, household hazardous collection facilities, and six transfer stations.

Solid waste is collected by the City's contractor and is transported to the regional facility located near West Palm Beach. Solid waste can also be taken to a transfer station, located on S.W. 4th Avenue just south of Linton Boulevard, which has a capacity of 1,000 tons per day. In 2006, the Southwest County Transfer Station was established to provide an additional 2,400 tons per day of capacity, to alleviate capacity shortages at the South County and Central County facilities.

The North County Regional Solid Waste Disposal Facility, operated by the SWA, is the ultimate disposal site. This facility occupies 334 acres and consists of a Class 1 (garbage and incinerator residue) and a Class 3 (trash) landfill. The landfill, at its established level of service standard of 7.02 pounds per person per day, has sufficient capacity to serve until the year 2049. In addition to the landfill, the facility provides recycling and waste-to-energy incineration. As of September 30, 2016, the Solid Waste Authority North County Landfill had an estimated 25,303,180 cubic yards of landfill capacity remaining. The second waste to energy facility which began operation in 2015 will significantly extend the useful life of the landfill.

Despite the recycling and incineration programs, the landfill is anticipated to reach final depletion by 2047. According to the 2017 Landfill Depletion Model report "Solid Waste Authority's integrated solid waste management system is designed to minimize the reliance on landfilling in an environmentally responsible and cost-effective manner. While Solid Waste Authority's combustion, recycling and recovery efforts have and will continue to significantly extend the life of the landfill, it is unreasonable to expect, given current technology, that landfill disposal can be completely avoided. Landfills, unlike other forms of infrastructure, are a depletable resource. The purpose of the Landfill Depletion Model is to forecast the estimated life of Solid Waste Authority's landfill in order to assist facilities planning decisions and to assess the impact of alternatives on landfill life. As a planning tool, the model is useful in identifying the point or points in time at which a decision is required in order to ensure the availability of disposal capacity.

The total residential tonnage added to the landfill from the City of Delray Beach in 2016 was 32,569.8 tons.

The City provides a residential recycling program that began in 1990. The program includes curbside residential recycling for single family and multi-family homes. The program accounted for a reduction to the waste stream of 3,024.83 residential tons in 2016. This represents a reduction of 8.26% in the residential waste stream, which provides a 12.83% reduction from 2008 tonnage.

With an estimated 2016 population of 65,044 (American Community Survey), Delray Beach has an estimated 2.74 pounds per capita per day need, which is well below the established level of service standard of 9.54 pounds per capita per day. This level of use indicates the landfill is anticipated to meet the City's capacity needs within the projected final depletion year.

Table PFE-5 shows the residential solid waste and recycling tonnage for Delray Beach between 2008 and 2016.

**Table PFE-5**
**City of Delray Beach**
**Residential Solid Waste & Recycling**
**Annual Tonnage Report Summary 2008 -2016**

| YEAR | Garbage (tons) | Recycle (tons) | Vegetation (tons) | Bulk (tons) | TOTAL ANNUAL TONNAGE |
|---|---|---|---|---|---|
| 2016 | 16,509.9 | 3,024.8 | 1,626.2 | 14,793.7 | 35,954.6 |
| 2015 | 16,065.8 | 2,963.4 | 1,813.8 | 13,137.4 | 33,980.4 |
| 2014 | 18,738.3 | 4,267.4 | 853.6 | 15,800.6 | 39,659.9 |
| 2013 | 19,807.1 | 4,356.6 | 748.7 | 16,072.0 | 40,984.4 |
| 2012 | 19,285.0 | 4,057.6 | 728.0 | 16,300.1 | 40,370.7 |
| 2011 | 18,555.7 | 4,186.1 | 1,592.0 | 14,161.3 | 38,495.1 |
| 2010 | 18,235.5 | 4,419.5 | 1,515.5 | 13,765.2 | 37,935.7 |
| 2009 | 18,609.8 | 4,503.4 | 1,834.7 | 13,051.7 | 37,999.6 |
| 2008 | 19,630.7 | 5,216.3 | 2,053.7 | 13,742.9 | 40,643.6 |

*Source: City of Delray Beach / Southern Waste Systems*

## Stormwater Management

Responsibility for stormwater management in the City is divided among a hierarchy of state and regional agencies, the City, and landowners, as follows:

**Table PFE-6**
**Stormwater Management Agencies**

| AGENCY | RESPONSIBILITY |
|---|---|
| South Florida Water Management District | Major canals and structures; permitting |
| Lake Worth Drainage District | Lateral and equalizer canals and minor structures |
| City of Delray Beach/Palm Beach County | Public stormwater collection system |
| Land Owners and Homeowners Associations | On-site storm sewers and retention areas |

Stormwater is managed through a combination of interconnected SFWMD canals and natural waterways, local drainage districts, County and City government facilities, and community and neighborhood drainage systems.

### *South Florida Water Management District*

Congress authorized the Central and Southern Florida Project in 1948 to control flood and drought. The district is operated and maintained by the South Florida Water Management District, whose predecessor the Central and Southern Florida Flood Control District, was established in 1949.

Florida is divided into five water management districts—the City of Delray Beach is located within the South Florida Water Management District. The South Florida Water Management District is a regional governmental agency that manages the water resources in the 16 counties from Orlando to the Florida Keys, and serves a population of 8.1 million residents. SFWMD is the oldest and largest of the state's five water management districts. The agency is responsible for managing and protecting South Florida water resources by balancing and improving flood control, water supply, water quality and natural systems.

The restoration of the Everglades is a key regional project – the largest environmental restoration project in the United Sates. Lake Okeechobee and its watershed are another important focus of the SFWMD. The District is working to improve it, the Kissimmee River and its floodplain, and South Florida's coastal estuaries.

Stormwater is managed by SFWMD through a system of canals and natural waterways that work in connection with community and neighborhood systems.

### *Lake Worth Drainage District*

The Lake Work Drainage District was created in 1915 under Chapter 6458 of the 1913 General Drainage Laws of Florida. Currently, the District operates as an independent special district under Chapter 2009-258, Laws of Florida, and under F.S. 189 and 298

The Lake Work Drainage District was created to

- Reclaim, drain, and irrigate the lands within its boundary.
- Provide water control and water supply.
- Protect the lands within its boundary from the effects of water by means of the construction and maintenance of canals, ditches, levees, dikes, pumping stations and other works.
- Provide improvements for the purpose of making the area habitable for both settlement and agriculture.

The Lake Work Drainage District protects the 700,000 residents in its service area from flooding by maintaining approximately 500 miles of canals and their rights-of-ways, 20 major water control structures and several minor structures. This system is also operated to provide ground water recharge to prevent saltwater intrusion for numerous municipal water utilities.

The Lake Work Drainage District encompasses roughly 200 square miles in southeastern Palm Beach County, generally bordered on the west by the Arthur R. Marshall Loxahatchee National Wildlife Refuge, on the east by 1-95, on the north by Okeechobee Boulevard and on the south by the Hillsboro canal. There are 13 municipalities entirely or partially within the boundary of the Lake Work Drainage District. The western half of the City of Delray Beach is within the LWDD boundaries.

The responsibilities of the Lake Work Drainage District include

- Permitting of construction projects that discharge into LWDD canals.
- Aquatic weed control program utilizing EPA & DEP approved herbicides.
- Daily inspections of 20 major water control structures and weekly inspection of minor water control structures.
- Daily recording of rainfall at multiple locations throughout the LWDD.
- Daily monitoring of surface water elevations at multiple locations.
- Water quality monitoring.
- Mowing of canal banks and berms.
- Removal of encroachments within canal rights-of-way.
- Community outreach and educational programs.

### *Palm Beach County*

The City of Delray Beach is part of the Palm Beach County Stormwater Management Program (SWMP), to maintain compliance with the Environmental Protection Agency (EPA) Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES). NPDES is a federal program to eliminate stormwater pollutant discharge to "receiving waters." Palm Beach County applies for NPDES permitting for 40 governmental units within the County – including the City of Delray Beach – to the Florida Department of Environmental Protection (FDEP) through the lead permittee, the Northern Palm Beach County Improvement District (NPBCID). The City is responsible for monitoring and assessment of pollutants discharged into water bodies, with discharges not to exceed the Total Maximum Daily Loads (TMDLs). All stormwater management and monitoring is subject to the NPDES requirements. MS4 permit (FLS000015-004) is scheduled to expire in 2021.

### *City of Delray Beach*

Currently, the city maintains 3,000 stormwater inlets and over 26 miles of storm drainage pipes. The City established the SFWMD Level of Service Standards for drainage as the City's standard in the Goal's, Objectives, and Policies

**Table PFE-7**
**Level of Service Design Standards**

| Level of Service Standard | Design Standard for Roadways | Impacts | |
|---|---|---|---|
| | | General Conditions | Accessibility |
| A | 10-year, 24-hour | Possible minor ponding | Roads are accessible |
| B | 5-year, 24-hour | Possible minor ponding | Roads are accessible |
| C | 3-year, 24-hour | Possible minor ponding | Roads are accessible |
| D | < 3-year, 24-hour | Portions of area have ponding with moderate duration < 12 hours | General inconvenience |
| E | < 3-year, 24-hour | Ponding with relatively long duration > 12 hours | Sections of roadways are not accessible and general inconvenience |
| F | < 3-year, 24-hour | Ponding with relatively long duration > 12 hours and structural damage | Sections of roadways are not accessible and general inconvenience |

*Source: 2000 Stormwater Master Plan for the City of Delray Beach by Kimley-Horn*

As described in the 2000 Stormwater Plan, these Level of Service standards are applied to City drainage in the following manner (City of Delray Beach 2000 Stormwater Master Plan Update, Kimley Horn and Associates, Inc):

- All SFWMD permitted projects were assigned a Level of Service Standard A, B or C depending on the storm event used for design of the roadways within each permitted project. If the permit did not specify the roadway design standard, a Level of Service Standard C was assumed.
- All FDOT or Palm Beach County roadways (excluding 1-95 which was designed for greater than a 10-year, 24-hour storm event) were assigned a Level of Service Standard C (per FOOT and Palm Beach County standards) unless drainage problems have been identified.
- All undeveloped areas were assigned a Level of Service Standard C based on the assumption that as these areas are developed minimum standards will be met.
- All developed areas within the City with existing storm sewer systems were assigned a Level of Service Standard C. This assumes that the City has previously reviewed plans for these systems and minimum standard criteria have been met. Note some of these areas may contain isolated problems areas which, based on the available data, were thought to be attributed to localized irregularities and/or maintenance problems.
- All developed areas within the City without drainage systems, or with drainage systems that were determined to be inadequate but where significant drainage problems have not been identified, were assigned a Level of Service Standard D. Note these areas may contribute to drainage problems elsewhere.
- All developed areas within the City without drainage systems, or with drainage systems that were determined to be inadequate where significant drainage problems have been identified, were assigned a Level of Service Standard E.
- All developed areas where structural damage due to flooding has been identified by City Staff were assigned a Level of Service Standard F. (Often structural damage due to flooding occurs when buildings have a floor elevation that is below the road.)

The City is in the process of a Stormwater Management Master Plan Update that will include assumptions for sea level rise based on 30-year and 75-year projections identified in the City of Delray Beach Intracoastal Waterway Water Level & Infrastructure Vulnerability Study, conducted in 2018. The Stormwater Management Master Plan Update will identify stormwater management challenges due to impacts of sea level rise and localized flooding. These issues coupled with a rising groundwater table will impact primary and secondary drainage systems, ultimately reducing the capacity of these systems which can result in flooding of street, buildings and natural systems.

The Stormwater Management Master Plan Update will provide current data on elevations of structures and their projected future impact which provides the City with additional tools for evaluating future projects. The goal of the Stormwater Management Master Plan Update is to create a plan to address water resource issues and problems, including but not limited to, drainage problems, street flooding, tidal flooding, inadequate infrastructure, stormwater quality and recharge as well as other stormwater related issues or problems. The Update also evaluates the adequacy and condition of the drainage facilities, determines the level of service for flood protection for the City's sub-watersheds and identifies solutions. The Update will address the current and future needs of the City based on growth and climatological changes that have and will continue to impact the City's stormwater management system.

### Transportation System

A well-maintained transportation system is a component of public facilities, which is crucial to sustaining a high quality of life. The City has 275 (centerline) miles of streets, and 250 miles

of sidewalks. Street infrastructure includes parking meters, street lights, signs, and pavement markings. The transportation system includes bike lanes, the trolley, a pending bike share program, and planned Tri-Rail Coastal Link station.

In 2016, the City adopted a Complete Streets Policy, which is modeled on the best practices recommended by Smart Growth America, which redirects street planning to focus on the needs of all users, rather than prioritize drivers. This policy will be adhered to in future street improvements, which will help identify and prioritize bicycle and pedestrian infrastructure needs.

The Mobility Element and Capital Improvements Element provide a full inventory of the transportation facilities, needs, and planned improvements.

## NEEDS & RECOMMENDATIONS

The needs and recommendations are based on both public input and subject matter feedback. As part of the Always Delray Comprehensive Plan update process, the City conducted a public workshop on May 20, 2017, to discuss Public Facilities and other Grow Elements.

### Needs Identified by Public Input

Workshop participants identified short, mid, and long-range goals for public facilities improvements, as follows:

***Focus on Now***

- Expansion of reclaimed water facilities to reduce ocean discharge
- Improved way-finding signs
- Reduce nuisance street flooding

***Focus on Soon***

- Beautification projects for roads and public spaces
- Street lighting for public safety
- Improved surveillance capabilities

***Focus on Later***

- A living shoreline
- Sea walls
- Sidewalks
- Street lights

Additional needs were identified in the following areas as a result of inventory and analysis of existing public facilities and services. Since the City has completed all critical improvements to the system, the identified needs can be categorized as

1) initiatives to maintain or improve existing infrastructure,
2) initiatives to enhance quality of life, and
3) sustainability initiatives.

### Recommendations and Initiatives to Maintain or Improve Infrastructure

**Public Building Improvements**

The City is undertaking a major initiative to refurbish and remodel buildings and facilities to become more energy efficient, sustainable, and resilient. A needs assessment is also underway to help plan for long term short needs.

***Public Building Recommendations:***

- Continue to support public WiFi and explore its expansion as public infrastructure.
- Explore the feasibility of solar panels on public buildings.
- Work with the Delray Beach CRA to assess the need for new parking facilities and plan for their location.
- Upgrade City Hall and other public facilities for both emergency preparedness as well as for future resilience to sea level rise.

**Wastewater Improvements**

Ongoing improvements are needed to force mains, sewer mains, lift stations, and other plant facilities, including the reclaimed water system. Significant expansion of the reclaimed water system is planned to meet environmental goals, protect wellfields from saltwater intrusion, recharge aquifers, and conserve resources.

These needs have been identified in the capital budget to accommodate ongoing demand and regulations. Infiltration into the collection system by rainwater and high groundwater levels could impact future capital expansion facility costs. This problem has been significantly reduced in recent years with the repair and reconstruction of the collection system city-wide. An on-going program to reduce infiltration/inflow is a cost-effective method of reducing the need for treatment facility expansion and requires on-going capital investment.

***Wastewater Improvements Recommendations:***

- Continue to expand the reclaimed water system to increase the amount of water that is reused.

**Potable Water Improvements**

Ongoing improvements are needed to water mains, water meters, raw water wells, and other plant facilities. These needs have been identified in the capital budget to accommodate ongoing demand and regulations. Long term potable water planning has to focus on identifying additional, alternative water supplies and additional treatment process.

***Potable Water Improvements Recommendations:***

- Identify and develop alternative water supplies and treatment processes.

**Solid Waste Improvements**

Although the landfill has adequate capacity to accommodate the solid waste generated by the City, the City could increase the amount of waste that is recycled.

***Solid Waste Improvements Recommendations:***

- Increase involvement in recycling programs by expanding both participation and the number of permitted recyclable items.

**Stormwater Improvements**

Local and City-wide drainage deficiencies are identified in the Stormwater Master Plan and funded by the Stormwater Utility Fee. An update to the plan is underway. As a part of this process, the City has identified drainage deficiencies throughout the City. Projects identified include seawall overtopping along the Intracoastal Waterway to prevent flooding from high and king tides, miscellaneous projects to remedy street flooding, and projects to repair swale degradation. Increased flooding from sea level rise is a growing stormwater concern for the City. Upon completion of the Stormwater Master Plan Update, the Public Facilities Element will be updated to reflect new information.

***Stormwater Improvements Recommendations:***

- Update level of service standards and project priorities based upon the 2018 Stormwater Master Plan
- Establish a program for the repair, replacement, and maintenance of seawalls based upon the Intracoastal Waterway Water level & Infrastructure Vulnerability Study.

***Emergency Preparedness.*** In 2017, Hurricane Irma hit Delray Beach with Category 1 strength winds, highlighting vulnerabilities within the City, particularly to the wastewater collection system which lost power to 70% of its pumping stations. To prevent disruption of service during a natural or manmade catastrophic event, the City now has approximately 75 generators, of which 52 are portable and the remainder fixed. The portable generators are primarily for the 130 wastewater lift stations, 7 stormwater pumping stations and 30 raw water potable wells.

***Emergency Preparedness Recommendations and Actions:***

- A Continuity of Operations Plan (COOP) has been developed and should be regularly updated and maintained
- Develop a plan for post disaster recovery for all hazards.
- A $13 M project to add a third floor to Fire Station 113 to serve as the City's emergency operations center (EOC).
- Develop strategies to prevent street flooding and ponding on critical streets.
- Upgrade IT infrastructure to facilitate post-disaster recovery.

With the adoption of the Complete Streets policy, the City will continue to prioritize transportation infrastructure improvements that provide for pedestrian and bicycle mobility. The City has recently completed several bike lane installations and has more projects scheduled in the capital improvements program. Ultimately, a bicycle master plan will be needed to establish priority links. New long term needs include a station for the planned Tri-Rail Coastal Link station in downtown.

***Transportation Recommendations:***

- Implement a Safe Routes to Schools program, including evaluating existing conditions, mapping routes to school, identifying needed improvements, and prioritization of the identified improvements.
- Analyze bicycle and pedestrian infrastructure needs along routes to major destinations, such as parks, the downtown district, schools, and employment centers, and prioritize multimodal improvements.
- Increase the percentage of tree coverage throughout the city to aesthetically improve areas and provide a shaded environment for pedestrians. To measure success in this area, the City should develop benchmarks for tree coverage on public streets and public land.
- Plan for the design and construction of the Tri-Rail Coastal Link Station.
- Prioritize multi-modal improvements needed in the Tri-Rail station area to facilitate access and support the long term viability of commuter train service.

always delray
Comprehensive Plan | 2018

# PUBLIC FACILITIES ELEMENT

## General Government and Public Safety Facilities [MAP PFS-1]


City-Owned Buildings and Facilities

Delray Beach Boundary

Planning Area

Palm Beach County Jurisdiction

0 0.5 1 Miles

City of Delray Beach
Development Services Department

Print Date: 11/30/2018

# PUBLIC FACILITIES & SERVICES

LIVE

WORK

PLAY

GROW

## GOALS, OBJECTIVES, AND POLICIES

# PUBLIC FACILITIES AND SERVICES ELEMENT

## WHAT IS THE PUBLIC FACILITIES ELEMENT?

The Goals, Objectives, and Policies in the Public Facilities Element provide cost-effective lifecycle management of the City's public facilities, infrastructure, and key essential services to enhance sustainability and the health, safety and welfare of residents, businesses, and visitors.

## PUBLIC FACILITIES AND SERVICES GOALS

| | |
|---|---|
| **GOAL PFE 1** | **PRIORITIZATION OF PROJECTS**<br>ENHANCE PUBLIC FACILITIES AND THE PROCESSES USED TO IDENTIFY AND FINANCE IMPROVEMENTS IN ACCORDANCE WITH THE GUIDELINES FOR PRIORITIZING CAPITAL IMPROVEMENT PROJECTS. |
| **GOAL PFE 2** | **POTABLE WATER SYSTEM**<br>PLAN FOR, PROVIDE, AND DISTRIBUTE POTABLE WATER TO ACCOMMODATE DEMANDS BOTH IN TERMS OF QUANTITY AND QUALITY IN CONSIDERATION OF THIS LIMITED RESOURCE AND LIMITED SOURCES OF CAPITAL. |
| **GOAL PFE 3** | **WASTEWATER MANAGEMENT**<br>MAINTAIN AND UPGRADE FACILITIES TO EFFECTIVELY COLLECT, TREAT, AND PROPERLY DISPOSE OF WASTEWATER AND SYSTEM BIPRODUCTS FOR THE PROTECTION OF THE ENVIRONMENT. |
| **GOAL PFE 4** | **STORMWATER MANAGEMENT AND FLOOD PREVENTION AND MITIGATION**<br>LIMIT POTENTIAL PROPERTY DAMAGE AND INCONVENIENCE TO THE PUBLIC CREATED BY FLOODING, POOR STREET DRAINAGE CONDITIONS, OR SEA LEVEL RISE BY PLANNING AND IMPLEMENTING MITIGATION STRATEGIES THROUGHOUT THE CITY. |
| **GOAL PFE 5** | **SOLID WASTE SYSTEMS**<br>UTILIZE SOLID WASTE DISPOSAL PROGRAMS AND FACILITIES TO PROVIDE A FUNCTIONAL, ECOLOGICALLY SOUND, AESTHETICALLY PLEASING, AND SUSTAINABLE PHYSICAL ENVIRONMENT THROUGHOUT THE CITY. |
| **GOAL PFE 6** | **TRANSPORTATION AND MOBILITY**<br>PROVIDE MULTIMODAL TRANSPORTATION FACILITIES THAT PROVIDE MOBILITY CHOICES TO USERS OF ALL AGES AND PHYSICAL ABILITIES AND THAT MAINTAIN AND ENHANCE THE CHARACTER OF THE CITY, ITS NEIGHBORHOODS, DISTRICTS, AND CORRIDORS. |
| **GOAL PFE 7** | **PUBLIC BUILDINGS AND FACILITIES**<br>IMPLEMENT A COORDINATED AND COMPREHENSIVE PROGRAM FOR THE PROVISION OF OFFICES AND FACILITIES FOR CITY BUSINESS. |

# PFE 1 PRIORITIZATION OF PROJECTS

**ENHANCE THE PROCESSES USED TO IDENTIFY AND FINANCE PUBLIC FACILITY IMPROVEMENTS IN ACCORDANCE WITH THE GUIDELINES FOR PRIORITIZING CAPITAL IMPROVEMENT PROJECTS.**

**Performance Measures:** Success in addressing the Objectives and Policies of **Goal PFE 1** shall be measured utilizing the following performance indicators:

- Conduct an annual infrastructure hearing to solicit public input regarding needed infrastructure improvements
- Number of public outreach efforts conducted in capital improvement programming and facilities planning.

## Objective PFE 1.1 Public Input and Involvement

Public information campaigns shall be used to provide public awareness of and encourage involvement in public improvement activities. [Policy Carried Forward]

**Policy PFE 1.1.1**

Promote public knowledge and understanding of public facilities and infrastructure planning and projects by continuing public outreach efforts on the City's website to provide the most current Five-Year Capital Improvement Plan and Capital Improvement Budget; information and schedule for improvement projects in the design and construction phases; and, information regarding water conservation, solid waste disposal, and other subjects related to public facilities. [Policy Carried Forward]

**Policy PFE 1.1.2**

Conduct an annual infrastructure public hearing to solicit public input to identify those geographic areas that are most in need of improvements and specific infrastructure needs for the purposes of identifying and prioritizing project funding and scheduling. The public hearings shall be advertised and held before the Planning and Zoning Board (Local Planning Agency). [Annually in the winter months] ([Policy Carried Forward] (Similar to Policy F-2.1 but not verbatim)

**Policy PFE 1.1.3**

In conjunction with the annual infrastructure hearing, provide opportunities for public input on needed improvements using a variety of methods of engagement, such as, email, online surveys, contacting neighborhood and homeowner associations, holding roundtable discussions, hosting booths at public events, etc. [Annually]

**Policy PFE 1.1.4**

Provide an updated list from the Planning and Zoning Board (Local Planning Agency) to the City Commission of new or revised infrastructure needs with written findings to justify the need for the identified projects. [Annually] [Policy Carried Forward]

**Policy PFE 1.1.5**

Conduct a study or analysis of needs and potential solutions for new or major upgrades to existing public facilities, and publicly present the findings and recommendations to engage the public in the process. [Ongoing]

## Objective PFE 1.2 Project Prioritization

Prioritize projects based on adopted need and efficiency standards.

**Policy PFE 1.2.1**

Use the criteria for prioritizing capital projects in the Capital Improvements Element for public facility improvements.

**Policy PFE 1.2.2**

Use the Water Supply Facilities Work Plan to prioritize and coordinate improvements to the City's water supply system.

CSR Policy 2.5.1

**Policy PFE 4.5.4**

Consider other planned improvement projects (e.g. street construction and drainage) when

programming water, sewer, and other public facilities to maximize efficiency. [Policy Carried Forward]

**Objective PFE 1.3 Water and Sewer Capital**

Allocate capital raised through the water and sewer enterprise funds as required by bond covenants. [Objective Carried Forward]

**Policy PFE 4.5.1**

Transfer funds from enterprise funds to the general fund only for the fund's proportionate share of administrative costs and an in-lieu of tax payment. [Policy Carried Forward]

**Policy PFE 4.5.2**

Provide annual allocations for upgrading system components (i.e. manholes, hydrants, etc.) in the Water and Sewer Renewal and Replacement Fund. [Policy Carried Forward]

**Policy PFE 4.5.3**

Finance upgrades of existing systems to construction and level of service standards and extension of new facilities to unserved, inhabited areas through appropriations in the Water and Sewer New Capital Outlay Fund. [Policy Carried Forward]

# PFE 2 POTABLE WATER

**PLAN FOR AND PROVIDE POTABLE WATER FACILITITES TO ACCOMMODATE DEMANDS BOTH IN TERMS OF QUANTITY AND QUALITY IN CONSIDERATION OF THIS LIMITED RESOURCE AND THE LIMITED SOURCES OF CAPITAL. (Goal B Carried forward)**

**Performance Measures:** Success in addressing the Objectives and Policies of Goal PFE 2 shall be measured utilizing the following performance indicators:

- Water consumption per capita and total
- Diversity of water supply
- Decrease in amount of citizen complaints

**Objective PFE 2.1**
Preserve and protect the long term water supply, by preparing for increased groundwater withdrawals and reduced capacity through potential salt water intrusion and/or extended drought conditions through the optimum use of existing wells, development of new wells, and development of alternative technologies and methods of providing water.
(Objective Carried Forward)
CSR Objective 2.5

**Policy PFE 2.1.1**
Protect existing wellfields through the continued implementation of monitoring for salt water intrusion, wastewater pretreatment programs, and monitoring wells, and enhanced quality control programs that provide early detection of possible contamination. [Policy Carried Forward]
CSR Policy 2.1.1

**Policy PFE 2.1.2**
Continue developing alternative water supplies as a mechanism to diversify the City's sources of potable water supply
CSR Policy 2.4.3

**Policy 2.1.3**
Cooperate with and support local and regional strategic partners in the development of and implementation of local and regional water resource strategies and development, including but not limited to, increased conservation, aquifer recharge, additional reuse projects such as rapid infiltration basins, Upper Floridian aquifer development, and the C-51 Reservoir Project.
CSR Policy 2.4.1

**Policy PFE 2.1.4**
Consider the most current version of South Florida Water Management District's Lower East Coast Water Supply Plan and Regional Water Plan in developing a Water Supply Facilities Work Plan. The Work Plan will be updated within 18 months following an update of the Regional Water Supply Plan, pursuant to F.S. 163.3177(6)(c)3. [Policy Carried Forward]
CSR Objective 2.5
CSR Policies 2.5.1 and 2.5.2

**Policy PFE 2.1.5**
Adopt and maintain a Water Supply Facilities Work Plan for at least a 10-year period, based on the availability and appropriate use of regional water resources and the combined use of alternative water supplies to diversify the City's source of water and reduce dependence on the surficial aquifer. The Work Plan shall be consistent with the City's Water Use Permit renewals. [Policy Carried Forward]
CSR Policies 2.4.1, 2.4.2, 2.4.3

**Policy PFE 2.1.6**
The City of Delray Beach 2015 Water Supply Facilities Work Plan is hereby adopted.

**Policy PFE 2.1.7**
Reclaim and reuse at least 60% of wastewater by 2025 through reclaimed water systems that provide irrigation, help recharge wellfields, etc., pursuant to the 2008 Leah B. Schaad Ocean Outfall Act guidelines. (Policy Updated )
CSR Policy 2.4.11

**Objective PFE 2.2**
Reduce demand through year-round conservation and treatment plant enhancements to ensure that potable water is available to meet long term consumption demands, [Objective Carried Forward]

**Policy PFE 2.2.1**
Maintain the program of responsible consumption of water and strive to decrease the overall per capita consumption of water through continued implementation of the following techniques and programs:

- Maintaining the water rate structure, which establishes an inverted block rate structure to set higher consumption rates for increased water use to promote reductions in water consumption.
- Establishing conservation surcharges, based on South Florida Water Management District formulae, and keyed to various levels of drought alert.
- Mandating use of wells for irrigation purposes, where conditions permit.
- Continuing enforcement of water use laws.
- Considering Florida-friendly landscaping alternatives for all new development, redevelopment, or new planting/landscape modifications/replacements during the review of site and development plans. (not only new development only; encourage/incentivize existing development); provide information on "Florida-friendly"; public information on what is appropriate and where to get it;
- Continuing the regular preventive maintenance program for water mains, pumps and meters.
- Continuing and expanding the reclaimed water system.
- Participating in South Florida Water Management District's Conservation Hotel and Motel Program to promote water conservation for the City's hotels.

[Policy Carried Forward]
CSR Policy 2.4.2

**Policy PFE 2.2.2**
Continue to provide the following levels of service at the water treatment facility:

- Average finished water design flow of the water system @ 234.8 gpcd.
- Storage capacity for the water system @ 15% of maximum flow plus fire reserve at 1.5 mg, plus 25% of that total. .
- Minimum pressure for the water system @ 20 psi.
- Capacity of 26 MGD

**Policy PFE 2.2.3**
Require new development to provide water system improvements to accommodate increased demand and to meet the City's minimum design standards concurrent with development. [Policy Carried Forward]

**Policy PFE 2.2.4**
Coordinate population projections and water demand planning with the Town of Gulfstream, to which the City provides water service through an interlocal agreement.

**Objective PFE 2.3**
Provide for the enhancement of the quality of water, as measured by the Florida Department of Environmental Protection standards.
CSR Objective 2.1

**Policy PFE 2.3.1**
Maintain provisions in the program for raw water supply that require only minimal reliance upon wells that are subject to saltwater intrusion.
[Policy Carried Forward]
CSR Policies 2.1.5 and 8.6.12

**Policy PFE 2.3.2**
Distribute annual consumer confidence reports to residents that describe the current condition of potable water, including at a minimum, water quality, consumption trends, and treatment methods. [Policy Carried Forward]

**Policy PFE 2.3.3**
Continue to meet the EPA stage 2 disinfection by-product rule requirements. [Policy Carried Forward]

## Objective 2.4
Provide for the efficient and effective distribution of potable water resources.

**Policy PFE 2.4.1**
Discourage urban sprawl within areas of County jurisdiction by denying requests to make water service available outside the Planning Area to areas that could be developed at low density. [Policy Carried Forward]

**Policy PFE 2.4.2**
Require new development to be responsible for extending water service to and through land to be developed; these extensions shall meet the City's performance standards. [Policy Carried Forward]

**Policy PFE 2.4.3**
Provide for upgrades of existing potable water distribution facilities through annual appropriations in the capital improvement program. [Policy Carried Forward]

## Objective 2.5
Improve the potable water supply and distribution system to enhance capacity and reduce leakage.

**Policy PFE 2.5.1**
Maintain the inventory and condition of the water distribution system through regular updates to the City atlas and the use of surveillance programs. [Objective Carried Forward]

**Policy PFE 2.5.2**
Whenever the opportunity occurs to uncover or examine an existing water main, conduct an inspection to evaluate the condition and log the results to help inform the Operation and Maintenance Plan. [Policy Carried Forward]

**Policy PFE 2.5.3**
Complete the underground pipe condition assessment to identify near term and longterm Capital Improvements repair and replacement needs. [Complete by 2020]

**Policy PFE 2.5.4**
Use the Water Supply Facilities Work Plan to prioritize and coordinate improvements to the City's water supply system.
CSR Policy 2.5.1

**Policy PFE 2.5.5**
Maintain a current five-year schedule of capital improvements to the Water Supply System. [Policy Carried Forward]

# PFE 3 WASTEWATER MANAGEMENT

**MAINTAIN AND UPGRADE FACILITIES TO EFFECTIVELY COLLECT AND TREAT, AND PROPERLY DISPOSE OF WASTEWATER AND SYSTEM BIPRODUCTS FOR THE PROTECTION OF THE ENVIRONMENT.**

**Performance Measures:** Success in addressing the Objectives and Policies of Goal PFE 3 shall be measured utilizing the following performance indicator:

- Increase in amount of reclaimed water used
- Increase in availability of reclaimed water systems

## Objective PFE 3.1

Continue to develop and implement specific programs to mitigate the adverse impacts of point sources of pollution in collaboration with the South Central Regional Wastewater Treatment and Disposal Board and other strategic partners, as appropriate. [Objective Carried Forward]

CSR Objective 2.1

**Policy PFE 3.1.1**

Discontinue the use of existing septic tanks located in areas with access to city sewer systems and require connection to the City's system, pursuant to Florida Statutes. Septic systems subject to flooding, or with chronic drainfield problems, shall be abandoned and connection shall be made to the central sewer system. [Policy Carried Forward]

CSR Objective 3.1

CSR Policy 3.1.4

**Policy PFE 3.1.2**

Continue to utilize the reclaimed water system, surficial aquifer replenishment, and other options for the disposal of treated wastewater and only utilize discharge into the Intracoastal Waterway and Atlantic Ocean in emergency weather events.

**Policy PFE 3.1.3**

Prioritize improvements to the sewer system that rehabilitate portions of the original system that experience infiltration and leakage. [Policy Carried Forward]

## Objective PFE 3.2

Reclaim and reuse more wastewater and effluent from the wastewater treatment plant

**Policy PFE 3.2.1**

Reuse at least 60% of wastewater by 2025 through reclaimed water systems that provide irrigation, help recharge wellfields, and other sustainable activities, pursuant to the 2008 Leah B. Schaad Ocean Outfall Act guidelines. This reuse water goal shall be shared by Delray Beach and Boynton Beach.

**Policy PFE 3.2.2**

Continue to monitor and expand the use of reclaimed water from the wastewater treatment plant for irrigation purposes, with prioritization on golf courses in the City, large home owner associations on master meters, City Parks, and in the Coastal Planning Area.

**CSR Policies 2.4.10 and 2.4.11**

**Policy PFE 3.2.3**

Expand the use of reclaimed water as a water conservation measure.

CSR Policy 2.4.10

## Objective PFE 3.3

Maintain the condition and inventory of the water and sewer systems through regular updates of the City atlas and surveillance programs. [Objective Carried Forward]

**Policy PFE 3.3.1**

Continue to maintain and update the wastewater collection and transmission system atlas to reflect current system inventory, and monitor operational characteristics by radio

telemetry and surveillance programs for the purpose of planning system extensions and upgrade requirements. [Policy Carried Forward]

**Policy PFE 3.3.2**
Complete the underground pipe condition assessment to identify and prioritize collection and transmission system needs. [Complete by 2020]

**Policy PFE 3.3.3**
Conduct a lift station condition assessment to identify and prioritize facility needs. [Complete by 2020]

**Objective PFE 3.4**
Program and install wastewater collection facilities when the need is demonstrated. [Objective Carried Forward]

**Policy PFE 3.4.1**
Program upgrades of existing wastewater facilities through annual appropriations in the capital improvement program. [Policy Carried Forward]

**Policy PFE 3.4.2**
Require new development to extend sewer service that meets the City's performance standards to and through land to be developed. [Policy Carried Forward]

**Objective PFE 3.5**
Continue to participate on the South Central Regional Waste Water Treatment and Disposal Board to examine cost effective ways in which capital improvements have the least economic impact on property owners within the city. [Objective Carried Forward]

**Policy PFE 3.5.1**
Maintain a minimum Level of Service for the wastewater treatment plant of 115 gpcd up to the plant capacity of 12 mgd, in addition to the specific requirements of Boynton Beach.
CIE Policy

**Policy PFE 3.5.2**
Base commitments by the South Central Regional Waste Water Treatment and Disposal Board for capital expansion at the wastewater treatment plant on a 50%/50% cost sharing by the City of Delray Beach and the City of Boynton Beach. Base costs related to operating the plant on the usage of each municipality (currently Delray Beach 40% and Boynton Beach 60%). [Policy Carried Forward]

**Policy PFE 3.5.3**
Maintain average flow design capacity for the South Central Regional Wastewater Treatment Plant at 24 mgd and maintain peak flow design capacity at 30 mgd, with capacity needs monitored by the South Central Wastewater Regional Treatment Plant Board. [Policy Carried Forward]

# PFE 4 STORMWATER MANAGEMENT, FLOOD PREVENTION AND MITIGATION

**LIMIT PROPERTY DAMAGE AND INCONVENIENCE TO THE PUBLIC CREATED BY FLOODING, POOR STREET DRAINAGE CONDITIONS, OR SEA LEVEL RISE BY PLANNING AND IMPLEMENTATION OF MITIGATION STRATEGIES THROUGHOUT THE CITY.**

**Performance Measures:** Success in addressing the Objectives and Policies of Goal PFE 4 shall be measured utilizing the following performance indicators:

- Reduced occurrences of flooding
- Projects completed to decrease flood impacts and mitigate flooding
- Completed analysis of facilities for flooding potential, including but not limited to, 2018 Stormwater Master Plan Update and 2018 Intracoastal Waterway Water Level & Infrastructure Vulnerability Study

**Objective PFE 4.1**
Maintain a capital improvement program directed specifically to stormwater management and identify capital projects in that program that will be implemented with funding from the Stormwater Utility Fee. [Objective Carried Forward]

**Policy PFE 4.1.1**
Criteria for determining project priorities shall be as defined in the 2018 Stormwater Master Plan Update, Intracoastal Waterway Water Level & Infrastructure Vulnerability Study, and based upon correcting current, localized problems. The City shall allocate funds necessary to update the Stormwater Master Plan on a regular basis. [Policy Carried Forward]
CSR Policies 8.1.4, 8.5.5, 8.6.1, 8.6.2 and 8.6.6

**Policy PFE 4.1.2**
Determine the scope of stormwater management projects using minimum design standards that establish a level of service to protect water quality at least equal to the standard of retaining the first one inch of runoff for the entire site or 2.5 inches of water storage times the percentage of impervious area, whichever is greater. [Policy Carried Forward]

**Policy PFE 4.1.3**
Maintain storm water management regulations that provide for the protection of natural drainage features and ensure that development provides compensating or "net neutral" storage for areas below the 100-year storm elevation, to ensure no loss in storage for the basin below the 100-year stage with calculations of predevelopment storage equal to or greater than post development storage. [Policy Carried Forward and Updated]

**Policy PFE 4.1.4**
Maintain through regulations the minimum design storm return frequency for stormwater facilities capacity that considers future flood risk. [Policy Carried Forward]
CSR Policy 8.5.5, 8.6.4 and 8.6.6

**Policy PFE 4.1.5**
Protect and enhance surface water quality through the full implementation of programs and activities included in the National Pollutant Discharge Elimination System permit. [Policy Carried Forward]

**Policy PFE 4.1.6**
Maintain a stormwater mapping system and maintenance program for storm sewers and structures. [Policy Carried Forward]

**Policy PFE 4.1.7**
Locate drainage improvements and flood control projects throughout the City as opposed to being concentrated in a single quadrant. [Policy Carried Forward]

**Policy PFE 4.1.8**
Develop regulations to reduce stormwater runoff through strategies such as pervious paving in alleys, public ROW, parking lots, and on-site storage of the "first flush" or first 1"-2" of rainfall.

**Policy CSR 4.1.9**
Establish a program to accommodate necessary repair, replacement, and maintenance of City owned seawalls and stormwater outfalls along the Intracoastal Waterway and canals consistent with the recommendations of the City of Delray Beach Intracoastal Waterway Water Level & Infrastructure Vulnerability Study. (Policy B-3.3 carried forward)

**Objective PFE 4.2**
Advance water management strategies, and infrastructure improvements necessary to mitigate for the adverse impacts of climate change and sea level rise on water management systems, according to industry best practice standards.

**Policy PFE 4.2.1**
Utilize information and recommendations in the 2018 Stormwater Master Plan Update to determine level of service and design standards for stormwater systems that consider vulnerability to sea level rise and future climate impacts, such as extreme precipitation.

**Policy PFE 4.2.2**
Utilize the recommendations in the 2018 Stormwater Master Plan Update to amend and/or update the Land Development Regulations to achieve the highest design standards for development related to on site stormwater systems.

**Policy PFE 4.2.3**
Restrict investments in and protect, and determine needed upgrades to, public facilities within the coastal high hazard area and adaptation action areas, once adopted, accounting for the impacts of sea level rise.
CSR Policy 8.6.4

**Policy PFE 4.2.4**
At the time of street upgrades, implement methods to prevent nuisance street flooding and ponding during storms and from tidal flooding on critical streets, including, but not limited to those identified at risk in a Vulnerability Analysis or those with vulnerable infrastructure identified in the 2018 Stormwater Master Plan Update or Intracoastal Waterway Water Level & Infrastructure Vulnerability Study.
CSR Policies 8.6.1 and 8.6.2

**Policy PFE 4.2.5**
Explore the use of Living Shorelines and green infrastructure as adaptation strategies in conjunction with stormwater infrastructure capital planning.
CSR Objective 8.5
CSR Policy 8.5.5

**Policy PFE 4.4.6**
Continue to utilize the best available and regionally accepted modeling parameters that identify future conditions under which the stormwater system is expected to operate including future precipitation and sea level rise conditions.
CSR 8.6.6

**Policy PFE 4.2.7**
Engage the South Florida Water Management District, Lake Worth Drainage District, and other water officials in the development and update of regional flood resilience models, and guide planning and investments for future flood and climate conditions based on anticipated adjustments to water management operations.
CSR Policy 8.7.3

# PFE 5 SOLID WASTE SYSTEMS

**UTILIZE SOLID WASTE DISPOSAL PROGRAMS AND FACILITIES TO PROVIDE A FUNCTIONAL, ECOLOGICALLY SOUND, AESTHETICALLY PLEASING, AND SUSTAINABLE PHYSICAL ENVIRONMENT THROUGHOUT THE CITY.**

**Performance Measures:** Success in addressing the Objectives and Policies of Goal PFE 5 shall be measured utilizing the following performance indicators:

- Increase in recycled waste
- Landfill space available

**Objective PFE 5.1**
Continue to develop and implement programs to address the collection and disposal of solid waste that use environmentally sound procedures. [Objective Carried Forward]

**Policy PFE 5.1.1**
Support the continuation of a central collection site, under the jurisdiction of the Solid Waste Authority, to which the public may bring and deposit household hazardous wastes on a daily basis. [Policy Carried Forward]
CSR Policy 2.3.4

**Policy PFE 5.1.2**
Implement public education programs to provide awareness of the impacts of the improper disposal of household hazardous waste. (Policy A- 3.2 carried forward)

**Policy PFE 5.1.3**
Maintain the lifespan of the landfill; maintain the Level of Service for solid waste generation as 7.13 pounds per person per day.

**Policy PFE 5.1.4**
Increase involvement in recycling programs available to residents and business owners.
CSR Goal 6
CSR Objective 6.1
CSR Policies 6.1-6.10, 6.14

**Policy PFE 5.1.5**
Continue to participate in the Palm Beach County Solid Waste Authority recycling program, and work with Palm Beach County to meet or exceed county-imposed recycling goals in Section 403.706(2)(a), Florida Statutes requiring a recyclable materials program that have a goal of recycling solid waste by 75 percent by December 31, 2020. (Objective D-1 carried forward).
Policy CSR 6.1.1

**Policy PFE 5.1.6**
Work with the Solid Waste Authority to increase rates of residential and commercial recycling and implementation of hazardous waste management programs for the proper storage, recycling, collection and disposal of hazardous wastes.
Policy CSR 6.1.2

**Policy PFE 5.1.7**
Continue to support the County's education program to increase participation in recycling. (Policy D-1.2 carried forward).
Policy CSR 6.1.3

**Policy PFE 5.1.8**
Implement communitywide incentives and policies ensuring that residents and businesses are working toward achieving community waste reductions goals. Conduct an annual education program to encourage increased participation in the recycling program by low performing neighborhoods. (Policy D-1.3 carried forward).
Policy CSR 6.1.4

**Policy PFE 5.1.9**
Work with the waste hauler to receive city-level monitoring data and utilize annual and quarterly service reports to create a database of waste management services, analyze usage, and identify opportunities for improving waste management within the Delray Beach Planning Area.
Policy CSR 6.1.5

**Policy PFE 5.1.10**
Promote waste reduction through the use of more sustainable products in certain industries, such as biodegradable straws, bags, packaging and containers.

Policy CSR 6.1.6

**Policy PFE 5.1.11**
Update commercial recycling requirements consistent with Section 403.7046(3), F.S. and Collaborate with the Chamber to reach business entities on importance of recycling and benefits to the community overall in increasing recycling rates with an emphasis on restaurants.
Policy CSR 6.1.7

**Policy PFE 5.1.12**
To increase recycling of construction and demolition debris, provide the public with educational materials about available pick up service, and partner with the Solid Waste Authority, its waste hauler, and other appropriate agencies to promote available methods of disposal.
Policy CSR 6.1.8

**Policy PFE 5.1.13**
Explore opportunities to add recycle receptacles on City properties specifically in locations where the City currently supports trash receptacles, such as on Atlantic Ave., the Beach (the sidewalk that is adjacent to Highway A1A), Pineapple Grove, Swinton, US-1 and other appropriate areas.
Policy CSR 6.1.12

**Policy PFE 5.1.14**
Work closely with the Solid Waste Authority in the preparation of public notices, educational materials, promotional materials to be distributed to residential and commercial customers.
Policy CSR 6.1.13

**Policy PFE 5.1.15**
Actively work with the waste hauler in the administration of the "Optional Benefits" described in Exhibit 13 of the current Agreement with the City:

- Collaborate in the administration of the "Recycle Delray" program, which promotes recycling through community events and outreach programs for local schools and businesses.
- Use the contribution made to the Delray Beach Public Library for recycling and composting educational outreach activities.
- Continue support of one Keep America Beautiful Coastal Cleanup event per year.
- Coordinate with the waste hauler to support the "Annual Shredder Day" providing free shredding services to the City and its residents.
- Coordinate to support the "You Recycle, We Replant" provision of the Agreement which provides for new or replacement trees in public places.

Policy CSR 6.1.14

**Policy PFE 5.1.16**
Prior to demolition, salvageable materials should be removed and sourced to upcycling and reuse organizations or recycled.
Policy CSR 6.1.15

# PFE 6 TRANSPORTATION AND MOBILITY

**PROVIDE TRANSPORTATION FACILITIES FOR ALL USERS AND PHYSICAL ABILITIES AND THAT MAINTAIN AND ENHANCE THE CHARACTER OF THE CITY, ITS NEIGHBORHOODS, DISTRICTS, AND CORRIDORS.**

**Performance Measures:** Success in addressing the Objectives and Policies of Goal PFE 6 shall be measured utilizing the following performance indicators:

- Reduction of deficient roads
- Increase in lane miles repaired and/or installed
- Increase in sidewalks repaired and/or installed
- Increase in planned and/or constructed bike lanes
- Increase in improved alleys
- Increase in planned or completed streetscape projects that incorporate landscaping, lighting, street furniture, etc.

**Objective PFE 6.1**
Maintain and enhance the City's street system to provide a safe, convenient, and aesthetically-pleasing multi-modal network throughout the City. [Policy Carried Forward]
CSR Objective 1.3

**Policy PFE 6.1.1**
Program installation of sidewalks on an annual basis, with the goal of completing a safe and convenient American's with Disabilities Act (ADA) compliant sidewalk system throughout the City by the year 2030. [Policy Carried Forward] (Similar to Policy E-3.2 but not verbatim)

**Policy PFE 6.1.2**
Improve the street network in accordance with the Complete Streets Policy adopted November 1, 2016.
CSR Policy 1.4.8

**Policy PFE 6.1.3**
Program installation of bicycle lanes on an annual basis, with the goal of completing the priority projects identified on Map MBL-Bicycle Network by 2030.

**Policy PFE 6.1.4**
Prioritize sidewalk and bicycle route improvements that provide access to schools, parks, and transit stops and stations.

**Policy PFE 6.1.5**
Coordinate with strategic partners, including the Downtown Development Authority and Community Redevelopment Agency, to create an improved and complete system of wayfinding signs throughout the downtown.

**Policy PFE 6.1.6**
Plan for and allocate funding for the design and construction of the Tri-Rail Coastal Link station.

**Policy PFE 6.1.7**
Continue to engage the public through the annual infrastructure hearing, neighborhood meetings, web-site postings, and other public outreach methods to identify streets and public spaces in need of improvements, including beautification.

**Policy PFE 6.1.8**
To improve public safety, evaluate streets in need of lighting improvements, determine associated costs, and prioritize phasing of such improvements.

**Policy PFE 6.1.9**
Provide funding for the streets reconstructing and resurfacing program to bring all roadways to an overall condition index (OCI) above 70 by 2030. [Policy Carried Forward] (Similar to policy E-3.1)

**Policy CSR 8.6.3**
Incorporate sea level rise, flooding and climate information into the planning, siting, construction, replacement and maintenance of public infrastructure, including roads, in a manner that is cost-effective and that maximizes the use of the infrastructure throughout its expected life span.

# PFE 8 PUBLIC OFFICE FACILITIES AND SERVICES.

**IMPLEMENT A COORDINATED AND COMPREHENSIVE PROGRAM FOR THE PROVISION OF OFFICE FACILITIES FOR THE CONDUCT OF CITY BUSINESS.**

**Performance Measures:** Success in addressing the Objectives and Policies of Goal PFE 7 shall be measured utilizing the following performance indicators:

- Development and implementation of a strategic asset management plan
- Number of public facility hardening projects
- Number of renewable energy projects

## Objective PFE 7.1

Implement a comprehensive program to maintain and upgrade existing public facilities to a state of the art level of service and attractive appearance. [Policy Carried Forward]

**Policy PFE 7.1.1**
Continue the established programs for the maintenance and repair of buildings and facilities in a timely manner to maximize their viability. [Policy Carried Forward]

**Policy PFE 7.1.2**
Replace irreparable or obsolete buildings and facilities and upgrade existing facilities to maintain their established level of service to the community. [Policy Carried Forward]

**Policy PFE 7.1.4**
Complete a needs assessment, including American's with Disabilities Act compliancy, of offices, meeting chambers, and other facilities serving the public at City Hall to help guide long term facility planning.

**Policy PFE 7.1.5**
Engage the public in decisions related to major facility replacement.

## Objective PFE 7.2

Improve the sustainability and resiliency of City facilities.

**Policy PFE 7.2.1**
Consider alternatives that increase sustainability and resiliency when making improvements and repairs to all facilities.
CSR Policies 5.1.6, 5.2.1, 5.2.8, 7.1.3, 8.6.7 and 8.6.8

**Policy PFE 7.2.2**
Prior to adding to the Capital Improvements Element, review projects for resiliency, including impacts from climate change, such as sea level rise and storm surge, future flooding, and heat conditions. The City shall focus on level of service standards, as one of the points of analysis, to assure that infrastructure useful life and service expectations can be met in the face of climate change impacts.
Policy CSR 8.6.15

**Policy PFE 7.2.3**
In order to meet the City's greenhouse gas reduction goals, and highlight renewable energy projects to the community, require any new major public facilities or retrofits (upgrade) include solar energy or other renewable energy source, where feasible.
Policy CSR 7.1.3

**Policy PFE 7.2.4**
Develop informational signage in city facilities to educate visitors about sustainability and resilience initiatives such as relative elevation or location from mean sea level identifiers.
Policy CSR 7.3.1

## Objective PFE 7.3

Implement programs to "harden" existing facilities and prevent disruption of service as a result of natural or other disasters.
Objective CSR 9.1

**Policy PFE 7.3.1**
All major repairs, reconstruction, or new construction of public facilities shall include design

features to "harden" the facility and to add, where appropriate, self-sustaining energy source (i.e. solar with backup battery power) to enable these facilities to continue to provide services and be used as a safe haven during storm events.
**Policy CSR 9.1.1**

**Policy PFE 7.3.2**
Ensure locally-owned public facilities that will be used as shelters, command centers, storage, staging or demonstration areas to meet the highest risk standards for new construction or substantial renovations.
**Policy CSR 8.6.8**

**Policy PFE 7.3.3**
Plan for, construct, and maintain an emergency operations center (EOC) with a brick and mortar facility, staff, equipment, technology, and training that will meet current and estimated future needs of the City of Delray Beach. (add dates to complete by)
**Policy CSR 9.1.5**

**Policy PFE 7.3.4**
Complete a renewable energy feasibility study on all City facilities within two (2) years to identify opportunities for renewable energy projects to power municipal operations, minimize disruptions from major storms and weather events coupling renewable energy with backup power storage and establish a renewable energy target for municipal operations. [2021].
**Policy CSR 5.2.8**

# *PUBLIC FACILITIES ELEMENT*

## *TABLE OF CONTENTS*



## LIST OF MAPS

# PUBLIC FACILITIES ELEMENT

***OF THE COMPREHENSIVE PLAN***

***CITY OF DELRAY BEACH***

## *BACKGROUND*

The text of the Element is a summary of the complete inventory, analysis, and recommendations which are contained in the following source documents:

- ❑ Water Distribution System Master Plan (Hazen & Sawyer, 1992)
- ❑ Water Supply Master Plan (CH2M Hill, 2007)
- ❑ 2015 10-Year Water Supply Facilities Work Plan (Kimley-Horn and Associates, 2015)
- ❑ Stormwater Master Plan (Kimley Horn, 2000)
- ❑ Wastewater Transmission System Master Plan (Hazen & Sawyer, 1992)
- ❑ 1996 Evaluation and Appraisal Report (City of Delray Beach, 1996)
- ❑ Alternative Water Treatment Study (CH2M Hill 2001)
- ❑ Reclaimed Water Master Plan (Mathews Consulting, 2003)
- ❑ Congress Avenue Corridor Capacity Study (Mathews Consulting, 2007)
- ❑ Roadway Conditions Atlas (City of Delray Beach, 2007)
- ❑ 2006 Evaluation and Appraisal Report (City of Delray Beach, 2006)
- ❑ 2017 Evaluation and Appraisal Report (City of Delray Beach, 2017)

The source documents, and other documents which are cited in the Element, are available for public review at the Planning and Zoning Department offices located at 100 N.W. 1st Avenue, Delray Beach, Florida.

# *INVENTORY AND ANALYSIS*

The following summaries have been prepared to facilitate review with the requirements of F.S. 163.3177. As a summary, only significant items are highlighted. The source documents should be referred to for more information.

A separate inventory and analysis is provided for sewer, water, drainage, and solid waste disposal facilities. Inventory and analysis dealing with groundwater aquifer recharge is addressed under the water subsection.

## SEWER FACILITIES

Wastewater treatment is provided by the South Central Wastewater Treatment Facility, located in Delray Beach. The facility is jointly owned by Delray Beach and Boynton Beach, under the responsibility of a board comprised of the City Commissions of both cities. Daily operations of the facility are overseen by an executive director, reporting to the board. Delray Beach Environmental Services Department is responsible for the wastewater collection and transmission system within the service area.

The service area coincides with the City's Planning Area plus service provided through contract to Highland Beach. Also included are several single and multi-family connections in the Town of Gulf Stream. The service area encompasses approximately 18 square miles, as shown on Map #1.

The wastewater collection system consists of approximately 355 miles of gravity and force mains interconnected to 126 lift stations. In addition, there are less than 100 septic tanks within the service area. The treatment plant was constructed in 1979, with a programmed life of 50 years (2029). Ultimate disposal is currently by ocean discharge of secondary effluent and land spreading of sludge. In late 2008, deep well injection will replace the ocean discharge except for emergency situations and DEP permitted exceptions. Also in late 2008, with completion of the Palm Beach County Biosolids Pelletization facility, land spreading of sludge will no longer be used. The new facility will dry and process the sludge into pellets for use in fertilizer. The design capacity of the treatment plant, established by its secondary treatment capacity, is 24 mgd. This capacity is shared equally between Boynton Beach and Delray Beach.

**CITY OF DELRAY BEACH**
**CAPACITY/DEMAND ANALYSIS (SEWER)**
**(Includes Service to City of Highland Beach)**

| CAPACITY | DEMAND ('07) | DEMAND (2025) |
|---|---|---|
| 12 mgd | 7.5 mgd | 9.5 mgd |

## Deficiencies

Upgrading and maintenance of lift stations requires on-going capital investment.

Infiltration into the collection system could impact future facility costs through capital expansion. This problem has been significantly reduced in recent years with the repair and reconstruction of the collection system east of I-95. An on-going program to reduce infiltration/inflow is a cost effective method of reducing the need for treatment facility expansion and requires on-going capital investment.

## POTABLE WATER AND GROUNDWATER RECHARGE FACILITIES

Water treatment is provided by the City of Delray Beach at the Water Treatment Plant. The geographic service area coincides with the Planning Area plus service provided to Gulf Stream through contract as a bulk customer. The service area encompasses approximately 19 square miles, as shown on Map #1.

The treatment plant, as noted within the 2015 10-Year Water Supply Facilities Work Plan is rated at 26 MGD by the Florida Department of Environmental Protection (FDEP). The City maintains a State certified laboratory, the primary responsibility of which is monitoring potable water quality. EPA Stage 2 Standards for disinfection by-products are being met through the use of supplemental chemical treatment.

**CITY OF DELRAY BEACH**
**CAPACITY/DEMAND ANALYSIS (WATER TREATMENT)**
**(Includes Service to Town of Gulf Stream)**

| CAPACITY | POTABLE WATER DEMAND (2015) | POTABLE WATER DEMAND (2030) |
|---|---|---|
| 26 mgd | 16.29 mgd | 18.20 mgd |

The water distribution system includes 430 miles of water mains ranging from 2 to 24 inch diameter, 2,635 fire hydrants, transfer pumps, and storage facilities with a capacity of 8.5 mg.

The City currently withdraws groundwater from the 30 active Surficial Aquifer System (SAS) wells in four wellfields and one (1) Floridan Aquifer System (FAS) well 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

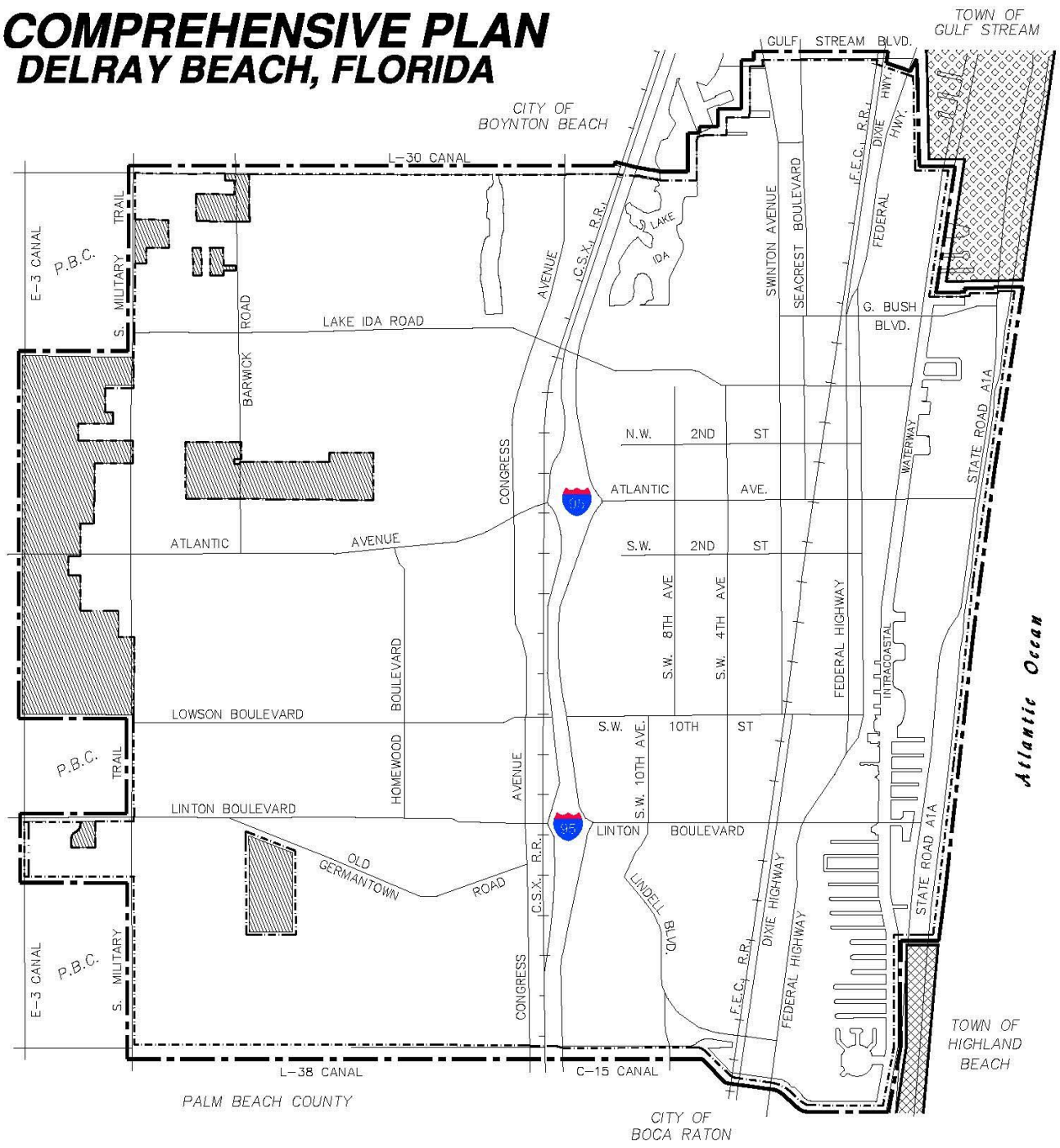
exceed 6,972 MG (19.10 MGD) and the maximum monthly allocation shall not exceed 654 MG (21.8 MGD). In addition, there are more than 1,000 domestic wells within the service area, predominantly used for irrigation. There are no major groundwater recharge areas within the Planning Area, although the entire region east of the Conservation Area is identified as a prime aquifer recharge area by the U.S. Geological Survey and the Palm Beach County Comprehensive Plan.

**Deficiencies**

Water mains of 2" diameter, found in older areas of the City, are not sufficient for fire protection. Funds are provided annually to upgrade these lines.

Needed improvements to the piping system have been identified to accommodate demand conditions and localized fire demands.

# COMPREHENSIVE PLAN
## DELRAY BEACH, FLORIDA

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MILE

GRAPHIC SCALE

CITY OF DELRAY BEACH, FLORIDA
PLANNING & ZONING DEPARTMENT

MARCH 2015

# PLANNING AREA
## MAP #1

LEGEND:
PLANNING AREA (ULTIMATE CITY BOUNDARY)
CITY LIMITS
TOWN OF GULF STREAM (WATER & FIRE SERVICE)
TOWN OF HIGHLAND BEACH (SEWER & FIRE SERVICE)
COUNTY JURISDICTION

## SOLID WASTE MANAGEMENT

The Solid Waste Authority has responsibility for the ultimate disposal of solid waste in the region. The City is responsible for collection of solid waste within the City limits through a contract with a private firm.

Solid waste is collected by the City's contractor and generally taken to a transfer station located within the City, then by Solid Waste Authority trucks to the regional landfill, located near West Palm Beach. The transfer station, located on S.W. 4th Avenue just south of Linton Boulevard, has a capacity of 1,000 tons per day and is operating at approximately 15% below its maximum capacity. This transfer station serves the south county from Boynton Beach Boulevard south to the County line. Other transfer stations used are outside the City.

The North County Regional Solid Waste Disposal Facility, operated by the Solid Waste Authority, is the ultimate disposal site. This facility occupies 334 acres, and consists of a Class 1 (garbage and incinerator residue) and a Class 3 (trash) landfill. The landfill, at its established Level of Service standard of 7.13 pounds per person per day, has sufficient capacity to serve until the year 2021. The Board of the Solid Waste Authority has authorized the initial design and permitting efforts to develop a new landfill on 1,600 acres owned by the authority. The capacity of this new landfill would extend the life of the solid waste system beyond the year 2065. In addition to the landfill, the facility provides recycling, waste-to-energy incineration and composting facilities. The total tonnage added to the landfill annually is 1,918,735 tons (2007). The City of Delray Beach contributes 70,800 tons per year (commercial and residential) to the landfill (2007), including garbage, trash, and vegetation. This equates to 6.02 pounds per person per day. The City's yearly contribution to the landfill is 4.4% of the total. The Delray Beach population of 64,360 (2007 estimate) represents 5.0% of the County population of 1,295,033 (2007 estimate). The City's impact on the landfill is, therefore, 16% less than the Level of Service standard and 11% less than its portion of the County population.

The City has an aggressive recycling program that began in 1990. The program includes curbside residential recycling for single family and multi-family homes. The program accounts for a reduction to the waste stream of 5,180 tons per year (2007). This represents a reduction of over 12% in the residential waste stream.

There were no problems or deficiencies with the collection system. Long truck queues at the transfer station sometimes cause congestion problems.

The capacity of the landfill was not estimated for this report. Such capacity analysis is under the jurisdiction of the Solid Waste Authority, and indicates sufficient capacity through the year 2021. A local issue relative to capacity would be whether the local government is meeting the established level of service standard of 7.13 pounds per person per day. As discussed above, Delray Beach is well below the standard, at 6.02 pounds per person per day.

## DRAINAGE

Responsibility for storm drainage in the City is divided among a hierarchy of state and regional agencies, the City, and landowners, as follows:

| AGENCY | RESPONSIBILITY |
|---|---|
| South Florida Water Management District | Major canals and structures; permitting |
| Lake Worth Drainage District | Lateral and equalizer canals and minor structures |
| City of Delray Beach/Palm Beach County | Public storm sewer system |
| Land Owners | On-site storm sewers and retention areas |

### Deficiencies

Local and City-wide drainage deficiencies are identified in the Stormwater Master Plan (Kimley-Horn, 2000). The City has programmed projects to correct the deficiencies identified in this report and achieve a Level of Service standard of 'C', with funding to come from the Stormwater Utility Fee.

## STREET SYSTEM

The City has repair and maintenance responsibility for most roads within the City limits. Exceptions to this include major roads under the jurisdiction of the State or County, and private roads maintained by land owners. The City maintains approximately 305.4 lane-miles of roadways (April, 2008).

The City has completed the 2000 Road Bond Program to reconstruct numerous streets under City jurisdiction. An annual program currently exists to resurface streets as needed. The program was developed to bring all city streets to Level of Service C, and to pave all unpaved streets which provide access to improved properties. Unpaved streets which do not currently provide access to improved properties will be paved by the developer with development of the property. In addition, there is a need to pave currently unpaved streets, particularly in areas added to the City by annexation. Approximately 2 miles of unpaved roads exist in the City (April, 2008).

There is no overall master plan for all the components of a street system, including roadways, sidewalks, street lights, drainage, and signs and markings. Without such a master plan, it is difficult to efficiently address problems in the area, and impossible to identify the proper level of funding needed to provide a uniform and equitable level of service to all parts of the City. These components are currently being added to the

citywide GIS system. When completed, this will provide the necessary information to identify problem areas and make funding decisions.

## BUILDINGS AND OTHER FACILITIES

An inventory of the major buildings and facilities owned by the City includes:

- ❑ City Hall and Community Center on NW 1st Avenue.
- ❑ City Attorney's Office on NW 1st Avenue.
- ❑ Central Fire Station on Atlantic Avenue.
- ❑ Four fire substations (#2, #3, #4, #5).
- ❑ Environmental Services complex on South Swinton Avenue.
- ❑ Water treatment plant on SW 2nd Avenue.
- ❑ Chemical/Generator Storage Building on SW 2nd Avenue.
- ❑ Public Safety Building (Police) on Atlantic Avenue.
- ❑ City Marina.
- ❑ Municipal Tennis Center and Stadium (operated by management firm).
- ❑ Municipal Golf Course (operated by a management firm).
- ❑ Lakeview Golf Course (operated by a management firm).
- ❑ Old School Square Complex (operated by a non-profit organization).
- ❑ Cason Cottage Museum (operated by a non-profit organization).
- ❑ Cemetery (mausoleum portion is operated by a lessee).
- ❑ Parks and Historic Structures (addressed in the Open Space & Recreation Element).
- ❑ Federspiel Parking Garage.
- ❑ Old School Square Parking Garage.
- ❑ Seacrest Soccer Complex.
- ❑ Delray Swim and Tennis Club (operated by management firm).

- ❑ Ocean Rescue Headquarters at Anchor Park

**Deficiencies**

There are no major deficiencies related to buildings and facilities.

## *NEEDS AND RECOMMENDATIONS*

Summarizing from the previous facility and performance analysis, the following needs and recommendations are identified in the City's Public Facilities Element.

- ❑ Continue the program for reduction of I/I in the wastewater collection system.
- ❑ Continue the program for extending water and sewer mains to inhabited areas in the City.
- ❑ Complete the citywide GIS street network inventory and mapping, including roadways, sidewalks, street lights, drainage, signs and markings.

# *GOALS, OBJECTIVES, AND POLICIES*

## GOAL AREA "A" *ENVIRONMENTAL PROTECTION*

Objective A-1 **Sources of Pollution**

Policy A-1.1 Septic Systems
Policy A-1.2 Rehabilitation of Sewer System

Objective A-2 **Solid Waste**

Policy A-2.1 Local Drop Off for Hazardous Waste
Policy A-2.2 Waste Level of Service

## *GOAL AREA "B" POTABLE WATER*

Objective B-1 **Water Supply**

Policy B-1.1 WWTP Effluent Recycling

Objective B-2 **Meeting Future Demands**

Policy B-2.1 Decrease in Consumption
Policy B-2.2 Level of Service
Policy B-2.3 New Development Concurrency

Objective B-3 **Groundwater Protection**

Policy B-3.1 Wellfield Protection
Policy B-3.2 Minimal Reliance on Eastern Wellfield

Objective B-4 **Enhancement of Water Quality (Potable)**

Policy B-4.1 Reports to the City Commission
Policy B-4.2 Water Main Inspection
Policy B-4.3 Discourage Urban Sprawl
Policy B-4.4 Alternative Treatment Methods

Objective B-5 **Water Supply Facilities Work Plan**

Policy B-5.1 Adoption of Work Plan
Policy B-5.2 Coordination with SFWMD
Policy B-5.3 Coordination with Town of Gulfstream
Policy B-5.4 Prioritization of Improvements
Policy B-5.5 Schedule of Improvements

## *GOAL AREA "C" SEWER COLLECTION AND WATER DISTRIBUTION SYSTEMS*

Objective C-1 **Master Plans**

Policy C-1.1 Water System Model
Policy C-1.2 Sewer System Model

Objective C-2 **System Improvements**

Policy C-2.1 Remedial Work - Sewer
Policy C-2.2 Remedial Work - Water

Objective C-3 **Availability of Facilities - Sewer**

Policy C-3.1 Obligations of New Development
Policy C-3.2 Upgrading existing Facilities

Objective C-4 **Availability of Facilities - Water**

Policy C-4.1 Upgrading of Existing Facilities
Policy C-4.2 Obligations of New Development

Objective C-5 **Revenue Allocations**

Policy C-5.1 General Fund Relationship
Policy C-5.2 Annual Allocations for Upgrading of System Components
Policy C-5.3 Financing of System expansions
Policy C-5.4 Coordination with Other Improvement Projects

Objective C-6 **Wastewater Treatment Plant**

Policy C-6.1 Level of Service
Policy C-6.2 Participation Formula
Policy C-6.3 Design Capacity

## *GOAL AREA "D" BUILDINGS AND FACILITIES*

Objective D-1 **Public Facilities**

Policy D-1.1 Repair and Maintenance
Policy D-1.2 Facility Replacement
Policy D-1.3 Accessibility

## *GOAL AREA "E" STREETS AND DRAINAGE*

Objective E-1 **Drainage Facilities**

Policy E-1.1 Project Priorities
Policy E-1.2 Design Standards
Policy E-1.3 Storm Water Management Regulations
Policy E-1.4 Design Frequency Standards
Policy E-1.5 NPDES Programs and Activities
Policy E-1.6 Storm Water Mapping System

Objective E-2 **Funding Mechanisms**

Objective E-3 **Street Resurfacing and Reconstruction**

Policy E-3.1 Street Resurfacing Program
Policy E-3.2 Sidewalk System

## *GOAL AREA "F" PUBLIC INFORMATION*

Objective F-1 **Public Information Resources**

Objective F-2 **Public Participation**

Policy F-2.1 Public Hearings Required Prior to Setting Priorities
Policy F-2.2 Local Planning Agency Responsibilities
Policy F-2.3 Priority Changes restricted

***GOAL AREA "A"*** ***THE PURPOSES, PROGRAMMING, AND PROVISION OF WASTE DISPOSAL FACILITIES SHALL BE DIRECTED BY THE GOAL OF PROVIDING A SAFE, FUNCTIONAL, ECOLOGICALLY SOUND, AESTHETICALLY PLEASING AND SUSTAINABLE PHYSICAL ENVIRONMENT, ELIMINATING ANY WASTE INTO THE INTRACOASTAL WATERWAY AND OCEAN AND ENCOURAGING RECLAIMED WATER USAGE AS A WATER CONSERVATION MEASURE.***

**Objective A-1**

Specific programs to mitigate the adverse impacts of point sources of pollution, as identified in the following policies, shall be developed and implemented by the City's Environmental Services Department and the South Central Regional Wastewater Treatment Facility Board, as appropriate.

**Policy A-1.1** Existing septic tanks which are located in sewered areas throughout the City shall be removed from use as necessary pursuant to Florida Statutes. Septic systems deemed subject to flooding, or with chronic drainfield problems that may have an adverse impact on the environment shall be abandoned and connection made to the central sewer system.

**Policy A-1.2** Programming of improvements to the sewer system shall place a high priority upon the rehabilitation of portions of the original system which experience infiltration and leakage.

**Objective A-2**

Programs to address the collection and disposal of solid waste shall be developed and implemented with particular regard to environmentally sound procedures.

**Policy A-2.1** The City shall support the continued operation of the "transfer" station or suitable alternative for the collection of small amounts of hazardous substances from individuals, and public information efforts which educate the public on the identification and proper disposal of household hazardous waste.

**Policy A-2.2** A level of service for solid waste at a generation of 7.13 pounds per person per day is hereby established within the City of Delray Beach.

***GOAL AREA "B"*** ***POTABLE WATER SHALL BE PLANNED FOR AND PROVIDED SO THAT IT IS AVAILABLE TO ACCOMMODATE DEMANDS BOTH IN TERMS OF QUANTITY AND QUALITY WHILE ALSO MAKING WISE USE OF THIS LIMITED RESOURCE AND THE LIMITED RESOURCE OF CAPITAL.***

**Objective B-1**

Even though the City has projected an adequate water supply, it shall provide for increasing draw-down and the potential of reduced capacity through salt water intrusion and/or extended drought conditions through optimum use of existing wells, development of new wells and development of alternative technologies and methods of providing water. This objective shall be met in the performance of the following:

**Policy B-1.1** The City, through the South Central Regional Wastewater Treatment Facility Board, shall continue to monitor the area of effluent reuse with the ultimate goal of reclaiming and reusing more effluent from the wastewater treatment plant for irrigation. Priorities for expansion should be on golf courses in the City, large home owner associations on master meters, and in the Coastal Planning Area.

**Objective B-2**

To insure that potable water is available to meet consumption, a reduction in demand through year- round conservation and treatment plant enhancement shall be achieved.

**Policy B-2.1** The City shall maintain its program of responsible consumption of water and shall strive to decrease the overall per capita consumption of water through continued implementation of the following techniques and programs: (Also see Objective A-4 of the Conservation Element).

- ❑ Maintaining its water rate structure which establishes an inverted block rate structure to set higher consumption rates for increased water use in order to promote reductions in water consumption as well as establishment of conservation surcharges, based on South Florida Water Management District formulae, and keyed to various levels of drought alert.

- ❑ Mandatory use of wells for irrigation purposes where conditions permit.

- ❑ Continued enforcement of water use laws.

- ❑ The consideration of xeriscape landscaping alternatives for all new development during the review of site and development plans.

- ❑ Continuation of the regular preventive maintenance program for water mains, pumps and meters.

- ❑ Continuation and expansion of the wastewater effluent reuse program.

- ❑ Participating in SFWMD's Conservation Hotel and Motel Program (CHAMP) to promote water conservation for many of the City's hotels.

**Policy B-2.2** The City's water utility shall perform at the following levels of service:

- ❑ Average finished water design flow of the water system @ 234.8 gpcd.

- ❑ Storage capacity for the water system @ 15% of maximum flow plus fire reserve at 1.5 mg, plus 25% of that total. (Based on 2007 figures, this amount is 5.6 mg).

- ❑ Minimum pressure for the water system @ 20 psi.

*(**Note**: The above standards are currently met throughout the system).*

**Policy B-2.3** It shall be an obligation of new development to provide water system improvements to accommodate demands created by it and to meet the City's minimum design standards concurrent with development.

**Objective B-3**

The City shall provide for the protection of its potable water resources at all times, including, but not limited to, power outages and other emergency situations.

**Policy B-3.1** Protection of existing wellfields shall be accommodated through the continued implementation of monitoring for salt water intrusion, wastewater pretreatment programs and monitoring wells and through enhanced quality control programs which provide early detection of possible contamination.

**Policy B-3.2** The City shall maintain provisions in the program for raw water supply to require only minimal reliance upon wells which are subject to salt water intrusion.

**Objective B-4**

The City shall provide for the enhancement of the quality of its water through implementation of the following:

**Policy B-4.1** Annual consumer confidence reports which describe the current condition of potable water, including at a minimum, water quality, consumption trends, and treatment methods, shall be distributed to residents.

**Policy B-4.2** Whenever the opportunity occurs to uncover or examine an existing water main, an inspection shall be conducted relative to the presence of asbestos cement in the main. The results of each such inspection shall be logged and made a part of the Operation and Maintenance Plan.

**Policy B-4.3** The City shall assist in discouraging urban sprawl within areas of County jurisdiction by denying requests to make water service available outside its existing Planning Area to areas which could be developed at low density with City water facilities.

**Policy B-4.4** The City shall continue to meet the EPA stage 2 disinfection by-product rule requirements.

**Objective B-5**

The City shall ensure that there is an adequate water supply to meet existing and projected potable water needs in emergency and nonemergency situations, with the recognition that development which increases density also increases the demand for water.

**Policy B-5.1** The City shall adopt and maintain a Water Supply Facilities Work Plan for at least a ten year period, based on the availability and appropriate use of regional water resources and the combined use of alternative water supplies to diversify the City's source of water and reduce dependence on the surficial aquifer. The Work Plan shall be consistent with the City's Water Use Permit renewals.

**Policy B-5.2** The City shall consider the most current version of South Florida Water Management District's Lower East Coast Water Supply Plan and Regional Water Plan in developing a Water Supply Facilities Work Plan. The Work Plan will be updated within 18 months following an update of the Regional Water Supply Plan.

**Policy B-5.3** The City will coordinate planning efforts regarding population projections and water demand with those of the Town of Gulfstream, to which it provides water service.

**Policy B-5.4** The City will use the Water Supply Facilities Work Plan to prioritize and coordinate improvements to the City's water supply system.

**Policy B-5.5** The City will maintain a current five-year schedule of capital improvements to the Water Supply System.

**GOAL AREA "C"** ***SEWER COLLECTION SYSTEMS AND WATER DISTRIBUTION SYSTEMS SHALL BE PROVIDED TO UNSERVED AREAS, AND EXISTING SYSTEMS SHALL BE UPGRADED IN SUCH A MANNER AS TO PROVIDE FOR THE PROTECTION OF THE ENVIRONMENT THROUGH AN ACCELERATED IMPROVEMENT PROGRAM.***

**Objective C-1**

The condition and inventory of the water and sewer systems shall be kept current through regular updates of the City atlas and surveillance programs.

**Policy C-1.1** The water distribution system atlas shall be maintained on an on-going basis and shall reflect current system inventory. Operational characteristics will be maintained utilizing an asset management program such as the Hansen Data Base Program, which shall be used in the planning of system extensions and upgrade requirements.

**Policy C-1.2** The wastewater collection and transmission system atlas shall be maintained on an on-going basis and shall reflect current system inventory. Operational characteristics will be monitored by radio telemetry and surveillance programs, and shall be used in the planning of system extensions upgrade requirements.

**Objective C-2**

Upgrading of sewer and water facilities shall occur as quickly as possible based on available funding. System upgrades shall be funded through annual appropriations in the Water and Sewer Renewal and Replacement Fund.

**Policy C-2.1** A study has been completed determining the total program cost of addressing remedial work needed, for wastewater lines and lift stations, to correct the problems with inflow and infiltration. The City shall allocate annual expenditures to complete the project by 2015.

**Policy C-2.2** A study has been completed determining the total program cost of addressing remedial work needed to correct deficiencies in existing water lines. The City shall allocate annual expenditures to complete the project by 2015.

**Objective C-3**

Installation of wastewater collection facilities shall be programmed and provided when the need is demonstrated.

**Policy C-3.1** New development shall be responsible for extending sewer service to and through the land to be developed. Said extensions shall meet the City's performance standards.

**Policy C-3.2** Upgrading of existing wastewater facilities shall be provided for through annual appropriations in the capital improvement program.

**Objective C-4**

Installation of potable water distribution facilities shall be programmed and provided when the need is demonstrated.

**Policy C-4.1** Upgrading of existing potable water facilities shall be provided for through annual appropriations in the capital improvement program.

**Policy C-4.2** New development shall be responsible for extending water service to and through the land to be developed. Said extensions shall meet the City's performance standards.

**Objective C-5**

Capital raised through the water and sewer enterprise funds shall be allocated as required by bond covenants.

**Policy C-5.1** Transfers from enterprise funds to the general fund are made only for the fund's proportionate share of administrative costs and an in-lieu of tax payment.

**Policy C-5.2** Annual allocations shall be provided for upgrading system components (i.e. manholes, hydrants, etc.) in the Water and Sewer Renewal and Replacement Fund.

**Policy C-5.3** Upgrading of existing systems to construction and level of service standards and extension of new facilities to unserviced, inhabited areas shall be financed through appropriations in the Water and Sewer New Capital Outlay Fund.

**Policy C-5.4** Priorities for projects shall also consider other improvement projects (e.g. street construction and drainage) in establishing priorities.

**Objective C-6**

The City Commission in its role with the Board of the South Central Regional Waste Water Treatment Plant shall examine ways in which increased costs associated with capital expansion can be avoided with respect to property owners within the City.

**Policy C-6.1** The Level of Service of the waste water treatment plant is hereby established as 115 gpcd up to the plant capacity of 12 mgd, in addition to the specific requirements of Boynton Beach.

**Policy C-6.2** Commitments by the South Central Regional Waste Water Treatment Board for capital expansion at the wastewater treatment plant, are based on a 50%/50% cost sharing by the City of Delray Beach and the City of Boynton Beach. Costs related to operating the plant is based on the usage of Delray Beach and Boynton Beach respectively.

**Policy C-6.3** Average and peak flow design capacity for the Regional Wastewater Treatment Plant shall be 24 mgd and 30 mgd respectively. Thus, capacity need shall be monitored by the South Central Wastewater Regional Treatment Plant Board.

## *GOAL AREA "D"* *A COORDINATED AND COMPREHENSIVE PROGRAM FOR THE PROVISION OF ADEQUATE OFFICE FACILITIES FOR THE CONDUCT OF CITY BUSINESS SHALL BE CONTINUED.*

### Objective D-1

Provisions are to be implemented to maintain and upgrade existing public facilities to a state of the art level of service and improve the appearance of the facilities.

**Policy D-1.1** The City shall continue its established program for the maintenance and repair of buildings and facilities, including such items as roof replacement and major structural repair, in a timely manner to maintain the viability of the facility.

**Policy D-1.2** The City shall continue its established program for the replacement of irreparable or obsolete buildings, facilities, and major facility elements and the upgrading of existing facilities to maintain their ability to deliver the established level of service to the community.

**Policy D-1.3** All new construction projects shall be in accordance with Federal guidelines on accessibility. The City shall make modifications to existing facilities that are easily achievable without great expense, such that the facility will be in accordance with Federal guidelines on accessibility.

## *GOAL AREA "E"* *PROPERTY DAMAGE AND INCONVENIENCE TO THE PUBLIC CREATED BY FLOODING AND POOR STREET CONDITIONS SHALL BE SUBSTANTIALLY REDUCED AND, WHERE POSSIBLE, ELIMINATED THROUGHOUT THE CITY.*

### Objective E-1

A capital improvement program directed specifically to storm drainage and runoff management has been adopted by the City Commission, and capital projects, as

identified in that program, shall be implemented with funding to come from the Stormwater Utility Fee.

**Policy E-1.1** Criteria for determining project priorities shall be as defined in the Stormwater Master Plan, and based upon correcting current, localized problems.

**Policy E-1.2** Minimum design standards for determining the scope of drainage projects shall be such as to establish a level of service at least equal to the standard of retaining the first one inch of runoff for the entire site, or 2.5 inches of water storage times the percentage of impervious area, whichever is greater, to protect water quality.

**Policy E-1.3** Storm water drainage regulations which provide for the protection of natural drainage features and ensure that development utilizes storm water management systems which are compatible with this objective shall be retained.

**Policy E-1.4** The City shall maintain through regulations the minimum design storm return frequency for stormwater facilities capacity.

**Policy E-1.5** The City shall protect and enhance surface water quality through the full implementation of programs and activities included in the National Pollutant Discharge Elimination System (NPDES) permit.

**Policy E-1.6** The City shall maintain a stormwater mapping system and maintenance program for storm sewers and structures.

**Objective E-2**

Drainage improvements and flood control measures shall be financed through the Stormwater Utility Fee. Funded projects shall be located throughout the City as opposed to being concentrated in a single quadrant. The fee shall be reassessed upon completion of the program.

**Objective E-3**

The street system under the City's jurisdiction shall be maintained and enhanced to provide a uniform level of service throughout the City and provide a safe and convenient transportation network.

**Policy E-3.1** The program of resurfacing streets shall be maintained with at least the current funding level.

**Policy E-3.2** The City shall program installation of sidewalks on an annual basis, with the goal of completing a safe and convenient sidewalk system throughout the City by the year 2010.

***GOAL AREA "F"*** ***THE NEED FOR ENHANCEMENT OF PUBLIC FACILITIES AND THE PROCESSES USED TO IDENTIFY, PRIORITIZE, AND FINANCE IMPROVEMENTS SHALL BE PUT FORWARD IN A MANNER WHICH IS EASILY UNDERSTOOD BY THE PUBLIC AND IS CONSISTENTLY AND EQUITABLY APPLIED.***

**Objective F-1**

Public knowledge and understanding of public facilities and infrastructure planning shall be assured through continuation of the following practices: display of system maps for water, sewer and drainage in City Hall; ready availability of the Five Year Capital Improvement Plan; prominent display of pamphlets, innovative methods and website additions addressing water conservation, solid waste disposal, and other subjects relative to public facilities.

**Objective F-2**

Public awareness of the methods used to determine public improvement activities, and public input to the process, shall be encouraged.

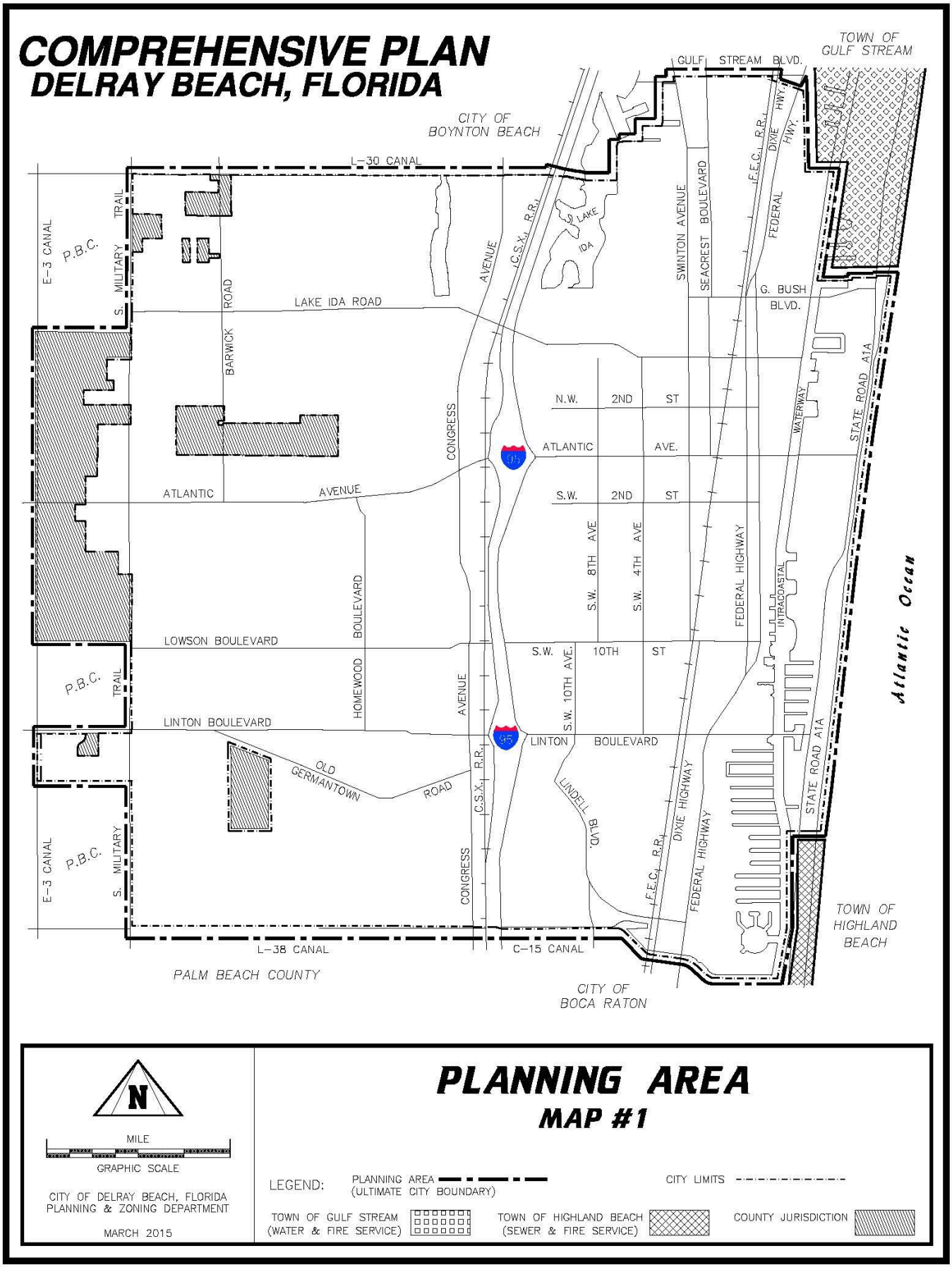
**Policy F-2.1** Public input through testimony received at public hearings, advertised and held before the Local Planning Agency, shall be solicited annually during winter months in order to identify geographic areas which are most in need of improvements.

**Policy F-2.2** Criteria, as identified in the Capital Improvement Element, shall be followed in the establishment of priorities for construction of public facilities. On an annual basis, the Local Planning Agency shall forward to the City Commission a listing of new or revised priorities with written findings as to the relationship of projects to those criteria.

**Policy F-2.3** Once established, program priorities shall not be altered except as allowed in the policies established for implementation of capital improvement programming.

**Water Supply Facilities Work Plan Sub-Element**

(Note: the 2015 Water Supply Facilities Work Plan Sub-Element is attached as an Appendix)


COMPREHENSIVE PLAN
DELRAY BEACH, FLORIDA
TOWN OF GULF STREAM
GULF STREAM BLVD.
CITY OF BOYNTON BEACH
L-30 CANAL
E-3 CANAL
P.B.C. TRAIL
S. MILITARY TRAIL
BARWICK ROAD
LAKE IDA ROAD
LAKE IDA AVENUE
C.S.X. R.R.
SWINTON AVENUE
SEACREST BOULEVARD
F.E.C. R.R.
DIXIE HWY.
FEDERAL HIGHWAY
G. BUSH BLVD.
WATERWAY
STATE ROAD A1A
CONGRESS AVENUE
N.W. 2ND ST
ATLANTIC AVE.
S.W. 2ND ST
ATLANTIC AVENUE
S.W. 8TH AVE
S.W. 4TH AVE
INTRACOASTAL
Atlantic Ocean
LOWSON BOULEVARD
HOMEWOOD BOULEVARD
S.W. 10TH ST
S.W. 10TH AVE.
LINTON BOULEVARD
OLD GERMANTOWN ROAD
LINDELL BLVD.
DIXIE HIGHWAY
TOWN OF HIGHLAND BEACH
L-38 CANAL
C-15 CANAL
PALM BEACH COUNTY
CITY OF BOCA RATON
N
MILE
GRAPHIC SCALE
CITY OF DELRAY BEACH, FLORIDA
PLANNING & ZONING DEPARTMENT
MARCH 2015
PLANNING AREA
MAP #1
LEGEND:
PLANNING AREA (ULTIMATE CITY BOUNDARY)
CITY LIMITS
TOWN OF GULF STREAM (WATER & FIRE SERVICE)
TOWN OF HIGHLAND BEACH (SEWER & FIRE SERVICE)
COUNTY JURISDICTION