DESCRIPTION

City of West Palm Beach – Stormwater Program Application

A. POPULATION

The City of West Palm Beach is home to over 110,200. It is the County Seat of Palm Beach County, located in Southeast Florida.

B. PERSONNEL

Staff that work on stormwater issues span several departments and all levels of the City. Stormwater is officially housed in the Utilities Department but is heavily supported by the Engineering Department and Mayor's Office of Sustainability. **31 full time employees are fully dedicated to stormwater**. Many others (50+) support stormwater as part of other programs throughout the City.

C. BUDGET AND FUNDING

West Palm Beach established a dedicated Stormwater Utility in 1993. The City also currently manages a handful of State and Federal grants related to stormwater and bonded over $25 Million to fund capital improvements (solely for stormwater) for 2017-2019.

D. EXISTING GOALS

The mission of the Public Utilities Department is to provide efficient, reliable and economical water, wastewater and stormwater service for our Customers while providing a work environment where employees are valued, respected and appreciated.

Our vision is advancing a customer-service-driven utility that is efficient and effective; supplying exceptional potable water and wastewater service that surpasses all federal and state standards; pumping and distributing wastewater, stormwater and source water to secure customers' health and safety; and leading environmental stewardship by restoration and preservation of our resources, promotion of water conservation, provision of alternative water resources and education of our natural areas.

The City completed five major planning efforts in the past several years that were focused on stormwater/water quality and completely re-envisioned their future as an integrated and sustainable surface water system. These efforts helped the City in the establishment of detailed goals related to programmatic and capital investments for stormwater. These efforts included:

- The City's Holistic Stormwater Master Plan
- The City's Vulnerability Assessment
- Advanced Resiliency Planning Phases I and II (Now Entering Scenario Planning)
- An increased focus on green infrastructure and sustainability (including implementation of the Stormwater Master Plan and Multiple LID Projects)
- Water Quality Baseline Reporting

CITY OF WEST PALM BEACH

STORMWATER PROGRAM

UNIQUELY INTEGRATED - DATA DRIVEN – SUSTAINABLY VISIONARY

FSA EXCELLENCE AWARDS – PROGRAM CATEGORY SUMMARY

GOALS AND OBJECTIVES

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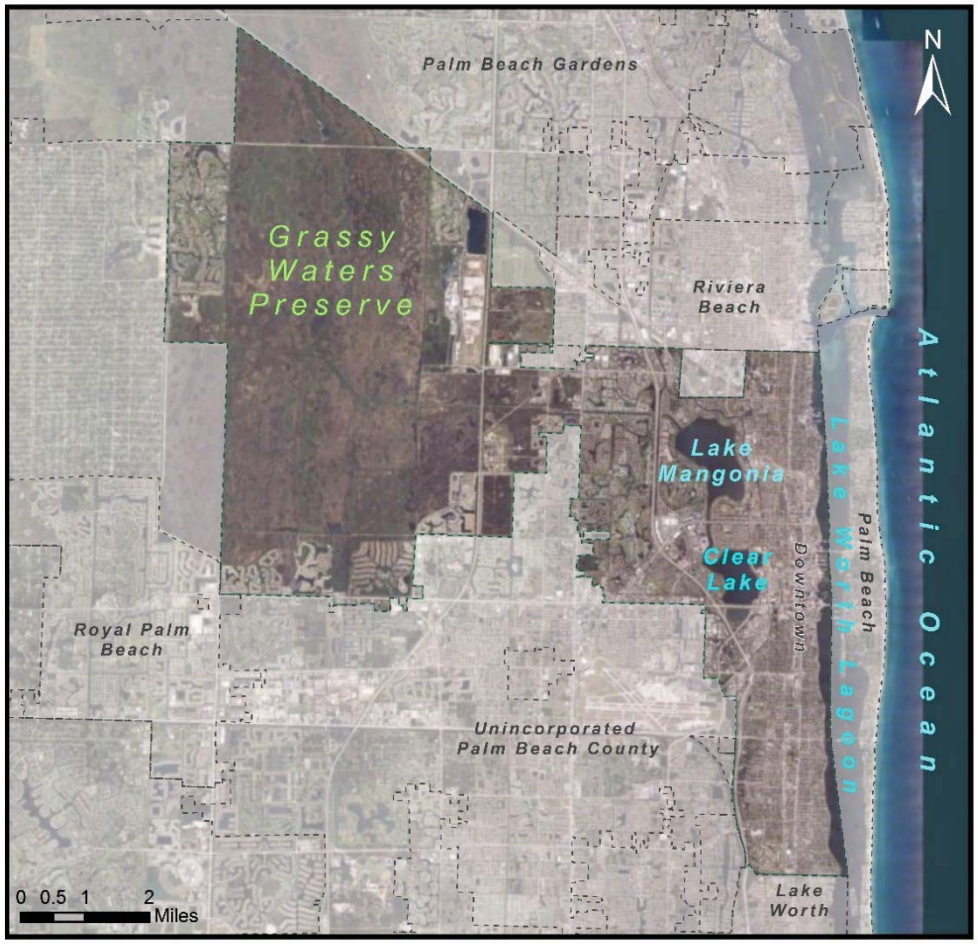

BUDGET AND FUNDING

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WEST PALM BEACH

60 square miles and 600 subbasins

Adjacent to the Lake Worth Lagoon and Loxahatchee River Basin

Over 38% Natural Areas

UNIQUELY INTEGRATED

A CITY THAT MANAGES A TRUE INTEGRATED WATER SYSTEM

The City of West Palm Beach (WPB or City) is a historic community located in South Florida of approximately 110,200 residents. WPB consists of a thriving downtown area and several distinctive and historical residential and commercial communities. The City's Stormwater Utility was established in 1993. West Palm's water supply is one of the only surface water supplies in the State of Florida. In recent years, the City has become one of the most active and innovative American cities in terms of sustainability and resiliency planning.

A critical part of West Palm Beach's system is Grassy Waters Preserve (pictured above), a historic remnant of the Florida Everglades. *Grassy is not only part of the City's Water Supply, it is a critical ecologic and educational resource.* It is home to both threatened and endangered species – most notably the snail kite. Grassy Waters occupies 38% of the City or over 23 square miles.

WPB exists in a very complex socio-economic and hydrologic environment. It is bordered by several other municipalities, Palm Beach County, and the Lake Worth Lagoon. The City also includes some surface water resources and structures that are managed by special districts, FDOT, and the SFWMD.

STORMWATER UTILITY

Due to the complexity of the City, the City administers a 3-tier stormwater utility. This allows for discounted rates for those within special districts.

INFRASTRUCTURE

GREEN AND GRAY

- Integrated stormwater/water system
- 160 miles of storm sewer with 9850 structures
- 14 miles of canals
- 7 stormwater pumps
- Over 20 LID projects
- 1 Million $ Tree Canopy Investment
- 24-hour maintenance staff and fleet (20 vehicles)

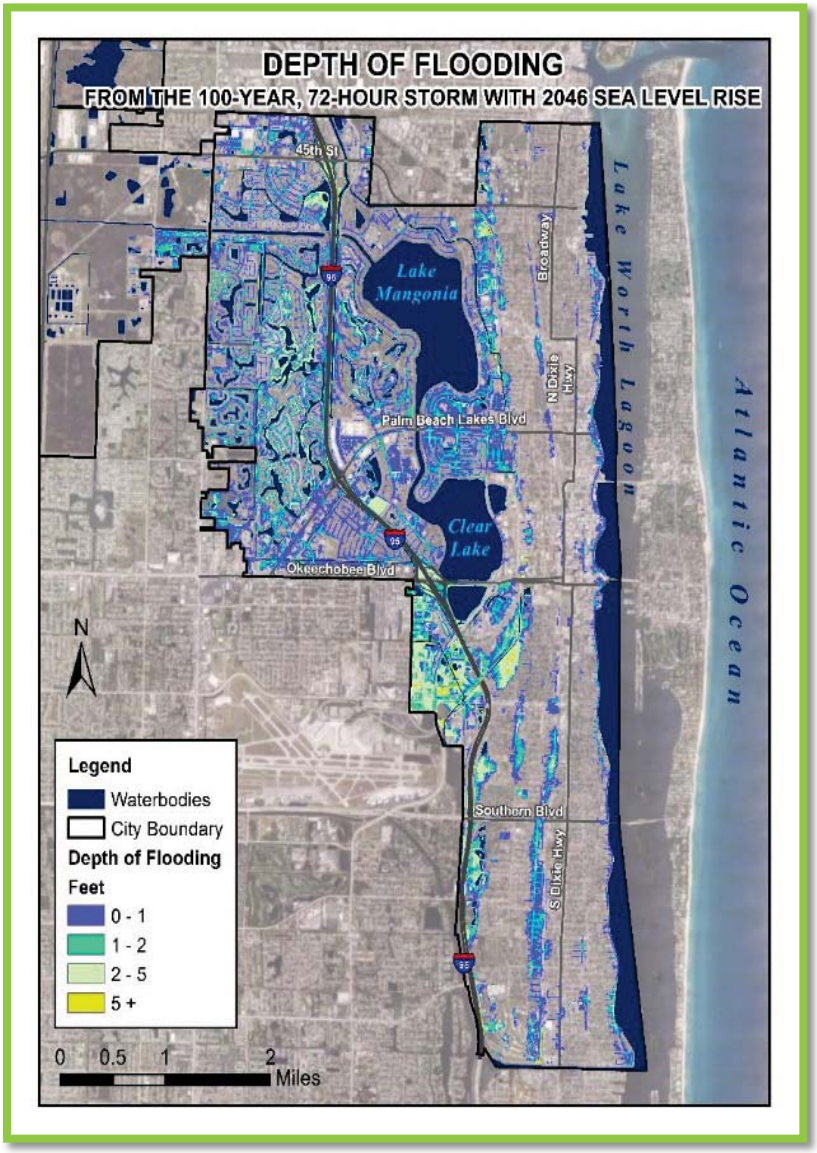
MODELS AND GIS

- Detailed Citywide ICPR 4 Model
- SIMPLE Pollutant Loading Model
- HEC Model for Major Canals
- Stormwater Geodatabases
- 2018 LIDAR
- Multiple Floodplain Coverages – including 2046 Sea Level Rise Scenarios

DATA DRIVEN

A CITY THAT TAKES ON TOUGH SCIENTIFIC, ENGINEERING, AND REGULATORY QUESTIONS

The City of West Palm Beach completed several major data collection and analysis efforts over the past several years. *These efforts consisted of both traditional stormwater planning efforts but also emerging needs – including several studies geared towards addressing the concerns of climate change and sea level rise.* The City also views stormwater through a holistic lens and integrates stormwater planning with issues pertaining to greenhouse gases emissions, multiple climate threats, mobility, socioeconomic, and complex combinations of neighborhood improvement projects. The City has three permanent citizen-led committees that provide feedback on Stormwater and Water Quality. These committees include the Water Advisory Board, Sustainability Advisory Committee, and most notably, the City Watersheds Committee. A diverse group of Business and Citizen leaders provide ongoing feedback to the City regarding a wide variety of stormwater and water quality issues.



The City's recent stormwater planning efforts are summarized on the following pages.

AT LEFT: A broad cross-section of City staff considers some tough questions during a recent resiliency planning session.

2014 – 2016 - Holistic Stormwater Master Plan: In 2014, the City committed to a vision for its stormwater program through the development of a holistic Stormwater Master Plan (SWMP). The SWMP is the first stormwater plan of its kind in South Florida that not only includes traditional development of capital improvement projects but also drives the City's vision to proactively modernize and adjust to the new realities of climate change specific to stormwater management. The SWMP leverages the best of traditional technologies and integrates the use of resiliency planning and catered technologies to better prepare the City for future conditions. Some of these technologies include green infrastructure and low impact development, as well as modernized methods to better manage hydrology, hydraulics, and water quality throughout the City. This project was awarded a Large City Honorable Mention at the 2018 Mayors' Climate Protection Awards in 2018. This was a top honor for the U.S. Conference of Mayors and this project was compared to projects undertaken by major U.S. cities such as New York City, Phoenix, Austin, and Minneapolis.

A summary of the SWMP is provided below

2017 - The City achieves a CRS Rating of 5: One of the highest CRS ratings in Florida. This increase in CRS Rating resulted in millions of dollars of flood insurance savings across the City on an annual basis. Concurrent with this effort – the City conducted a parcel-by-parcel review of FEMA's preliminary DFIRM maps which resulted in another $7 million in annual savings to City residents.

2017-2019 – Condition Assessment: As a first step in developing a long-term stormwater asset management program, the City embarked upon a condition assessment initiative to aid in identifying remaining service life of stormwater assets, with the ultimate goal of using this information (along with a risk analysis) to focus its investments on the City's most critical stormwater infrastructure.

2017 – 2019: Advanced Resiliency Planning (Vulnerability Assessment + Phase I and II Analyses): West Palm Beach (WPB) faces increasingly severe impacts from climate-related threats (flooding, drought, sea level rise, tropical storms, and extreme heat). WPB is simultaneously dealing with stressors unrelated to the climate that increase demand on City resources and services such as rapid population growth and development pressures. To better prepare for and adapt to these changing realities, WPB undertook an in-depth quantitative analysis to help City decision makers understand which assets in the City are most vulnerable to specific threats and to develop and prioritize potential solutions. This project is now entering a third phase, which will likely include considerations for specific threat-asset scenarios.

2019 – Stormwater & LID Manual: The City recently began coordination with local officials and SFWMD regarding the creation of a Stormwater and LID Manual. No other South Florida community has completed a manual of this type.

2014 – 2019 Water Quality Baseline Reporting: The City of West Palm maintains a network of monitoring stations in a variety of freshwater aquatic resources within the City limits including canals, lakes, and wetlands. The City is working to compile and review all water quality data in the city to better inform water management activities. The City plans to assemble a multidisciplinary expert team to peer review and further assess the aquatic data in 2019.

SUSTAINABLY VISIONARY

STORMWATER AS PART OF THE GREATER SUSTAINABLE VISION

As one of her first acts as Mayor, Jeri Muoio promoted the Office of Sustainability into her office. This unique restructuring allowed the City's sustainability team to make significant leaps over the past several years on several initiatives that involve stormwater and water quality. *As of 2019, the City of West Palm Beach has become an international leader in addressing the many complexities of being a thriving urban and coastal community.* WPB was one of the first Florida communities to study resilience and conducted planning efforts dating back to 2014 - and planning is still underway.

Mayor Jeri Muoio led this charge on sustainability during her tenure and was an invited panelist at the historic COP-21 Summit in Paris, France. *Subsequently, she has been recognized as a 'Climate Mayor' and is a charter member of the 'We Are Still In' organization promoting the continued efforts and goals of the Paris Climate Agreement.* In 2015, WPB was recognized as the first Four-STAR Certified City in Florida by STAR Communities, a national nonprofit organization focused on rigorous Best Management Practices in the seven areas of Built Environment, Climate & Energy, Economy & Jobs, Education, Arts & Community, Equity & Empowerment, Health & Safety, and Natural Systems. WPB earned high marks within Natural Systems due to the many efforts already outlined in its Stormwater initiatives. *West Palm Beach also makes a strong connection between stormwater and trees.* Recently, the City set aside $1M for tree canopy improvements that will not only positively impact stormwater, but also provide shade and cooling to encourage more biking and walking throughout the community. Over 4000 smaller native trees have been distributed to residents and businesses over the past four years as well. The City is also ISO 14001 Certified – which includes a process to track continual improvement in terms of environmental policy.