



The City of Tarpon Springs encompasses approximately 8.5 square miles with a stormwater program staff of 9 to serve the needs of approximately 25,176 residents.

Increased urbanization and infill development throughout the years has overtaxed the City's aging stormwater infrastructure and resulted in numerous flooding problems. As a coastal community, the City also has very unique topography ranging from 2 feet to 56 feet (NAVD), resulting in numerous closed basins with no stormwater infrastructure.

### **City of Tarpon Springs Stormwater Program Goals and Objectives**

**Goal 1:** Mitigate the potential for flooding and improve water quality in surrounding waterbodies.

**Objective 1:** Continue an active maintenance program of stormwater facilities.

**Objective 2:** Continue stormwater project capital improvements program.

**Goal 2:** Inform the public of their part in protecting the stormwater system and surrounding waterbodies.

**Objective 1:** Perform regular stormwater educational programs, events, and/or activities.

To achieve these goals and objectives, the City created their Stormwater Action Plan (SAP) which resulted in a prioritized stormwater capital improvement plan for implementation and water quality improvements. The SAP is a "living document", with quarterly updates to capture additional problem areas and updating costs to assist with programming adequate funding.

Development of the SAP included:

- **Data Collection:**
  - Review of 1992/1993 Master Drainage Study
  - Existing City/FDOT/Pinellas County flooding complaints
  - Historic SWFWMD aerials
  - LiDAR contour data
  - Delineation of City's drainage basins
  - Inventory of City's existing drainage facilities
  - Pinellas County Property Appraiser data
  - FEMA flood maps
  - Field investigations on rain-day conditions
  
- **Flooding Complaint Analysis:** Existing flooding locations were compiled. Flooding locations outside of the City's jurisdiction were separated. A total of 36 jurisdictional flooding locations were identified and for each one, two conceptual solutions were developed. For each of the conceptual solutions, cost estimates were developed that included survey, geotechnical, final design and permitting services, estimated property costs, construction mobilization/materials, and a 25% contingency for project unknowns.



- **Development of Scoring Criteria:** Scoring criteria for these key elements were developed:
  - Traffic Safety
  - Emergency Access/Routes
  - Private Property Impacts
  - Environmental Impacts
  - Problem Documentation
  - Maintenance
  - City Overall Score

All flooding locations received a total SAP score.

- **Cost/Benefit Analysis:** The cost estimates are divided by its respective total SAP score to develop the total cost/SAP point system. Alternatives are then sorted from low to high by their total cost/SAP point to create the City's stormwater capital improvement program (CIP). **This ranking of the total cost/SAP point system gives priority to those projects that will bring the most benefit to the community and environment with the least amount capital cost.**
- **10-year Stormwater Capital Improvement Program:** Initially, 24 individual stormwater projects were planned. As the City continues to grow, additional stormwater problem areas are added to the stormwater CIP using this same procedure.

The stormwater CIP is funded through the City's Stormwater Utility Fee which yields approximately \$1.8 million/year. A stormwater revenue analysis was completed in 2015, resulting with a Commission approved \$0.50 annual increase until FY 2025.

# City of Tarpon Springs Stormwater Program



- Staff of 9 (all certified and trained annually for illicit discharge)
- Maintains 32 major outfalls
- Emphasis on water quality and reducing stormwater pollution from its municipal separate storm sewer system (MS4)
  - Public Outreach / Education
  - Street Sweeper Program
  - Continued pollutant source tracking – *Whitcomb Bayou Water Quality Sampling*
- Developed Fertilizer Ordinance; includes retail sales and application restrictions
- Monthly reviews and treatment of aquatic growth control
- Noted improvements in water quality include:
  - Decreasing total phosphorus and total suspended solids in the Anclote River
  - Decreasing total phosphorus and total suspended solids in St. Joseph's Sound
  - Decreasing total nitrogen and increasing transmissivity in Lake Tarpon

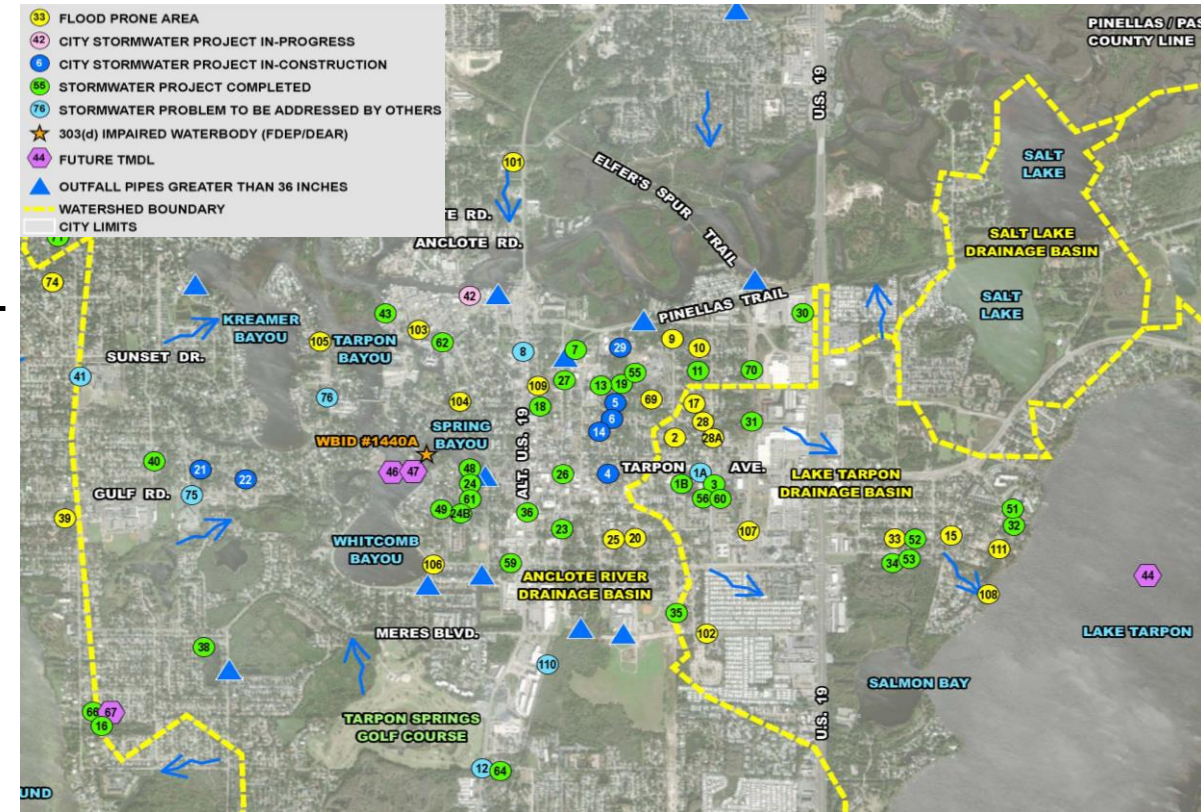
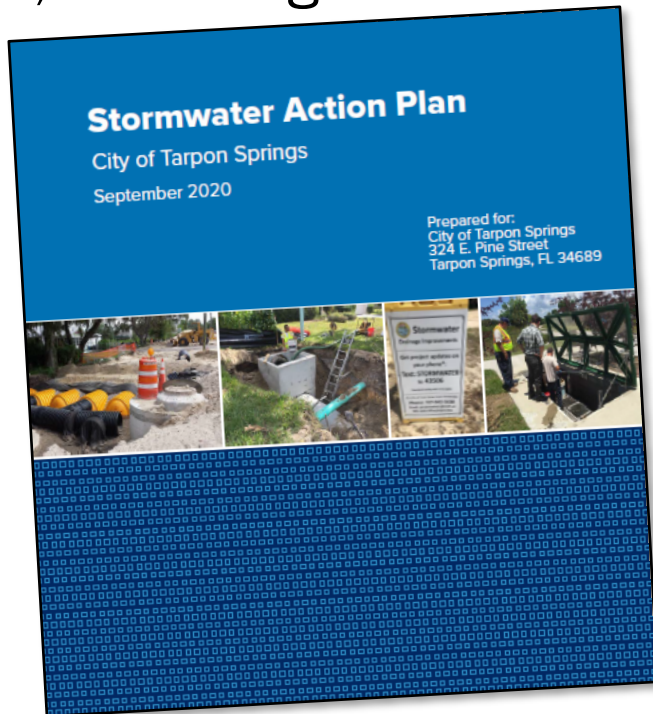


- 2019 City reconfigured their GIS database for their stormwater program
  - SWFWMD CFI Project
  - Mobile-based application for field personnel
  - Real-time data

# Stormwater Action Plan (SAP)



- Developed and maintained since 2010
- Living document (quarterly updates)
- 24 initial stormwater projects, added 14
- 21 CIP projects completed
  - \$3,223,519 design and construction costs

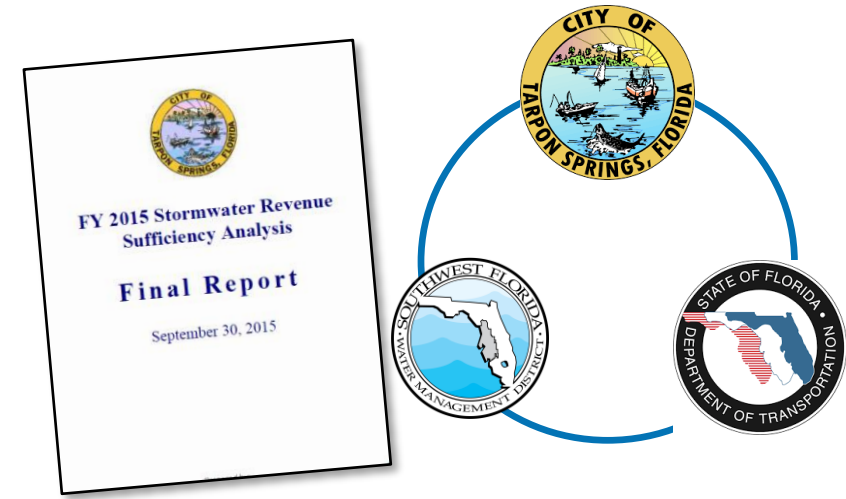


Arc-GIS map of City's stormwater CIP

# Funding Success



- 2015 Stormwater Revenue Analysis
- 5 successful grant applications through SWFWMD CFI and FDOT Highway Safety Improvement Program
  - Improving flood abatement and water quality
  - Totaling \$2,743,889 for design and construction
- 8 additional stormwater projects “on-deck” for grant applications



Summary of Successful Grant Applications

Project ID	Grant Funding Agency	Agency Project ID	Total Grant Funding to City
Pent Street / Grosse Avenue	SWFWMD	Q053	\$1,505,240
Palm Avenue	SWFWMD	N867	\$249,979
Highland / Jasmine	SWFWMD	N782	\$138,670
GIS Stormwater Inventory	SWFWMD	N923	\$100,000
Tarpon Avenue HSIP	FDOT / FHWA	443580-1	\$750,000
			\$2,743,889

Summary of Projects Eligible for Future Grant Funding

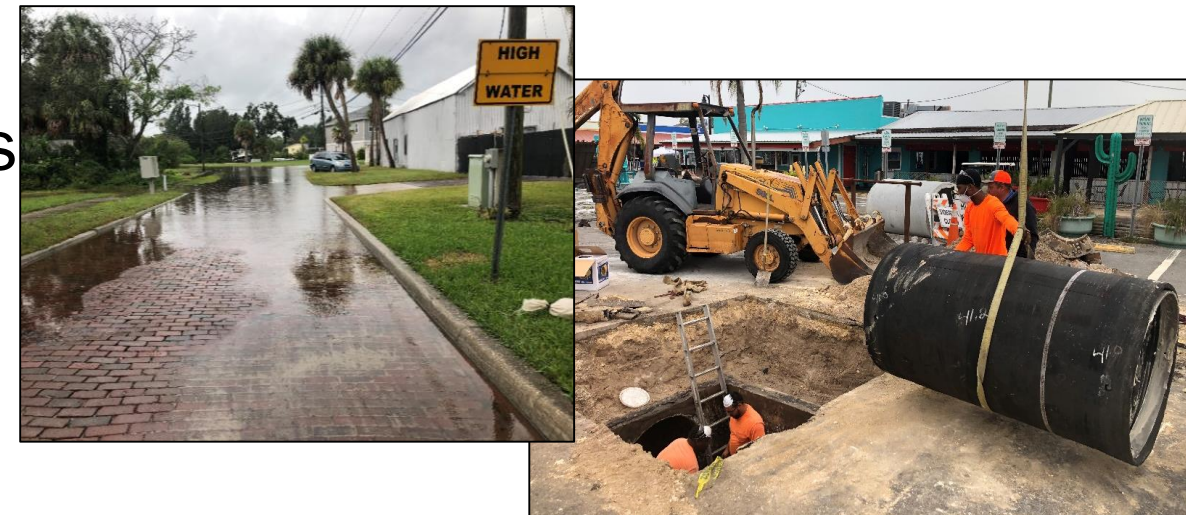
Map ID No.	Project Location	Resolved Map ID No.	Design & Construction Cost	Total Cost	Discharges to Impaired Waterbody
15/33	Highland Ave. & Vista Pl. & Jasmine Ave & Lime St.	15, 33	\$1,198,939	\$1,198,939	YES
110	Pinellas Trail Culvert	110	\$109,314	\$109,314	YES
106	Spring Dr. & MLK Jr. Dr.	106	\$365,561	\$365,561	YES
107	Lime St. & Huey Ave.	107	\$522,481	\$522,481	YES
2	Disston Ave. & Center St.	2, 17, 28, 28A	\$1,094,734	\$1,094,734	YES
42	Sponge Docks Flooding - Phase 2: Pipe Upgrades	42	\$789,453	\$789,453	YES
9	Disston Ave. between Spruce St. & Live Oak St.	9, 10, 11	\$957,244	\$957,244	YES
42	Sponge Docks Flooding - Phase 2: Pipe Upgrade & Stormwater Vault Pump Station	42	\$2,031,516	\$2,031,516	YES

- Active Sustainability Committee
- Developing Sustainability Action Plan
  - Increasing energy efficiency
  - Conserving water
  - Reducing waste
  - Protecting sensitive natural areas
  - Reducing Greenhouse Gas (GHG) emissions
  - Emphasis on green businesses and jobs
- Active FDEP Florida Resilient Coastlines Program (FRCP) Grant - \$75,000
- Future stormwater pump station for Sponge Docks (Dodecanese Blvd.)



- City has installed check valves within existing storm sewer systems to prevent tidally-influenced flooding at the following locations:

- Bayshore Drive and Sunset Drive
- Bayshore Drive and Desoto Way
- Dodecanese Boulevard and Hope Street
- Dodecanese Boulevard and Athens Street
- Dodecanese Boulevard and Arfaras Street
- Spring Boulevard and Canal Street
- Chesapeake Drive south of Royal Drive



# Trusted Partner



- Ongoing water quality sampling with Pinellas County
- Major stakeholder in County/SWFWMD CFI – *Anclote River Watershed Management Plan*
- Joint-Use stormwater management facility with Pinellas County School Board
- Continued community outreach and education

