

# FDOT Innovative Initiatives in Support of the MS4 Program

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FSA Summer Conference  
June 20, 2019

**Steve Peene, PhD**  
**Water Resources Principal**



**Robert Potts**  
**Senior Scientist**



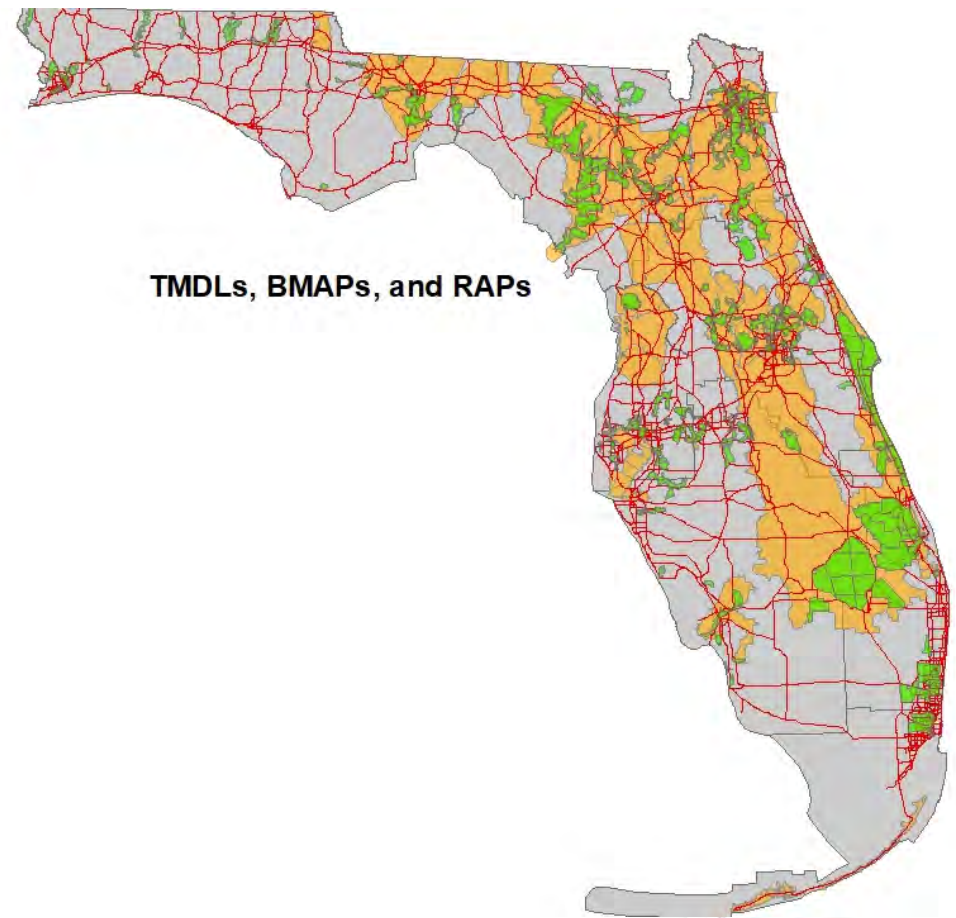
# Presentation Outline

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- Introduction to FDOT's MS4 Program
  - The Numbers
  - NPDES Guidance Document
  - Statewide Stormwater Management Plan
  - Asset Maintenance Guidance Document
- Training
  - Illicit Discharge Detection and Elimination (IDDE)
  - Spill Prevention and Response
- Statewide Stormwater Asset Management System (SAMS)
- FDOT Partnering

# The Numbers

- FDOT is a co-permittee on 15 Phase I MS4 permits and holds 12 Phase II permits covering 27 counties
- Annual Cycle 3 implementation costs (Phase I only) were about \$30 million
- Facilities include 12,670 total miles of roadway and 7,480 miles of “regulated” roadway
- Stakeholder in nearly 400 adopted or draft TMDLs, 33 BMAPs, and 4 reasonable assurance plans



# NPDES Guidance Document

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- Provide staff with an understanding of FDOT's roles and responsibilities under the NPDES program and assist with program implementation statewide
- Facilitate staff transitions within Districts' NPDES programs

**DRAFT**

FDOT Guidance Document For  
Implementation of the National Pollutant  
Discharge Elimination System Program

Florida Department of Transportation



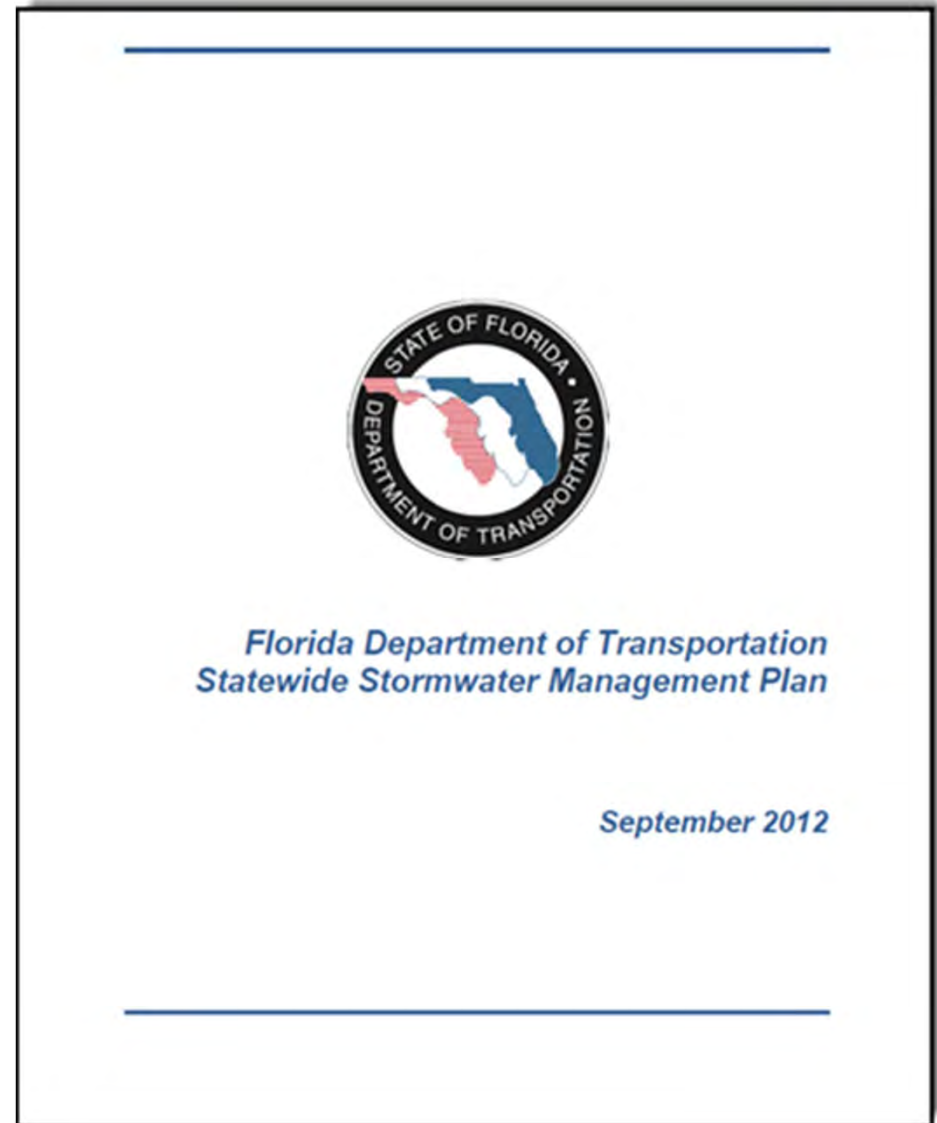
# NPDES Guidance Document

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- Structured in two parts:
  - ✓ NPDES Program Background and Purpose
    - Regulatory authority
    - FDOT program administration
    - Covered discharges and basic permit descriptions
    - FDEP's watershed management approach
  - ✓ NPDES Program Implementation within FDOT
    - FDOT Authority and Limitation
    - MS4 Permits
    - Construction Activities
    - Industrial Activities
    - Program Funding
    - TMDLs and BMAPs
    - Permit Enforcement

# Statewide Stormwater Management Plan

- Finalized in 2012
- Outlines FDOT Stormwater Management Program to be implemented statewide
- Outlines the general actions FDOT's eight Districts must take to comply with Phase I MS4 permits





# Introduction – Asset Maintenance Guidance Document

- Guidance document for stormwater asset maintenance
  - Wet and dry ponds
  - Dry treatment grass swales (including ditch blocks)
  - Exfiltration trench/French drain systems
  - Pollution control boxes
  - Major stormwater outfalls/canals
  - Collection systems and conveyances
  - Stormwater pump stations



*Skimmer is in good condition*



*Skimmer is broken – poor condition*

# FDOT IDDE and Spill Response Training

- Training for all FDOT maintenance personnel and contractors
- Training requirement incorporated into contract specifications
- Publicly available on line in both English and Spanish
- Certificate printed upon completion
- Trainees provided with information cards to report illicit discharges and spills





# Training – Illicit Discharge Detection and Elimination (IDDE)

- Provide basic awareness training to identify an illicit discharge, connection, and dumping to FDOT's MS4
- Inform personnel and contractors on procedure for reporting illicit discharges
- Fulfill MS4 permit requirements for proactive inspections and training

**Tier 1 Illicit Discharge Detection and Elimination Training**  


To receive a certificate for this training, you must watch the entire video.  
"Scrubbing" forward in the video has been disabled.

[Tier 1 Illicit Discharge Detection and Elimination Training](#)  
• English Version (14:22, Streaming Video)

[Tier 1 Illicit Discharge Detection and Elimination Training \(Spanish\)](#)  
• Versión en Español (14:51, Streaming Video)

[Contact Info Cards](#)  
• English Version  
• Versión en Español

  
ORGANIZATIONAL CHANGE MANAGEMENT

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# Training – Illicit Discharge Detection and Elimination (IDDE)

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## Illicit Discharge Detection & Elimination

Florida Department of Transportation

# Training – Spill Prevention and Response

- Provide training to address spills at FDOT facilities or along FDOT right-of-way during routine maintenance work
- Not intended to replace existing protocols for spill response related to vehicle accidents, on-road incidents, or spills during construction activities
- Fulfills the MS4 permit requirement


**NPDES Spill Prevention,  
Containment and Response  
Training**  


To receive a certificate for this training, you must watch the entire video.

[NPDES Spill Prevention, Containment and Response Training](#)  
• English Version (17:52, Streaming Video)

[NPDES Spill Prevention, Containment and Response Training \(Spanish\)](#)  
• Versión en Español (22:26, Streaming Video)

[Contact Info Cards](#)  
• English Version  
• Versión en Español

  
ORGANIZATIONAL CHANGE MANAGEMENT

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# Training – Spill Prevention and Response

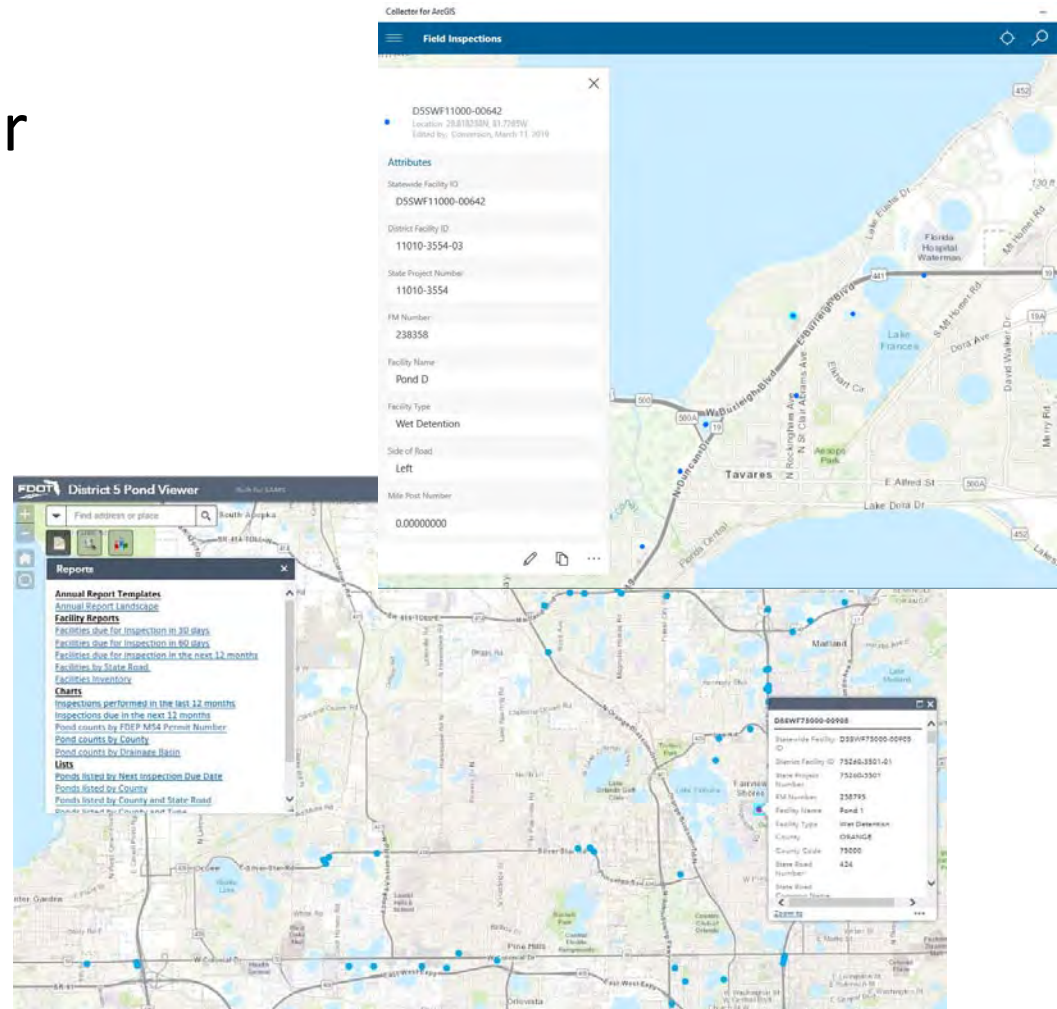
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## Spill Prevention, Containment, and Response Training



# Statewide Stormwater Asset Management System - SAMS

- FDOT is developing a statewide stormwater asset management system
- Under FDOT E-maintenance initiative
- ESRI GIS Online
- Promote statewide consistency in management of stormwater





# Statewide Stormwater Asset Management System – SAMS Inspections

Field Inspections

4 features

4/28/2011 7:00 PM

Edited by: Conversion, March 10, 2019

Inspection Date  
4/28/2011 7:00 PM

Primary Inspector  
Dave Moore

Secondary Inspector  
Kenny Mullen

Inspection Type  
Routine

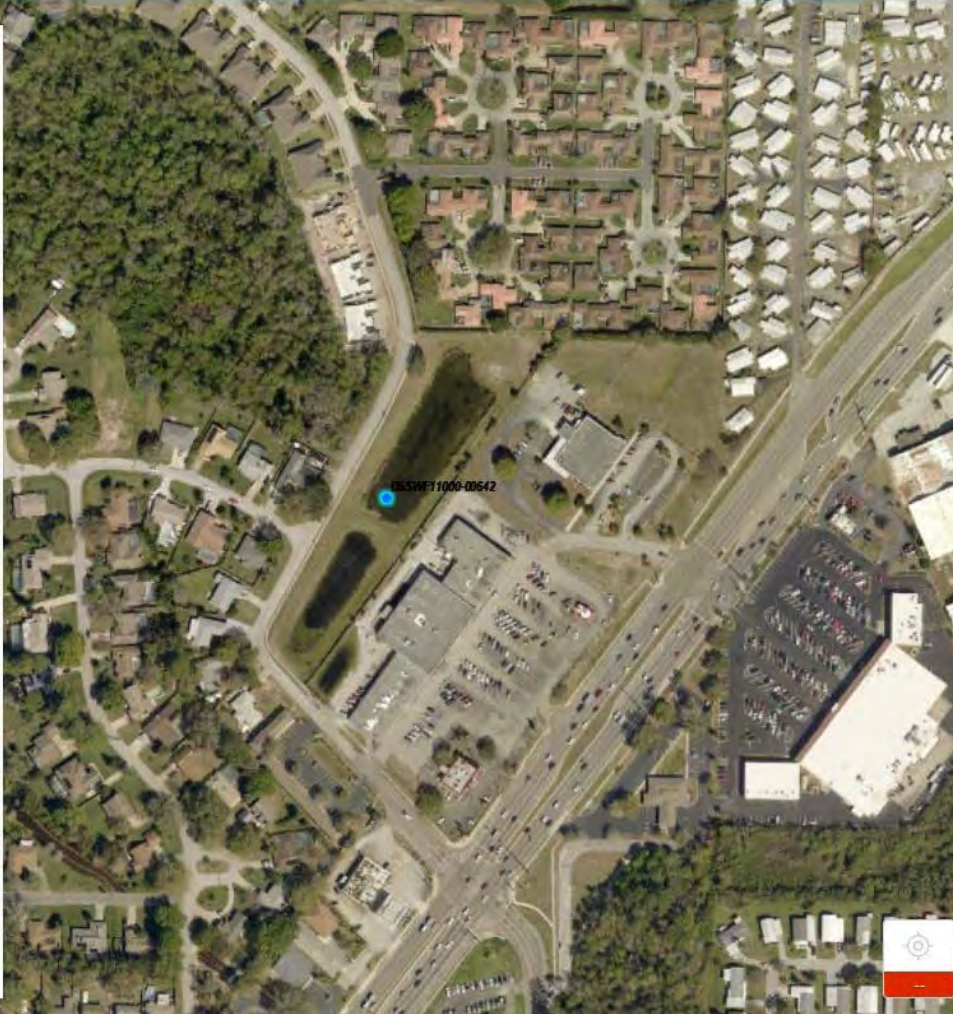
Date Last Precipitation  
4/28/2011 7:00 PM

Quantity Last Precipitation (in)  
0

Aesthetics Condition  
Good

Aesthetics Comments  
The side slopes appears to be well maintained and mowed regularly.

Hydraulic Recovery Condition  
Good





## District 5 Inspections Due in next 12 months

196 Facility Inspections are due by 4/28/2020

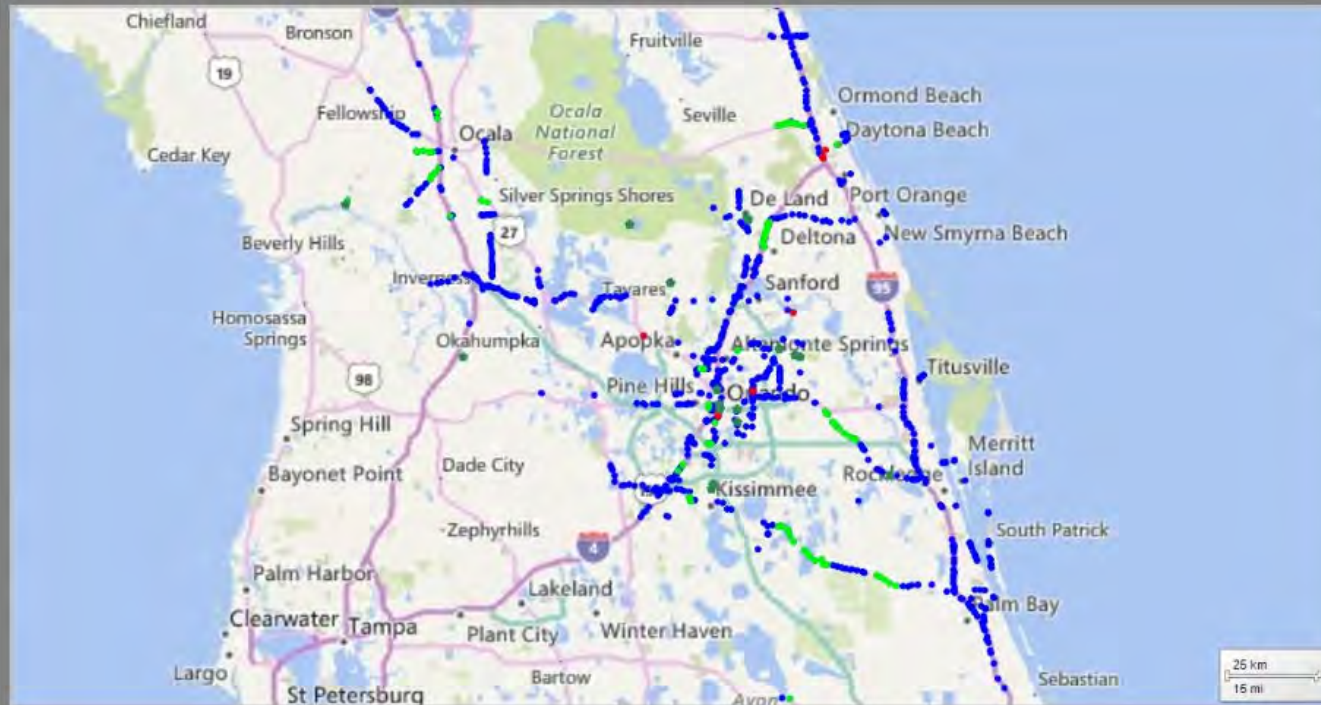
County	Facility ID	FM Number	State Road	Facility Type	Last Inspection Date	Last Inspection Result	Next Inspection Due
BREVARD							
	<a href="#">D5SWF70000-00811</a>	413072	9	Wet Detention	3/20/2018	Performing as designed and permitted	3/20/2020
	<a href="#">D5SWF70000-00795</a>	237421	507	Wet Detention	1/17/2018	Performing as designed and permitted	1/17/2020
	<a href="#">D5SWF70000-00814</a>	413072	9	Wet Detention	3/20/2018	Performing as designed and permitted	3/20/2020
	<a href="#">D5SWF70000-00801</a>	242266	9	Wet Detention	3/14/2018	Performing as designed and permitted	3/14/2020
	<a href="#">D5SWF70000-00802</a>	242266	9	Wet Detention	3/14/2018	Performing as designed and permitted	3/14/2020
	<a href="#">D5SWF70000-00809</a>	413072	9	Wet Detention	3/20/2018	Performing as designed and permitted	3/20/2020
	<a href="#">D5SWF70000-00815</a>	413072	9	Wet Detention	3/20/2018	Performing as designed and permitted	3/20/2020
	<a href="#">D5SWF70000-00235</a>	404601	528	Dry Retention	3/5/2018	Performing as designed and permitted	3/5/2020
	<a href="#">D5SWF70000-00232</a>	237421	507	Dry Retention	1/17/2018	Performing as designed and permitted	1/17/2020
	<a href="#">D5SWF70000-00841</a>	237466	520	Wet Detention	4/18/2018	Performing as designed and permitted	4/18/2020
	<a href="#">D5SWF70000-00842</a>	237466	520	Wet Detention	4/18/2018	Performing as designed and permitted	4/18/2020
	<a href="#">D5SWF70000-00816</a>	413072	9	Wet Detention	3/20/2018	Performing as designed and permitted	3/20/2020
	<a href="#">D5SWF70000-00236</a>	404601	528	Dry Retention	3/5/2018	Performing as designed and permitted	3/5/2020
	<a href="#">D5SWF70000-00803</a>	242266	9	Wet Detention	3/14/2018	Performing as designed and permitted	3/14/2020
	<a href="#">D5SWF70000-00810</a>	413072	9	Wet Detention	3/20/2018	Performing as designed and permitted	3/20/2020



# Statewide Stormwater Asset Management System – SAMS Dashboard

District 5 SAMS Data Dashboard

Last refreshed at 6/7/2019 2:44:27 PM



**23**

[last inspection result not performing as designed](#)

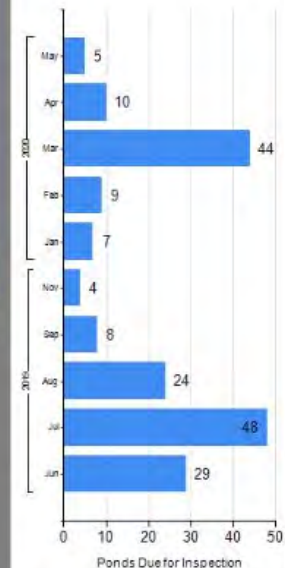
**188**

[inspections due between 6/7/2019 and 6/6/2020](#)

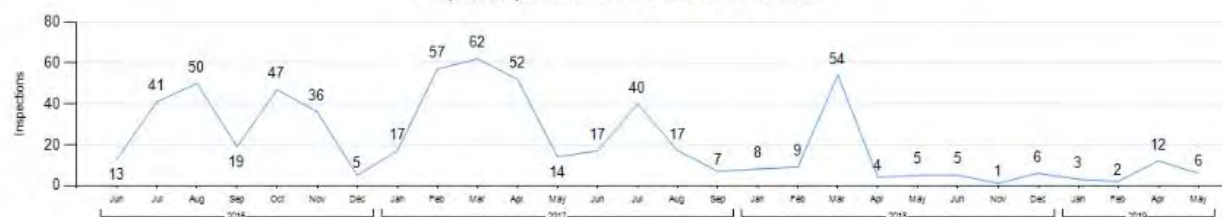
**7**

ponds with data that needs review

Inspection due by 6/6/2020

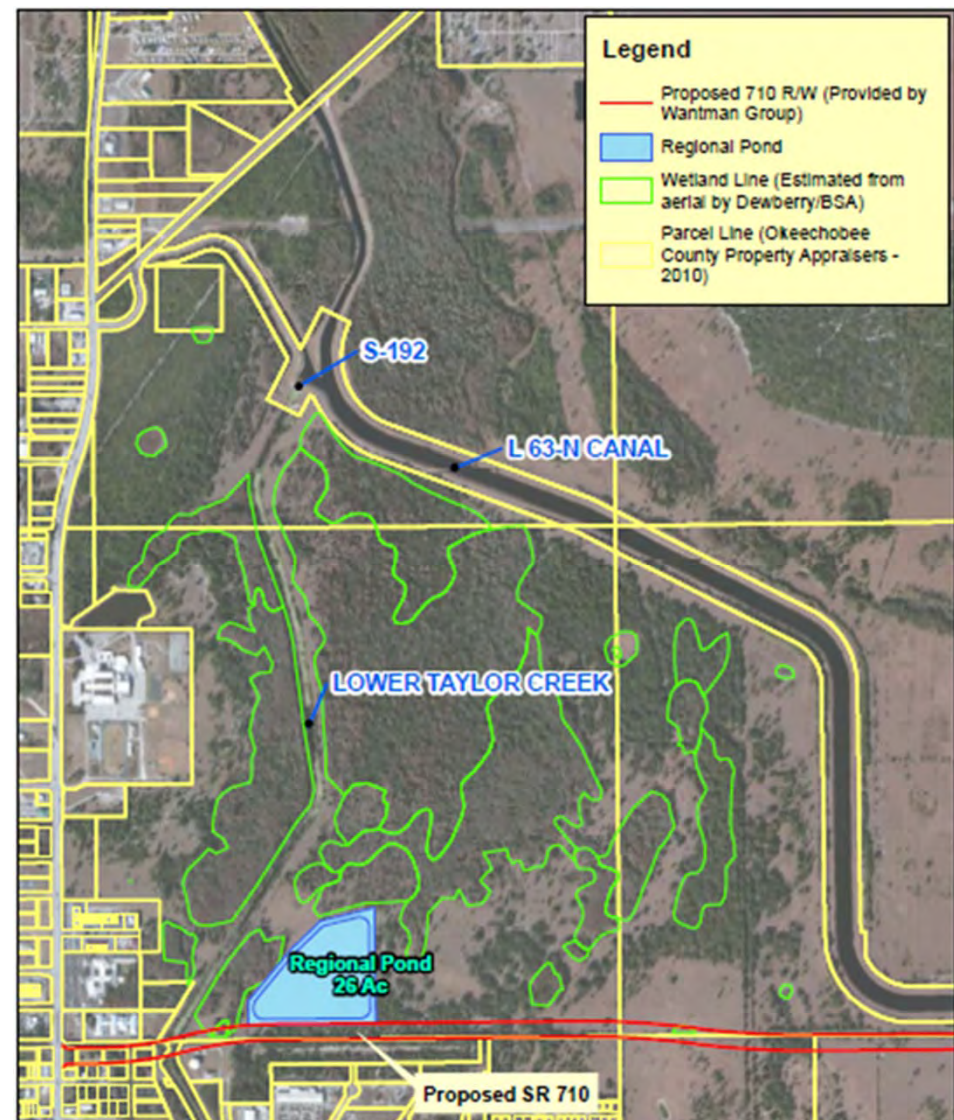


Inspections performed between 6/7/2016 and 6/7/2019



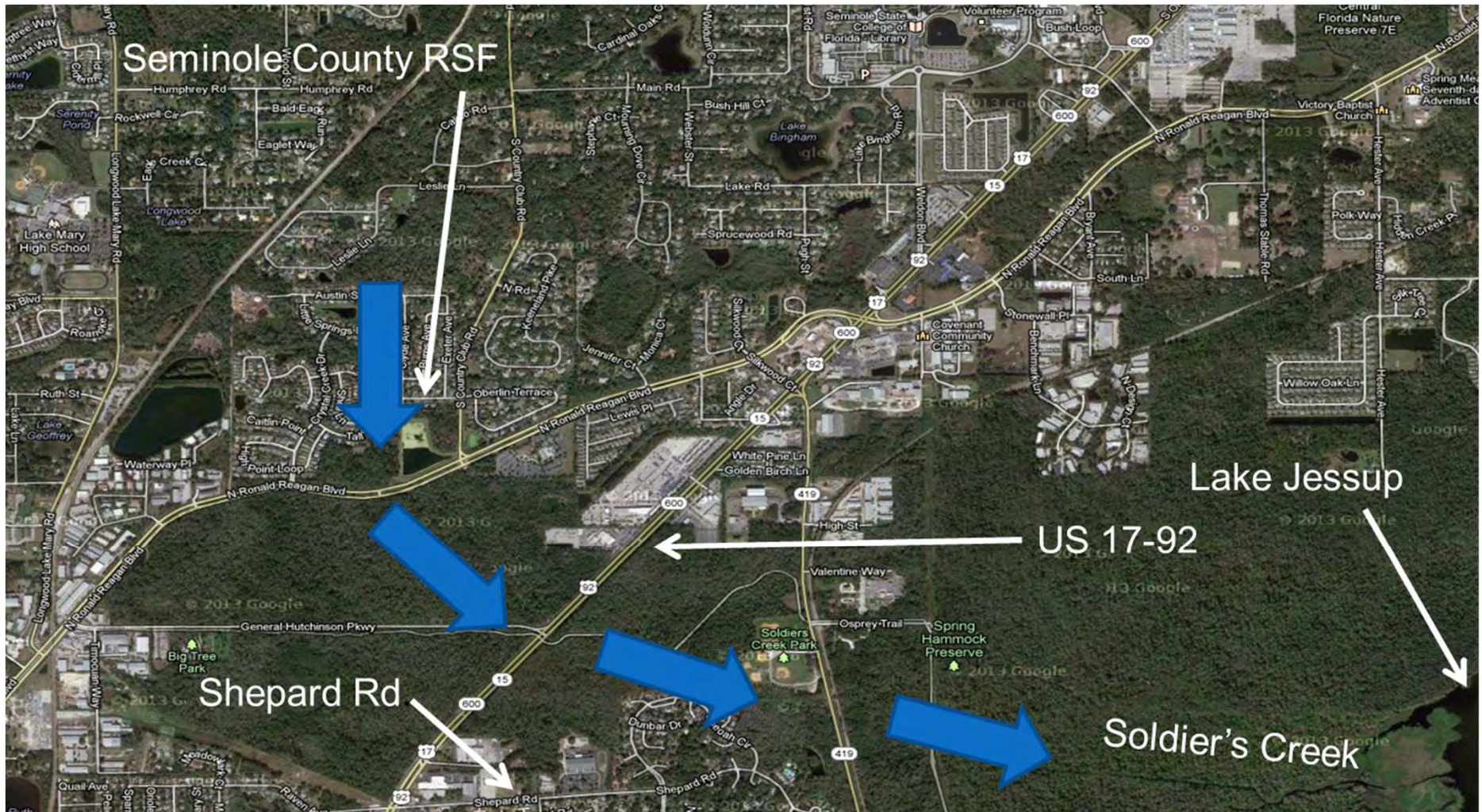
# FDOT Partnering – ELA and WATERSS

- Environmental Look Around (ELA) - **Old**
- Watershed Approach to Evaluate Regional Stormwater Solutions (WATERSS) – **New**
- Each program looking to promote cost effective regional solutions for treatment early in the FDOT process



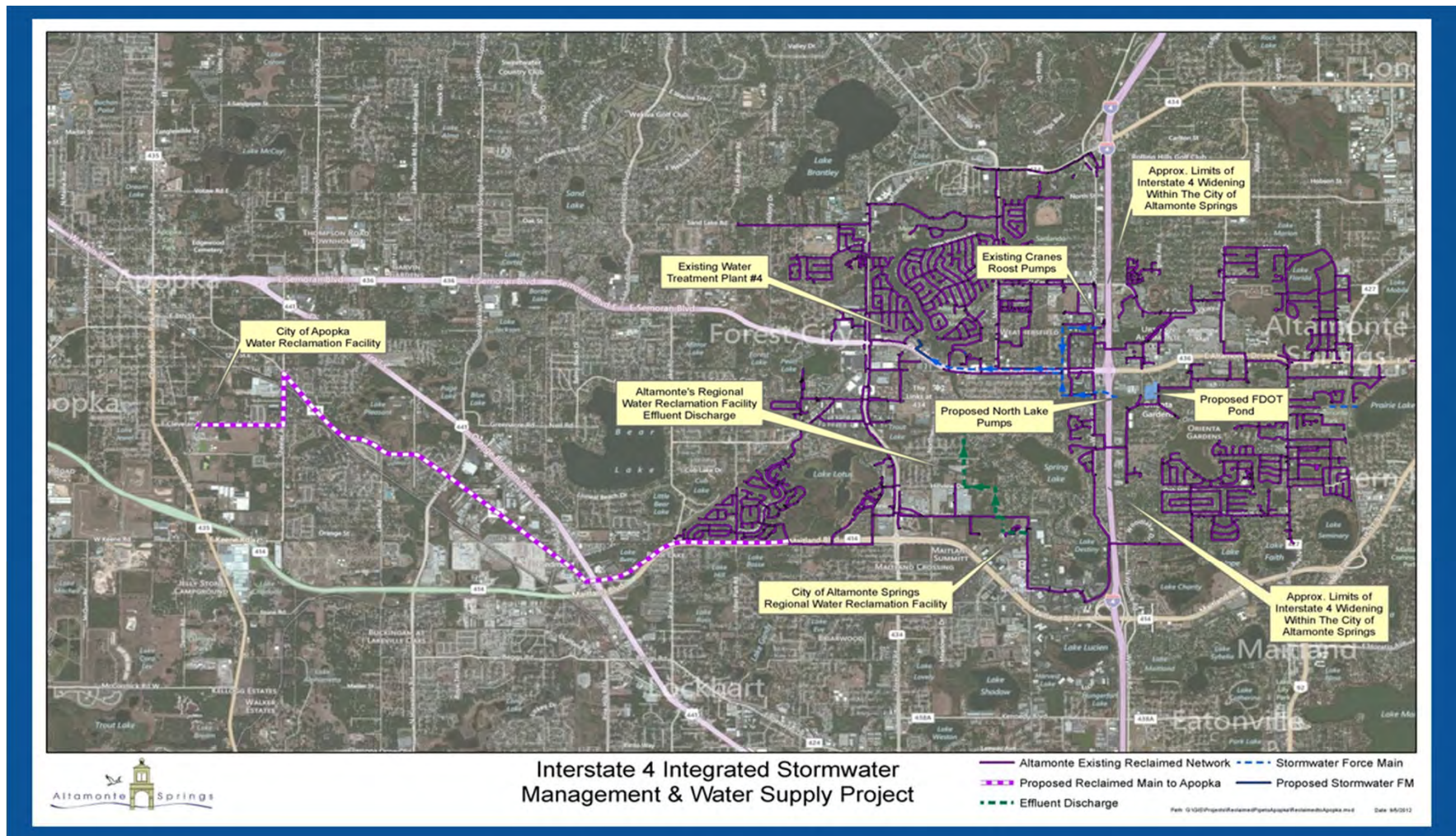


# Seminole County Regional Stormwater Facility



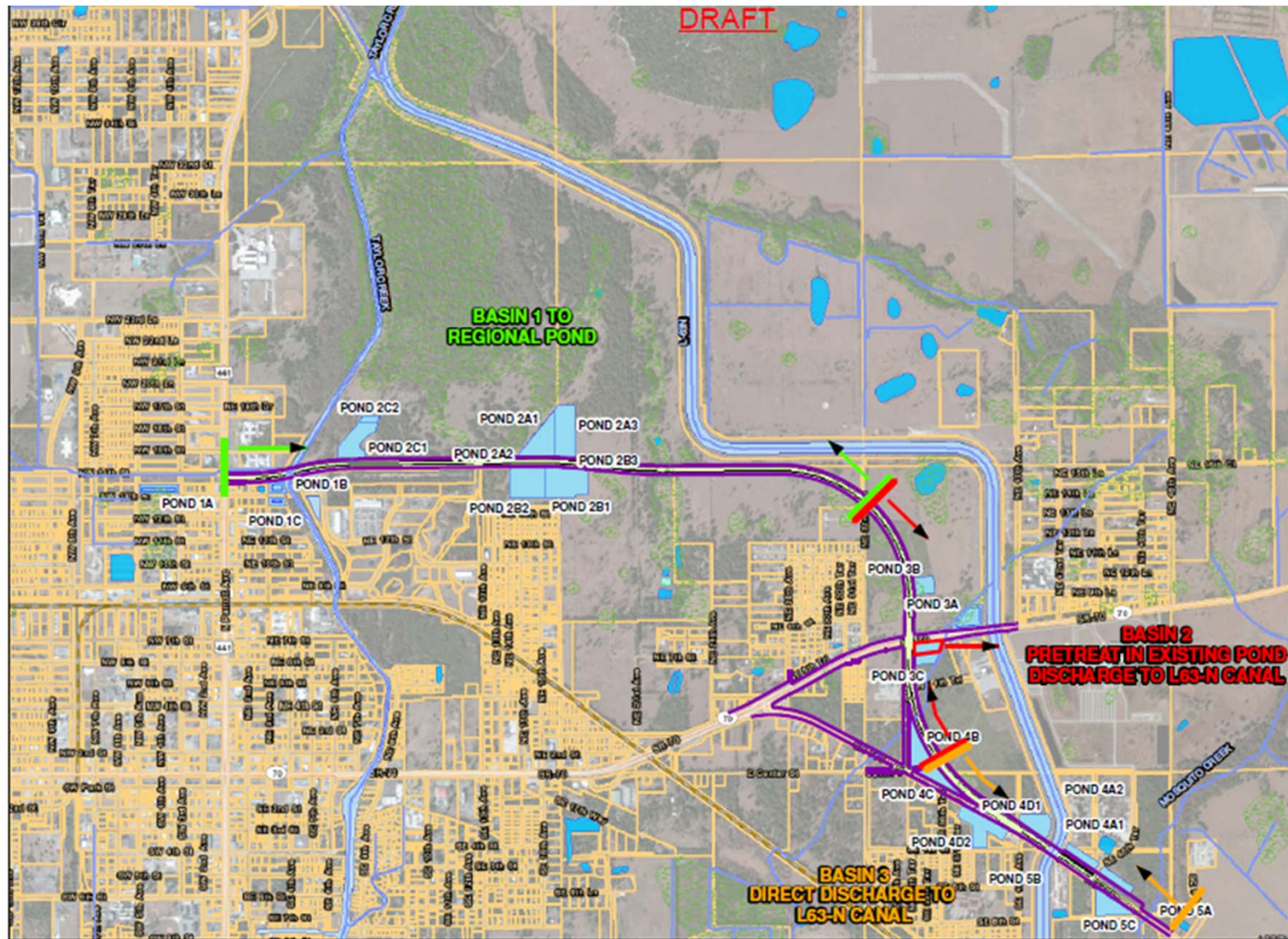


# A-First - I-4 Integrated Stormwater Project





# SR 710 Regional Treatment



Thank you!