

# FDOT - Innovative MS4 Program Initiatives

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SESWA Annual Conference

The department will provide a safe transportation system that ensures the mobility of people and goods, enhances economic prosperity, and preserves the quality of our environment and communities.

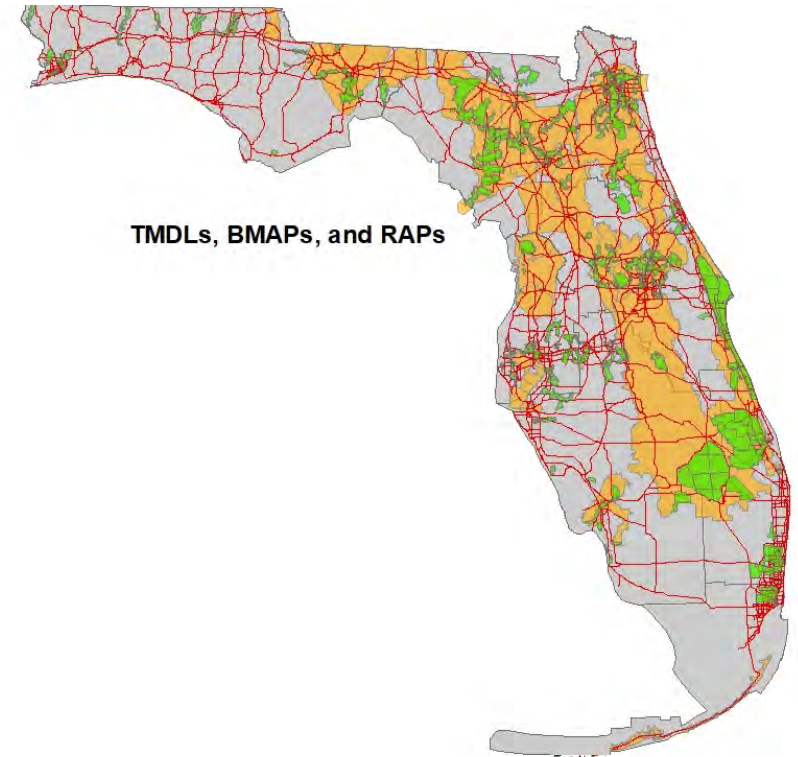
## Presentation Outline

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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)  
(E-Maintenance)
- FDOT Partnering – ELA and WATERSS

## The Numbers

- FDOT is a co-permittee on 15 Phase I MS4 permits and holds 13 Phase II permits covering 31 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 TMDL implementation plans (BMAPs), and 4 reasonable assurance plans



## NPDES Guidance Document

- 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

- 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 TMDL implementation plans (BMAPs)
    - Permit enforcement

**DRAFT**

FDOT Guidance Document For  
Implementation of the National Pollutant  
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Florida Department of Transportation



# Statewide Stormwater Management Plan

- 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
- FDOT updating in 2020 to include Phase II permits



*Florida Department of Transportation  
Statewide Stormwater Management Plan*

*September 2012*



# 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



## Rating Summary


- Control Structure – Poor
  - Orifice – Poor – Orifice is clogged with debris
  - Skimmer – Fair – Vegetation blocking more than 25 percent but less than 50 percent of opening and is intruding into structure chamber
  - Chamber – Poor – Grate is missing
- Hydraulic Recovery – Likely poor due to blocked orifice

## Maintenance Needs

- Remove debris from orifice
- Replace missing grate
- Clear vegetation from skimmer

# Asset Maintenance Guidance Document

- Promote statewide consistency in stormwater asset maintenance
  - Developed in Conjunction with Stormwater Asset Maintenance System (SAMS)
- Facility condition rating categories
  - Structural
  - Water (wet ponds)
  - Erosion
  - Aesthetics
  - Hydraulic Recovery
  - Vegetation
- Electronic format with example photos



Cracks in Mitered End Section

More than 40% of opening is obstructed

Rating Summary

- Inflow and Outflow Pipes – Poor
  - More than 40 percent of pipe opening is obstructed
  - Crack in mitered end section
- Sedimentation – Poor
  - Sediment accumulation within inflow pipe is evident
- Vegetation Condition – Fair
  - Excess vegetation within inflow pipe
  - Vegetation in pond bottom needs to be mowed

Maintenance Needs

- Remove sediment and vegetation accumulation from pipe opening
- Check pipe for damage and document if additional action needed
- Repair mitered end section
- Mow pond area



## FDOT IDDE and Spill Response Training

- Training for all FDOT maintenance personnel and contractors
- Training requirement incorporated into contract specifications
- Publicly available online 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

  
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## Training – Illicit Discharge Detection and Elimination (IDDE)



## 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



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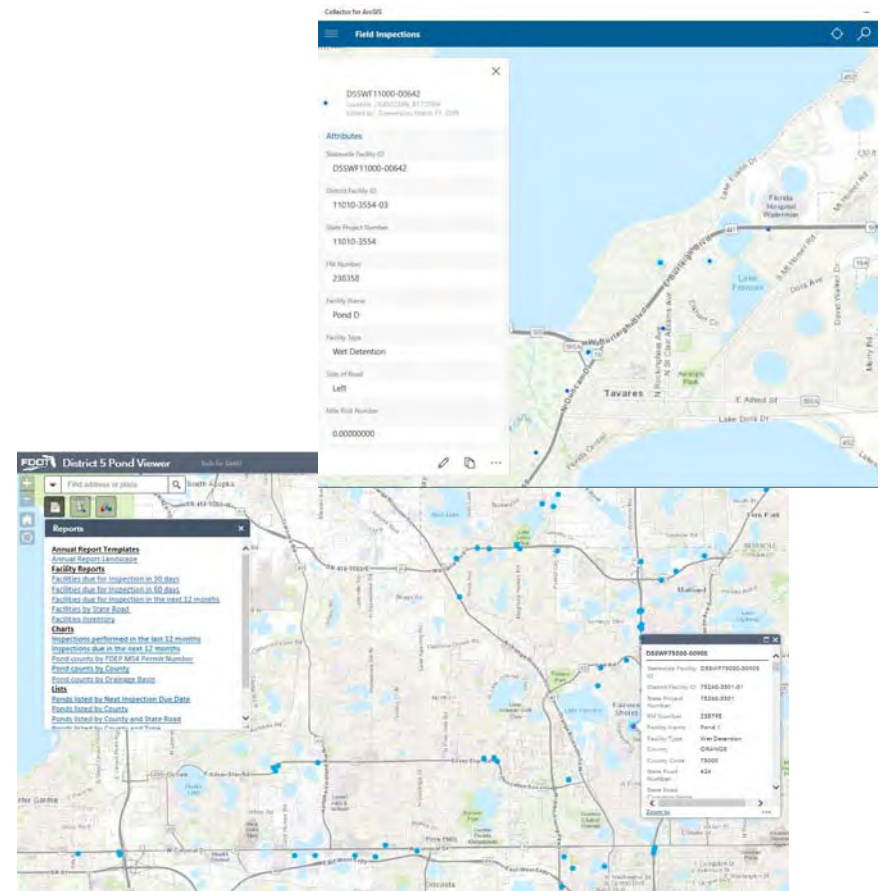
## Training – Spill Prevention and Response



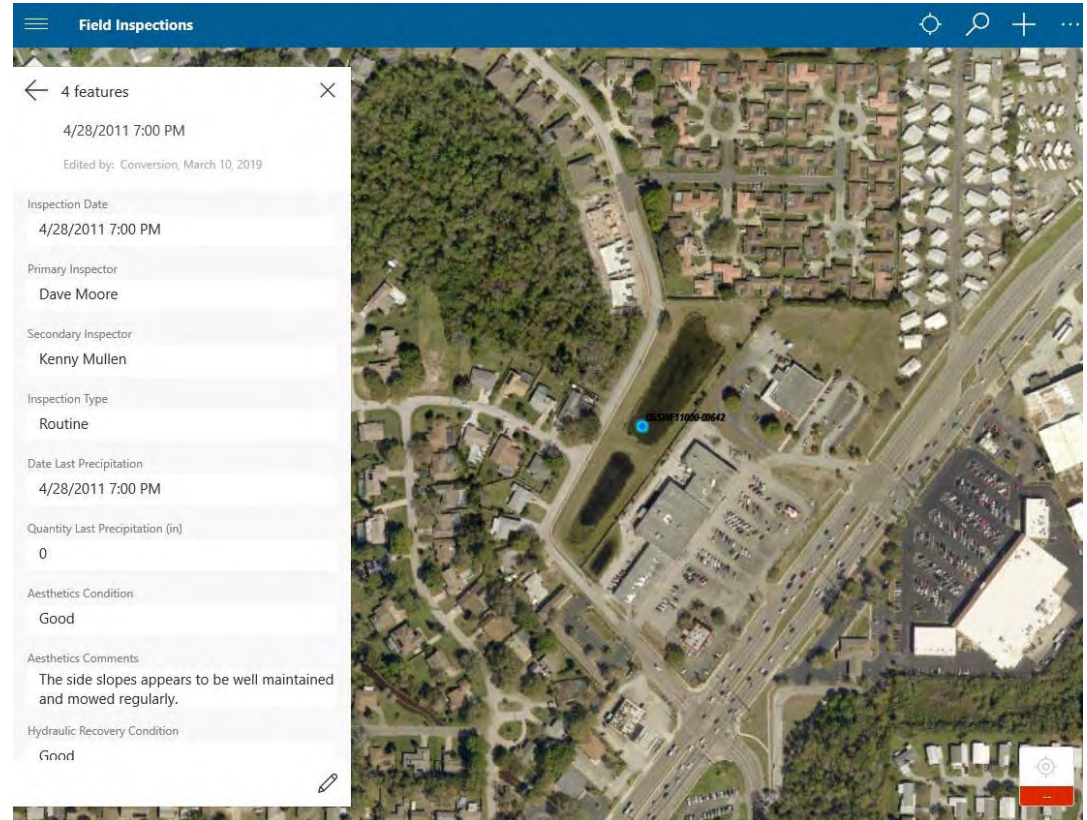
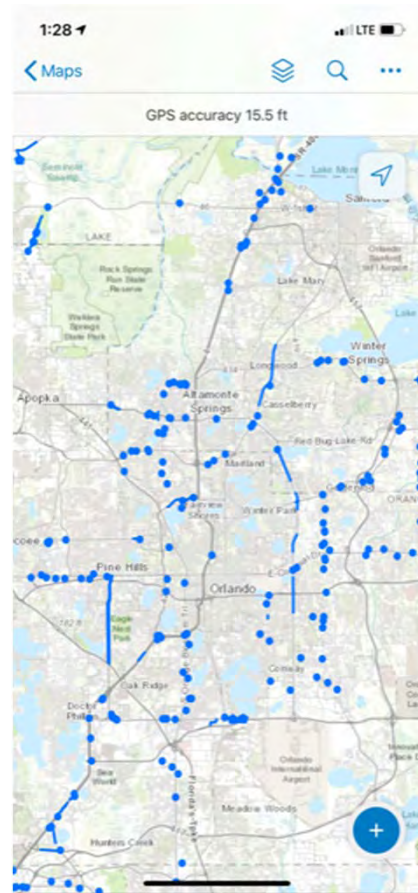
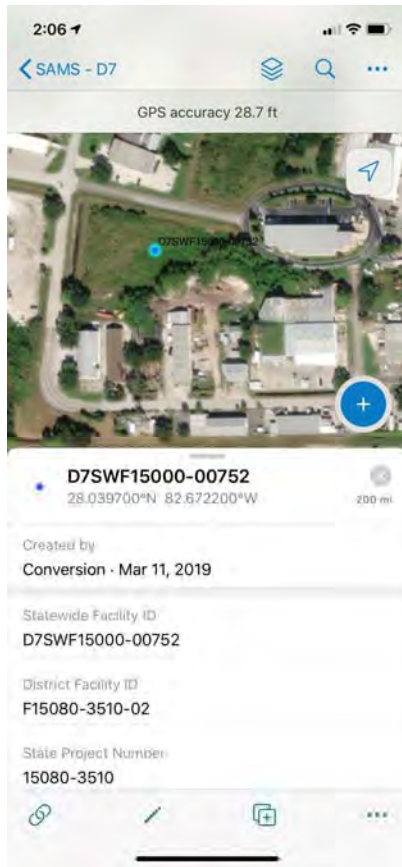


# Statewide Stormwater Asset Management System - SAMS

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





# SAMS Inspections





# SAMS Viewer and Reporting






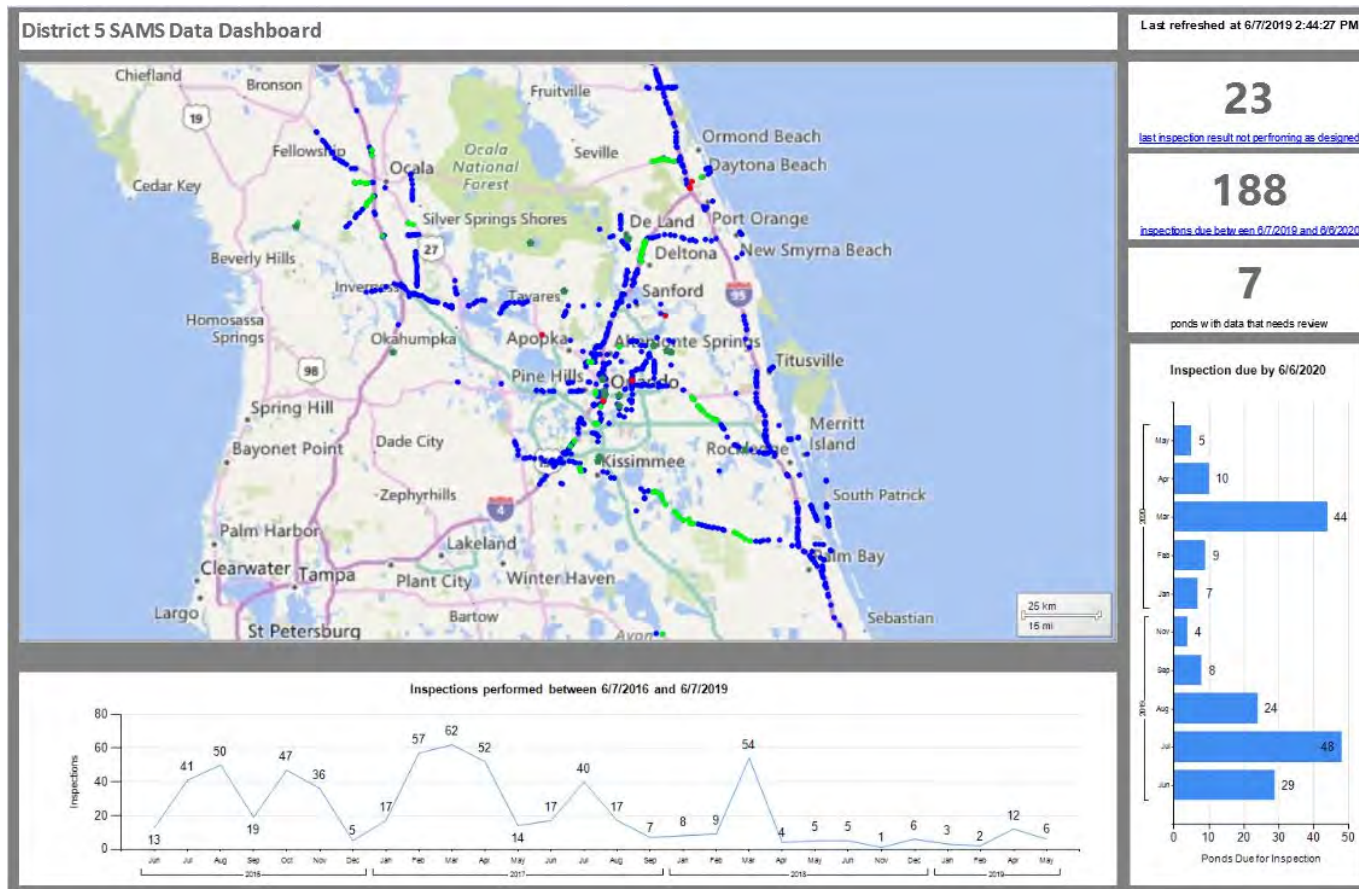
District 5 Inspections Due in next 12 months

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

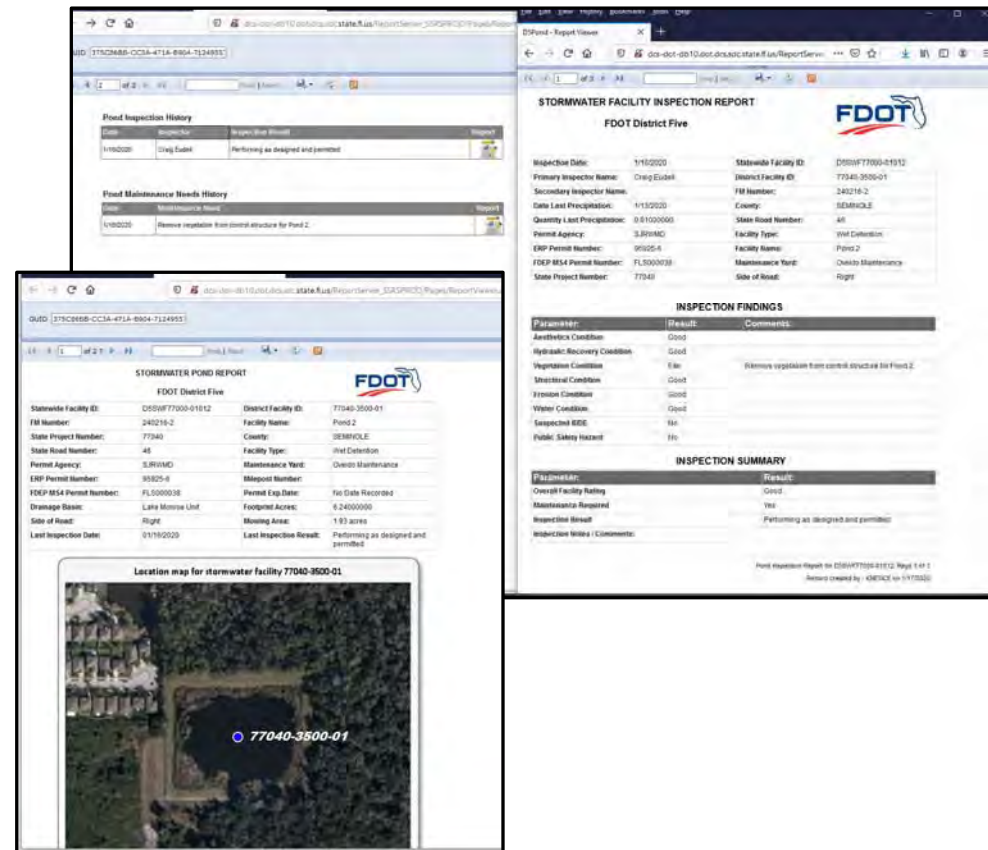


# SAMS Dashboard



# SAMS Benefits and Cost Savings

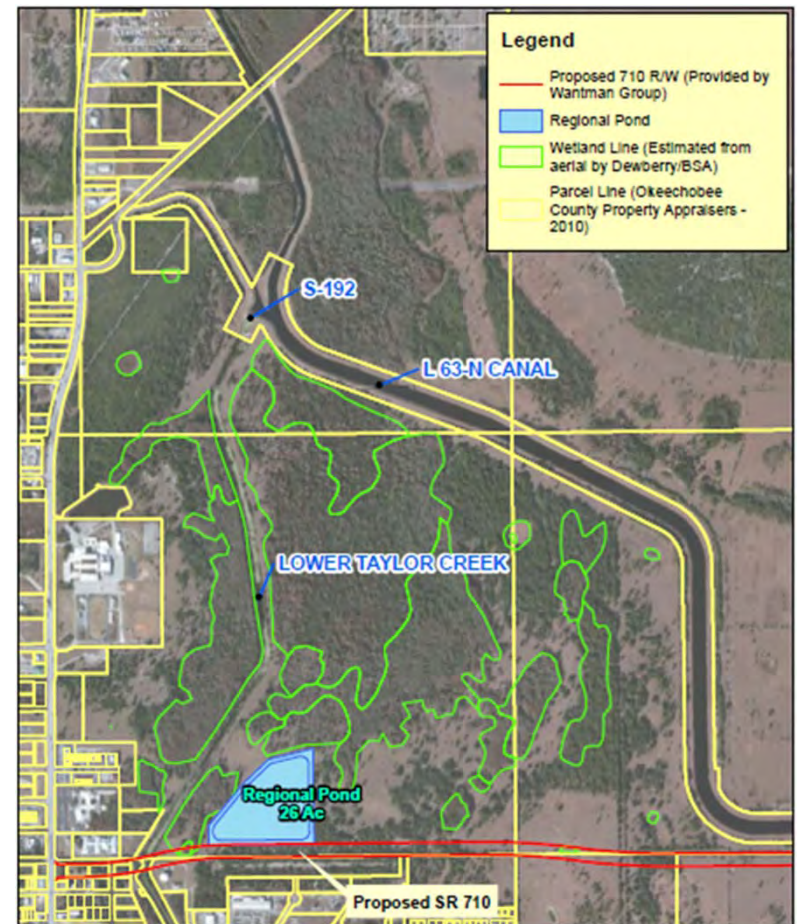
- Statewide consistency in overall MS4 compliance program (previously 8 different approaches)
- Average of 30% pond inspection cost savings in first year of implementation
- Ease of data access Statewide
- FDOT Asset Maintenance Contractors using to identify issues



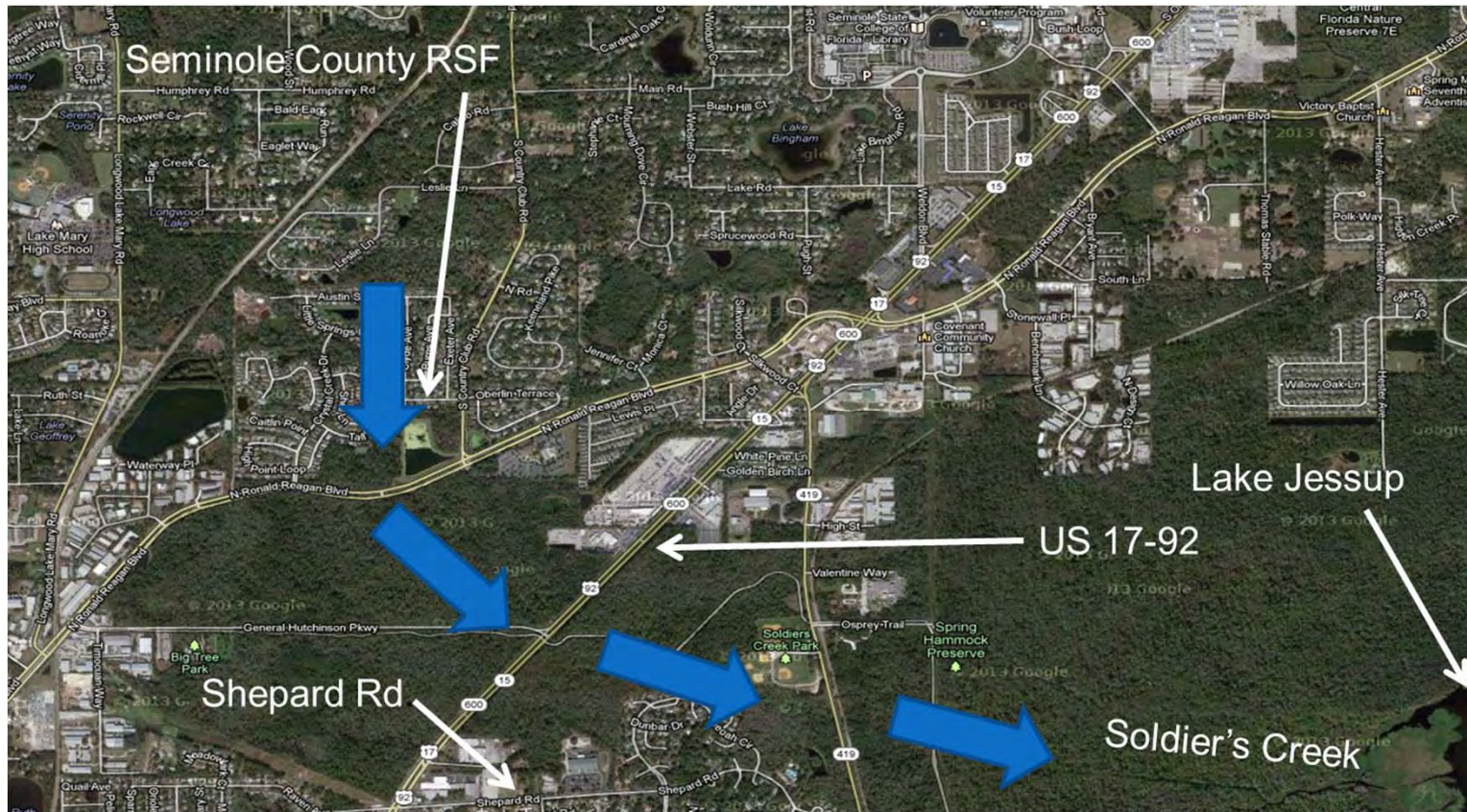


## FDOT Partnering – ELA and WATERSS

- Environmental Look Around (ELA) -  
**Now**
- Watershed Approach to Evaluate Regional Stormwater Solutions (WATERSS) – **??**
- Each program looking to promote cost-effective regional solutions for treatment early in the FDOT process
- Built into FDOT process
- Innovative partnering (septic system removal monies)



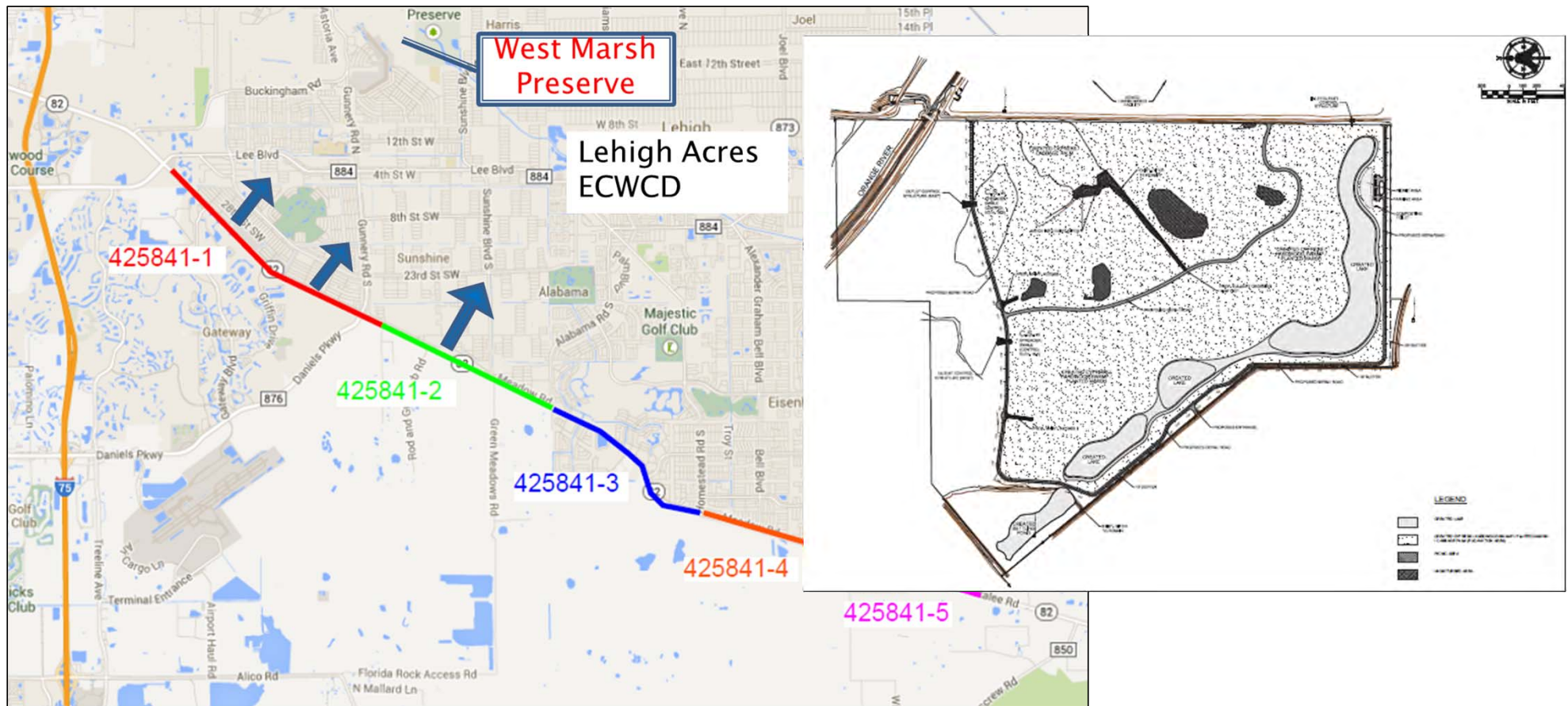
# Seminole County Regional Stormwater Facility







## SR 82 Corridor



Thank you!