

FDOT - Innovative MS4 Program Initiatives

SESWA Annual Conference

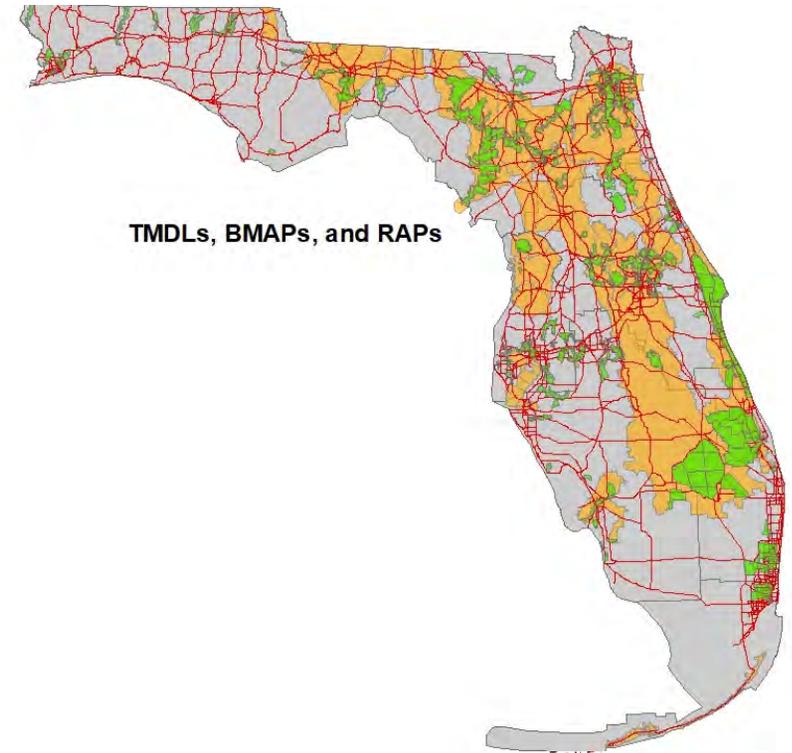
The department will provide a safe transportation system that ensures the mobility of people and goods, enhances economic prosperity, and preserves the quality of our environment and communities.

Presentation Outline

- 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

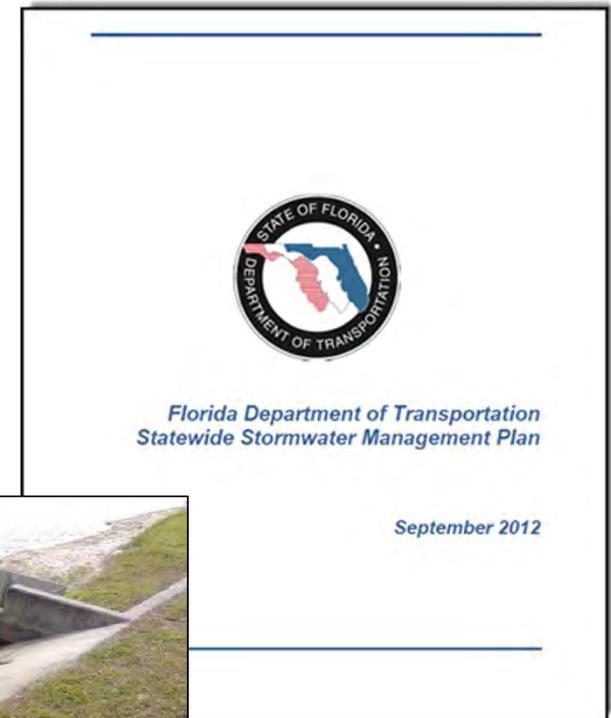
FDOT Guidance Document For
Implementation of the National Pollutant
Discharge Elimination System Program

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



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](#)
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• Versión en Español



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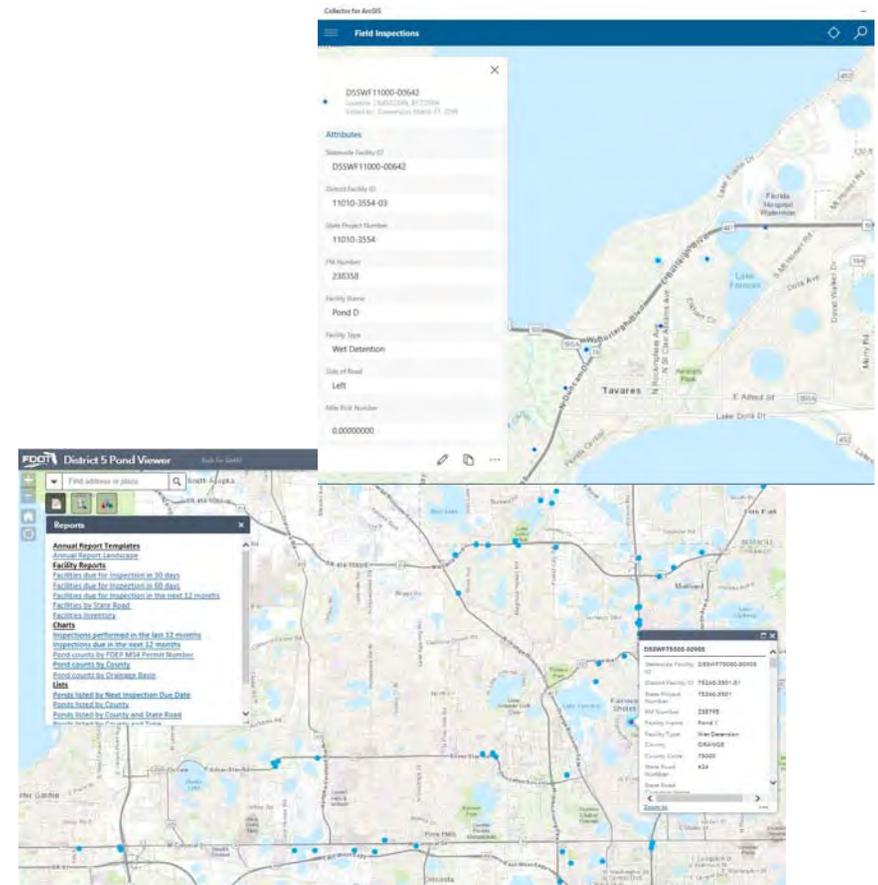
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Training – Spill Prevention and Response

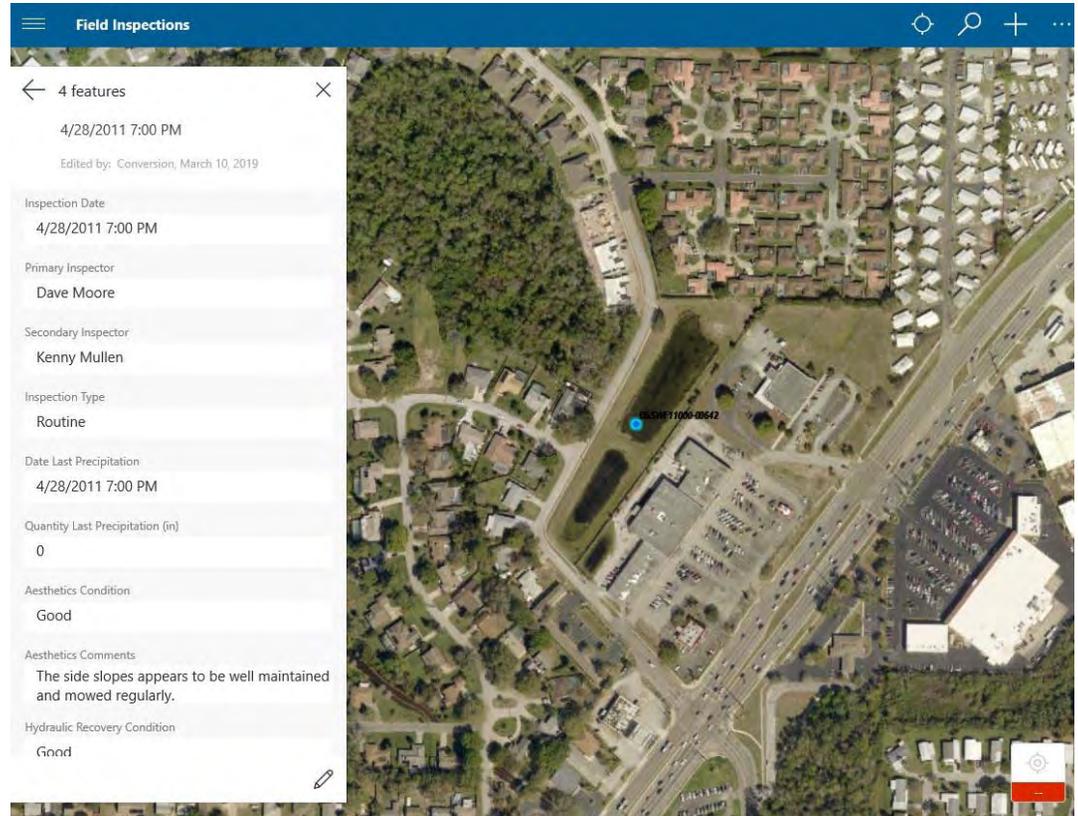
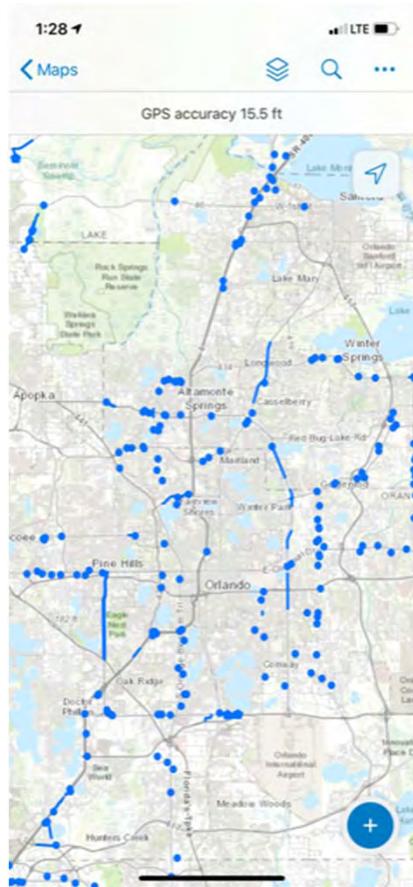
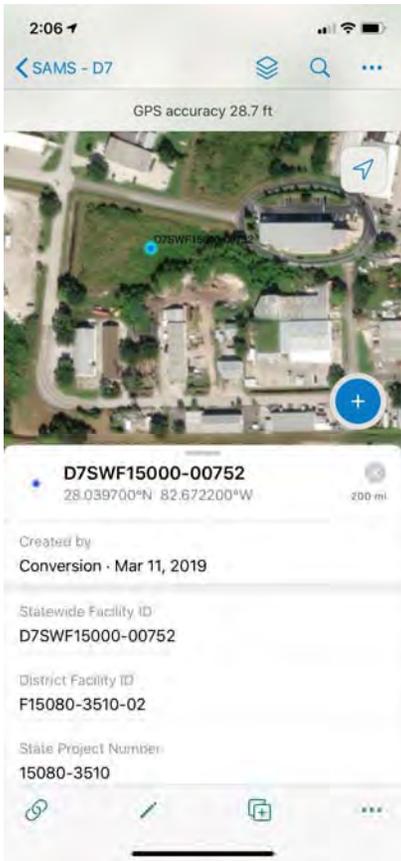


Statewide Stormwater Asset Management System - SAMS

- 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



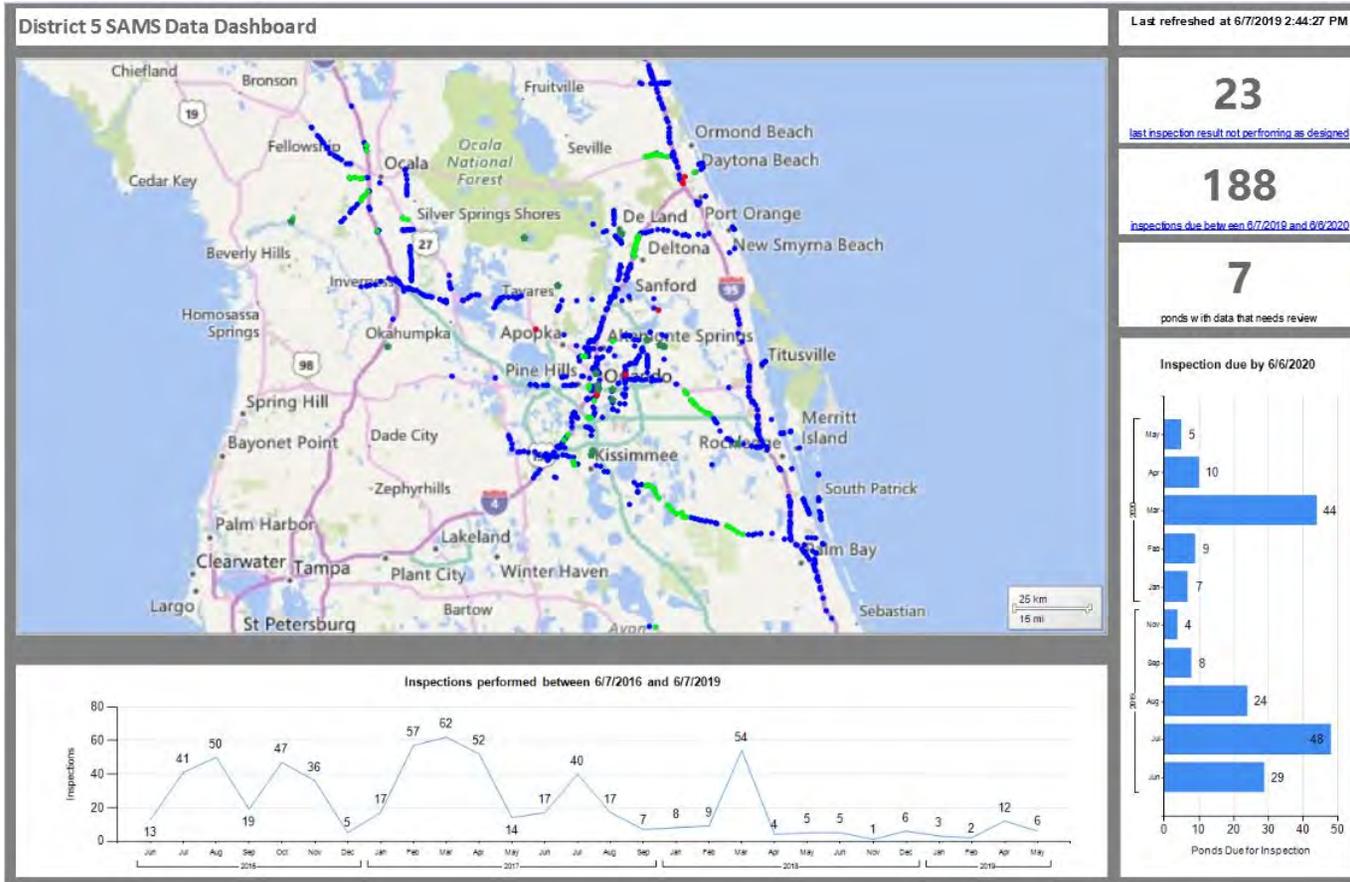
District 5 Inspections Due in next 12 months

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	D5SWF70000-00811	413072	9	Wet Detention	3/20/2018	Performing as designed and permitted	3/20/2020
	D5SWF70000-00795	237421	507	Wet Detention	1/17/2018	Performing as designed and permitted	1/17/2020
	D5SWF70000-00814	413072	9	Wet Detention	3/20/2018	Performing as designed and permitted	3/20/2020
	D5SWF70000-00801	242266	9	Wet Detention	3/14/2018	Performing as designed and permitted	3/14/2020
	D5SWF70000-00802	242266	9	Wet Detention	3/14/2018	Performing as designed and permitted	3/14/2020
	D5SWF70000-00809	413072	9	Wet Detention	3/20/2018	Performing as designed and permitted	3/20/2020
	D5SWF70000-00815	413072	9	Wet Detention	3/20/2018	Performing as designed and permitted	3/20/2020
	D5SWF70000-00235	404601	528	Dry Retention	3/5/2018	Performing as designed and permitted	3/5/2020
	D5SWF70000-00232	237421	507	Dry Retention	1/17/2018	Performing as designed and permitted	1/17/2020
	D5SWF70000-00841	237466	520	Wet Detention	4/18/2018	Performing as designed and permitted	4/18/2020
	D5SWF70000-00842	237466	520	Wet Detention	4/18/2018	Performing as designed and permitted	4/18/2020
	D5SWF70000-00816	413072	9	Wet Detention	3/20/2018	Performing as designed and permitted	3/20/2020
	D5SWF70000-00236	404601	528	Dry Retention	3/5/2018	Performing as designed and permitted	3/5/2020
	D5SWF70000-00803	242266	9	Wet Detention	3/14/2018	Performing as designed and permitted	3/14/2020
	D5SWF70000-00810	413072	9	Wet Detention	3/20/2018	Performing as designed and permitted	3/20/2020

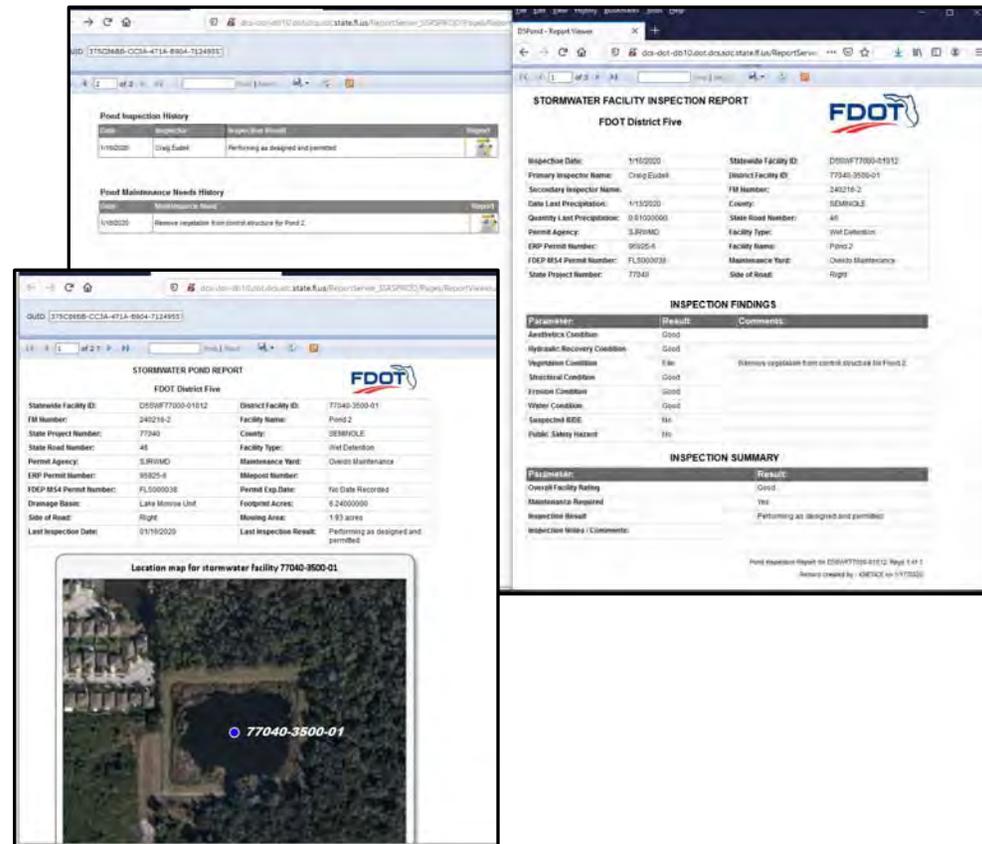


SAMS Dashboard



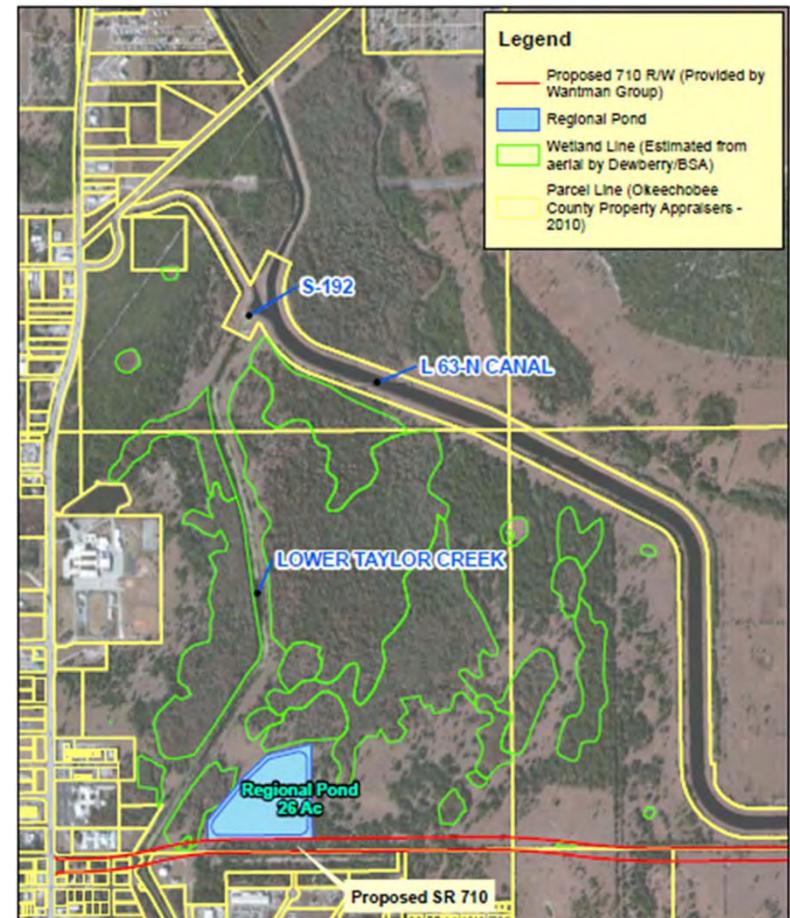
SAMS Benefits and Cost Savings

- 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

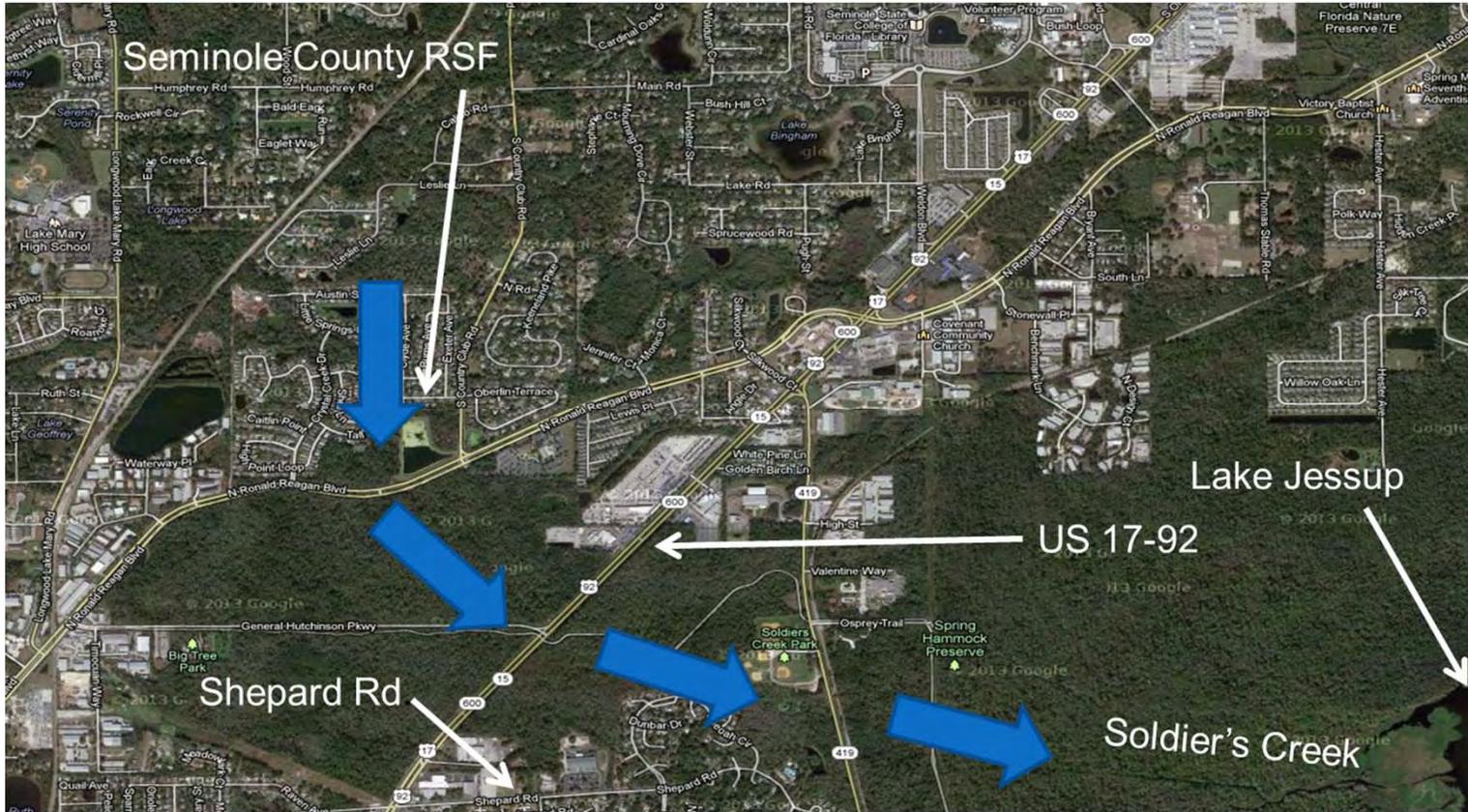


FDOT Partnering – ELA and WATERSS

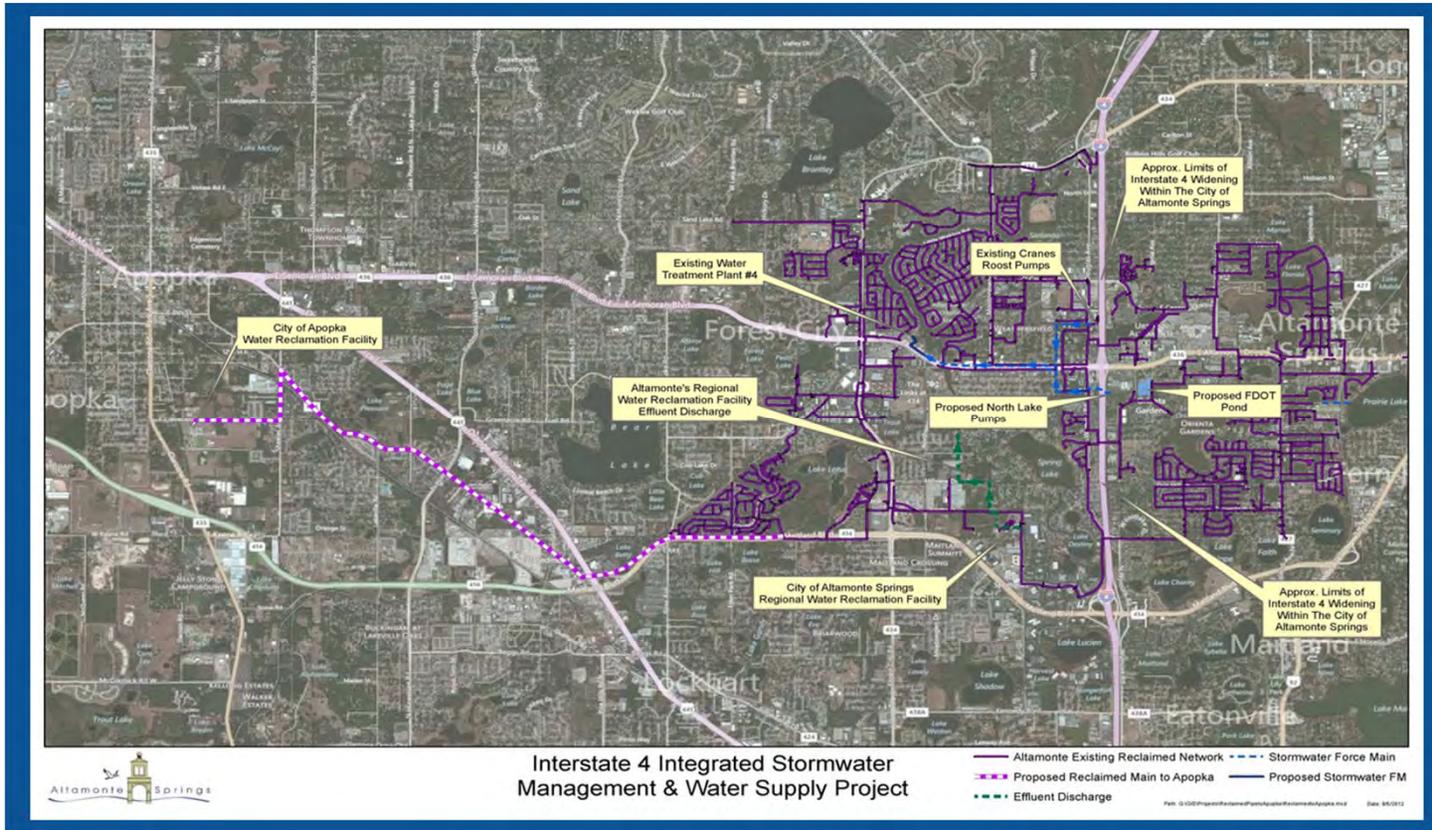
- Environmental Look Around (ELA) - **Now**
- Watershed Approach to Evaluate Regional Stormwater Solutions (WATERSS) – ??
- Each program looking to promote cost-effective regional solutions for treatment early in the FDOT process
- Built into FDOT process
- Innovative partnering (septic system removal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



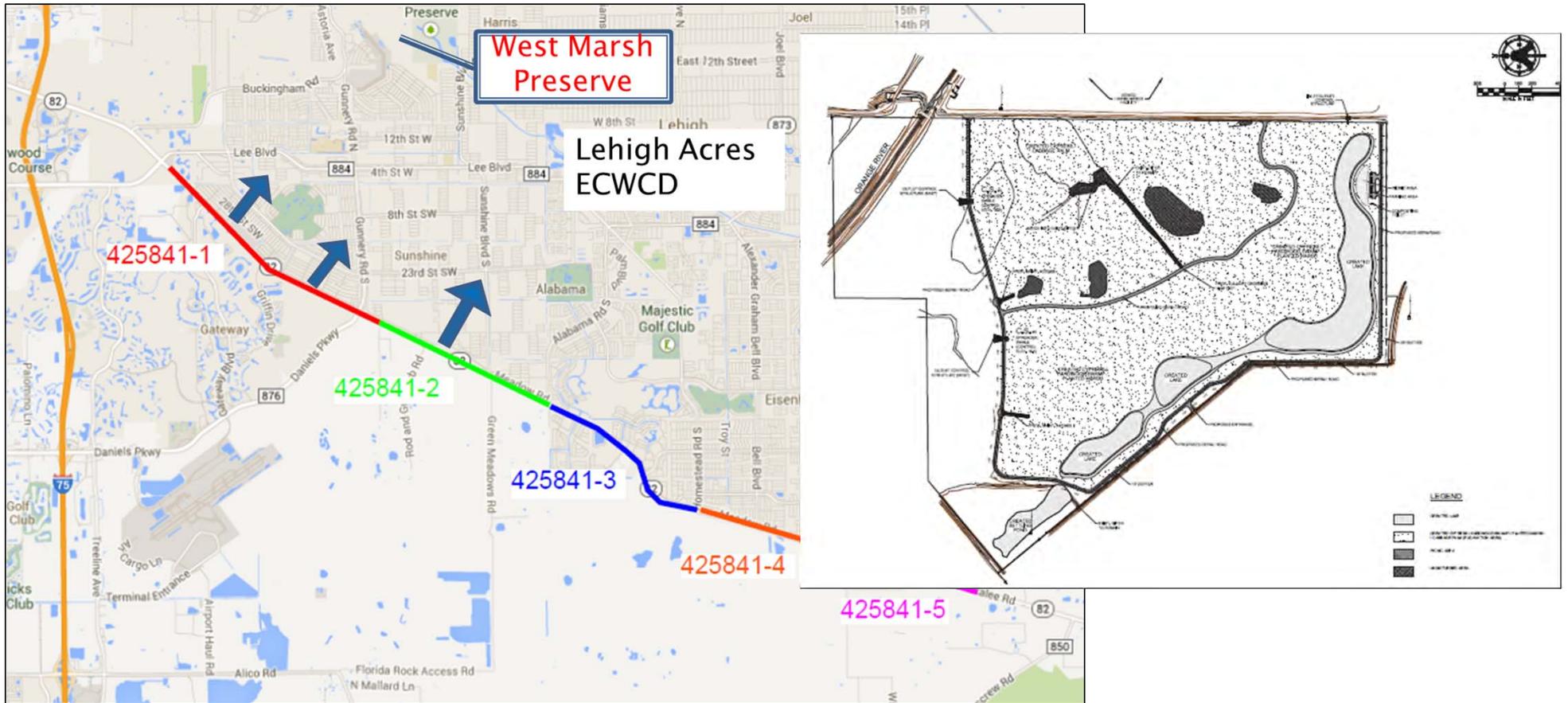
Seminole County Regional Stormwater Facility



A-First - I-4 Integrated Stormwater Project



SR 82 Corridor



Thank you!