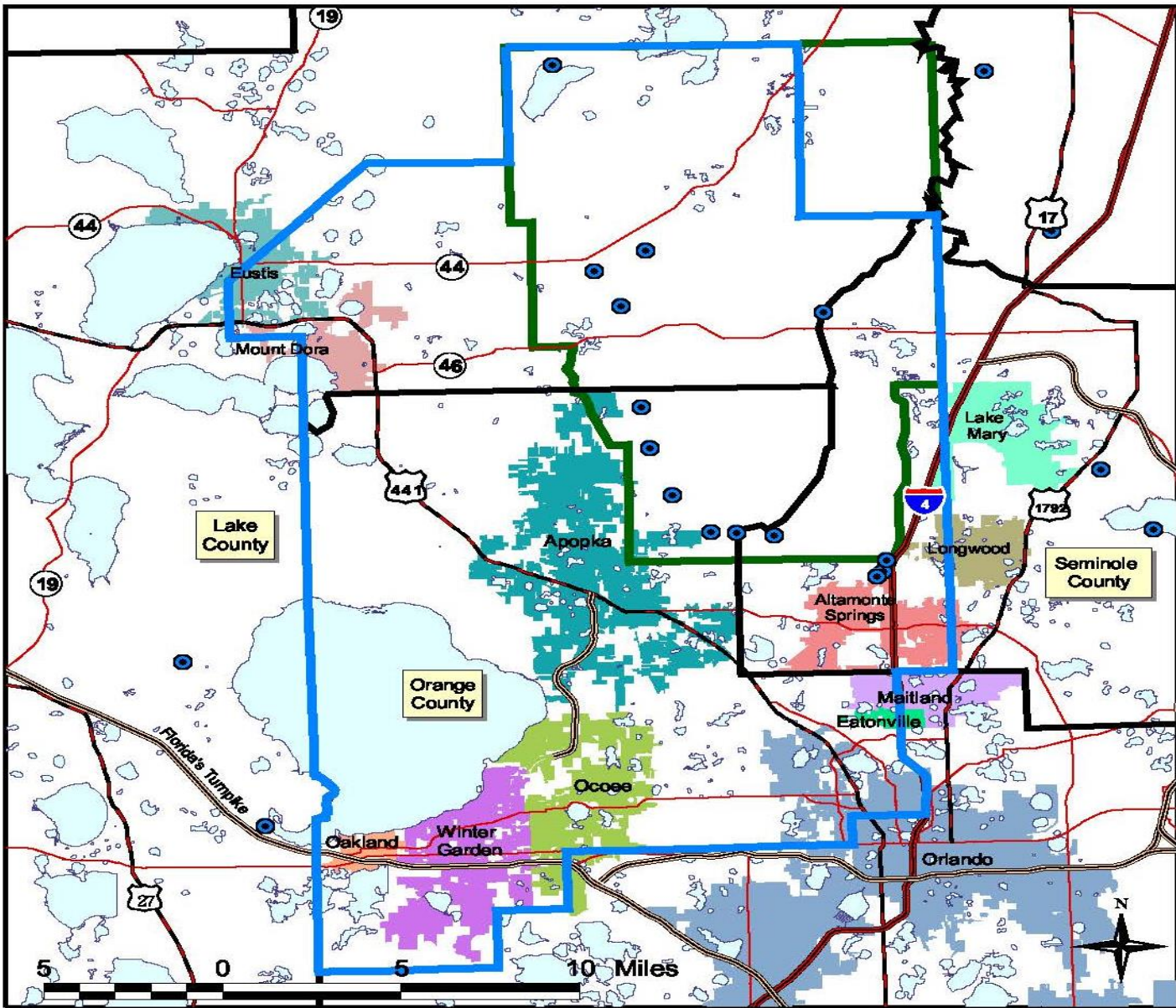




- Wekiva Parkway Protection Act required expedited TMDLs for the Wekiva River Study Area
- Wekiva River Designated Outstanding Florida Water (OFW) and National Wild & Scenic River
- Numeric Nutrient Criteria (NNC)
- CFWI Water Supply Issues & Minimum Flows and Levels
- Rigorous River, Springs, and Aquifer Protection
- Draft BMAP Wekiva River, Rock Springs Run, and LWR for nitrate-nitrogen and phosphorus

Environmental Background



Legend

- WEKIVA STUDY AREA
- SPRINGS
- WEKIVA RIVER PROTECTION AREA
- LAKES

LAKE COUNTY MUNICIPALITIES

- Eustis
- Mount Dora

ORANGE COUNTY MUNICIPALITIES

- Apopka
- Eatonville
- Maitland
- Oakland
- Ocoee
- Orlando
- Winter Garden

SEMINOLE COUNTY MUNICIPALITIES

- Altamonte Springs
- Lake Mary
- Longwood

July 13, 2004

**Wekiva Study Area
Established in Wekiva
Parkway and Protection
Act, Section 369.316,
Florida Statutes**



FLORIDA DEPARTMENT OF
Community Affairs

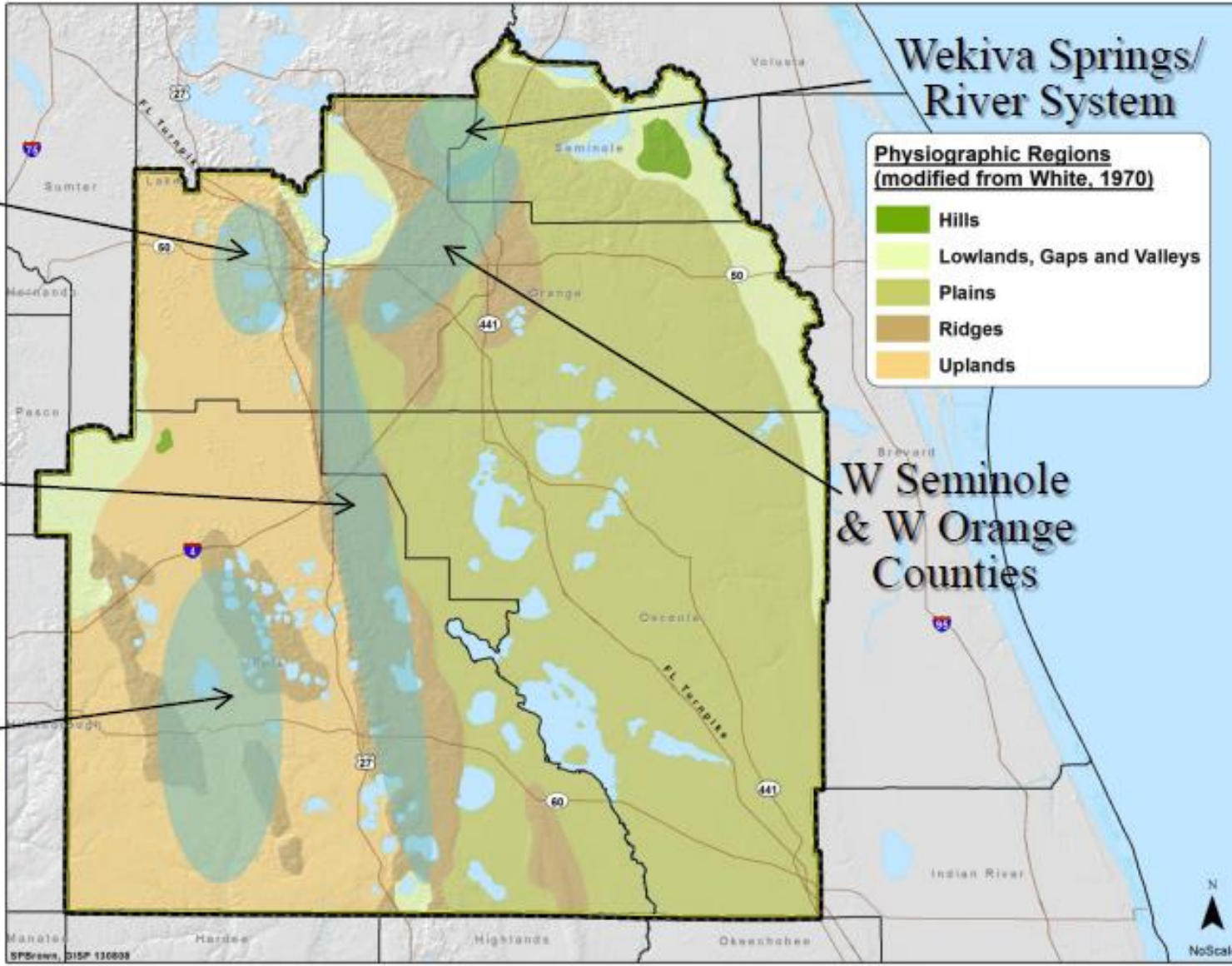
DCA
DCP
GIS

Wekiva River Study Area

Wekiva Springs/ River System

Physiographic Regions
(modified from White, 1970)

- Hills
- Lowlands, Gaps and Valleys
- Plains
- Ridges
- Uplands

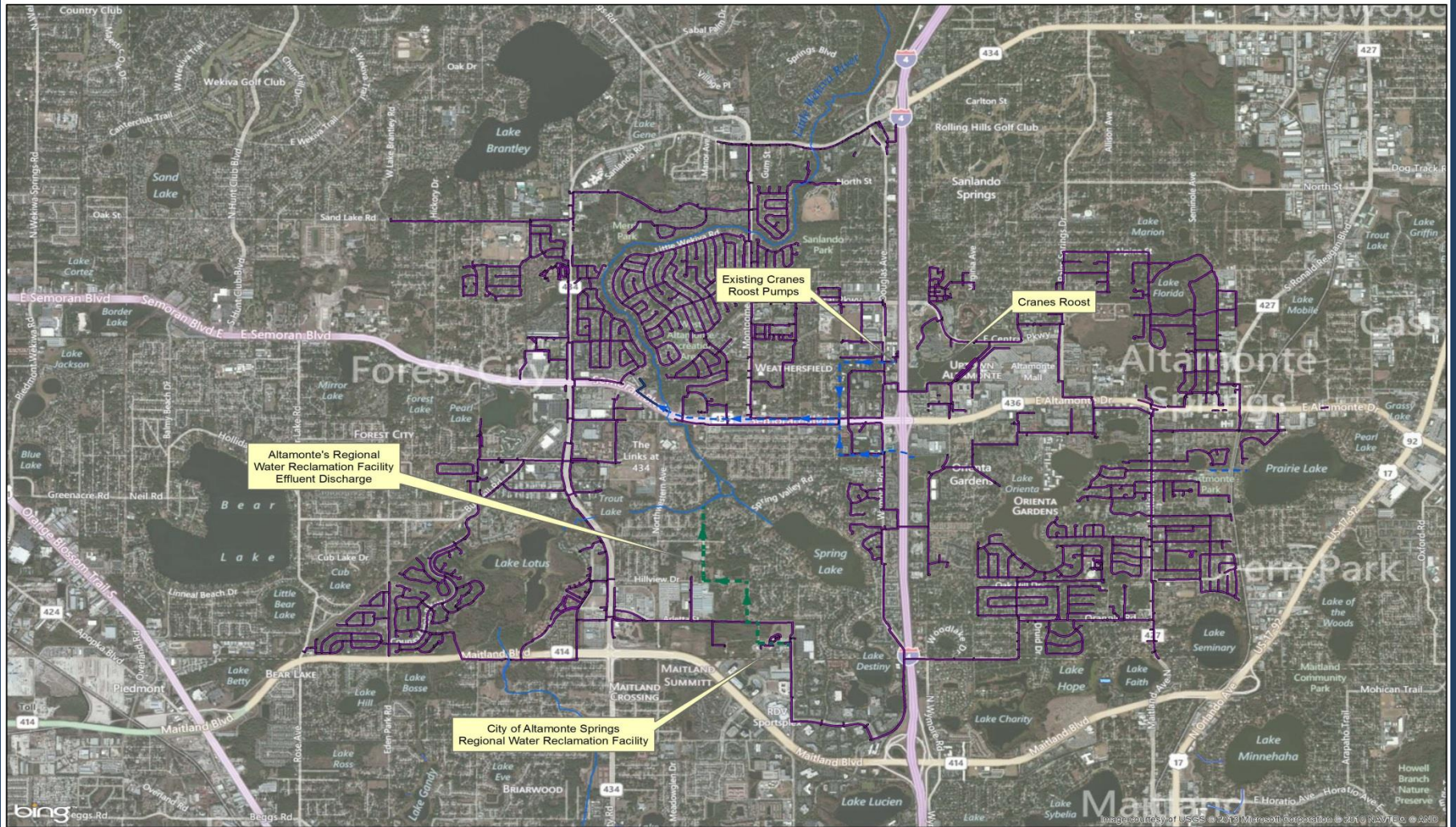


S Lake
County

Lake Wales
Ridge

Southern
Water Use
Caution Area
(SWUCA)

W Seminole
& W Orange
Counties



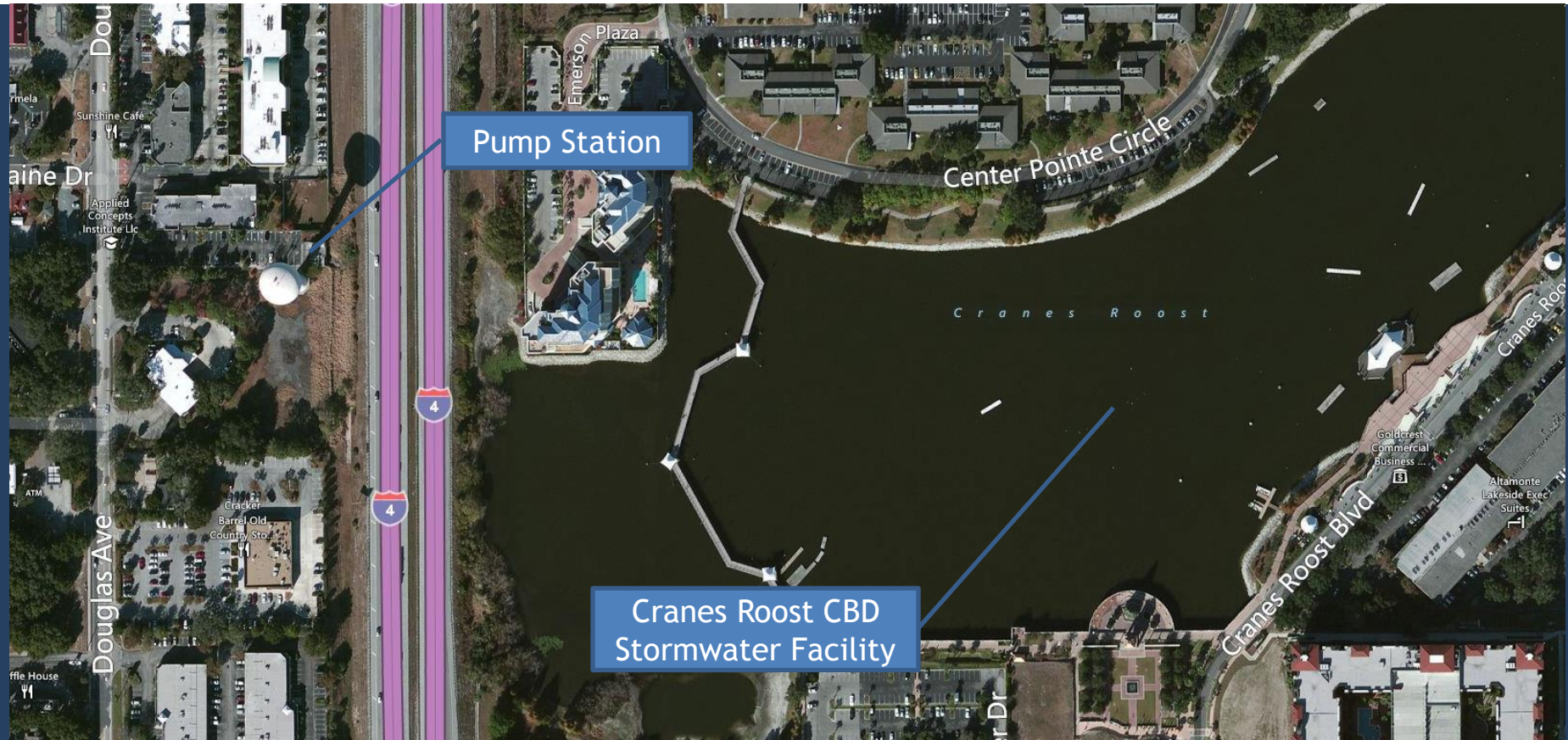
Present Stormwater & Utilities Operations

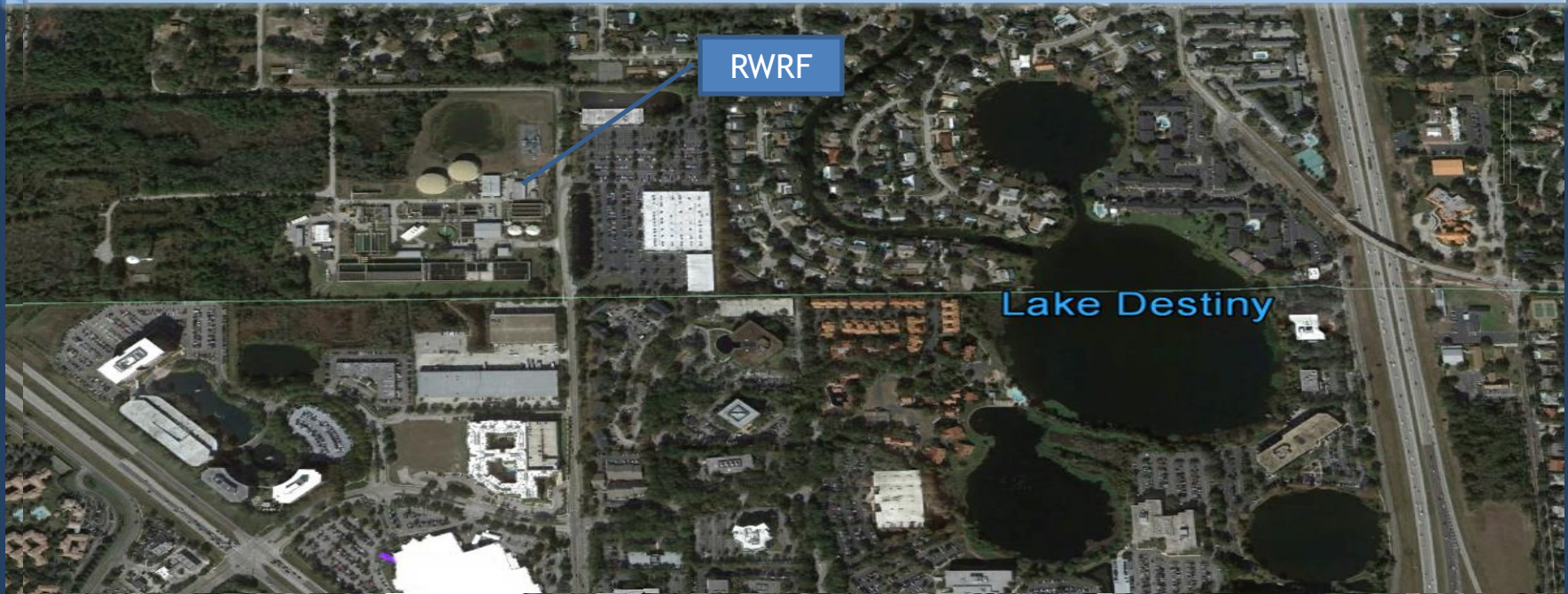


FIRST

Altamonte Springs-FDOT Integrated Reuse and Stormwater Treatment







Regional Water Reclamation Facility



FIRST

Altamonte Springs-FDOT Integrated Reuse and Stormwater Treatment



Regional Water Reclamation Facility Keller Road

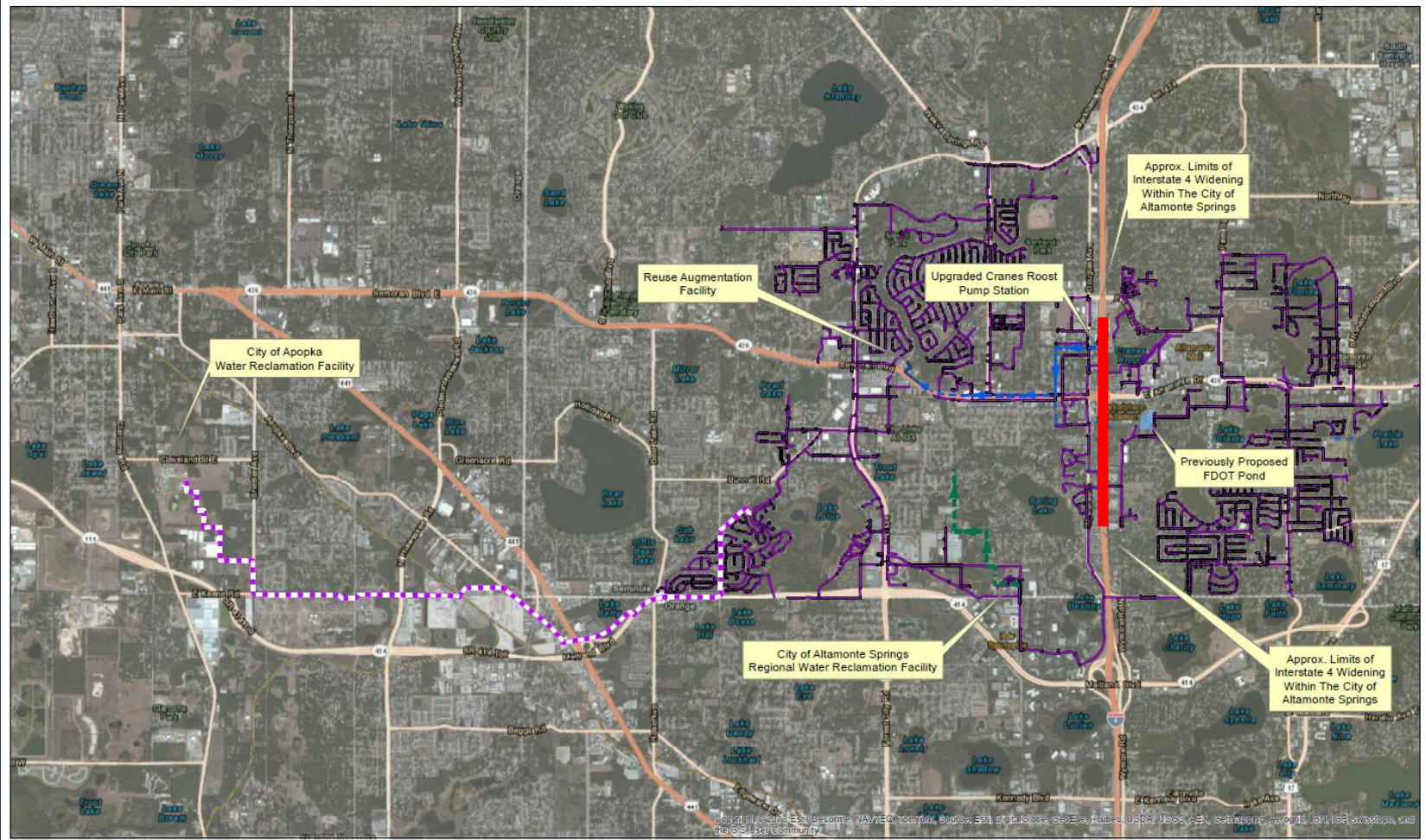
- Water Reclamation Facility
 - Design, permit and construct massive storage ponds and/or storage tanks (never enough)
 - Next level of treatment (i.e. treated to drinking water standards)
- Stormwater
 - Keep continually restricted pumping from Cranes Roost
 - Design, permit and construct unattractive de/retention ponds
 - Inefficient removal capabilities

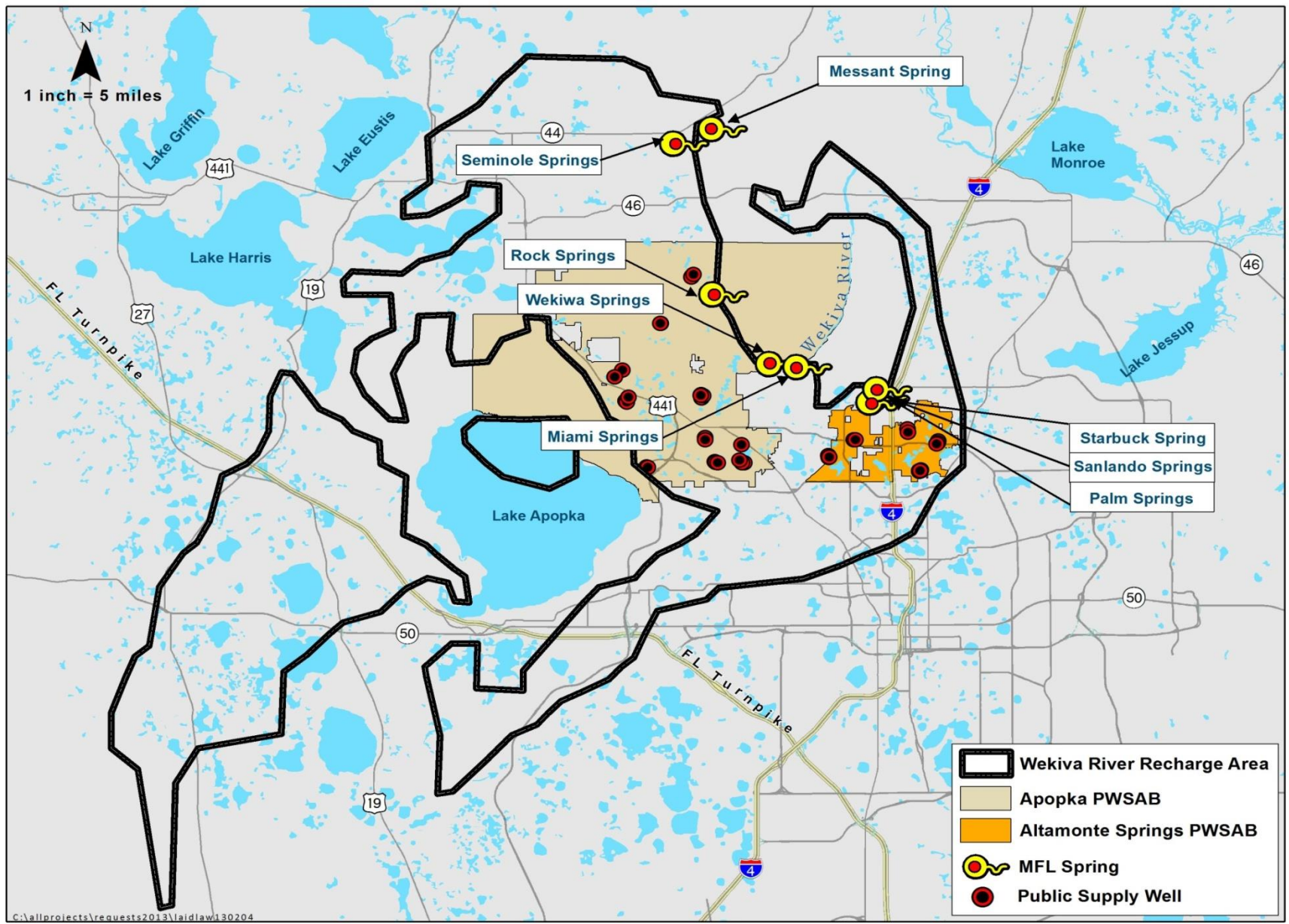
- Cannot continue discharges to the LWR indefinitely
- Most effective way to reduce nutrients in the LWR
- Continue tradition of being in the forefront protecting our environment
- Expense of other treatment options
- Changing environment for DOT

Challenges to Conventional Solution

Unconventional Solution

Doing Business Differently





Altamonte Springs & Apopka Utility Service Areas

Predicted Stormwater Pumping To Little Wekiva River, As-Permitted vs Trial G-02

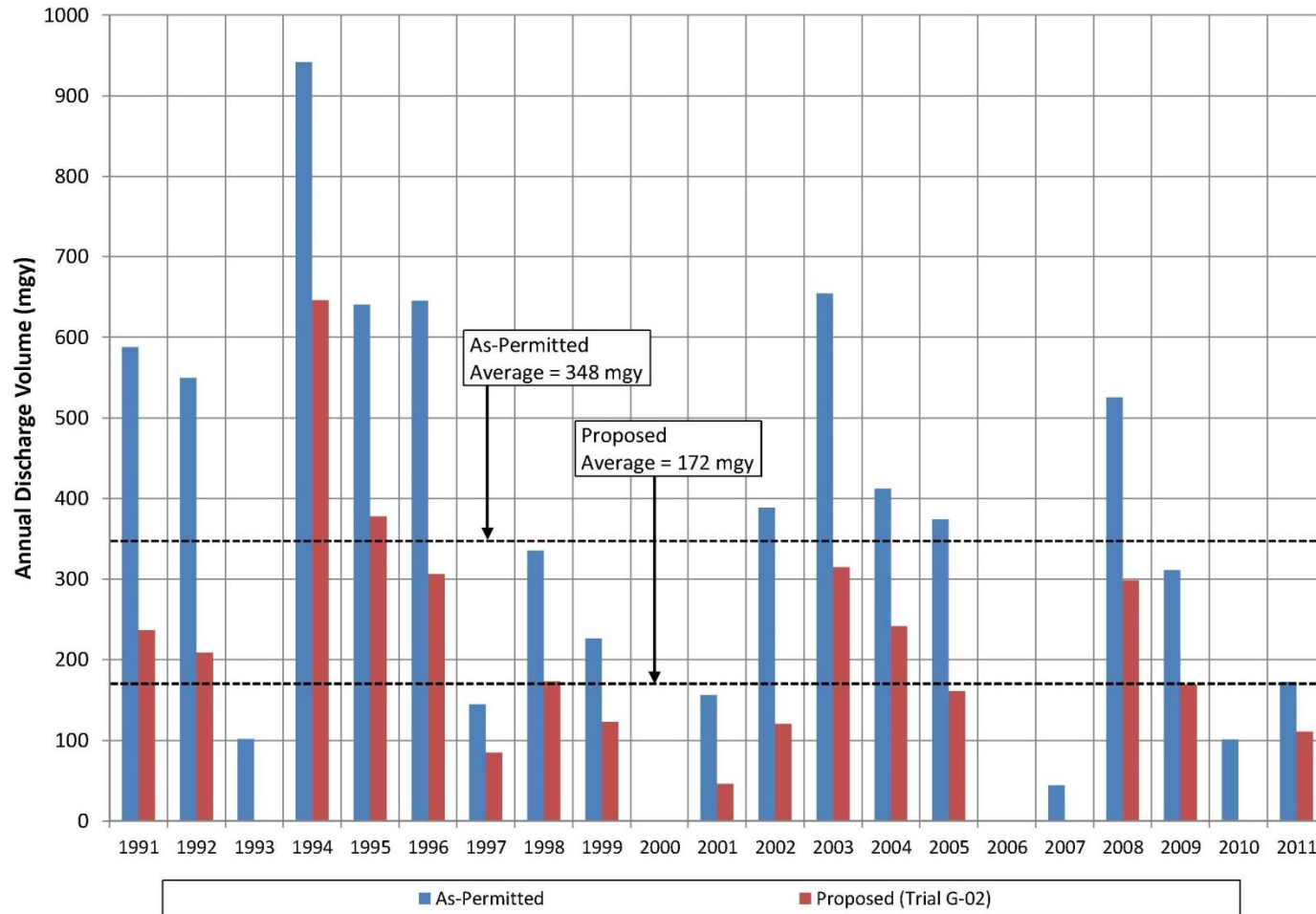


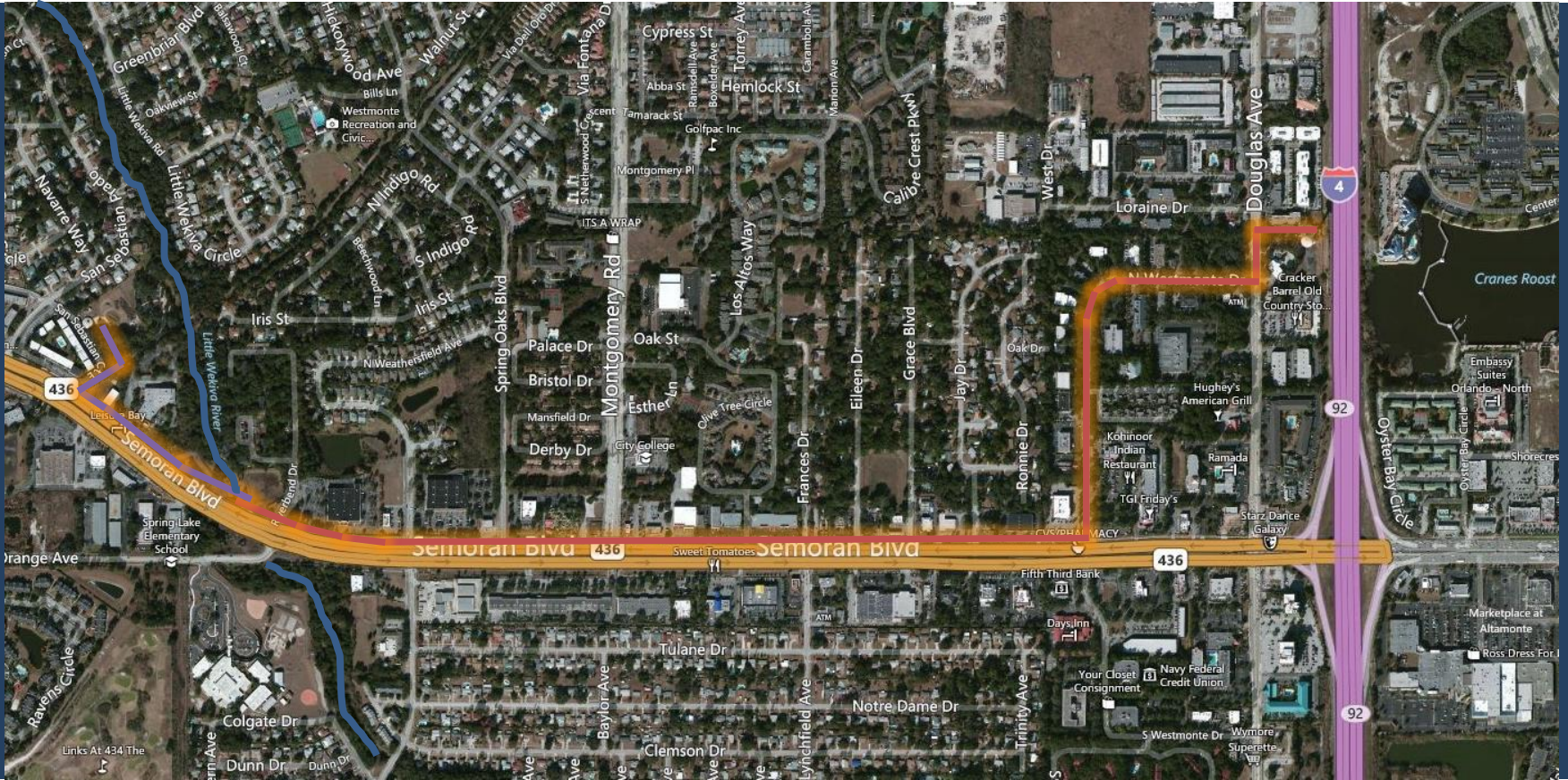
Exhibit 19. Predicted Pumping Discharge to Little Wekiva River, As-Permitted vs. Proposed (Trial G-02)

- Water Quality:
 - Stormwater source estimated nutrient reductions: 643 lbs/yr of TP and 3,259 lbs/yr of TN
 - Excess wet-weather highly treated reclaimed water source estimated nutrient reductions: 27,400 lbs/yr of TP and 59,400 lbs/yr of TN
- Water Supply:
 - 1.5 MGD of Alternate Water Supply from Cranes Roost
 - 3.0 MGD of Alternate Water Supply from RWRF

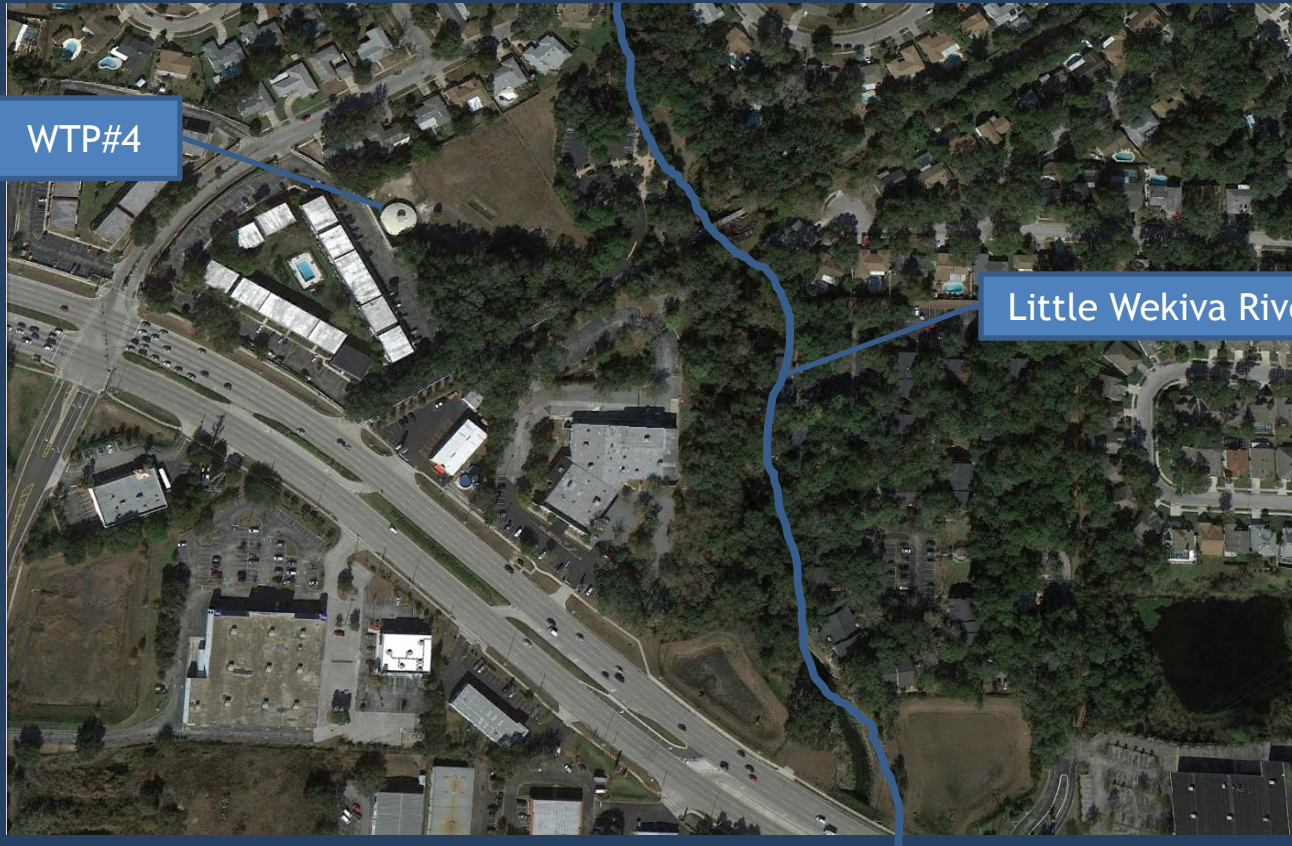


- Pumps:
- Generator
- Redundancies

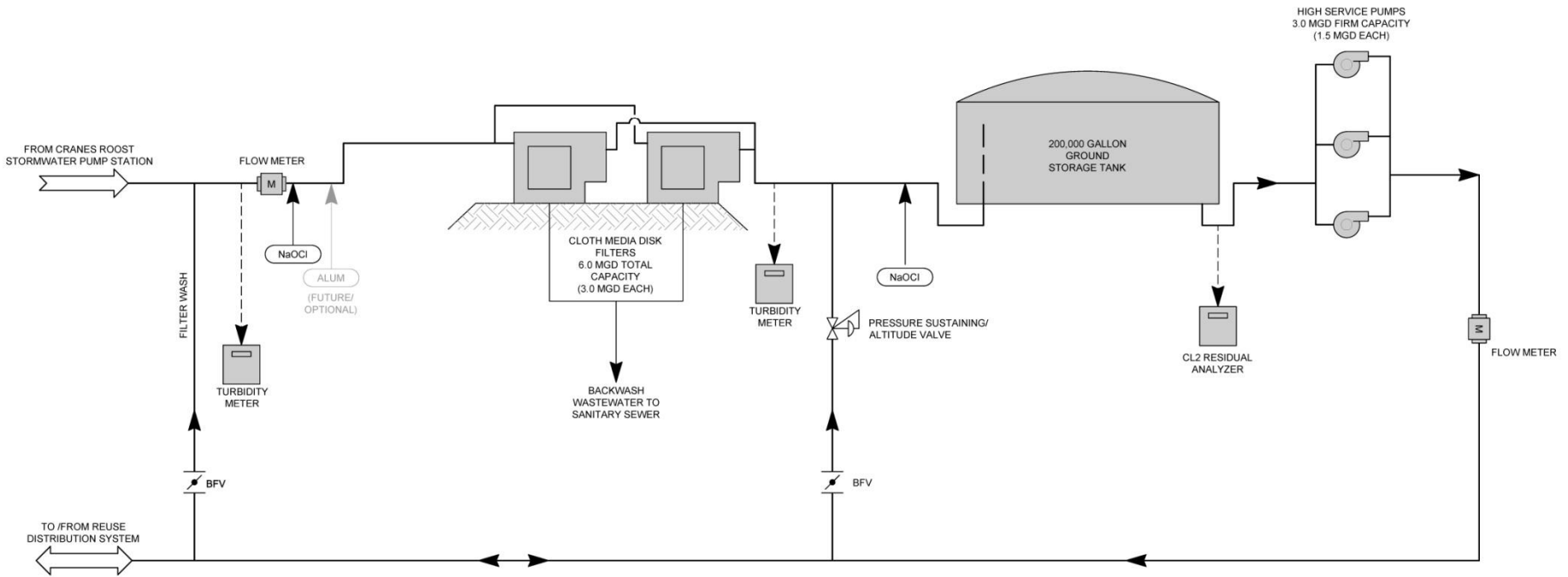
Stormwater Pump Station



Stormwater Forcemain



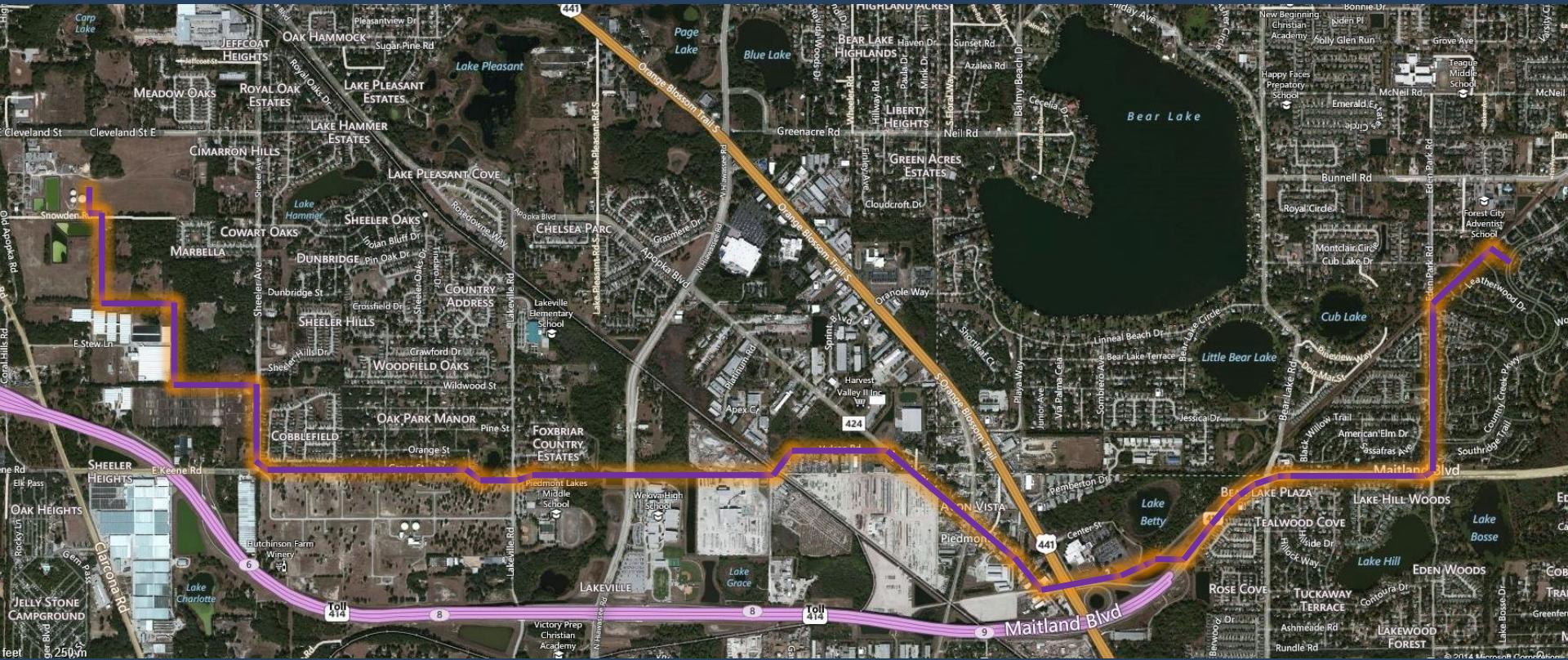
Water Treatment Plant #4/Reuse Augmentation Facility



WTP#4/Reuse Augmentation Facility

A FIRST

Altamonte Springs-FDOT Integrated Reuse and Stormwater Treatment



Pipeline to Apopka



- Major AWS alleviates unmet water supply demands in Apopka's service area
- Reduces groundwater pumping needs in the Apopka and Altamonte springshed, which directly correlates with spring flows and MFLs
- Significant overall nutrient loading reduction in the LWR from non-point and point-sources
- Nutrient reduction in the LWR will have ancillary water quality benefits in the springs
- Addresses NNC and TMDLs as well as the regional Wekiva Parkway Protection Act goals for the area
- Addresses stormwater treatment needs for Interstate 4 in Altamonte Springs and will serve as an example for future
- Besides environmental benefits...approximately \$15M savings to the FDOT

Benefits of Doing Business Differently

FDOT \$4.5M



Altamonte Springs \$3M + O&M



SJRWMD \$3.5M



Apopka (storage construction & retreatment)



FDEP \$1.5M



The Right People in the Right Place at the Right Time



**Stormwater Analysis
& Modification**



**Stormwater Pump Station
& Forcemain**



Stormwater Modeling



Reuse Augmentation Facility



Construction



Pipeline to Apopka



Analysis, Design, Permitting and Construction

Schedule:

- Design: March, 2013 - March, 2014
- Construction: June, 2014 - May, 2015

Current Status:

- Continuous Simulation Modeling - Complete
- Cranes Roost Pumps Improvements - Design Complete, Bid \$2,482,000
- Reuse Augmentation Facility (WTP#4) - Design Complete, Bid \$3,364,500
- Pipeline to Apopka - Design Complete, Bid \$5,594,828
- Easements - \$127,400
- Total Cost (including design & easements) = \$12,934, 468 (3.5% off from estimate)



“There is no greater satisfaction than realizing an accomplishment when the odds are stacked against you and the difficulty of implementation surpasses the greatness of an idea” ET 12/2013



Thank you!