

# **Hydrogeological Investigation of the Lower Floridan Aquifer in Polk County**

## **Crooked Lake Site**

**Nov. 7, 2017 – Presentations to District's  
Industrial & Public Supply Advisory Committees**

**Southwest Florida**  
*Water Management District*



# **Agenda**

- **Project Location**
- **Project Overview**
- **Crooked Lake Status**
- **Communications**
- **Status of Related Investigations**



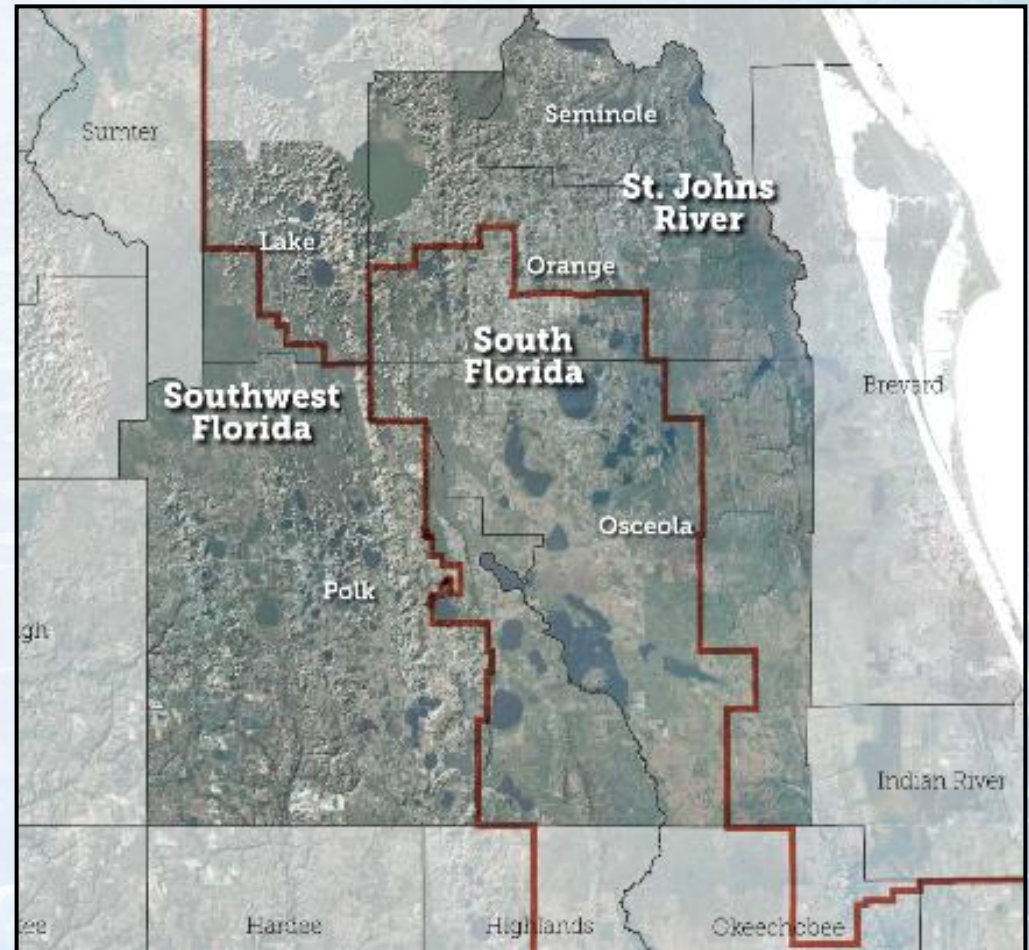
# Project Video: [WaterMatters.org/LFA](http://WaterMatters.org/LFA)



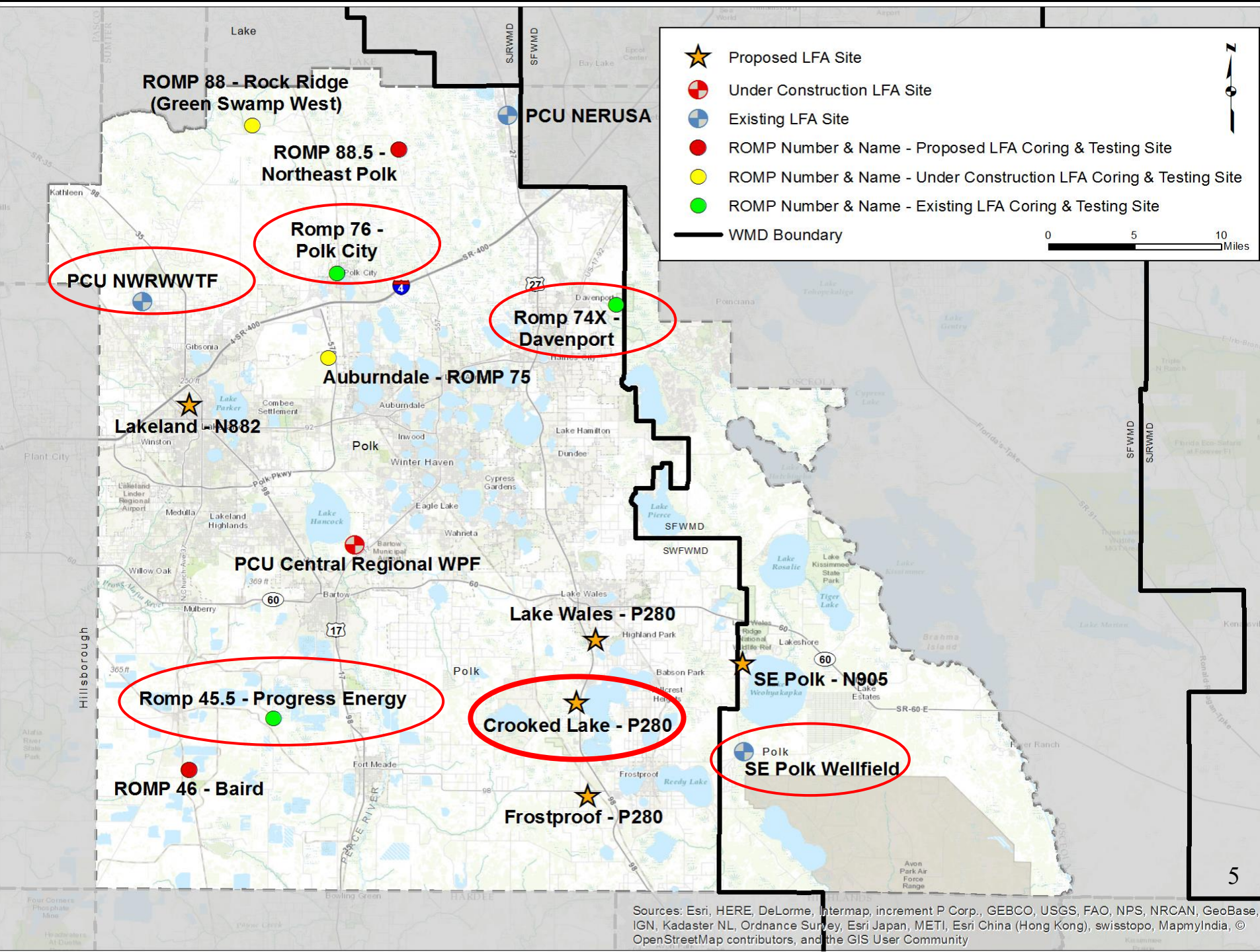


# Central Florida Water Initiative (CFWI)

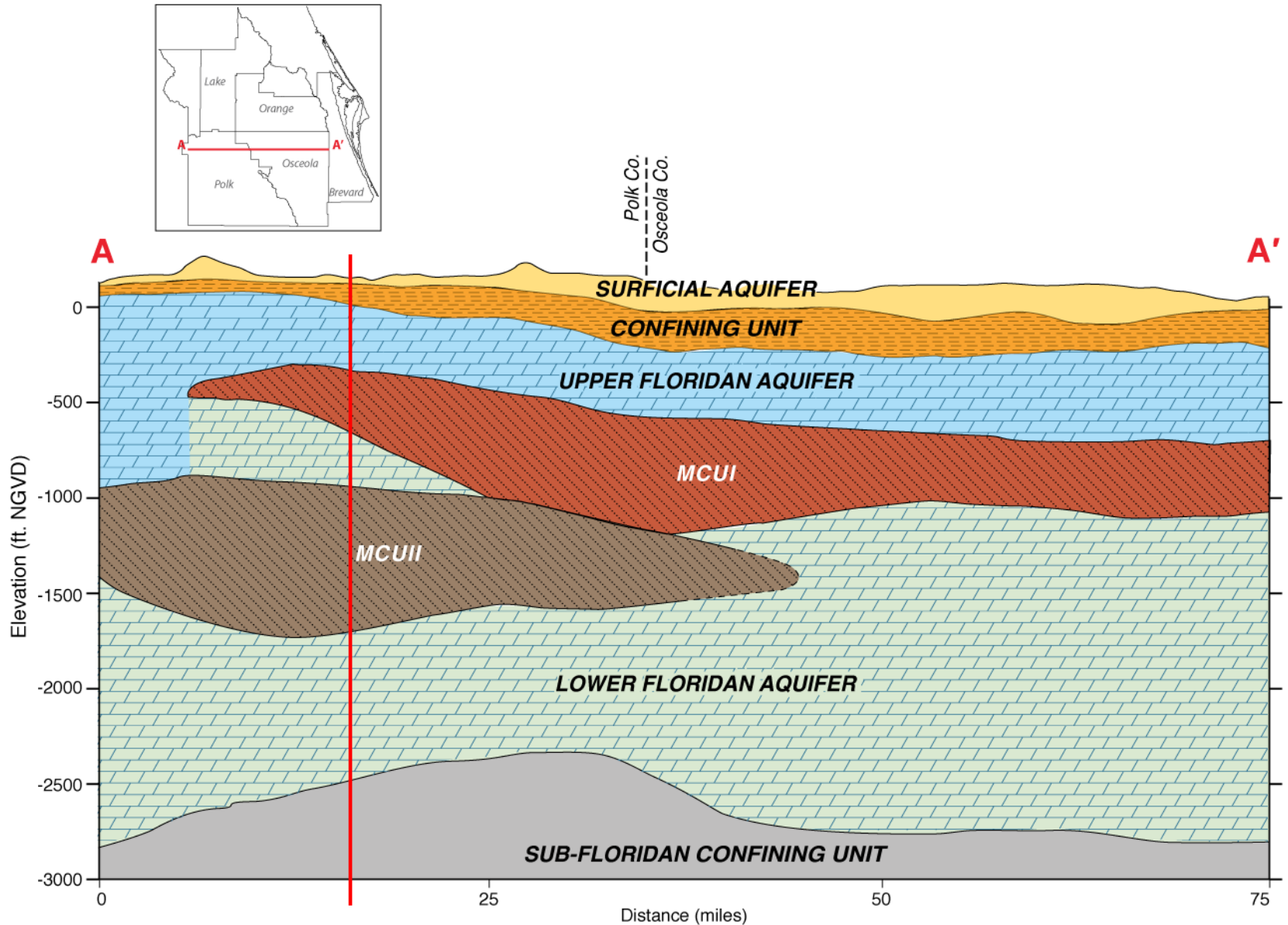
A collaborative regional water supply planning effort to protect, develop, conserve and restore central Florida's water resources







# Generalized Hydrogeologic Cross Section A-A'





# Project Overview

- Three-year testing program in two phases
- Phase 1
  - Initial drilling and testing
  - Installation of multiple monitor wells
- Phase 2
  - Drilling and testing of test/production wells
  - Aquifer performance tests:
    - Aquifer characteristics
    - Water quality

## Crooked Lake Well Site

A project to explore the Lower Floridan aquifer in Polk County is under way at this site. For more information, call the Southwest Florida Water Management District at:

**1-800-423-1476, ext. 4212**

*Southwest Florida  
Water Management District*

Funded by the  
Southwest Florida Water Management District



Versa-Drill coring rig



# **Crooked Lake LFA Site Update**

- Project started January 2017
- Upper Floridan aquifer (UFA) and surficial aquifer (SA) wells completed
- LFA coring ongoing
  - Coring
  - Packer tests
  - Water quality testing
  - Geophysical logging
  - USGS Optical Borehole Imaging and age dating



Removal of core sample



10 foot cores





Limestone



Dolomite with infill of gypsum and organics



Limestone with laminations/gypsum



Limestone with infill of gypsum and anhydrite



Porous dolomite



Crystalline dolomite and anhydrite



SA and  
UFA  
monitor  
wells





Storage of brackish water

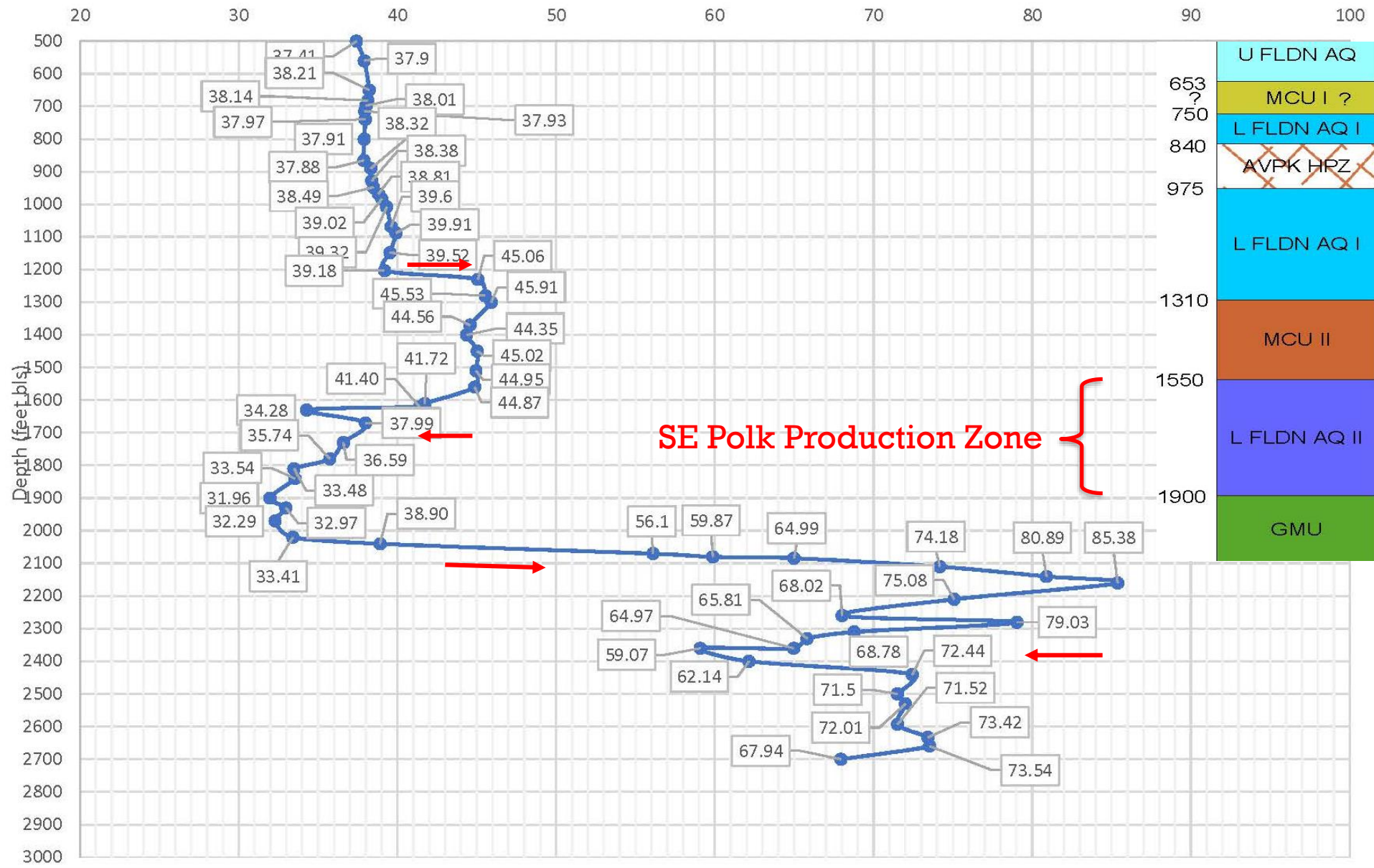
Disposal of blended water



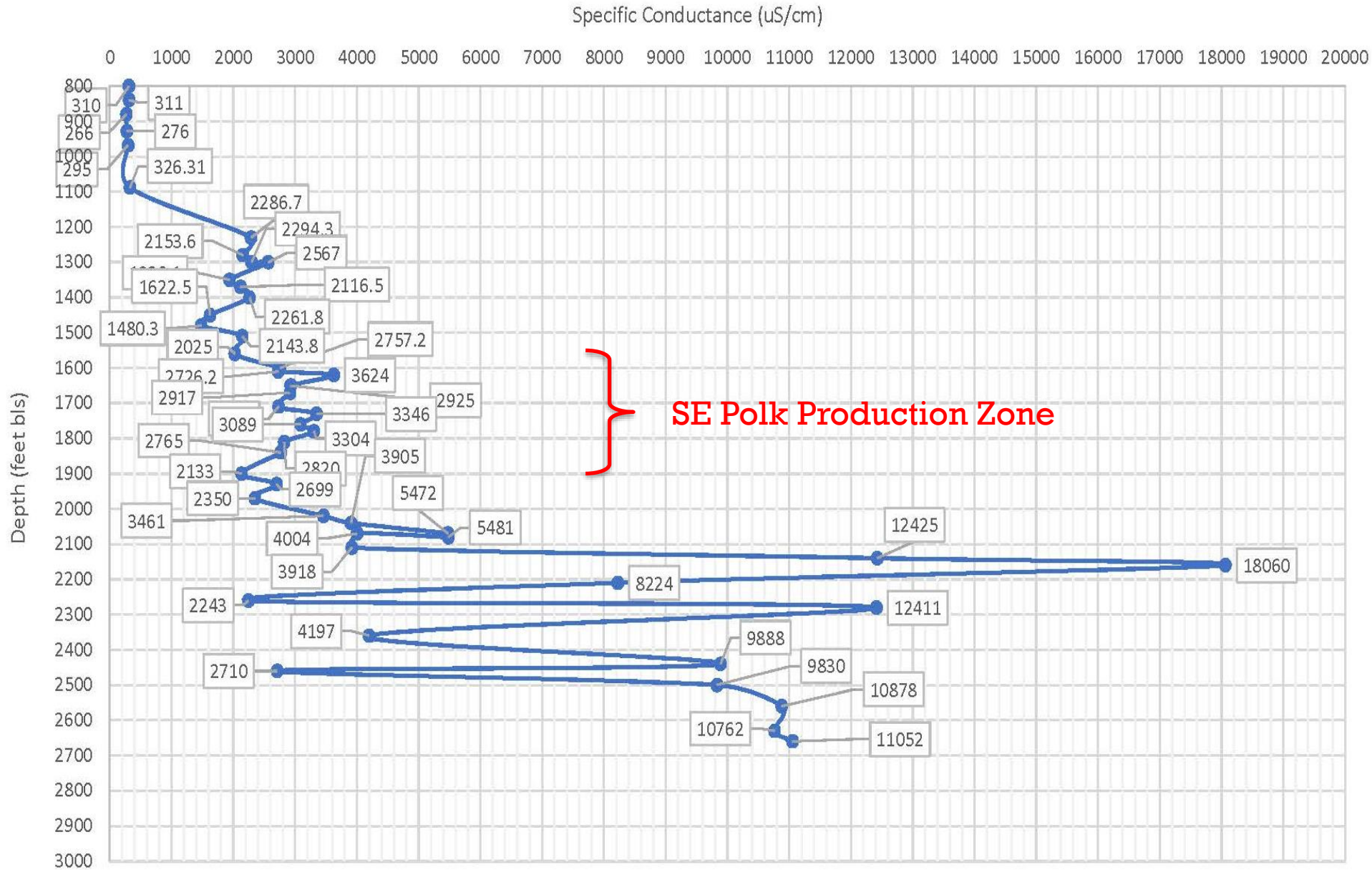


# P280 SWFWMD Hydrogeologic Investigation of the Lower Floridan Aquifer Static Water Level Depth Profile During Drilling Well CL-EC

Water Level (feet bls)

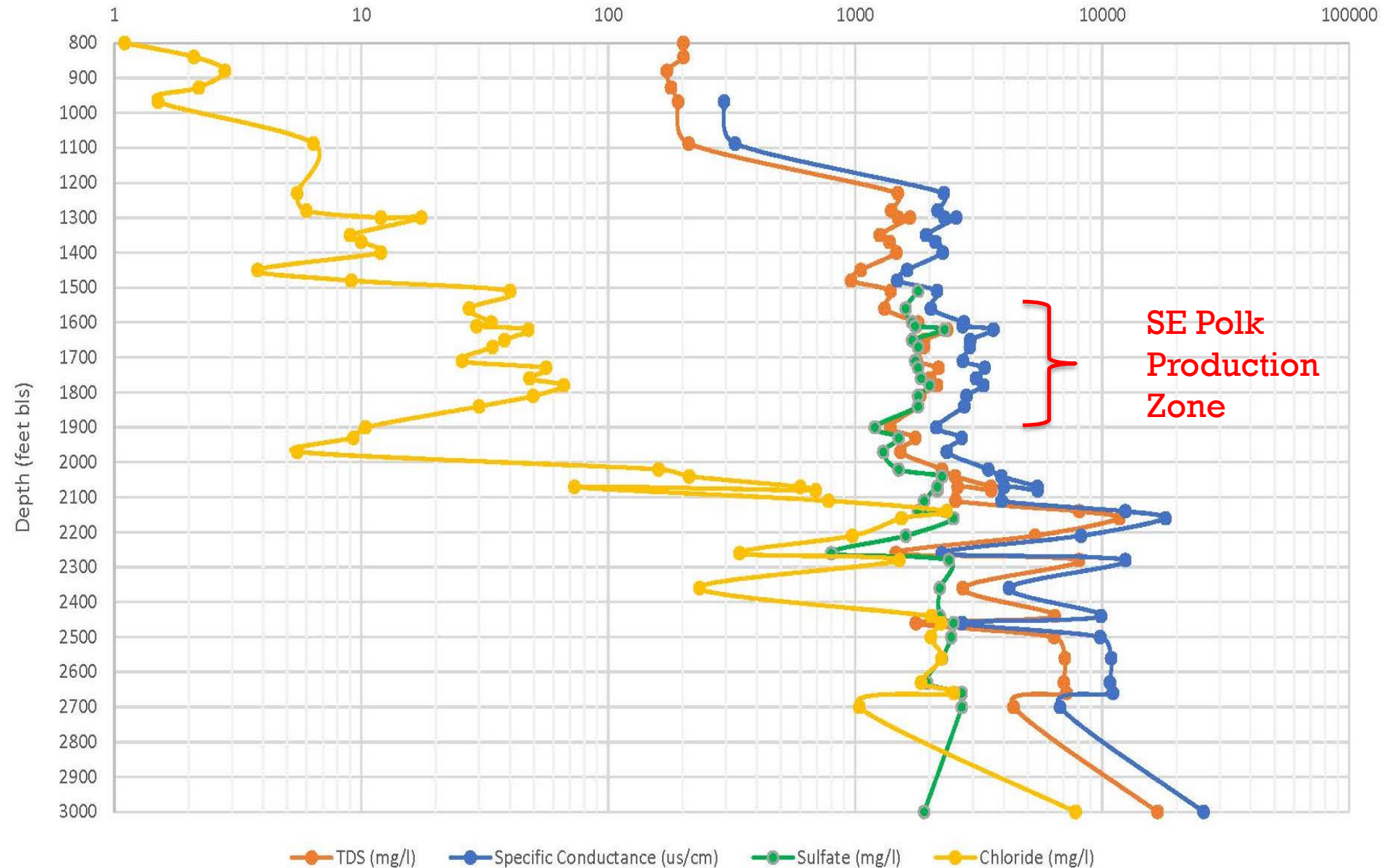


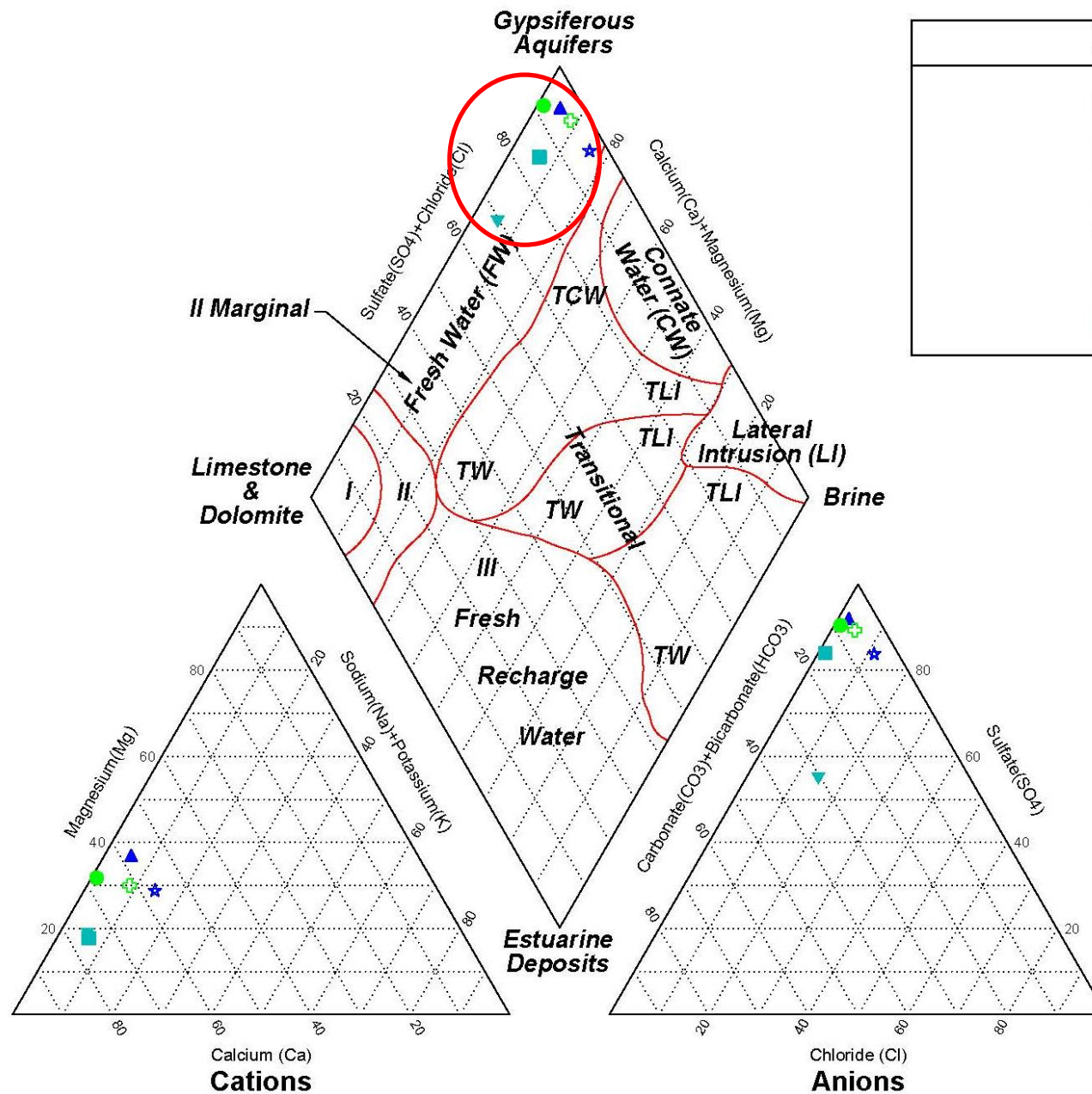
## P280 SWFWMD Hydrogeologic Investigation of the Lower Floridan Aquifer Specific Conductance Depth Profile During Drilling Well CL-EC





# P280 SWFWMD Hydrogeologic Investigation of the Lower Floridan Aquifer Specific Conductance Depth Profile During Drilling Well CL-EC







# Next Steps at Crooked Lake

- Complete LFA monitor well (below Middle Confining Unit I) with Huss Drilling
- Select contractor for construction of LFA dual zone monitor well (below Middle Confining Unit II)
  - January 2018: Request for Bids
  - Summer 2018: Start construction



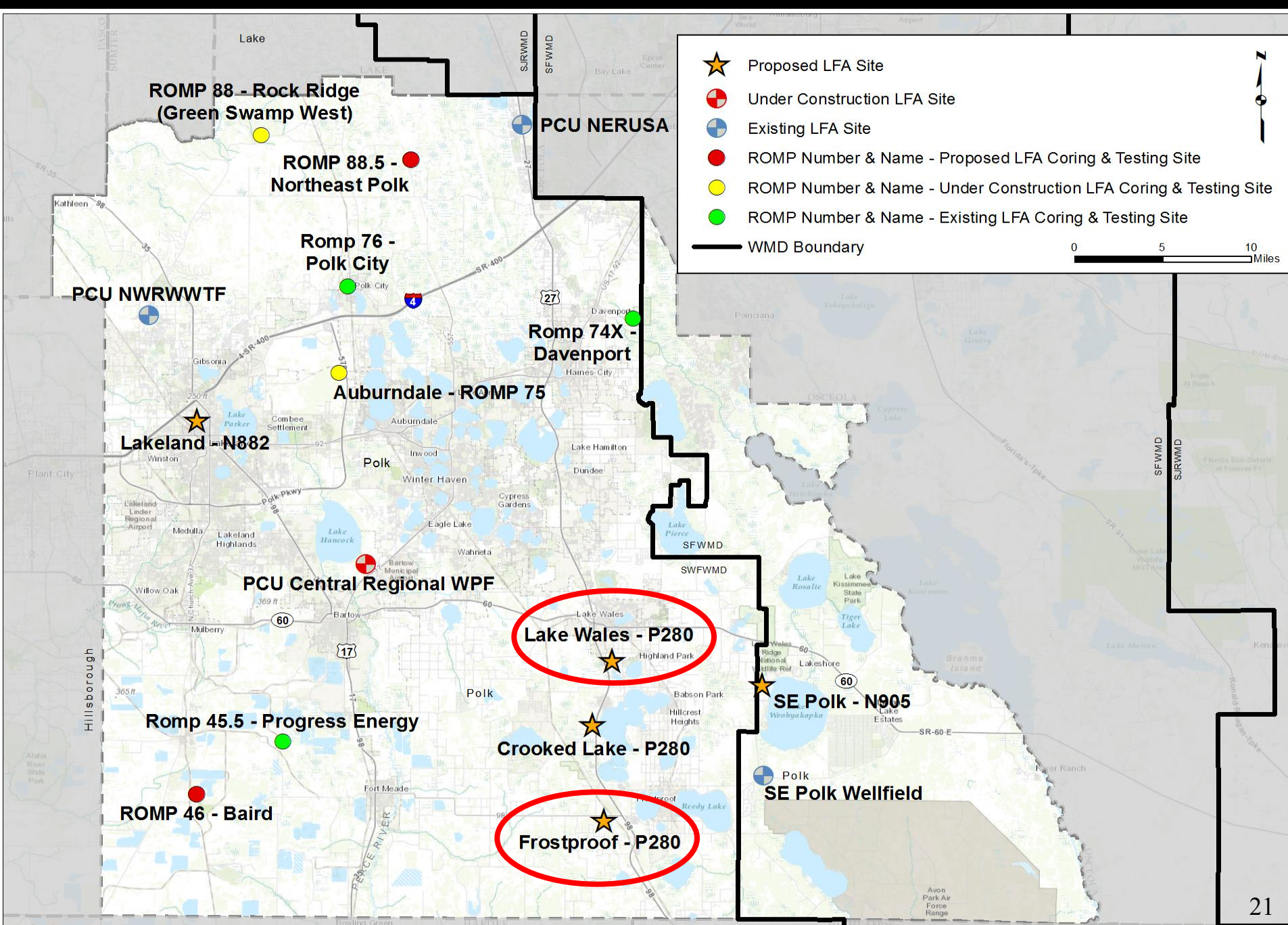
# Communications

- Video released on District's Facebook and Twitter on July 21, 2017



- LFA webpage launched July 25, 2017
  - [WaterMatters.org/LFA](http://WaterMatters.org/LFA)
- Future workshops









## QUESTIONS and COMMENTS



3,000 foot core sample