

Hydrogeological Investigation of the Lower Floridan Aquifer in Polk County

Crooked Lake Site Update

**Oct. 11, 2017 – Presentation to District's Well
Drillers Advisory Committee**

Southwest Florida
Water Management District



Agenda

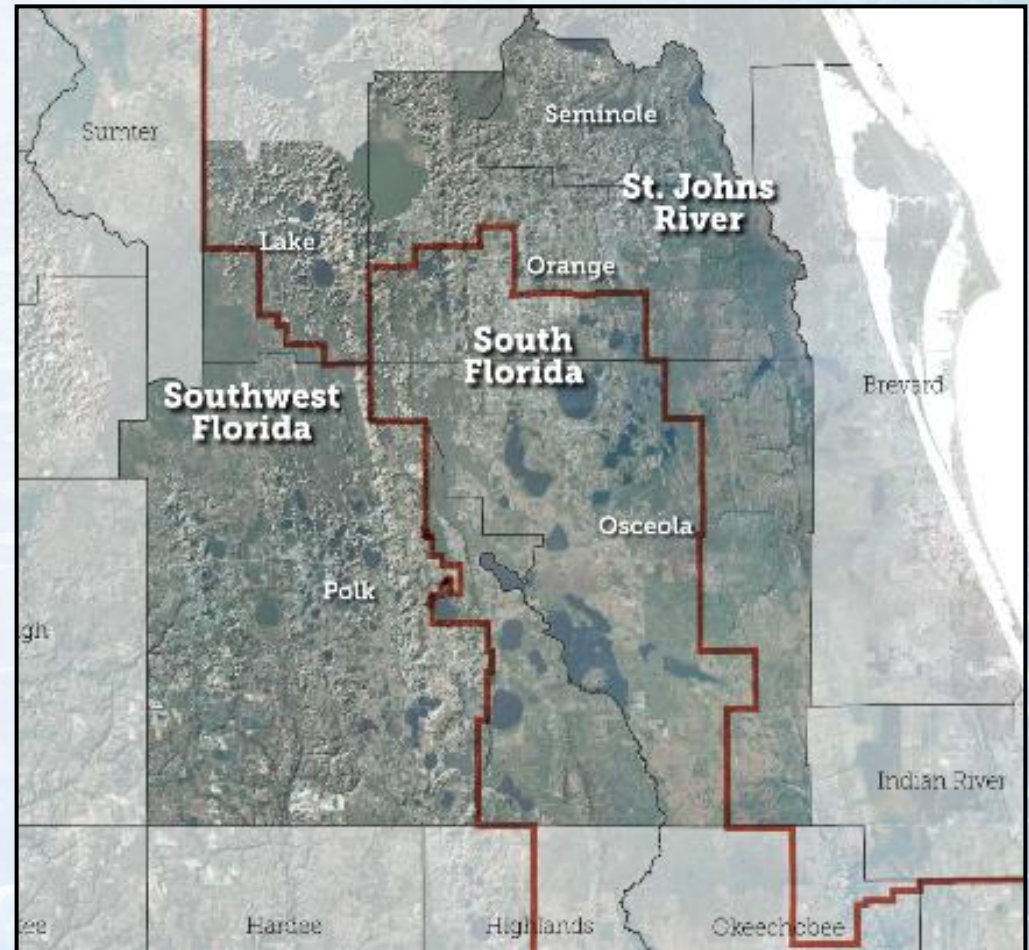
- **Central Florida Water Initiative (CFWI)**
- **Project Overview**
- **Crooked Lake Status**
- **Communications**
- **Status of Related Investigations**

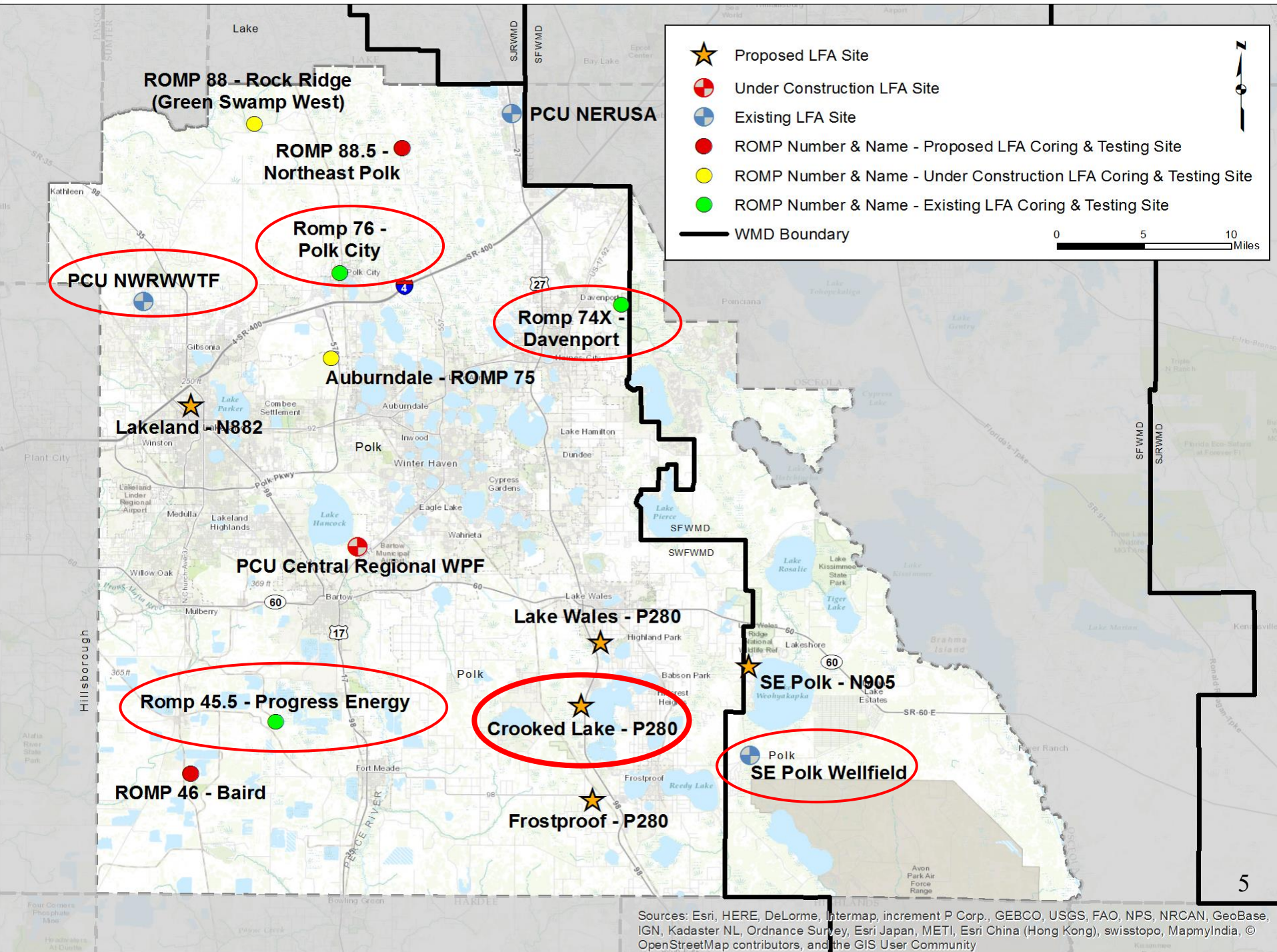
Project Video: WaterMatters.org/LFA



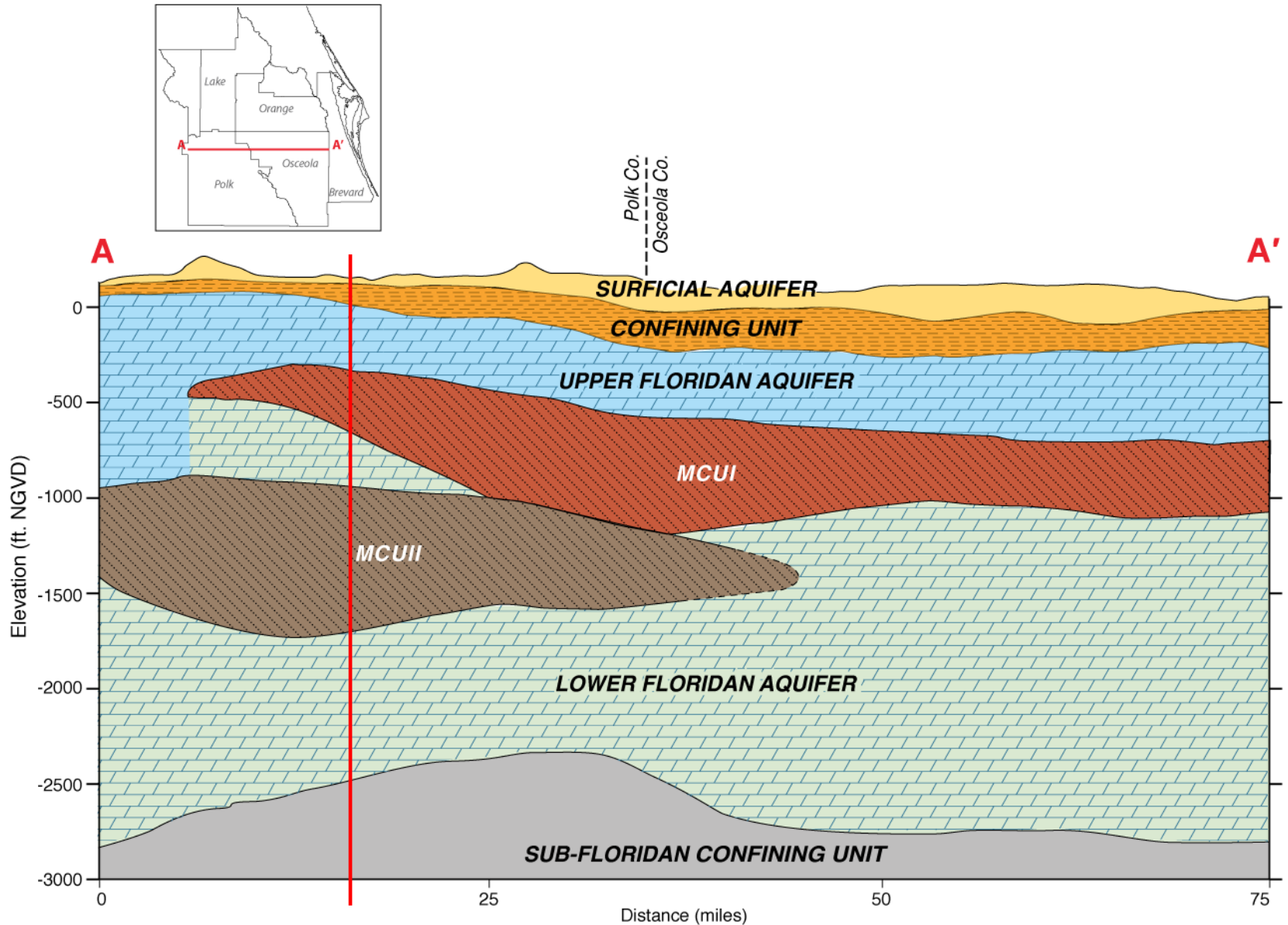
Central Florida Water Initiative (CFWI)

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

- Assess the viability of the LFA as an alternative water supply source
- 3-year testing program in 2 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:

1-800-423-1426, ext. 4212

*Southwest Florida
Water Management District*

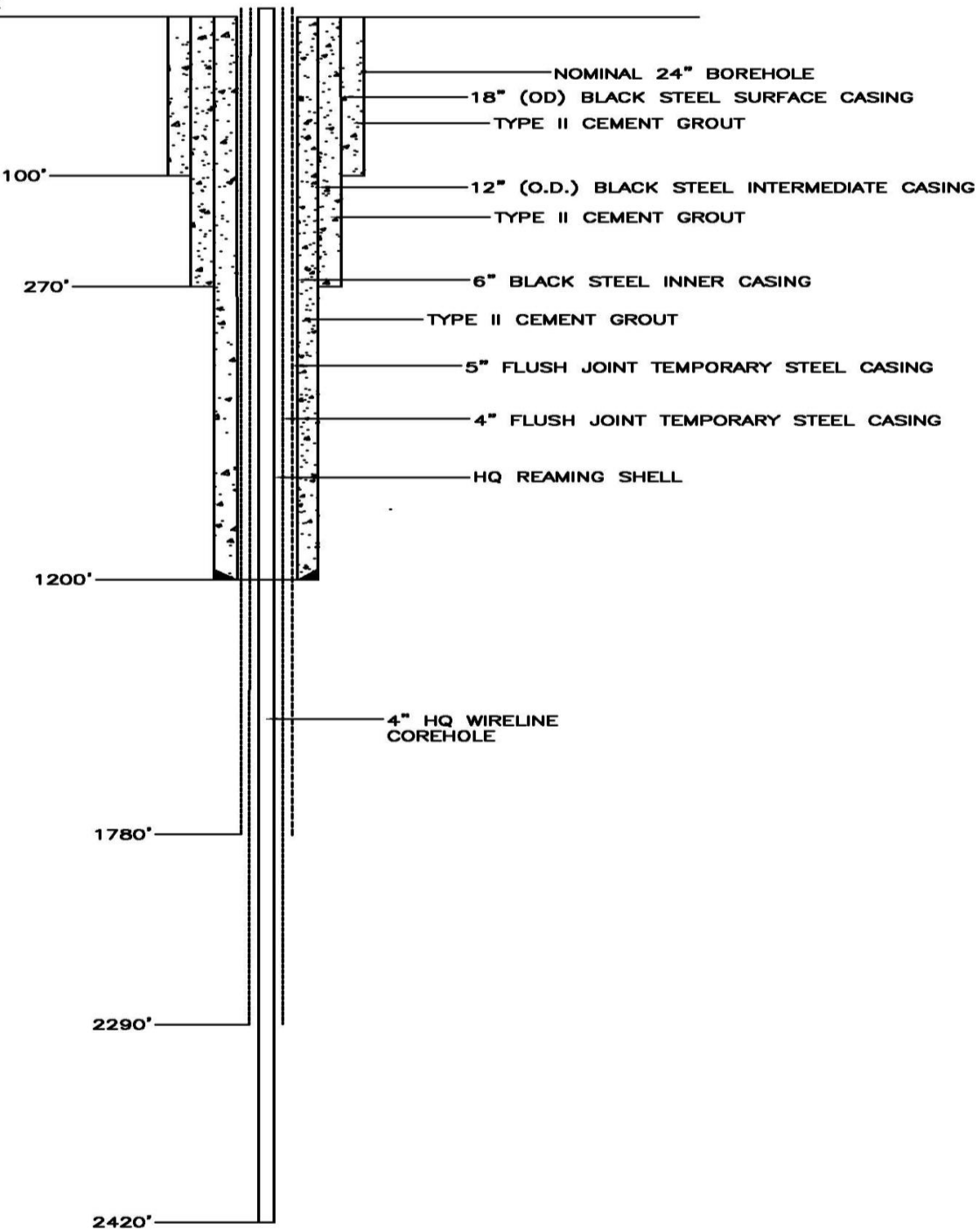
Funded by the
Southwest Florida Water Management District



Versa-Drill coring rig

Crooked Lake LFA Site Update

- Project start 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



Coring Bit



HQ Casing

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 & anhydrite



SA and
UFA
monitor
wells



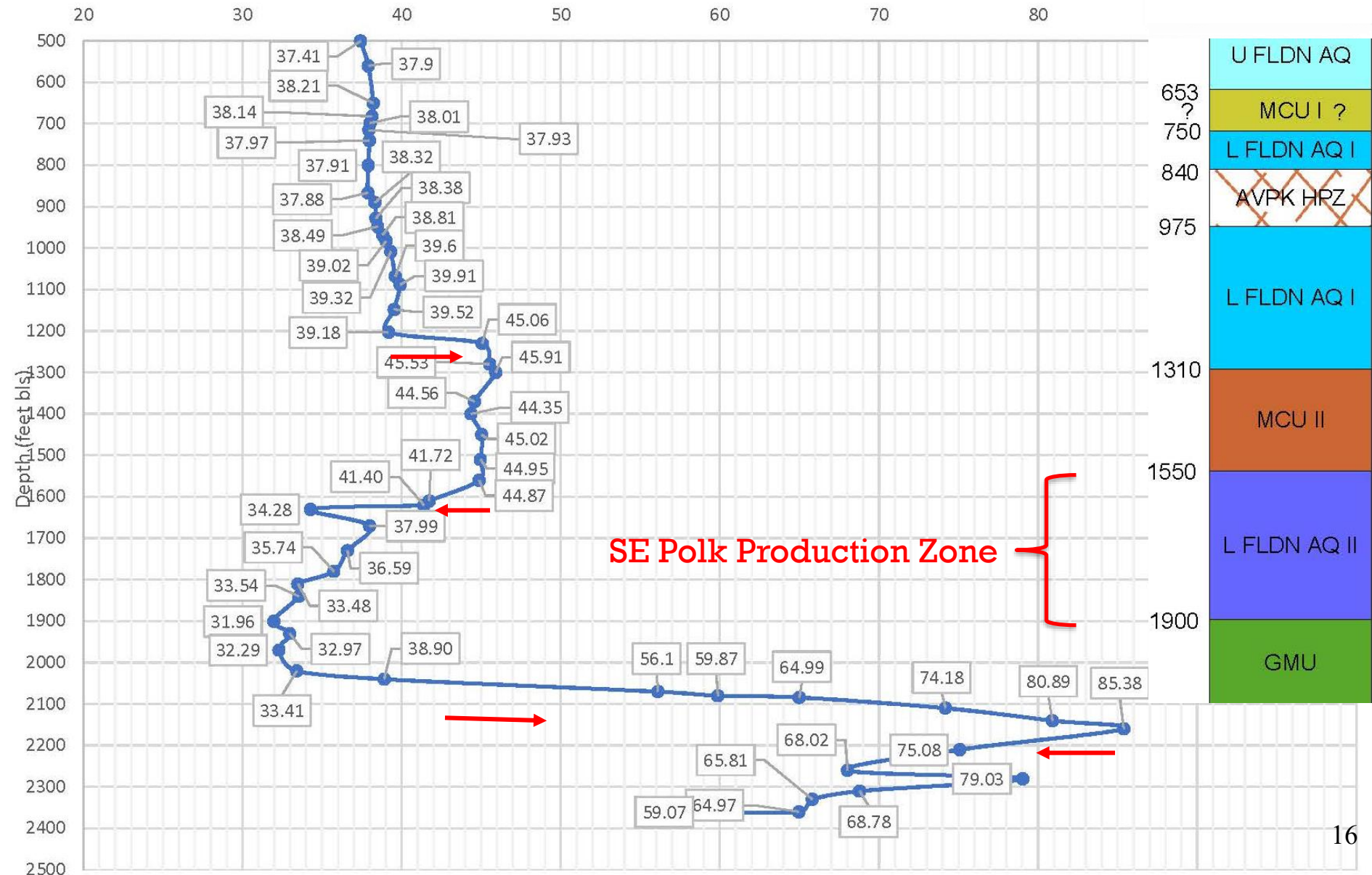
Storage of brackish water

Disposal of blended water



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

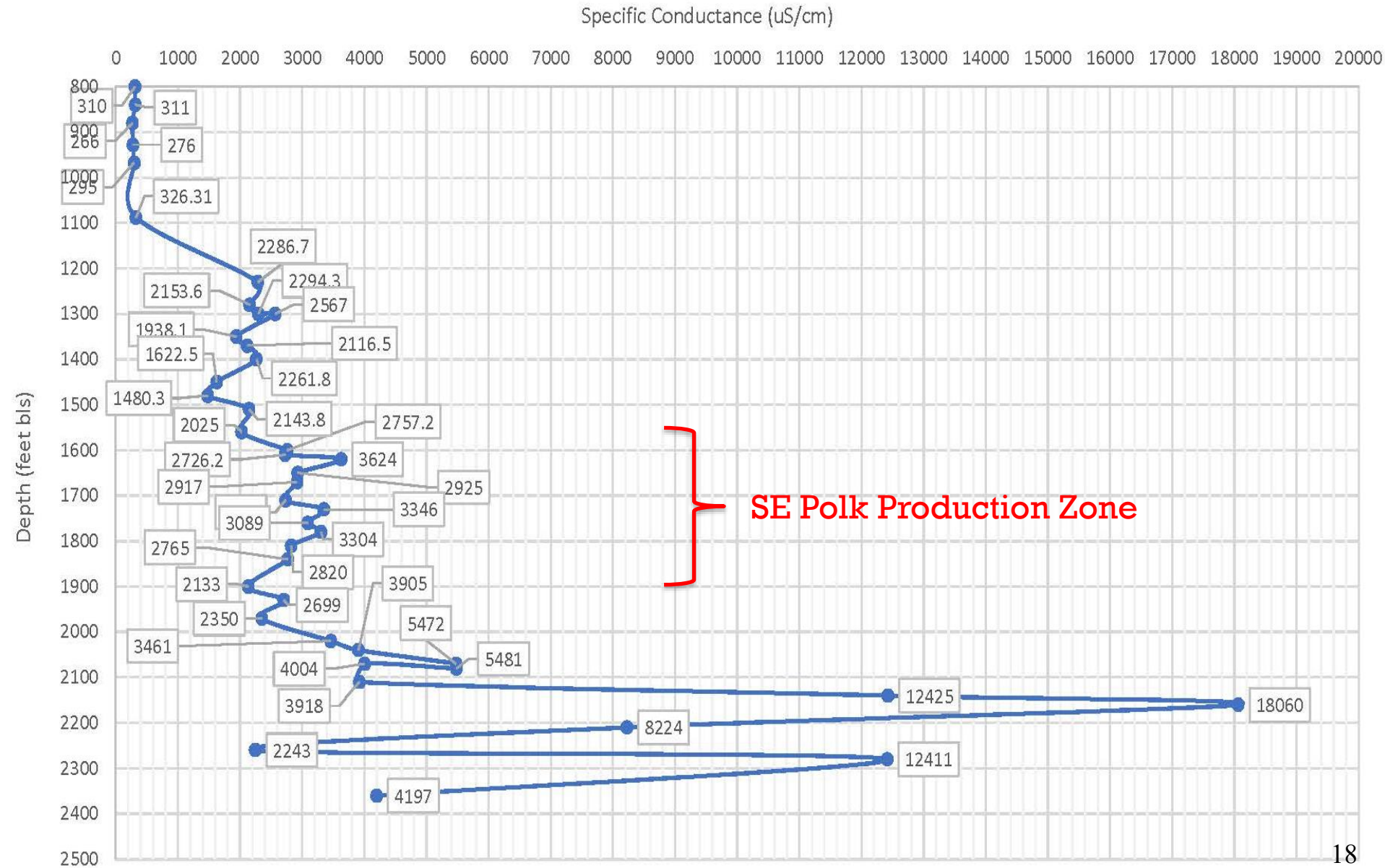
Water Level (feet bls)



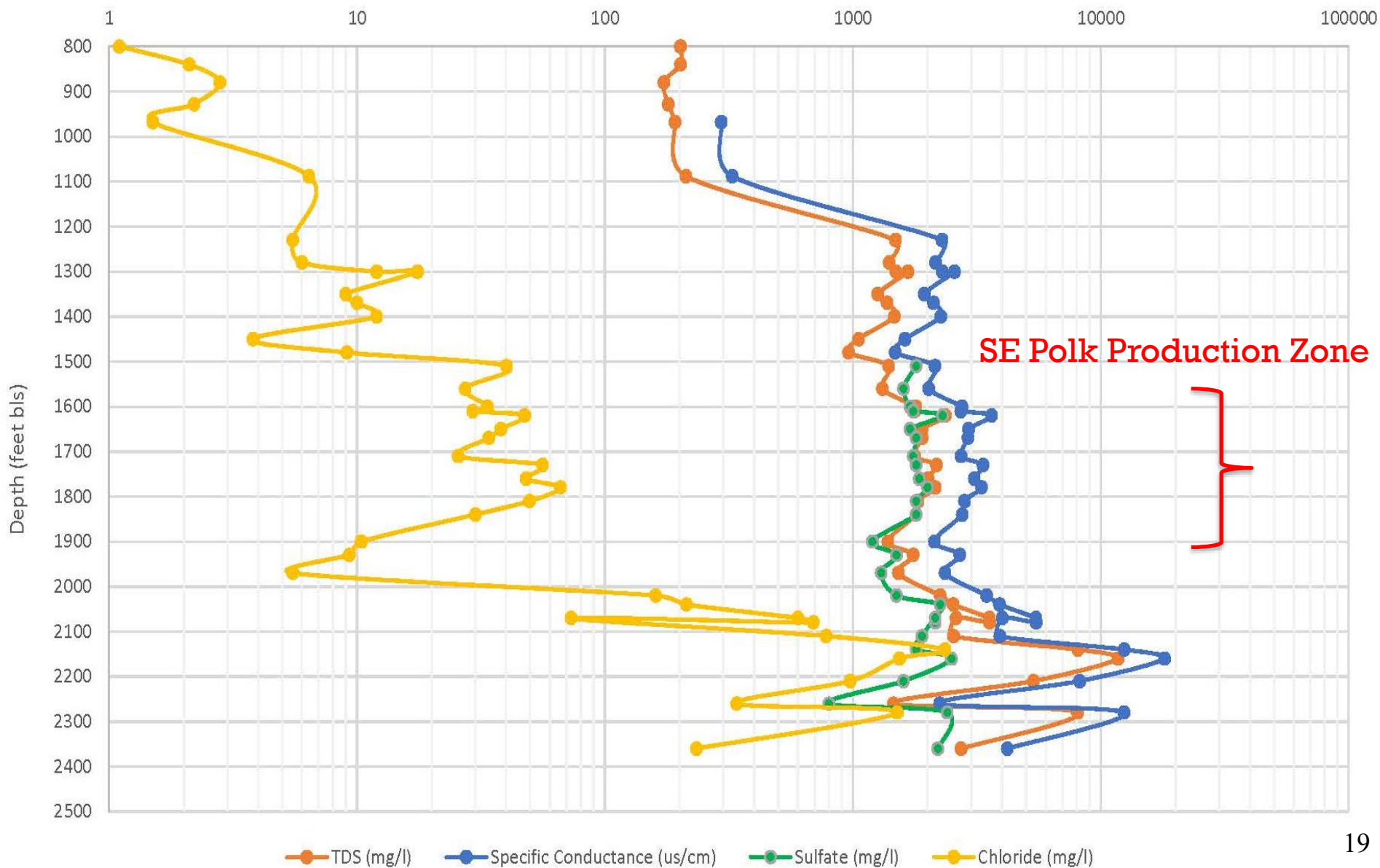
Glaucconite

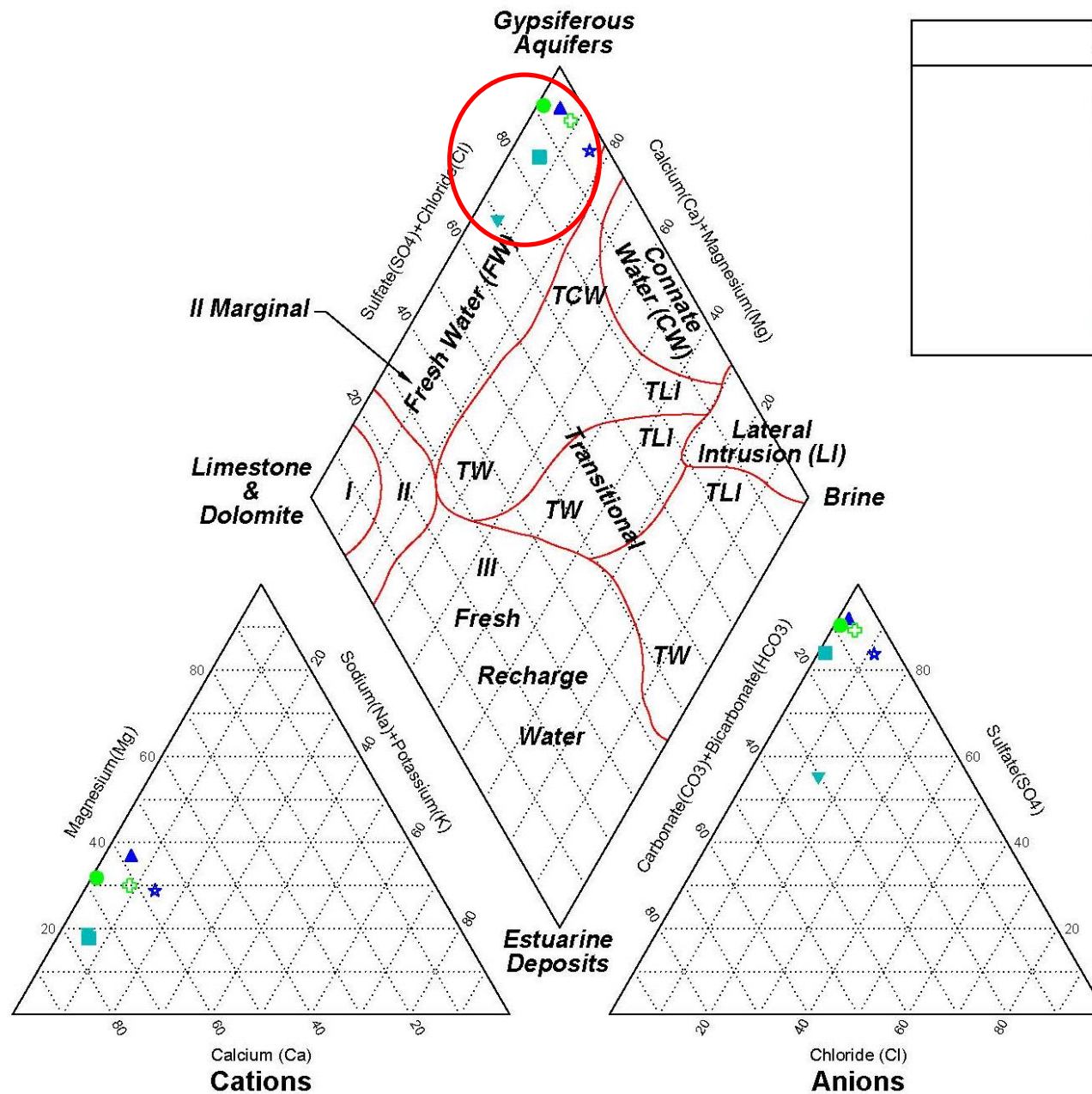


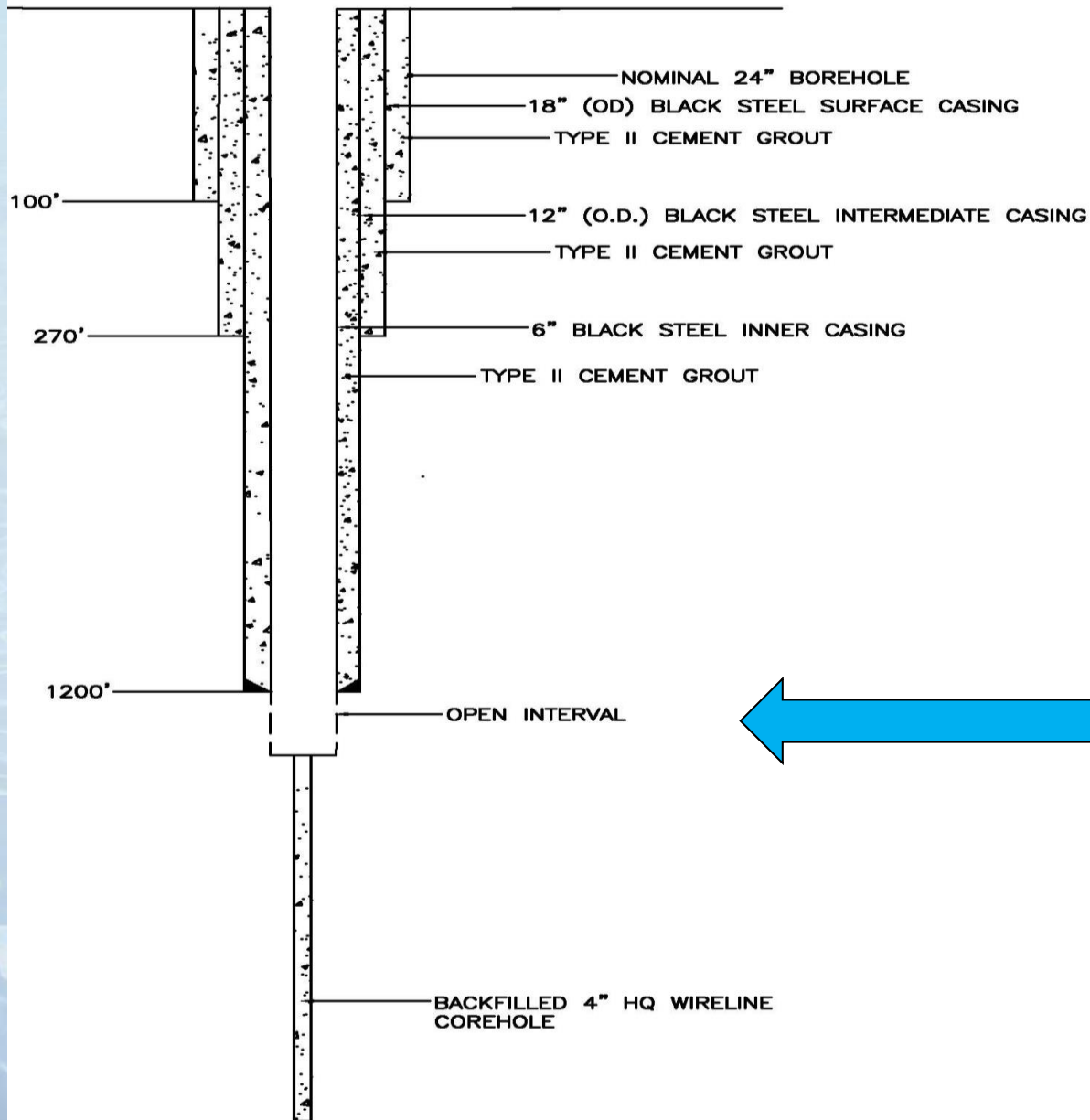
P280 SWFWMD Hydrogeologic Investigation of the Lower Floridan Aquifer Specific Conductance Depth Profile During Drilling Well CL-EC



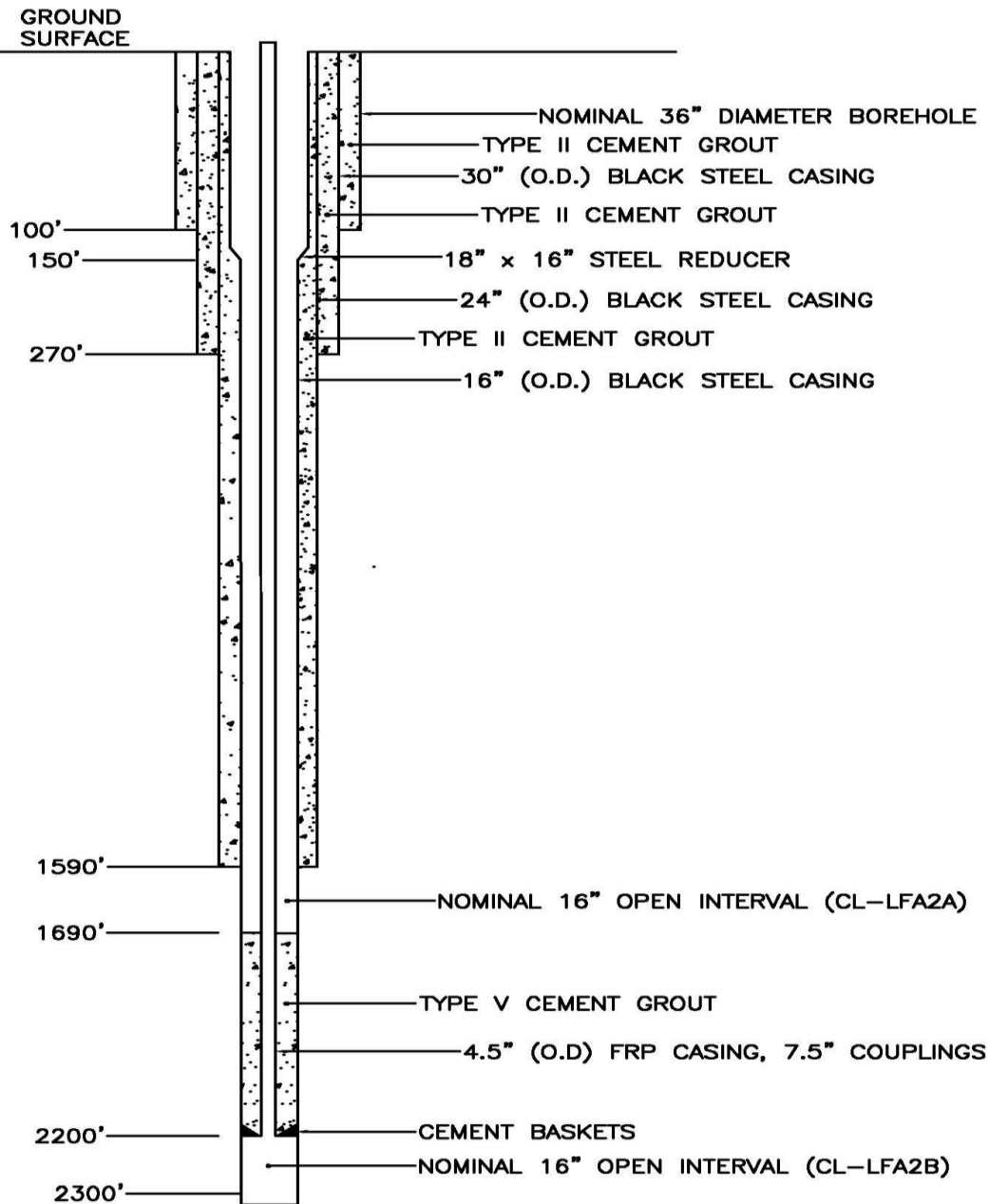
P280 SWFWMD Hydrogeologic Investigation of the Lower Floridan Aquifer Specific Conductance Depth Profile During Drilling Well CL-EC







Target zone is the
LFA above MCU II



Target zone is the
LFA below MCU II
The SE Polk
production zone



Target zone is the
LFA above MCU II
(below the GMU)



Next Steps at Crooked Lake

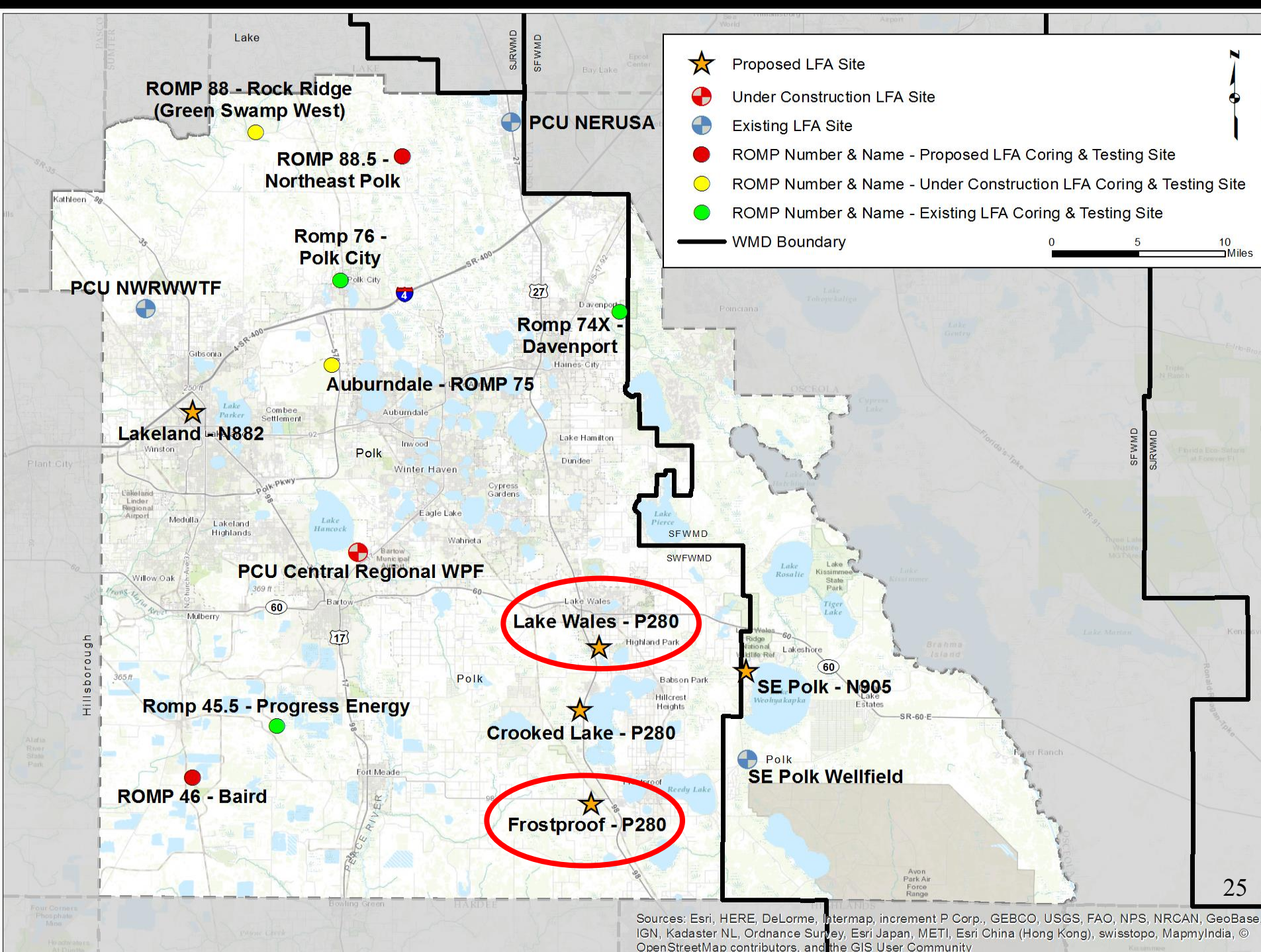
- Complete LFA monitor well (below MCU I) with Huss Drilling
- Select contractor for construction of LFA dual zone monitor well (below MCU II)
 - January 2018: Request for Bids
 - Summer 2018: Start construction

Communications

- Video released July 21, 2017

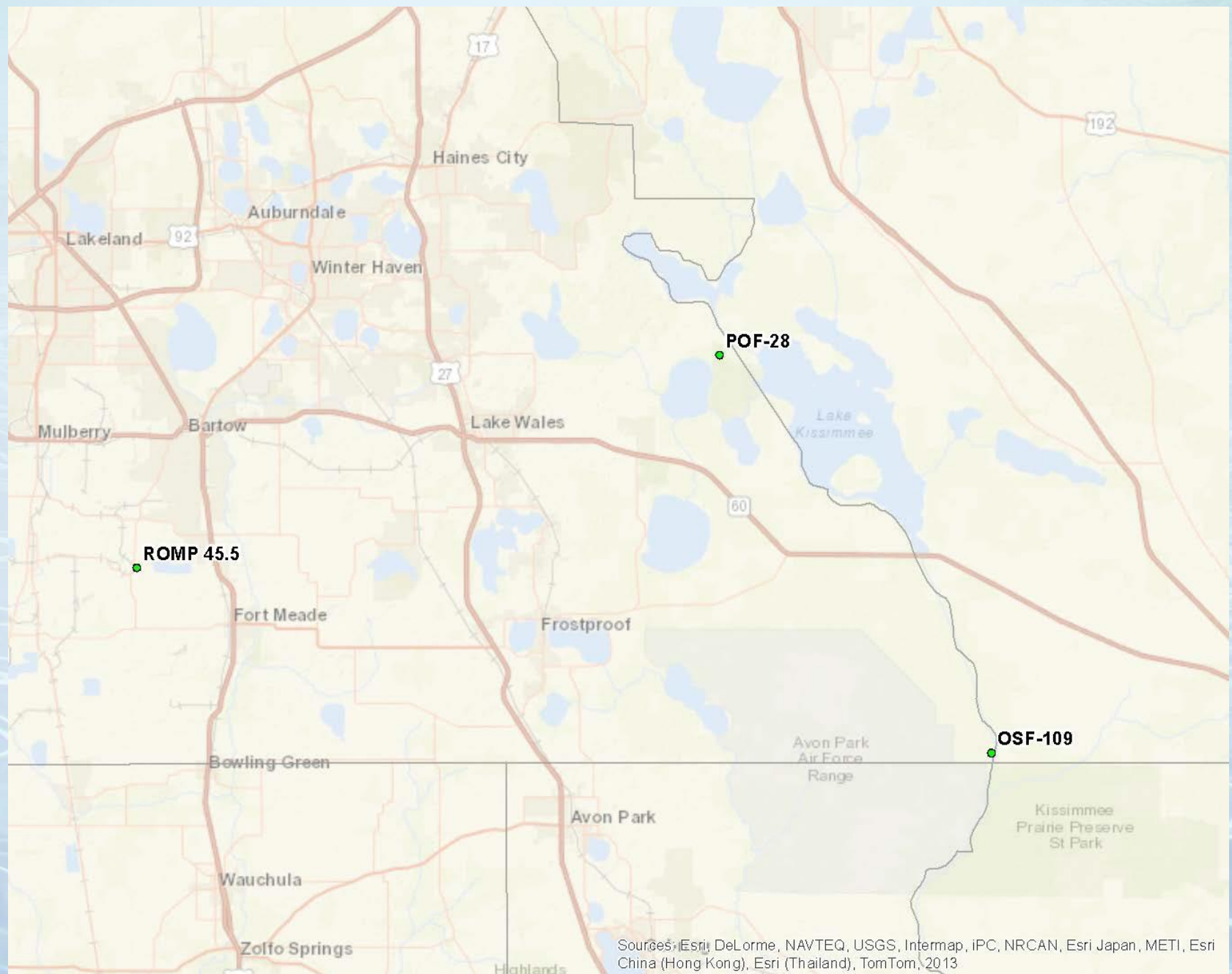


- LFA webpage July 25, 2017
 - WaterMatters.org/LFA
- Future workshops

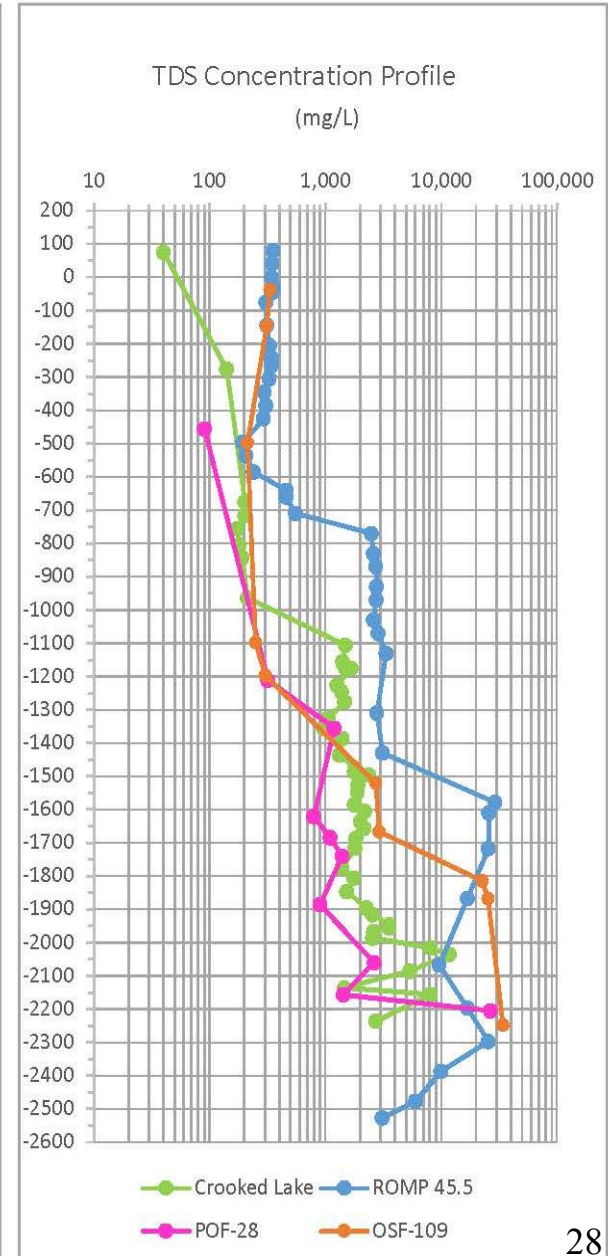
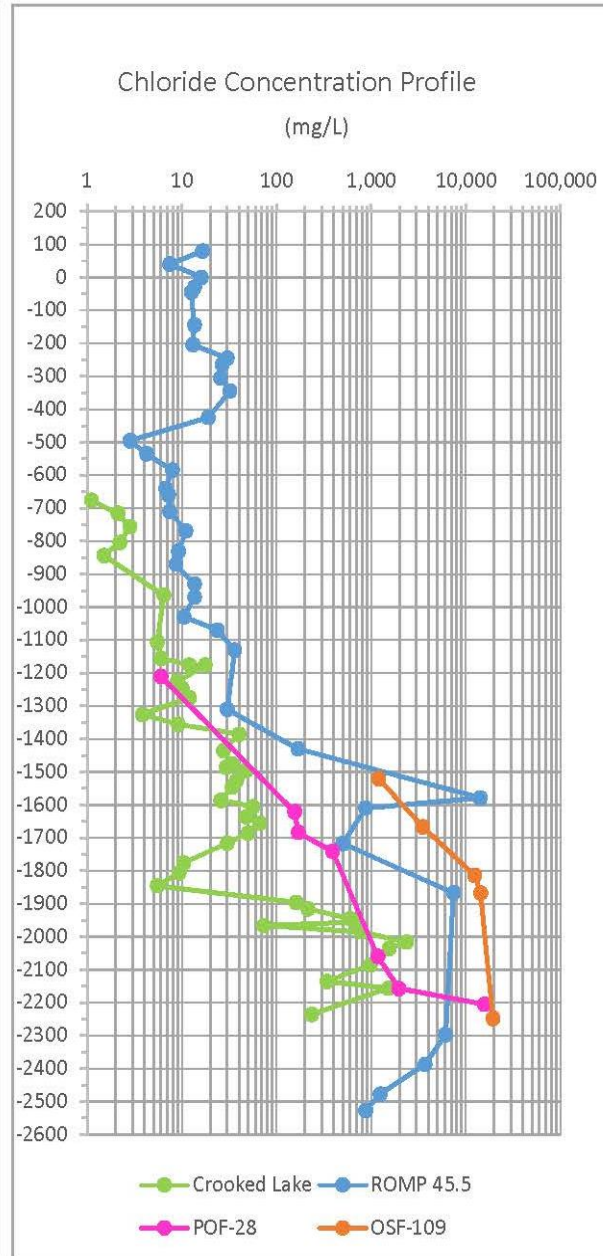
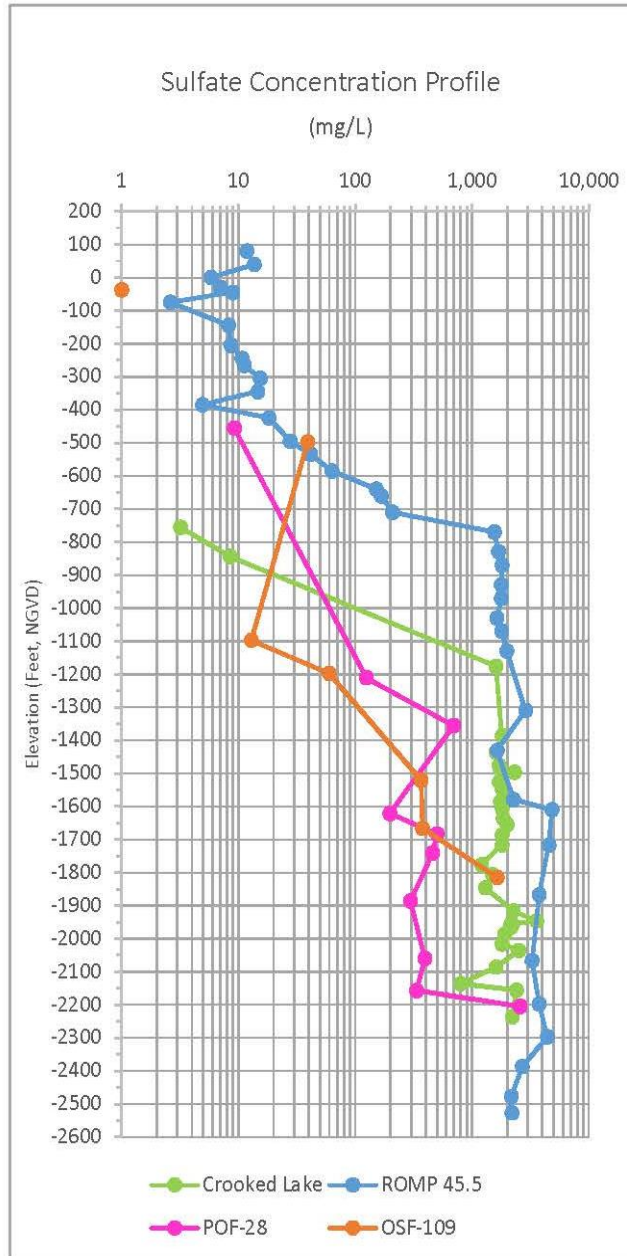




QUESTIONS and COMMENTS



P280 SWFWMD Hydrogeologic Investigation of the Lower Floridan Aquifer
Water Quality Comparison



Upper Floridan and Corrected Lower Floridan Water Level Elevation vs. Corehole Depth - Crooked Lake Wellsite

