

Water Resource Monitoring

SW Florida Water Management District

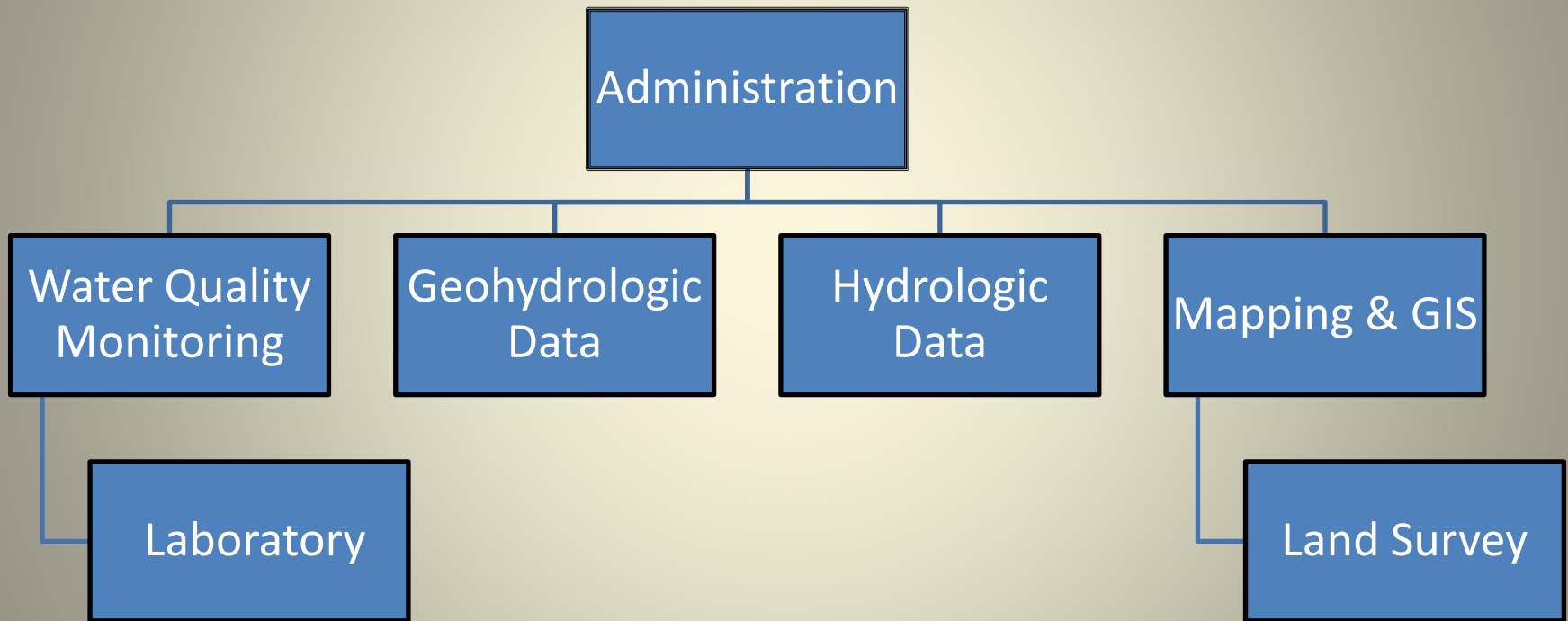


Florida Water Resources Monitoring Council

February 21, 2012

Roberta Starks, Bureau Chief
Data Collection Bureau, SWFWMD

Data Collection Bureau (DCB)



Geohydrologic Data

- Lithologic Data
- Aquifer Performance Testing
- Monitor Well Installation

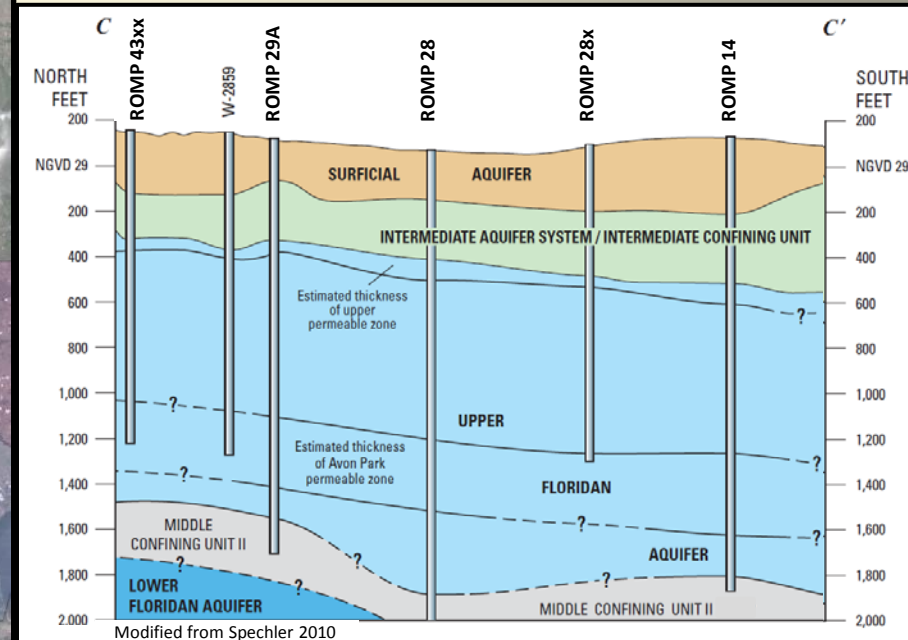
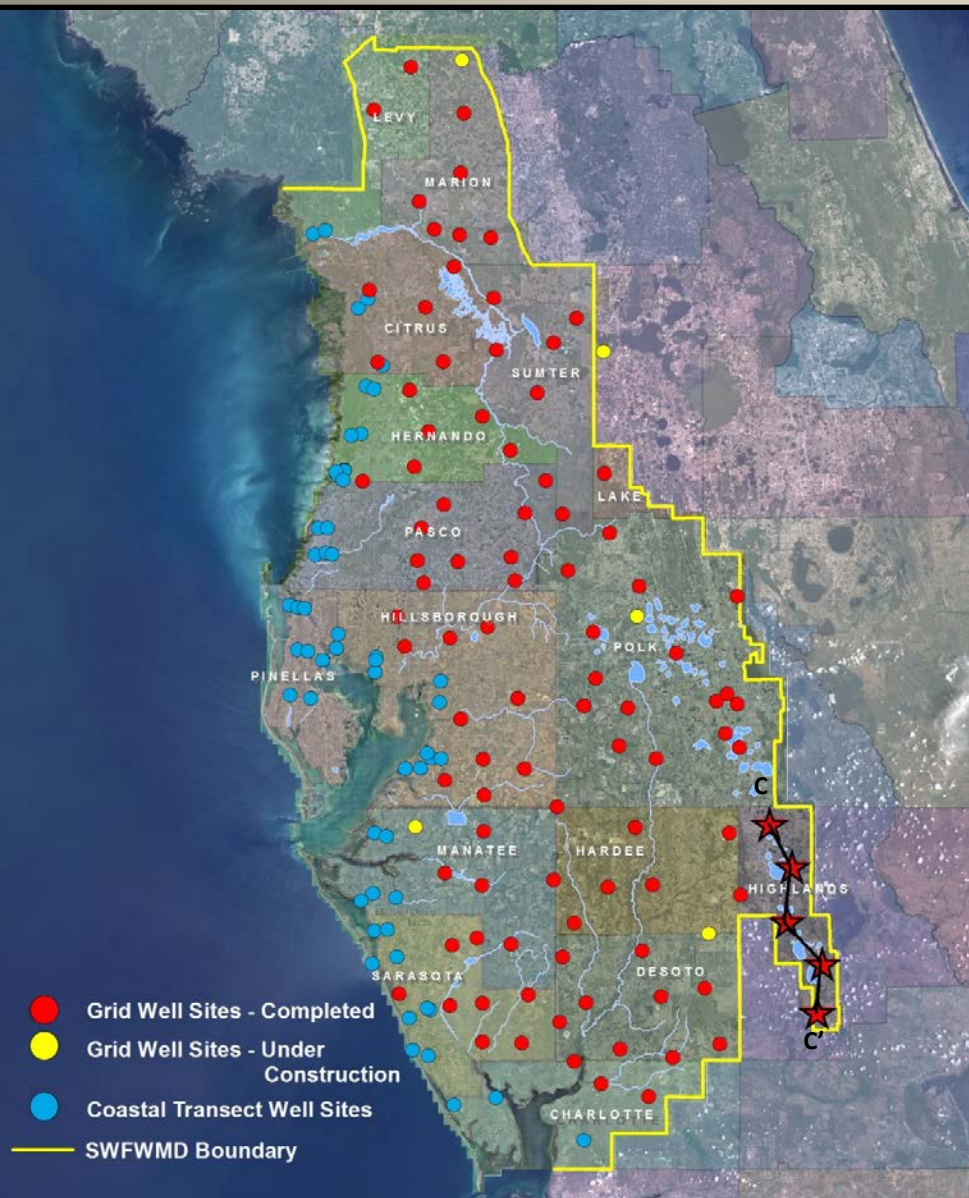


- Well Logging
- Well Repair
- Well Back-Plugging
- Well Abandonment



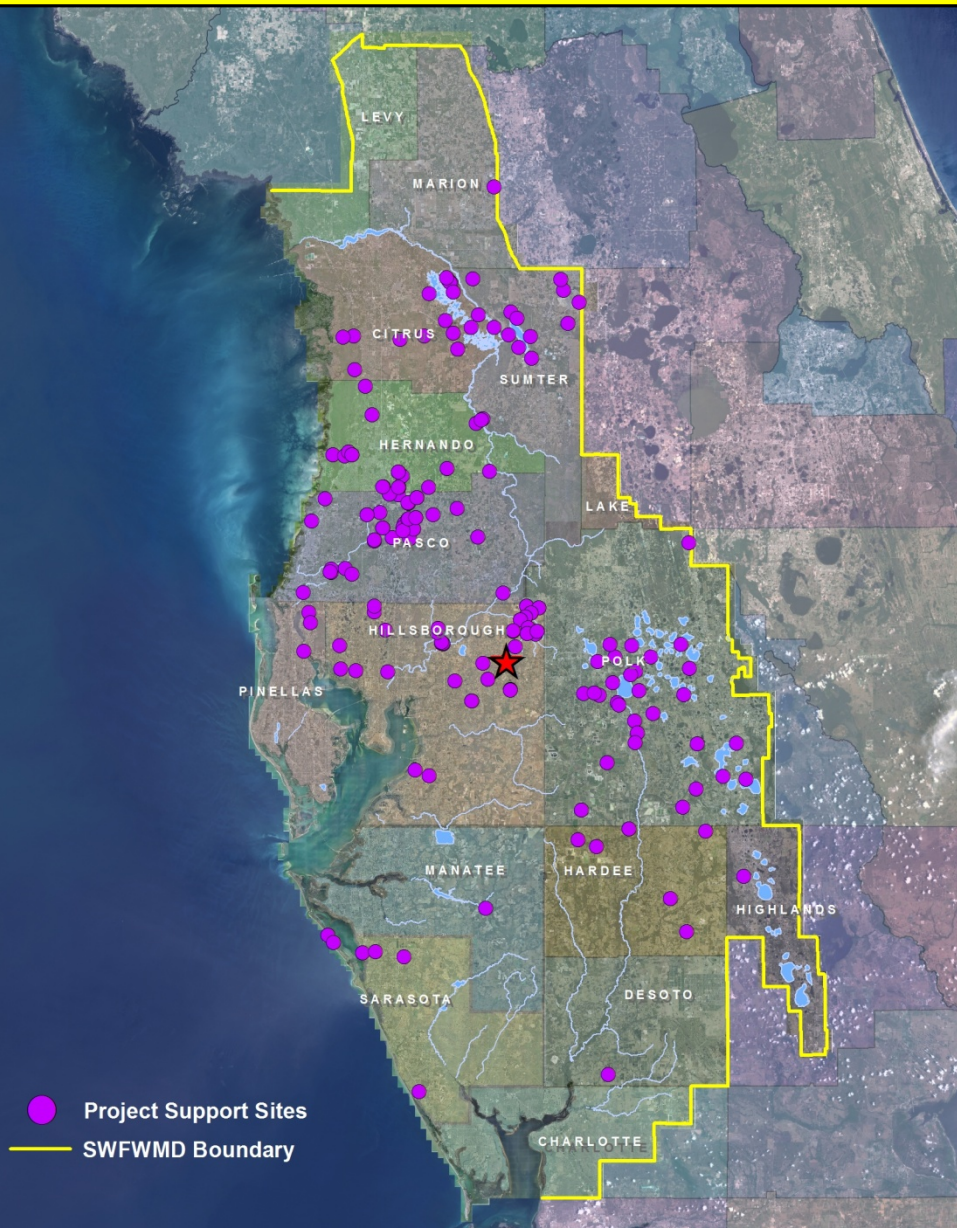
Regional Observation Monitor Well Program (ROMP)

- WQ & Water Levels
- Water Supply Modeling
 - SWUCA, NTB, ASR, MFLs
- Water-Use Permitting
- Specialized Project Support



Geohydrologic Data

- Special Project Support
 - MFLs
 - Dover/Plant City
 - WUCA studies
 - Polk County LFA

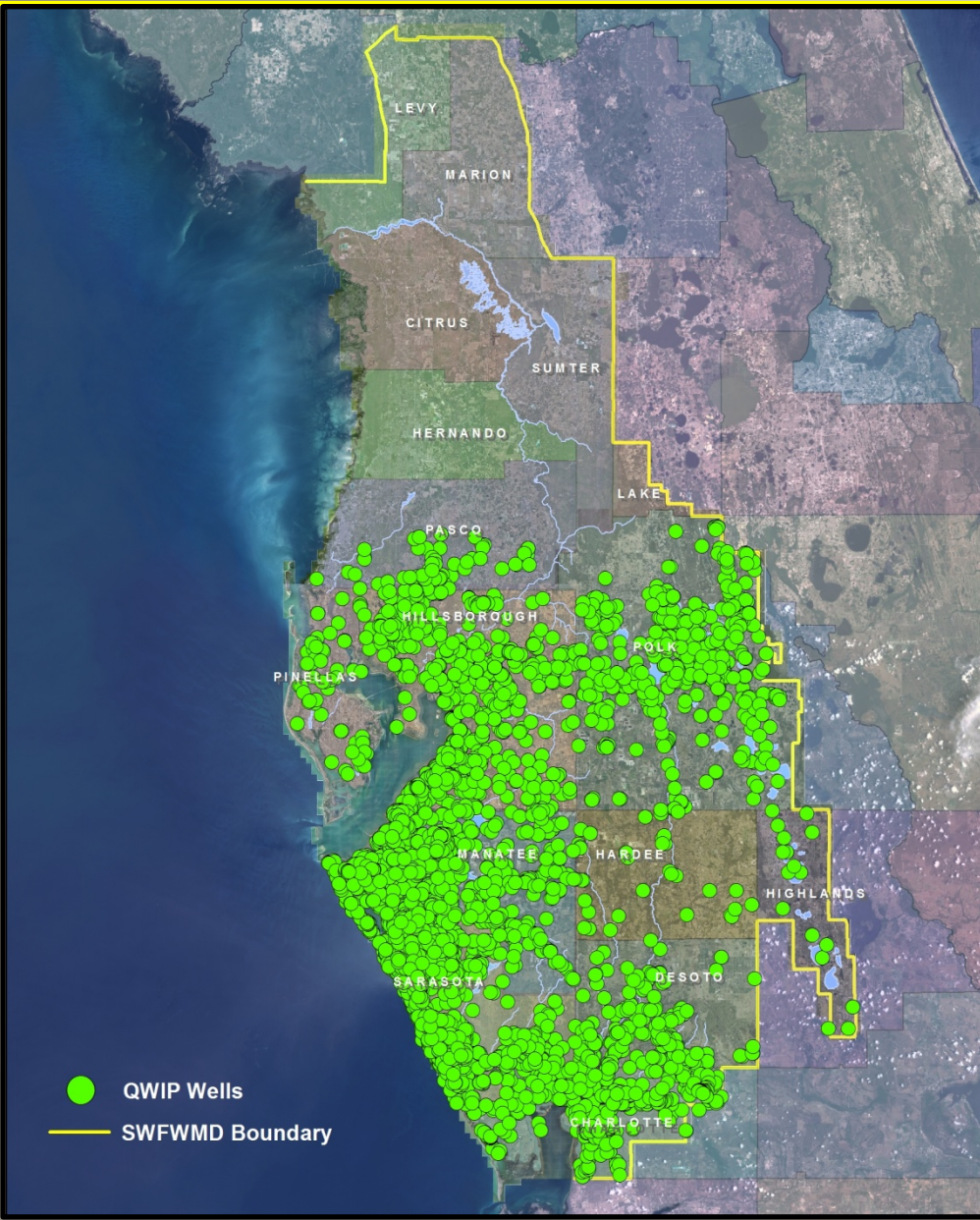


Dover North

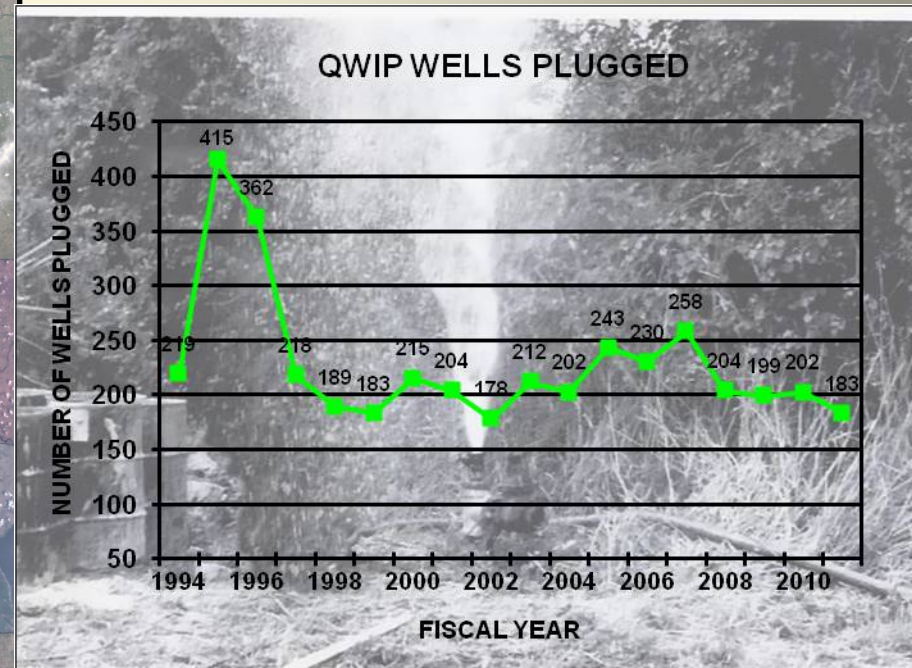
Well Construction



Quality of Water Improvement Program (QWIP)



- Funding Assistance Initiative
- Eliminate Interconnection of Aquifers
- Stop Uncontrolled Flow
- 5,122 Wells Abandoned to Date



Hydrologic Data

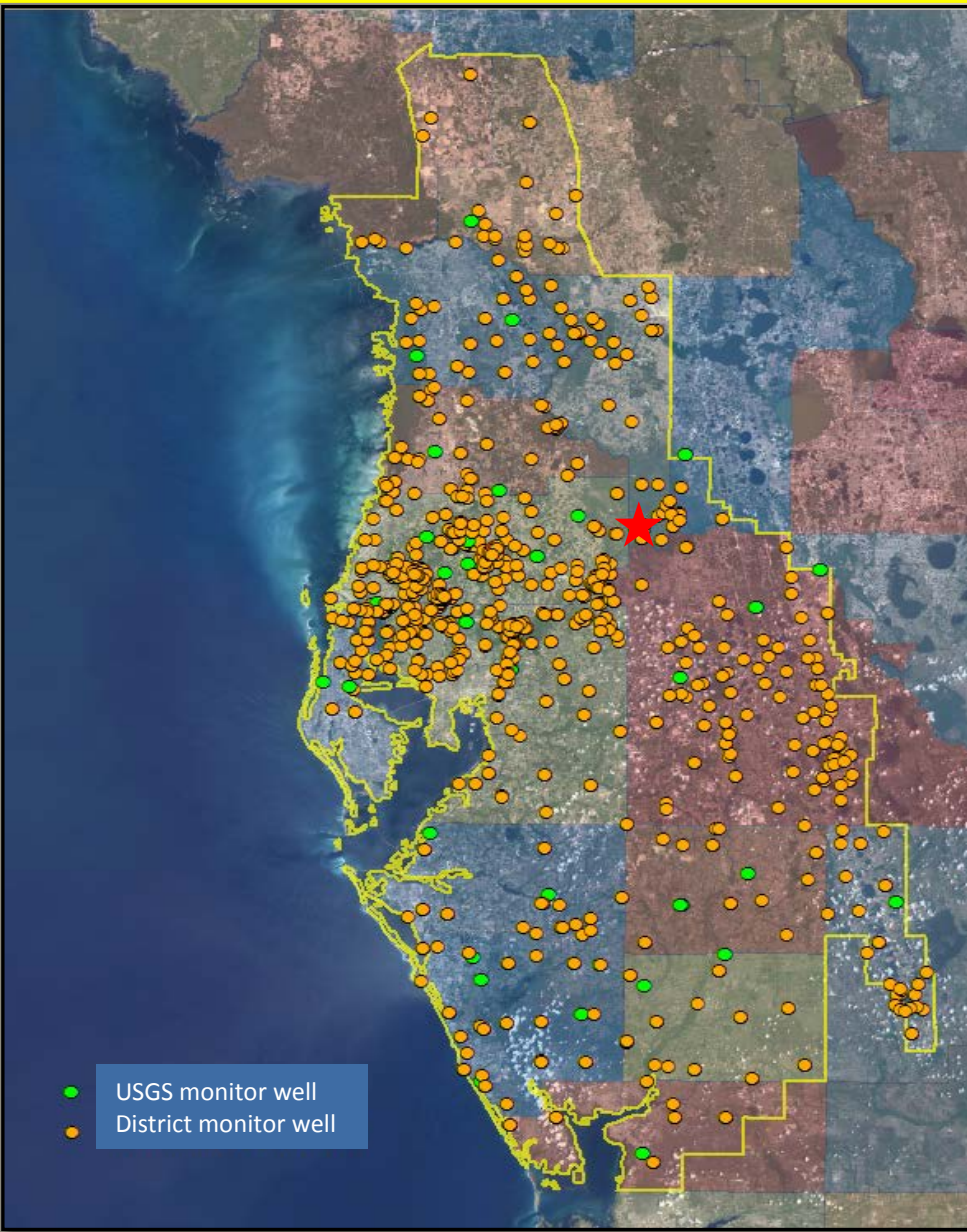


- Groundwater Levels
- Surface Water Levels

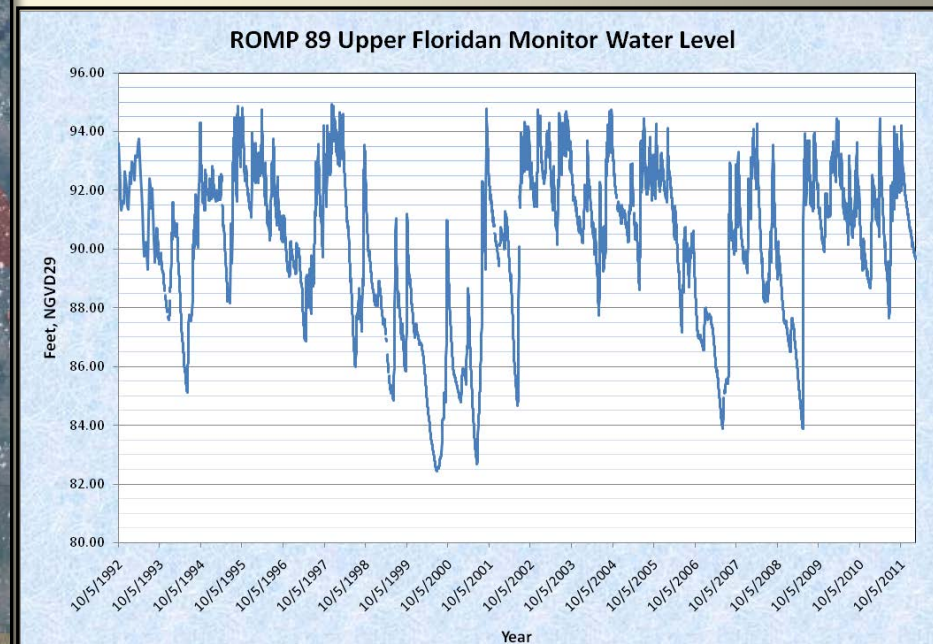


- Surface Water Discharge
- Meteorologic

Groundwater Level Monitoring

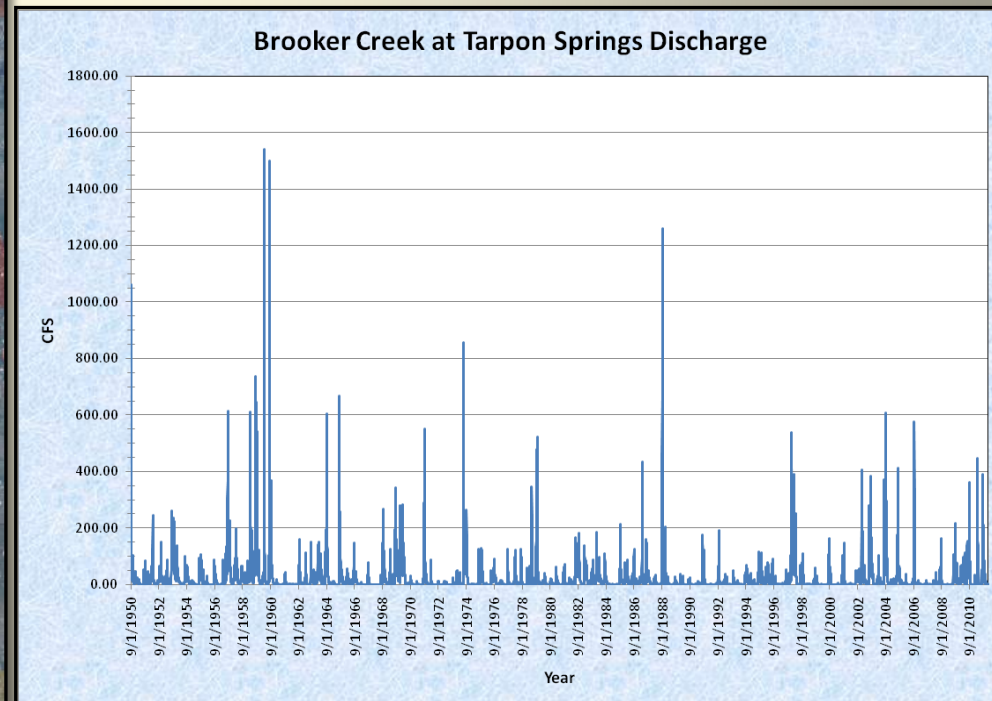
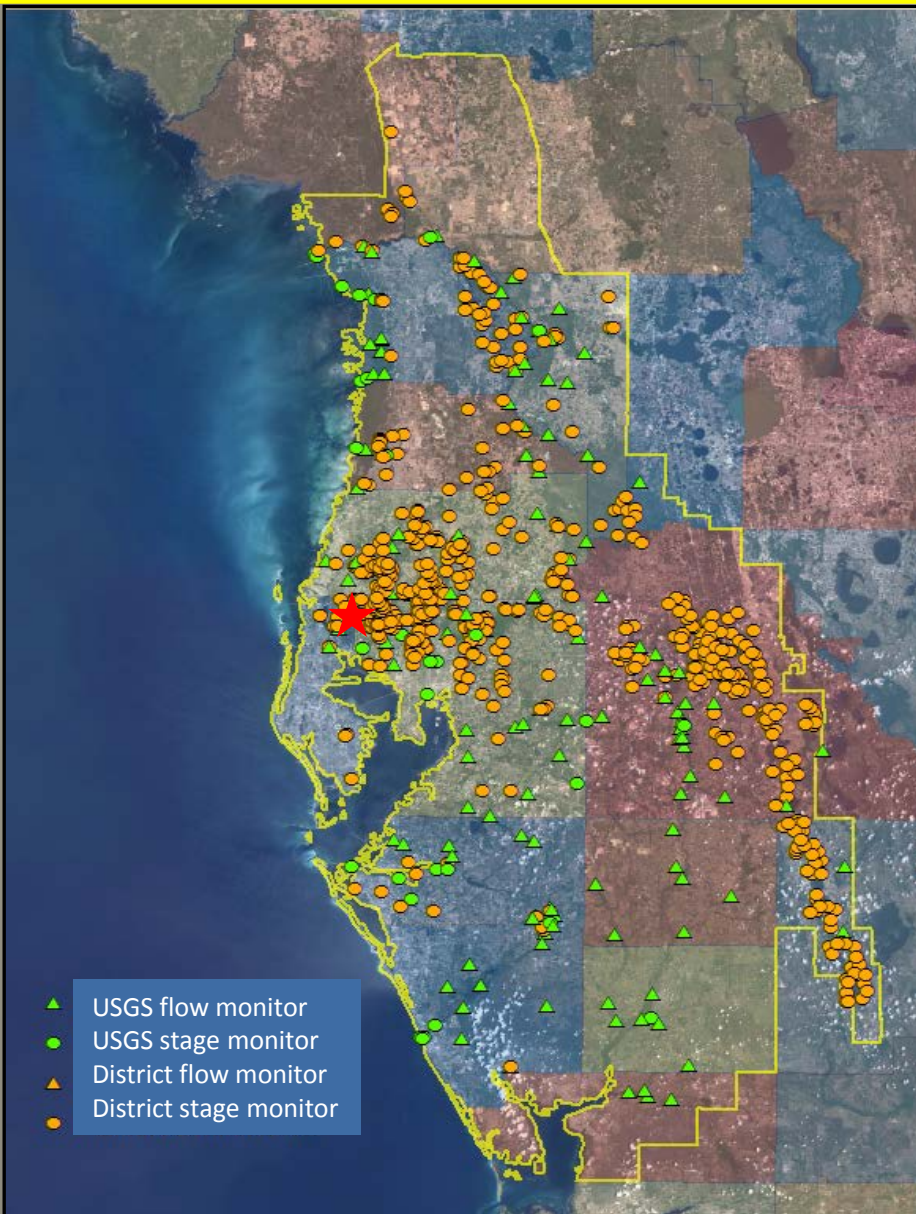


- 1478 District Sites
- 52 USGS Sites
- Water Supply Planning
- MFL Recovery
- Hydrologic Conditions
- Specialized Project Support

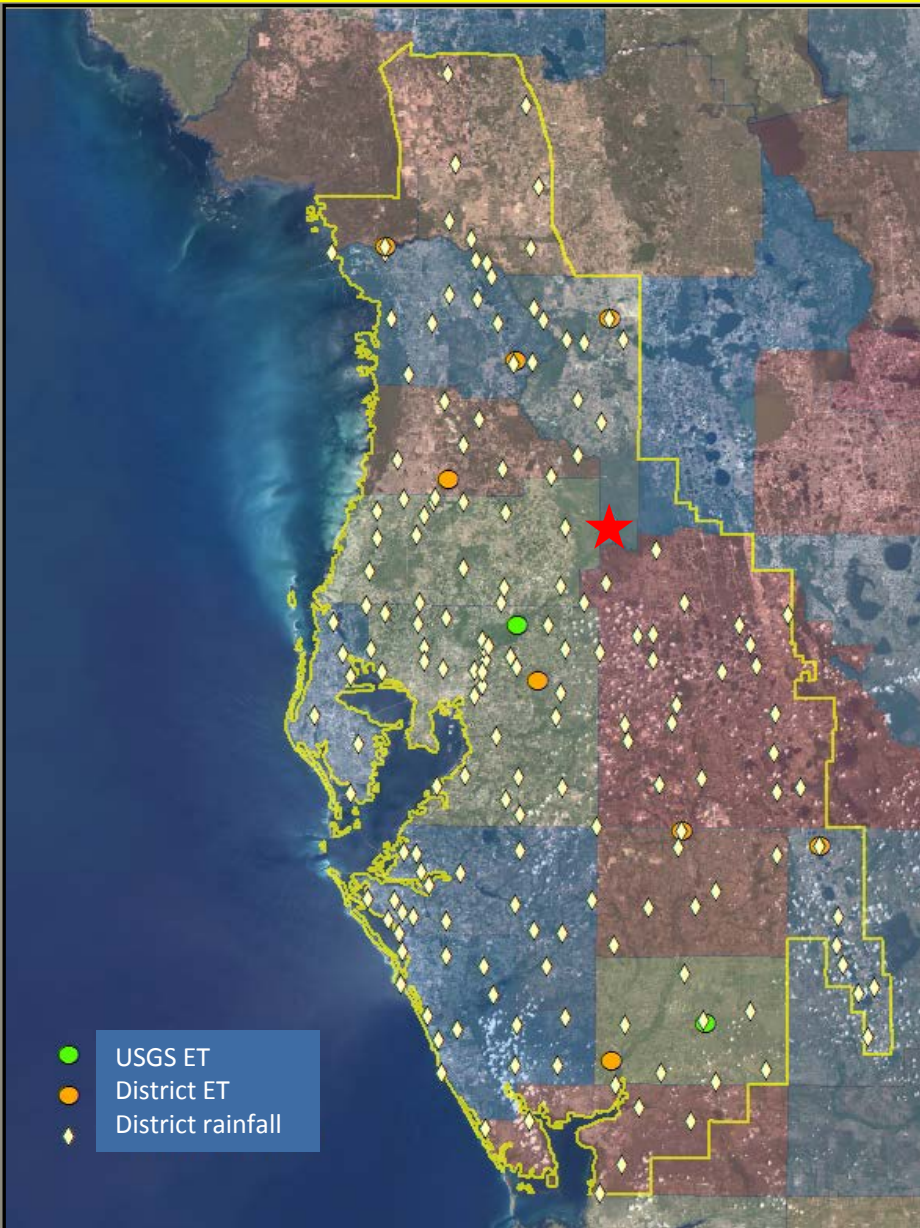


Surface-Water Stage & Flow Monitoring

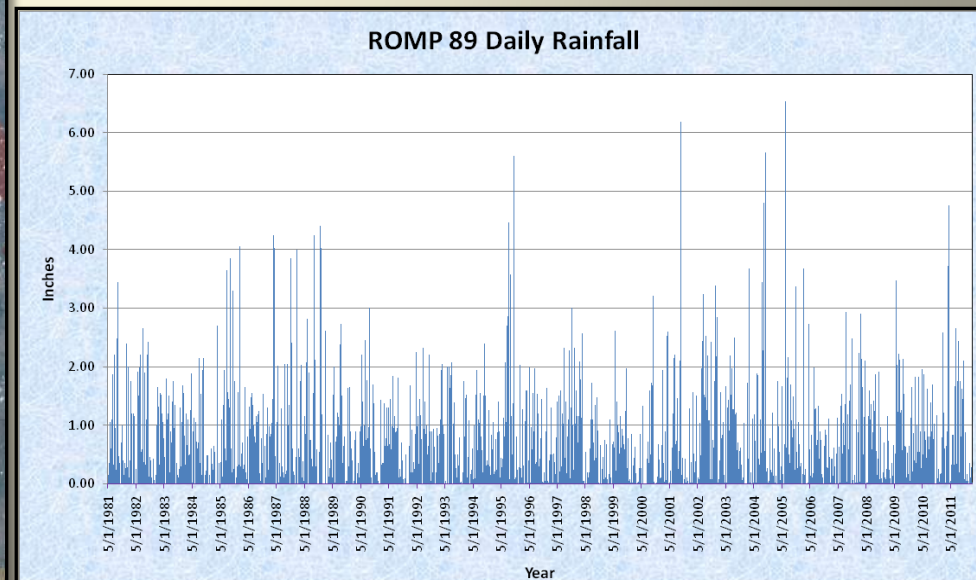
- 759 District Sites
- 164 USGS Sites
- Flood Protection
- Engineering Support
- MFL Est. & Recovery
- Water Supply Planning



Meteorologic Monitoring



- 186 District Sites
 - 178 Rainfall
 - 8 ET
- 2 USGS ET Sites
- Modeling Support
- Hydrologic Conditions
- RADAR Rainfall Calibration

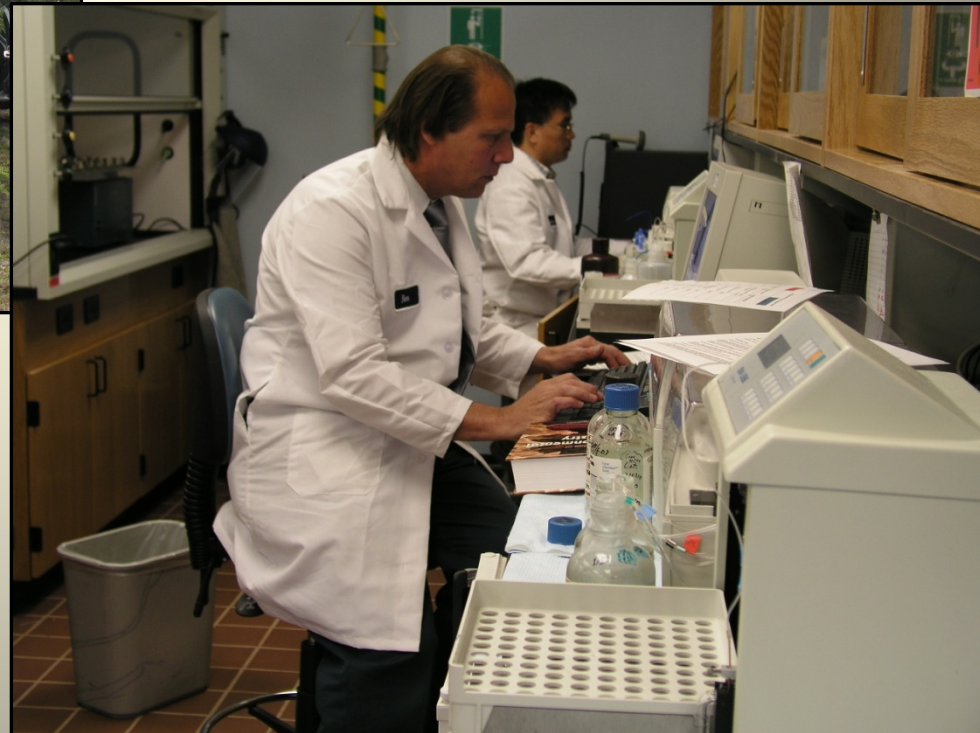


Water Quality Monitoring & Laboratory Analysis



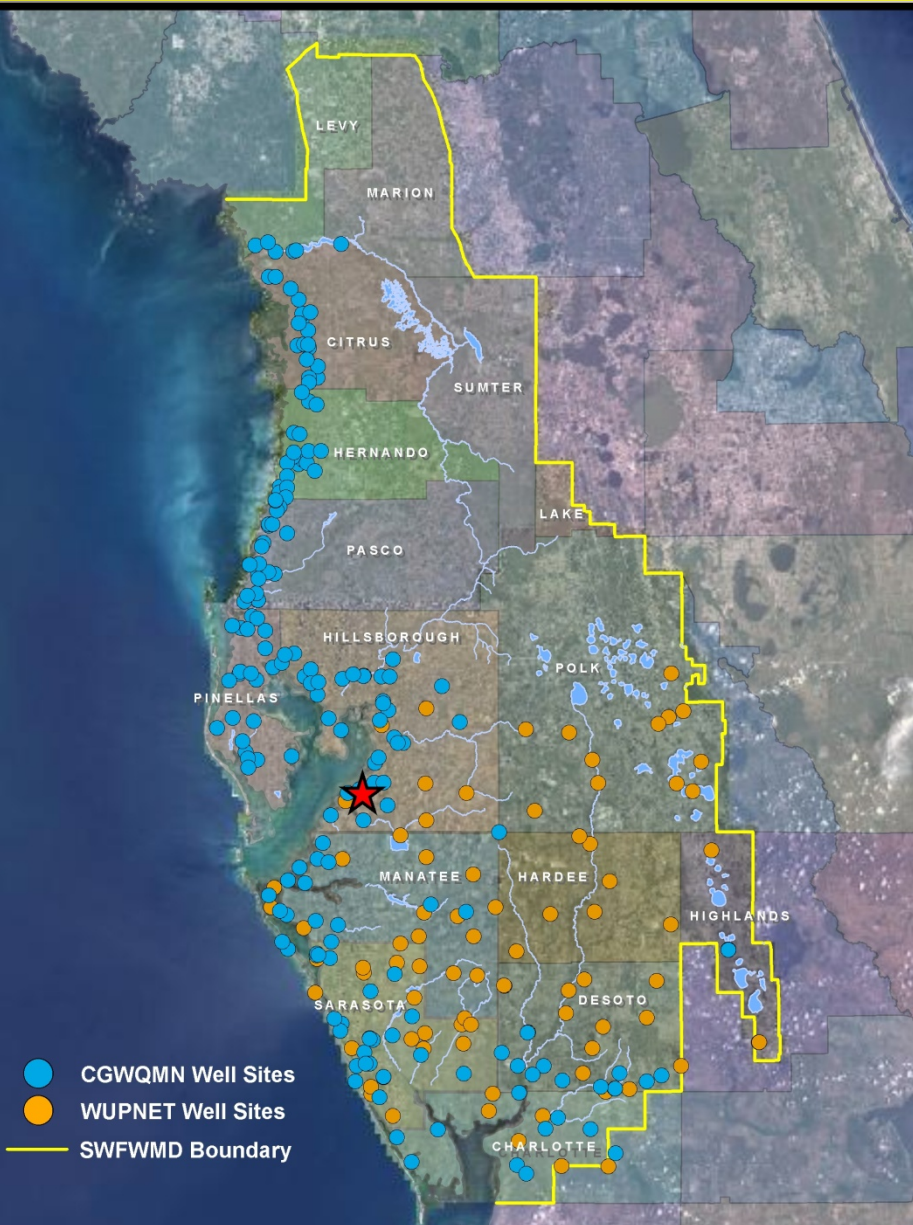
- Biological Quality
- Groundwater Quality
- Surface Water Quality

- Nutrients
- Trace Metals
- Major Ions
- Physical Properties
- Chlorophyll & Bacteria

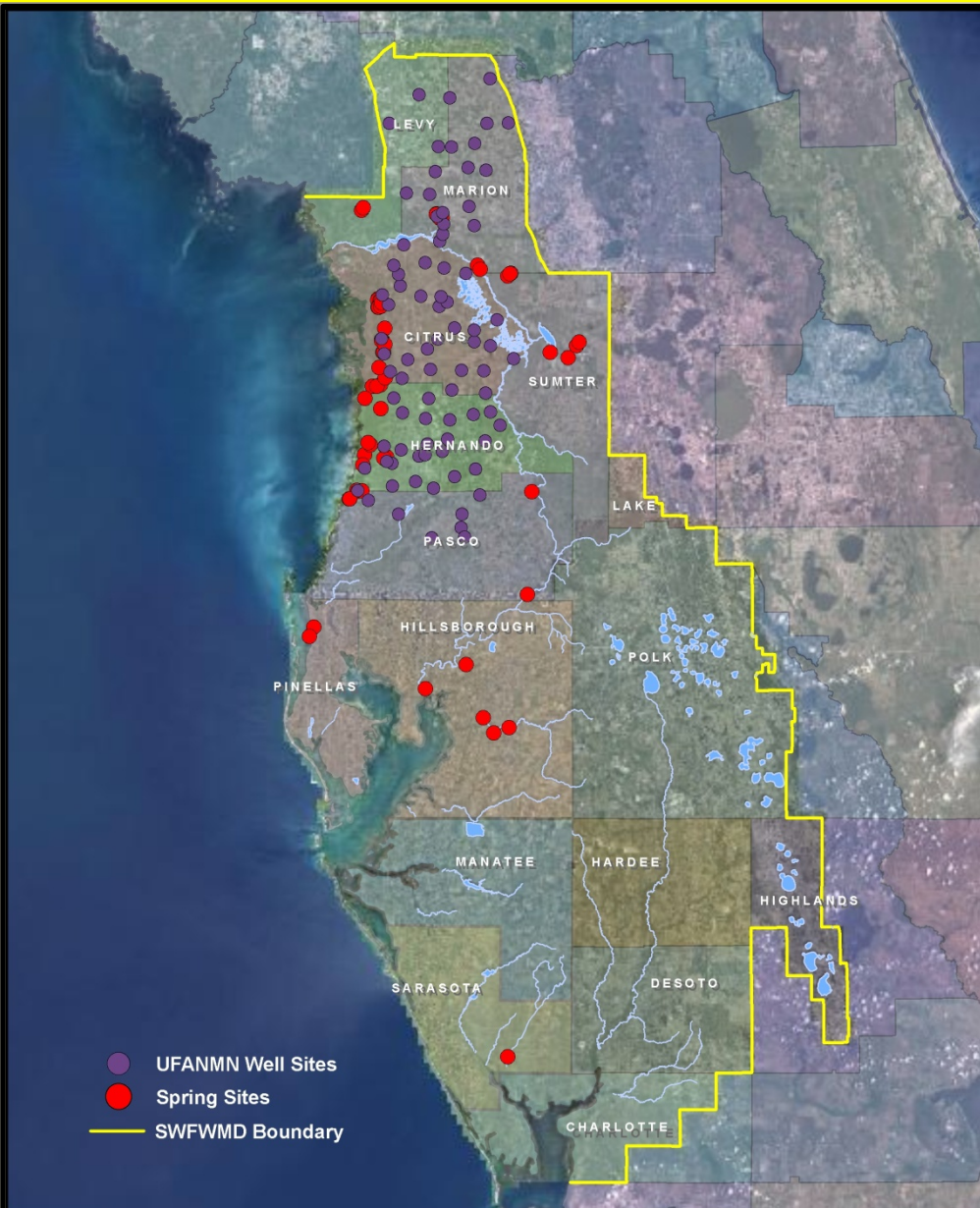


Saltwater Intrusion/WUP Network

- ~ 320 Sites
- Water-Use & Well Construction Permitting
- Water Supply Modeling
 - SWUCA, NTB, ASR, MFLs



Springs & Recharge Basins

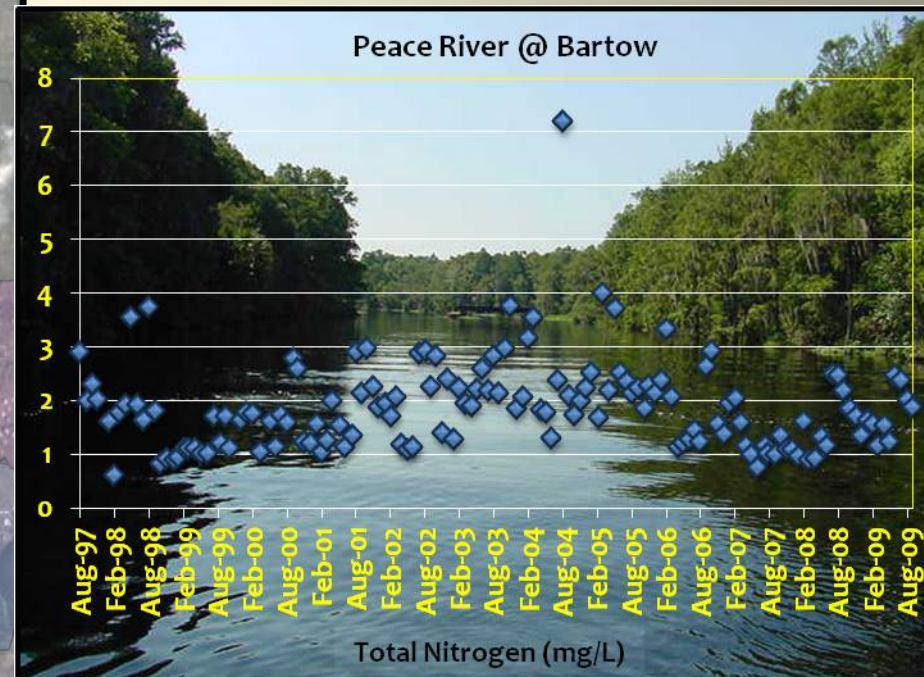
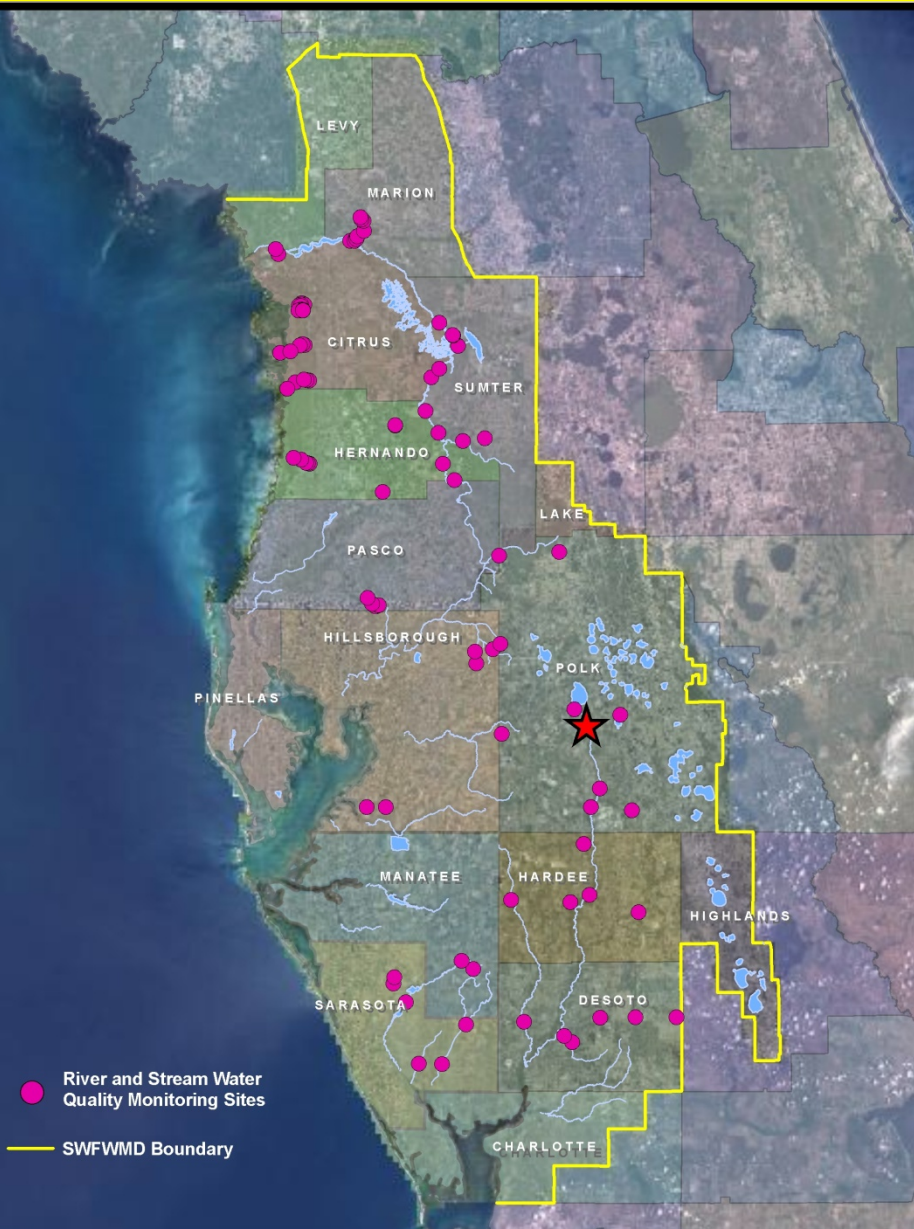


- 70 springs; 4x/yr.
- 80 wells; 1x/yr.
- Restoration Initiatives
- Nutrient Trends
- TMDL Assessments



Rivers and Streams

- 45 sites/month
- Trend & Loading Estimates
- Specialized Projects
- TMDL Assessments
 - Numeric Nutrient Criteria Development



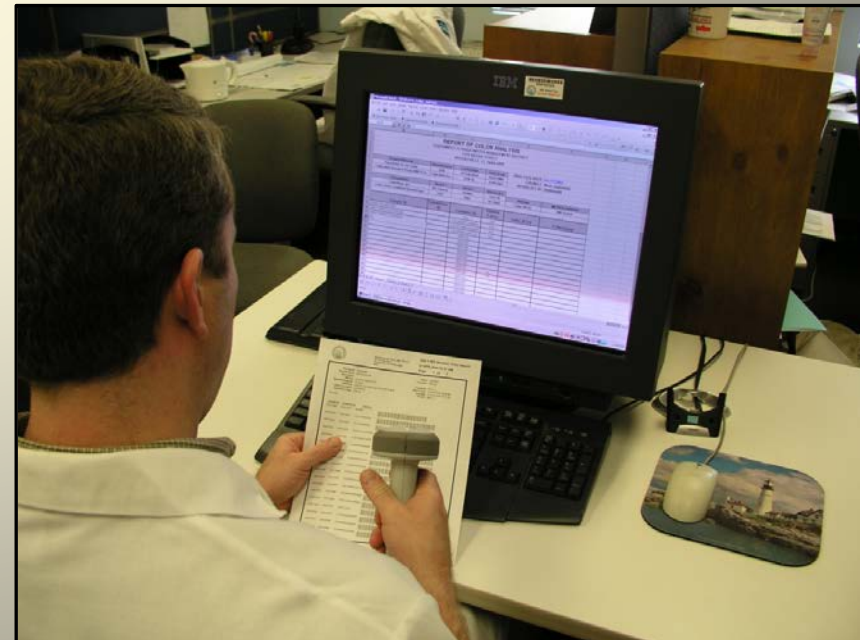
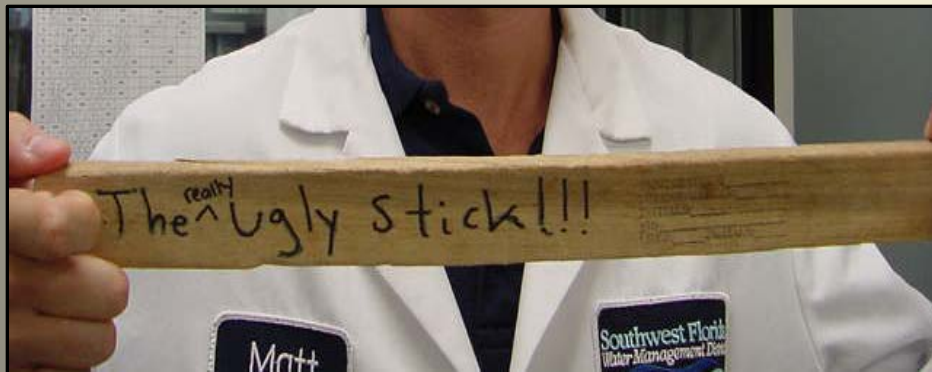
SWFWMD Chemistry Lab

- Performing Environmental Tests for 25 Years
- NELAC State Certified
- Three Levels of Annual Audits (FDOH, OIG, Internal)
- Approx. 3033 Samples/Yr.
- ~ 50, 374 tests/yr.
 - Nutrients
 - Major Ions
 - Trace Metals
 - Chlorophyll
 - Bacteria



Laboratory Quality

- GOMA Split-Sample Round Robin
 - Greatest degree of accuracy and precision among participating labs
- First in the State to Successfully Implement ADaPT/EDMS Data Quality Tools
- Data Pump to District WMIS
- STORET Uploads



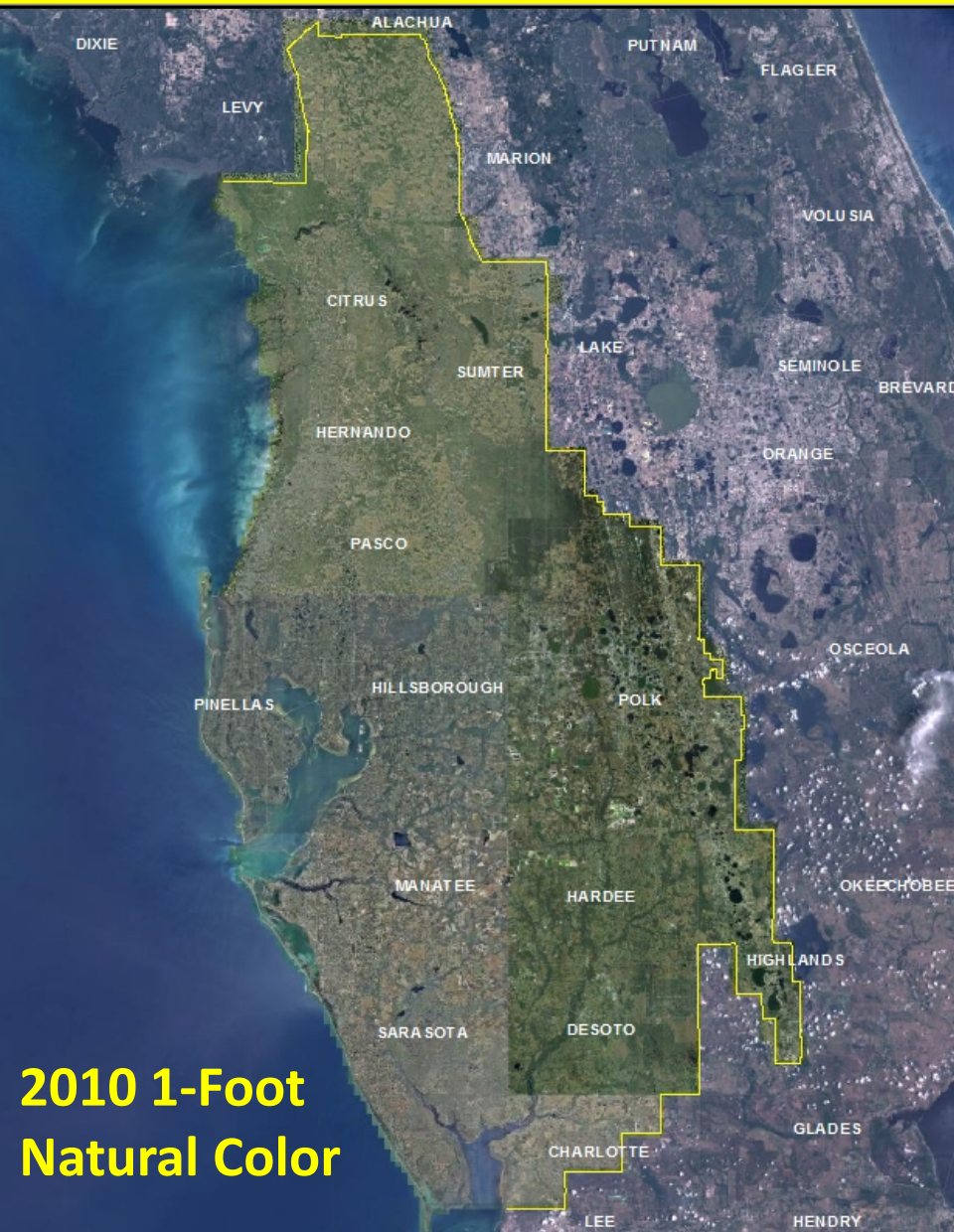
Mapping, GIS, & Land Survey

- Orthophotography
- Land Use/Land Cover
- Topographic Mapping
- Land Surveying, Bathymetry

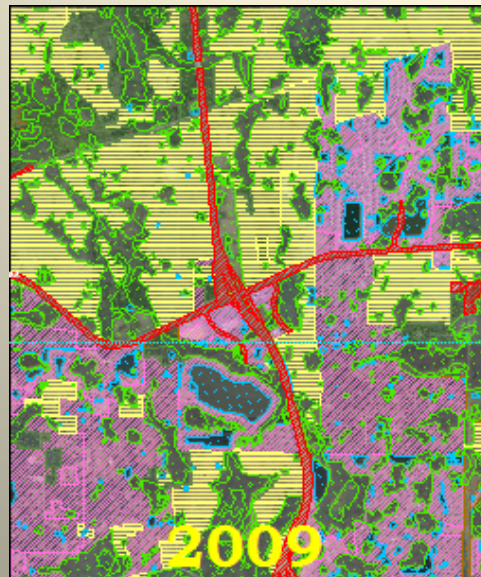
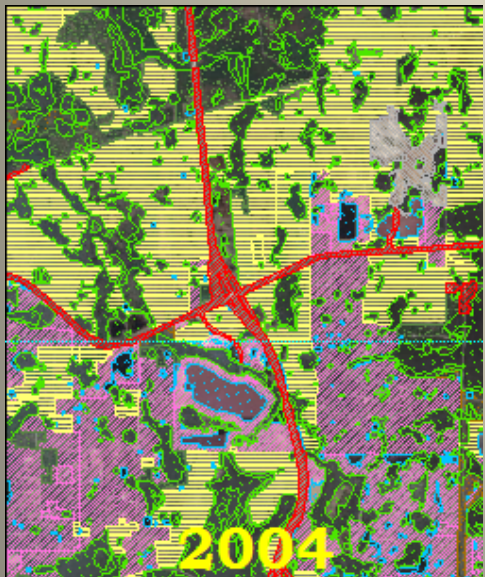
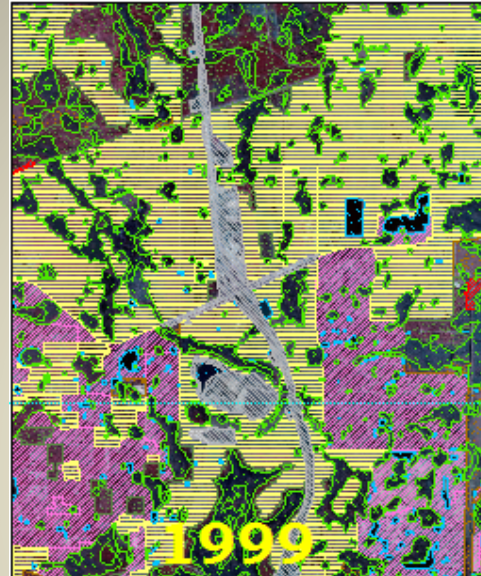
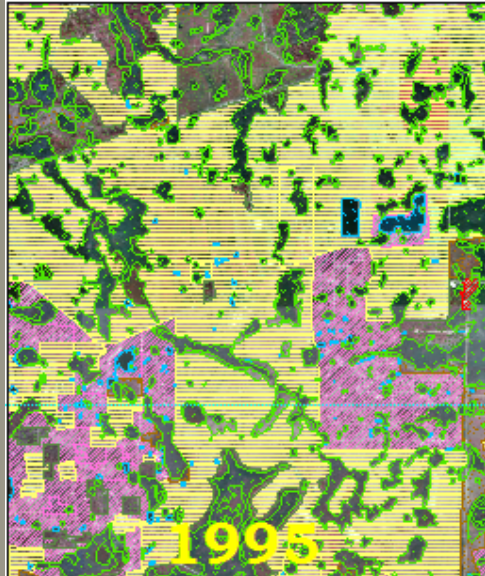


Orthophotography

- Serves as Foundation for GIS datasets & WMIS
- Supports Land Use/Land Cover Mapping
- Regulation Support
- Sea Grass Mapping



Land Use/Land Cover Mapping

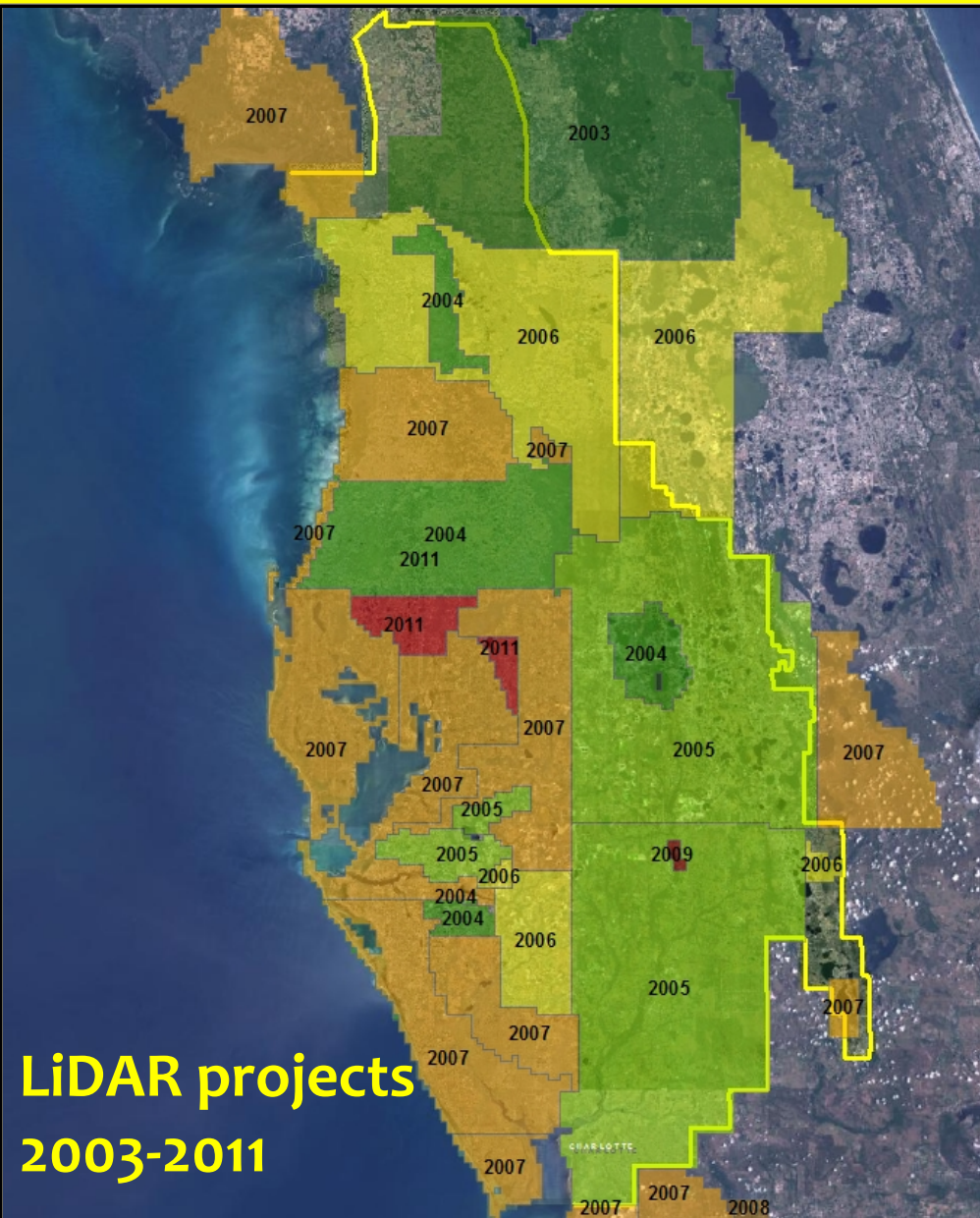


- Supports SWUCA Recovery Strategy by Tracking Agricultural Land Use
- Used for Land Acquisition, Restoration and Management
- Used for Water Quality and Surface Water Modeling



Topographic Mapping

- Watershed Management Program Planning
- Updating FEMA Flood Insurance Rate Maps (FIRM)
- Digital Terrain Modeling and 3-D visualizations

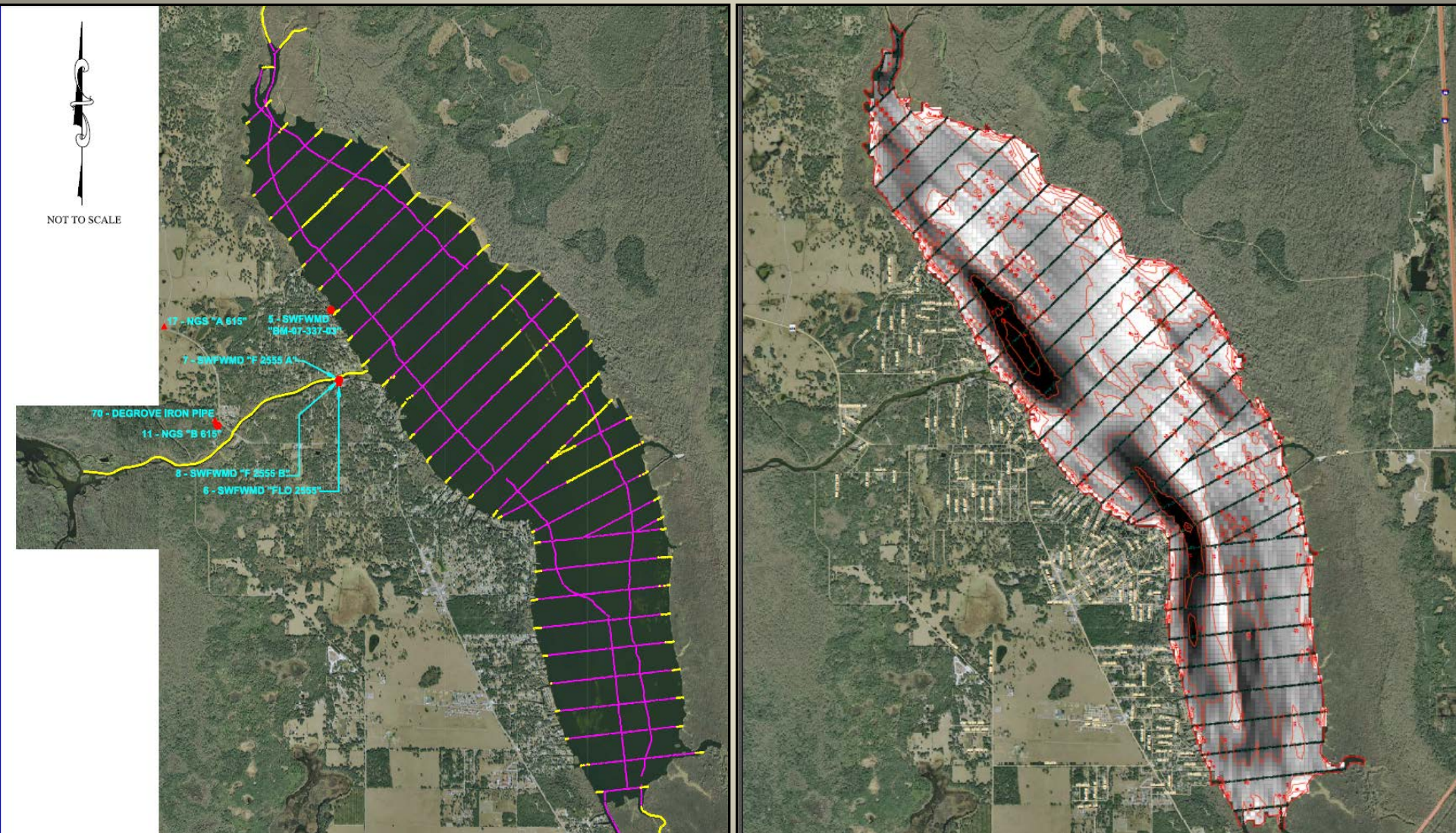


Survey Support

- Bathymetry
- MFLs
- Land Acquisition
- Land Management
- Topographic Mapping
- ERPs
- Wetland Assessments
- Water Control Structures
- Hydrologic Data Collection
- North American Vertical Datum 1988 (NAVD 88)
- Control Densification
- Natural Systems Restoration.....



Survey Support



Digital Elevation Model and Bathymetric Contours Created from Lake Panasoffkee Survey



Questions?