

FWRMC/Florida Salinity Network Meeting

additional topics to consider for groundwater-quality monitoring

- Lower Floridan aquifer water-quality monitoring
- Wastewater Injection/Disposal and Aquifer Storage and Recovery facilities
- Available data from public supply wells, compliance monitoring etc.

**Central Florida
Coordination Area
(CFCA)**

SJRWMD

SWFWMD

NORTHERN TAMPA BAY

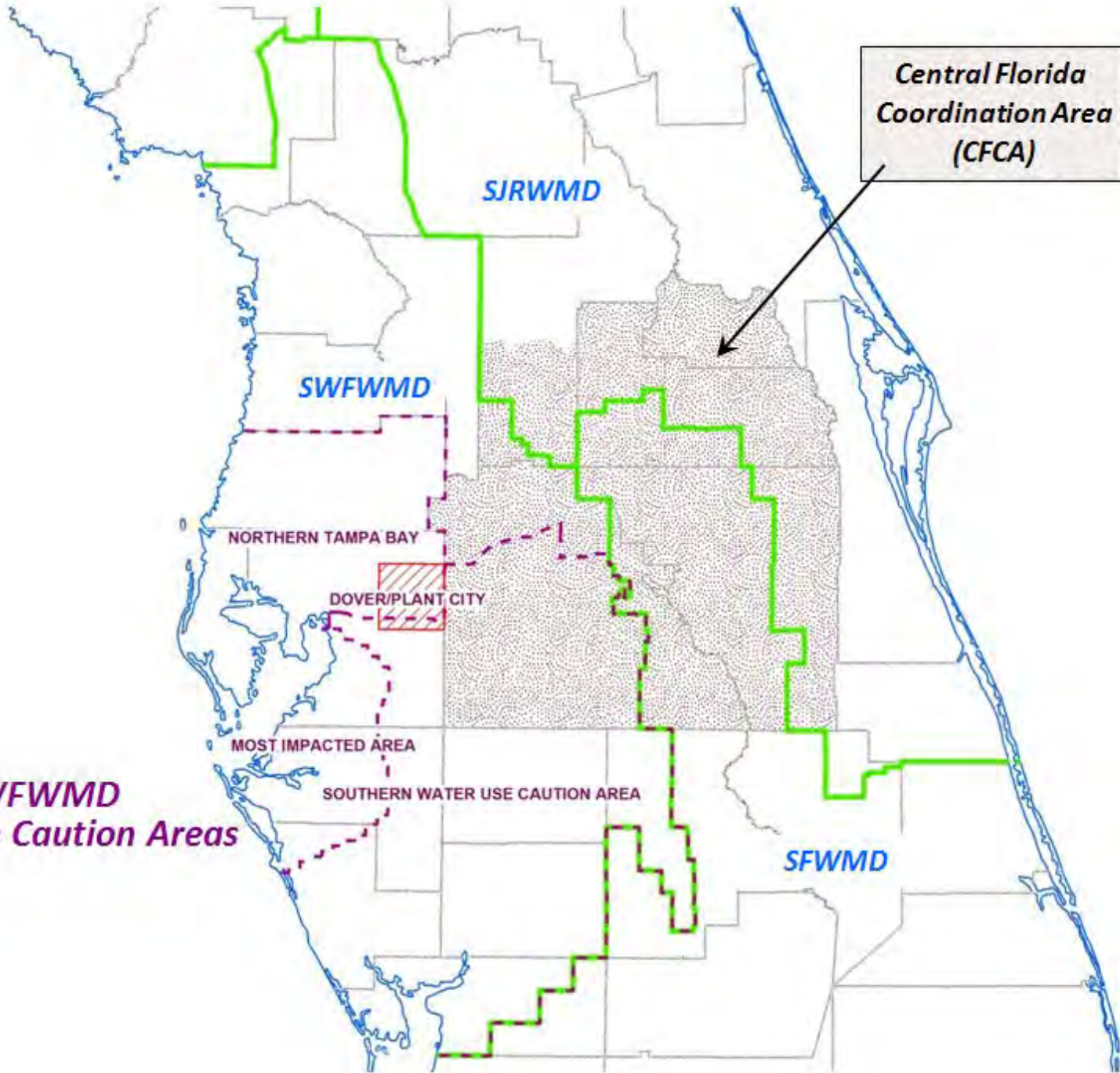
DOVER/PLANT CITY

MOST IMPACTED AREA

SOUTHERN WATER USE CAUTION AREA

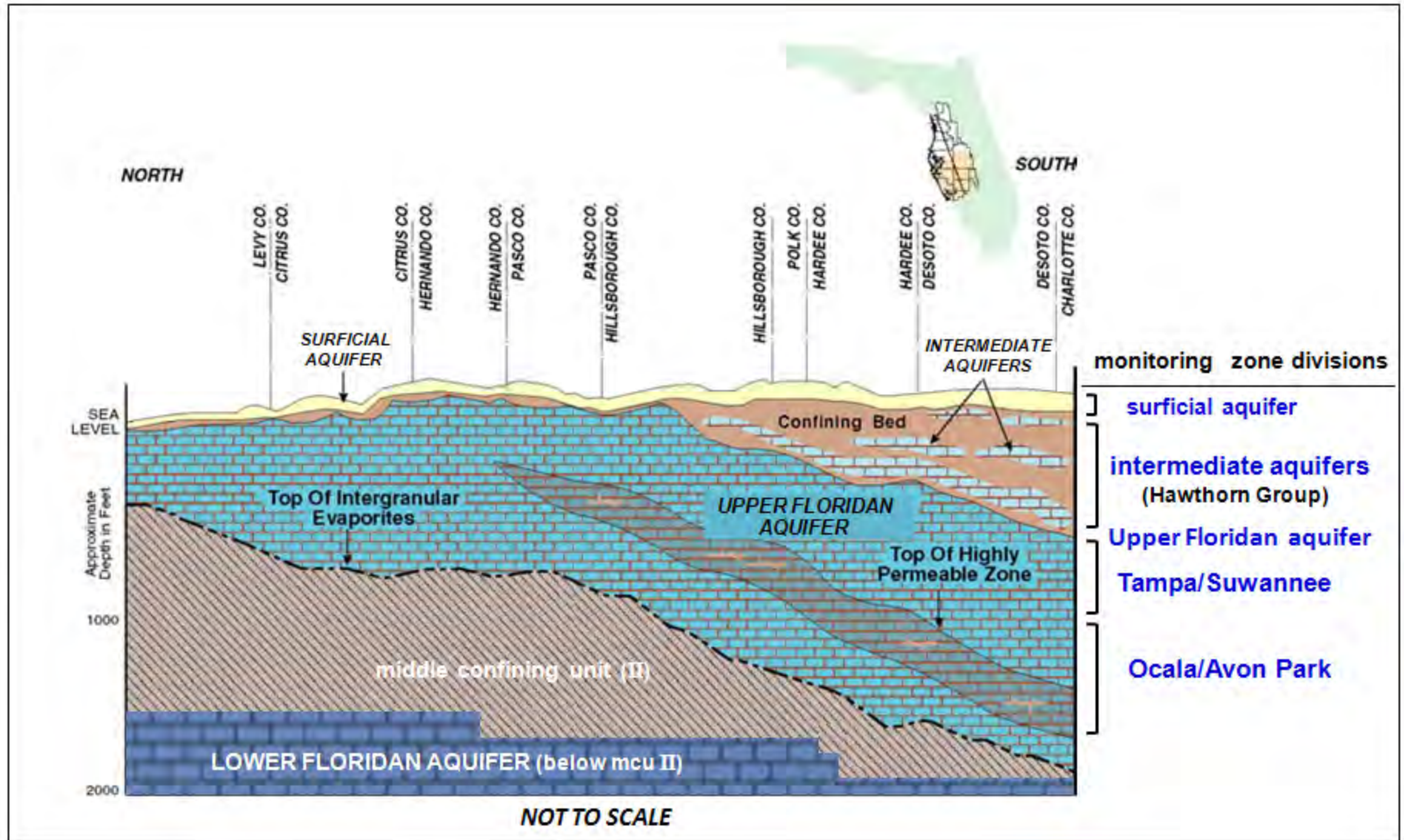
SWFWMD

**SWFWMD
Water Use Caution Areas**

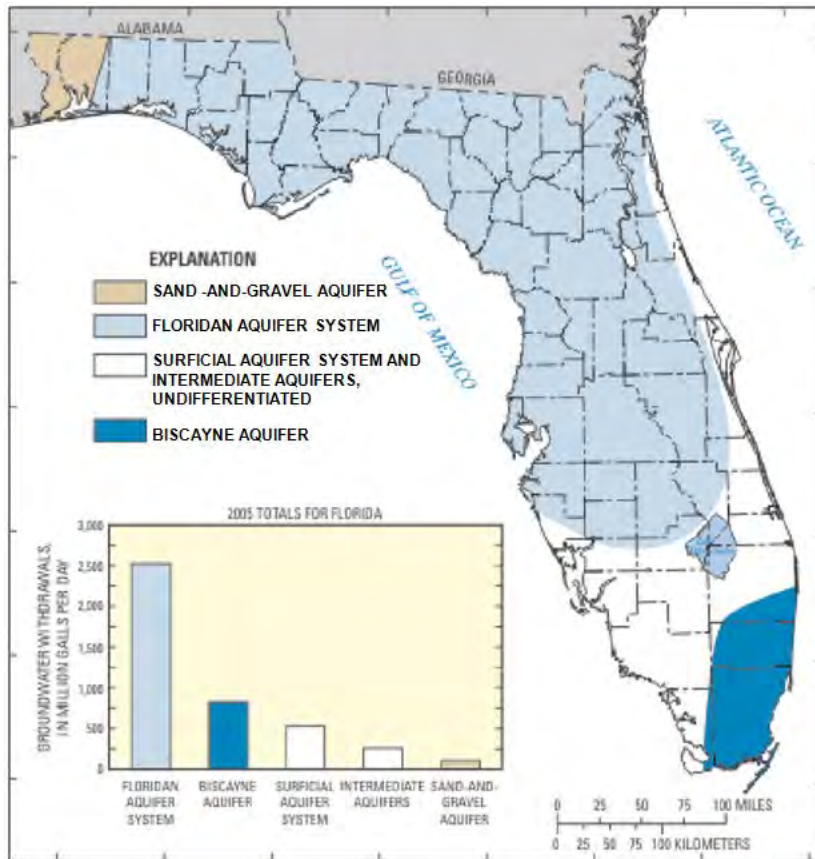


SWFWMD Coastal Groundwater/Water-Use Permit Water-Quality Monitoring

diagram showing aquifers and monitoring zone divisions used in well groupings



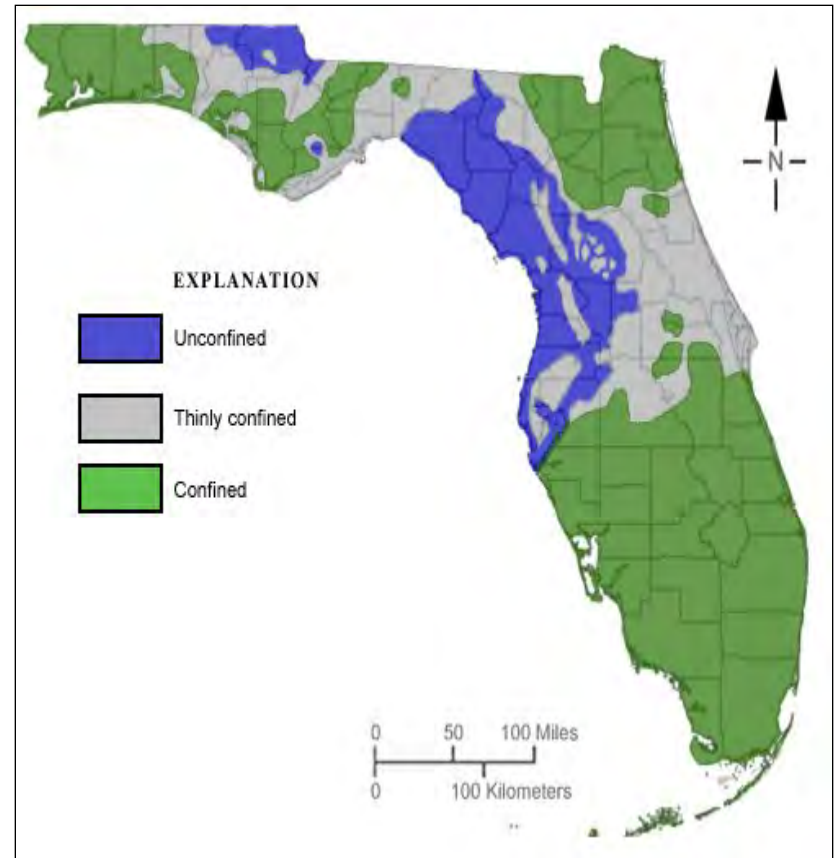
Geographic distribution of aquifers



Primary groundwater sources from principal aquifers in Florida (Marella 2009)

(sand-and-gravel aquifer in the western panhandle is part of the coastal lowlands aquifer system)

Hydrogeologic variability, Upper Floridan aquifer



Generalized confinement, Upper Floridan aquifer

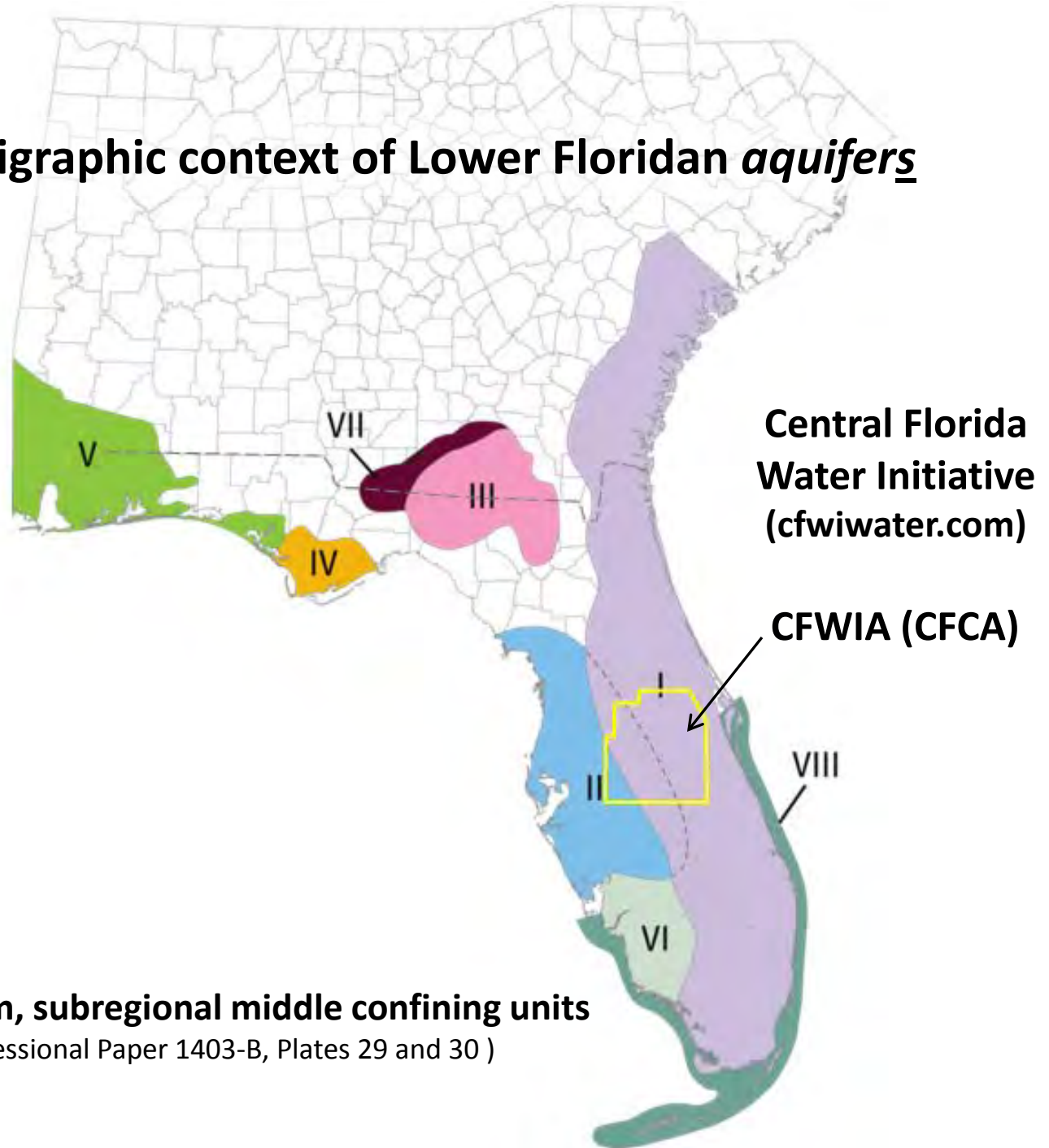
Overlying sediment thickness (Miller 1997)

unconfined = absent or thin

thinly confined <100 ft.

confined >100 ft.

Hydrostratigraphic context of Lower Floridan *aquifers*



Floridan aquifer system, subregional middle confining units

(from Miller 1986, USGS Professional Paper 1403-B, Plates 29 and 30)



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

NEWS RELEASE

December 29, 2011

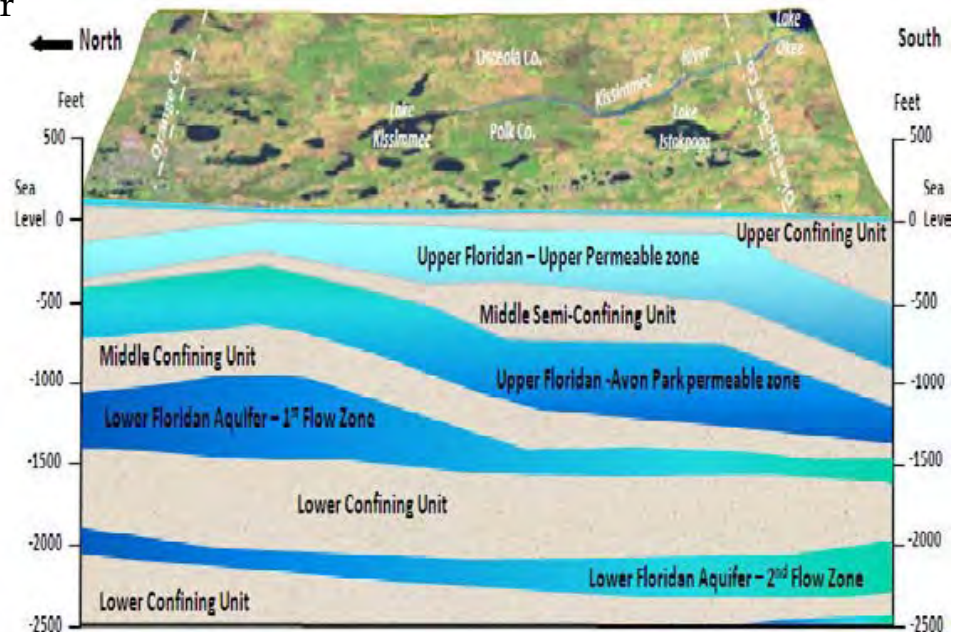
www.sfwmd.gov/news

SFWMD Installs Deep Exploratory Wells in Central Florida

Test wells will help evaluate the aquifer 2,700 feet below ground

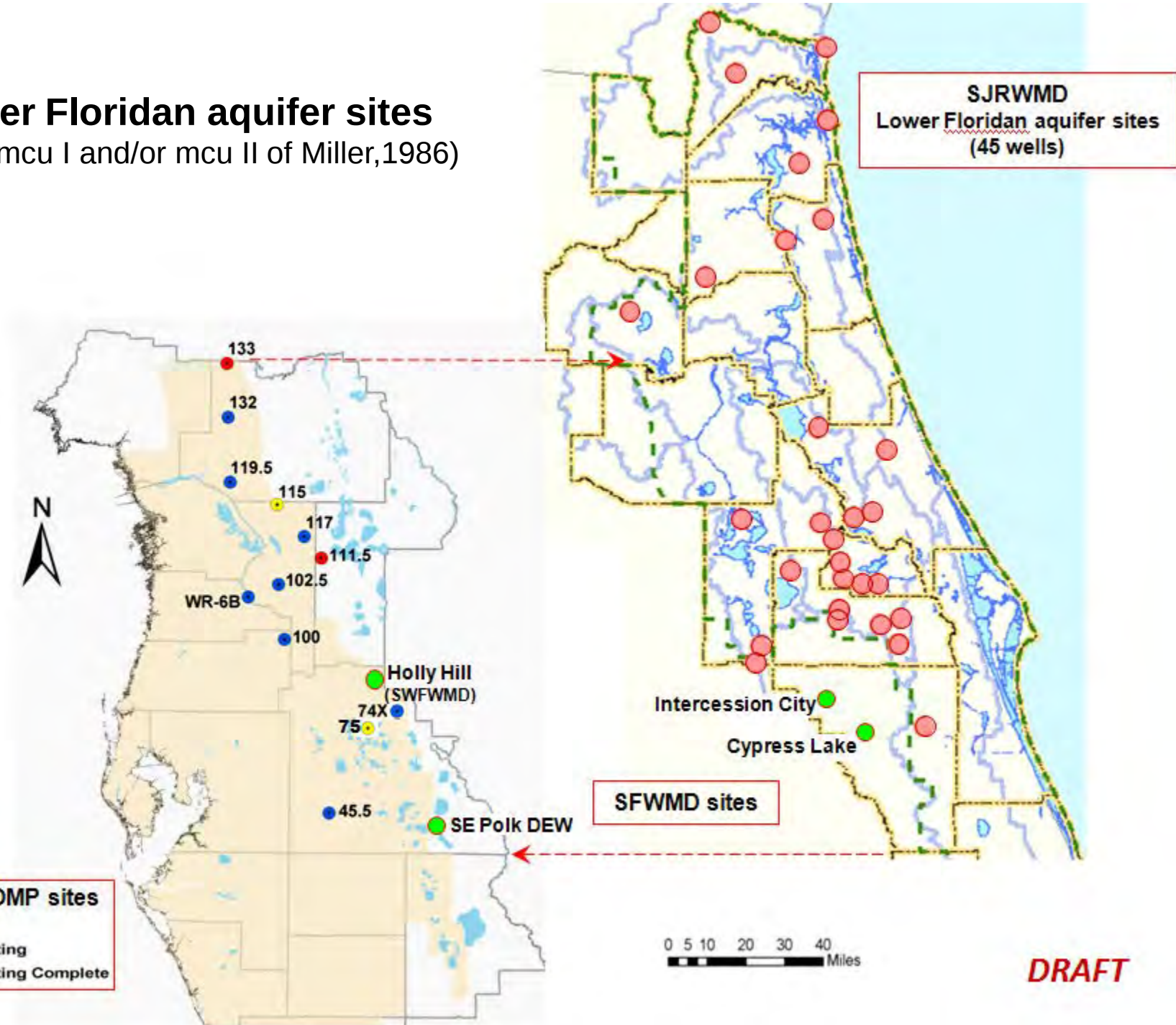
Polk County, FL — To support and sustain the water supply in Central Florida, the South Florida Water Management District (SFWMD) is currently drilling test wells up to 2,700 feet deep in previously unexplored portions of the Lower Floridan Aquifer.

“The Lower Floridan Aquifer in this area is largely uncharted territory, and its potential for boosting regional supplies is not yet known,” said Terrie Bates, Director of the SFWMD Water Resources Division. “This could be a significant and viable alternative source to meet water needs in future years.”

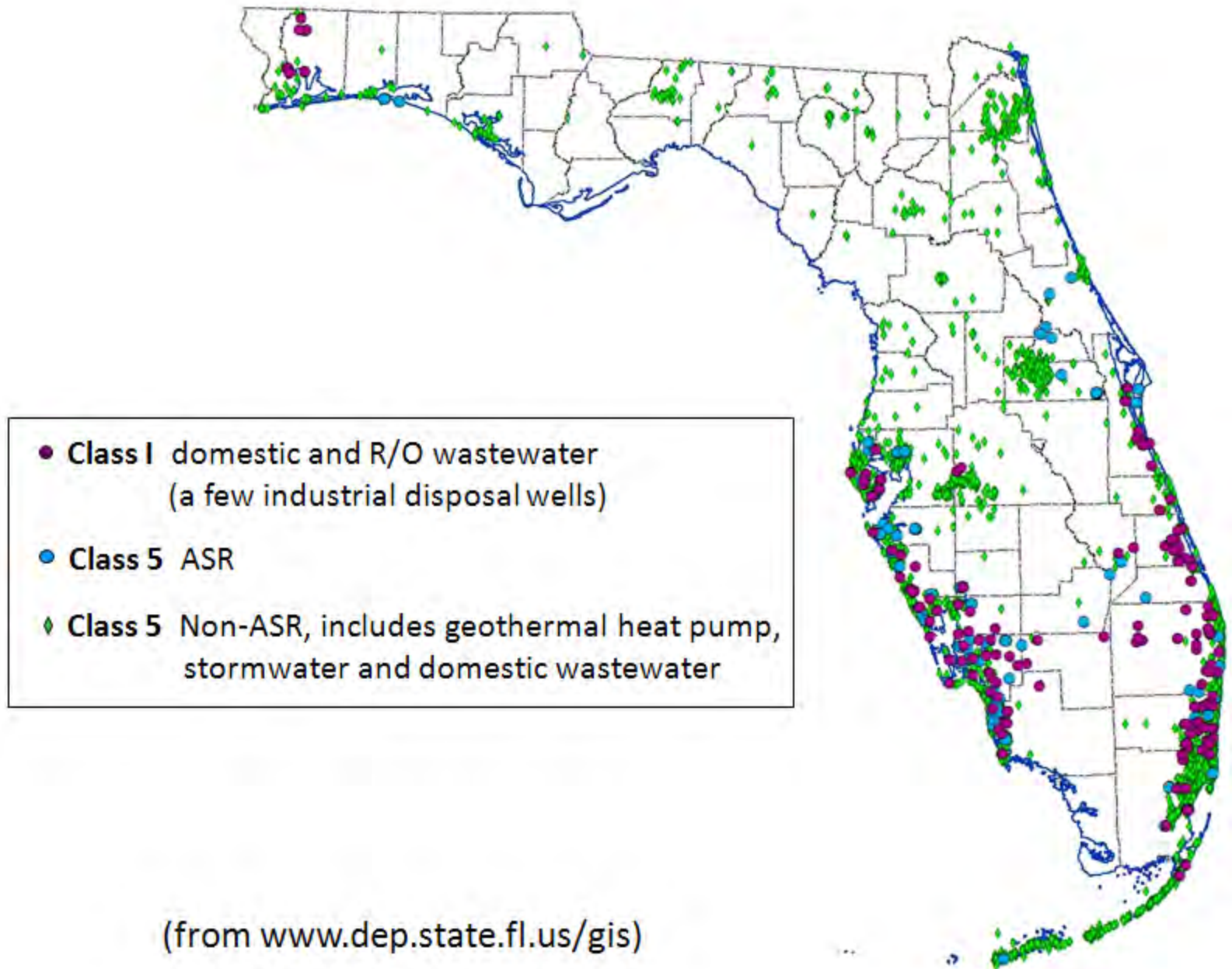


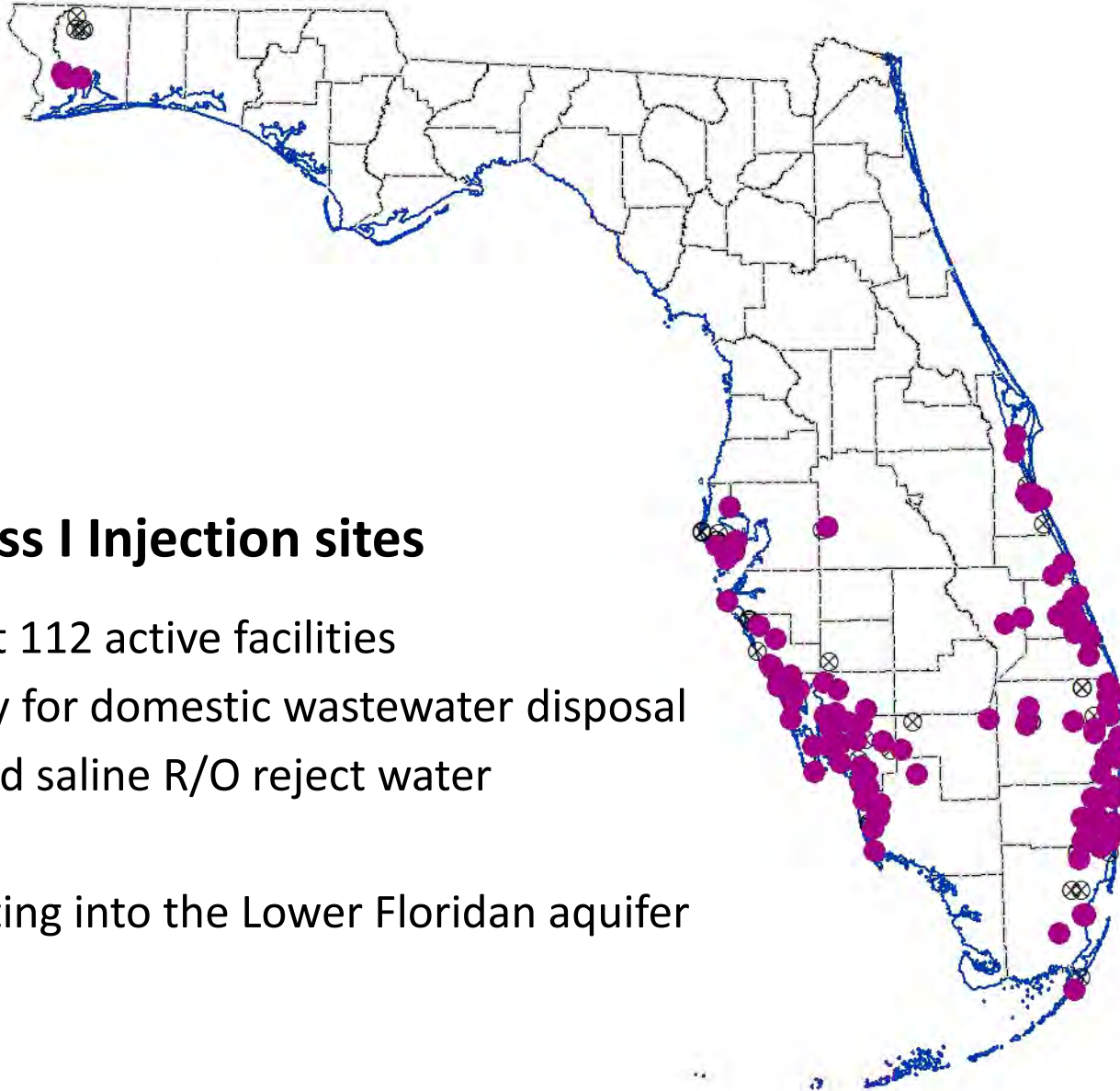
(modified from: <http://my.sfwmd.gov/portal/pls/portal/docs/16703158.PDF>)

Lower Floridan aquifer sites (below mcu I and/or mcu II of Miller,1986)



FDEP Underground Injection Control permitted locations (active and inactive)





Active Class I Injection sites

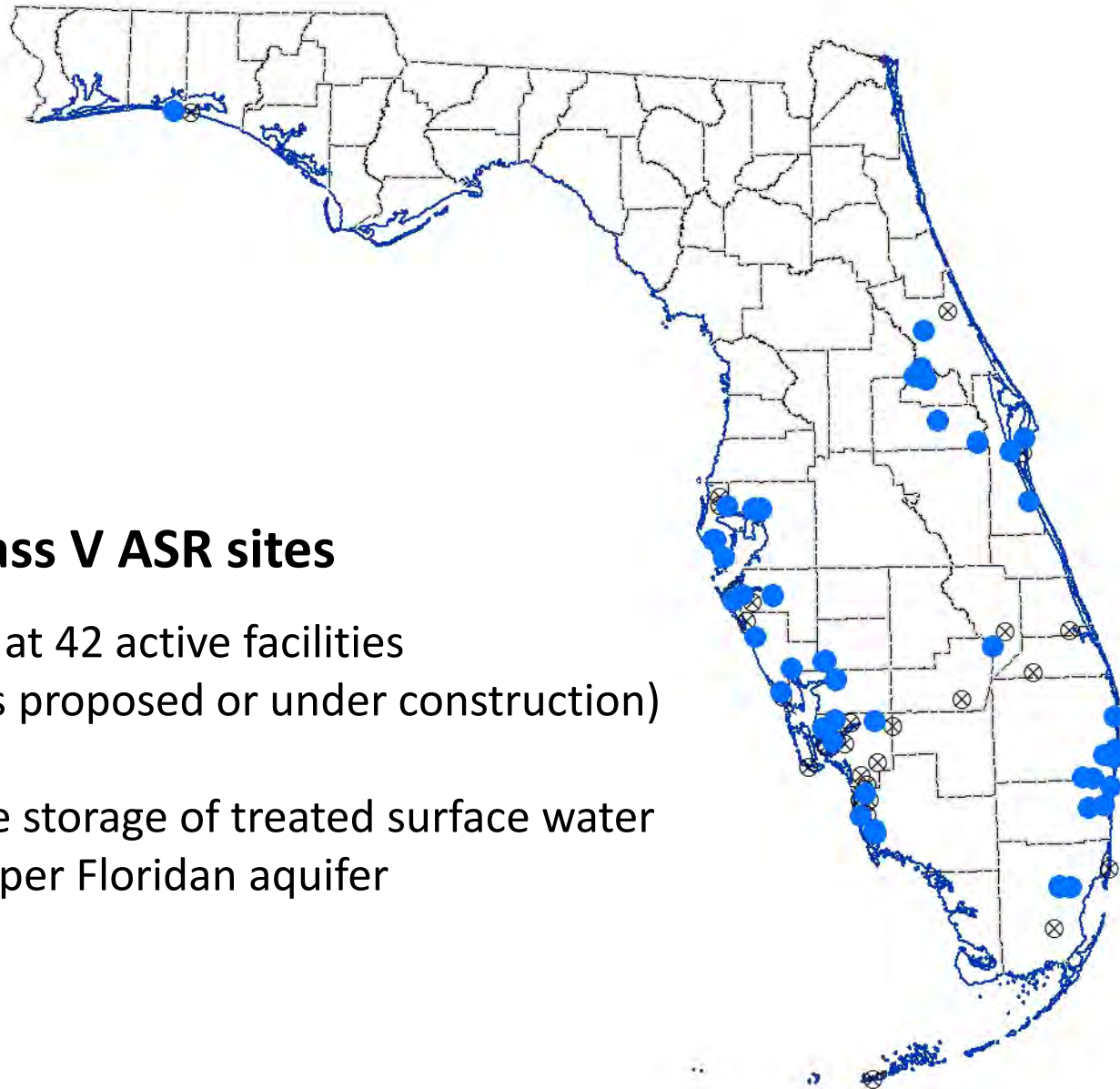
- 189 wells at 112 active facilities
- used mostly for domestic wastewater disposal
- also blended saline R/O reject water

Mostly injecting into the Lower Floridan aquifer

(from www.dep.state.fl.us/gis)

Active Class V ASR sites

- 115 wells at 42 active facilities
(7 new sites proposed or under construction)
- subsurface storage of treated surface water
- mostly Upper Floridan aquifer



(from www.dep.state.fl.us/gis)

Data availability from facility compliance monitoring

- Could be useful for filling data gaps, esp. in the Lower Floridan aquifer
- Public Supply: both production and monitor well data
- Class I injection facilities: monitor well data above injection zone ?
- Class V ASR facilities: ?