

FWRMC

Salinity Network Update

1:10 – 1:30 PM
February 21, 2012
[Rick Copeland (FDEP)]

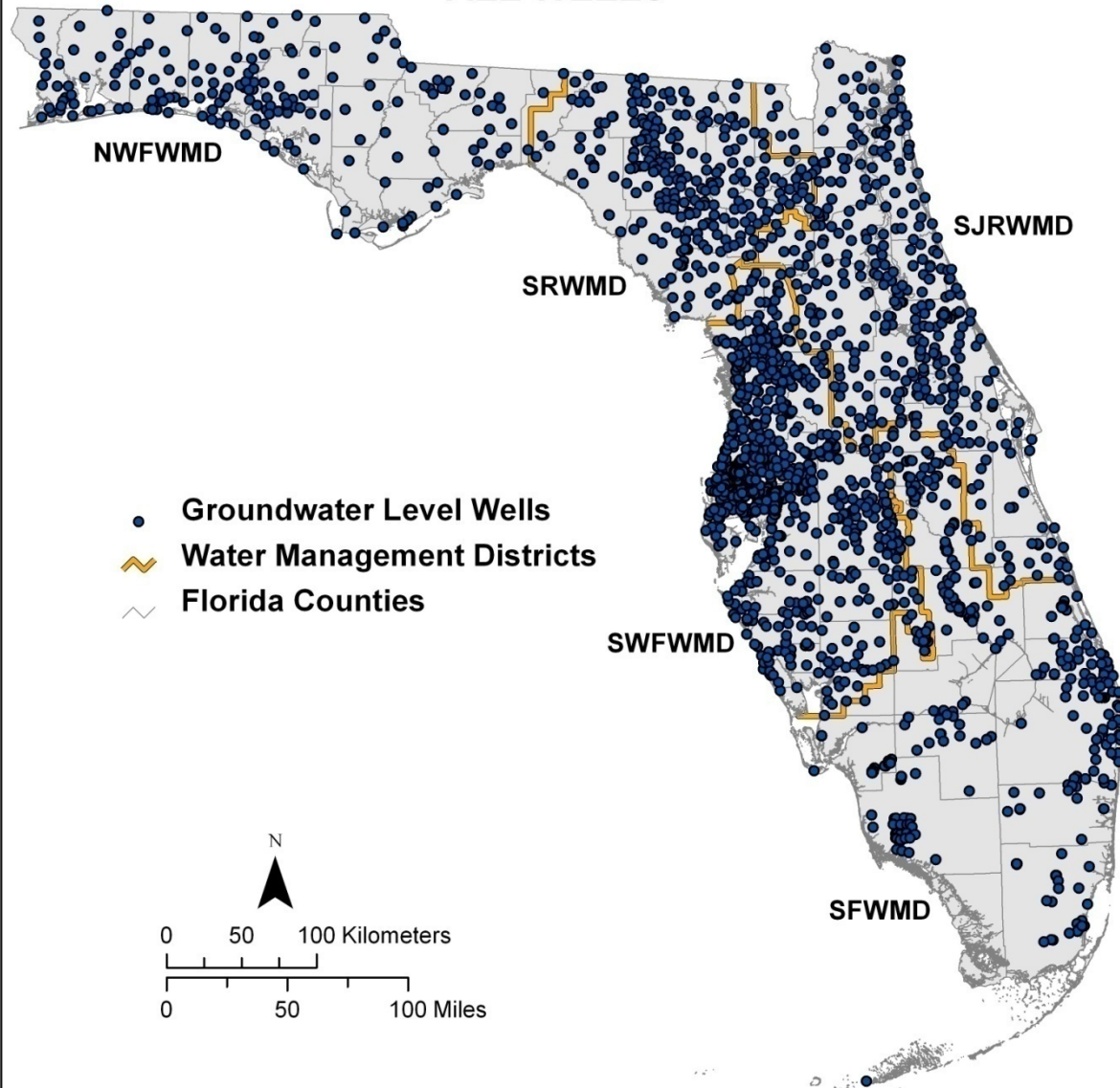
Salinity Network (SalNet)

- Operates Under the Guidance of the FWRMC
- Committed to Working Closely with Surface Water Monitoring Programs
- Tools - Consider GW/SW interactions if applicable
- Predominantly a GW Monitoring Network
- **A Network of Existing Networks**

Current Action Items

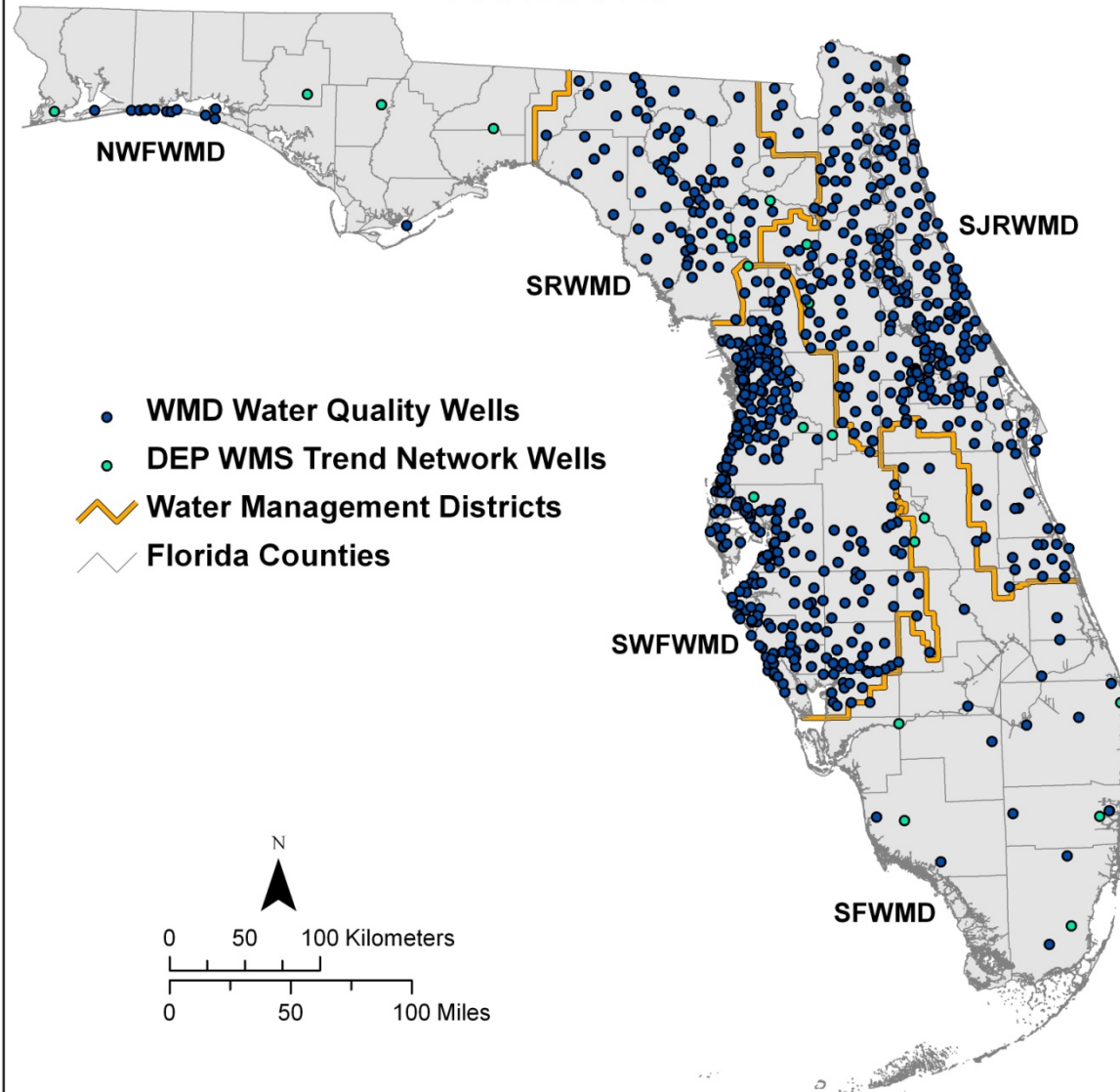
1. Compile GW Site Info for FL Water Mon. Catalog from USGS, WMDs, FDEP, other State Agencies, Counties, & Volunteers
2. Develop a Framework Document for the SalNet
3. Develop Indices for GWL and GWQ

GROUNDWATER LEVEL ALL WELLS

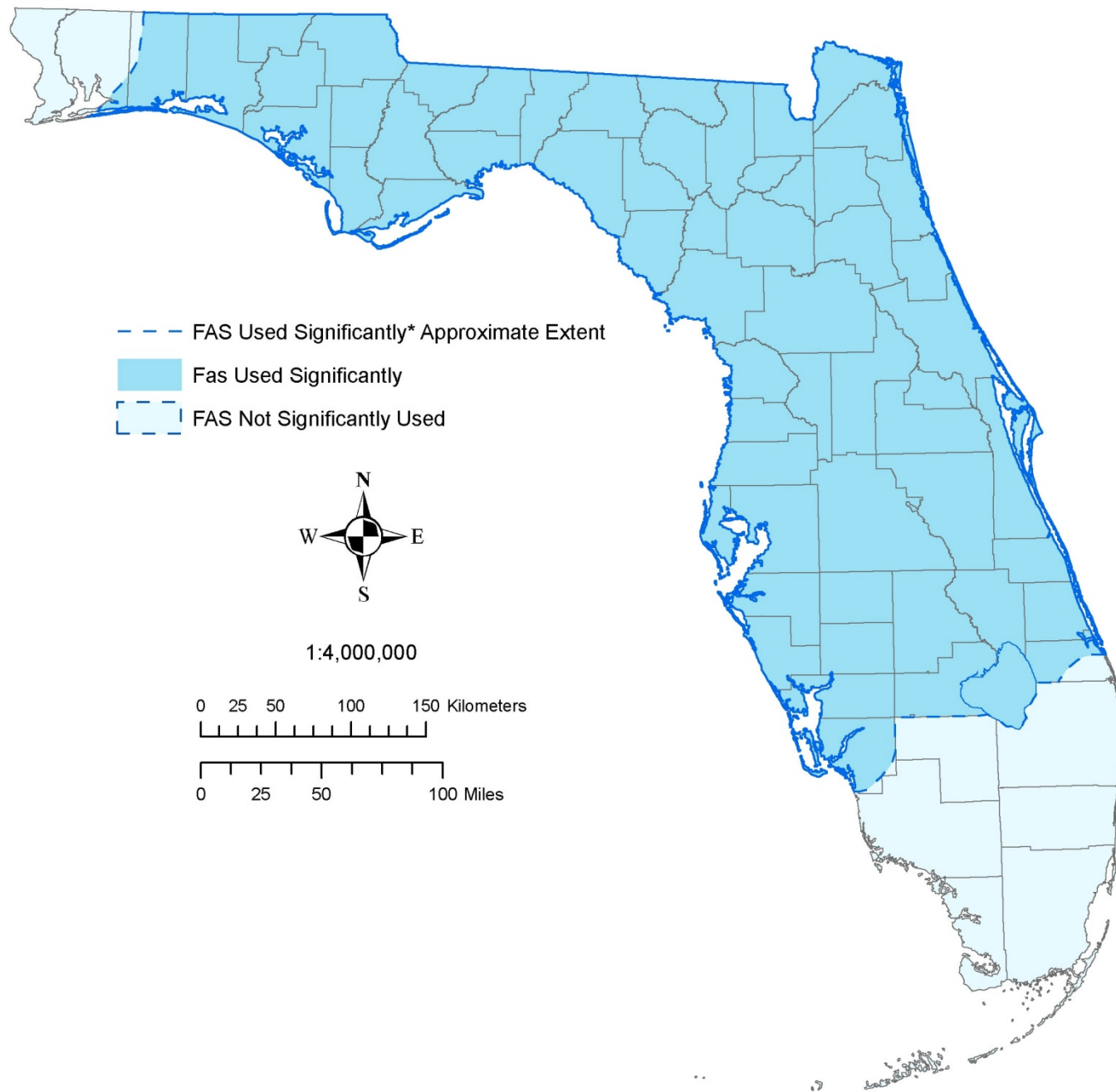


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WATER QUALITY ALL WELLS

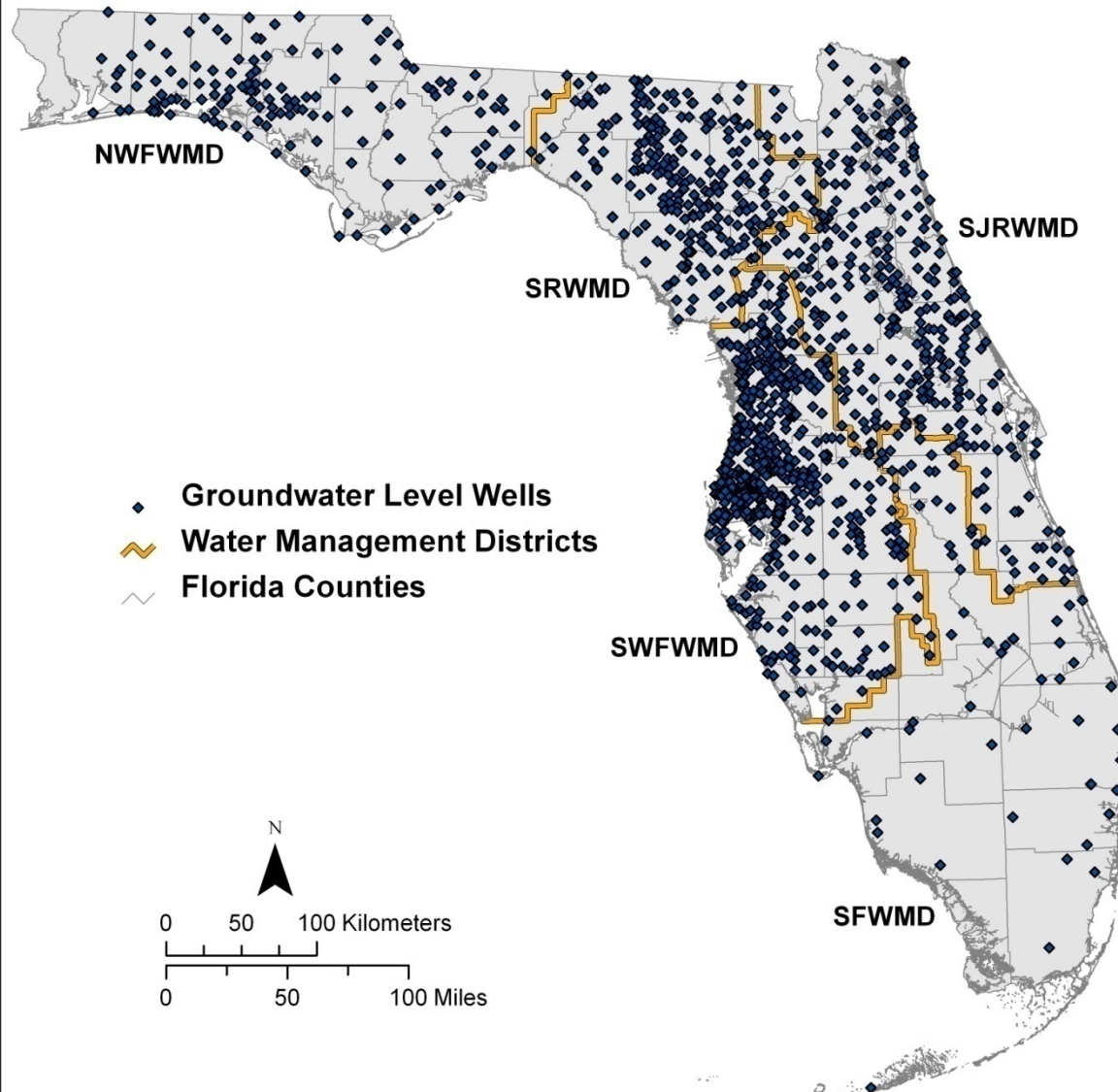


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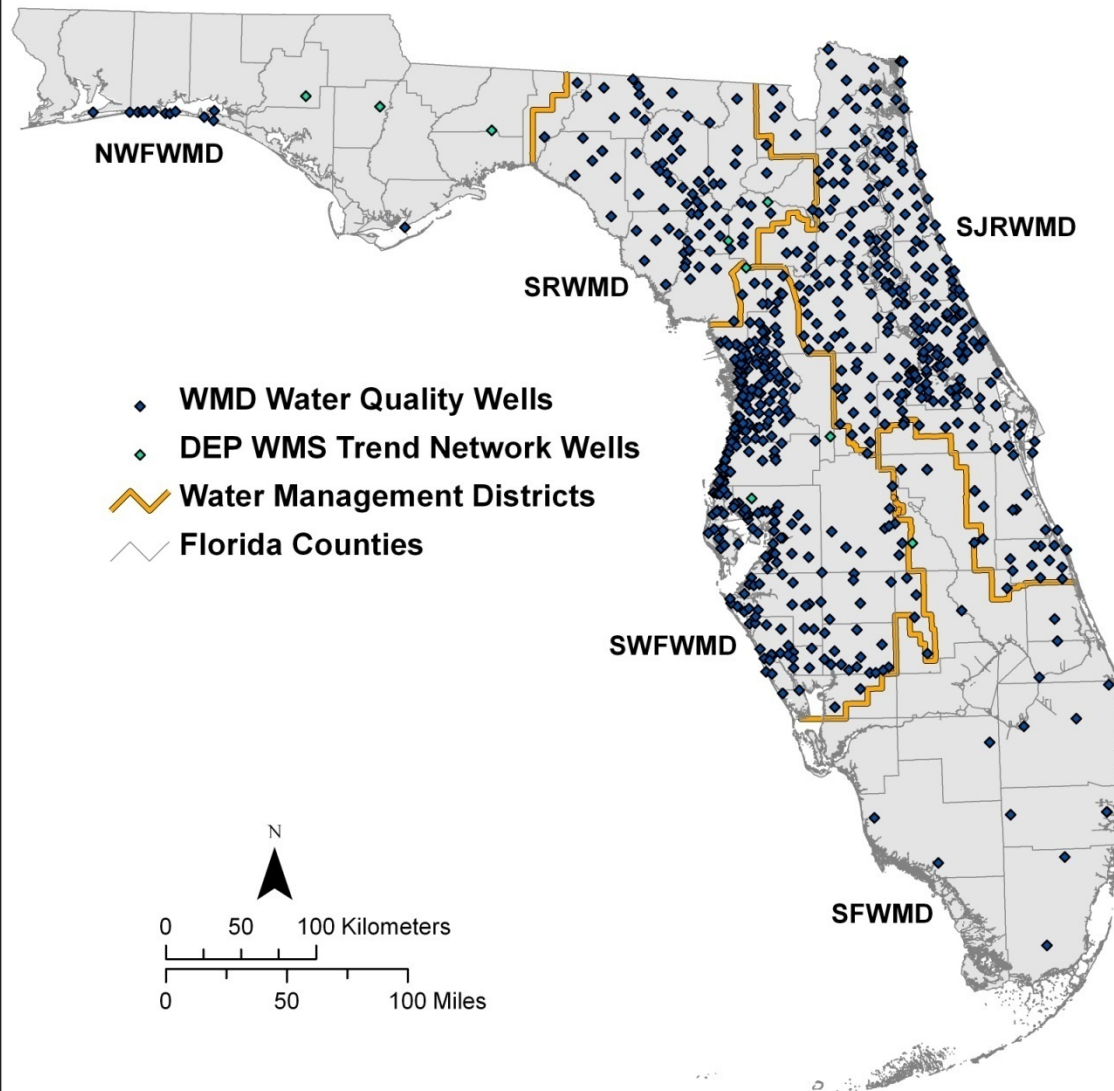
* Significant is greater than 5% of county groundwater use based on 2000 data from Marella and Bendt (2005).

GROUNDWATER LEVEL FLORIDAN AQUIFER SYSTEM

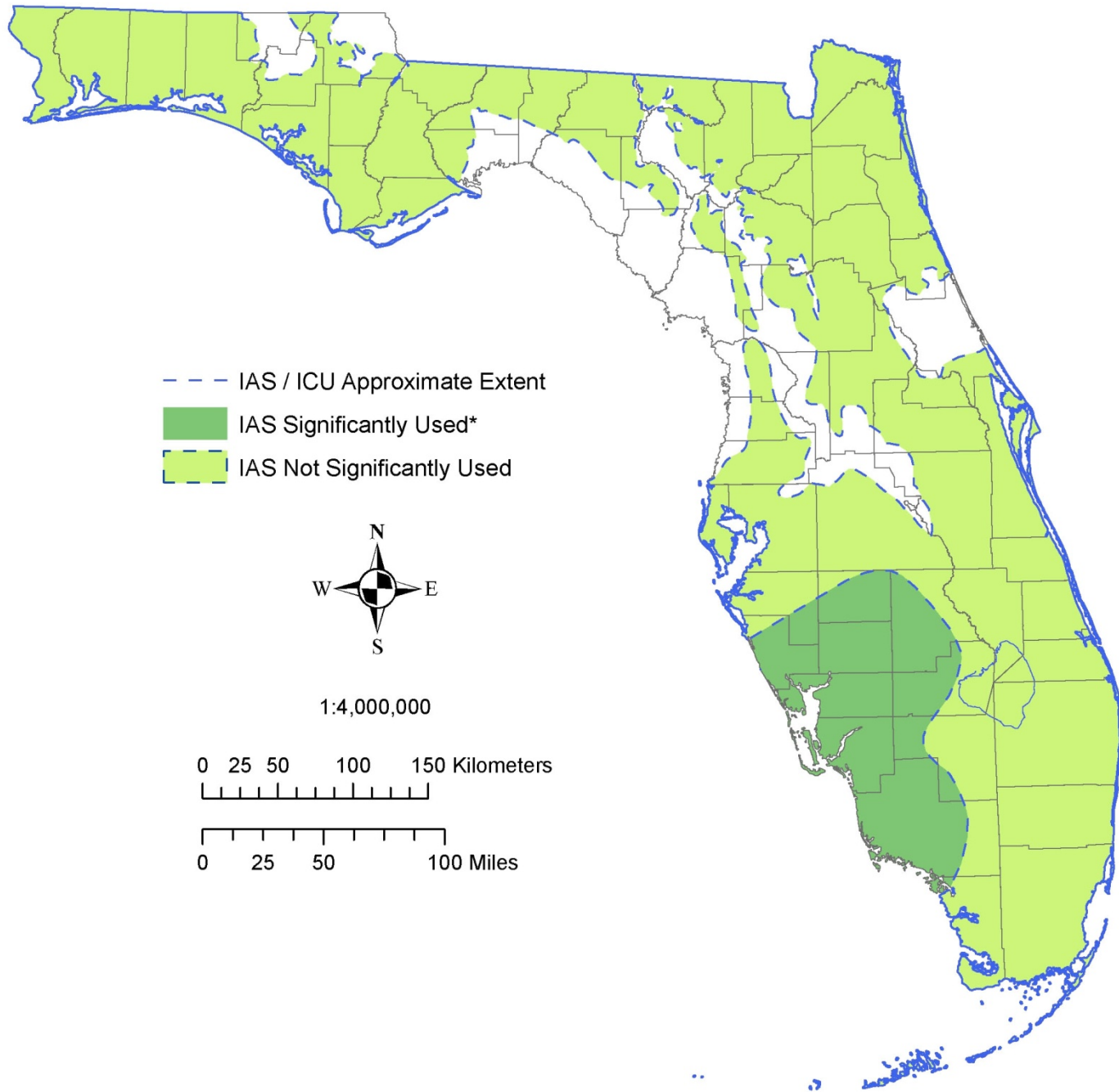


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WATER QUALITY FLORIDAN AQUIFER SYSTEM

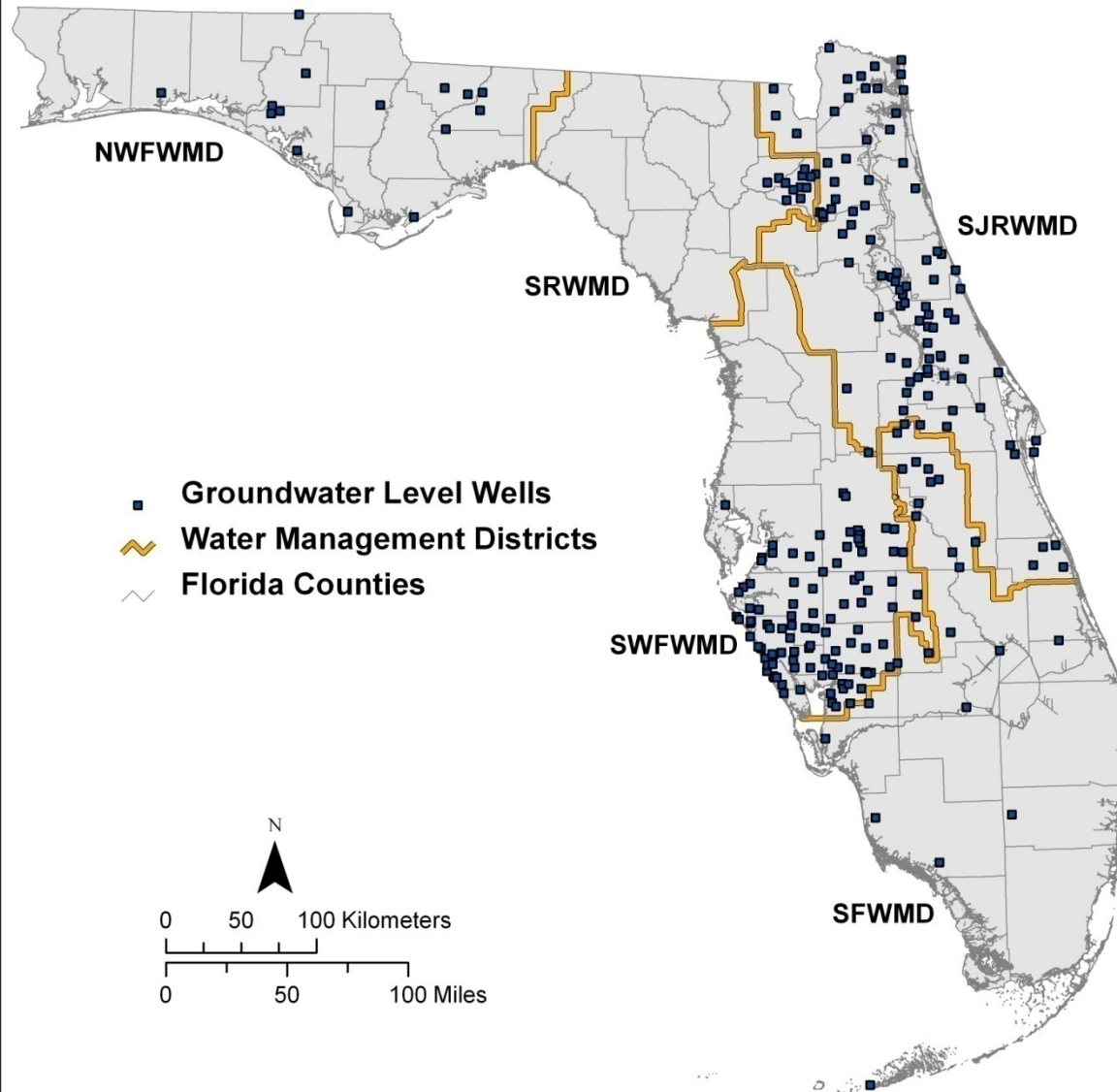


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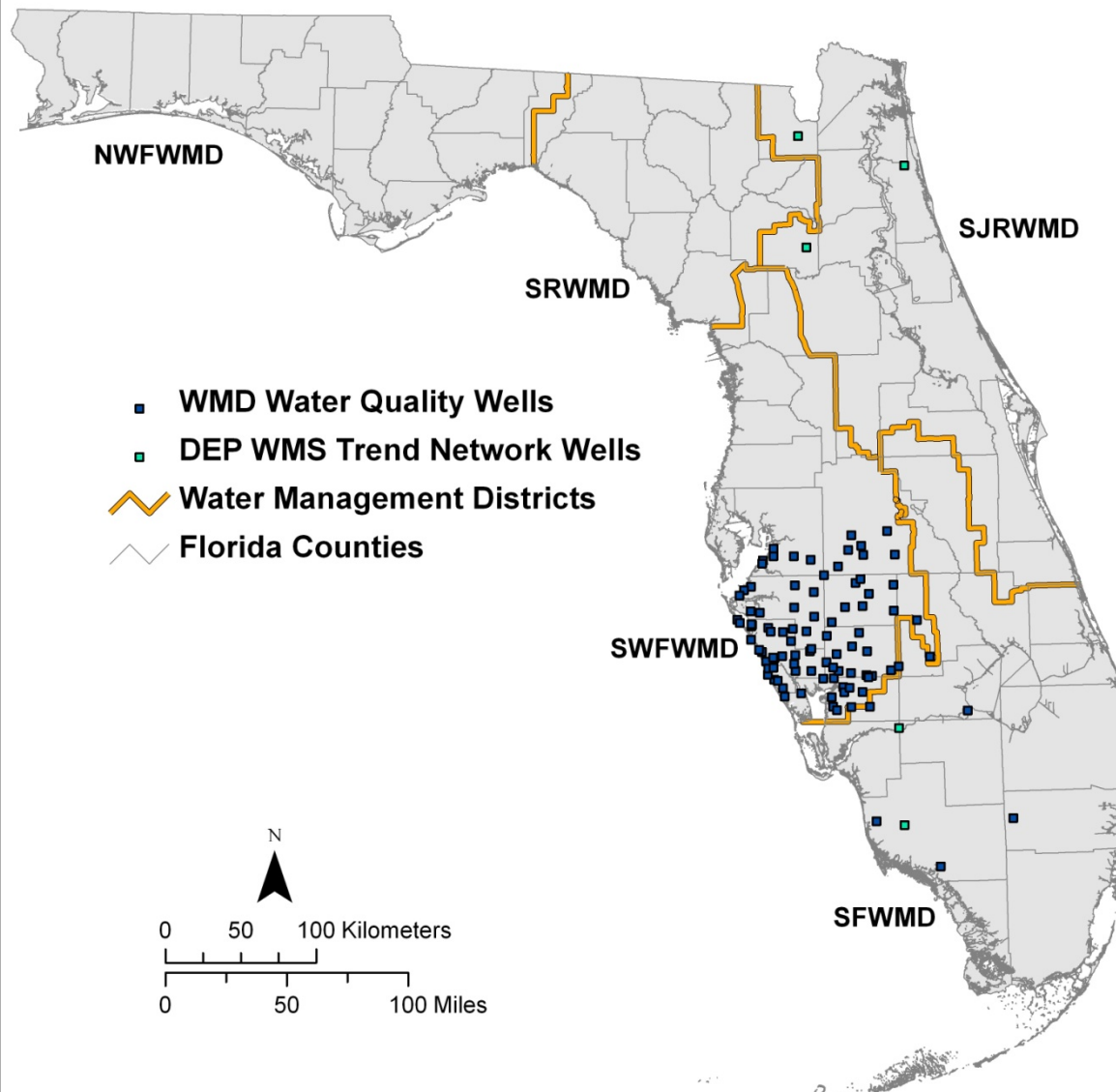
* Significant is greater than 5% groundwater use, based on 2000 data from Marella and Bendt (2005).

GROUNDWATER LEVEL INTERMEDIATE AQUIFER SYSTEM

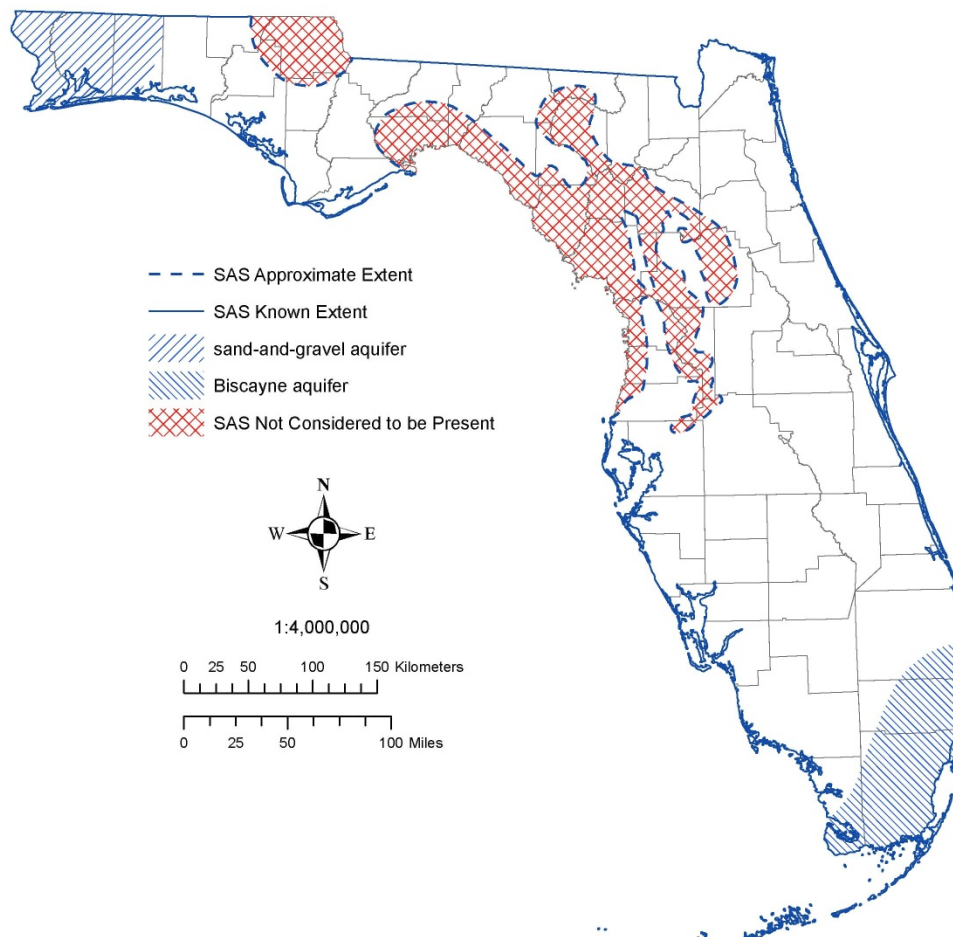


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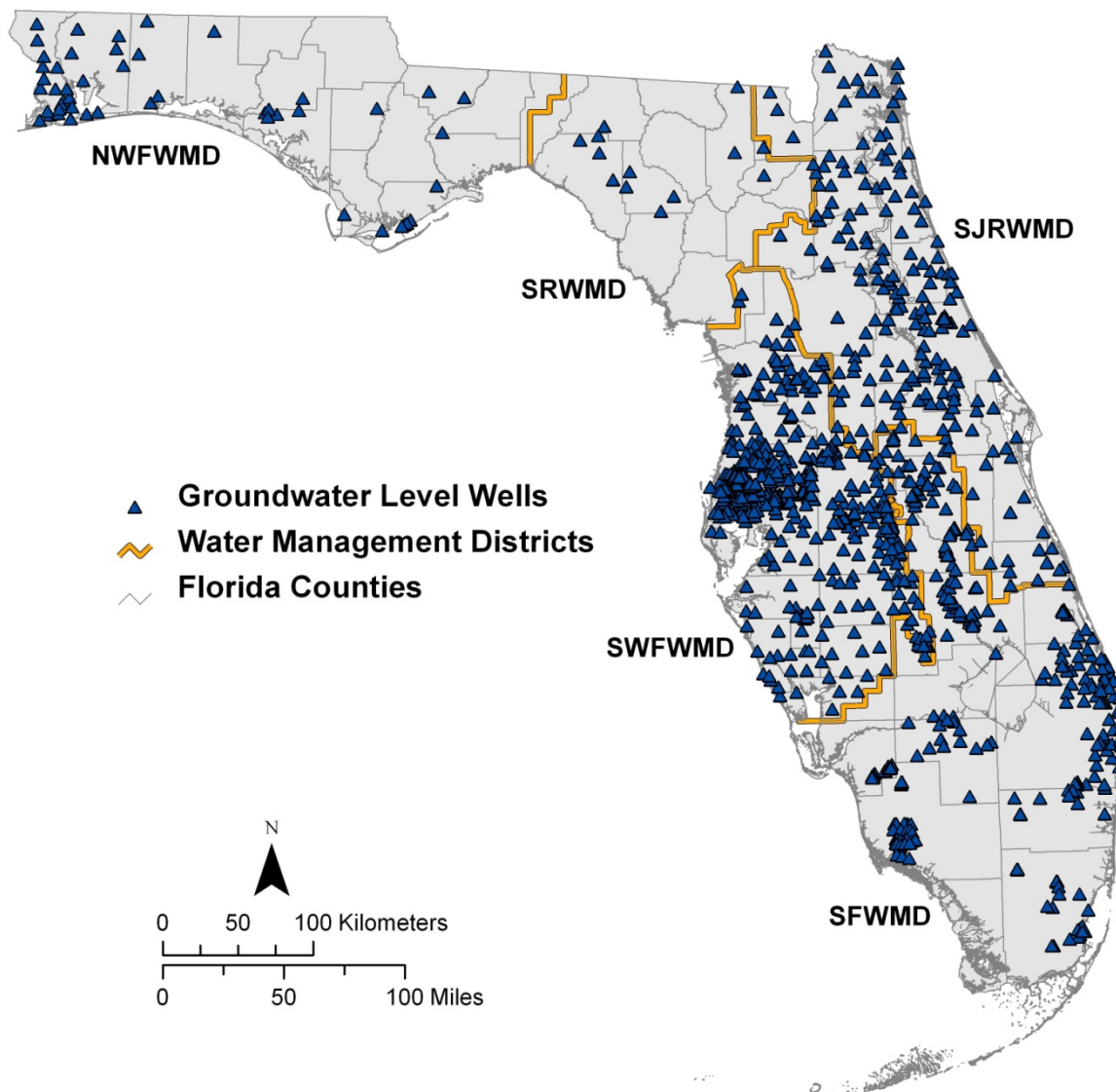
WATER QUALITY INTERMEDIATE AQUIFER SYSTEM



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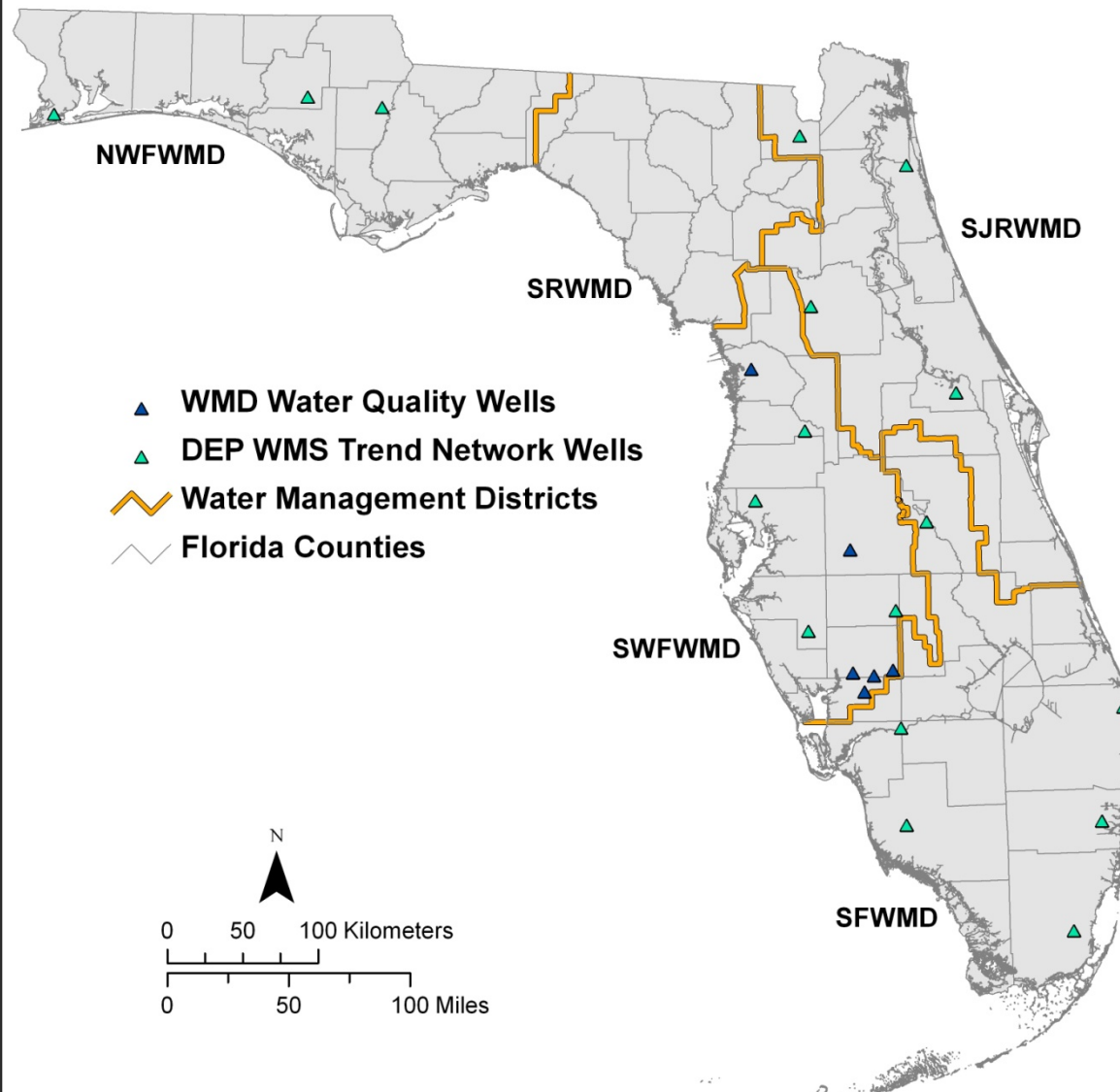


GROUNDWATER LEVEL SURFICIAL AQUIFER SYSTEM



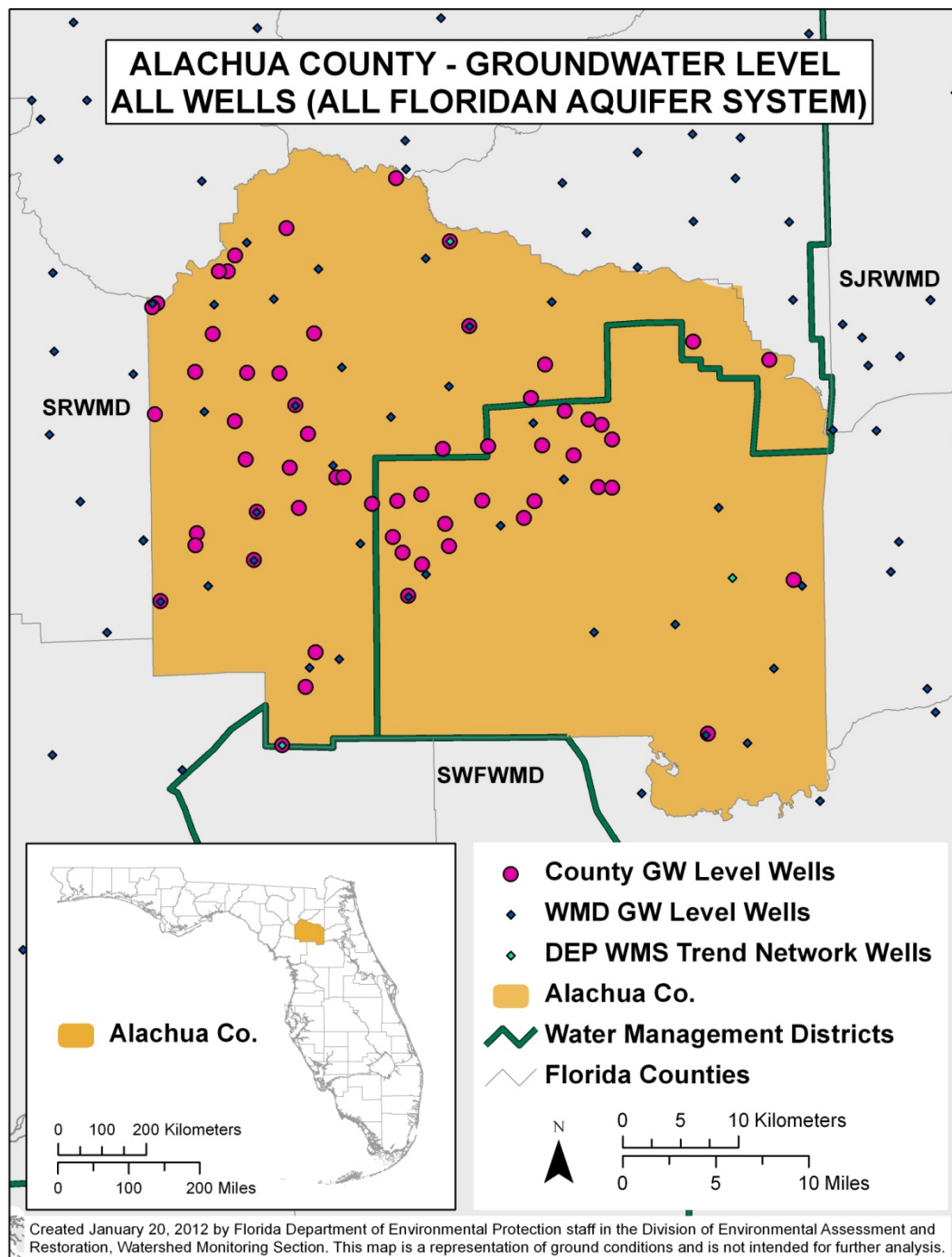
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WATER QUALITY SURFICIAL AQUIFER SYSTEM

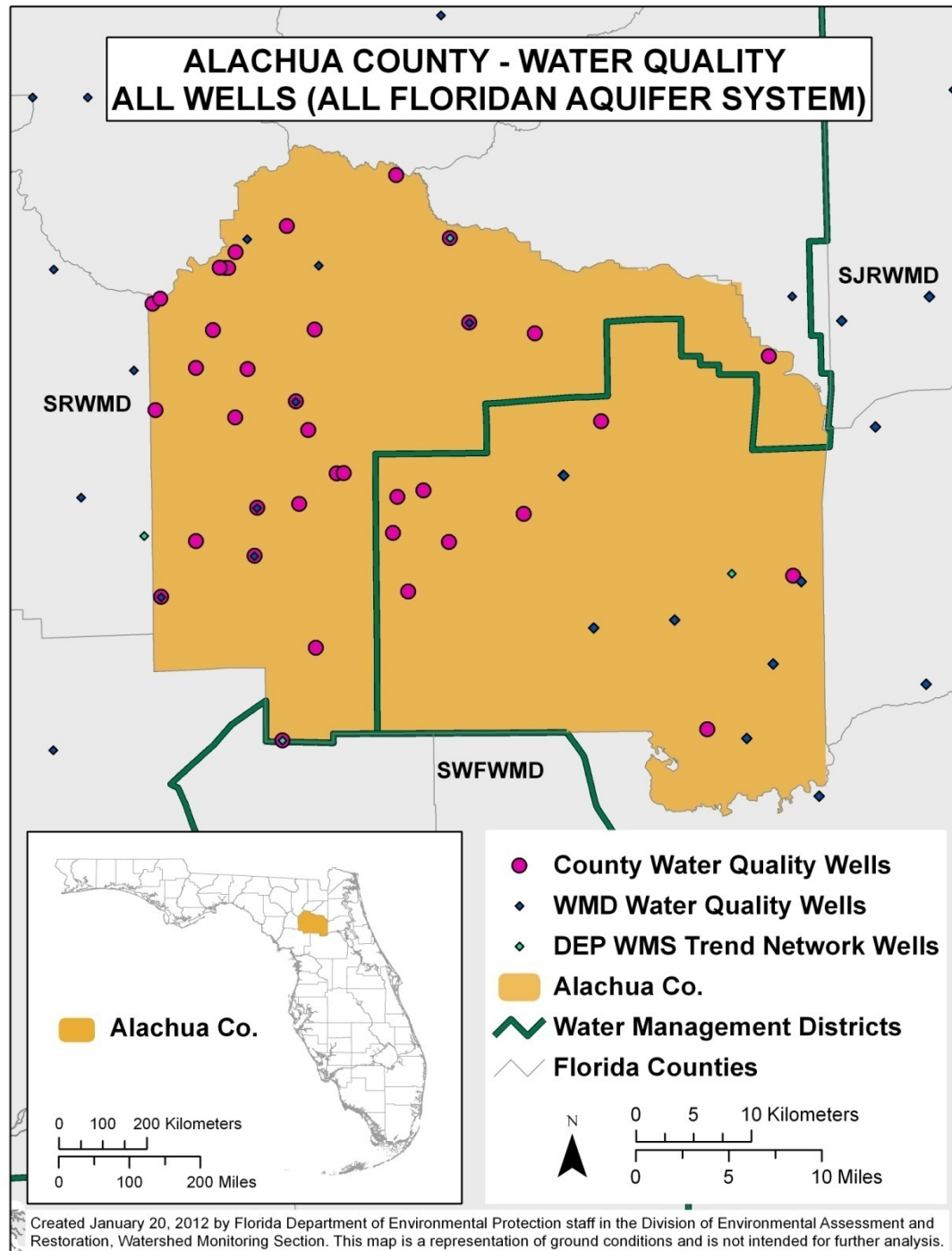


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ALACHUA COUNTY - GROUNDWATER LEVEL ALL WELLS (ALL FLORIDAN AQUIFER SYSTEM)



ALACHUA COUNTY - WATER QUALITY ALL WELLS (ALL FLORIDAN AQUIFER SYSTEM)



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SFWMD - CONSUMPTIVE USE PERMITS - ALL WELLS

◆ CUP Wells

■ SFWMD

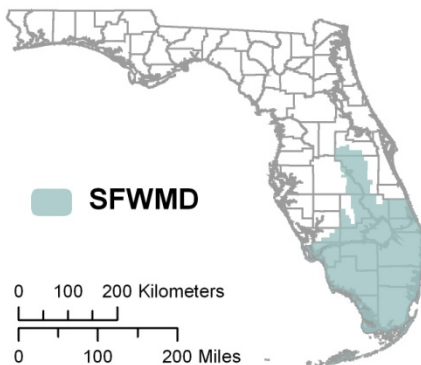
■ All Other WMDs

∩ Florida Counties



0 20 40 Kilometers

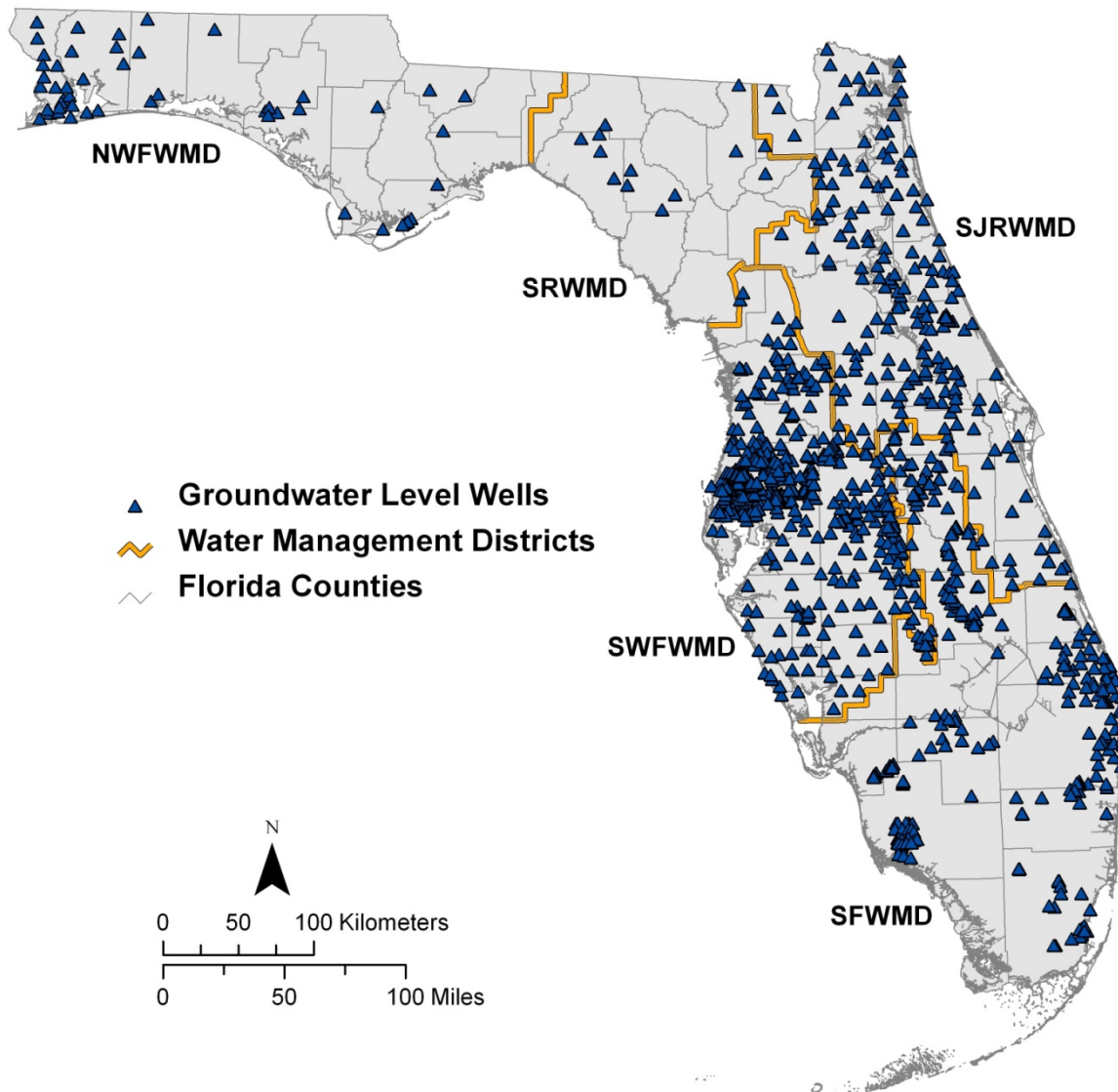
0 20 40 Miles



Volunteer Monitoring of GW?

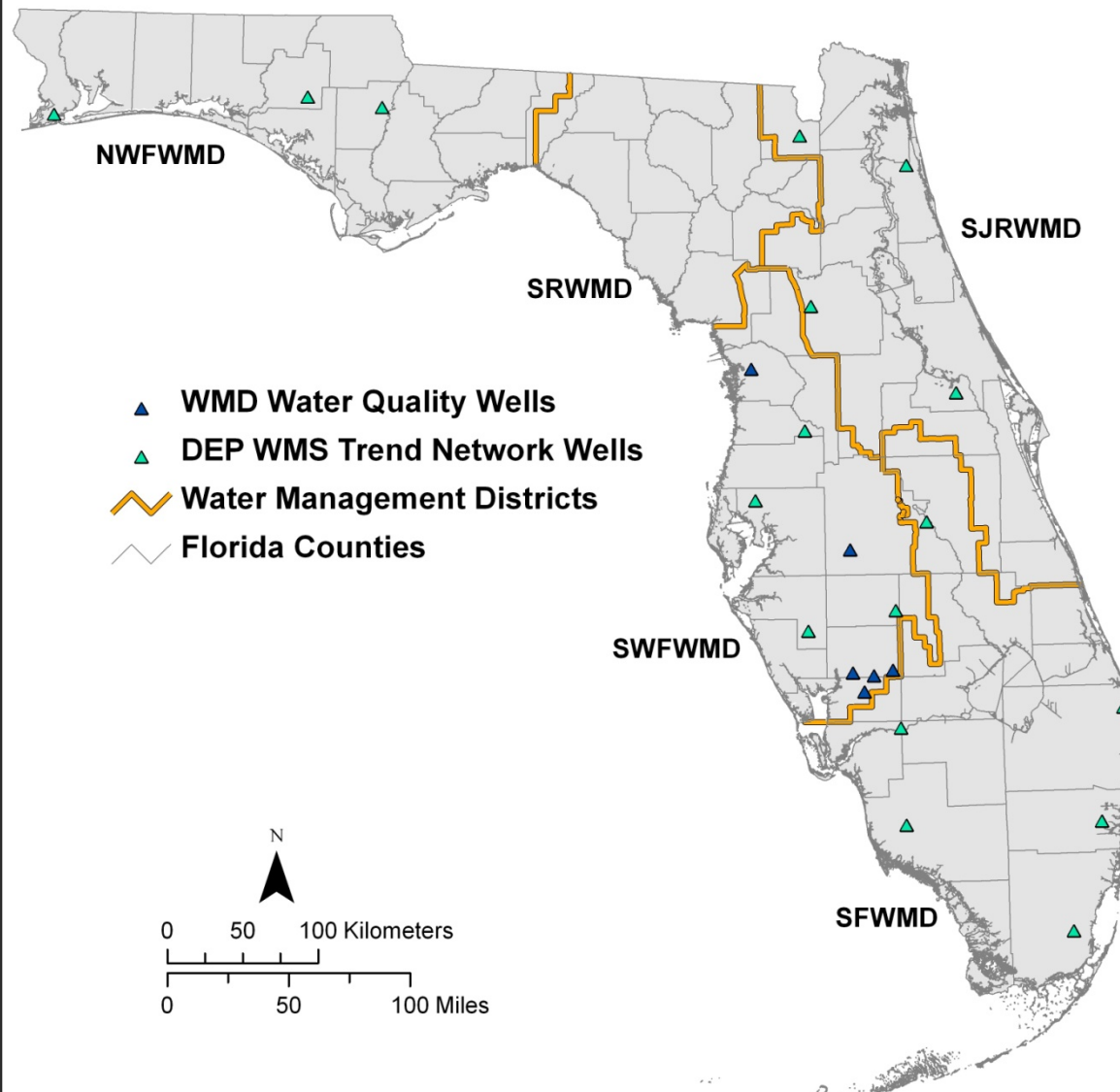
- In portions of FL, there is a lack of GW Level or GW Quality data
 - E.G. Recall the Surf. Aq. System
- Can Volunteers assist?
 - E.G LAKE WATCH?

GROUNDWATER LEVEL SURFICIAL AQUIFER SYSTEM



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WATER QUALITY SURFICIAL AQUIFER SYSTEM

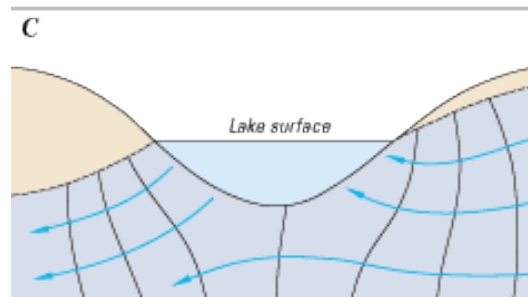
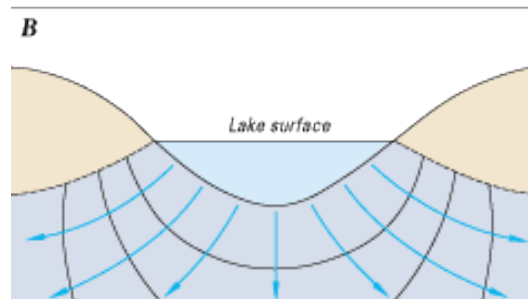
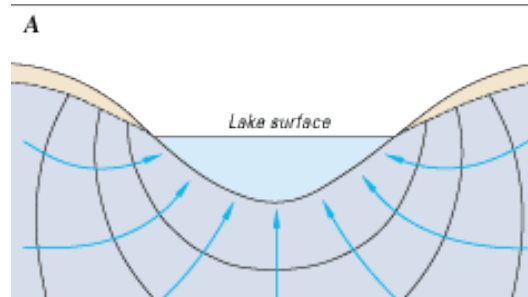


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Relationship - GW and Lakes

USGS Circular 1139

(Winter, Harvey, Franke, and Alley,
1998)



Volunteer Monitoring

- Can Volunteers assist?
- LAKE WATCH – As a pilot study, will obtain GWL and GW quality data
- SalNet should use volunteer data if applicable(?)

Framework Document for SalNet (Justification)

- Legal – FS 373.026 (paraphrased)
- (4) Disseminate to the public, current and useful information relating to the water resources of the State.
- (5) Identify areas of the State where saltwater intrusion is a threat to freshwater. Report...to the WMDs, counties and the public.

Framework Document for SalNet (Justification)

- As part of FWRMC –
 - Improve coordination among monitoring entities.
 - Increase integration of freshwater and coastal monitoring.
 - Create/Sustain collaboration among monitoring entities.

Framework Document (EPA – 10 Steps)

- **Program Strategy**
- **Monitoring Objectives**
- Monitoring Design
- Indicators
- Quality Assurance
- Data management
- Data Analysis and Assessment
- Reporting
- Programmatic Evaluation
- General Support and Infrastructure Planning



SalNet Framework Document

- Preamble – DRAFT
- Mission Statement - DRAFT
- Goal - DRAFT
- Objectives – DRAFT

Development of an Index or Indices

- Use of Percentile Ranks for GW Levels
 - Has Support from SalNet participants
- Index for Salinity? (To Discuss in April)
Specific Conductance (SC) or possibly Chloride(?)

GW Index(ies)

- Envision an index or indices that:
 - Uses uniform methodology (to calculate)
 - Can be used at a variety of scales
 - Statewide, WMD, County, Site Specific (well)

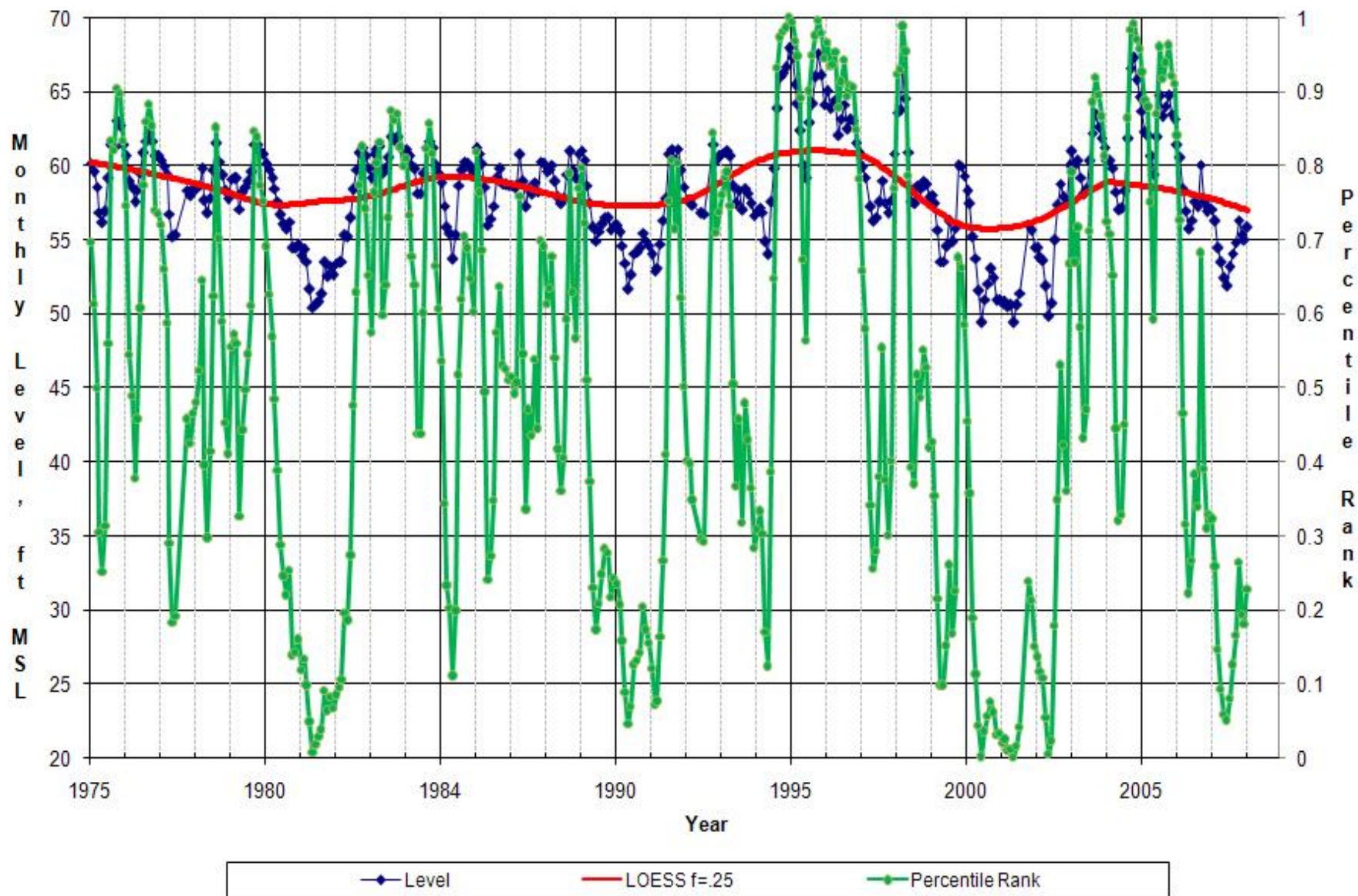
Development of an Index

- Can be used for an aquifer system , an aquifer, or portion of an aquifer
- Recognized by **Public**, Policy Makers, and Scientists
- A tool to be used by Policy Makers
- Tools should consider GW/SW interactions if applicable

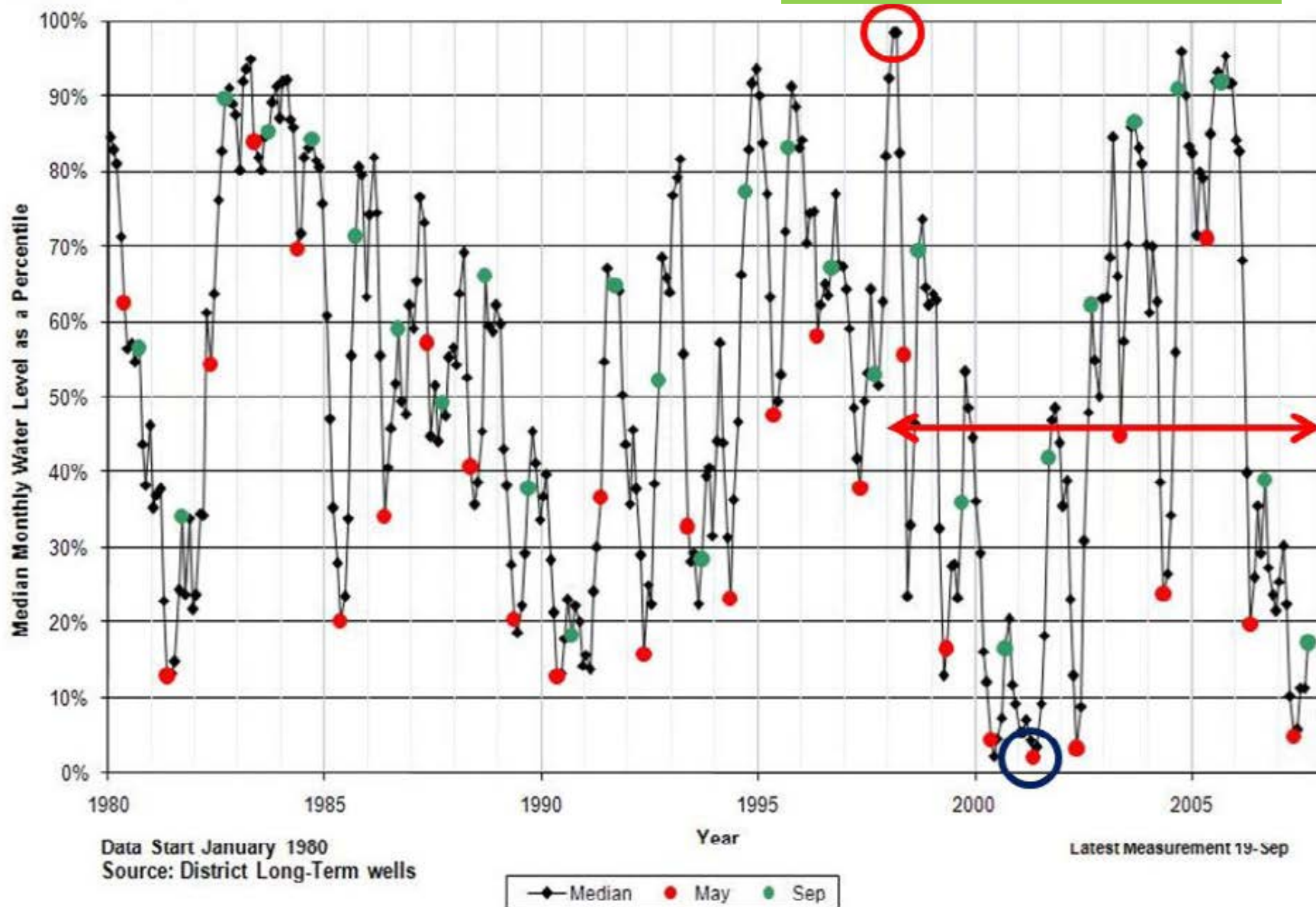
Uses of Percentile Ranks for GW Levels

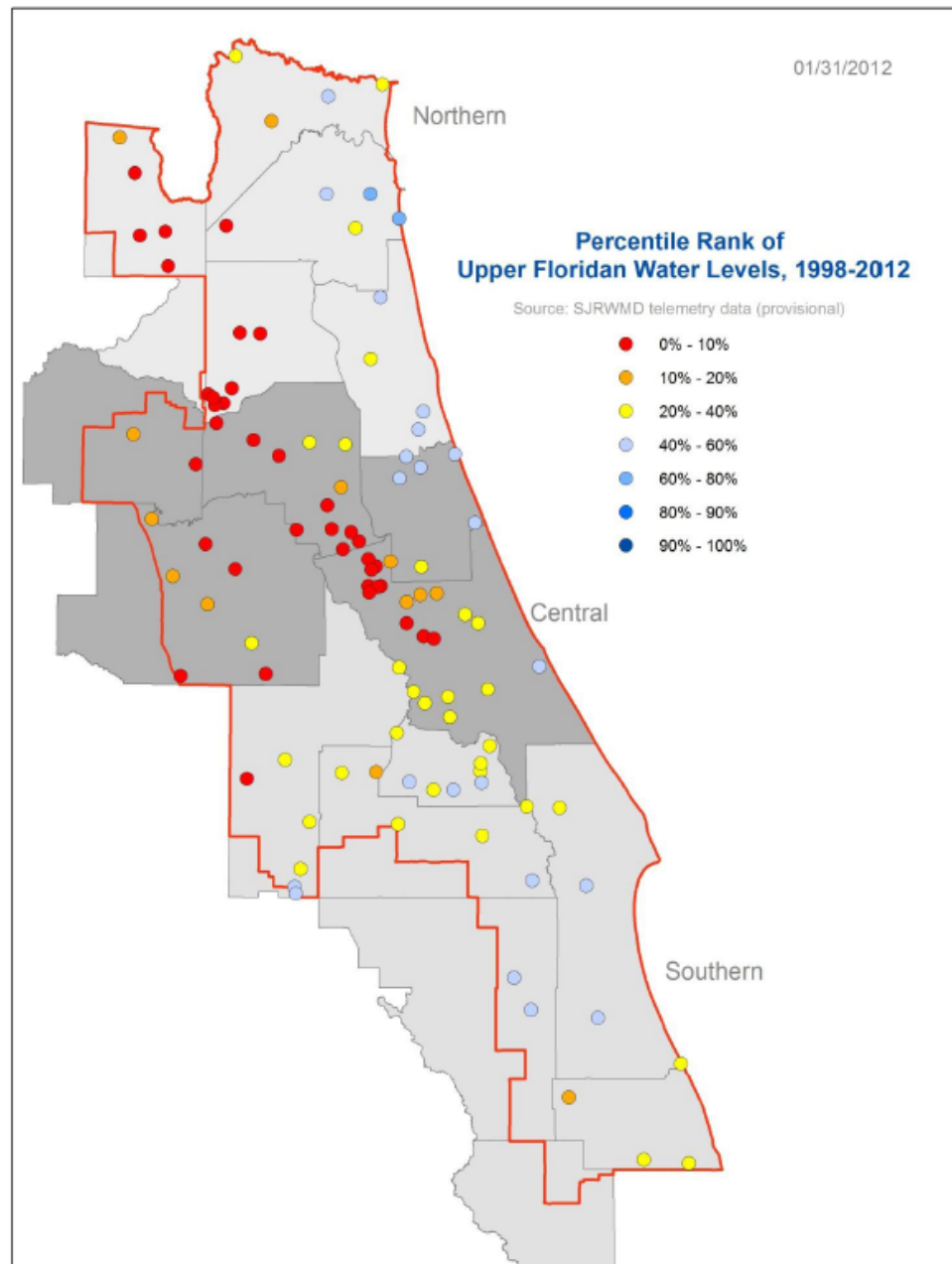
- SWFWMD - Aq. Resource Indicator
- SJRWMD - Upper Floridan aquifer
Water Level Report
- SRWMD – Uses a Report at Gov. Board
Meetings
- Other Entities – Either use or are willing
to use the method

OR0047 - Orlo Vista - FA



From D. Boniol - SJRWMD







Explanation - Percentile classes (symbol color based on most recent measurement)							
							Real Time
Low	<10	10-24	25-75	76-90	>90	High	Continuous
	Much Below Normal	Below Normal	Normal	Above Normal	Much Above Normal		Periodic Measurements
						Not Ranked	



Near Future Action Items

- Complete Framework Document
- Transfer Pertinent GW Data as Needed
- Develop GW Level Index
- Develop GW Quality Index (?)
- Complete GW Monitoring Catalog
- Use Volunteer data if applicable

Issues to be Resolved

- Decision making process
 - Recommend FWRMC Decision Making Process
- Who, or what organization is to chair
- Non-Salinity related issues
 - This group? Another group?

Questions?

- Rick Copeland
- Florida Dept. of Environ. Protect.
- Watershed Monitoring Section
- (850) 245-8503
- Rick.Copeland@dep.state.fl.us