Environmental Measures Team

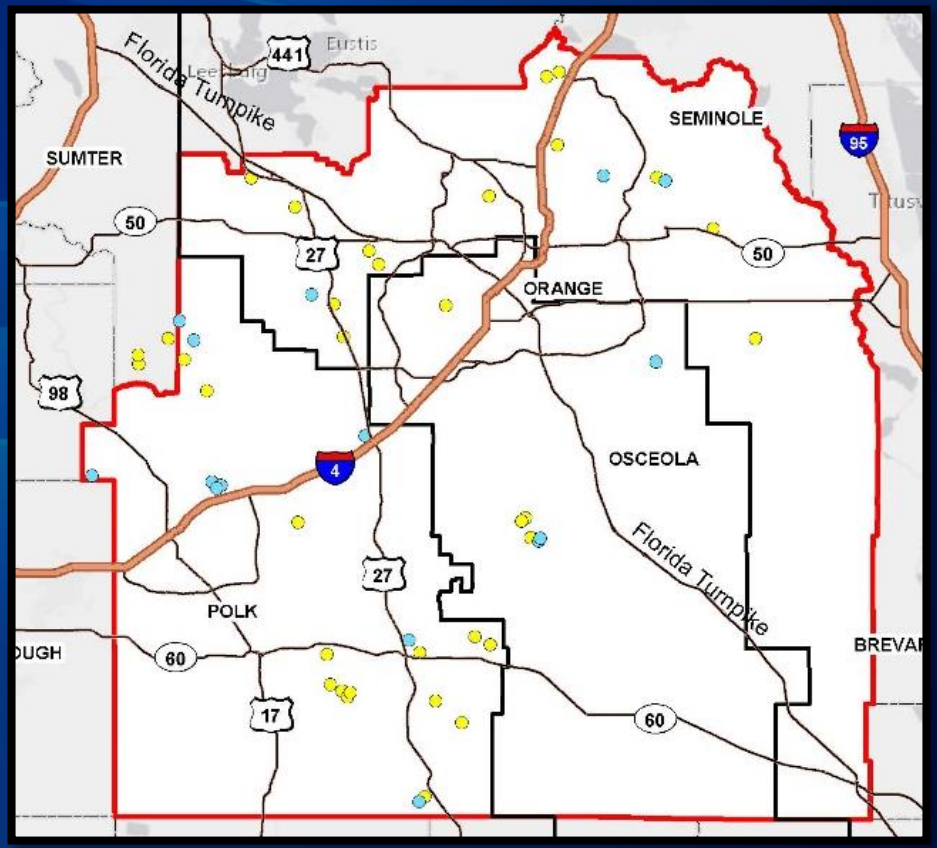
Current Work Status

Water Resource Assessment Team Meeting
February 27, 2019

Kym Rouse Holzwart
Senior Environmental Scientist
Southwest Florida Water Management District
Environmental Measures Team Chair

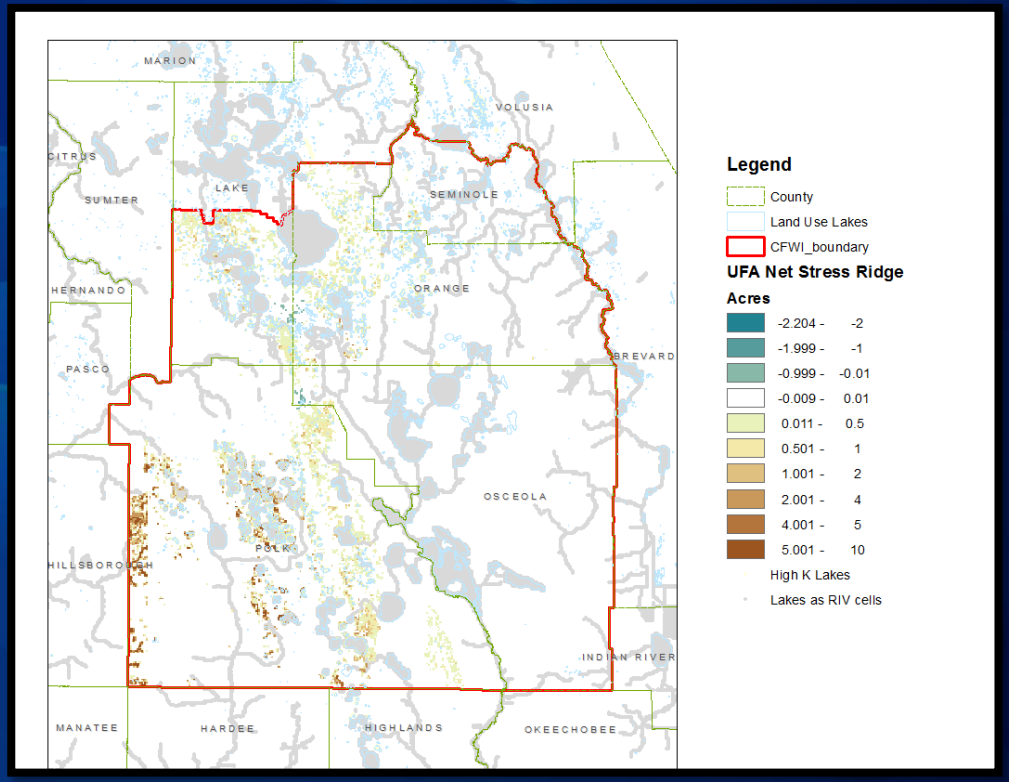
Final Expanded Class 1 Wetlands Dataset

- Expanded Class 1 wetland dataset:
  56 wetlands
  (41 original + 15 new)

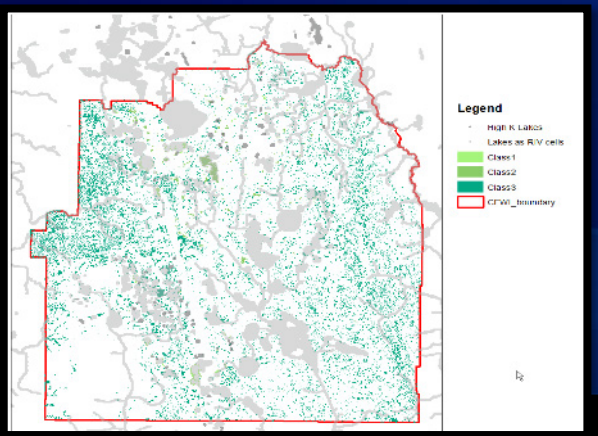


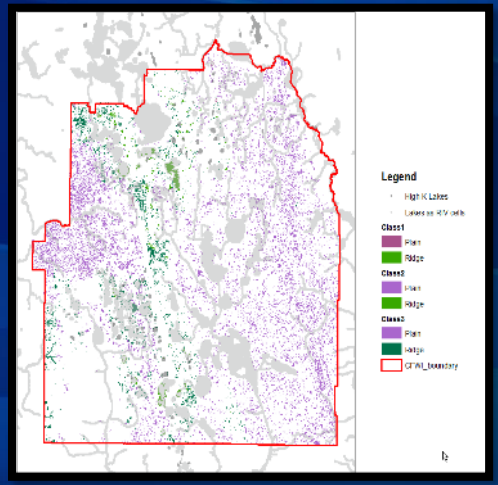
Wetlands Analysis

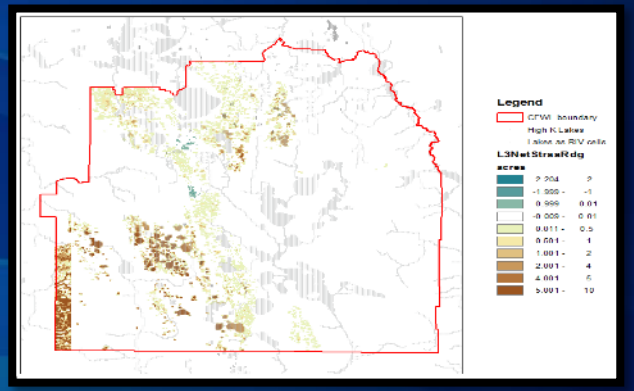
- Data exploration for analysis preparation complete
- Equations to calculate probability of future wetland stress updated
- Test runs of the methodology completed



Results for GAT and Report







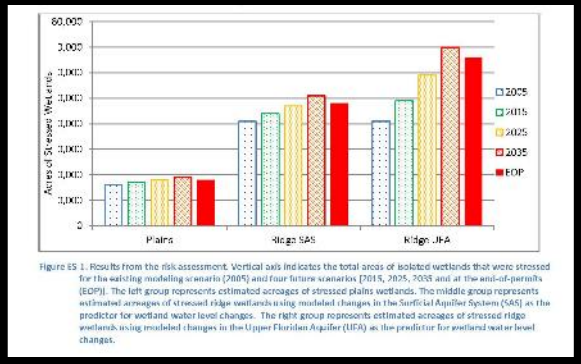


Figure ES 1. Results from the risk assessment. Vertical axis indicates the total areas of isolated wetlands that were stressed for the existing modeling scenario (2005) and four future scenarios (2015, 2025, 2035 and at the end-of-permits (EOP)). The left group represents estimated acreages of stressed plains wetlands. The middle group represents estimated acreages of stressed ridge wetlands using modeled changes in the Surficial Aquifer System (SAS) as the predictor for wetland water level changes. The right group represents estimated acreages of stressed ridge wetlands using modeled changes in the Upper Floridan Aquifer (UFA) as the predictor for wetland water level changes.

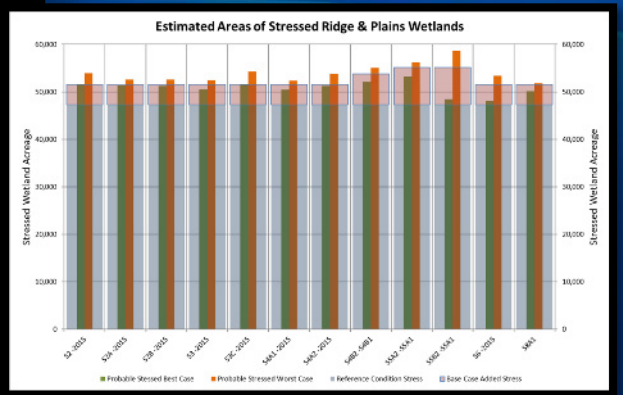


Table 5. Summary of results for regional assessment of the area of stressed plains wetlands, excluding wetlands with significant hydrologic alteration.

Wetland Class	Total Area (acres)	Stressed Wetland Acreages for Each Simulation				
		2005	2015	2025	2035	EOP*
Class 1	510	460	740	910	480	820
Class 2	2,600	1,400	1,500	1,600	1,620	1,650
Class 3	79,000	14,000	15,000	16,000	17,000	16,000
Total	82,000	16,000	17,000	18,000	19,000	18,000

* Class 1 acreages were rounded to the nearest 10 acres; Class 2 to the nearest 100 acres; and Class 3 to the nearest 1000 acres, based on the relative quality of data obtained from GIS and field data for each case.

** EOP = End-Of-Permit

Table 6. Summary of results for regional assessment of the area of stressed isolated ridge wetlands, including wetlands with significant hydrologic alteration [see text].

Aquifer Layer Used to Predict Wetland Water Level Change	Wetland Class	Total Area (acres) **	Stressed Wetland Acreages for Each Simulation				
			2005	2015	2025	2035	EOP**
Surficial Aquifer System	Class 1	13,300	13,420	13,480	13,540	13,880	13,630
	Class 2	3,800	2,800	3,300	3,900	4,900	4,200
	Class 3	64,000	25,000	27,000	29,000	32,000	30,000
	Total	92,000	41,000	44,000	47,000	51,000	48,000
Upper Floridan Aquifer	Class 1	13,300	13,420	13,860	14,740	16,400	15,440
	Class 2	3,800	2,800	3,800	6,000	8,400	7,000
	Class 3	64,000	25,000	31,000	38,000	45,000	43,000
	Total	92,000	41,000	49,000	59,000	70,000	66,000

* Class 1 acreages were rounded to the nearest 10 acres; Class 2 to the nearest 100 acres; and Class 3 to the nearest 1000 acres, based on the relative quality of data obtained from GIS and field data for each case.

** EOP = End Of Permit

Report Preparation

- Report preparation ongoing
- Assignments given out
- Rainfall data complete
- Appendix of comprehensive Class 1 wetlands information