

Environmental Measures Team Preliminary Results

*Water Resources Assessment Team/
Groundwater Availability Team Meeting
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Introduction and Background

- Subteam of the WRAT
- Water management district and public supply utility representatives
- Wetlands and surface waters expertise
- Determines current status of wetlands
- Develops tools to analyze future groundwater withdrawals on wetlands



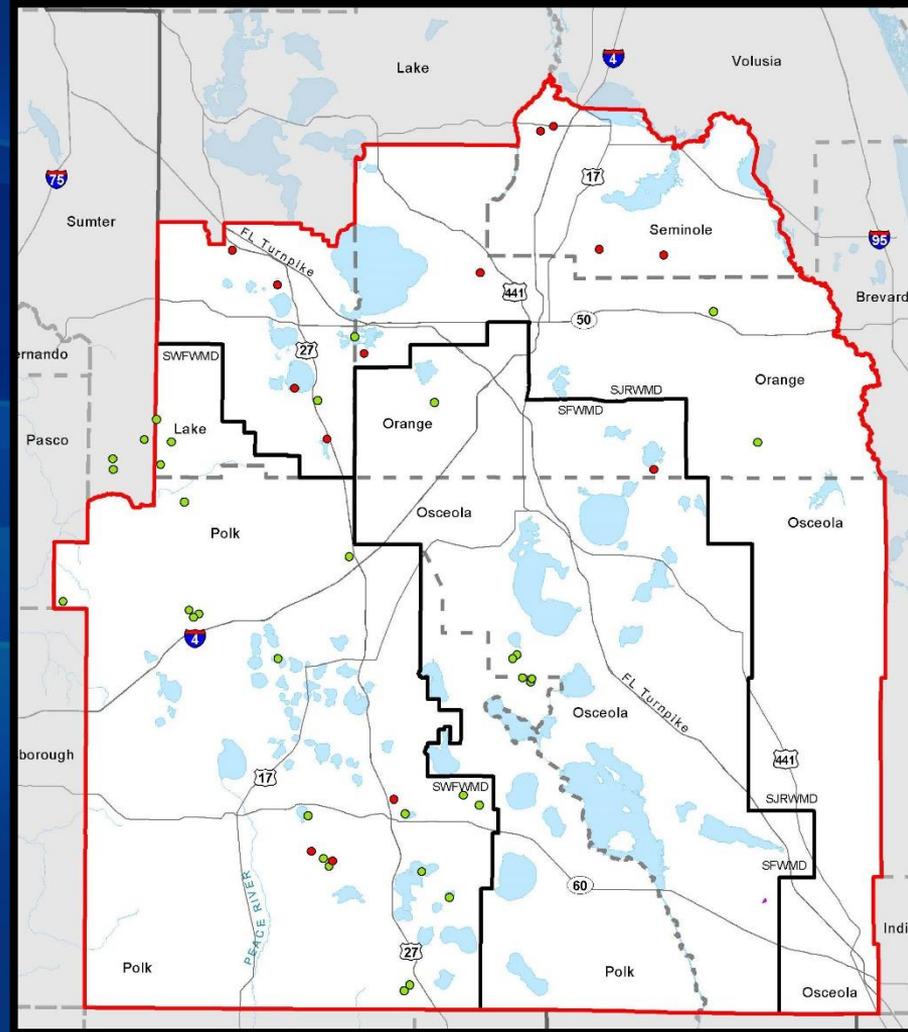
Approved EMT Analysis Methodology

- Re-assess original Class 1 wetlands
- Add new Class 1 wetlands
- Original methodology with expanded Class 1 wetlands dataset and updated model



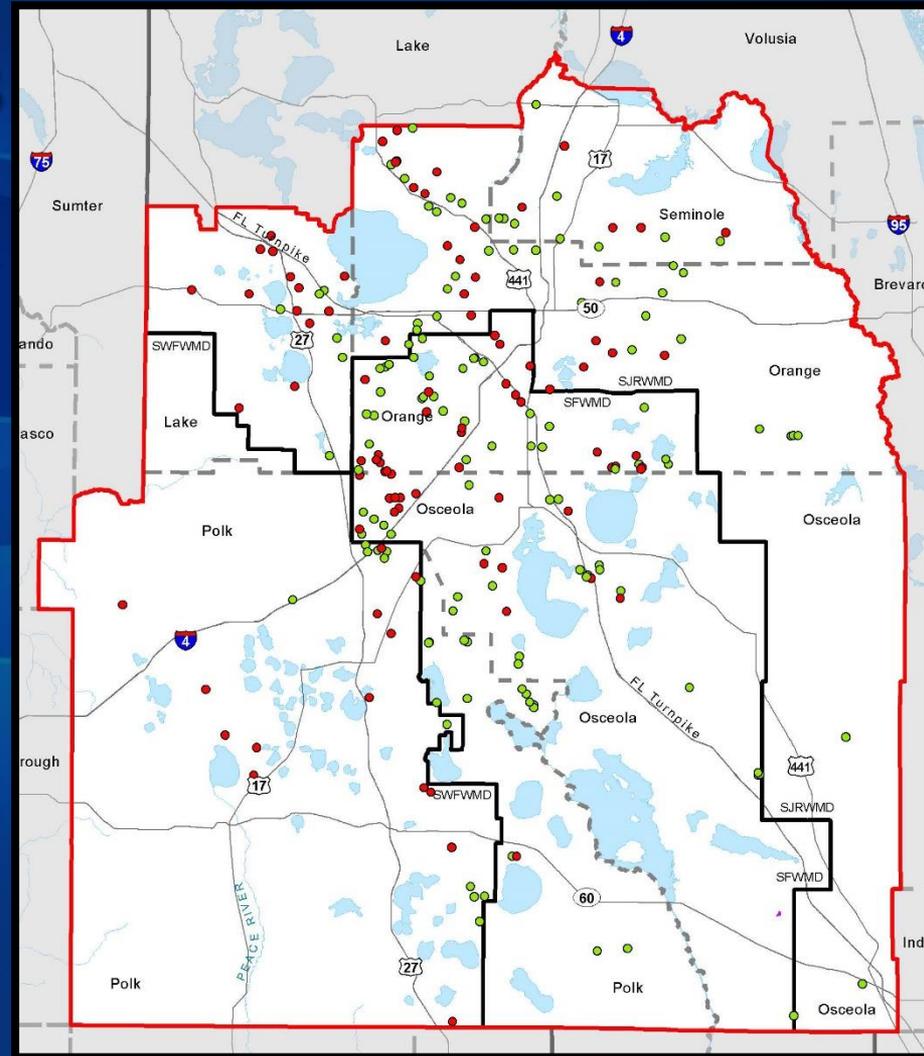
EMT Wetlands Datasets

- Class 1 Wetlands:
 - Long-term water level data
 - Wetland edge and stress status known
 - 56 wetlands (increased by 12)
 - Small, non-random dataset
 - Water level data and stress status used to develop a statistical relationship
 - Statistical relationship used to estimate probability (or risk) for future changes occurring between RC and 2030 and 2040 withdrawal scenarios



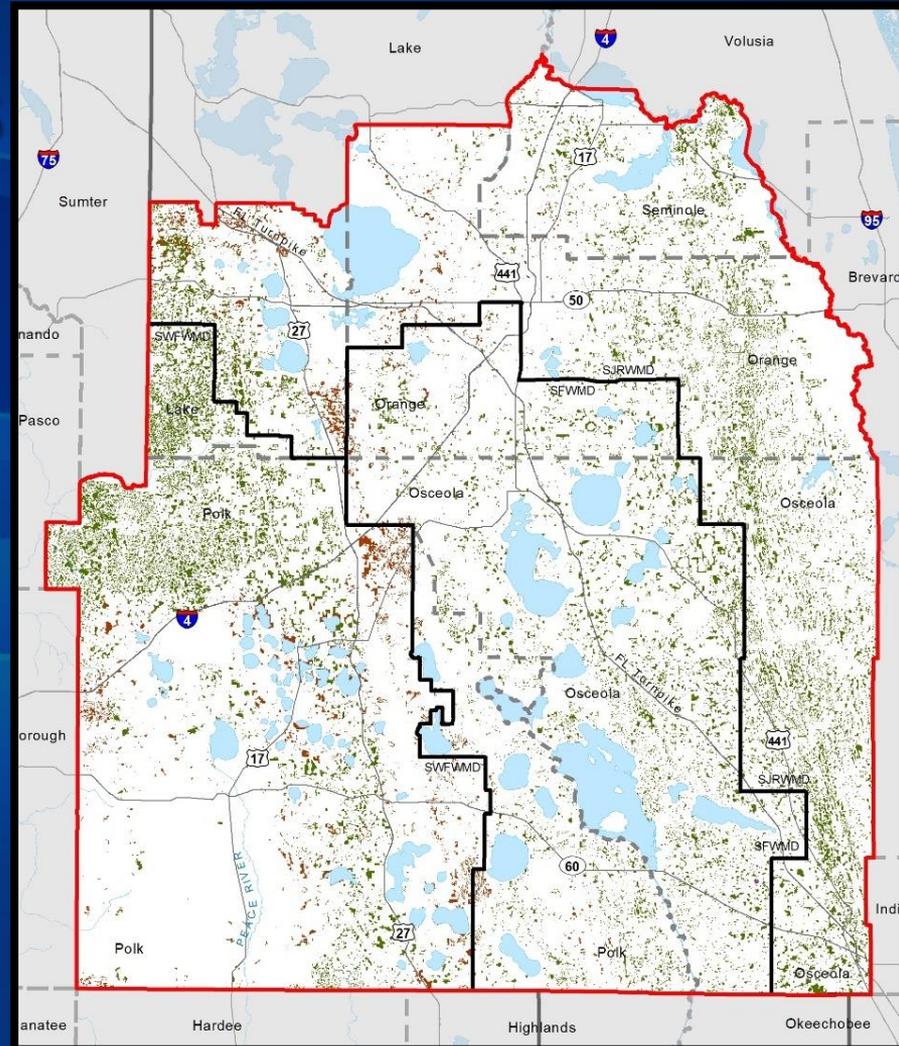
EMT Wetlands Datasets

- Class 2 Wetlands:
 - Stress status known (assessed in 2007-2012)
 - 222 wetlands in current analysis
 - Large, broadly distributed dataset
 - Statistical relationship used to estimate probability (or risk) for future changes occurring between RC and 2030 and 2040 withdrawal scenarios



EMT Wetlands Datasets

- Class 3 Wetlands:
 - Thousands within CFWI planning area
 - Stress status not known
 - Location known
 - Statistical relationship used to estimate probability (or risk) for future changes occurring between RC and future withdrawal scenarios



Preliminary Results for Stressed **Plains** Wetlands

- Wetlands with significant hydrologic alteration excluded
- Surficial aquifer system model layer (Layer 1) was used

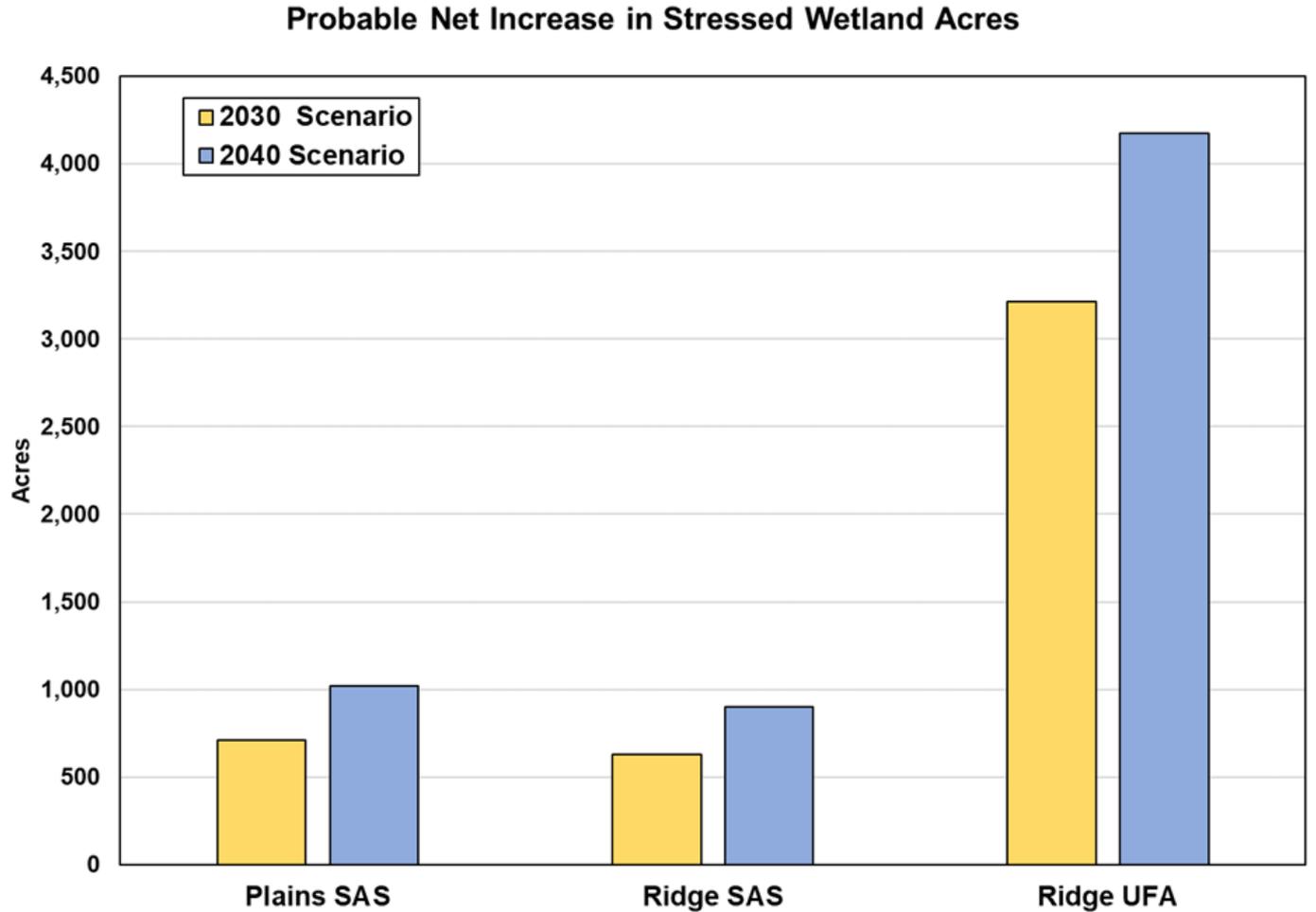
Wetland Class	Total Acres of Wetlands (Stressed and Not Stressed)	Acres of Stressed Wetlands for 2014 Reference Condition	Δ Acres of Stressed Wetlands for 2030 Model Scenario	Δ Acres of Stressed Wetlands for 2040 Model Scenario
Class 1	1,200	750	10	15
Class 2	5,700	1,800	(15)	(20)
Class 3	131,400	23,100	720	1,020
Total	138,300	25,650	715	1,015

Preliminary Results for Stressed **Ridge** Wetlands

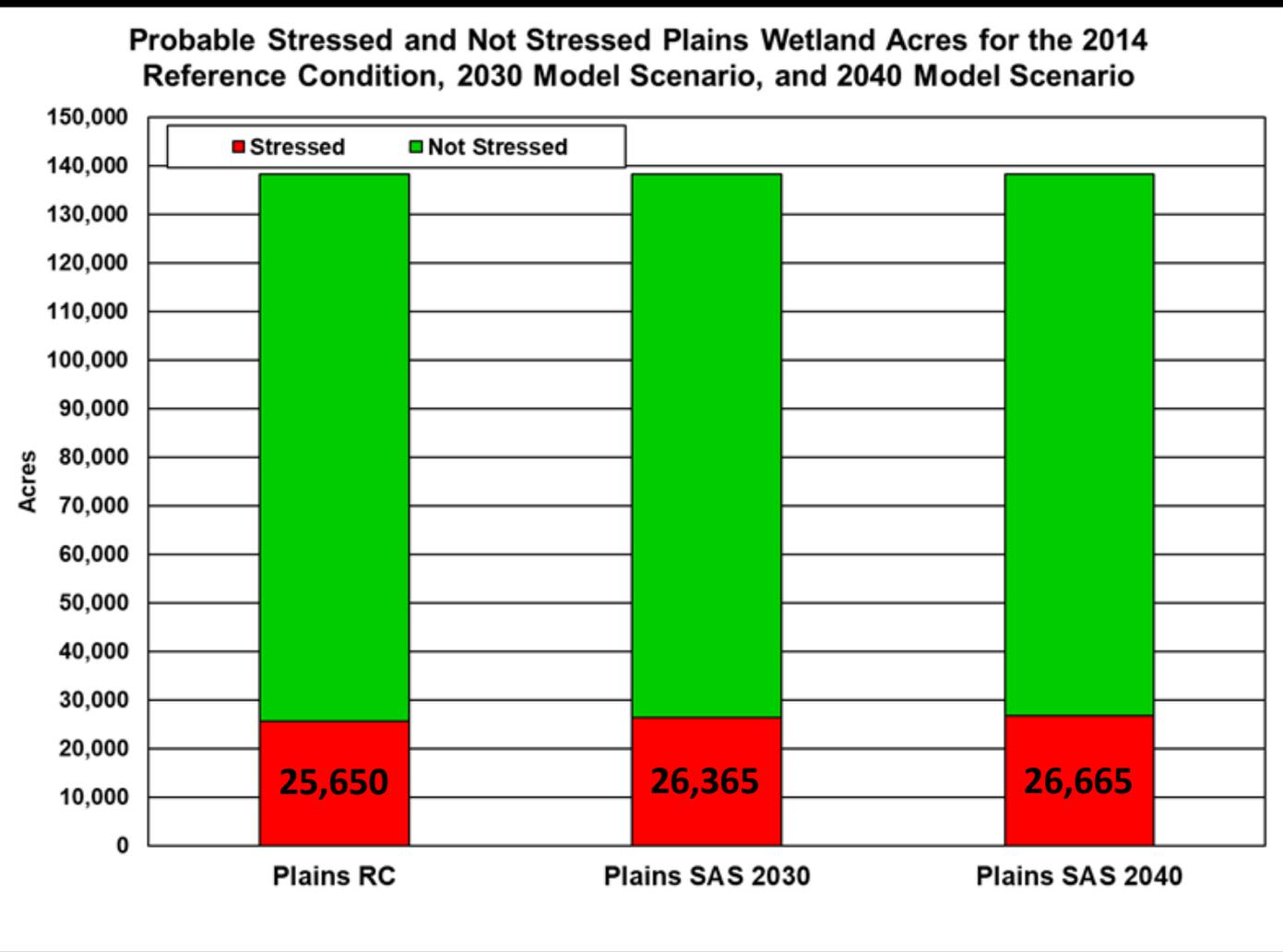
- Wetlands with significant hydrologic alteration excluded

Model Aquifer Layer Used to Predict Wetland Water Level Change	Wetland Class	Total Acres of Wetlands (Stressed and Not Stressed)	Acres of Stressed Wetlands for 2014 Reference Condition	Δ Acres of Stressed Wetlands for 2030 Model Scenario	Δ Acres of Stressed Wetlands for 2040 Model Scenario
Surficial Aquifer System (Layer 1)	Class 1	5,530	1,400	20	20
	Class 2	11,300	3,200	310	440
	Class 3	33,100	13,900	305	440
	Total	49,930	18,500	635	900
Upper Floridan Aquifer (Layer 3)	Class 1	5,530	1,400	400	500
	Class 2	11,300	3,200	700	1,000
	Class 3	33,100	13,900	2,100	2,700
	Total	49,930	18,500	3,200	4,200

Probable Net Increase in Stressed Wetland Acres for the 2030 and 2040 Withdrawal Scenarios



Comparison of Probable Stressed and Not Stressed Plains Wetland Acres for Each of the Model Scenarios

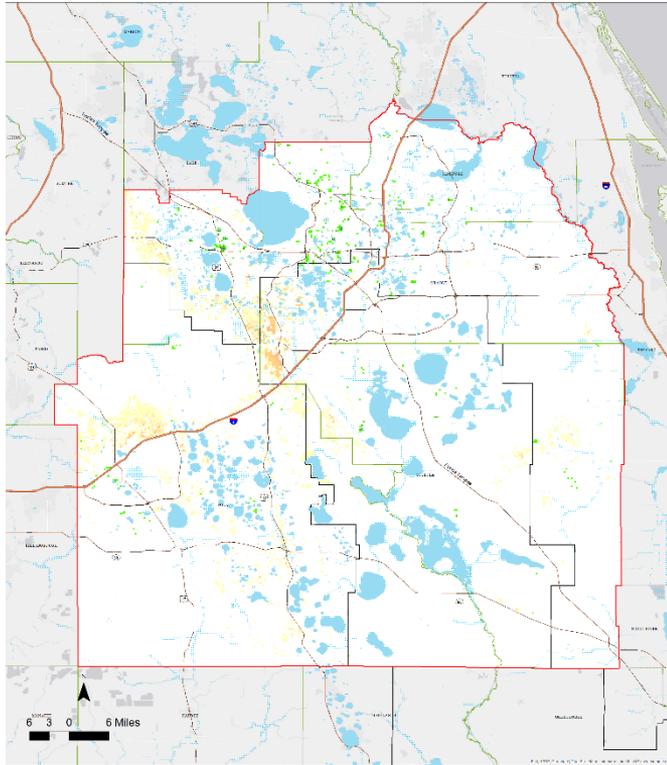


Comparison of Probable Stressed and Not Stressed Ridge Wetland Acres for Each of the Model Scenarios

Probable Stressed and Not Stressed Ridge Wetland Acres for the 2014 Reference Condition, 2030 Model Scenario, and 2040 Model Scenario



CFWI Wetland Stress 2014RC minus 2030 Base



Legend

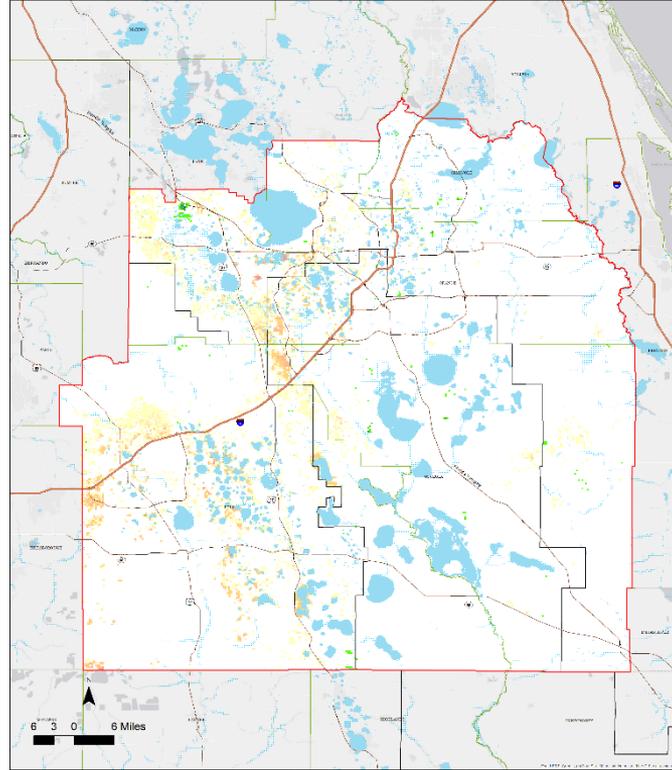
CFWI
WMD Boundaries

Surficial Plain and Ridge

Acres of Change in Stress



CFWI Wetland Stress 2014RC minus 2030 Base

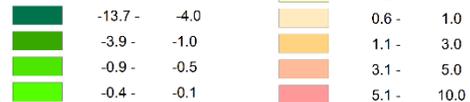


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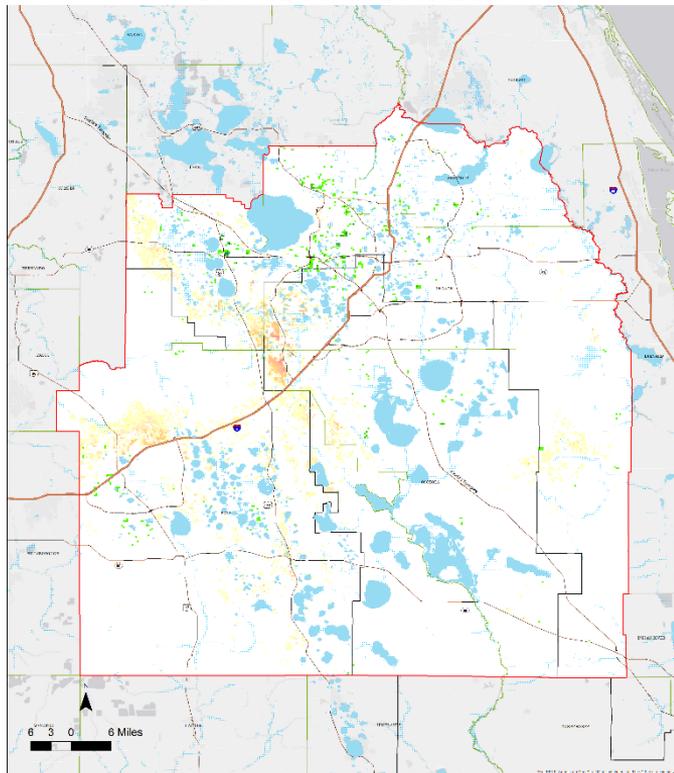
CFWI
WMD Boundaries

Surficial Plain and UFA Ridge

Acres of Change in Stress



CFWI Wetland Stress
2014RC minus 2040 Base

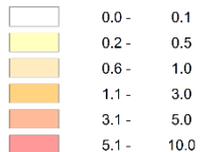
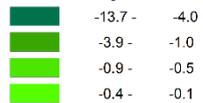


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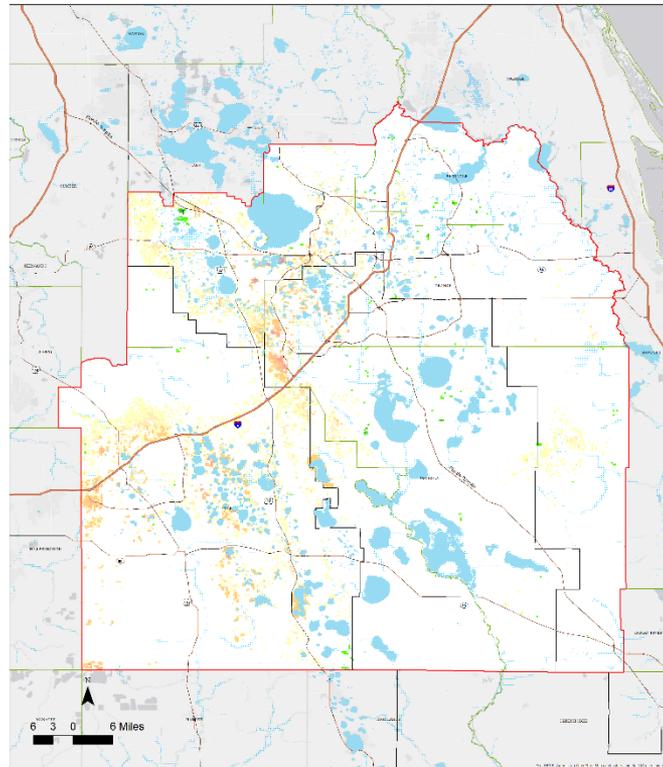
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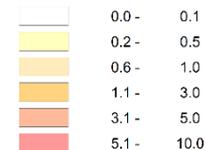


Legend

CFWI
WMD Boundaries

Surficial Plain and UFA Ridge

Acres of Change in Stress



Questions?

