

Central Florida Water Initiative

WATER FOR TOMORROW

ASSESSMENT OF EFFECTS OF GROUNDWATER WITHDRAWALS ON GROUNDWATER-DOMINATED WETLANDS IN THE CENTRAL FLORIDA WATER INITIATIVE PLANNING AREA



Central Florida Water Initiative's Environmental Measures
Working Group

September 2024

FINAL DRAFT REPORT

EXECUTIVE SUMMARY

The Central Florida Water Initiative's (CFWI's) Environmental Measures (EM) working group is a technical support group consisting of scientists from three water management districts – South Florida Water Management District (SFWMD), St. Johns River Water Management District (SJRWMD), and Southwest Florida Water Management District (SWFWMD). The EM group provided support to the 2025 CFWI Regional Water Supply Plan (RWSP) as it relates to non-minimum flows and level (MFL), primarily groundwater-dominated wetlands and lakes. It was tasked with determining the current status of wetlands and lakes with respect to hydrologic stress and to develop tools to evaluate modeled future wetland conditions within the CFWI Planning Area. This information was used to evaluate the following environmental criterion: probable increase in acres of stressed, primarily groundwater-dominated wetlands.

Groundwater-dominated wetlands are those wetlands whose water budget is largely driven by the exchange (both inflow and outflow) of groundwater due to their connectivity to an aquifer. Groundwater-dominated wetlands are mostly isolated, but also include headwater wetlands and seasonally inundated wetland strands that would be defined under regulatory rules as “connected wetlands.”

There are more than one million acres of wetlands in the CFWI Planning Area, and the focus of the EM working group's wetlands risk assessment was on primarily groundwater-dominated lake and wetland systems, excluding those that were determined to be hydrologically altered. The wetlands analyzed make up approximately 30 percent of the total wetland acreage in the CFWI Planning Area. It is assumed that if these groundwater sensitive systems are protected, less vulnerable systems will also be protected.

Approximately 442,300 acres of wetlands were included in the EM working group's analysis, which consisted of about 382,850 acres of wetlands located in Plains physiographic provinces and approximately 59,440 acres of wetlands located in Ridge physiographic regions. Primarily groundwater-dominated wetlands and lakes in Plains and Ridge physiographic regions were evaluated separately, since wetland hydrologic conditions in these systems are different as a result of variations in underlying soils, geology, physiography, typical depths, and other factors.

Numerous tasks were conducted in support of the 2025 CFWI RWSP. These tasks included conducting field visits from early 2019 through Fall 2023 to assess the current hydrologic stress status of over 500 Class 1 and Class 2 wetlands within the CFWI Planning Area. Class 1 wetlands are defined as wetlands or lakes with available long-term water level data of sufficient duration, known wetland edge elevations, and known hydrologic stress conditions, while the location and current hydrologic stress condition is known for the Class 2 wetlands. Previous analysis by the EM working group demonstrated that these wetlands were representative of primarily groundwater-dominated wetlands within the CFWI Planning Area. In addition, the same wetlands risk assessment methodology that was used by the EM group to predict likely effects of current and future groundwater withdrawals in support of the 2015 and 2020 CFWI RWSPs was used for the current risk assessment, with an expanded Class 1 and Class 2 wetlands dataset and updated groundwater model [East-Central Florida Transient X (ECFTX), Version 2.0 (v2.0)].

The final Class 1 wetlands statistical analysis dataset used for the wetlands risk assessment included 51 sites, while 342 sites were included in the Class 2 wetlands dataset. An analysis of water level data from 2015 through 2022, an eight-year period of record, from the Class 1 wetlands was used to develop a statistical relationship between observed hydrologic stress and observed water level variations. This statistical relationship was used to estimate the probability (or risk) of future changes in wetland stress occurring throughout the CFWI Planning Area based on the modeled water level changes between the 2016-2020 Reference Condition (RC) and 2025, 2030, 2035, 2040, and 2045 Withdrawals Conditions.

For the Plains wetlands risk assessment, ECFTXv2.0 model results for Model Layer 1 (surficial aquifer system or SAS) were used to determine the potential for stress since Plains physiographic provinces are typically characterized by having a confining layer that restricts the exchange of water between the SAS and the underlying Floridan aquifer system. The confining layer between the SAS and the Floridan aquifer is typically very restrictive but can vary throughout the Plains physiographic regions. For the Ridge wetlands risk assessment, a range of probable stress was developed using ECFTXv2.0 model results for Model Layer 1 (SAS) and Model Layer 3 (Upper Floridan aquifer), since most of the Ridge physiographic provinces are typically characterized by less or no confining conditions that vary considerably throughout the CFWI Planning Area. This range provided an estimate of low and high probability of future changes in Ridge wetlands water levels from which to estimate corresponding probabilities of changes in wetland stress conditions.

Almost 20 percent of Plains wetlands are currently stressed. Compared to the 2016-2020 RC, the probable net increase in stressed Plains wetland acres resulting from the 2025 Withdrawals Condition was 1,450 acres, an increase of 0.4 percent compared to the 2016-2020 RC. The probable net increase in stressed Plains wetland acres was 2,210 acres for the 2030 Withdrawals Condition, 2,780 acres for the 2035 Withdrawals Condition, 3,390 acres for the 2040 Withdrawals Condition, and 3,870 acres for the 2045 Withdrawals Condition. These results represent an increase of 0.6, 0.8, 0.9, and 1.1 percent, respectively, in stressed Plains wetland acres as compared to the 2016-2020 RC.

Approximately 25 percent of Ridge wetlands are currently stressed. For the 2025 Withdrawals Condition, the probable net increase in stressed Ridge wetland acres ranged from 590 to almost 2,000 acres; this represents an increase between 1 and 3 percent in stressed wetland acres compared to the 2016-2020 RC. For Ridge wetlands, the probable net increase in stressed acres ranged between 870 acres and about 3,000 acres for the 2030 Withdrawals Condition as compared to the 2016-2020 RC, an increase ranging between 1.5 and 5 percent of stressed wetland acres. For the 2035 Withdrawals Condition, the probable net increase in stressed Ridge wetland acres ranged from 1,060 to almost 4,000 acres; this represents an increase between 2 and 6 percent in stressed wetland acres compared to the 2016-2020 RC. For the 2040 Withdrawals Condition, the probable net increase in stressed Ridge wetland acres ranged from 1,260 to 4,600 acres; this represents an increase between 2 and 8 percent in stressed wetland acres compared to the 2016-2020 RC. For Ridge wetlands, the probable net increase in stressed acres ranged from about 1,400 acres and 5,230 acres for the 2045 Withdrawals Condition as compared to the 2016-2020 RC, an increase ranging between 2 and 9 percent of stressed wetland acres.

Similar to the EM working groups' previous analyses, understanding the limitations of the wetlands risk assessment and the appropriate use of the results is important. The focus of the EM group's work was on primarily groundwater-dominated systems since they are generally

considered as being more sensitive to changes in groundwater levels than flowing (e.g., riverine) systems. Primarily groundwater-dominated wetlands represent a small percentage of the total number of wetlands in the CFWI Planning Area; therefore, extrapolating the wetland impacts resulting from the 2025, 2030, 2035, 2040, and 2045 Withdrawals Conditions to all wetlands in the planning area is not appropriate. In addition, the results of our analysis assessed the probability of wetland stress occurring at a high level and can't be applied to the local scale. The regional scale of the ECFTXv2.0 model limits its precision in predicting future changes of water elevations in specific lakes and wetlands. The wetland stress response is also very sensitive to the initial hydrologic condition of each wetland, and this is not known for most of the wetlands within the CFWI Planning Area included in our analysis. It must be noted that other factors, such as land-use changes, can affect wetland quality. In addition, the results of the wetlands risk assessment are intended as a planning-level effort, based on a specific set of Withdrawals Conditions, and are not intended to represent a site-specific impact assessment that may occur in 2025, 2030, 2035, 2040, or 2045.

Baseline monitoring events at all wetland sites established for the long-term wetlands monitoring program under the Data, Monitoring and Investigations Team will be completed by the end of 2025. All of these sites were included in either the Class 1 or Class 2 wetlands datasets used for this analysis. As monitoring continues at these sites, the Class 1 wetlands dataset within the CFWI Planning Area will increase, which will contribute to improvements in the analyses conducted for future CFWI RWSPs.

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1.0 INTRODUCTION AND BACKGROUND

The Environmental Measures (EM) working group is a technical support group consisting of scientists from three water management districts – South Florida Water Management District (SFWMD), St. Johns River Water Management District (SJRWMD), and Southwest Florida Water Management District (SWFWMD). It performs environmental assessments of wetlands and surface waters and other related work in the Central Florida Water Initiative (CFWI) Planning Area in support of CFWI Regional Water Supply Plans (RWSPs). The EM group currently consists of the following members:

- ◆ Kym Rouse Holzwart – EM Working Group Lead and SWFWMD representative
- ◆ Kristian Holmberg – EM Working Group Co-Lead and SJRWMD Representative
- ◆ Lisa Prather – SFWMD Representative
- ◆ Kris Esterson – SFWMD Representative
- ◆ Kevin Rodberg – SFWMD Representative
- ◆ Jose Grisales – SFWMD Representative
- ◆ Brian Moore – SFWMD Representative

1.1 Previous Efforts of Environmental Measures Groups

For the 2015 CFWI RWSP, the EM working group evaluation of wetlands and lakes within the CFWI Planning Area, most without adopted minimum flows and levels (MFLs), was an important consideration (CFWI EMT 2013). The EM group was tasked with determining the current status of wetlands and lakes whose hydrology is typically groundwater-dominated with respect to hydrologic stress (e.g., potentially more likely to be affected by groundwater withdrawals) and alteration and to develop tools to evaluate modeled future wetland conditions within the CFWI Planning Area.

Between 2007 and 2012, over 350 primarily groundwater-dominated wetlands and lakes within and near the CFWI Planning Area were visited and assessed by consultants for the Central Florida Coordination Area (CFCA) EM group, the predecessor to the CFWI Planning Area EM technical group (CFWI EMT 2013), in support of the 2015 CFWI RWSP. The CFCA team met to review the consultant's reports, evaluate aerial photographs, and categorize the wetlands as stressed or not stressed. The EM group conducted field visits to re-evaluate wetlands, and wetlands and lakes were divided into three classes based on the amount of information available as described below.

- ◆ Class 1 wetlands: These wetlands and lakes were studied in detail. The location, wetland edge elevation, and hydrologic stress condition were known (e.g., stressed/not stressed), and long-term water level data were available. Analyses demonstrated that these wetlands were representative of primarily groundwater-dominated wetlands within the CFWI Planning Area.
- ◆ Class 2 wetlands: The location and environmental condition of these wetlands was known (e.g., stressed/not stressed), but there were insufficient water level data to assess the hydrologic conditions.

- Class 3 wetlands: Thousands of groundwater-dominated wetlands and lakes within the CFWI Planning Area were included in this class. The location of these wetlands was known, but the hydrologic condition was not known.

For the 2015 CFWI RWSP, the method used to evaluate wetlands under future modeled groundwater level conditions was based on evaluations of primarily groundwater-dominated lake and wetland systems, which are generally considered to be inherently more vulnerable to impacts from lowered groundwater levels (CFWI EMT 2013). The methodology was based on a statistical assessment of the probability of future environmental stress in each wetland within and near the CFWI Planning Area based upon the relationship between observed ecologic and hydrologic conditions of the Class 1 wetlands. The long-term water level data from the Class 1 wetlands were used to compute a statistical relationship between observed stress and observed water level variations. This statistical relationship was used to estimate the probability (or risk) of future changes in wetland stress occurring, based on modeled groundwater level changes between the Reference Condition (RC) and future Withdrawals Conditions. This risk assessment was applied separately to primarily groundwater-dominated wetlands in Plains and Ridge physiographic settings because wetland hydrologic conditions and responses in these wetland types are, in general, substantially different. Statistical analyses were performed, which indicated that the characteristics of the Class 1 wetlands were adequately representative of all groundwater-dominated wetlands in the CFWI Planning Area and that the data used were appropriate for their application. The EM group's work products predicted the likely effects of future groundwater withdrawals on wetland resources as predicted by the East-Central Florida Transient (ECFT) model.

The EM group was reactivated in 2016 to provide support for the 2020 CFWI RWSP as it relates to non-MFL, groundwater-dominated wetlands and lakes (CFWI EMT 2020), and options for assessing the current condition of primarily groundwater-dominated wetlands and lakes in the CFWI Planning Area were evaluated. One option included evaluating a valid subset of the approximately 200 Class 2 wetlands to determine if their environmental conditions had changed since the original evaluation. A statistical power analysis was performed, and the results indicated that a population greater than the original sample pool of Class 2 wetlands would need to be evaluated to provide a statistically significant conclusion at a 90 or 95 percent confidence level on whether a change in stress status on the order of 10 percent or more of wetlands had occurred since the last survey of Class 2 wetlands (CFWI EMT 2020). Therefore, an alternative option was developed and approved by the Water Resources Assessment Team, the Management Oversight Committee, and the Steering Committee:

- Field visits were conducted in 2018 to assess the current stress status of all of the Class 1 wetlands, as well as potential new sites, using primarily the same methodology that was used for the wetland assessments in support of the 2015 CFWI RWSP.
- The same methodology, with improvements, was used to conduct the wetlands analysis that was used for the 2015 CFWI RWSP but with the expanded Class 1 wetlands dataset and the updated model [East-Central Florida Transient Expanded (ECFTX) groundwater model]. The improvements to the methodology are described below.
 - The 2007-2012 assessments were performed by a large number of consultants with varying skill levels. To ensure consistency and minimize variability, three

wetland scientists on the EM group, one representing each water management district with significant experience assessing wetlands, conducted all the 2018 assessments. As an additional measure to ensure consistency, a joint field day was held by the water management district EM group wetland scientists in April 2018, and stress status assessments of eight Class 1 wetlands were conducted collaboratively.

- The stress status determinations for the original assessments were based largely on change from historical conditions based on a review of aerial photography and observations of obvious stress, such as soil subsidence. For the 2018 assessments, historical changes that were not consistent with observed current conditions were not used as the sole determinant of current stress. In other words, even though the wetland may have been altered historically, if current conditions indicated stable hydrology, then the historical alteration was not considered in the stress status determination.
- In addition to not focusing on historical changes if the wetland had stable hydrology for the recent past (e.g., the last 10-20 years), the determination of stress was based on combinations of physical evidence of permanently reduced wetland hydrology or invasion/establishment of species from drier ecological communities and soil oxidation or loss (due to reduced water levels) observed in wetlands that had organic soils.
- The field form used for the 2007-2012 assessments required the collection of information that was not related to hydrologic stress. The field form used for the 2018 wetland status assessments was revised, simplified, and field tested by water management district EM group wetland scientists to collect data related only to hydrologic stress (CFWI EMT 2020)

This report describes the tasks that were completed, and analyses conducted, to assess the impacts of modeled future groundwater withdrawals in the CFWI Planning Area on wetlands and lakes in support of the 2025 CFWI RWSP. This information was used to evaluate the following environmental criterion: probable increase in acres of stressed, primarily groundwater-dominated wetlands.

1.2 Spatial Distribution of Wetlands in the CFWI Planning Area

The current distribution of wetlands, classified by EM working group hydroclass (Attachment E in CFWI EMT 2013), is shown in **Figure 1**, and **Table 1** includes the acreages and percentages of the various wetland classifications. There are more than one million acres of wetlands within the CFWI Planning Area, and about 70 percent of the wetlands consist of floodplains and interconnected wetlands (2D and 2F). The primarily groundwater-dominated lake and wetland systems that were the focus of the EM working group's analysis include approximately 30 percent of wetlands located within the CFWI Planning Area (1A + 2A-M + 1E, 1B + 2A-X + 1F, and 1C). Groundwater-dominated wetlands are those wetlands whose water budget is largely driven by the exchange (both inflow and outflow) of groundwater due to their connectivity to an aquifer and are mostly isolated. However, groundwater-dominated wetlands can also include headwater wetlands and seasonally inundated wetland strands that would be defined under regulatory rules as "connected wetlands" (1D, 2D, and 2F).

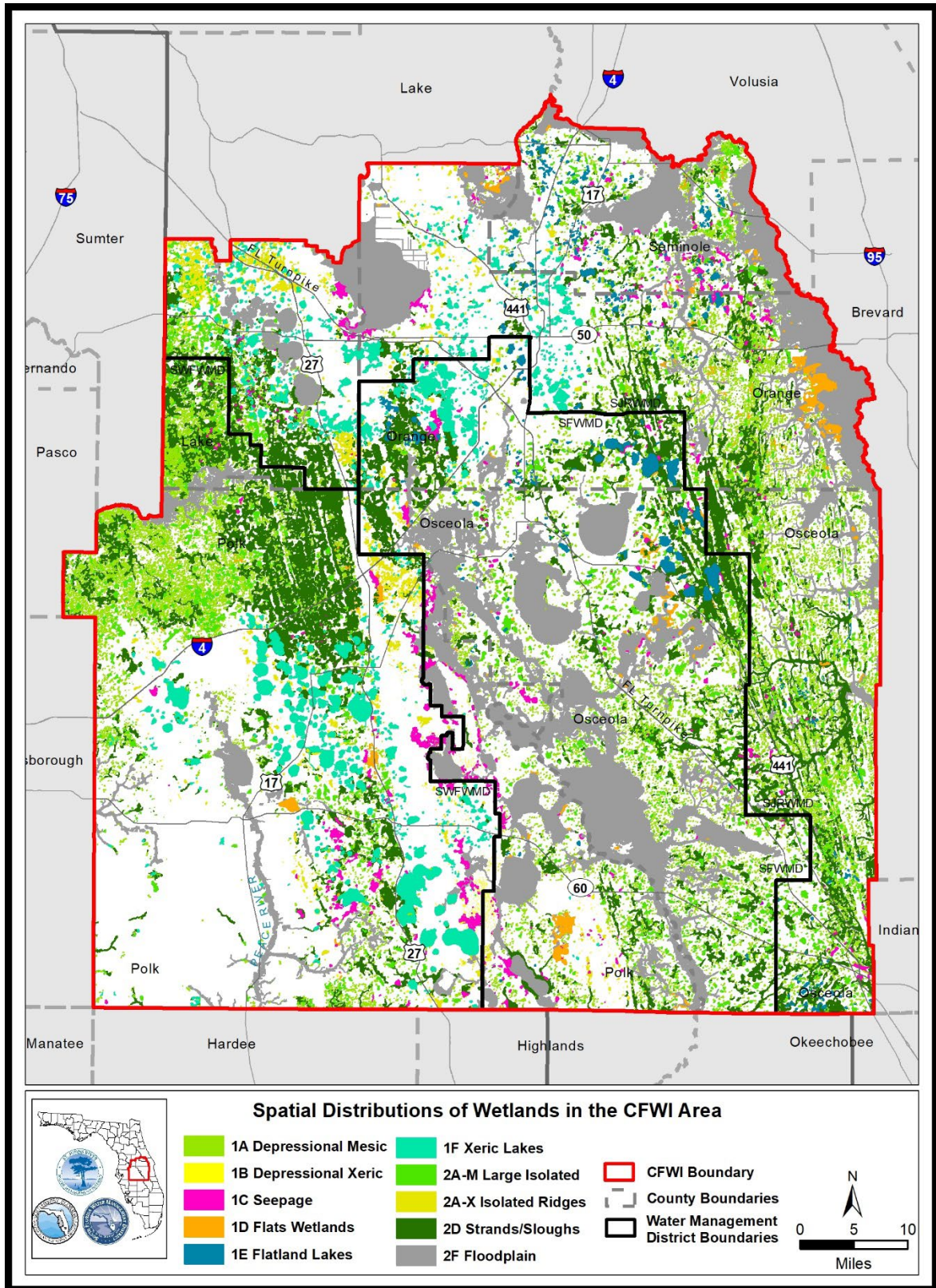


Figure 1. Spatial distribution of wetlands by EM working group hydroclass classifications (defined in Attachment E in CFWI EMT 2013) within the CFWI Planning Area.

Table 1. Total acreages and percent coverages of EM working group wetland hydroclasses (defined in Attachment E in CFWI EMT 2013) within the CFWI Planning Area.

EM Working Group Wetland Hydroclass	Wetland Description	Wetland Acreage	Percent of Total Wetland Acres
1A + 2A-M + 1E	Groundwater-dominated and semi-groundwater-dominated mesic (Plains)	166,000	15.7
1B + 2A-X + 1F	Groundwater-dominated and semi-groundwater-dominated xeric (Ridge)	119,000	11.2
1C	Seepage slope wetlands	22,000	2.1
1D	Flats wetlands (Ridge, Plains, and floodplains)	14,000	1.3
2D	Connected (strands/sloughs, Ridge and Plains)	278,000	26.3
2F	Floodplain (lakes and wetlands)	460,000	43.4
Total		1,059,000	100

2.0 WETLANDS ANALYSIS METHODOLOGY IN SUPPORT OF THE 2025 CFWI REGIONAL WATER SUPPLY PLAN

After the 2020 CFWI RWSP was completed, the EM working group continued to meet on a regular basis so that there would be adequate time to conduct the necessary work for the analysis in support of the 2025 CFWI RWSP. The following decisions were made during the interim meetings:

- The same wetlands analysis risk assessment methodology that was used for the 2015 and 2020 CFWI RWSPs would be used for the analysis in support of the 2025 CFWI RWSP.
- Field assessments of all the Class 1 and Class 2 wetlands would be conducted. The three wetland scientists on the EM working group, one representing each water management district with significant experience assessing wetlands, would conduct all the assessments. These same wetland scientists conducted the Class 1 wetland assessments in support of the 2020 CFWI RWSP.
- Similar to the assessments conducted in support of the 2020 CFWI RWSP, historical changes that were not consistent with observed current conditions would not be used as the sole determinant of current stress. In other words, even though the wetland may have been altered historically, if current conditions indicated stable hydrology, then the historical alteration would not be considered in the stress status determination.
- In addition to not focusing on historical changes if the wetland had stable hydrology for the recent past (e.g., the last 10-20 years), the determination of stress would be based on combinations of physical evidence of permanently reduced wetland hydrology or invasion/establishment of species from drier ecological communities and soil oxidation or loss (due to reduced water levels) observed in wetlands that had organic soils.
- The field form that was revised for all the Class 1 wetlands assessments conducted in support of the 2020 CFWI RWSP would be used for the assessments (**Appendix A**).

3.0 ASSESSMENTS OF CLASS 1 WETLANDS

Field assessments of the Class 1 wetlands were conducted from February 2021 through November 2023. The sites assessed were those that were visited in support of the analyses conducted for both the 2015 and 2020 CFWI RWSPs, as well as two new sites. The new sites that were able to be added because the necessary data were available included DMIT-35, Intersession City, one of the sites established as part of the Data, Monitoring and Investigations Team (DMIT) long-term wetlands monitoring program, and SW-AF, Davenport P1, a former Class 2 wetland.

After the field work was completed, the EM working group water management district wetland scientists met to finalize the results of the stress status assessments by reviewing the field forms, photographs, and previous assessment results. The water level data were also reviewed during numerous EM working group meetings. As a result of the meetings and data exploration, 13 of the sites were moved to the Class 2 wetlands dataset for various reasons (**Table 2**).

Table 2. Sites that were in the Class 1 wetlands dataset for the analysis in support of the 2020 CFWI RWSP or that were added for the Class 1 wetlands assessments in support of the 2025 CFWI RWSP that were moved to the Class 2 wetlands dataset or removed.

District	Site ID	Site Name	Comment
SFWMD	SF-N1	Walker Ranch WR-16	Not accessible for field assessment since roads that would have provided reasonably close access were closed to vehicles. It was removed from the Class 1 wetlands dataset.
SFWMD	SF-N2	Walker Ranch WR-15	Not accessible for field assessment since roads that would have provided reasonably close access were closed to vehicles. It was removed from the Class 1 wetlands dataset.
SFWMD	SF-XY	Walker Ranch WR-8	Water level data no longer being collected, moved to Class 2 wetlands dataset (was in Class 2 wetlands dataset for 2020 analysis).
SFWMD	DMIT-121/SF-ZJ3	Tibet Butler 1	Water level data available, but wetland edge elevation not available, moved to Class 2 wetlands dataset. This wetland was last assessed in August 2007 and was listed as confounded due to "chain stabilization." Because it was listed as confounded, this site was not included for the 2020 analysis. This lake is not regulated and the wetland is not confounded; therefore, it was assessed and included.
SJRWMD	DMIT-86/SJ-GA	Prairie Lake	Water level data were anomalous, since it includes both a stressed and non-stressed period. The site was determined not to be representative of groundwater-dominated wetlands in the CFWI Planning Area and was moved to Class 2 wetlands dataset. This site started out in the Class 1 wetlands dataset for the 2020 analysis and was moved to the Class 2 wetlands dataset for the same reason.

Table 2. Sites that were in the Class 1 wetlands dataset for the analysis in support of the 2020 CFWI RWSP or that were added for the Class 1 wetlands assessments in support of the 2025 CFWI RWSP that were moved to the Class 2 wetlands dataset or removed.

District	Site ID	Site Name	Comment
SJRWMD	SJ-0169/SJ-QC	Trout Lake	Since the US Geological Survey (USGS) stopped collecting water level data in 2019, this lake was moved to Class 2 wetlands dataset.
SJRWMD	SJ-0170/SJ-QA	Church Lake	Since the USGS stopped collecting water level data in 2019, this lake was moved to Class 2 wetlands dataset.
SJRWMD	SJ-AJ	Lake Gem	This lake was determined to be confounded and water level data anomalous; it was moved to Class 2 wetlands dataset. This site started out in the Class 1 wetlands dataset for the 2020 analysis and was moved to the Class 2 wetlands dataset for the same reason.
SJRWMD	SJ-LB	Unnamed Wetland Near SR 46	This site was impacted by road widening, and the well was removed; it was removed from the Class 1 wetlands dataset.
SJRWMD	SJ-LH	Island Lake	Water level data were anomalous, since it includes both a stressed and non-stressed period. The site was determined not to be representative of groundwater-dominated wetlands in the CFWI Planning Area and was moved to Class 2 wetlands dataset. This site started out in the Class 1 wetlands dataset for the 2020 analysis and was moved to the Class 2 wetlands dataset for the same reason.
SWFWMD	SW-LE	Cypress Creek 199, W16 Sentry Wetland	Water level data were anomalous, since it includes both a stressed and non-stressed period. The site was determined not to be representative of groundwater-dominated wetlands in the CFWI Planning Area and was moved to Class 2 wetlands dataset. Wetland was determined to be Stressed for 2015 and 2020 analysis, but currently Not Stressed.
SWFWMD	SW-LK	Green Swamp 5	Water level data were anomalous. The site was determined not to be representative of groundwater-dominated wetlands in the CFWI Planning Area and was moved to Class 2 wetlands dataset.
SWFWMD	SW-QL	Lake Walker	Water level data were anomalous, since it includes both a stressed and non-stressed period. The site was determined not to be representative of groundwater-dominated wetlands in the CFWI Planning Area and was moved to Class 2 wetlands dataset. This lake was determined to be Stressed for the 2015 and 2020 analyses, but it is currently Not Stressed.

The final dataset of 51 Class 1 wetlands used for the analysis conducted in support of the 2025 CFWI RWSP is included in **Table 3**. The location and current stress status of each of the Class 1 wetlands is shown in **Figure 2**. A detailed description and history of each Class 1 wetland is included in **Appendix B**, and **Appendix C** contains a spreadsheet of detailed information resulting from the assessments.

Table 3. Site descriptions of the 51 Class 1 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Physiographic Region	Wetland Hydroclass	Longitude	Latitude
South Florida Water Management District Sites							
SFWMD	DMIT-35 ¹		Intercession City	Plains	2F Floodplain (But Located in Upper Floodplain Edge)	-81.503314	28.254863
SFWMD	DMIT-131	SF-YK	Tibet Butler	Plains	1A Depressional Mesic	-81.537112	28.446165
SFWMD	DMIT-190	SF-LA	Walker Ranch - WR11	Plains	1A Depressional Mesic	-81.404507	28.083626
SFWMD	DMIT-191	SF-XZ	Walker Ranch - WR9	Plains	1A Depressional Mesic	-81.418795	28.109258
SFWMD	SF-WT	SF-WT	Split Oak	Plains	1A Depressional Mesic	-81.208902	28.358426
SFWMD	SF-XX	SF-LB	Walker Ranch - WR6	Plains	1A Depressional Mesic	-81.412562	28.113903
St. Johns River Water Management District Sites							
SJRWMD	DMIT-59	SJ-LI	Lake Sylvan	Plains	1E Flatland Lakes	-81.379811	28.803797
SJRWMD	SJ-0127	SJ-LL	City of Cocoa, Well 9T	Plains	2D Strands/Sloughs (But Hydrologically Isolated by Roads and Crossings)	-81.053314	28.394303
SJRWMD	SJ-AI	SJ-AI	Chapman Marsh	Plains	2A-M Large Isolated	-81.193906	28.641028
SJRWMD	SJ-AW	SJ-AW	Red Bug Lake	Plains	1E Flatland Lakes	-81.290839	28.648639
SJRWMD	SJ-LA	SJ-LA	Unnamed Cypress	Plains	1A Depressional Mesic	-81.119700	28.566632
SJRWMD	SJ-LC	SJ-LC	Boggy Marsh	Plains	2D Strands/Sloughs (But Hydrologically Isolated by	-81.697514	28.396950

Table 3. Site descriptions of the 51 Class 1 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Physiographic Region	Wetland Hydroclass	Longitude	Latitude
					Roads and Crossings)		
SJRWMD	SJ-LD	SJ-LD	Hopkins Prairie	Ridge	1F Xeric Lakes	-81.693251	29.274910
SJRWMD	SJ-LE	SJ-LE	Lake Avalon	Ridge	1F Xeric Lakes	-81.642740	28.510180
SJRWMD	SJ-LF	SJ-LF	Lake Apshawa	Ridge	1F Xeric Lakes	-81.773330	28.599640
SJRWMD	SJ-LJ	SJ-LJ	Lake Louisa	Ridge	2G Floodplain Lakes (But Regulated)	-81.74695	28.46346
SJRWMD	SJ-QB	SJ-QB	Johns Lake	Ridge	1F Xeric Lakes	-81.657585	28.531825
SJRWMD	SJ-QD	SJ-QD	Long Lake	Ridge	1F Xeric Lakes	-81.469958	28.617014
Southwest Florida Water Management District Sites							
SWFWMD	DMIT-1	SW-N3	Alston Bay	Plains	2A-M Large Isolated	-82.0906	28.1804
SWFWMD	DMIT-11	SW-N4	NE Lakeland Wellfield G	Plains	2A-M Large Isolated	-81.902779	28.170354
SWFWMD	DMIT-12	SW-N5	NE Lakeland Wellfield J	Plains	2A-M Large Isolated	-81.8883	28.1652
SWFWMD	DMIT-13	SW-N6	NE Lakeland Wellfield K	Plains	1A Depressional Mesic	-81.8962	28.161
SWFWMD	DMIT-136	SW-QQ	Crooked Lake (Monitored via Crooked Lake Prairie	Ridge	1E Flatland Lakes	-81.553030	27.827970
SWFWMD	DMIT-154	SW-N7	Saddle Blanket Scrub 2	Ridge	1B Depressional Xeric	-81.5788	27.6706
SWFWMD	DMIT-161	SW-DD	Van Fleet 2	Plains	1A Depressional Mesic	-81.6634	28.2422
SWFWMD	DMIT-28	SW-N2	Green Swamp 4	Plains	1A Depressional Mesic	-81.9311	28.3919
SWFWMD	DMIT-29	SW-AA	Green Swamp 7	Plains	1A Depressional Mesic	-81.911111	28.312611

Table 3. Site descriptions of the 51 Class 1 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Physiographic Region	Wetland Hydroclass	Longitude	Latitude
SWFWMD	DMIT-30	SW-N1	Green Swamp Bay	Plains	2A-M Large Isolated	-81.9537	28.4218
SWFWMD	DMIT-67	SW-N8	Lake Wales Ridge WEA 1	Ridge	1B Depressional Xeric	-81.595412	27.923136
SWFWMD	SW-AF ¹	SW-AF	Davenport P1	Plains	2A-M Large Isolated	-81.618502	28.168362
SWFWMD	SW-JJ	SW-JJ	Lake Garfield	Ridge	1A Depressional Mesic	-81.723410	27.900860
SWFWMD	SW-LF	SW-LF	Cypress Creek 190 E Marsh	Plains	2A-M Large Isolated	-82.378218	28.304856
SWFWMD	SW-LG	SW-LG	Cypress Creek 223 B W46	Plains	1A Depressional Mesic	-82.391208	28.290439
SWFWMD	SW-LH	SW-LH	Cypress Creek 211 W33	Plains	2A-M Large Isolated	-82.393056	28.276317
SWFWMD	SW-LI	SW-LI	Green Swamp Marsh 304	Plains	1A Depressional Mesic	-82.017890	28.354863
SWFWMD	SW-LJ	SW-LJ	Green Swamp 6, 303	Plains	1A Depressional Mesic	-81.971260	28.394560
SWFWMD	SW-LM	SW-LM	Green Swamp 1, 298	Plains	1A Depressional Mesic	-81.946755	28.361410
SWFWMD	SW-MM	SW-MM	Lake Wales	Ridge	1F Xeric Lakes	-81.578690	27.903910
SWFWMD	SW-QA	SW-QA	Big Gum Lake	Ridge	1F Xeric Lakes	-81.492193	27.928229
SWFWMD	SW-QB	SW-QB	Bonnet Lake (Highlands)	Ridge	1F Xeric Lakes	-81.438926	27.546476
SWFWMD	SW-QC	SW-QC	Buck Lake (Highlands)	Ridge	1F Xeric Lakes	-81.332671	27.234785
SWFWMD	SW-QD	SW-QD	Gator Lake	Ridge	1F Xeric Lakes	-81.686616	27.841225
SWFWMD	SW-QE	SW-QE	Lake Annie (Highlands)	Ridge	1F Xeric Lakes	-81.351758	27.205947
SWFWMD	SW-QF	SW-QF	Lake Apthorpe	Ridge	1F Xeric Lakes	-81.362716	27.344290

Table 3. Site descriptions of the 51 Class 1 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Physiographic Region	Wetland Hydroclass	Longitude	Latitude
SWFWMD	SW-QH	SW-QH	Lake Leonore	Ridge	1F Xeric Lakes	-81.512255	27.793753
SWFWMD	SW-QI	SW-QI	Lake Placid	Ridge	1F Xeric Lakes	-81.364219	27.244505
SWFWMD	SW-QJ	SW-QJ	Lake Streety	Ridge	1F Xeric Lakes	-81.569989	27.678406
SWFWMD	SW-QK	SW-QK	Lake Van	Ridge	1F Xeric Lakes	-81.768938	28.107150
SWFWMD	SW-QM	SW-QM	Polecat Lake	Ridge	1F Xeric Lakes	-81.699882	27.843913
SWFWMD	SW-QN	SW-QN	Surveyors Lake	Ridge	1F Xeric Lakes	-81.691552	27.833970
SWFWMD	SW-QO	SW-QO	Parks Lake	Ridge	1F Xeric Lakes	-81.468410	27.915700

¹: Denotes new Class 1 wetland

With the exception of one site (SW-QD, Gator Lake) which changed from Stressed to Not Stressed, the stress status of the Class 1 wetlands did not change between the assessments conducted in support of the 2020 and 2025 RWSPs. The Class 1 wetlands dataset used for the analysis in support of the 2025 CFWI RWSP included 27 Plains wetlands and 24 Ridge wetlands. The numbers and distribution of not stressed and stressed wetlands is fairly similar to the dataset used for the 2020 update to the CFWI RWSP (**Table 4**). While the number of not stressed Plains and Ridge wetlands has increased over time, the number of stressed Plains and Ridge wetlands in the dataset has decreased.

Table 4. Comparison of the not stressed/stressed Class 1 wetlands for the analyses in support of the 2015, 2020, and 2025 CFWI RWSPs.

Wetland Type	For the Analysis in Support of the 2015 CFWI RWSP		For the Analysis in Support of the 2020 CFWI RWSP		For the Analysis in Support of the 2025 CFWI RWSP	
	Not Stressed	Stressed	Not Stressed	Stressed	Not Stressed	Stressed
Plains	10	8	18	7	21	6
Ridge	15	11	19	9	19	5
Total	25	19	37	16	40	11

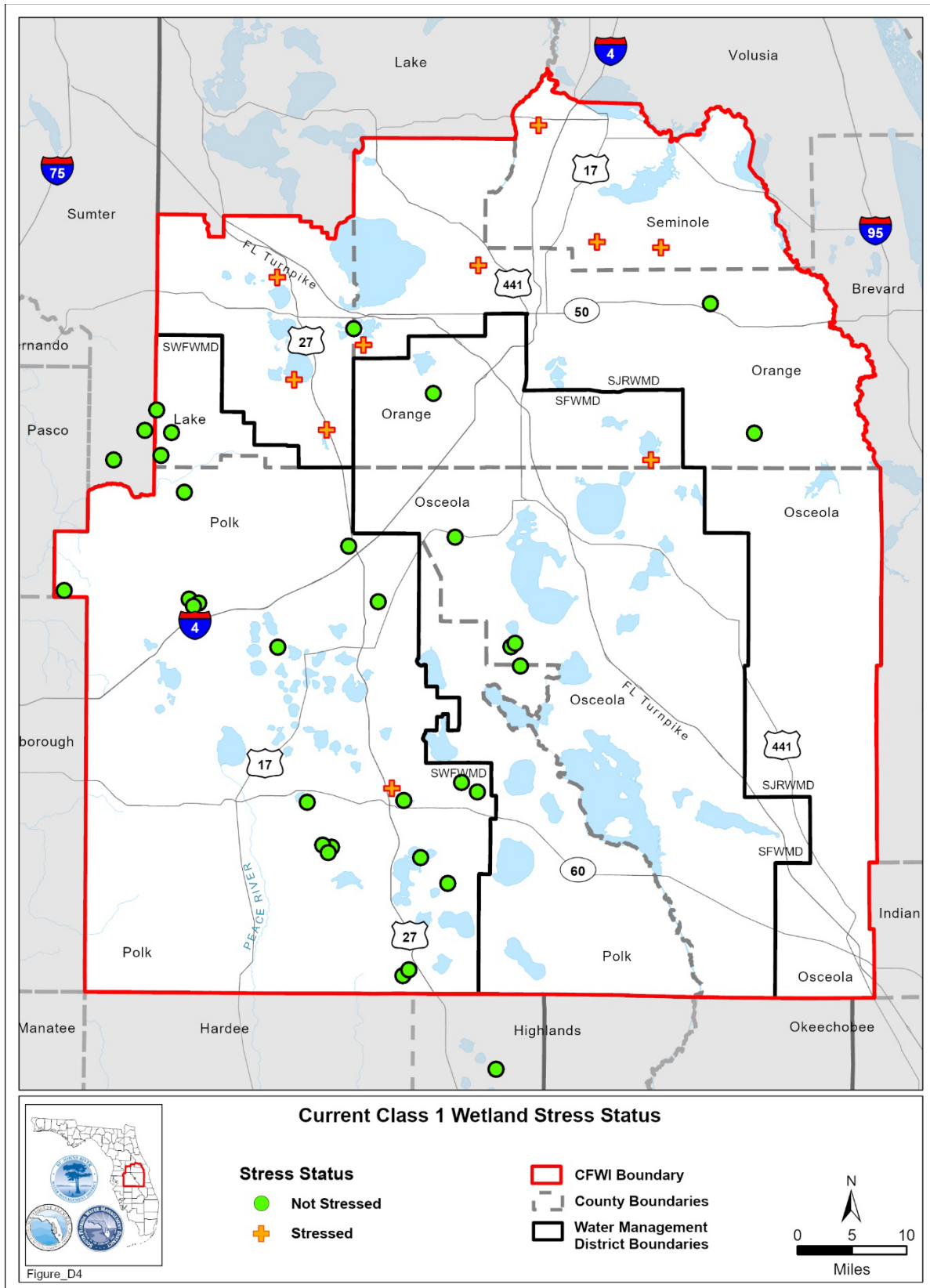


Figure 2. Location and current stress status of the Class 1 wetlands included in the EM working group analysis in support of the 2025 CFWI RWSP.

4.0 ASSESSMENTS OF CLASS 2 WETLANDS

Since the analysis conducted in support of the 2020 CFWI RWSP did not include field assessments of the Class 2 wetlands, the EM working group continued to meet after the 2020 RWSP was completed so that there was adequate time for fieldwork to be conducted to assess the current status of the Class 2 wetlands. Field assessments of the Class 2 wetlands were conducted from June 2019 through November 2023.

The field assessments included sites assessed for the analysis conducted in support of the 2015 CFWI RWSP, the 226 Class 2 wetlands that were included in the analysis conducted for the 2020 CFWI RWSP, sites established as part of the DMIT long-term wetlands monitoring program, as well as a number of new sites. The Class 2 wetlands dataset for the EM working group's wetlands analysis in support of the 2025 CFWI RWSP included 342 wetlands, which are described in **Table 5**. The location and current stress status of each of the Class 2 wetlands is shown in **Figure 3**. A detailed description and history of notable Class 2 wetlands is included in **Appendix D**, and **Appendix E** contains a spreadsheet of detailed information resulting from the assessments.

During the field assessments of Class 2 wetlands conducted by the EM group in support of the 2025 CFWI RWSP, wetlands were excluded if there were obvious physical alterations that would significantly alter the hydrology in the wetland system. It was recognized that hydrologically altered systems may be stressed by factors other than groundwater withdrawals, and these wetlands were not included in the analysis. Examples of significantly altered hydrology include:

- ◆ A portion or all of the wetland was physically removed (excavated or filled).
- ◆ Ditches through the wetland that would alter water levels.
- ◆ Substantial urbanization of the contributing watershed that would significantly alter the amount of runoff being discharged to the wetland.
- ◆ Isolation or re-routing of significant portions of the watershed that previously contributed water to the wetland.

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
South Florida Water Management District Sites								
SFWMD	DMIT-9		Camp Lonesome 1	Plains	Stressed	-81.161826	28.080663	
SFWMD	DMIT-24		East Pine Island	Plains	Not Stressed	-81.446594	28.37863	
SFWMD	DMIT-53		Lake Marion Creek East	Ridge	Not Stressed	-81.512348	28.100563	
SFWMD	DMIT-120		Snell 2 West	Ridge	Not Stressed	-81.55099	28.133719	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SFWMD	DMIT-121	SF-ZJ3	Tibet Butler 1	Ridge	Not Stressed	-81.535461	28.44811	Moved from Class 1 wetlands dataset; wetland edge elevation not available; not confounded as described in 2007
SFWMD	DMIT-130		Lake Marion Creek West	Plains	Not Stressed	-81.515431	28.10482	
SFWMD	DMIT-132	SF-WA	Snell 1 East	Ridge	Not Stressed	-81.543635	28.13299	
SFWMD	DMIT-188	SF-VC	Camp Lonesome 2	Plains	Not Stressed	-81.170716	28.076513	
SFWMD	SF-AC	SF-AC	N of Lake Weohyakapka, E of Lake Wales Ridge	Plains	Not Stressed	-81.424032	27.862624	
SFWMD	SF-AD	SF-AD	N of Lake Weohyakapka, E of Lake Wales Ridge	Plains	Not Stressed	-81.417806	27.862678	
SFWMD	SF-AF	SF-AF	Lake Ruby	Ridge	Not Stressed	-81.499286	28.397880	
SFWMD	SF-AG	SF-AG	E of RIBS at Lake Marion Circle Drive and Hemlock	Ridge	Not Stressed	-81.489922	28.061480	
SFWMD	SF-AJ	SF-AJ	W of San Miguel (off Marigold)	Plains	Not Stressed	-81.510353	28.172218	
SFWMD	SF-AL	SF-AL	Along CR 535	Plains	Not Stressed	-81.463184	28.248110	
SFWMD	SF-AN	SF-AN	Off Mor Tay Road	Ridge	Not Stressed	-81.609696	28.280233	
SFWMD	SF-AS	SF-AS	End of Cypress Road Across Golf Green	Ridge	Not Stressed	-81.616511	28.359224	
SFWMD	SF-AT	SF-AT	N of Black Lake Road	Ridge	Stressed	-81.600443	28.344939	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SFWMD	SF-AU	SF-AU	Providence, SE of US 17/US 92	Ridge	Not Stressed	-81.557159	28.210364	
SFWMD	SF-AV1	SF-AV1	American Equities, SE of US 17/US 92	Ridge	Not Stressed	-81.553724	28.197034	
SFWMD	SF-BG	SF-BG	SE of Lake Butler	Ridge	Not Stressed	-81.545176	28.468681	
SFWMD	SF-BI	SF-BI	E of SR 535, S of Reaves Road	Ridge	Not Stressed	-81.555668	28.516614	
SFWMD	SF-BM1	SF-BM1	Big Bend Swamp	Plains	Stressed	-81.141311	28.183869	
SFWMD	SF-BM2	SF-BM2	Jug Creek Swamp	Plains	Not Stressed	-81.126176	28.172812	
SFWMD	SF-BM3	SF-BM3	Big Bend Swamp	Plains	Not Stressed	-81.120597	28.165977	
SFWMD	SF-BR	SF-BR	Off Lost Cove Road, W of Apopka Vineland Road	Ridge	Not Stressed	-81.505758	28.45335	
SFWMD	SF-BS	SF-BS	E of Conroy, S of Millenia	Plains	Not Stressed	-81.424694	28.489636	
SFWMD	SF-BU	SF-BU	Lake Catherine Swamp	Plains	Stressed	-81.413621	28.49535	
SFWMD	SF-BV	SF-BV	Americana at Whitcomb	Plains	Stressed	-81.415532	28.489312	
SFWMD	SF-BW	SF-BW	W Side of US 17/US 92, N of Americana	Ridge	Stressed	-81.398616	28.485694	
SFWMD	SF-BY	SF-BY	Lake Fran Conservation Easement off MetroWest Road	Ridge	Stressed	-81.451848	28.520850	
SFWMD	SF-BZ	SF-BZ	City of Orlando, Eagle Nest Park	Plains	Stressed	-81.443911	28.509442	
SFWMD	SF-CE	SF-CE	South Park Circle	Plains	Not Stressed	-81.421644	28.445530	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SFWMD	SF-CG	SF-CG	Between Lake Tohopekaliga and Alligator Lake	Plains	Not Stressed	-81.269368	28.198394	
SFWMD	SF-CJ	SF-CJ	N of Clay Whaley, W of FL Turnpike	Plains	Not Stressed	-81.328417	28.224973	
SFWMD	SF-CL	SF-CL	NE of Lake Center	Plains	Not Stressed	-81.179653	28.283942	
SFWMD	SF-CP	SF-CP	Kissimmee, S of Mills Slough Road and W of FL Turnpike	Plains	Not Stressed	-81.372259	28.313671	
SFWMD	SF-CQ1	SF-CQ1	Kissimmee, E of Simpson Road and N of New Beginning	Plains	Stressed	-81.345482	28.298791	
SFWMD	SF-CT	SF-CT	E of Wetherbee, S of Palm Bay	Plains	Not Stressed	-81.373040	28.406063	
SFWMD	SF-CY	SF-CY	Three Lakes WMA Site III	Plains	Not Stressed	-81.073427	27.966053	
SFWMD	SF-CZ	SF-CZ	Three Lakes WMA Isolated Wetland Prairie	Plains	Not Stressed	-81.145803	27.895454	
SFWMD	SF-DB	SF-DB	Lake Gifford	Ridge	Stressed	-81.643061	28.361329	
SFWMD	SF-DC	SF-DC	Lake Marion	Ridge	Not Stressed	-81.533056	28.056400	
SFWMD	SF-DF	SF-DF	Along Lake Hancock Road at Porter Road	Ridge	Not Stressed	-81.598542	28.448949	
SFWMD	SF-DG	SF-DG	Near Site 10D	Ridge	Not Stressed	-81.609243	28.445231	
SFWMD	SF-DI	SF-DI	Along Consulate Road W of FL Turnpike	Plains	Stressed	-81.413694	28.437002	
SFWMD	SF-DJ	SF-DJ	Lake Ellenore	Ridge	Not Stressed	-81.408514	28.464504	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SFWMD	SF-DM	SF-DM	Palm Lake-Lake Littoral Marsh	Ridge	Not Stressed	-81.496935	28.478858	
SFWMD	SF-DO	SF-DO	SE of US 192 near Intersection with CR 545	Plains	Not Stressed	-81.645315	28.343667	
SFWMD	SF-DX	SF-DX	Off CR 535 S of US17/US92	Plains	Stressed	-81.465594	28.232383	
SFWMD	SF-EE	SF-EE	Celebration	Plains	Not Stressed	-81.555941	28.306906	
SFWMD	SF-EF	SF-EF	Reedy Creek	Plains	Not Stressed	-81.533248	28.317871	
SFWMD	SF-EQ	SF-EQ	Hilton Resort, Off Foxfire Circle	Ridge	Not Stressed	-81.498530	28.403293	
SFWMD	SF-ET	SF-ET	International Drive S, W of Continental Gateway	Plains	Not Stressed	-81.516122	28.356848	
SFWMD	SF-EW	SF-EW	N Off Osceola Polk Line Rd.	Ridge	Not Stressed	-81.599731	28.268461	
SFWMD	SF-EQ	SF-EQ	Hilton Resort, off Foxfire Circle	Ridge	Stressed	-81.498530	28.403293	
SFWMD	SF-ET	SF-ET	International Drive S, W of Continental Gateway	Plains	Not Stressed			
SFWMD	SF-EW	SF-EW	N off Osceola Polk Line Rd.	Ridge	Not Stressed	-81.599731	28.268461	
SFWMD	SF-FA	SF-FA	DeLuca Preserve	Plains	Not Stressed	-81.019853	27.662089	
SFWMD	SF-FD	SF-FD	DeLuca Preserve	Plains	Not Stressed	-80.923118	27.703394	
SFWMD	SF-VA	SF-VA	Between Mann and Tiny Roads on Lake Wales Ridge	Ridge	Not Stressed	-81.618263	28.484465	
SFWMD	SF-VB	SF-VB	Between Mann and Tiny Roads on Lake Wales Ridge	Ridge	Not Stressed	-81.614509	28.485925	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SFWMD	SF-VD	SF-VD	Camp Lonesome	Plains	Stressed	-81.194203	28.066714	
SFWMD	SF-WB	SF-WB	NW of County Highway 580, Snell Creek – Wet Prairie	Ridge	Not Stressed	-81.544952	28.131931	
SFWMD	SF-WD	SF-WD	N of Sinclair Just W of Old Lake Wilson Road	Ridge	Not Stressed	-81.594717	28.296793	
SFWMD	SF-WF	SF-WF	N of US 192 Curve at Black Lake Rd.	Ridge	Not Stressed	-81.606119	28.348862	
SFWMD	SF-WG	SF-WG	E of SR 545, S Side of Siedel Road	Ridge	Not Stressed	-81.625096	28.419059	
SFWMD	SF-WH	SF-WH	E of SR 545 off Lake Hancock Rd.	Ridge	Not Stressed	-81.625096	28.419059	
SFWMD	SF-WJ	SF-WJ	Along Rheams Road, S of SR 535	Ridge	Not Stressed	-81.556282	28.441113	
SFWMD	SF-WK	SF-WK	Along SR 535, E of Rheams Road	Ridge	Not Stressed	-81.554239	28.442928	
SFWMD	SF-WL	SF-WL	W of Powerlines, Between Rheams and Overstreet	Plains	Not Stressed	-81.584195	28.444121	
SFWMD	SF-WM	SF-WM	Off Rheams Road Near Disney World Employee Entrance	Plains	Not Stressed	-81.579602	28.434537	
SFWMD	SF-WN	SF-WN	Lake Sharpe	Ridge	Stressed	-81.567162	28.432068	
SFWMD	SF-WT	SF-WT	Split Oake Forest Mitigation Park Cypress Head	Plains	Not Stressed	-81.207309	28.358205	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SFWMD	SF-WU	SF-WU	Split Oak Forest Mitigation Park Cypress Head	Plains	Not Stressed	-81.201597	28.358305	
SFWMD	SF-WV	SF-WV	Split Oak Forest Mitigation Park Cypress Head	Plains	Stressed	-81.205067	28.364734	
SFWMD	SF-WW	SF-WW	Off SR 527A	Plains	Not Stressed	-81.349269	28.438646	
SFWMD	SF-WX	SF-WX	Off 527A	Plains	Not Stressed	-81.35097	28.435498	
SFWMD	SF-WY	SF-WY	Off SR 527A	Plains	Stressed	-81.300185	28.230752	
SFWMD	SF-WZ	SF-WZ	Off SR 527A	Plains	Not Stressed	-81.299677	28.225093	
SFWMD	SF-XA	SF-XA	Near Intersection of Marigold and Bourne	Plains	Not Stressed	-81.504073	28.190088	
SFWMD	SF-XB1	SF-XB1	Lake Speer	Plains	Not Stressed	-81.604939	28.47718	
SFWMD	SF-XB2	SF-XB2	W of Lake Speer at Base of Lake Wales Ridge	Plains	Not Stressed	-81.609221	28.480052	
SFWMD	SF-XC	SF-XC	Behind Ramada at US 192 and Poiniana Boulevard	Plains	Not Stressed	-81.487760	28.331733	
SFWMD	SF-XD	SF-XD	Along International Drive W of Gateway Point Drive	Plains	Not Stressed	-81.502444	28.353689	
SFWMD	SF-XE	SF-XE	E of Lake Tohopekaliga, near Hawkin Drive	Plains	Not Stressed	-81.433677	28.172087	
SFWMD	SF-XF	SF-XF	Grass Lake	Ridge	Not Stressed	-81.647156	28.349803	
SFWMD	SF-XG	SF-XG	Hickorynut Lake	Ridge	Not Stressed	-81.636044	28.421085	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SFWMD	SF-XH	SF-XH	Reedy Creek	Plains	Not Stressed	-81.532189	28.28809	
SFWMD	SF-XI	SF-XI	Off CR 531 Near Bellalago	Plains	Not Stressed	-81.439279	28.191916	
SFWMD	SF-XJ	SF-XJ	Lake Reedy Floodplain	Plains	Not Stressed	-81.617147	28.420053	
SFWMD	SF-XL	SF-XL	SE of Lake Bryan	Ridge	Not Stressed	-81.492676	28.363313	
SFWMD	SF-XM	SF-XM	Off Reedy Creek Road, W of Treatment Plant	Plains	Not Stressed	-81.586832	28.345798	
SFWMD	SF-XN	SF-XN	Near Solivita Road, S of County Highway 580	Plains	Not Stressed	-81.490194	28.133728	
SFWMD	SF-XO	SF-XO	Near Solivita Road, S of County Highway 580	Plains	Not Stressed	-81.494471	28.135431	
SFWMD	SF-XP	SF-XP	E of Shingle Creek Floodplain	Plains	Not Stressed	-81.444868	28.315867	
SFWMD	SF-XQ	SF-XQ	S of US 17/US 92 and W of CR 535	Plains	Not Stressed	-81.464615	28.251084	
SFWMD	SF-XR	SF-XR	W of CR 531	Plains	Not Stressed	-81.439954	28.227182	
SFWMD	SF-XS	SF-XS	Providence Development	Plains	Not Stressed	-81.540083	28.210375	
SFWMD	SF-XT	SF-XT	US 17/US 92 at Kinney Harmon	Plains	Stressed	-81.361738	28.384292	
SFWMD	SF-XU	SF-XU	Disney Wilderness Preserve/Walker Ranch	Plains	Not Stressed	-81.394084	28.053479	
SFWMD	SF-XV	SF-XV	Disney Wilderness Preserve/Walker Ranch	Plains	Not Stressed	-81.394025	28.050299	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SFWMD	SF-XW	SF-XW	Disney Wilderness Preserve/Walker Ranch	Plains	Not Stressed	-81.399884	28.057562	
SFWMD	SF-XY	SF-XY	Walker Ranch – WR8	Plains	Not Stressed	-81.417485	28.106642	Moved from Class 1 wetlands dataset; water level data no longer being collected
SFWMD	SF-YA	SF-YA	Lake Russell	Plains	Not Stressed	-81.422163	28.128414	
SFWMD	SF-YB	SF-YB	Tri County Road	Ridge	Not Stressed	-81.644910	28.274923	
SFWMD	SF-YC	SF-YC	Near Goodman Road	Ridge	Not Stressed	-81.624380	28.287969	
SFWMD	SF-YD	SF-YD	Apache Trail	Ridge	Not Stressed	-81.639560	28.296760	
SFWMD	SF-YE	SF-YE	E of Old Lake Wilson Road Near Reedy Creek Floodplain	Plains	Not Stressed	-81.585668	28.311273	
SFWMD	SF-YF	SF-YF	Reedy Creek Floodplain E of Old Lake Wilson Road	Plains	Stressed	-81.586380	28.315144	
SFWMD	SF-YG	SF-YG	West of Narcoossee Road	Plains	Not Stressed	-81.247560	28.369271	
SFWMD	SF-YH	SF-YH	West of Narcoossee Road	Plains	Stressed	-81.253863	28.366331	
SFWMD	SF-YI	SF-YI	N of Dowden Road	Plains	Not Stressed	-81.236076	28.430206	
SFWMD	SF-YN	SF-YN	Shadow Bay Park	Ridge	Not Stressed	-81.479676	28.492433	
SFWMD	SF-ZA1	SF-ZA1	Davenport Creek Swamp	Plains	Stressed	-81.615704	28.324011	
SFWMD	SF-ZA2	SF-ZA2	Davenport Creek Swamp Well OSF-102 OSF-103	Ridge	Not Stressed	-81.633704	28.334059	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SFWMD	SF-ZA3	SF-ZA3	Goodman Road	Ridge	Not Stressed	-81.647565	-81.647565	
SFWMD	SF-ZB1	SF-ZB1	Near Boggy Creek Road	Plains	Not Stressed	-81.359889	28.314260	
SFWMD	SF-ZB2	SF-ZB2	E of FL Turnpike Off Florida Road	Plains	Stressed	-81.36993	28.328702	
SFWMD	SF-ZC1	SF-ZC1	W of John Young at 417 Interchange	Plains	Not Stressed	-81.436009	28.372014	
SFWMD	SF-ZC2	SF-ZC2	Shingle Creek E of Sandy Hill Road	Plains	Not Stressed	-81.43689	28.396084	
SFWMD	SF-ZC3	SF-ZC3	Shingle Creek Floodplain	Plains	Not Stressed	-81.450167	28.318312	
SFWMD	SF-ZC4	SF-ZC4	"Give The Kids The World" Boardwalk	Plains	Not Stressed	-81.460342	28.288265	
SFWMD	SF-ZC5	SF-ZC5	Shingle Creek Floodplain	Plains	Not Stressed	-81.449538	28.282922	
SFWMD	SF-ZC6	SF-ZC6	Between Kings Point Road and FL Turnpike	Plains	Not Stressed	-81.434931	28.459519	
SFWMD	SF-ZC7	SF-ZC7	E of International Drive S, N of World Center Drive	Plains	Not Stressed	-81.481235	28.359185	
SFWMD	SF-ZC8	SF-ZC8	East Pine Island - STOPR Site	Plains	Not Stressed	-81.455024	28.381070	
SFWMD	SF-ZD1	SF-ZD1	Cypress Creek S of Lake Sheen	Plains	Not Stressed	-81.508265	28.397569	
SFWMD	SF-ZD2	SF-ZD2	E of SR 535, 0.5 Mile N of S Apopka Vineland Road	Plains	Not Stressed	-81.518092	28.391819	
SFWMD	SF-ZE1	SF-ZE1	Lake Britt	Ridge	Not Stressed	-81.615704	28.324011	
SFWMD	SF-ZE2	SF-ZE2	Lake Britt	Ridge	Not Stressed	-81.633704	28.334059	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SFWMD	SF-ZE3	SF-ZE3	Western Way W Off 429 Through Pine Plantation	Ridge	Not Stressed	-81.647565	28.325747	
SFWMD	SF-ZF1	SF-ZF1	Reedy Creek Floodplain E of Reedy Creek Road	Plains	Not Stressed	-81.581373	28.342657	
SFWMD	SF-ZF2	SF-ZF2	Reedy Creek Floodplain E of Old Lake Wilson Road	Plains	Not Stressed	-81.586877	28.317796	
SFWMD	SF-ZF3	SF-ZF3	Reedy Creek Floodplain Western Way in RCID	Plains	Not Stressed	-81.580705	28.364243	
SFWMD	SF-ZG1	SF-ZG1	Between CR 527 and FL Turnpike Near Ball Fields	Plains	Not Stressed	-81.383044	28.379570	
SFWMD	SF-ZG2	SF-ZG2	Along Balcombe Road, N of 417	Plains	Not Stressed	-81.399105	28.380938	
SFWMD	SF-ZH1	SF-ZH1	Disney Wilderness Preserve/Walker Ranch	Plains	Not Stressed	-81.404763	28.067872	
SFWMD	SF-ZH2	SF-ZH2	Disney Wilderness Preserve/Walker Ranch	Plains	Not Stressed	-81.410571	28.074050	
SFWMD	SF-ZI1	SF-ZI1	Mystic Dunes Development , S of Fantasy Heights	Ridge	Stressed	-81.602339	28.314800	
SFWMD	SF-ZI2	SF-ZI2	Mystic Dunes Development , S of Fantasy Heights	Ridge	Stressed	-81.594693	28.315161	
SFWMD	SF-ZJ5	SF-ZJ5	Lake Sheen	Ridge	Not Stressed	-81.525860	28.425257	
SFWMD	SF-ZJ6	SF-ZJ6	Lake Sheen	Ridge	Not Stressed	-81.526328	28.424272	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SFWMD	SF-ZJ7	SF-ZJ7	E of SR 535, S of Lake Butler Road	Ridge	Not Stressed	-81.568709	28.492579	
SFWMD	SF-ZJ8	SF-ZJ8	Tibet Butler Preserve-North	Ridge	Not Stressed	-81.546604	28.448967	
SFWMD	SF-ZK1	SF-ZK1	Little Sand Lake	Plains	Not Stressed	-81.479402	28.445309	
SFWMD	SF-ZK2	SF-ZK2	Spring Lake	Plains	Not Stressed	-81.481489	28.457107	
SFWMD	SF-ZL1	SF-ZL1	Three Lakes WMA Wet Prairie	Plains	Not Stressed	-81.072074	27.967865	
SFWMD	SF-ZL2	SF-ZL2	Three Lakes WMA Cypress Dome	Plains	Not Stressed	-81.072612	27.967832	
SFWMD	SF-ZN	SF-ZN	Adjacent to FL Turnpike (in Edgewater East	Plains	Stressed	-81.311737	28.214526	
SFWMD	SF-ZW	SF-ZW	County Park S of Conroy Road	Ridge	Not Stressed	-81.483416	28.488325	
SFWMD	SF-ZX	SF-ZX	Shadow Bay	Ridge	Not Stressed	-81.481921	28.491165	
SFWMD	SF-ZY	SF-ZY	NW of Lake Speer at Base of Lake Wales Ridge	Ridge	Not Stressed	-81.604270	28.483336	
SFWMD	SF-ZZ	SF-ZZ	Lake Hartley	Ridge	Not Stressed	-81.617122	28.478422	
St. Johns River Water Management District Sites								
SJRWMD	DMIT-4	SJ-0144	LBESF Site 2 (South)	Plains	Not Stressed	-81.119186	28.675178	
SJRWMD	DMIT-5	SJ-0143	LBESF Site 1 (North)	Plains	Not Stressed	-81.128156	28.694469	
SJRWMD	DMIT-6	SJ-0045	Bull Creek WMA North	Plains	Not Stressed	-80.978192	28.107889	
SJRWMD	DMIT-7	SJ-JI and SJ-0046	Bull Creek WMA South	Plains	Not Stressed	-80.946731	28.012586	
SJRWMD	DMIT-21	SJ-HO and SJ-0076	Dixie Lake	Plains	Not Stressed	-81.73611	28.439285	
SJRWMD	DMIT-50	SJ-JB and SJ-0077	Lake Louisa Small Isolated	Plains	Stressed	-81.738914	28.45532	
SJRWMD	DMIT-55	SJ-0069	Prevatt Lake	Ridge	Not Stressed	-81.489006	28.708328	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SJRWMD	DMIT-56	SJ-0011	Lake Proctor	Plains	Stressed	-81.101522	28.733503	
SJRWMD	DMIT-58	SJ-IB and SJ-008	Sunset Lake	Ridge	Stressed	-81.888733	28.57621	
SJRWMD	DMIT-86	SJ-GA	Prairie Lake	Ridge	Not Stressed	-81.5113	28.59775	Moved from Class 1 wetlands dataset; water level data anomalous since includes both a stressed and non-stressed period
SJRWMD	DMIT-90	SJ-FB4 and SJ-0132	RSRSR DMIT Site SJ-FB4	Plains	Not Stressed	-81.446417	28.776972	
SJRWMD	DMIT-91	SJ-0133	RSRSR DMIT Site 1	Plains	Not Stressed	-81.439014	28.775753	
SJRWMD	DMIT-92	SJ-0130	RSRSR DMIT Site 2	Plains	Not Stressed	-81.453389	28.771739	
SJRWMD	DMIT-99	SJ-FM and SJ-0007	Round Lake	Ridge	Stressed	-81.593986	28.779517	
SJRWMD	DMIT-113	SJ-0078	Lake Bartho	Ridge	Stressed	-81.511628	28.779594	
SJRWMD	DMIT-114	SJ-0080	Lake Jesup Isolated	Plains	Not Stressed	-81.186333	28.722928	
SJRWMD	DMIT-133	SJ-0147	Hal Scott Rp Site 1	Plains	Not Stressed	-81.134989	28.477192	
SJRWMD	DMIT-162	SJ-0145	Lake Apopka Marsh FW Site 1	Plains	Stressed	-81.712078	28.659633	
SJRWMD	DMIT-163	SJ-0146	Lake Apopka Marsh FW Site 2	Plains	Stressed	-81.720206	28.664481	
SJRWMD	DMIT-168	SJ-0042	Rock Springs Run State Reserve Site 3	Plains	Not Stressed	-81.457592	28.78165	
SJRWMD	DMIT-169	SJ-0043	Rock Springs Run State Reserve Site 4	Plains	Not Stressed	-81.458503	28.785628	
SJRWMD	DMIT-174	SJ-0075	Wekiva River State Park Site 1	Plains	Not Stressed	-81.381472	28.848147	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SJRWMD	DMIT-175	SJ-0079	Wekiva River State Park Site 2	Ridge	Stressed	-81.517361	28.772786	
SJRWMD	DMIT-177	SJ-0150	Hal Scott Preserve and RP Site 2	Plains	Not Stressed	-81.112522	28.511767	
SJRWMD	DMIT-180	SJ-0015	Geneva Wilderness Area	Plains	Stressed	-81.121958	28.708047	
SJRWMD	DMIT-181	SJ-0040	Black Hammock Site 1	Plains	Not Stressed	-81.150064	28.713292	
SJRWMD	DMIT-182	SJ-0041	Black Hammock Site 2	Plains	Not Stressed	-81.152303	28.716436	
SJRWMD	DMIT-195	SJ-0148	Hal Scott RP Site 2	Plains	Not Stressed	-81.134403	28.469742	
SJRWMD	DMIT-196	SJ-0149	Hal Scott RP Site 3	Plains	Not Stressed	-81.116767	28.470767	
SJRWMD	DMIT-197	SJ-0107	Hilochee WMA Site 1	Ridge	Not Stressed	-81.717694	28.408547	
SJRWMD	DMIT-204	SJ-0101	Hilochee Site 3	Ridge	Stressed	-81.730972	28.408686	
SJRWMD	DMIT-205	SJ-0106	Hilochee WMA Site 4	Ridge	Not Stressed	-81.723436	28.407997	
SJRWMD	SJ-0001		Long Branch Preserve - Monitoring Well Site	Plains	Not Stressed	-81.11266	28.52737	
SJRWMD	SJ-0002		Long Branch Preserve – Freshwater Marsh	Plains	Not Stressed	-81.11829	28.52838	
SJRWMD	SJ-0003		Long Branch Preserve - Pond	Plains	Not Stressed	-81.12399	28.52856	
SJRWMD	SJ-0004	SJ-DN	Wetlands to the N of Boca Woods Drive	Plains	Not Stressed	-81.17994	28.59897	
SJRWMD	SJ-0005	SJ-DO	UCF- Wetland E of Lake Claire	Plains	Not Stressed	-81.1988	28.60972	
SJRWMD	SJ-0006	SJ-DQ	Lake Rouse	Plains	Not Stressed	-81.210670	28.574636	
SJRWMD	SJ-0009		Gallows Lake	Ridge	Not Stressed	-81.899917	28.572997	

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District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SJRWMD	SJ-0010		Still Lake	Plains	Stressed	-81.096278	28.729281	
SJRWMD	SJ-0011	SJ-DT	W of Creel Street	Plains	Not Stressed	-81.234301	28.546109	
SJRWMD	SJ-0018	SJ-DV	Along Econlockhatchee Road, N of Powerlines	Plains	Not Stressed	-81.254217	28.503131	
SJRWMD	SJ-0019	SJ-DX	E of SR 551, S of Quail Pond Road	Plains	Stressed	-81.282834	28.499261	
SJRWMD	SJ-0021	SJ-DY	N of Hoffner, W of Semoran Boulevard	Plains	Stressed	-81.323643	28.481015	
SJRWMD	SJ-0023	SJ-HI1	Jack's Lake	Ridge	Stressed	-81.737161	28.550569	
SJRWMD	SJ-0024	SJ-HL	Lake Felter	Ridge	Stressed	-81.725906	28.517819	
SJRWMD	SJ-0028		Clear Lake	Plains	Not Stressed	-81.295411	28.669433	
SJRWMD	SJ-0029		Quail Pond	Plains	Not Stressed	-81.334925	28.670939	
SJRWMD	SJ-0030		Lake Hodge	Plains	Not Stressed	-81.321678	28.691311	
SJRWMD	SJ-0032		Lake Marion	Ridge	Not Stressed	-81.365997	28.679678	
SJRWMD	SJ-0033		Little Lake Georgia	Plains	Not Stressed	-81.248547	28.613025	
SJRWMD	SJ-0034		Lake Spier	Ridge	Not Stressed	-81.329653	28.579081	
SJRWMD	SJ-0035		Lake Berry	Ridge	Not Stressed	-81.332836	28.588636	
SJRWMD	SJ-0038		Lake Florence	Ridge	Not Stressed	-81.503653	28.570725	
SJRWMD	SJ-0048	SJ-ER	Lake Herrick	Ridge	Stressed	-81.485970	28.546516	
SJRWMD	SJ-0049	SJ-GC	Lake Lily	Ridge	Not Stressed	-81.535119	28.545106	
SJRWMD	SJ-0050	SJ-GB	Spring Lake	Ridge	Not Stressed	-81.520190	28.579513	
SJRWMD	SJ-0051	SJ-ET1	Lake Lucy	Ridge	Stressed	-81.496285	28.572747	
SJRWMD	SJ-0052	SJ-EU	Crooked Lake	Ridge	Stressed	-81.479914	28.593932	
SJRWMD	SJ-0053	SJ-KD	Bream Lake	Ridge	Stressed	-81.502587	28.616505	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SJRWMD	SJ-0055	SJ-CS1	Wetland N of Jamestown Boulevard Across From Town Way	Plains	Stressed	-81.412987	28.682599	
SJRWMD	SJ-0057	SJ-CX	Pearl Lake	Ridge	Not Stressed	-81.423835	28.662355	
SJRWMD	SJ-0058	SJ-CY	Mirror Lake	Plains	Not Stressed	-81.439949	28.668807	
SJRWMD	SJ-0059	SJ-CZ	Pond S of SR 436/Semoran Boulevard at Executive Park Court	Plains	Not Stressed	-81.446332	28.669161	
SJRWMD	SJ-0060	SJ-EY	Lake Jackson	Ridge	Not Stressed	-81.464944	28.667673	
SJRWMD	SJ-0061	SJ-EZ	Lake McCoy	Ridge	Not Stressed	-81.499793	28.687825	
SJRWMD	SJ-0062	SJ-FV	Buchan Pond	Ridge	Not Stressed	-81.516053	28.694499	
SJRWMD	SJ-0063	SJ-FS	Wolf Lake	Ridge	Stressed	-81.536044	28.726883	
SJRWMD	SJ-0064	SJ-FR	Lake Grassmere	Ridge	Not Stressed	-81.583073	28.718371	
SJRWMD	SJ-0065	SJ-FT	Lake Wilkins	Ridge	Stressed	-81.570095	28.707100	
SJRWMD	SJ-0066	SJ-FU	Lake Standish	Ridge	Stressed	-81.552964	28.699122	
SJRWMD	SJ-0067	SJ-FW	Heineger Lake	Ridge	Not Stressed	-81.548291	28.683764	
SJRWMD	SJ-0068	SJ-FY	Marshall Lake	Ridge	Not Stressed	-81.536550	28.676639	
SJRWMD	SJ-0071	SJ-EC	Lake Jean	Plains	Not Stressed	-81.277456	28.588340	
SJRWMD	SJ-0072	SJ-EE	Lake Susannah	Plains	Not Stressed	-81.326685	28.562677	
SJRWMD	SJ-0083		Secret Lake	Plains	Not Stressed	-81.327764	28.674678	
SJRWMD	SJ-0084	SJ-AR	Red Bug Lake Road at Dovera	Plains	Stressed	-81.242109	28.657847	
SJRWMD	SJ-0085	SJ-EN	Lake Lucien	Ridge	Not Stressed	-81.392999	28.628357	
SJRWMD	SJ-0086	SJ-EO	Lake Eve	Plains	Not Stressed	-81.425048	28.628925	
SJRWMD	SJ-0087		Lake Betty	Ridge	Not Stressed	-81.450769	28.637811	
SJRWMD	SJ-0088		Blue Lake	Ridge	Not Stressed	-81.466589	28.657678	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SJRWMD	SJ-0089	SJ-AD	S of Osprey Lakes Drive	Plains	Stressed	-81.119683	28.651250	
SJRWMD	SJ-0090		S of 419 East of Twin Rivers	Plains	Not Stressed	-81.159283	28.65125	
SJRWMD	SJ-0091		S of 419 Publix Commercial Plaza	Plains	Not Stressed	-81.138808	28.645356	
SJRWMD	SJ-0092	SJ-AE	Lake Catherine	Plains	Not Stressed	-81.126883	28.640683	
SJRWMD	SJ-0095	SJ-AV	Eagle Boulevard Near Dodd Road	Plains	Stressed	-81.282406	28.657699	
SJRWMD	SJ-0097		Marsh S of Lake Howell Lane	Plains	Not Stressed	-81.306994	28.632211	
SJRWMD	SJ-0098		Newberryport Avenue	Ridge	Stressed	-81.360758	28.674289	
SJRWMD	SJ-0099		Sunnytown Park	Ridge	Not Stressed	-81.344756	28.666814	
SJRWMD	SJ-0100		Maitland Community Park	Ridge	Stressed	-81.348867	28.639044	
SJRWMD	SJ-0103	SJ-GD	Lake Beulah	Ridge	Not Stressed	-81.563417	28.535486	
SJRWMD	SJ-0104	SJ-GE	Lake Reaves	Ridge	Not Stressed	-81.563581	28.527316	
SJRWMD	SJ-0105	SJ-GF	Sunset Lakes of Windermere	Ridge	Not Stressed	-81.575446	28.508779	
SJRWMD	SJ-0111	SJ-HB	Lake Montgomery	Plains	Stressed	-81.774594	28.645278	
SJRWMD	SJ-0112	SJ-HC	N of Wilson Lake Parkway	Plains	Stressed	-81.790450	28.627944	
SJRWMD	SJ-0113	SJ-HD	Lake Merritt, Schoolhouse Lake	Plains	Stressed	-81.772253	28.625534	
SJRWMD	SJ-0114	SJ-HF	Grassy Lake	Ridge	Not Stressed	-81.746686	28.593224	
SJRWMD	SJ-0115	SJ-HH	Plum Lake	Ridge	Stressed	-81.734339	28.579484	
SJRWMD	SJ-0116	SJ-HJ	Crystal Lake	Ridge	Not Stressed	-81.761107	28.552424	
SJRWMD	SJ-0117	SJ-HX	N of CR 565A	Plains	Stressed	-81.806031	28.571156	
SJRWMD	SJ-0118	SJ-HK	Lost Lake	Ridge	Stressed	-81.718196	28.534995	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SJRWMD	SJ-0119	SJ-GN	Blacks Still Lake	Ridge	Stressed	-81.704766	28.572279	
SJRWMD	SJ-0121		Econlockhatc hee River Canoe Launch CR 419	Plains	Not Stressed	-81.169628	28.655728	
SJRWMD	SJ-0122		Econlockhatc hee River Barr Street Trailhead	Plains	Not Stressed	-81.156183	28.685183	
SJRWMD	SJ-0123	SJ-KM	Well 13T, Cocoa Wellfield	Plains	Not Stressed	-81.015044	28.395193	
SJRWMD	SJ-0124	SJ-KL	Wetland E of Well 12T, Cocoa Wellfield	Plains	Not Stressed	-81.022227	28.395128	
SJRWMD	SJ-0125	SJ-KK	Wetland 12T1, Cocoa Wellfield	Plains	Not Stressed	-81.025023	28.394170	
SJRWMD	SJ-0128	SJ-KI	Well 5T, Cocoa Wellfield	Plains	Not Stressed	-81.070609	28.403397	
SJRWMD	SJ-0137	SJ-HR	Twin Oaks MHP	Ridge	Not Stressed	-81.688860	28.367959	
SJRWMD	SJ-0138	SJ-JC	N Side of CR 561	Ridge	Stressed	-81.819232	28.427372	
SJRWMD	SJ-0141	SJ-KC	Hartwood Marsh Road Powerline	Ridge	Not Stressed	-81.679394	28.516815	
SJRWMD	SJ-0142	SJ-HM2	Flat Lake North	Ridge	Not Stressed	-81.671258	28.491917	
SJRWMD	SJ-0152	SJ-DR	E of Windsorgate Road, W of Northampton Road	Plains	Not Stressed	-81.183788	28.517035	
SJRWMD	SJ-0154	SJ-ED	E of SR 436, W of Forsyth Road	Plains	Stressed	-81.300988	28.588944	
SJRWMD	SJ-0156	SJ-BT	Lake Seminary	Ridge	Not Stressed	-81.358267	28.643573	
SJRWMD	SJ-0157	SJ-EX	Lake Pleasant	Ridge	Stressed	-81.481470	28.657798	
SJRWMD	SJ-0158	SJ-GG	Fern Bayhead	Ridge	Stressed	-81.609169	28.513219	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SJRWMD	SJ-0159	SJ-GQ	S of Florida Turnpike, N of SR 50	Ridge	Stressed	-81.691221	28.550676	
SJRWMD	SJ-0160	SJ-GM	Doll Lake	Ridge	Not Stressed	-81.697789	28.576326	
SJRWMD	SJ-0161	SJ-KH2	Lake Glen	Plains	Stressed	-81.372778	28.453176	
SJRWMD	SJ-0162	SJ-KF	Lake Emma	Plains	Stressed	-81.352599	28.760704	
SJRWMD	SJ-0163	SJ-CN	S of 46, W of Lake Markham	Plains	Not Stressed	-81.393253	28.812655	
SJRWMD	SJ-0164	SJ-FL	N of Boch Road, W of Plymouth Sorrento Road	Ridge	Not Stressed	-81.571647	28.782743	
SJRWMD	SJ-0165	SJ-KA	Round Lake Road N	Ridge	Stressed	-81.594627	28.740392	
SJRWMD	SJ-0166	SJ-KB	Round Lake Road S	Ridge	Stressed	-81.595821	28.739527	
SJRWMD	SJ-0167	SJ-FQ	Lake Maggiore	Ridge	Not Stressed	-81.614744	28.765387	
SJRWMD	SJ-0168	SJ-GI	Montverde-Ridgewood Avenue Near Bay Avenue	Plains	Stressed	-81.668668	28.594794	
SJRWMD	SJ-0169	SJ-QC	Trout Lake	Ridge	Not Stressed	-81.712212	28.447999	Moved from Class 1 wetlands dataset; water level data stopped being collected by USGS in 2019
SJRWMD	SJ-0170	SJ-QA	Church Lake	Ridge	Stressed	-81.841699	28.644937	Moved from Class 1 wetlands dataset; water level data stopped being collected by USGS in 2019

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SJRWMD	SJ-AJ	SJ-AJ	Lake Gem	Plains	Not Stressed	-81.207313	28.645854	Moved from Class 1 wetlands dataset; confounded and water level data anomalous
SJRWMD	SJ-LH	SJ-LH	Island Lake	Plains	Not Stressed	-81.363091	28.696596	Moved from Class 1 wetlands dataset; water level data anomalous since includes both a stressed and non-stressed period
Southwest Florida Water Management District Sites								
SWFWMD	DMIT-2		Alston New Cypress	Plains	Not Stressed	-82.089646	28.1856762	
SWFWMD	DMIT-43		Lake Annie (Polk)	Ridge	Not Stressed	-81.602300	28.0001000	
SWFWMD	DMIT-47		Lake Easy	Ridge	Not Stressed	-81.556500	27.8556000	
SWFWMD	DMIT-63		Lake Wales Ridge State Forest Arbuckle 1	Ridge	Not Stressed	-81.480578	27.6877330	
SWFWMD	DMIT-64		Lake Wales Ridge State Forest Arbuckle 2	Ridge	Not Stressed	-81.471982	27.6960540	
SWFWMD	DMIT-65		Lake Wales Ridge State Forest Walk in the Water 1	Ridge	Not Stressed	-81.474015	27.7826290	
SWFWMD	DMIT-66		Lake Wales Ridge State Forest Walk in the Water 2	Ridge	Not Stressed	-81.471605	27.8038330	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SWFWMD	DMIT-68		Lake Wales Ridge WEA 2	Ridge	Stressed	-81.595390	27.9231500	
SWFWMD	DMIT-102		Thornhill Ranch	Ridge	Not Stressed	-81.655695	28.210436	Due to existing well cluster, may have enough data to be moved to Class 1 dataset for next RWSP
SWFWMD	DMIT-134		Alafia River Reserve	Plains	Not Stressed	-82.099113	27.884819	
SWFWMD	DMIT-135		Bonnet Lake Marsh	Plains	Not Stressed	-81.660400	28.156200	
SWFWMD	DMIT-137		Crooked Lake West 1	Ridge	Not Stressed	-81.63666	27.81041	
SWFWMD	DMIT-138		Crooked Lake West 2	Ridge	Stressed	-81.60222	27.81767	
SWFWMD	DMIT-139		Crooked Lake WEA 1	Plains	Not Stressed	-81.608340	27.7369500	
SWFWMD	DMIT-140		Crooked Lake WEA 2	Plains	Not Stressed	-81.610506	27.7438140	
SWFWMD	DMIT-141	SW-C1	Gator Creek Reserve 1	Plains	Stressed	-81.984671	28.177670	
SWFWMD	DMIT-142		Gator Creek Reserve 2	Plains	Not Stressed	-81.962702	28.1830592	
SWFWMD	DMIT-143		Green Swamp Upper Withlacoochee	Plains	Not Stressed	-81.918611	28.3309205	
SWFWMD	DMIT-144		Hampton Colt Creek	Plains	Not Stressed	-82.006681	28.2933211	
SWFWMD	DMIT-145		Hampton Gator Creek	Plains	Not Stressed	-82.001399	28.2494841	
SWFWMD	DMIT-146		Hilochee Osprey West	Plains	Not Stressed	-81.709783	28.1922841	
SWFWMD	DMIT-147		Lake Marie	Ridge	Not Stressed	-81.608239	28.0197600	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SWFWMD	DMIT-148		Lake Marion Creek Scrub	Ridge	Not Stressed	-81.560989	28.1539524	Due to existing well cluster, may have enough data to be moved to Class 1 dataset for next RWSP
SWFWMD	DMIT-149		Lake Maude	Ridge	Not Stressed	-81.721067	28.0398350	
SWFWMD	DMIT-150		Lake Ned	Ridge	Not Stressed	-81.669680	27.9961360	
SWFWMD	DMIT-152		Richloam Upper Little Withlacoochee	Plains	Not Stressed	-81.928795	28.4579585	Due to existing well cluster, may have enough data to be moved to Class 1 dataset for next RWSP
SWFWMD	DMIT-153		Saddle Blanket Scrub 1	Ridge	Not Stressed	-81.580240	27.6632100	
SWFWMD	DMIT-155		Saddle Blanket Scrub 3	Ridge	Not Stressed	-81.574136	27.6695150	
SWFWMD	DMIT-156		Pasture Reserve 1	Plains	Not Stressed	-81.878479	28.4888043	
SWFWMD	DMIT-157		Pasture Reserve 2	Plains	Not Stressed	-81.876492	28.4906168	
SWFWMD	DMIT-158		Pasture Reserve 3	Plains	Not Stressed	-81.870482	28.4904008	
SWFWMD	DMIT-159		Tiger Creek 1	Ridge	Not Stressed	-81.483560	27.8080330	
SWFWMD	DMIT-160	SW-H1	Tiger Creek 2	Ridge	Not Stressed	-81.478144	27.811083	
SWFWMD	DMIT-199		Hickory Lake	Ridge	Not Stressed	-81.540338	27.6992509	
SWFWMD	Old DMIT-198		Bartow Airport	Plains	Not Stressed	-81.794570	27.943710	
SWFWMD	SW-AB	SW-AB	Near Teneroc Transportation Facility	Plains	Not Stressed	-81.864391	28.071341	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SWFWMD	SW-AC	SW-AC	Near County Landfill	Plains	Not Stressed	-81.835875	28.014375	
SWFWMD	SW-AE	SW-AE	CRUSA T9	Plains	Not Stressed	-81.795016	27.963582	
SWFWMD	SW-AI	SW-AI	W of Lake Weohyakapka and Tiger Creek	Ridge	Stressed	-81.463245	27.812075	
SWFWMD	SW-AK	SW-AK	On Lake Wales Ridge SW of Lake Pierce	Ridge	Not Stressed	-81.552821	27.951547	Site not accessible, relocated to a similar marsh just north of original site that is adjacent to county park
SWFWMD	SW-AL	SW-AL	On Lake Wales Ridge SW of Lake Pierce	Ridge	Not Stressed	-81.540492	27.942996	
SWFWMD	SW-AN	SW-AN	N Lake Pierce	Ridge	Not Stressed	-81.518390	28.028997	
SWFWMD	SW-AO	SW-AO	E of US 17/US 92	Ridge	Not Stressed	-81.598922	28.143506	
SWFWMD	SW-AQ	SW-AQ	Along Loughman Road (CR 54)	Ridge	Not Stressed	-81.605705	28.247007	
SWFWMD	SW-AR	SW-AR	S of I-4 Loughman Road Interchange	Ridge	Not Stressed	-81.618437	28.248014	
SWFWMD	SW-AS	SW-AS	Along Loughman Road	Ridge	Stressed	-81.613216	28.251085	
SWFWMD	SW-AT3	SW-AT3	S of Loughman Road	Ridge	Not Stressed	-81.636164	28.255501	

Table 5. Site descriptions of the 342 Class 2 wetlands that were included in the analysis in support of the 2025 CFWI RWSP.

District	EM Working Group ID	Former CFCA/EMT ID	Site Name	Wetland Type	Stress Status	Longitude	Latitude	Comments
SWFWMD	SW-CC	SW-CC	Hilochee	Plains	Not Stressed	-81.739907	28.185078	Was selected as DMIT site, but removed because I-4 construction took out portion of wetland on S side
SWFWMD	SW-D1	SW-D1	Little Lake Dinner Wetland	Plains	Stressed	-81.790673	27.998556	
SWFWMD	SW-EE	SW-EE	NERUSA - Pamplin Site	Ridge	Not Stressed	-81.633575	28.246105	
SWFWMD	SW-F1	SW-F1	Dick's Bros. Wetland	Ridge	Not Stressed	-81.629312	28.062028	
SWFWMD	SW-FF	SW-FF	NERUSA - Loma Linda Well	Ridge	Not Stressed	-81.608767	28.238525	
SWFWMD	SW-GG	SW-GG	Standard Mine	Ridge	Not Stressed	-81.563668	28.215180	
SWFWMD	SW-H1A	SW-H1A	Tiger Creek Preserve-TNC	Ridge	Not Stressed	-81.483670	27.824210	
SWFWMD	SW-LE	SW-LE	Cypress Creek 199, W17 Sentry Wetland	Plains	Not Stressed	-82.394478	28.286128	
SWFWMD	SW-LK	SW-LK	Green Swamp 5, 302	Plains	Not Stressed	-82.018658	28.368859	
SWFWMD	SW-N7		Eagle Lake	Ridge	Not Stressed	-81.765893	27.9861557	
SWFWMD	SW-N8		Lake McLeod	Ridge	Not Stressed	-81.753362	27.853656	
SWFWMD	SW-QL	SW-QL	Lake Walker	Ridge	Not Stressed	-81.717885	27.853656	
SWFWMD	SW-RR	SW-RR	Lake Wales Ridge State Forest	Ridge	Not Stressed	-81.470358	27.780032	
SWFWMD	SW-UU	SW-UU	Trout Lake	Ridge	Not Stressed	-81.508392	27.653502	

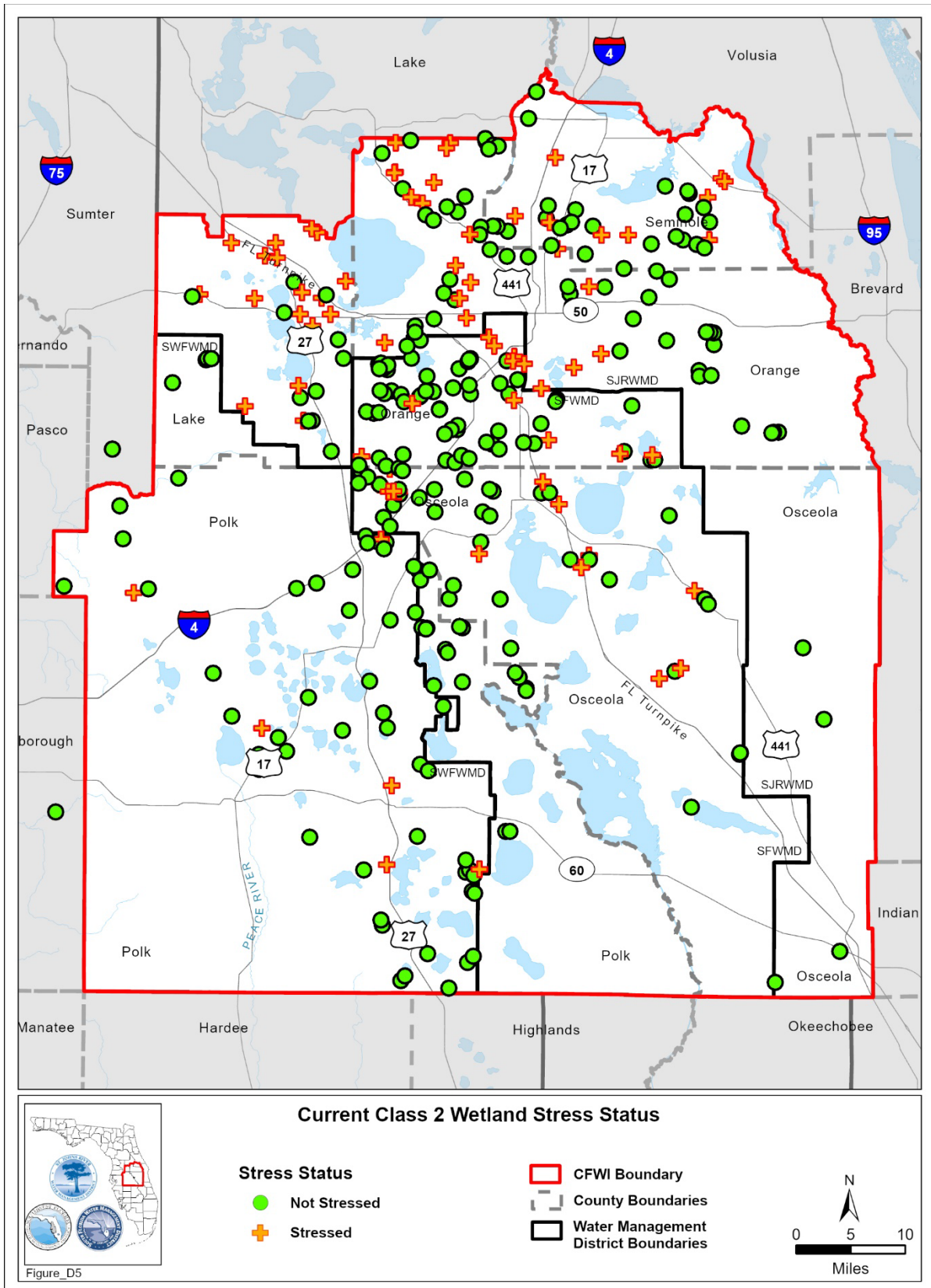


Figure 3. Location and current stress status of the Class 2 wetlands in the CFWI Planning Area included in the analysis for the 2025 CFWI RWSP.

5.0 CLASS 3 WETLANDS

Since the EM working group continued to meet after the 2020 RWSP was completed, there was adequate time to conduct a thorough review of the GIS layer of the Class 3 wetlands to ensure the accuracy of the locations and acreages of the primarily groundwater-dominated Plains and Ridge wetlands of unknown stress status located within the CFWI Planning Area. The locations of the thousands of Class 3 wetlands included in the analysis in support of the 2025 CFWI RWSP are shown in **Figure 4**.

6.0 DETERMINATION OF CLASS 1 WETLANDS WATER LEVEL DATA PERIOD OF RECORD AND HYDROLOGIC INDEX DEVELOPMENT FOR WETLANDS ANALYSIS

For the analysis in support of the 2015 CFWI RWSP, the EMT used Class 1 wetlands water level data from 2006 through 2011 (a six-year period of record) to compute a statistical relationship between observed stress and observed water level variations for the wetlands analysis (CFWI EMT 2013). The EMT was interested in expanding the period of record for the analysis in support of the 2020 update to the CFWI RWSP. In this section, we briefly describe the determination of the period of record of Class 1 wetlands water level data and the development of the hydrologic index (θ) for the wetlands analysis; additional details are provided in **Appendix F**.

To determine the period of record to use for the analysis without causing the dataset to become non-representative, available water level data for each Class 1 wetland from 2006 through 2024 were organized, preprocessed, and analyzed. This involved reformatting the available data, as well as eliminating redundant or non-relevant data and creating datasets that were in a consistent form. For most wetlands included in the dataset, only one measuring device was available. However, if a site had multiple wells and staff gages, all the data were compared, and the most representative measuring device or the device with the most complete dataset was selected. If a Class 1 wetland had multiple devices and also had been selected as a DMIT monitoring site, the water level data from the upland well (which is typically located immediately adjacent to the wetland) was used to be consistent with the DMIT monitoring methodology and future analyses. **Table 6** lists the source of the water level data for each Class 1 wetland included in the dataset.

Historic water levels for each Class 1 wetland from 2006 (if available) through 2024 were summarized; **Figures 5** through **8** present the water level data from 2006 through 2024 for the stressed and unstressed Plains and Ridge Class 1 wetlands. The 80th percentiles or P80s (80 percent of the water level readings exceed the P80) were calculated for each year-range permutation, for each Class 1 wetland. Permutations were defined as ranges of consecutive years within 2006 and 2022 with a minimum of 5 years included.

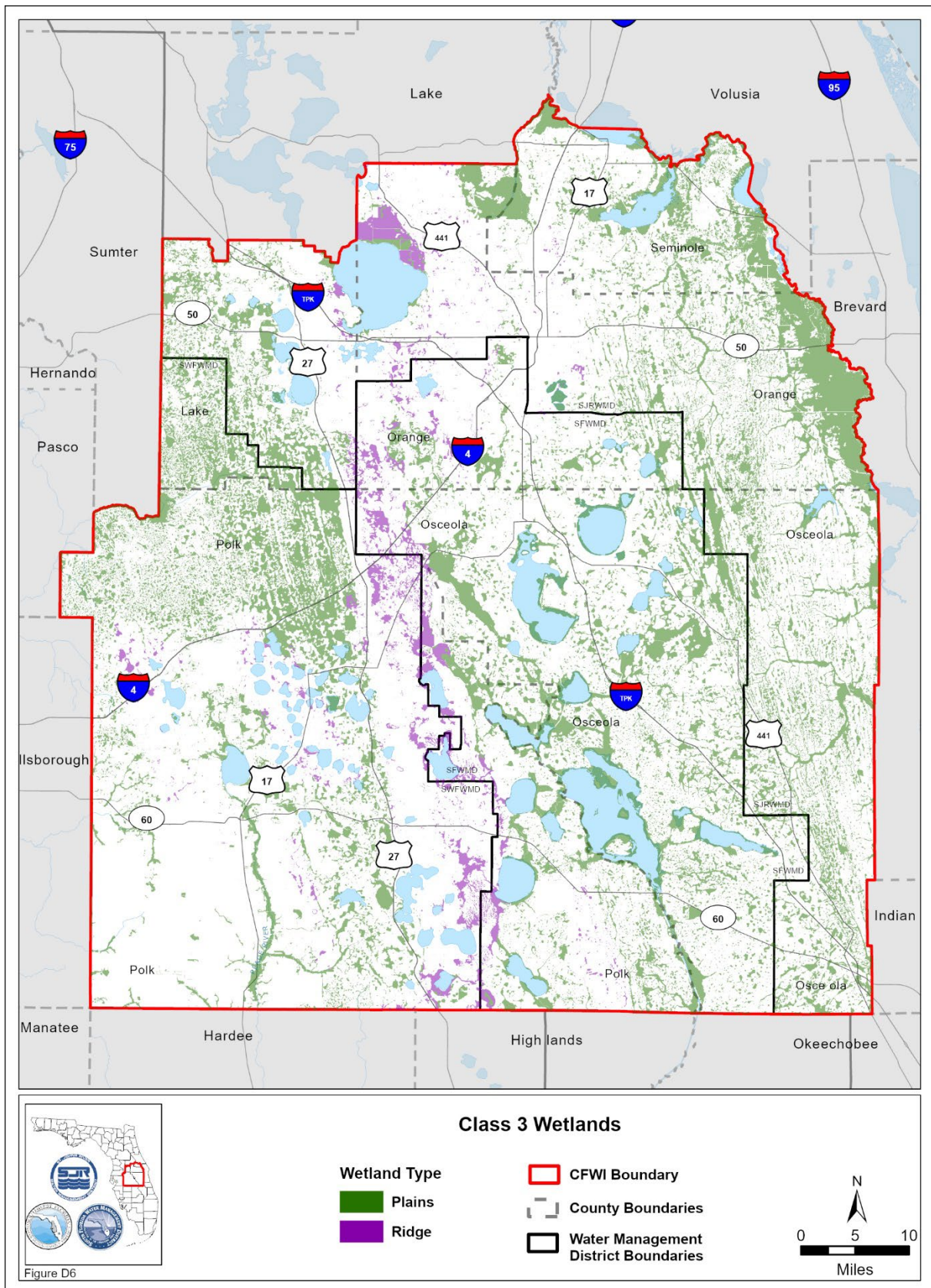


Figure 4. Location of Class 3 wetlands in the CFWI Planning Area.

Table 6. Hydrologic information for the 51 Class 1 wetlands included in the EM working group wetlands analysis dataset.

EM Working Group ID	Site Name	Physio-graphic Region	Water Level Data Device Type and ID	P80 (2015-2022) (ft NAVD88)	Wetland Edge Reference Elevation (ft NAVD88)	Hydrologic Index (θ) (ft)	Stressed	Hydro Altered
DMIT-131	Tibet Butler	Plains	Upland Well, TB2_GW1	98.53	100.70	2.17	No	No
DMIT-190	Walker Ranch - WR11	Plains	Wetland Well, WR11_GW1	64.81	66.60	1.79	No	No
DMIT-191	Walker Ranch - WR9	Plains	Wetland Well, WR11_GW1	64.69	67.29	2.60	No	No
DMIT-35	Intercession City	Plains	Upland Well, INRCTY (IC-SAS)	64.00	66.50	2.50	No	No
SF-WT	Split Oak	Plains	Upland Well, ENV-SITE-30-PZ-1	64.87	68.45	3.58	Yes	No
SF-XX	Walker Ranch - WR6	Plains	Wetland Well, WR11_GW1	61.35	63.42	2.07	No	No
SJ-0127	City of Cocoa, Well 9T	Plains	Upland Well, 243977	72.61	73.00	0.39	No	No
SJ-AI	Chapman Marsh	Plains	Upland Well, 244219	63.98	65.89	1.91	Yes	No
SJ-AW	Red Bug Lake	Plains	Upland Well, 244201	66.13	68.55	2.42	Yes	No
SJ-LA	Unnamed Cypress	Plains	Upland Well, 244195	67.91	69.35	1.44	No	No
SJ-LC	Boggy Marsh	Plains	Upland Well, 3117003	115.97	117.96	1.99	Yes	No
SJ-LD	Hopkins Prairie	Ridge	Upland Well, 2401320	21.45	26.49	5.04	No	No
SJ-LE	Lake Avalon	Ridge	Upland Well, 15243091	86.88	95.80	8.92	Yes	No
SJ-LF	Lake Apsawa	Ridge	Upland Well, 2930258	81.63	86.76	5.13	Yes	No
SJ-LI	Lake Sylvan	Plains	Upland Well, 30342852	36.47	42.01	5.54	Yes	No
SJ-LJ	Lake Louisa	Ridge	Upland Well, 3980647	95.27	96.42	1.15	Yes	No

Table 6. Hydrologic information for the 51 Class 1 wetlands included in the EM working group wetlands analysis dataset.

EM Working Group ID	Site Name	Physio-graphic Region	Water Level Data Device Type and ID	P80 (2015-2022) (ft NAVD88)	Wetland Edge Reference Elevation (ft NAVD88)	Hydrologic Index (θ) (ft)	Stressed	Hydro Altered
SJ-QB	Johns Lake	Ridge	Upland Well, 3840562	93.80	96.54	2.74	No	No
SJ-QD	Long Lake	Ridge	Upland Well, 244198	61.62	67.88	6.26	Yes	No
DMIT-1	Alston Bay	Plains	Upland Well, 18838	96.39	98.40	2.01	No	No
DMIT-11	NE Lakeland Wellfield G	Plains	Upland Well, DID 130 (17557), WUP 4912	130.74	134.32	3.58	No	Yes (But Ditches Filled)
DMIT-12	NE Lakeland Wellfield J	Plains	Upland Well, DID 134 (17558), WUP 4912	132.48	134.16	1.68	No	Yes (But Ditches Filled)
DMIT-13	NE Lakeland Wellfield K	Plains	Upland Well, DID 136 (17688), WUP 4912	130.74	134.43	3.69	No	Yes (But Ditches Filled)
DMIT-136	Crooked Lake (Monitored via Crooked Lake Prairie)	Ridge	Staff Gage, 23857 (When Enough Data, Will be Replaced by New Upland Well)	116.46	120.26	3.80	No	Yes
DMIT-154	Saddle Blanket Scrub 2	Ridge	Upland Well, 702384	117.09	120.20	3.11	No	No
DMIT-161	Van Fleet 2	Plains	Upland Well, 623026	124.40	127.21	2.81	No	No
DMIT-28	Green Swamp 4	Plains	Upland Well, 17727	100.04	102.01	1.97	No	No
DMIT-29	Green Swamp 7	Plains	Wetland Well, 17707	104.80	105.95	1.15	No	No
DMIT-30	Green Swamp Bay	Plains	Upland Well, 17505	98.78	100.83	2.05	No	No
SW-N8	Lake Wales Ridge WEA 1	Ridge	Upland Well, 25240	121.57	129.98	8.41	Yes	No

Table 6. Hydrologic information for the 51 Class 1 wetlands included in the EM working group wetlands analysis dataset.

EM Working Group ID	Site Name	Physio-graphic Region	Water Level Data Device Type and ID	P80 (2015-2022) (ft NAVD88)	Wetland Edge Reference Elevation (ft NAVD88)	Hydrologic Index (θ) (ft)	Stressed	Hydro Altered
SW-AF	Davenport P1	Plains	Staff Gage, DID 28 and DID 38, WUP 5750	111.16	114.77	3.61	No	No
SW-JJ	Lake Garfield	Ridge	Staff Gage, 24818	100.52	104.63	4.11	No	Yes
SW-LF	Cypress Creek 190 E Marsh	Plains	Upland Well, 18945	67.57	71.23	3.66	No	No
SW-LG	Cypress Creek 223 B W46	Plains	Upland Well, 18451	63.03	68.11	5.08	Yes	No
SW-LH	Cypress Creek 211 W33	Plains	Upland Well, 638835	66.60	69.97	3.37	No	No
SW-LI	Green Swamp Marsh 304	Plains	Upland Well, 17585	90.92	92.88	1.96	No	No
SW-LJ	Green Swamp 6, 303	Plains	Upland Well, 17595	95.01	97.25	2.24	No	No
SW-LM	Green Swamp 1, 298	Plains	Upland Well, 17502	97.08	99.81	2.73	No	No
SW-MM	Lake Wales	Ridge	Staff Gage, 25351	104.11	110.38	6.27	No	No
SW-QA	Big Gum Lake	Ridge	Staff Gage, 25237	92.53	95.17	2.64	No	Yes
SW-QB	Bonnet Lake (Highlands)	Ridge	Staff Gage, 23799	88.37	90.89	2.52	No	No
SW-QC	Buck Lake (Highlands)	Ridge	Staff Gage, 25405	91.21	93.63	2.42	No	No
SW-QD	Gator Lake	Ridge	Staff Gage, 24814	130.13	131.22	1.09	No	No
SW-QE	Lake Annie (Highlands)	Ridge	Staff Gage, 23830	109.10	110.29	1.19	No	No
SW-QF	Lake Apthorpe	Ridge	Staff Gage, 25460	68.44	70.10	1.66	No	Yes

Table 6. Hydrologic information for the 51 Class 1 wetlands included in the EM working group wetlands analysis dataset.

EM Working Group ID	Site Name	Physio-graphic Region	Water Level Data Device Type and ID	P80 (2015-2022) (ft NAVD88)	Wetland Edge Reference Elevation (ft NAVD88)	Hydrologic Index (θ) (ft)	Stressed	Hydro Altered
SW-QH	Lake Leonore	Ridge	Staff Gage, 23850	84.80	85.17	0.37	No	No
SW-QI	Lake Placid	Ridge	Staff Gage, 25440	90.52	93.79	3.27	No	No
SW-QJ	Lake Streety	Ridge	Staff Gage, 23766	103.11	105.06	1.95	No	No
SW-QK	Lake Van	Ridge	Staff Gage, 17662	131.99	133.31	1.32	No	No
SW-QL	Lake Walker	Ridge	Staff Gage, 24816	136.87	149.17	12.30	Yes	No
SW-QM	Polecat Lake	Ridge	Staff Gage, 24812	139.99	143.52	3.53	No	No
SW-QN	Surveyors Lake	Ridge	Staff Gage, 24810	130.22	132.44	2.22	No	No
SW-QO	Parks Lake	Ridge	Staff Gage, 25233	99.24	101.86	2.62	No	No

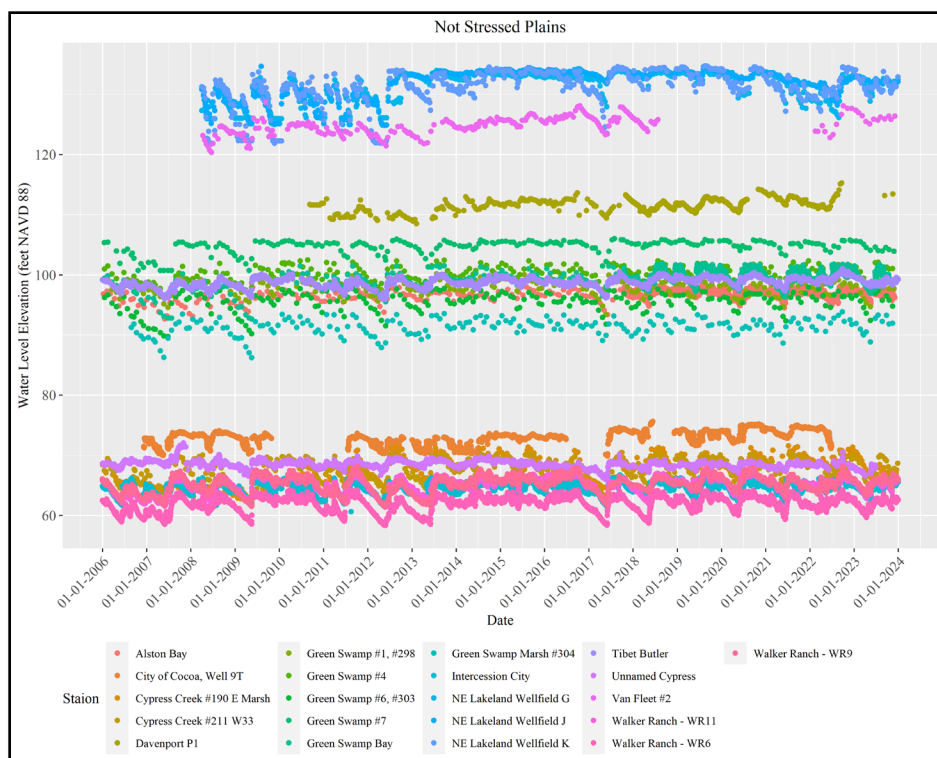


Figure 5. Water level data ranged from 2006 through 2024 for the not stressed Plains Class 1 wetlands included in the EM group wetlands analysis dataset.

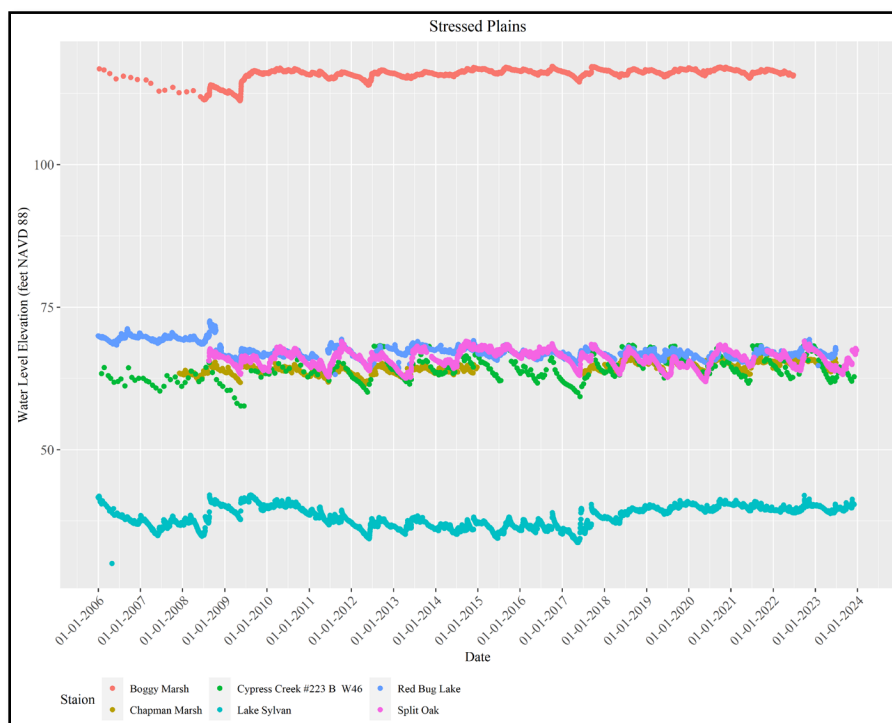


Figure 6. Water level data ranged from 2006 through 2024 for the stressed Plains Class 1 wetlands included in the EMT wetlands analysis dataset.

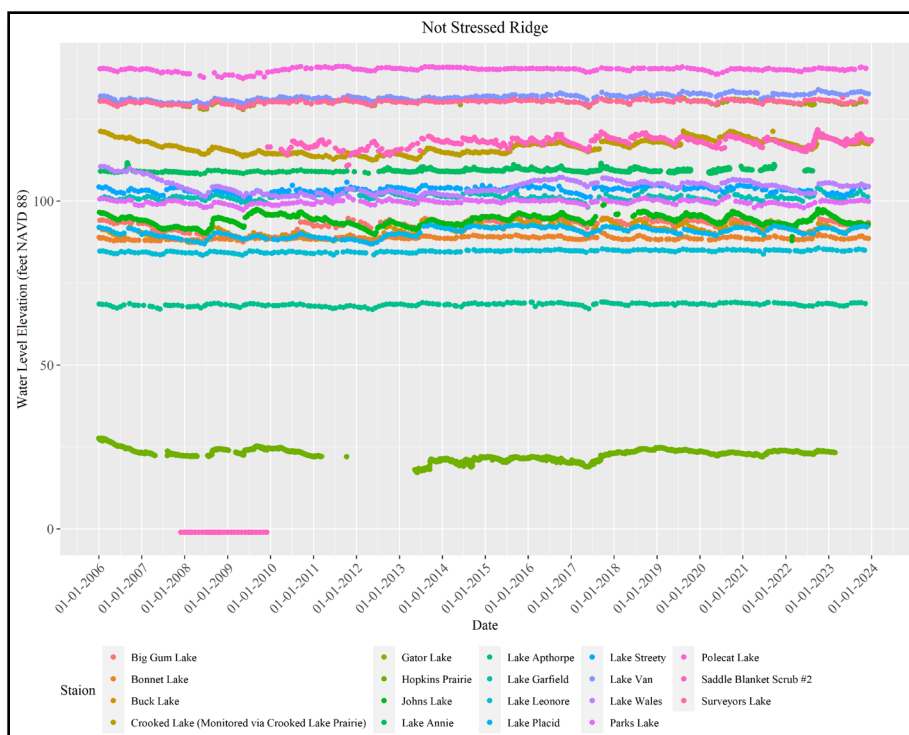


Figure 7. Water level data ranged from 2006 through 2024 for the not stressed Ridge Class 1 wetlands included in the EM group wetlands analysis dataset.

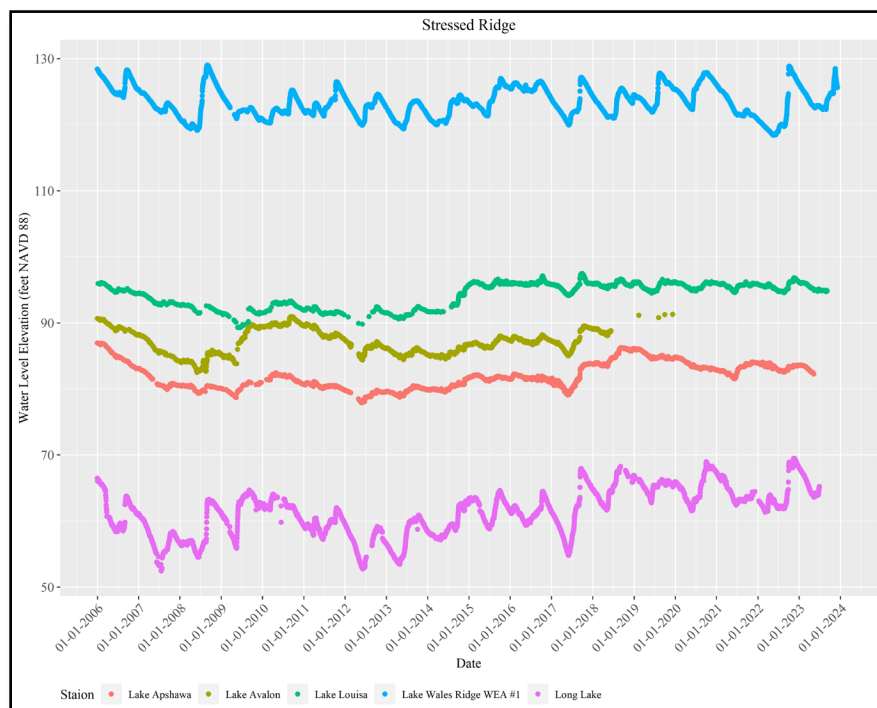


Figure 8. Water level data ranged from 2006 through 2024 for the stressed Ridge Class 1 wetlands included in the EM group wetlands analysis dataset.

To identify the “optimal” period of record, a new R script, `Optimal_RNG_finder.R`, was developed. This script references the number of years, number of observations, Shapiro-Wilk Normality Test results, and the standard deviations, calculated from the water level observations in each permutation and for each wetland. There were 78 date ranges for each wetland. Consequently, the previously mentioned values were referenced to rank each year-range permutation for each wetland as follows: primarily by ascending standard deviation; secondarily, descending total number of years; tertiary, descending number of observations; and quaternary, descending Shapiro-Wilk Normality Test results, such that the optimal year-ranges for each wetland were closer to the first position. The sum of rankings for each year-range permutation, across all wetlands, was then used to evaluate the optimal year-range, with the smallest sum representing the ideal target. Line charts were developed for each of the 78 permutations and for each wetland, and the top date-range targets were reviewed. These charts helped determine that the most current data captured both wet and dry years and were representative of expected hydrologic conditions.

For each of the 51 Class 1 wetlands included in the dataset, a hydrologic index (θ) was calculated by subtracting the P80 value from the wetland edge elevation (**Table 6**). **Figures 9 through 12** display the centered (Reference Edge Elevation subtracted from observed water levels) variations from the land surface elevation and provide a visual of the hydrologic index over time.

Previous work by EM groups demonstrated that a probability of hydrologic stress occurring in wetlands could be related to the hydrologic index or θ (CFWI EMT 2013, 2020). The θ value distributions were reasonably approximated by the normal distribution using the Shapiro-Wilk Normality Test, as well as charts, to help identify outliers. The Class 1 wetland statistics (e.g., mean, standard deviation, kurtosis, skew) for each wetland group (stressed and not stressed) and each physiographic province (Plains and Ridge) were evaluated for normal distributions. As mentioned earlier, a number of Class 1 wetlands were determined to be not representative of groundwater-dominated wetlands within the CFWI planning area during this review and were moved to the Class 2 wetlands dataset (**Table 2**).

Ultimately, 2015-2022, an eight-year period of record, was selected as the optimal period of record (**Table 6**). This eight-year period was chosen as the best compromise between longer periods of record for fewer sites vs. shorter periods of record for more numerous sites, while still yielding sets of hydrologic indices (θ) which approximated normal distributions.

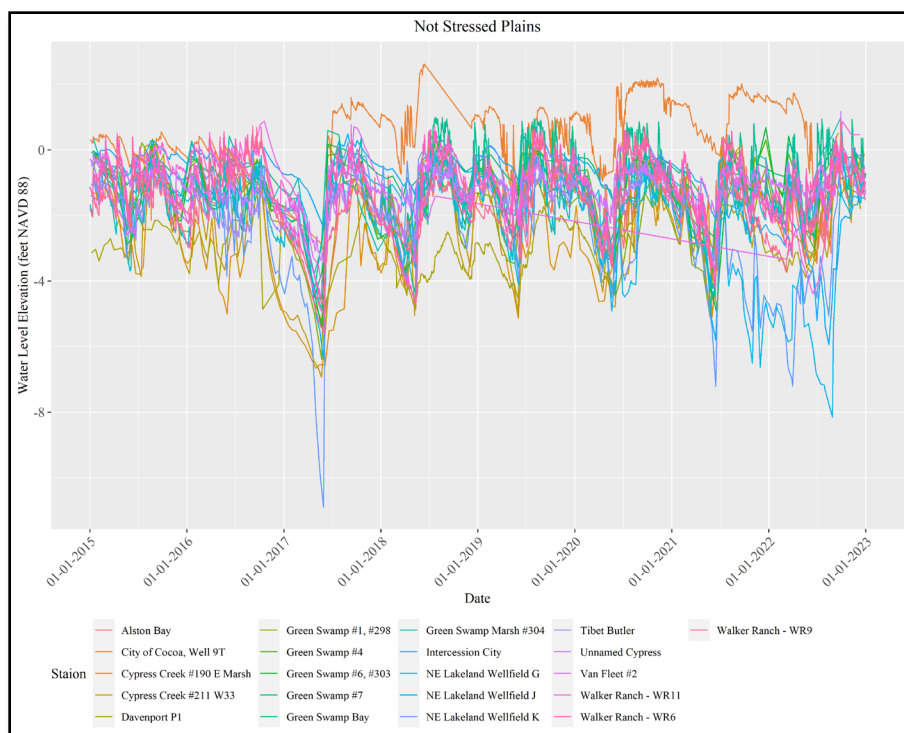


Figure 9. Centered water levels (Reference Edge Elevation - observed water levels) from 2015 through 2022 for the not stressed Plains Class 1 wetlands included in the EM group wetlands analysis dataset.

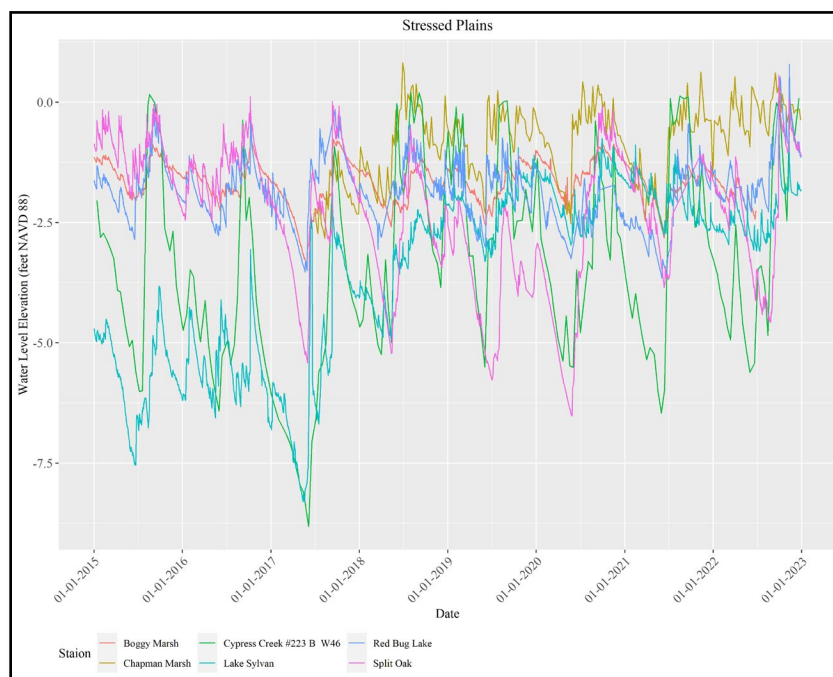


Figure 10. Centered water levels (Reference Edge Elevation - observed water levels) from 2015 through 2022 for the stressed Plains Class 1 wetlands included in the EM group wetlands analysis dataset.

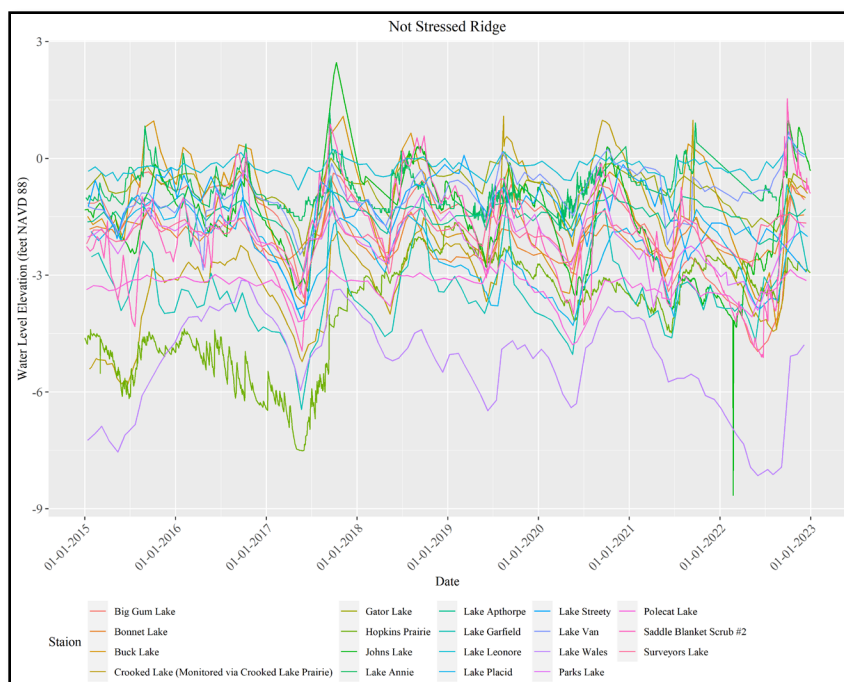


Figure 11. Centered water levels (Reference Edge Elevation - observed water levels) from 2015 through 2022 for the not stressed Ridge Class 1 wetlands included in the EM group wetlands analysis dataset.



Figure 12. Centered water levels (Reference Edge Elevation - observed water levels) from 2015 through 2022 for the stressed Ridge Class 1 wetlands included in the EM group wetlands analysis dataset.

6.1 Period-of-Record (2015-2022) Rainfall in the CFWI Planning Area

For comparison to the Class 1 wetlands water level data, rainfall data from 2015 through 2022 were summarized from seven representative locations in the CFWI Planning Area (**Table 7**). The average rainfall across all sites and years was just over 52 inches. The lowest annual average value recorded was about 31 inches at the Mountain Lake NWS station in 2021, while the highest average rainfall recorded was almost 72 inches at Mountain Lake NWS in 2015 (**Figure 13**).

The seasonal variation in monthly rainfall at each of the seven locations is shown in **Figure 14**; the highest values typically occurred during the wet season months of June through September. For the period of record, the highest monthly rainfall for the seven stations typically occurred in September 2022 as a result of Hurricane Ian passing over Central Florida.

Table 7. Rainfall monitoring stations examined in the CFWI Planning Area

Site ID	Site Name	Longitude	Latitude	District
15323/SHING.RG	Shingle Creek Swamp Rain Gauge	-81.450344	28.377505	SFWMD
FF846/WRWX	Walker Ranch Weather Station (Disney Wilderness Preserve)	-81.399830	28.048727	SFWMD
28765084	Lake Louisa State Park at Clermont	-81.723000	28.455000	SJRWMD
USW00012854	Orlando Sanford Airport	-81.24356	28.77951	SJRWMD
USW00012815	Orlando International Airport	-81.325000	28.433900	SJRWMD
25147	Mountain Lake NWS	-81.599236	27.938631	SWFWMD
17350	ROMP 88 Rock Ridge	-81.906739	28.309450	SWFWMD

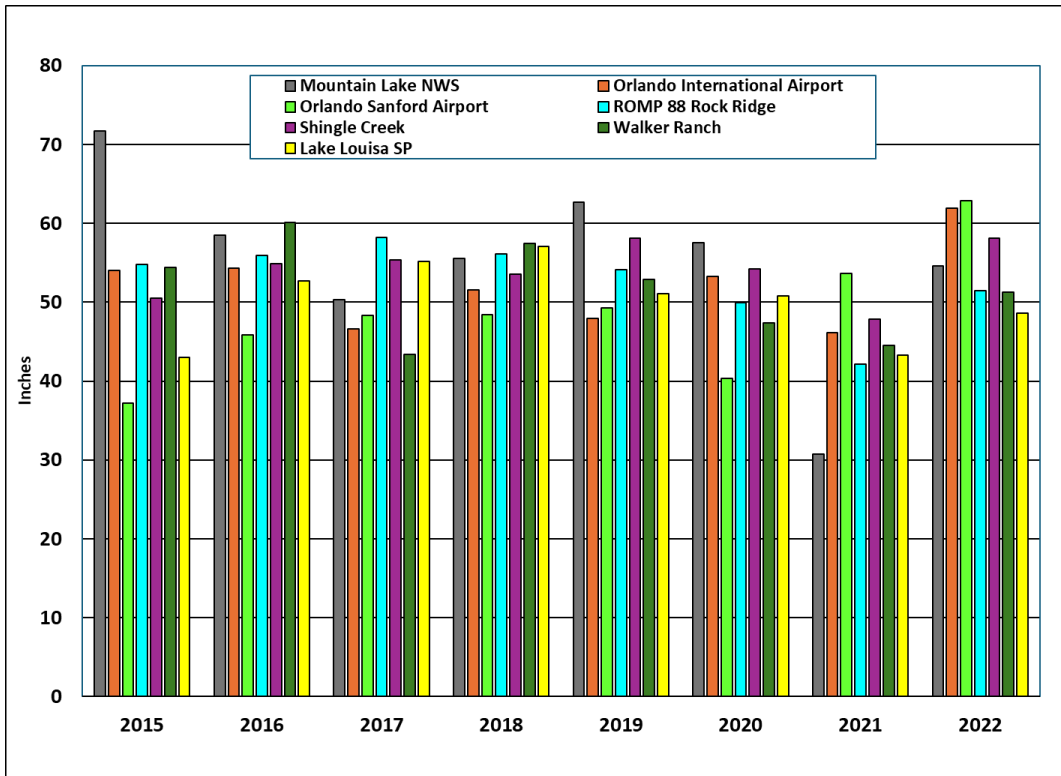


Figure 13. Yearly average rainfall values (inches) from January 2015 through December 2022 from seven rainfall stations within the CFWI Planning Area.

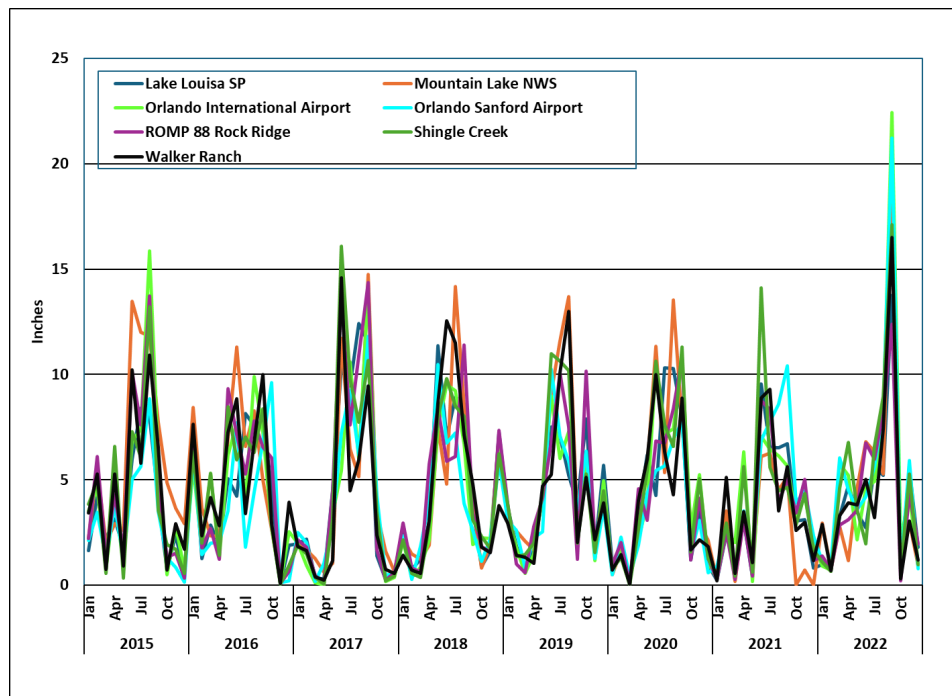


Figure 14. Monthly rainfall values (inches) from January 2015 through December 2022 from seven rainfall stations within the CFWI Planning Area.

7.0 WETLANDS RISK ASSESSMENT

The same wetlands risk assessment methodology that was used by earlier EM working groups in support of the 2015 and 2020 CFWI RSWPs (CFWI EMT 2013, 2020) was used for the current analysis. While the wetlands analysis methodology is described in detail in **Appendix F**, it is briefly described in the following paragraphs.

7.1 Wetlands Risk Assessment Methodology

Some updates to the wetlands analysis methodology that was used by the EM group for the previous analysis were necessary. They were associated with revised Class 1, 2, and 3 wetlands datasets; a different Class 1 wetlands water level period of record; and an updated model (the ECFTXv2.0 model). Using GIS, the observed ratios of stressed to unstressed Class 1 and 2 wetlands, and an urban density and physiographic region correction factor developed for the 2015 and 2020 analysis, the acreages of stressed and unstressed Class 1, Class 2, and Class 3 wetlands for each ECFTXv2.0 model cell were calculated for the 2016-2020 RC.

In order to determine the location and coverage of Class 1 and Class 2 wetlands, GPS coordinates from wetland site visits were used to identify land-use features that retained an appropriate land use and USGS hydroclass designation. In the rare instance an appropriate land-use feature could not be identified, or the feature did not accurately represent the wetland in question, digitization was employed with the guidance of those that had visited the site. Since the stress status for each of the Class 1 and Class 2 wetlands is known, total acreages of stressed and unstressed Class 1 and 2 wetlands could be calculated utilizing the reviewed GIS layers. Class 3 wetlands stress status is not known, but a combination of land use and USGS hydroclass data was used to determine the location and total acreage of Class 3 wetlands within the CFWI planning area. GIS tools were utilized to remove the open water from Class 1, 2, and 3 wetlands so that the RC acres were not overestimated by including non-vegetated areas in analysis.

Using the statistical relationship between observed stress and observed P80 water level and hydrologic index (θ) variations for the Class 1 wetlands water level data, the probability (or risk) of future changes in wetland stress occurring, based on modeled water level changes between the 2016-2020 RC and the 2025, 2030, 2035, 2040, and 2045 Withdrawals Conditions, was estimated. This risk assessment was applied separately to primarily groundwater-dominated wetlands (Class 1, 2, and 3) in Plains and Ridges physiographic settings because wetland hydrologic conditions in these wetlands are typically different due to underlying soils, geology, physiography, typical depths, and other factors.

The majority of the Plains physiographic provinces are typically characterized by having a confining layer that restricts the exchange of water between the surficial aquifer system (SAS) and the underlying Floridan aquifer system. The confining layer between the SAS and the Floridan aquifer is typically very restrictive but can vary throughout the Plain physiographic regions. The best predictor for probable change in the long-term water level regime of Plains wetlands due to groundwater alterations is the simulated change in the SAS water table at the wetland locations (CFWI EMT 2013, 2020). Therefore, ECFTXv2.0 model results for Model Layer 1 (SAS) were used for the Plains wetlands risk assessment.

Most of the Ridge physiographic provinces are characterized by less or no confining conditions that vary considerably at the local scale. Because the variability occurs at a finer scale than the model grid cells and there is insufficient data available to provide calibration information on all the local variations in confinement and resulting water table elevation differences, the ECFTXv2.0 model was not able to reproduce the variability in the hydrogeology of the Ridge physiographic provinces. Because of this variability, and the associated lack of data, a range of values was developed for the Ridge wetlands risk assessment. The low part of the range was based on the projected change in SAS water levels (Model Layer 1) from the ECFTXv2.0 model, which may underestimate wetland water level responses to groundwater drawdown in the leakiest locations for the future groundwater withdrawal scenarios. The high part of the range was based on the projected change in UFA water levels (Model Layer 3) from the model, which may overestimate wetland water level responses to groundwater drawdown in the UFA. For Ridge wetlands, this range provides an estimate of the low and high amount of future changes in Ridge wetlands water levels from which to estimate corresponding probabilities of changes in wetland stress conditions

The stress-risk algorithms that were developed for post-processing of the ECFT and ECFTX model results in support of the 2015 and 2020 CFWI RWSPs were revised to incorporate the updated statistical risk equations and for compatibility with the ECFTXv2.0 model output files. Post-processing of the ECFTXv2.0 model runs included calculating the probable stressed and unstressed wetland acreage for each ECFTXv2.0 model cell in the 2016-2020 RC and calculating the probable change in stressed and unstressed wetland acreage for each ECFTXv2.0 model cell under the 2025, 2030, 2035, 2040, and 2045 Withdrawals Conditions; calculating the probable change in total stressed wetland acreage for each Withdrawals Condition; and preparing tables, graphs, and maps showing the geographic distribution of projected stressed wetland acreage.

7.2 Wetlands Risk Assessment Results

Since primarily groundwater-dominated wetlands are potentially more likely to be affected by groundwater withdrawals, these wetlands, which make up approximately 30 percent of the wetlands in the CFWI Planning Area, were the focus of the EM group's wetlands risk assessment. The locations of the Plains and Ridge wetlands included in the wetlands risk assessment are shown in **Figure 15**. As mentioned earlier, wetlands that were determined to be significantly hydrologically altered were excluded from the analysis. Approximately 442,300 acres of primarily groundwater-dominated wetlands (combined Class 1, 2, and 3) found within the CFWI Planning Area were included in the analysis. This acreage includes about 382,850 acres of Plains wetlands and approximately 59,440 acres of Ridge wetlands (**Tables 8 and 9**).

While it is natural to compare the results of the current wetlands analysis to those of the previous analyses in support of the 2015 and 2020 CFWI RWSPs, there are many factors that make a direct comparison not possible or appropriate. These factors include:

- An improved model, the ECFTXv2.0 model, was used to calculate groundwater drawdowns for the 2025, 2030, 2035, 2040, and 2045 Withdrawals Conditions, as well as for the 2016-2020 RC.

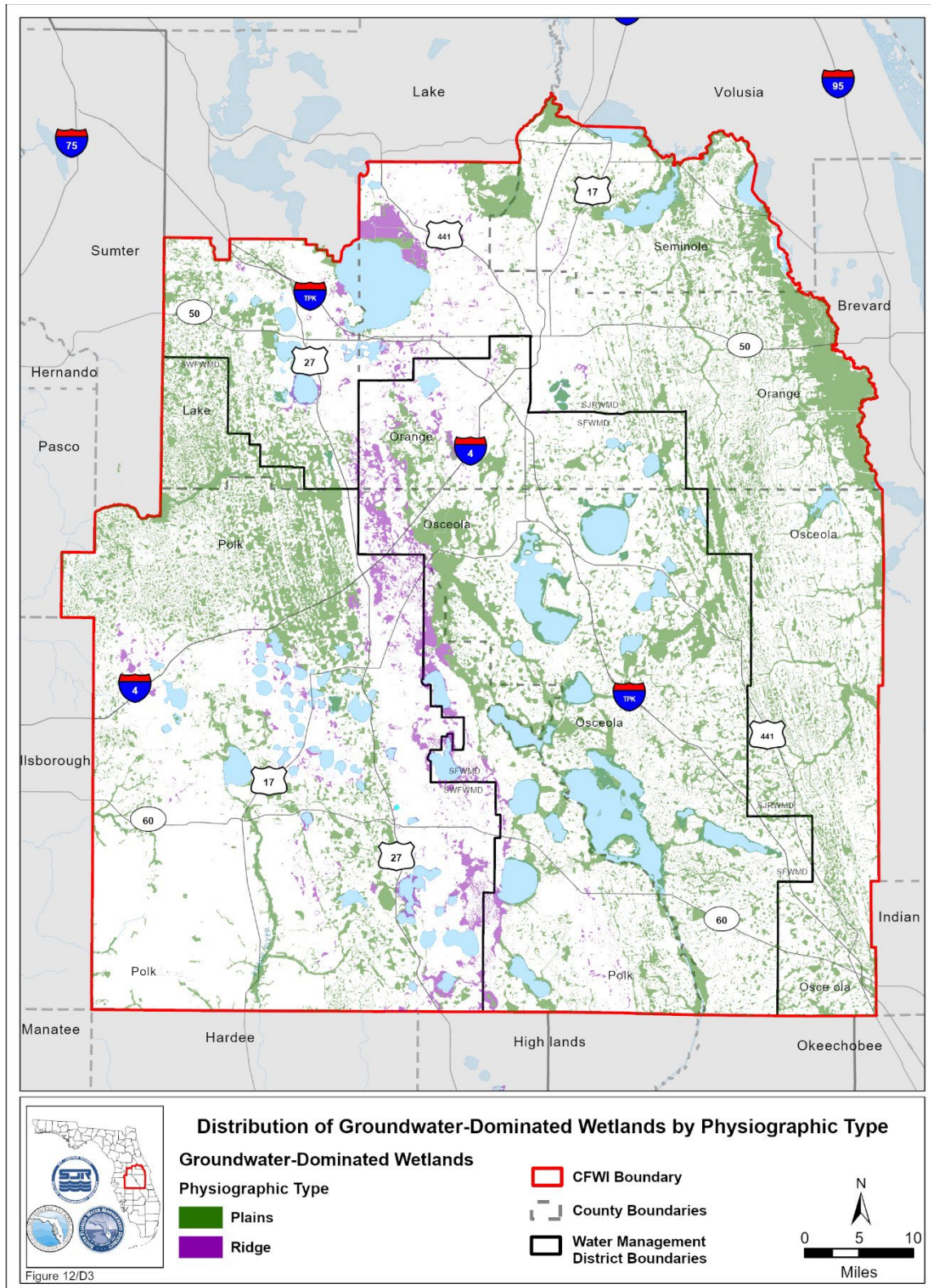


Figure 15. Distribution of Plains and Ridge wetlands within the CFWI Planning Area included in the EM group wetlands analysis.

Table 8. Summary of results (rounded to the nearest 10 acres) for the CFWI Planning Area assessment of primarily groundwater-dominated Plains wetlands, excluding wetlands with hydrologic alteration. ECFTXv2.0 Model Layer 1 (Surficial Aquifer System) was used to predict the wetland water level change.

Wetland Class	Total Acres of Wetlands (Stressed and Not Stressed)	Acres of Stressed Wetlands for 2016-2020 Reference Condition	Probable Net Change in Acres of Stressed Wetlands				
			2025 Withdrawals Condition	2030 Withdrawals Condition	2035 Withdrawals Condition	2040 Withdrawals Condition	2045 Withdrawals Condition
Class 1	1,200	710	10	20	20	30	30
Class 2	29,510	2,600	190	290	360	440	500
Class 3	352,140	72,290	1,250	1,900	2,400	2,920	3,340
Total	382,850	75,600	1,450	2,210	2,780	3,390	3,870

Table 9. Summary of results (rounded to the nearest 10 acres) for the CFWI Planning Area assessment of primarily groundwater-dominated Ridge wetlands, excluding wetlands with hydrologic alteration.

Model Layer Used to Predict Wetland Water Level Change	Wetland Class	Total Acres of Wetlands (Stressed and Not Stressed)	Acres of Stressed Wetlands for 2016-2020 Reference Condition	Probable Net Change in Acres of Stressed Wetlands				
				2025 Withdrawals Condition	2030 Withdrawals Condition	2035 Withdrawals Condition	2040 Withdrawals Condition	2050 Withdrawals Condition
Surficial Aquifer System (Model Layer 1)	Class 1	4,920	1,160	10	10	10	10	10
	Class 2	6,350	2,050	90	140	170	200	230
	Class 3	48,170	11,730	490	720	880	1,050	1,170
	Total	59,440	14,940	590	870	1,060	1,260	1,410
Upper Floridan Aquifer (Model Layer 3)	Class 1	4,920	1,160	130	190	220	250	290
	Class 2	6,350	2,050	240	380	470	570	640
	Class 3	48,170	11,730	1,440	2,440	3,090	3,780	4,300
	Total	59,440	14,940	1,810	3,010	3,780	4,600	5,230

- The period of record used for the current analysis was from 2015 through 2022 (2006-2011 was the period of record used for the 2015 analysis and 2009-2017 was used for the 2020 analysis).
- Similar to the 2020 analysis, in order not to overestimate the stressed and unstressed Plains and Ridge Class 1, 2, and 3 wetlands acreages for the 2016-2020 RC, as well as for changes in stressed wetland acres resulting from the 2025, 2030, 2035, 2040, and 2045 Withdrawals Conditions, the open water portions of wetlands and lakes were removed from the analysis (this was not done for the 2015 analysis).
- For the current analysis, the Class 1 wetlands dataset included 51 wetlands (53 Class 1 wetlands were included in the 2020 analysis and 44 Class 1 wetlands were included in the 2015 analysis).
- Field assessments of all Class 2 wetlands were conducted for the current analysis, and the Class 2 wetlands dataset was expanded to include 342 sites (while field assessments were conducted for the 2015 analysis, some of the results were questionable; field assessments of the Class 2 wetlands were not part of the 2020 analysis, and the status determined for the 2015 analysis was assumed unchanged).
- The GIS polygons of all of the Class 1 and Class 2 wetlands were thoroughly reviewed. In addition, the spatial representation of the Class 3 wetlands within the CFWI Planning Area was reviewed and improved (as time permitted, some review was conducted for the 2020 analysis, but the rigor of the review for the 2015 analysis is unknown).

Compared to the 2016-2020 RC, the probable net increase in stressed wetland acres for Plains and Ridge wetlands resulting from the 2025, 2030, 2035, 2040, and 2045 Withdrawals Conditions is shown in **Figure 16**. **Tables 8** and **9** also present that information by wetland class. A comparison of the probable change in the proportion of stressed and not stressed Plains and Ridge wetland acres for each of the Withdrawals Conditions is shown in **Figures 17** and **18**.

Under the 2016-2020 RC, almost 20 percent of Plains wetlands are currently stressed (**Figure 17**). For the 2025 Withdrawals Condition, the total probable acres of stressed Plains wetlands increased 0.4 percent compared to the RC. For the Plains wetlands, the total probable acres of stressed wetlands increased 0.6 percent for the 2030 Withdrawals Condition, 0.8 percent for the 2035 Withdrawals Condition, 0.9 percent for the 2040 Withdrawals Condition, and 1.1 percent for the 2045 Withdrawals Condition as compared to the 2016-2020 RC (**Figure 17**).

Approximately 25 percent of Ridge wetlands are currently stressed under the 2016-2020 RC (**Figure 18**). For the 2025 Withdrawals Condition, the total probable acres of stressed Ridge wetlands increased between 1 and 3 percent of stressed wetland acres compared to the RC. The total probable acres of stressed Ridge wetlands increased between 1.5 and 5 percent for the 2030 Withdrawals Condition, between 2 and 6 percent for the 2035 Withdrawals Condition, between 2 and 8 percent for the 2040 Withdrawals Condition, and between 2 and 9 percent for the 2045 Withdrawals Condition compared to the 2016-2020 RC (**Figure 18**).

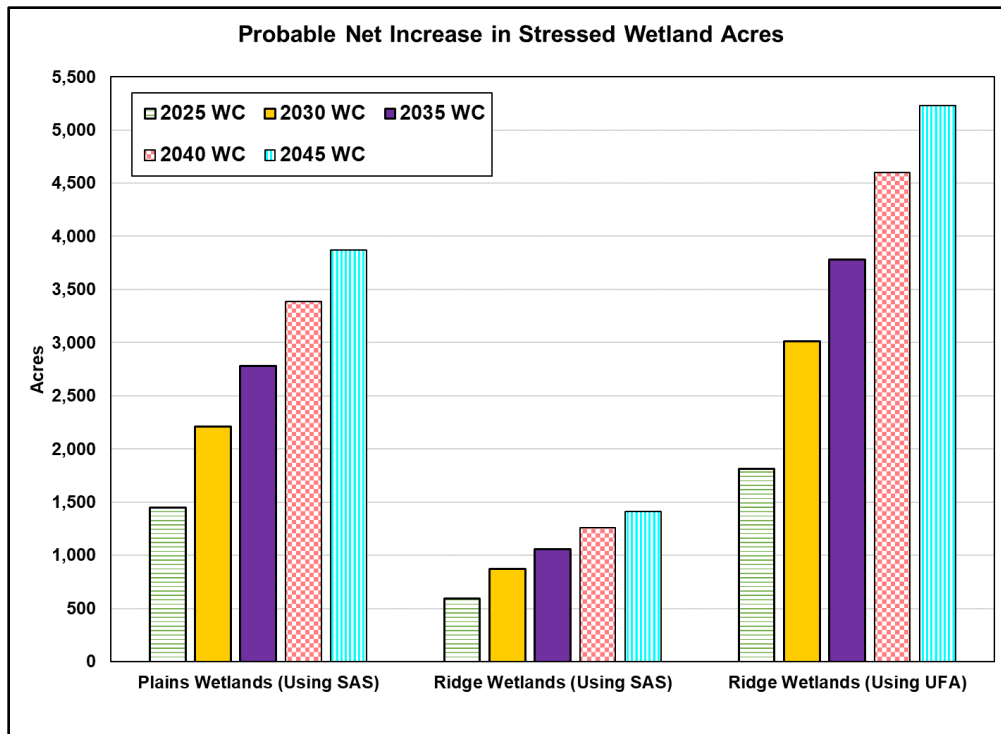


Figure 16. The probable net increase in acres of stressed Plains and Ridge wetlands for the 2025, 2030, 2035, 2040, and 2045 Withdrawals Conditions. WC – Withdrawals Condition; SAS – Surficial aquifer system; UFA – Upper Floridan aquifer.

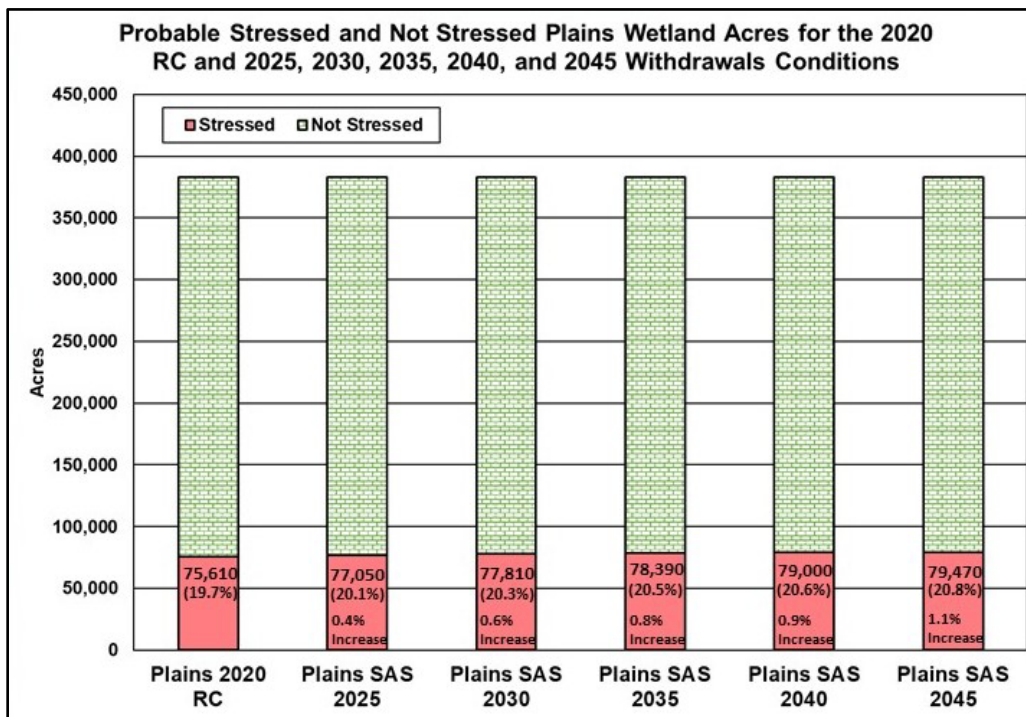


Figure 17. A comparison of probable acres of stressed and not stressed Plains wetlands for the 2025, 2030, 2035, 2040, and 2045 Withdrawals Conditions. RC – Reference Condition; SAS – Surficial aquifer system.

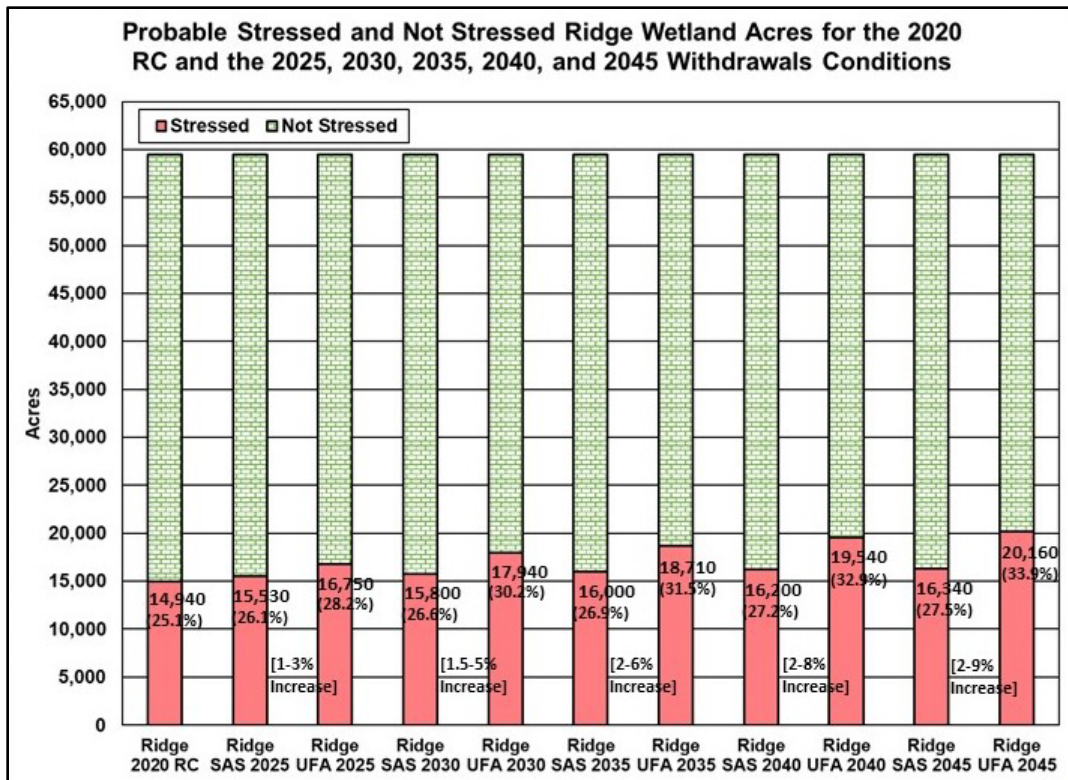


Figure 18. A comparison of probable acres of stressed and not stressed Ridge wetlands for the 2025, 2030, 2035, 2040, and 2045 Withdrawals Conditions. RC – Reference Condition; SAS – Surficial aquifer system; UFA – Upper Floridan aquifer.

For the 2025 Withdrawals Condition, regional maps of the probable acres of change in stress by model cell for Plains and Ridge wetlands are presented in **Figures 19** and **20**. Since Model Layer 1 was used to predict wetland water level changes for both Plains and Ridge wetlands in **Figure 19**, it represents the low range, while **Figure 20** represents the high range, since Model Layer 3 was used to predict wetland water level changes for Ridge wetlands.

Regional maps of the probable acres of change in stress by model cell for Plains and Ridge wetlands for the 2030 Withdrawals Condition are presented in **Figures 21** and **22**. Since Model Layer 1 was used to predict wetland water level changes for both Plains and Ridge wetlands in **Figure 21**, it represents the low range, while **Figure 22** represents the high range, since Model Layer 3 was used to predict wetland water level changes for Ridge wetlands.

Figures 23 and **24** include regional maps of the probable acres of change in stress by model cell for Plains and Ridge wetlands for the 2035 Withdrawals Condition. Similar to the maps for the 2025 Withdrawals Condition, **Figure 23** represents the low range, and **Figure 24** represents the high range because of the different model layers used to predict wetland water level changes for the Ridge wetlands.

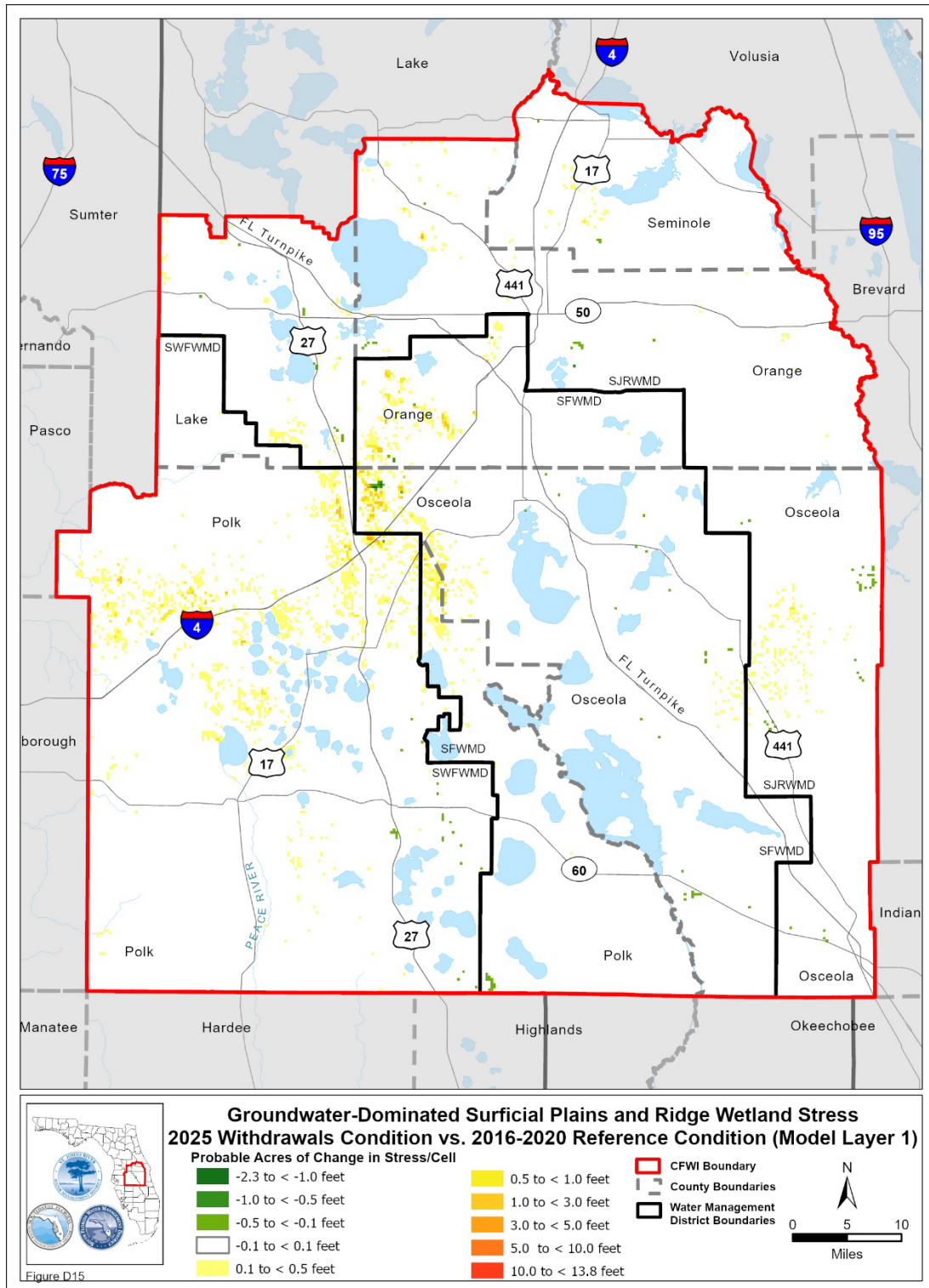


Figure 19. Compared to the 2016-2020 Reference Condition, the probable acres of change in stress by model cell for Plains and Ridge wetlands using Model Layer 1 (Surficial aquifer system) to predict wetland water level change for the 2025 Withdrawals Condition.

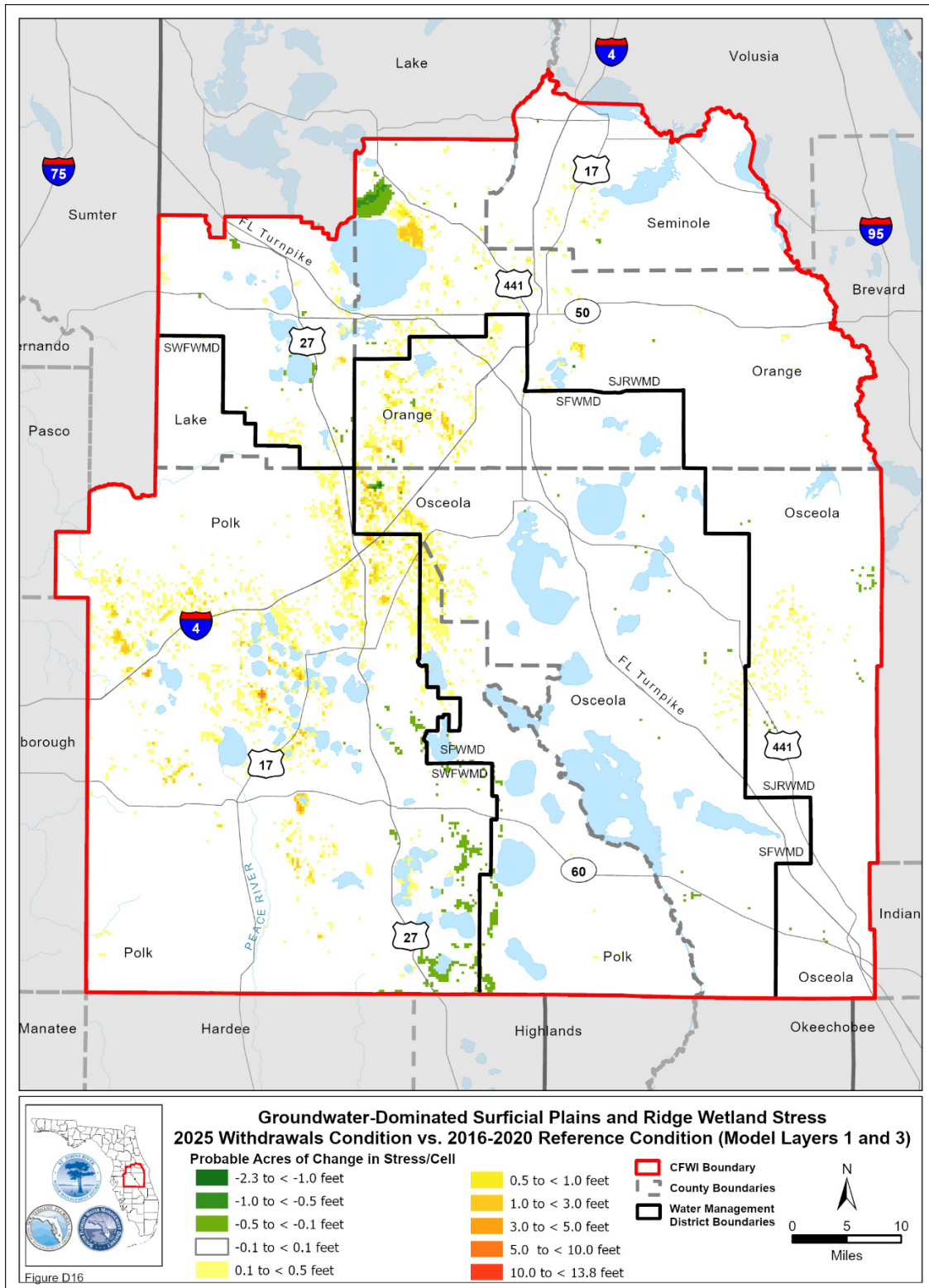


Figure 20. Compared to the 2016-2020 Reference Condition, the probable acres of change in stress by model cell for Plains wetlands using Model Layer 1 (Surficial aquifer system) and Ridge wetlands using Model Layer 3 (Upper Floridan aquifer) to predict wetland water level change for the 2025 Withdrawals Condition.

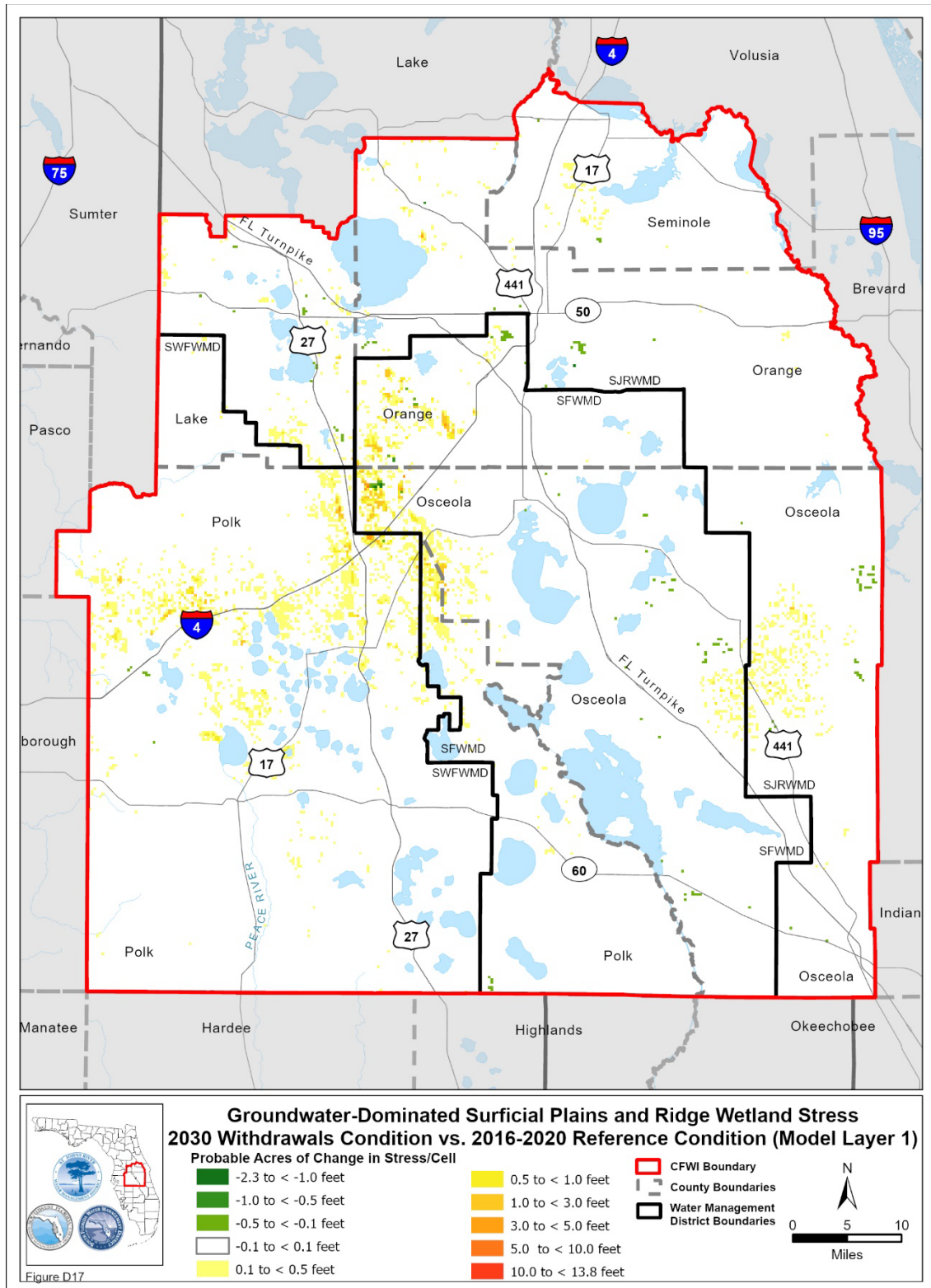


Figure 21. Compared to the 2016-2020 Reference Condition, the probable acres of change in stress by model cell for Plains and Ridge wetlands using Model Layer 1 (Surficial aquifer system) to predict wetland water level change for the 2030 Withdrawals Condition.

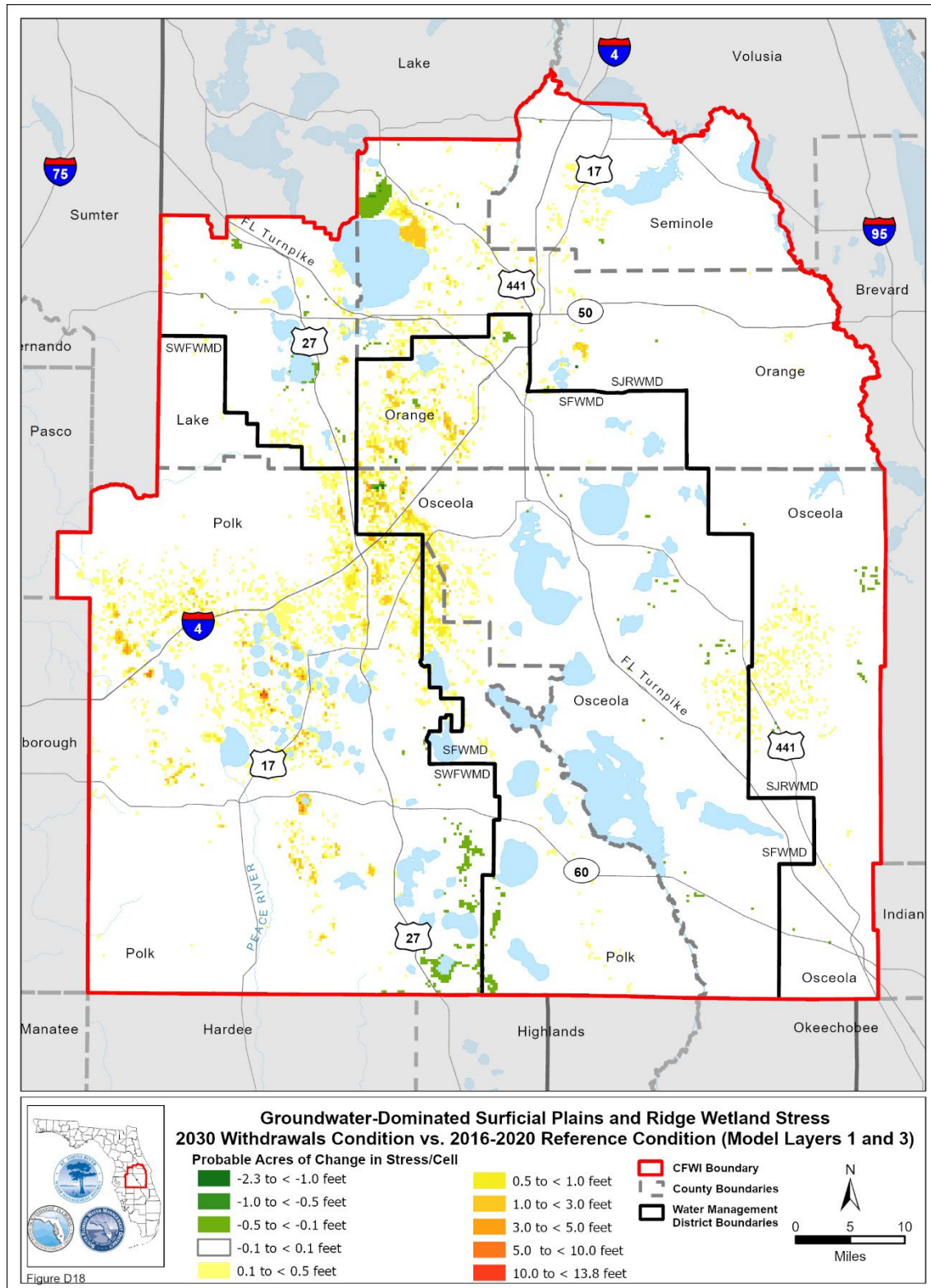


Figure 22. Compared to the 2016-2020 Reference Condition, the probable acres of change in stress by model cell for Plains wetlands using Model Layer 1 (Surficial aquifer system) and Ridge wetlands using Model Layer 3 (Upper Floridan aquifer) to predict wetland water level change for the 2030 Withdrawals Condition.

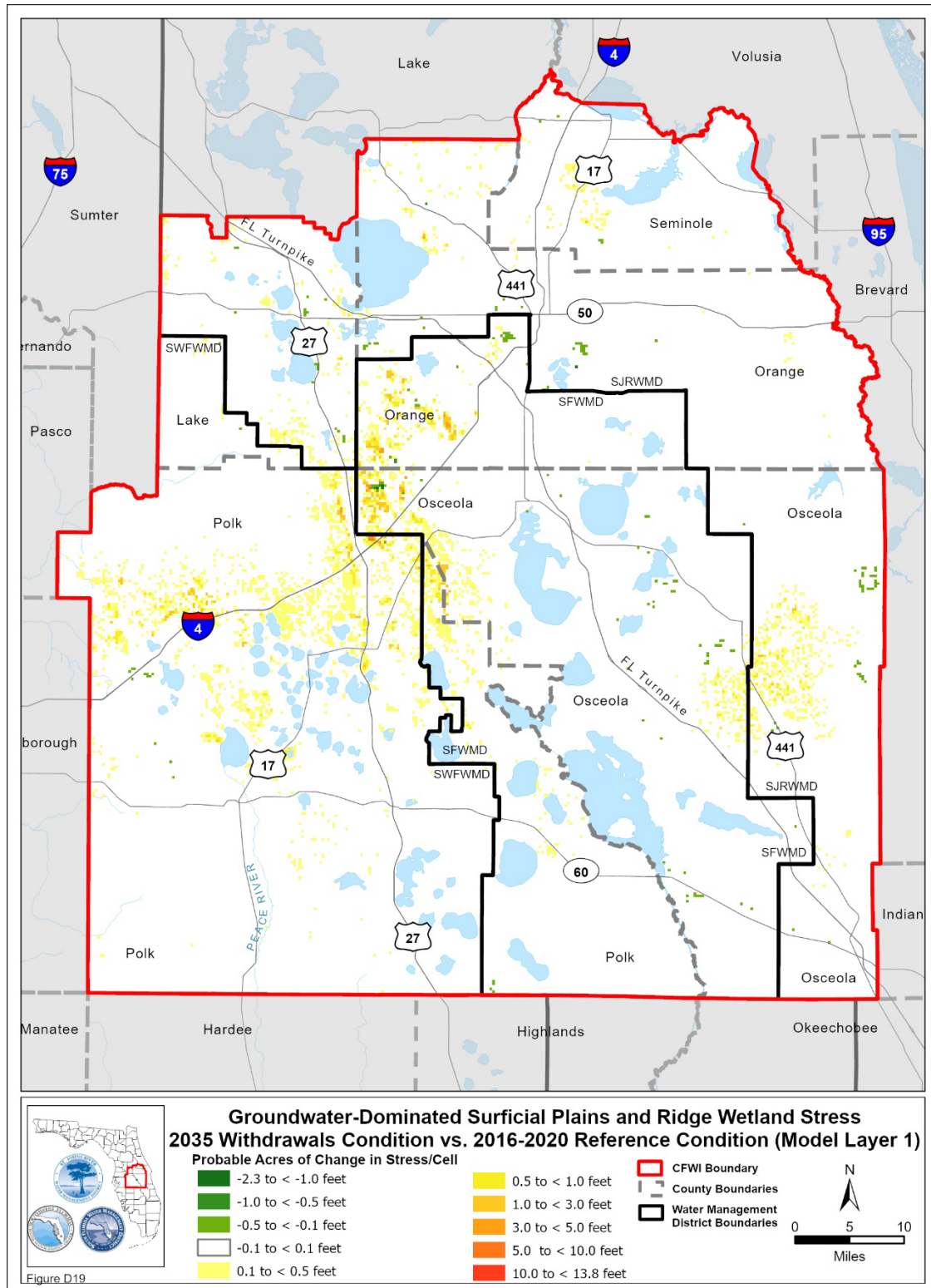


Figure 23. Compared to the 2016-2020 Reference Condition, the probable acres of change in stress by model cell for Plains and Ridge wetlands using Model Layer 1 (Surficial aquifer system) to predict wetland water level change for the 2035 Withdrawals Condition.

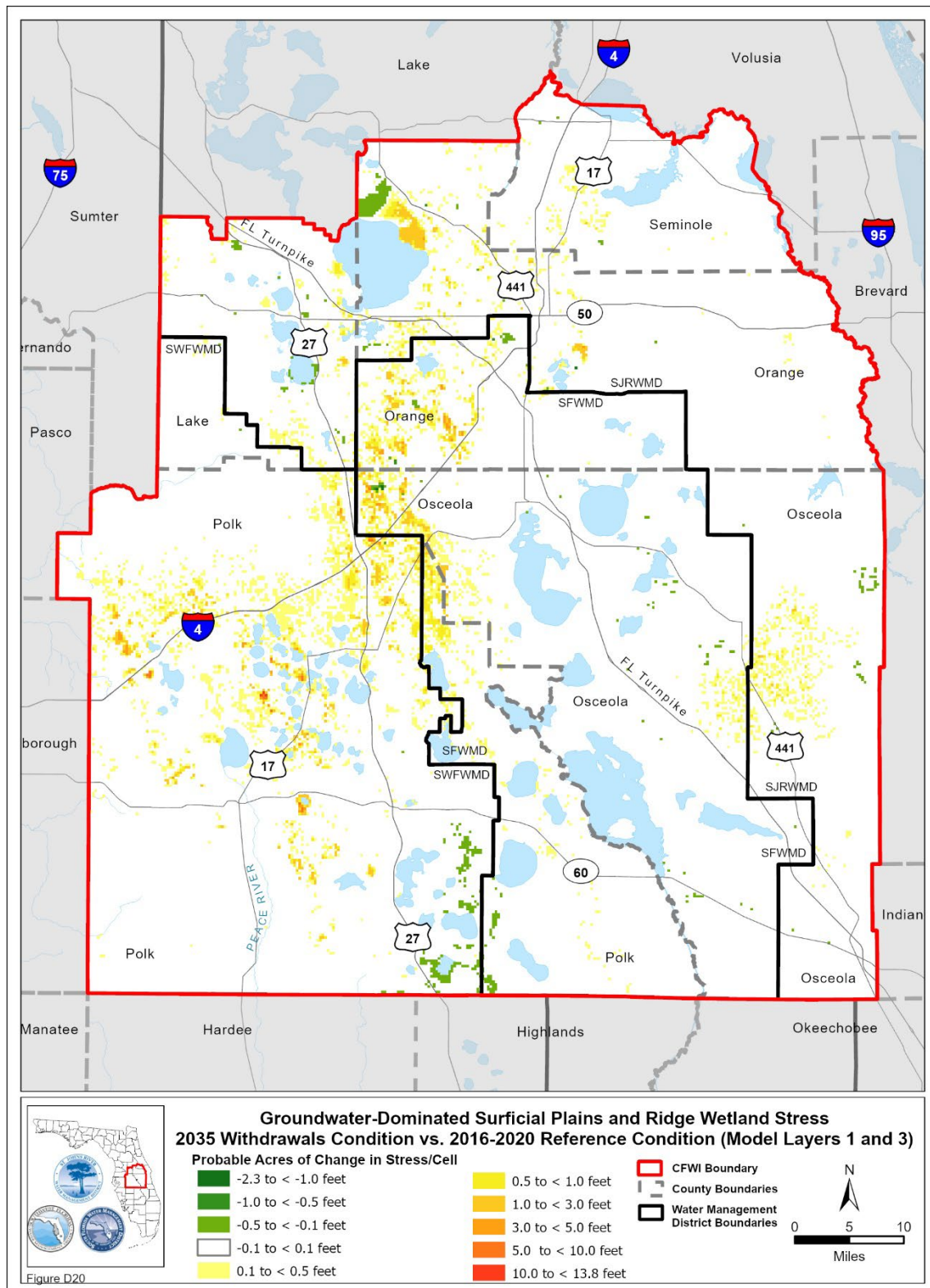


Figure 24. Compared to the 2016-2020 Reference Condition, the probable acres of change in stress by model cell for Plains wetlands using Model Layer 1 (Surficial aquifer system) and Ridge wetlands using Model Layer 3 (Upper Floridan aquifer) to predict wetland water level change for the 2035 Withdrawals Condition.

Regional maps of the probable acres of change in stress by model cell for Plains and Ridge wetlands for the 2040 Withdrawals Condition are presented in **Figures 25** and **26**. Since Model Layer 1 was used to predict wetland water level changes for both Plains and Ridge wetlands in **Figure 25**, it represents the low range, and **Figure 26** represents the high range since Model Layer 3 was used to predict wetland water level changes for Ridge wetlands.

Figures 27 and **28** include regional maps of the probable acres of change in stress by model cell for Plains and Ridge wetlands for the 2045 Withdrawals Condition. **Figure 27** represents the low range, and **Figure 28** represents the high range because of the different model layers used to predict wetland water level changes for the Ridge wetlands.

Similar to the previous analyses (CFWI EMT 2013, 2020), the results of our wetland risk assessment assess the probability of wetland stress occurring at the regional scale and can't be applied to the local scale. The regional scale of the ECFTXv2.0 model limits its precision in predicting future changes of water elevations in specific lakes and wetlands. The wetland stress response is also very sensitive to the initial hydrologic condition of each wetland, and this is not known for most of the wetlands within the CFWI Planning Area (e.g., Class 3 wetlands). Both of these uncertainties have been minimized by averaging the effects across the entire planning area. This reduces the overall effect of random errors because randomly distributed positive and negative errors at individual locations tend to cancel each other when predicted effects at individual locations are summed to obtain a predicted net regional effect (CFWI EMT 2013, 2020).

For **Figures 19** through **28**, the negative values (green shading) represent change from stressed to unstressed, while the positive values (white, yellow, orange, and pink shading) represent change from unstressed to stressed. Also, note that white can indicate areas not included in these analyses. Because these risk assessments assessed the probability of wetland stress occurring at the regional scale, these regional maps should not be applied at the local scale.

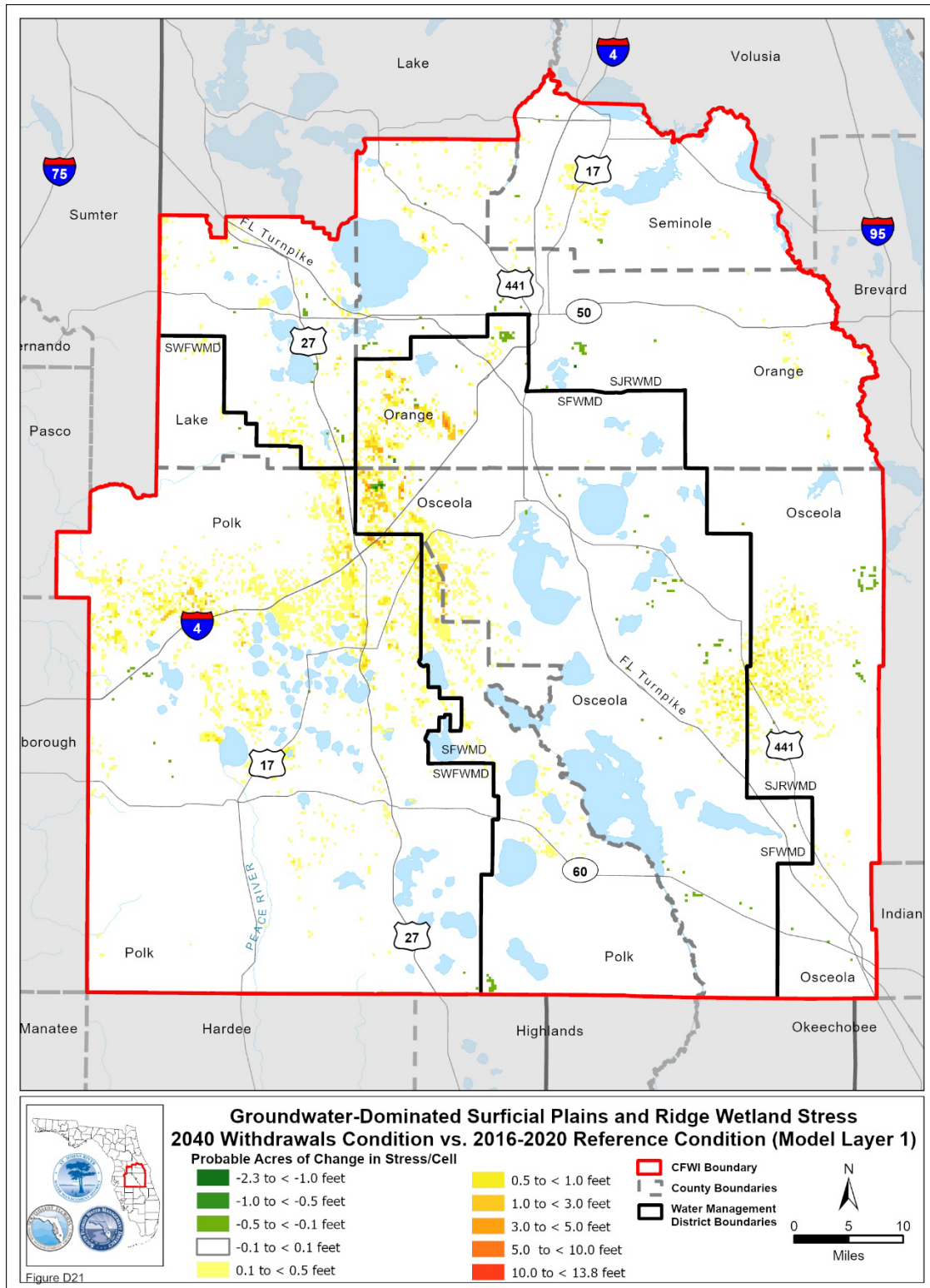


Figure 25. Compared to the 2016-2020 Reference Condition, the probable acres of change in stress by model cell for Plains and Ridge wetlands using Model Layer 1 (Surficial aquifer system) to predict wetland water level change for the 2040 Withdrawals Condition.

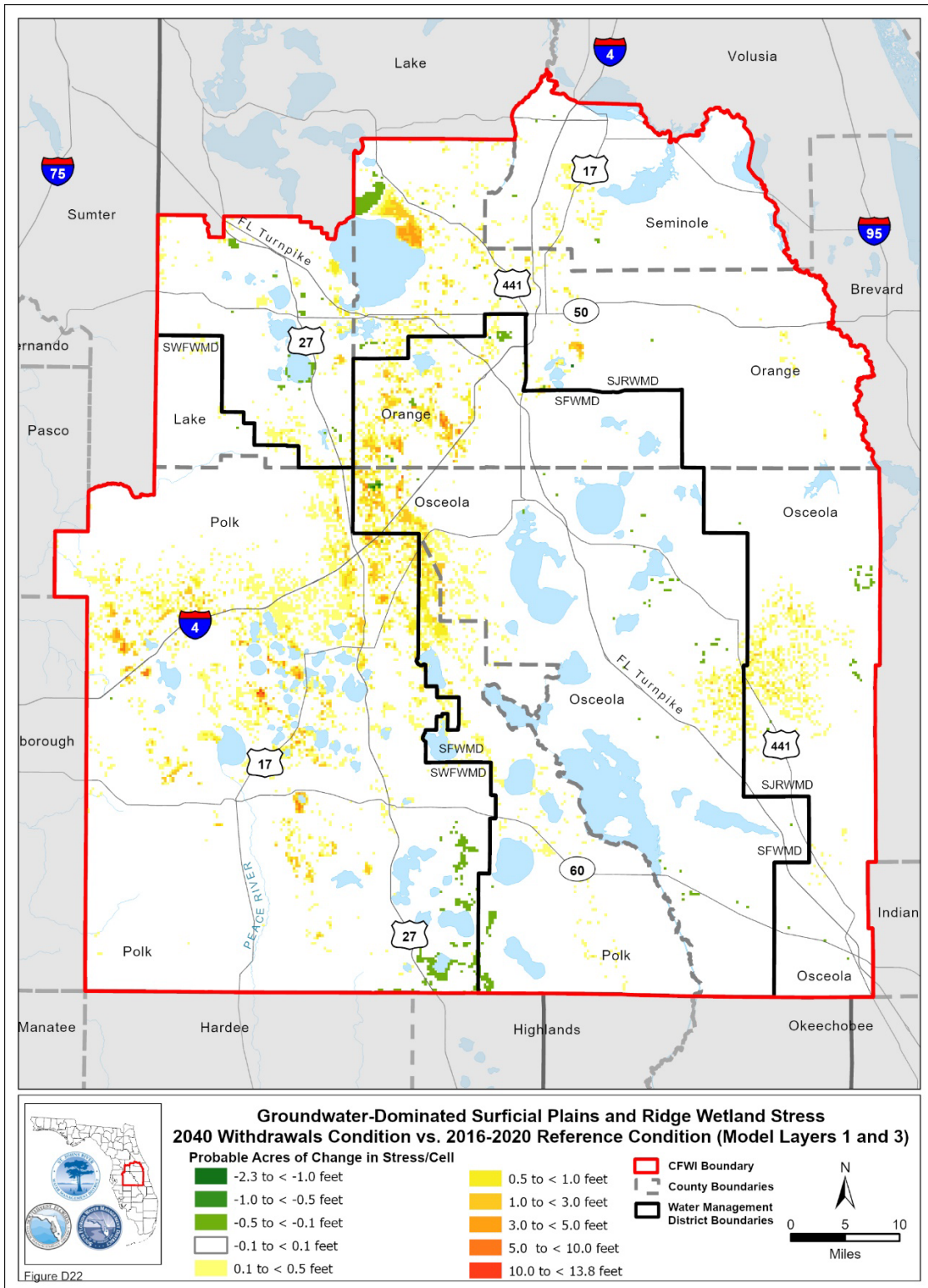


Figure 26. Compared to the 2016-2020 Reference Condition, the probable acres of change in stress by model cell for Plains wetlands using Model Layer 1 (Surficial aquifer system) and Ridge wetlands using Model Layer 3 (Upper Floridan aquifer) to predict wetland water level change for the 2040 Withdrawals Condition.

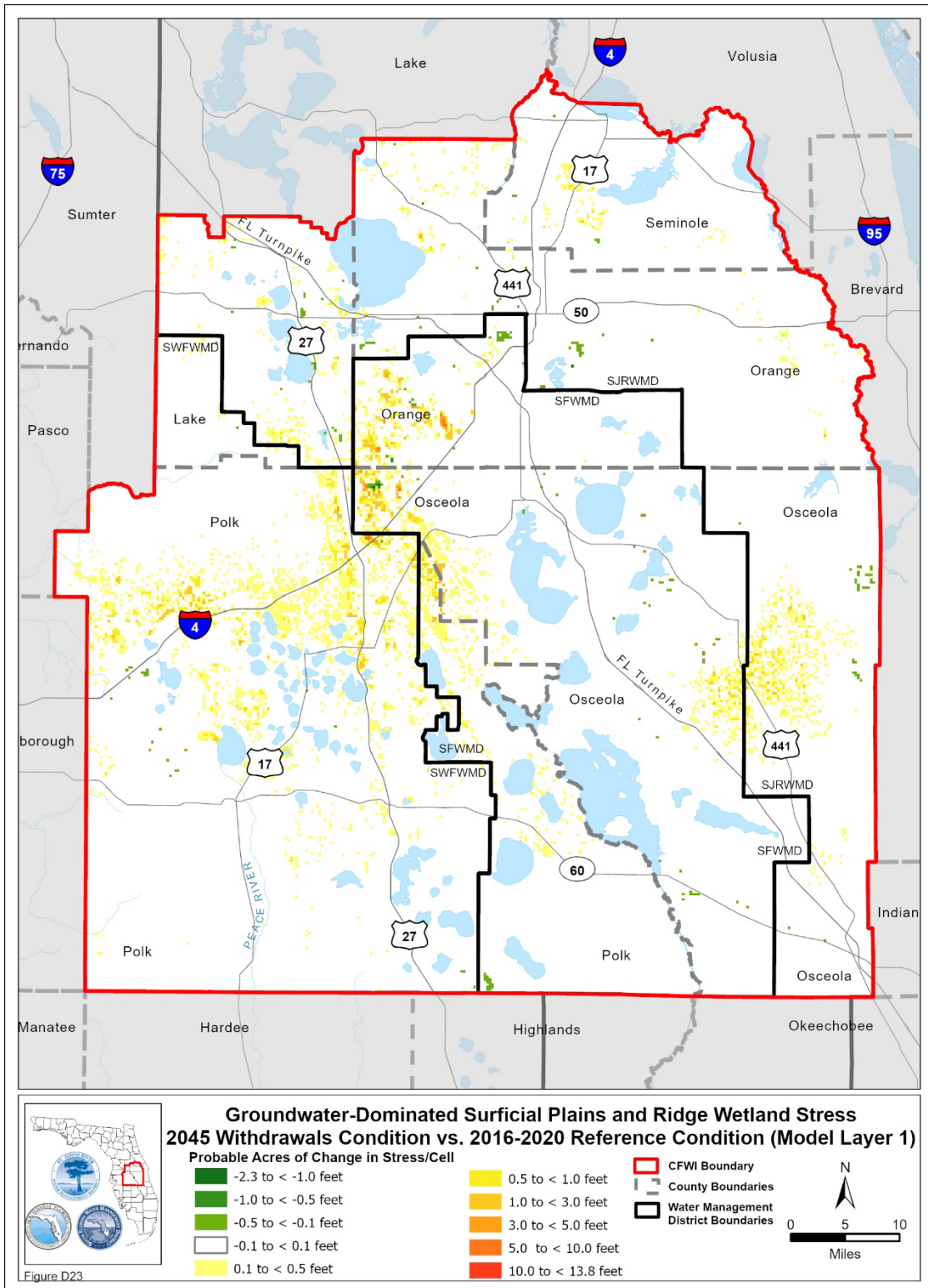


Figure 27. Compared to the 2016-2020 Reference Condition, the probable acres of change in stress by model cell for Plains and Ridge wetlands using Model Layer 1 (Surficial aquifer system) to predict wetland water level change for the 2045 Withdrawals Condition.

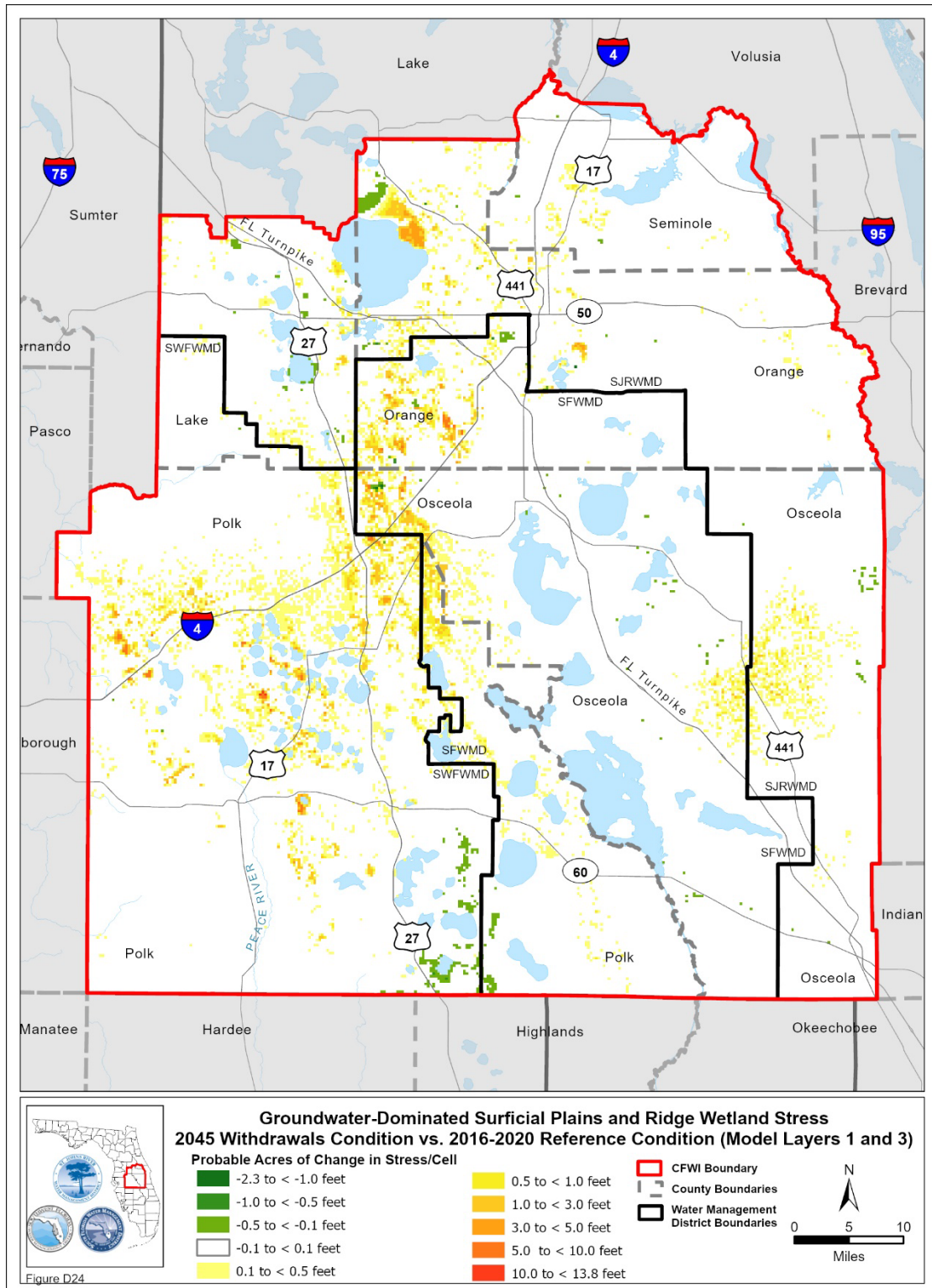


Figure 28. Compared to the 2016-2020 Reference Condition, the probable acres of change in stress by model cell for Plains wetlands using Model Layer 1 (Surficial aquifer system) and Ridge wetlands using Model Layer 3 (Upper Floridan aquifer) to predict wetland water level change for the 2045 Withdrawals Condition.

8.0 SUMMARY

Similar to the analyses conducted in support of the 2015 and 2020 RWSPs, results from the current analysis indicated that there are areas within the CFWI Planning Area where there are concentrations of stressed wetlands. They include Central Polk County northwest of I-4, a large portion of the Southern Water Use Caution Area (SWUCA), South Lake County, the Lake Wales Ridge along the U.S. 27 corridor, West Seminole and Orange Counties, the Wekiva River area, and East Osceola County. Scenarios for the 2025, 2030, 2035, 2040, and 2045 Withdrawals Conditions indicated that the number and extent of stressed wetlands could potentially increase in these areas and could potentially expand into additional areas where wetlands are currently not stressed.

It is important to understand the limitations of our analysis and results and the appropriate use of these findings. Some of the limitations inherent in this our analysis are described below.

- Wetlands and lakes whose hydrology is typically groundwater-dominated only represent a small percentage of the total number of wetlands in the study area; and therefore, it would be inappropriate to extrapolate the results of potential wetland impacts to all wetlands within the CFWI Planning Area.
- The patterns of response seen in the results of these analyses generally appear to agree with the results we would expect to see in the landscape, based on experience and observations to date.
- The study did not address the degree of wetland stress, only the presence or absence of stress. This can be an important factor when considering the impact of human activities on natural systems.
- The conclusions are based on the ECFTXv2.0 model output and are subject to the limitations of modeling assumptions and available input data.
- These analyses were conducted to support the regional water supply planning process and are at the scale and resolution appropriate for that effort. Use of these regional findings in other contexts or for other applications (e.g., to a specific wetland or lake system) would likely require additional data acquisition, analysis, and considerations.

9.0 FUTURE RECOMMENDATIONS

The EM working group recognizes that future data collection efforts in the CFWI Planning Area will support the development of a more robust dataset for these types of analyses. Recommended actions include the following:

- Improve the methods for the accurate designation of the Ridge and Plains designation of a wetland or lake, as well as the characteristics of the systems.
- Consider the collection of water level and duration data within the wetland or lake, in addition to the well data.
- As enough data are collected, expand the Class 1 wetlands dataset to include the DMIT wetlands long-term monitoring program sites.

- ◆ Require that the DMIT wetlands monitoring methodology be used for wetlands monitored under Consumptive Use and Water Use Permits so that they can be included in the Class 1 wetlands dataset (as enough data are collected).
- ◆ Ensure that future monitoring sites focus on areas of high probability of stress depicted in the 2025, 2030, 2035, 2040, and 2045 Withdrawals Conditions and in areas where sufficient monitoring may currently be lacking.
- ◆ Conduct and complete a stress analysis during annual compliance reviews of permittee sites for potential use in future EM group analyses.
- ◆ As enough DMIT wetlands data become available, revisit the methods that the EM groups uses in support of future CFWI RWSPs.

10.0 REFERENCES

CFWI (Central Florida Water Initiative) Environmental Measures Team (EMT). 2013. Development of Environmental Measures for Assessing Effects of Water Level Changes on Lakes and Wetlands in the Central Florida Water Initiative Area. Central Florida Water Initiative's Environmental Measures Team, Final Report, November 2013.

CFWI EMT. 2020. Assessment of Effects of Groundwater-Dominated Wetlands in the Central Florida Water Initiative Planning Area. Central Florida Water Initiative's Environmental Measures Team, Final Report, August 2020.