

# *Central Florida Water Initiative*

*Water for Tomorrow*



**Public Workshops/Webinars**

April 30, 2020

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# Agenda

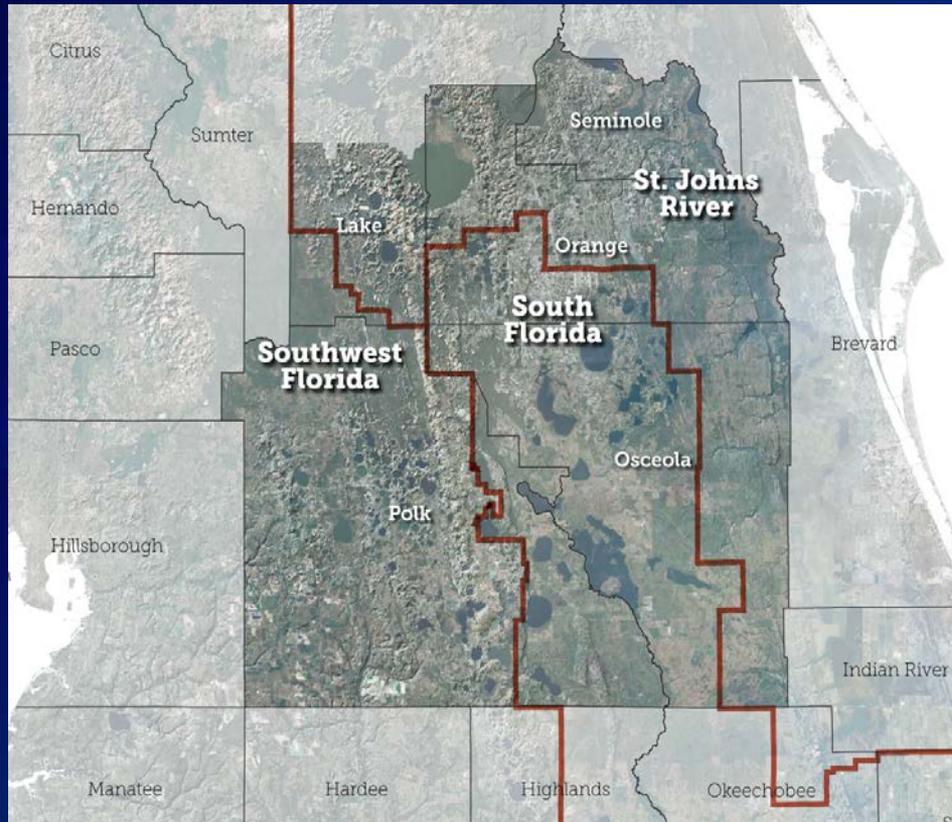
- Introductions
- What is CFWI?
- What is a Regional Water Supply Plan?
- What are the components?
- How are we addressing the challenges?
- Overview of the Draft 2020 CFWI RWSP
- Public comment

# Importance of Public Involvement

- Ensure plan reflects local needs
- Review of RWSP conclusions and recommendations
- Coordination among:
  - County Commission/  
City Council
  - Utility staff
  - Planning staff
- Identify projects to meet future water demand

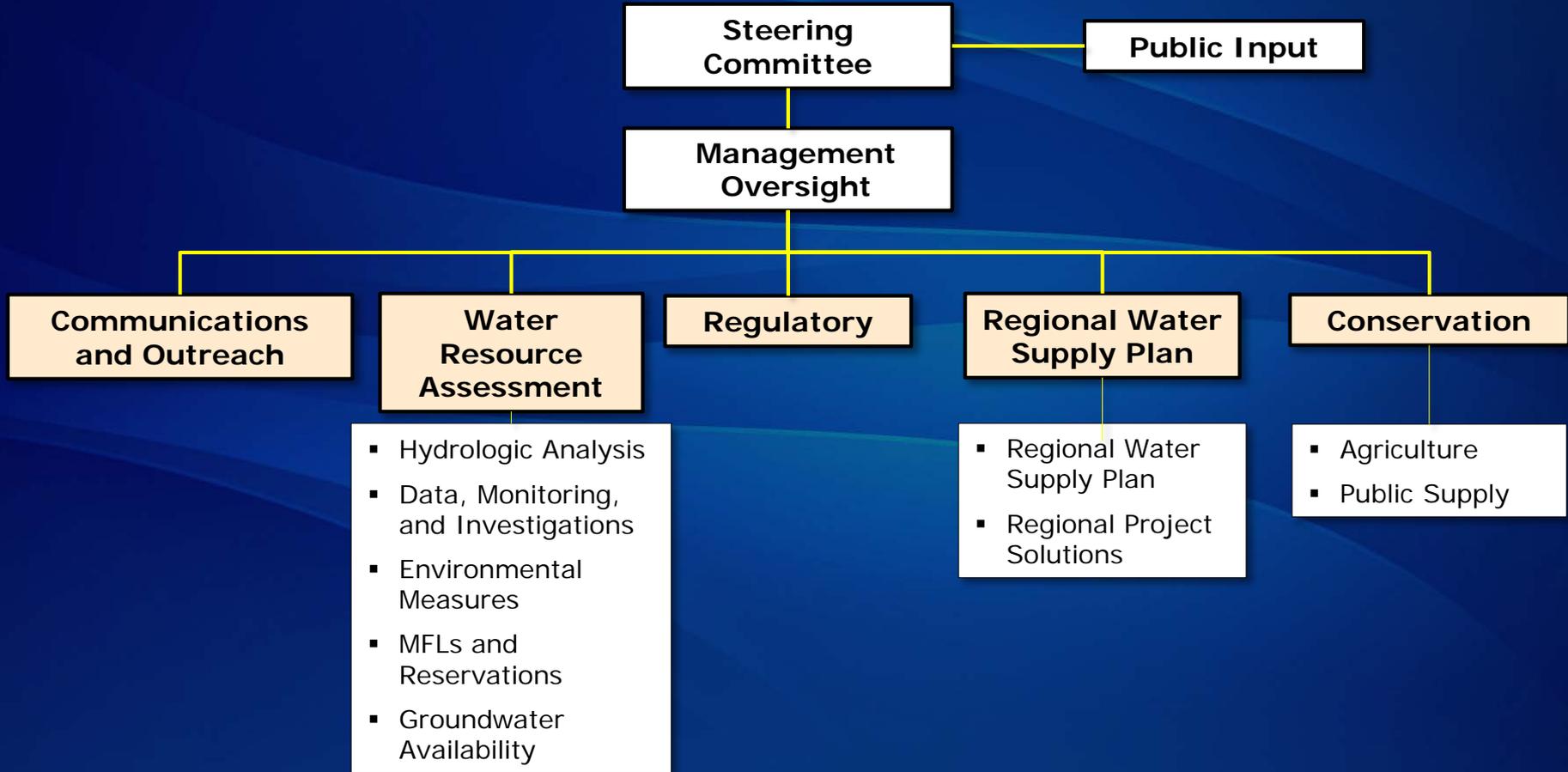


# Central Florida Water Initiative



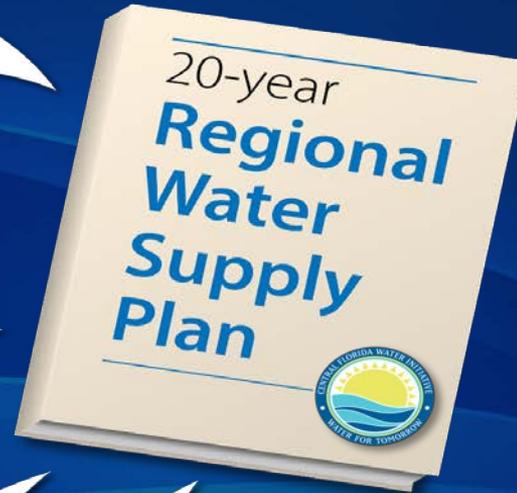
- Collaborative process with FDEP, SJRWMD, SFWMD, SWFWMD, FDACS, regional public water supply utilities, and other stakeholders
- CFWI Planning Area includes Orange, Osceola, Polk, Seminole, and southern Lake counties

# CFWI Organizational Structure



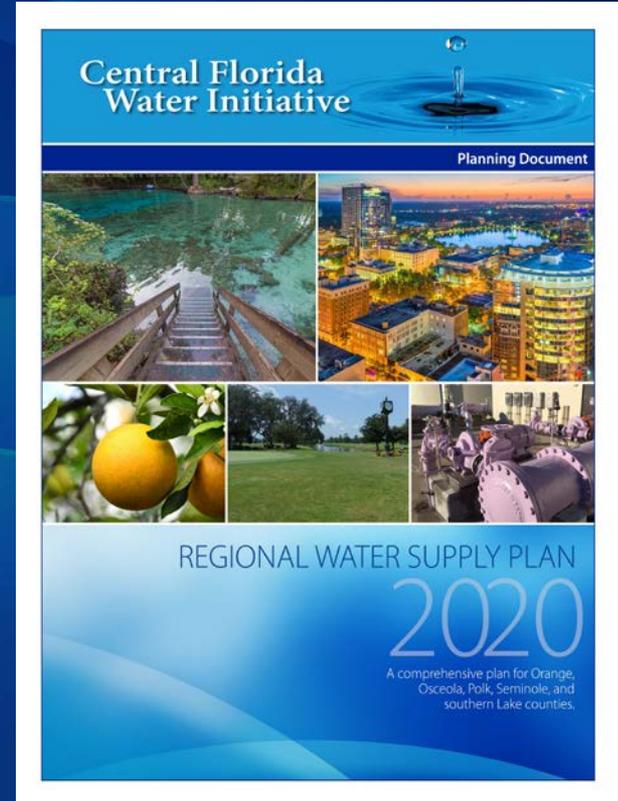
# Regional Water Supply Planning

- Statutory requirements: Sections 373.036 and 373.709, Florida Statutes
- Required for regions where existing water sources are not adequate to supply existing and future reasonable-beneficial uses and to sustain water resources and related natural system



# 2020 CFWI Regional Water Supply Plan

- RWSP updated every 5 years, covers a 20-year planning period
- Provides a framework for water supply management decisions
- RWSP chapters
  1. Introduction
  2. Progress since 2015 CFWI RWSP
  3. Population and Water Demands
  4. Water Resource Assessment
  5. Water Conservation
  6. Water Source Options
  7. Water Supply & Water Resource Development Options
  8. Funding Options
  9. Conclusions and Recommendations



# Progress since 2015

- Updated and expanded ECFT model, including an independent peer-review panel
- Funding (\$44 million) for 39 alternative water supply projects that will make available 94.3 mgd of AWS
- Lower Floridan aquifer investigations at multiple locations in Polk County, and installation and testing of more than 15 LFA wells
- Water Conservation Implementation Strategy was approved
- Regional Cooperation – Polk Regional Water Cooperative was created in 2016

# Water Demands in the CFWI Planning Area

	Public Water Supply	Domestic and Small Public Supply	Agricultural Irrigation	Industrial/ Commercial/ Institutional	Landscape/ Recreational Irrigation	Power Generation	Total
<b>2015</b>	385.97	21.56	159.38	53.50	38.24	8.47	<b>667.12</b>
<b>2040</b>	592.28	24.59	163.49	69.00	46.96	11.27	<b>907.59</b>
<b>Change</b>	206.31	3.03	4.11	15.50	8.72	2.80	<b>240.47</b>
<b>% Change</b>	53%	14%	3%	29%	23%	33%	<b>36%</b>

Demands under average rainfall conditions, in million gallons per day.

## Population

2015 2,933,915 residents  
 2040 4,373,309 residents

*49% increase*



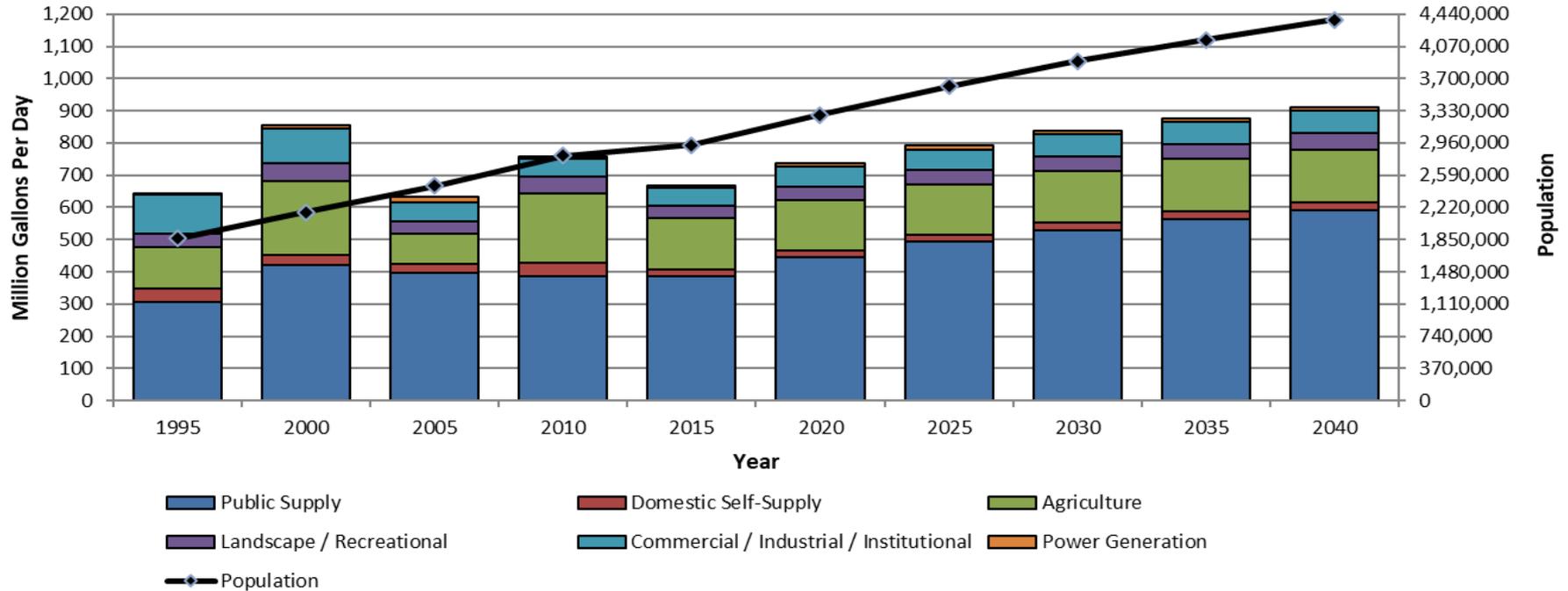
## Irrigated agricultural acres

2015 135,700 acres  
 2040 134,300 acres

*1% decrease*



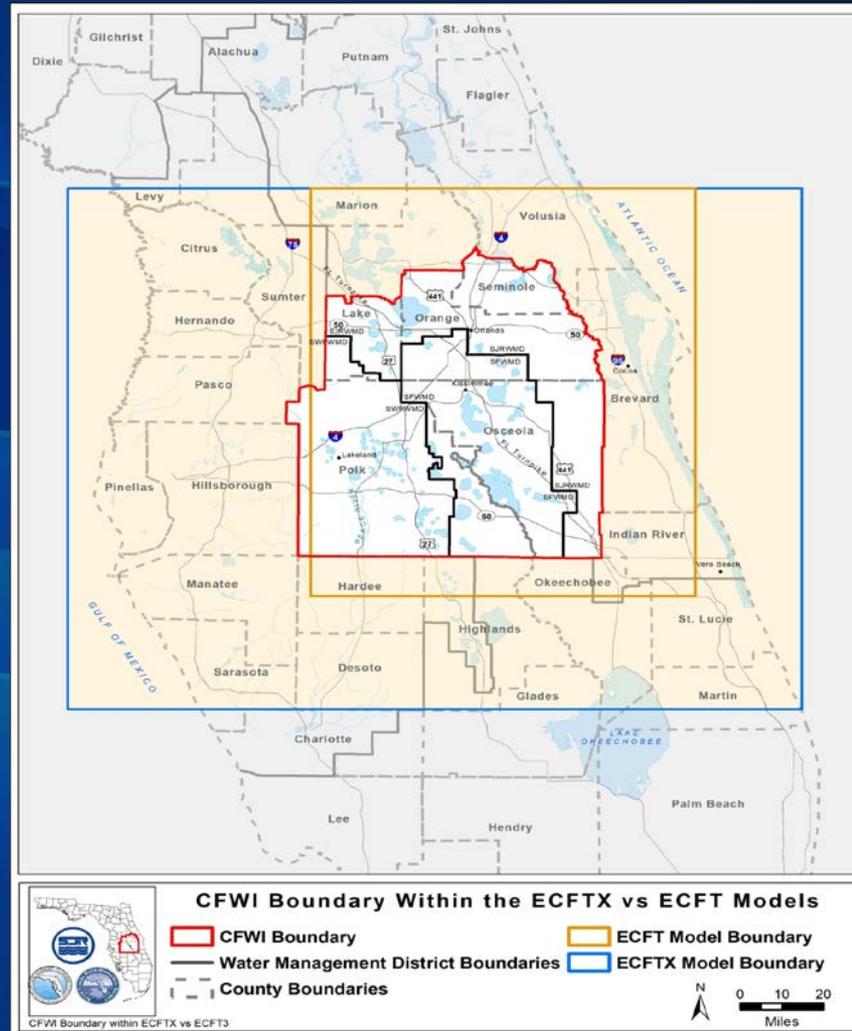
# CFWI Historical and Projected Water Demand vs. Population



1995-2015 are historical data; 2020-2040 are projected data

# Groundwater Model Boundaries

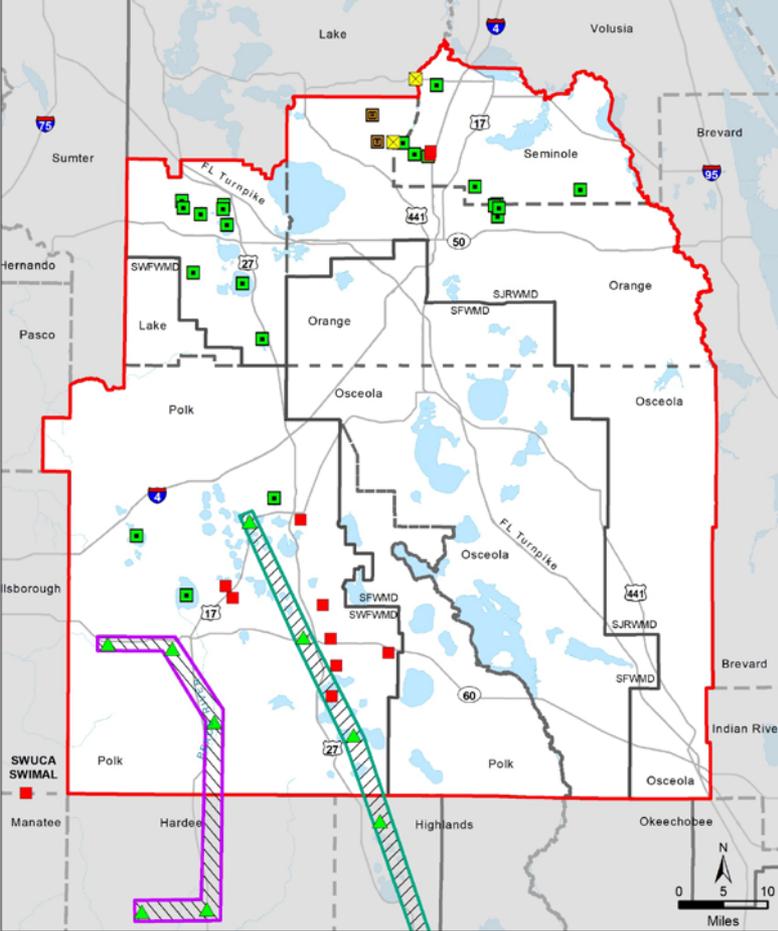
- Planning-level tool
- 2015 RWSP
  - East Central Florida Transient Model (ECFT)
    - 10,000 sq. mi.
- 2020 RWSP
  - East Central Florida Transient Model Expanded (ECFTX)
    - 25,000 sq. mi.



# Environmental Measures

## 39 MFL and MFL-related environmental criteria

- Adopted MFLs in CFWI:
  - 29 lakes/wetlands
  - 6 springs
  - 1 river segment
- Adopted SWUCA SWIMAL
- Upper Peace River target wells for SWUCA recovery
- Ridge Lakes target wells for SWUCA recovery



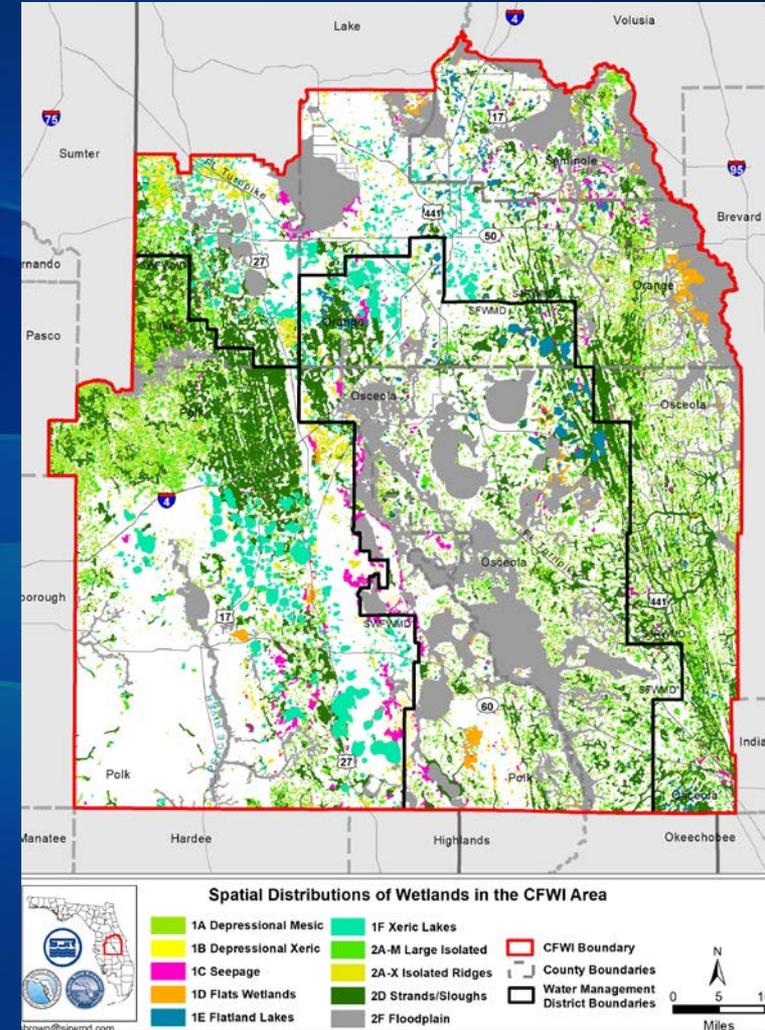
2040 Withdrawals Condition Status of MFL and MFL-Related Environmental Criteria in the Central Florida Water Initiative (CFWI) Area



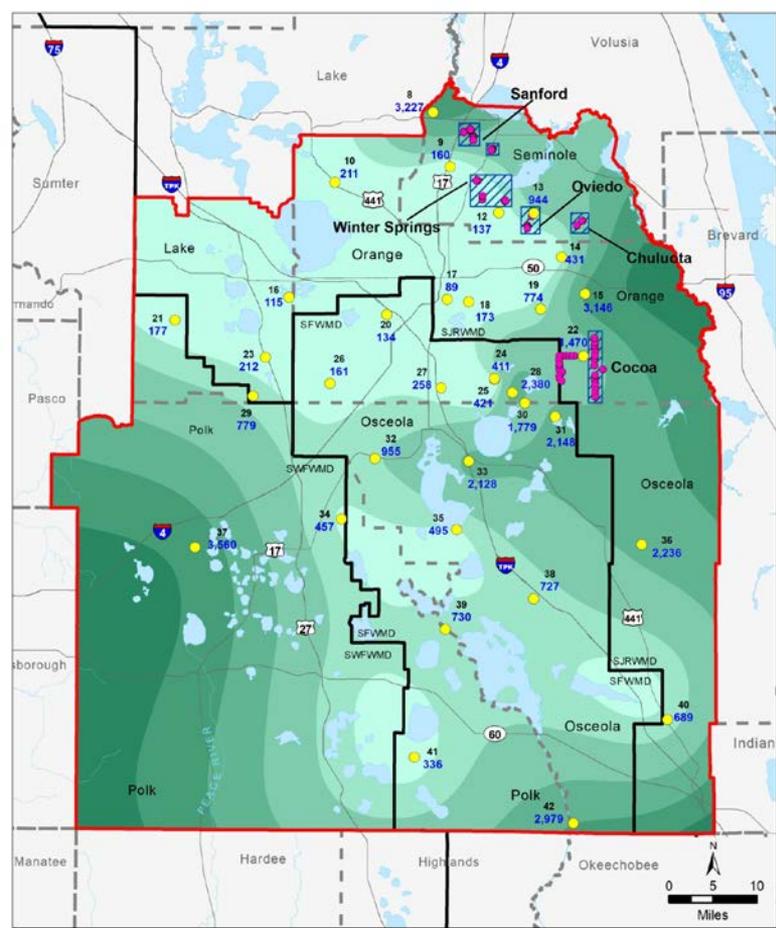
# Environmental Measures

## Wetlands

- >1 million acres in CFWI
- Focus on groundwater-dominated wetlands
- 189,000 acres of wetlands assessed (~19% of total)

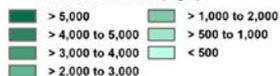


# Total Dissolved Solids in the Lower Floridan Aquifer



**Total Dissolved Solids (TDS) within the Upper Most Permeable Zone of the Lower Floridan Aquifer Model Layer 9 (LFA)**

TDS Concentrations (mg/L)



● Well ID  
mg/L

■ Well Field

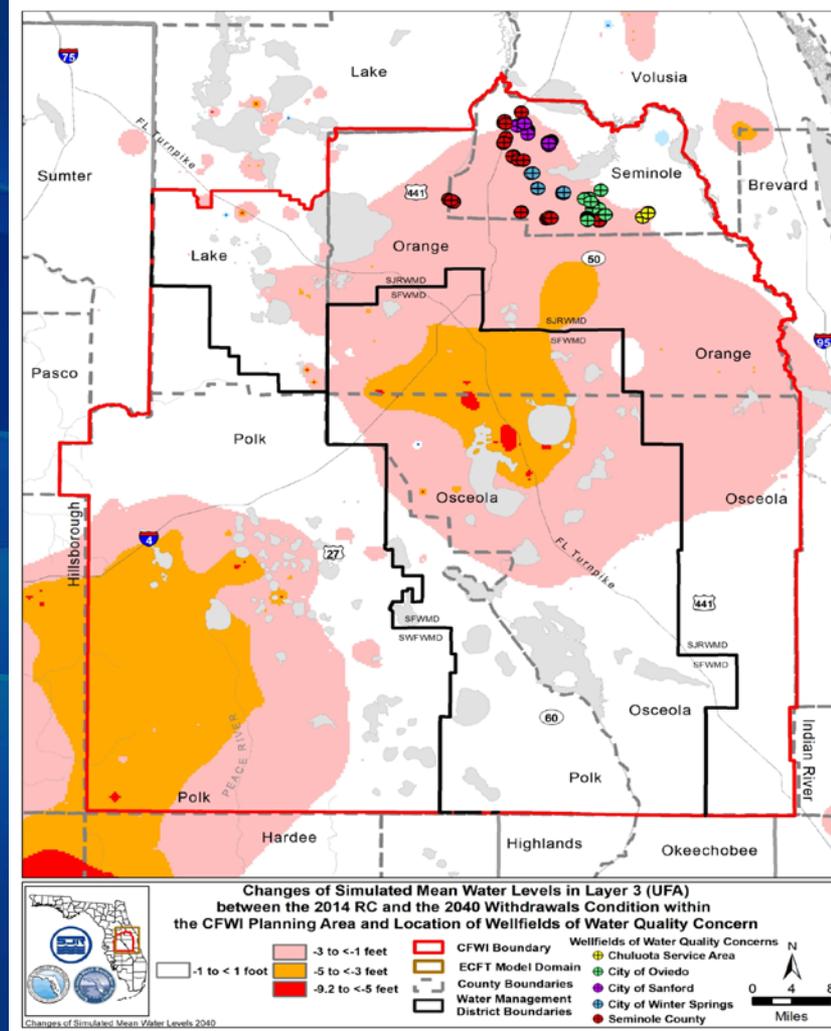
▭ CFWI Boundary  
- - - County Boundaries  
▭ Water Management District Boundaries



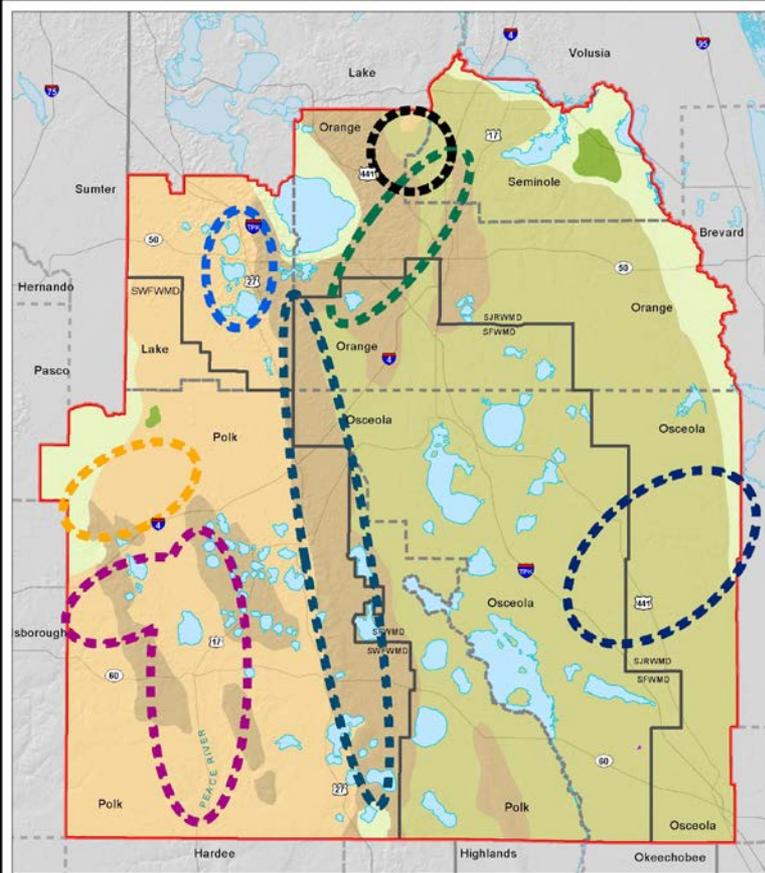
CFWI TDS LFA v.0 DCM 200208

# Example Model Scenario

2014 RC minus 2040



# Primary Areas Susceptible to Groundwater Withdrawals



Areas Susceptible to Groundwater Withdrawals within the Central Florida Water Initiative (CFWI) Planning Area



- Susceptible Areas**
  - Central Polk County
  - East Osceola County
  - Lake Wales Ridge
  - South Lake County
  - Southern Water Use Caution Area (SWUCA)
  - Wekiva Springs / River System
  - West Seminole & Orange Counties
- Physiographic Regions (White 1970)**
  - Hills
  - Lowlands, Gaps and Valleys
  - Plains
  - Ridges
  - Uplands
- CFWI Boundary**
- County Boundaries**
- Water Management District Boundaries**

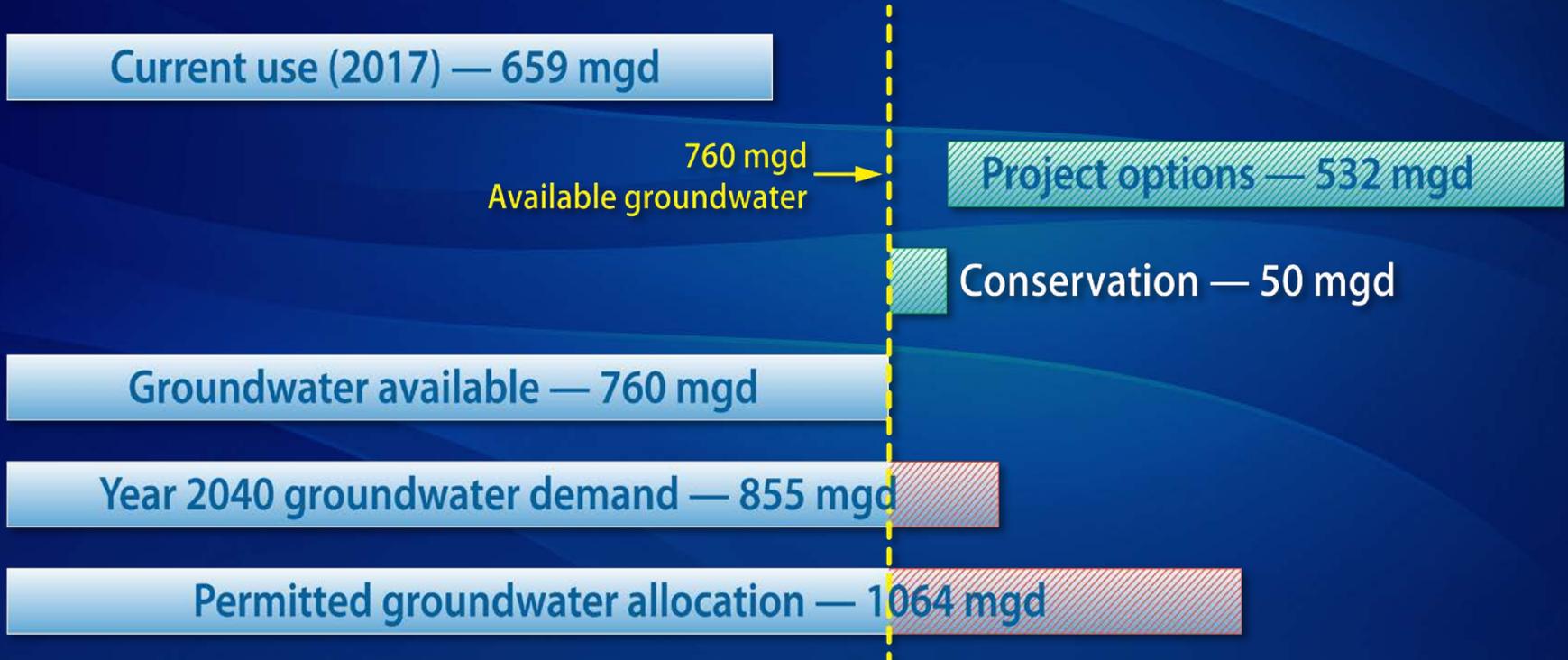


# CFWI Planning-Level Groundwater Availability Assessment

Model Scenarios	Environmental Measures		
	MFLs and MFL-related (39 criteria)	Plains Wetlands (139,000 acres)	Ridge Wetlands (50,000 acres)
2014 (~620 mgd)	11 Not Met	16,700 ac	18,700 ac
2025 (~760 mgd)	11 Not Met	17,400 ac	19,200 – 21,400 ac
2030 (~800 mgd)	13 Not Met	17,700 ac	19,400 – 22,200 ac
2040 (~860 mgd)	15 Not Met	18,100 ac	19,700 – 23,400 ac

# 2020 CFWI RWSP

## Planning-Level Groundwater Availability

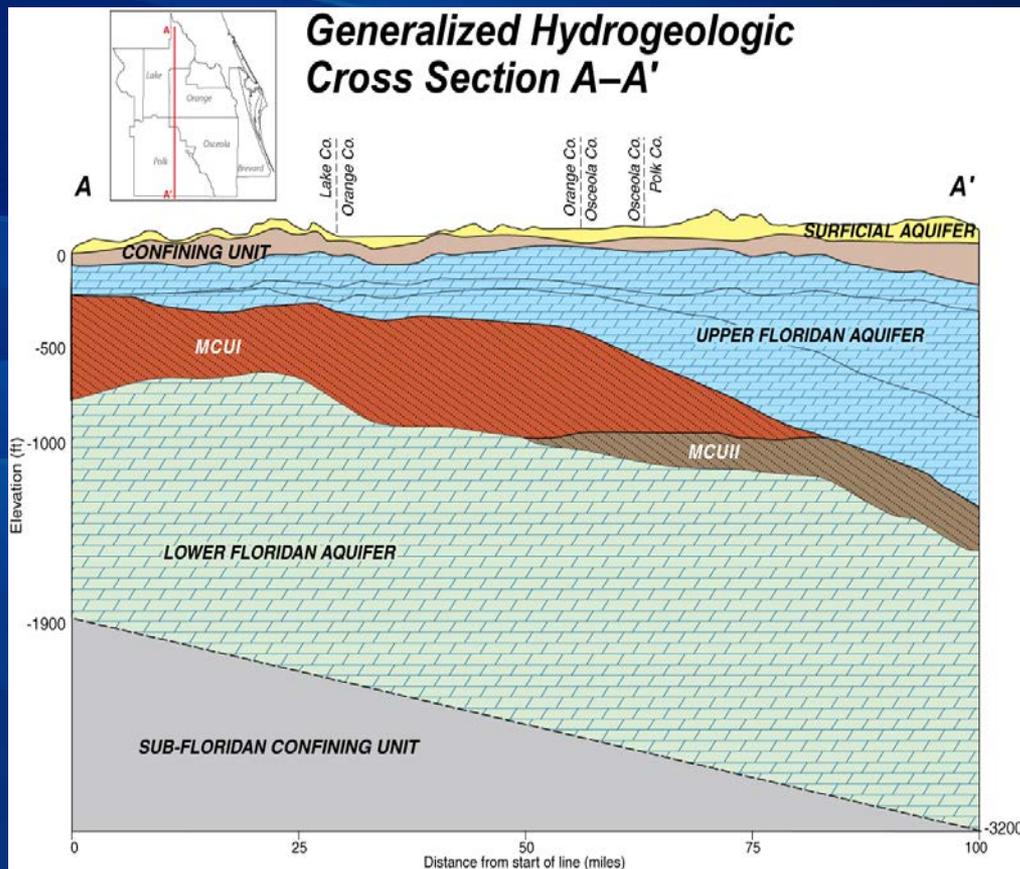


# Projected Water Conservation Savings

Category	Projected 2040 Water Demand (mgd)	Projected 2040 Water Conservation Savings (mgd)
Public Supply	592.28	41.50 – 44.16
Domestic and Small Public Supply	24.59	0.86
Agriculture	163.49	4.19
Landscape/Recreational	46.96	2.22
Commercial/Industrial/Institutional	69.00	1.55 – 4.40
Power Generation	11.27	
<b>Total</b>	<b>907.59</b>	<b>50.32 – 55.83</b>

# Water Source Options

- Groundwater
  - Floridan aquifer system
    - Brackish groundwater
  - Surficial and intermediate aquifer systems
- Reclaimed water
- Surface water
- Stormwater
- Seawater
- Storage capacity
  - ASR and reservoirs



# Water Supply and Water Resource Development Options

County	Brackish/ Non-traditional Groundwater	Management Strategies	Reclaimed Water	Surface Water	Stormwater	Total
Lake	13.70	0.00	4.80	5.00	0.00	<b>22.50</b>
Orange	24.00	5.00	31.97	71.00	0.00	<b>131.97</b>
Osceola	30.00	0.00	19.00	120.00 <sup>a</sup>	9.12	<b>178.12</b>
Polk	45.00	6.00	11.35	46.10	0.00	<b>108.45</b>
Seminole	1.00	0.00	7.03	82.20	0.00	<b>90.23</b>
<b>Total</b>	<b>113.70</b>	<b>11.00</b>	<b>74.15</b>	<b>324.30</b>	<b>9.12</b>	<b>532.27</b>

Project options are shown in million gallons per day

<sup>a</sup> Includes the Grove Land Reservoir Project located in Okeechobee and Indian River counties.

# Funding Options

- Water supplier and user funding
  - Water utility revenue
- Water management district funding
  - Cooperative/cost-share programs
  - Water Resource Development Work Program
  - District initiatives and FARMS/WISE programs
- State funding
  - Water Protection and Sustainability Program
  - Alternative water supply and development appropriation
  - Drinking Water State Revolving Fund Program
  - Florida Forever Program
  - Springs restoration funding
  - Agricultural best management practices
- Federal funding
- Public-private partnerships, cooperatives, and other private investment

# Draft 2020 CFWI RWSP

## Conclusions and Recommendations

- Although groundwater sources are limited, the 2020 CFWI RWSP concludes that current and future water demands can be met through 2040, while sustaining water resources and related natural systems
- The RWSP outlines an integrated approach that includes:
  - Increased water conservation
  - Development of alternative water supplies
  - Further hydrogeologic investigation
  - Optimization of groundwater withdrawals
  - Additional project evaluation and modeling
  - Pursuit of funding for water resource/water supply projects
  - Development of consistent rules/regulations

# 2020 CFWI RWSP Schedule

- *February* *Steering Committee approved release of draft 2020 CFWI RWSP*
- *February/March* *Presentation to District Governing Boards*
- *March to May* Public comment period
- *April* Host public workshops/webinars
- *May to August* Public comments/responses and update of draft
- *August/September* Management Oversight Committee review of updated draft
- *October* Steering Committee approval of final draft 2020 CFWI RWSP
- *November* Governing Board approvals of final draft 2020 CFWI RWSP



# Local Government Requirements



- After the Districts approve the RWSP:
  - Local governments must amend their Comprehensive Plans to include a 10-year Water Supply Facilities Work Plan within 18 months of RWSP update and submit it to the Dept. of Economic Opportunity
  - Work Plan must demonstrate sufficient water supply for at least the next 10 years
  - Identify projects to be developed

# Written Public Comment

- Comment period ends at 5:00 p.m. on May 15, 2020
- Public comment form is available on [www.cfwiwater.com](http://www.cfwiwater.com)

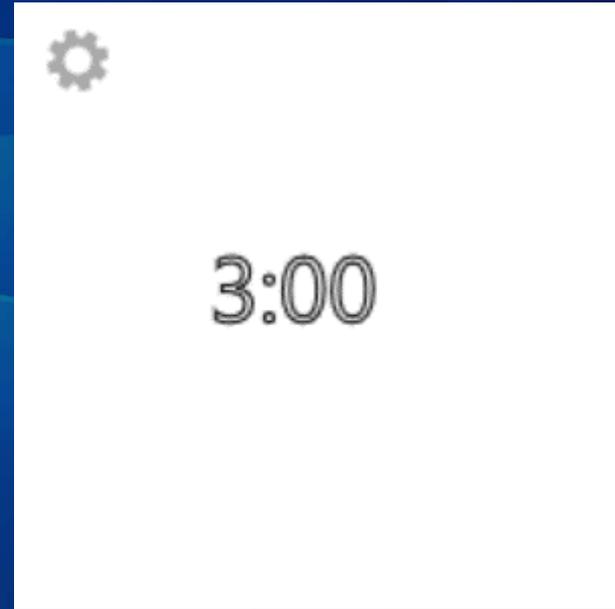
# General Public Comment

- If you're participating via Zoom – use the Raise Hand feature

If you're participating via phone –

\*9 Raises Hand

\*6 Mutes/Unmutes



Thanks for attending!

