

Central Florida Water Initiative: Water for Tomorrow



The Florida Water & Climate Alliance

February 7, 2020

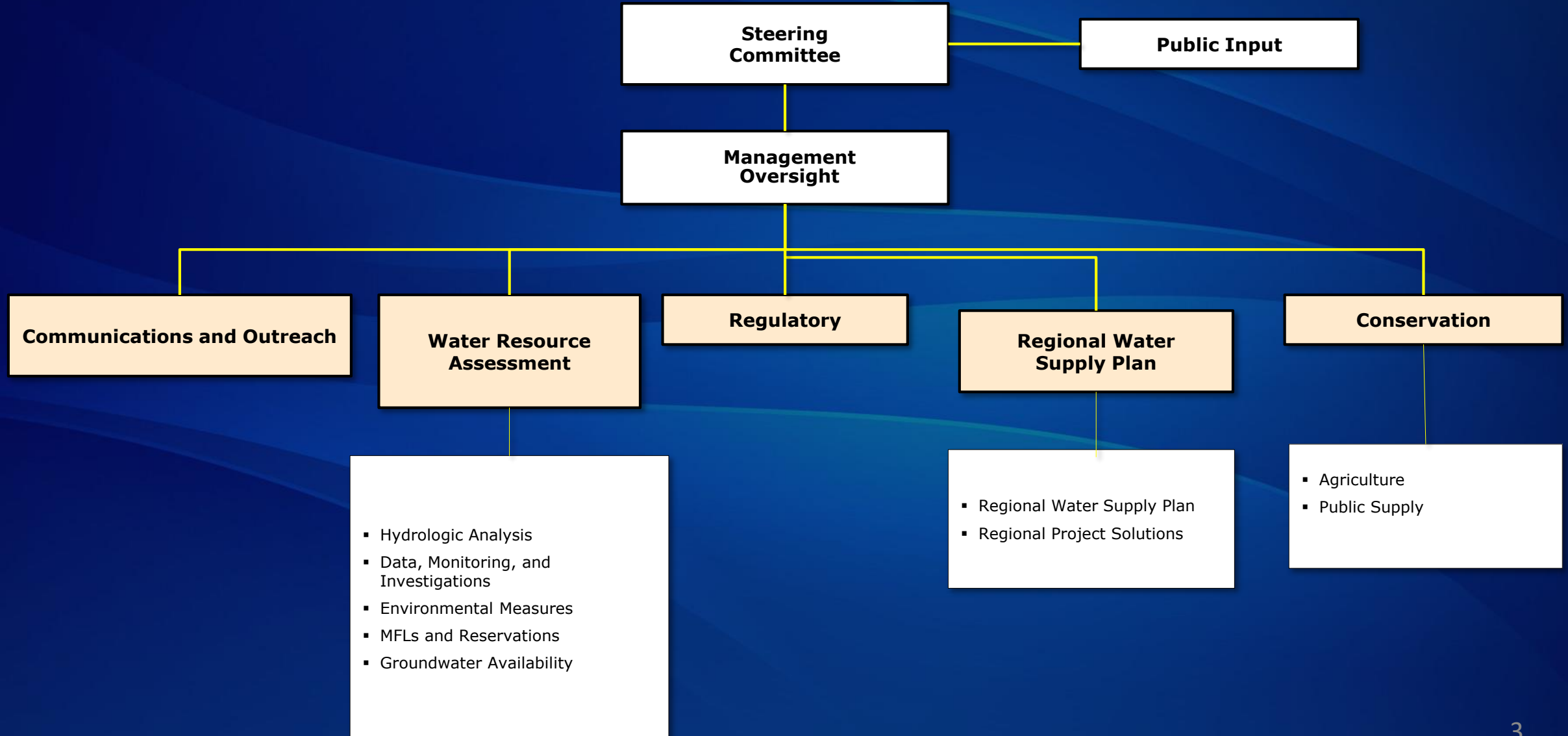
Craig Varn

Manson Bolves Donaldson Varn

What is the CFWI?

- A collaborative water supply planning effort to: Protect, manage, conserve and restore central Florida's water resources
- Goals
 - Identify sustainable quantities of groundwater sources
 - Develop strategies to meet water demands
 - Complete the 2020 CFWI RWSP

2020 Organizational Structure



PERMITTED QUANTITIES (mgd)

Groundwater		Surface Water		Total		Total Percent
PS	573	PS	21	PS	593.9	53.2
AG	262.5	AG	52.6	AG	315.1	28.2
CII/PG/MD	116	CII/PG/MD	20.4	CII/PG/MD	136.3	12.2
Other	40.2	Other	31.6	Other	71.8	6.4
Total	<u>991.7</u>	Total	125.5	Total	1,117.2	100

CFWI Planning Area

Planning Horizon 2015-2040

➤ Population:

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



49% increase

➤ Irrigated agricultural acreage:

- 2015 135,700 acres
- 2040 134,300 acres



1% decrease

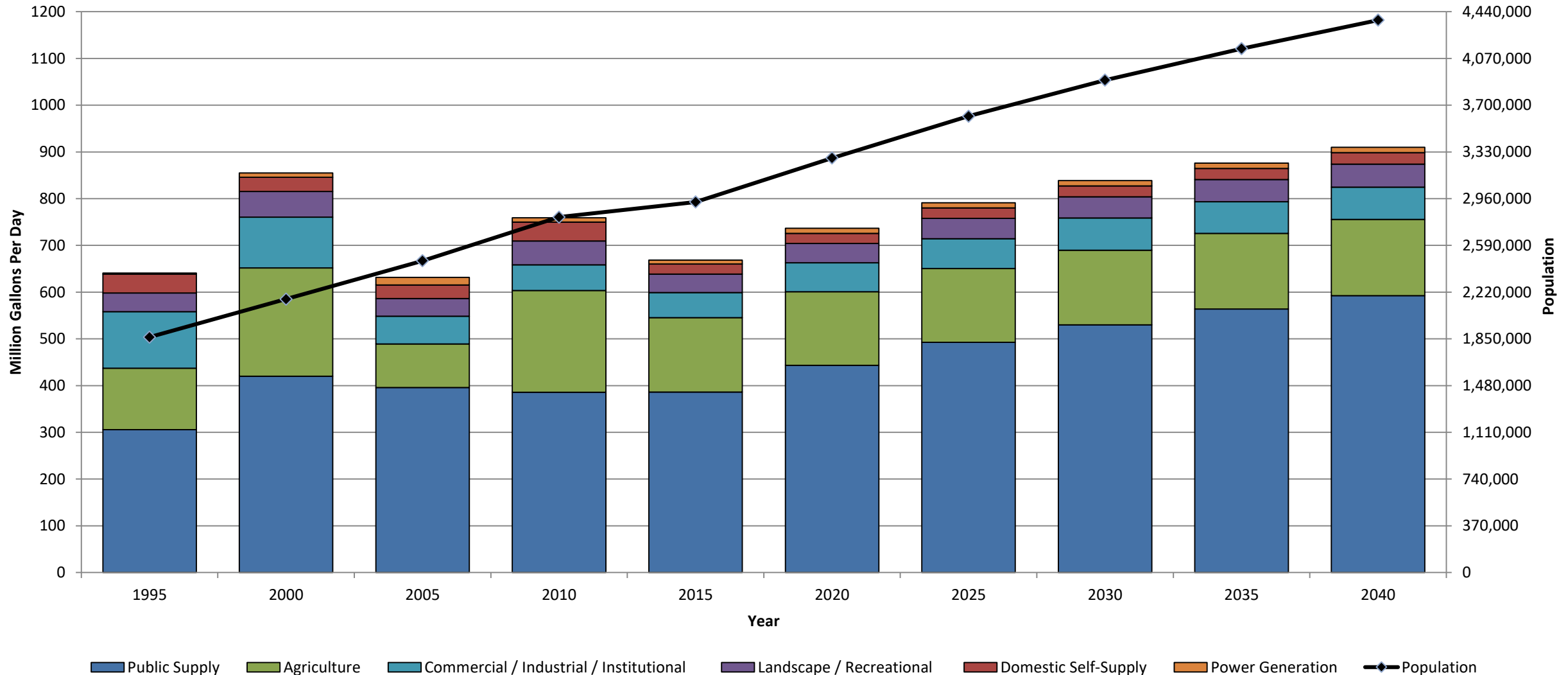
➤ Total water demands:

- 2015 669 mgd
- 2040 910 mgd



36% increase

Historic Water Use and Projected Water Demand – vs – Historic Population and Projected Population



Planning Level Tool




Modeled Groundwater Volumes in the CFWI Planning Area (mgd)

Plan	2005RC	2014 RC	2015	2025	2030	2035	2040	EOP
2015 RWSP	658		804	897		1018		990
2020 RWSP		620		753	796	825	861	992

Recent Actual Use and ECFTX Modeled Quantities (mgd)

Area	2014 RC	2017 Actual	2025	2030	2035	2040
CFWI Planning Area	620	659	753	796	825	861

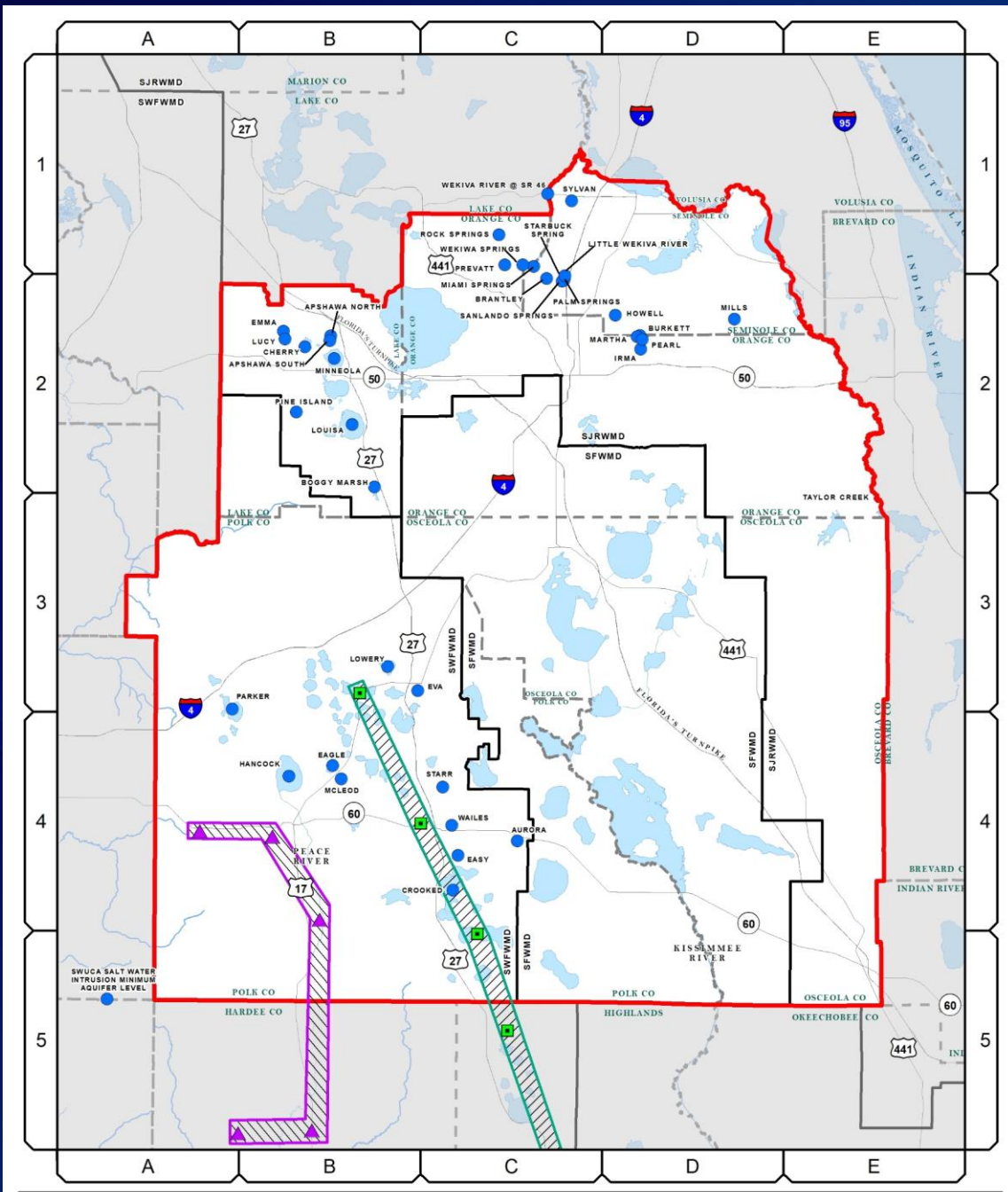


2025 RWSP

MFLs and MFL-Related Environmental Criteria

39 Criteria

- Adopted MFLs in CFWI: 29 lakes/ wetlands, 6 springs, and 1 river segment
- Adopted SWUCA SWIMAL
- Upper Peace Target Wells for SWUCA recovery
- Ridge Lakes Target Wells for SWUCA recovery



MFLs and MFL-Related Environmental Criteria Results

MFLs and MFL-Related Environmental Criteria	ECFTX Groundwater Model Withdrawals Scenario				
	2014 RC (620 mgd)	2025 (753 mgd)	2030 (796 mgd)	2035 (825 mgd)	2040 (861 mgd)
Number Met	28	28	26	24	24
Number Not Met	11	11	13	15	15

- Trending freeboard reductions or deficit increases noted for most environmental criteria through 2040
- Recovery or prevention strategies required for MFLs not currently met or projected to not be met over a 20-year planning horizon

SJRWMD Critical MFLs Status Based on ECFTX Model Results and Linear Interpolation

Withdrawal Condition	2014 RC	Linear Interp	2025	Linear Interpolation				2030	2035	2040
Withdrawal Rate (mgd)	620	701	753	762	770	779	787	796	825	861
Wekiwa Springs (cfs) <i>Outstanding FL Spring</i>	1.8	0.9	0.2	0.2	0.1	0.0	-0.1	-0.2	-0.6	-0.9
Rock Springs (cfs) <i>Outstanding FL Spring</i>	2.2	1.3	0.8	0.7	0.6	0.5	0.4	0.3	-0.1	-0.3
Wekiva River at State Road 46 (cfs)	6.2	2.6	0.3	0.1	-0.3	-0.7	-1.0	-1.4	-2.8	-3.9
Lake Prevatt (UFA, ft)	0.9	0.5	0.3	0.3	0.2	0.2	0.1	0.1	-0.1	-0.2

- 2014 Reference Condition and 2025, 2030, 2035 and 2040 Withdrawals Condition freeboard/deficit values are based on ECFTX model results; other are based on linear interpolation

CFWI Planning-Level Groundwater Availability Assessment

Environmental Criteria	2014 RC 620 mgd	760 mgd	800 mgd	860 mgd
MFLs and MFL-related Criteria	28 Met	No Change in Status	26 Met	24 Met
	11 Not Met		13 Not Met	15 Not Met
Stressed Plains Wetlands	17,000 Acres	+770 Acres	+1,000 Acres	+1,400 Acres
	12%	+0.5%	+0.7%	+1%
Stressed Ridge Wetlands	19,000 Acres	+ 500 to 2,750 Acres	+700 to 3,600 Acres	+1,000 to 4,700 Acres
	37%	+ 1 to 5%	+1.5 to 7%	+2 to 9%

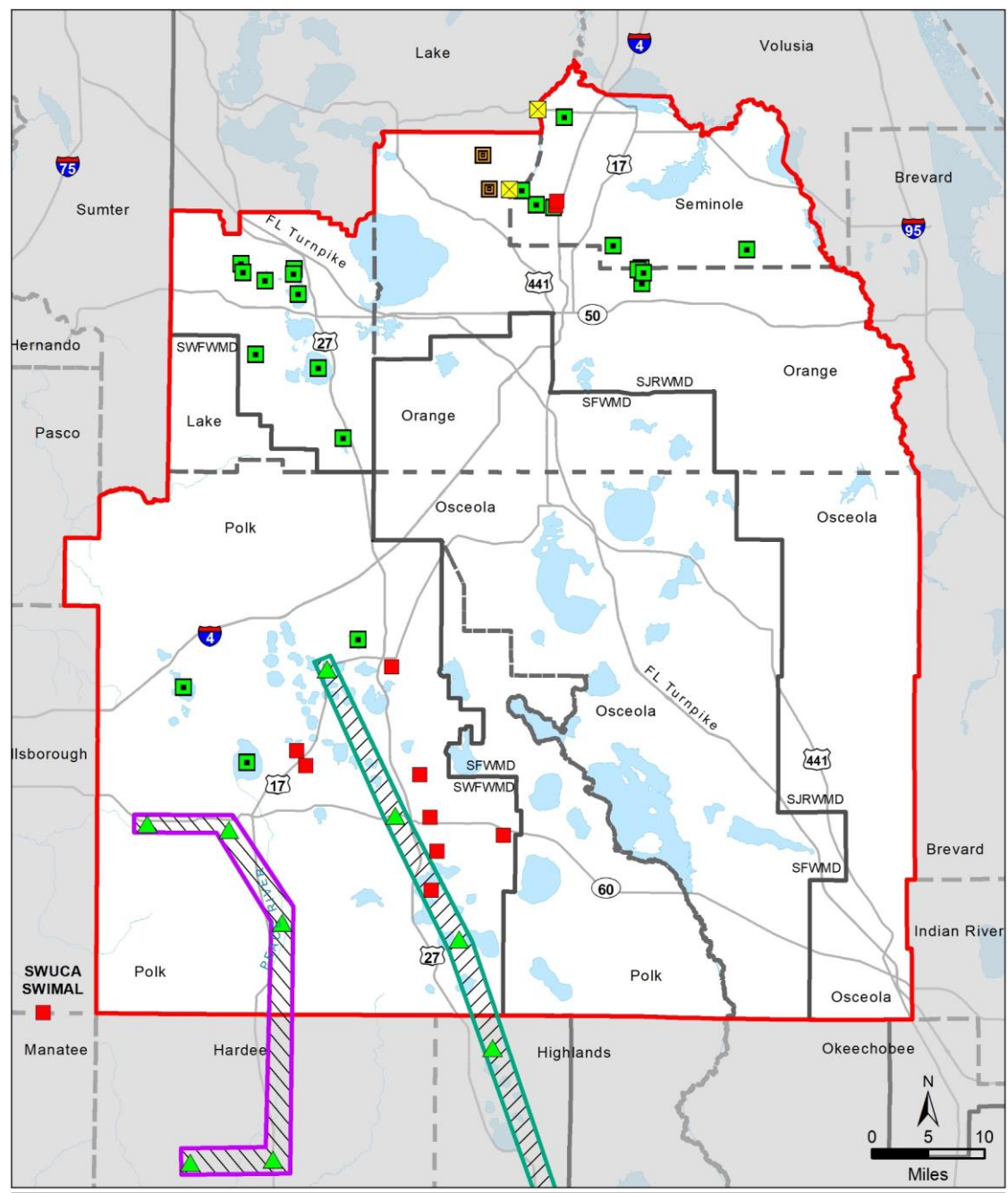
2040 Withdrawals Condition Status

 or  Met – 2014 RC, 2030 and 2040

 Not Met – 2014 RC, 2030 and 2040

 Not Met – 2030 RC and 2040

 Not Met – 2040



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2020 CFWI Conservation Projections

Water Demand Category	Projected 2040 Demand (mgd)	Projected 2040 Conservation Savings Estimate (mgd)
Public Supply	592.28	41.50 – 44.16
Domestic Self-Supply (DSS)	24.59	0.86
Agriculture	163.49	4.19
Landscape/Recreational	49.27	2.22
Commercial/Industrial/Institutional	69.00	1.55 - 4.40
Power Generation	11.27	
Total	909.9	50.32 – 55.83

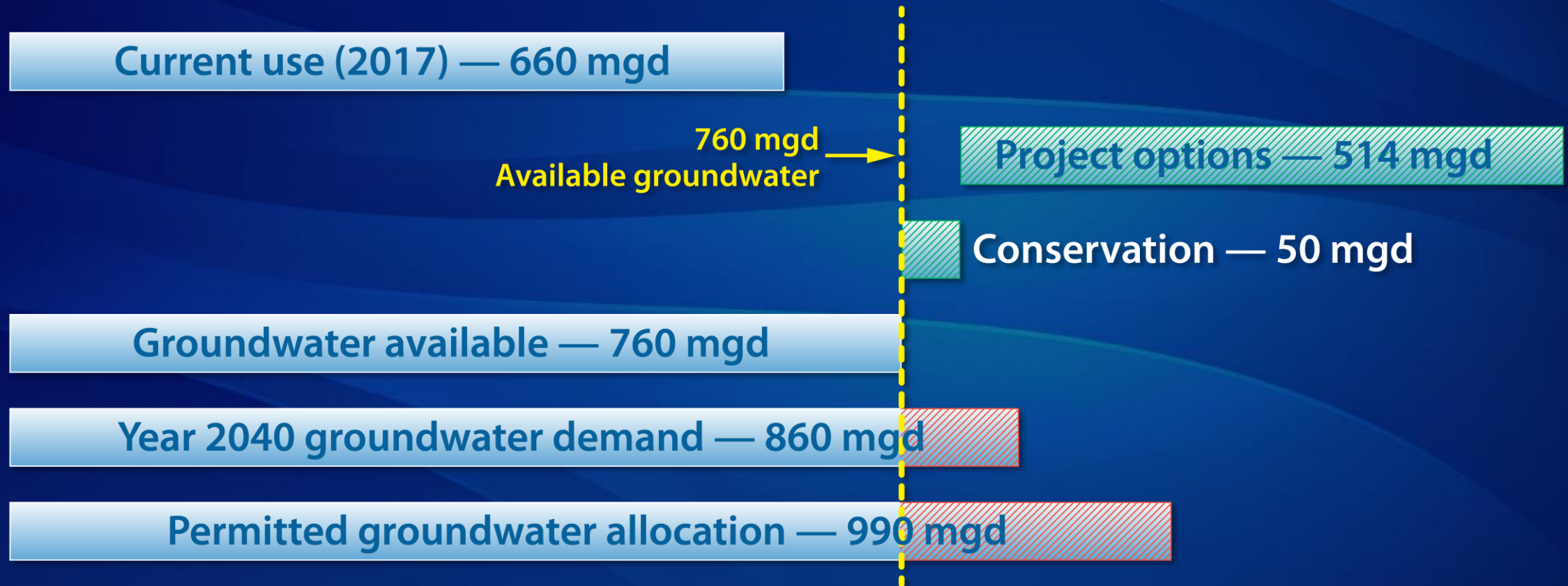
Proposed Projects

County	Brackish Groundwater	Management Strategies	Reclaimed Water	Surface Water	Stormwater	Total
Orange	24.00	5.00	31.97	71.00	0.00	132.36
Osceola*	30.00	0.00	5.00	120.00	5.90	135.90
Polk	45.00	6.00	11.35	46.10	0.00	109.34
Lake	13.70	0.00	3.80	5.00	0.00	23.23
Seminole	1.00	0.00	7.03	82.20	0.00	86.53
Total	113.70	11.00	59.15	324.30	5.90	514.04

* Includes the Grove Land Reservoir Project located in Okeechobee and Indian River Counties

CFWI RWSP 2020

Planning-level groundwater availability



Next Steps

- Prioritize proposed project options based on:
 - Geographic location of project in relation to environmental constraints
 - Resource benefit
 - Permitability
 - Cost effectiveness
- Continue to identify water supply project options
- Focused conceptualization and optimization modeling
- Continue to implement Recovery Strategies (e.g., SWUCA)
- Develop and implement new Prevention/Recovery Strategies
- Encourage funding for construction of AWS projects
- Continue monitoring and data collection in the region

2020 RWSP Key Dates

Key Components	Completion
Per Guiding Principle 3 – Initiate Rule Development (Regulatory Team)	12/31/2016
ECFTX Model Completion	12/30/2017
Develop population and water demand projections – tabular and spatial distribution	12/31/2017
Update water supply and water resource development project options	8/16/2018
Evaluate and assess water sources	9/8/2018
Update water conservation and reclaimed water estimates and options	12/31/2018
Produce Draft 2020 Regional Water Supply Plan (first internal draft 6/4/2019)	10/9/2020
Conduct public workshops and meetings on the Draft 2020 Regional Water Supply Plan	10/20/2020
Governing Board Approvals	10/20/2020

Questions