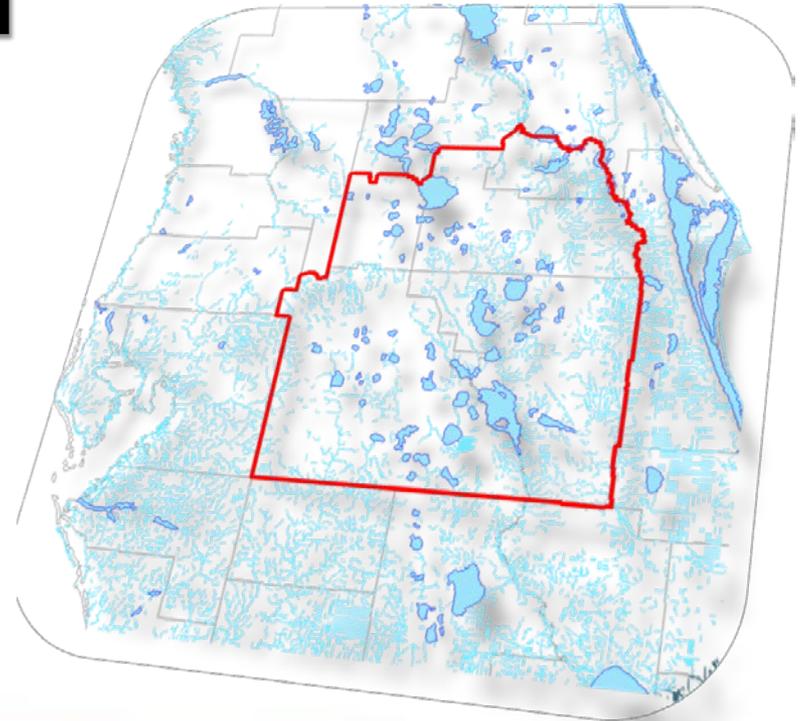


# CFWI Draft Regional Water Supply Plan

**Public  
Workshop**  
January 16, 2014

Tom Bartol, P.E.



# Today's Presentation

- What is CFWI?
- How are we addressing the challenges?
- What is a regional water supply plan?
- What are the components?
- Opportunities for public comment



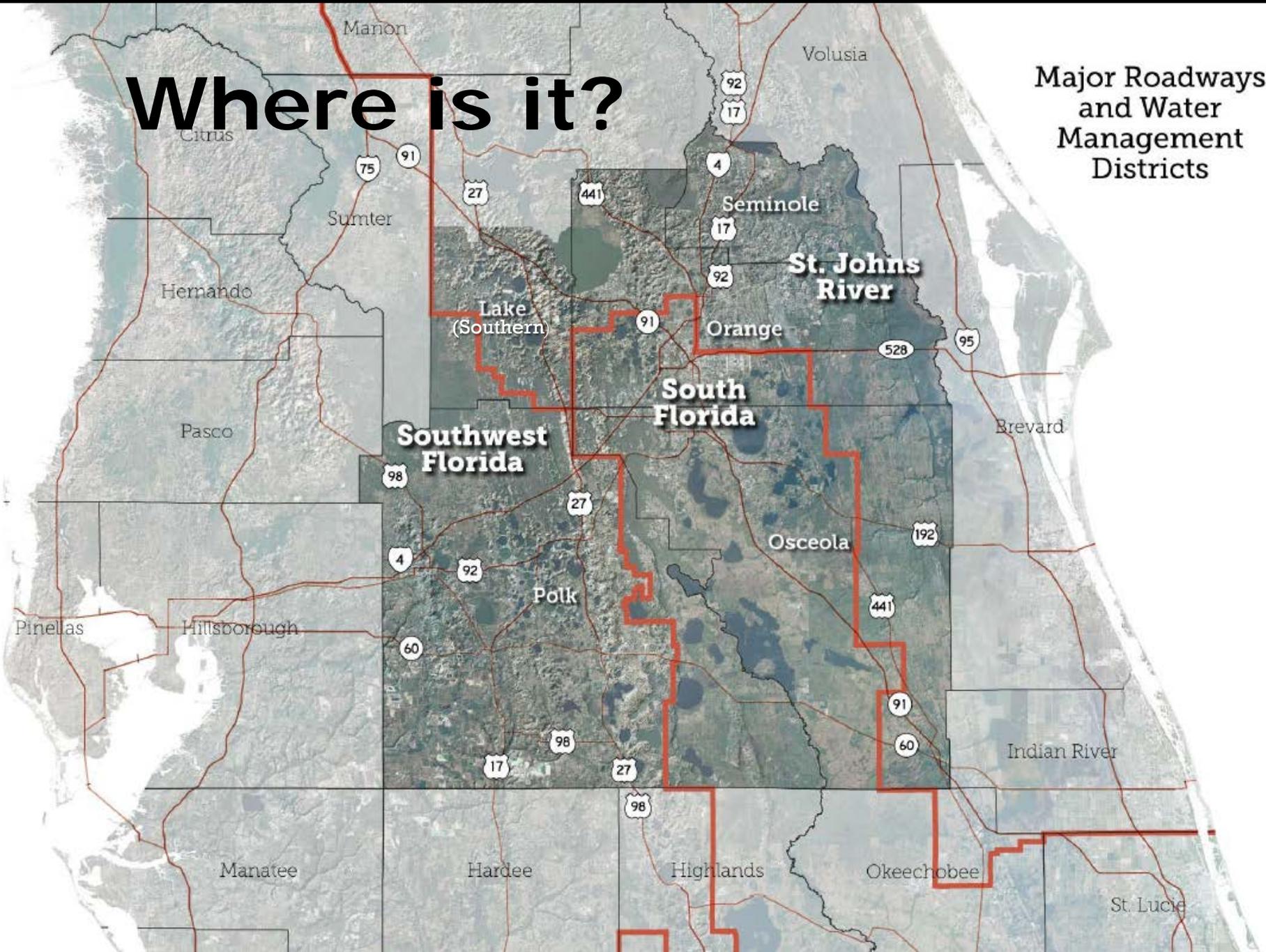
# What is the CFWI?

A collaborative water supply planning effort to:

- Protect, develop, conserve and restore central Florida's water resources

## Where is it?

Major Roadways and Water Management Districts

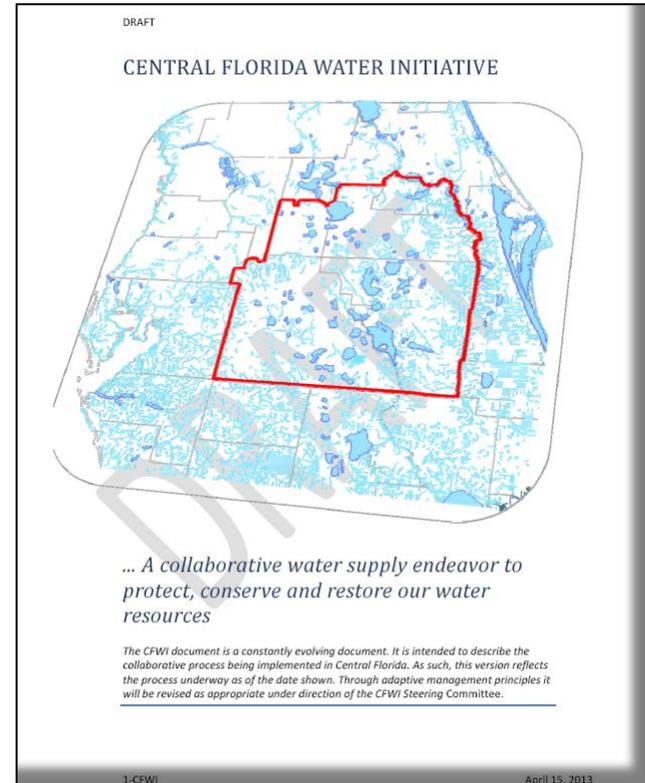


# CFWI Steering Committee

- Includes one representative each from:
  - Florida Department of Agriculture & Consumer Services (FDACS)
  - Florida Department of Environmental Protection (FDEP)
  - St. Johns River Water Management District Governing Board
  - South Florida Water Management District Governing Board
  - Southwest Florida Water Management District Governing Board
  - Utilities

# Steering Committee

- Primary oversight to guide a coordinated effort
- Guidance Document outlines the process based on three Guiding Principles



Guidance Document available at [CFWIwater.com](http://CFWIwater.com)

# Guiding Principles (simplified)

1. Identify sustainable quantities of groundwater sources
2. Develop strategies to meet water demands
3. Establish consistent rules

# CFWI Timeline

## Ongoing

Technical Teams:

- Data Monitoring & Investigations
- Environmental Measures
- Groundwater Availability
- Hydrologic Analysis
- MFLs & Reservations
- Regional Water Supply Plan

## Nov. 30, 2013

Technical Work:

- Findings & Conclusions
- Draft Regional Water Supply Plan

## Dec. 31, 2014

Solutions Work:

- Projects
- Regulatory
- Financing
- Monitoring

# What are the Challenges?

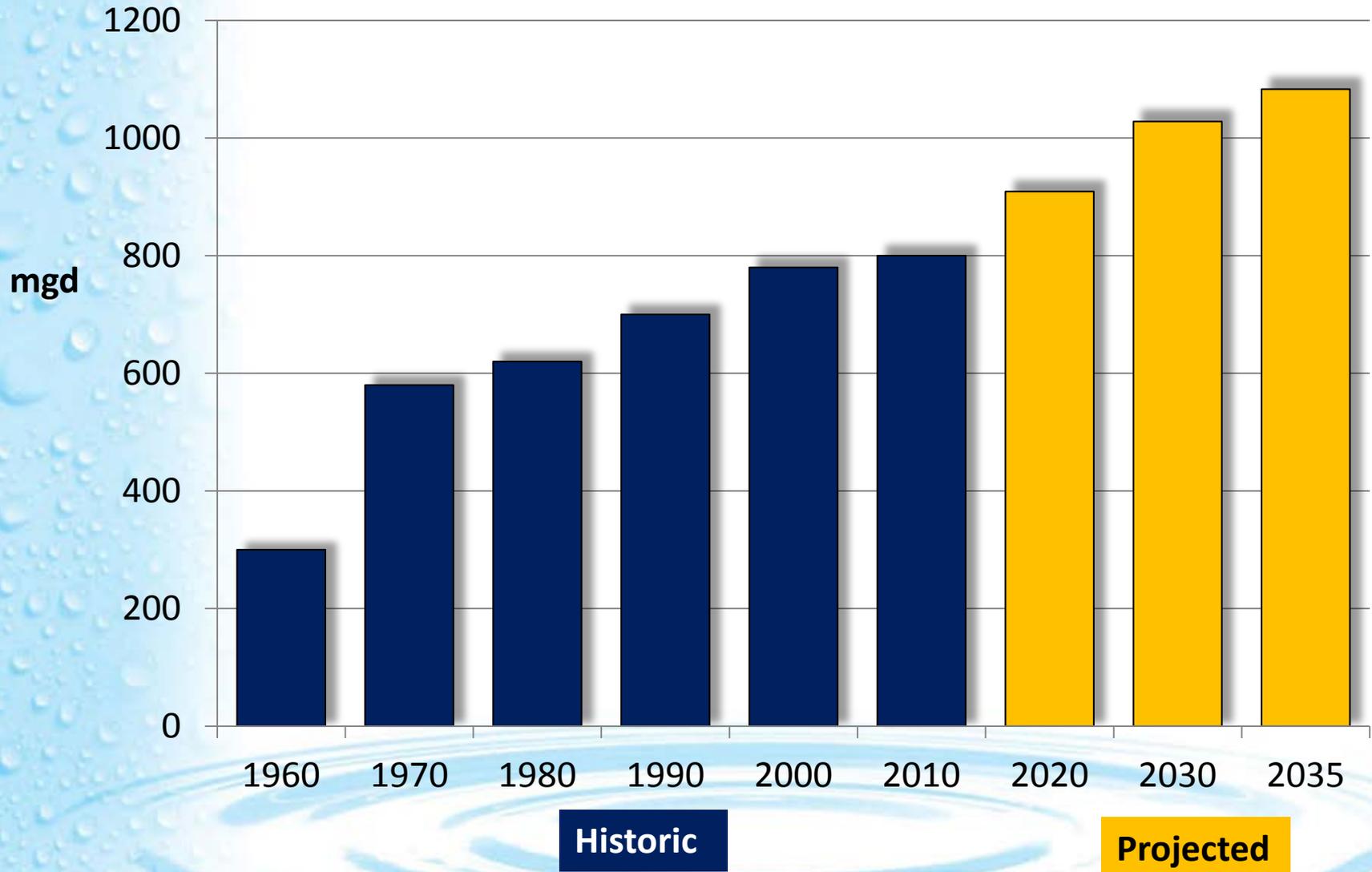
- Reaching sustainable groundwater limits
- Meeting future demands on the area's water resources
- Overlapping regulatory programs

# Addressing the Challenges

- One shared groundwater model
- One coordinated strategy for Minimum Flows & Levels (MFLs)
- One Regional Water Supply Plan (RWSP)

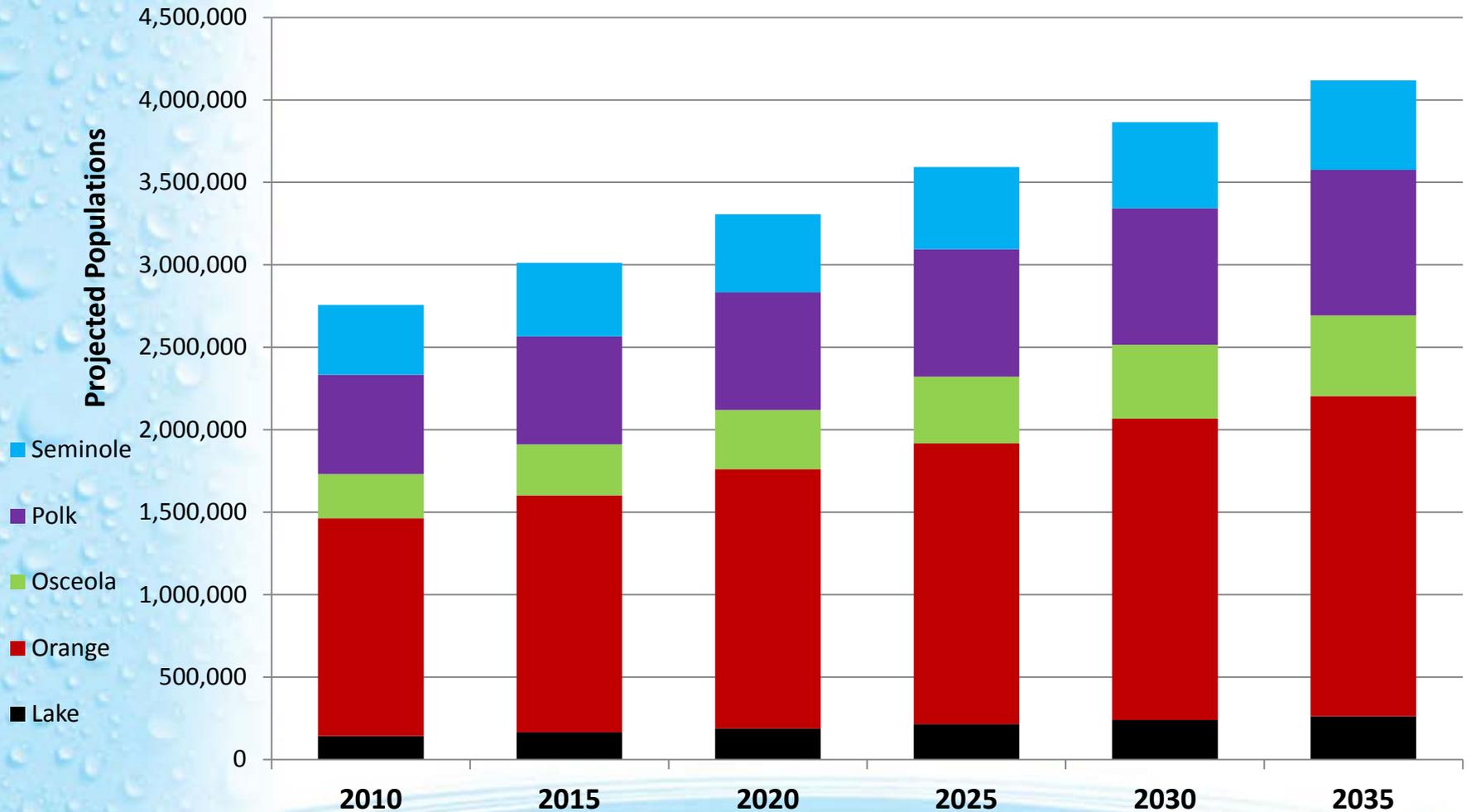
# Water Use

## All Classes



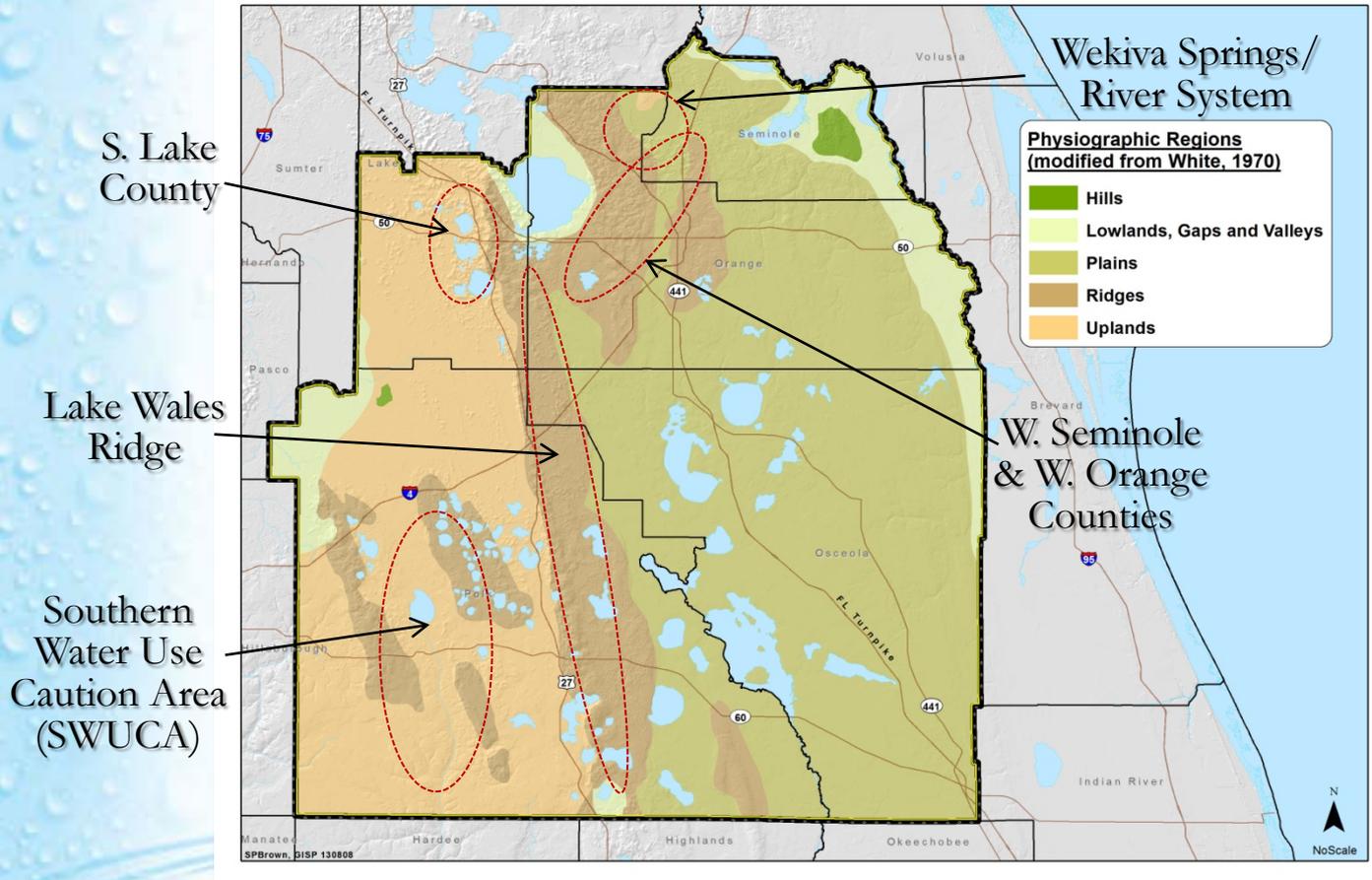
mgd— million gallons per day

# Projected Population



**Projected Increase of 1.4 Million People**

# Primary Areas Susceptible to Groundwater Withdrawals



# Findings

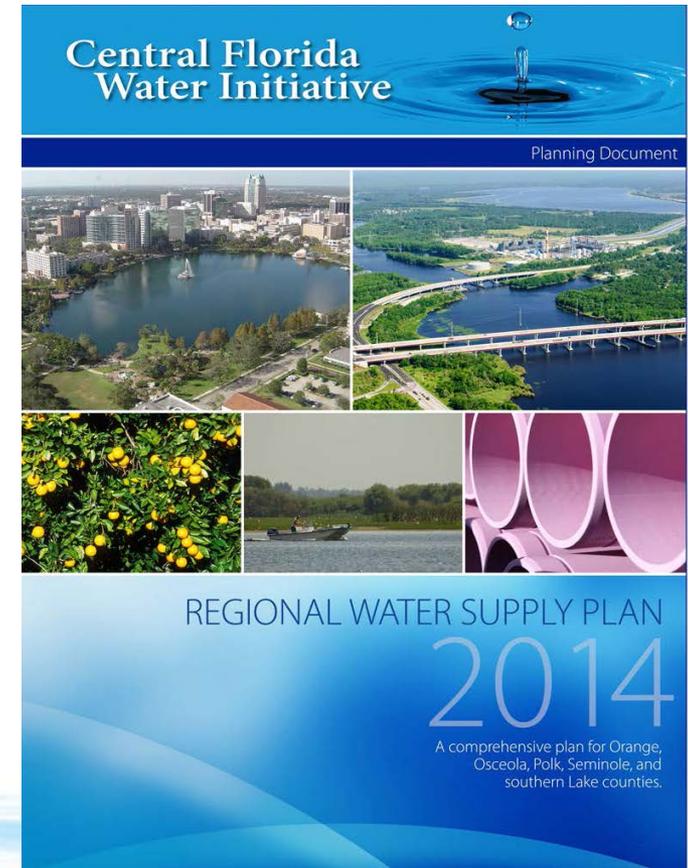
- Traditional groundwater sources can meet some, but not all projected and currently permitted needs in the CFWI.

# CFWI Planning Level Groundwater Availability Estimates

- 800 mgd
  - Average groundwater use (1995 to 2010)
  - Includes some management activities
- 850 mgd
  - Sustainable level of traditional groundwater sources available for water supply without causing unacceptable harm to water resources and associated natural systems
- 250 mgd
  - Amount of new water supply options needed in the RWSP (difference between 2035 projected demands and sustainable level using existing sources)

# One Plan for CFWI Region

- Developing first-ever Regional Water Supply Plan
- Collaborative effort between Districts, FDEP, FDACS, utilities and other stakeholders
- Technical teams provided strong scientific foundation for development of Plan
- Ensuring protection of the water resources and related natural systems



# Regional Water Supply Plan Components

- Demands from all categories
  - 20-year planning horizon
- Evaluation of water resources
- How to meet the demands
  - Potential sources
  - Project options
- Funding mechanisms



Note: Updated every 5 years

# Plan Structure

- [Executive Summary](#)
- [List of Tables](#)
- [List of Figures](#)
- [Acronyms and Abbreviations](#)
- Chapter 1: [Introduction](#)
- Chapter 2: [Population and Water Demands](#)
- Chapter 3: [Resource Protection and Assessment Criteria](#)
- Chapter 4: [Evaluation of Water Resources](#)
- Chapter 5: [Water Conservation](#)
- Chapter 6: [Water Source Options](#)
- Chapter 7: [Water Supply Development](#)
- Chapter 8: [Water Resource Development](#)
- Chapter 9: [Funding for Water Supply and Water Resource Development Projects](#)
- Chapter 10: [Conclusion](#)
- Chapter 11: [Recommendations / Future Direction](#)
- [Glossary](#)
- [References Cited](#)

# Chapter 1 – Introduction

- Statutory & Legal Framework
- Goals/Principles
- Description of CFWI Area
- Previous Planning Efforts
- Water Resources of CFWI Area

# Chapter 2 – Population and Water Demands

- Population by County 2010-2035
  - Public Supply and Domestic Self-Supply
- Demand by County 2010-2035
  - Public Supply
  - Domestic Self-Supply
  - Agriculture
  - Commercial/Industrial/Institutional & Mining Dewatering
  - Landscape/Recreational/Aesthetic
  - Power Generation
- Methods
- Considerations

# Chapter 3 – Resource Protection and Assessment Criteria

- Regulatory Protection
  - Consumptive Use Permitting
  - Minimum Flows & Levels (MFLs)
  - Water Reservations
  - Water Shortage
- Resource Protection
  - Environmental Considerations
    - MFL Prevention & Recovery Strategies
  - Climate Change

# Chapter 4 – Evaluation of Water Resources

- East Central Florida Groundwater Flow Model Overview and Simulations
- Evaluations/Results
  - Groundwater Availability
  - MFLs Status
  - Non-MFL Lakes, Wetlands & Springs Status
  - Water Quality & Saltwater Intrusion

# Chapter 5 – Water Conservation

- Conservation estimates for all water use categories
  - Conserve Florida EZ Guide & Methods
- Water Conservation Programs

Water Use Category	Projected 2035 Conservation (mgd)
Public Supply	27
Domestic Self-supply	1
Agriculture Self-supply	11
Recreation/Aesthetic Self-supply	2
Commercial/Industrial/Institutional Self-supply	1
Power Generation Self-supply	0
<b>Total</b>	<b>42</b>

# Chapter 6 – Water Source Options

- Groundwater
  - Overview of Aquifers
  - Brackish Groundwater
- Surface Water
  - Overview of River Systems
- Seawater
- Reclaimed Water
- Aquifer Storage and Recovery (ASR) & Reservoirs

# Chapter 7 – Water Supply Development

- Project Options (139)
  - Brackish Groundwater (35 projects)
  - Surface Water (14 projects)
  - Seawater (1 project)
  - Reclaimed Water (86 projects)
  - Storage Capacity
  - Management Strategies (3 projects)
- Permitting/Planning Link
- Political Boundaries

# Water Supply Project Options

County	Reclaimed Water	Brackish Water	Surface Water	Management Strategies	Total
Orange	69	10	47	0	<b>126</b>
Osceola	34	17	4 - 29	0	<b>55 - 80</b>
Polk	30	18 - 48	15	6	<b>69 - 99</b>
Lake (southern)	7	0	5	0	<b>12</b>
Seminole	25	0	92	0	<b>117</b>
<b>Total</b>	<b>165</b>	<b>45 - 75</b>	<b>163 - 188</b>	<b>6</b>	<b>379 - 434</b>

Million gallons per day

# Chapter 8 – Water Resource Development

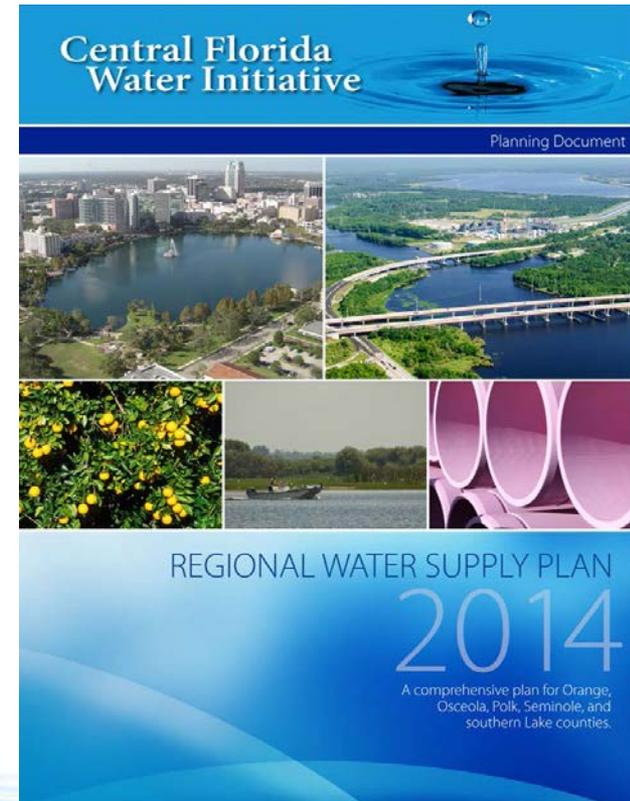
- Project Options
  - Research Activities
    - Surface and Groundwater Modeling
  - Water Conservation Programs
  - Agricultural Projects
    - Facilitating Agricultural Resource Management Systems Program (FARMS)
  - Hydrologic Data Collection/Analysis
  - Lower Floridan Investigations
  - MFL & Reservation Management Activities
  - MFL Recovery/Prevention Strategy Projects
  - Abandoned Well Plugging
  - Surface Water Storage/Treatment Research Projects
  - Aquifer Recharge Projects
  - ASR Research & Pilot Projects

# Chapter 9 – Funding for Water Supply and Water Resource Development

- Water Utility Revenue Funding Sources
- Water Management District Funding Options
- State Funding Options
- Federal Funding Options
- Public-Private Partnerships, Cooperatives and Other Private Investment

# Chapter 10 – Conclusion

- Groundwater Availability – 50 mgd
  - 250 mgd deficit
- Water Conservation Potential
  - 42 mgd
- Alternative Sources Potential
  - 391 mgd (435 with RW Supplementation)
- MFLs
  - 46 in CFWI
  - 10 currently below
  - Additional 15 projected to fall below



# Chapter 11 – Recommendations/ Future Direction

- Water Conservation
- Groundwater
- Reclaimed Water
- Surface Water
- Seawater
- New Storage Capacity
- Minimum Flows and Levels and Water Reservations
- Water Supply Development Projects
- Water Resource Development Projects
- Consumptive Use Permitting Process
- Intergovernmental, Water Supplier and Public Coordination
- Demand Estimates and Projections
- Climate Change

# Local Government Requirements



## After the Districts update the Regional Water Supply Plan:

- Local governments must amend their comprehensive plan to include a 10-year Water Supply Facilities Work Plan within 18 months of RWSP update and submit to Dept. of Economic Opportunity (DEO)
- Work Plan must demonstrate sufficient water supply for at least next 10 years
- Identify the projects to be developed

# Importance of Public Involvement

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



## RWSP Next Steps

- Draft Plan Available – November 26, 2013
  - 65-day comment period
  - Ends January 31, 2014
- Develop comment responses and a response document
- Final Plan

# Providing Public Comment

- Electronically via CFWI webpage
- Email to Tom Bartol:  
[tbartol@sjrwmd.com](mailto:tbartol@sjrwmd.com)
- Mail to Tom Bartol:  
SJRWMD  
4049 Reid Street  
Palatka, FL 32177

# Next Phase: Solutions

- Strategies to meet future water demands:
  - Optimize use of existing groundwater
  - Identify demand management activities
  - Identify viable alternative supplies
  - Establish consistent rules

# Solutions Planning Team

<b>Southwest Florida Water Management District</b>	Robert Beltran (Team Leader)
<b>St. Johns River Water Management District</b>	Woody Boynton
<b>South Florida Water Management District</b>	Len Lindahl
<b>Florida Department of Environmental Protection</b>	Tom Beck
<b>Florida Department of Agriculture and Consumer Services</b>	Ray Scott
<b>Congress of Regional Leaders</b>	Bob Dallari
<b>Agriculture</b>	Jim Fletcher
<b>Public Water Supply Utilities</b>	Andy Neff
	Gary Fries
<b>Environmental Community</b>	Nancy Prine
<b>Business Community</b>	Michael Minton

## Central Florida Water Initiative

Home

Meetings

Regional Water Supply Plan

Minimum Flows and Levels and Water Reservations

Hydrologic Analysis

Environmental Measures

Data, Monitoring and Investigations

Groundwater Availability

CFWI Resources

CFCA Resources

Contacts

### Overview of the Central Florida Water Initiative

Florida's water management districts are committed to finding new ways of meeting the demand for freshwater. Historically, the Floridan aquifer system has supplied the vast majority of the water used in the central Florida area. The boundaries of three water management districts — the St. Johns River Water Management District, South Florida Water Management District and Southwest Florida Water Management District — meet in the area. The three districts are studying whether the Floridan aquifer system is reaching its sustainable limits, of use and exploring the need to develop supplemental sources of water.



In the past, the three districts worked independently to resolve water resource issues, but the decisions of one district can impact the water resources of another. Today, the districts are working collaboratively with other agencies and stakeholders to implement effective and consistent water resource planning, development and management through the Central Florida Water Initiative (CFWI).

The CFWI builds on the prior work of the Central Florida Coordination Area (CFCA). Both efforts focus on an area that includes southern Lake, Orange, Ocala, Seminole and Polk counties. The three water management districts, along with the Florida Department of Environmental Protection (DEP), Florida Department of Agriculture and Consumer Services (FDACS), regional public water supply utilities and other stakeholders are collaborating to develop a unified process to address central Florida's current and long-term water supply needs.



The Central Florida Parkway passes central Florida's theme park region and communities.

**Guiding principles**

The guiding principles of the CFWI are:

- Identify the sustainable quantities of traditional groundwater sources available for water supplies that can be used without causing unacceptable harm to the water resources and associated natural systems.
- Develop strategies to meet water demands that are in excess of the sustainable yield of existing traditional groundwater sources.
- Establish consistent rules and regulations for the three water management districts that meet their collective goals, and implement the results of the Central Florida Water Initiative.

## Public Comments

Additional information can be found at [cfwiwater.com](http://cfwiwater.com)