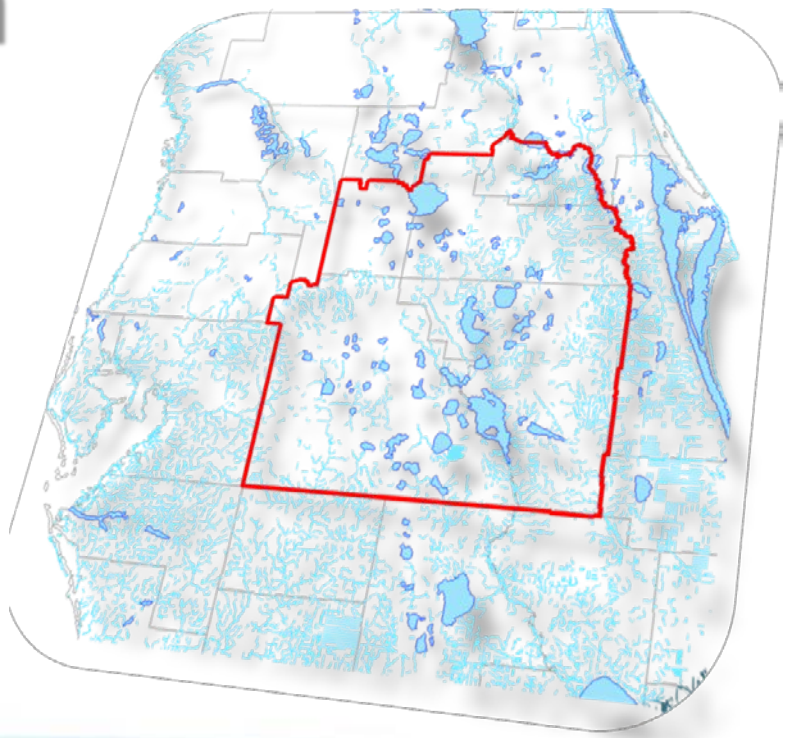
CFWI Draft Regional Water Supply Plan

Public Workshop

December 12, 2013

Tom Bartol, P.E.



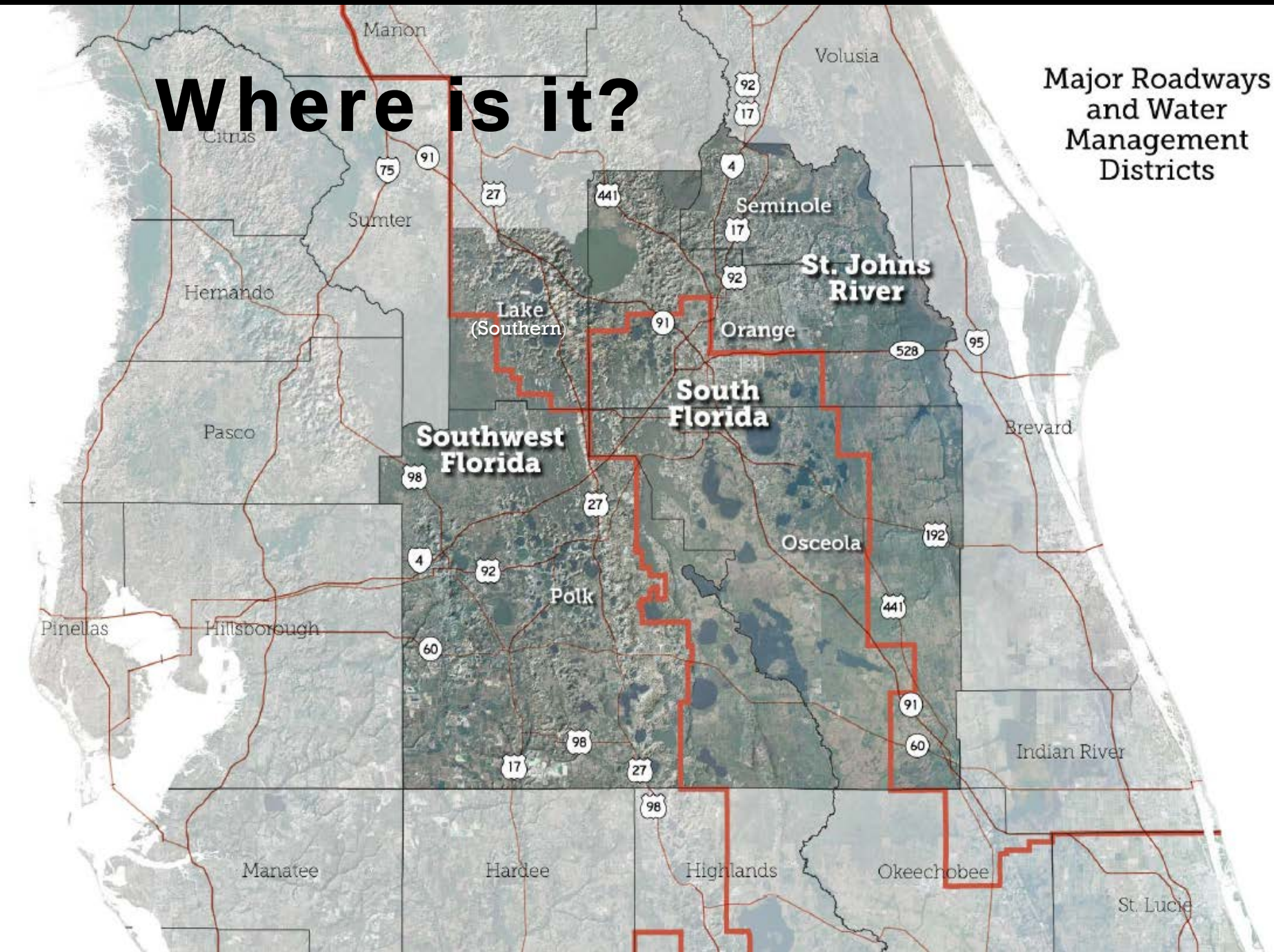
Today's Presentation

- 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

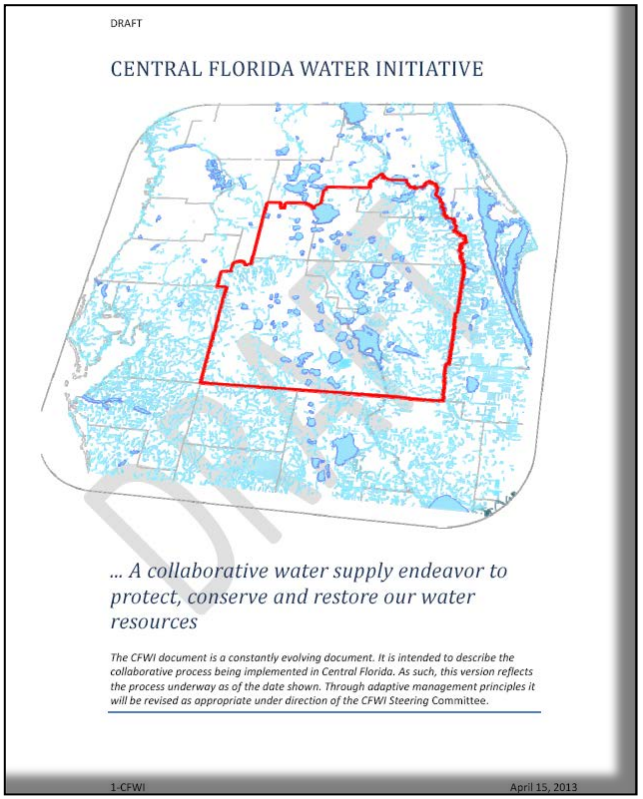

Where is it?
Major Roadways and Water Management Districts
Marion
Volusia
Citrus
Sumter
Hernando
Lake (Southern)
Seminole
Orange
St. Johns River
South Florida
Southwest Florida
Pasco
Brevard
Osceola
Polk
Pinellas
Hillsborough
Indian River
Manatee
Hardee
Highlands
Okeechobee
St. Lucie
75
91
27
441
4
17
92
98
60
95
528
192

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*

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?

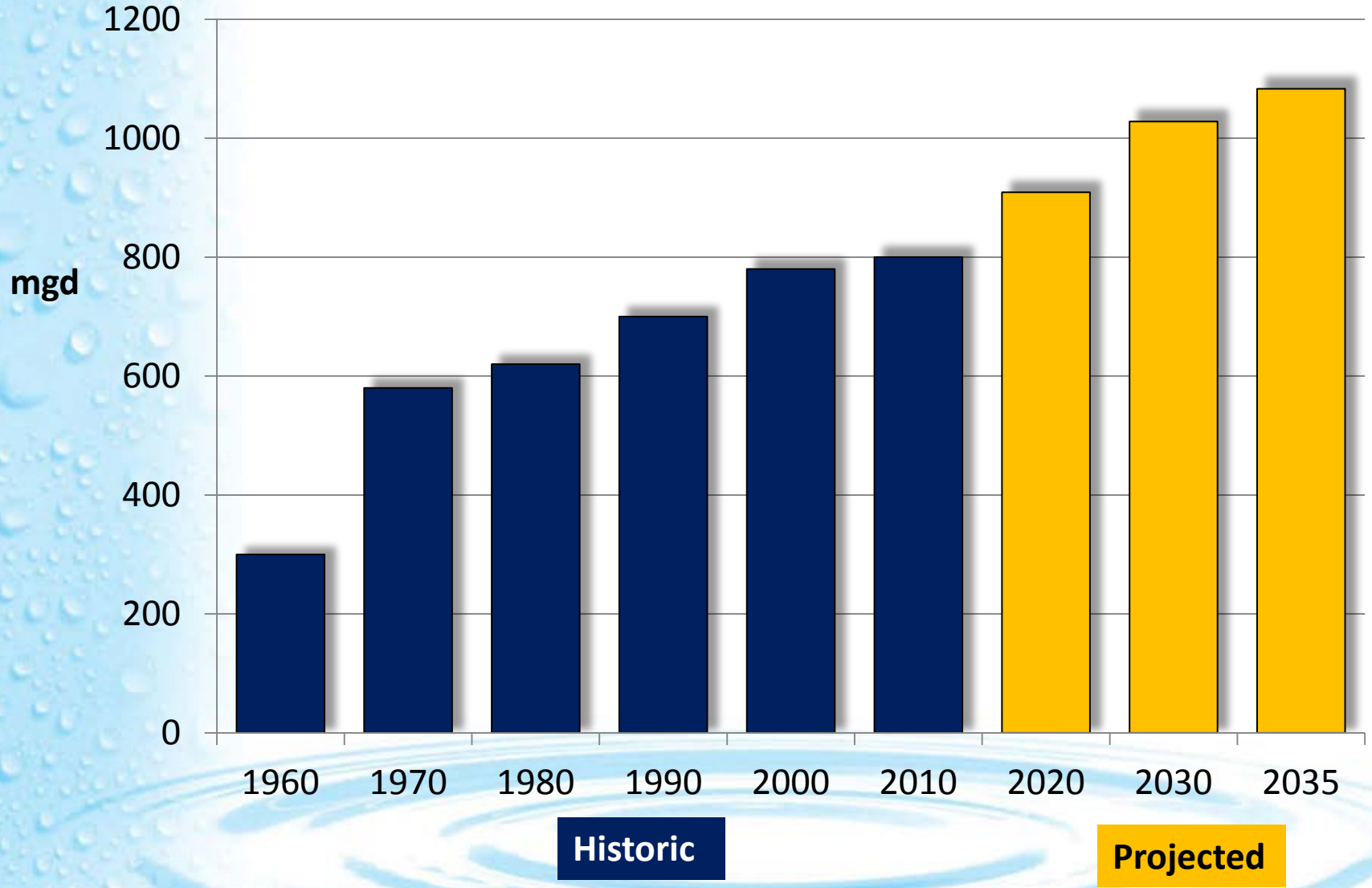
- Reaching sustainable groundwater limits
- Meeting future demands on the area's water resources
- Overlapping regulatory programs

Addressing the Challenges

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

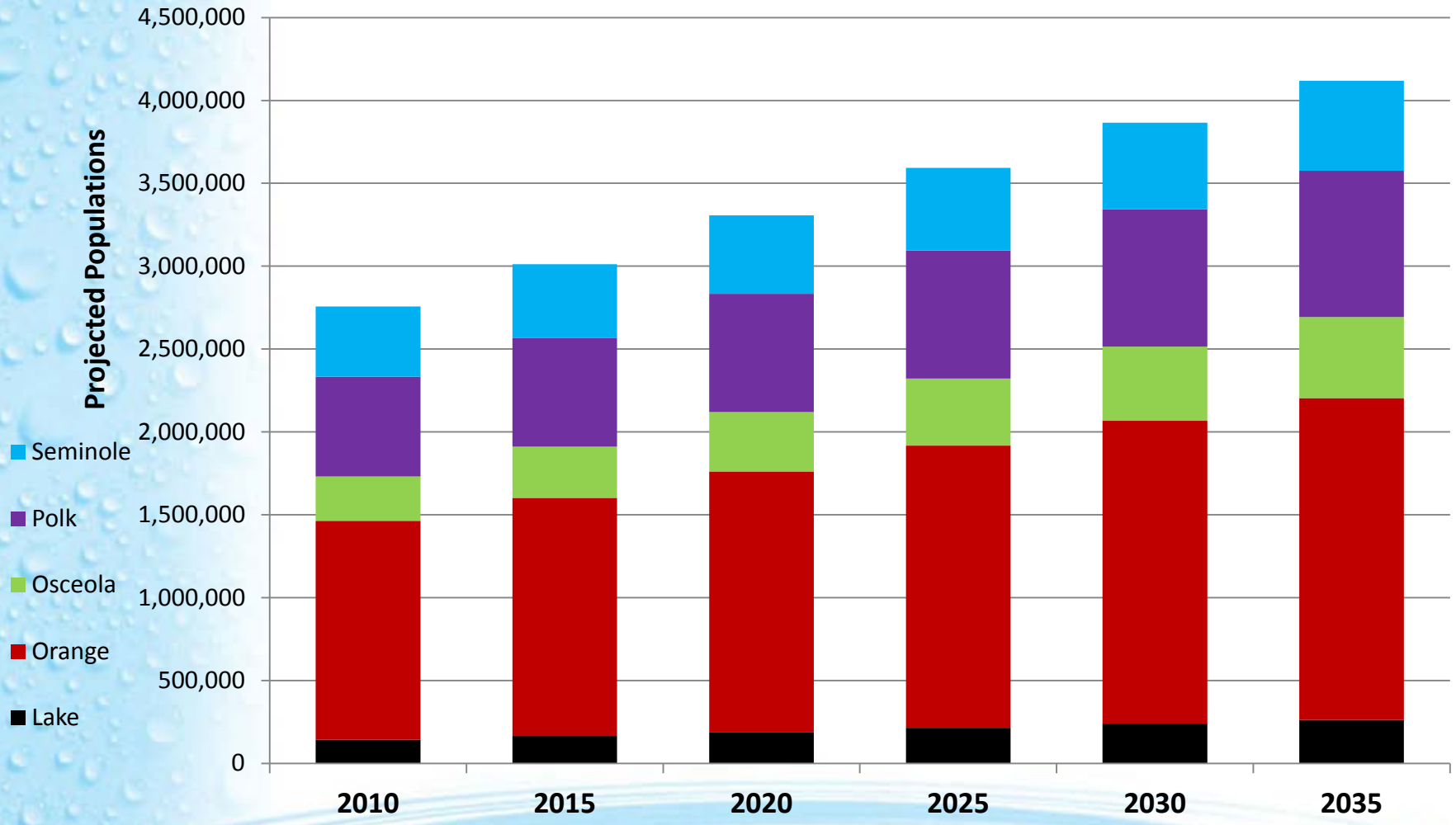
Water Use

All Classes



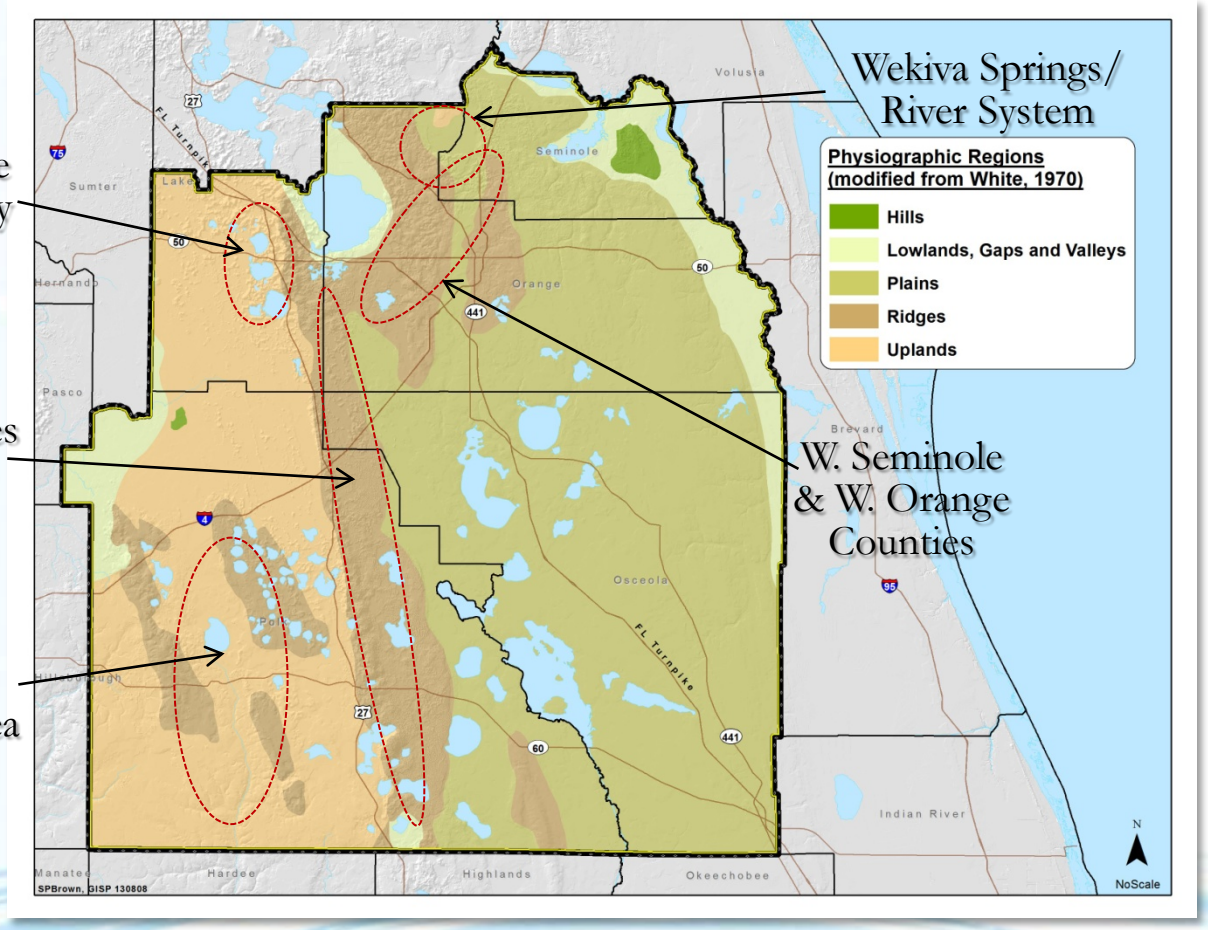
mgd– million gallons per day

Projected Population



Projected Increase of 1.4 Million People

Primary Areas Susceptible to Groundwater Withdrawals



Findings

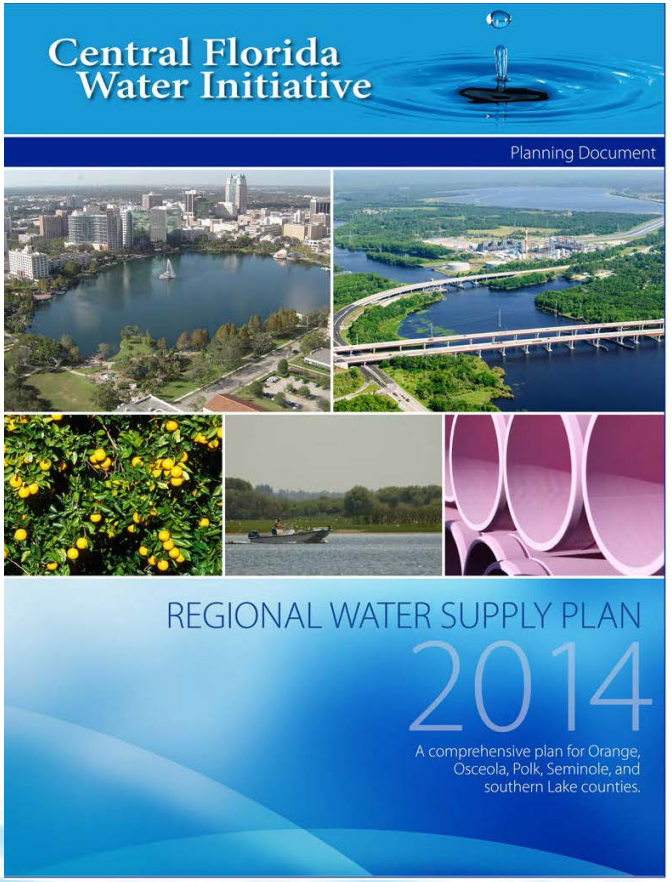
- Traditional groundwater sources can meet some, but not all projected and currently permitted needs in the CFWI.

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
Total	**42**

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	**126**
Osceola	34	17	4 - 29	0	**55 - 80**
Polk	30	18 - 48	15	6	**69 - 99**
Lake (southern)	7	0	5	0	**12**
Seminole	25	0	92	0	**117**
Total	**165**	**45 - 75**	**163 - 188**	**6**	**379 - 434**

Million gallons per day

Chapter 8 – Water Resource Development

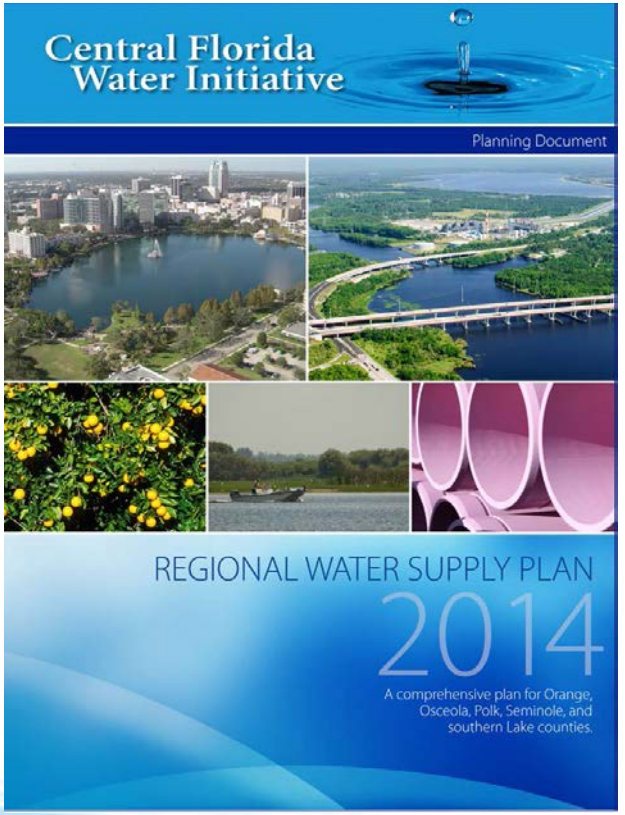
- Project Options
  - Research Activities
    - Surface and Groundwater Modeling
  - Water Conservation Programs
  - Agricultural Projects
    - Facilitating Agricultural Resource Management Systems Program (FARMS)
  - Hydrologic Data Collection/Analysis
  - Lower Floridan Investigations
  - MFL & Reservation 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

Public Involvement Schedule

Components	Time Frame
Briefings / Presentations	Ongoing
Draft RWSP Public Workshop Clermont Community Center (Lake)	Dec. 12, 2013 4–7 p.m.
Draft RWSP to WMD Governing Boards St. Johns River WMD South Florida WMD Southwest Florida WMD	Dec. 2013 Dec. 10 Dec. 12 Dec. 17
Public Comment Period Closes	Jan. 10, 2014

RWSP Next Steps

- Draft Plan Available – November 26, 2013
  - 45-day comment period
  - Ends January 10, 2014
- Develop comment responses and a response document
- Final Plan

Providing Public Comment

- Electronically via CFWI webpage
- Email to Tom Bartol: *tbartol@sjrwmd.com*
- Mail to Tom Bartol:

  SJRWMD

  4049 Reid Street

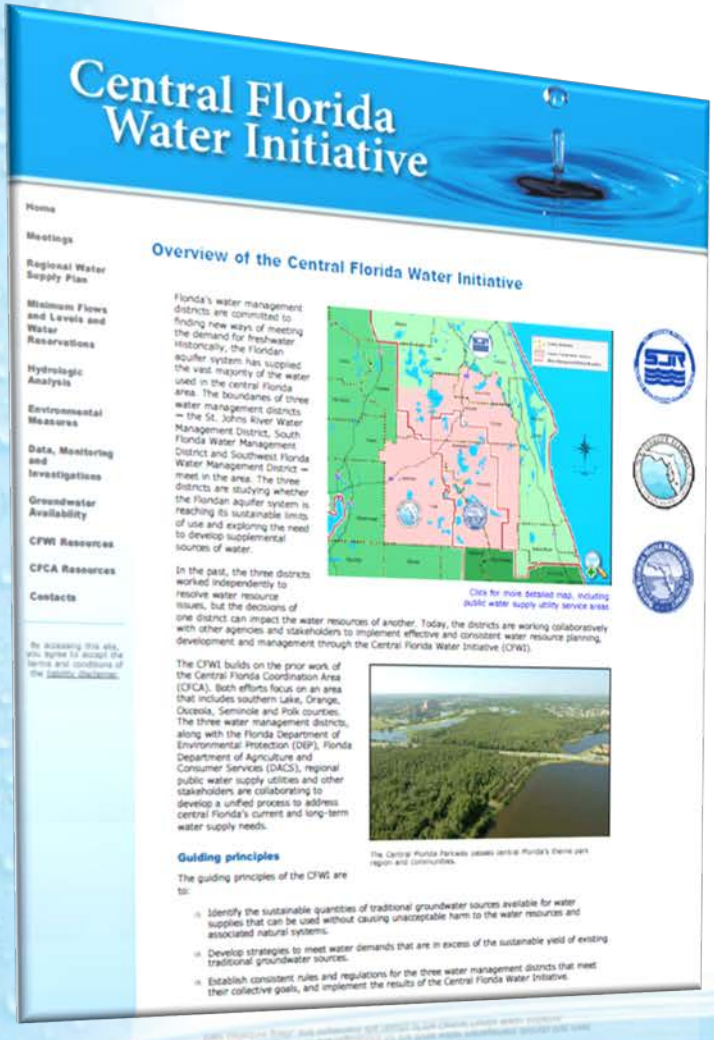
  Palatka, FL 32177

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

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



Public Comments

Additional information can be found at ***cfwiwater.com***