



# Water Resource and Supply Development Projects

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LWC Plan Update- WRAC Workshop #3

LWC Service Center, Ft. Myers, FL

May 21, 2010

# Lower West Coast Water Supply Plan Update Process

Workshop 1 (Dec. 18, 2009)  
Population, Public Water Demands

Local Government  
Presentations

Report to WRAC  
March 2010

Workshop 2 (March 5, 2010)  
Agriculture & Other Water Demands  
MFLs & CERP Updates

Workshop 3 (May 2010)  
Conservation, Water Resource and  
Supply Development - Fort Myers

Workshop 4 (August 2010)  
Water Resource & Supply  
Development - Fort Myers

Report to WRAC  
and Governing Board

Distribute Draft Plan (Sept. 2010)

Workshop 5 (Nov. 2010)  
Review Final Draft Plan

Local Government  
Presentations

Draft Plan to WRAC  
(Dec. 2010)

Draft Plan to Governing  
Board (Dec. 2010)

FDEP Review of Draft Plan  
(Dec. 2010 – Feb. 2011)

Final Plan to WRAC  
(April 2011)

Present Final Plan to  
Governing Board  
(April 2011)

# March Workshop Follow-up

Power Generation	2005	2010	2015	2020	2025	2030
Demands for Average Conditions (MGD)						
Total LWC Planning Area (Fort Myers)	0.5	0.5	0.5	12.1	12.1	42.1
				<del>8.1</del>	<del>23.1</del>	<del>53.1</del>

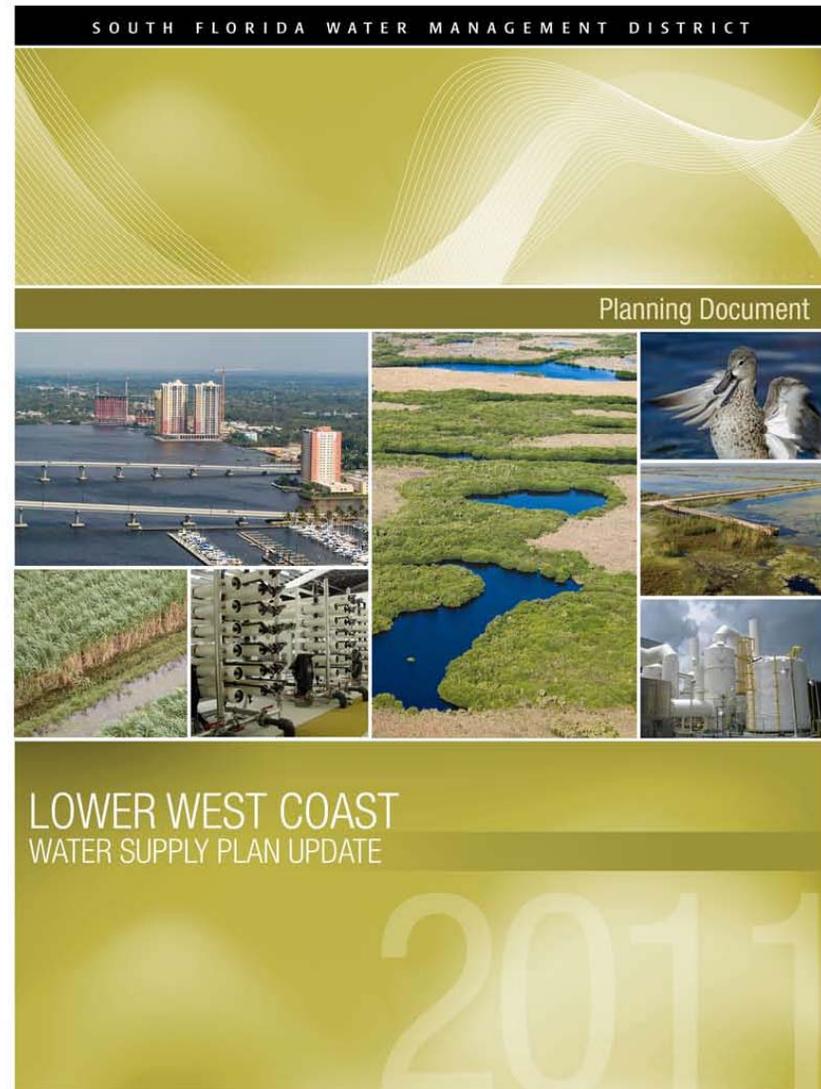


***How much Reclaimed Water is used for Recreational Irrigation ?***

**2008 Annual Average Production of 61 MGD**

# Plan Document Outline

- ✓ **Introduction**
- ✓ **Demand Estimates and Projections**
- ✓ **Water Resources Development Projects**
  - ✓ Type of projects for 5 year planning period
    - ✓ Groundwater and wetland monitoring
    - ✓ Groundwater & ET assessments
    - ✓ Drilling and testing
    - ✓ Comprehensive water conservation
    - ✓ MFLs, water reservations and modeling,
    - ✓ Southwest Florida Feasibility study
- ✓ **Water Supply Development Projects**
  - ✓ PWS projects to meet the next 20-year needs
  - ✓ Utility summaries
  - ✓ Other water uses
- ❖ **Resource Evaluation and Issues**
- ❖ **Water Source Options and Conservation**

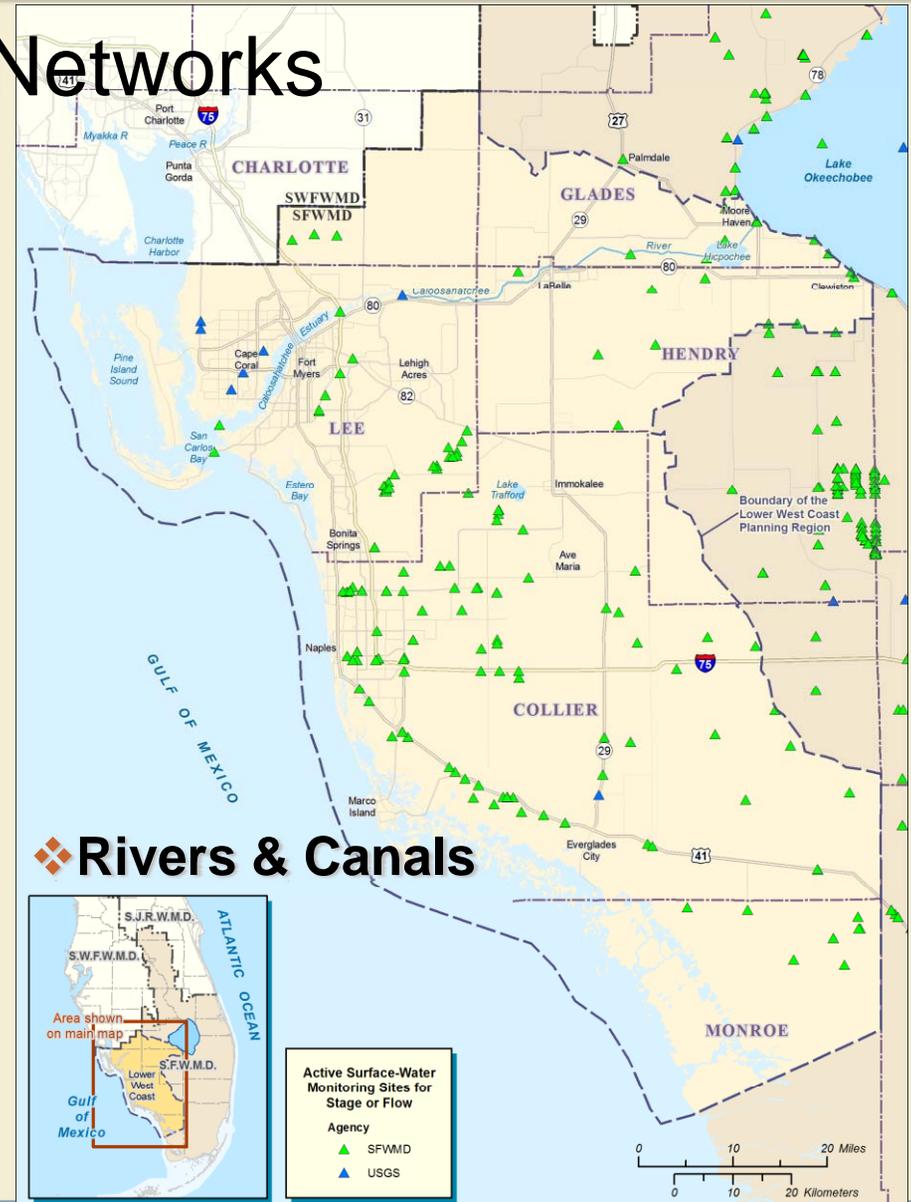
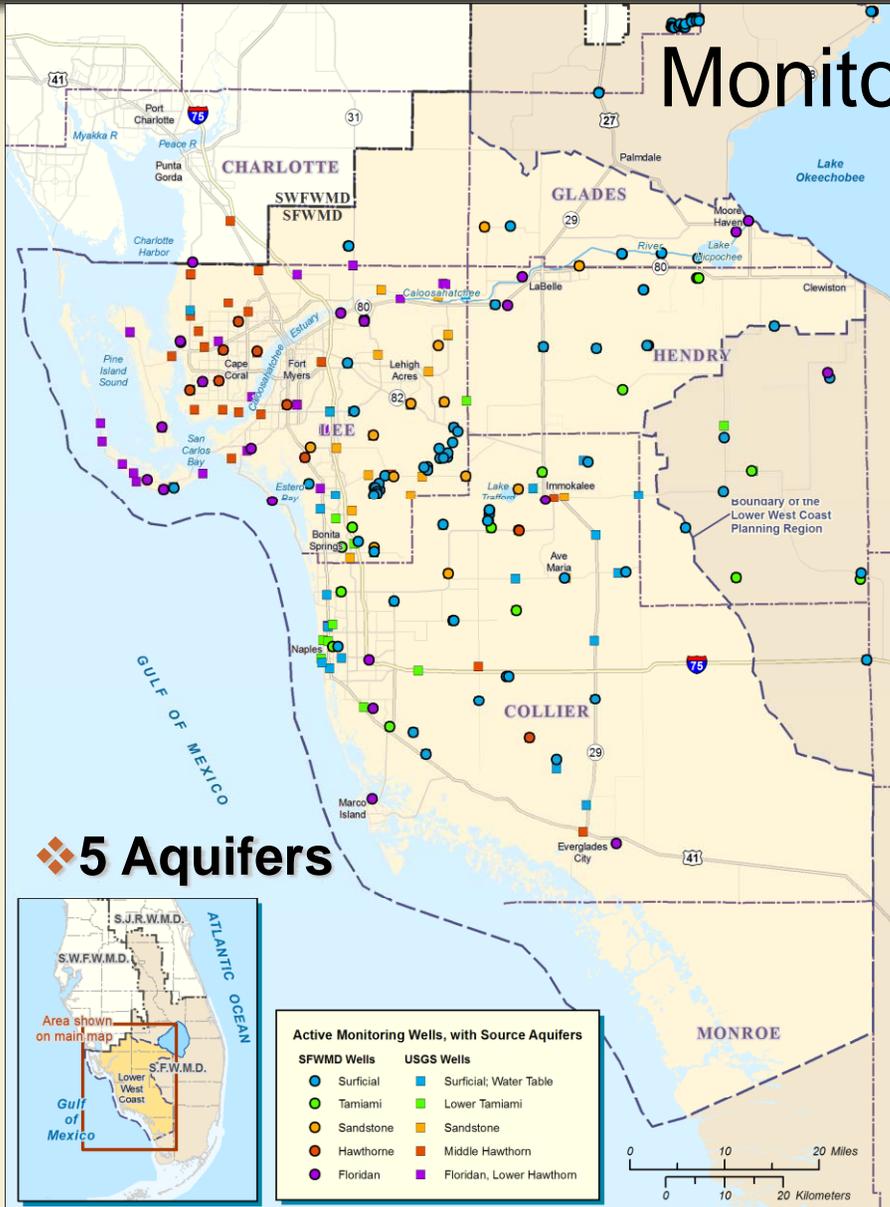


# Water Resource and Water Supply Development Projects

- **Water Resource Development Projects**
  - regional water resources management strategies
  - monitoring and evaluating water resources
  - flood control, storage and groundwater recharge
- **Water Supply Development Projects**
  - Develop public or private facilities for water production, collection, treatment and transmission for sale to end users

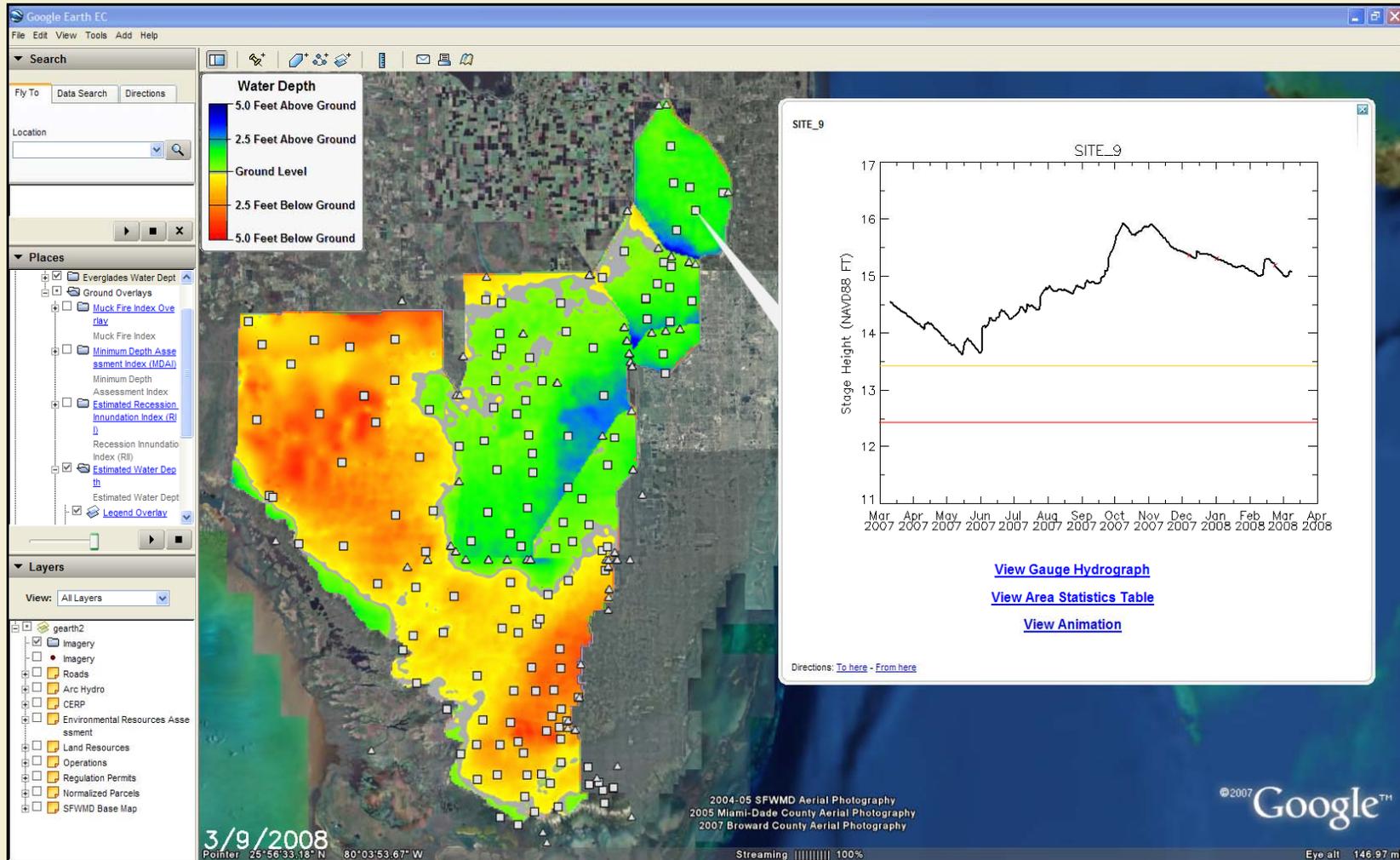
# Water Resource Development Projects

## Monitoring Networks

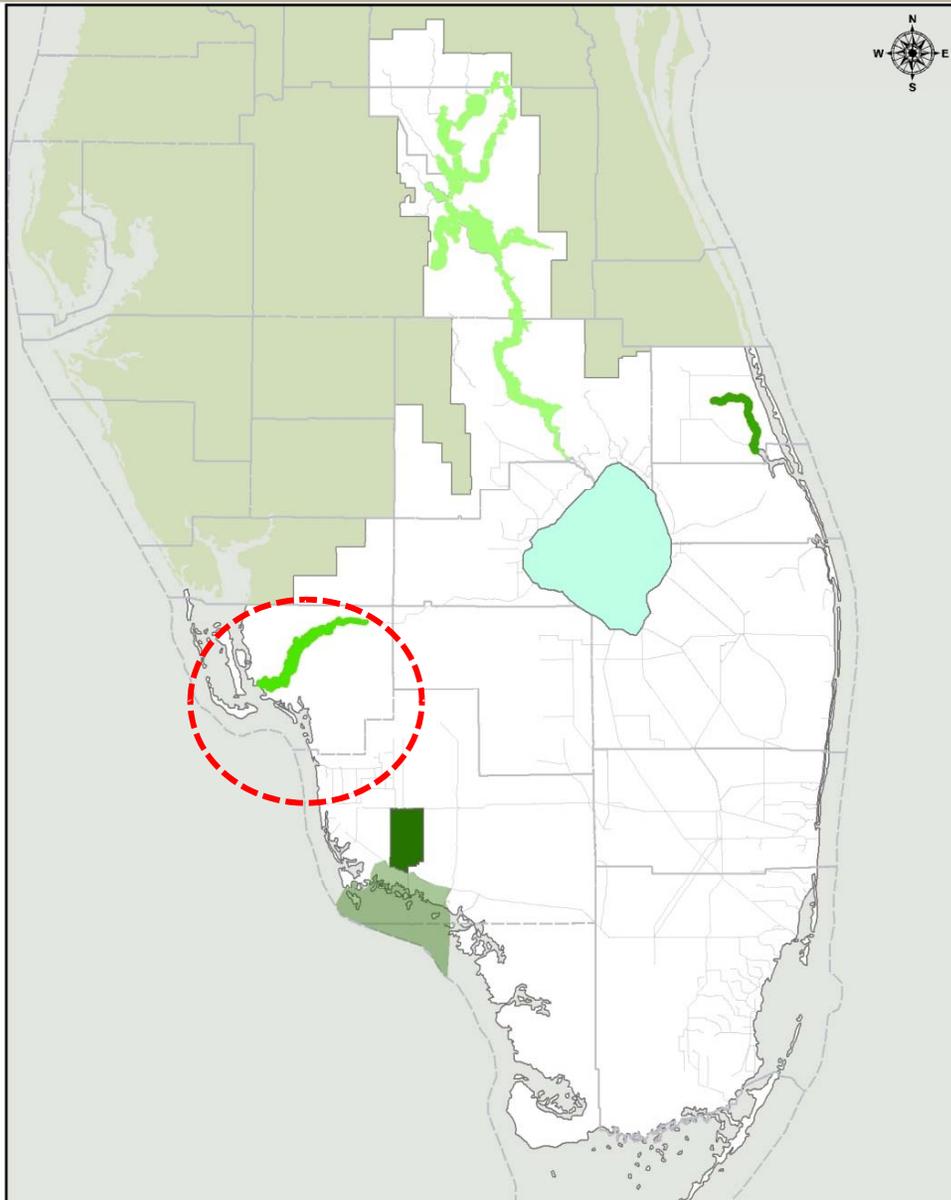


# Water Resource Development Projects

Web-base Data Processing, real-time conditions, summary statistics, geographic and site information



# Water Resources Development Projects



## Water Reservation Rule in place:

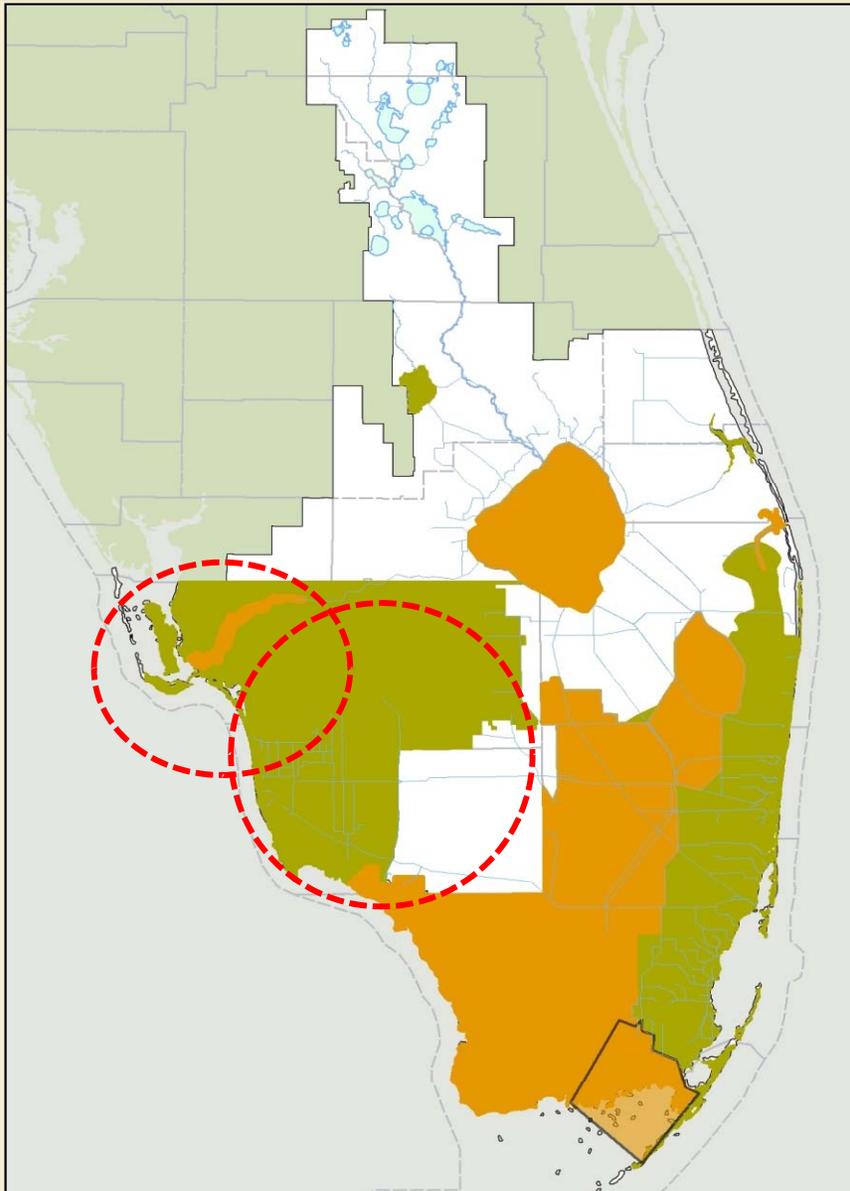
- Picayune Strand and Fakahatchee Estuary

## Rules in development

- Caloosahatchee Estuary

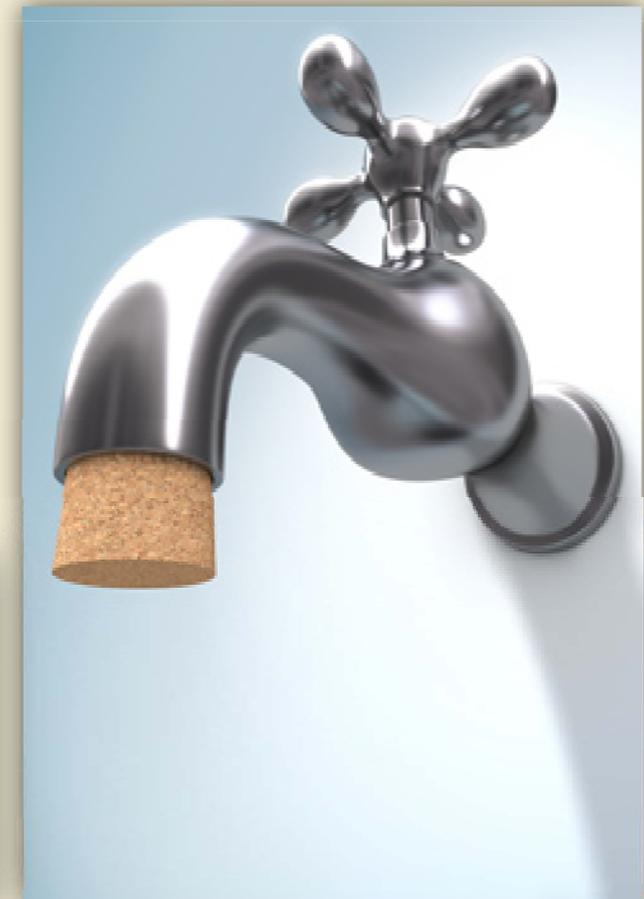
# Water Resources Development Projects

- **Minimum Flows and Levels Prevention Waterbodies**
  - Lower West Coast aquifers
- **Minimum Flow and Levels Recovery Waterbodies**
  - Caloosahatchee River



# Water Conservation Program

- Water Savings Incentive Program
- Conserve Florida Clearinghouse
  - EZ Guide
- Great Water Odyssey
- Florida Water Star
- Leading by Example
- FAWN



# Water Supply Development Projects

- **Public and private facilities for water production, collection, treatment and transmission for sale to end users**
- **Projects needed to meet future demands**



# Current and Proposed Projects

## UTILITY SUMMARY WORKING DRAFT

**County:** Sample County  
**Supply Entity:** Sample County Utilities  
**Local Government Served:** Unincorporated Sample County (portion), Plain City, Park Place and City of Coolville (portion).

**Description:** Water supplies are comprised of 45 percent traditional groundwater supplies and 55 percent brackish groundwater, and are projected to be 31 percent traditional and 69 percent alternative water supplies in the future.

**Bulk Water:** Sample County has an interlocal agreement with the City of Coolville to provide bulk alternative water from 0.50 to 1.2 MGD from 2009-30.

**Utility Purchases:** Sample County has contracted to purchase one existing utility, Regional Utility by late 2010. Sample County plans on connecting this utility to their water system by mid 2011.

POPULATION AND DEMANDS	Historical	Projected		
	2005	2010	2020	2030
Population	68,820	75,500	90,868	109,316
Per Capita (gallons per day finished water)	129	129	129	129
<b>Potable Water Demands</b> (daily average annual finished water in MGD)	8.79	9.74	11.72	14.10
FACILITY PRODUCTION CAPACITY				
FDEP Facility Design Capacity plus projects design capacity	Capacity	Cumulative Facility & Project Capacity		
	MGD	2010	2020	2030
	2005			
Water Source: Surficial	4.50	4.50	4.50	4.50
Floridan	5.50	6.50	9.00	11.00
<b>Total Capacity</b>	10.00	11.00	13.50	15.50
Non-potable Water				
Source: Reclaimed	2.00	8.00	9.00	9.00

PROJECTS SUMMARY					
Water Supply Facility Projects	Alt. Src.	Total Cap. Cost (\$ M)	Cumulative Design Capacity (MGD)		
			2010	2020	2030
Completed Brackish Projects (2006-07)	B	\$6.00	1.00	3.50	4.50
WTP RO expansion from 4.0 to 4.80	B	\$0.50	0.00	0.00	1.00
<b>Brackish Total</b>	<b>B</b>	<b>\$2.50</b>	<b>1.00</b>	<b>3.50</b>	<b>5.50</b>
Completed Reclaimed Projects (2006-08)	R	\$2.00	6.00	6.00	6.00
South WWTP expansion from 1.6 to 2.8 MGD	R	\$7.20	0.00	1.00	1.00
<b>Reclaimed Total</b>	<b>R</b>	<b>\$9.20</b>	<b>6.00</b>	<b>7.00</b>	<b>7.00</b>

Alternative sources legend: T=Traditional; B=Brackish; R=Reclaimed; C=Captured Storm/Surface Water; O=Other.  
 Note: Methodology is being considered to reflect planned conservation water savings.  
 SFWMD Consumptive Use Permit Number: 43-xxxx-W, Annual Allocation: 15.0 MGD, Permit Expires: 2028

# Completed Water Supply Projects

**2006-2010**

**MGD**

- |                                |    |
|--------------------------------|----|
| ■ 23 Brackish Water projects   | 42 |
| ■ 22 Reclaimed Water projects- | 40 |
| ■ 5 Storage/ Other projects-   | 16 |
| ■ 8 ASR projects-              | 6  |



# Proposed Water Supply Projects

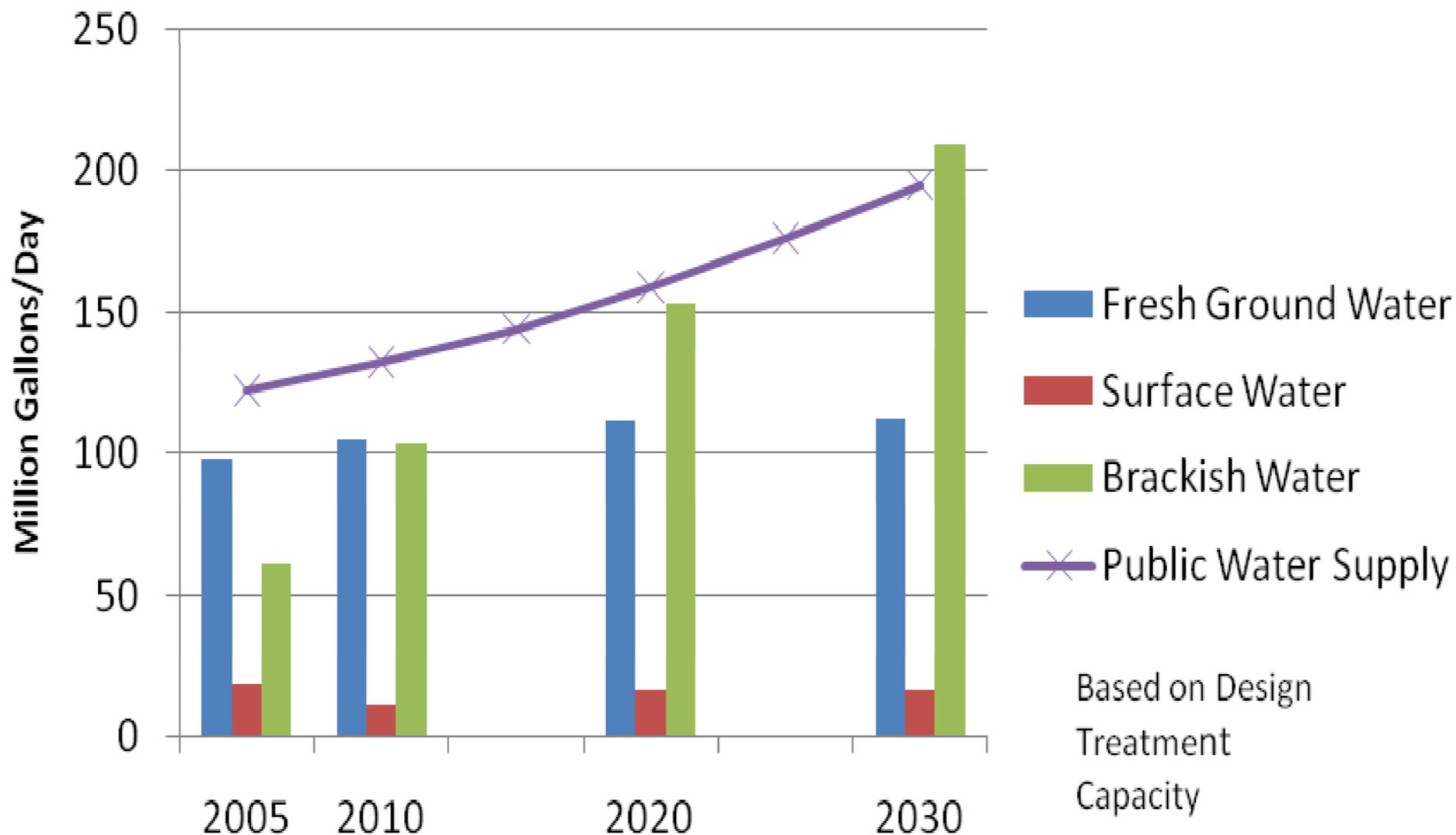
## 2011-2030 Projects\*

	<u>MGD</u>
■ 29 Brackish Water projects-	106
■ 23 Reclaimed Water projects-	78
■ 4 Storage/ Other projects-	4
■ 5 ASR projects-	10
■ 2 Fresh Water projects-	6

\* Many Projects Multi-phased



# Current and Future Sources for Public Water Supply



# Questions



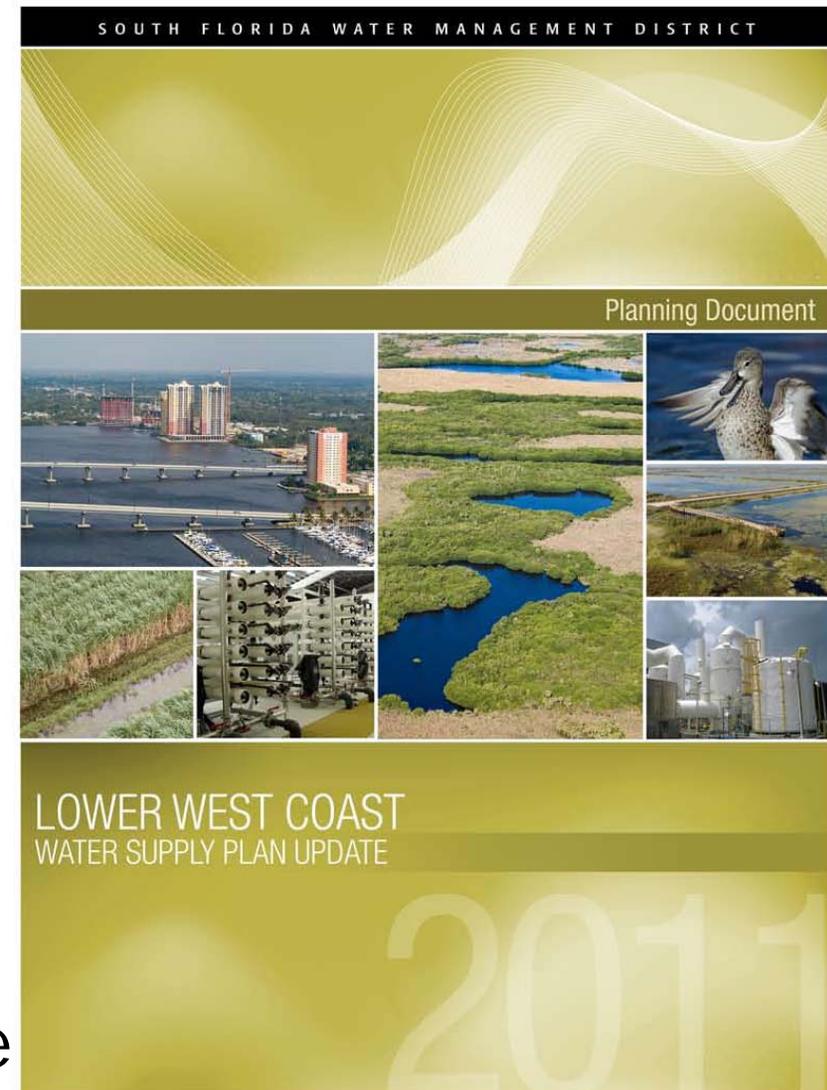
# Draft Plan Chapters 1 & 2

## Chapter 1- Introduction

- Regional Water Supply Plans
- Plan Goals and Objectives
- Accomplishments
- Water Supply Planning for Next 20 Years
- Climate Change

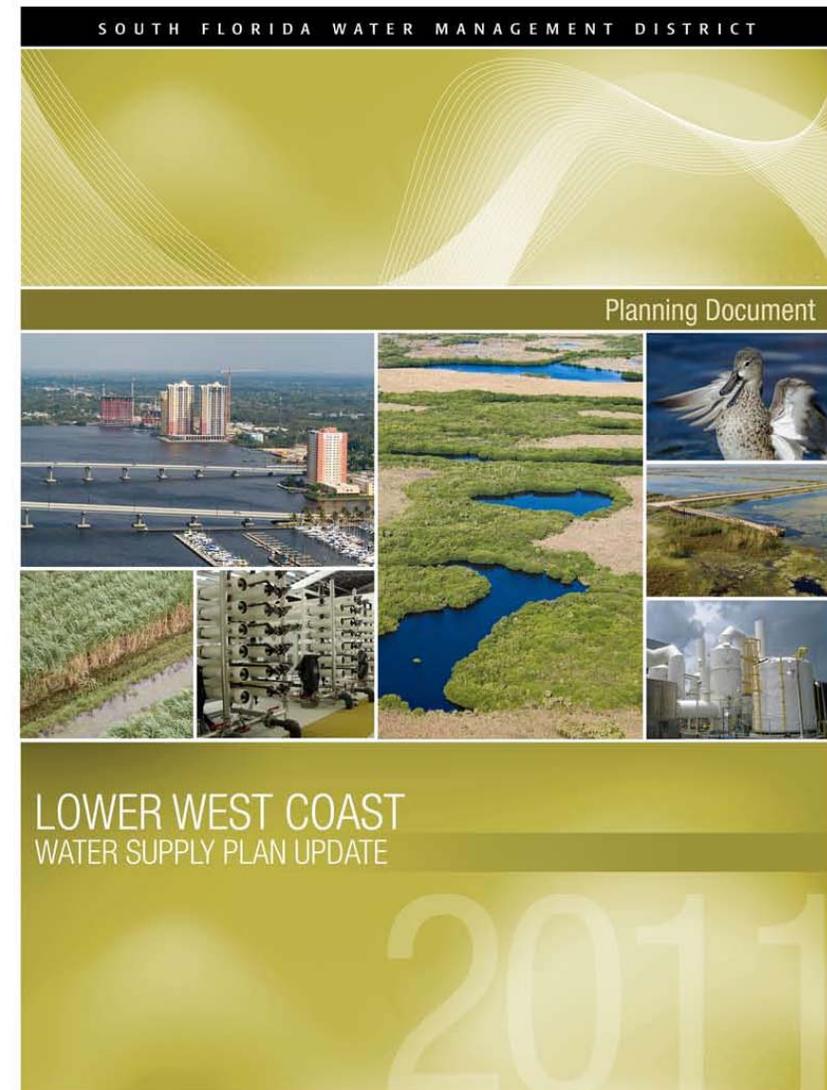
## Chapter 2- Demand Estimates and Projections

- Demands by Water Use Category
- Population and Water Use Trends
- Demand Projections in Perspective



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# Questions?

