SOUTH FLORIDA WATER MANAGEMENT DISTRICT

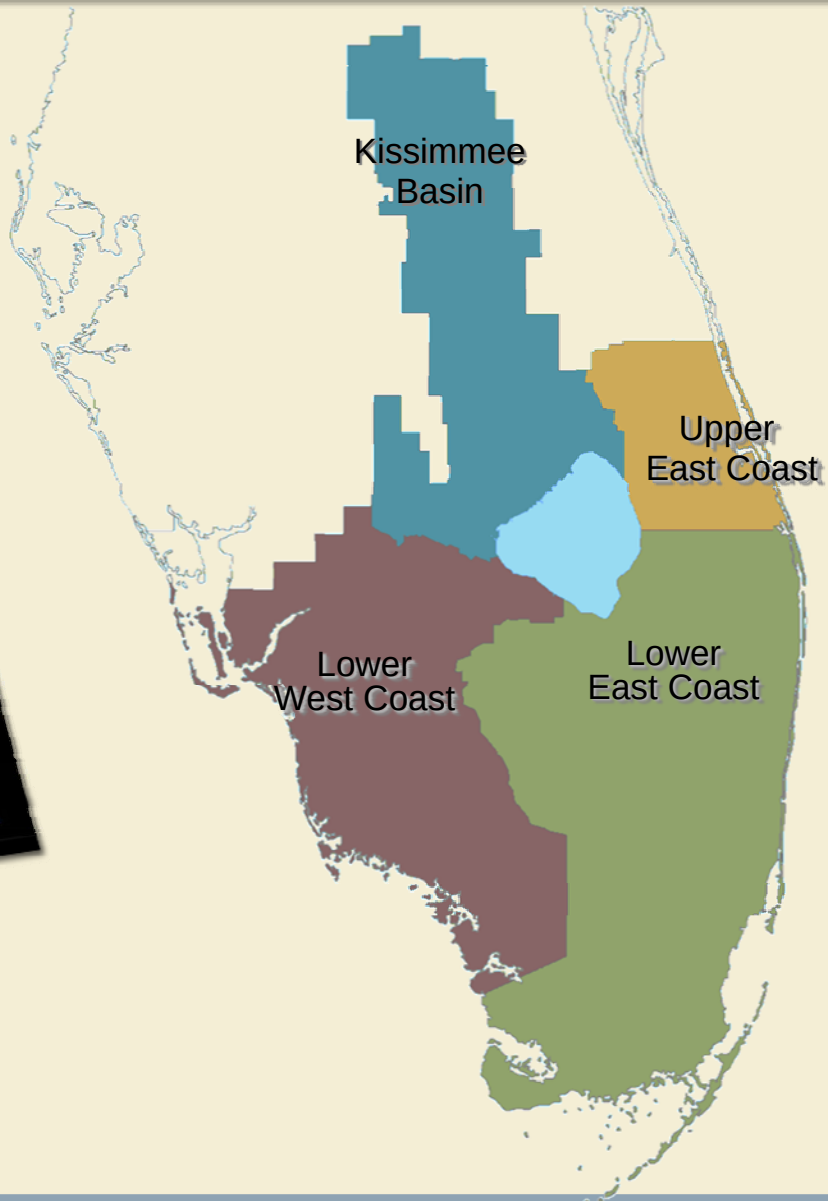
Upper East Coast Water Supply Planning

Linda Hoppes, AICP, Lead Planner
Water Supply Development

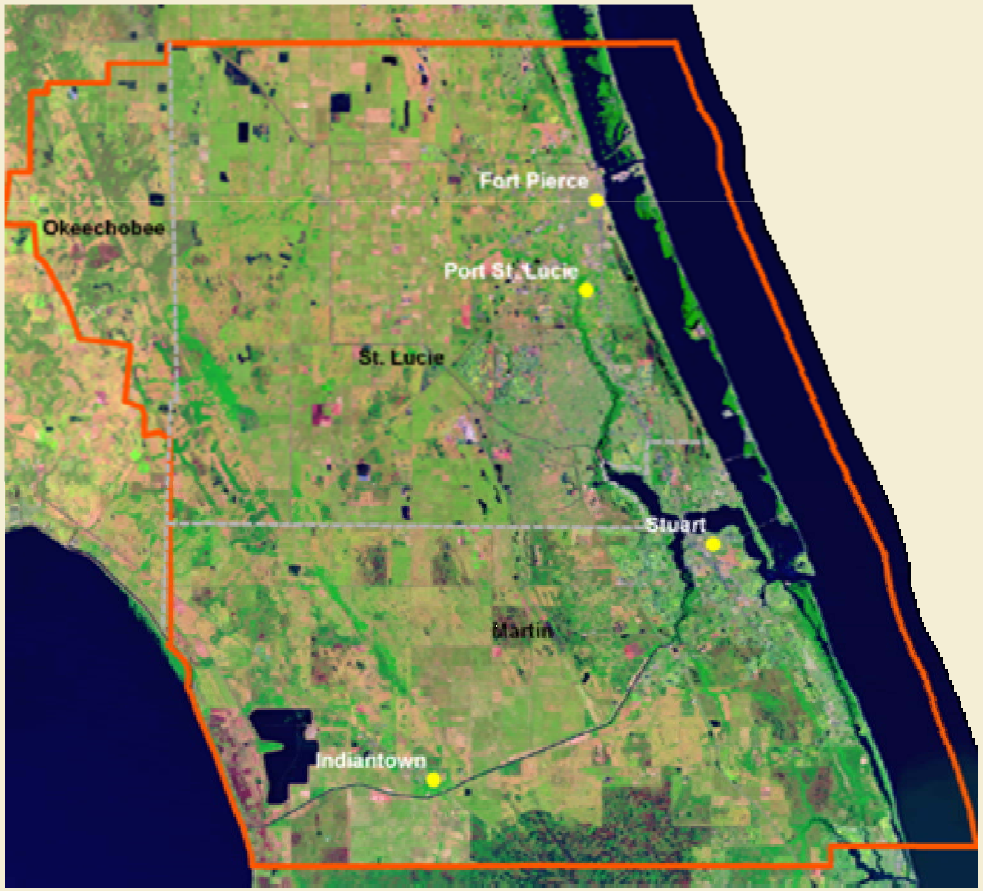
WRAC Workshop – UEC Plan Update
IFAS – Ft. Pierce, FL
December 16, 2009

sfwmd.gov

Water Supply Planning Regions



Upper East Coast Planning Region



UEC Water Supply Plan Update

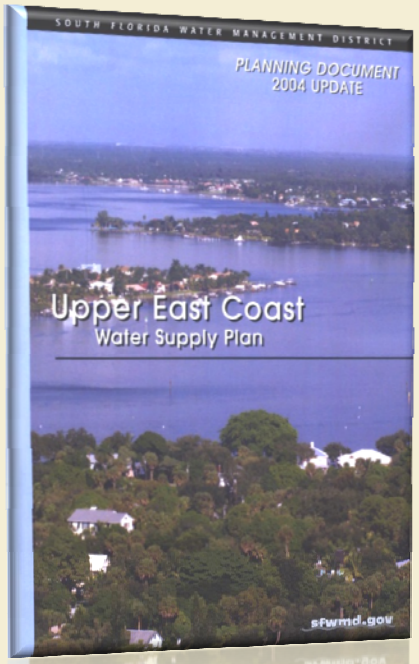
- Kick-off Workshop
- Planning Horizon
  - 2005 - 2030

Includes:

- Martin and St. Lucie Counties
- Eastern Okeechobee County

Upper East Coast Water Supply Plan

- **2010-11 UEC Plan Update**
  - 2005 – 2030 Planning Horizon
- **2006 UEC Plan Amendment**
  - 2005 – 2025 Planning Horizon
- **2004 UEC Plan Update**
  - 2000 – 2025 Planning Horizon
- **1998 UEC Plan Update**
  - 1990 – 2010 Planning Horizon



What is a Regional Water Supply Plan?

- Proactive approach to sustain future water resources for supply and natural resources
- Projects demands, sets resource protection
- Proposes strategies to meet future demands
- Not a master consumptive use permit
- May be the best available data
- Provides a toolbox of water supply source options

Water Use Categories

- Agriculture
- Public Water Supply
- Domestic Self-Supply
- Recreational
- Commercial and Industrial
- Thermoelectric Power Generation

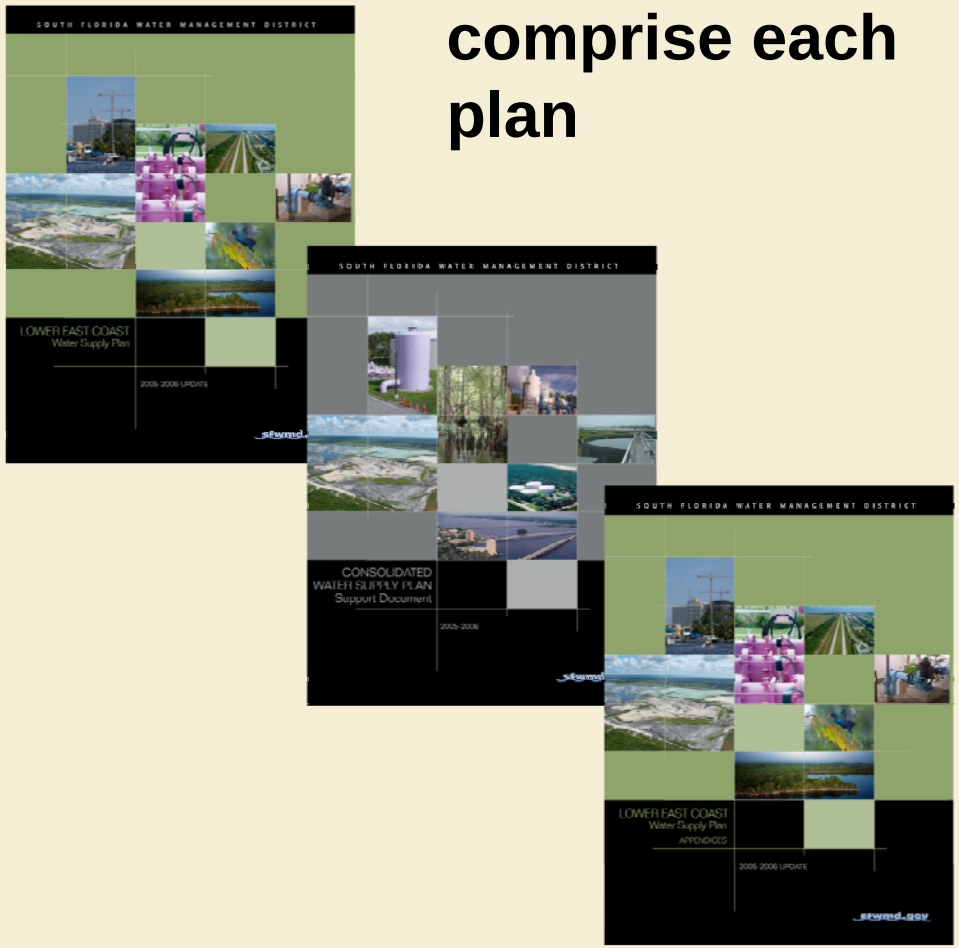
Water Supply Plan Documents

New Look

- Concise (<140 pages)
- Enclosed CD
  - Technical Reports
  - Data and Information for Local Governments
- Reader-Friendly Plan
  - Deliver take home messages for public and decision-makers

SFWMD Regional Water Supply Plans

Three documents comprise each plan



- **The Plan:** DEP mandated sections, summaries of projections & demands and utility summaries
- **Appendices:** detailed data, methodology, project lists & conservation plan
- **Support Document:** information that applies to all plans or does not change over the years

Water Supply Plan Documents

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PLANNING METHODOLOGY

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BACKGROUND WORK

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PROJECT	PREVENTS LOSS OF NATURAL RESOURCES	AVOIDS GREATER FUTURE EXPENDITURES	SAVES COSTS	DIRECTLY INCREASES FUTURE SUPPLY AVAILABILITY	PRESERVES EXISTING SUPPLY AVAILABILITY
Hydrologic Investigations	•	•	•	•	
Groundwater Modeling	•	•	•	•	•
Groundwater Monitoring	•	•	•		•
Seawater Desalination Pilot	•	•		•	
RIDS	•	•	•	•	
CERP & ACCELER8	•	•		•	•
Big Cypress Basin Projects	•	•		•	•

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2000 PLAN ACCOMPLISHMENTS

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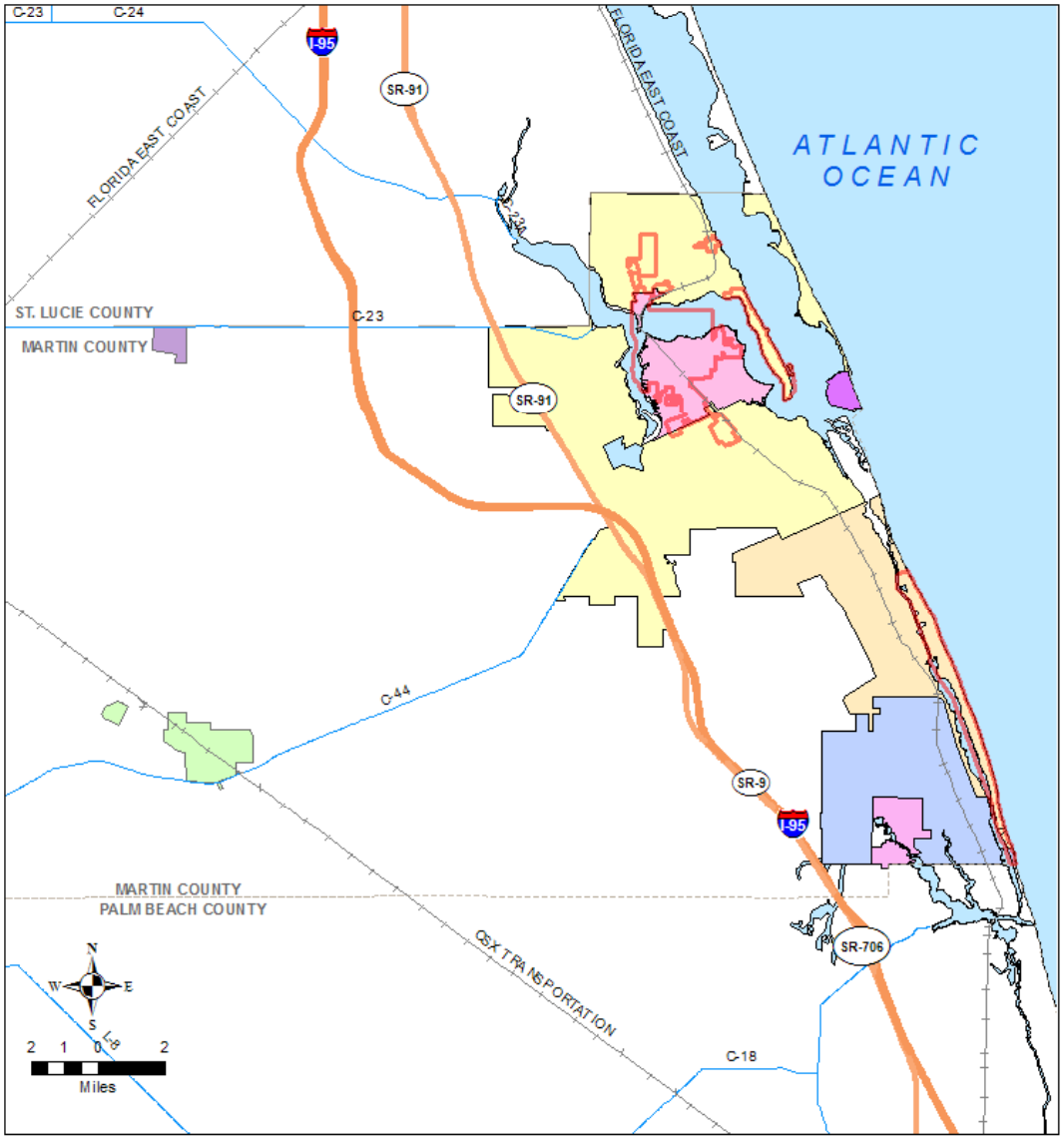
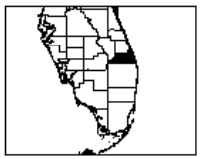


UTILITY AREAS SERVED IN MARTIN COUNTY 2009

- Major Canals
- INDIANTOWN COMPANY, INC.
- JUPITER, TOWN OF
- MARTIN CORRECTIONAL
- MARTIN COUNTY
- PIPERS LANDING
- SAILFISH POINT
- SOUTH MARTIN REGIONAL UTILITY (SMRU)
- STUART, CITY OF
- TEQUESTA, VILLAGE OF
- TEQUESTA BULK FOR SMRU

- Municipal Boundaries
- Major Highways
- Highways
- Railroads
- Major Canals



Martin County
Water Supply Utilities

- 4 municipalities
  - Jupiter Island
  - Ocean Breeze Park
  - Sewall's Point
  - Stuart
- 9 water providers

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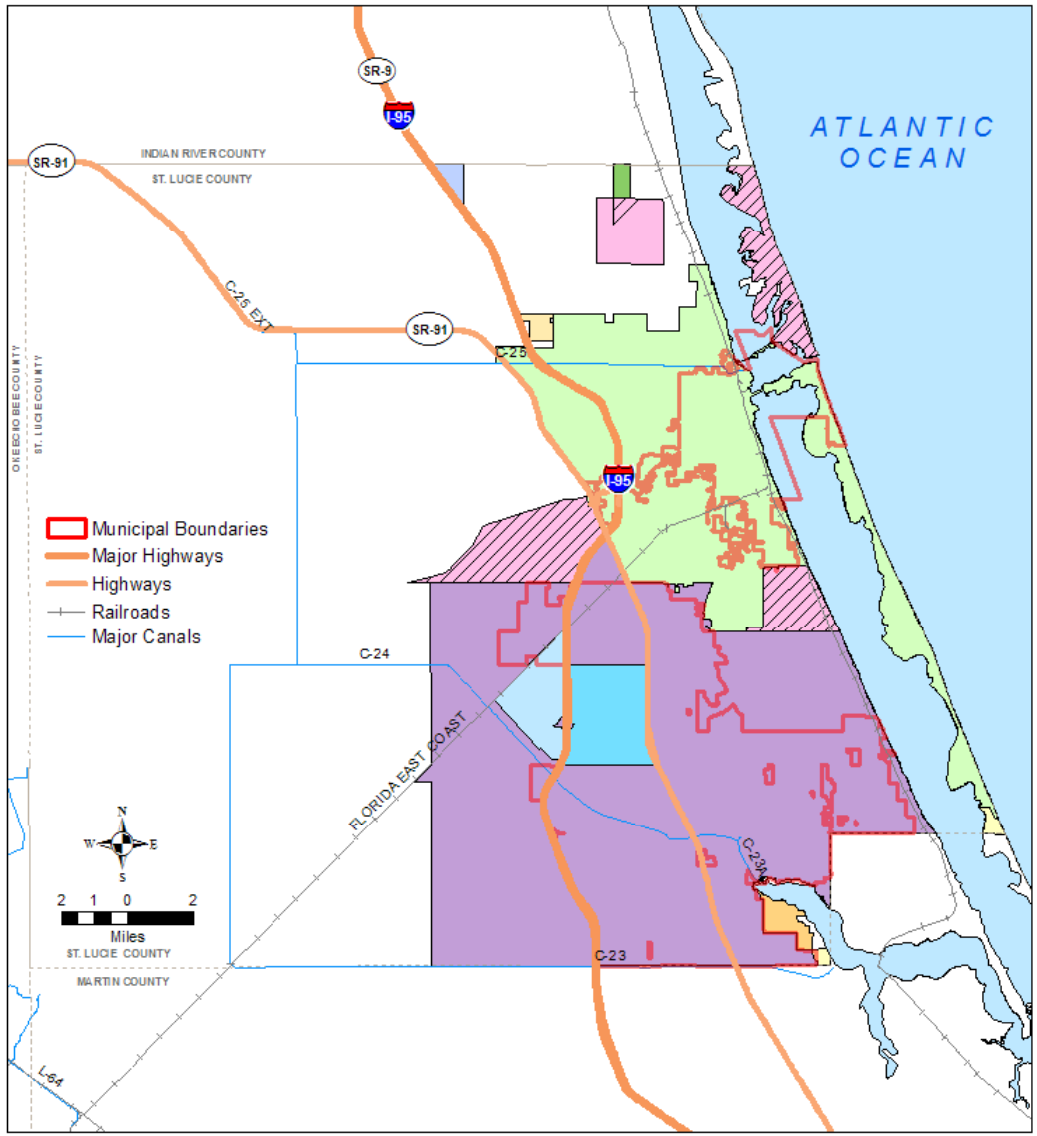
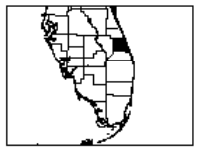
St. Lucie County
Water Supply Utilities



UTILITY AREAS SERVED IN ST. LUCIE AND OKEECHOBEE COUNTIES 2009

- FORT PIERCE UTILITY AUTHORITY (FPUA)
- FPUA BULK FOR ST LUCIE COUNTY
- HARBOUR RIDGE
- MARTIN COUNTY (FLORIDAN G.C. & S. HUTCHINSON IS.)
- PANTHER WOODS
- PORT ST LUCIE, CITY OF
- RESERVE COMMUNITY DEVELOPMENT DISTRICT
- SPANISH LAKES COUNTRY CLUB VILLAGE
- SPANISH LAKES FAIRWAYS
- ST LUCIE COUNTY
- ST LUCIE WEST



- 3 municipalities
  - Fort Pierce
  - Port St. Lucie
  - St. Lucie Village
- 10 water providers

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 alterntaive 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 2005	Projected 2010	2020	2030
Population	68,820	75,500	90,868	109,316
Per Capita (gallons per day finished water)	129	129	129	129
Potable Water Demands (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 MGD 2005	Cumulative Facility & Project Capacity (MGD) 2010	2020	2030
Water Source: Surficial	4.50	4.50	4.50	4.50
Floridan	5.50	6.50	9.00	11.00
Total Capacity	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
Brackish Total	**B**	**$2.50**	**1.00**	**3.50**	**5.50**
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
Reclaimed Total	**R**	**$9.20**	**6.00**	**7.00**	**7.00**

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-xxxxx-W, Annual Allocation: 15.0 MGD, Permit Expires: 2028

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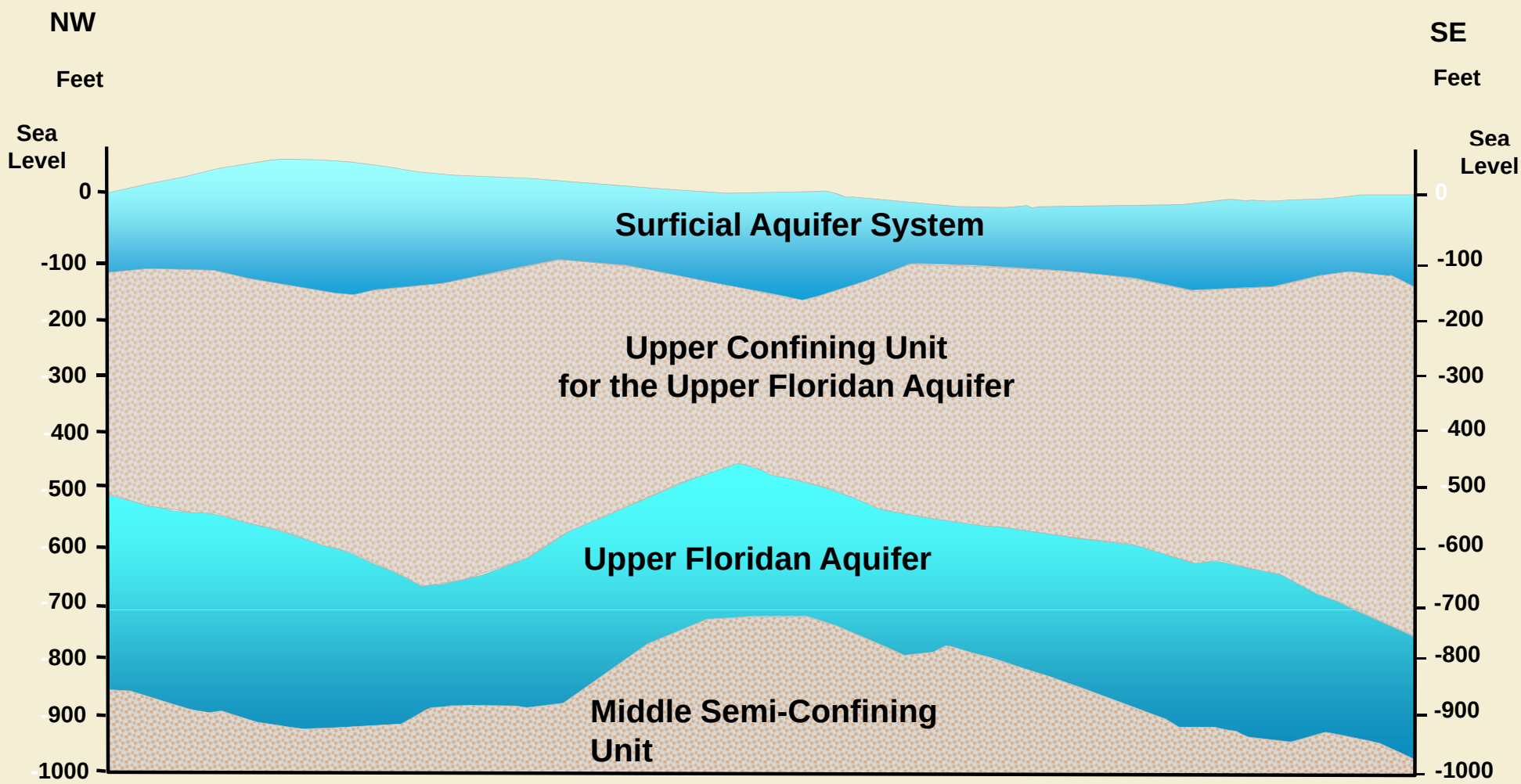
Where Does Our Water Come From?

UEC Cross Section



Trends in Water Use Demands

Martin and St. Lucie Counties

- Public Water Supply use is decreasing
- Agricultural use declining
- Thermoelectric power generation use increasing

Issues Identified in the Past UEC Water Supply Plan

- Limited expansion of fresh water aquifers
  - Wetland Impacts
  - Saltwater Intrusion
  - Aquifer Protection
- Limited fresh water for irrigation
- Surface water availability
  - C-23, C-24 and C-25 Canals
- Freshwater discharges to estuaries

How will Future Demands be met?

- **Alternative Water Sources**
  - Brackish Groundwater
  - Reclaimed Water
  - Surface Water
  - Storage Options
  - Seawater Desalination
- **Conservation**
  - Most cost-effective method to increase water supplies
- **Limited Traditional Sources**
  - Fresh Groundwater
  - Fresh Surface Water
    - C-23, C-24 & C-25 Basins

Requirement: Link Land Use with Water Supply Planning

- After the District updates the Water Supply Plan:
  - All local governments must amend their comprehensive plan to incorporate a water supply facilities work plan for at least a 10 year period within 18 months of water supply plan update
    - Utilities identify the projects to be developed
  - Annual Progress Reports
    - Utilities

Tentative Upper East Coast Water Supply Plan Update Process

Workshop 1 (Dec. 16, 2009)
Kick-Off Meeting – Ft. Pierce
Update Process, Population, & Demands

Local Government Presentations

Workshop 2 (Feb. 2010)
Agriculture, Other Demand Projections, MFLs & CERP Updates - Stuart

Workshop 3 (Apr. 2010)
Conservation, Water Resource and Water Supply Development – Ft. Pierce

Local Government Presentations

Workshop 4 (June 2010)
Final Water Resource & Supply Development– Stuart

Report to WRAC and Governing Board

Distribute Draft Plan by Mail (Sept. 2010)

Local Government Presentations

Workshop 5 (Oct. 2010)
Review Final Draft Plan

Present Draft Plan to WRAC (Nov. 2010)

Present Draft Plan to Gov. Bd. (Nov. 2010)

DEP Review of Draft Plan (Nov. – Dec. 2010)

Present Final Plan to WRAC (Feb. 2011)

Present Final Plan to Gov. Bd. (Feb. 2011)

December 15, 2009

Questions