

Meeting the State's Requirements for Water Supply Planning

Jim Jackson, AICP
February 27, 2008



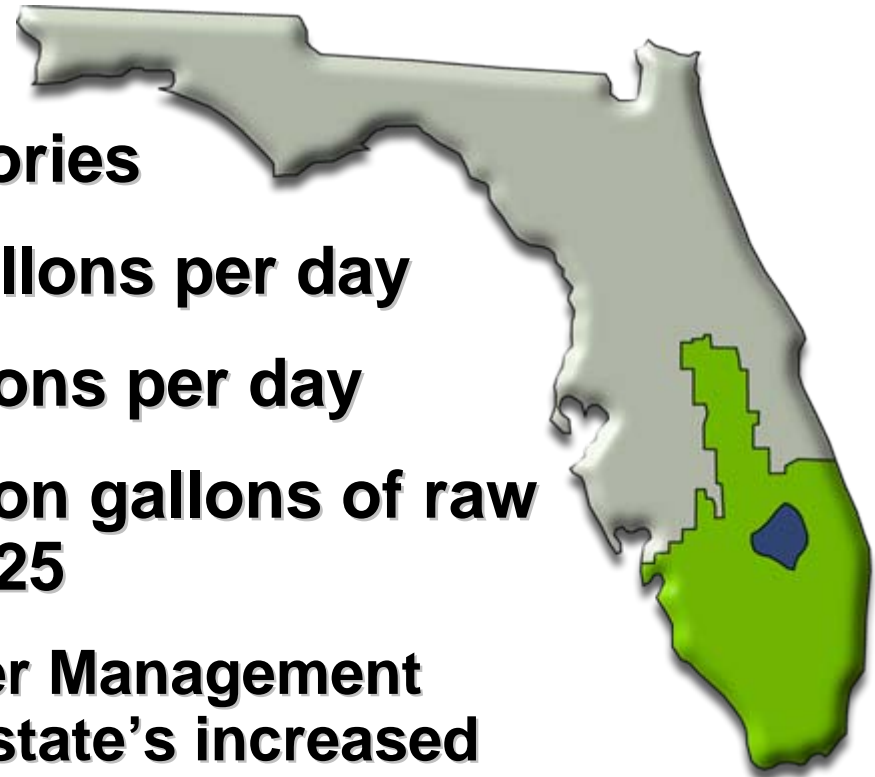


Comprehensive Planning Overview A Statewide Perspective



All Water Use Categories

- **TODAY:** 6 billion gallons per day
- **2025:** 8 billions gallons per day
- **An additional 2 billion gallons of raw water needed by 2025**
 - **South Florida Water Management District's share of state's increased demand is almost half**



State Law Now Links Growth with Water Supply Components



State Law Links Growth and Water Supply Overview





State Law Links Growth and Water Supply Water Supply Challenges for LEC



- **Traditional sources are limited**



- **Need to reduce potential impacts on and competition with natural resources**



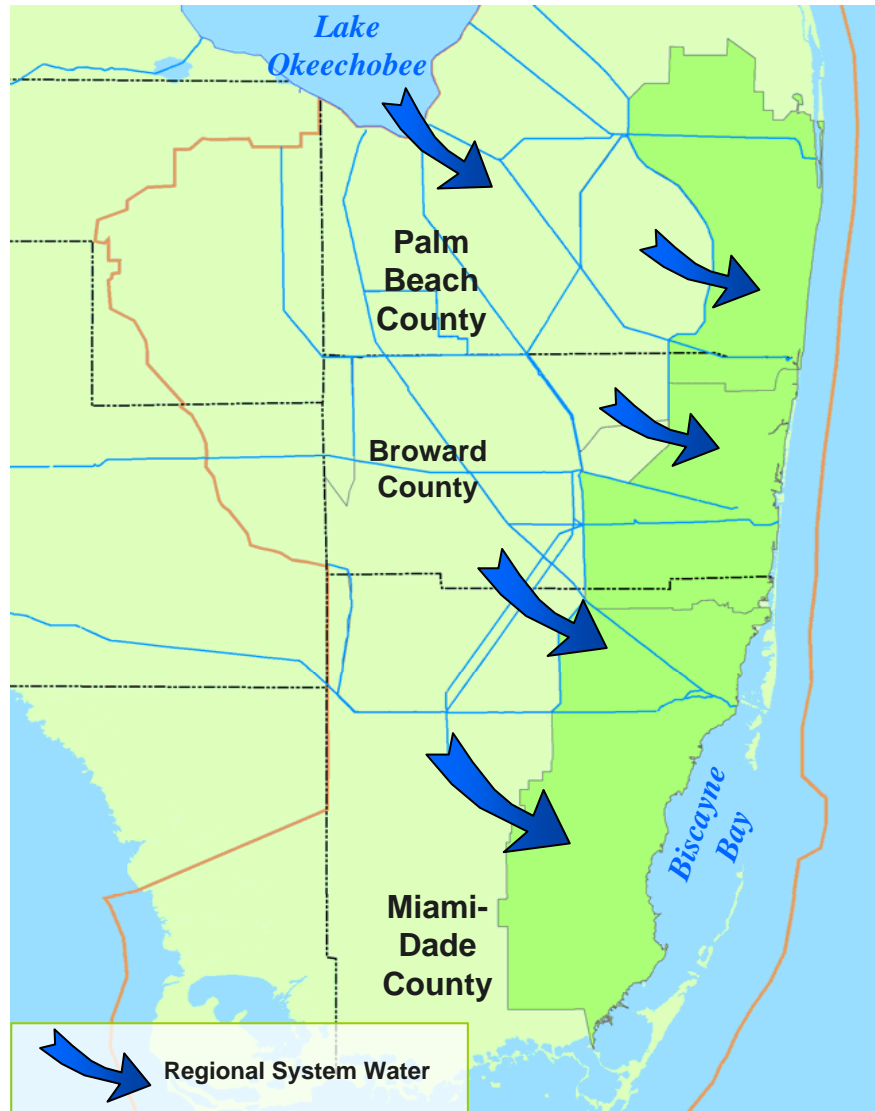
- **Proactive approach to meet future water needs**



- **One time use of water is no longer considered beneficial use**



Water Source for Lower East Coast



- **Source of Water Supply must be identified**
- **Biscayne Aquifer is important source for Lower East Coast**
- **Biscayne Aquifer is recharged by both local rainfall and the Regional System**



Water Source for Lower East Coast



- **Regional Water Availability rule adopted February 15, 2007**
- **Rule: ‘will not cause a net increase in volume or change the timing of surface or groundwater withdrawals from the specified Waterbody above the base condition water use’.**
- **Section 3.2.1.E(3)(a) of the Basis of Review (Feb. 13, 2008)**

Local Government Water Supply Planning Requirements





State Law Links Growth and Water Supply New Laws



New Requirements for Comprehensive Plans



- **Local Governments must submit to DCA:**
 - A minimum 10-Year Water Supply Facilities Work Plan
 - Selection, if any, of Alternative Water Supply (AWS) projects from the Lower East Coast Plan Update
 - Traditional Source, AWS, Bulk Sales, Conservation & Reuse Projects necessary to meet future needs
- **Adopt any related amendments to the Capital Improvements Element (CIE) & other elements**



State Law Links Growth and Water Supply New Laws



Additional Requirements



- **Identify water supply sources for entire planning period - 163.3167(13)**
- **Base future land use plan on availability of water supplies & facilities - 163.3177(6)(a)**
- **Ensure concurrency of water supply at building permit stage - 163.3180(2)(a)**
- **Report on water supply facilities work plan project implementation in EAR - 163.3191(2)(l)**



State Law Links Growth and Water Supply New Laws



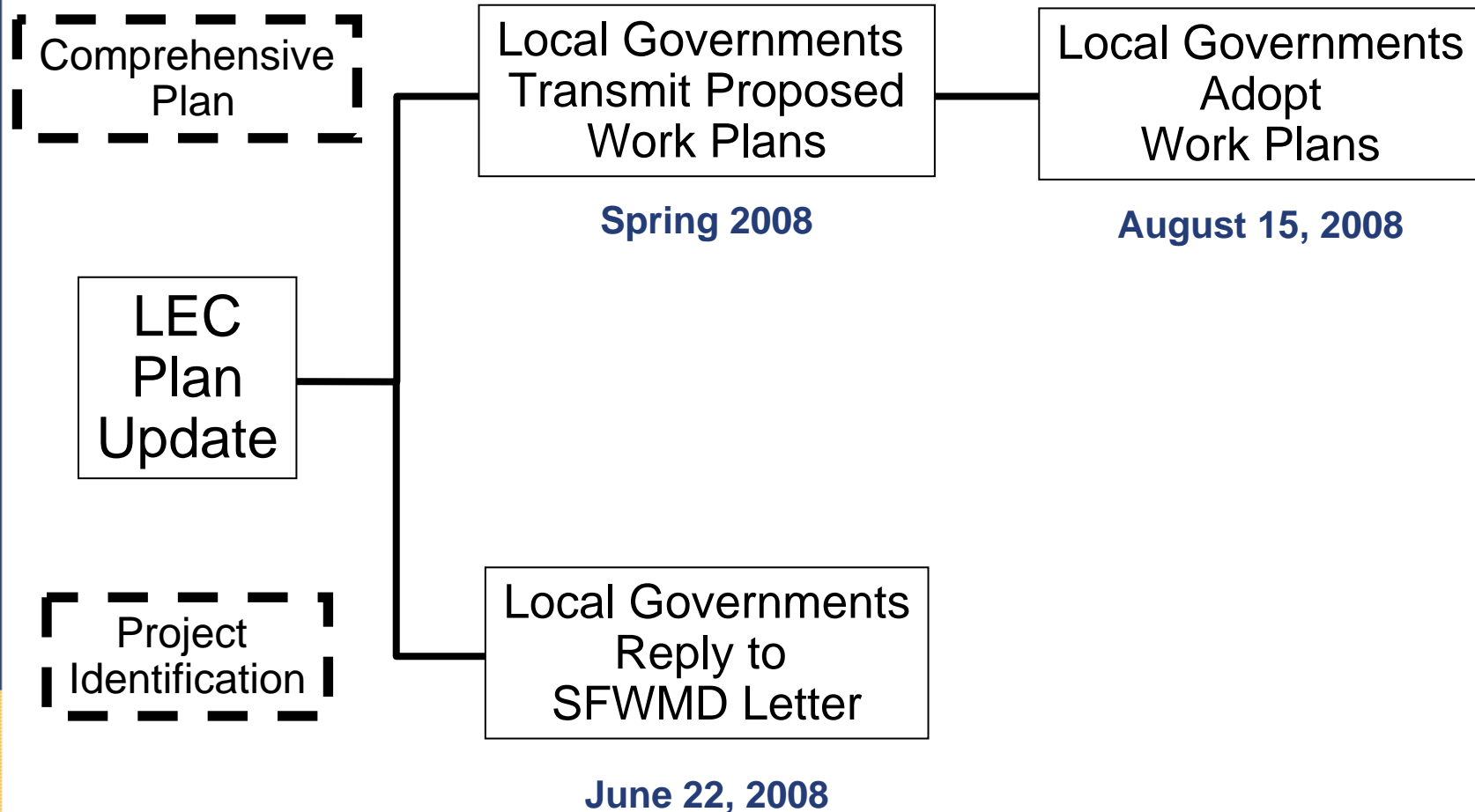
Points to Address in Amending Comprehensive Plans



- Is source availability determined?
- Is there a water supplier commitment?
- Does the analysis support the additional demands of the amendment?
- Are the necessary facilities included in the Capital Improvement Element?



Local Government Requirements





Local Government Requirements Work Plans



10-Year Water Supply Facilities Work Plan must identify sources:



- Traditional water supply projects
- Alternative water supply projects
- Bulk sales purchases/sales
- Conservation programs
- Reuse programs
- Coordination



Local Government Requirements Work Plans



Water Supply Facilities Work Plan must identify responsibilities for:



- Financial planning
- Facilities master planning
- Permitting
- Activities and efforts in coordinating or participating in multijurisdictional projects, where applicable

Issues and Key Points





Issues and Key Points



Objective of a Water Supply Facilities Work Plan

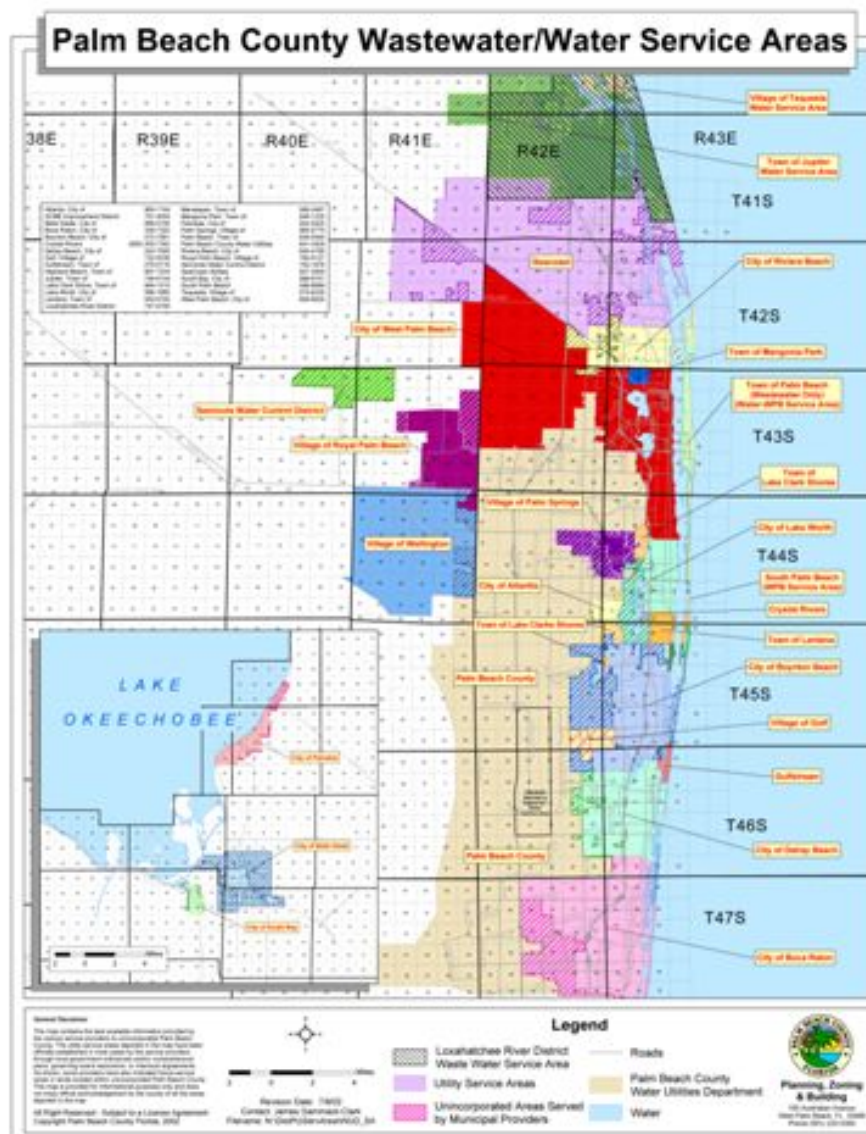
- A plan for building public, private, and regional water supply facilities to serve existing and new development within the local government's jurisdiction



Issues and Key Points



- Include all utilities serving jurisdiction
- Coordinate with utility providers on:
 - Future utility service areas
 - Population projections
 - Bulk sales agreements
 - Infrastructure



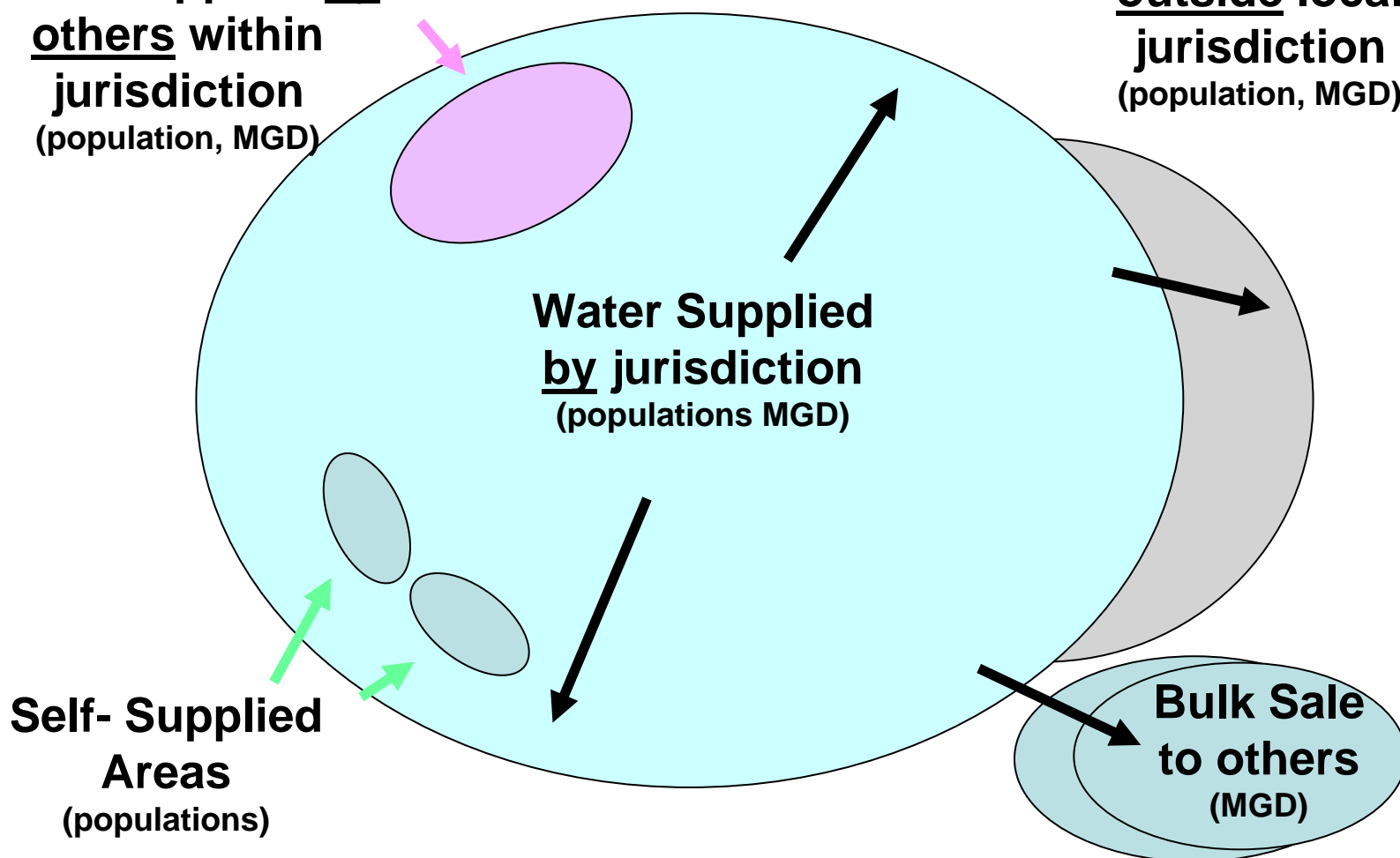


Water Supply Responsibility for Facilities Work Plan



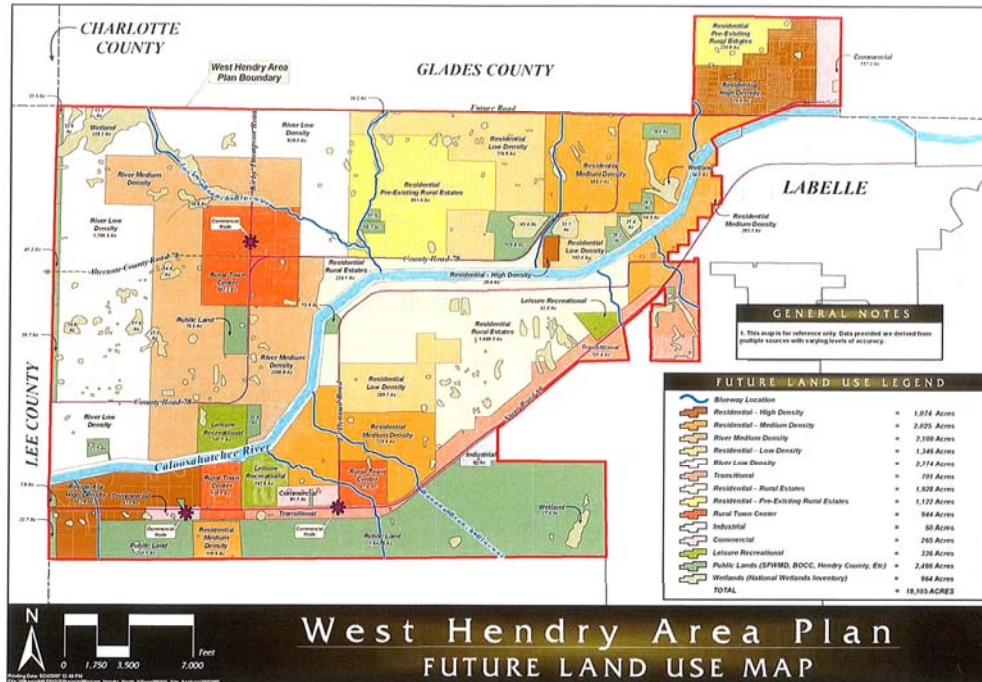
**Water supplied by
others within
jurisdiction**
(population, MGD)

**Water Supplied
outside local
jurisdiction**
(population, MGD)



Work Plan must address ALL water supply providers serving jurisdiction

Issues and Key Points



Population Projections

- Resolve conflicting population projections between local plans, permits, and water supply plans
- Non-standard, alternative population projection methodologies must be approved by DCA & be reflected in all the various elements of a local government's comprehensive plan



Issues and Key Points



- Many local comprehensive plans have large amounts of vacant, but approved, land uses that require water supply facility planning



Issues and Key Points



Water Supply Level of Service

- No standard definition exists for water supply Level of Service
- Use Work Plan to review how the Level of Service in the comprehensive plan compares with the current utility use
- A separate level of service standard for non-residential land use categories may be helpful



Issues and Key Points



- **Work Plans must be for at least a 10 year period**
- **As regional water supply plans and consumptive use permits address 20 year periods, Work Plans can be for more than 10 years**

Issues and Key Points



UTILITY SUMMARY

PALM BEACH COUNTY

Supply Entity: Palm Beach County Water Utilities Department

Permitted Entity: Lake Region Water Treatment Plant

Service Area: City of Belle Glade, City of Pahokee and City of South Bay

By 2015, Palm Beach County, in partnership with Belle Glade, Pahokee and South Bay, will construct a Floridan reverse osmosis (RO) water treatment plant to completely replace surface water supplies.

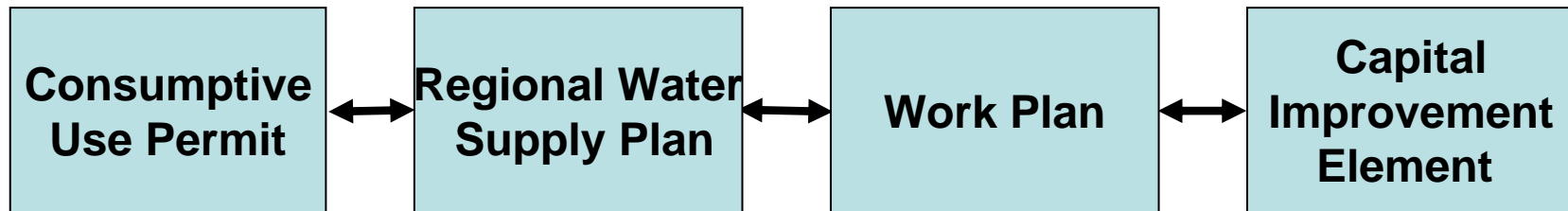
| CURRENT AND PROJECTED WATER SUPPLY | | | |
|--|----------------|-----------|--------|
| Item | Actual 2005 | Projected | |
| | | 2015 | 2025 |
| Population | 33,416 | 36,755 | 42,115 |
| Per Capita (gallons per day finished water) | | 168 | 168 |
| (Note: All potable volumes are finished water unless noted) | MGD | MGD | MGD |
| Potable Water Demands (daily average annual) | 6.40 | 6.17 | 7.07 |
| Water Source: Volume from Biscayne/Surficial | 7.00 | 0.00 | 0.00 |
| Volume from Floridan | 0.00 | 10.00 | 10.00 |
| Volume from Other | 0.00 | 0.00 | 0.00 |
| Volume from Reclaimed | 0.00 | 0.00 | 0.00 |
| Additional Potable Water Needed (after assessing historic use or proposed projects) | 0.00 | 0.00 | 0.00 |

| PROJECT SUMMARY | | | | | | |
|---|----------------|---------------------|-----------------------|-------|-------|-------|
| Projects | Alt. Source | Total Cap. Costs | Total Design Capacity | | | |
| | | | 2010 | 2015 | 2020 | 2025 |
| Floridan RO Water Treatment Plant (WTP) Phase I | Brackish | \$25,000,000 | 10.00 | 10.00 | 10.00 | 10.00 |

- **Alternative water supply projects from Regional Water Supply Plans must be considered**



Issues and Key Points



Consistency and transparency are important

- The traditional, AWS, conservation and reuse projects listed in the work plan need to match
- All projects need to be identified as to technology and source being utilized, and design capacity size (e.g. 5 MGD Floridan Aquifer Reverse Osmosis Plant)
- Annotate tables as necessary



Issues and Key Points



Irrigation Water Use Planning

- Irrigation can account for a significant portion of water supply demands
- Reclaimed water is typically not available at sufficient quantities during the initial phases of developments; need to plan for interim and/or alternative sources
- Irrigation planning is especially important in areas of limited traditional water supply sources

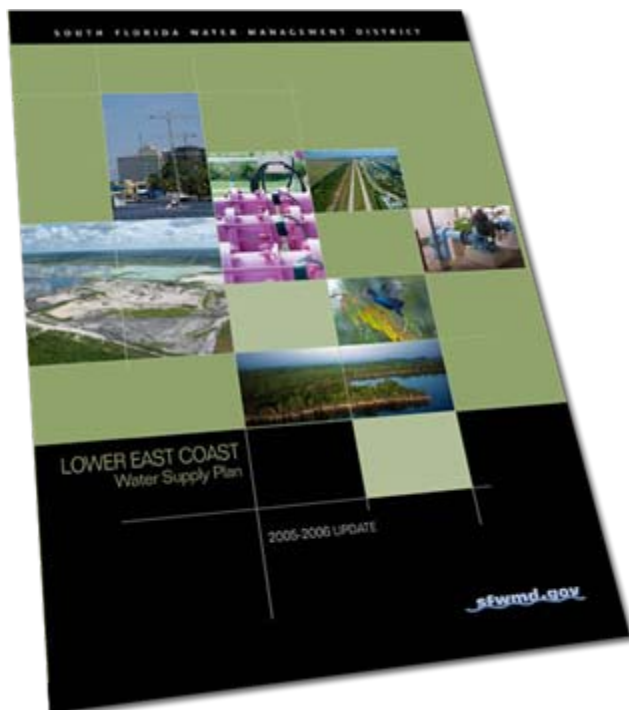


Possible Formats for Work Plan

1. Incorporate the Work Plan as a sub-element
- recommended
2. Incorporate by reference in a policy
- requires comp plan amendment to revise any portion
3. Include as goals, objectives and policies in the Infrastructure Element or throughout the comprehensive plan
- need to provide index or list



Technical Assistance



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Discussion on how to meet the
August 15, 2008 deadline

