

PR/MRWSA Source Water Feasibility Study

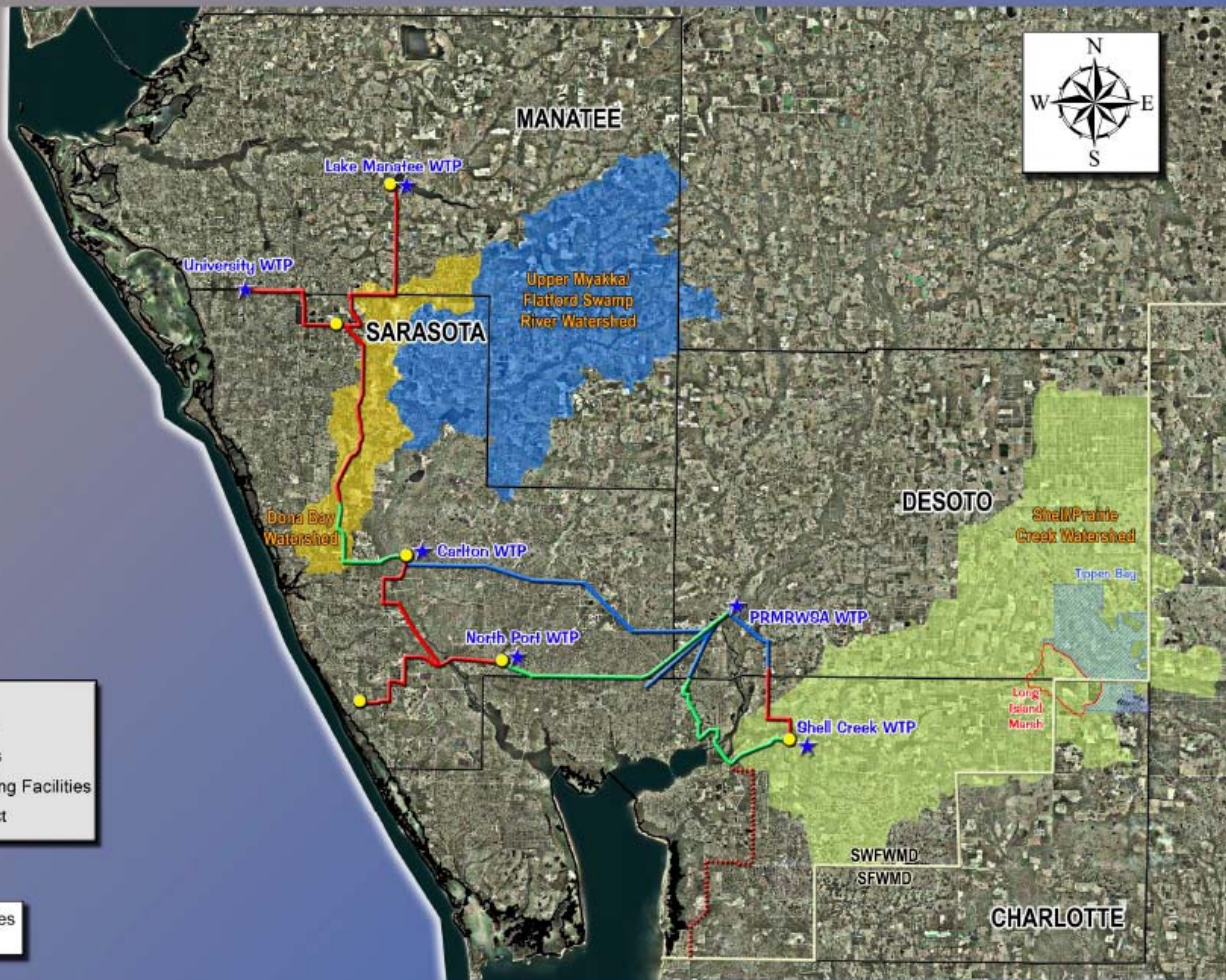
September 12, 2008



History

- 2005 Water Planning Alliance & PRMRWSA identified future supply opportunities
- 2006 Authority Regional Water Supply Master Plan evaluates 6 high potential supply opportunities
- 2007 Authority Board approves feasibility study on 3 source areas
- 2008 Completion of Source Water Feasibility Study

Regional Sources and Integrated Loop System



- Existing Regional Transmission Mains
- Ongoing Regional Transmission Mains
- Proposed Regional Transmission Mains
- Proposed Regional Storage and Pumping Facilities
- ⋯ Future Charlotte County Utilities Project



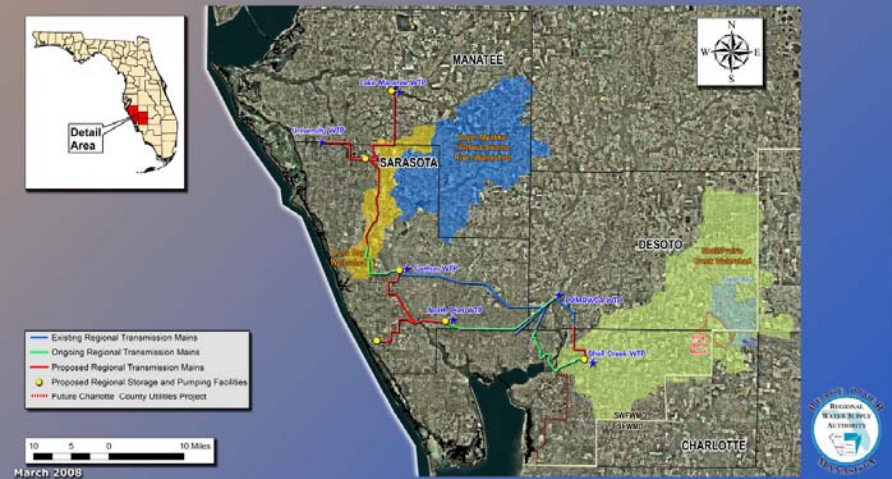
March 2008



Feasibility Study

- Major Opportunities
 - Surface Water
 - Groundwater
 - Environmental Benefits
- Resource Evaluation
 - Flow / Quality / Timing
 - Existing Users
 - Land Use
- Project Development
 - Reservoirs & Intakes
 - Treatment Requirements
 - Connections
 - Cost Screening
- Program Development
 - Meet Future Needs
 - Project Combinations & Comparisons

Regional Sources and Integrated Loop System



System-Wide Findings

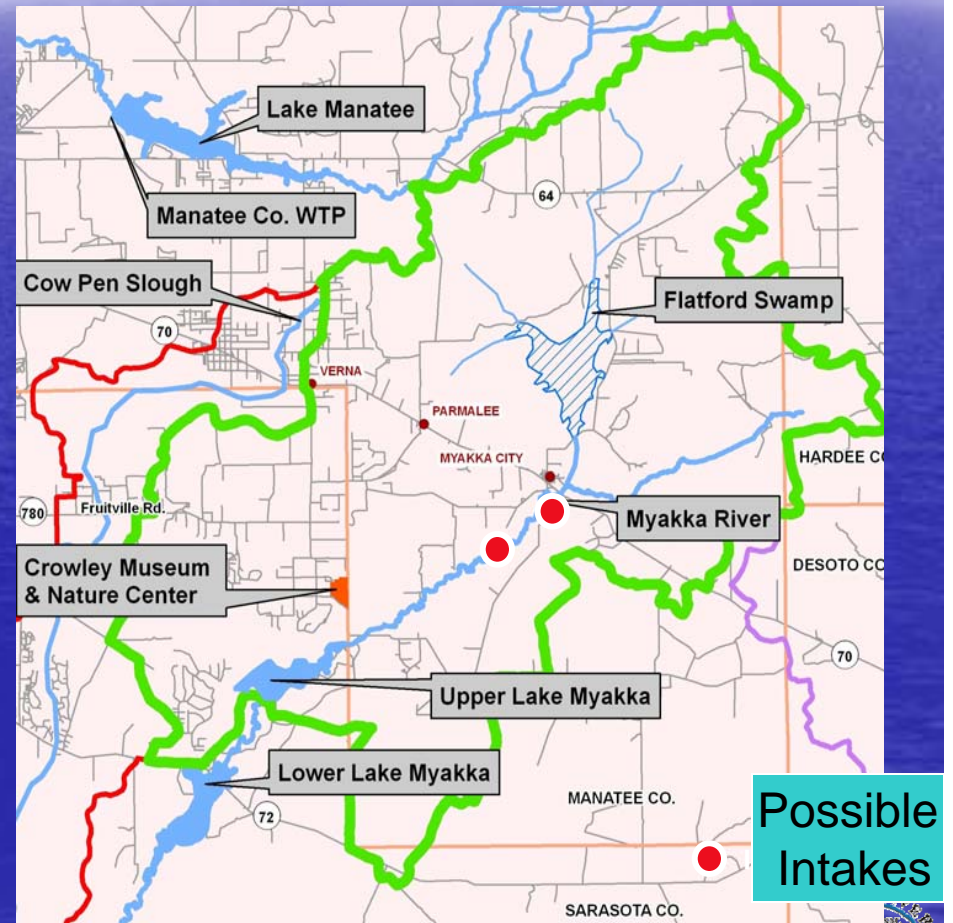
- Membrane treatment required for all sources
- Reject water disposal required
- Conjunctive use is beneficial for cost-effective reliability and yield
 - Conjunctive use source can be almost anywhere in the regional system

Estimated System Yields

<u>Source Area</u>	<u>Size, BG</u>	<u>Yield, MGD</u>
Upper Myakka	6	5-10
Shell/Prairie	6	12-20
Dona Bay	4 to 10	7 to 20

Upper Myakka / Flatford

- 3 Reservoir Sites Near Flatford
- 2 Intake Sites – Near SR 70
- Est. 5-10 mgd Available based on MFL
- Est. 15-20 mgd Available based on “excess water”
 - Conjunctive Use Desirable



Next Steps

- Complete Technical Analysis
- Project Development
- Program Development (collection of projects)
 - Board Workshop in November 5
 - Board Meeting December 3
- Preliminary Design
- Final Design
- Construction

Questions?

Reservoir Site Alternatives

- Multi-step siting process
- Completed
 - GIS avoidance maps
 - ID potential sites
 - 11 sites in Shell/Prairie
 - 8 sites in Upper Myakka
 - Site evaluations
 - 3 sites Shell/Prairie
 - 3 sites in Upper Myakka
 - 2 existing sites in Dona Bay

Environmental Benefits

- Reduce excess fresh water flow to Dona Bay
- Reduce excess flow in Flatford Swamp
- Protection of Shell Creek and Charlotte Harbor through compliance with the MFL