



Discussion, Selection, and Prioritization of Water Management Strategies

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Planning Framework Definitions

- **Surface Water Management Strategy** – a water management strategy proposed to eliminate a Surface Water Shortage, reduce a Surface Water Shortage, or generally increase Surface Water.
- **Groundwater Management Strategy** – a water management strategy proposed to address a Groundwater Area of Concern or Groundwater Shortage.
- **Groundwater Area of Concern** – an area in the Coastal Plain, designated by an RBC, where groundwater withdrawals from a specified aquifer are causing or are expected to cause unacceptable impacts to the resource or to the public health and well-being.

Group Reports – Q1: Existing Strategies in the Basins

Supply Side:

Reuse, reclaimed effluent for irrigation
Stormwater collection in ponds, then used for golf course irrigation
Conjunctive use (golf, ag, public supply, energy, and other sectors)
Interconnections and regionalization of public supply systems
Interbasin transfers (e.g., from Lower Savannah to Salkehatchie)
Aquifer Storage and Recovery (ASR)
Onsite retention (impoundments for agriculture)
USACE flow strategy and minimum releases
Aerial or satellite leak detection programs
Land management (to improve water quality)

Demand Side:

Golf courses: Wetting agents, moisture sensors, irrigation system upgrades (to be more efficient)

Public Supply: Automatic Meter Reading (AMI/AMR), SCADA, public education, tiered rate structure during drought, pricing structures (Increasing block rates), building code requirements (e.g., utilities that get water from BJW&SA), education/outreach/communication, general conservation strategies

Group Reports – Q2: Effectiveness of Existing Strategies

Reclaimed water is effective for HHPSD

Regionalization is effective in terms of technical and financial capacity

Effectiveness is often location specific and depends on financial capability

Outreach is not effective (relative to other issues, e.g. electric/energy)

More incentive is needed for water conservation

Group Reports – Q3: Can Existing Strategies be Expanded

Where there is new construction, new golf courses, reclaimed water would be useful

Support and promote industrial growth – reclaimed water can help with that

All existing strategies can be expanded. Prioritizing them is important.

Holding to and enforce existing standards is important.

State funding is needed to expand strategies (e.g., replace aging infrastructure)

Groundwater barrier wall to prevent further saltwater migration/intrusion at the coast (e.g., HHPSD)

Group Reports – Q4: What Strategies are Relevant in the Lower Savannah and Salkehatchie River basins and Should be Further Evaluated?

Ag is out in front. Continue to expand strategies being employed by Ag users.

Public Water Supply – Encourage reuse; fix existing systems (leaks); Use methods like Advanced Metering Infrastructure (AMI) and Automated Meter Reading (AMR) with text messaging to more quickly stop leaks. Make consumer aware of drought and begin conservation earlier.

Conservation, not only during drought periods (employ methods to reduce overall consumption)

More state funding for water projects

Lobby for federal dollars

Water Management Strategies

Important Considerations:

- Water users have different financial and technical resources.
- Not every strategy is applicable to every water user.
- Due to **uncertainty** of future water availability, it is becoming increasingly important to use water as efficiently as possible.
- Some strategies may be identified as part of an **adaptive management plan**. They are only recommended if certain risk triggers occur, or conditions change beyond what is expected.

Adaptive management is a framework that can be used to implement options as the future unfolds in a structured way to avoid the pitfalls of either **under-performance** or **over-investment**.



What Are Some Potential Uncertainties that May Impact the LSS River Basins?

RBC identified Uncertainties
Climate, drought flood
Neighboring states water use
Growth, economic and population
Industry, new demand sources
Groundwater data
Regulation, politics, governance
Quality, spills, saltwater intrusion
Natural disasters

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Common uncertainties in water resources planning



What Strategies Should be Recommended as part of the River Basin Plan?

Also consider which strategies might be most effective to adapt to changing conditions.



Supply-Side Strategies Already in Use

- Water reuse including use of reclaimed WW effluent for irrigation
- Onsite retention of stormwater (impoundments for agriculture and golf)
- Conjunctive use (golf, ag, public supply, energy, and other sectors)
- Interconnections and regionalization of public supply systems
- Interbasin transfers (e.g., from Lower Savannah to Salkehatchie)
- Aquifer Storage and Recovery (ASR)

Should any of these existing strategies be prioritized?

Are there other supply-side strategies that should be recommended?

Which strategies would be most useful to adapt to changing conditions?

Water Conservation and Efficiency Strategies

(Demand-Side Strategies)

RBC Decisions

Irrigation (Ag & Golf Courses) Portfolio of Water Efficiency Strategies	Supported?	Priority?
Water Audits and Nozzle Retrofits		
Irrigation Equipment Changes		
Soil Management and Cover Cropping		
Irrigation Scheduling		
Crop Variety, Crop Type, and Crop Conversions		
Moisture Sensors / Smart Irrigation Systems		
Wetting Agents (golf courses)		
Future technologies		

Water Conservation and Efficiency Strategies (Demand-Side Strategies)

RBC Decisions

Municipal Portfolio of Water Conservation and Efficiency Strategies	Supported?	Priority?
Conservation Pricing Structures / Drought Surcharge		
Public Education of Water Conservation		
Landscape Irrigation Program and Codes / Time-of-Day Watering Limits		
Leak Detection and Water Loss Control Programs (and replacement of aging Infrastructure)		
Advanced Metering Infrastructure (AMI) and Automated Meter Reading (AMR)		
Car Wash Recycling Ordinances		
Water Waste Ordinance		
Toilet Rebate Program		
Residential Water Audits		
Building Code Requirements (Water Efficiency Standards for New Construction)		

Water Conservation and Efficiency Strategies (Demand-Side Strategies)

RBC Decisions

Industrial and Energy Portfolio of Water Conservation and Efficiency Strategies	Supported?	Priority?
Water Audits		
Rebates on Energy Efficient Appliances		
Water Recycling and Reuse		
Water Saving Equipment and Efficient Water Systems		
Installing Water Saving Fixtures and Toilets		
Educating Employees		