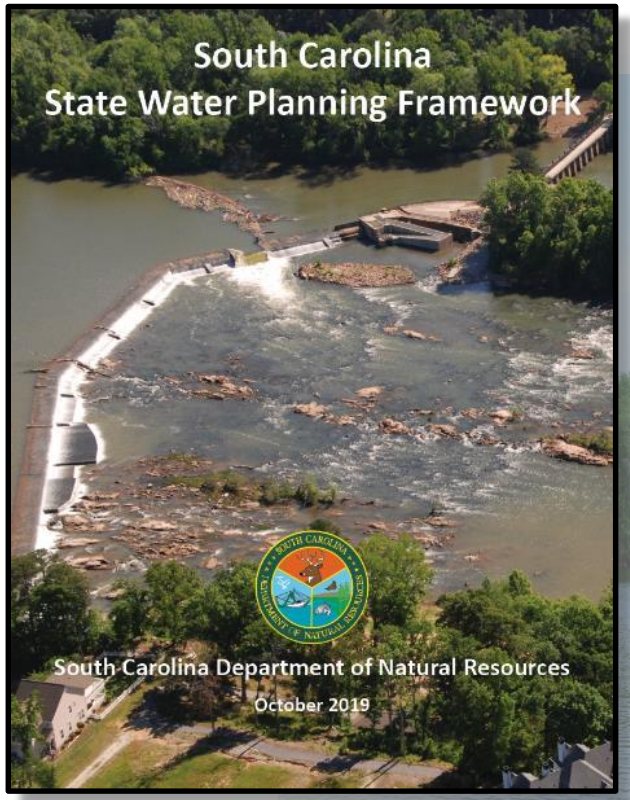
Potential Groundwater Management Strategies

Pee Dee River Basin Council

April 23, 2024



Information Considered for Groundwater Management Strategies

- Previous discussions and feedback on strategies at RBC meetings
- Leigh Anne's presentation last month on water management strategies
- Last month's breakout session on groundwater issues
- Strategies identified in the Edisto and Broad plans

Potential Demand-side Water Management Strategies

Surface and Groundwater

Municipal Conservation	• Update of Drought Management Plans • Public education on water conservation • Residential water audits • Incentives for low flow indoor fixtures • Water efficiency standards for new construction • Leak detection and water loss control programs • Reclaimed water programs • Car wash recycling programs • Pricing structures (ex. increasing block rates) • Landscape irrigation programs and codes • Time-of-day watering limits • Xeriscaping

Potential Demand-side Water Management Strategies

Surface and Groundwater

Ag/Irrigation Conservation	• Water audits and center pivot sprinkler retrofits • Cover cropping, conservation tillage, mulch • Soil moisture sensors/smart irrigation • Crop selection ← *Crop selection is market-driven* • Irrigation scheduling ← *Needs to be done right* • Drip/Trickle irrigation (for select crops) • Grass buffers to prevent runoff
Golf Courses	• Wetting agents to reduce water use • Water loss control and regular maintenance • Time-of-day watering practices • Soil moisture monitoring • Low-water use landscaping

Potential Demand-side Water Management Strategies

Surface and Groundwater

Industry is conserving, but how can we improve?

Industrial Conservation	• Water reuse and recycling • Water efficient processes • Water loss control and routine maintenance • Low flow fixtures, toilets, and appliances • Develop drought management plans

Solar power could offset need for more thermoelectric generation. But what are the net effects of clearing areas for solar farms?

Thermoelectric Conservation	• Reclaimed water • Switch to combined-cycle natural gas • Energy saving appliances (which reduces thermoelectric generation needs)

Potential Supply-side Water Management Strategies
Groundwater

New Supply	• Drill new or supplemental wells into lesser-used aquifer formations • Desalination
Water Reclamation	• Water reuse systems (non-potable) • Direct potable reuse • Reuse for aquifer storage and recovery

Conjunctive Use	• Use surface water to supplement groundwater
	• Aquifer storage and recovery ← *Is this economically feasible?*
	• Stormwater capture and use
	  – Potable
	  – Non-potable ← *What are the treatment requirements and is it feasible?*

Thank you.

Questions?

Brown AND Caldwell