Selection and Prioritization of Water Management Strategies

Agenda Item 6

Group Work Sessions

Objective: Review and consider information discussed and provided on the effectiveness and feasibility of management strategies and develop a proposal for consideration by the full RBC.

Group 1
Municipal Demand-Side Strategies

Group 2
Municipal Supply-Side Strategies

Group 3
Strategies for other Sectors

Group Work Sessions

In general, each group will:

1. Decide which, if any, of the considered strategies merit recommendation by the RBC for implementation and indicate why you think these strategies should be recommended. Are there others not already considered that should be recommended?
2. Determine if you need more information regarding the effectiveness or feasibility of a strategy to recommend it for implementation.
3. Decide if there is reason to recommend a phased-approach to implementing the recommended strategies?
4. Consider if the any of the strategies may be more or less applicable and/or effective for a particular water user in the Broad River basin, and why.
5. Decide if the strategies can be prioritized for implementation, and if so, prioritize them in order of most favorable to least favorable (but still recommended).

When Evaluating Water Management Strategies…

…each RBC should take an **adaptive management approach** and **recognize the potential for changing hydrologic or socioeconomic conditions**, which may lead to new recommendations for water management. The two water demand projection scenarios [**Moderate** and **High Demand**] are designed, in part, to address this potential for varying conditions in a basin. **Changing conditions on the water supply side could include the occurrence of a more severe drought during the planning process, as compared to recent historic droughts included in the simulated period of record.**

Gaffney Alternatives Summary Cheat Sheet

Key:

Entirely effective
Highly effective
Somewhat effective
Not effective

Alternative	Effectiveness			Relative Feasibility
	Avg. Shortage (MGD)	Frequency of shortage (%)	Max Shortage (MGD)	
Baseline	1.6	37%	26.7	
Optimization of existing supplies (Lake Whelchel and Gaston Shoals):	0.42	5%	26.7	High
Lake Whelchel 3-ft dam raise	0.37	4%	26.7	Low to Moderate
New Broad River withdrawal	0	0%	0	High
Lake Blalock withdrawal	0.15	1.7%	24.3	Low to Moderate
2 BG Offline Quarry	0	0%	0	Low to Moderate
New reservoir on Kings Creek	0.02	0.3%	11.1	Low
New regional reservoir	0	0%	0	Low
Large Interconnection with SWS (from SWS 42" Transmission Main)	--	--	--	Moderate
Smaller Interconnection with SWS (from SWS 12" Transmission Main)	--	--	--	Moderate to High

Municipal Demand Side Strategies (Group 1)

- Every strategy has education component and education is its own category to do outreach
- Water loss strategies can be cost prohibitive to small agencies, consortium of utilities to help implementation. System to system communication is already happening.
- Engage city councils and local govts
- Shift in mentality from growth to existing system – have fund from new development to help maintain existing infrastructure
- Residential programs – turf replacement, smart irrigation, new construction efficiency standards (irrigation and leaving trees on development)
- Utilities having conservation program (dedicated staff), consideration of financial impacts of demand reduction, education & outreach
- Reclaimed systems (demand and supply strategy), site specific strategy, option for industrial users
- May see diminishing returns from low flow fixtures as most have been replace and population continues to grow
- Smaller utilities may need more outreach and support from outside influence. Less likely to have return flows to surface water

Municipal Supply Side Strategies (Group 2)

- Phased approach
    - Short term: focus on what utility has control over and lower cost. Optimization of existing supplies. Interconnection to Spartanburg.
    - Mid-term: raising dam of Lake Whelchel and further assess feasibility of quarry. Consider timing of closing quarry and retrofit needs.
    - Long-term: new withdrawal on Broad River and new regional reservoir as last resort.
- Gaffney is currently looking at adjustments to FERC limits to help short term growth but less in droughts
- Would need more information and discussion between Gaffney and Spartanburg to assess whether interconnection should be smaller or larger diameter. How much water is available?

Discussion of Other Strategies (Group 3)

- Agricultural water use is low in basin and may already be efficient. There may not be a need to include in the Broad RBP.
- Accommodate and look for ways to encourage industry development (including ag and golf course)
- Conservation pricing structures. We as are used to cheap water. When it hits budgets, all users look for ways to save. And that incentivizes users to look at leak detection. Leak detection technology in general would be beneficial.
- An economic incentive (from the state?) to recruit manufacturing in an area with short supply might include a way to, say fund that new quarry/reservoir. If Gaffney, for example, hosts a big new industry, that industry helps to foot the bill for the long-term supply solution. This would be controversial but should be considered.