Water Management Strategies for the Broad River Basin – Breakout Groups

Agenda Item 8

Discussion Guide

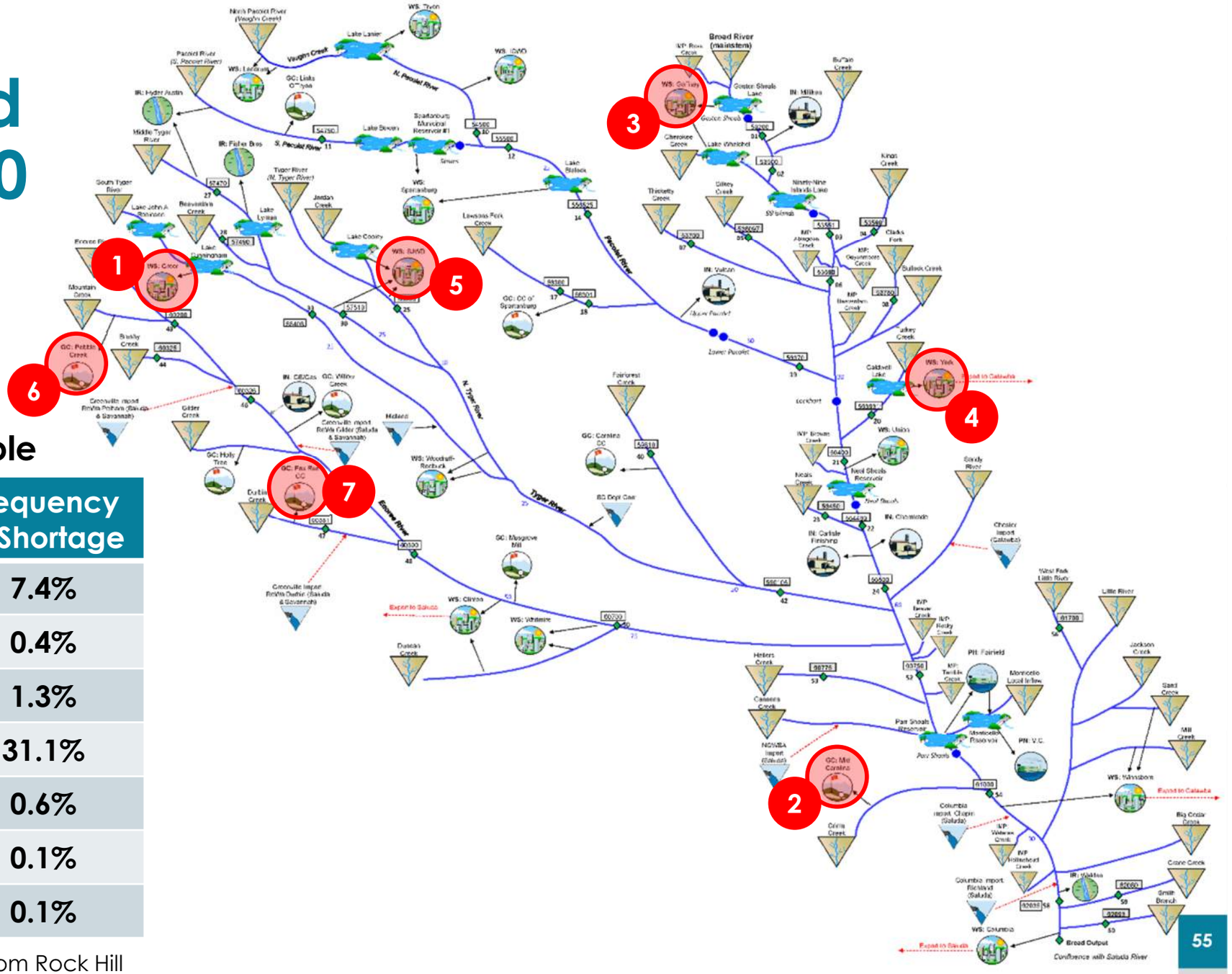
1. What existing water management strategies are already used in the Broad basin? Consider and group these strategies by water use sector and whether they are:
    a. Supply-side strategies
    b. Demand-side strategies
    c. Low flow management strategies

2. How effective are the existing strategies? Think in terms of their ability to reduce demands, increase supply availability, and prevent shortages.

3. Do you think strategies that are already in-place can be expanded or improved?

4. What types of strategies are likely to be relevant in the Broad Basin to reduce or eliminate projected shortages, increase available supply, minimize low flows, and help improve the flow regime for aquatic organisms and recreation? Which strategies should we evaluate using the surface water model?

High Demand Scenario 2070



Surface Water Shortage Table

Map ID	Water User	Frequency of Shortage
1	WS: Greer	7.4%
2	GC: Mid Carolina	0.4%
3	WS: Gaffney	1.3%
4	WS: York*	31.1%
5	WS: SJWD	0.6%
6	GC: Pebble Creek	0.1%
7	GC: Fox Run	0.1%

* York is now purchasing all their water from Rock Hill

Group Reports – Q1: Existing Strategies in the Basin

- **Supply -** Maintaining reservoir infrastructure – gates, dams.
- **Supply, low-flow -** Reservoir operations optimization (maintain water in upper reservoirs for flexibility, consider timing of maintenance)
- **Supply -** Raise dams (Gaffney), increase reservoir capacity
- **Supply -** Interconnections between water systems (incl. emergency)
- **Supply** – conjunctive use for small farmers where applicable
- **Ag Demand Management** – cover crops, intercropping, drip irrigation
- **PWS Demand Management** – conservation, education & outreach, citizen academies, social media, pricing structure (comes into play during drought), Smart irrigation, install second meter for irrigation water (sewer based on water use, will reduce sewer bill & help identify leak source, could cut off or manage irrigation in drought)
- **Supply/demand** – reuse in industrial, water loss audits & follow up investments with financial plans, leak detection in Lawrence County
- Seed coating of herbicide/insecticide to reduce irrigation
- Onsite power generation, more efficient energy → more efficient water use
- **Demand Management** – requirement of smart irrigation – NC study 20 MGD could be saved throughout Catawba basin if owners on reservoirs had req'd smart irrigation.
- Local water managers monthly meeting for sharing lessons learned
- Reuse – blend onsite ponds for process water and fire protection, stormwater capture to augment all water uses, improved efficiency in condensate capture – heat exchangers

Group Reports – Q2: Effectiveness of Existing Strategies

- Study to track benefits of industrial strategies
- Amount of storage in basin is good buffer for growing demand – effective
- Lack of real or modeled shortages indicates existing strategies, which are mostly comprised of storage reservoirs, are effective.
- General abundance of water and the constructed storage has limited the need for other strategies, based on current demands.

Group Reports – Q3: Can Existing Strategies be Expanded

- Improve consistency with public messaging
- Improving funding for agricultural conservation measures
- Many rate structures are currently flat
- Planning for increased sedimentation in reservoirs/decreasing storage – requires partnering with other agencies
- Need strategies to ensure enough water for fish/environment – currently addressed by minimum releases which may not be met when inflow < min. release
- Review utility ordinances to ensure they have authority to restrict usage when necessary (in Catawba this was an issue)
- Regionalized public education
- Increased water audits
- Onsite storage for irrigation of public lands and industrial sites
- User group of chief engineers from textile industry from Carolinas, Georgia, TN – sharing best practices. Expand in other industries and document best practices shared

Group Reports – Q4: What Strategies are Relevant in the Broad and Should be Further Evaluated?

- Update drought management plans
- Expand water audits
- Identify funding sources for addressing results of water audits
- Knowledge sharing locally, basinwide, statewide on strategies that work
- Interconnections (pot. Opportunity for Greer)
- Gaffney increasing height of dam – assess in model
- Conjunctive use for small demands like ag or golf courses
- Potential benefit from increasing storage – existing capacity increase or new reservoirs
- More onsite use of water and onsite generation of power (energy & water conservation & WQ benefit)