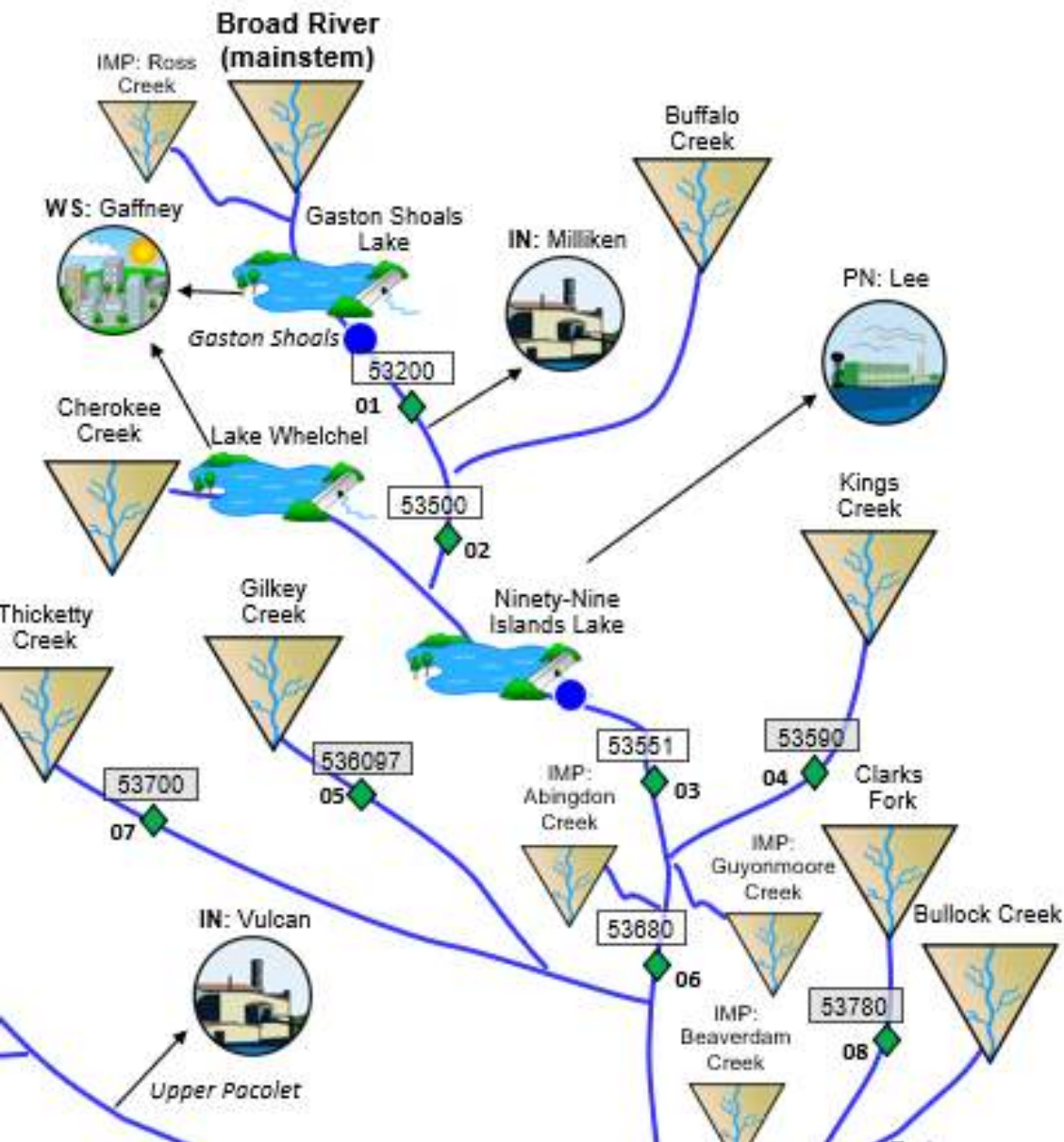




April RBC Meeting Review

Lee Nuclear Site Evaluation

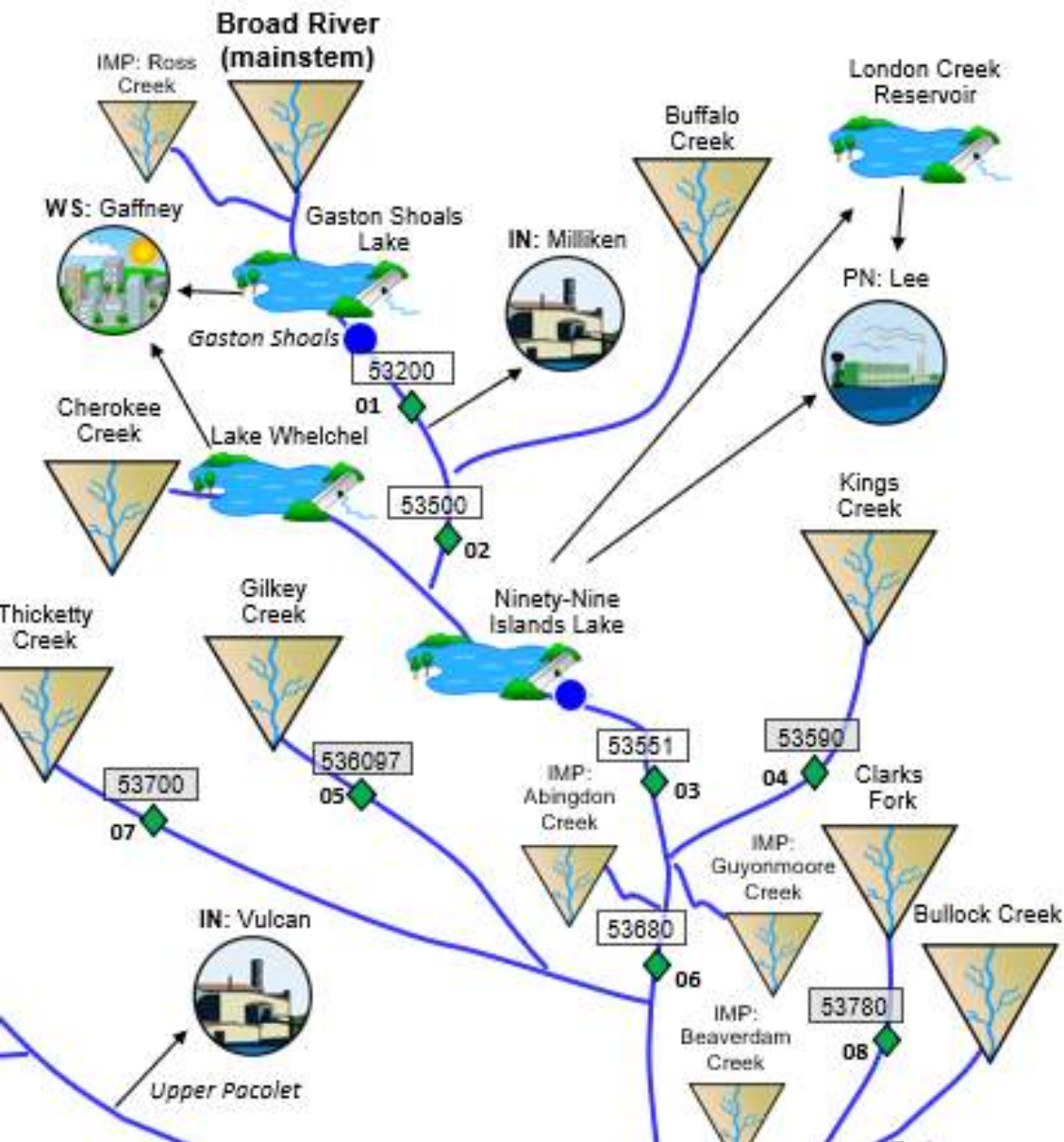
2070 High Demand Scenario



	Lee Nuclear Site Shortage (MGD)		BR03 Flow (cfs) Downstream of Ninety-Nine Islands	
	Priority to Downstream Flows	Priority to Lee	Priority to Downstream Flows	Priority to Lee
Min	0	0	232	178
Avg	0.6	0	2,197	2,196
Max	36	0	6,468	6,468
Frequency (%)	3.0%	0%	-	-

Lee Nuclear Site's demand can be satisfied with minimal impact to flows downstream of Ninety-Nine Islands.

Lee Nuclear Site Evaluation



- Offline storage reservoir, filled by pumping from Ninety-Nine Islands Reservoir (or just upstream)
- 5.7 BG of usable storage
- During drought, withdrawals for Lee would come from the London Creek Reservoir.
- Modeling this configuration demonstrated that the storage provided by London Creek Reservoir was enough to eliminate the project shortages for Lee.

Gaffney Alternatives Summary

Key:

Entirely effective
Highly effective
Somewhat effective
Not effective

Alternative	Effectiveness (2070 High Demand Scenario)			Relative Feasibility
	Avg. Shortage (MGD)	Frequency of shortage (%)	Max Shortage (MGD)	
Baseline	1.6	37%	26.7	
Optimization of existing supplies (Lake Welchel and Gaston Shoals):	0.42	5%	26.7	High
Lake Welchel 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

- 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

- **Recommended phased approach**

- **Short-term: Focus on lower cost, most feasible options**

- Optimization of existing supplies
- Negotiation with the Gaston Shoals FERC licensee
- Interconnection to Spartanburg

- **Mid-term: Options that are more expensive, but have greater impact**

- New Broad River intake below Buffalo Creek
- Raising dam height of Lake Welchel
- Quarry storage

- **Long-term: New reservoir**

Discussion of Other Strategies

- Agricultural water use is low in basin and may already be efficient.
- Accommodate and look for ways to encourage industry development (including ag and golf course), especially in areas where ample water availability was demonstrated via modeling.
- 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 limited 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.