



Falls Lake Dam Hydroelectric Project Update

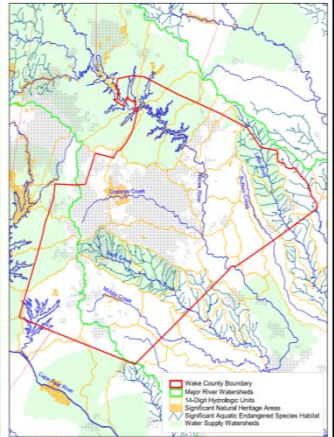
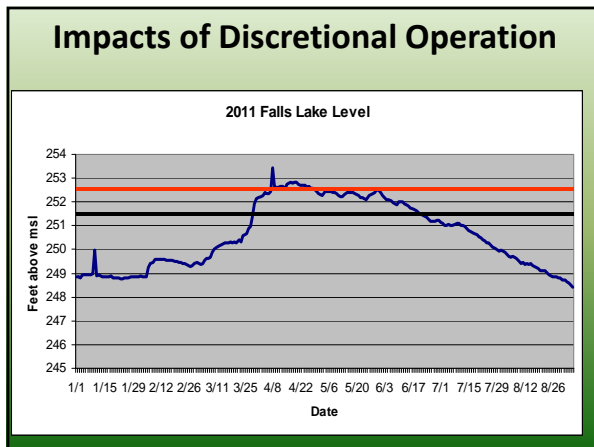
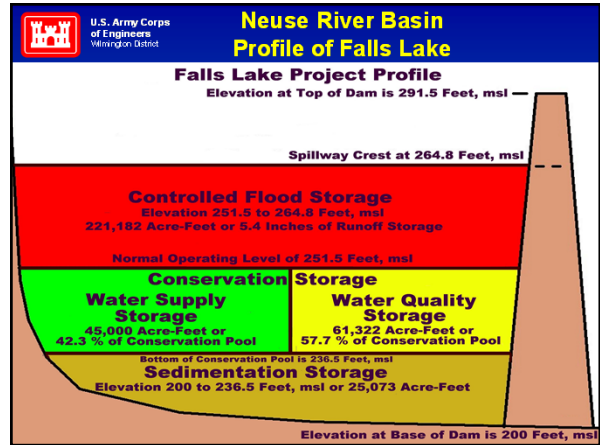
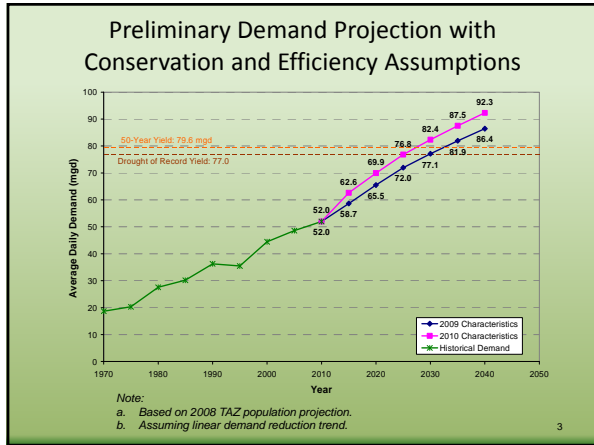
Upper Neuse River Basin Association

January 18, 2012



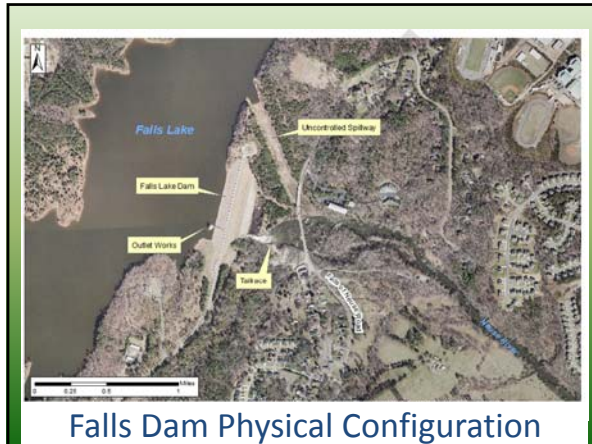
Water Supply Sources

WATER SUPPLY SOURCE	RELIABLE YIELD (mgd)	
	50-YEAR	RECORD DROUGHT
1. Falls Lake	68.1	63.1
2. Swift Creek	11.2	13.6
3. Proposed Little River Reservoir ¹	13.7	12.3
TOTAL	93.0	89.0

Project Genesis

- February 15, 2009, Community Hydro LLC, made application to the Federal Energy Regulatory Commission (FERC) for a permit to develop a facility to harness hydroelectric power from Falls Lake.
- On October 7, 2009, the Raleigh City Council authorized the City staff to ask FERC for a competing permit.
- On June 28, the City Council approved a 10-year Capital Improvement Program (CIP) that allocated a total of \$300,000 for the initial phases of the project.
- On November 19, 2010, the City was awarded a Preliminary Permit to conduct studies and prepare a license application for a hydroelectric project (FERC Project No. P-13623)



Falls Dam Physical Configuration

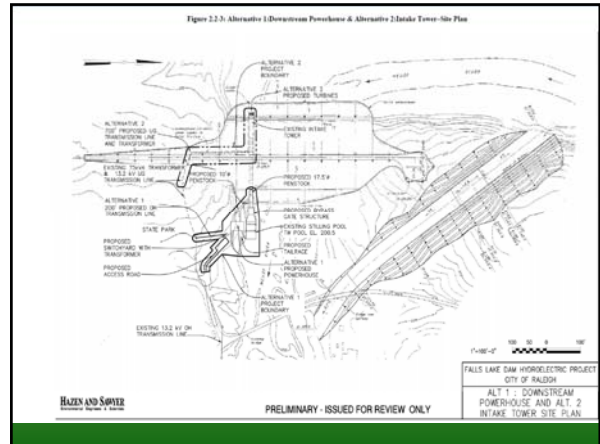


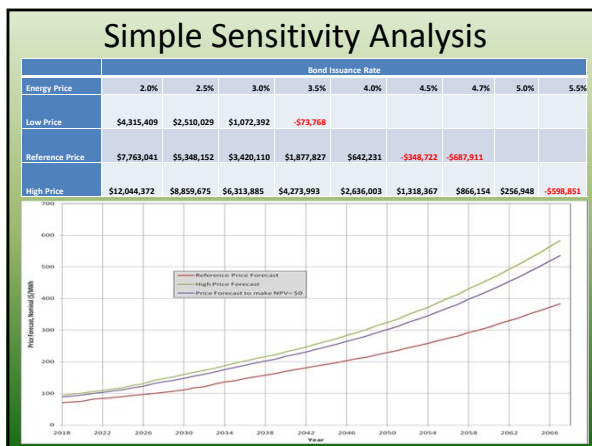
Table ES-1: Hydropower Development Hydraulic and Electrical Capacities

Alternative Vendor	No. of Turbines and Runner Diameter Size	Rated Net Head (ft)	Hydroelectric Capacity (cfs)	Hydroelectric Generation Capacity (MW)
Alternative 1 Voith	2 turbines total 2 – 1085 mm (3.6 ft)	50.0	500	1.90
Alternative 2 CHEC	2 turbines total 2 – 1250 mm (4.1 ft)	40.0	600	1.70

Table ES-2: Falls Lake Dam Average Annual Generation and OPCC

Vendor/Layout	Alternatives – No. of Turbines and Runner Diameter Size	*Avg. Annual Generation over Period of Record (from OASIS Model)	OPCC Estimate (\$2011)
Alternative 1 Voith	2 turbines total 2 – 1085 mm (3.6 ft)	7256 MWH/yr	\$28,372,000
Alternative 2 CHEC	2 turbines total 2 – 1250 mm (4.1 ft)	4608 MWH/yr	\$7,825,000

* All generation estimates assume a 5% downtime due to scheduled and unscheduled outages.



Green House Gas Reduction Opportunity:

Approximately 3,850 tons of CO2 equivalents per year

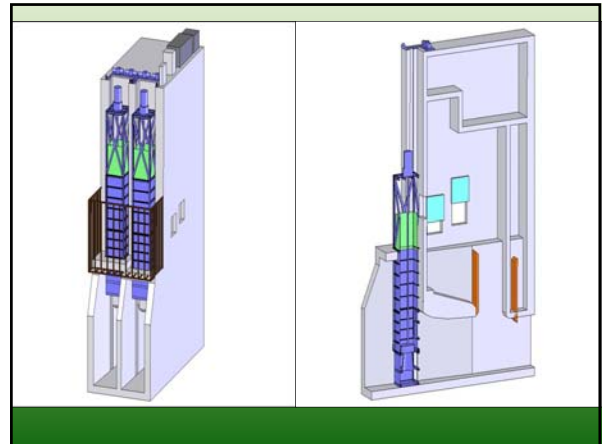
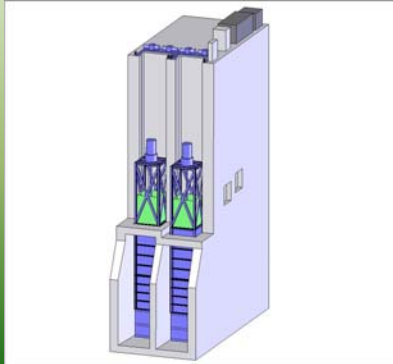
SUSTAINABLE Raleigh

City Goals and Policies

- 20% Reduction in Fossil Fuel Consumption
- Greenhouse Gas Emissions Reduction Strategy
- Endorsed the U.S. Mayors Climate Protection Agreement to develop a greenhouse gas emissions reduction strategy for the City

Module Placement

- Two modules operating separately
- Control room beside Tower roof
- Substation on Dam crest beside access bridge



Jordan Lake Hydro-Project



Final Thoughts and Next Steps

- The impact of the USCOE discretionary authority in operating the Lake is significant.
- The environmental impact of the Project is relatively low and the Project has the tacit support of permitting and regulatory agencies.
- Under the Traditional Licensing Process, our first agency and public meeting will occur on January 23, 2012 at the E.M. Johnson WTP.

Questions?

