



Catawba-Wateree Hydro Project – *Changes Ahead from Relicensing*

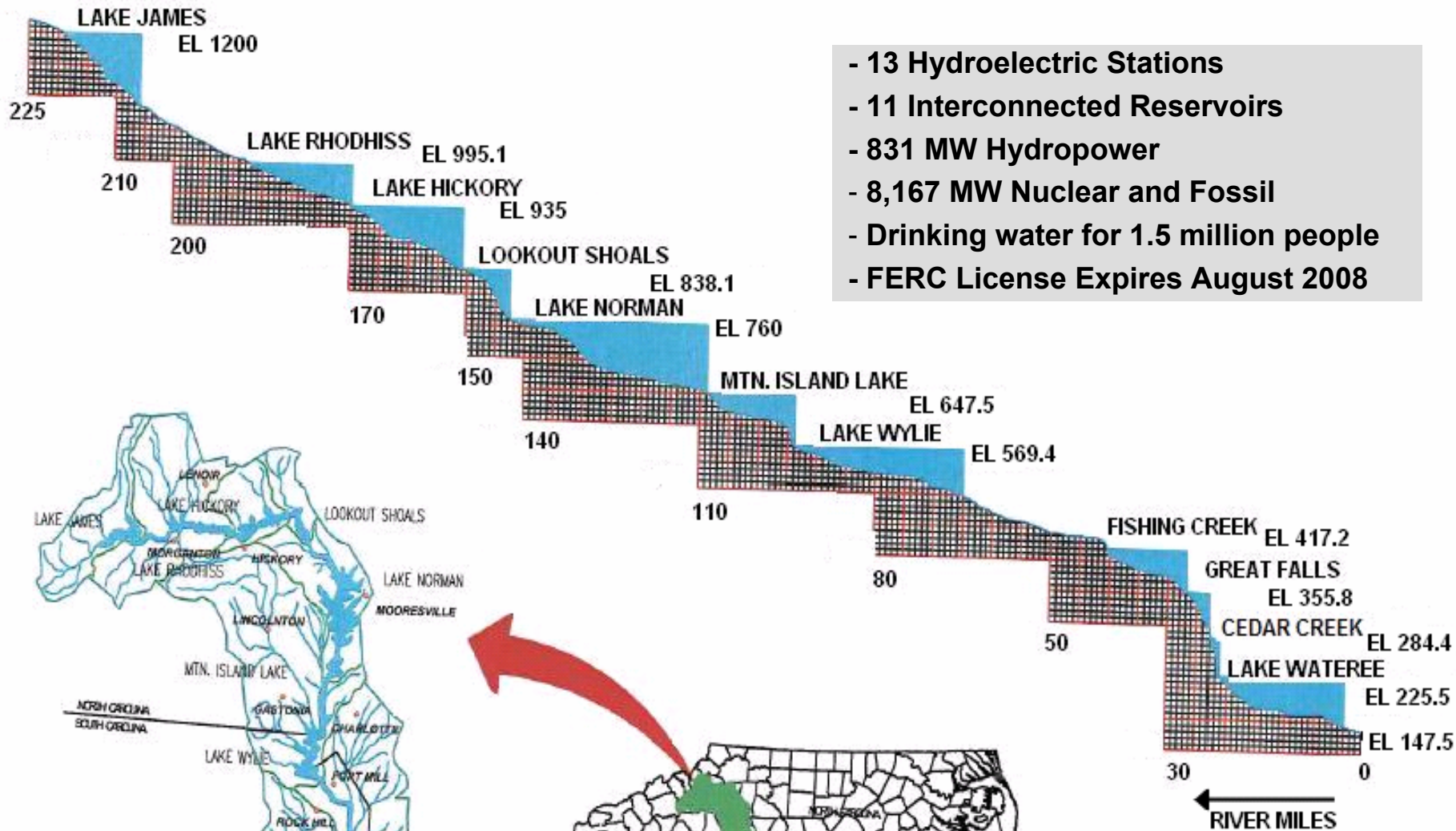
Presented to the Catawba-Wateree River Advisory Commission - 2/08/2008

Presented by:

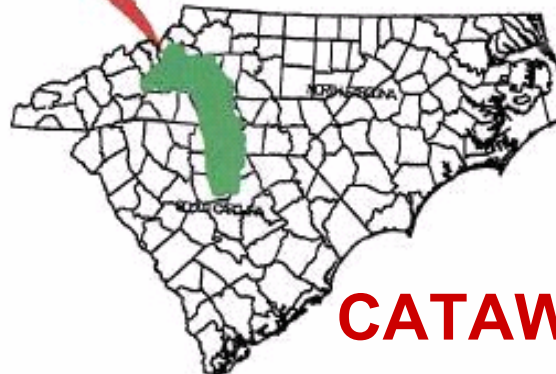
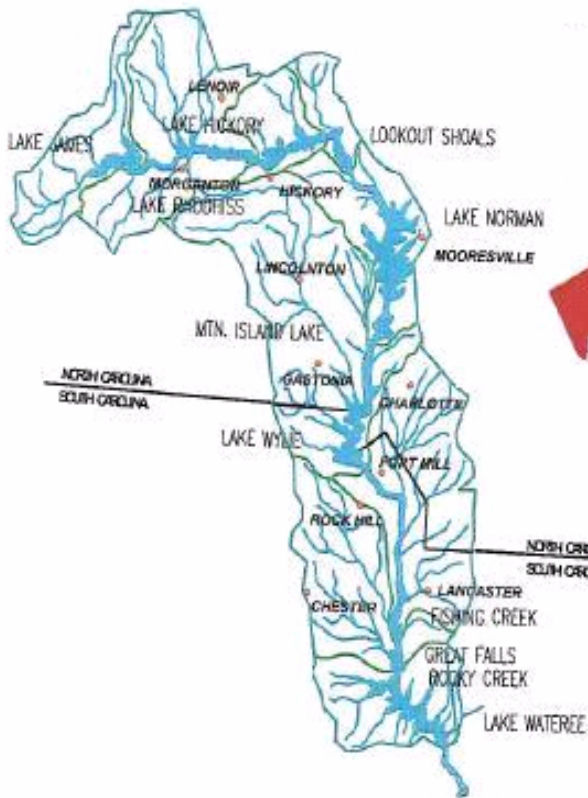
Jeff Lineberger, Director, Hydro Strategy & Licensing, Duke Energy

Topics

- **Relicensing Stakeholder Process**
- **Comprehensive Relicensing Agreement**
- **What will be different under the New License? (*water quantity focused*)**

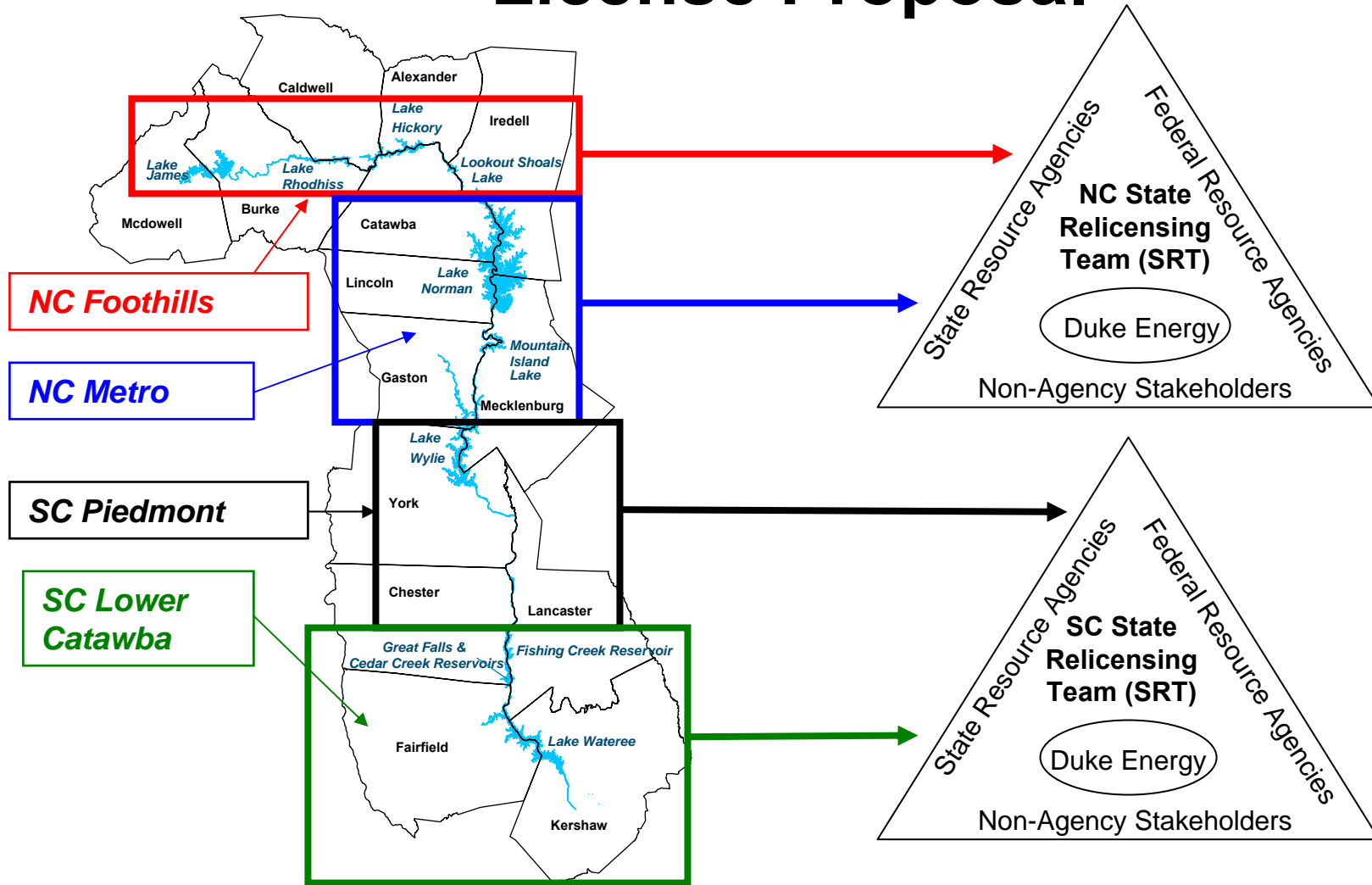


- 13 Hydroelectric Stations
- 11 Interconnected Reservoirs
- 831 MW Hydropower
- 8,167 MW Nuclear and Fossil
- Drinking water for 1.5 million people
- FERC License Expires August 2008



CATAWBA-WATEREE HYDROELECTRIC PROJECT

3-Yr Regional Collaboration on the New License Proposal



Comprehensive Relicensing Agreement Presented to FERC

- Signed by 70 of 85 eligible parties in Summer of 2006
 - 6 Catawba-Wataeree Commission organizations are CRA signatories
- Filed with FERC August 29, 2006
- FERC review ongoing
- New License could be received in 3rd Quarter of 2009
- Will shape lake system operation for next 40 to 50 years
- Balanced, inter-dependent package.



*CRA Signing Ceremony at Stowe Botanical Gardens
Belmont, NC July 26, 2006*

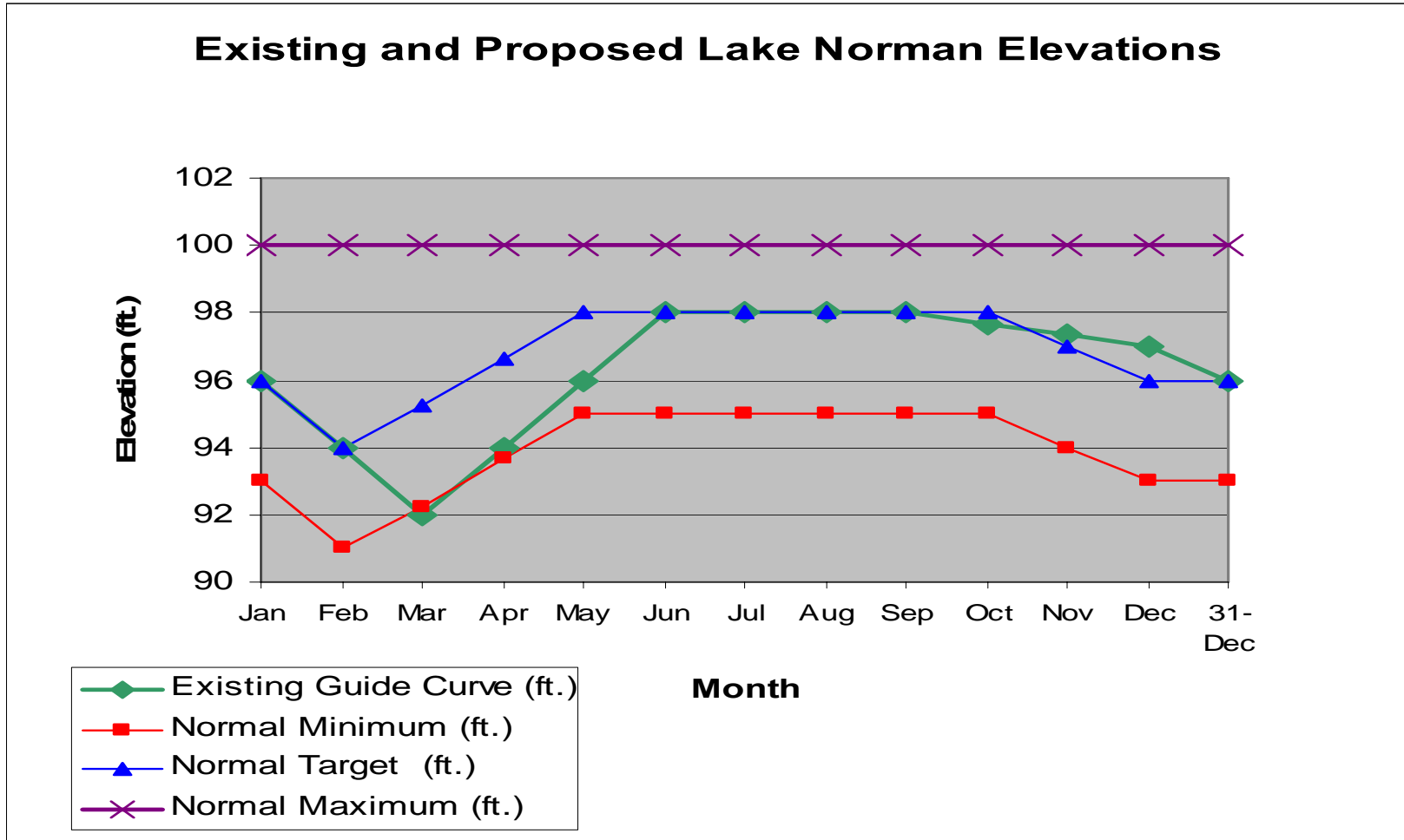
➤ More info available at
<http://www.duke-energy.com/lakes>

Primary CRA Resource Requirements

- **Rebalancing of Water Quantity-related Interests**
 - Lake Levels
 - Aquatic Habitat Flows
 - Recreation Flows
 - Flood Management at Lake Wateree
 - Drought Management
 - Water Supply Needs
- **Major Recreation and Land Management Improvements**
 - Recreation Facilities
 - Shoreline Management
 - Land Conservation
 - Habitat Enhancement Program
- **Additional Resource Improvements**
 - Cultural Resource Protection
 - Rare, Threatened and Endangered Species Management
 - Water Quality Enhancements
 - Public Information Enhancements



Changing Lake Level Management



Continuous Flow Releases will Improve Aquatic Habitat

- ✓ Flow rates are science-based
- ✓ New facilities needed to deliver flows

<u>Downstream of.....</u>	<u>Seasonal Continuous Flow Range (cfs)</u>
James	125 - 220
Hickory	150
Lookout Shoals	80
Wylie	1100
Great Falls	550 - 950
Wateree	930 - 2700



Reliable Recreation Flow Schedules Bring New Opportunities

- ✓ Flow rates, schedules on web and phone line
- ✓ New facilities to access river reaches

<u>Downstream of.....</u>	<u>Scheduled Rec Flow Days / Yr</u>
James	85
Hickory	49
Wylie	69
Great Falls	22 (long), 28 (short)
Wateree	47



Improved Flood Management at Lake Wateree



Tempe Town Lake Dam
16 ft Bladder Installed in 1999
4 – Sections approx. 1000 ft
Each Section Individually Controlled

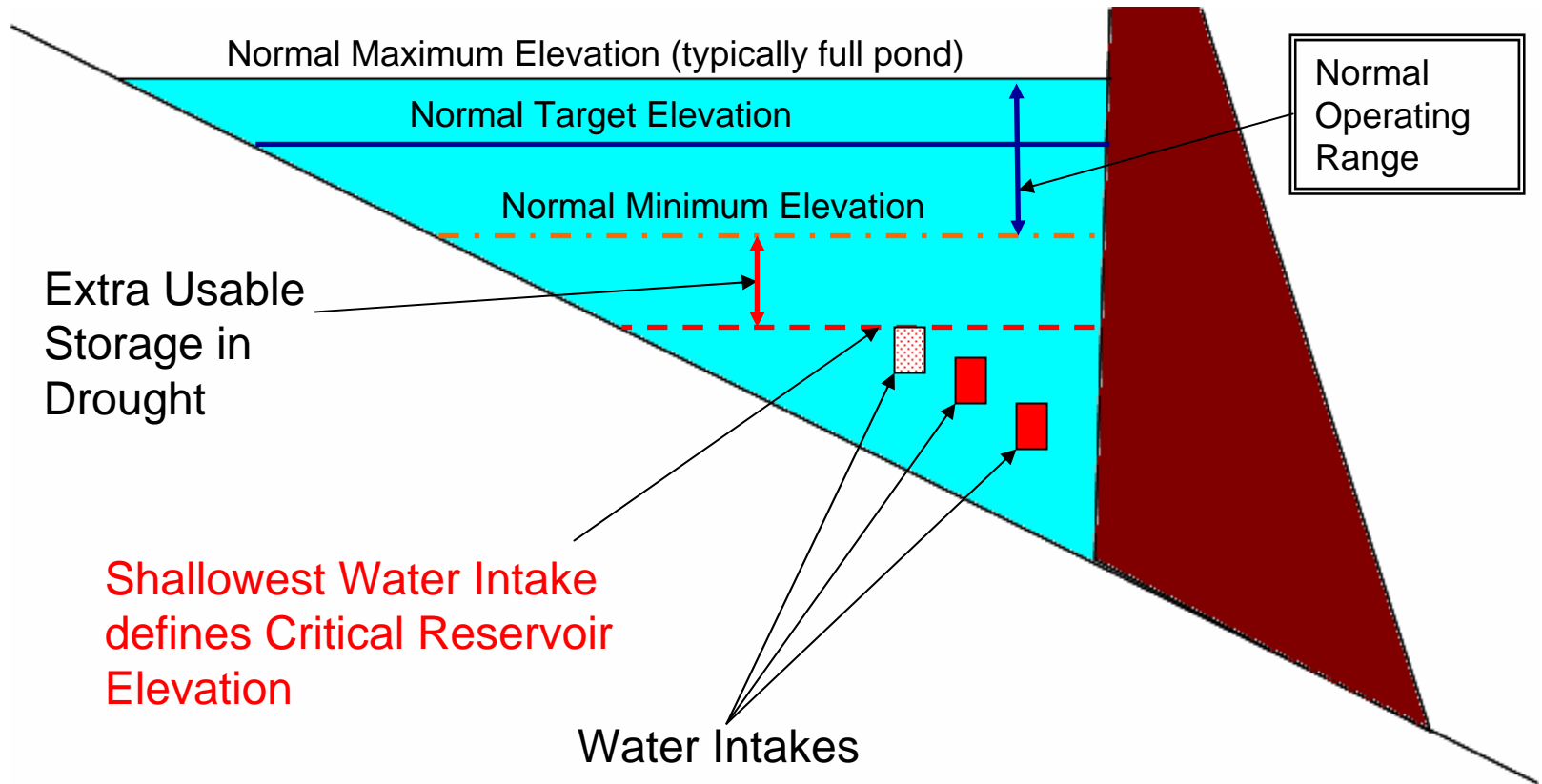
Drought Coordination on the Catawba

➤ Drought Management Advisory Group (DMAG)

- **Who** - Duke, Public Water Suppliers, Industries, Resource Agencies
- **What** - Take coordinated, basin-wide action to conserve water in response to drought
- **When** - Triggers are storage, streamflow, US Drought Monitor and groundwater
- **How** - Low Inflow Protocol (LIP) (5-stage procedure)

<u>LIP Stage (date of declaration)</u>	<u>Public Water Supplier Actions</u>	<u>Duke Actions</u>	<u>Other Intake Owners' Actions</u>
0 (Aug 2006) 90% to 100% of Target Storage	Preparation	Declare stages, coordinate DMAG communications	Preparation
1 (Jul 2007) 75% to 90% of Target Storage	Voluntary Water Use Restrictions	Reduce hydro generation, ask customers and employees to conserve water and electricity	Ask customers and employees to conserve water and electricity
2 (Aug 2007) 57% to 75% of Target Storage	Mandatory Water Use Restrictions	Further reduce hydro generation, customer / employee conservation	Customer / employee conservation
3 (Oct 2007) 42% to 57% of Target Storage	Increased Mandatory Water Use Restrictions	Further reduce hydro generation, customer / employee conservation	Customer / employee conservation
4 ≤ 42% of Target Storage	Emergency Water Use Restrictions	Further reduce hydro generation, customer / employee conservation	Customer / employee conservation

Protecting Water Intakes



New Water Management Group Will Help Drive Change

- **Who** – Duke and Public Water Suppliers
- **What** – Non-profit corporation that will invest its membership dues (\$550,000 / yr) in initiatives to improve water quantity and water quality
- **When** – Official organizational meeting was held December 6, 2007
- **How** – 5-yr rolling projects list
- **17 Participants (Intakes that use Catawba lake system storage)**

Morganton
Valdese
Lenoir
Granite Falls
Hickory
Longview
Camden
Lincoln County
Charlotte

Mount Holly
Gastonia
Belmont
Rock Hill
Union-Lancaster Water Plant
Chester Metropolitan District
Lugoff-Elgin Water Authority
Duke Energy Carolinas, LLC



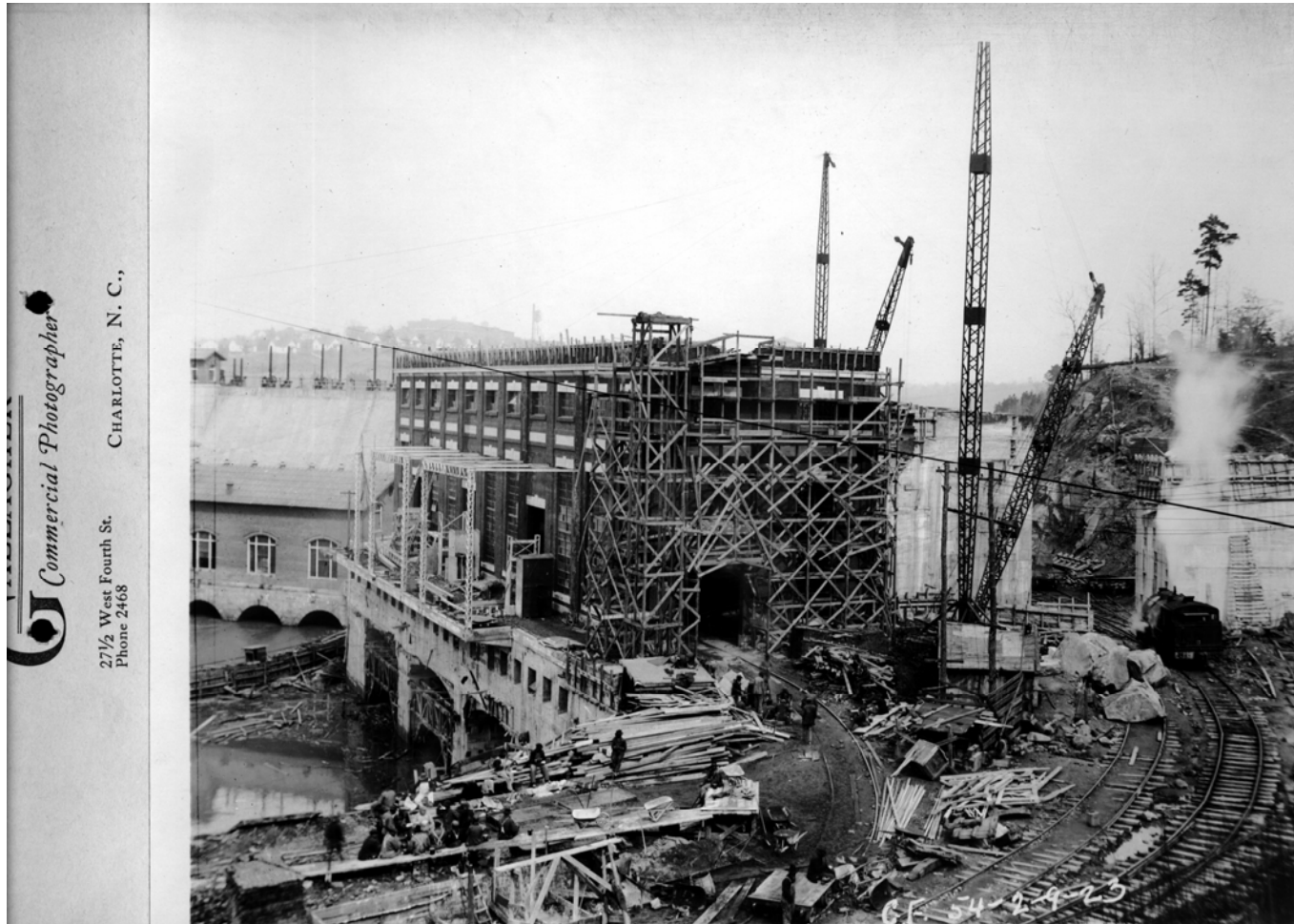
- **Officers & Directors**

Chair – Barry Gullet (Charlotte)
Sec/Treas – Jeff Lineberger (Duke)

Vice-Chair – Jeff Morse (Valdese)
NC At-Large Director – Kevin Greer (Hickory)

SC At-Large Director – Mike Bailes (Union-Lancaster)

Questions?



Dearborn Hydro Station under Construction – 1923