



Catawba-Wateree Water Management Group

Water Supply Planning



WHO ARE WE?



Catawba-Wateree Water Management Group exists to identify, fund and manage projects to extend and enhance the capacity of the Catawba and Wateree Rivers to meet human needs while maintaining the ecological health of the waterway

www.catawbawatereewmg.org

MEMBERS

South Carolina

- City of Camden
- Union-Lancaster Catawba River Water Treatment Plant (NC/SC)
- Chester Metropolitan District
- Lugoff-Elgin Water Authority
- City of Rock Hill

Duke Energy Carolinas

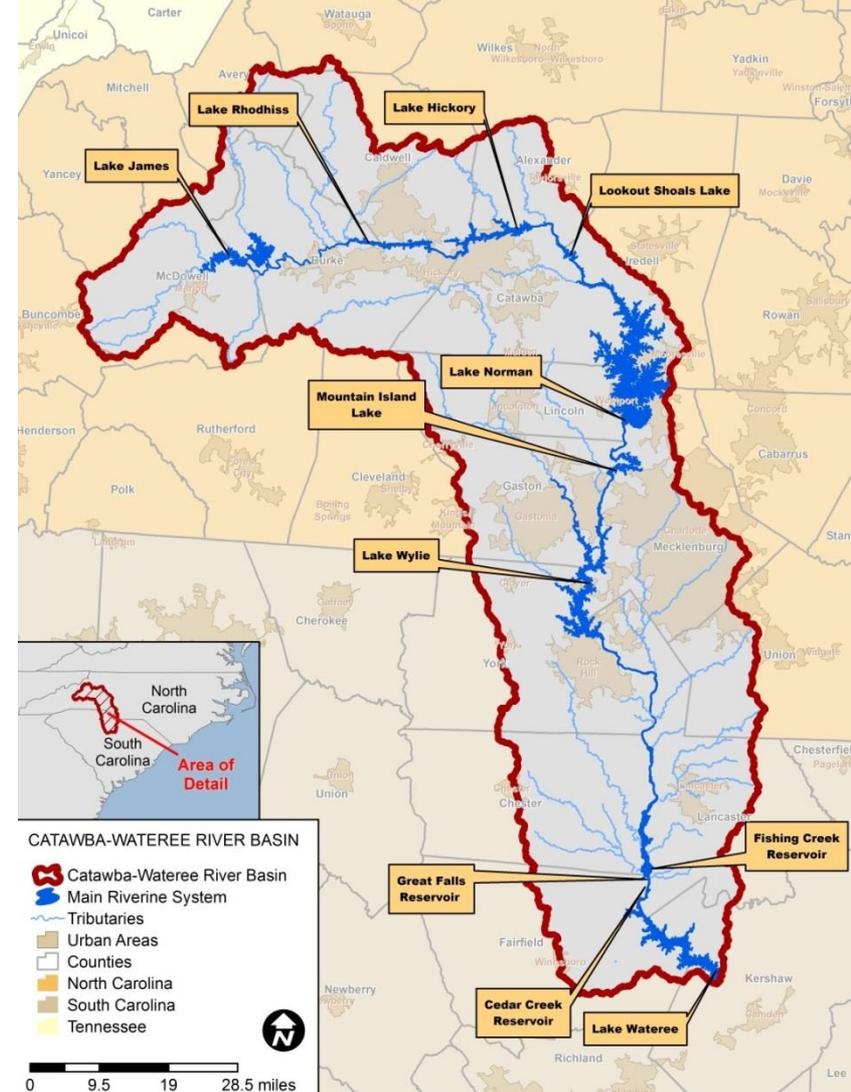
North Carolina

- City of Belmont
- City of Charlotte
- City of Gastonia
- Town of Granite Falls
- City of Hickory
- City of Lenoir
- Lincoln County
- Town of Long View
- City of Morganton
- Town of Mooresville
- City of Mount Holly
- City of Statesville
- Town of Valdese



The Catawba-Wataeree River Basin

- 4,750 square miles
- Supports nearly two million people with water for drinking, power generation, industrial processes, crop and livestock production, recreation, irrigation, and more



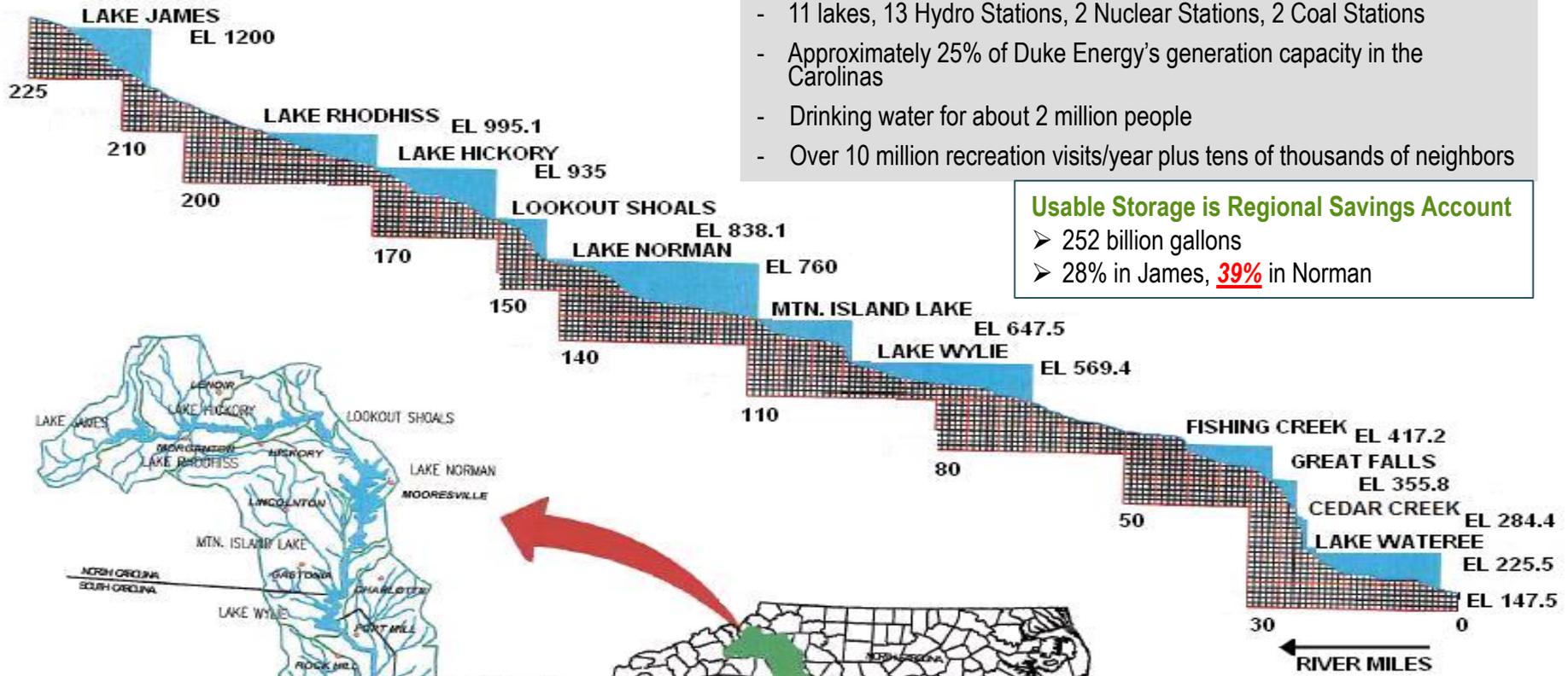
CWWMG Planning Goals

- Create a technically based planning process that can be sustained over time
- Extend the capacity of the water supply and make it more useful / useable
- Develop projects, plans, and recommendations that are:
 - Meaningful and impactful
 - Based on current technology and capabilities
 - Achievable without disrupting the economy, environment, or quality of life
 - Acceptable and affordable to diverse interests in the basin
- Develop and provide tools to assist members with plan implementation

Background

- 2006 Water Supply Study found maximum capacity of Catawba River Basin for water supply could be reached mid-century
- Catawba-Wateree Water Management Group incorporated - December 2007
- Water Supply Master Plan commissioned in 2010
- Purpose of Master Plan is to find ways to extend the time before the capacity of the Basin is reached

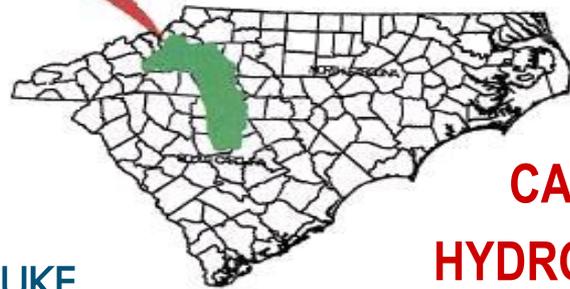




- 11 lakes, 13 Hydro Stations, 2 Nuclear Stations, 2 Coal Stations
- Approximately 25% of Duke Energy's generation capacity in the Carolinas
- Drinking water for about 2 million people
- Over 10 million recreation visits/year plus tens of thousands of neighbors

Usable Storage is Regional Savings Account

- 252 billion gallons
- 28% in James, **39%** in Norman

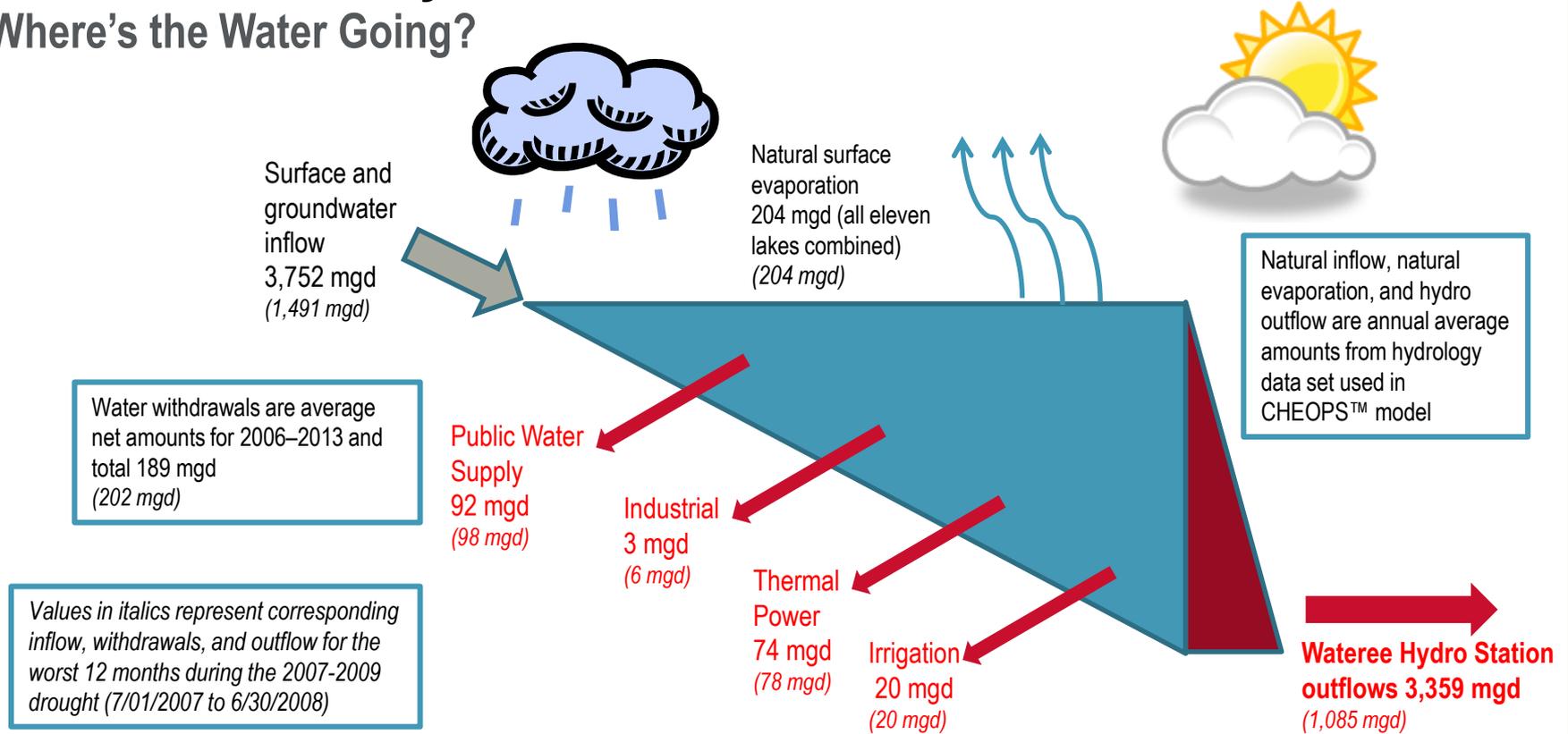


CATAWBA-WATEREE HYDROELECTRIC PROJECT



CW Reservoir System Water Balance

Where's the Water Going?



* mgd = million gallons per day. To convert to cubic feet per second (cfs), multiply all numbers by 1.5475

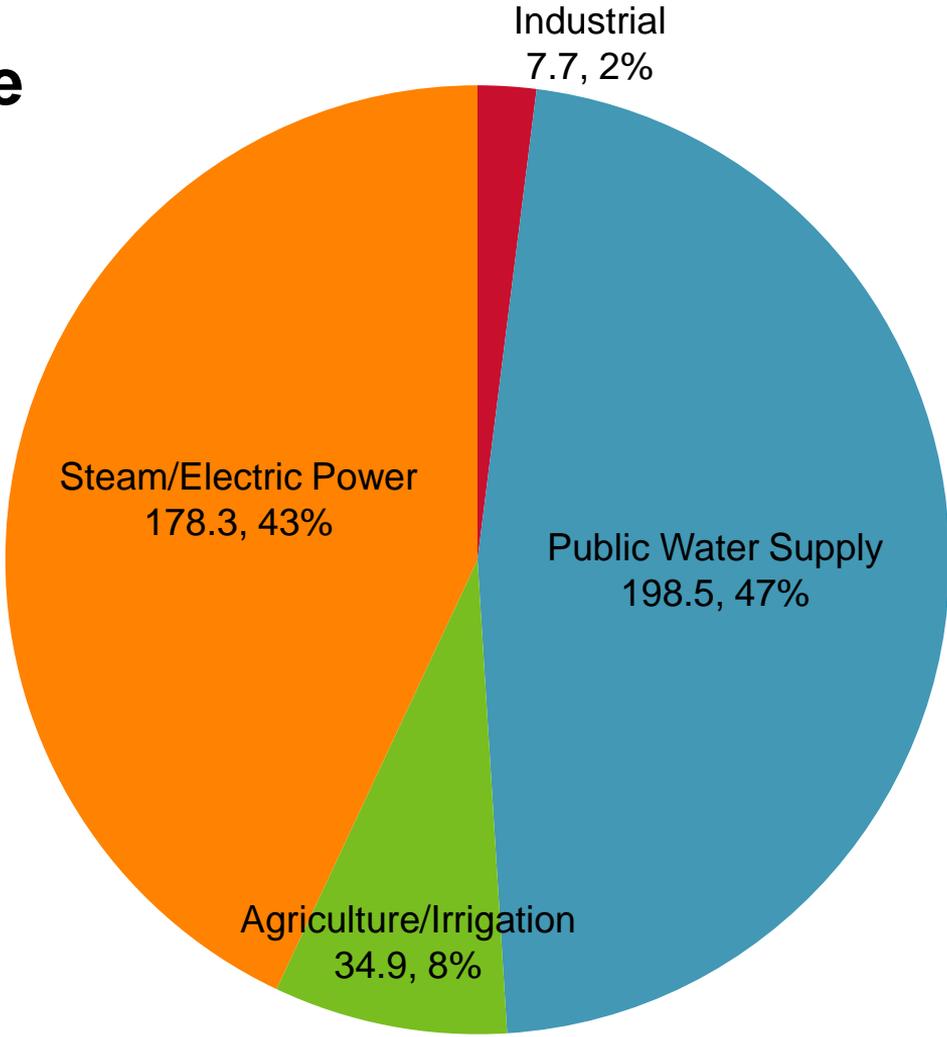
Reliable Water Supply Critical to Economy

- Risk of overbuilding during normal conditions
- Avoid drought driven disruptions to business, quality of life
- Confidence to make long-term investments in the region
- Sustainable environment, economy, quality of life



How Water will be Used (2065)

- Million gallons per day (mgd) consumed and percent of total 419.4 mgd



Elements of the Master Plan

- Supplemental funding
- Stakeholder input
- Water use projections
- Refinement of hydrologic model
- Climate change impacts
- Develop & evaluate options
- Action plan and schedule
- Publish report
- Implementation, on-going public input
- Periodic future updates



Key Recommendations

- Increase water use efficiency
- Lower critical water intakes/elevations
 - Power plant
 - Public water supply
- Raise target lake levels during summer months
- Enhance drought responsiveness through Low Inflow Protocol



Duke Energy's Role in Sustainable Water Use

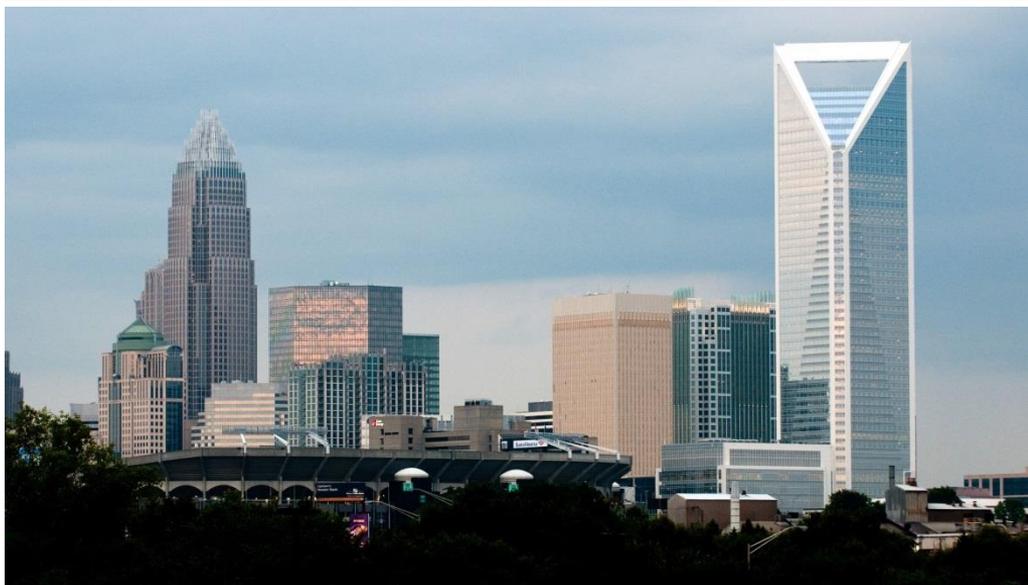
Manage the Water Resource

- Manage the region's raw water supply (big, ongoing investment)
- Implement Comprehensive Relicensing Agreement (CRA), New License, & Water Supply Master Plan
- Continue making electric customers more energy-efficient. In 2009-2014, Duke Energy's energy conservation programs across the Carolinas
 - Reduced capacity needs by total of $\approx 1,200$ MW (about a nuclear unit)
 - Reduced energy needs by total of $\approx 2,442,000$ MWh (about a billion gallons of water equivalent)



Projected Results

- Implementation of the Catawba-Wateree Water Supply Master Plan extends the River's capacity to sustain growth through 2100





For more information including the Water Supply Master Plan Report

www.catawbawaterreewmg.org