



To Our Communities and Stakeholders:

In 2005, with the participation of more than 50 water supply jurisdictions in the Catawba-Wateree Basin – from Morganton, NC to Camden SC – Duke Energy commissioned the first-ever basin-wide evaluation of the region's future water needs. The results were bracing: without changes, the combined demands on the basin's water supplies and on the storage in the Duke Energy-managed reservoirs over the next 50 years will approach or exceed what can be provided during anticipated drought conditions. In short: we could run low on water.

The 1998-2002 drought, the worst on record at that time, was still fresh in our minds. It was clear that we needed to begin thinking about changes. That was the impetus for the Catawba-Wateree Water Management Group; the commitment to make it happen was spelled out in the Comprehensive Relicensing Agreement filed by Duke Energy with the Federal Energy Regulatory Commission in 2006.

Throughout 2007, Duke Energy and the region's largest water suppliers that pull water directly from the Catawba-Wateree River or reservoirs met regularly to clarify the basin's water needs, refine the Group's purpose and how it would operate, and formulate strategies and projects that would help us understand and address the basin's water challenges. In December of that year, we incorporated the Catawba-Wateree Water Management Group as a non-profit organization. Then, in 2008, with dues in hand, the Group kicked off its first projects.

It was a good start and, in this first WMG annual report, we describe the purpose of the Group, our strategies addressing water supply challenges, and the projects underway and planned. That we're on the right track was reinforced by the basin's drought, which started with a vengeance in 2007 and has now overtaken all others to become the basin's worst drought on record. The WMG has also been recognized as a model of cooperation for others to follow by the recent Water Allocation Study performed at the direction of the North Carolina Environmental Review Commission.

We thank all of our communities and our stakeholders for their interest and support and we look forward to continuing our work together to protect and enhance our region's water resources. For more information, please visit our website at [www.saveyourwater.org](http://www.saveyourwater.org).

A handwritten signature in black ink that reads "Barry Gullet".

Barry Gullet  
Chair



## **An Important Role for the Catawba-Wateree Water Management Group**

For some time, there's been a need to understand the technical realities of how water is used in the basin and, just as important, how we can extend the ability of the finite amount of water available to meet our human and environmental needs now and far into the future. It's not a trivial undertaking, but it's now underway by the Catawba-Wateree Water Management Group (WMG).

Below, we briefly look at regional trends affecting water and electricity supply and how several recent events have stimulated a host of water-related initiatives and led to the formation of the WMG.

### **Trends Affecting Catawba-Wateree Basin Water and Electricity Supply**

For centuries the Catawba-Wateree River has served the area's water needs from early fishing and transportation to harnessing the river's power for grist mills and saw mills. Later it powered cotton and textile mills and a booming textile economy. The first large water supply pumping station was completed in the 1800's. The first of the eleven hydroelectric dams on the river was completed in 1904; the last in 1963. Since then, and particularly in the last 20 years, the basin's lakes and rivers have evolved to their present day roles.

Today the area values its lakes and river for recreation and aesthetics which has driven shoreline development. They are the principal source of water supply for over 1.5 million people and provide essential cooling water to run ~45% of Duke Energy's electric generating capacity in the Carolinas.

The region is still evolving, and we expect that the trends that have influenced water and electricity supply for some time will continue over the next decades, including:

1. **Population Growth:** The large areas around metropolitan Charlotte have for sometime seen substantial growth, and they continue to make up one of the highest growth areas in the country.
2. **Quality of Life:** the lexicon in regional plans and goals now includes "environment," "aesthetics," "renewables," "conservation," and "sustainability" along with "comfort" "convenience," and "economic development."
3. **Regional and Public Involvement:** There will be increased stakeholder expectations of involvement in decisions at all levels which will be supplemented with new governmental requirements and greater emphasis on region-wide management of issues.
4. **Climate Change:** The region's rainfall records reach back more than 113 years, but that's not really enough to allow long-term predictions of the swings between wet and dry periods, and there's no certainty about the potential future effects of climate change.

With respect to water and electric supply, these trends will lead to:

- Increasing need for new water and wastewater treatment facilities.
- Increasing need for new electric generation plants.
- Tougher permitting standards along with extended times required for permitting and construction.
- Increasing difficulty in permitting and siting new infrastructure.

- More stringent water quality standards.
- Tougher laws and enforcement on environmental topics.
- Higher facilities and operating costs and therefore higher water and electricity costs.
- Increasing water allowances for wildlife protection and habitat (especially aquatic habitat).
- Increasing emphasis on lakeside and riverside aesthetics.
- Increasing community involvement.

### **Catawba-Wateree River Basin under Stress**

In the last decades, three significant events have led to the heightened awareness of the basin's potential limitations in supporting water supply and electricity.

Between 1998 - 2002, the basin experienced its worst drought on record. Then, in 2007-2009, it experienced an even worse drought when water customers faced mandatory outdoor water use restrictions for over 19 months.

The third event was the requirement that Duke Energy's Catawba-Wateree Hydro Project, which includes all eleven dams on river, obtain a new operating license from the Federal Energy Regulatory Commission (FERC). Having received its existing license in 1958, the New License will be subject to all the environmental laws that have emerged since the 1950s including the National Environmental Policy Act, Clean Water Act, Endangered Species Act, National Historic Preservation Act, and others. As a result the New License will include considerably more requirements to reserve water for environmental, recreational and aesthetic needs than ever before.

In support of its August 2006 license application to the FERC related to water supply, Duke Energy commissioned the first-ever basin-wide evaluation of the region's future water needs. The results were bracing: without changes, the combined demands on the basin's water supplies and on its storage in the Duke Energy-managed reservoirs over the next 50 years will approach or exceed what can be provided during anticipated periodic drought conditions. In short: without changes, there are times we could run low on water.

These events and others have led to a number of regional and statewide initiatives. Some of the prominent ones include:

- In 2002, North Carolina enacted legislation requiring the Environmental Management Commission (EMC) to implement rules governing water conservation and reuse during drought and water emergencies. In 2003, NC enacted a requirement for all water suppliers already required to develop Local Water Supply Plans to also prepare Water Shortage Response Plans.
- In 2004, companion legislation in both North and South Carolina created the Catawba-Wateree River Basin Advisory Commission to make recommendations for the use, stewardship, and enhancement of the water and other natural resources in the basin.
- In 2005, the Concord-Kannapolis application to the EMC for an interbasin transfer (IBT) certification to move water from the Catawba-Wateree Basin to the Yadkin-Pee Dee Basin was greeted with strident public objections in both North and South Carolina.

- Beginning in 2006 and continuing into 2009, the South Carolina General Assembly has been developing draft legislation to establish a surface water withdrawal permitting system that would require State-issued permits for water withdrawals exceeding 3 million gallons per month.
- In June 2007, South Carolina sued North Carolina in the US Supreme Court alleging, among other things, that North Carolina's existing and potential new IBTs exceed NC's equitable share of the Catawba River and asking the Court to determine the equitable apportionment and enjoin NC from authorizing IBTs that are inconsistent with it.
- In 2007, North Carolina enacted legislation for the Environmental Review Commission to study IBTs and water resources. The Commission contracted with UNC-Chapel Hill and the Duke University Nicholas Institute for the Water Allocation Study, the first major draft of which was completed in late 2008.
- In April 2009, North Carolina introduced draft legislation based on the Water Allocation Study recommendations that would require permits for water withdrawals exceeding 100,000 gallons per day and create river basin planning organizations funded by the water withdrawers.

An emphasis in these initiatives is water allocation – how water will be shared if there's not enough to go around. What's generally missing is a coordinated, technically based exploration of how to extend and enhance the water supply – making more water available to share. The WMG was organized to begin this exploration and is already underway with projects. It is also kicking off a long-term effort to better inform the public about what it's learning about water storage and use.

## WATER – FIFTY YEARS AND BEYOND

The Catawba-Wateree Water Management Group (WMG) exists to identify, fund and manage projects that help extend and enhance the capacity of the Catawba-Wateree River to meet human water needs while maintaining the ecological health of the waterway.

At its outset in December 2007, the WMG initiated projects that will:

- Improve the region’s ability to monitor and respond to droughts;
- Improve its understanding of landscape irrigation, one of the region’s largest seasonal uses of water;
- Initiate systems to better coordinate and improve member communications with customers, state regulators, and other stakeholders;
- Develop and disseminate information to help the region better understand the importance of water and water use today and in the future; and
- Further explore feasible approaches to extend the availability of water from the Catawba-Wateree River.

The WMG’s projects are organized under five strategies which are described below along with their 2008-2009 budgets and the approximate percent the budgets represent of the total WMG budget for that two-year period.

**Strategy One:** Improve the efficiency of customers’ water use – the demand side.

*Demand-Side Norms, Trends and Opportunities* projects are focusing first on better understanding the region’s water consumption trends and then will develop strategies to better manage these trends to affect long-term per capita water use reductions. Better understanding the region’s economic dependencies on water consumption will be a key to the success of these projects.

2008-2009 Projects	\$84,612	12%
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*Lakefront Smart Irrigation Study:* To address a relative lack of data about water use directly from the river’s reservoirs for landscape irrigation and to explore opportunities to improve water consumption trends, the WMG is evaluating the effectiveness of “smart” irrigation controllers in improving landscape watering efficiency. Smart controllers will use soil moisture content and other parameters to decide when and how much irrigation water is needed. The three-year study is involving representative property owners that withdraw water directly from the lakes for landscape irrigation.

**Strategy Two:** Improve the region’s ability to supply water – the supply side.

*Supply-Side Opportunities* projects are investigating constraints on increasing the basin’s usable water storage and will optimize the location and water depths of new intakes, independent of jurisdictional boundaries. These projects also will evaluate ways to improve water delivery and consumption efficiency; for example by optimizing water return locations, improving operational flexibility and better aligning water supply sources and returns with service areas.

2008-2009 Projects	\$153,500	21%
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*Intakes and Discharge Mapping:* The project is generating comprehensive Geographic Information System (GIS) maps of existing and projected public water service areas overlaid with the locations of existing water intakes and

discharges in the Catawba-Wateree and neighboring river basins. These maps will enable planners to identify future intake and discharge locations that optimize use of the water stored in the Catawba-Wateree reservoirs.

*Approaches to Extend Safe Yield:* The WMG is beginning its investigation of approaches to extend the safe yield of the system such as optimizing locations of intakes and returns or adjustment in system operational protocols. Because the result could provide guidance for water suppliers all over the country, the WMG is applying for grants to cost-share its funding.

**Strategy Three:** Plan and manage our water supply and drought responses as a region.

*System-Wide Drought Preparation and Management* projects will improve the effectiveness and regional coordination of drought preparation and management. They will improve communications among regional governing bodies and house useful water supply information in one place.

2008-2009 Projects	\$20,800	3%
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*WMG Web Site:* The WMG is creating its Web site to better coordinate and manage water supply and use among WMG members and to facilitate efficient reporting, monitoring and measurement of information related to water supply and use.

**Strategy Four:** Improve monitoring for water resources and drought recovery.

2008-2009 Projects	\$199,199	28%
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*Groundwater Monitoring:* WMG committed more than \$550,000 over four years ending in February 2012 to improve three existing groundwater monitoring wells and to install seven new wells located in both North and South Carolina. This network of monitoring wells will help the region better assess when it is appropriate to remove water use restrictions imposed during severe droughts. Constructed by the U.S. Geological Survey (USGS), which will contribute \$181,900 in joint funding, these wells will become part of the USGS' nationwide network of wells and streamflow gauges that provide daily readings available to the public over the Web.

In 2008, the USGS improved the existing wells in North Carolina at Langtree and Glen Alpine and began installation of a new groundwater well in the Lake Wateree area of South Carolina. In 2009, the USGS will improve the Linville well in the Lake James area and install new wells in the Lake Wylie and Plateau, NC areas.

**Strategy Five:** Make information about water use and water supply widely available to the public.

Accurate and timely information about regional water use will aid individuals and local, statewide, and regional entities in planning for their current and future water needs.

2008-2009 Projects	\$80,000	11%
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*Public Information on Wise Water Use:* The WMG is kicking-off what promises to be a long-running campaign to improve awareness, understanding, and planning of the region's water use. As part of its own Web site development the WMG is

taking over and expanding [www.saveyourwater.org](http://www.saveyourwater.org) to house public resources on conservation and wise water use.

## 2008 FINANCIAL REPORT

The Catawba-Wateree Water Management Group was incorporated in the State of North Carolina on December 5, 2007 and formerly adopted its ByLaws and other organizing documents on December 6, 2007.

Its application to the IRS requesting status as a 501(c)(3) tax-exempt charitable organization was approved by the IRS on April 30, 2008 and made effective back to December 5, 2007. The Corporation filed IRS Form 990 – Return of Organization Exempt from Income Tax – for the short year December 5 - December 31, 2007, although no taxes were due. By letter dated August 6, 2008, the IRS subsequently exempted the Corporation from having to file Form 990 in the future.

The Corporation received its tax-exempt status from the State of North Carolina on June 3, 2008. It also received a Charitable Solicitation License from North Carolina and its Certificate of Authorization from South Carolina, both of which expire on May 15, 2009.

The Corporation's Bylaws require that, prior to April 1, its Board of Directors provides the Members an accounting of the funds expended during the previous calendar year. Because the Group was incorporated in December 2007, this Statement of Income and Expenses is for the period December 5, 2007 through December 31, 2008.

### BALANCE SHEET

December 31, 2008

#### Assets

##### Current Assets

Cash \$404,039

Total Current Assets 404,039

Total Assets \$404,039

#### Liabilities and Equity

##### Current Liabilities

Accounts Payable \$0

Total Current Liabilities 0

Equity 404,039

Total Liabilities and Equity \$404,039

## STATEMENT OF INCOME AND EXPENSES

December 5, 2007 through December 31, 2008

### Income

#### Member Dues

Dues – 2008 (Note 1) \$150,630  
(Duke Energy Carolinas, LLC)

Dues – 2009 (Note 1) 335,282  
(City of Belmont, NC; City of Charlotte, NC; City of Gastonia, NC; City of Lenoir, NC; City of Morganton, NC; City of Rock Hill, SC; Lincoln County, NC; Lugoff-Elgin Water Authority, SC; Town of Granite Falls, NC; Town of Valdese, NC; Union-Lancaster Catawba Water Treatment Plant; SC)

Total Member Dues 485,912

#### Other Income

Interest 1,121

Total Other Income 1,121

Total Income \$487,033

### Costs and Expenses

#### Projects

GIS Mapping Project \$ 5,788  
USGS Groundwater Wells (Note 2) 59,042

Total Projects 64,830

#### Other Expenses (Note 3)

Insurance 1,651  
Legal and Other Professional Services 16,442  
Supplies 71

Total Other Expenses 18,164

Total Costs and Expenses 82,994

Total Net Income \$404,039

## **NOTES WITH STATEMENTS**

Note 1: Annual dues amounts are established in the Corporation's Bylaws. Dues for any year are payable on or before January 31 of that year. Only Duke Energy Carolinas, LLC was required to pay dues for 2008. All Members were required to pay dues for 2009, and many submitted their dues prior to December 31, 2008.

Note 2: Working with the Centralina Council of Governments (CCOG), the Corporation is supporting a four-year US Geological Survey (USGS) Joint Funding Agreement for the USGS to upgrade three existing groundwater wells and install seven new groundwater wells in the Catawba-Wateree Basin. Although there are early termination provisions, the total four-year fixed cost of the project is \$692,300 of which the Corporation will contribute \$510,400 and the USGS will provide \$181,900 in cost-share funding. The USGS Joint Funding Agreement extends from March 1, 2008 to February 29, 2012. The amount shown also includes a small management fee for the CCOG.

Note 3: In addition to the expenses shown, Duke Energy Carolinas LLC provided an additional in-kind contribution to the Corporation by funding Kearns & West, Inc. to provide administrative services and support throughout this first year of the Corporation.

## **SUMMARY OF ACCOUNTING POLICIES**

### **Nature of Operation**

The Corporation is engaged in identifying, funding and managing projects that will help ecologically preserve, extend, and enhance the capabilities of the Catawba and Wateree Rivers to provide water resources for human needs.

### **Method of Presentation**

The Corporation's financial statements and income tax returns have been prepared on the accrual method of accounting.

### **Cash**

The Corporation maintains its cash in bank deposits, which, at times, may exceed federally insured limits. The Corporation has not experienced any losses on such accounts. The Company believes it is not exposed to any significant credit risk on cash or cash equivalents.

### **Fair Value of Financial Instruments**

The Directors have estimated the fair values of cash, receivables, payables and accrued expenses to be approximately their respective carrying values reported on these statements because of their short maturities.

## Members 2009

### **Catawba River Water Treatment Plant, SC**

Mike Bailes, Director  
Eric Robertson, Assistant Director

### **Chester Metropolitan District, SC**

Mike Medlin, Executive Director  
Fred Castles, Engineer

### **City of Belmont, NC**

Barry Webb, City Manager  
Chuck Flowers, Utility Director

### **City of Camden, SC**

Tom Couch, Director of Public Works  
Jo Ellen Trueblood, Supervisor Water  
Treatment Plant and Wastewater  
Treatment Plant

### **City of Charlotte, NC**

Barry Gullet, Deputy Director, Charlotte-  
Mecklenburg Utilities  
Maeneen Klein, Water Conservation  
Manager, Charlotte Mecklenburg  
Utilities

### **City of Gastonia, NC**

Ed Cross, Division Manager of Water  
Treatment  
Matt Bernhardt, Public Works and  
Utilities Director

### **City of Hickory, NC**

Kevin Greer, Asst Public Services  
Director  
Chuck Hansen, Public Services Director

### **City of Lenoir, NC**

Mack Edmisten, Director, Public Utilities  
Dept  
Mark Townsend, Water Treatment  
Supervisor

### **City of Morganton, NC**

Don Danford, Director, Water Resources  
Ron George, Asst City Manager

### **City of Mt Holly, NC**

Eric Davis, City Manager  
James Friday, Utilities Director

### **City of Rock Hill, SC**

Jimmy Bagley, Public Services  
Administrator  
Bill Yetman, Engineer

### **City of Statesville, NC**

Joe Hudson, Water Resources Director  
Jerry Byerly, Water Resources Assistant  
Director

### **Duke Energy Carolinas, LLC**

Jeff Lineberger, Director, Hydro Strategy  
& Licensing  
Ed Bruce, Senior Engineer

### **Lincoln County, NC**

Burns Whittaker, Director of Public  
Works  
Barry McKinnon, Senior Utility Engineer

### **Lugoff-Elgin Water Authority**

Mike Hancock, General Manager  
Randy Bowers, Superintendent of  
Treatment

### **Town of Granite Falls, NC**

Shuford Wise, Water Resources Director  
Kim Prestwood, Water Plant Supervisor

### **Town of Long View, NC**

David Epley, Town Administrator  
Rani Holland, Water Treatment Plant  
Superintendent

### **Town of Valdese, NC**

Jeff Morse, Town Manager  
David Cook, Water Plant Superintendent

## Officers and Directors for 2009

Barry Gullet – Chair

Jeff Morse – Vice Chair

Jeff Lineberger – Secretary/Treasurer

Kevin Greer – North Carolina At-Large Director

Mike Bailes – South Carolina At-large Director