

Catawba-Wateree Drought Management
Advisory Group Meeting Summary
May 22, 2007
Charlotte-Mecklenburg Utilities
Lee S. Dukes Water Treatment Plant

The Catawba-Wateree Drought Management Advisory Group (CW-DMAG) met on Tuesday, May 22, 2007 and the meeting served as the first official annual meeting as required by the Catawba-Wateree Comprehensive Relicensing Agreement. The following is a list of the attendees:

Members Present:

Hope Mizzell (SCDNR)
Melinda Chapman (USGS)
Bruce Campbell (USGS)
Don Danford (City of Morganton, NC)
Kevin Greer (City of Hickory, NC)
Barry Gullet (Charlotte Mecklenburg Utilities)
Maeneen Klein (Charlotte Mecklenburg Utilities)
Steve Gilbert (Lincoln County, NC)
Matt Jordan (City of Gastonia, NC)
Nick Stegall (City of Rock Hill, SC)
Mike Bailes (Catawba River WTP)
Tom Couch (City of Camden, SC)
John Baker (International Paper)
Deborah Basnight (Invista)
Ed Bruce (Licensee-Duke Energy)
George Galleher (Licensee-Duke Energy)

Interested Parties:

Don Rayno (NCDWR)
Mike Boyd (Charlotte Mecklenburg Utilities)
Stephen White (Lancaster County Water and Sewer District)
Christy Putman (Union County, NC)
Jeff Lineberger (Licensee-Duke Energy)
Kevin Mosteller (HDR Engineering)
Jacque Taylor (Bowater)
Eddie Copeland (City of Newton, NC)
Tim Abernathy (City of Newton, NC)
Mark Townsend (City of Lenoir, NC)
Kirsten Lackstrom (University of South Carolina- Department of Geography)
Allison Knight (Town of Mooresville, NC)

Member Organizations Not Represented by Member or Interested Party:

North Carolina Division of Water Quality
North Carolina Wildlife Resources Commission
South Carolina Department of Health and Environmental Control
City of Marion, NC
Town of Granite Falls, NC

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Town of Valdese, NC
Town of Longview, NC
City of Statesville, NC
City of Mount Holly, NC
City of Belmont, NC
Bessemer City, NC
City of Cherryville, NC
Town of Dallas, NC
City of Lincolnton, NC
Chester Metropolitan District
Lugoff-Elgin Water Authority
South Carolina Electric & Gas
American & Efird
The Greens of Rock Hill
Clariant Corporation
Springs Industries
Seimans Westinghouse

The following is a summary of the topics discussed and action items identified in the meeting:

I. Introductions

Ed Bruce opened the meeting by reviewing the purpose of the meeting and having each attendee introduce themselves.

II. Current Drought Update

Ed Bruce provided an update on the current Low Inflow Protocol (LIP) triggers of storage, inflow and the US Drought Monitor as of April 30, 2007. The Storage Index (SI) on April 30, 2007 was 100.8% of the Target Storage Index (TSI) for this time of year. This would support Normal conditions. The Streamflow Indicator (six-month average versus historical six-month average) was at 99.7%, which would support Normal conditions. The US Drought Monitor (three-month average) is +0.33, which supports Stage 0 Watch Condition. The three groundwater wells that exist in the basin still show groundwater levels at either an LIP Stage 0 or Stage 1 for recovery purposes and are trending downward. The February-April actual Wateree Development generation was 71% of the long-term February-April generation and that helps explain why the SI is still very near the TSI, even though dry conditions exist.

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III. LIP Obligations for Drought Ordinance Updates

Ed Bruce reminded those in attendance of the requirement for Large Water Intake Owners to review and update their Drought Response Plans and Ordinances (or develop a plan or ordinance if they do not have one) by June 30, 2007.

IV. Current Water Use Trends and Future Data Reporting Discussion

CW-DMAG member organizations are required to report annual water use to Duke such that Duke can maintain the current level of water use per reservoir. The annual data can also be used as a comparison point to water use in future years. Ed Bruce provided a summary of the 2006 water use in the Catawba Basin. The data was broken down by reservoir and also by monthly use. The actual 2006 withdrawals were essentially equal to the withdrawals projected in the Water Supply Study, but the actual returns were about 4% less than projected in the Water Supply Study. Therefore, the net usage was almost 10 mgd more than what was projected in the Water Supply Study for 2006. Water use data for 2007 and 2008 will be used for trending purposes. This information will be shared with the Catawba-Wateree Water Management Group (CW-WMG) in July, 2007.

V. Regional Drought Monitor Development and Implementation Discussion

Hope Mizzell, SC State Climatologist within SCDNR provided the CW-DMAG with an update on the development and potential implementation of a regional drought monitor for the C-W Basin. The regional drought monitoring tool can be accessed at <https://www.dnr.sc.gov/demo/drought/>. The US Drought Monitor has several pros and cons associated with its use. The advantages are its interpretation is perceived as being simple, it's popular and it's updated weekly. Some of the disadvantages are that it can't regenerate historical values, it depicts broad areas of dryness and it has only been in existence since 1999. As a follow-up to the June and November 2006 DMAG meetings, Hope has continued the research of several proposed indices included in the regional drought monitor and compared their historical readings to historical storage and streamflow data. Hope continues to recommend that the Standardized Precipitation Index (SPI) be studied further as a possible replacement for the US Drought Monitor as a trigger for the LIP. Research work continues on whether to weight the upper basin SPI higher since the upper basin precipitation may have a higher influence on storage than the lower basin.

The DMAG agreed that additional study of the regional drought monitor SPI was needed before possible replacement of the US Drought Monitor could take place. As a reminder, the following working technical sub-committee was appointed to assist in the additional study:

- Tom Fransen (NCDWR)
- Don Rayno (NCDWR)
- Maeneen Klein (CMU)

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- Melinda Chapman (USGS)
- Ed Bruce (Duke)
- Hope Mizzell (SCDNR)

VI. Groundwater Monitoring Network

Melinda Chapman of the USGS provided an update of the proposed groundwater monitoring network for the C-W Basin. The CW-DMAG and the CW-WMG, in accordance with the Comprehensive Relicensing Agreement (CRA), will work together to review and revise the plan for groundwater monitoring by December 31, 2007. Three wells currently exist in the basin that monitor groundwater levels and USGS has proposed that seven additional well sites be developed to cover the diverse geological and geographical features of the basin.

A working technical subgroup was appointed with representatives from the following organizations to review this issue and the subgroup met in April, 2007:

- Nat Wilson (NCDWR)
- USGS (Melinda Chapman)
- Duke Energy (Ed Bruce)
- SCDNR (Hope Mizzell)
- Maeneen Klein (CMU-representing the WMG)

Melinda presented an updated cost sharing plan for the network from USGS based on matching funds from USGS at an estimated 40 to 45% for capital expenditures. The following is an estimated yearly budget to get all ten groundwater gages installed to provide real-time data:

Year	2008	2009	2010	2011	2012+
Capital \$	\$69,000	\$177,000	\$156,000	\$52,000	\$0
O&M \$	\$4,000	\$22,000	\$66,000	\$99,000	\$110,000
Total \$	\$73,000	\$199,000	\$222,000	\$151,000	\$110,000
WMG Amount \$	\$37,950	\$119,350	\$151,800	\$127,600	\$110,000
USGS Coop. Amount \$	\$31,050	\$79,650	\$70,200	\$23,400	\$0
Station Number Complete	# 8	#'s 5, 7, 10, & 3	#'s 2, 9, & 4	# 1	All

Melinda also indicated that there is 2007 USGS matching money for early site reconnaissance work.

The DMAG approved the Groundwater Monitoring Network installation plan and it will be presented to the WMG for approval in July, 2007.

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VII. Conclusion

There was no further business discussion and the meeting concluded. The next e-mail drought update will be issued by Duke in early June, 2007.