Member Organizations Present

- Catawba River Water Treatment Plant
- Charlotte Water
- City of Belmont
- City of Camden
- City of Gastonia-Two Rivers Utilities
- City of Hickory
- City of Lenoir
- City of Morganton
- City of Rock Hill
- City of Statesville
- Duke Energy
- International Paper
- Lincoln County
- Lugoff-Elgin Water Authority
- North Carolina Department of Environment and Natural Resources, Division of Water Resources (NCDENR-DWR)
- North Carolina Wildlife Resources Commission
- South Carolina Department of Natural Resources (SCDNR)
- Town of Granite Falls
- Town of Mooresville
- Town of Valdese
- US Geological Survey (USGS)

Other Organizations Present

- HDR Engineering
- Lancaster Water and Sewer District
- Town of Fort Mill
- Union County
- York County

Member Organizations Not Present

- American & Efird
- Bessemer City
- Chester Metropolitan District
- City of Cherryville
- City of Lincolnton
- City of Marion
- City of Mount Holly
- City of Newton
- Clariant Corporation
- Resolute Forest Products
- SCANA Corporation
- South Carolina Department of Health and Environmental Control (SDHEC)
- Siemens Waterhouse
- Springs Industries
- The Greens of Rock Hill
- Town of Dallas
- Town of Long View

Introductions, Agenda Review and Announcements

- Ed Bruce, Duke Energy, called the meeting to order at 10:00 A.M., welcomed attendees, and reviewed the agenda for the day. Mr. Bruce commented this is the first time in several years the basin is experiencing somewhat dry conditions and Duke Energy is monitoring conditions very closely. Following the guidelines set forth in the Low Inflow Protocol (LIP), Duke Energy will make a decision
on Monday, June 1, whether drought condition status should be upgraded from normal to Stage 0 (the triggers indicated Normal Conditions as of June 1, 2015).

- Mr. Bruce asked attendees to introduce themselves and state their organization, pointing out the attendee’s organization is important particularly for members of the Catawba-Wateree Water Management Group (CWWMG) for whom participation in the Catawba-Wateree Drought Management Advisory Group (CW-DMAG) is a requirement of CWWMG membership.

- Barry Gullet, Charlotte Water, provided a safety minute on alarms and evacuation procedures for the meeting facility.

**CW-DMAG Membership Update**

- Jonathan Williams, HDR, distributed copies of the current member roster and asked all attendees to review and update their personal information, that of others in their organization not present, and initial any entries they have reviewed. Mr. Williams reviewed the role and make-up of the CW-DMAG and the responsibilities of the members. The group meets as often as necessary to monitor drought conditions and response, with a minimum of one in-person meeting annually.

- General responsibilities – review and update the LIP periodically, secure consensus from membership for approval of any changes, and provide an annual report on water use across the basin.

- LIP requirements – members must adhere to the requirements established in the LIP developed and agreed to by all member organizations. Mr. Williams reviewed the specific responsibilities and obligations of members relative to each of the five LIP Stages.

**Update on Drought Conditions and LIP Status**

- Mr. Bruce reviewed the trigger conditions used to determine the drought conditions and presented data indicating the current status of basin.

- Storage Index – the Storage Index Chart shows target storage levels for each LIP stage compared with actual storage levels over the past three years. Currently, storage is slightly below target levels but requires a confirming trigger through either streamflow or US Drought Monitor data to impact LIP stage determination (Note: As of June 1, 2015 the Storage Index was equal to the Target Storage Index).

- U.S. Drought Monitor – the U.S. Drought Monitor map from one week ago indicates multiple areas of this region in Stage 0 drought conditions. Tom Fransen, NCDENR-DWR, confirmed the western half of North Carolina is all in Stage 0 (50-60 percent of the state). Mr. Bruce stated this trigger typically lags behind other conditions in the basin and would likely show the basin in normal conditions at this time.

- Streamflow – Duke Energy monitors four gages as part of the LIP. For the past few years, monitoring has been done using both six-month and four-month averages and results have been similar. Streamflow data from each method currently indicate Stage 0 conditions for the basin.

- Groundwater – ten monitoring well locations installed by the CWWMG and USGS are being monitored, most are new with less than five years data, only two with historical data. Current groundwater levels indicate normal conditions.

- Duke Energy will evaluate conditions on June 1 to determine if a change in drought status is needed (no changes were needed).
Duke Energy Systems Operations and Meteorological Forecast

- George Galleher, Duke Energy, gave an update on current and forecast conditions from Duke Energy and the National Oceanic and Atmospheric Administration (NOAA) and pointed out the importance of considering trends when projecting conditions.
- Precipitation – rainfall is below long term average for last year and thus far this year as well.
- Streamflows - USGS graphic for regional streamflow shows widespread values below long term averages.
- Forecast – current forecasts from Duke Energy and NOAA are similar, predicting warmer than average temperatures with normal to above average probability of precipitation through August.
- El Niño – there is an 80-90 percent chance El Niño will continue through the end of 2015; this increases the probability for normal conditions in the region.
- Tropical Outlook – forecast anticipates fewer named storms and hurricanes in the 2015 season.
- US Seasonal Drought Outlook – no droughts are indicated for this region through the end of August.
- Evaporative Stress Index – shows dry conditions in the basin.
- Soil Moisture Outlook – shows dry conditions with conditions improving in late June and late August.
- Streamflow trends – all monitoring locations currently show median flows or lower.

Groundwater Network Analysis Update

- Mr. Bruce reviewed the makeup of the existing Catawba-Wateree Basin groundwater network and presented a map showing the ten monitoring locations. There are two wells at most locations and three at one location (Langtree Peninsula), all providing real time data available every hour via the USGS website.
- LIP recovery – During drought recovery period, each of the four triggers (storage, stream flow, U.S. Drought Monitor and groundwater) must be above certain recovery trigger points in order to upgrade the LIP stage.
- The groundwater network has been in operation and collecting data for the past four to five years; two of the wells have historical data beyond five years (Langtree Peninsula and Glen Alpine). The CW-DMAG needs to review data collected and determine how best to use for LIP recovery trigger determination. Duke Energy and HDR met with USGS and determined two general approaches on how to use the data as an LIP recovery trigger.
  - Method 1 – use only actual data as recorded (limited period of record (POR))
  - Method 2 – use synthetic data to supplement actual data (simulates a longer POR) – predict newer wells back to 2001 using regression analysis to create a more complete database by utilizing the two long term gages and other nearby gages in neighboring basins.
  - With either method, two options exist for trigger determination
    - Option A – base determination on values for each individual gages
    - Option B – base trigger determination on average of all network gages
- Duke Energy and HDR propose creating an ad-hoc team to study these methods in detail. The suggested team would include representatives from HDR, Duke Energy, USGS, SCDNR, South Carolina Department of Health and Environmental Control, and NCDENR-DWR. At Duke Energy’s request, HDR is working with USGS to analyze the various methods as potentially applied to the last drought of record to evaluate how the results would have impacted the LIP conditions. The purpose of the ad-hoc team is to review the results and recommendations from that work, select a preferred methodology, and develop a final LIP trigger proposal for approval by the CW-DMAG membership at the next annual meeting.
Results of the 2014 Annual Water Use Reporting and 2015 Reporting Requirements

- Mr. Williams distributed the 2014 Annual Water Use Report on CD to each attendee; several hard copies were available for anyone wanting one. The purpose of the report is to maintain a historical record of annual water use in the basin. The annual data is compared to projections made in both the Water Supply Study prepared as part of Duke Energy’s relicensing process in 2006 and the Water Supply Master Plan (WSMP) published by the CWWMG in 2014 and addended in 2015.

- Sources of data – the majority of data in the report is actual data provided by water users (88 percent of withdrawal data and 92 percent of return data). Additional data is obtained from NCDENR-DWR Local Water Supply Plans and the EPA Envirofacts Warehouse. In the few remaining cases where actual data is not available, projected data is used.

- 2014 Overall results – both withdrawals and returns were less than projections for 2014; overall net withdrawals are approximately 10 percent less than 2006 values.
  - Factors impacting long term trends – wet industry closures/reduction, increased/tiered water rates, behavior conservation mindset, development trends (urban growth, rural decline, smaller lots, smaller houses, renovating with more efficient fixtures), variance in precipitation.
  - Categorical water use – This report marks the fifth annual water use report which includes categorical water use data from CWWMG members to identify patterns and find how water is used across the basin by residential, commercial, industrial, institutional, and wholesale users. Residential use remains by far the largest category of water use.

- 2015 reporting requirements – Report template will be the same as 2014. CW-DMAG members must report total monthly withdrawal data for each intake and monthly return data for each discharge point including waste water treatment plant decant discharge. CWWMG members also must include categorical use data for each month. A reminder will come from Duke Energy in early January 2016 with the data due to HDR Engineering by January 31st.

Update on Residential Water Use

- Kearns and West (Duke Energy Consultant) began tracking residential water use for the CW-DMAG during the 2007-2008 drought to monitor use during the drought and to determine the average water use “otherwise to be expected” during normal conditions. The purpose is to provide perspective during drought conditions for setting reduction goals and measuring how well those goals are being met.

- HDR and Duke Energy have proposed the following two changes in these procedures.
  - Reset the baseline to 2012-present background data in order to update the otherwise to be expected use based values.
  - Streamline the approach to collection and analysis by relying on annual categorical data already provided by CWWMG members as part of their water use tracking during normal conditions. Monthly reporting would be required only during times of drought.

Catawba Wateree Relicensing Update

- Mark Oakley, Duke Energy, presented a timeline depicting the activities and events which have occurred during the past several years to prepare and defend the Comprehensive Relicensing Agreement (CRA). During that time, Duke Energy has voluntarily implemented several things in the CRA including releasing recreation flows and continuous or intermittent minimum flows, restoring bypass flows, developing new recreation areas, and establishing the LIP. One of the most significant activities was formation of the CWWMG.
- CWWMG – Establishment of this group has provided significant understanding of safe yield levels for the basin and resulted in valuable basin-wide relationships and collaboration.
- Final Agreement Committee – Mr. Oakley emphasize Duke Energy is not the sole administrator of the CRA but a member of the entire CRA team of 70 parties; all decisions are referred to a Final Agreement Committee formed as part of the CRA process.
- Outreach events – Duke Energy held four events in April to update and refresh CRA members in anticipation of receiving license approval later this year. Goals were to provide a status on the licensing process, review what the CRA means in terms of responsibility of the members, and prepare all parties to participate. Each party to the agreement was provided with a spreadsheet tool allowing them to see exactly what portion of the CRA applies to them and what is expected of them and of others in the agreement including Duke Energy. The tool also included the appendices and resource agreements from the CRA which will be enforceable when the license goes into effect.
- Additional accomplishments – Mr. Oakley reviewed a list of CRA-related commitments that have been completed as part of this process including the 2010 Settlement Agreement for the SC vs. NC Supreme Court Case and the 2014 Settlement Agreement Regarding the South Carolina Water Quality Certification.
- License approval – Approval is expected later this summer; the requirements in the license will be retroactive to the beginning of the issuing month. A thirty-day review period will begin upon issuance; Mr. Oakley will request an extension of that time to allow all parties adequate time for review.
- Jeff Lineberger, Duke Energy, provided the following perspective on how to review the license effectively and efficiently.
  - Look for the sentence beginning “The Director orders:...” midway through the document, followed by a numbered list of items. That is the place to start the review. Everything after that statement is a binding condition of the license. Everything before that statement is background information describing the project and does not necessarily need review.
  - Appendix A of the CRA contains the draft agreements previously developed. Mr. Lineberger emphasized the importance for all members to review the license for any changes in language, areas needing clarification, or inconsistences between the license and the CRA.
  - Near the end of the document will be a section titled L-Form Articles for Licenses which contains a series of standard FERC statements included in all licenses. These cannot be changed and do not need review.
- Mr. Oakley will notify all CW-DMAG and CWWMG members immediately upon license issuance. The review period will begin at that time. Mr. Oakley will provide links and guidance for review including a deadline for receipt of comments.

Lunch 11:45-12:30

Catawba-Wateree Water Supply Master Plan (WSMP)

- Mary Knosby, HDR, reviewed development and publication of the WSMP. Non-binding resolutions of support have been approved by the governing bodies of all CWWMG member water utilities as well as the non-member Centralina Council of Governments. A letter of support was also issued by Duke Energy.
- Ms. Knosby reviewed a list of components necessary for a thorough water supply planning effort and highlighted key aspects of the WSMP.
- Comments received at all presentations over the past year have been compiled and are being addressed in a brief amendment being prepared by HDR.
- The next step for the WSMP is for the CWWMG to begin strategically planning and implementing the recommendations provided in the plan.
NCDENR-DWR Water Planning Update

- Mr. Fransen highlighted key personnel changes that have occurred over the past year: Secretary-Donald van der Vaart; Deputy Secretary-John Evans; Assistant Secretary of the Environment-Tom Reeder; and Division of Water Resources Director-Jay Zimmerman.
- Planning activities – NCDENR-DWR has just completed the Tar River Basin plan, the first integrated plan which combines water supply and water quality planning. The plan is awaiting approval by the Environmental Management Commission (EMC). Cape Fear River Basin plan development is underway. Following a lull in basin modeling due to funding restraints, the budget is now in place to begin model development for the Yadkin-Pee Dee River Basin.
- General Assembly (GA) highlights:
  - Budget has been published, house budget includes $900,000 for aquatic weed control.
  - HB760, regulatory reform act of 2015, Section 3.3b includes exemption for riparian buffer requirements for certain private properties. Buffer requirements have been critical for mitigation of interbasin transfers; it is unclear how this might impact existing or future interbasin transfers.
  - HB795 Environmental Policy Reform Act includes a provision restricting the ability to look at impacts outside the state of North Carolina; it is unclear how that might impact projects with interest in adjoining states and the Settlement Agreement between North and South Carolina.
- Catawba-Wateree Basin Advisory Commission – next meeting will be June 12.
- Modeling - EMC will not approve any models until the GA issues clarification on the ecological flows issue; meanwhile the EMC has directed NCDENR-DWR to continue to develop and use modeling for planning purposes as they have been.

South Carolina Water Planning Update

- Scott Harder, SCDNR, reported on behalf of Joe Gellici who was unable to attend.
- South Carolina is developing surface-water quantity models for the state’s eight major river basins. Models will be used to determine water availability, predict potential water shortages, evaluate interbasin transfers and withdrawal permits and support development of drought management plans.
- CDM Smith Inc. was awarded a contract to develop the models. Clemson University will facilitate work with stakeholder teams. The stakeholder process is focused strictly on surface water model development at this time, but is expected to expand in the future to consider the other issues related to basin-wide water planning.
- Schedule – SCDNR’s goal is to complete all eight models in two years which requires groups of models to be created in parallel. Mr. Harder reviewed the projected schedule for the modeling; the Saluda River Basin will serve as the pilot model, and stakeholder meetings are already underway.
- Surface water planning is the first step in a long term water planning effort.
  - Step 1 – surface water availability assessments
  - Step 2 – groundwater flow models
  - Step 3 – water demand forecasts over a 50-year period
  - Step 4 – regional (basin-wide) water plans
  - Step 5 – update State Water Plan

Closing remarks

- Mr. Bruce thanked everyone for attending the annual meeting and reiterated Duke Energy will continue to monitor conditions over the next few days and make a decision concerning drought status on Monday, June 1. If Stage 0 is determined, Mr. Bruce recommended the group consider issuing a press release by the end of the week (Normal Conditions were declared on June 1, 2015).
- Jennifer Jabon, Duke Energy, requested anyone interested in being active participants to develop a news release and be contact persons cited in the release contact her or Mr. Bruce after the meeting or by email. The goal is to have a collaborative effort led by key representatives of the CW-DWAG membership. The draft statement would then be approved by entire group before release.
- If Stage 0 is determined on Monday, Mr. Bruce will initiate monthly meetings via conference call on the second Tuesday beginning on June 9 (subsequently not needed).

Mr. Bruce adjourned the meeting at 1:04 P.M.