Member Organizations Present

Bessemer City
Charlotte Water
Chester Metropolitan District
City of Belmont
City of Hickory
City of Lenoir
City of Morganton
City of Mount Holly
City of Rock Hill

City of Statesville
Duke Energy
International Paper
Lincoln County
North Carolina Department of Environmental Quality, Division of Water Resources (NCDEQ-DWR)
US Geological Survey (USGS)

Other Organizations Present

City of Concord
HDR

Town of Fort Mill
Town of Winnsboro

Member Organizations Not Present

American & Efird
Catawba River Water Treatment Plant (Union County, NC and Lancaster County, SC)
City of Camden
City of Gastonia-Two Rivers Utilities
City of Cherryville
City of Lincolnton
City of Marion
City of Newton
Clariant Corporation
Invista
Lugoff-Elgin Water Authority
National Marine Fisheries Service
North Carolina Wildlife Resources Commission
Resolute Forest Products

SCANA Corporation
South Carolina Department of Health and Environmental Control (SDHEC)
South Carolina Department of Natural Resources (SCDNR)
Siemens Westinghouse
Springs Industries
The Greens of Rock Hill
Town of Dallas
Town of Granite Falls
Town of Long View
Town of Mooresville
Town of Valdese
US Fish and Wildlife Service

Agenda Review and Attendance Roll Call

Ed Bruce, Duke Energy, opened the teleconference meeting at 10:00 AM, welcomed participants and reviewed the agenda for the call.

Jonathan Williams, HDR, conducted an attendance roll call by asking for voice confirmation of each organization’s participation on the call; member names were not requested or recorded.
Three sets of data slides were provided to the participants prior to the meeting; Mr. Bruce, George Gallaher (Duke Energy), and Mr. Williams reviewed the slide information and answered member’s questions; highlights were as follows.

**Low Inflow Protocol (LIP) Update (Mr. Bruce)**

- **Storage Index (SI)**
  - SI represents total of remaining usable water storage in all eleven reservoirs combined from Lake James down to Lake Wateree as a percentage of the total usable water storage at full pond.
  - The SI trigger has recovered to above Target Storage Index (i.e., remaining usable water storage when all lakes are at their Target Elevation) for this time of the year.
  - Mr. Bruce noted this has been a remarkably quick and timely recovery in remaining usable water storage level. Early October rainfalls greatly improved storage and steady rainfall and runoff through the last five weeks has improved streamflow.
  - Duke has been generating with excess water to keep the water from spilling water from the reservoirs.

- **U.S. Drought Monitor**
  - October rain events have cleared the U.S. Drought monitor for all of the Carolinas.
  - The three month numeric average as of the end of October, 2015 stands at 1.0, Stage 1 condition. Mr. Bruce anticipates this value this will improve to Stage 0 conditions by the end of November, 2015.
  - In order to totally recover out of an LIP stage, all triggers must recover to above the threshold of the previous stage; therefore, by the end of the year the monthly drought monitor average should return to Normal conditions.

- **Streamflow**
  - The six month average as of November 1, 2015 was 89.7%. The stream base flows have recovered well due to the past 5 weeks of rain events. The six-month average streamflow is at 93.0% as of Monday, November 9, 2015 (Normal conditions).
  - The six month average streamflow is projected to continue rising steadily through the rest of 2015.

- **Groundwater**
  - Langtree gage – has been below the long term average for most of 2015, but has now fully recovered to above long term average for this time of year.
  - Glen Alpine gage – has recovered fully to above long term average for this time of year.
  - York Co Regolith gage – has recovered to well above long term average for this time of year, but this new gage has limited long-term data.

- **Summary**
  - The SI has recovered to Normal Condition.
  - The streamflow and U.S. Drought Monitor triggers have now also recovered to Normal and Stage 0 Condition, respectively.

**Meteorology and Catawba-Wateree Project Operations Data (Mr. Gallaher)**

- **Precipitation**
  - Basin-wide precipitation is now above average based on Duke Energy long-term average. However, the Charlotte area is still slightly behind the long-term average.
  - Wateree Hydro Station recorded 15.3 inches of rain since October 1, 2015 and Bridgewater Hydro Station recorded 10.4 inches as of October 1st.
  - Overall rainfall for the year is back to normal in most areas; however, a small area near Lake Norman and Hickory remains slightly behind normal.
• In the last 30 days, storm events resulted in heavy precipitation of approximately +/- 6 to 8 inches, on average, throughout the basin.

  Forecast
  • The short term, 7 day forecast shows below average chance for rainfall, while the 8-14 day and November forecasts show an above average chance of precipitation.
  • Tropical activity remains low. A tropical system off the coast is expected to have no impact on the Catawba-Wateree basin.
  • November through January is expected to have an equal chance for normal, warmer or cooler temperatures and be wetter than average, for the period.
  • El Nino is expected to continue through the winter and weaken through spring 2016. January through March of 2016 will likely be cooler and wetter than normal.
  • The US Seasonal drought outlook from mid-October through the end of January, 2016 no forecasted drought conditions in our area.

  Streamflow
  • All streamflow data show significant recovery due to October rainfall.
  • There are now higher amounts of water flowing through the Catawba-Wateree Project and streamflow conditions are well above the long-term averages.

  Summary
  • Duke System precipitation is slightly above average through November 1, 2015.
  • El Nino this winter is expected to produce above average rainfall.
  • Storage Index is in Normal Condition. LIP stage is still Stage 1 due to the U.S. Drought Monitor still needing time to recover.
  • Due to recent rainfall, Duke Energy is actively managing high water conditions with more rainfall expected.

Residential Water Use Patterns (Mr. Williams, HDR)

  • Residential water use updates are based on monthly data provided by CWWMG members and compared to long-term average (based on 2012-2015).
  • Data is current through the end of September, 2015.
  • Monthly residential use
    • Peak water use occurred in June and declined significantly in July/August and remained relatively constant during September. Voluntary water restrictions implemented with Stage 1 designation greatly benefited water conservation efforts.
    • Overall residential use as of September was running approximately 4% above long term average.
  • Charlotte Water compared with other suppliers:
    • Water use for both groups is close to long term average for this time of year and showed significant decreases in August and similar use in September.
    • Compared to 2012 dry period, water use seems more regulated today, indicating folks have been more aware of and responsive to drought conditions across the basin.
  • Hydro generation shows a slight increase in September but remains below the long term average.
  • Mr. Williams reminded CWWMG members to provide their October information by end of November.

Mr. Bruce adjourned the meeting at 10:25 A.M.

The next meeting will be December 8, 2015 by conference call.

Summary of Action Items:
**ACTION ITEM**: Residential water use data for October 2015 to be provided to HDR by November 30, 2015.