Member Organizations Present

Catawba River WTP (Lancaster Water and Sewer District and Union County)  Duke Energy
Charlotte Water  Lincoln County
Chester Metropolitan District  North Carolina Department of Environmental Quality, Division of Water Resources, (NCDEQ DWR)
City of Belmont  Resolute Forest Products
City of Camden  Town of Granite Falls
City of Gastonia-Two Rivers Utilities  Town of Long View
City of Hickory  Town of Mooresville
City of Lenoir  Town of Valdese
City of Morganton
City of Mount Holly  US Geological Survey (USGS)
City of Rock Hill

Other Organizations Present

HDR Engineering  Town of Winnsboro
Town of Fort Mill

Member Organizations Not Present

American & Efird  North Carolina Wildlife Resources Commission
Bessemer City  SCANA Corporation
City of Cherryville  Siemens Waterhouse
City of Lincolnton  South Carolina Department of Health and Environmental Control (SCDHEC)
City of Marion
City of Newton  South Carolina Department of Natural Resources (SCDNR)
City of Statesville  Springs Industries
Clariant Corporation  Town of Dallas
International Paper
Invista  US Fish and Wildlife Service
Lugoff-Elgin Water Authority
National Marine Fisheries Service

Introductions, Agenda Review and Announcements

– Ed Bruce, Duke Energy, opened the teleconference meeting at 3:31 PM, welcomed participants and reviewed the agenda for the day.
– Audri Baker, HDR, conducted an attendance roll call by asking for voice confirmation of each member organization’s participation on the call; individual names were not requested or recorded.
– Three sets of data slides were provided to the participants prior to the meeting; Mr. Bruce (Duke Energy, Lynne Dunn (Duke Energy) and Jonathan Williams (HDR) reviewed the slide information in detail; highlights were as follows.

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

– **Storage Index (SI)**
  - The SI represents the total of all remaining usable water storage in the eleven reservoirs combined, from Lake James down to Lake Wateree, as a percentage of the total usable water storage volume (full pond) in the eleven reservoirs.
  - The SI remains in LIP Normal Condition as of December 12, 2017.
  - Storage in good shape for this time of year partly due to watchful water use since the basin has been under LIP conditions for over a year.

– **U.S. Drought Monitor**
  - The three-month numeric average for the U.S. Drought Monitor as of December 1, 2017 is 0.33, which supports a Stage 0 LIP Condition.
  - The trend across the southeast is toward a worsening drought. Middle areas of Georgia through South Carolina, North Carolina and into Virginia, are showing Stage D1, Moderate Drought, designation as of December 5, 2017.

– **Streamflow**
  - The streamflow indicator is a measure of the actual six-month rolling average compared to the historical six-month rolling average measured at four USGS gages on tributary streams across the Catawba-Wateree River Basin.
  - As of December 11, 2017, the ratio was 85.9% which just barely supports a Normal LIP Condition.

– **Groundwater**
  - Groundwater readings are reported for four USGS gage locations representing the geographical spectrum of the basin.
  - Langtree Regolith – Groundwater levels are below long term average for this time of year. This gage has yet to show the usual upturn typically seen at this time of year.
  - Glen Alpine– Groundwater levels at this gage near the long term average.
  - Near Pleasant Gardens – Groundwater levels at this newer gage are above its long term average.
  - Lancaster– Groundwater levels at this newer gage remain below the long term average for this time of year.
  - Mr. Williams presented a new slide depicting a consolidation of all groundwater gage data from across the Catawba-Wateree River Basin. Duke Energy, HDR, NCDWR, SCDNR, SCDHEC, and USGS representatives have been working together to develop a mechanism for consolidating all groundwater gage data to evaluate groundwater levels for the Catawba-Wateree Groundwater Network as a percentage of the overall basin-wide historical groundwater range. While there is not sufficient data yet to use this measurement as an LIP recovery trigger, Duke Energy and HDR will continue to track and report the results. Currently, the groundwater level from the combined data of the 21 wells, at 10 locations across the basin, is near the threshold between Stage 0 and Stage 1 recovery conditions.

**Meteorology and Catawba-Wateree Project Operations Data (Ms. Dunn)**

– Precipitation
- The long term average annual precipitation for the basin from 1999-2016 is 42.5 inches; 2017 basin-wide precipitation is approximately 43.01 inches to date.
- Precipitation over the past 90 days has been above normal in the Upper Basin but more than two inches below normal in the Middle and Lower Basin.
- Forecast
  - NOAA short term, 7-day outlook: Less than half an inch of rain is forecast for the whole Basin over the next seven days. Below normal precipitation is predicted to continue over the next 8-14 days for the Upper Basin with equal chance of normal, above normal, or below normal precipitation for the Lower Basin.
  - NOAA long term forecast for December through February calls for above normal temperature and below normal precipitation. Temperatures are predicted to remain above normal through May 2018 with equal chance of normal, above normal, or below normal precipitation.
  - Duke Energy internal meteorologist suggest below normal temperatures and precipitation through February 2018.
- Streamflow
  - Pleasant Gardens and Johns River: Streamflow at both gages is currently normal.
  - Southfork: Streamflow is normal but continues to be below the median.
  - Rocky Creek: Streamflow is much below normal.
- Reservoirs
  - Reservoir levels at Lakes James, Norman, and Wylie continue to fluctuate, with a declining trend over the last month.
- Summary & Operations
  - The Catawba-Wateree River Basin remains in LIP Stage 0 since July 3, 2017.
  - NOAA is forecasting warmer temperatures and below normal precipitation through the winter.
  - Duke Energy internal meteorologists are suggesting below normal temperatures and below normal precipitation through February.
  - Duke Energy continues to operate conservatively.
- Weather is being influenced by La Niña conditions in the Pacific.

Residential Water Use Patterns (Mr. Williams)

- The residential water patterns presented are based on data received from members of the Catawba-Wateree Water Management Group through October 2017. The data graphs show gallons per account with about five years of data to illustrate residential data in the basin and how it compares to the long term average.
- Overall, residential water use in the Basin was right at the long term average for September and slightly below average in October.
- Charlotte Water’s residential use continues to be below the long term average for 2017 and was about 6% below normal for October. Use by all other suppliers has above the long term average over the past several months, and was about 7% above the average in October.
- Water being released downstream of the Catawba-Wateree River Basin is shown by Duke Energy’s Wateree Hydro Station generation. This value was slightly below the long term average for October.
- Mr. Williams reminded CWWMG members to submit their annual water use data for November 2017 by the end of December. Monthly data will continue to be collected while the basin is in an LIP stage.

Closing Comments

Mr. Bruce will continue to monitor the storage between now and the end of December and provide monthly updates. The LIP at the beginning of January is likely to remain in Stage 0.

Mr. Bruce adjourned the meeting at 3:54 P.M.