CATAWBA-WATEREE DROUGHT MANAGEMENT ADVISORY GROUP

DROUGHT STATUS MEETING

Tuesday, September 12, 2017

MEETING SUMMARY

Member Organizations Present

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

Other Organizations Present

HDR Engineering

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 Mount Holly  South Carolina Department of Natural Resources (SCDNR)
City of Newton
City of Rock Hill  Springs Industries
Clariant Corporation  Town of Dallas
Invista  Town of Mooresville
Lugoff-Elgin Water Authority  Town of Valdese
National Marine Fisheries Service  US Fish and Wildlife Service

Introductions, Agenda Review and Announcements

- Ed Bruce, Duke Energy, opened the teleconference meeting at 3:30 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 Stage 0 as of September 12, 2017.
  - Mr. Bruce provided an additional slide showing the change in SI resulting from preparation for Hurricane Irma. The overall SI was drifting down as a result of the return to LIP Stage 0 at which time Duke Energy resumed normal minimum flows and normal recreational flows for this time of year. With the forecast for significant rain anticipated on and around September 6 from Hurricane Irma, Duke Energy released additional water to mitigate potential high water conditions, which further lowered the storage. When the storm tracked further west than previously forecast, Duke Energy stopped any further lake level reductions, to the extent possible, and reduced releases back to minimal levels. The storage index had begun to respond to this by increasing over the several days leading up to this meeting.
  - A second additional slide this month showed the rainfall distribution in the Catawba-Wateree region as a result of Hurricane Irma.

- U.S. Drought Monitor
  - The three-month numeric average for the U.S. Drought Monitor as of September 1, 2017 is 0.67, which supports a Normal LIP Condition.
  - The three-month USGS maps show abnormally dry conditions developing in the lower Catawba-Wateree Basin region prior to the hurricane.

- 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 September 11, 2017, the ratio was 97.5% which supports a Normal LIP condition.
  - Streamflow over the past six months has now returned to long-term average levels.

- Groundwater
  - Groundwater readings are reported for four USGS gage locations representing the geographical spectrum of the basin. Levels at most wells continue to be below the long term average which indicates streamflow will also likely continue below average, but may be improving.
  - Langtree Regolith – Groundwater levels are slightly below long term average for this time of year.
  - Glen Alpine– Groundwater levels at this gage are above the typical long term average.
  - Near Pleasant Gardens – Groundwater levels at this newer gage are near long term average.
  - Lancaster– Groundwater levels at this newer gage reflect drier conditions in this area of the basin and remain slightly below the long term average.

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

- Precipitation
  - The long term average annual precipitation for the basin from 1999-2016 is 42.5 inches; 2017 basin-wide precipitation is approximately 34.9 inches to date.
  - Precipitation in the basin over the last 90 days is an average of 1-8 inches above normal in the Upper Catawba-Wateree River Basin and slightly below normal in the Mid and Lower Basin.

- Forecast
- Short term: Two to four inches of rain are forecast for the region from Hurricane Irma.
- NOAA forecast for September is below normal temperature for the Upper Catawba and equal chance of above, below or normal temperature for the Lower Catawba, with precipitation above normal across the basin.
- Duke Energy Meteorologist forecast is for below normal rainfall through September and into October.
- Long term: NOAA predicts above normal temperatures with equal chance of above, below, or normal precipitation for September through November.
- Forecast for November through January currently calls for above normal temperatures and equal chance of above, below, or normal precipitation.
  - Streamflow
    - Streamflow is at normal levels at the Pleasant Gardens and Johns River gages.
    - Streamflow is below normal at the Southfork and Rocky Creek gages.
  - Reservoirs
    - Storage levels in Lakes James, Norman, Wateree, and Wylie have been declining slowly following the return to normal minimum releases under Stage 0.
    - Storage in the reservoirs was dropped in anticipation of hurricane rains but is now trending upward. Lake Wateree is at EL. 96.41’.
  - Hurricane Forecast
    - NOAA forecast is for 11-17 named storms, 5-9 total hurricanes, and 2-4 major hurricanes.
    - Overall forecast from other sources has been adjusted upward, including Duke Energy calls for 13-16 named storms, 6-8 total hurricanes, and 3 major hurricanes (forecasts were made before Hurricane Irma).
  - Summary & Operations
    - The Catawba-Wateree River Basin remains in LIP Stage 0 since July 3, 2017.
    - The Catawba-Wateree River Basin precipitation is above the long term average for September (due only to Hurricane Irma).
    - NOAA is forecasting warmer temperatures with the Upper Catawba having equal chances of above, below, or normal precipitation and the Lower Catawba having above normal precipitation through the end of the fall season.
    - Duke Energy Operations has adjusted all lake level minimums, minimum flows, and recreation flows back to the Stage 0 operation limits. Duke Energy continues to operate conservatively.

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 members through July 2017.
- Overall, residential water use has remained below average since February of this year.
- Charlotte Water represents about 50% of water used by the CWWMG membership overall. Charlotte Water’s residential use for July was below the long term average; use by all other suppliers was 3.7% above the long term average for July after having been slightly below the previous month.
- Duke Energy’s Wateree Hydro Station generation was 38% below the long term average in July.
- Mr. Williams reminded CWWMG members to submit their annual water use data for August 2017 by the end of September. Monthly data will continue to be collected while the basin is in a drought stage.

Closing Comments

Mr. Bruce will continue to monitor the storage between now and the end of September and provide monthly updates.

Mr. Bruce adjourned the meeting at 3:52 P.M.