KEOWEE-TOXAWAY DROUGHT MANAGEMENT ADVISORY GROUP
CONFERENCE CALL SUMMARY

Wednesday, January 11, 2017

Organizations Present
Anderson Regional Joint Water System, SC
Duke Energy
Georgia Environmental Protection Division (GA-EPD)
Greenville Water, SC
HDR
National Weather Service (Greenville-Spartanburg)
SC Department of Health and Environmental Control (SCDHEC)
SC Department of Natural Resources (SCDNR)
Southeastern Power Administration (SEPA)

Attendance Roll and Agenda Review
1. Ed Bruce of Duke Energy took attendance and reviewed the agenda.

Low Inflow Protocol (LIP) Status
2. As of January 2, 2017 the Keowee-Toxaway (KT) Project remained in Low Inflow Protocol (LIP) Stage 2 conditions due to a continued rainfall deficit and as a result of the U.S. Army Corps of Engineers (USACE) currently being in Level 2 of their Drought Plan.

3. Mr. Bruce provided a detailed review of the individual LIP trigger conditions. Duke Energy usable reservoir water storage operates in tandem with the USACE usable reservoir water storage, per the New Operating Agreement. The U.S. Drought Monitor 12-week average trigger reflects worsening LIP Stage 3 conditions for that trigger. The four-month average streamflow trigger reflects LIP Stage 4 conditions and continues to decline. The USACE drought conditions for both Hartwell Lake and Thurmond Lake are at USACE Drought Plan Level 2 and are projected to remain there during early 2017. USACE expects reservoir elevation levels to remain around 650’ for Hartwell and 320’ for Thurmond for the next few weeks with the potential for a slight increase in March, under the assumption of continued below average inflows. A new slide shows the historical Hartwell elevation from 2011 to present and shows that the reservoir is at its lowest point since late 2012 for this time of the year. Four month rolling average streamflows continue to be well below the long term average and worsening. The U.S. Drought Monitor map shows continued drought conditions despite improvement in the southeastern U.S. over the past month, including the Upper Savannah River Basin. A chart showing the intensity of historical drought since 2000, as based on the U.S. Drought Monitor, indicates the basin is now in what appears to be a very steep and significant drought after having experienced normal to wet conditions the previous three years. Both the Oconee County and McCormick County groundwater gages are well below their long term averages. The Oconee County gage showed a slight improvement from last month while the McCormick County gage indicates worsening conditions.

4. Mr. Bruce reviewed the Oconee Nuclear Station’s consumptive water use and cumulative surface evaporation. Consumptive water use in January is approximately 25.2 million
gallons per day (MGD) and is expected to be approximately 25.3 MGD next month (based on long-term historical water use). Cumulative surface evaporation for all of Duke Energy’s reservoirs located in the Upper Savannah River Basin is estimated to be approximately 29.9 MGD in January (similar to December). Surface evaporation rates are expected to increase in February to approximately 43.4 MGD.

5. Mr. Bruce reviewed the Keowee Development’s water releases to Hartwell during the previous month ending January 3rd. Average weekly total releases, including leakage and seepage, for the month were 2,042 acre-feet per week (147 cubic feet per second or 95 MGD). Mr. Bruce indicated that both Duke and USACE reservoirs are projected to stabilize.

6. Greenville Water reports rainfall continues to be significantly below average and reservoir levels remain below normal for their system reservoirs. Table Rock Reservoir is approximately 13.75 feet below full pond elevation, and the North Saluda Reservoir is approximately 8.50 feet below full pond. Table Rock Reservoir remains offline while samples are taken to the recent Pinnacle Mountain forest fire (although possibly coming back online soon as of the date of this meeting).

7. There was no report provided on the City of Seneca or City of Walhalla water supply status.

Update on Meteorology and Keowee-Toxaway Project Operations

8. Lynne Dunn (Duke Energy) summarized recent precipitation patterns and meteorological predictions. The regional precipitation for 2017 year-to-date (~10 days) is above normal due to rainfall since the beginning of the month but is expected to decrease. Current rainfall for Greenville-Spartanburg, SC is 2.55 inches; Asheville, NC is 1.42 inches; and Hartwell Dam is 2.51 inches. Current departure from normal for Greenville-Spartanburg, SC is +1.45 inches; Asheville, NC is +0.41 inches; and Hartwell Dam is +0.79 inches.

9. According to NOAA data, observed precipitation shows there is a 4 to 6 inch rainfall deficit within this area over the last 90 days.

10. The NOAA Long Term Palmer Drought Severity Index map through January 7, 2017 shows the KT area as moderately to extremely dry and estimates the KT area needs 9-12 inches of rain to return to normal.

11. The NOAA probability of precipitation, updated through November, shows there is a very limited (15% or less) chance of receiving enough rainfall over the subsequent four months to end the drought. The NOAA short and medium term forecasts predict +/- 0.1 inches of rainfall for the next 7 days, a 40% to 50% chance of above normal precipitation for the 8 to 14 day outlook and slightly above normal precipitation for the month of January. The January to March outlook projects above average temperatures and equal chance to below average precipitation, depending on the location in basin.

12. The U.S. Seasonal Drought Outlook indicates persistent drought conditions are likely for the Upper Savannah River Basin through at least March, 2017. According to the regional and South Carolina drought monitor, the basin is experiencing Severe and Extreme drought levels.

13. Streamflow conditions are currently below the 5th percentile and declining, despite some positive response from recent rainfall in the region. Groundwater remains significantly below the long-term average.

14. In summary, the KT LIP is in Stage 2 Condition. Forecasters are suggesting below normal probability for precipitation for the period of January to March. USACE and KT lake storage continues to decline slightly, but is projected to stabilize. USACE reservoir levels are in
Drought Level 2. Duke Energy continues to request water conservation efforts by water users relying on water stored in Lake Keowee, including watering restrictions for Lake Neighbors on Lake Keowee and Lake Jocassee.