



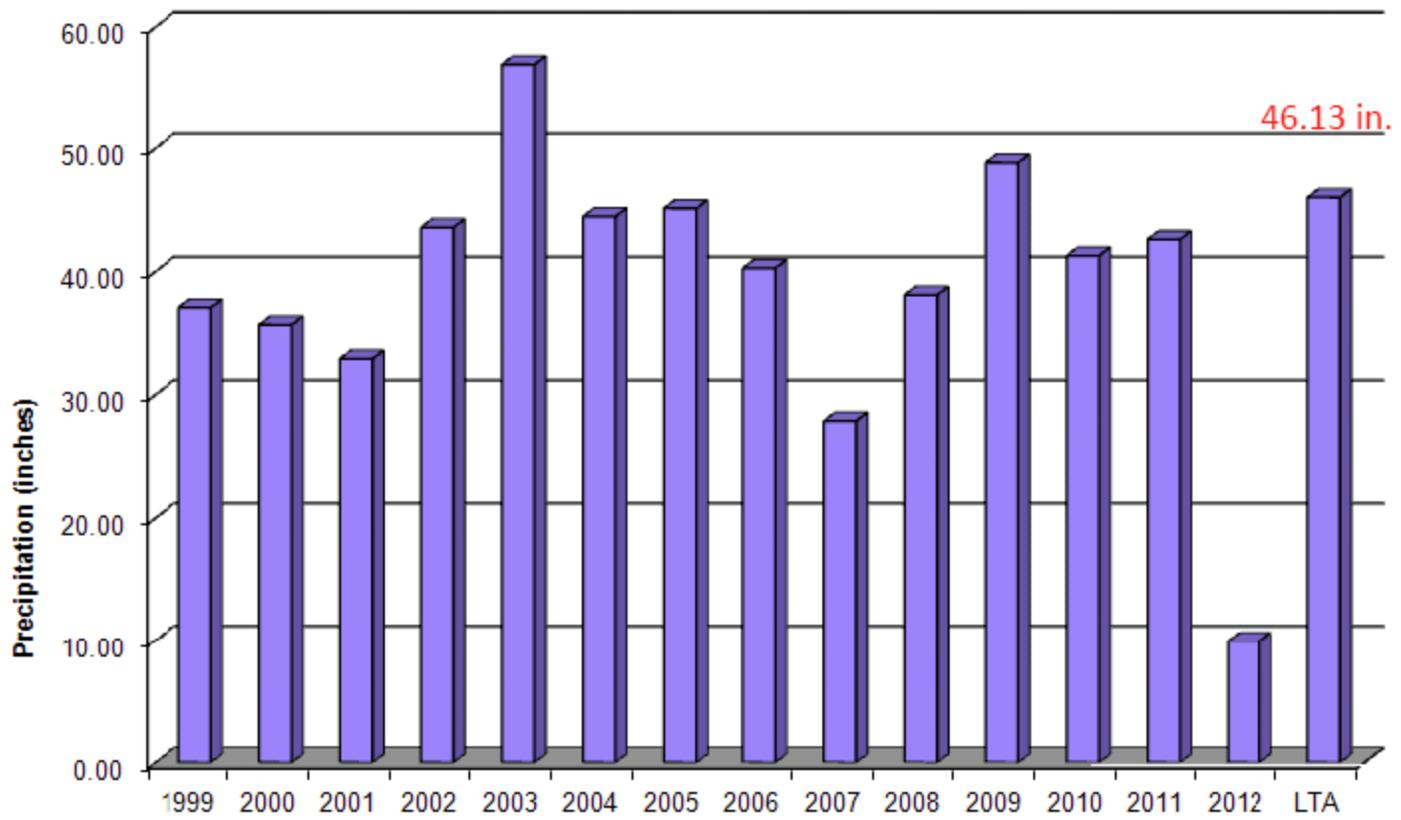
NC Drought Management Council Duke Energy Update April 26, 2012

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Hydro Fleet Operations
Duke Energy Carolinas
(Prepared 4/24/2012)

Some of the factors evaluated by Duke:

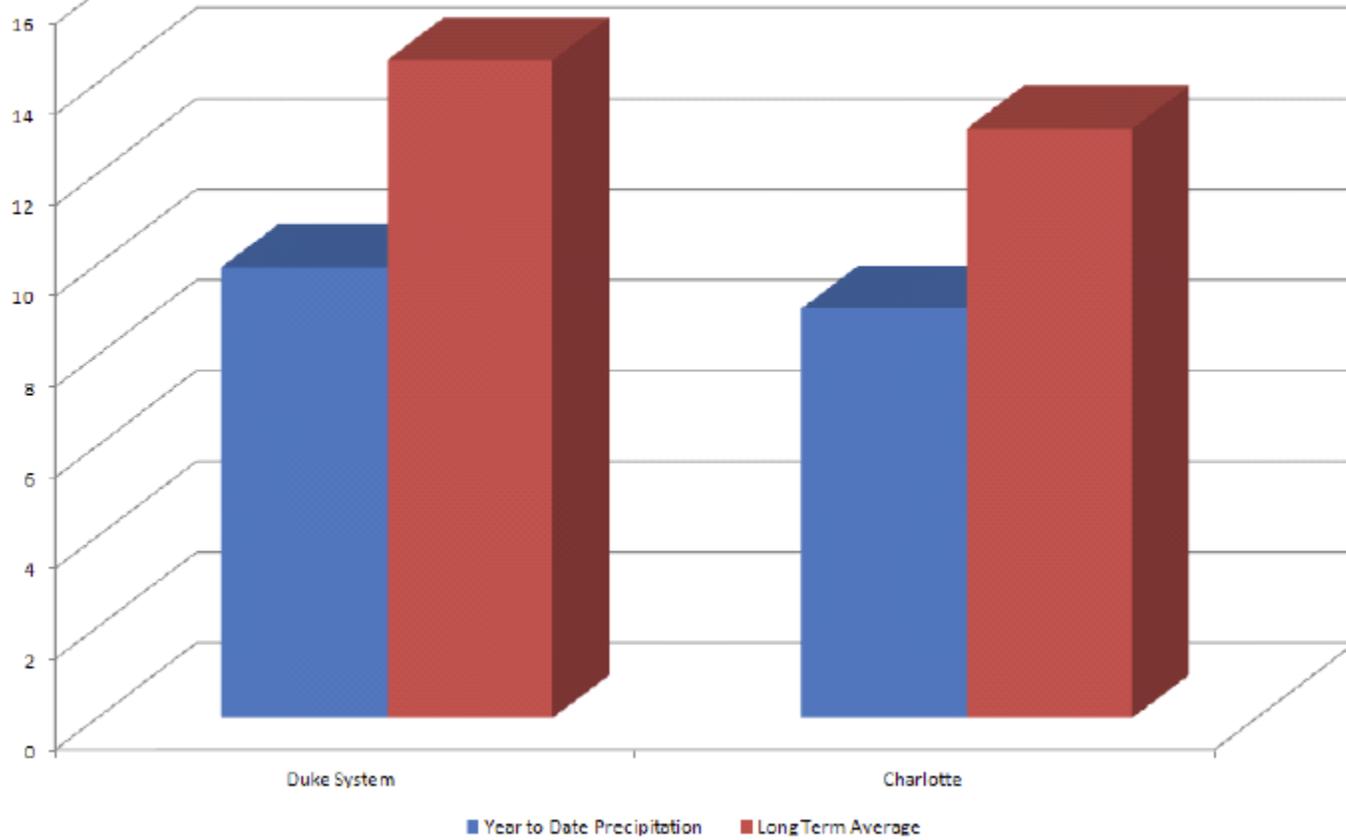
- Precipitation
- Catawba-Wateree Low Inflow Protocol
- Hydroelectric station lake level trends
- Forecast
- Operations Summary and Ancillary Impacts

Duke Energy System Average Precipitation and History 1999 - 2012

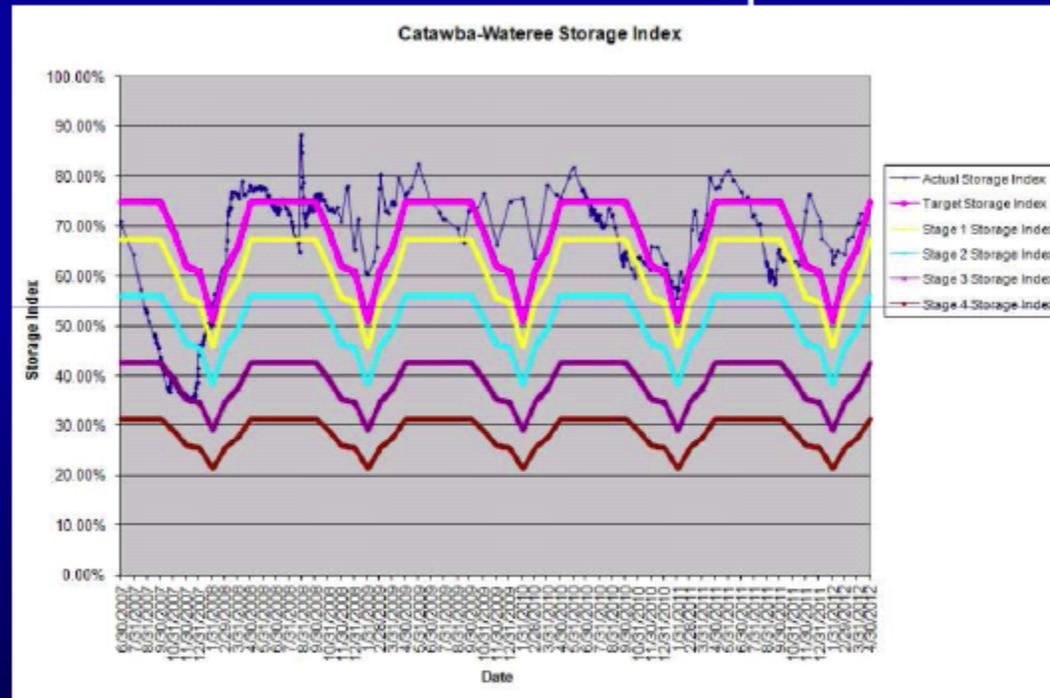


2012 Year to Date actual vs. Duke Energy long term average 9.94 in. or 68.6%

Duke System Average Precipitation Year to Date Compared to Charlotte, NC for the Period January 1 - April 22, 2012



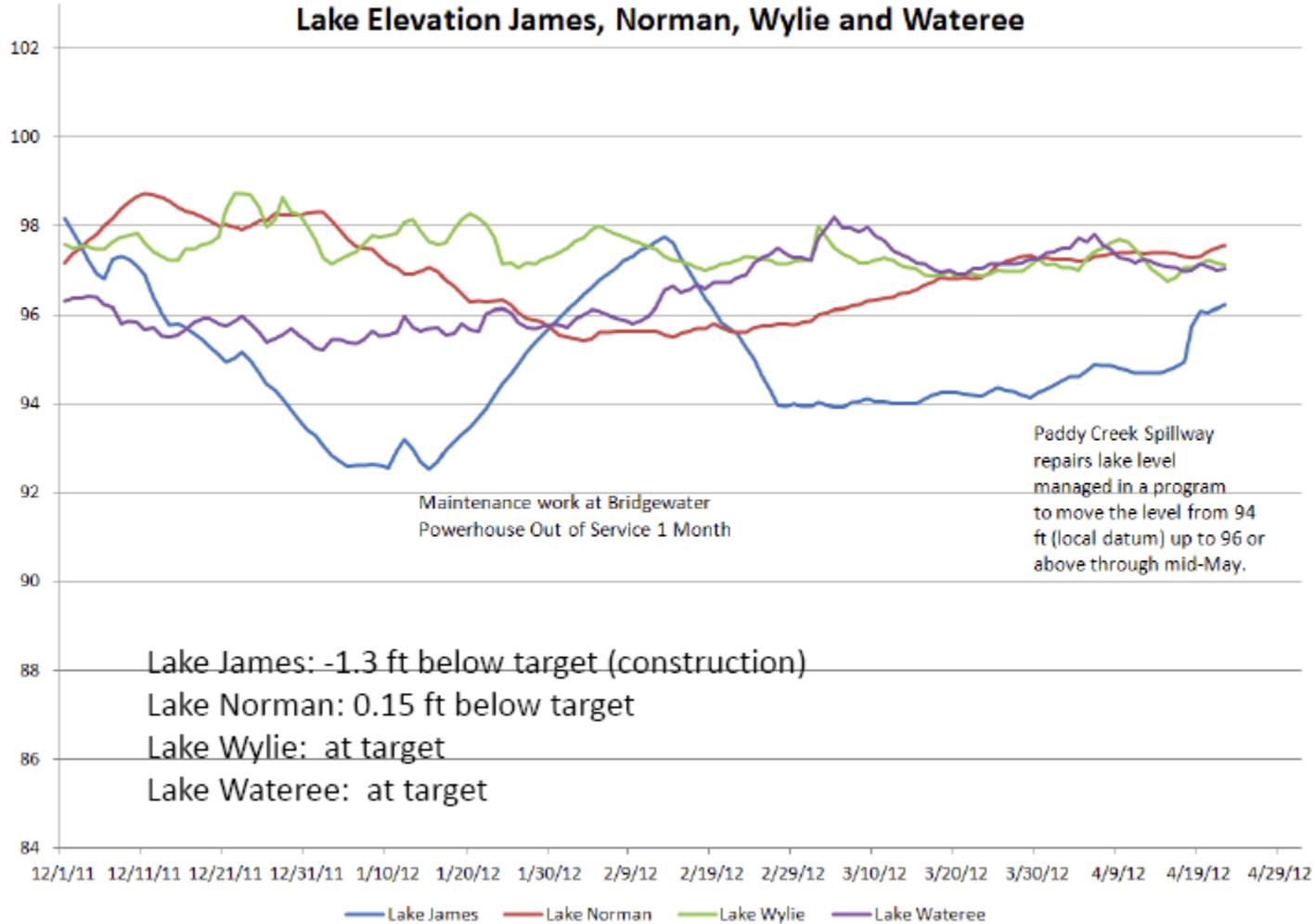
Catawba-Wateree Project Low Inflow Protocol Update

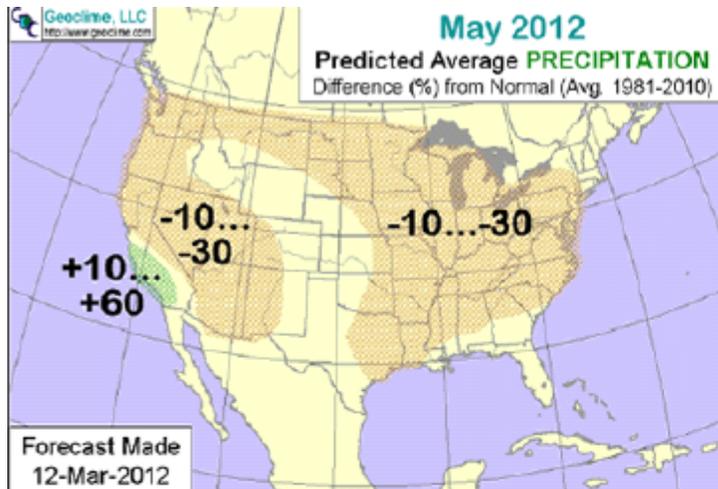


April 12, 2012

Currently the C-W Basin is in a Stage 0 drought but I would not be surprised on gradually declining storage to see the stage go to level 1 in June under current conditions.

Lake Elevation James, Norman, Wylie and Wateree



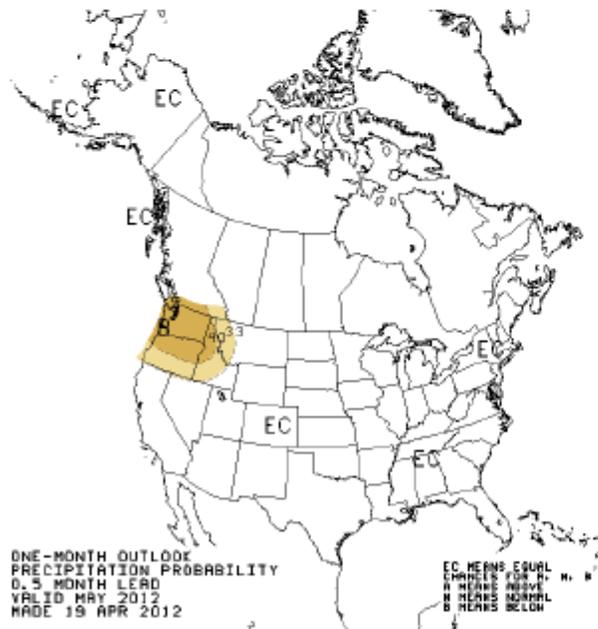


May 2012 Outlook

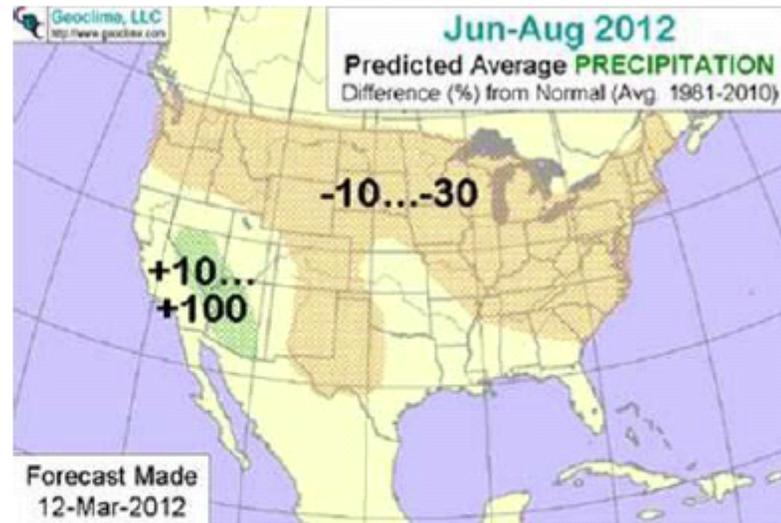
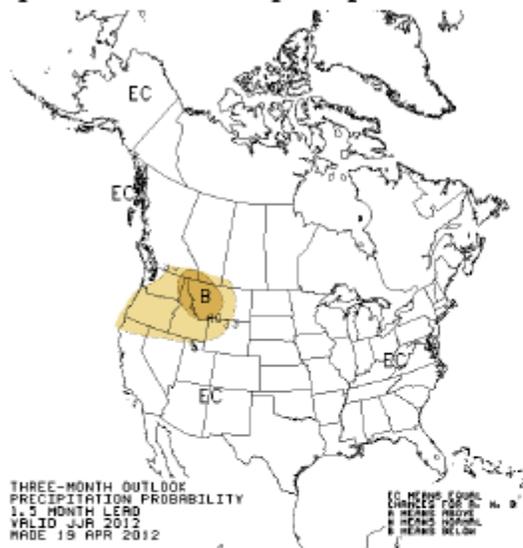
A Duke commercial forecast suggests a below normal probability of precipitation in the C-W, Broad and K-T Basins.

NOAA forecast suggests an “EC” or equal chance for above, below or a normal probability of precipitation for the period for the C-W, Broad and K-T River Basins. Which isn’t much guidance.

An internal Duke Energy Meteorological Staff statistical forecast suggests that precipitation amounts for Charlotte will be 60% of normal for May.



Forecast June – August 2012: NOAA suggests “EC” equal chance probabilities for precipitation for the C-W, Broad and K-T basins. Duke’s contractor expects below average probabilities for precipitation for the period.

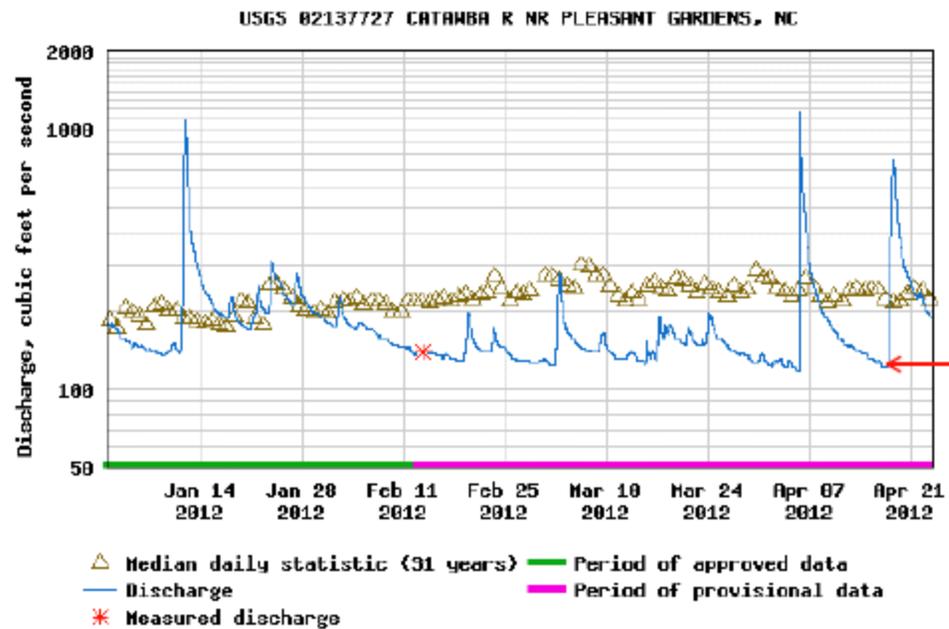


Why the difference I am not sure. It maybe something like NOAA’s forecast is based on their perceived probability of above, normal or below. EC doesn’t necessarily mean that they are predicting a normal summer, but rather there is equal chance of all 3 occurring. I’m guessing that Geoclimate feels that an above normal summer is unlikely. So, if you average equal chances of near-normal and below normal, you get “slightly below normal”. Just a guess!! There really aren’t any strong climatic signals that would suggest above normal rainfall. I know also the forecast is based on analog years and I believe that Geoclimate may select different years as they may not think we will go into El Nino conditions as quickly as the CPC does.

Catawba-Wateree River Basin

Discharge, cubic feet per second

Most recent instantaneous value: 190 04-23-2012 16:45 EDT



Note that prior to this latest rainfall event the streamflow has been about the 5th percentile.

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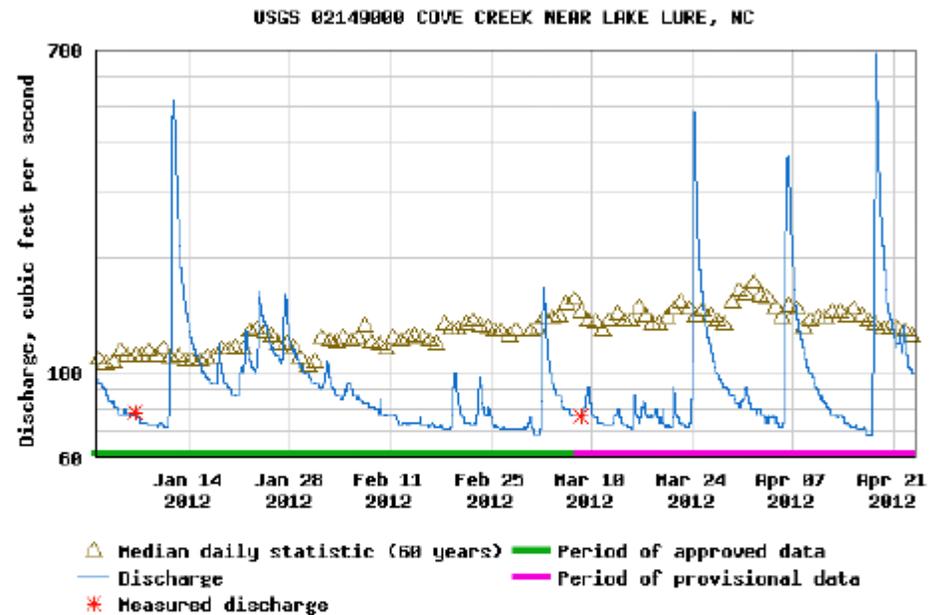
Daily discharge statistics, in cfs, for Apr 23 based on 31 years of record [more](#)

Min (2001)	25th percentile	Most Recent Instantaneous Value Apr 23	Median	Mean	75th percentile	Max (1997)
106	157	190	222	291	372	875

Broad River Basin: receding to below 25th percentile

Discharge, cubic feet per second

Most recent instantaneous value: 99 04-23-2012 16:30 EDT



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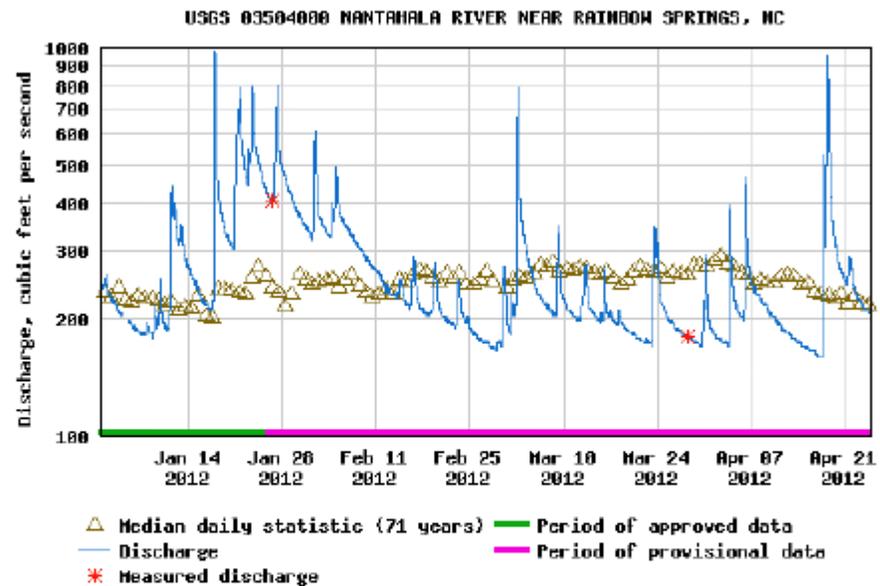
Daily discharge statistics, in cfs, for Apr 23 based on 61 years of record [more](#)

Min (2002)	25th percentile	Most Recent Instantaneous Value Apr 23	Median	Mean	75th percentile	Max (1983)
47	94	99	125	150.	189	433

Nantahala River Basin: below 25th percentile

Discharge, cubic feet per second

Most recent Instantaneous value: 208 04-24-2012 15:30 EDT



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Daily discharge statistics, in cfs, for Apr 24 based on 71 years of record. [more](#)

Min (1986)	25th percent-ile	Most Recent Instantaneous Value Apr 24	Median	Mean	75th percent-ile	Max (1977)
103	175	208	217	229	270.	516

Operations Summary:

1. Drought conditions in the Catawba-Wateree River Basin and to the west are likely to continue into Spring-Summer 2012 and perhaps into the fall. Hydrologic drought in place.
2. Low Inflow Protocol in the Catawba River will continue being management tool for seasonal lake levels. Duke Energy is expecting to manage to summer lake levels.
3. Nantahala Area lakes; Duke expects to manage to summer lake levels and be positioned to support recreation interests in the Nantahala and Tuckasegee Rivers. Low Inflow Protocol if necessary.
4. The Whitewater, Thompson, Horsepasture and Toxaway Rivers located in southwestern NC feeding Duke Energy's Lake Jocassee (in the upper Savannah River Basin in SC) are running well below median levels.
5. High water event management as necessary.