Duke Energy Update
April 6, 2017

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Topics for Discussion

- Low Inflow Protocols (Where applicable)
- Hydro Station Lake Level Trends
- Drought Conditions
- Operations Summary

Low Inflow Protocol Status

- Catawba-Wateree
  - Stage 1 Low Inflow Protocol (Nov 1, 2016)
    - Reduced Minimum Allowed Lake Levels
    - Reduced Minimum Flows
    - Reduced Recreation Flows

- Nantahala, Tuckasegee, Yadkin-Pee Dee
  - Operating under Normal Operations

Catawba-Wateree LIP Trigger Status Summary for 04/03/17 and Changes Compared to 03/01/17

	Reservoir Storage as % of Target	% of 6-Month Long-Term Avg Streamflow	3-Month Avg of US Drought Monitor	Groundwater Levels
Normal	102.1% >=100%	>85%	<0	
LIP Stage 0	>90%	<=85%	>=0	
LIP Stage 1 (Apr 3, 2017)	>75%	<=78%	1.67 >=1	Glen Alpine; Langtree
LIP Stage 2	>57%	<=65%	>=2	
LIP Stage 3	>42%	<=55% 42.0%	>=3	
LIP Stage 4	<=42%	<=40%	4	

To recover to a less restrictive LIP Stage, all four triggers must support that Stage or lower.

Catawba-Wateree Streamflow Gages

Monitored USGS Streamflow Gages:

Gage # 02137727 (Catawba River near Pleasant Gardens, NC)

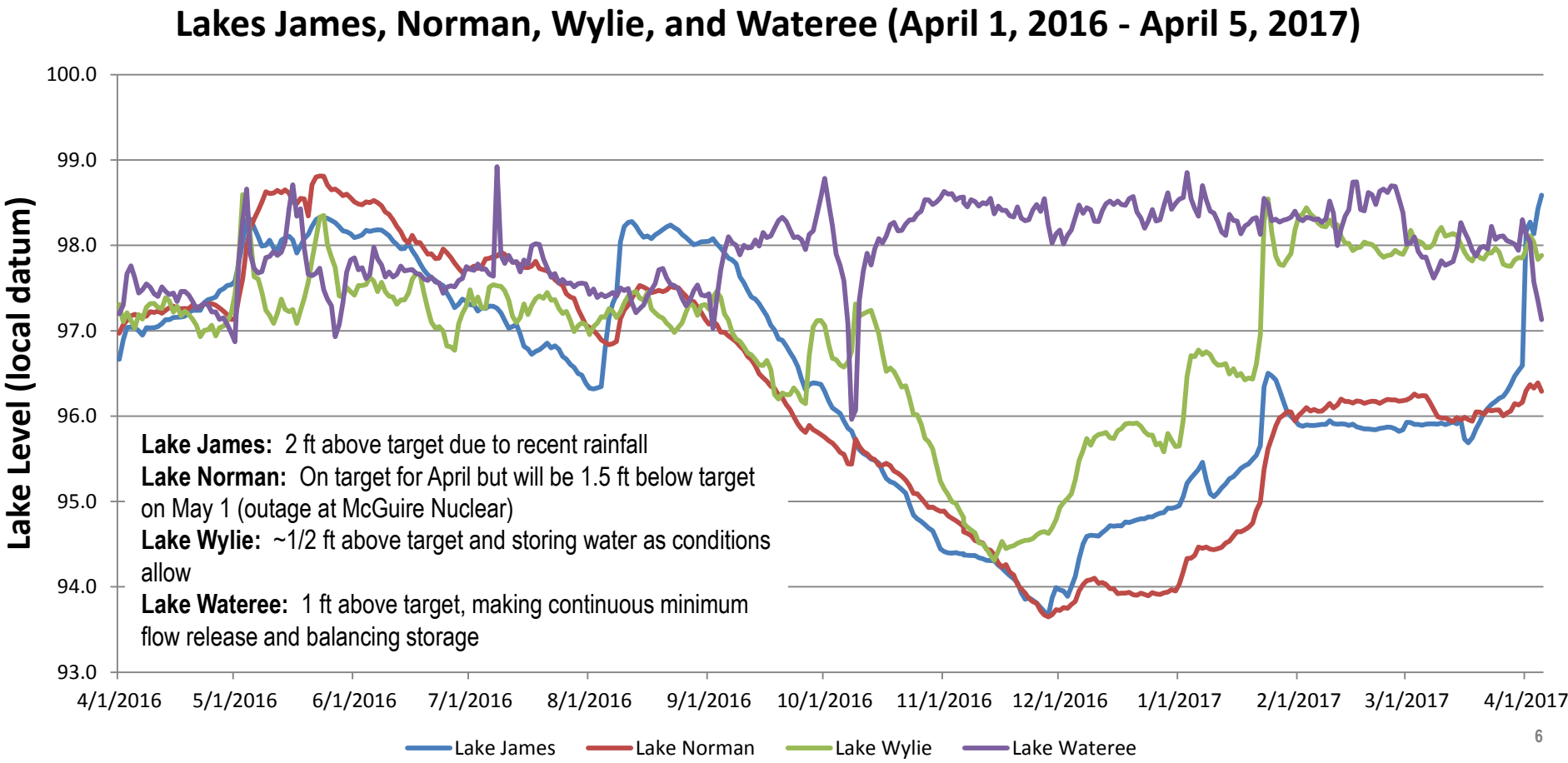
Gage # 02137727 (Johns River at Arneys Store, NC)

Gage # 021450000 (South Fork Catawba River at Lowell, NC)

Gage # 02147500 (Rocky Creek at Great Falls, SC)

Actual Six-Month Versus Historical Six-Month Ratio as of March 13, 2017= 40.6 % (Supports Stage 3 Condition)

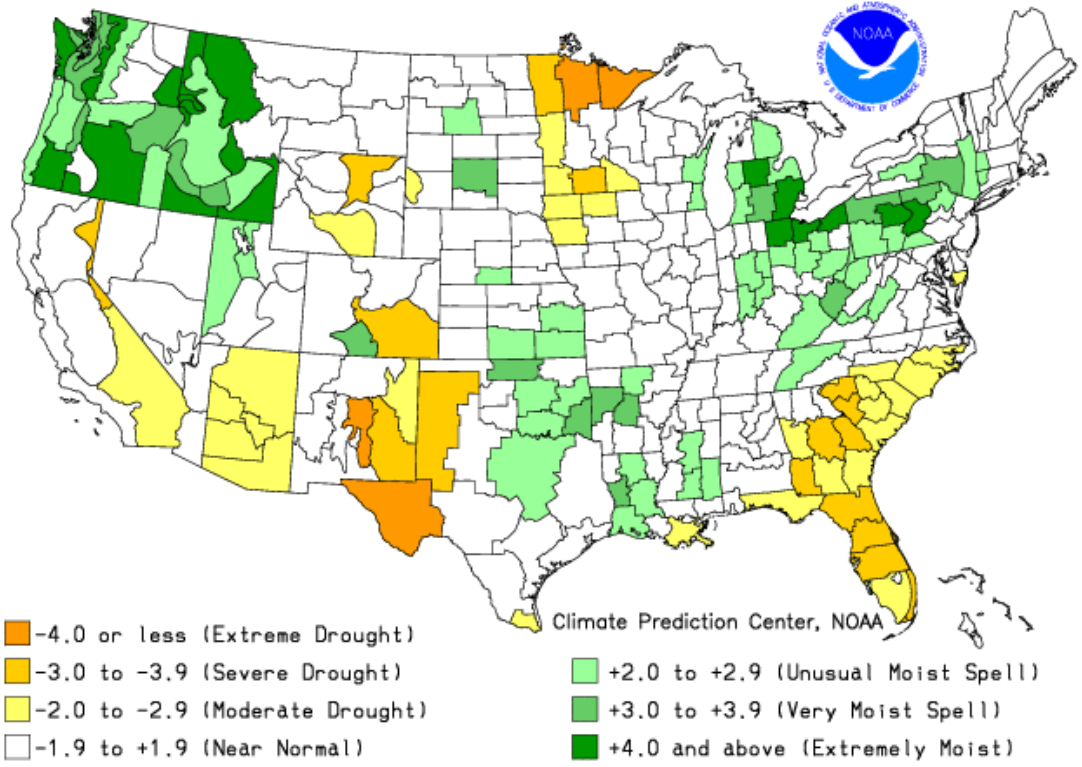
Lake Level Trends



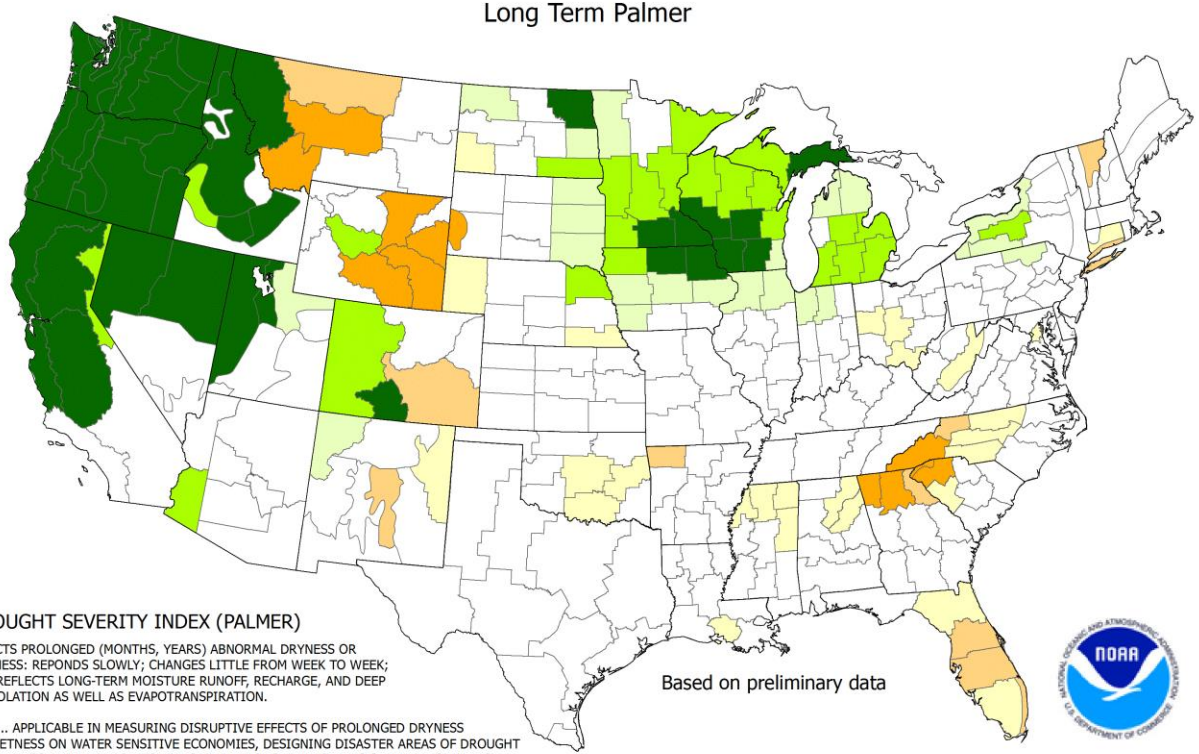
Drought Severity Index by Division

Weekly Value for Period Ending MAR 24, 2012

Long Term Palmer



Drought Severity Index by Division
Weekly Value for Period Ending Mar 25, 2017
Long Term Palmer



DROUGHT SEVERITY INDEX (PALMER)

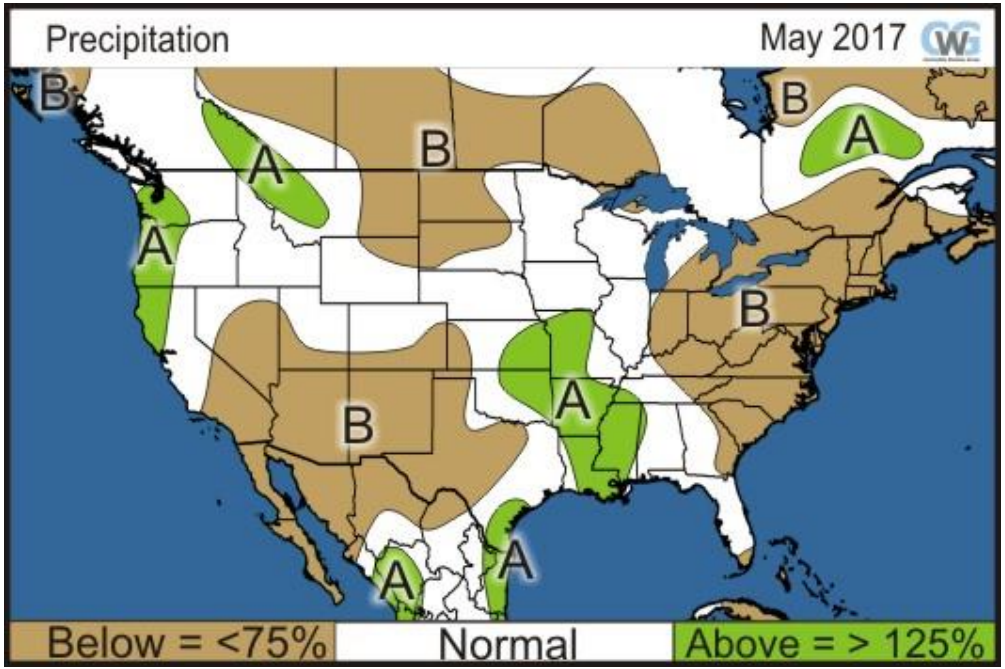
DEPICTS PROLONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS: REPONDS SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK; AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE, AND DEEP PERCOLATION AS WELL AS EVAPOTRANSPIRATION.

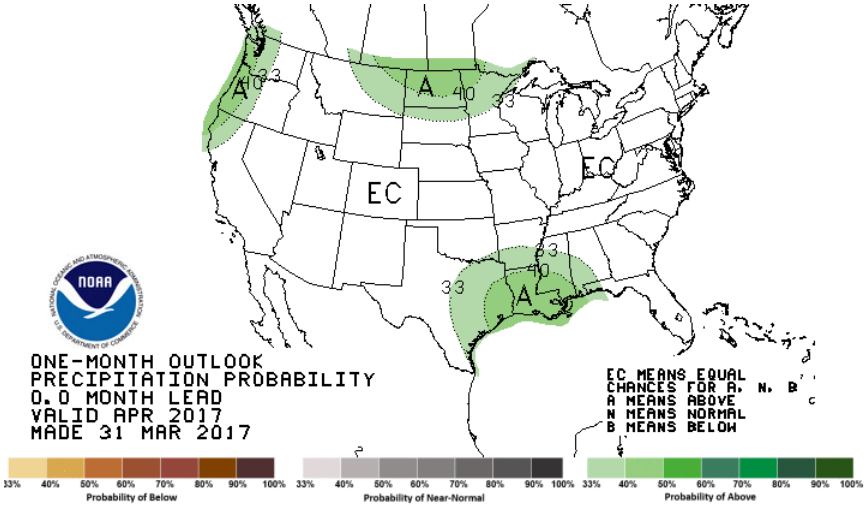
USES... APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES, DESIGNING DISASTER AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL LONG-TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS AND STREAMS.

LIMITATIONS... IS NOT GENERALLY INDICATIVE OFFSHORT-TERM (FEW WEEKS) STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).

- -4.0 or less (Extreme Drought)
- -3.0 to -3.9 (Severe Drought)
- -2.0 to -2.9 (Moderate Drought)
- --1.9 to +1.9 (Near Normal)
- +2.0 to +2.9 (Unusual Moist Spell)
- +3.0 to +3.9 (Very Moist Spell)
- +4.0 and above (Extremely Moist)

Duke Energy Precipitation Forecast through May; NOAA forecast through June





Operations Summary:

- As recreation releases increase this will result in lower lake levels and the potential for the Nantahala and the Tuckasegee to see Low Inflow Protocol (LIP) conditions (resulting in reduced recreation flows)

- The LIP Stage 1 condition in the Catawba-Wateree River will continue through April and potentially May
  - As we move into the recreation season, recreation flows will continue to contribute to lower lake levels.
  - The reduced recreation flows for Stage 1 LIP will help with delaying the C-W from going to Stage 2 LIP.
  - Duke Energy will conserve water with reduced hydroelectric generation, reduced minimum flows and recreation flows

- Duke Internal Meteorologist forecast below normal precipitation through May, NOAA is suggesting EC through June


Questions?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