

NC Drought Management Advisory Council Meeting Minutes

Thursday, April 10, 2014

Meeting Attendees:

Linwood Peele, DWR, NCDENR
Tom Reeder, DWR, NCDENR
Tom Fransen, DWR, NCDENR
Sarah Young, DWR, NCDENR
Christina Thomas, DWR, NCDENR
Rebecca Cumbie, NC SCD
Steve Wall, UNC-IE
David M. Lane, NC DAFS/NCFS
David Smith, NCDA
Mike Money Penny, NWS
Katie Dedeaux, NWS
Nat Wilson, DWR, DENR
Curtis Weaver, USGS
Tony Young, USACE
Bob Taylor, USACE
Barrett Smith, NWS

9:15am

Linwood Peele, Introduction

Tom Reeder, Opening Remarks

Chief Deputy Commissioner David Smith, Welcome Statement

Rebecca Cumbie, Climate Rainfall Outlook:

- 6-month percent of normal across the state, normal-wet conditions.
- 6 month standardized precipitation index indicates rainfall is near normal of ½-1 standard deviation below mean rainfall. No indications of dryness.
- Similar with 3-month percent of normal and standardized precipitation index, as well as 2 month charts.
- 1-month some small amount of dryness in eastern portion of the state.
- 7-day precipitation, western and eastern seen good amount of precipitation.
- 6-10, 8-14 day outlook normal rainfall
- 1-month rainfall and temp outlooks look normal to above normal
- El Niño watch issued, predictions indicate warming trend and probability of neutral spring conditions and possible El Niño at the end of the summer months
- Define El Niño: warm tongue of water in equatorial pacific, oscillation of warm to cold to neutral conditions, determined by 5 consecutive months or moving 3-month period of 0.5 degrees Celsius or higher
- Means increased wind shear and will prevent tropical disturbances, wetter and cooler winter

- Long range seasonal outlook: increased temperature in the summer and cooler, wetter winter predictions

9:25am

Nat Wilson, Ground Water:

- Drought indicator wells, 56 with 34 year record, 14 monitored by USGS, 41 monitored by DWR, 1 well destroyed (USGS well, located in Yadkin county)
- Installed 3 cell phone telemetry systems, successful so far, can help to increase data robustness and accuracy, costs around \$4000. Included modem, battery and instruments to measure barometric pressure and water levels, only costs about \$4 a month to operate
- Review of NCwater.org webpage drought indicator wells map
- Surface water gauge data to calculate base flow; graphic updated weekly
- Reviewed webpage where base flow data and drought well data are shown and then combined data map
- April 2013-2014 drought graphic shows state is much wetter this year

9:35am

Curtis Weaver, USGS, Stream Flows:

- Reviewed Watauga River and Crabtree Creek examples of hydrologic gauges
- 2013 annual data report map for NC, 265 Surface water site and 47 well site data, 23 water quality sites, 143 precipitation sites (just released online map for rainfall precipitation sites which show rainfall levels after rainfall events)
- Overall 7-day average flows across the US, east coast looks good, compared to Midwest and western parts of the nation experiencing drought conditions
- Percentage of sites with 7-day average flows below normal looks better than last year, not exceeding 50% and almost none below average in July of last year.
- Review of average stream flow index by province, blue ridge area drying out a bit over the last months, in “dry” range
- 28-day flow hydrographs show fluctuations around normal but in normal range now
- “Spaghetti plot” percent of median by region, early part of year concerned with northern coastal plain, now concern is around southern blue ridge region
- New record monthly minimum average during 2014 water year at McAlpine Creek in Charlotte, only site in NC
- Below normal 28-day flows July 2004 to current, almost 10 years of record, shows 2007-2008 severe dryness
- As of January 2014-current, percentage of site with 28 day average flows at 25th percentile or lower, extrapolating that 2014 looks to be in a good range during this spring and summer under the assumption we continue to get regular rainfall
- No POR minimum daily discharges for 2014

9:45am

Tony Young, Lake and Reservoir Levels:

- Review of Corps of Engineers Lake levels since April 1, 2013
- Late summer, early fall were below guide curve; Jordan had a cutback once drought plan was triggered, however the rest of the year was wet
- Weekly status report form review, gives a week look ahead and how inflows are looking over last 7 days
- Currently at 100% of conservation/water supply pool, no indications of current concerns
- Kerr Lake Level Forecast; drawdown projected to help meet spawning flows in Roanoke river, not anticipating problems with maintaining summer pools into early part of summer
- Falls Lake level; currently above guide curve due to recent rain, expect to hang on to some water for release to meet spawning flows, still only slightly below guide curves into June
- Jordan Lake levels; above guide line and not below through end of forecast period
- Scott lake level; almost entirely above guide curve in the last year, not expecting any issues in the near future
- Review of website and project status tab to get to these lake level plots

9:55am

Linwood Peele

- George Galleher contacted Linwood and provided information for current levels at Duke Reservoirs – which are or above guide curve
- Linwood looked at local reservoirs such as Asheville, Durham, Rocky Mount, and were all at or above capacity
- Tennessee River system in NC – Amanda Bowen of the TVA requested to be a part of the Drought Council Meeting for next year. She will be invited to be on the agenda to speak next year.
- Amanda sent slides for Linwood to review; Fontana, Chatuge, and Hiwassee tributaries which affect NC, graph shows that water levels of 2013-2014 so far are well above guide curves

10:00am

Mike Yoder, Agriculture:

- 2013, started with cool wet conditions
- Late frost damaged peaches, no issues with larger commodities
- Spring flooding in Burke and Caldwell counties
- Summer was variable and affects all crops in various positive and negative ways
- Hay production was difficult, with marginal quality, horse owners went out of state to purchase better quality hay
- Kudzu bugs and worms worst in recent history
- Crop yields were average to slightly above
- Wet weather limited amount of time farmers could be in the field, however dryer days allowed to make up for this
- Soil moisture percent across the state ranged from 56-72%

- Growing degree days per month, measure of heat units, adequate to get good crop production last year

10:05am

David Lane, Forest Conditions:

- 3568 fires since beginning of fiscal year, 9698 total acres
- Larger fires in coastal plain, more numerous fires in piedmont, average is around 4500 fires
- Outlook for April and May: no significant fire potential
- Fires will still occur but local resources are expected to be able to handle them
- Soils are wet so no peat burning; shallower fires and less smoke production with wetter soils
- NC is in normal range for significant fire potential outlook in April and May 2014
- No drought associated impacts

10:15am

Linwood Peele, Drought Technical Team:

- Reviewed Drought Management Advisory Council website info and drought monitoring map
- G.S. review: Council must meet at least once each calendar year, meet on the call of the chair to respond to drought conditions and issue drought advisories, submit annual report to DENR secretary by October 1st each year
- Made up of experts on aspects drought related topics; engage in weekly teleconference and make recommendations on NC drought conditions
- Issues drought advisories protect accurate and consistent info to local gov't and other water users; provide assistance to specific areas of the state experiencing drought
- Special thanks to Drought Advisory Team

Meeting adjourned at 10:20am