



Location: **Oconee River near Athens – Georgia**

Updated: October 31, 2007

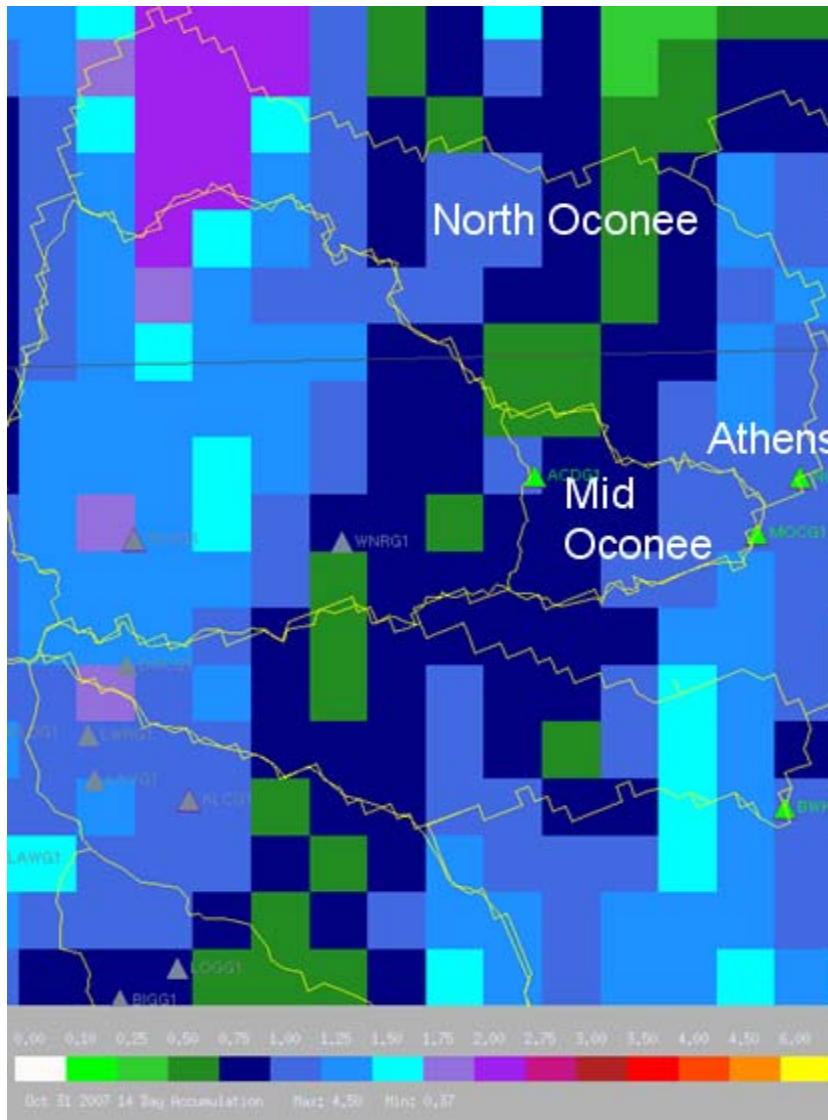
...Significant Drought Relief Not Expected Through November...



Our Forecast – Key Points

- 90% or greater chance for stream flow to average below normal in November.
- Below-normal rainfall predicted in November.

Hydrometeorological Basin Analysis



Hydrometeorological Basin Analysis

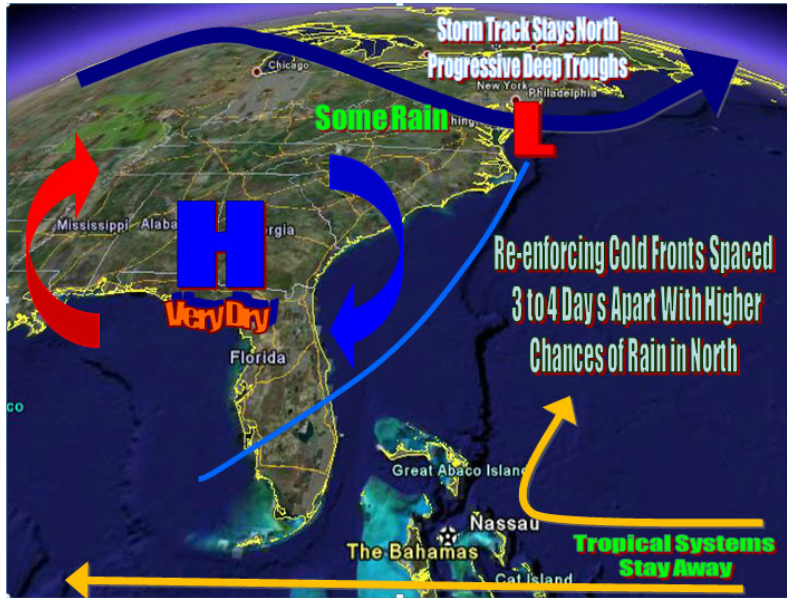
The graph to the left is a 14-day multi-sensor rainfall accumulation analysis of the Oconee River Basin above Athens, Georgia. It is derived from radar and rain gage estimates, adjusted as needed by SERFC hydrometeorologists.

This graphic shows rainfall over the North Oconee averaged from 1 to 2 inches and across the Middle Oconee 0.75 inches.

While this was a welcome rain, due to the very dry soils, very little runoff occurred.

Hydrologic response, if any, was minimal.

Looking Ahead Through November



While some welcome rain fell over Central Georgia the last two weeks of October, unfortunately, it does not look like this will be the start of a new trend towards a wetter pattern.

As heavy rain made its way across Mississippi and Alabama to the west, and the Carolinas and Virginia to the northeast, Central Georgia missed out. The month of November is looking to be another dry month, with below-normal rainfall. November will look more like October for the North Georgia area – cool and dry. Peak autumn colors are still a few weeks away, which is indicative of the warmer than normal October temperatures.

Numerical weather models are indicating a very dry atmosphere the first half of November.

For the first half of November, a progressive jet stream across Canada and the northern United States will bring quick-hitting deep troughs and fast-moving cold fronts to the southeast U.S every three to four days. However, these cold fronts will only bring slight-to-moderate rain chances to Georgia. This speed of the fronts will not allow sufficient time for moisture to be transported northward. Models indicate that total basin average rain accumulations through mid November will be no more than $\frac{1}{2}$ to $\frac{3}{4}$ inch over the Oconee Basin.

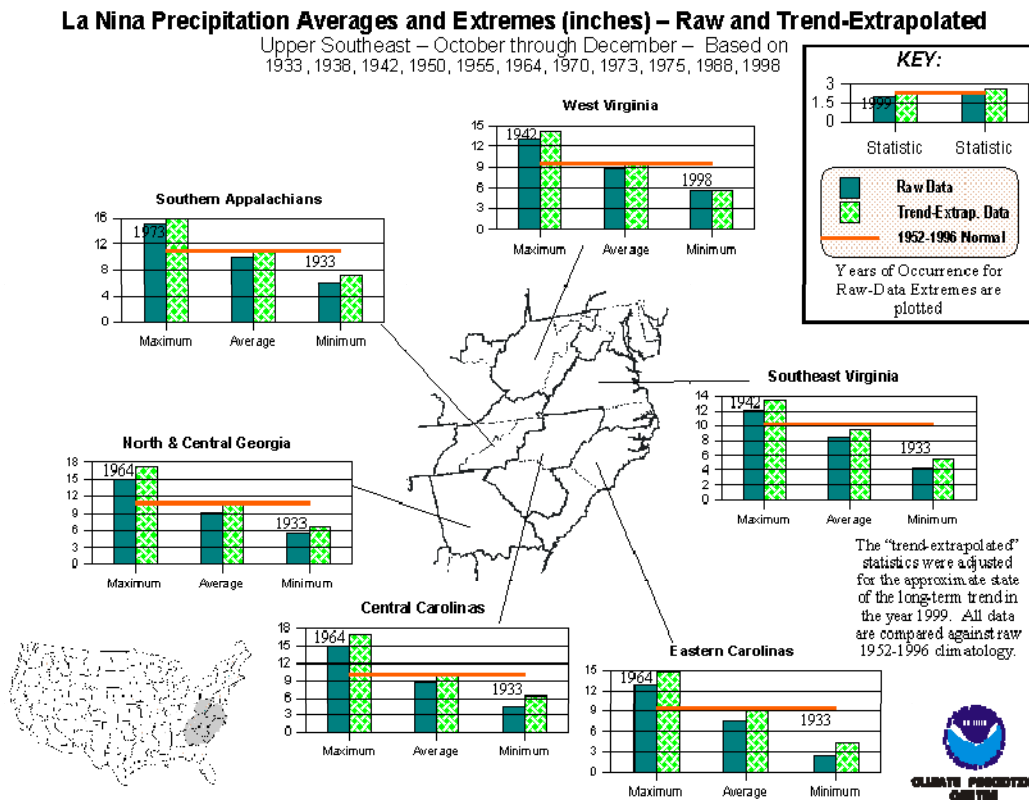
After the mid part of November, there is some uncertainty, but dry conditions are highly likely to continue through December 1st.

Longer-Term Outlook

The Climate Prediction Center's (CPC) forecast for November through January continues to show an elevated chance for below-normal precipitation. An explanation of what these percentages mean can be found in the last two Critical Water Watch issuances. This forecast is based on strengthening La Nina conditions in the equatorial Pacific Ocean. Signals from previous La Ninas are represented in figure 1. The north and central Georgia regions are represented in this schematic produced by CPC.

Average rainfall for the October through December time frame is near 11 inches, with the average during La Nina years being between 9 and 10 inches. There have been years that have been well above and well below normal based on a La Nina signal. The Ohio and Tennessee River Valley areas tend to be wet during the winter during a La Nina event. Therefore, the gradient between above and below normal is just north of Georgia. This leaves north and central Georgia with more potential for improvement for the rest of the fall season and early winter.

Figure 1.



As we shift out of the dry fall season and move towards winter with lower evapotranspiration rates, December and January should offer a better opportunity to see improvement. The next Critical Water Watch in mid November will begin to look at winter rainfall potential.

Technical Discussion

The figures below are two Ensemble Streamflow Prediction (ESP) forecasts for the Middle Oconee River near Athens. Figure 2 was initiated on 10/15 and Figure 3 on 10/29. The window of the forecast remained 45 days and therefore the second forecast included half of December in its prediction. This is probably the largest reason for the minor change in the forecast as we move closer to the winter wet season and out of the typically dry fall season.

Unless tropical activity is normal to above normal in the fall, we can expect rivers, creeks, and reservoirs to recede due to higher evapotranspiration rates than rainfall.

Figure 2

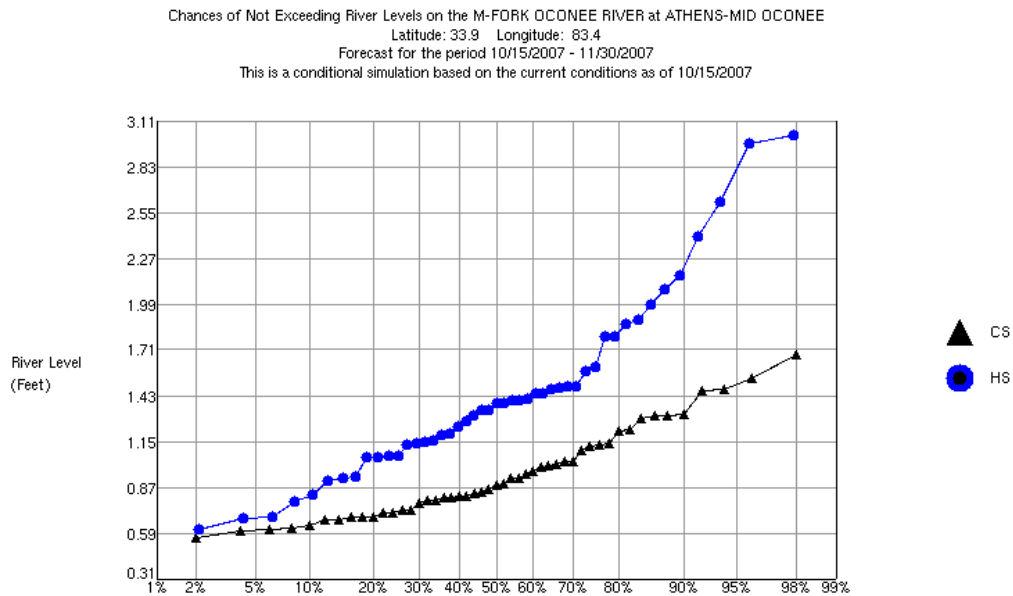


Figure 3

Chances of Not Exceeding River Levels on the M-FORK OCONEE RIVER at ATHENS-MID OCONEE
Latitude: 33.9 Longitude: 83.4
Forecast for the period 10/29/2007 - 12/15/2007
This is a conditional simulation based on the current conditions as of 10/29/2007

