

Outlook for the Arkansas and Eastern Oklahoma

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The drought in eastern Oklahoma and western Arkansas that has developed since the spring of 2012 is expected to see very little improvement during late July and August. Rainfall is still expected to remain below average even though some rainfall events may occur. The long term drought will likely remain in place well into the middle of August and in fact could persist or even deepen through September.

Fourteen and thirty day precipitation deficits are present in both Oklahoma and Arkansas. The worst conditions are actually occurring in Oklahoma. Rainfall over the past 30 days in Oklahoma has ranged from about 5% to 15% of normal. In Arkansas, the most significant deficits are across the northern two-thirds of the state. Rainfall totals during the same time period range from 10% up to about 25% of normal. Keetch Byram Drought Indices (KBDI) are above 650 in eastern Oklahoma, and range from 575 to 625 across Arkansas. These values are about 100 to 200 points above normal for July. Rainfall deficits also extend into much of Missouri as well. Triple digit heat will continue to produce low relative humidity minimums in the 20%^s across the region as a large dome of high pressure remains parked over the area. Occasionally RH minimums will drop into the teens. These low values will allow fuel moisture contents to remain low, even among the larger fuel classes, and be available for involvement in any fires that do occur. These conditions could persist well into August.

During the latter half of August, there is some indication that the large dome of high pressure will begin to move westward. If this happens, Oklahoma will continue to see persisting dry conditions. Arkansas and Missouri however, will begin to see more frontal passages and more opportunities for some much needed rain. Southern Arkansas may see a little recovery from occasional westward moving tropical waves that move across the northern Gulf of Mexico. It must be emphasized however, that southern Arkansas will be on the northern periphery of any of these events and the more significant rain will likely stay well south. The rains that do occur under this scenario will not significantly lessen the drought, but will provide some temporary relief to the drying of fuels.

In the larger scale weather pattern, the waters of the equatorial Pacific are warming. This signals a gradual return to El Nino conditions. El Nino is typically a wet scenario for the Southeastern US, but is most strongly correlated to wet conditions in the cold season. This particular event is expected to remain rather weak and also be rather short lived. A transition back to the drier La Nina (cold waters in the Pacific) is expected during 2013. The wetting effect of El Nino would likely not fully manifest itself for Arkansas and Oklahoma until the fall or winter. In the meantime, rainfall is likely to remain at or below average levels.

The current rainfall deficit is one indication of the elevated fire potential that is in place over eastern Oklahoma and western Arkansas. The forecast of below normal rainfall is another. Our monthly outlook highlights eastern Oklahoma and western Arkansas in high fire potential. The higher potential is also forecast for the seasonal outlook currently in place for the August-September-October timeframe. Some improvement may begin to be seen during the middle to latter half of October if El Nino is well established by that time.

There are several events that would alleviate fire conditions in Arkansas and Oklahoma. The first one is a tropical event to move just west of the area. While that could happen, it has a very low probability of occurring. The second event that would reduce or even eliminate the elevated fire conditions across this region would be repeated frontal passages that produce widespread showers and thunderstorms. This has a higher probability of occurring than the tropical event, but is certainly not foreseen at this time. Finally, if high pressure settles over southeast Georgia or the adjacent Atlantic waters, the result would be higher humidity levels in Oklahoma and Arkansas and a decrease in fire potential. This scenario would not necessarily provide significant rain, but even the hit and miss

thunderstorms would gradually lessen the threat for fires. This too, is not foreseen to be a dominant set of circumstances during July or August, even though it may occur for brief periods from time to time.

