

DROUGHT IMPACT

April 2003

By Pat Guinan

As of April 8, 2003, the drought still persists over much of northern and west central Missouri. There have been improvements over southwestern Missouri due to numerous snow events this past winter and above normal precipitation in February. Additionally, periodic precipitation events in March over northeastern, central, and southern Missouri have contributed in decreasing the coverage of the current drought.

Unfortunately, drought conditions have continued to deteriorate over west central and northern Missouri, especially over north central and northwestern sections. Despite a notable rain event during the middle of March in the drought region, deficits continue to accumulate across most of northwestern and north central Missouri. Some locations in northwestern Missouri have gone 10 consecutive months with below normal precipitation. Since June 2002, 10-month precipitation deficits were approaching or exceeding 16", or just over 40% of normal for several communities in northwestern Missouri including St. Joseph and Kansas City. There have been numerous reports in northwestern Missouri of residents hauling water for themselves and/or their livestock due to low water levels in wells and empty ponds. According to the Missouri Agricultural Statistics Service, subsoil moisture supplies were reported to be 98% short to very short in the northwest district. The north central and west central districts were reporting 94% and 93% subsoil shortages respectively. Rivers and streams in northern Missouri are at low water levels experienced in one out of every 10 years. Lake and reservoir levels are also well below normal. One of the lakes associated with the Grindstone Reservoir in Cameron, MO is estimated to have only a 77-day supply of obtainable water.

It is imperative that a wetter regime establish itself across northern and western Missouri over the next several weeks in order to begin replenishing water supplies above and below the ground. If not, more impacts will be felt with the advance of the growing season and hotter temperatures.

The latest outlook issued by the Climate Prediction Center reveals a lot of uncertainty in terms of the expectation of rainfall for Missouri. Currently, the outlook for April calls for equal chances of above, below, and near normal precipitation. Equal chances also exist for above, below, and near normal precipitation for the combined months of April, May, and June. With this sort of forecast, the best forecasting tool to use is climatology.

Climatologically speaking, spring is the wet season for much of Missouri, especially for northern and central sections of the state. April precipitation is more than double what usually falls in February. And May and June are the wettest two consecutive months for much of the state. In fact, for northern Missouri, as much as 35% of the normal annual rainfall occurs during May, June and July. So, climatologically, the best opportunity to put a dent in this drought will come during these months. This is precisely what happened during June and July of 2000. In May of 2000, northwestern and south central Missouri were experiencing severe to extreme drought conditions. There was little moisture in the soil profile at this time, and it was timely June and July rains that sustained the crop through the growing season.

This year, as like most years, it is very difficult to estimate how much rain will fall this spring and summer. Inevitably, hot temperatures with longer days will arrive which will increase the evaporation rates over bodies of water and soils, but rainfall normals are also highest during this time of year. In the short term, the signs are encouraging. Over the past few weeks, a stormier weather pattern has established itself over the central United States. Portions of northern Missouri have seen more precipitation over the past 3 weeks, than over the past 5 months preceding this wet period. The latest outlook for next week forecasts another strong storm system to move out of the southern Plains as early as next Tuesday and bring another round of widespread showers and thunderstorms to the region.