

North American Drought Monitor –February 2006

Canada: Because of relatively high soil moisture reserves from 2005, most areas in southern Canada are not at much risk of drought in spite of having low snow accumulations. Exceptions are southeastern Saskatchewan and southwestern Manitoba, where abnormally dry conditions (D0) exist. Well below average precipitation amounts were recorded in the northern, central, and Peace River regions of Alberta and BC, and thus they are rated D0. This area expanded to western Saskatchewan in February. Moderate drought (D1) exists in the northern and Peace River regions of Alberta and BC, where some agricultural impacts are possible in terms of animal feeds.

Because of the low snow accumulations in the entire plains area of Alberta and western and southern Saskatchewan, below-average runoff is expected in the spring. Water use in the spring will be monitored closely.

In Manitoba, snow cover was average to below average in the southern areas. The potential for large-volume flows in the southern areas is low. In the southeast, Interlake area, and western Manitoba, the lingering effects of the wet conditions of 2005 left ample soil moisture and this may bring about higher than average flow volumes. Water supply problems are not expected

Based on trends of river flow volumes in Ontario, which have ranged from average to above average, no shortages in flow volumes are projected at this time. In Atlantic Canada, precipitation was near average in most areas except southern New Brunswick, where conditions were rated abnormally dry (D0) because of low precipitation amounts. Based on the limited snow accumulation in Atlantic Canada, the spring water supply may be affected unless average to above-average spring precipitation is received.

United States: February was a dry month across much of the United States. For the month of February, only 2.4 percent of the United States was considered very wet, compared to 18.3 percent considered very dry. Severe to extreme drought affected about 15 percent of the contiguous United States as of the end of February 2006, an increase of about 7 percent compared to January. The driest locations during the month were in the Central Plains, where Kansas experienced its driest February on record. Much of the Plains states were at or near record-low precipitation for the month, with several individual stations recording all-time record low amounts. The winter of 2006 will go down as the driest on record for numerous locations in both Arizona and New Mexico. Homeowners in the Tucson area have been forced to water cactus and other native plants in their landscapes to keep them alive. Phoenix again ended February with no measurable precipitation. For the first time ever, the months of November, December, January, and February were completely dry, without even a trace of precipitation. Overall for the United States, February was the 9th driest on record, with temperatures near normal, as it was the 68th warmest February on record. There was a significant winter storm the second week of February, as an upper-air Pacific low slowly tracked eastward across northwestern Mexico, eventually merging with a low pressure center that became a

Nor'easter that blanketed parts of the mid-Atlantic and New England with heavy snow (including an all-time record 26.9 inches of snow in New York's Central Park); however, being moisture-starved in the Southwest, it only dropped 0.1 to 0.3 inches of rain on southeastern Arizona while keeping the rest of the region dry.

During the month, the southern Plains continued to push further into extreme to exceptional drought status. The D3 conditions in Oklahoma in Texas slowly crept toward the west, as impacts were being experienced in much of central and west Texas in the form of fires. As of February 17, more than a dozen large active wildfires were burning in eastern Oklahoma, adding to the 2006 national total of 390,190 acres charred--much of it occurring in the southern Plains (5-year NIFC average: 20,953 acres). Midland, Texas, provides a good example of the expanding drought in western Texas. During the past 4 months (October 20-February 20), only 0.24 inches have fallen, the 3rd driest such period since 1948. And farther north, according to the Oklahoma Climatological Survey, the statewide average precipitation ranked driest on record for the past 90, 120, and 180 days, 3rd driest at 365 days, 5th driest at 60 days, and 15th driest the past 30 days, with the shorter times benefiting from recent rains in the southeast. The D4 conditions expanded in eastern Oklahoma, while much of the D4 in northeast Texas was reduced by timely precipitation. In south Texas, a new area of D4 was added to include the area from San Antonio to Laredo to Corpus Christi. Record dryness over the last 12 months, crop failure, and a severe lack of soil moisture led to this expansion of drought conditions.

The Midwest and Delta regions also had changes in drought status for the month. Southeast Arkansas saw improvements as several weeks of rains brought relief to that part of the state. A steep gradient in drought conditions was also established in Arkansas during February. Much of the central and western parts of the state did not show any recovery and slipped further into drought. For example, according to the February 16 Little Rock WFO Drought Information Statement, Ft. Smith (west-central Arkansas) only received 4.35 inches (39% of normal) while Crossett (southeast Arkansas) measured 15.06 inches (80% of normal) during November 1-February 15. In Missouri, the drought expanded during February with the state showing abnormally dry conditions all the way to D3 conditions in the southwest corner of the state. According to the February 21 Springfield, Missouri, WFO Drought Information Statement, only 0.01 and 0.09 inches have fallen at Joplin and Springfield, MO, this month, respectively, while Cape Girardeau measured 1.97 inches. Many southwest Missouri reservoirs and lakes remained well below normal, with some reporting as low as 59% capacity. Farm stock ponds are also well below normal, with some shallow ponds nearly or completely dry and shallow wells running dry or at very low pressure levels.

Abnormally dry conditions in the Mid-Atlantic region also declined in February. A dry winter, combined with low streamflows, and reservoir levels that are well below normal for this time of year continued to expand the D0 conditions into Virginia and Kentucky, while D1 conditions in North Carolina also expanded. With no agricultural impacts being reported, this area is delineated with the hydrological label.

Mexico: Most of México continued to see below-normal precipitation during February. The long-term dry conditions across northern and central Mexico reinforced drought impacts over those regions. Nationwide, the National Meteorological Service (SMN) ranked February 2006 as the third driest February since 1941. Approximately 90% of the nation received below-normal precipitation. According to the SMN, the present season represents the third driest winter (November to March) for the period 1941-2006. To date, the worst conditions are in northwest Mexico, including southern Sonora, northern Sinaloa, southeastern Chihuahua, and the western part of Durango, where drought is affecting cattle ranchers and water availability for all uses. The federal agency responsible for monitoring fire activity, CONAFORT (Comisión Nacional Forestal), reported 1,819 fires for the period January 1 to March 9, the second-most active fire season during the last ten years (only 1998 was more active). During the same period, 17,431.43 ha (43,073.06 acres) of pasture was burned. On the national level, the National Water Commission (CNA) reported that the available water for irrigation is equal to normal for this time of the year but is declining very fast, while the available water for municipal use since the first of January is below normal and declining.

Changes for February include the introduction of the extreme drought category (D3) in northwest Mexico, including areas south of Sonora and north of Sinaloa, and southwest Chihuahua. This area of extreme drought is well reflected in the February PDSI map. Severe drought conditions also expanded over northwest Mexico (most of Sonora, the west half of Chihuahua, and portions of Sinaloa and Durango), while moderate drought conditions (D1) increased over central México. The only area without drought is southeastern Mexico, including the Yucatan peninsula. Since the official monthly rainfall forecast indicates below-normal precipitation nationwide during March, April, and May, the CNA recommends that users conserve water.