

North American Drought Monitor – May 2008

CANADA: The drought situation generally improved throughout the month of May, however east central Saskatchewan and West Central Manitoba have emerged as new areas of concern. Significant precipitation in Alberta has resulted in noteworthy improvement and a reduction in drought severity and extent. Some minimal improvements occurred throughout southern Saskatchewan and portion of Manitoba however the improvements are generally small and fairly localized. Water supplies are still a significant concern across the southern prairies.

In British Columbia, near normal snowpacks throughout most of the Rocky Mountains has resulted in near normal runoff for most of the province. The Okanagan and Similkameen regions, of south central British Columbia remain the only regions that have experienced below normal runoff. This region has also received below normal precipitation however there is limited concern for drought in this region at this time. Below normal snow pack in these regions has resulted in lower than normal runoff and concern for summer water supplies. Precipitation in north-west regions of British Columbia have also been below normal this past month however at this time remain unclassified due to limited impacts and surplus of water supplies.

Southern and central regions of Alberta received significant precipitation in May resulting in considerable improvement. Some regions of Southern Alberta received over 165 percent of normal precipitation (between 80-130 millimeters (3.15-5.12 inches)) in May and 130 percent of normal for the two month period beginning in April. Water supplies in some regions of southern and central Alberta still remain a concern; however the large irrigation reservoirs in the southern regions of the province have filled.

Conditions in most southern regions of Saskatchewan and Manitoba also improved, however not to the same degree as Alberta. Significant portions of Saskatchewan and Manitoba remain very dry, with well below normal on farm water supplies due to low winter and spring precipitation. Some improvement was seen in Southwest Saskatchewan where the cypress region and regions boarding Alberta received near normal May precipitation. Water supplies continue to be a significant concern for producers in southern Saskatchewan. With limited snowpack and a very slow melt this spring, dugouts and other traditional water supplies did not recharge. East central portions of Saskatchewan have emerged as a Moderate Drought (D1) this month. This region experienced below normal winter snowpack and well below normal spring precipitation. In May this region experienced very dry conditions with some regions experienced 10-20 percent of normal rainfall and a two month value of below 40 percent of normal. Similarly, west central Manitoba has received very little precipitation in the past month. This region has been downgraded from Moderate Drought (D1) to Severe Drought (D2) as a result.

Central Canada continued to receive normal or above precipitation throughout May. There are currently no drought concerns throughout this region.

Conditions through the Atlantic region remain relatively unchanged since last month. There are presently no drought concerns to report however below normal rainfall has been received this spring. A region of Abnormally Dry (D0) has been added to this month's assessment to show the area most significantly impacted by lower than average spring precipitation. Regions of northern Nova Scotia, portions of Prince Edward Island and southern Newfoundland also remain drier than normal however at this time there are no concerns as water supplies and soil moisture is adequate.

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UNITED STATES: During the month of May, the drought situation improved significantly over the United States. The month ended with 37.1 percent of the United States categorized as abnormally dry or in drought, compared to 45.1 percent at the beginning of the month. Temperatures were below normal for much of the United States during May, and the northern Rockies, central Plains, and Midwest all recorded above-normal precipitation.

May started off with a late spring snowstorm in the High Plains region. Snow water equivalent was very high with this storm, and portions of Montana and South Dakota recorded 2-4 inches (51-102 millimeters) of water with this snow. Along with the snow, much of the Plains states saw ample rainfall as well, leading to reductions of drought intensity in portions of Nebraska and Kansas. After a very wet start to the year out west, very little precipitation has been recorded since early February. Cooler-than-normal temperatures have helped to reduce impacts associated with dryness up to this point.

The active weather pattern continued into the second week of May. Severe weather and a slow-moving storm system brought ample rains to the Southeast and Mid-Atlantic states. In portions of Maryland and Virginia, 4-7 inches (102-178 millimeters) of rain were recorded and led to some flooding events. In Alabama, 2-4 inches (51-102 millimeters) of rain helped to recharge soil moisture, but did not eliminate the long-term drought concerns for the region. Many locations in the Plains recorded several inches of rain as an active storm pattern continued for the region. In Texas, Oklahoma, Kansas, and North Dakota, these rains did take place on the main drought regions, but were only enough to

slightly improve overall conditions and help alleviate short term dryness. Portions of Wyoming, Colorado, and Montana recorded 1-4 inches of precipitation, helping to improve D1 conditions. Outside of Arizona, reservoir levels in the West remain below normal for this time of year. The main cause of this is the delay in snowmelt in the region.

Another wet and cool week has allowed for improvements to drought intensities over the Southeast, south Texas, and the central Plains. Heavy rains along the Gulf Coast helped to improve D0 conditions there with 4-8 inches (102-204 millimeters) of rain across portions of Louisiana and Mississippi. Southern Georgia and northern Florida were not as fortunate, as abnormally low rain totals allowed for the drought conditions to spread and intensify over those regions. Continued lack of ample precipitation (less than 25 percent of normal since October) in portions of southwest Kansas and the Oklahoma/Texas panhandle has warranted the introduction of D3 conditions. Impacts on winter wheat crops in the region as well as lack of grazing were widespread.

As May came to a close, drought intensity and spatial extent continued to improve for the United States. In the West, the elimination of D2 and the reduction of D0/D1 in Montana and the elimination of D0 in Arizona and New Mexico were shown. Drought conditions continued to improve in south Texas as well as in portions of the Southeast.

MEXICO: In May, accumulated precipitation at the national level was 39.5 millimeters (1.6 inches), this is only 2 percent under the climatology which is 40.2 millimeters (1.58 inches), calculated for the period 1941-2007.

Most of the precipitation was associated to the passing of three cold fronts as well as to transitory low pressure systems. By the end of the month Tropical storms Alma (Pacific) and Arthur (Caribbean) had effect on precipitation especially in the southeast of the country.

Distribution of the rain during the month was mainly over Veracruz and north of Oaxaca, the states of Chiapas and Tabasco and the Peninsula of Yucatan. In this latter area the most significant anomalies registered were in the states of Campeche (89.1 percent over the normal), Chiapas (48.7 percent) and Tabasco (20.7 percent); A significant change during this month was registered in Coahuila, where there was a precipitation anomaly of 93.9 percent over the normal.

By contrast, most of the northern and northwestern regions of the country had negative anomalies; the most significant were Baja California Sur (100 percent below normal), Sinaloa (99.2 percent) and Nayarit (99 percent).

Drought conditions in northern Coahuila, Nuevo Leon and Tamaulipas improved from exceptional and extreme (D4 and D3) to severe and moderate (D2 and D1), this was a result of heavy rain in the zone, however, moderate drought condition remains for most of the region, this has had consequences for farming and livestock.

In spite of the rain derived from the passing of cold fronts, 43, 44 and 45 over northern Mexico, abnormally dry condition (D0) remains over a great extent of Sonora, Chihuahua, western Coahuila and northern Durango.

Lack of precipitation during recent months as well as high temperatures over south of Chihuahua, Sinaloa, Zacatecas, Tamaulipas, Jalisco, Colima, Michoacán, Estado de México and Guerrero made moderate drought condition (D1) remained.

In western Mexico the same conditions did not allow for improvements of the long term drought (hydrological) in some regions of Nayarit and Jalisco, thus D3 condition expanded to the north, to center and south of Durango. Also, severe drought condition (D2), which has affected southern Jalisco and Michoacan during recent months changed to extreme (D3).

A new area with severe drought condition (D2) centered in Michoacan, expanded to the south of the state, the north of Guerrero and south of Estado de Mexico.

The Peninsula of Baja California continues with the drought conditions as in the last month. Abnormally dry to severe drought (D0 and D2); these have remained for some months now.

A ribbon of abnormally dry condition (D0) affects the states of Guanajuato, Querétaro, Hidalgo, Tlaxcala, Puebla, Guerrero and Oaxaca. Veracruz, Tabasco Campeche, Quintana Roo and some areas of Yucatan and Chiapas showed conditions D0 to D2, even though these states registered precipitation during the month due to the passing of the cold front 45 and tropical storms Arthur and Alma.

CONAFOR reported that during May, there were 1567 fires reported. These affected an estimated area of 61,071ha (152,677 acres), mostly covered by scrubs and grass and some wooded areas. The states affected are: Chihuahua, south of Coahuila, Durango, Sinaloa, Nayarit, Michoacán, Guerrero and Oaxaca.

As for the report on the changes to dam volumes in the country, CONAGUA has registered a decrement in the volume for most of them in the different regions. Northern from 47 to 45 percent, North-Central from 61.2 to 59.7 percent, Northeastern from 46.5 to 45.9 percent, Central from 53.1 to 51.5 percent and Southern from 28.1 to 26.7 percent.