

North American Drought Monitor – Discussion – July 2004

CANADA: Growing season precipitation has been near average in much of British Columbia with the exception of the northeast Peace River region, southwest coastal region, and Vancouver Island. The most significant concern for BC is the low surface and groundwater levels resulting from the low snowpack accumulation last winter. The region remains in an abnormally dry to moderate to severe hydrologic drought condition.

Low mountain snowpack conditions continue to impact the surface water supplies and streamflow volume forecasts for the streams and reservoirs flowing from the eastern Rockies, although irrigation reservoirs are generally at normal levels. Most areas have had average growing season precipitation with the exception of the most northern region of Alberta, including the northern Peace River area, where moderate to severe drought conditions exist. Agricultural areas in the eastern half of Alberta remain at risk of moisture stress as soil moisture reserves are nearly depleted, although the majority of crops are rated in good to excellent condition.

In Saskatchewan the provincial crop yield estimates range from 86 to 118 percent of average. The west-central region is Saskatchewan's driest agricultural region. Moderate to severe drought conditions occur in the northeast corner of the province.

The agricultural regions of Manitoba are generally quite wet. Conditions in the northern regions of the province range from abnormally dry to moderate drought.

Most agricultural regions of Ontario and Quebec report average or better moisture conditions and water supplies. There are a couple of areas in northern Ontario where growing-season precipitation is rated abnormally dry; otherwise, there are no drought concerns in these provinces.

There are no surface water-supply problems expected in the northwest and southwest areas of New Brunswick during August; however, runoff in central and eastern areas of the Province is expected to remain below normal. Groundwater supplies are below normal in most areas of New Brunswick and levels are expected to continue to drop. Users with groundwater supplies are being advised to exercise conservation measures now in hopes of avoiding problems later this summer or fall.

Abnormally dry conditions continue to categorize parts of Prince Edward Island, Newfoundland, and eastern and Annapolis Valley regions of Nova Scotia, although there are no reports of adverse impacts.

UNITED STATES: The contiguous United States (excluding Alaska and Hawaii) experienced its 29th-coolest, 39th-wettest July during the 110-year period of record, according to preliminary information provided by the NOAA National Climatic Data Center. Cool weather was concentrated across areas east of the Rockies, where it was the 12th-coolest July in Oklahoma, Missouri, and Illinois. In contrast, high temperatures in the drought-affected West resulted in the fifth-hottest July on record in Nevada and tenth-hottest July in Washington. Meanwhile, dryness returned to parts of the Southeast, providing Georgia with its 14th-driest July on record. Below-

normal precipitation was also a factor in parts of the West, where it was the 16th-driest July in Washington and 17th-driest July in Oregon. Farther east, however, it was the tenth-wettest July in Kansas and the wettest July on record in Pennsylvania and New York.

With the prevailing July pattern of cool, showery weather from the Plains into the Northeast and hot, dry weather in the Far West, there were few changes to the overall drought depiction. In the West, water-supply concerns remained at the forefront of the drought situation. At the end of July, Lakes Powell and Mead—which currently account for more than 90 percent of the storage in the Colorado River system—held 23.8 million acre-feet (7.8 trillion gallons) of water, down 46 percent from July 31, 2000. Storage fell by 20.6 million acre feet (6.7 trillion gallons) during the four-year period. In addition, Western pastures and rangelands continued to exhibit serious stress from the multi-year drought. On August 1, at least 40 percent of the pastures and rangelands were rated in very poor to poor condition in six states, according to the U.S. Department of Agriculture. Topping the list was California (90 percent very poor to poor), followed by Wyoming (53 percent), New Mexico (52 percent), Nevada (51 percent), Arizona (47 percent), and Montana (47 percent). The West retained a core area of exceptional drought (D4) in parts of Wyoming, southern Montana, eastern Idaho, and northeastern Utah. Severe to extreme drought (D2 to D3) covered at least a portion of 15 of the 17 Plains and Western States. However, the southern High Plains and adjacent Rockies were one area experiencing some drought relief in July. For example, parts of southeastern New Mexico recovered from moderate drought (D1) conditions during the month. At the end of July, there was no drought east of the Plains states, with only a few pockets of abnormal dryness (D0) in Maine, the upper Great Lakes region, and the Southeast.

Unusually warm, dry conditions kept Alaska in the midst of a record-setting wildfire season. Abnormal dryness (D0) expanded across the central one-third of Alaska, while moderate drought (D1) was introduced in the east-central part of the state. Alaskan wildfires charred about 1.1 million acres of vegetation by the end of June, followed by nearly 3.3 million acres in July. The 4.4 million-acre Alaskan total through the first seven months of the year more than doubled the state's modern January-July record of 2.1 million acres, established in 2002. In fact, Alaska's January-July wildfire acreage accounted for more than 80 percent of the United States' year-to-date total of 5.5 million acres. By the end of July, Alaska's largest active fires were the 842,000-acre Taylor Highway complex, about 35 miles northwest of Tok, and the 503,000-acre Boundary fire, just 20 miles northeast of Fairbanks. In fact, Fairbanks completed its third-warmest, seventh-driest June-July period in the last century.

MEXICO: Important changes in the rainfall pattern distribution were observed in July across large sections of México, in comparison with the conditions observed during the period from January-June 2004. Nationally, the Mexican National Meteorological Service reported monthly precipitation averaging 3 percent below normal, making July the first month of 2004 with below-normal rainfall. During July, wet conditions were observed in isolated sections of northern and northwestern Mexico (northern Sinaloa, Durango, and Southern Coahuila, along with sections of the Baja Peninsula and Sonora). In contrast, conditions were drier than normal across Tabasco, the southern half of Veracruz, and northern Oaxaca, which is typically the wettest area in Mexico during the summer season. Drier-than-normal conditions over parts of southeastern Mexico are also visible on 2- and 3-month time scales, and streamflow reports indicate river levels below

normal for this time of the year (e.g. Papaloapan River). The drier-than-normal conditions in southeastern Mexico reflect the lack of tropical storms in the western North Atlantic and the Gulf of Mexico.

No major changes in the drought distribution were noted over northwestern Mexico, where categories from abnormally dry to moderate drought (D0 and D1) remained unchanged over the northern portion of the Baja Peninsula, and a slight reduction of D0 and D1 were noted in northern Sonora and Chihuahua. In addition, the coverage of abnormally dry conditions noted last month in Nayarit and inland sections of Yucatan was reduced. The only regions where abnormal dryness expanded were Northern Jalisco (Los Altos region) and central Veracruz.