

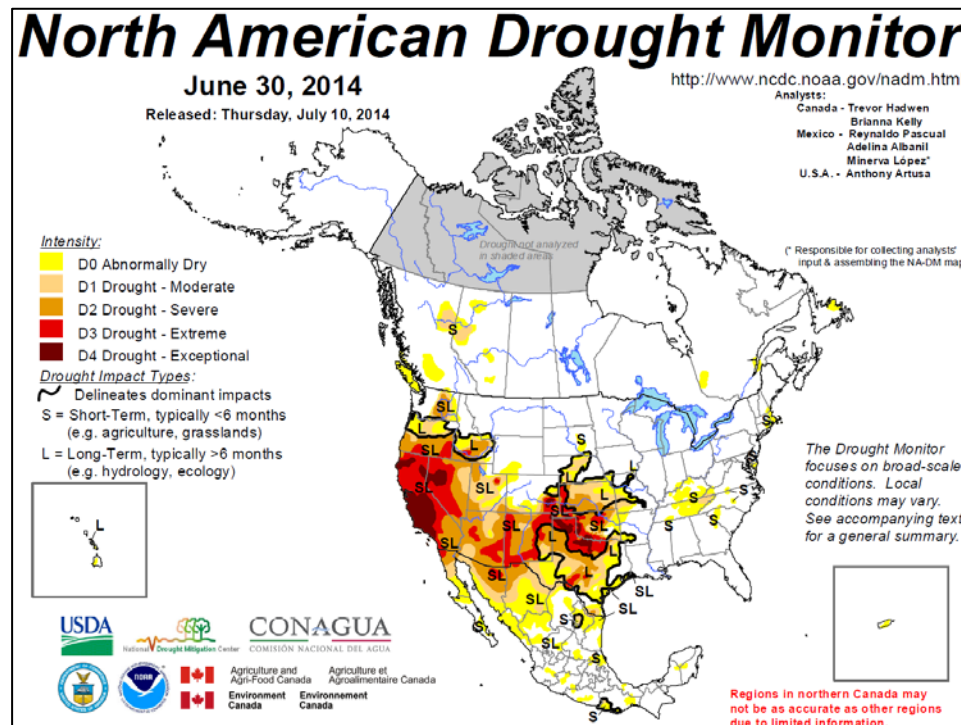


The North American Drought Monitor

The North American Drought Monitor (NADM) is a cooperative effort between drought experts in Canada, Mexico and the United States (U.S.) to monitor and map drought across the continent on an ongoing basis. The program, initiated in April 2002, is part of a larger effort to improve the monitoring of climate extremes on the continent. The NADM is based on the highly successful U.S. Drought Monitor (USDM), and as such, has been developed to provide an ongoing comprehensive and integrated assessment of drought throughout all three countries in North America. Since its inception, the NADM has been extremely successful in assessing and communicating the state of drought on a monthly basis.

Drought is a re-occurring reality across North America, affecting all sectors and often resulting in major economic impacts. Regions and sectors are affected differently by drought, and often have

different definitions and ways to measure its extent and severity. The NADM systematically consolidates diverse definitions and indicators to produce a picture of drought across the continent.



The NADM is built upon a “convergence of evidence” system of drought monitoring, developed by the U.S. in 1999, and used in the USDM. The methodology was developed with the goal of using a simple and easily understood five-category system to define the severity, spatial extent and impacts of drought.

This NADM map, hosted on the U.S. National Climatic Data Centre’s website, shows extreme (D3) and exceptional (D4) drought occurring across western and central U.S. in June 2014.

Drought categories in the NADM range from D0 to D4, with D1 to D4 representing moderate to exceptional drought (D4) and D0 indicating abnormally dry conditions. The categories are based

on the percentile chance of drought occurring. For example, a D3 or extreme drought occurs less than five years in one hundred. While D0 is not classified as a “drought” category, it designates those areas experiencing “abnormally dry” conditions, which often occur in areas preceding or following a drought, and is an early indicator of the potential for drought.

Drought designations are made based on a wide variety of data sources, compiled and interpreted by drought experts and scientists. Information is gathered from analysis of streamflow values, the Normalized Difference Vegetation Index (NDVI), climate indices such as the Palmer Drought Index, and multiple drought indices used by the agricultural, water management and forestry sector. Federal, provincial and academic scientists then interpret this evidence and reach consensus, making final designations under NADM an interpretive process rather than a quantitative index. NADM maps and descriptions are available on the U.S. National Oceanic and Atmospheric Administration (NOAA) website at <http://www.ncdc.noaa.gov/temp-and-precip/drought/>.

Although Canada, the U.S. and Mexico have long-standing climate and drought monitoring programs, NADM provides an integrated view of drought across the continent. Now drought experts work together in an ongoing capacity to compile and analyze climate observations and weather impact information at multiple temporal and spatial scales. Close coordination among government agencies and scientists in each country has provided the means for identifying and addressing critical gaps in existing data, knowledge and programs. Major partners include Environment Canada (EC), Natural Resources Canada (NRCAN), NOAA, the National Drought Mitigation Centre (NDMC), the U.S. Department of Agriculture (USDA), the National Meteorological Service of Mexico (Servicio Meteorológico Nacional - SMN), and various provincial agriculture, water and environment departments.

As part of their ongoing collaboration, the NADM partners assemble bi-annually to discuss continuing drought work. Major NADM partners from the U.S. and Mexico attend these workshops, as well as a variety of provincial and federal agencies from Canada. The workshops provide the opportunity to discuss ongoing work on all aspects of drought and advance the ongoing collaboration on monitoring drought across North America.

For more information please contact AAFC’s **National Agroclimate Information Service (NAIS)** of the Agro-Climatic, Geomatics and Earth Observations (ACGEO) Division of the Science and Technology Branch at nais-snia@agr.gc.ca or visit AAFC’s **Drought Watch** website at www.agr.gc.ca/drought. View the current NADM map at <http://www.ncdc.noaa.gov/temp-and-precip/drought/nadm/nadm-maps.php>.

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