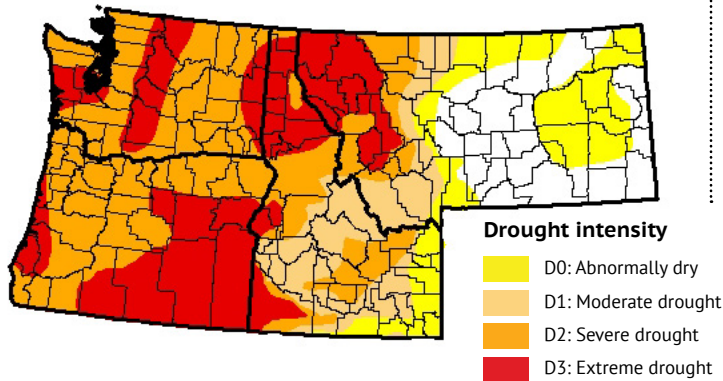


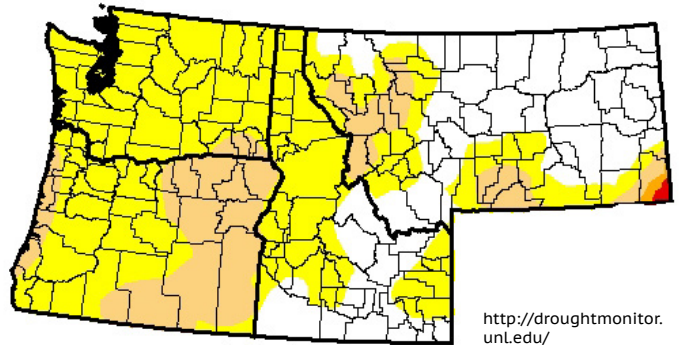


NATIONAL INTEGRATED DROUGHT INFORMATION SYSTEM PACIFIC NORTHWEST DROUGHT OUTLOOK July 2016

U.S. DROUGHT MONITOR FOR JULY 28, 2015



U.S. DROUGHT MONITOR FOR JULY 19, 2016



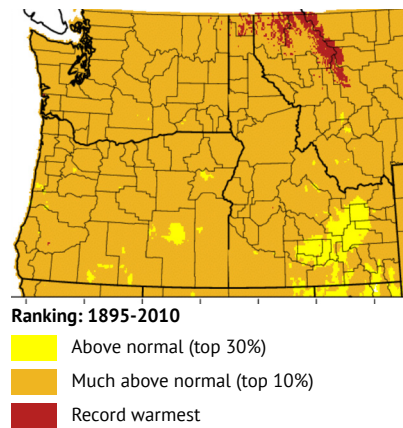
CURRENT CONDITIONS

While much of the Pacific Northwest is experiencing abnormally dry or drought conditions, the region as a whole is faring better than it was a year ago during the record-breaking drought of 2015. The abnormally warm start to the calendar year led to a much earlier and faster melt of the region's snowpack.

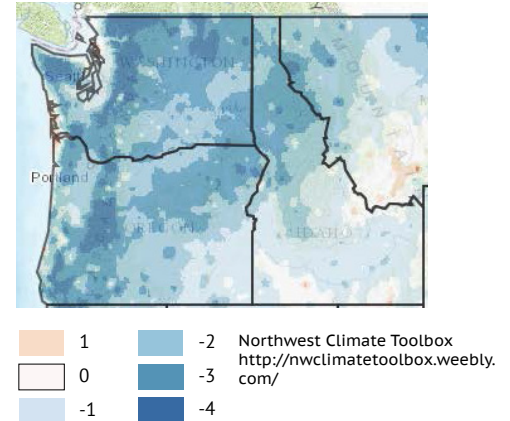
As the summer of 2016 progresses this early runoff could result in below-average streamflows and higher water temperatures. Low soil moisture is already being observed in some areas but the fire season has been relatively quiet due to low potential evapotranspiration and energy release components.

Cooler temperatures and average precipitation in July offered some temporary relief, but above average temperatures are forecasted for August and September.

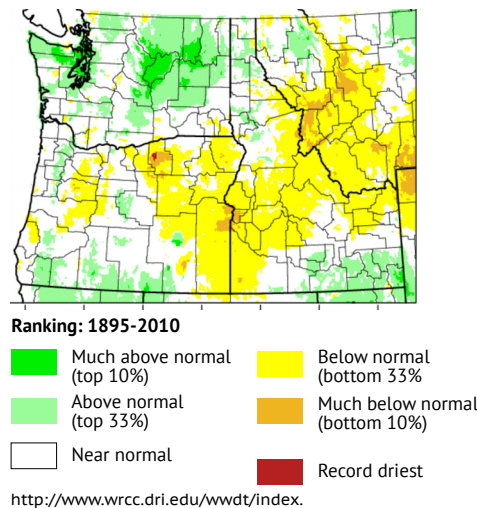
TEMPERATURE: MEAN PERCENTILE
JANUARY - JUNE 2016



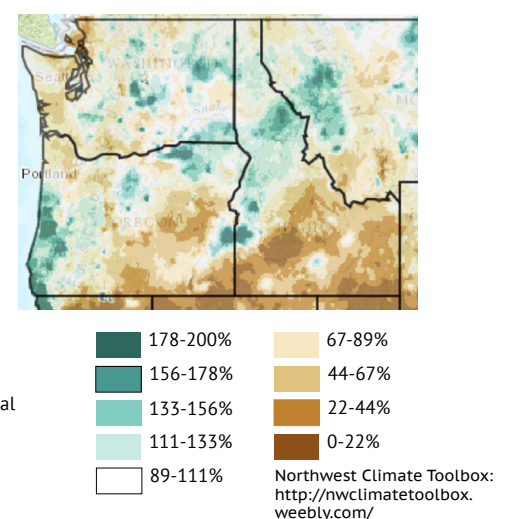
TEMPERATURE, JUNE 26 - JULY 25, 2016
DEGREES F DEPARTURE FROM NORMAL



PRECIPITATION PERCENTILES
JANUARY-JUNE 2016



PRECIPITATION: % OF NORMAL
JUNE 26 - JULY 25, 2016



ABOUT THIS OUTLOOK

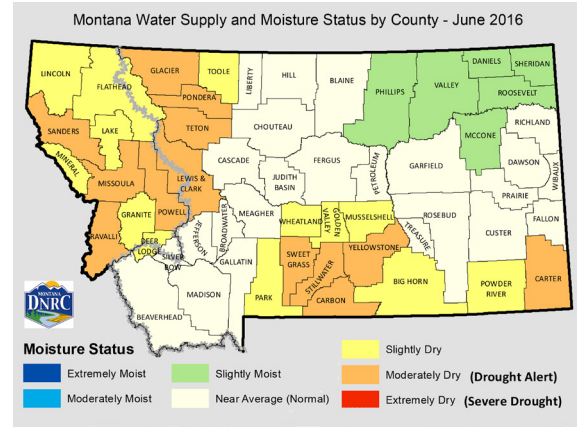
On July 26, 2016 NIDIS and its partners held the Pacific Northwest DEWS Drought & Climate Outlook Webinar. This is the first in a series of regular drought and climate outlook webinars designed to provide stakeholders and other interested parties in the region with timely information on current drought status and impacts, as well as a preview of current and developing climatic events like La Niña.

IMPACTS AND UPDATES

Montana: Despite some relief in early July when substantial precipitation fell in some basins, precipitation overall has been well below average through July along the Rocky Mountain Front and Upper Yellowstone for the second year in a row. Above-average temperatures coupled with diminished snowpack also led to early runoff. Low soil moisture levels depicted by NASA GRACE models illustrate the lack of June precipitation which impacted shallow groundwater and root zone moisture particularly along the Rocky Mountain Front and Upper and Lower Yellowstone.

Lieutenant Governor Mike Cooney has declared a “Drought Alert” in nine counties.

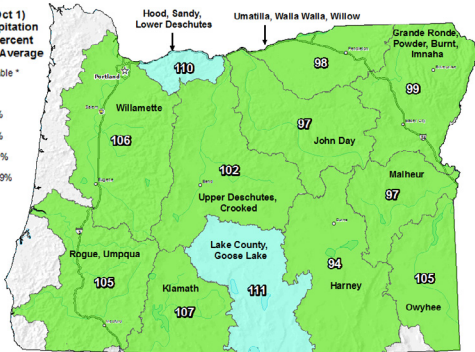
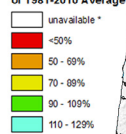
Montana will be hosting four community drought forums in August and September 2016 to kick off the update process for its state drought response plan.



Oregon SNOTEL Water Year (Oct 1) to Date Precipitation % of Normal

Jul 18, 2016

Water Year (Oct 1) to Date Precipitation Basin-wide Percent of 1981-2010 Average



Oregon: Even though total precipitation is at or near normal for much of the state, above-normal temperatures in the spring meant snowpack melted earlier and faster than normal. Statewide average streamflows for June were 44% of normal. While this is better than 2015 (when streamflows were at 32% of normal), flows are still low and have been on a downward trend since April. Statewide reservoir storage is higher than 2015, but all reservoirs are now being drawn down for fisheries, irrigation and municipal needs and by the end of the summer could potentially resemble 2015 levels.

Bi-weekly drought updates are available here: http://apps.wrd.state.or.us/apps/wr/wr_drought/current_updates.aspx

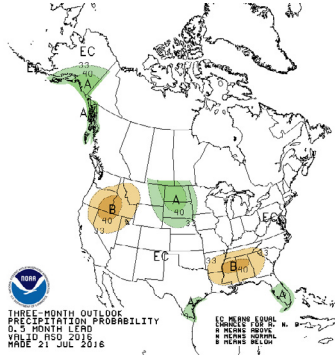
Washington: Spring was warm and dry but summer conditions have returned to normal and kept water demand down. There have been no reports of water shortages, but the Makah Tribe was forced to release hatchery fish approximately one month early due to lack of water supply.

Water supply in the Yakima Basin (which often acts as Washington’s bellwether for drought) is good. Junior water rights users are being pro-rated to 90% of full supply vs. 47% in 2015.

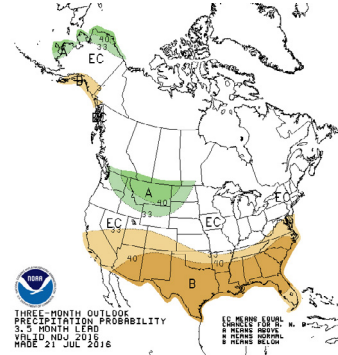
Monthly meeting minutes from Washington’s Water Supply Availability Committee are available here: <http://www.ecy.wa.gov/drought/wsac.html>

OUTLOOK: PRECIPITATION

AUG-SEPT-OCT



NOV-DEC-JAN



CLIMATE OUTLOOK:

While temperatures across the region were cooler in July, NOAA’s Climate Prediction Center (CPC) is predicting above average temperatures through October throughout the lower 48 states, and higher than normal chances of less than average precipitation in eastern Oregon, most of Idaho and western Montana.

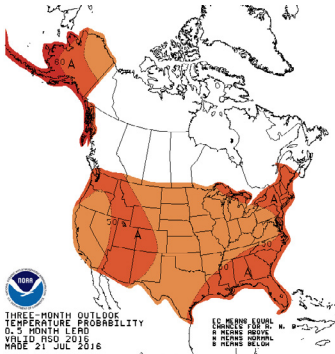
As last year’s El Niño continues to deteriorate CPC has issued a La Niña watch as conditions favorable to the development of a (albeit weak) La Niña are expected to continue during August-October. CPC is predicting a 55-60% chance of La Niña occurring during the fall and winter of 2016-17.

Previous La Niña’s have brought cooler and wetter conditions to the Pacific Northwest during winter months.

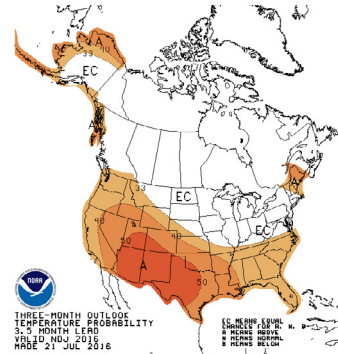
The presentations from this webinar can be accessed here: <https://www.drought.gov/drought/calendar/events/pacific-northwest-drought-climate-outlook-webinar-july-26-2016>

OUTLOOK: TEMPERATURE

AUG-SEPT-OCT



NOV-DEC-JAN



CONTRIBUTORS

- Andrea Bair, National Weather Service Western Region
- Kathie Dello, Climate Impacts Research Consortium (CIRC)
- Alicia Marrs, NOAA/NIDIS
- Jeff Marti, Washington State Department of Ecology
- Ada Montague, Montana Department of Natural Resources & Conservation
- Ken Stahr, Oregon Water Resources Department

