

Oregon

Water Conditions Report

May 18, 2020



Remaining snowpack across the state continues to melt, however contributions to surface water supplies are minimal. All basins across the state will melt out (or have melted out) earlier than normal, with several melting out 1 to 4 weeks earlier than normal.

Current Oregon statewide water year precipitation at NRCS SNOTEL sites is 79 percent of average. This has improved slightly from 77 percent one week ago, however still well below average for the water year. Basin precipitation values range from a low of 68 percent of average in the Klamath basin to 97 percent of average in the Umatilla, Walla Walla, Willow and Grand Ronde, Powder, Burnt, and Imnaha basins.

The NRCS [Basin Outlook Report](#) for May is available. This report is published monthly from January through June.

Precipitation over the [past two weeks](#) varied widely, ranging from 0.75 inches below-normal in parts of central and southeast Oregon to almost 4 inches above-normal in parts of Curry and Coos Counties. For the [month of April](#), precipitation was below-normal across most of the state. Most noteworthy were Klamath and Lake Counties where precipitation was less than 25 percent of normal.

Temperatures over the [past two weeks](#) have been up to 5 degrees warmer than normal in parts of western Oregon and up to 4 degrees warmer than normal in northeast Oregon. Temperatures across much of central Oregon were a mix of slightly above to slightly below normal. For the [month of April](#), temperatures were warmer than normal across the central and western regions of Oregon and right around normal for the rest of the state.

Over the next [8 to 14 days](#), the NOAA Climate Prediction Center is forecasting a higher than normal probability of above-normal temperature and below-normal precipitation across the state. The most recent [three month outlook](#) indicates an increased probability of above-normal temperatures along with below-normal precipitation across the Pacific Northwest. The next long-term outlook will be issued on May 21, 2020.

There is a ~65 percent chance of [ENSO-neutral](#) during Northern Hemisphere summer 2020, with chances decreasing through the autumn (to 45-50 percent). During April 2020, positive sea surface temperature (SST) anomalies weakened and were near zero by the end of the month. All of the Niño indices decreased during the month, with the latest weekly Niño index values near +0.2°C. For a more complete report, refer to the May 14, 2020 [diagnostic discussion](#) issued by the Climate Prediction Center. The next diagnostic discussion is scheduled for June 11, 2020. Another source of information is the latest [ENSO blog](#) on the climate.gov website.

Statewide streamflow conditions for April were lower than normal at 63 percent. Values ranged from a high of 93 percent of normal in the Umatilla Basin to a low of only 35 percent in the Owyhee. Recent rainfall continues to provide benefit to streamflow in some parts of western Oregon. Flows are currently ranging from well over 150 percent of normal

in the South and Mid Coast basins to around 60 percent of normal in the Umpqua Basin. East of the Cascades, flows are ranging from over 105 percent in the Grande Ronde to around 40 percent in the Malheur and Owyhee Basins.

USACE Reservoirs:

Rogue: The Rogue system is 88 percent full and 12 percent below rule curve. Lost Creek is 96 percent full and releasing a fisheries recommended flow of 2500 cfs. Applegate is only 49 percent full and is releasing minimum flow of 150 cfs. Applegate is not expected to fill this year, and will probably be on or close to minimum flow for most of the summer.

Willamette: The Willamette system is 81 percent full and 19 percent below rule curve. System wide inflow is 9600 cfs and outflow is 6500 cfs. We were able to continue refill of the reservoirs with the recent rainfall that swept across Oregon this past weekend, and forecasts indicate another day or two of higher inflow which will aid refill. We are monitoring the refill at Lookout Point and Hills Creek since both of these projects have interim risk reduction measures in place for seismic associated dam safety concerns which require that they only fill to within 10 ft. of full at Hills Creek (elevation of 1521 feet) and 5 ft. of full at Lookout Point (921 ft.). Currently these projects are reading a forebay elevation of 1517 ft. and 908 ft. Most but not all reservoirs are releasing minimum flow. A few are releasing a higher than minimum flow which is used to augment natural streamflow to meet mainstem flow targets measured at Salem. As the weather dries USACE will increase the reservoir releases to ensure that mainstem targets are met, since the targets are identified in the 2008 Biological Opinion.

Willow Creek: Willow Creek is 100 percent full and is passing inflow. Current releases are 20 cfs.

USBR Reservoirs:

Tualatin River Basin: Scoggins reservoir is at 97 percent of capacity and maintaining storage levels with inflows around 42 cfs and outflows around 12 cfs.

Umatilla River Basin: McKay reservoir is at 100 percent of capacity and maintaining storage levels with inflows around 68 cfs and outflows around 75 cfs.

Deschutes River Basin: Prineville reservoir is at 71 percent of capacity and drafting with inflows around 102 cfs and outflows around 275 cfs. Ochoco reservoir is at 50 percent of capacity and maintaining storage levels with inflows around 37 cfs and outflows around 13 cfs. Crescent Lake is at 53 percent, Wickiup reservoir is at 56 percent and Crane Prairie reservoir is at 85 percent of capacity.

Malheur River Basin: Warm Springs reservoir is at 75 percent of capacity and maintaining storage levels with inflows around 157 cfs and outflows of around 292 cfs. Beulah reservoir is at 78 percent of capacity and filling with inflows around 204 cfs and outflows around 275 cfs. Bully Creek reservoir is at 86 percent of capacity and drafting with inflows below 10 cfs and outflows around 11 cfs.

Owyhee River Basin: Owyhee reservoir is at 80 percent of capacity and drafting with inflows around 790 cfs and outflows around 188 cfs.

[Burnt and Powder River Basins](#): Unity reservoir is at 97 percent of capacity and drafting with inflows around 72 cfs and outflows around 100 cfs. Phillips reservoir is at 42 percent of capacity and maintaining storage levels with inflows around 250 cfs and outflows around 280 cfs.

The most recent update to the [US Drought Monitor](#) indicates that over 97 percent of the state is in D0 (abnormally dry) conditions, with 82 percent of the state listed as in D1 (moderate drought), almost 38 percent is listed as in D2 (severe drought) and now almost 9 percent in D3 (extreme drought).

Governor Brown declared a [drought emergency](#) in Klamath County in early March, followed by Curry County in April, Jackson County in early May and most recently in Coos County. It is very likely that more counties could follow in the near future.

May is the transitional period into the Western Fire Season. Overall, the entry into the season is expected to be normal; however, there are areas of concern emerging for the summer months. While the Pacific Northwest received beneficial precipitation in late April, the overall weather pattern has been warm and dry which may be problematic for Oregon and Central through Eastern Washington. The Oregon Department of Forestry’s Southwest Oregon District started fire season this year on Friday, May 1. This is the earliest that the Southwest Oregon District has declared fire season since 1968 (52 years).

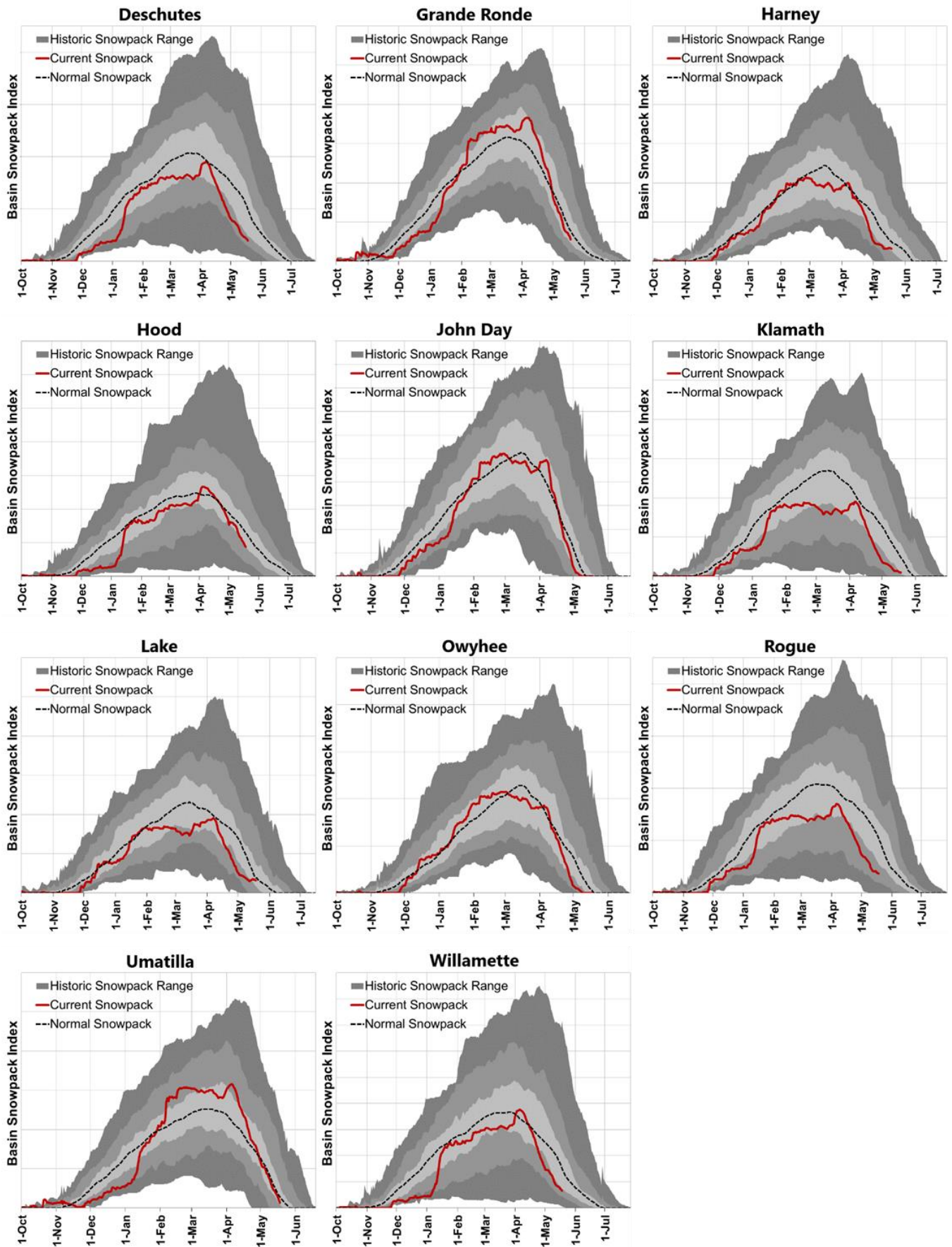
The Oregon Office of Emergency Management has assembled a [hydrology/meteorology dashboard](#) featuring many of the data sources used to generate this report. Use the selection arrows at the bottom of your browser to navigate to the various data sources.

Data & Products:

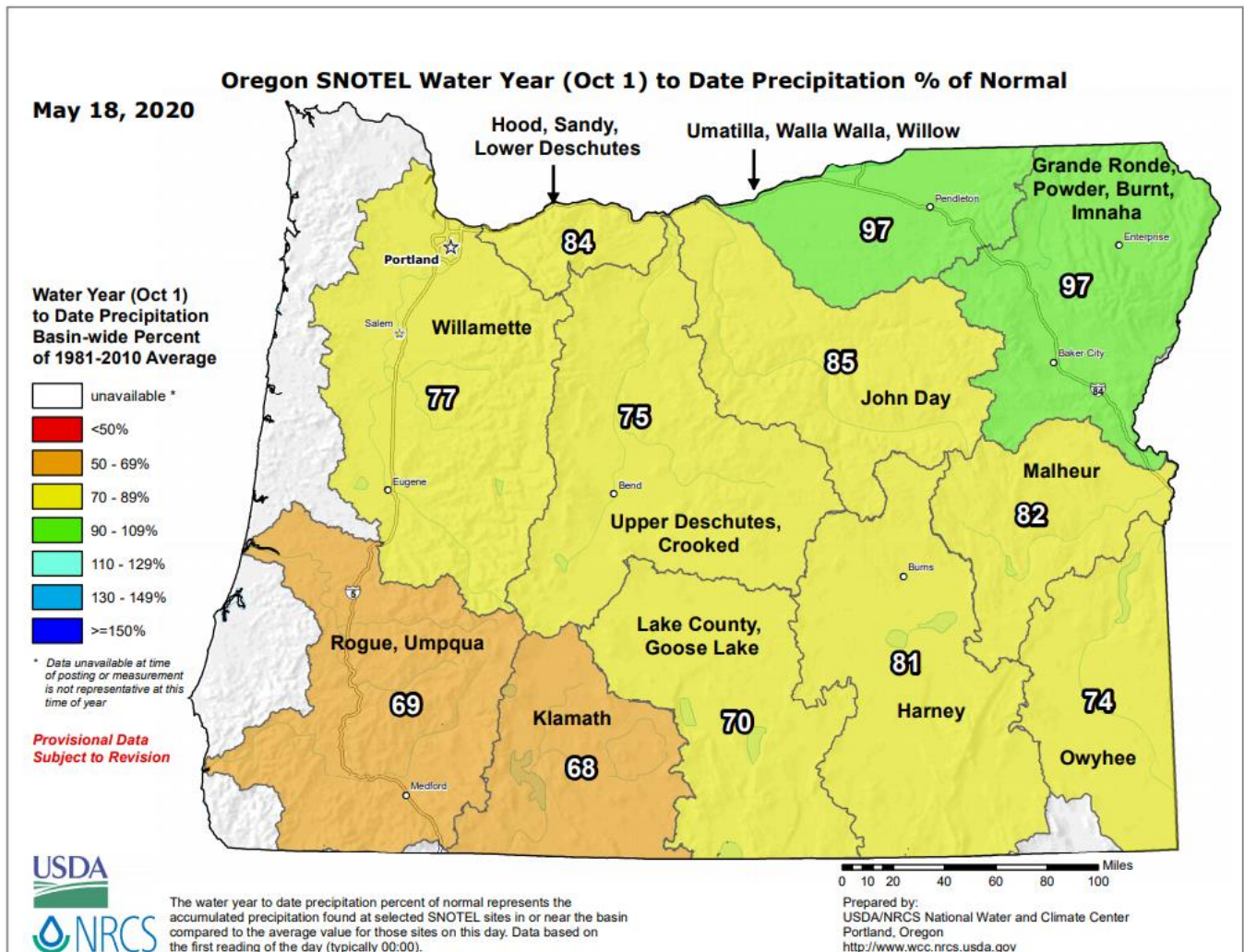
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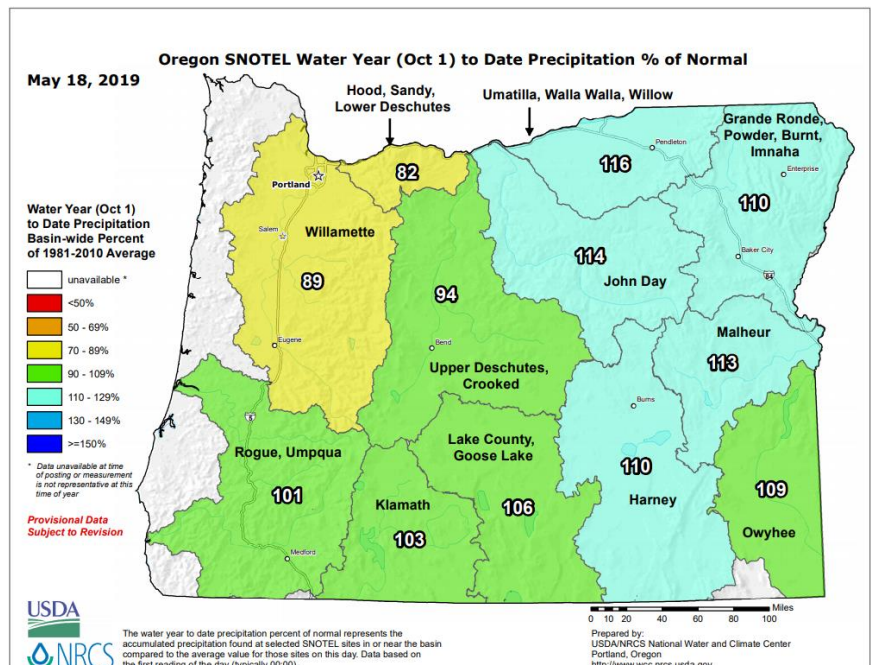
Snowpack Graphs – May 18, 2020



Precipitation (Mountain) - Percent of Normal



Compared to this time last
year:



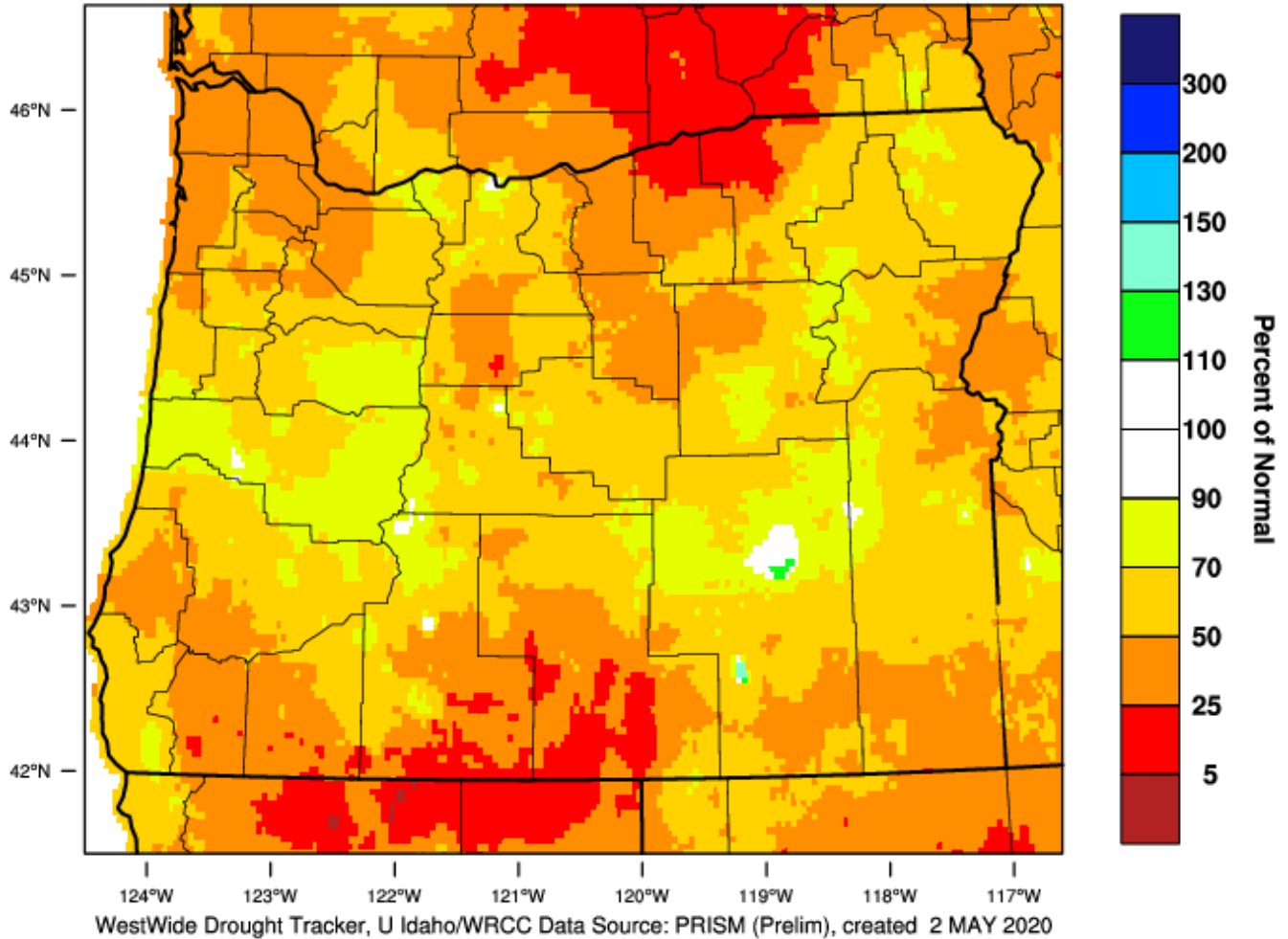
Precipitation – (1 Month) Percent of Normal

Website: <https://wrcc.dri.edu/wwdt/index.php?folder=pon1>

PRISM > Precipitation Anomaly 1 Month > Oregon

Oregon - Precipitation

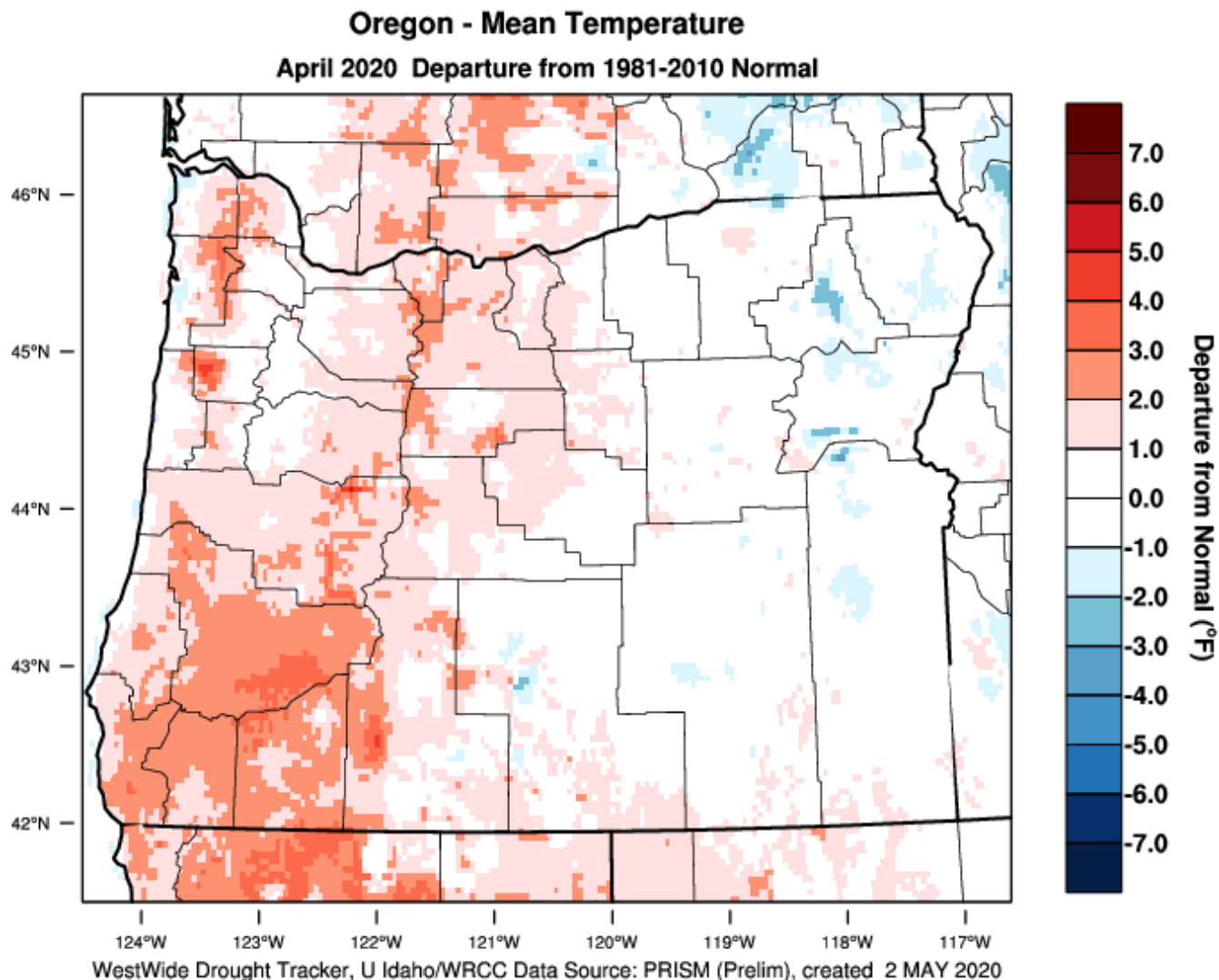
April 2020 Percent of 1981-2010 Normal



Temperature – (1 Month) Departure from Normal

Website: <https://wrcc.dri.edu/wwdt/index.php?region=or>

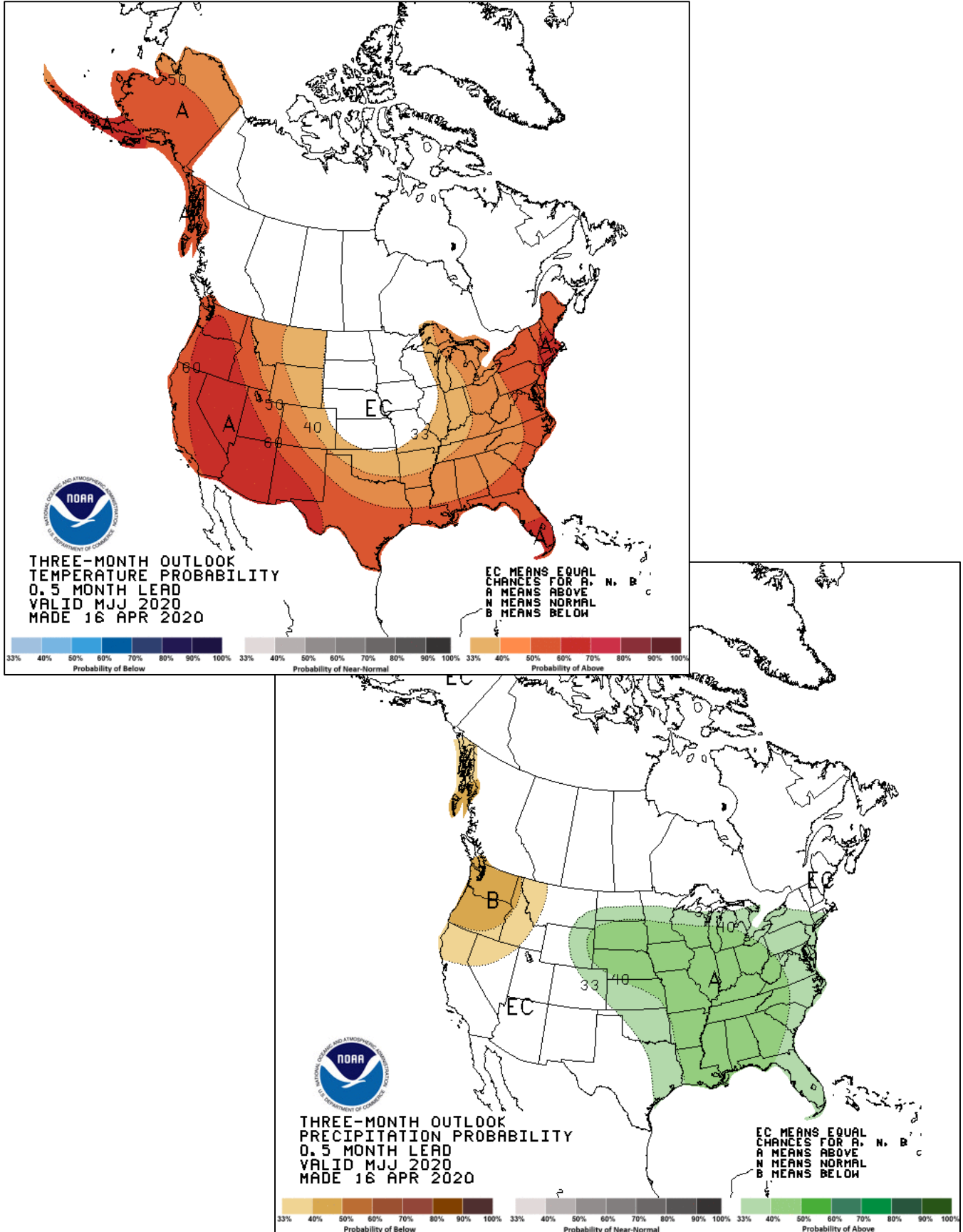
PRISM > Temperature Anomaly 1 Month > Oregon



Three Month Temperature and Precipitation Outlook

May through July

Website: http://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=1



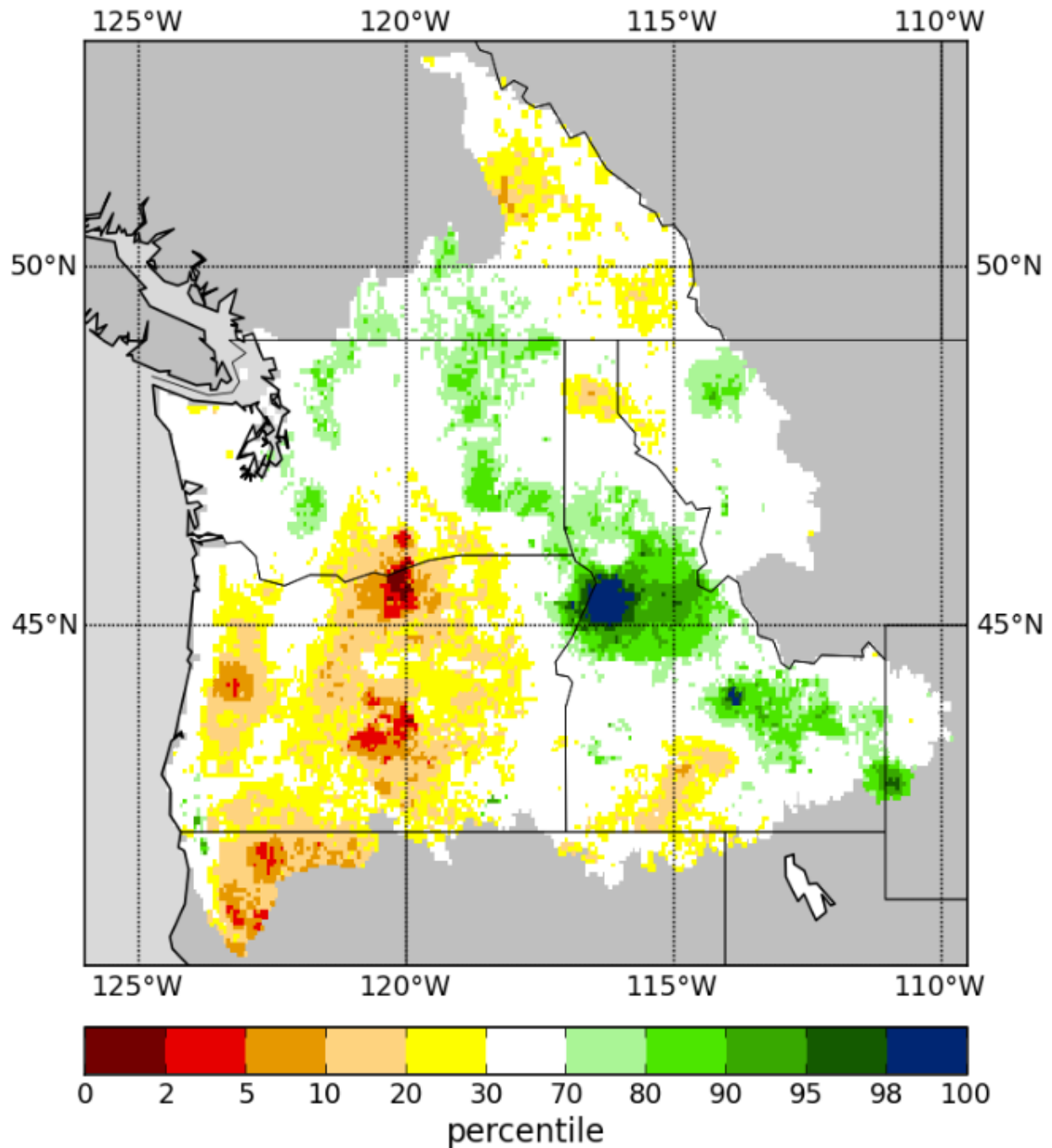
Total Moisture - Percentile

Total Moisture (STOT) is a moisture index calculated by adding Soil Moisture and Snow Water Equivalent. STOT represents the total water content of a region.

Website: http://www.hydro.ucla.edu/SurfaceWaterGroup/forecast/monitor_pnw/index.shtml

Total Moisture Percentile

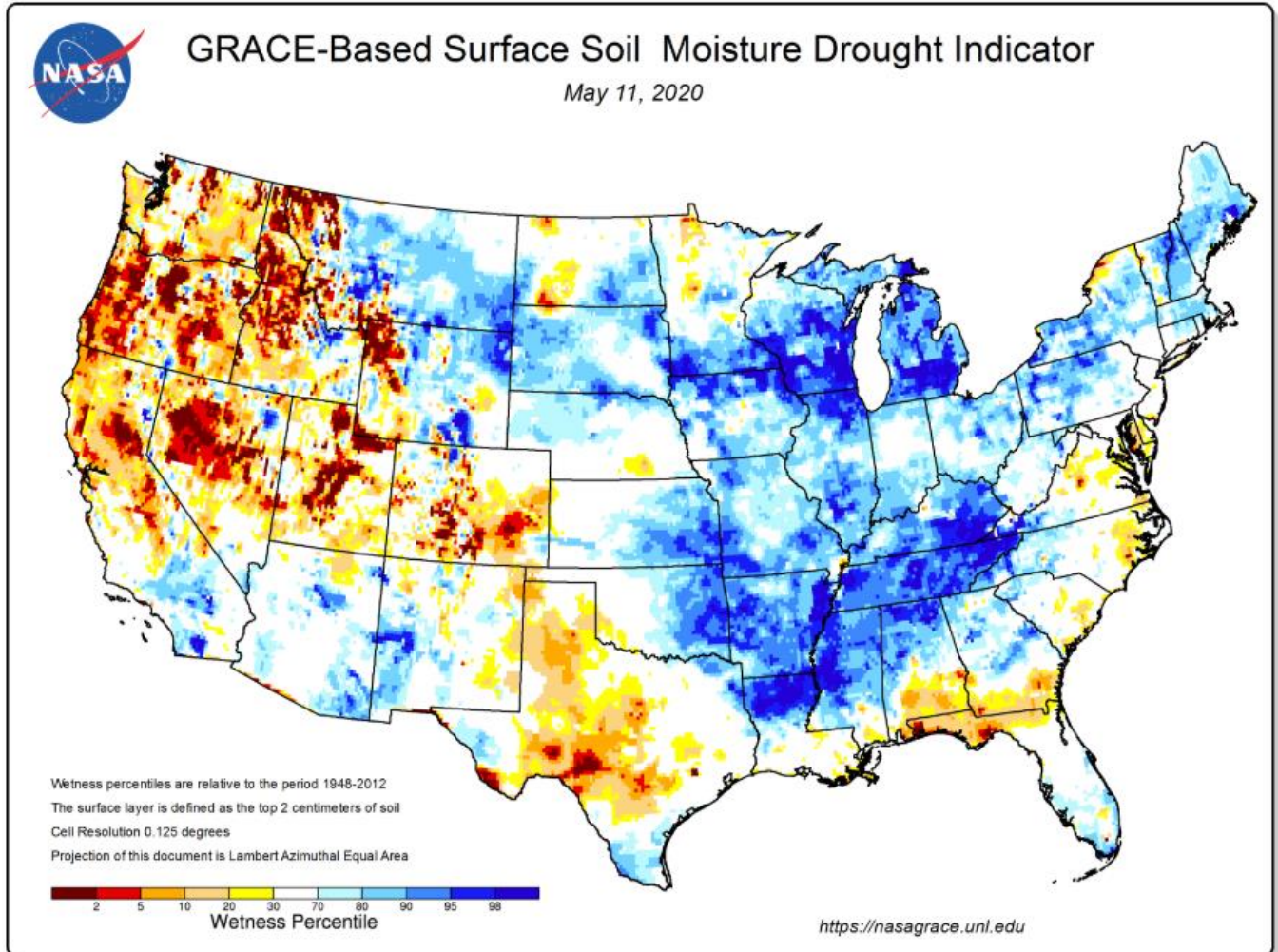
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Satellite-Based Soil Moisture Percentile

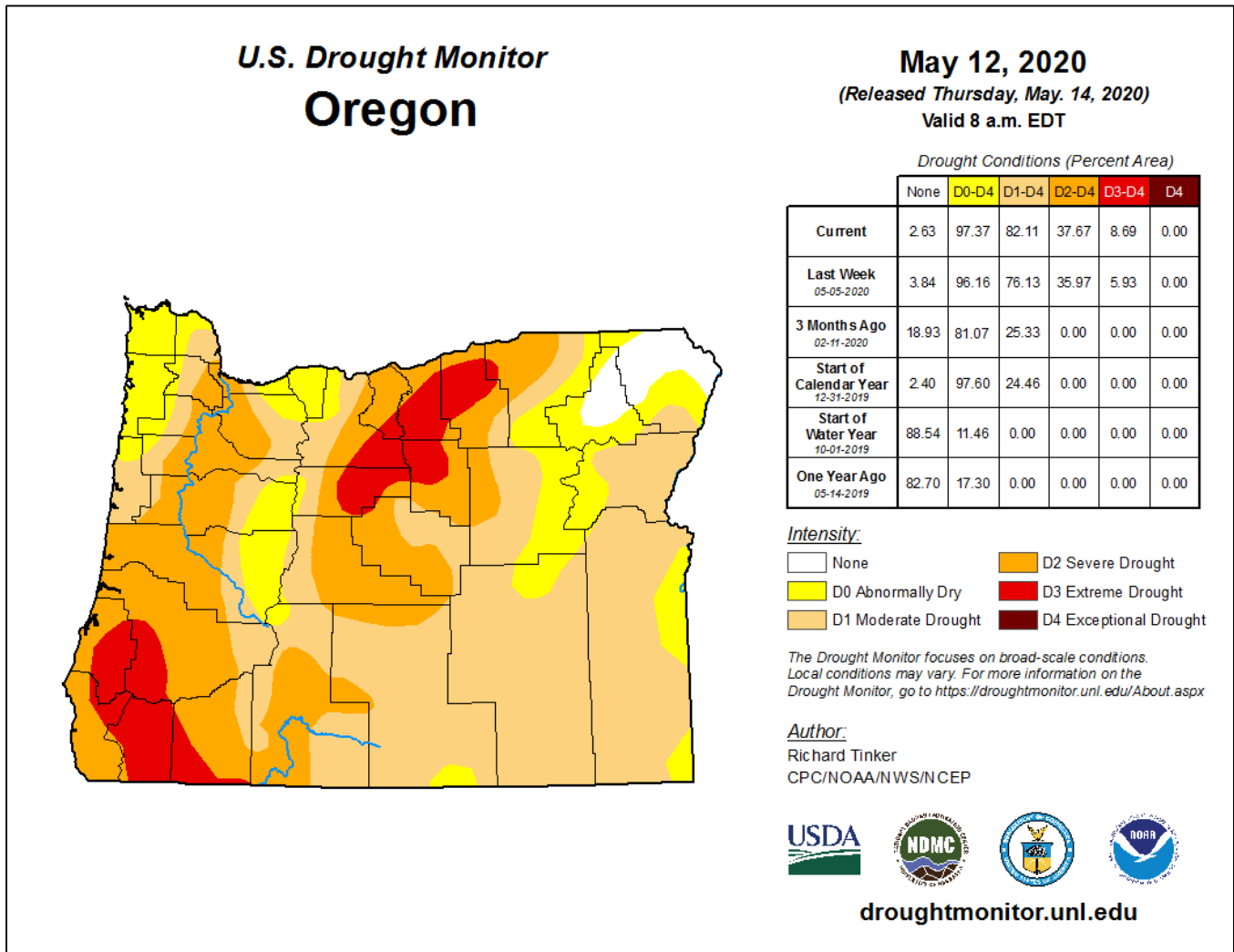
The maps are based on data from NASA's Gravity Recovery and Climate Experiment (GRACE; 2002-2017) and GRACE Follow On (GRACE-FO; 2018-present) satellites, which detect small changes in the Earth's gravity field caused by the redistribution of water on and beneath the land surface.

Website: <https://nasagrace.unl.edu/Default.aspx>

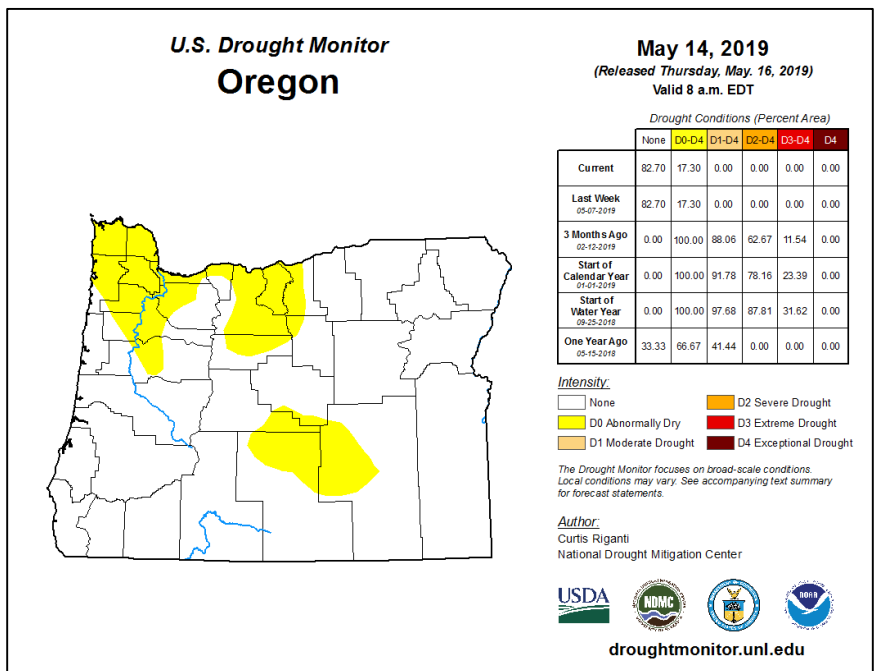


U.S. Drought Monitor for Oregon

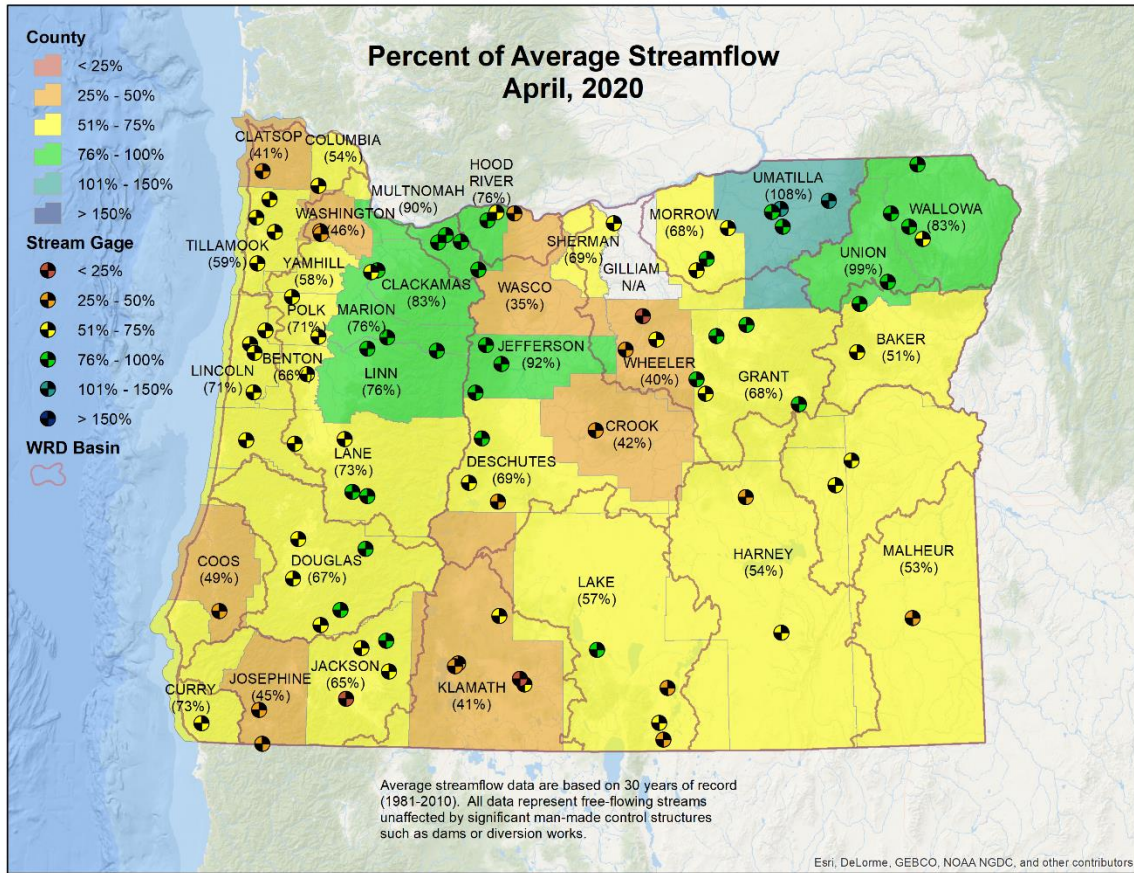
Website: <https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?OR>



Compared to this time last year:



Streamflow Conditions by County – April, 2020



Streamflow Conditions – 7-day average (USGS)

