Oregon
Water Conditions Report
February 11, 2020

OREGON
WATER RESOURCES
DEPARTMENT

Current Oregon statewide snow water equivalent is 97 percent of normal, as conditions continued to improve from early in the calendar year. Basin values vary from 82 percent of normal in the Klamath basin to 132 percent of normal in the Umatilla, Walla Walla, and Willow basin.

Current Oregon statewide water year precipitation at NRCS SNOTEL sites is 85 percent of normal, remaining below average but improved from 66 percent in mid-January. Basin precipitation values range from 73 percent of average in the Klamath basin, to 116 percent of average in the Umatilla, Walla Walla, and Willow basin.

The NRCS Basin Outlook Report for February is now available. This report is published monthly from January through June. The most recent edition underscores the significant increase in snowpack this past month.

Precipitation over the past two weeks has ranged from well above normal in north central Oregon and central Cascades to of the Cascades to well below normal in the southwest corner of the state. The above-normal precipitation anomalies in north central Oregon were over 7 inches above normal. For the month of January, precipitation was above-normal across much of the state with the exception of areas of central Oregon in the lower Deschutes and John Day basins where precipitation was below-normal.

Temperatures over the past two weeks have been mostly above-normal especially in Baker, Malheur and Harney counties where temperatures ranged from 2 to over 8 degrees above-normal. For the month of January, temperatures were above-normal across most of the state, especially in north central and eastern Oregon where temperatures were up to 6 degrees warmer than normal for this time of year.

Over the next 8 to 14 days, the NOAA Climate Prediction Center is forecasting normal temperature probability west of the Cascades with above-normal temperature to the east. The precipitation outlook ranges from above-normal across the north of the state transitioning to normal and then below-normal to the far south. The most recent three month outlook indicates equal probability of above or below-normal temperatures across all but the southeastern third of the state where above-normal temperatures are forecast. The precipitation outlook for the same period is for equal chances of above or below-normal probability across most of the states except for the southwest corner where below-normal precipitation is forecast. The next long-term outlook will be issued on February 20, 2020.

ENSO-neutral is favored during the Northern Hemisphere spring 2020 (~60 percent chance), continuing through summer 2020 (~50 percent chance). During December 2019, near-to-above-average sea surface temperatures were evident over the equatorial Pacific Ocean. For a more complete report, refer to the January 9, 2020 diagnostic discussion issued by the Climate Prediction Center. The next diagnostic discussion is scheduled for

February 13, 2020. Another source of information is the latest ENSO blog on the climate.gov website.

Thanks to persistent weather patterns January statewide streamflow ended up right at normal (100 percent) for this time of year. This is much higher than the 53 percent seen in December. Regionally for January, streamflow conditions were about 70 percent of normal east of the Cascades and over 140 percent to the west. Overall, flows in the John Day were the lowest at around 50 percent of normal while the highest flows were in the North Coast and Mid Coast at over 160 percent of normal. As illustrated in the hydrograph on page 12, recent weather-induced extreme high flows in the Umatilla River at Pendleton peaked on February 7. While it is of note that flows are rapidly receding, this and other rivers in the region continue to flow at above-normal levels.

USACE Reservoirs: **Willamette:** The Willamette system is 17 percent full and right on rule curve. Recent weather has helped to elevate inflows and bring most projects closer to rule curve. Flows in the Willamette River at Albany are 19,500 cfs with flows at Salem at 38,000 cfs.

Rogue: The Rogue system is currently 53 percent full and 1 percent below rule curve. Lost Creek is 60 percent full and 1 percent below rule. Outflows should continue holding at about 1,100 cfs and hopefully capture the majority of the forecasted inflows. Applegate is at 19 percent, 2 percent above rule. Releases are currently at 165 cfs. Current fisheries goals are minimizing the dewatering of spring chinook redds in 2019-2020, and minimizing early emergence by spring chinook in the spring of 2020.

Willow Creek: The Willow Creek Project is currently 63 percent full and 9 percent below rule curve. The current project objectives are to pass 5 cfs of the current inflow, as the project continues to slowly fill back to rule curve.

USBR Reservoirs: Reclamation reservoirs in Oregon continue to have higher than average storage levels thanks to higher than average carryover at the start of the Water Year. Most reservoirs have shown very little increase in storage over the past several weeks. Water Managers continue to actively monitor potential precipitation events since some reservoirs (Prineville, Bully Creek, Warm Springs, and Scoggins) are potentially a decent rainstorm away from exceeding maximum winter storage requirements as set by flood control regulations.

Umatilla River Basin: McKay reservoir is at 61 percent of capacity. Outflows are close to 14 cfs with inflows of about 615 cfs.

Deschutes River Basin: Ochoco and Prineville reservoirs are at 48 percent and 62 percent full respectively. Ochoco reservoir is releasing less than 3 cfs while Prineville reservoir is currently releasing about 100 cfs with inflows of about 345 cfs. Crescent Lake is at 52 percent, Wickiup is at 59 percent and Crane Prairie is at 82 percent of capacity.

Malheur River Basin: Warm Springs, Beulah, and Bully Creek reservoirs are at 63, 50, and 67 percent full respectively. All three are above normal for this time of year, hopefully ensuring the chance of available carryover for next year.

Owyhee River Basin: Owyhee reservoir is well above normal at 73 percent. Inflows are currently about 1100 cfs.

Burnt and Powder River Basins: Phillips and Unity reservoirs are at 25 percent and 55 percent full respectively. Phillips is releasing about 12 cfs with inflows around 33 cfs while Unity is releasing about 65 cfs.

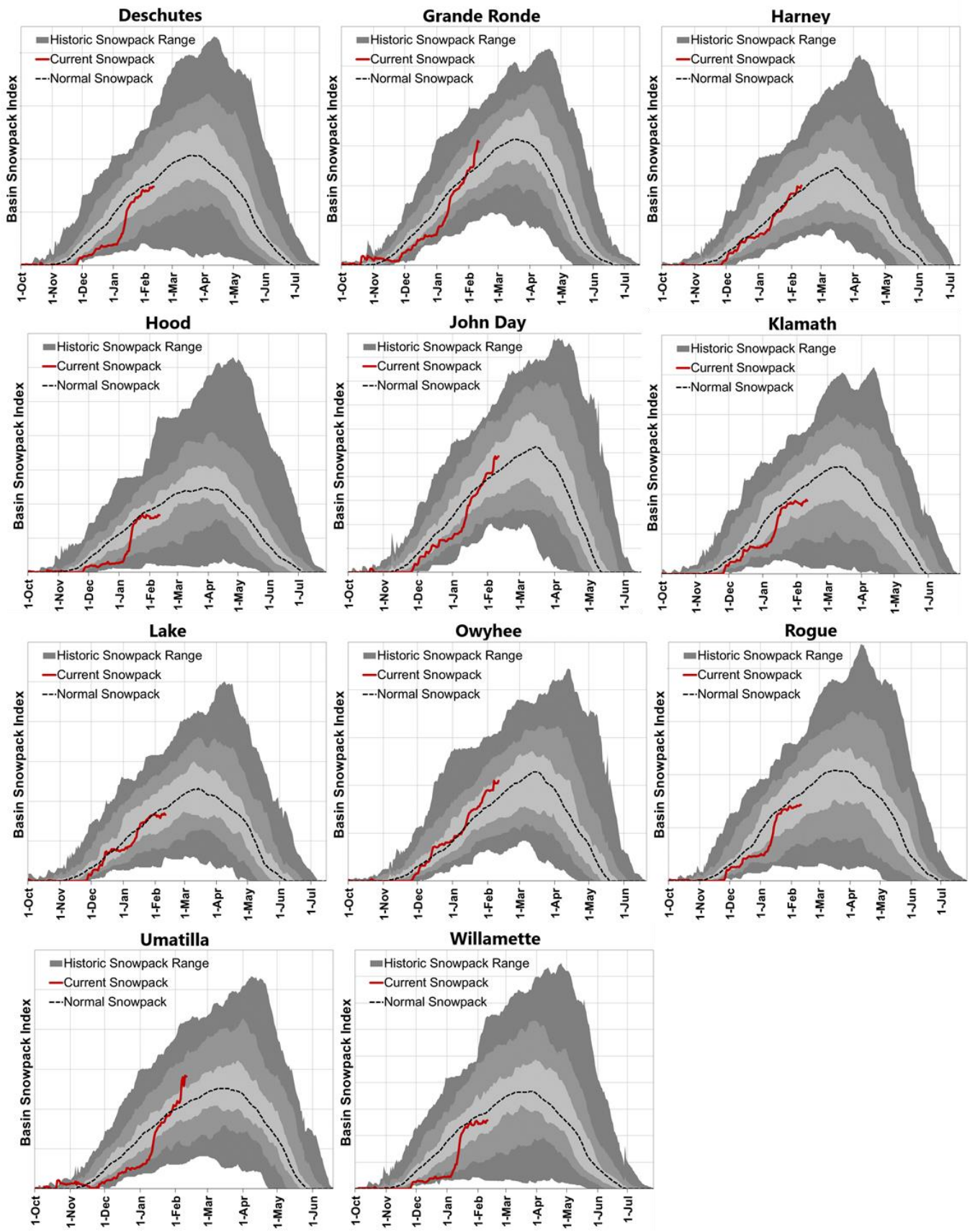
Tualatin River Basin: Scoggins reservoir is at 74 percent of capacity and releasing 17 cfs.

The most recent update to the US Drought Monitor now indicates that almost 90 percent of the state is in D0 (abnormally dry) conditions, with just over 23 percent of the state listed as in D1 (moderate drought). This is likely to improve in North Central Oregon in response to recent weather events.

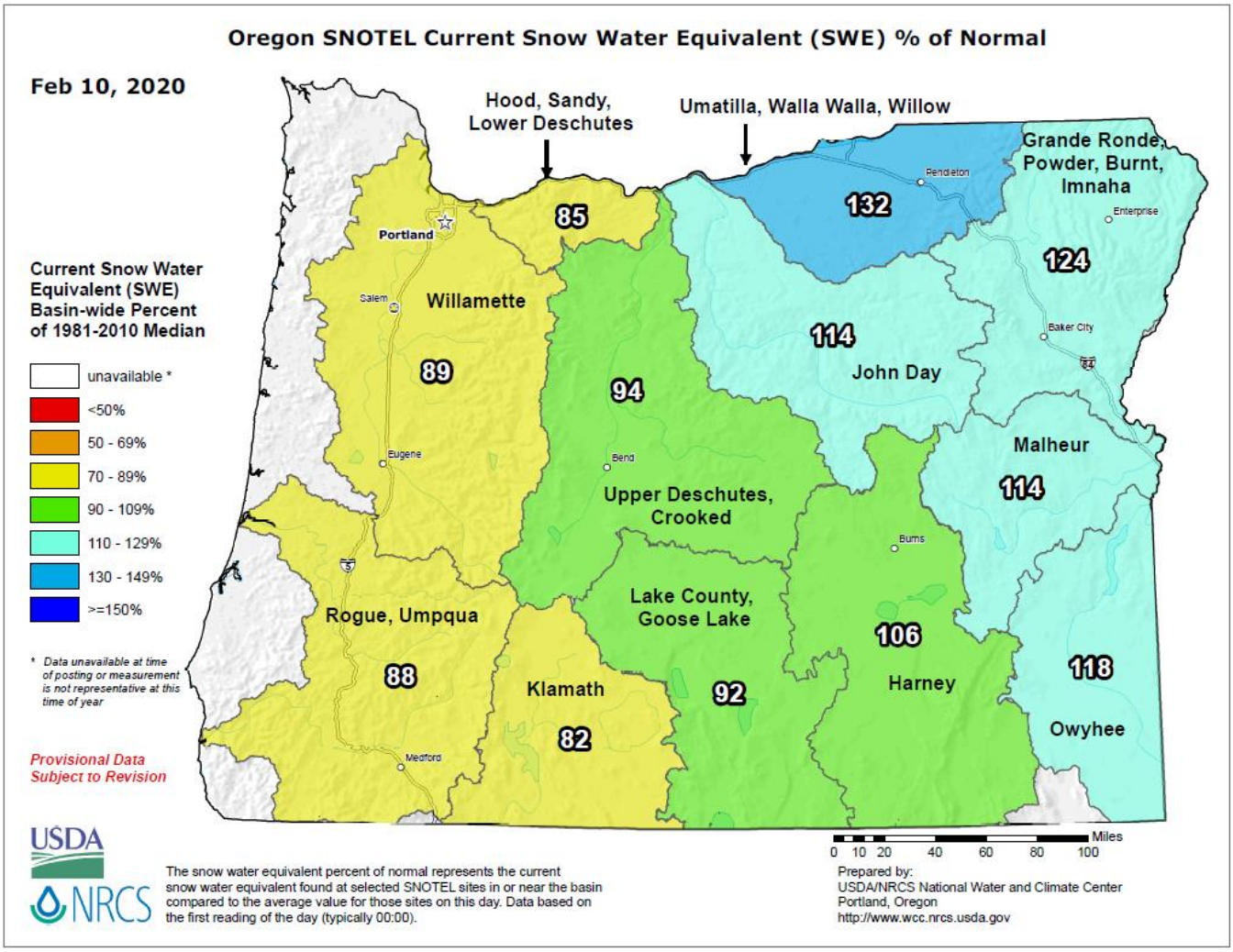
The Oregon Office of Emergency Management has assembled a new hydrology/meteorology dashboard featuring many of the data sources used to generate this report. Use the selection arrows at the bottom of your browser to navigate to the various data sources.

Data & Products: Page:

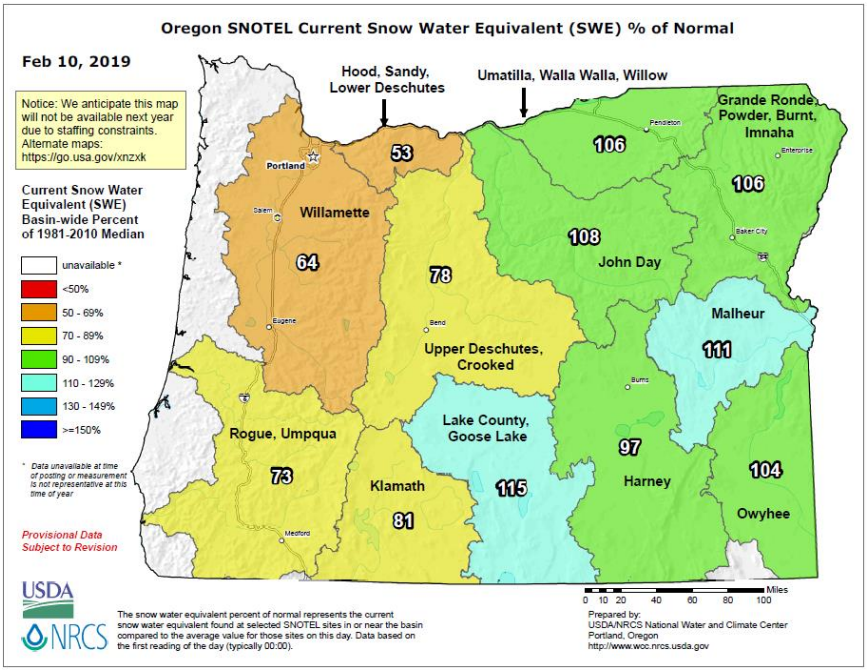
Snowpack Graphs – February 10, 2020



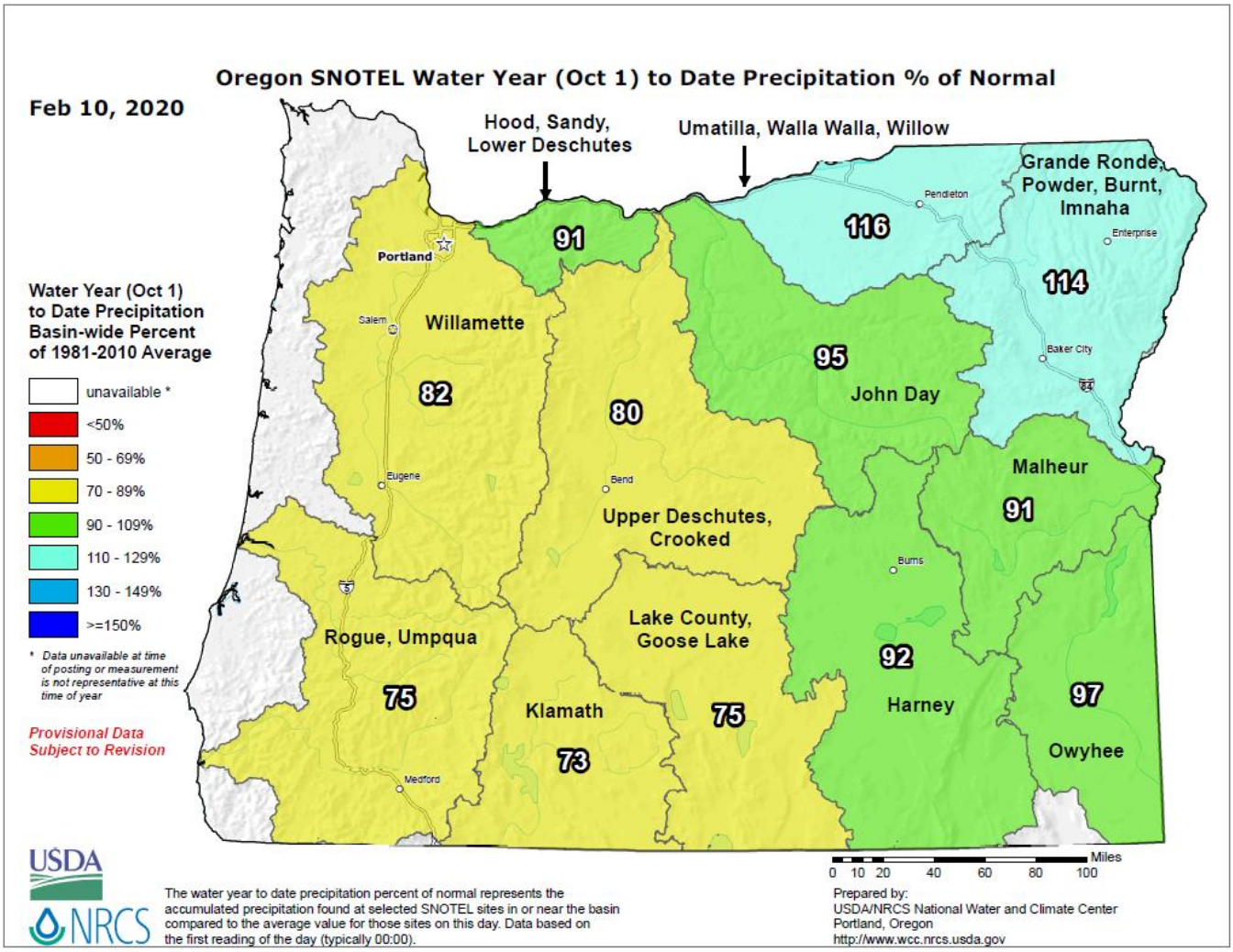
Snow Water Equivalent (SWE) - Percent of Normal



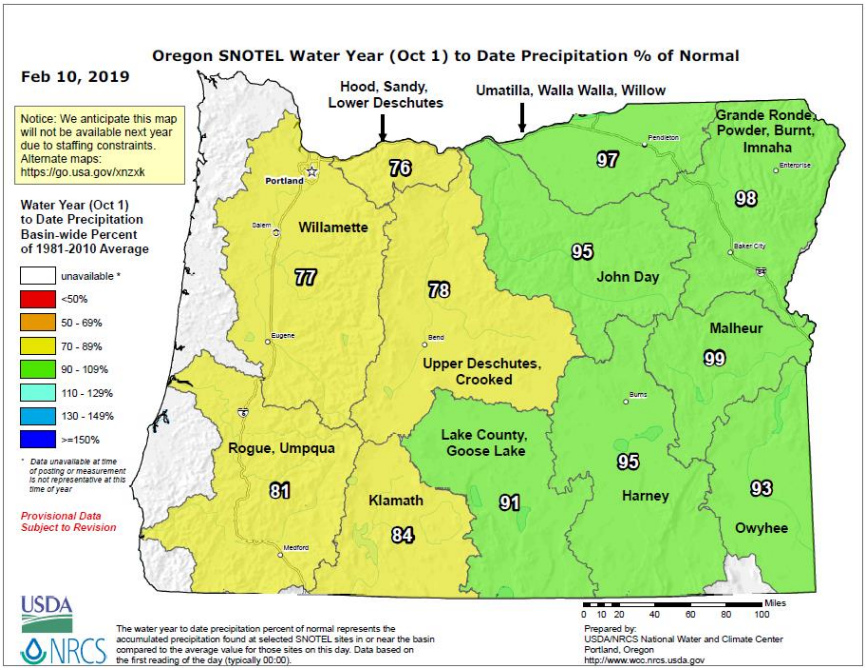
Compared to this time <u>last year</u>:



Precipitation (Mountain) - Percent of Normal



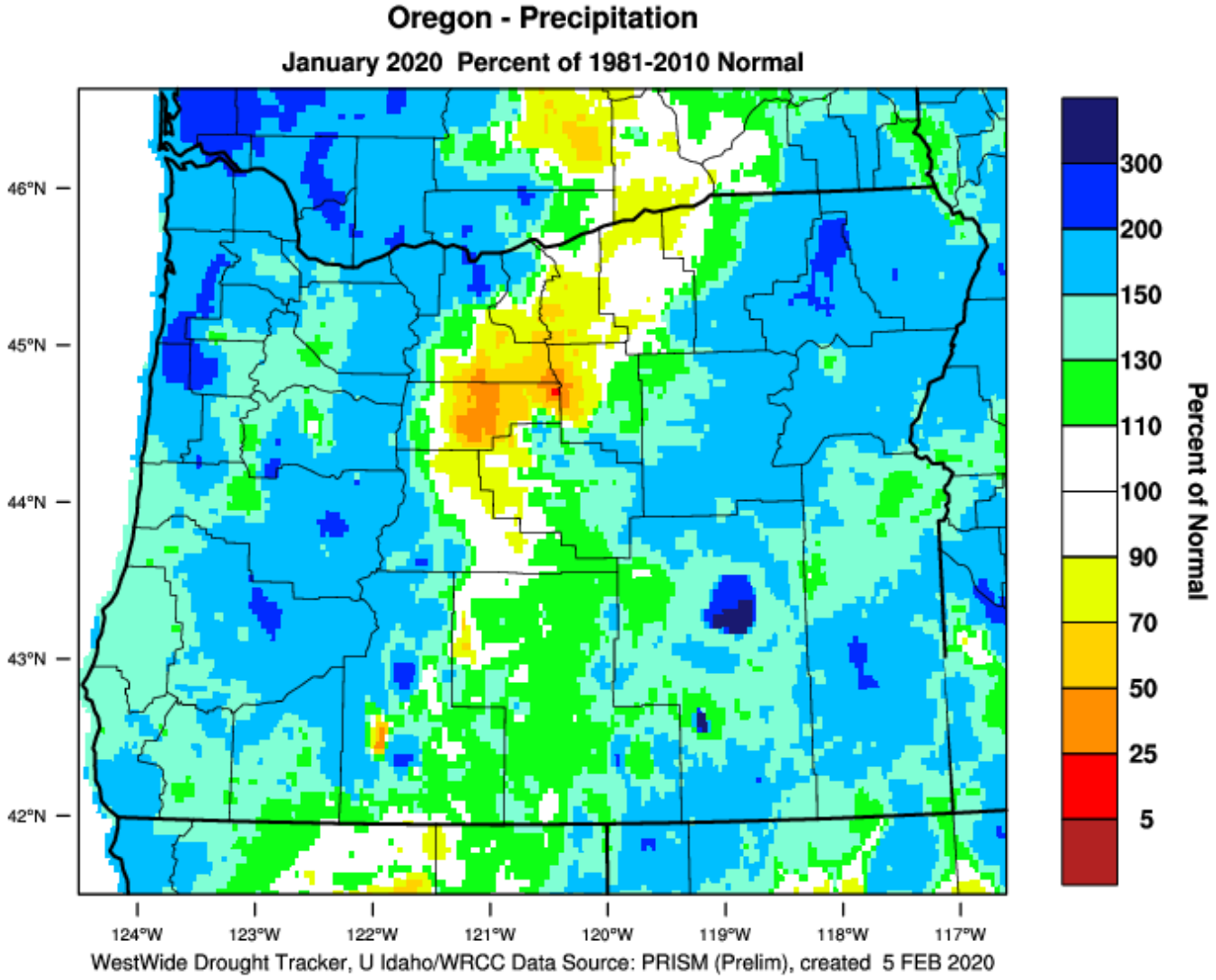
Compared to this time <u>last year</u>:



Precipitation – (1 Month) Percent of Normal

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

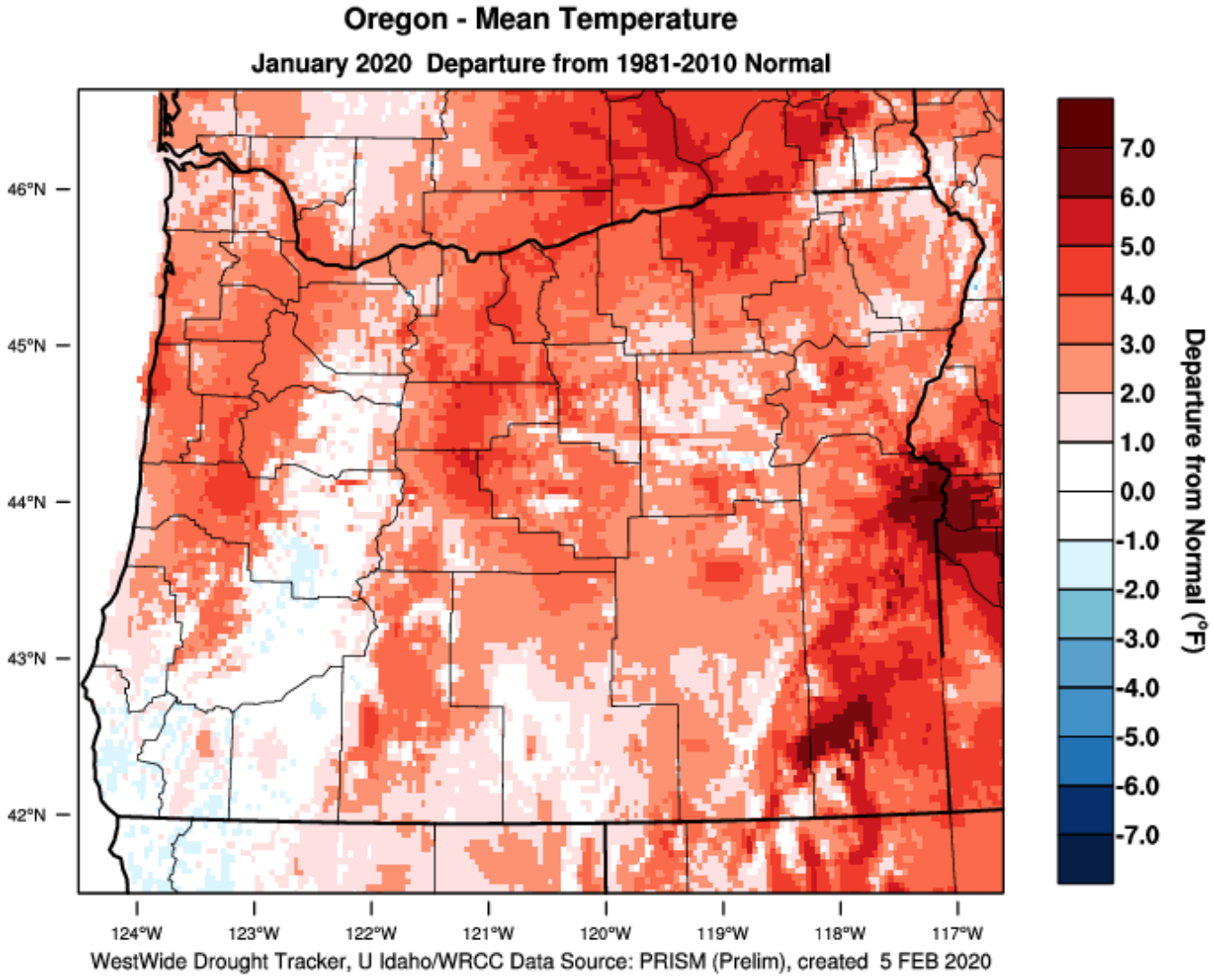
PRISM > Precipitation Anomaly 1 Month > Oregon



Temperature – (1 Month) Departure from Normal

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

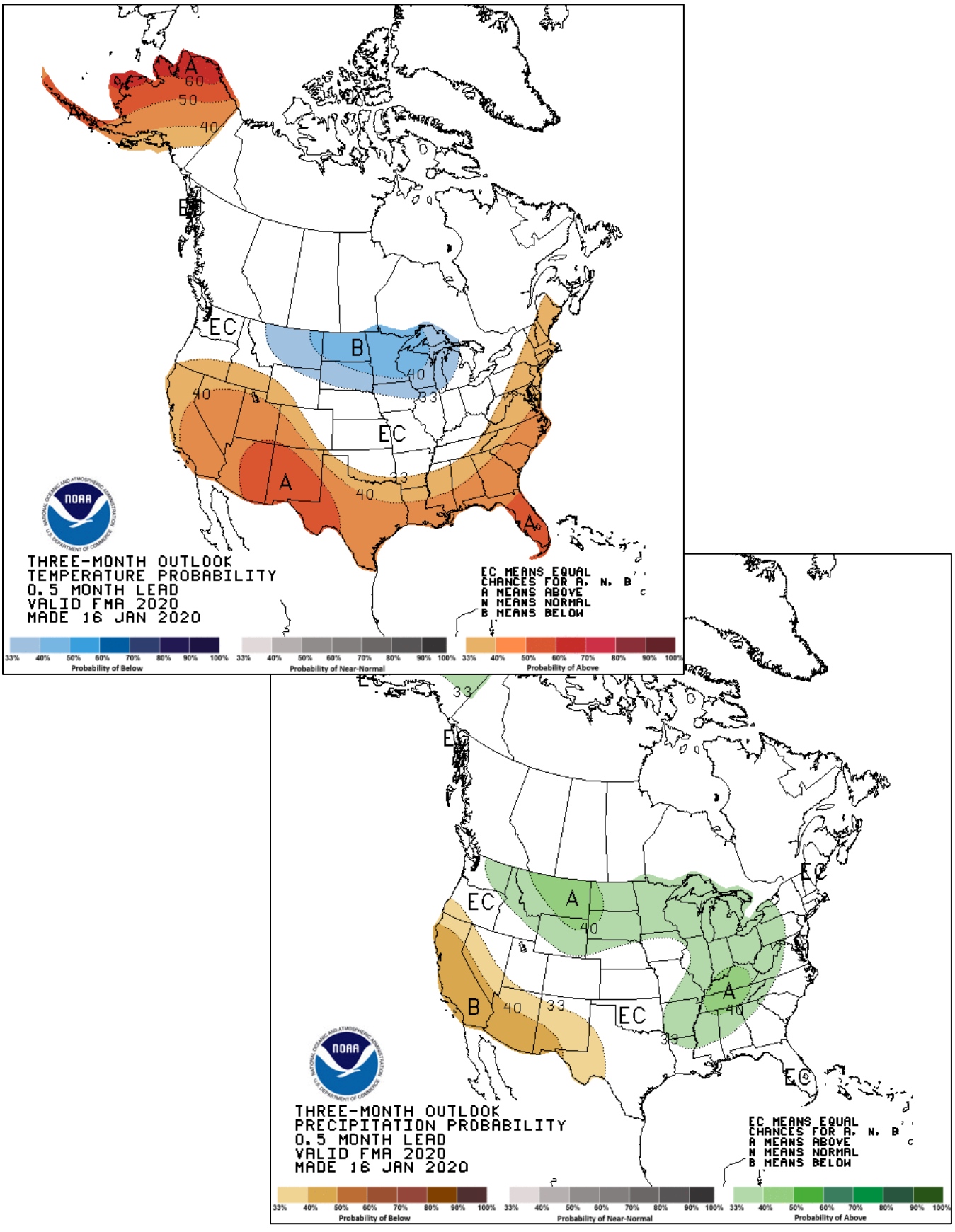
PRISM > Temperature Anomaly 1 Month > Oregon



Three Month Temperature and Precipitation Outlook

February through April

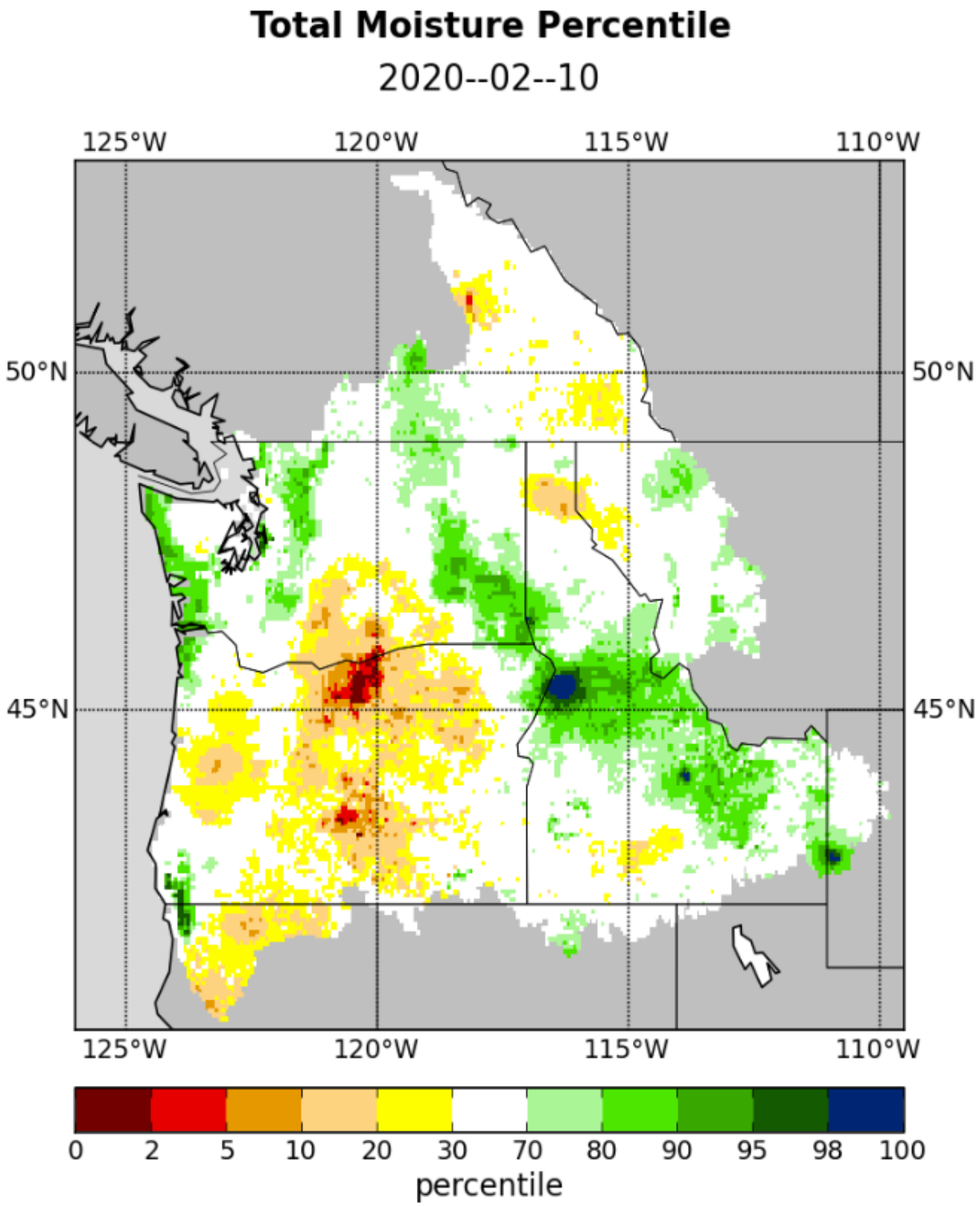
Website: http://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=1



Total Moisture - Percentile

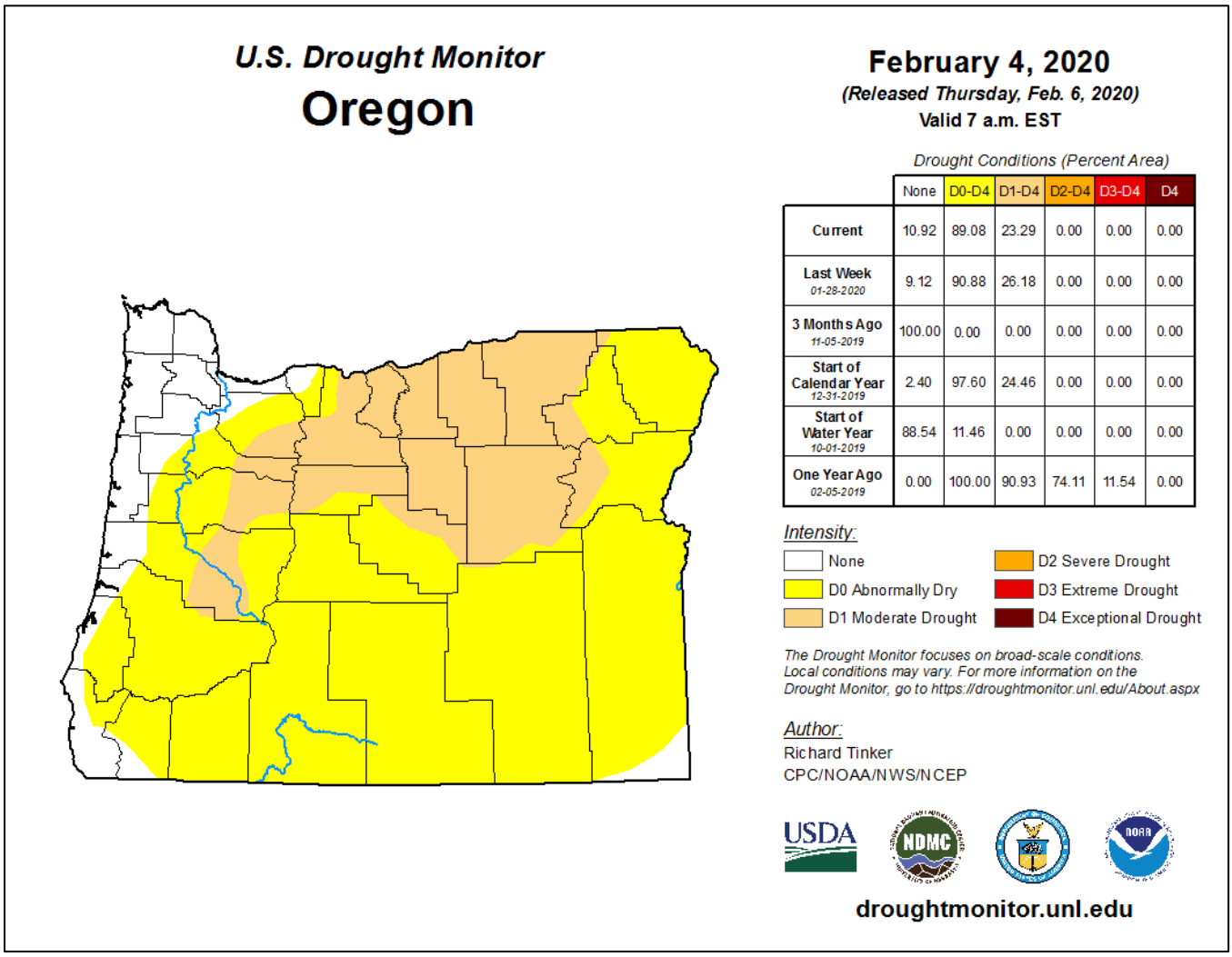
Total Moisture (STOT) is a moisture index calculated by adding Soil Moisture and Snow Water Equivalent. STOT represents the total water content of a region.

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

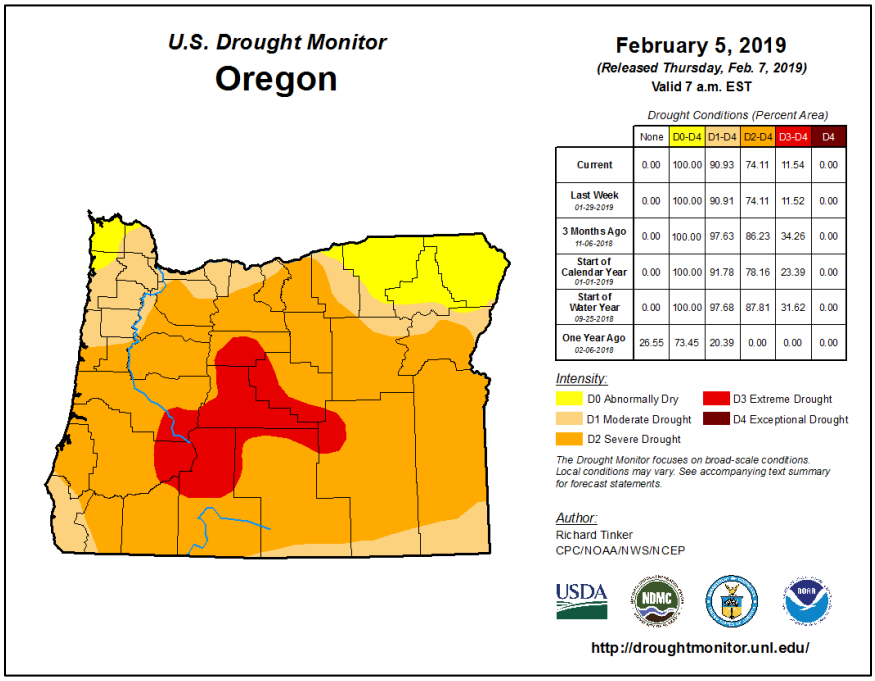


U.S. Drought Monitor for Oregon

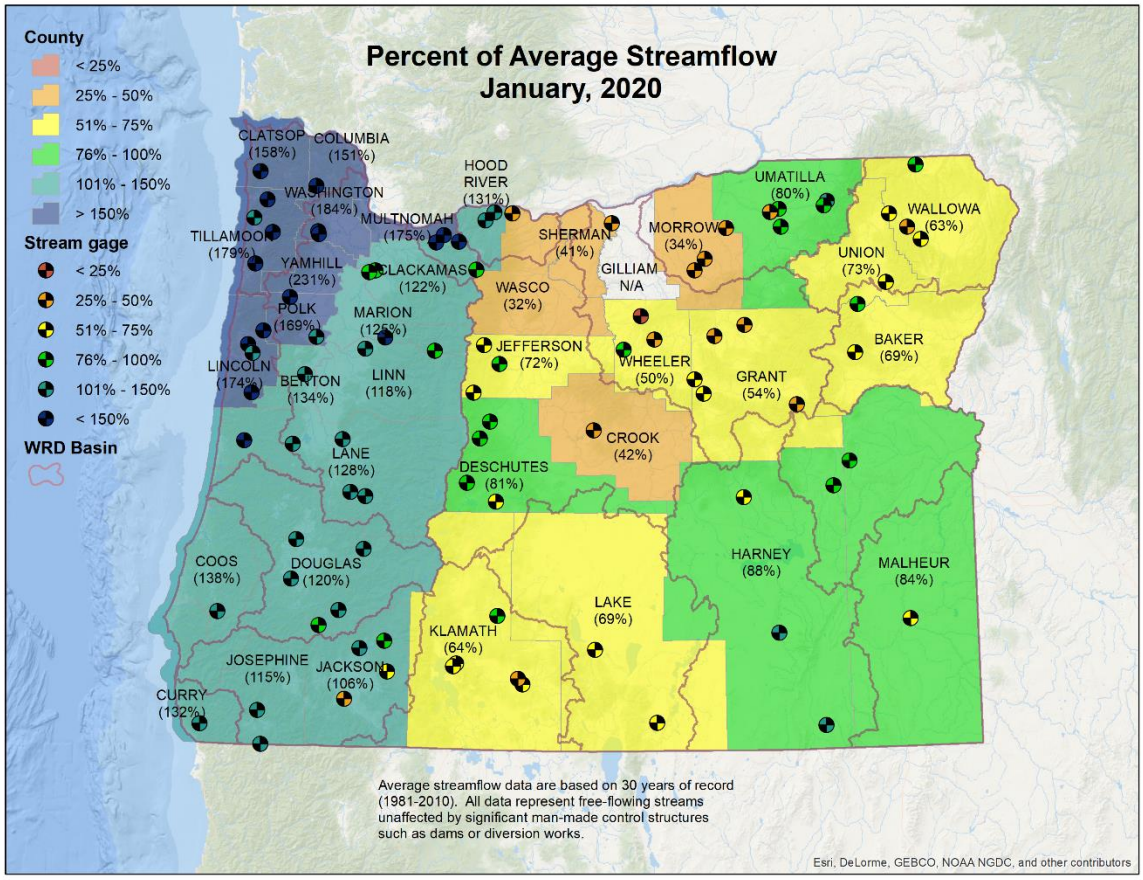
Website: https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?OR



Compared to this time last year:



Streamflow Conditions by County – January, 2020



Streamflow Conditions – Umatilla Basin (Umatilla County)