# Oregon
# Water Conditions Report
## January 27, 2020

OREGON
WATER RESOURCES
DEPARTMENT

**Current Oregon statewide snow water equivalent** is 93 percent of normal, improved from 79 percent over the last two weeks. Basin values vary from 86 percent of normal in the Klamath basin to 123 percent of normal in the Owyhee basin. Snowpack in the Hood, Sandy, and Lower Deschutes basin has increased from 25 percent of normal reported on December 30, 2019 to 90 percent today.

**Current Oregon statewide water year precipitation** at NRCS SNOTEL sites is 78 percent of normal, still below average but improved from 66 percent over the past two weeks. Basin precipitation values range from 74 percent of normal in the Willamette, Rogue, Umpqua and Upper Deschutes basins to 92 percent of normal in the Owyhee basin.

**The first NRCS Basin Outlook Report of the year is now available.** This report is published monthly from January through June. The most recent edition points out that the southeastern third of the state fared better with higher than normal amounts of accumulating snow, while the northwestern two thirds of the state received amounts of SWE well below normal. Storm impacts were generally only in the southern regions of the state during the fall with much of the precipitation falling as rain instead of snow, particularly at lower elevations.

**Precipitation over the past two weeks** has ranged from below to above normal east of the Cascades to well above normal to the west. The highest anomalies were in the central Cascades, north and south coast areas where precipitation amounts were up to 4 inches above normal. For the month of December, precipitation was below-normal across much of the state with the exception of Lake and Harney Counties where precipitation was well above normal. In areas west of the Cascades and in southeast Oregon anomalies ranged between 50 and 70 percent of normal.

**Temperatures over the past two weeks** have been mostly above-normal especially in Baker and Malheur counties where temperatures ranged from 2 to over 5 degrees above-normal. For the month of December, 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 an increased probability of below-normal temperatures along with below-normal precipitation. The most recent three month outlook indicates equal probability of above or below-normal temperatures across all but the southern 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.

**January streamflow will likely end up between 75 and 80 percent of normal**. This is higher than the 53 percent seen in December. Regionally for January, streamflow conditions should end up around 50 percent of normal east of the Cascades and about 110 percent to the west. Overall, flows in the John Day were the lowest at around 35 percent of normal while the highest flows were in the North Coast and Mid Coast at over 135 percent of normal. Recent weather events have brought marked improvement in streamflow in western Oregon, with many streams continuing to flow at rates well over 100 percent of normal.

**USACE Reservoirs:** **Willamette:** The Willamette system is 6 percent full and 6 percent above 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 36,100 cfs with flows at Salem at 60,800 cfs.

**Rogue:** The Rogue system is currently 40 percent full and 2 percent below rule curve. Lost Creek is 45 percent full and 5 percent below rule. Outflows should continue holding at about 1,150 cfs and hopefully capture the majority of the forecasted inflows. Applegate is at 18 percent, 8 percent above rule. Releases are currently at 650 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 45 percent full and 1 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 24 percent of capacity. Outflows are close to 10 cfs with inflows of about 335 cfs.

Deschutes River Basin: Ochoco and Prineville reservoirs are at 46 percent and 57 percent full respectively. Ochoco reservoir is releasing less than 5 cfs while Prineville reservoir is currently releasing about 100 cfs with inflows of about 260 cfs. Crescent Lake is at 52 percent, Wickiup is at 54 percent and Crane Prairie is at 80 percent of capacity.

Malheur River Basin: Warm Springs, Beulah, and Bully Creek reservoirs are at 59, 44, and 54 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 70 percent. Inflows are currently about 400 cfs.

Burnt and Powder River Basins: Phillips and Unity reservoirs are at 23 percent and 49 percent full respectively. Phillips is releasing about 17 cfs with inflows around 19 cfs while Unity is releasing about 11 cfs.

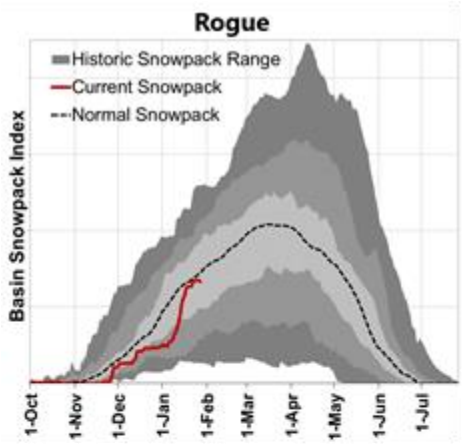
Tualatin River Basin: Scoggins reservoir is at 73 percent of capacity and releasing over 175 cfs.

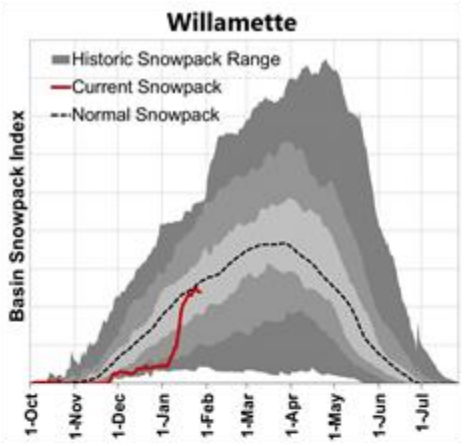
**The most recent update to the US Drought Monitor** now indicates that almost 98 percent of the state is in D0 (abnormally dry) conditions, with almost 33 percent of the state listed as in D1 (moderate drought). This is likely to improve in Western Oregon in response to recent weather events.

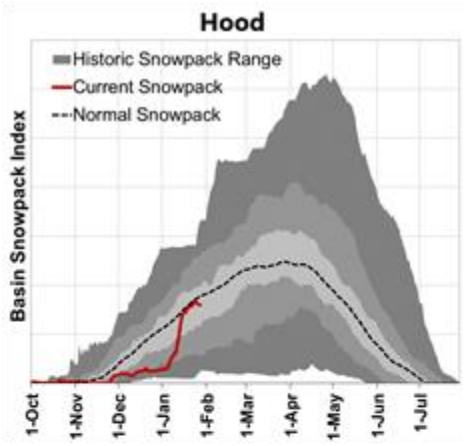
**The Oregon Office of Emergency Management has assembled a new hydrology/meteorology dashboard** featuring many of the data sources used to generate this report.

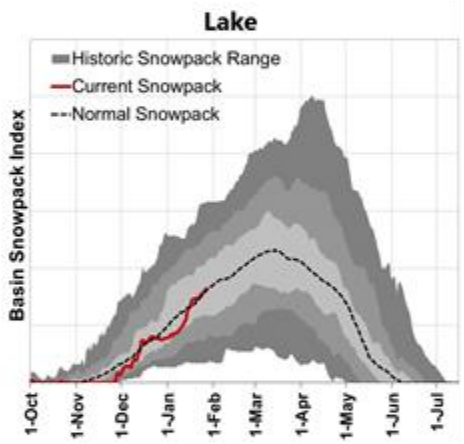
## Data & Products: Page:

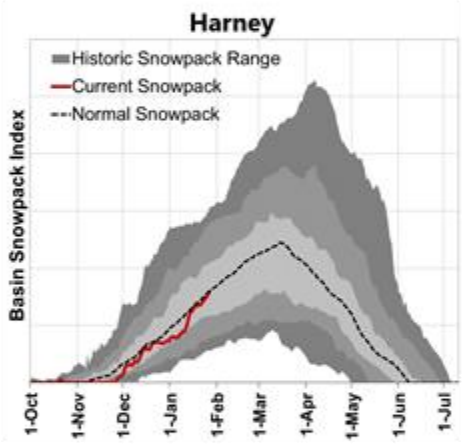
## Snowpack Graphs – January 2020

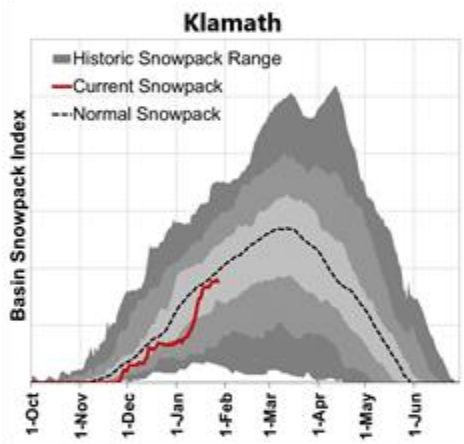


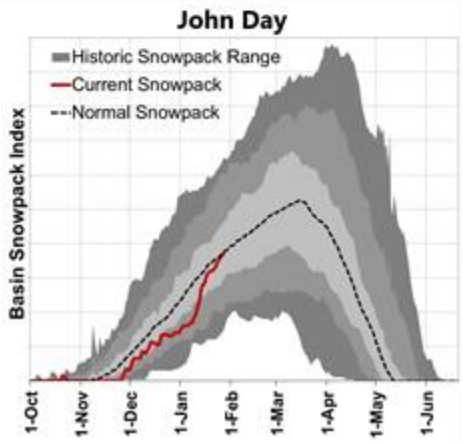



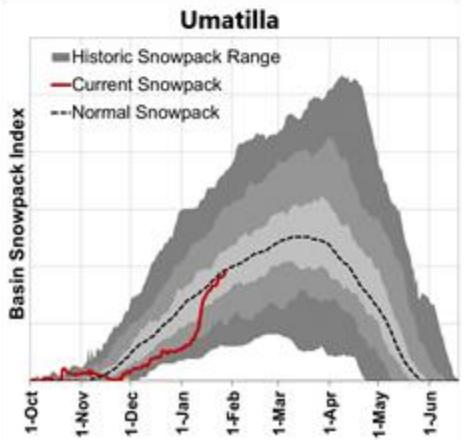



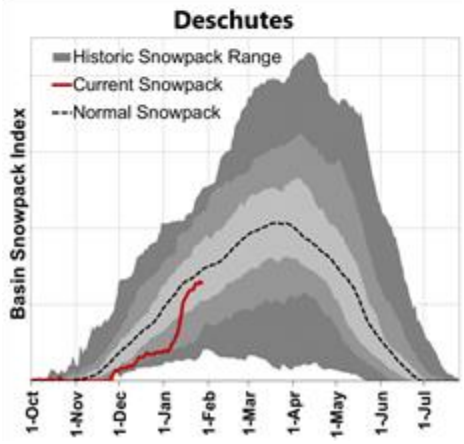



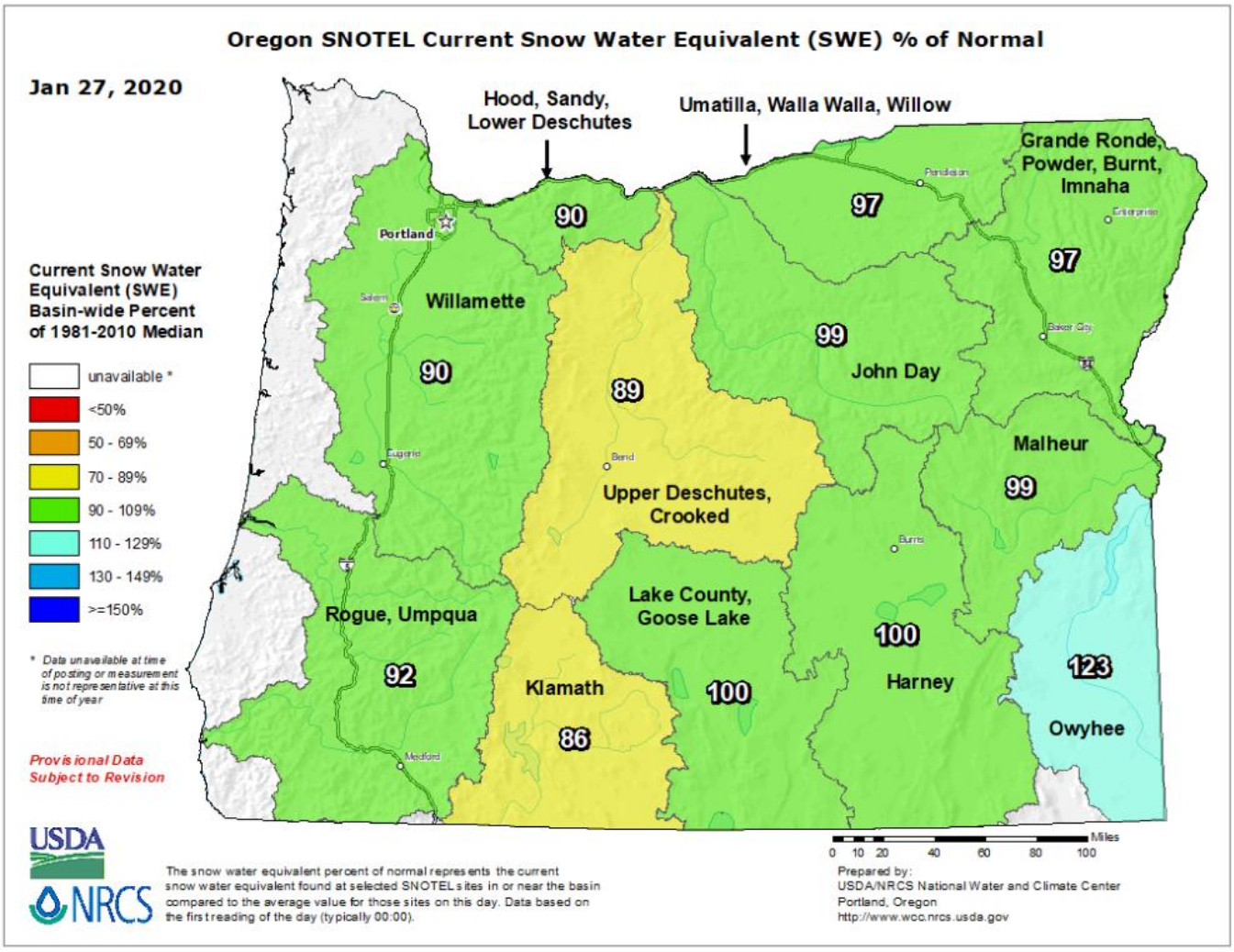



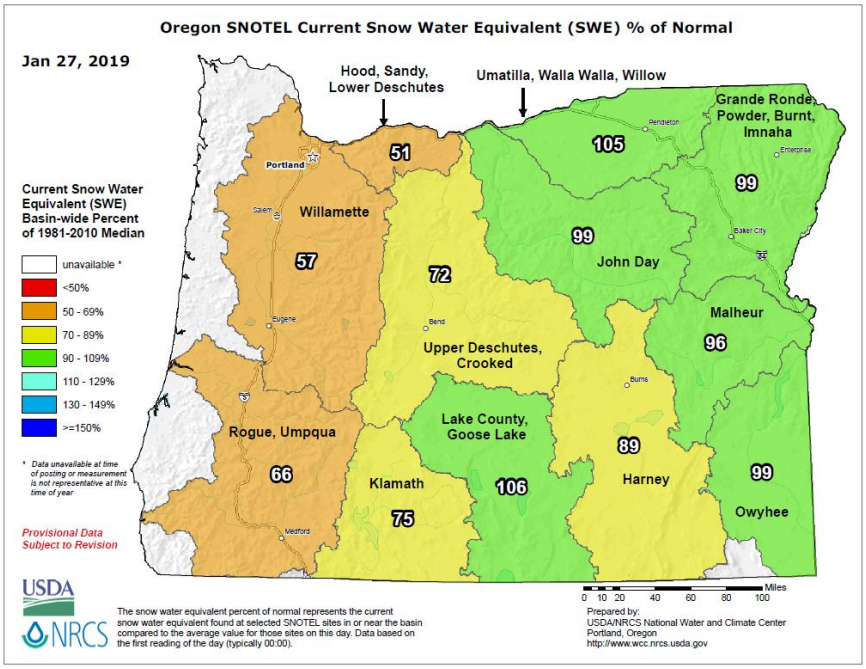



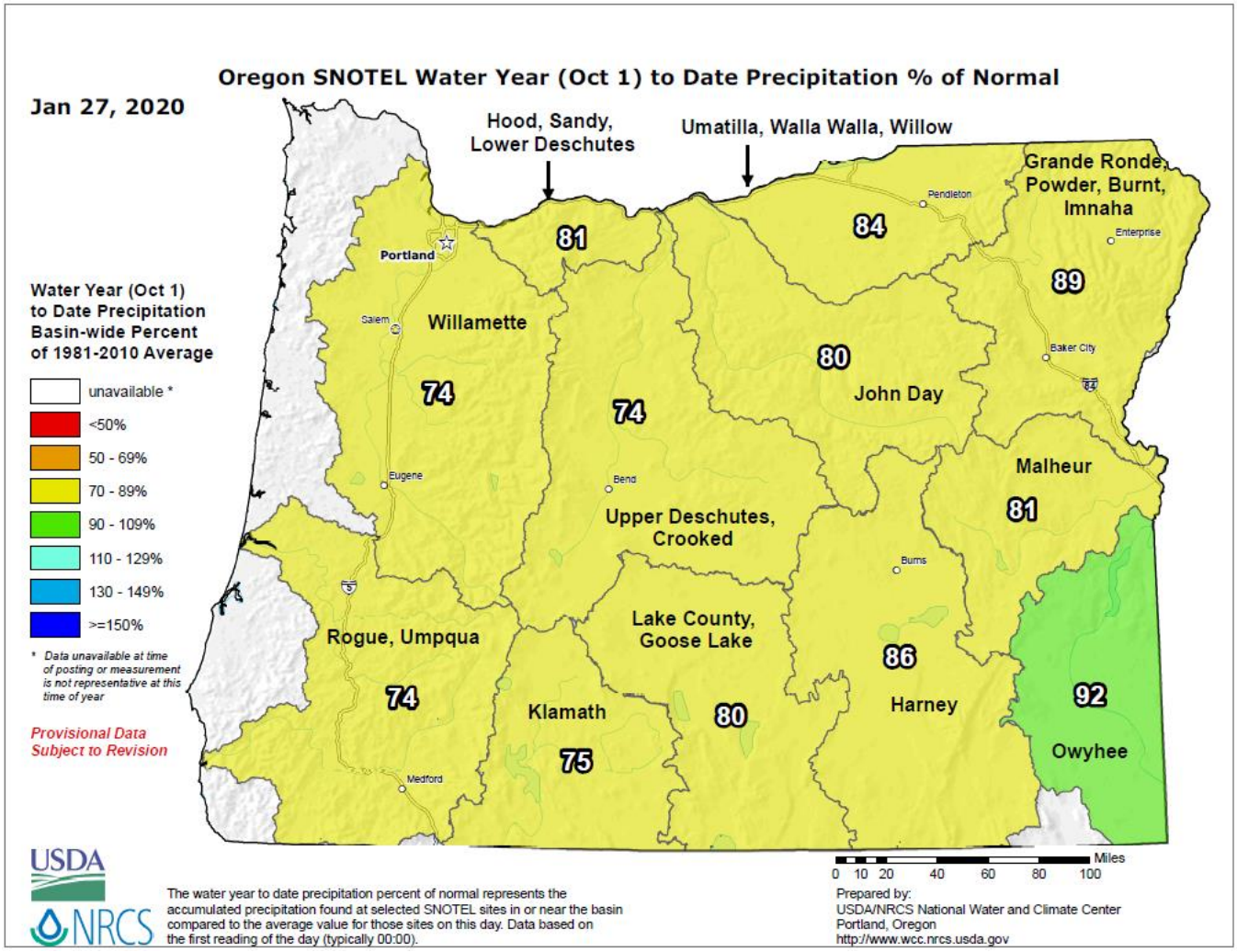
## Snow Water Equivalent (SWE) - Percent of Normal



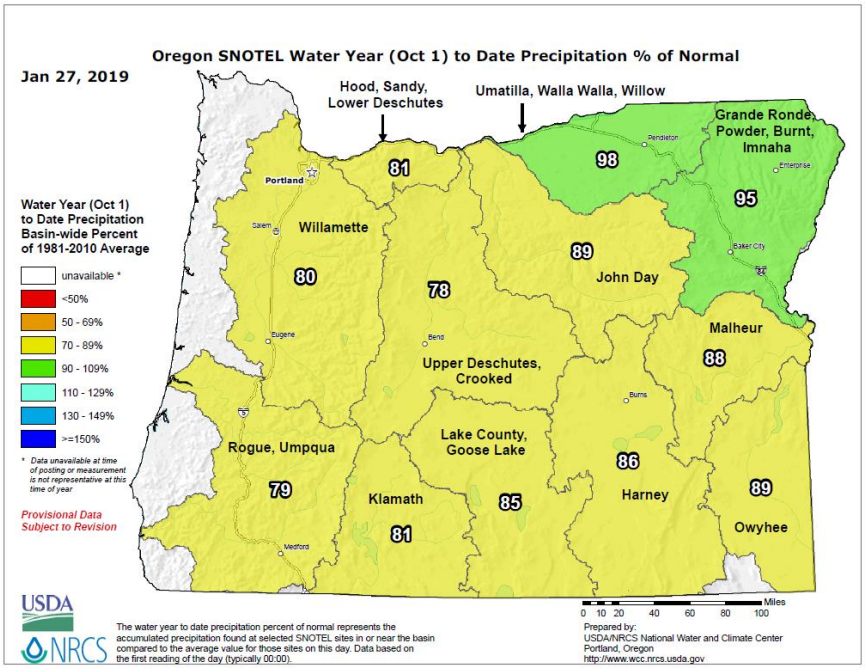

**Compared to this time <u>last year</u>:**



## Precipitation (Mountain) - Percent of Normal



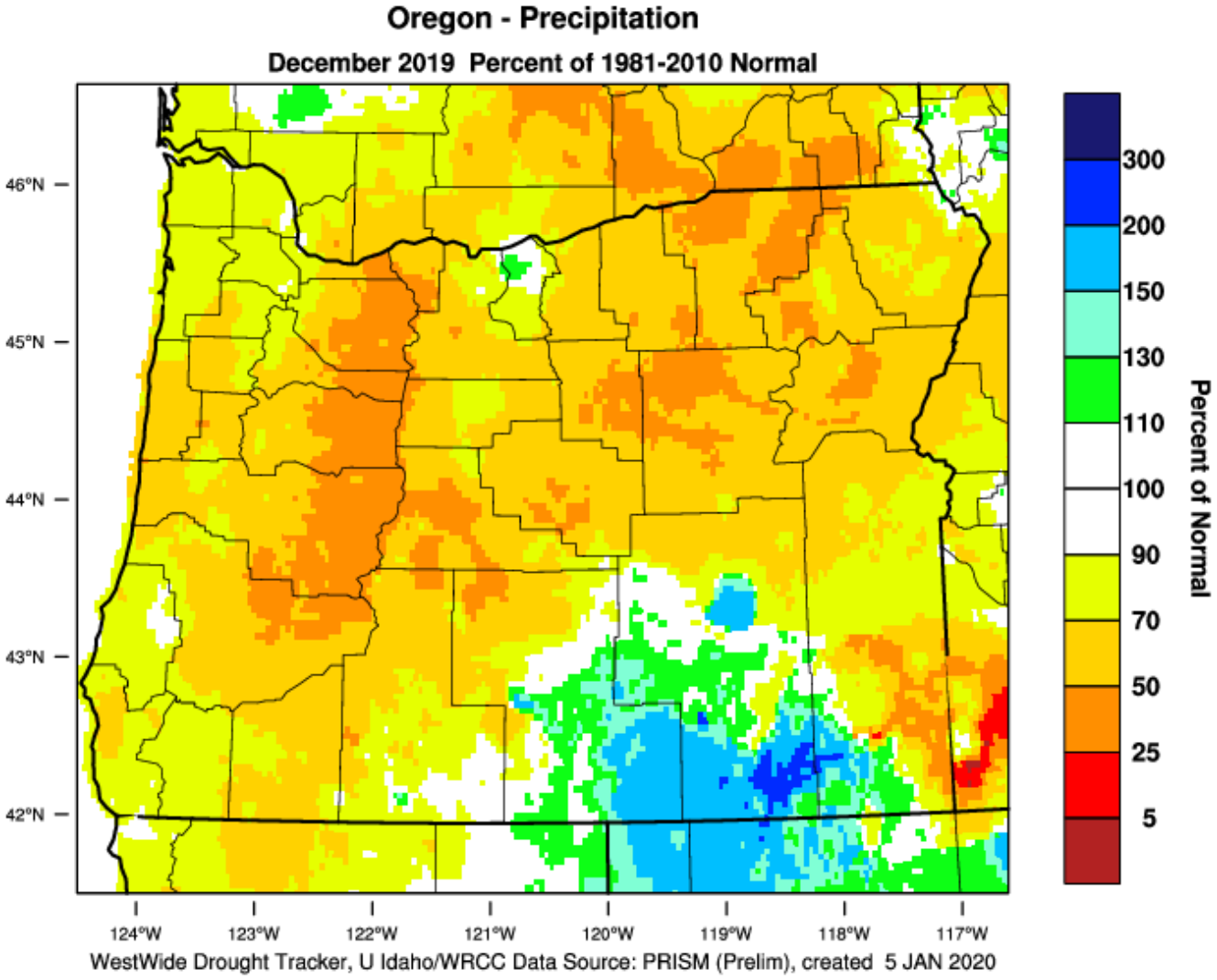

**Compared to this time <u>last year</u>:**



## Precipitation – (1 Month) Percent of Normal

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

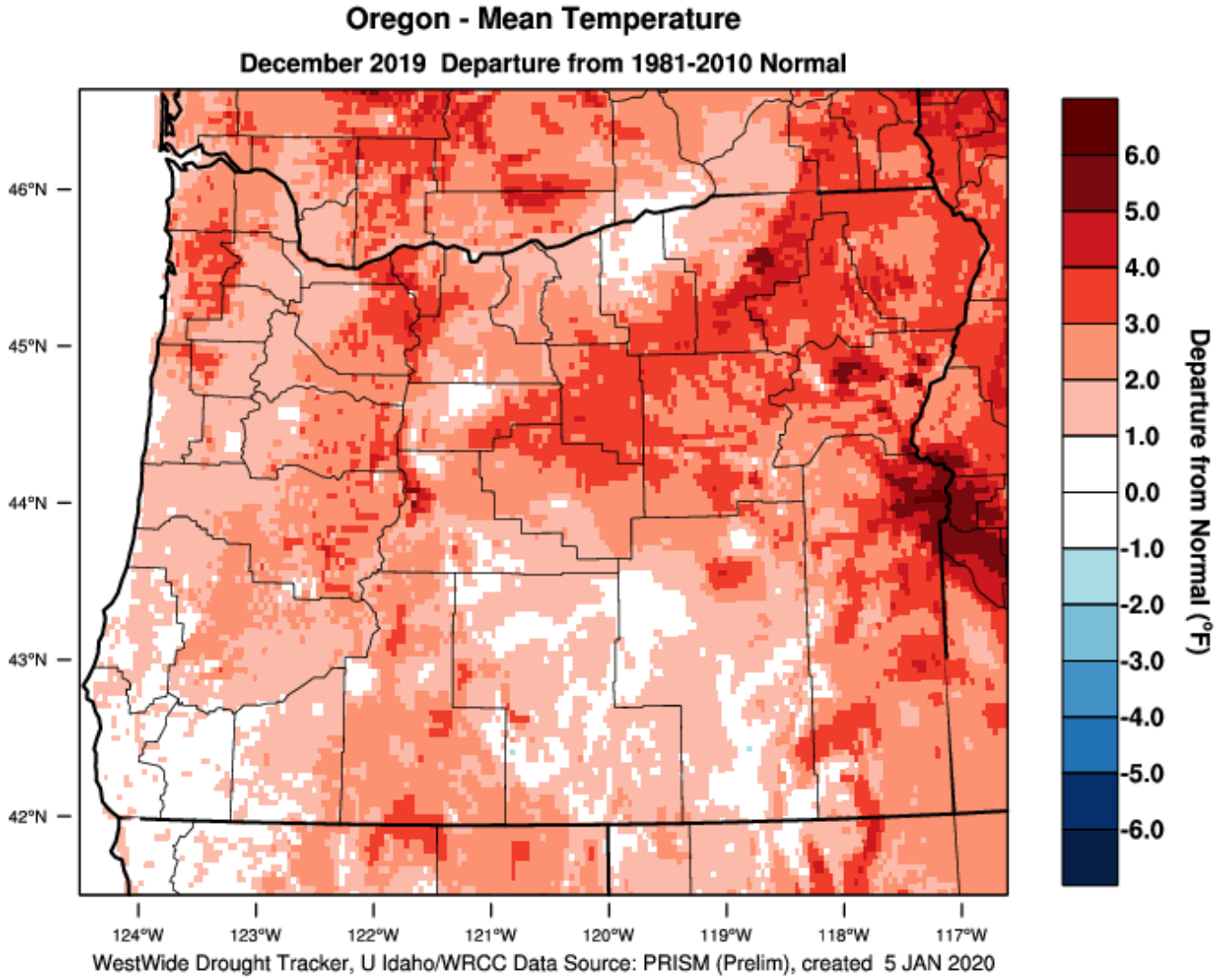
**PRISM > Precipitation Anomaly 1 Month > Oregon**



## Temperature – (1 Month) Departure from Normal

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

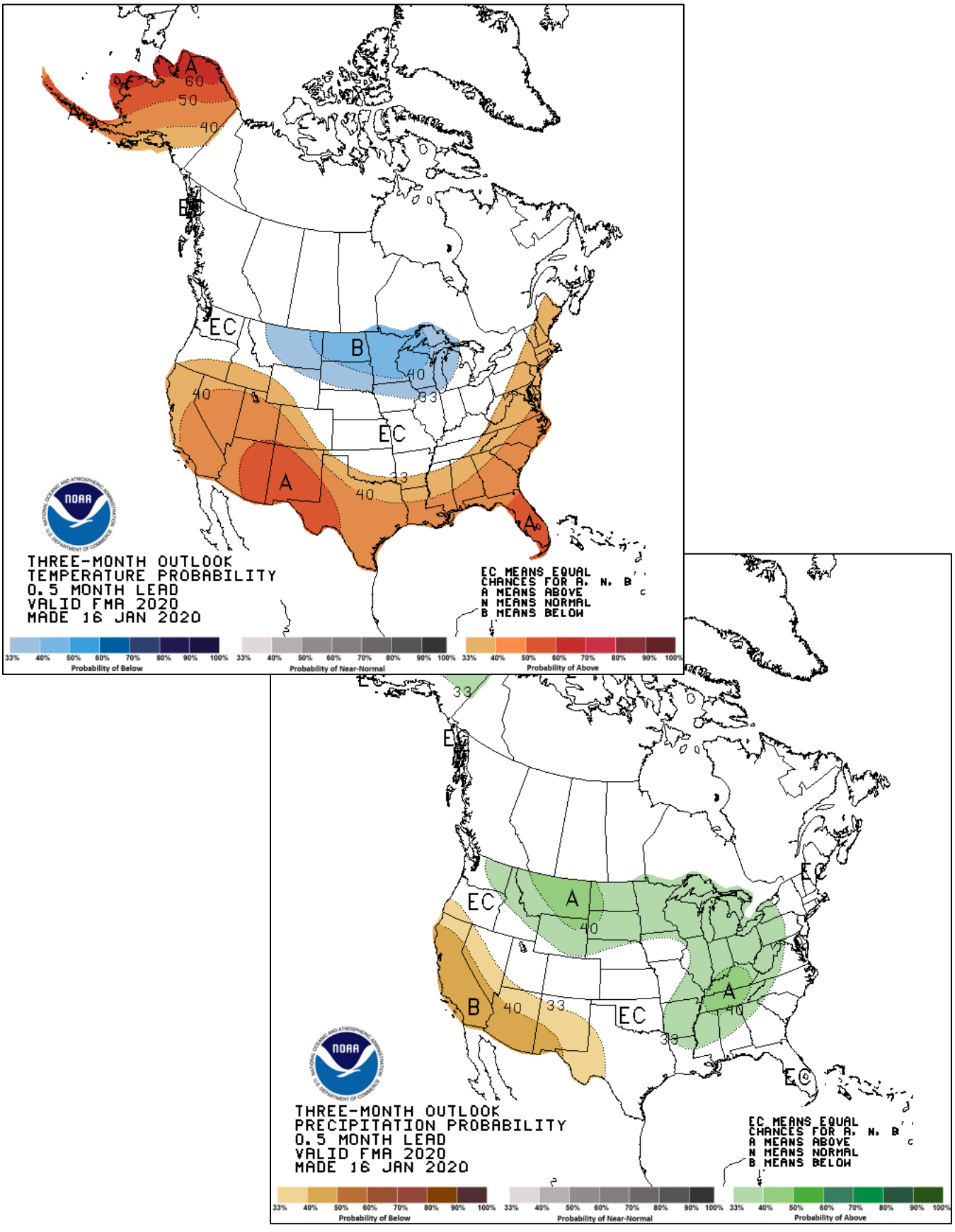
**PRISM > Temperature Anomaly 1 Month > Oregon**



## Three Month Temperature and Precipitation Outlook

**February through April**

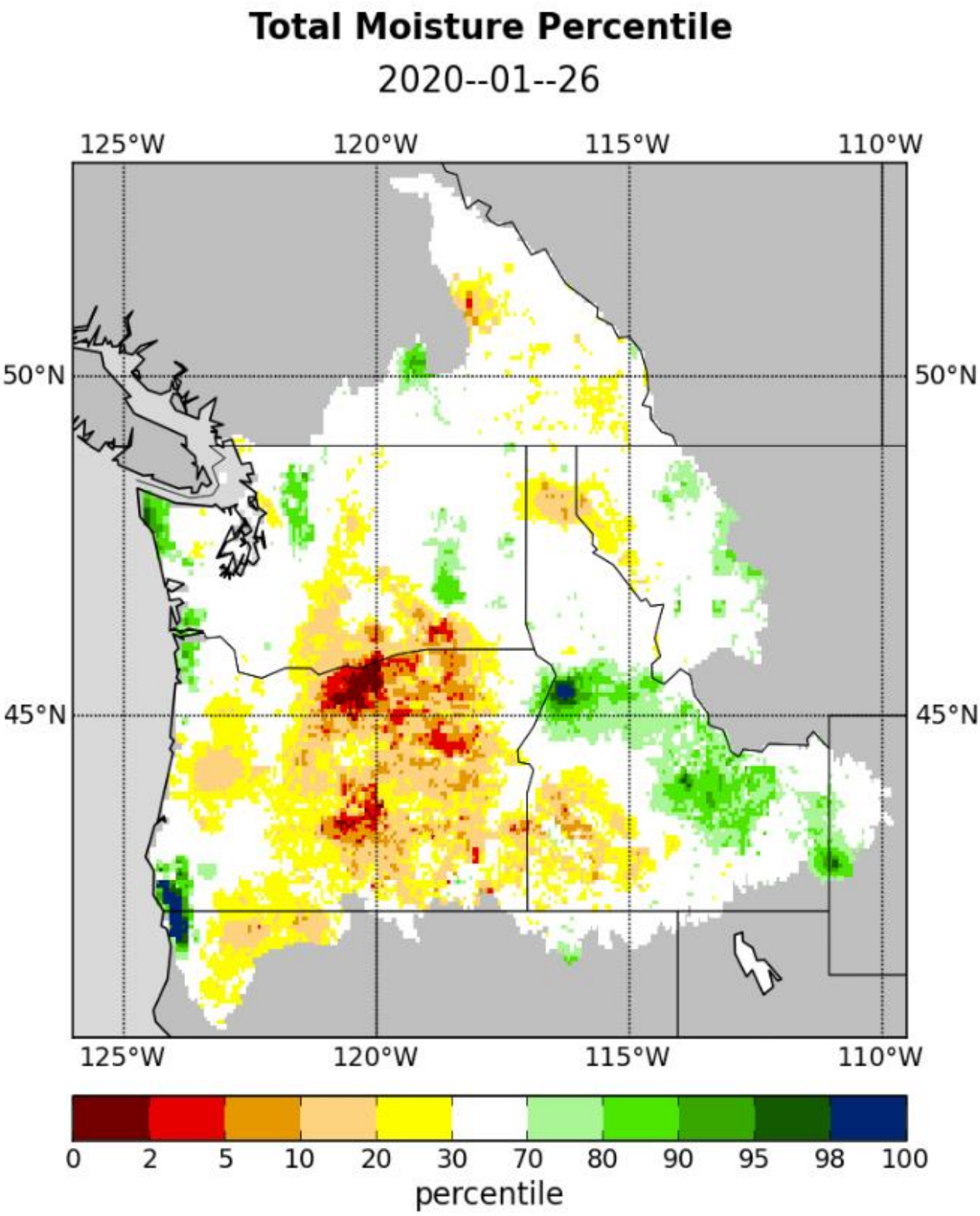
Website: http://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=1



## Total Moisture - Percentile

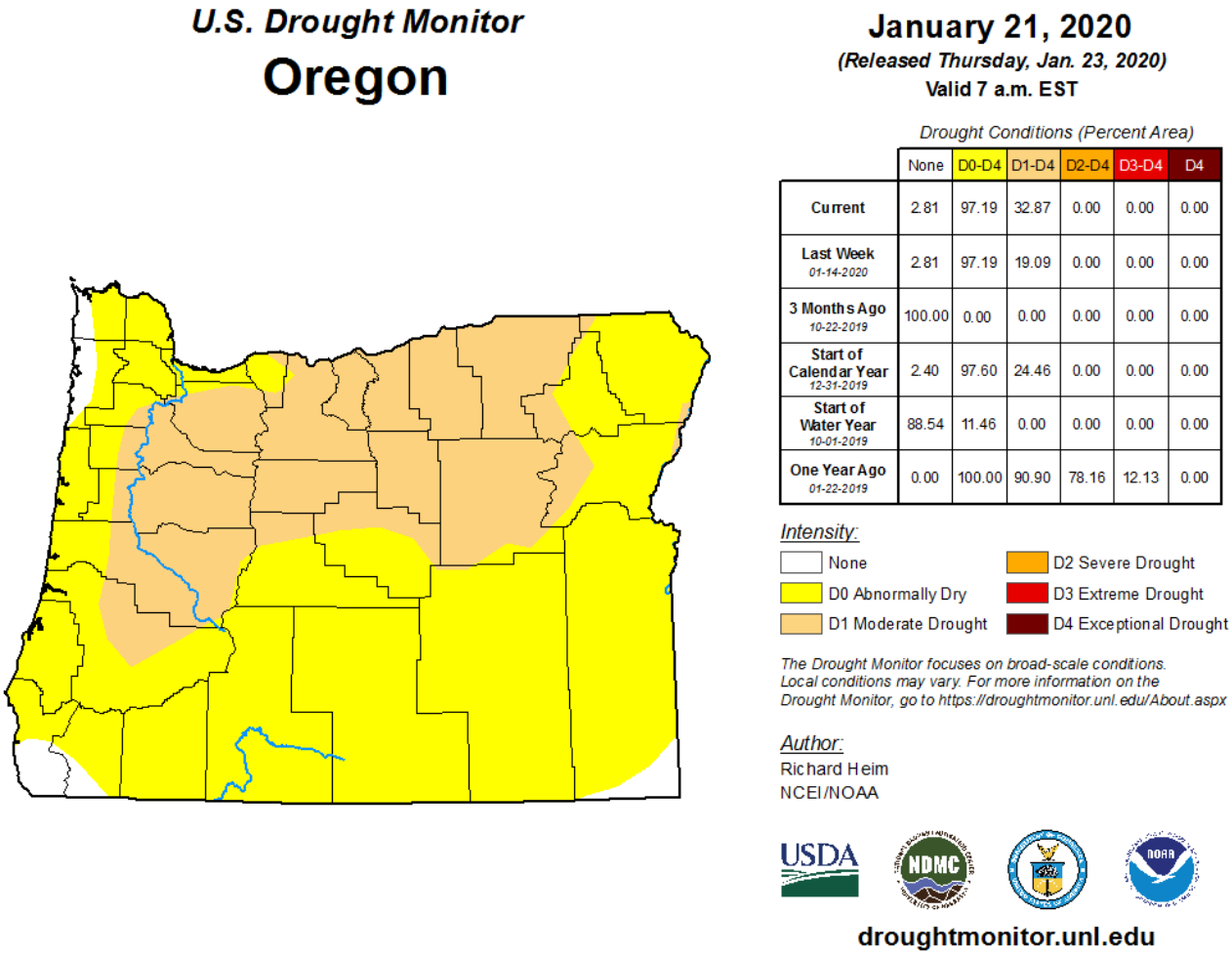
Total Moisture (STOT) is a moisture index calculated by adding Soil Moisture and Snow Water Equivalent. STOT represents the total water content of a region.

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

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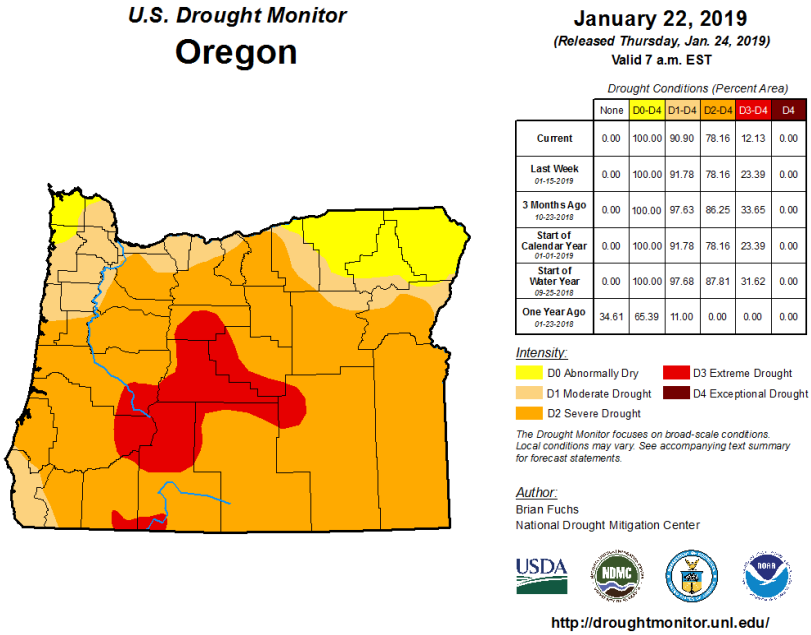
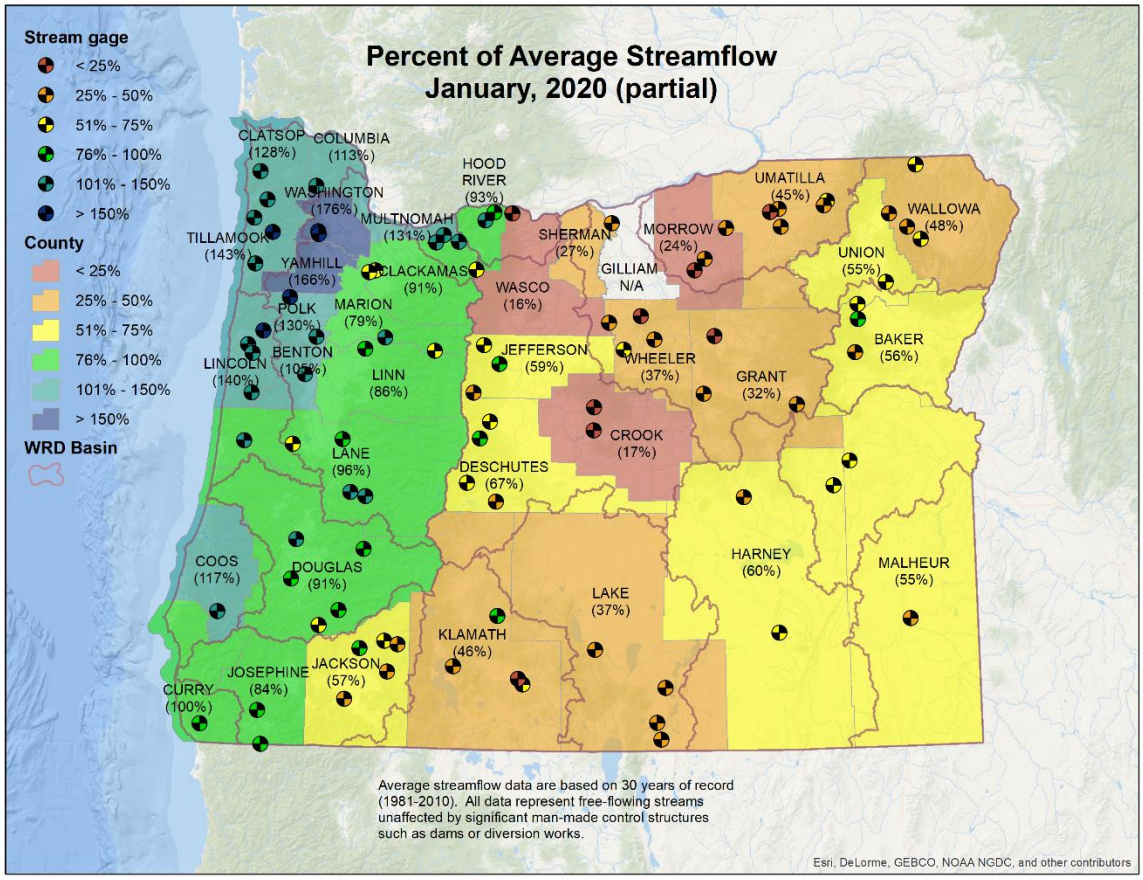


## Streamflow Conditions by County – January, 2020




## Streamflow Conditions – Powder Basin (Baker County)