

Oregon Water Conditions Report January 14, 2019



Snow water equivalent (SWE) values measured at NRCS SNOTEL sites remain below normal statewide at 66 percent of normal. The Owyhee basin currently has the highest amount of snowpack and is measuring 94 percent. The Hood, Sandy, and Lower Deschutes basins are measuring the least amounts of snowpack and stand at 54 percent of normal.

Oregon statewide water year precipitation at NRCS SNOTEL sites is 75 percent of normal. The highest amounts of water year precipitation have been in the Umatilla, Walla Walla, and Willow basins with 90 percent of normal, while the lowest value are in the Rogue and Umpqua basins at 66 percent of normal for the water year.

The first NRCS [Basin Outlook Report](#) of the year is now available. Barring any unforeseen circumstances, this report is published monthly from January through June. The most recent edition points out that while we are seeing snowpack deficits for this time of the year, it is still early in the season and there are plenty of opportunities for these conditions to change significantly. While eastern Oregon currently has about-normal snowpack as of January 1, storms must continue to bring snow and cold temperatures in order to keep it on track.

Temperatures over the [past two weeks](#) have been warmer than normal across most of the state. Temperatures ranged from four degrees below normal in the John Day basin to five degrees above normal just to the east towards the Powder basin. For the [month of December](#), temperatures were above normal for the northern part of the state and about normal for the rest of the state.

Over the next [8 to 14 days](#), the NOAA Climate Prediction Center is forecasting above-normal temperatures west of the Cascades with normal temperature probability to the East. Precipitation probability is for below-normal precipitation across the state. The most recent [three month outlook](#) indicates increased chances of above-normal temperatures statewide. The precipitation outlook for the same period calls for below-normal precipitation for all of the state. The next long-term outlook will be issued on January 17, 2019.

[El Niño](#) is expected to form and continue through the Northern Hemisphere spring 2019. ENSO-neutral conditions continued during December 2018, despite widespread above-average sea surface temperatures across the equatorial Pacific Ocean. For more insight, refer to the January 10, 2019 [diagnostic discussion](#) issued by the Climate Prediction Center. Another excellent source of information is the latest [ENSO blog](#) on the climate.gov website. The Climate Prediction Center provides updates on a regular basis. The next diagnostics discussion is scheduled for February 14, 2019.

Statewide streamflows for December were 60 percent of normal. This is up from the 50 percent seen for the month of November. Regionally for December, streamflow conditions were about 56 percent east of the Cascades and 63 percent to the west. More recent data indicate that despite recent rain events flows remain lower than normal, ranging from less

than 20 percent in the Goose and Summer Lakes to over 60 percent in the Grande Ronde and Malheur.

USACE Reservoirs: Rogue: Currently the system is 37 percent full and 3 percent below rule curve. Lost Creek is at 41 percent and 5 percent below rule curve, maintaining an outflow of about 1,050 cfs with inflows currently at 1,220 cfs. Applegate is at 16 percent and 6 percent above rule curve. Applegate outflows are being maintained at 150 cfs with inflows now at 225 cfs.

Willow Creek: Currently the project is 22 percent full and 23 percent below rule curve. Inflows are about 6.5 cfs while the project has been maintaining an outflow of about 2 cfs. The project goal is to continue to capture inflows to get back to rule curve.

Willamette: The project is currently effectively empty and very close to the rule curve. The flows in the Willamette River at Albany are about 10,000 cfs and at Salem flows are about 20,000 cfs.

From the USBR: Storage contents in Reclamation's Pacific Northwest Region reservoirs in Oregon remain well below normal for this time of year and range from 22 percent of average in the Crooked River system to 73 percent of average in the Owyhee. Coupled with below average precipitation and runoff forecasts for this upcoming spring, there is the potential for minimal risk in terms of flood control operations and a relatively increased risk in terms of refill. The current operation at all reservoirs is to release winter minimum flows to allow the reservoirs to fill over the winter and it is anticipated this operation will continue for the next few months.

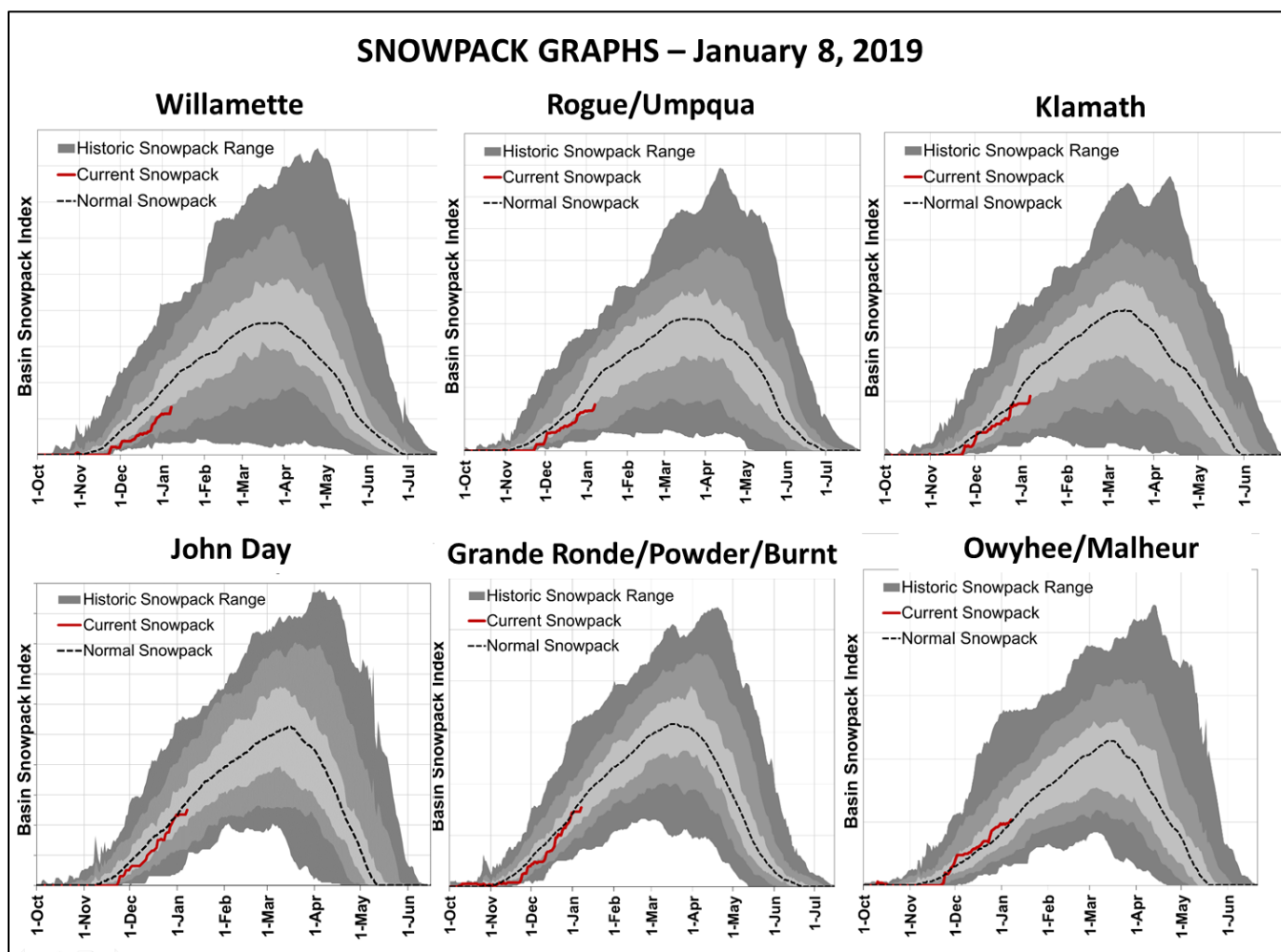
In north central Oregon, **McKay Reservoir** is at 25 percent of capacity, which is below normal for this time of year. In the Willamette, **Scoggins Reservoir** is currently 49 percent full. **Central Oregon** reservoirs are between 7 (Ochoco) and 67 (Crescent Lake and Crane Prairie) percent of capacity. **Eastern Oregon** reservoirs (not considering Thief Valley) are all at or below 36 percent now with Warm Springs at 6 percent and Owyhee at 36 percent of capacity. **Rogue Basin** reservoirs are between 7 and 41 percent of capacity. **Upper Klamath Lake** is currently at 48 percent of capacity.

The most recent update to the US Drought Monitor is showing a slight improvement in conditions in Oregon over the past few weeks. Indicators now point toward D3 (Extreme Drought) in over 23 percent of the state. The report also shows 78 percent of the state is in D2 (Severe Drought), 92 percent is listed as in D1 (Moderate Drought) and 100 percent of the state is listed as D0 (Abnormally Dry).

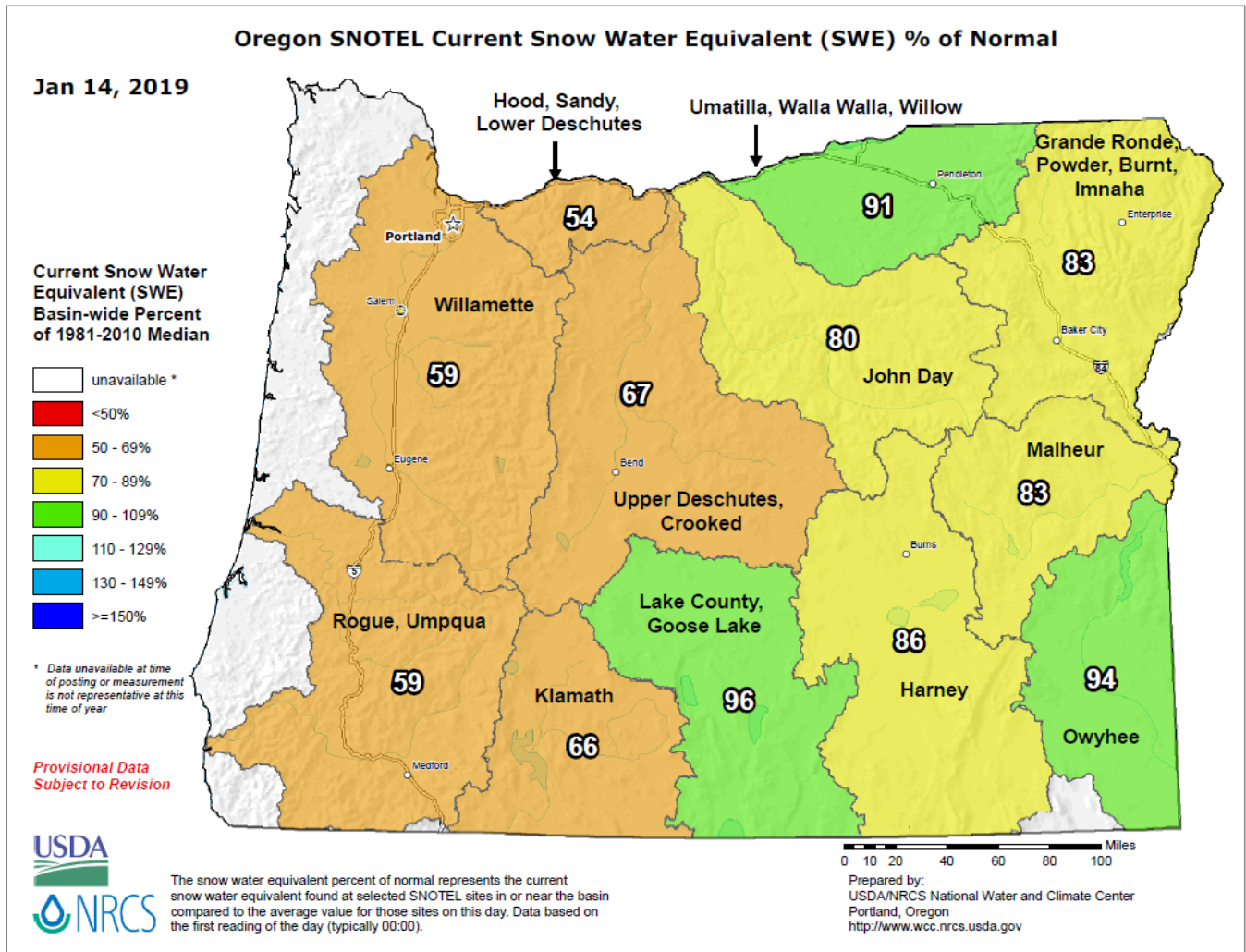
Wildfire conditions have abated across the state with fire danger now at low levels. The next wildland fire **outlook** update is scheduled for January 1, 2019. More information can also be accessed through the Northwest Interagency Coordination Center **website**. Another recommended resource is the Oregon Office of Emergency Management's **RAPTOR** incident mapping program which includes current situational information, such as wildfire perimeters, thermal satellite, fire evacuation boundaries, and air quality info.

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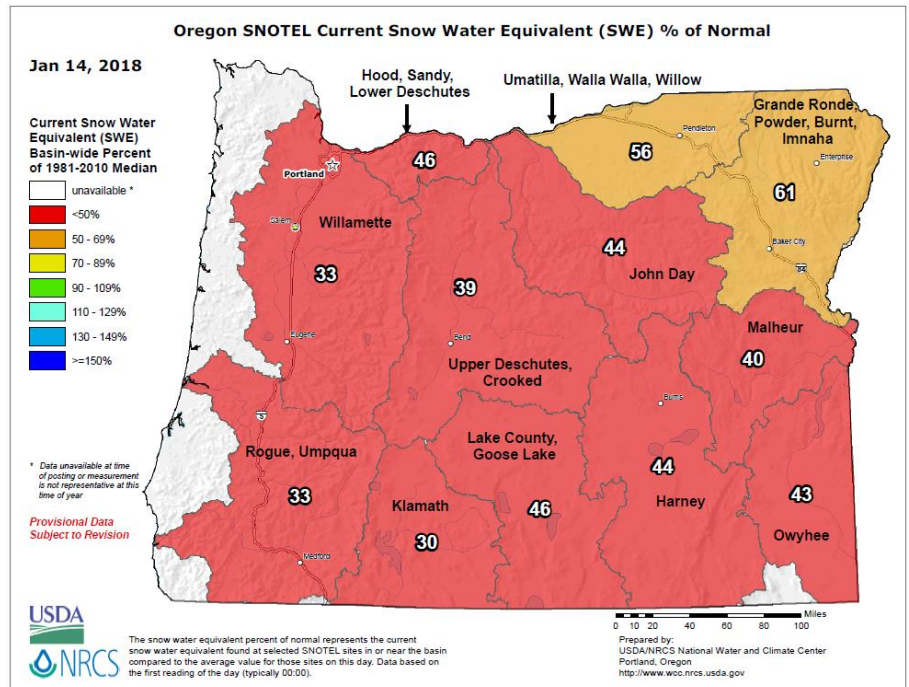
Snowpack Graphs – January 2019



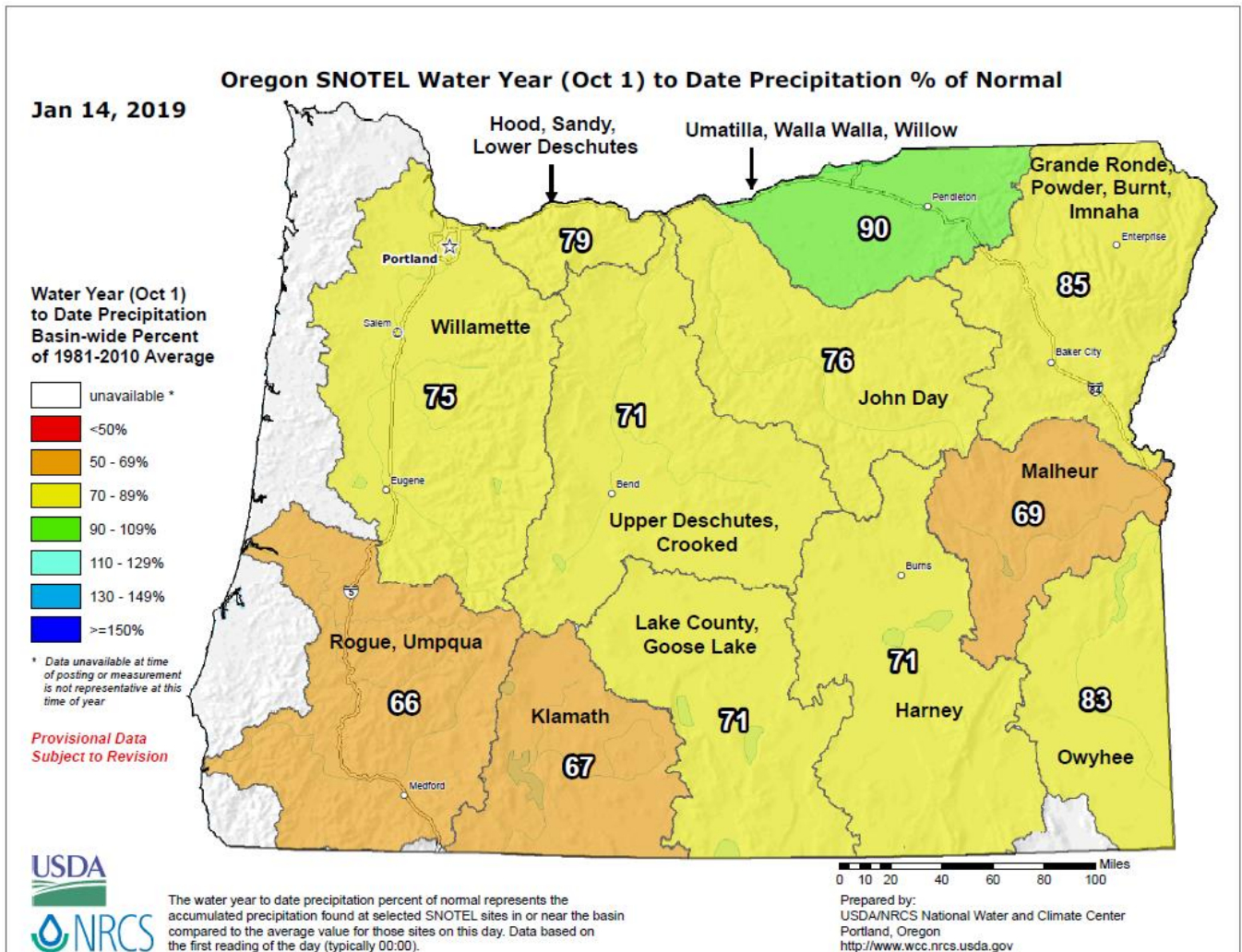
Snow Water Equivalent - Percent of Normal



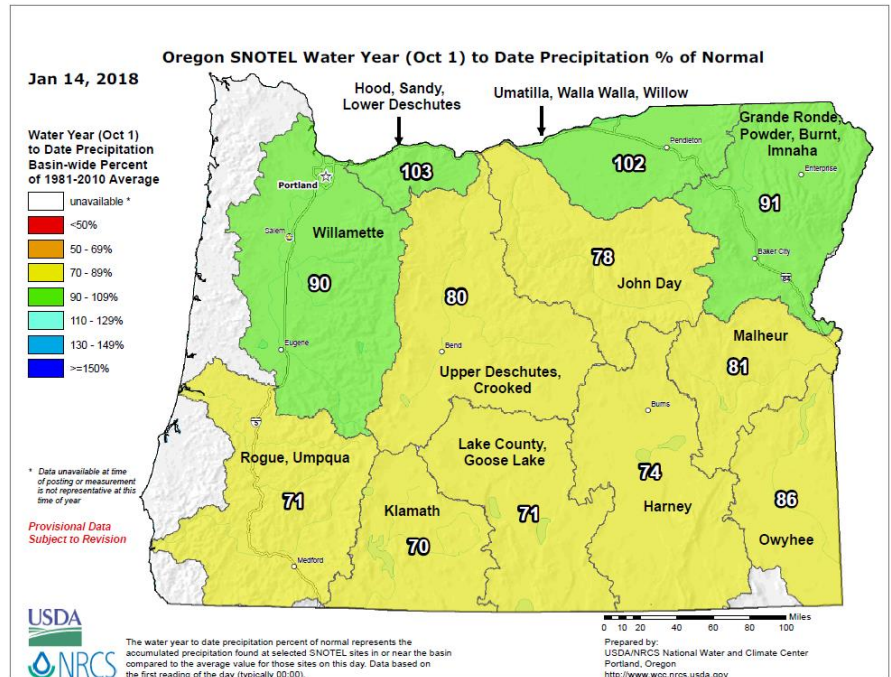
Compared to this time last year -



Precipitation (Mountain) - Percent of Normal



Compared to this time last year -



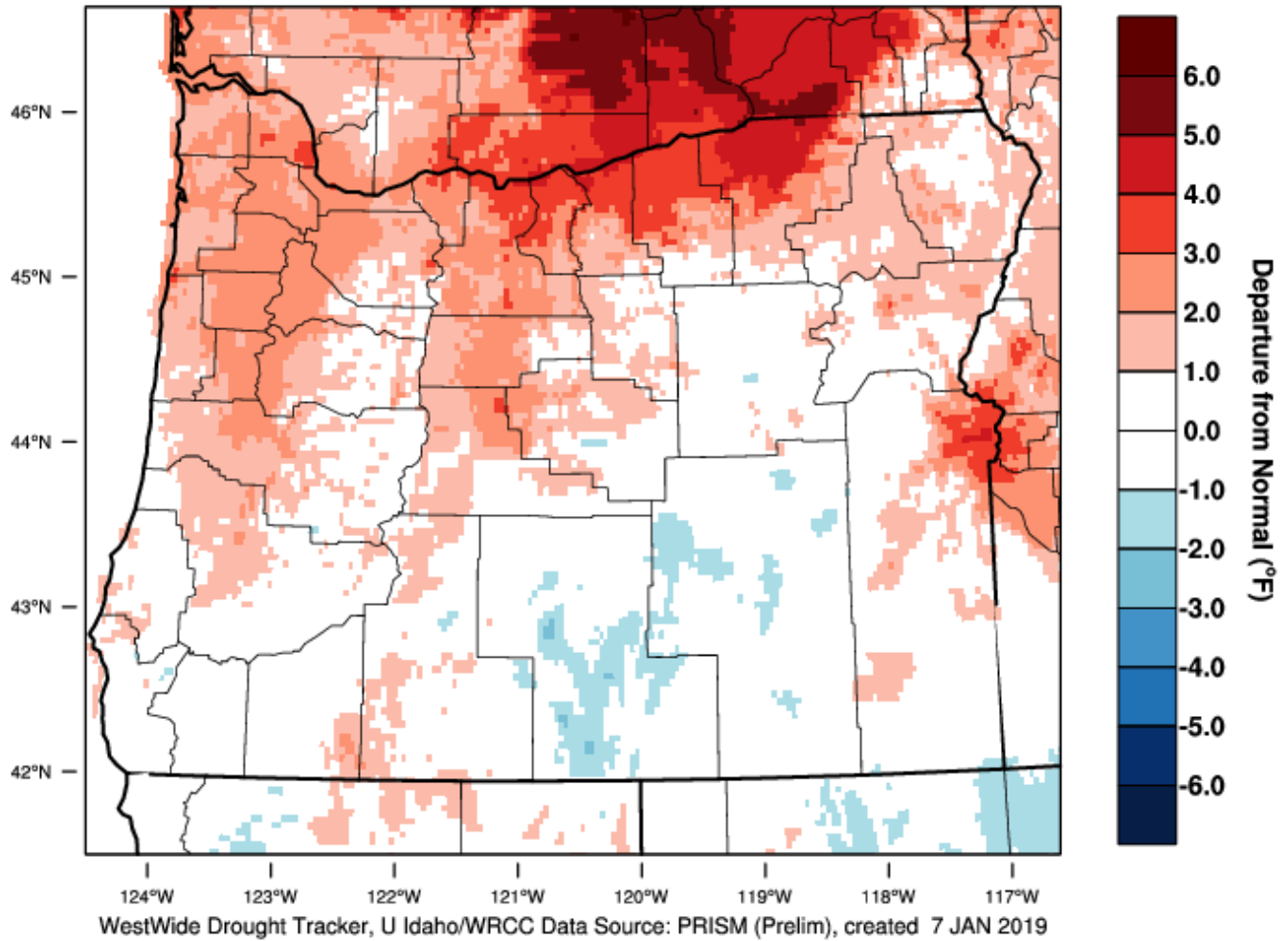
Temperature – (1 Month) Departure from Normal

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

PRISM > Temperature Anomaly 1 Month > Oregon

Oregon - Mean Temperature

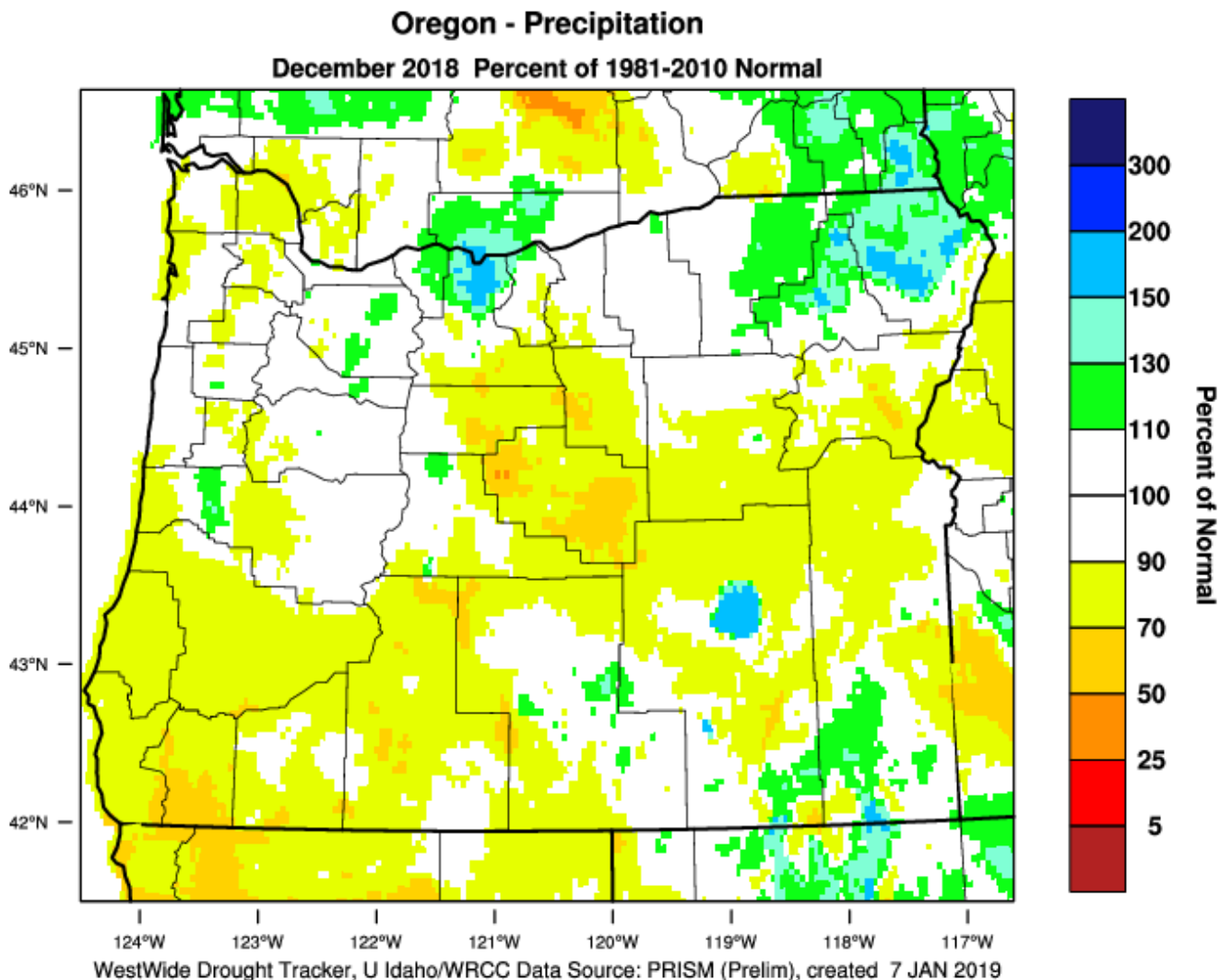
December 2018 Departure from 1981-2010 Normal



Precipitation – (1 Month) Percent of Normal

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

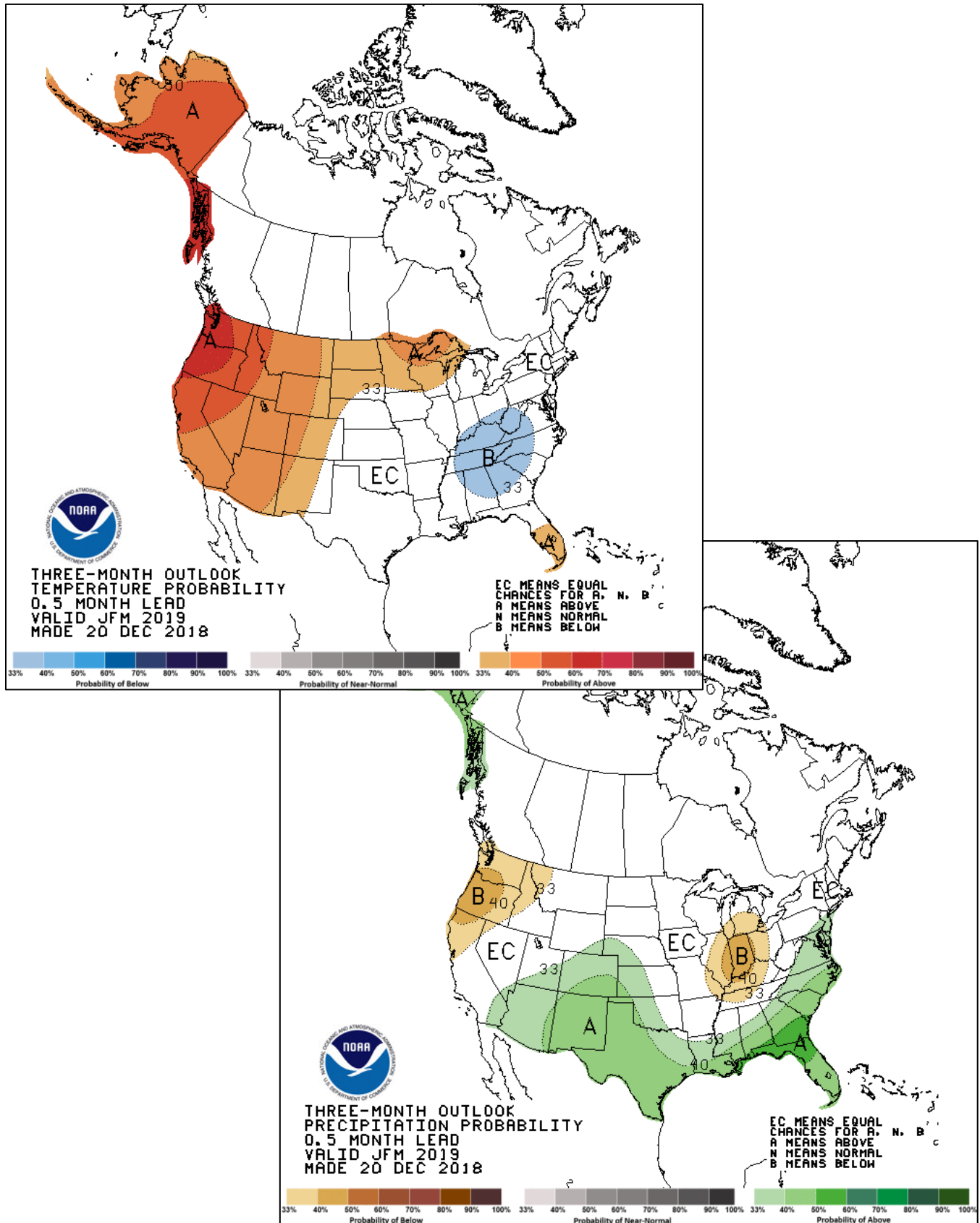
PRISM > Precipitation Anomaly 1 Month > Oregon



Three Month Temperature and Precipitation Outlook

January through March

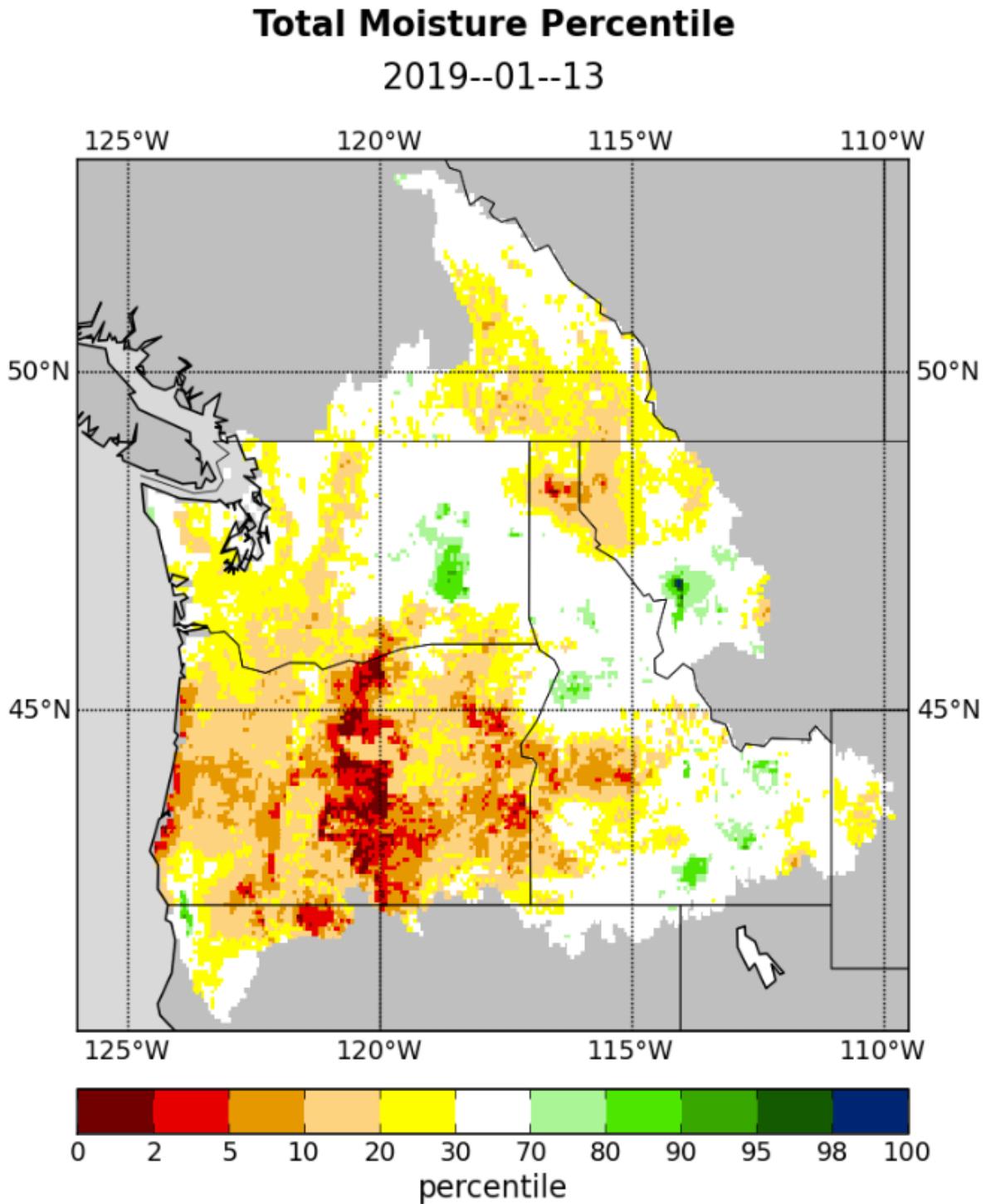
Website: http://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=1



Total Moisture - Percentile

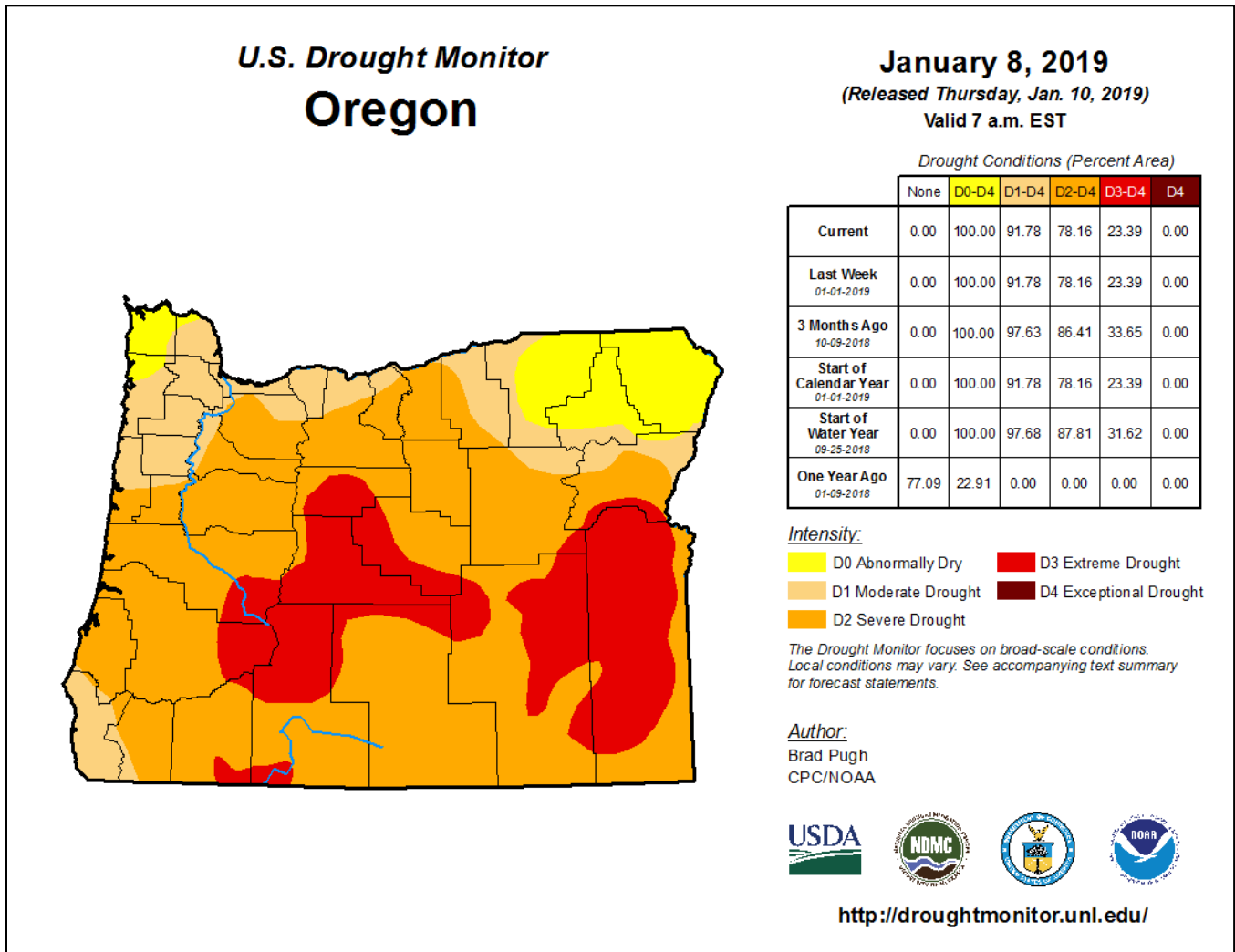
Total Moisture (STOT) is a moisture index calculated by adding Soil Moisture and Snow Water Equivalent. STOT represents the total water content of a region.

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

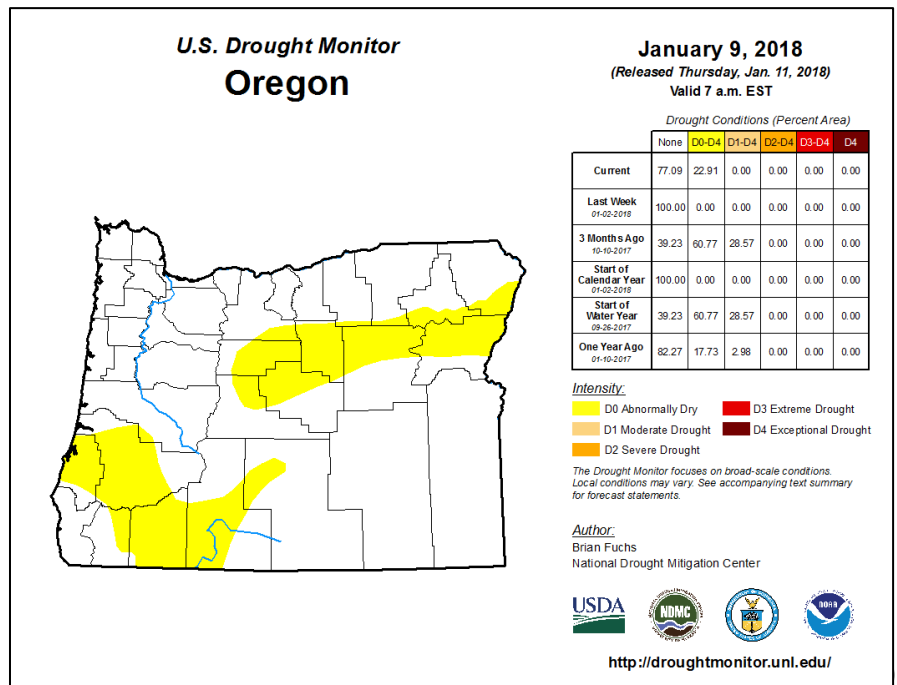


U.S. Drought Monitor for Oregon

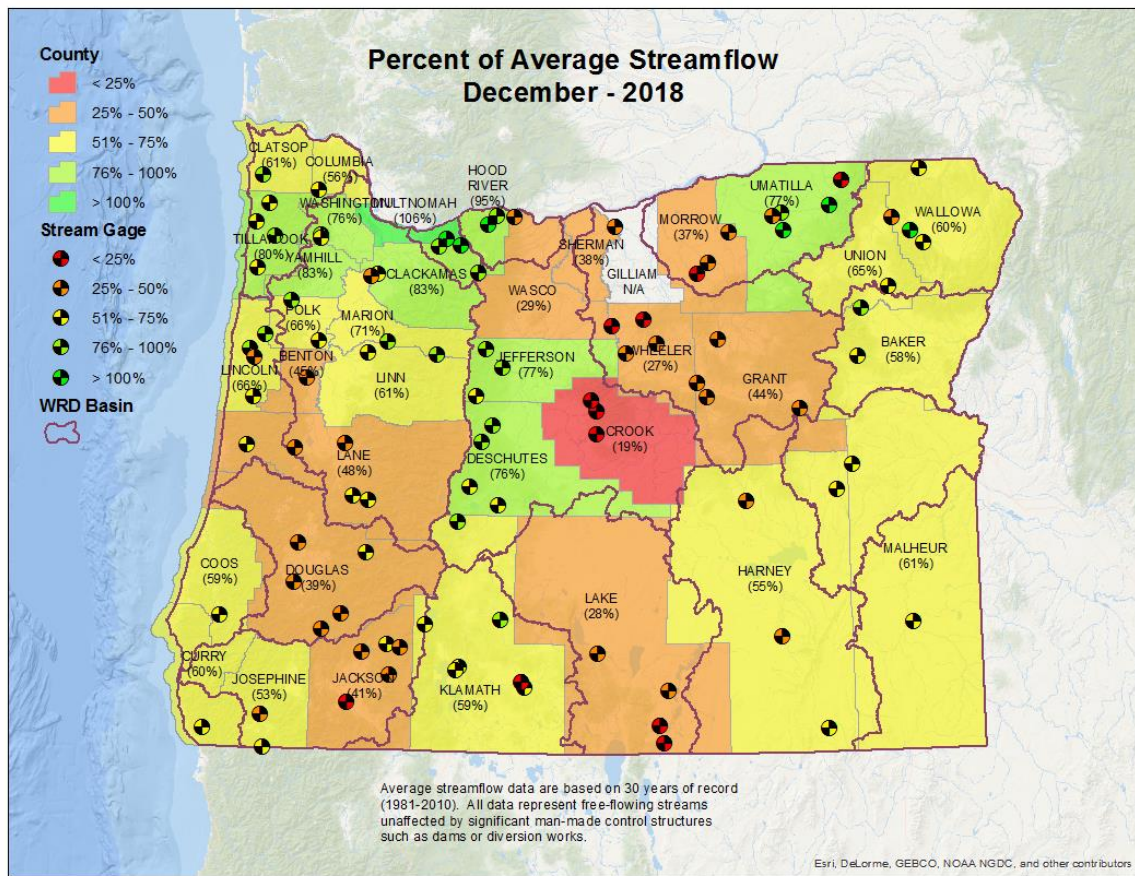
Website: <https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?OR>



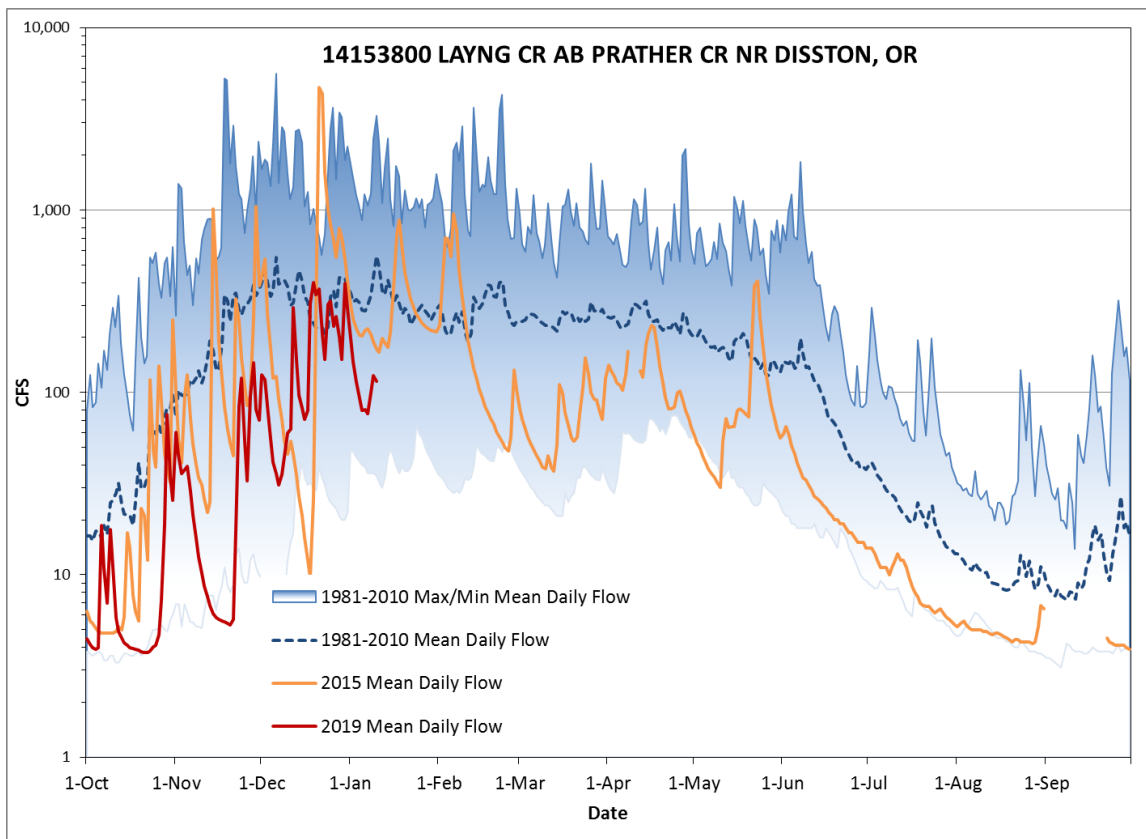
Compared to this time last year:



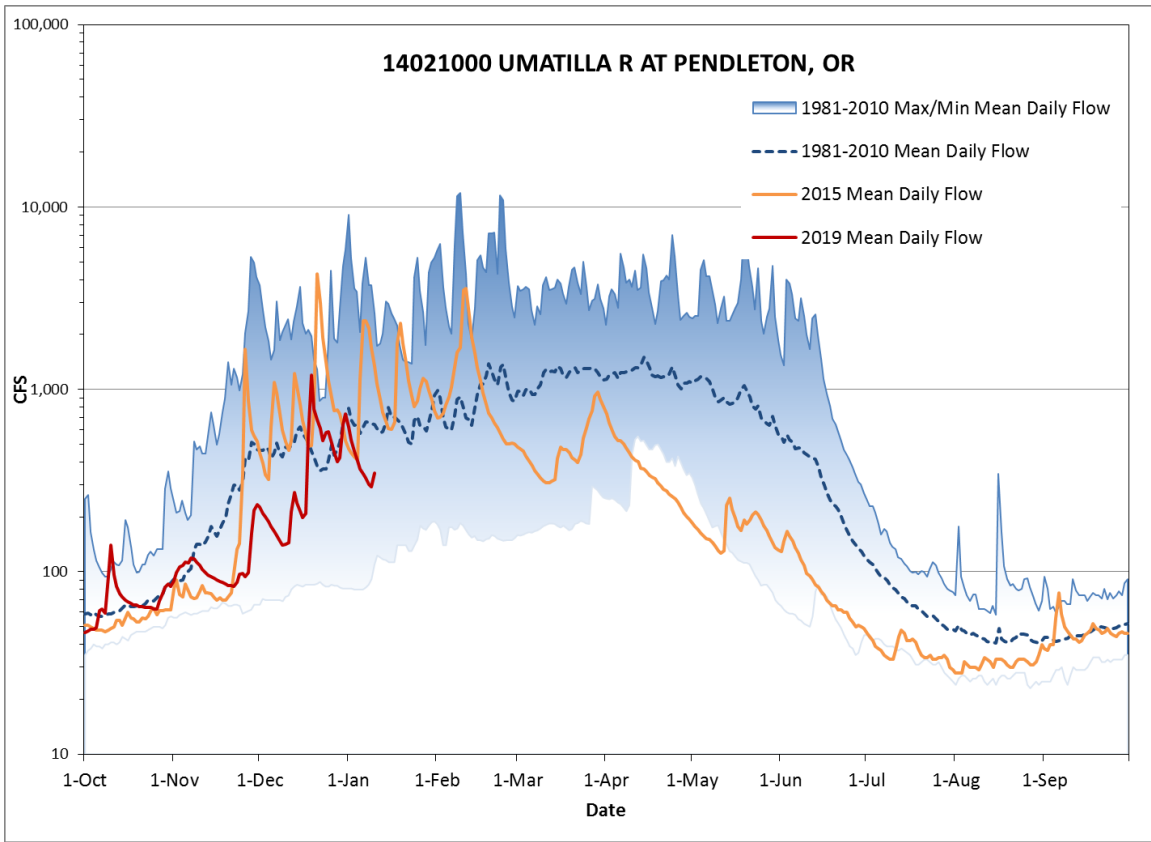
Streamflow Conditions by County - December



Streamflow Conditions – Willamette Basin (Lane County)



Basin Streamflow Conditions – Umatilla Basin (Umatilla County)



Basin Streamflow Conditions – Klamath Basin (Klamath County)

