

Oregon Water Conditions Report



January 11th, 2021

HIGHLIGHTS

Statewide precipitation for the water year to date is measuring 88% of the long-term average at [NRCS SNOTEL](#) sites, a slight improvement over recent weeks. Many basins in northern Oregon continue to measure near normal, while conditions trend further below normal moving south. Basin values range from a high of 102% in the Umatilla-Walla Walla-Willow Basin to a low of 62% in the Owyhee Basin.

Similarly to precipitation, snow water equivalent (SWE) has shown slight improvements over the past two weeks and is currently measuring 87% of the statewide median; however, impacts were more variable. Basins in eastern Oregon, including the Umatilla-Walla Walla-Willow, Grande Ronde-Burnt-Powder-Imnaha, Malheur, and John Day Basins all received influxes in SWE. Alternatively, several basins in southern and western Oregon saw reductions in SWE. Basin values range from a high of 108% in the Harney Basin to a low of 72% in the Owyhee Basin.

Temperature and precipitation departures from normal for the month of December indicate [above-normal temperatures](#) and [below-normal precipitation](#) experienced throughout much of the state. Northern Oregon experienced a distinctly greater departure from normal, with higher temperatures experienced relative to southern Oregon. Eastern Oregon experienced a much drier December, with a large portion receiving less than 50% of the long-term average precipitation for the month.

[Streamflows for the month of December](#) were variable throughout the state. West of the Cascades, gages in the northwest region and in the Willamette Valley measured normal streamflows while many streams in the southwestern region measured below normal. On the east side, streams experienced a wider range of conditions. Streams in the northeastern corner measured normal to above normal, likely in response to an influx of precipitation. With the exception of NE Oregon, many stream systems in eastern Oregon measured below to well below normal streamflows. Recent [7-day averages](#) indicate increased streamflows west of the Cascades and overall response to [recent two-week precipitation anomalies](#).

Climate outlooks indicate near-normal temperatures and below-normal precipitation over the next [8 - 14 days](#). However, [seasonal outlooks](#) are more variable, indicating a shift towards increased likelihood of above-normal temperatures and above-normal precipitation over the next month. The 3-month outlook favors below-normal temperatures and above-normal precipitation for much of Oregon. The outlook for southern Oregon is less definitive, indicating the possibility of equal chances of above or below normal precipitation and temperatures.

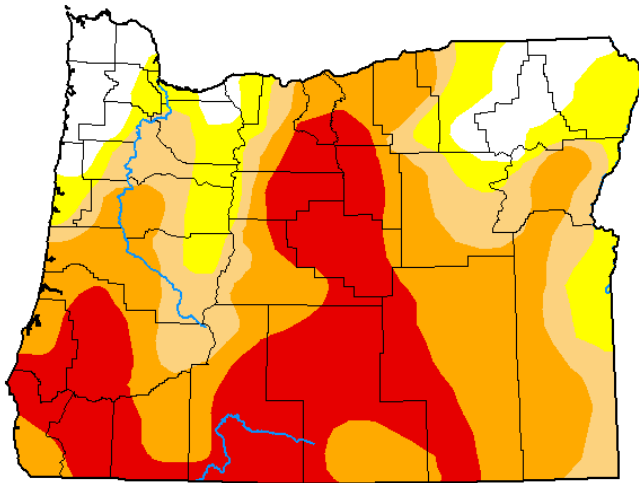
The [US Drought Monitor](#) shows slight changes from previous versions, where nearly 91% of the state is classified as experiencing some form of drought. Coverages in Linn and Grant Counties have been upgraded from D3 (extreme drought) to D2 (severe drought). Slight improvements in this area are indicated by recent improvements in the wetness profile of NASA's [GRACE-based shallow groundwater drought indicator](#).

DROUGHT CONDITIONS

The US Drought Monitor indicates nearly 91% of the state is classified as experiencing some form of drought. Major changes include reductions in D3 coverage in Linn and Grant Counties, which have been upgraded from D3 (extreme drought) to D2 (severe drought).

U.S. Drought Monitor Oregon

January 5, 2021
(Released Thursday, Jan. 7, 2021)
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	8.91	91.09	78.46	62.68	28.26	0.00
Last Week <i>12-29-2020</i>	8.57	91.43	83.53	68.71	27.74	0.00
3 Months Ago <i>10-06-2020</i>	6.51	93.49	86.44	68.84	35.63	0.00
Start of Calendar Year <i>12-29-2020</i>	8.57	91.43	83.53	68.71	27.74	0.00
Start of Water Year <i>09-29-2020</i>	6.50	93.50	84.77	65.53	33.59	0.00
One Year Ago <i>01-07-2020</i>	2.40	97.60	24.57	0.00	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

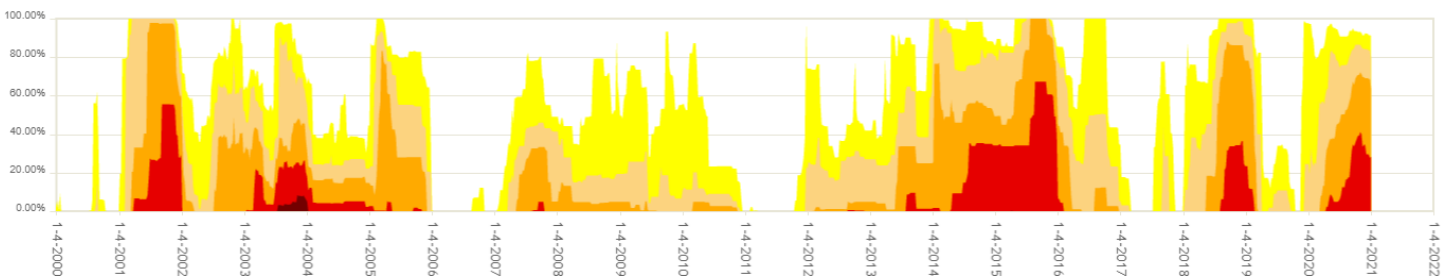
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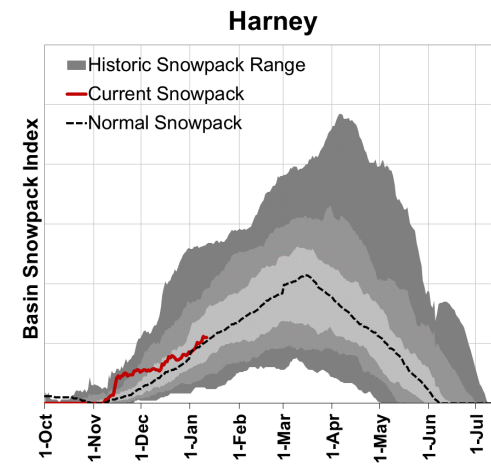
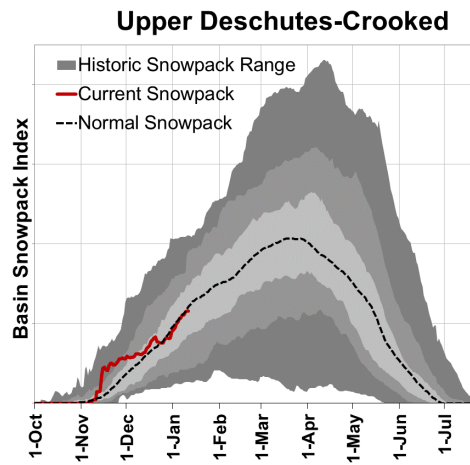
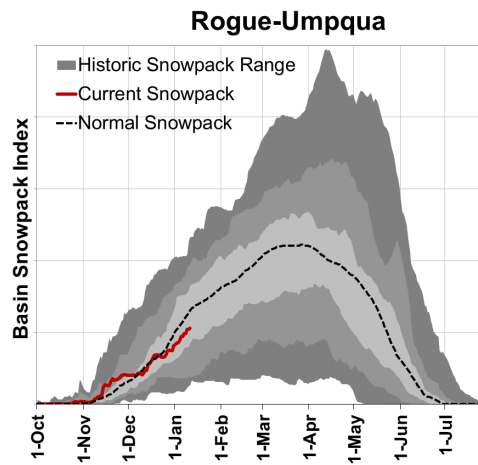
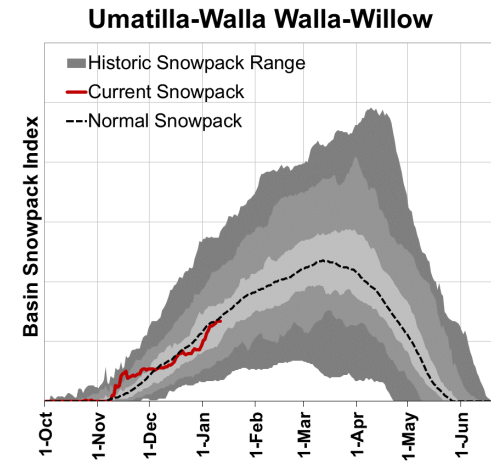
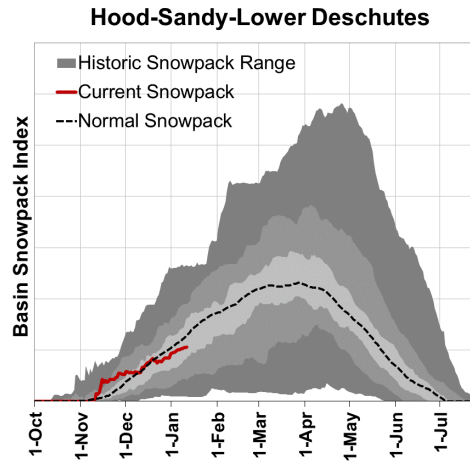
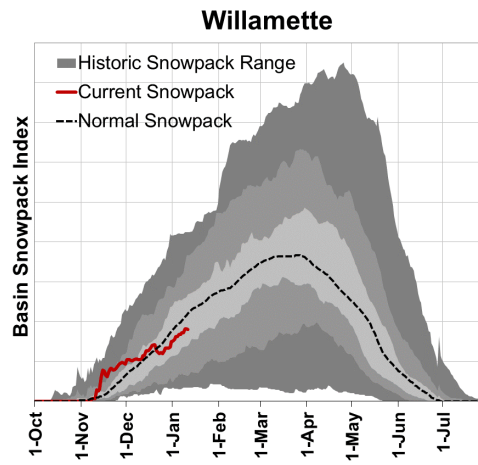
Deborah Bathke
National Drought Mitigation Center



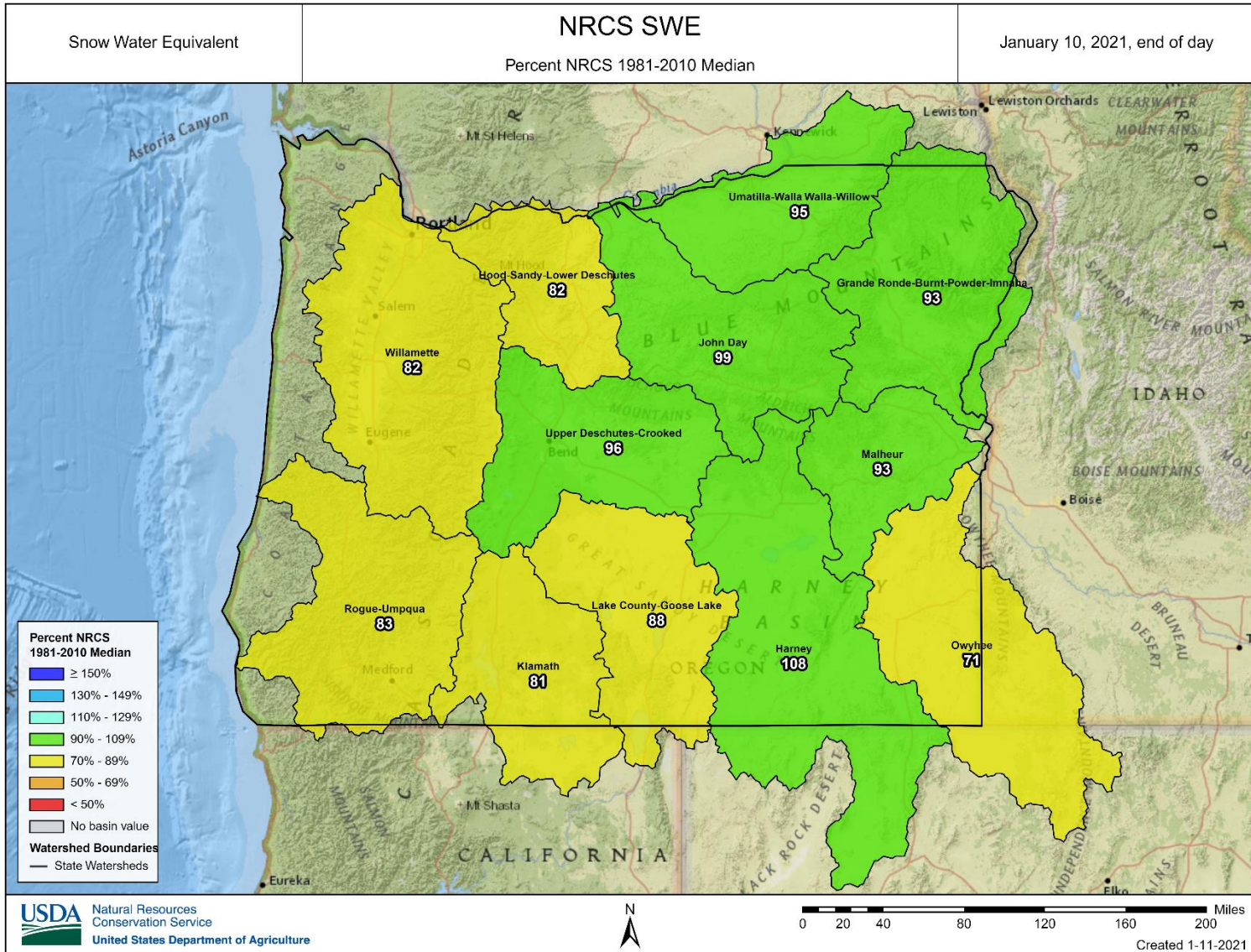
droughtmonitor.unl.edu

Oregon Percent Area

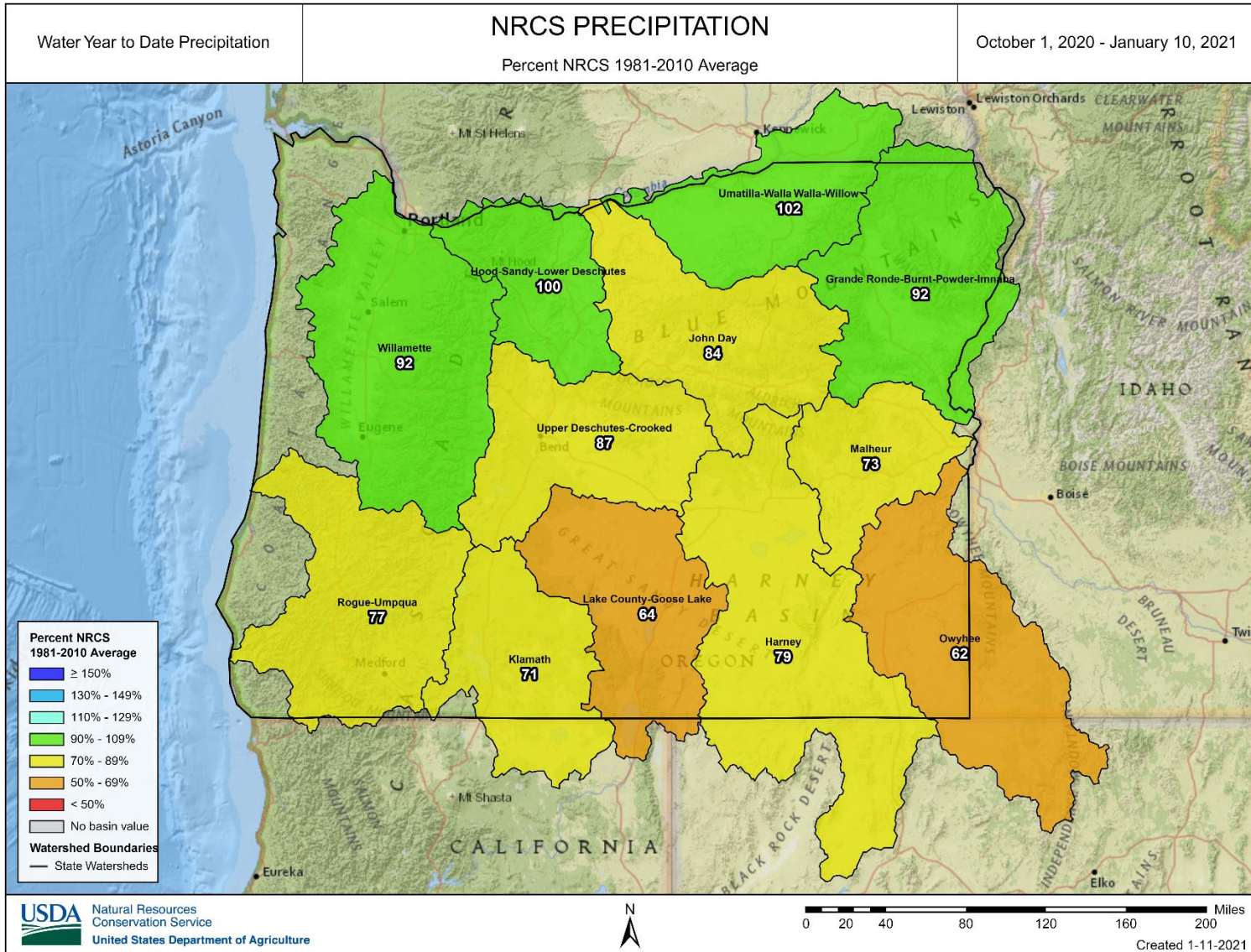




CLIMATE CONDITIONS
SNOW WATER EQUIVALENT

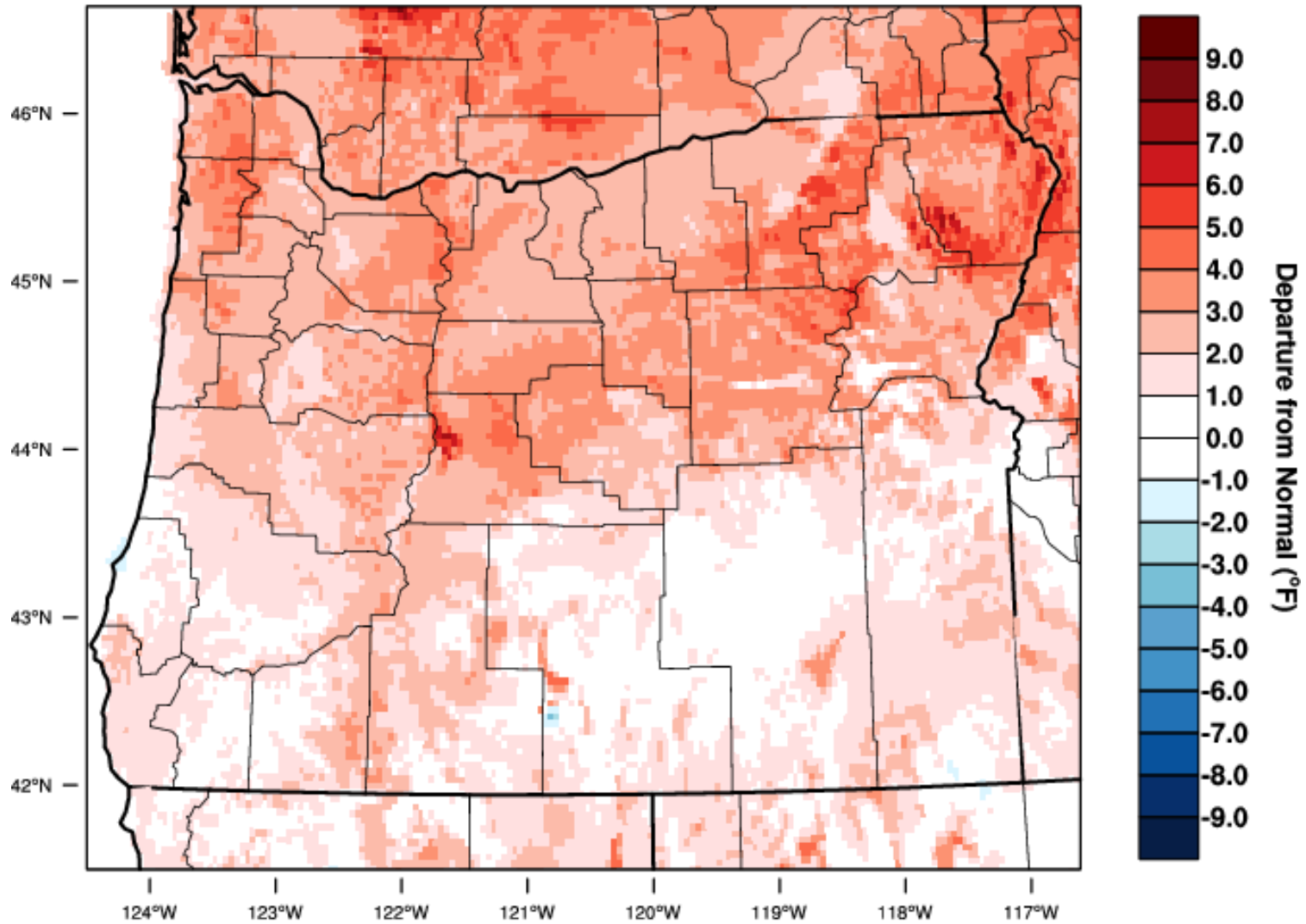


PRECIPITATION



Oregon - Mean Temperature

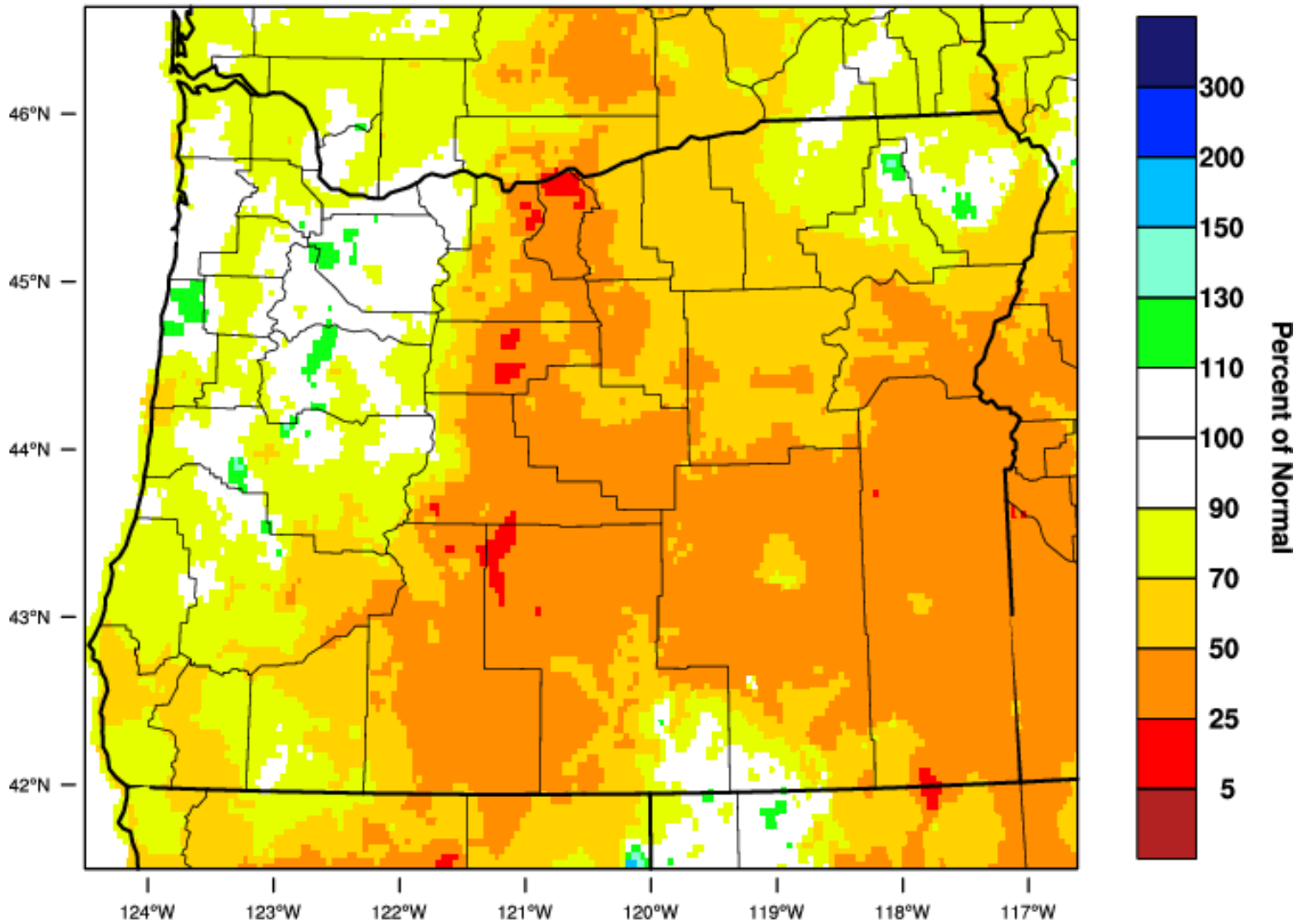
December 2020 Departure from 1981-2010 Normal



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 5 JAN 2021

Oregon - Precipitation

December 2020 Percent of 1981-2010 Normal

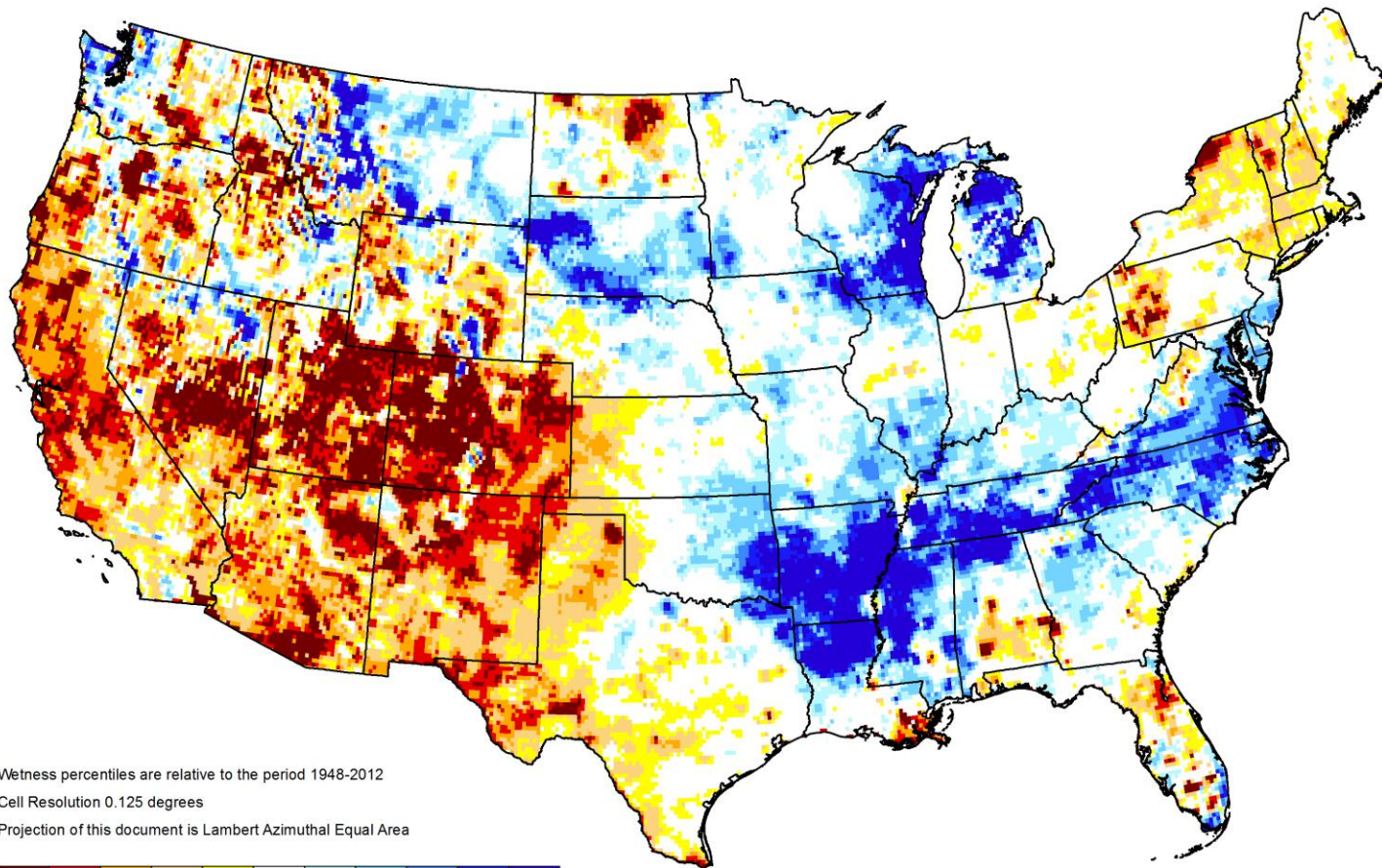


WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 5 JAN 2021

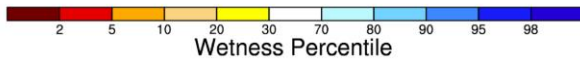


GRACE-Based Shallow Groundwater Drought Indicator

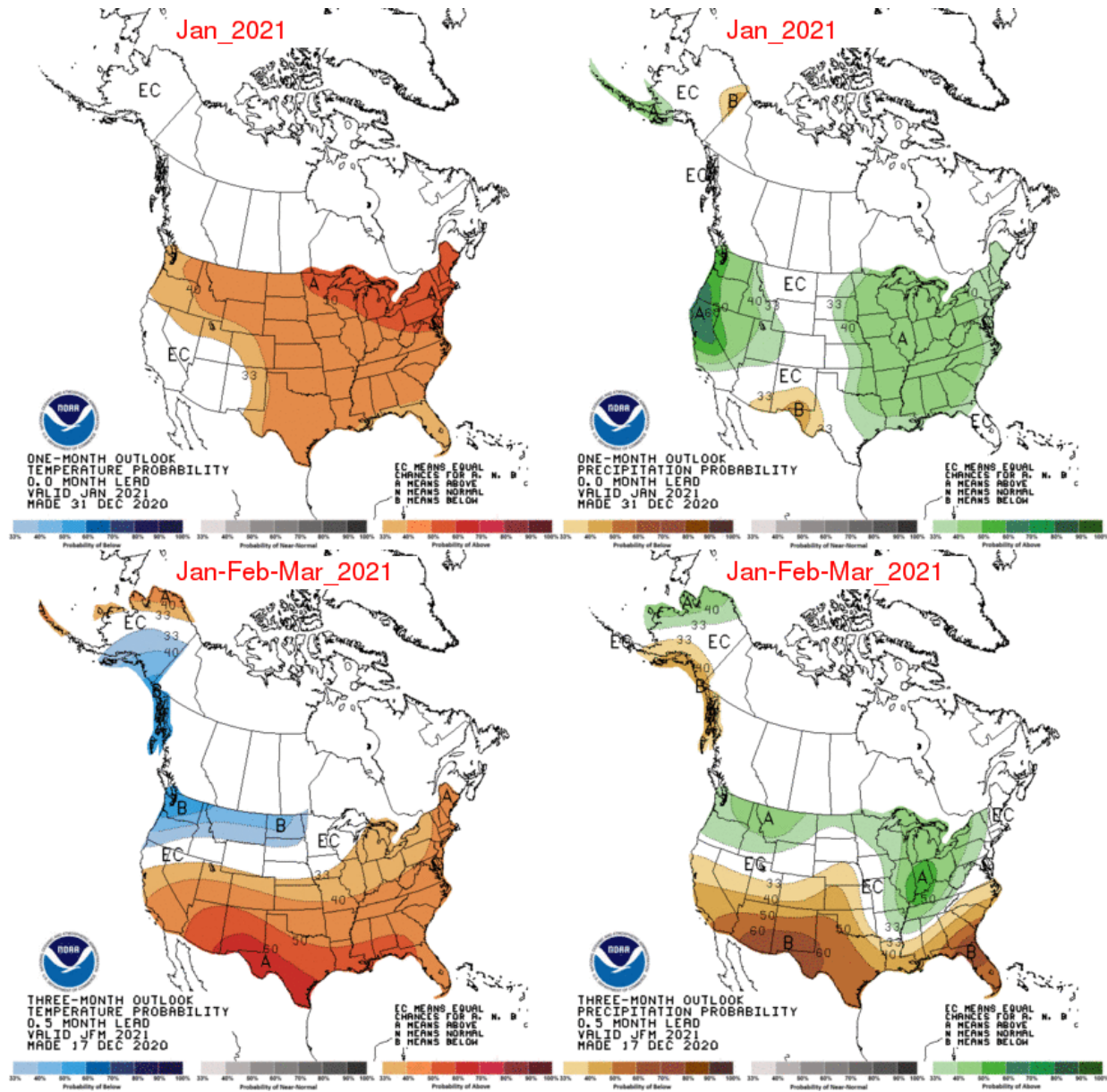
January 04, 2021



Wetness percentiles are relative to the period 1948-2012
Cell Resolution 0.125 degrees
Projection of this document is Lambert Azimuthal Equal Area



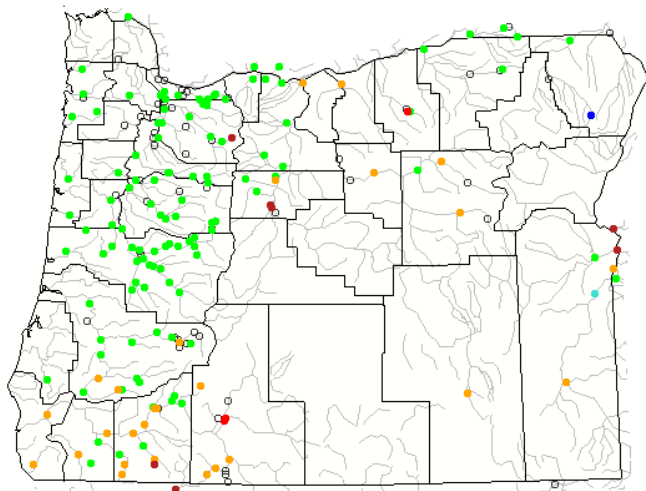
<https://nasagrace.unl.edu>



Map of monthly streamflow compared to historical streamflow for the month of the year (Oregon)

Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

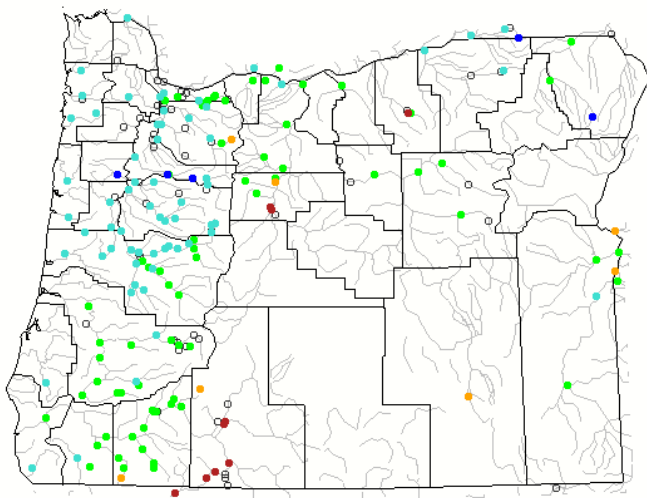
December 2020



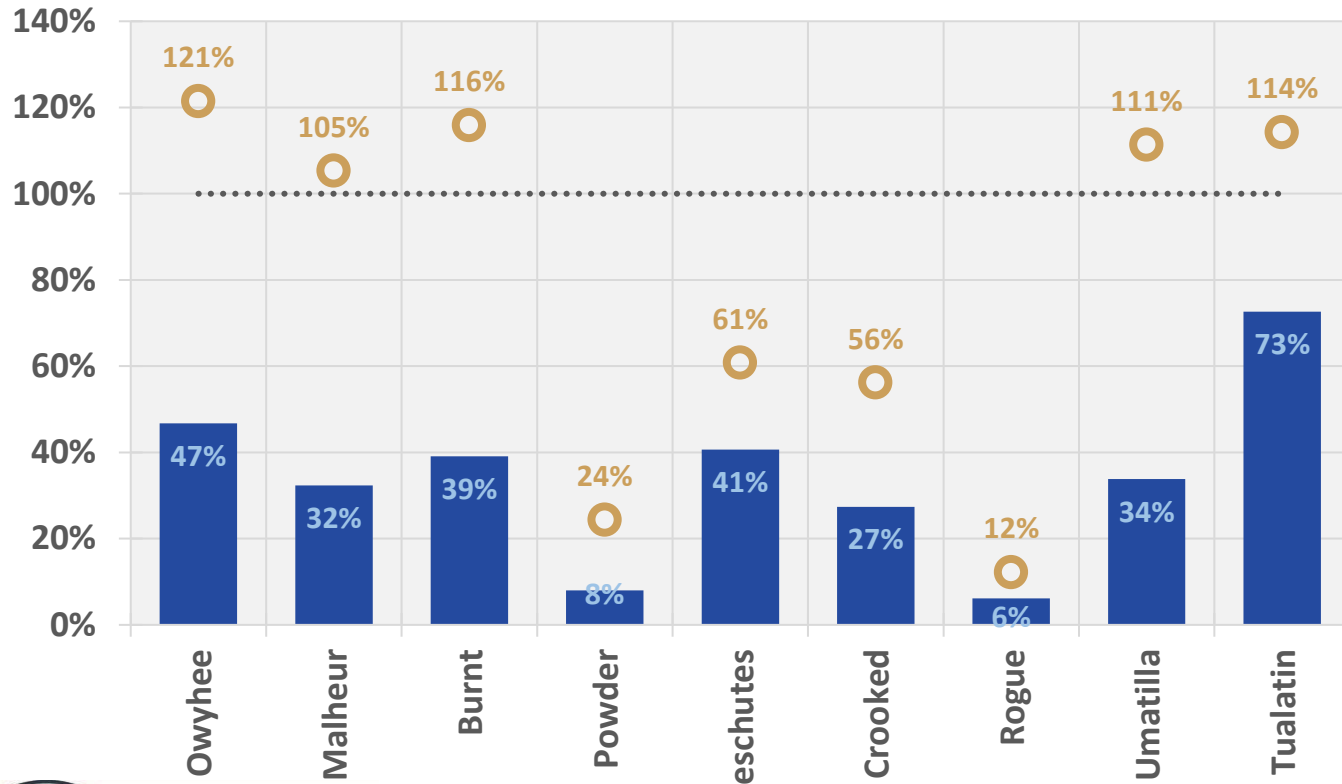
Map of 7-day average streamflow compared to historical streamflow for the day of the year (Oregon)

Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

Sunday, January 10, 2021



January 8 Reservoir Storage



BUREAU OF RECLAMATION

■ Percent Full

● Percent of Average

RESOURCES/REFERENCES

Released every Thursday, the [US Drought Monitor](#) provides a weekly assessment of drought conditions. The USDM provides a [network infographic](#) which depicts the network of observers who gather and report information about conditions and drought impacts.

The [NRCS Snow Survey](#) Program provides mountain snowpack data and streamflow forecasts for Oregon and the western United States.

The [WestWide Drought Tracker](#) uses data from [PRISM](#) to provide easy access to fine-scale drought monitoring and climate products, such as the figures depicting climate conditions within this report.

The National Weather Service's [Climate Prediction Center](#) offers [weekly](#), [monthly](#), and [seasonal](#) climate outlooks illustrating the probabilities of temperatures and precipitation.

The [Regional Climate Centers](#) (RCC) working with NOAA partners, deliver climate services at national, regional, and state levels. Climate [anomaly maps of Oregon](#) are updated daily at around noon PST.

NASA's [Gravity Recovery and Climate Experiment](#) (GRACE) provide satellite-based observations of soil moisture conditions that are useful as drought indicators, helpful in describing current wet or dry soil conditions.

USGS [Water Watch](#) provides maps of real-time and average streamflow conditions at USGS sites throughout the state.

Reservoir storage "teacup" diagrams are offered by both the [US Bureau of Reclamation](#) and [US Army Corps of Engineers](#). The diagrams represent the level of fill in the reservoirs as both percent full and as a ratio of volume of water currently in the reservoir to the volume of water in the reservoir when it is full.

Oregon wildfire information can be found through [InciWeb](#) and the Oregon Department of Forestry's [Wildfire News](#), along with the [National Interagency Fire Center](#) which offers outlooks on the significant wildland fire potential.

Oregon Office of Emergency Management maintains a [hydrology/meteorology dashboard](#) which shows state and local drought declarations, as well as hosts many of the data sources to generate this report. Use the selection arrows at the bottom of your browser to navigate through the various sources.

US Department of Agriculture provides the [Weekly Weather and Crop Bulletin](#) as a vital source of information on US and global weather, climate, and agricultural developments, along with seasonally appropriate agrometeorological charts and tables. USDA's [Drought Programs and Assistance](#) offers links to programs and resources to help those struggling with persistent drought.