

# Oregon Water Conditions Report



March 22<sup>nd</sup>, 2021

## HIGHLIGHTS

[Statewide snow water equivalent](#) (SWE) is currently measuring 111% of the long-term median. Snowpack conditions follow a clear north-south trend, with northern basins measuring snowpack above the median (max = Umatilla-Walla Walla-Willow @ 135%) and southern basins measuring below the median (min = Owyhee @ 75%). Snowpack graphs indicate typical meltout timing is approaching and has begun in some basins (see below).

[SNOTEL precipitation](#) is currently measuring 93% of the long-term statewide average at NRCS monitoring locations over the water year to date. With the exception of a few basins measuring above-average precipitation (max = Umatilla-Walla Walla-Willow @ 106%), most basins are measuring precipitation below to well below the long-term average (min = Lake County-Goose Lake @ 67%). [Recent precipitation](#) has been below average for nearly all of Oregon over the past two weeks, with some areas in eastern Oregon receiving [little to no measurable precipitation](#).

Temperatures were cooler than average [over the past two weeks](#) for much of Oregon. Portions of Harney and much of Malheur, Baker, and Union Counties were generally 1 °F - 4 °F warmer than normal. Other areas of the state, notably southwest and southcentral Oregon, benefitted from temperatures between 2 °F and 5 °F cooler than the long-term average.

Several Oregon counties have been [declared primary natural disaster areas](#), with additional areas named as contiguous disaster counties. Farm operators in areas receiving Secretarial disaster declarations on behalf of the US Department of Agriculture are [eligible for assistance benefits](#).

Climate outlooks over the next [8 - 14 days](#) indicate increased likelihood of below-normal precipitation and above-normal temperatures statewide. [Longer-term outlooks](#) for the month of April and beyond continue to favor below-average precipitation, while temperatures are likely to vary depending upon location.

Streamflows indicate variability in conditions throughout the state over recent weeks. [Over the past week](#), streamflows have been measuring below to well below the long-term average throughout much of the state, with the exception of northeastern Oregon. This represents a downward trend in many areas, such as coastal and central Oregon, where runoff has reduced compared to the [28-day average](#) (see below for more).

Reservoir storage conditions [vary throughout the state](#). McKay Reservoir in the Umatilla basin is performing flood control operations. Reservoirs in the Rogue basin (12% full; 18% of average) are expecting shortages with meeting irrigation demands; similar concerns in Powder basin. [USACE reservoir projects](#) are slow to refill while still maintaining minimum flow requirements.

## DROUGHT CONDITIONS

The [US Drought Monitor](#) indicates approximately 80% of the state is experiencing some form of drought. There has been little change in terms of areal coverage and drought severity over recent weeks. One notable change in drought conditions over recent weeks is a one-category improvement from D2 (severe drought) to D1 (moderate drought) in much of Grant County.

### U.S. Drought Monitor Oregon

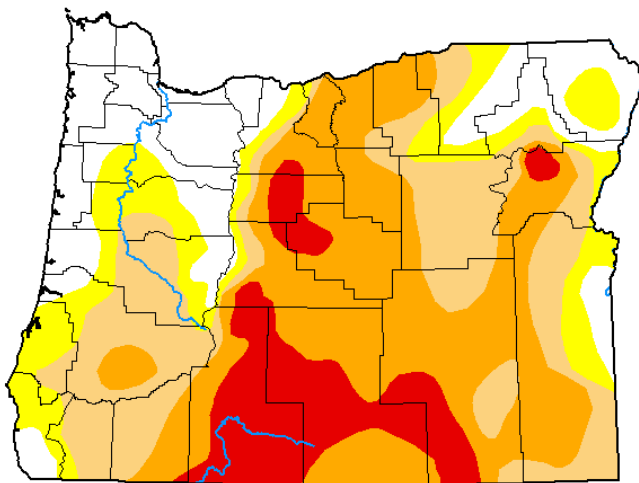
**March 16, 2021**

(Released Thursday, Mar. 18, 2021)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	19.32	80.68	67.32	43.99	12.53	0.00
<b>Last Week</b> <small>03-09-2021</small>	19.33	80.67	67.28	43.99	12.53	0.00
<b>3 Months Ago</b> <small>12-15-2020</small>	7.77	92.23	84.10	69.14	29.59	0.00
<b>Start of Calendar Year</b> <small>12-29-2020</small>	8.57	91.43	83.53	68.71	27.74	0.00
<b>Start of Water Year</b> <small>09-29-2020</small>	6.50	93.50	84.77	65.53	33.59	0.00
<b>One Year Ago</b> <small>03-17-2020</small>	15.69	84.31	55.37	7.63	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>

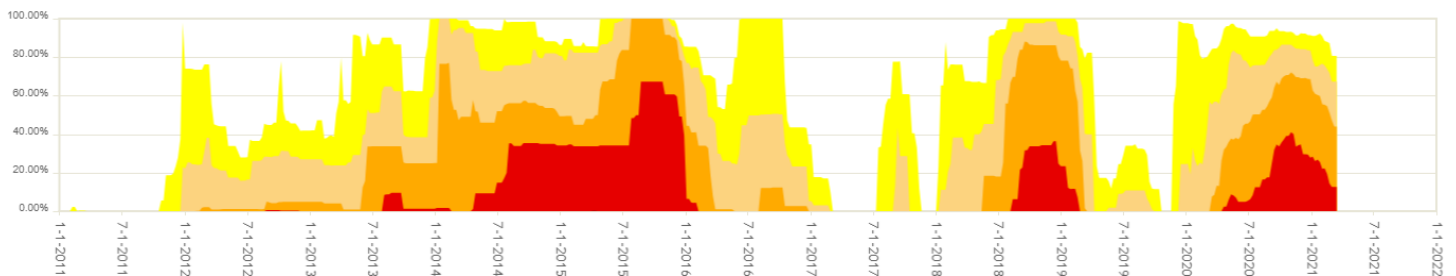
**Author:**

Brad Pugh  
CPC/NOAA

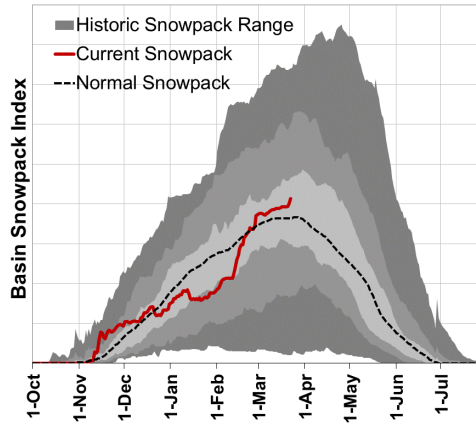


[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

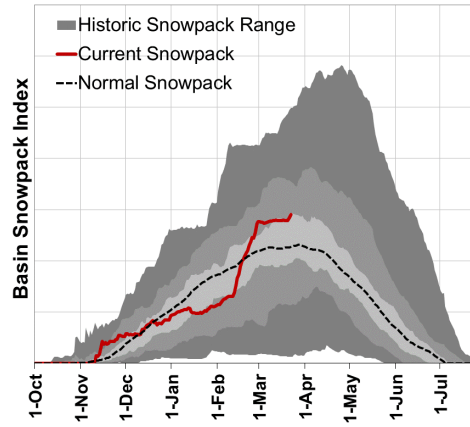
### Oregon Percent Area



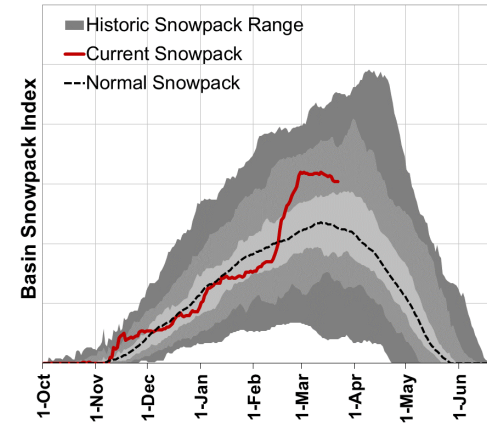
**Willamette**



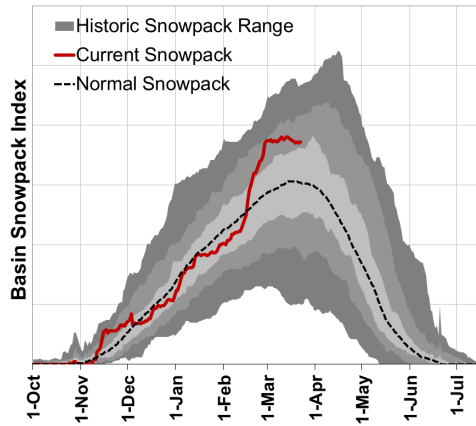
**Hood-Sandy-Lower Deschutes**



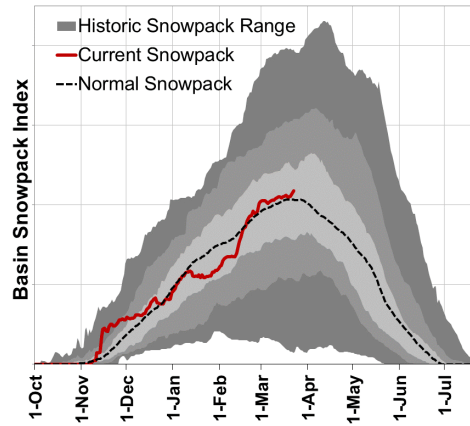
**Umatilla-Walla Walla-Willow**



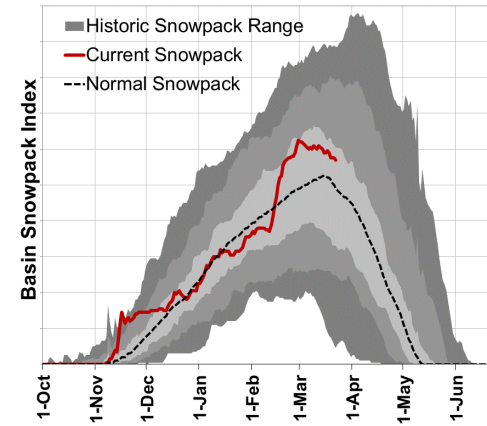
**Grande Ronde-Burnt-Powder-Imnaha**

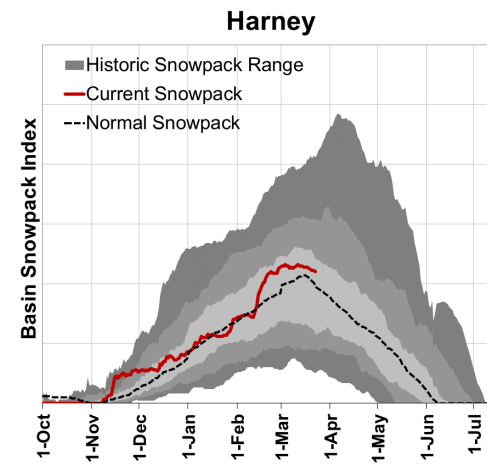
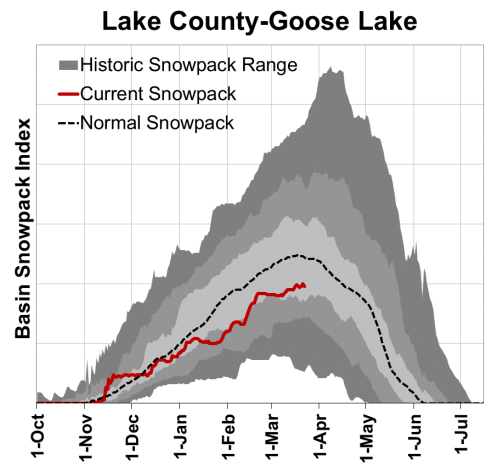
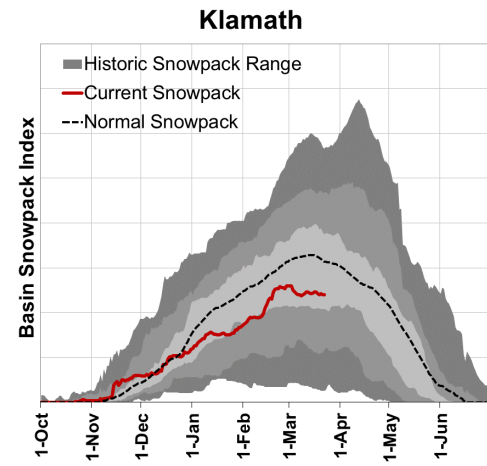
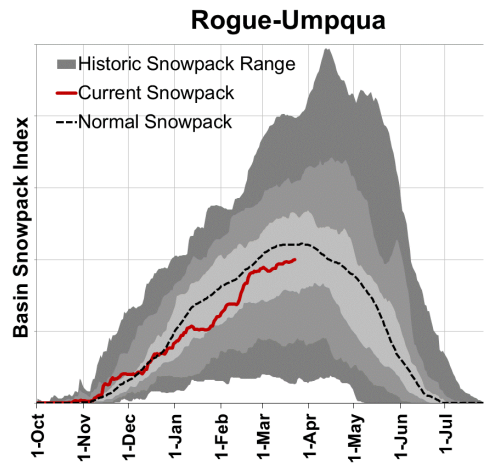
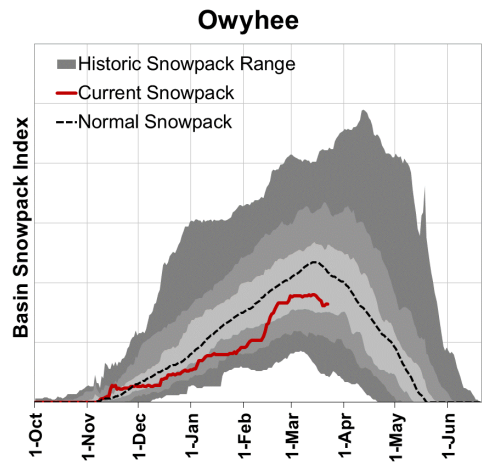


**Upper Deschutes-Crooked**

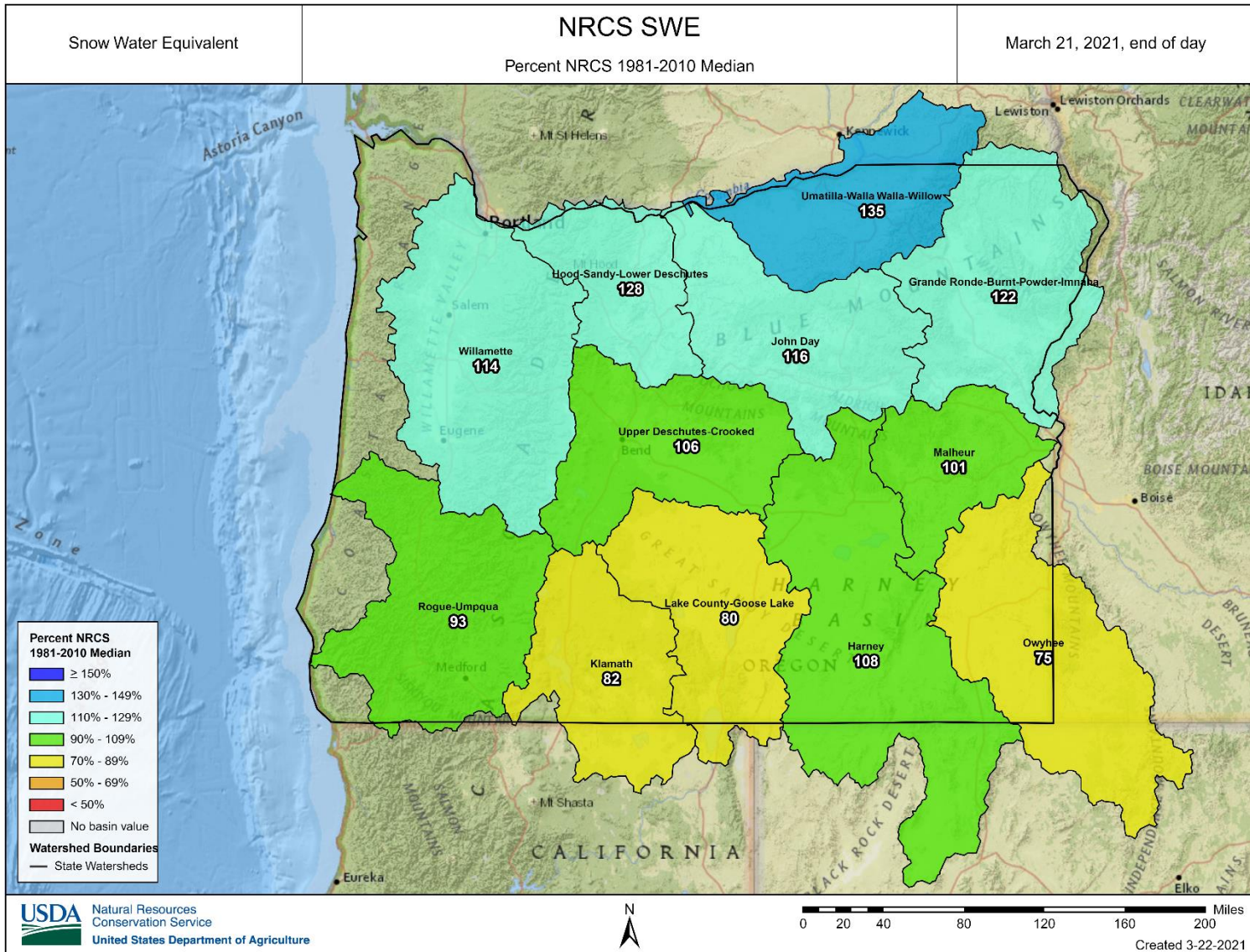


**John Day**

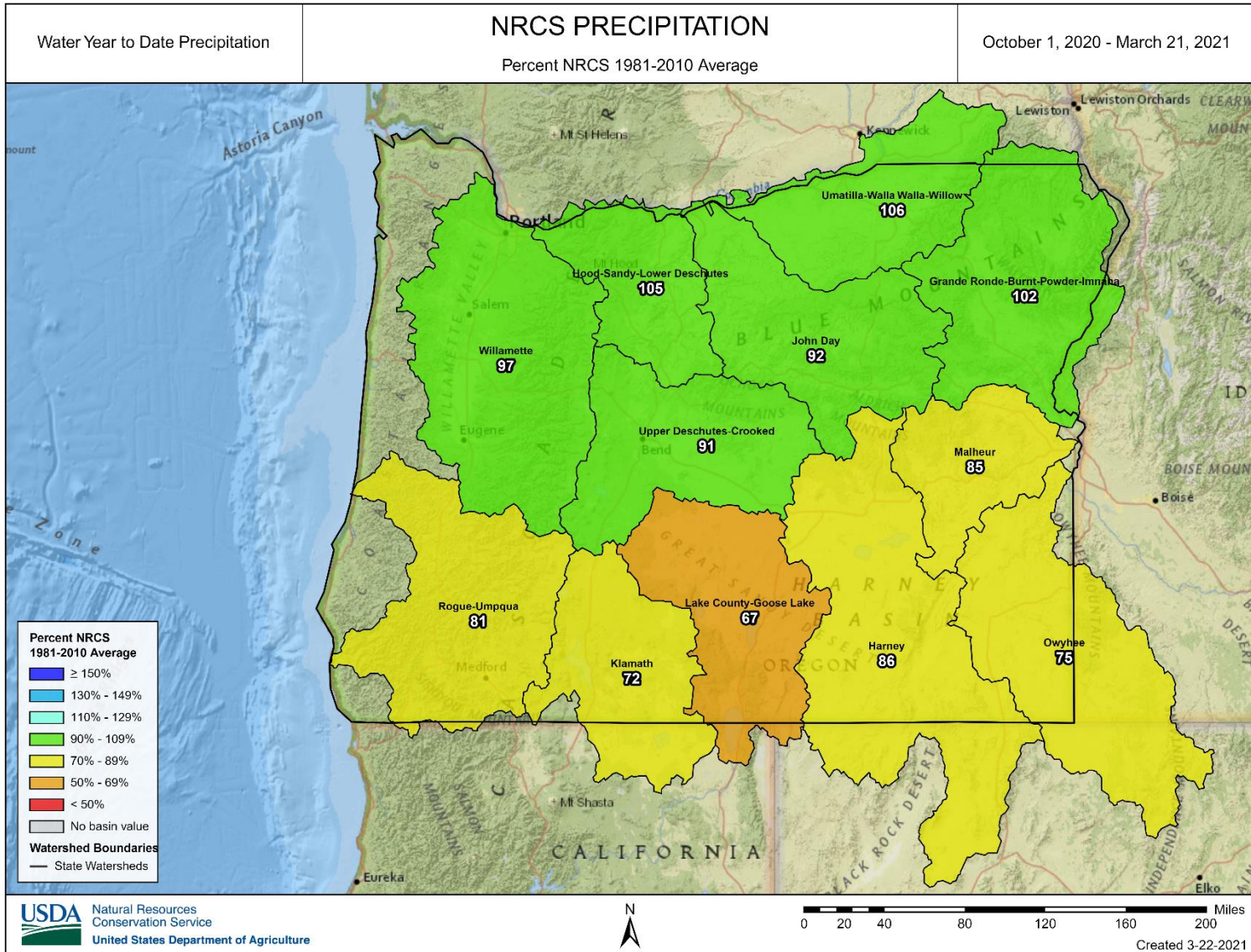




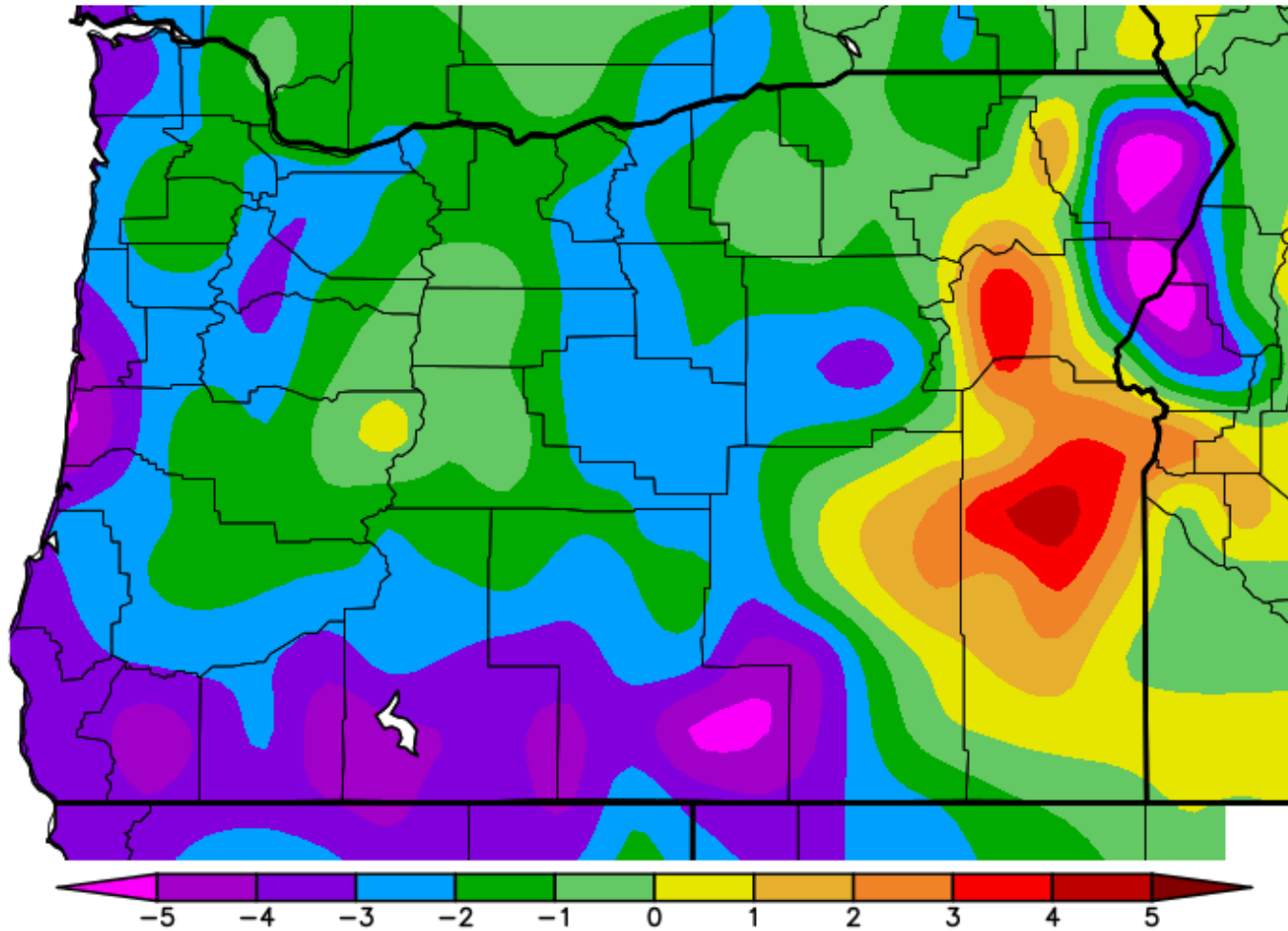
**CLIMATE CONDITIONS**  
**SNOW WATER EQUIVALENT**



**PRECIPITATION**



Ave. Temperature dep from Ave (deg F)  
3/6/2021 - 3/19/2021

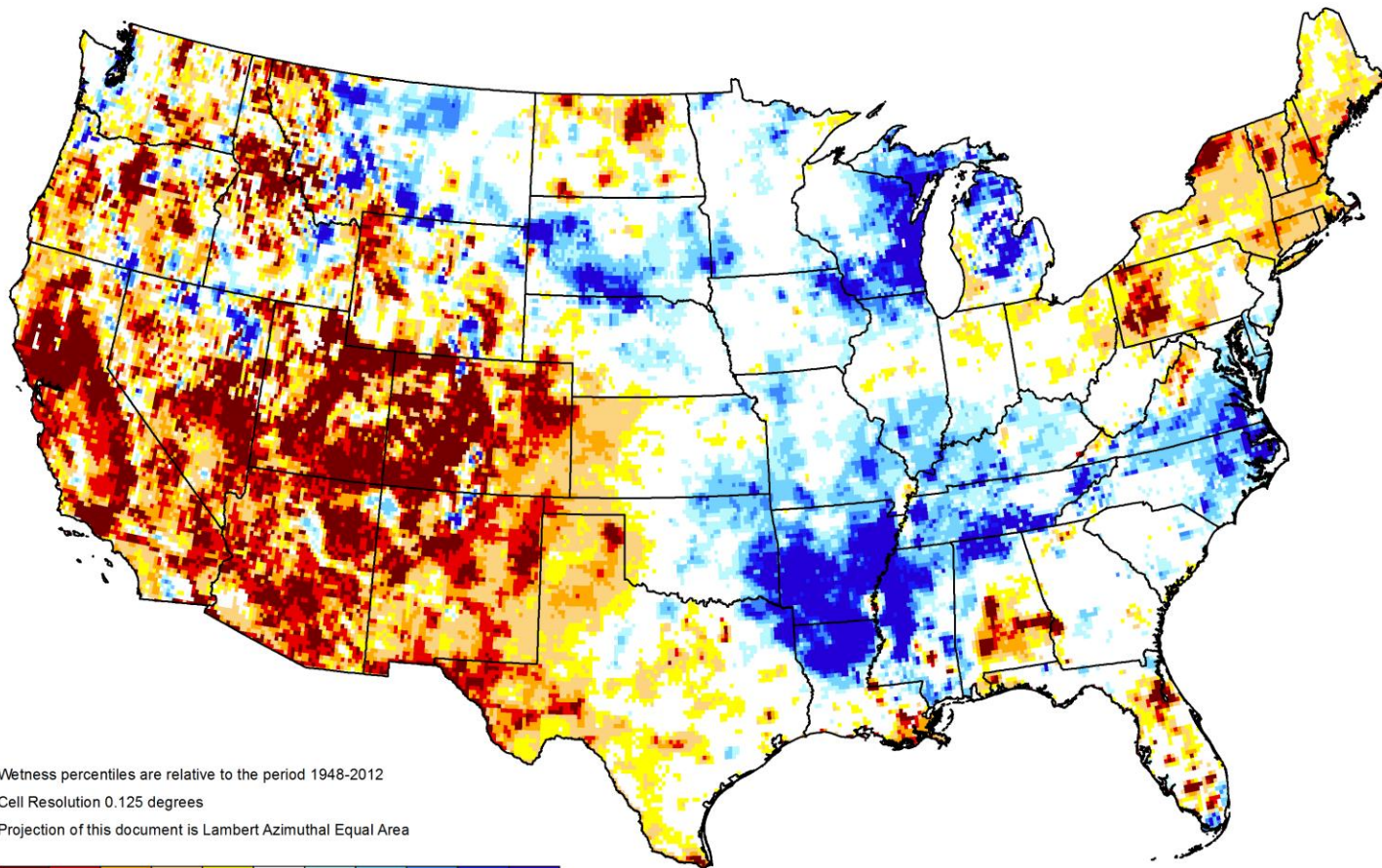


Generated 3/20/2021 at WRCC using provisional data.  
NOAA Regional Climate Centers

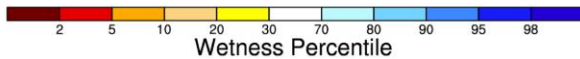


# GRACE-Based Shallow Groundwater Drought Indicator

March 15, 2021



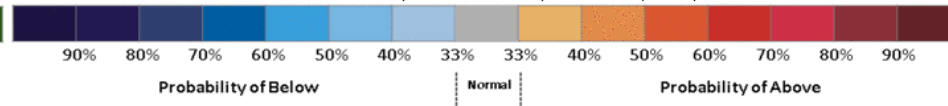
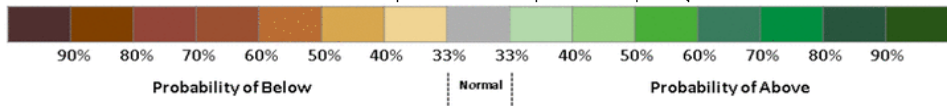
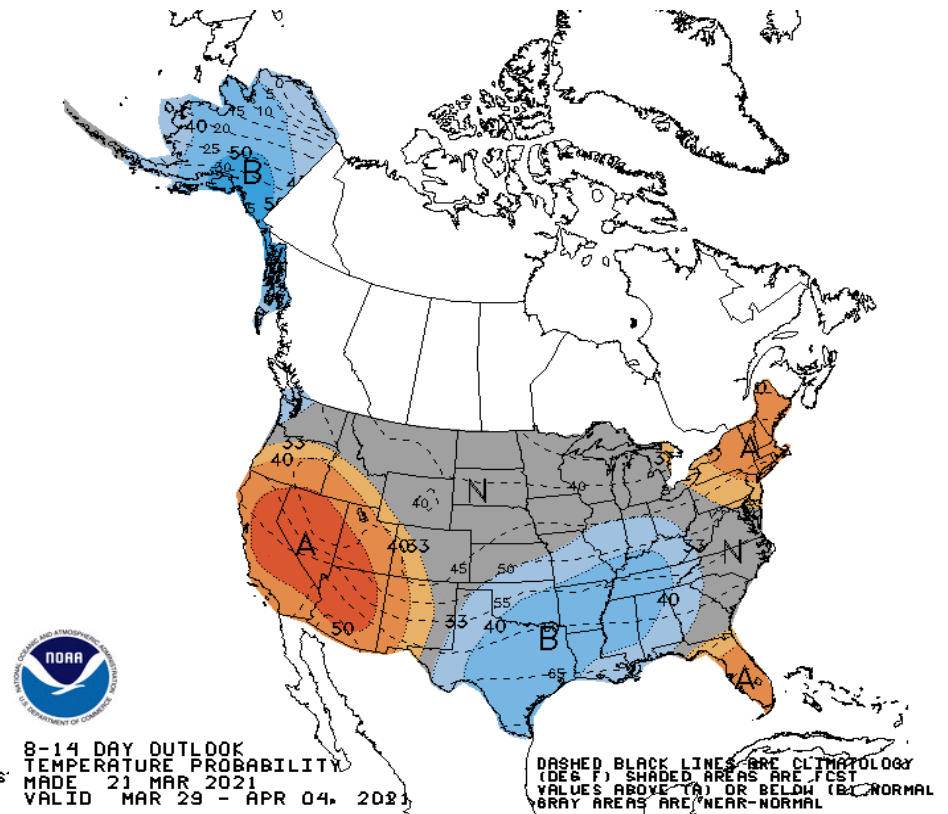
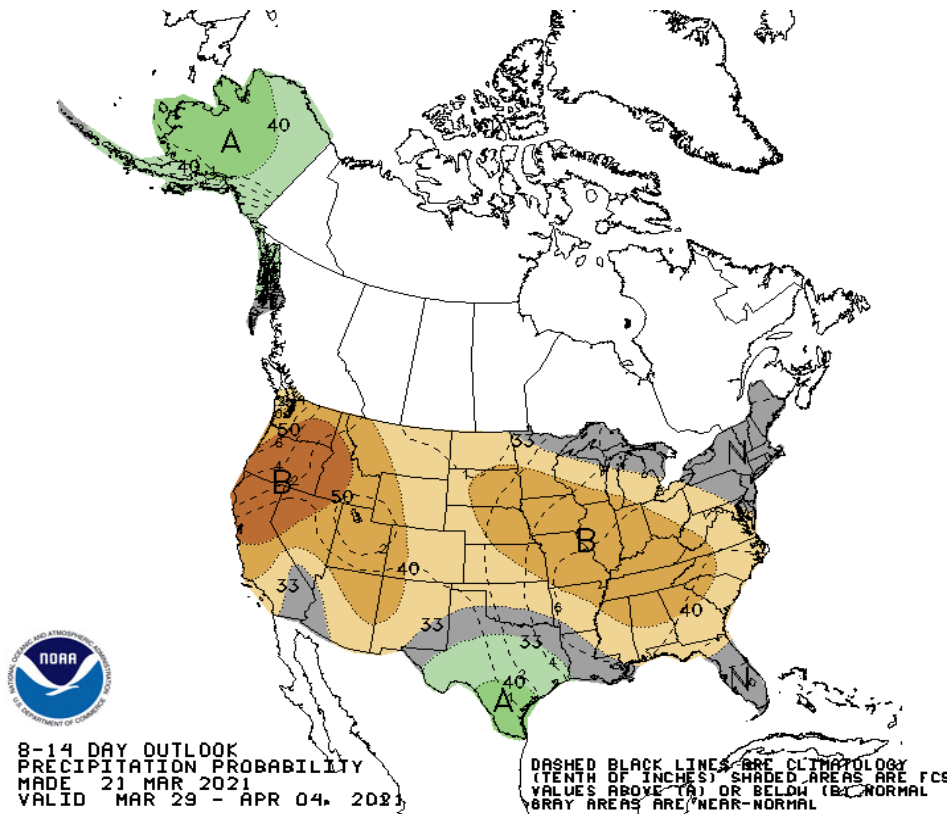
Wetness percentiles are relative to the period 1948-2012  
Cell Resolution 0.125 degrees  
Projection of this document is Lambert Azimuthal Equal Area



<https://nasagrace.unl.edu>

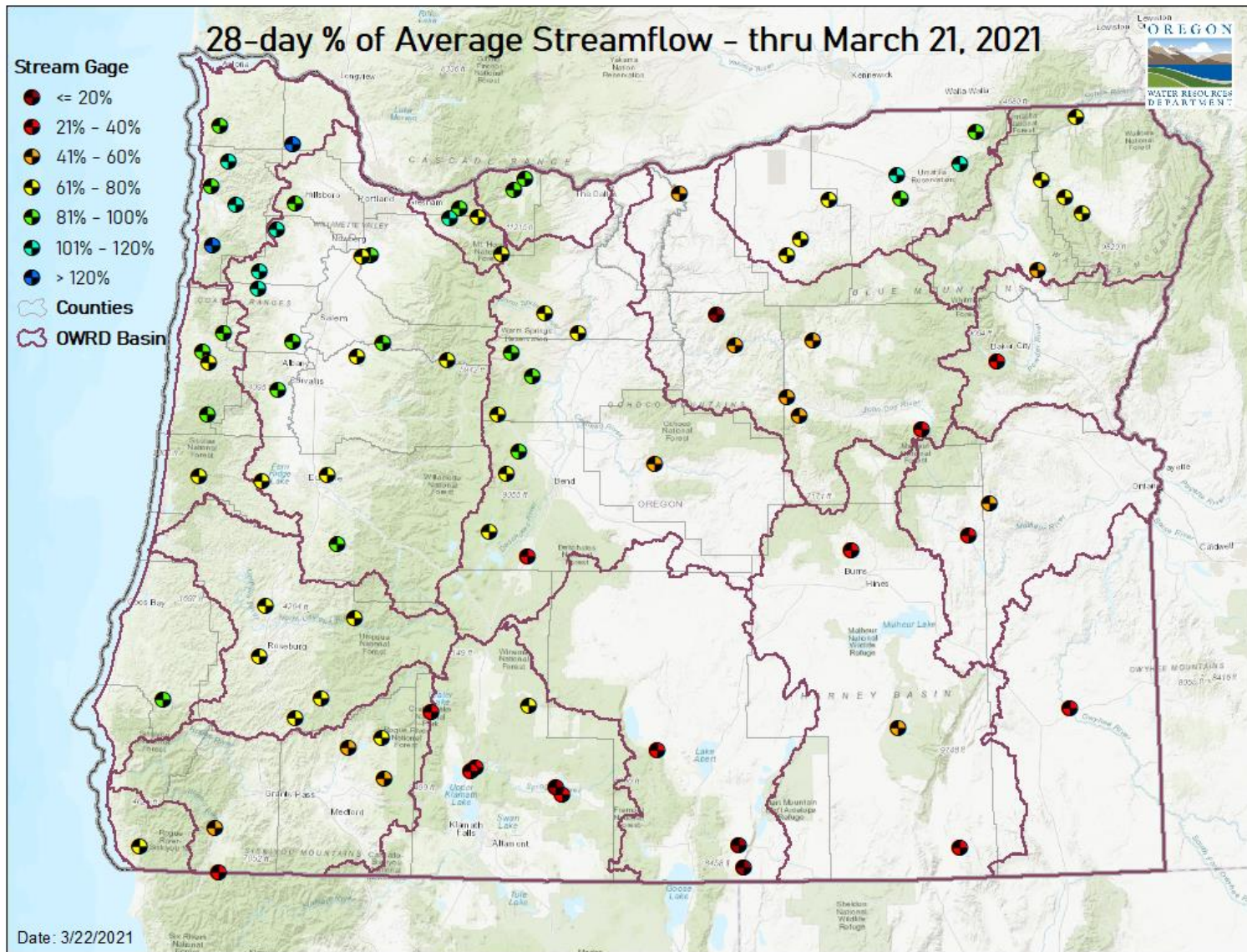


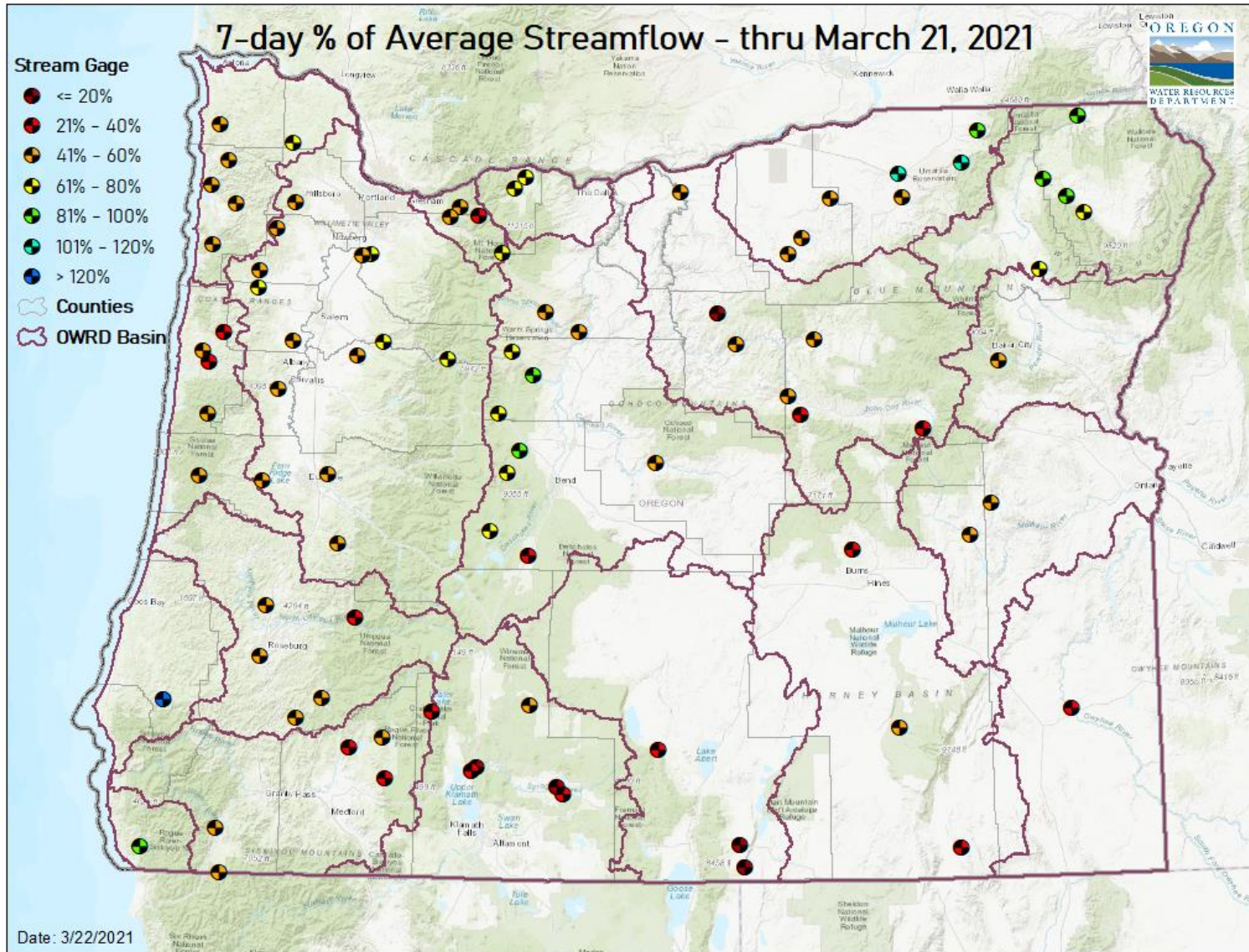
CLIMATE OUTLOOK



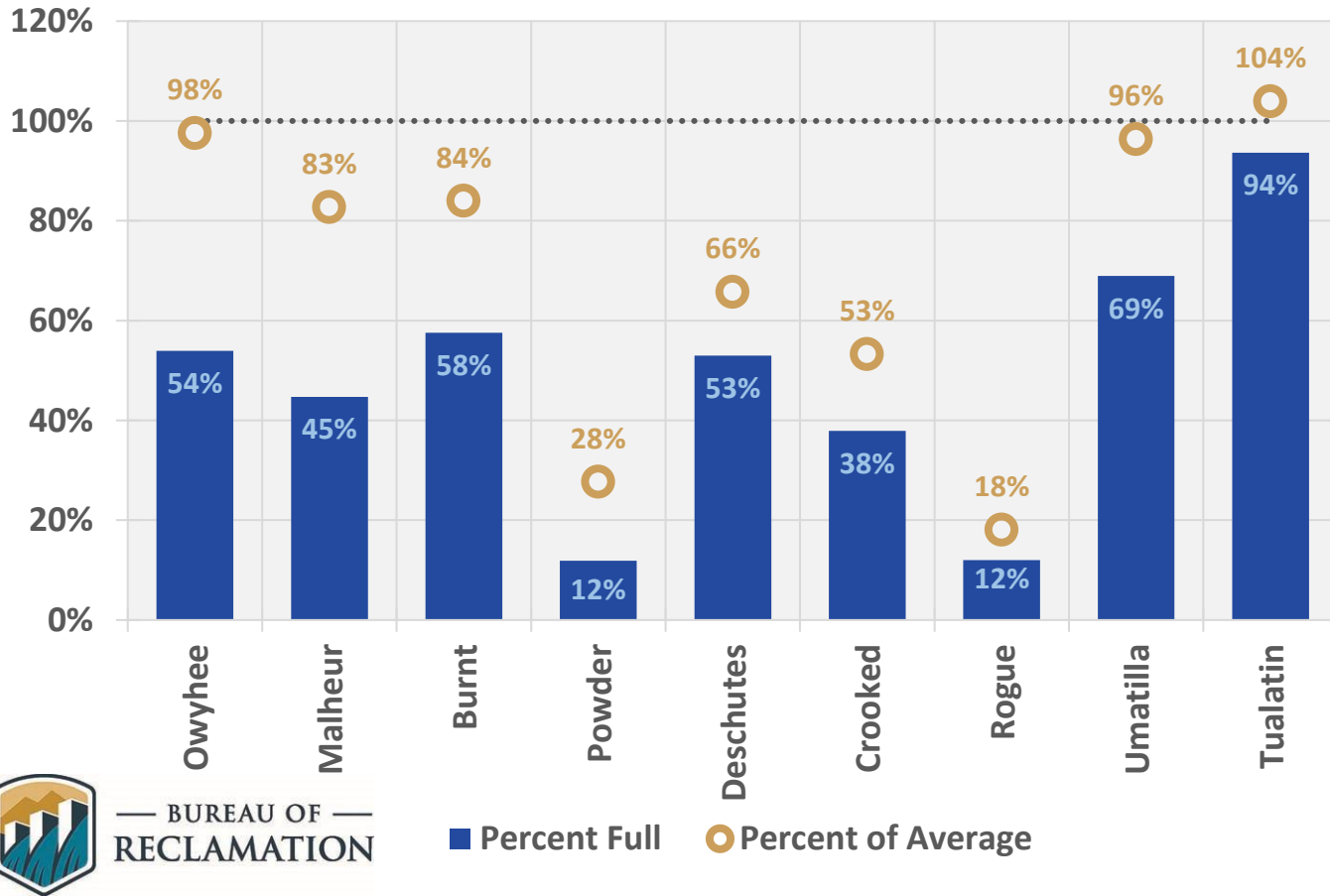
STREAMFLOW

28-DAY





### March 19 Reservoir Storage



## 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.