

# Oregon Water Conditions Report



February 21<sup>st</sup>, 2023

## HIGHLIGHTS

An [Executive Order](#) has been issued declaring drought emergencies in both Crook and Jefferson Counties under ORS 536. Both counties have been experiencing longstanding drought conditions since the beginning of 2020. The declaration has come [much sooner than is typical](#) for each county.

The [US Drought Monitor](#) indicates over 70% of Oregon is classified as experiencing moderate (D1) to exceptional (D4) drought conditions. [Changes over recent weeks](#) include expansion of moderate drought in portions of the Willamette Valley as well as one category improvements in parts of eastern Oregon.

Current [snow water equivalent at NRCS SNOTEL sites](#) ranges from near to above average in all basins throughout the state (min = Malheur @ 91%; max = Harney @ 120%). Although conditions in southeastern Oregon are above average, snowpack accumulation has stagnated over recent weeks.

[Precipitation over the past two weeks](#) has measured well below the long-term average, with much of the area east of the Cascades receiving less than 25% of the usual amount. [Precipitation over the water year to date](#) is below to well below average throughout the state, with western Oregon accruing a significant deficit of up to 16 - 20 inches in some locations.

[Temperatures over the past two weeks](#) have been near to below average throughout a majority of Oregon, with some exception in the northeast.

[Current surface soil moisture](#) reflects the lack of precipitation, with much of the state measuring near historical dryness for this time of year.

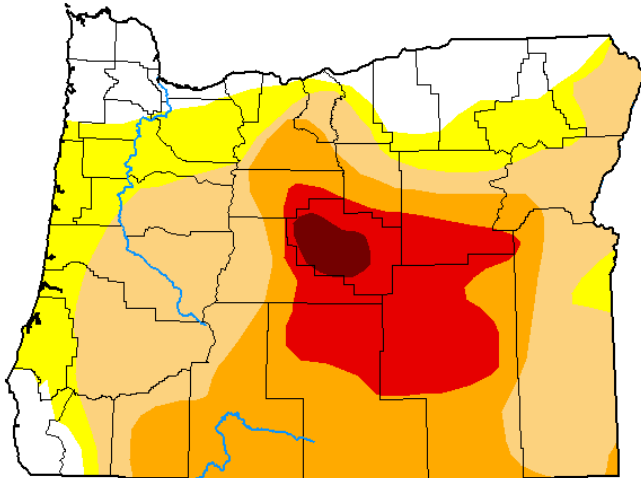
The [8 - 14-day climate outlook](#) indicates probabilities favoring a slight chance of above average precipitation and favorable chances of below average temperatures statewide.

Streamflows over the water year to date are measuring below to well below average in all basins throughout the state (min = Malheur Lake @ 41%; max = Malheur and South Coast @ 82%). The 7-day average streamflows indicate a similar pattern statewide, including [several record lows](#) in various parts of the state.

Reservoir storage is measuring below to well below average in most southern, central, and southeastern [USBR](#) (including [Klamath](#)) projects. Conditions in the Burnt, Tualatin, and Umatilla Basins are near to above average. US Army Corps of Engineers projects have just begun refill operations in the Willamette Basin.

**U.S. Drought Monitor  
Oregon**

**February 14, 2023**  
(Released Thursday, Feb. 16, 2023)  
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	12.81	87.19	70.46	38.84	14.48	1.40
<b>Last Week</b> 02-07-2023	12.87	87.13	70.46	38.84	14.61	1.40
<b>3 Months Ago</b> 11-15-2022	5.37	94.63	59.79	46.04	26.18	1.40
<b>Start of Calendar Year</b> 01-03-2023	13.46	86.54	59.75	46.03	26.18	1.40
<b>Start of Water Year</b> 09-27-2022	0.42	99.58	68.05	52.42	30.73	1.40
<b>One Year Ago</b> 02-15-2022	4.27	95.73	90.59	75.03	45.61	16.22

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>

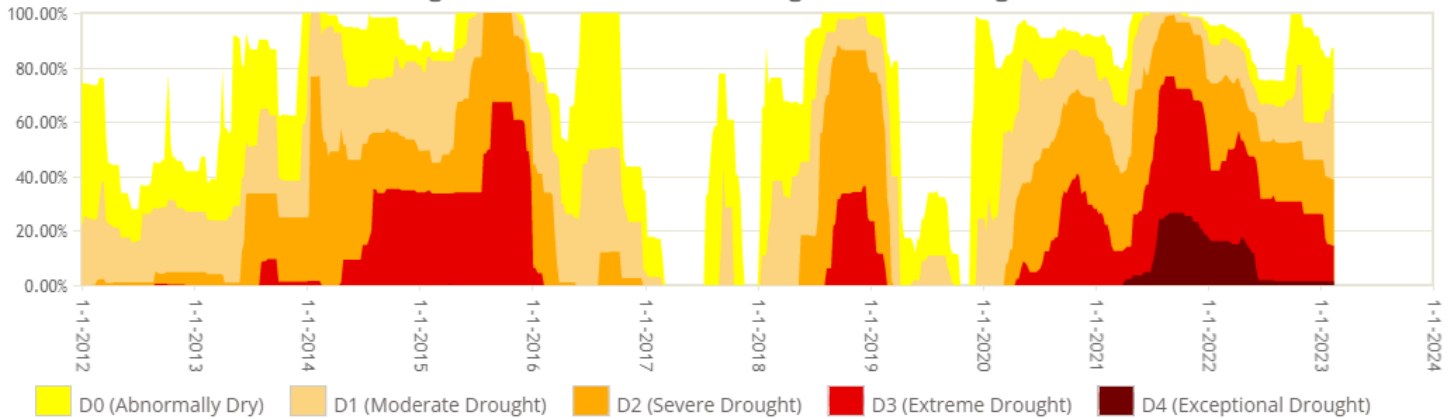
Author:

Brian Fuchs  
National Drought Mitigation Center

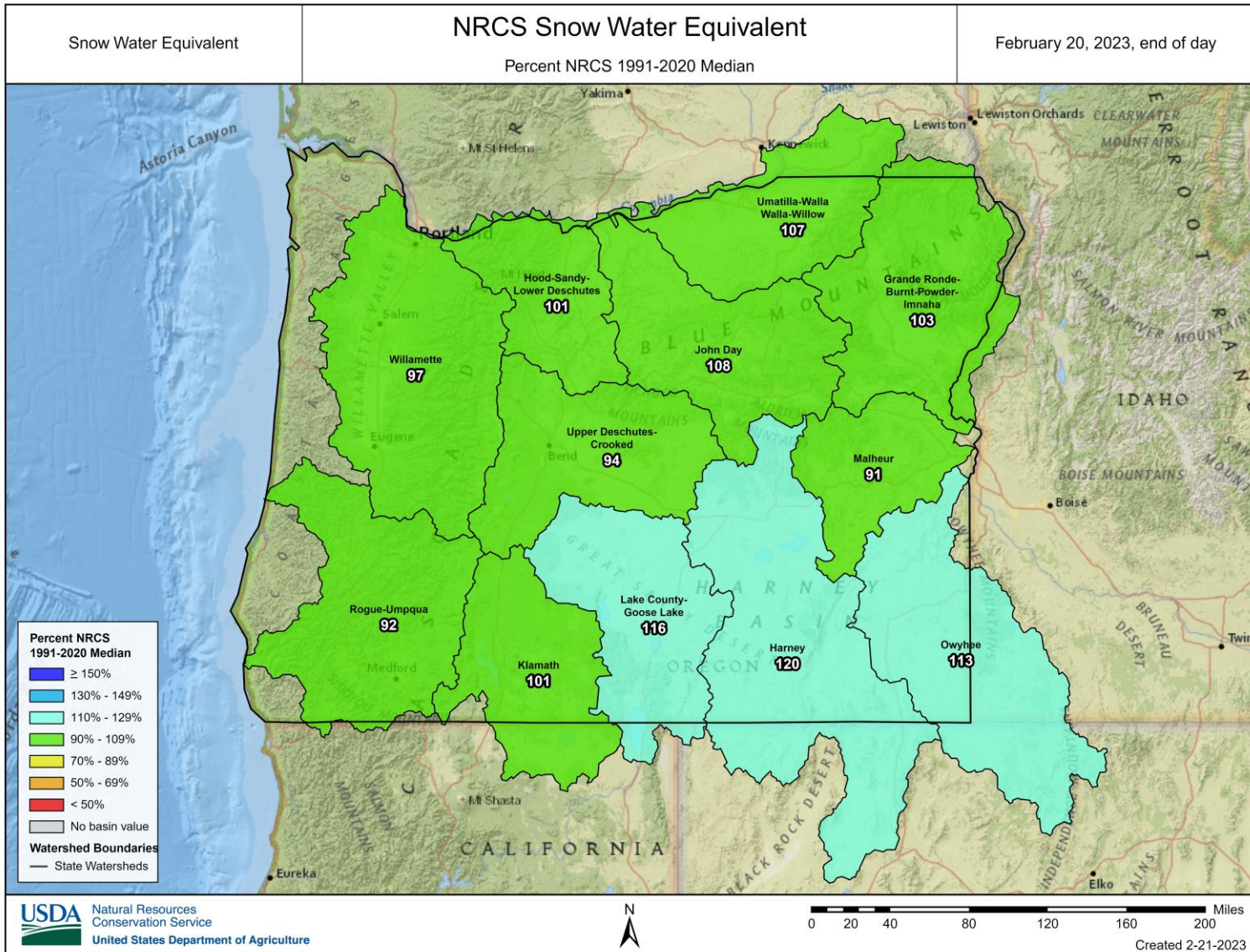


[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

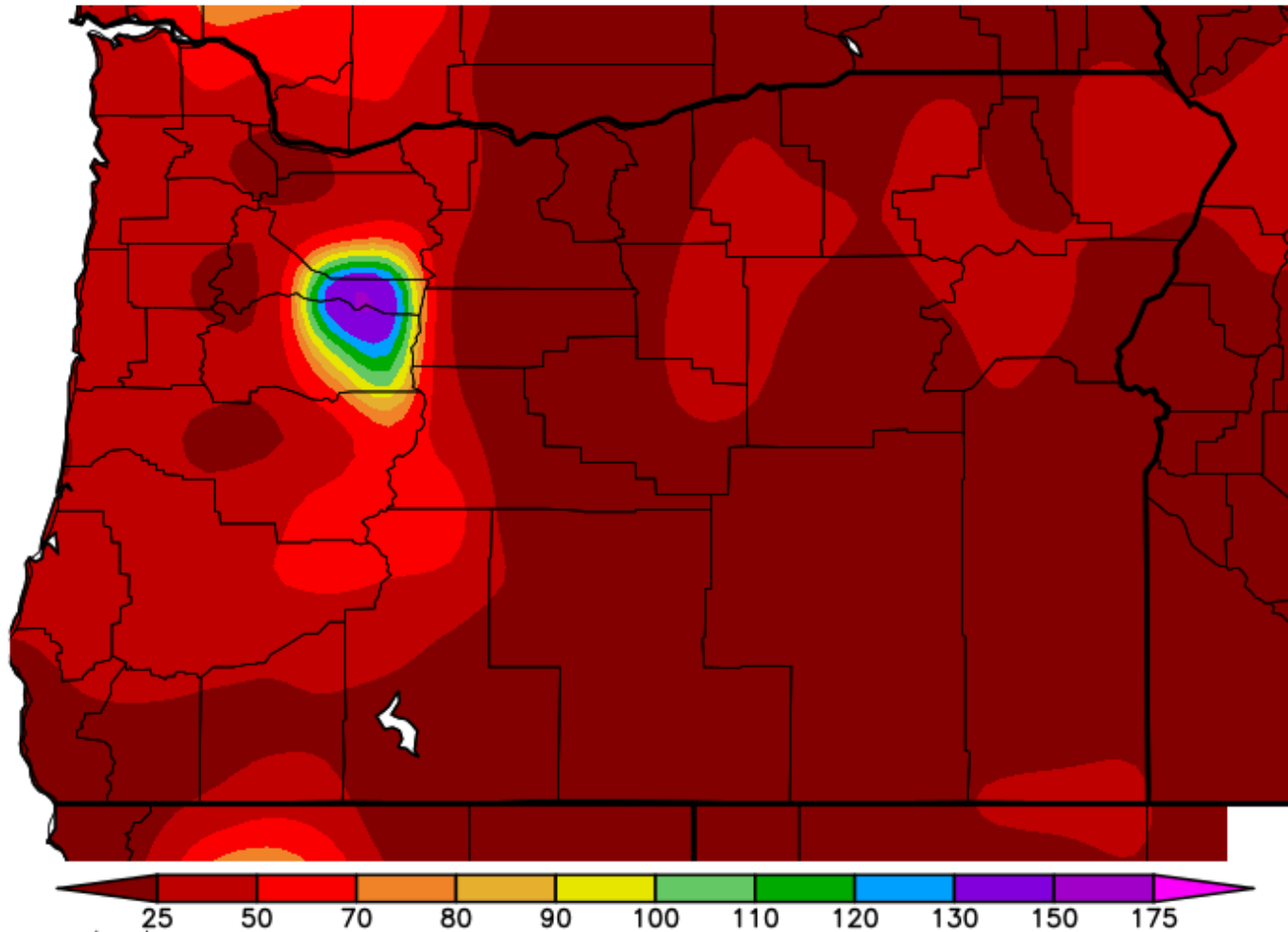
**Oregon Percent Area in U.S. Drought Monitor Categories**



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

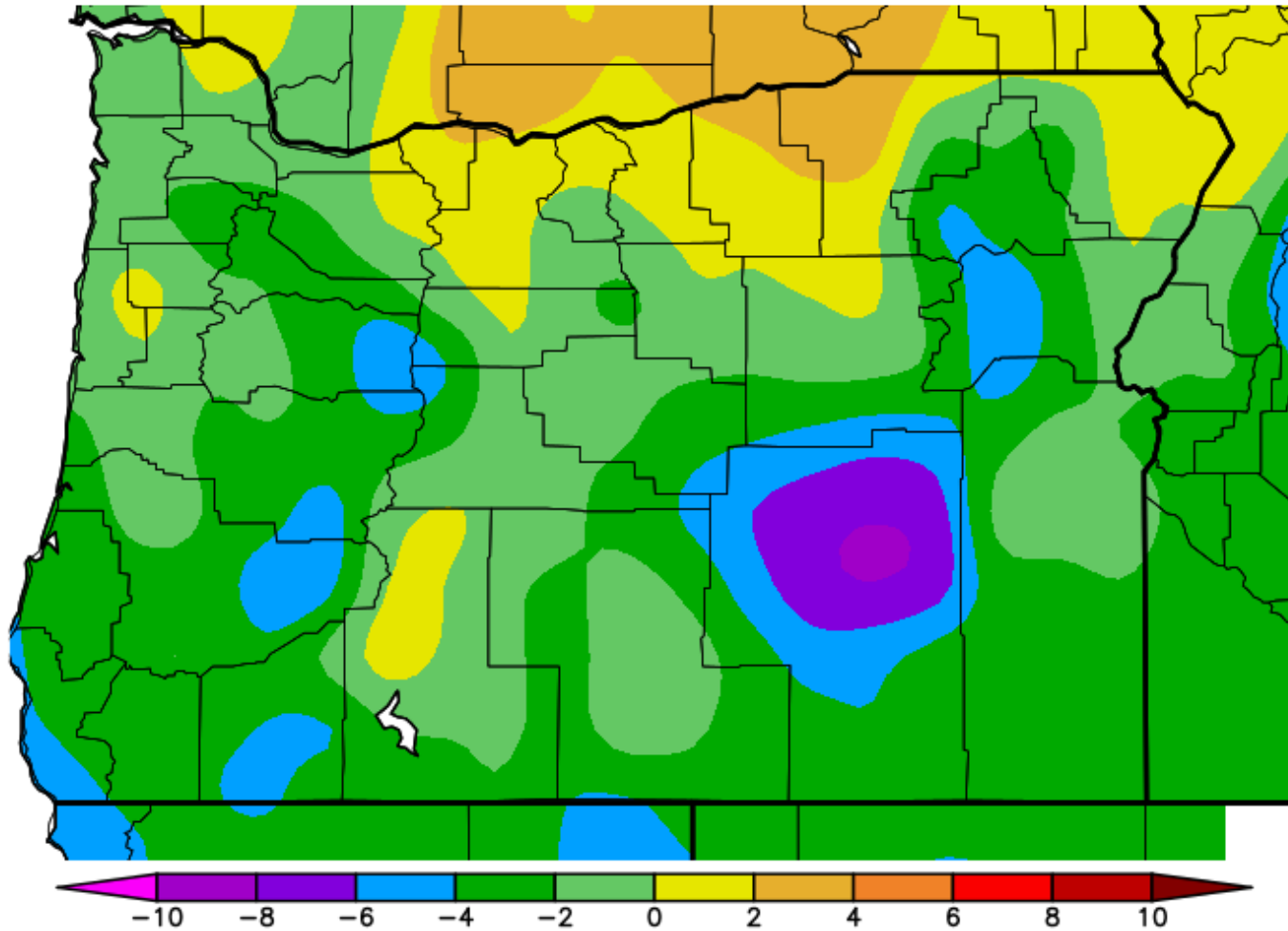


# Percent of Average Precipitation (%) 2/7/2023 – 2/20/2023



Generated 2/21/2023 at WRCC using provisional data.  
NOAA Regional Climate Centers

Ave. Temperature dep from Ave (deg F)  
2/7/2023 - 2/20/2023

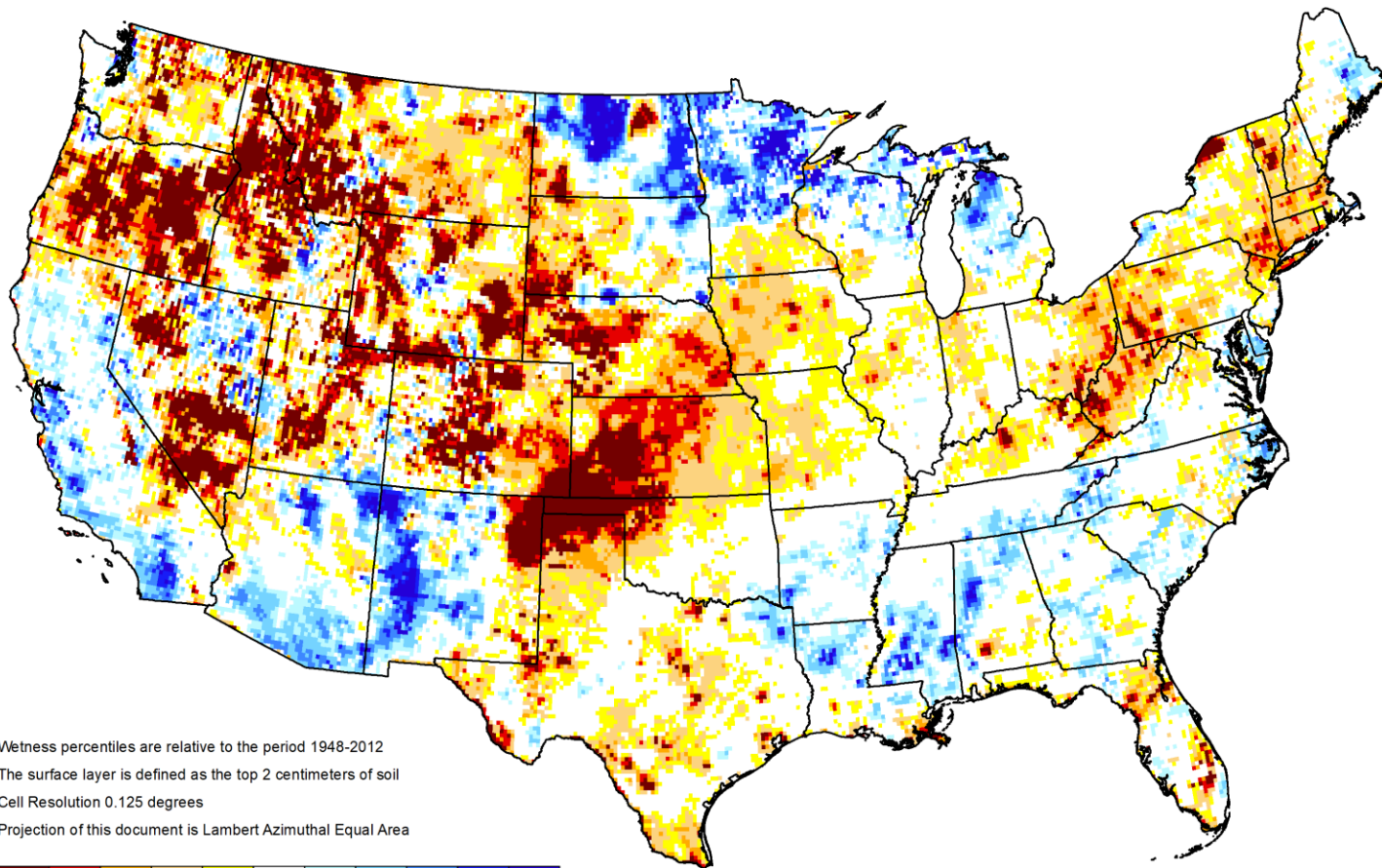


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NOAA Regional Climate Centers

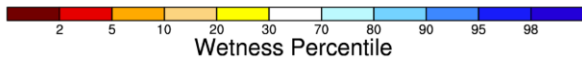


# GRACE-Based Surface Soil Moisture Drought Indicator

February 13, 2023



Wetness percentiles are relative to the period 1948-2012  
The surface layer is defined as the top 2 centimeters of soil  
Cell Resolution 0.125 degrees  
Projection of this document is Lambert Azimuthal Equal Area



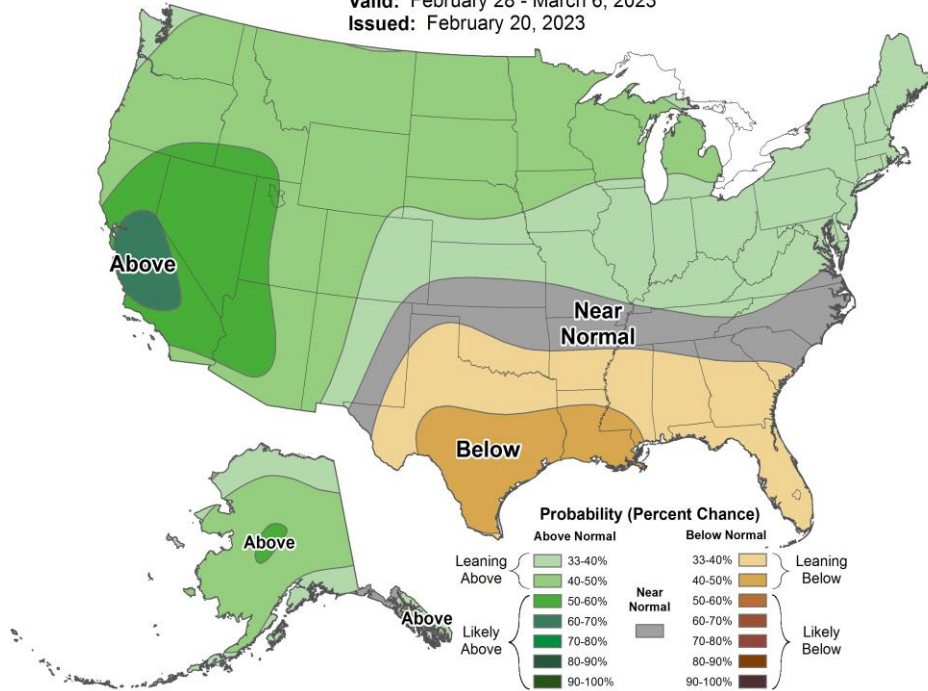
<https://nasagrace.unl.edu>



## 8-14 Day Precipitation Outlook



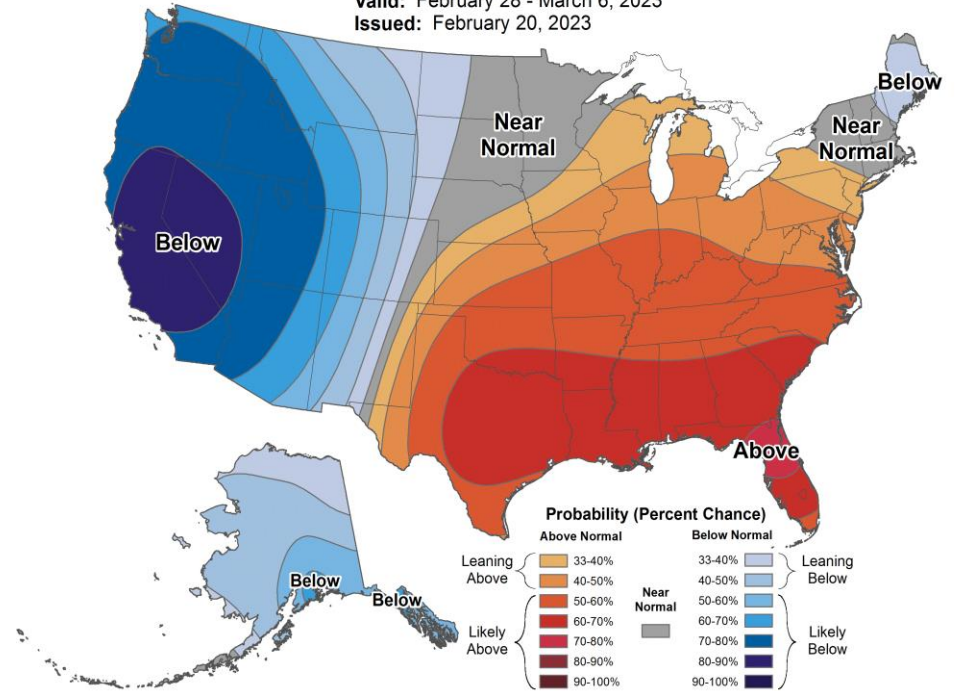
Valid: February 28 - March 6, 2023  
 Issued: February 20, 2023



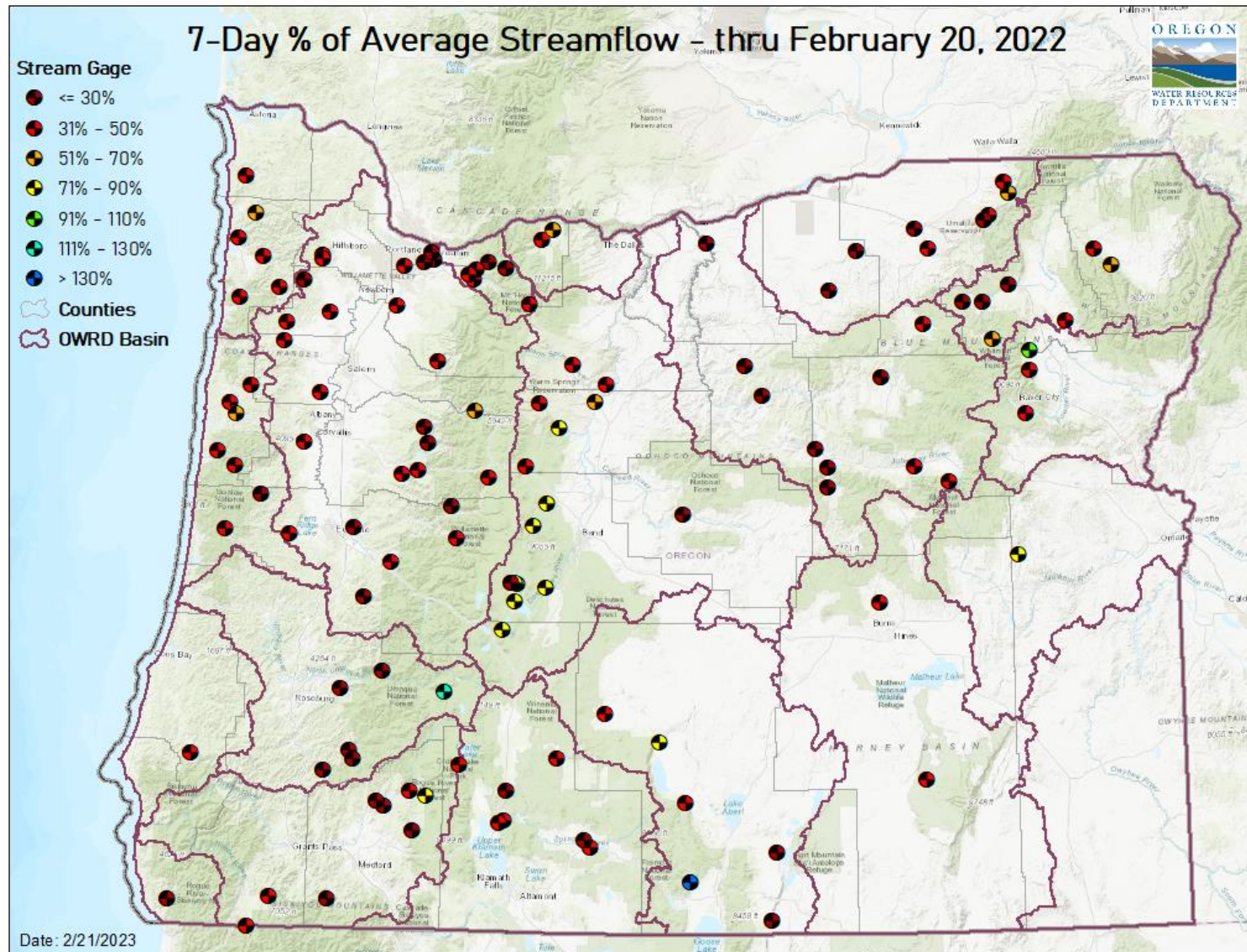
## 8-14 Day Temperature Outlook



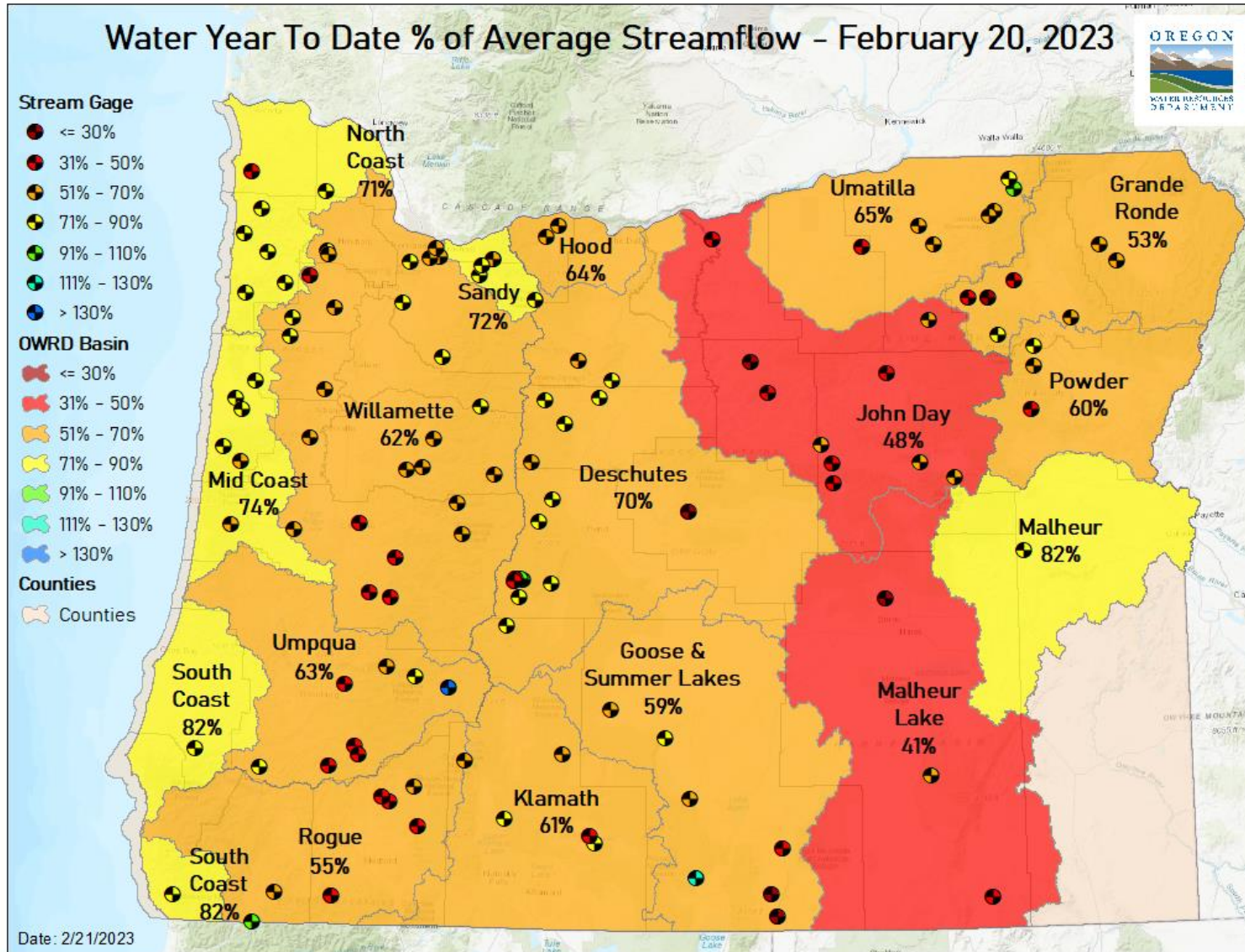
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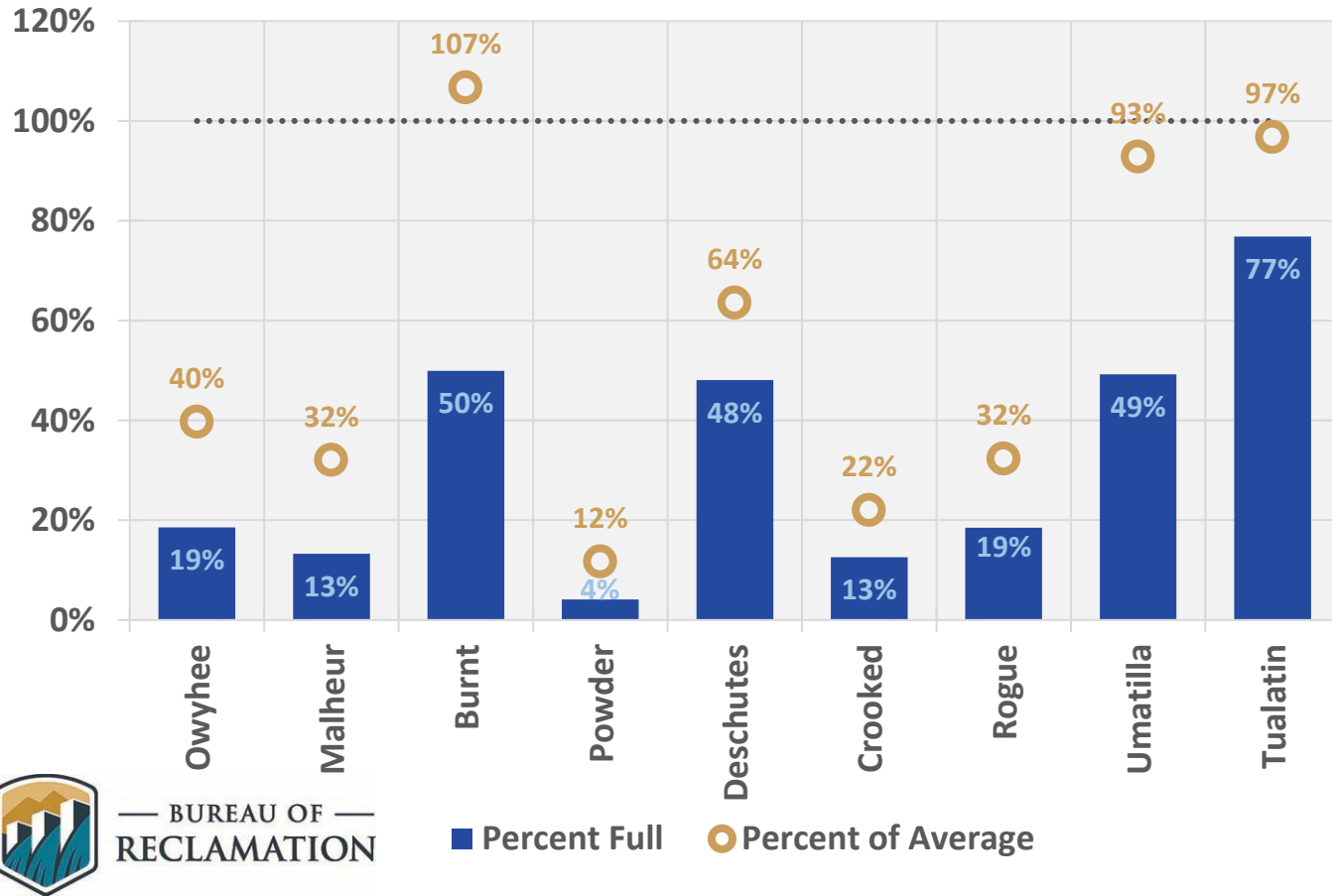
**STREAMFLOW**  
**MOVING AVERAGE**







## February 20 Reservoir Storage



## RESOURCES/REFERENCES

Please visit [Oregon Water Resources Department's drought information page](#) to learn about current drought conditions, assistance programs, and potential drought tools.

If you are interested in submitting local drought-related conditions and impacts, please visit the [drought impacts toolkit](#) to learn more. [Click here](#) to visit the map of condition monitoring observer reports.

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 [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.