Oregon Water Conditions Report

December 18th, 2023

OREGON WATER RESOURCES DEPARTMENT

HIGHLIGHTS

According to the US Drought Monitor, over 18% of Oregon is experiencing moderate (D1) to severe (D2) drought conditions. Over the past 3 weeks, conditions across Oregon have shown improvement with an areal reduction in moderate and severe drought conditions, specifically in coastal regions.

Snow water equivalent (SWE) in many basins across the state is currently measuring well below to just below the historical median (min = 24%; max = 88%) with exception of the Harney and Owyhee basins which are just above (105%) and well above (135%) the historical median, respectively. It is important to note SWE is highly variable early in the water year.

Over the past two weeks, precipitation varied statewide. Much of southern, central, and eastern Oregon received well below average precipitation, ranging from 1.5 to 3 inches below average. The Cascade Range, Blue Mountains and most of the coastal regions received above to well above average precipitation ranging from 1.5 to 6 inches above average.

Temperatures over the past two weeks have varied between eastern and western Oregon where average temperatures ranged from 4°F to 10°F and 2°F to 8°F above the long-term average, respectively. There was some exception to this trend in the central Cascades where average temperatures reached 2°F below the long-term average.

Root zone soil and surface soil moisture profiles show improvement over recent weeks across the state due to a family of atmospheric rivers that brought significant moisture to the state from 11/30/2023 to 12/06/2023.

The near-term climate outlook (8-14 days) indicates probabilities leaning towards above average precipitation for most of the state and above average temperatures statewide.

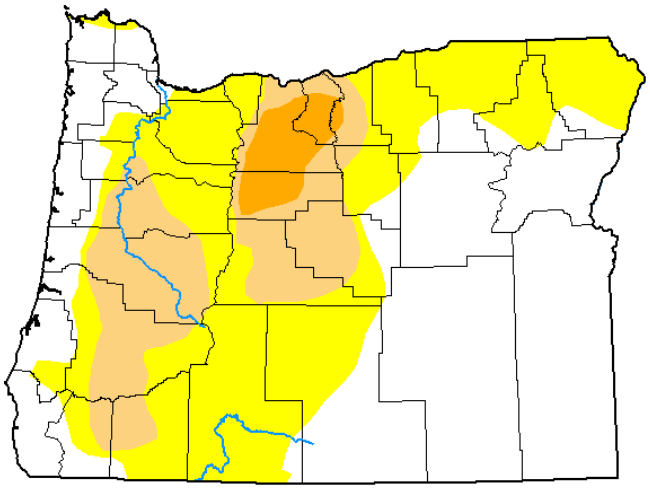
Recent streamflow conditions across much of the state are generally at or well above the long-term average. However, streams in southwestern and south-central Oregon are generally below to well below the long-term average. Streamflow over the water year to date is average to above average for most Oregon basins with the exception of some southern basins (Goose and Summer Lakes, Klamath, Rogue, and Umpqua) which are below average.

Reservoir storage carryover in many basins continues to be above average. However, projects in the Deschutes and Rogue basins are measuring below average. See USBR (including Klamath) and USACE teacup diagrams for more information.

DROUGHT CONDITIONS

U.S. Drought Monitor

Oregon



December 12, 2023

(Released Thursday, Dec. 14, 2023)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	47.07	52.93	18.85	3.12	0.00	0.00
Last Week 12-05-2023	42.73	57.27	19.08	3.12	0.00	0.00
3 Months Ago 09-12-2023	24.13	75.87	56.11	19.63	0.00	0.00
Start of Calendar Year 01-03-2023	13.46	86.54	59.75	46.03	26.18	1.40
Start of Water Year 09-26-2023	24.13	75.87	54.18	27.06	6.40	0.00
One Year Ago 12-13-2022	8.61	91.39	59.76	46.04	26.18	1.40

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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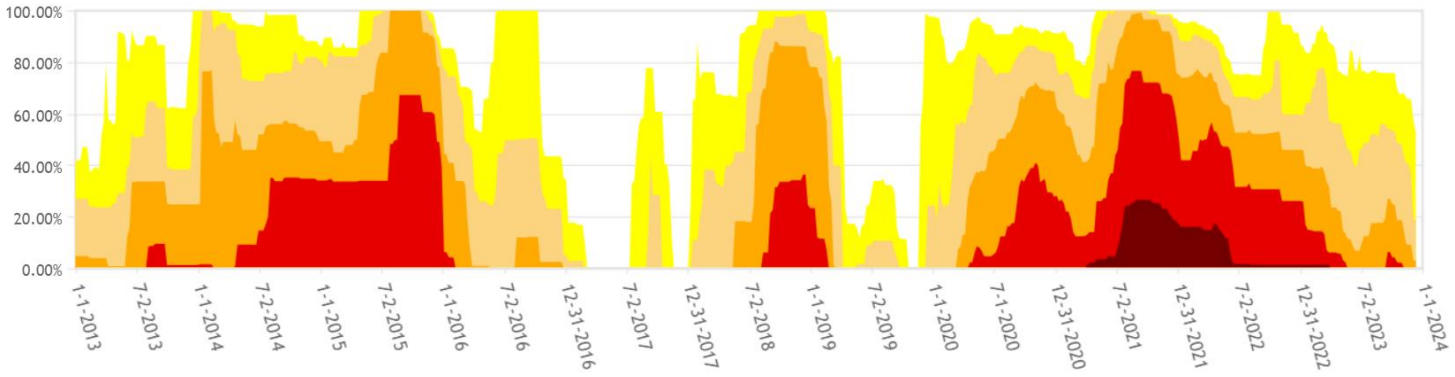
National Drought Mitigation Center

droughtmonitor.unl.edu

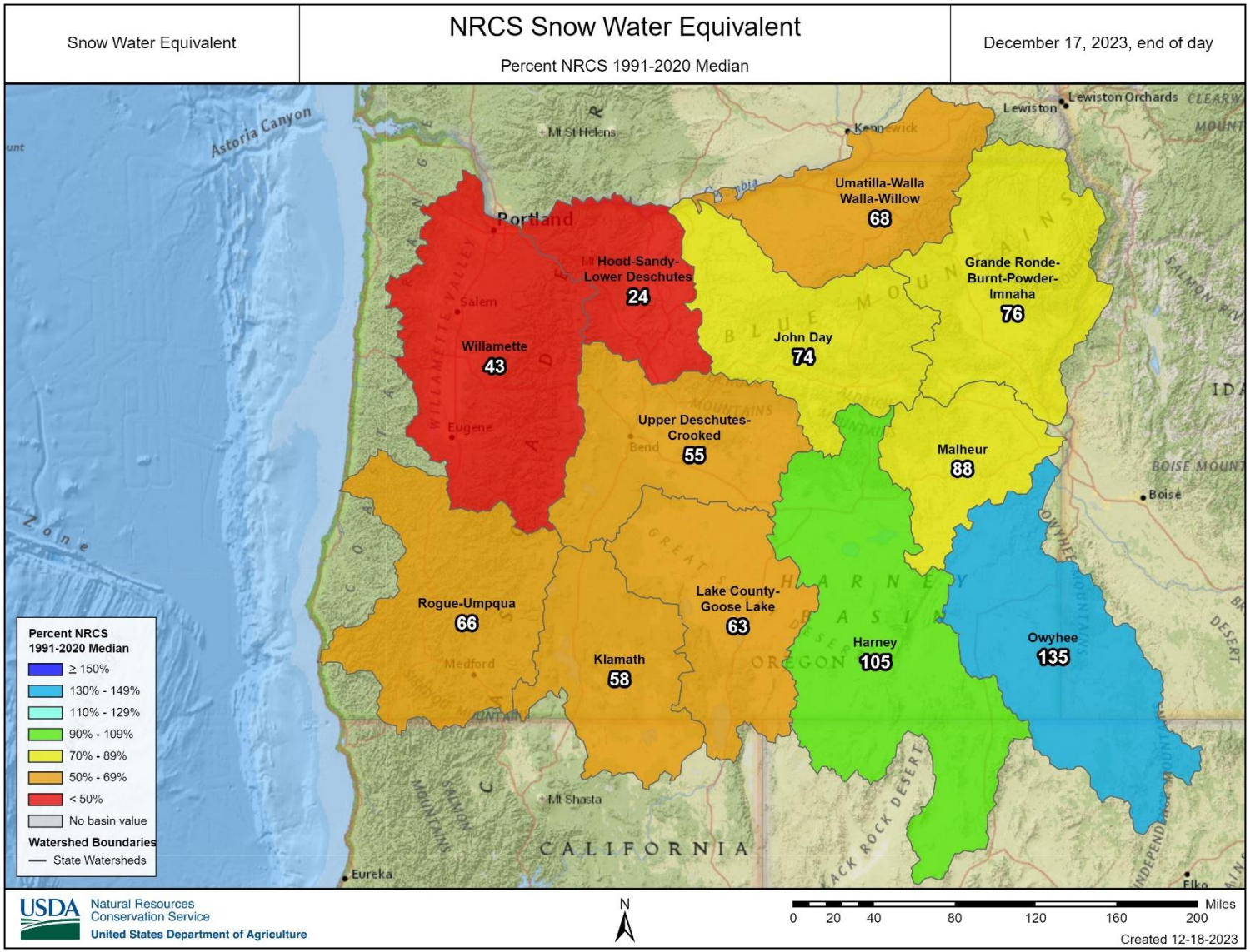
Oregon Percent Area in U.S. Drought Monitor Categories



From the U.S. Drought Monitor website, https://droughtmonitor.unl.edu/DmData/TimeSeries.aspx, 12-18-2023

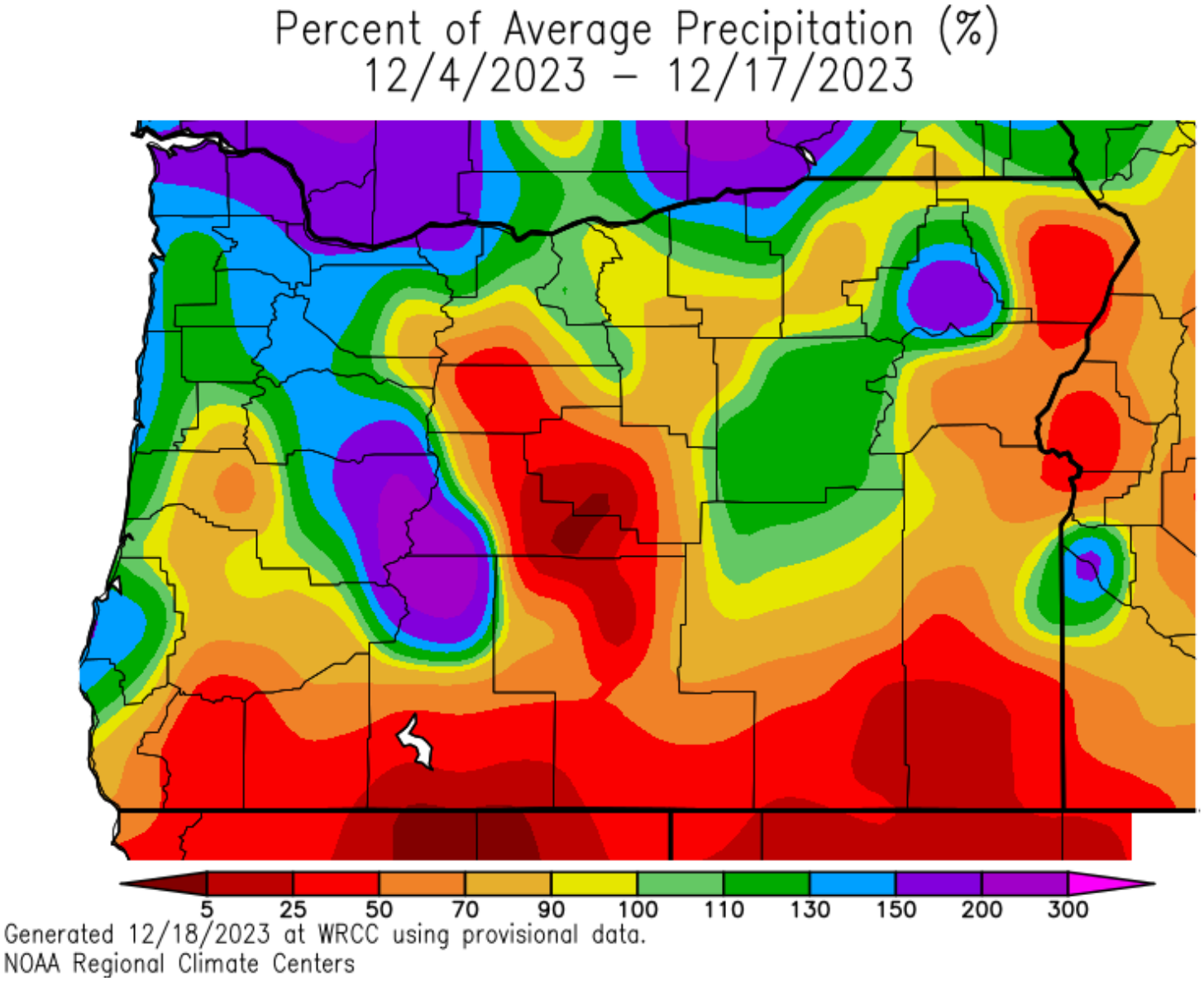
CLIMATE CONDITIONS

SNOW WATER EQUIVALENT

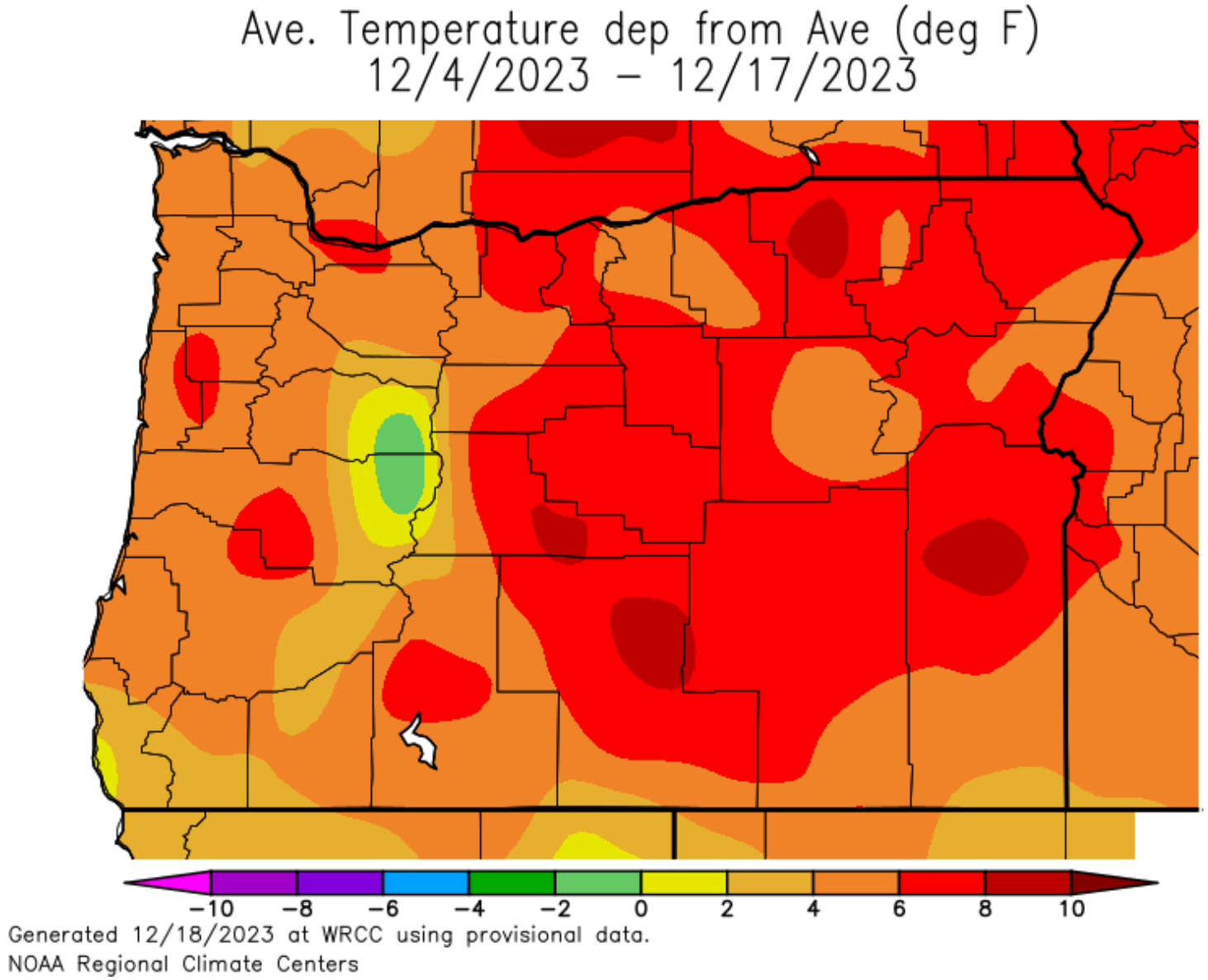


CLIMATE CONDITIONS

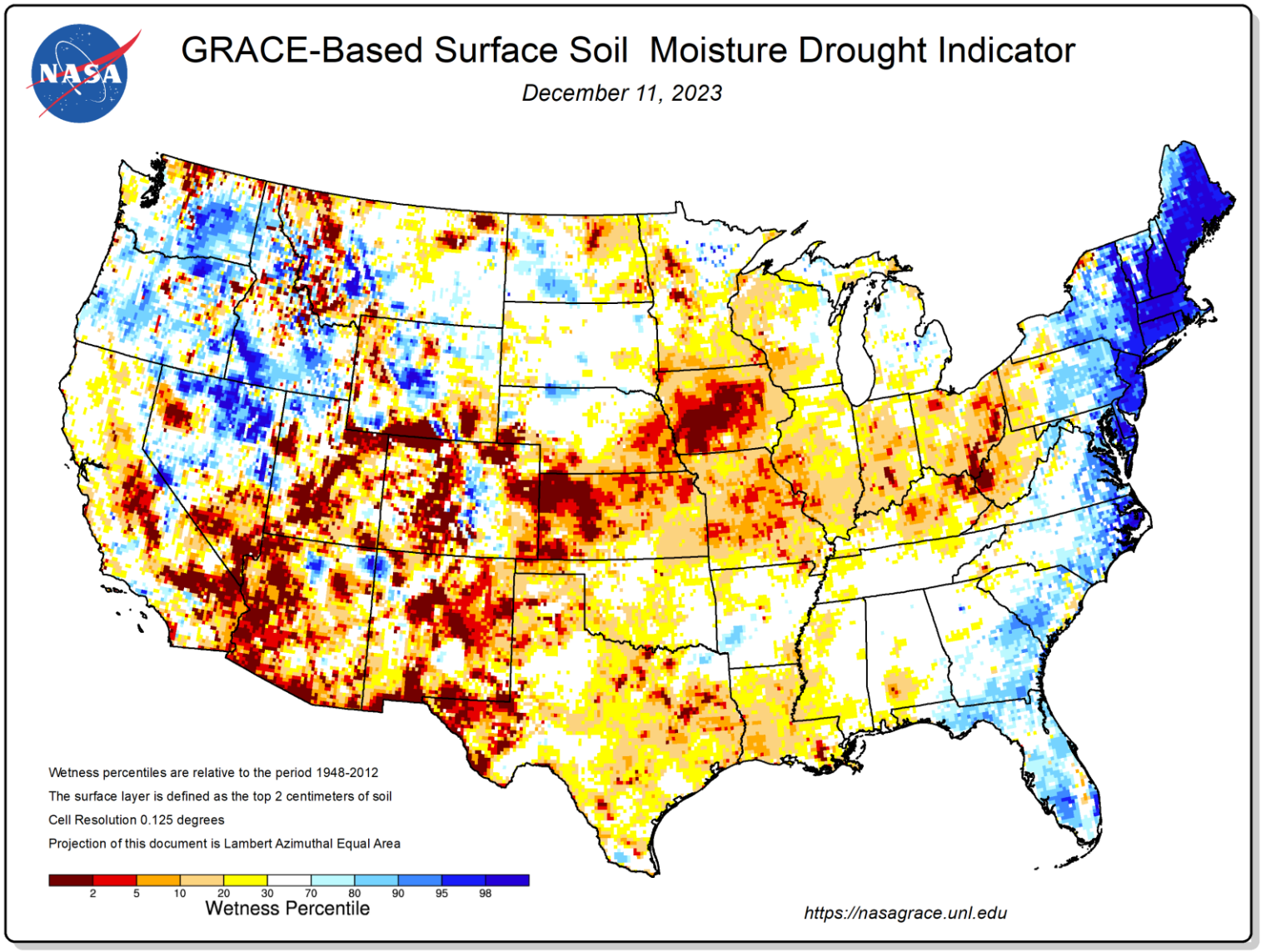
PRECIPITATION



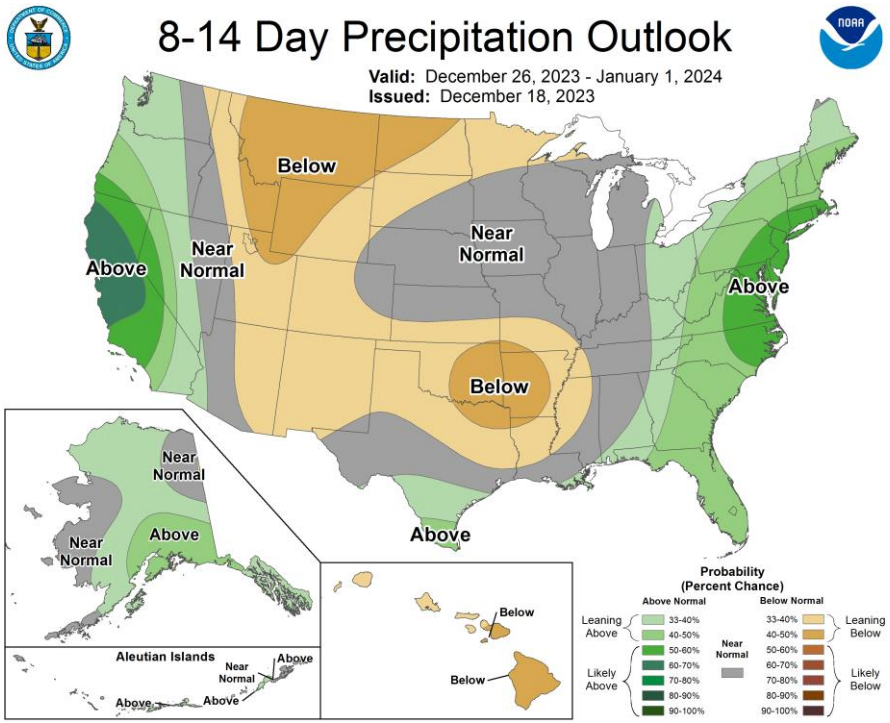
TEMPERATURE

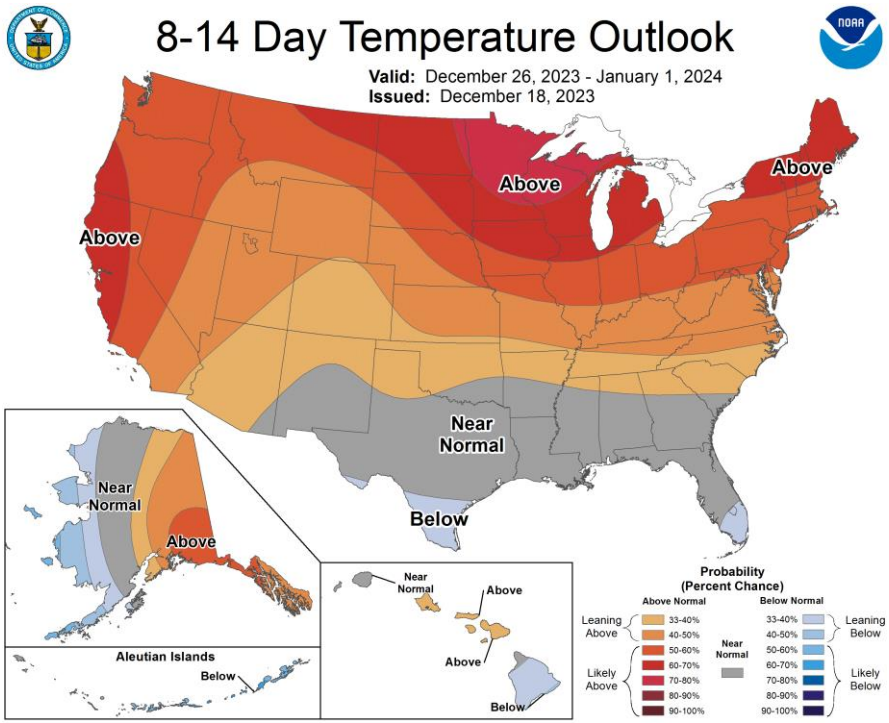


SOIL MOISTURE

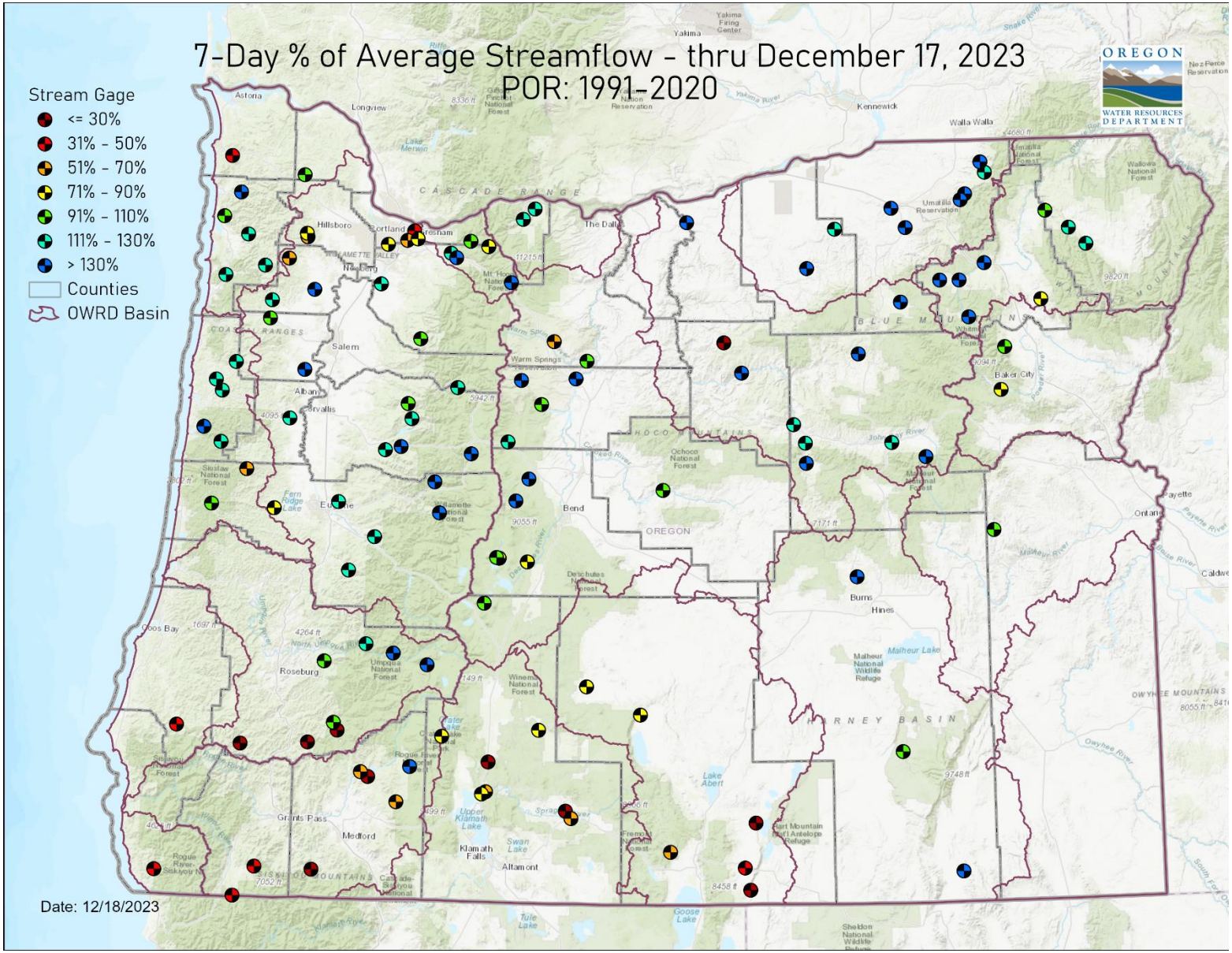


CLIMATE OUTLOOK

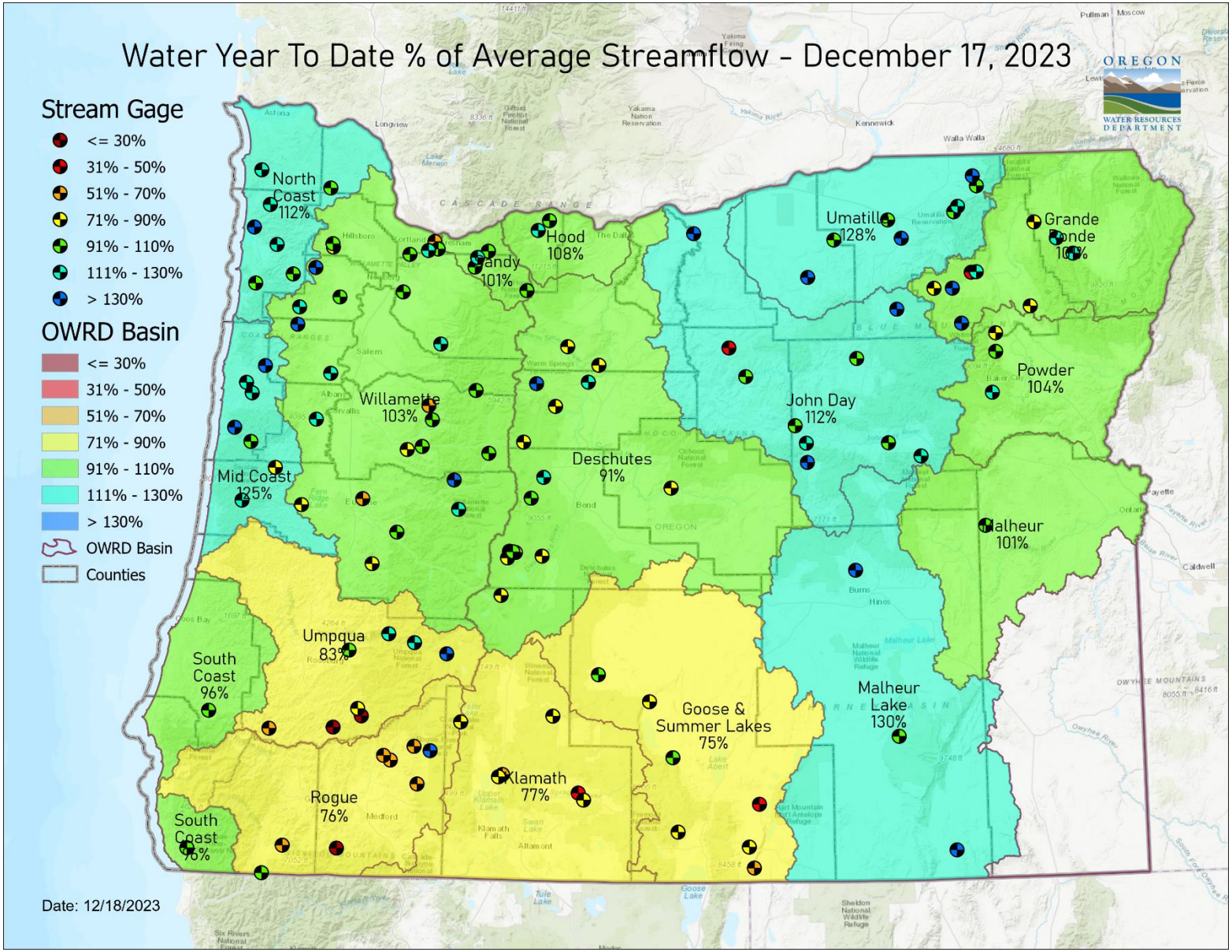


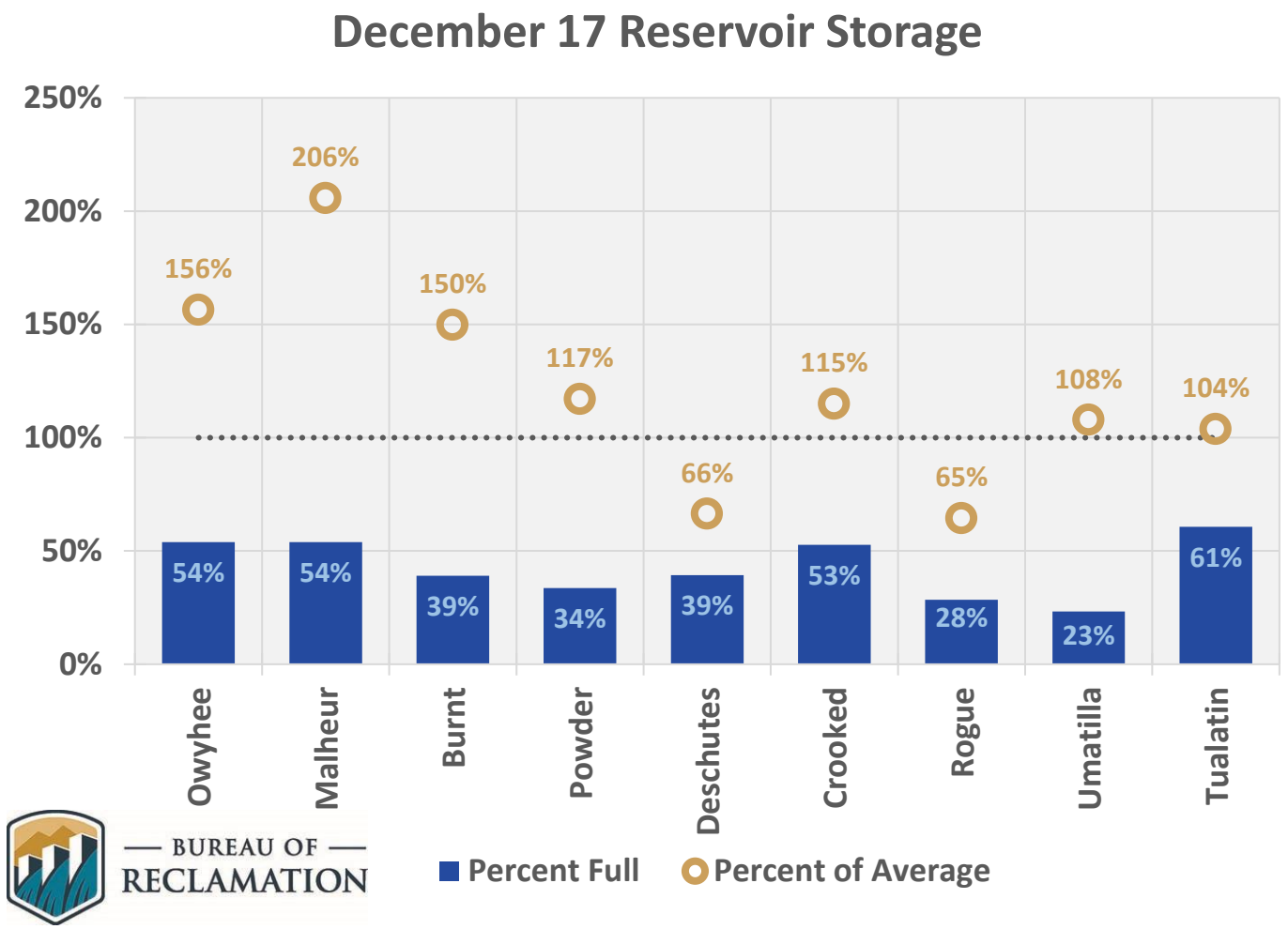


STREAMFLOW – 7 DAY AVERAGE



STREAMFLOW – WATER YEAR TO DATE




December 17 Reservoir Storage
250%
200%
150%
100%
50%
0%
206%
156%
150%
117%
115%
108%
104%
66%
65%
54%
54%
39%
34%
39%
53%
28%
23%
61%
Owyhee
Malheur
Burnt
Powder
Deschutes
Crooked
Rogue
Umatilla
Tualatin
BUREAU OF RECLAMATION
Percent Full
Percent of Average

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.