Oregon Water Conditions Report

March 20th, 2023

HIGHLIGHTS

Thus far in 2023, two Oregon counties have received Executive Orders for state drought declarations under ORS 536. Requests from two additional counties – Deschutes and Grant – have been forwarded to the Governor's Office.

The US Drought Monitor indicates over 77% of Oregon is experiencing moderate (D1) to exceptional (D4) drought conditions. Changes over recent weeks include one-class improvements throughout the state including Jackson County (D2 -> D1), Harney County (D3 -> D2), and parts of northwest Oregon improved to abnormally dry (D0) or were removed from classification.

Snow water equivalent at NRCS SNOTEL sites is measuring above to well above the long-term median throughout the state (min = Hood-Sandy-Lower Deschutes @ 116%; max = Harney @ 177%). All basins are measuring near or above their peak median value.

Precipitation over the past two weeks has been variable throughout the state. Much of central and eastern Oregon received above to well above average precipitation, with some areas receiving upwards to 1.5 – 3 inches.

Temperatures over the past two weeks were cooler than usual across the state, largely ranging from 0 – 9 °F below average, with some areas measuring 12 – 15 °F below average.

Soil moisture profiles have shown some improvement over recent weeks, likely in response to recent precipitation events. Many areas are showing near to above average surface soil moisture.

The 8-14-day climate outlook indicates probabilities favoring below average temperatures statewide and slight chances of above average precipitation outside of the northern coast and Willamette Valley.

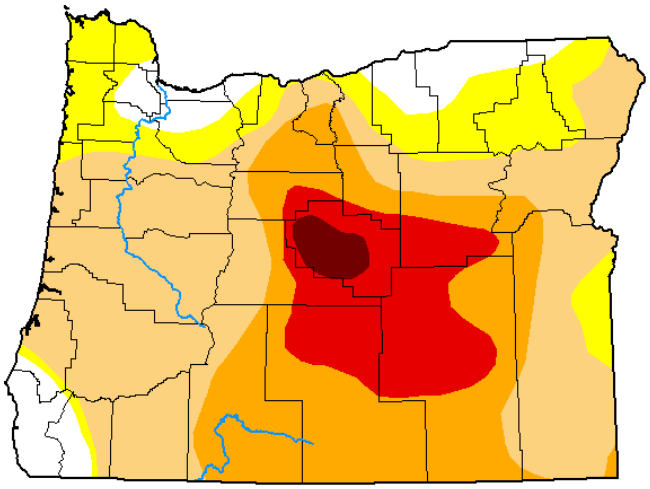
Streamflows over the water year to date remain well below average statewide (min = John Day @ 39%; max = South Coast @ 84%). More recently, 7-day average streamflows show some improvement in western Oregon, while flows in central and eastern Oregon continue to measure below to well below average (see below).

Reservoir storage contents remain below to well below average in most USBR (including Klamath) and USACE systems due to low carryover, low baseflows, and delayed runoff due to snowpack. Refill is unlikely at many facilities, with some measuring near record low contents.

DROUGHT CONDITIONS

U.S. Drought Monitor

Oregon



March 14, 2023

(Released Thursday, Mar. 16, 2023)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	8.28	91.72	77.32	37.70	13.51	1.40
Last Week *03-07-2023*	5.19	94.81	78.02	39.67	14.48	1.40
3 Months Ago *12-13-2022*	8.61	91.39	59.76	46.04	26.18	1.40
Start of Calendar Year *01-03-2023*	13.46	86.54	59.75	46.03	26.18	1.40
Start of Water Year *09-27-2022*	0.42	99.58	68.05	52.42	30.73	1.40
One Year Ago *03-15-2022*	5.66	94.34	89.04	75.03	49.69	15.73

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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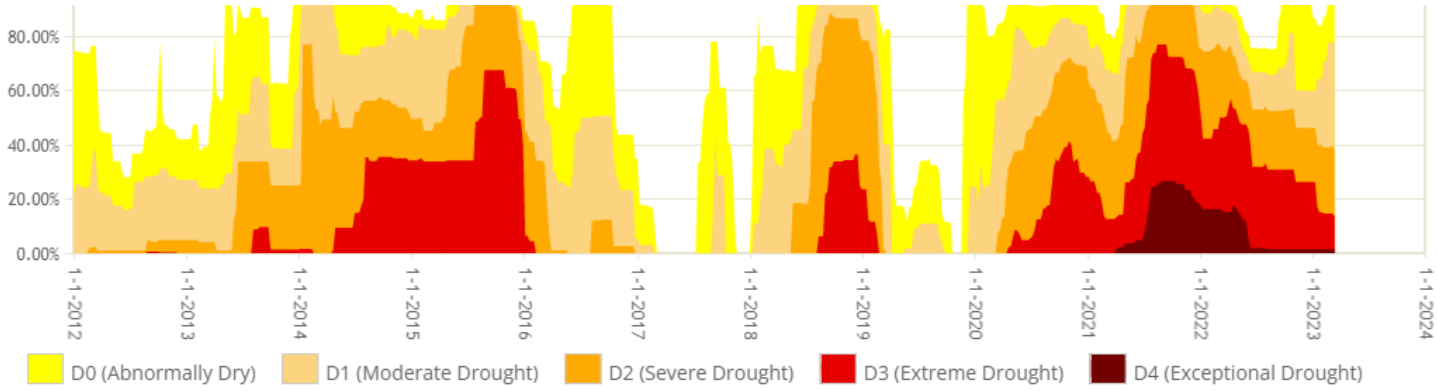
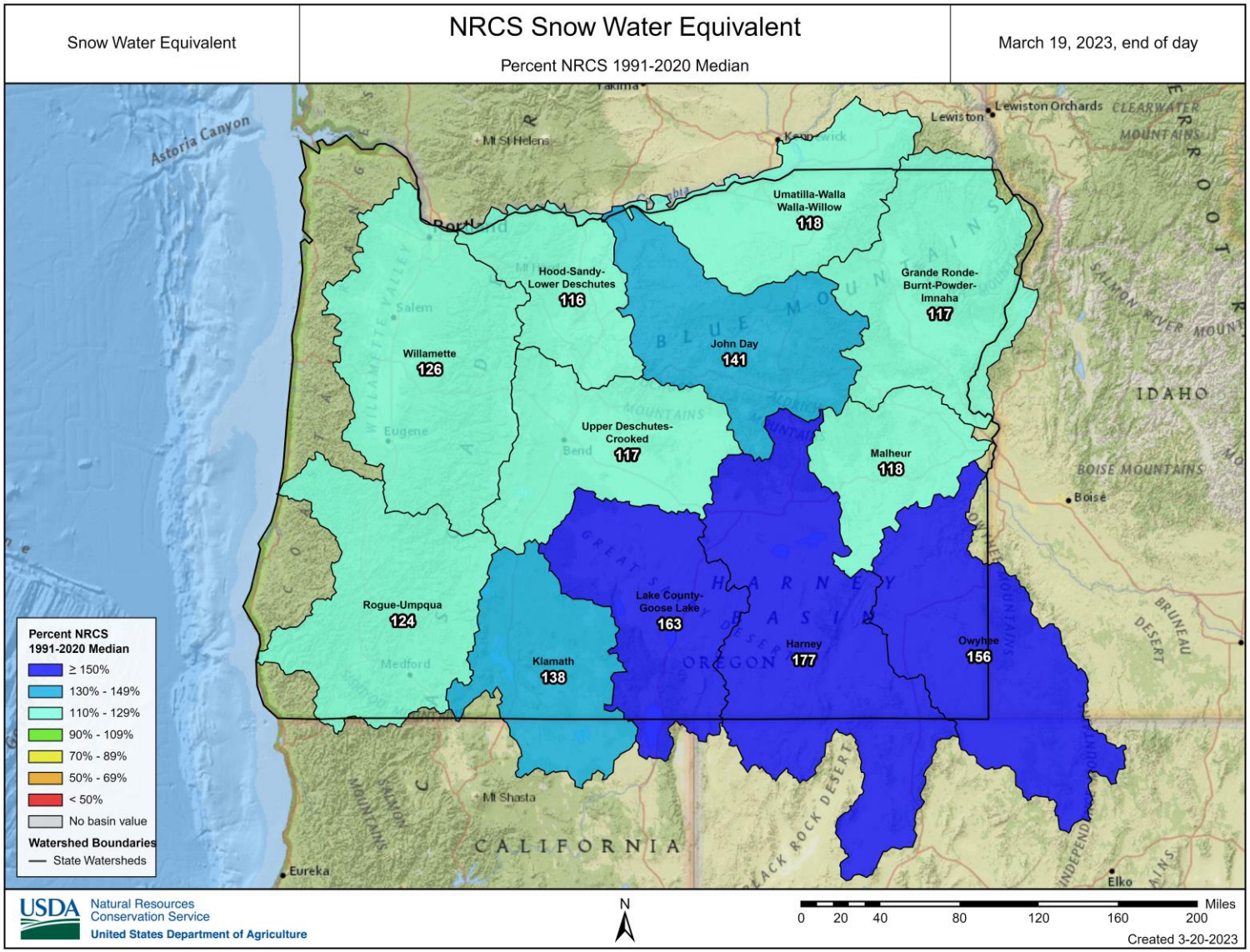
U.S. Department of Agriculture

droughtmonitor.unl.edu

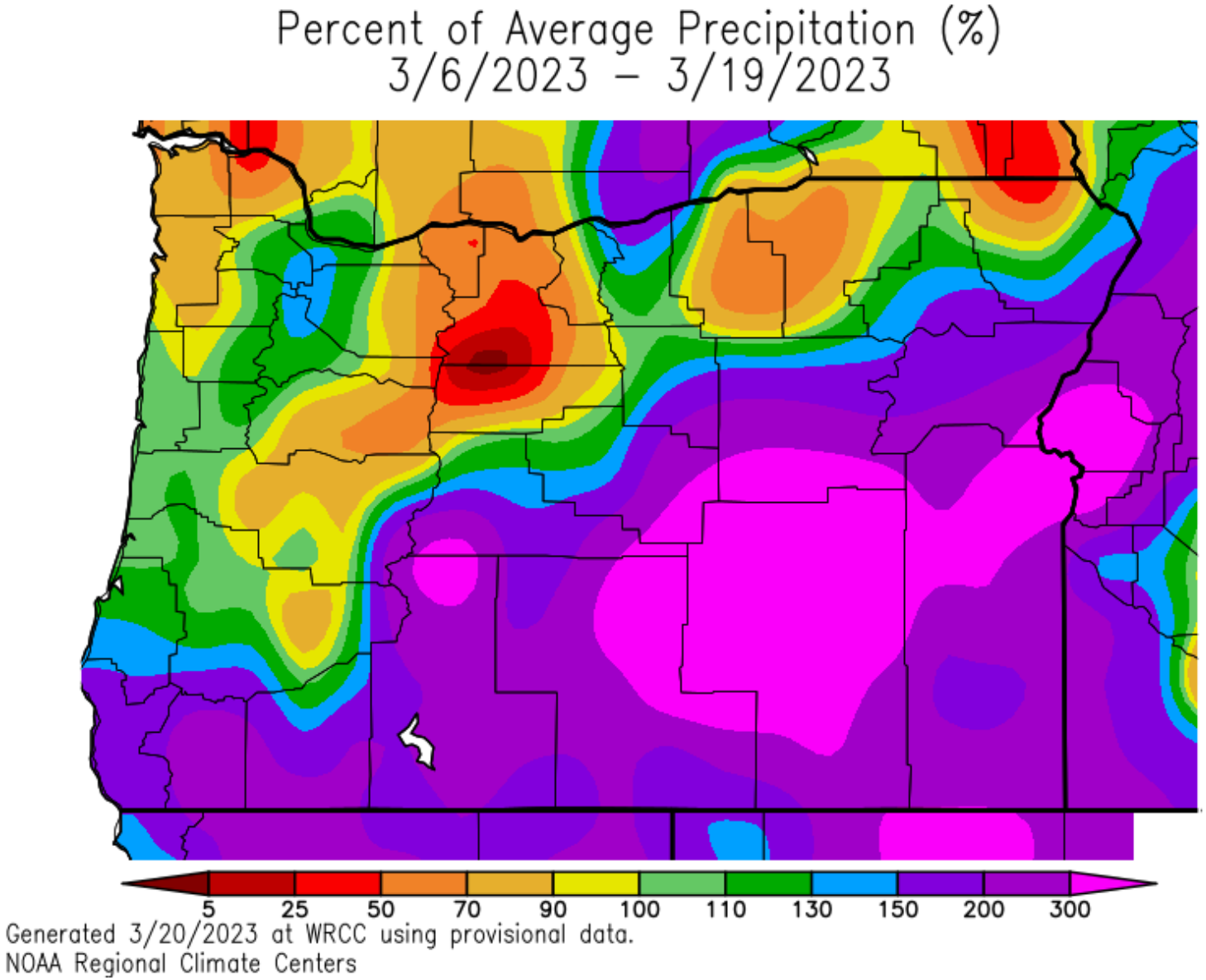


CLIMATE CONDITIONS

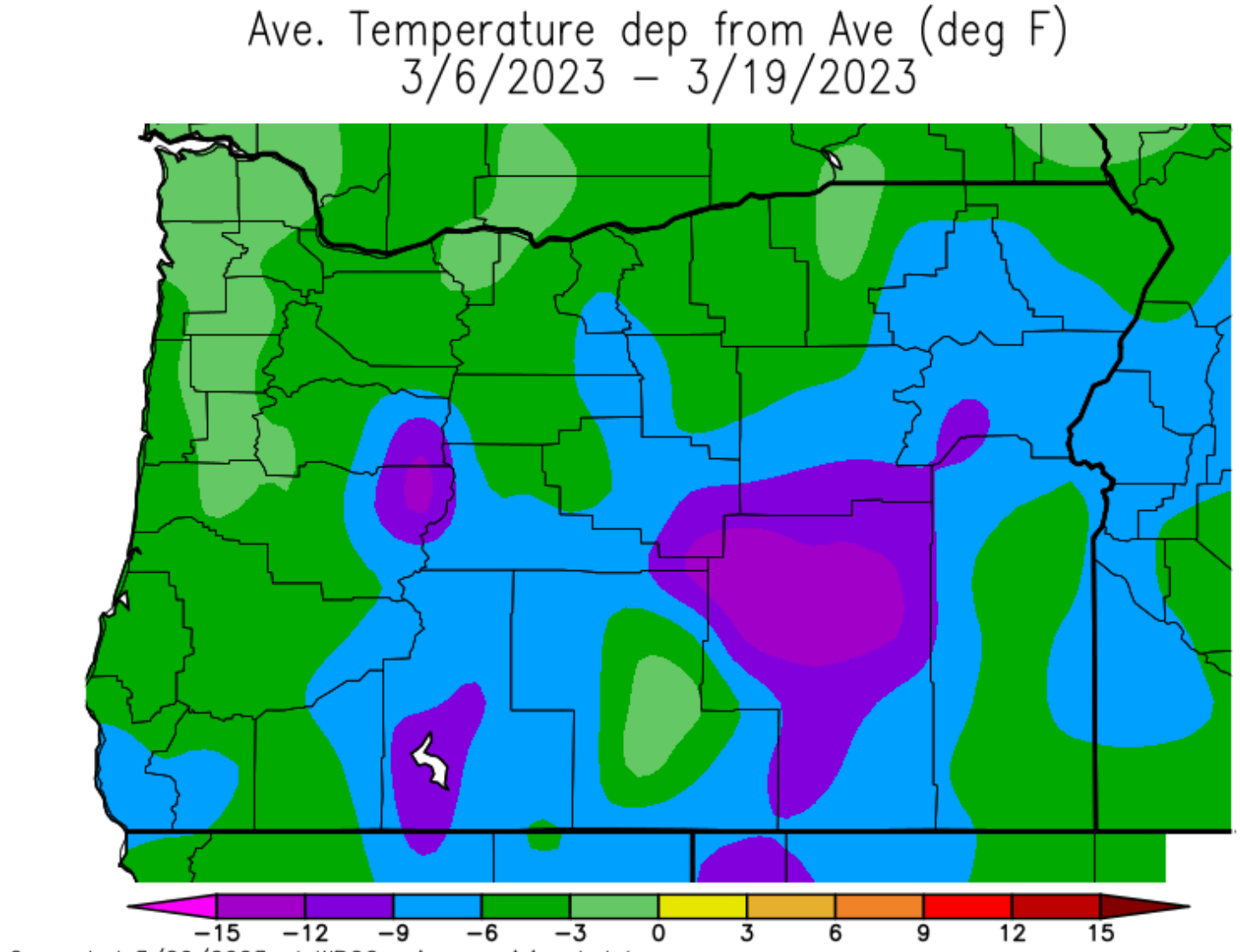
SNOW WATER EQUIVALENT



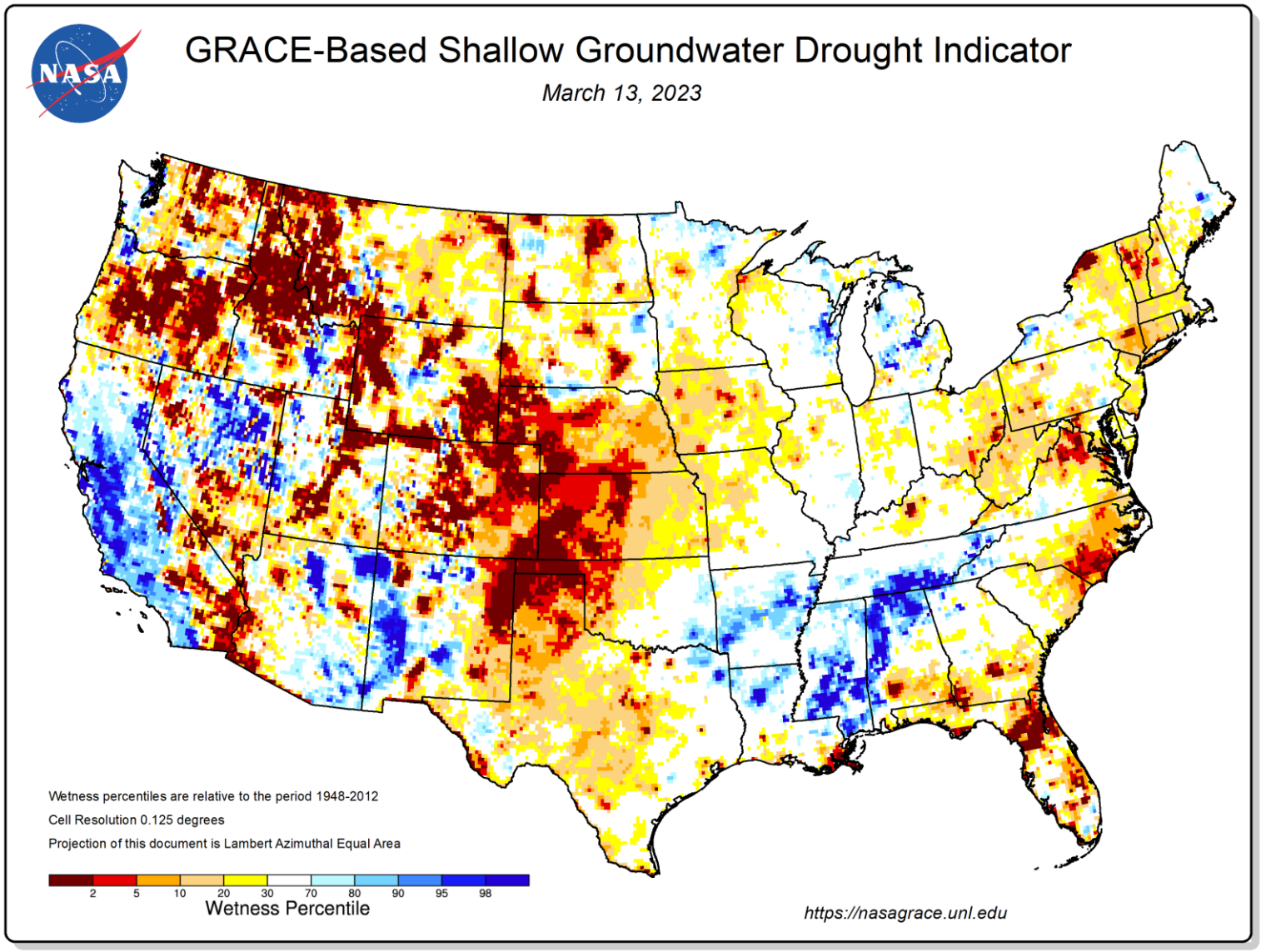
PRECIPITATION



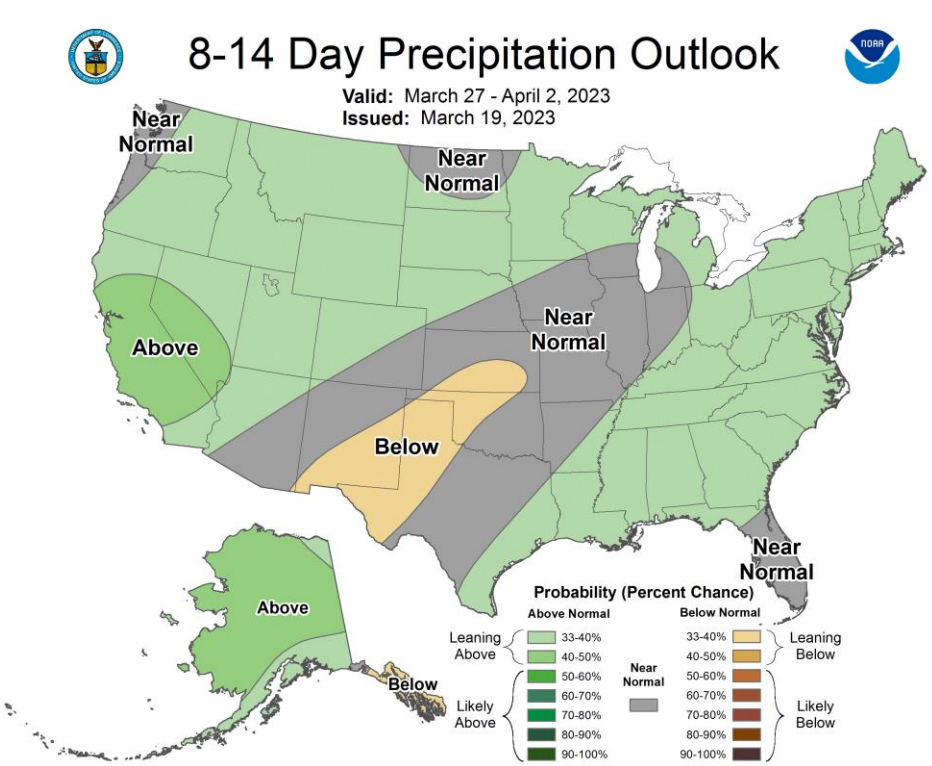
TEMPERATURE

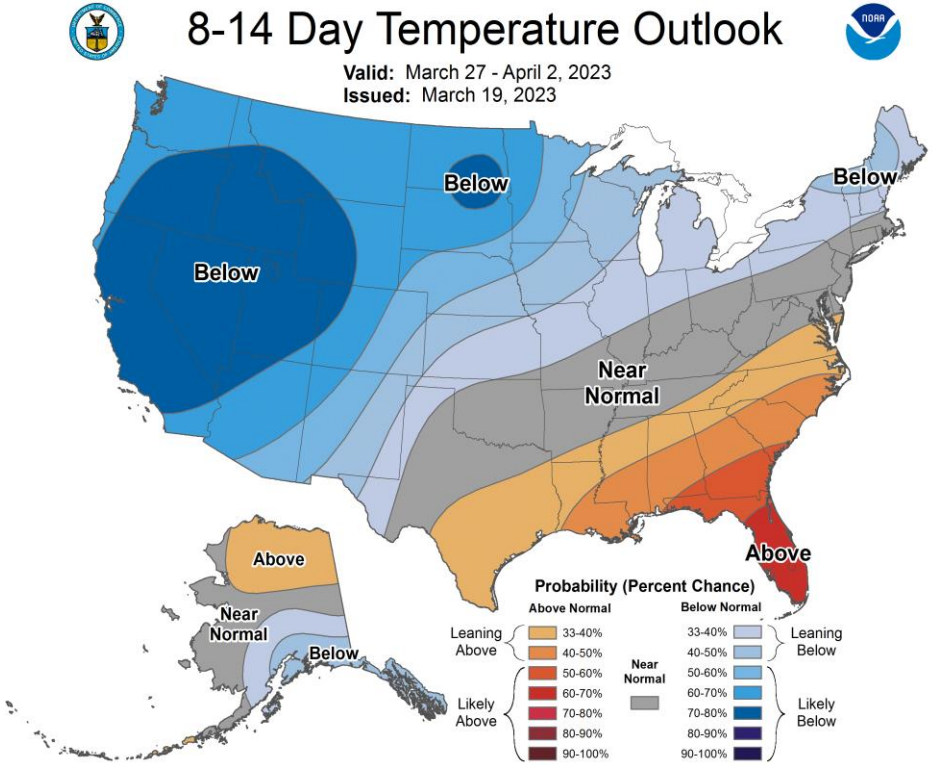


SOIL MOISTURE



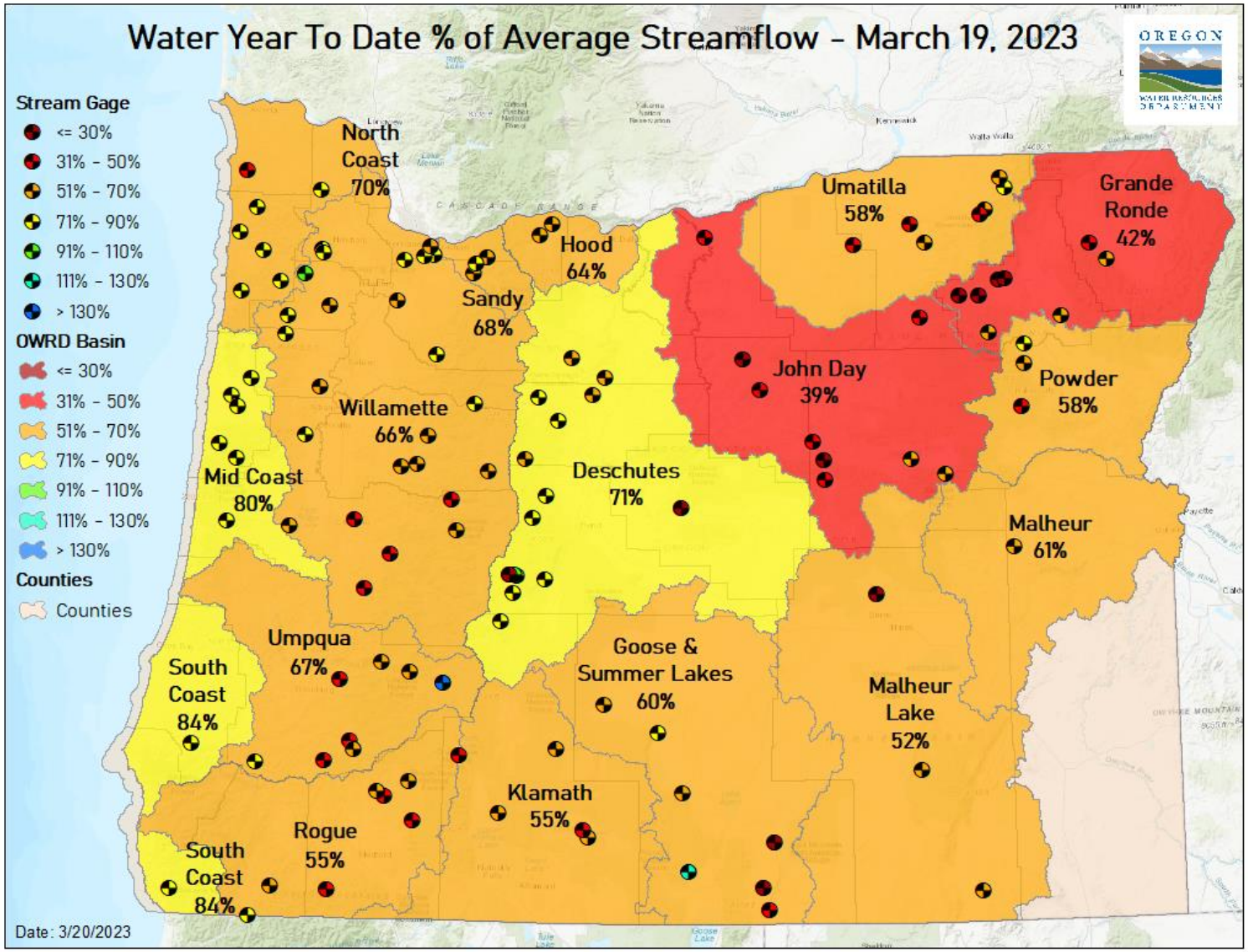
CLIMATE OUTLOOK



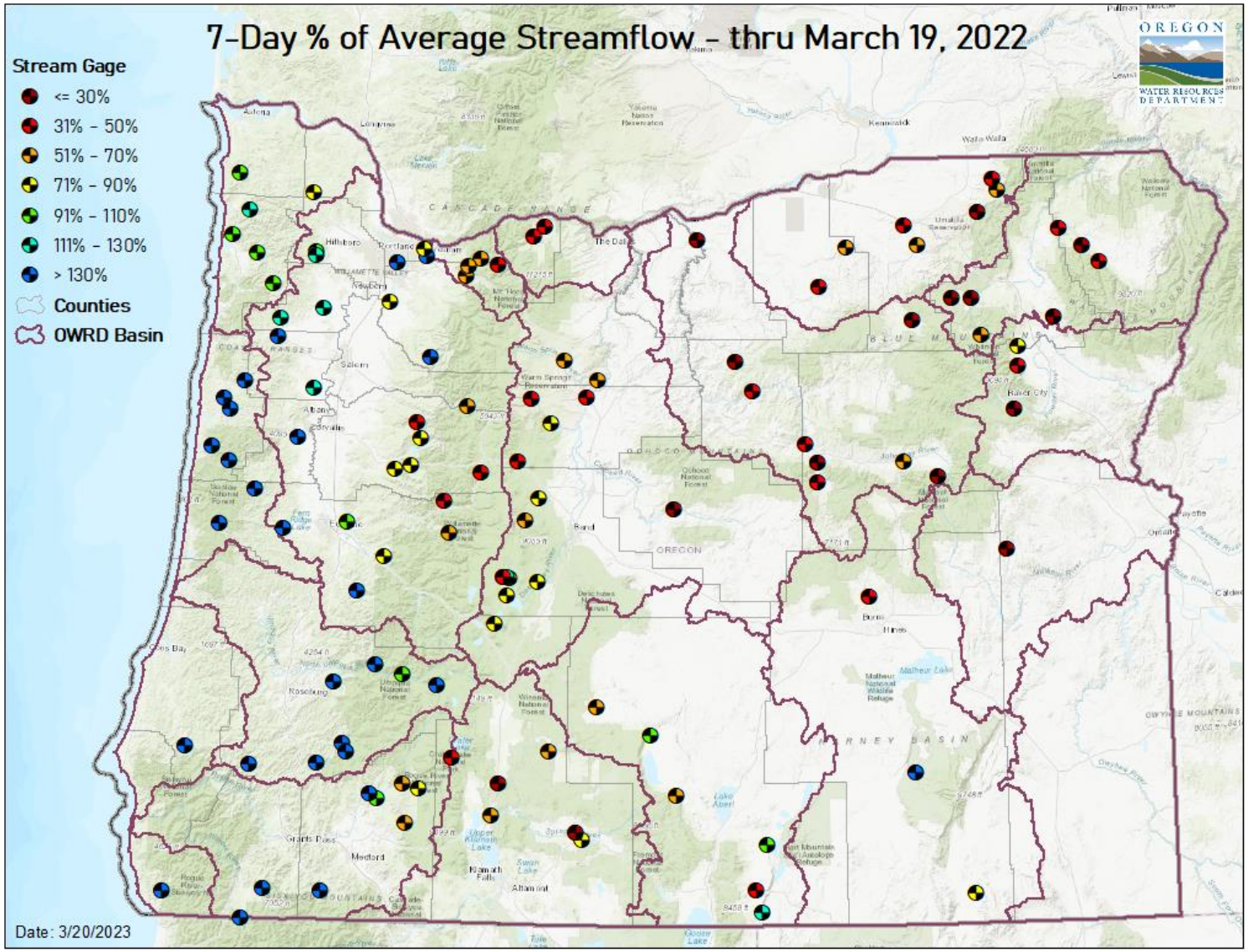


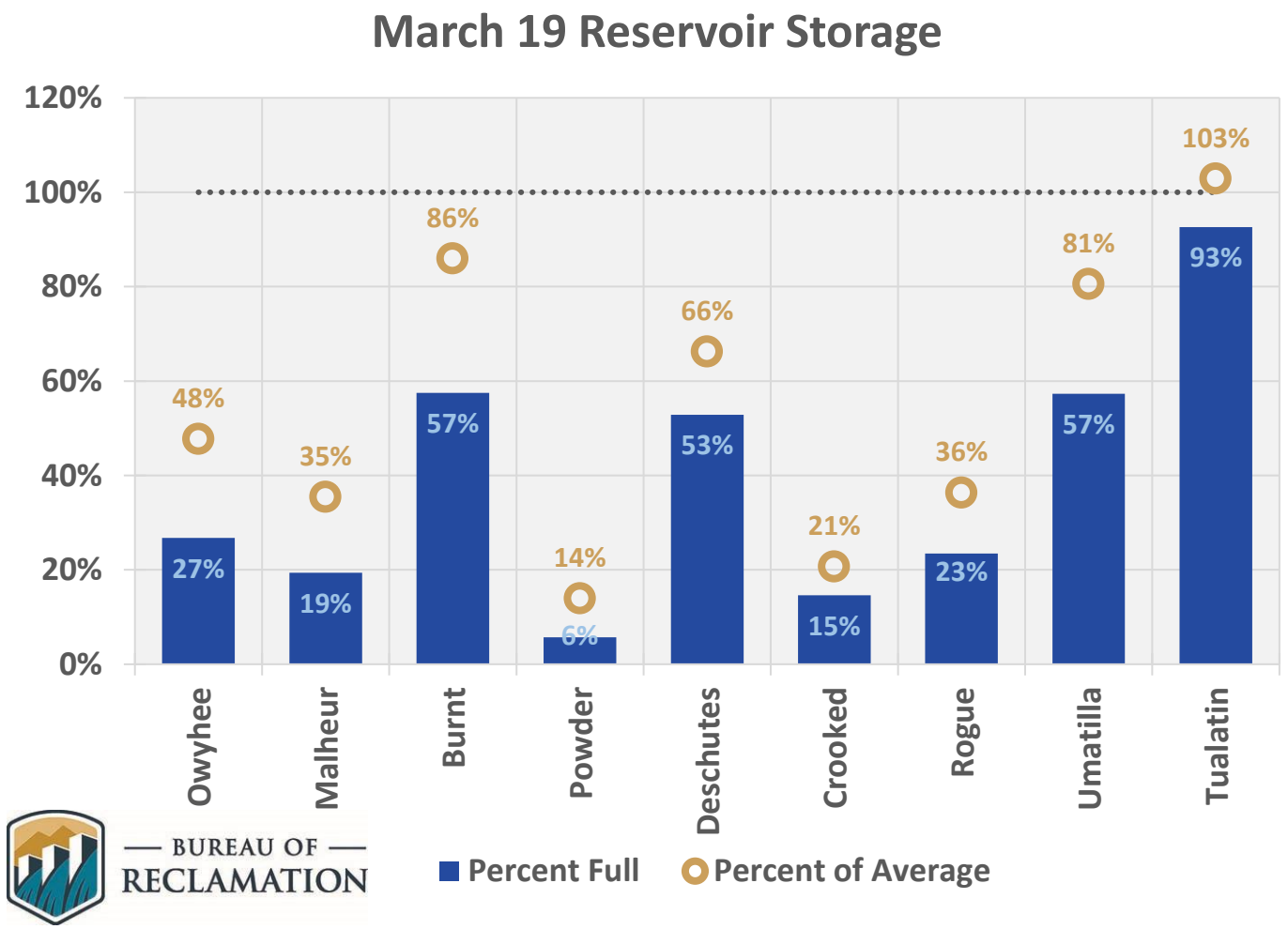
STREAMFLOW

WATER YEAR TO DATE



7-DAY


7-Day % of Average Streamflow - thru March 19, 2022
Stream Gage
<= 30%
31% - 50%
51% - 70%
71% - 90%
91% - 110%
111% - 130%
> 130%
Counties
OWRD Basin
Date: 3/20/2023
OREGON
WATER RESOURCES DEPARTMENT


March 19 Reservoir Storage
120%
100%
80%
60%
40%
20%
0%
48%
27%
35%
19%
86%
57%
14%
6%
66%
53%
21%
15%
36%
23%
81%
57%
103%
93%
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.