Oregon Water Conditions Report

December 28th, 2020

HIGHLIGHTS

Statewide water year precipitation at NRCS SNOTEL sites is measuring 87% of normal, indicating an improvement over the past two weeks. Basin values range from a low of 60% in the Owyhee and Lake County-Goose Lake Basins to a high of 102% in the Umatilla-Walla Walla-Willow and Hood-Sandy-Lower Deschutes Basins. Conditions generally decrease in southern basins as compared to northern basins.

Although overall precipitation has improved statewide, NRCS SNOTEL snow water equivalent (SWE) has decreased over recent weeks and is currently measuring 86% of the median statewide. Conditions are similar throughout much of the state, where nearly all basins are showing deficits of SWE, with the exception of the Harney Basin (108%).

Drought conditions show little change in recent weeks, according to the US Drought Monitor. Conditions have remained stable in recent weeks, with little reduction in coverages of D0 (abnormally dry), D1 (moderate drought), and D2 (severe drought) drought classifications. As indicated by NASA's shallow groundwater drought indicator, wetness profiles are measuring well below normal throughout much of the state.

Temperatures over the past two weeks have been above average statewide, with much of northern Oregon reaching temperatures between 4 – 10 °F above normal. Anomalies in southern Oregon were not as extreme; however, temperatures ranged from 0 – 8 °F above normal.

Two-week anomalies show clear east-west distinction in precipitation profiles. Much of Oregon west of Cascades received surplus deposits of precipitation, averaging between 0 – 3 inches. Nearly all of eastern Oregon experienced a deficit of precipitation ranging from 0 – 3 inches, with the exception of portions of the NE corner of the state.

Outlooks over the next 8 – 14 days indicate likelihood of near normal temperatures for much of the state, except for many areas along the Columbia River Gorge. Expect above normal precipitation for much of the western US.

The seasonal climate outlook has fluctuated slightly in recent weeks, such that the one-month and three-month outlooks both indicate increased probabilities of below normal temperatures and above normal precipitation for much of Oregon. Eastern Oregon can expect equal chances of above or below normal temperatures over the next month, however below normal temperatures are expected over the long term.

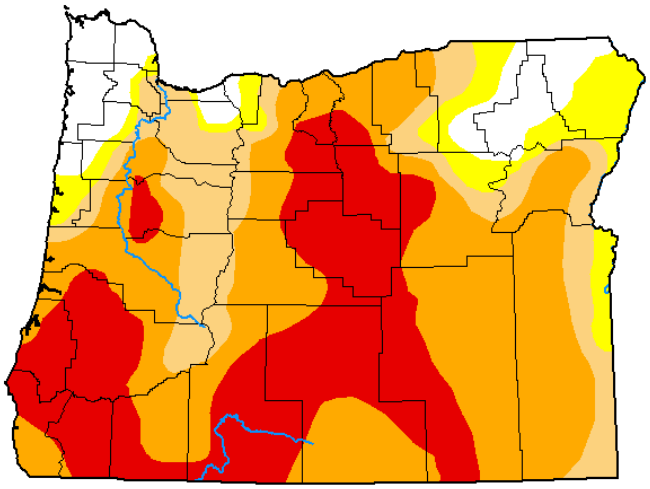
Recent 28-day and 7-day streamflows are indicative of recent precipitation events and the distinction in conditions between eastern and western Oregon. 28-day averages show improvement from the most recent Water Conditions report as a result of recent precipitation west of Cascades. The 7-day average streamflows are responding to recent rain events in the Willamette Valley and portions of the coast.

DROUGHT CONDITIONS

The US Drought Monitor remains largely unchanged from recent versions. Coverages of D0 (abnormally dry), D1 (moderate drought), and D2 (severe drought) have reduced slightly. Overall, just over 91% of the state is classified as experiencing some form of drought.

U.S. Drought Monitor

Oregon



December 22, 2020

(Released Thursday, Dec. 24, 2020)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	8.57	91.43	83.53	68.71	29.42	0.00
Last Week 12-15-2020	7.77	92.23	84.10	69.14	29.59	0.00
3 Months Ago 09-22-2020	4.98	95.02	83.86	67.32	34.70	0.00
Start of Calendar Year 12-31-2019	2.40	97.60	24.46	0.00	0.00	0.00
Start of Water Year 09-29-2020	6.50	93.50	84.77	65.53	33.59	0.00
One Year Ago 12-24-2019	2.40	97.60	24.46	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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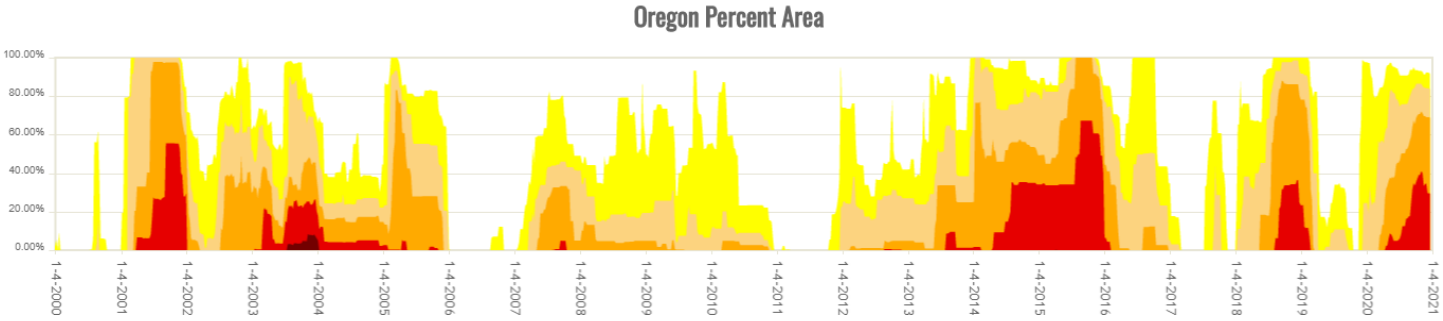
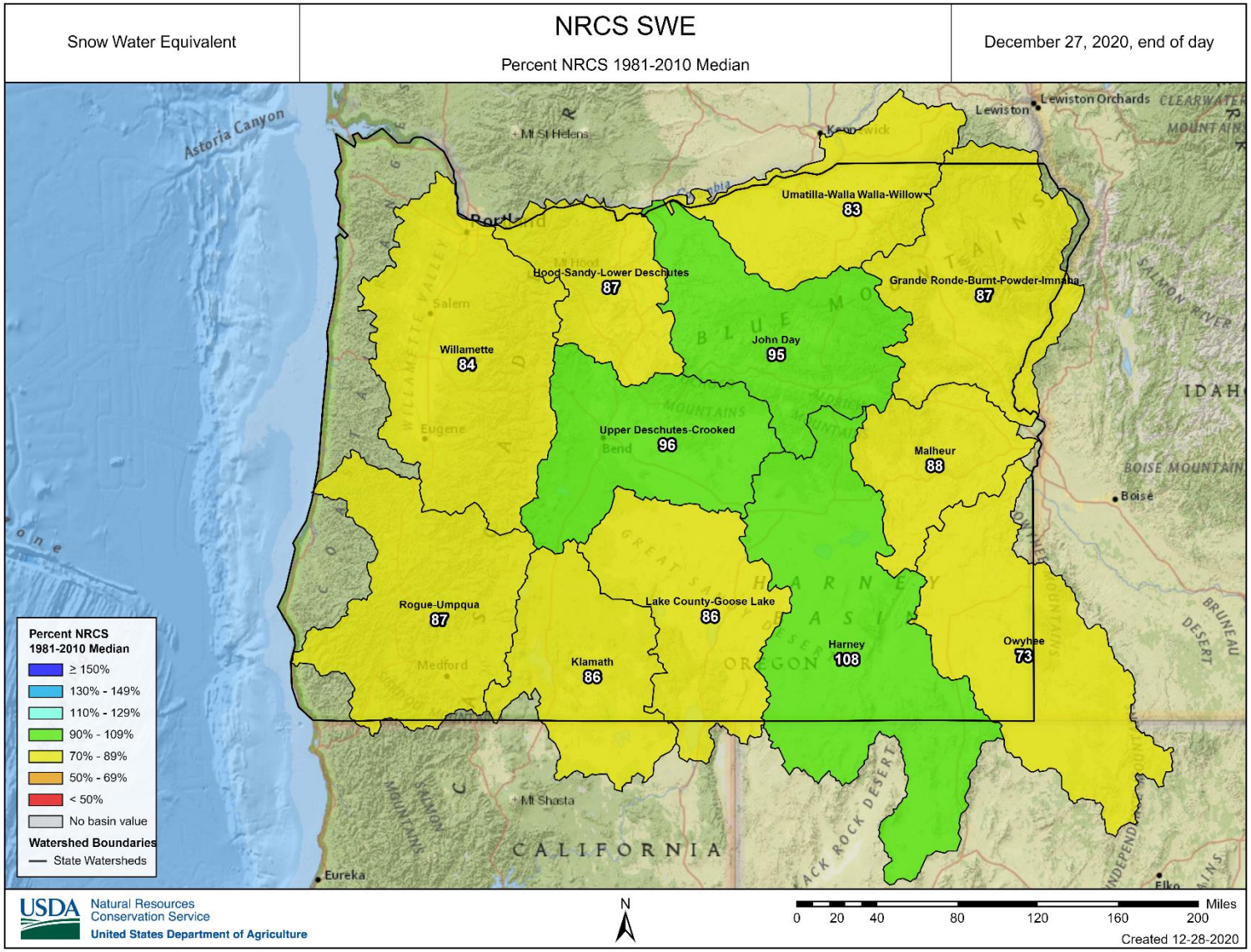
NOAA/NWS/NCEP/CPC

droughtmonitor.unl.edu

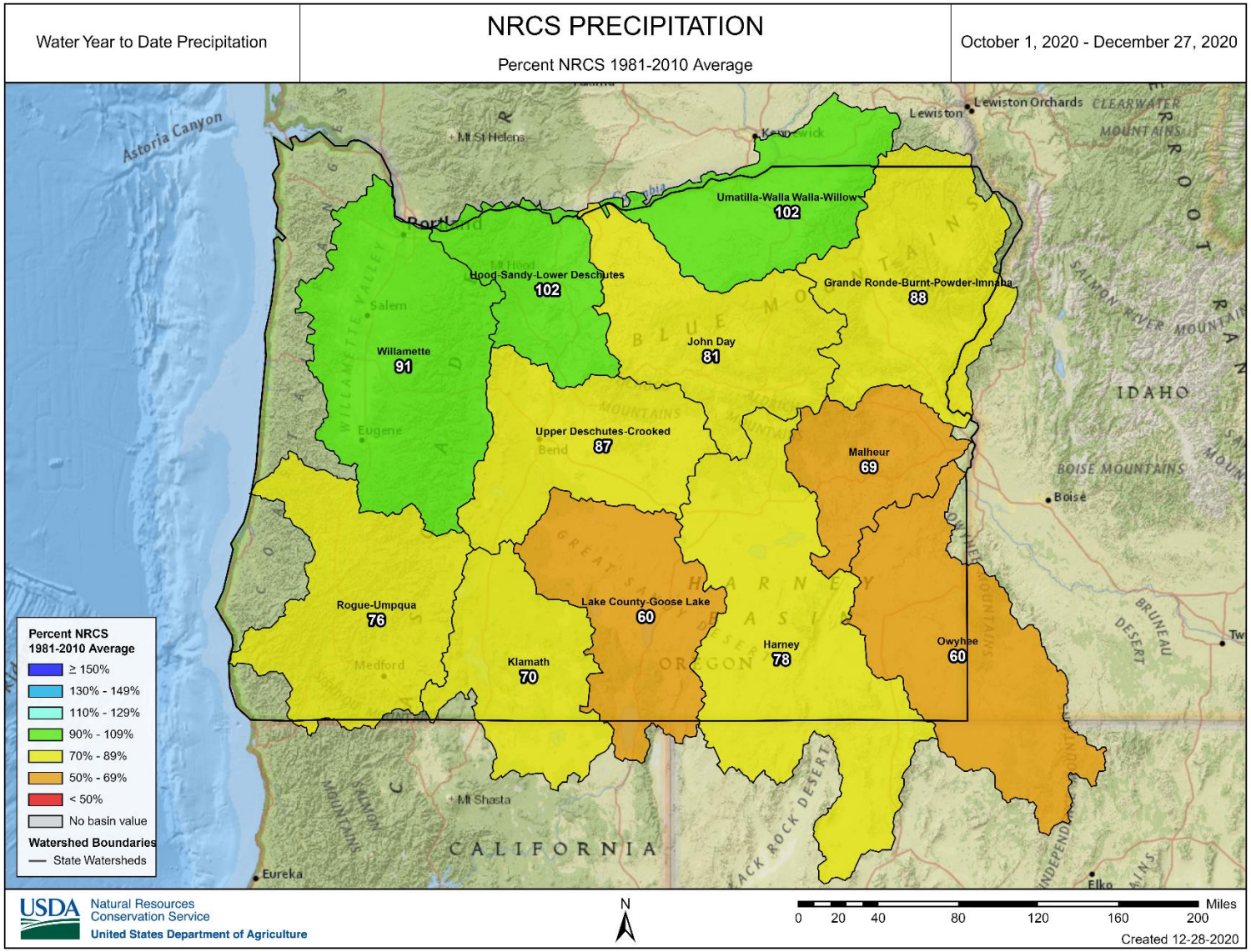


CLIMATE CONDITIONS

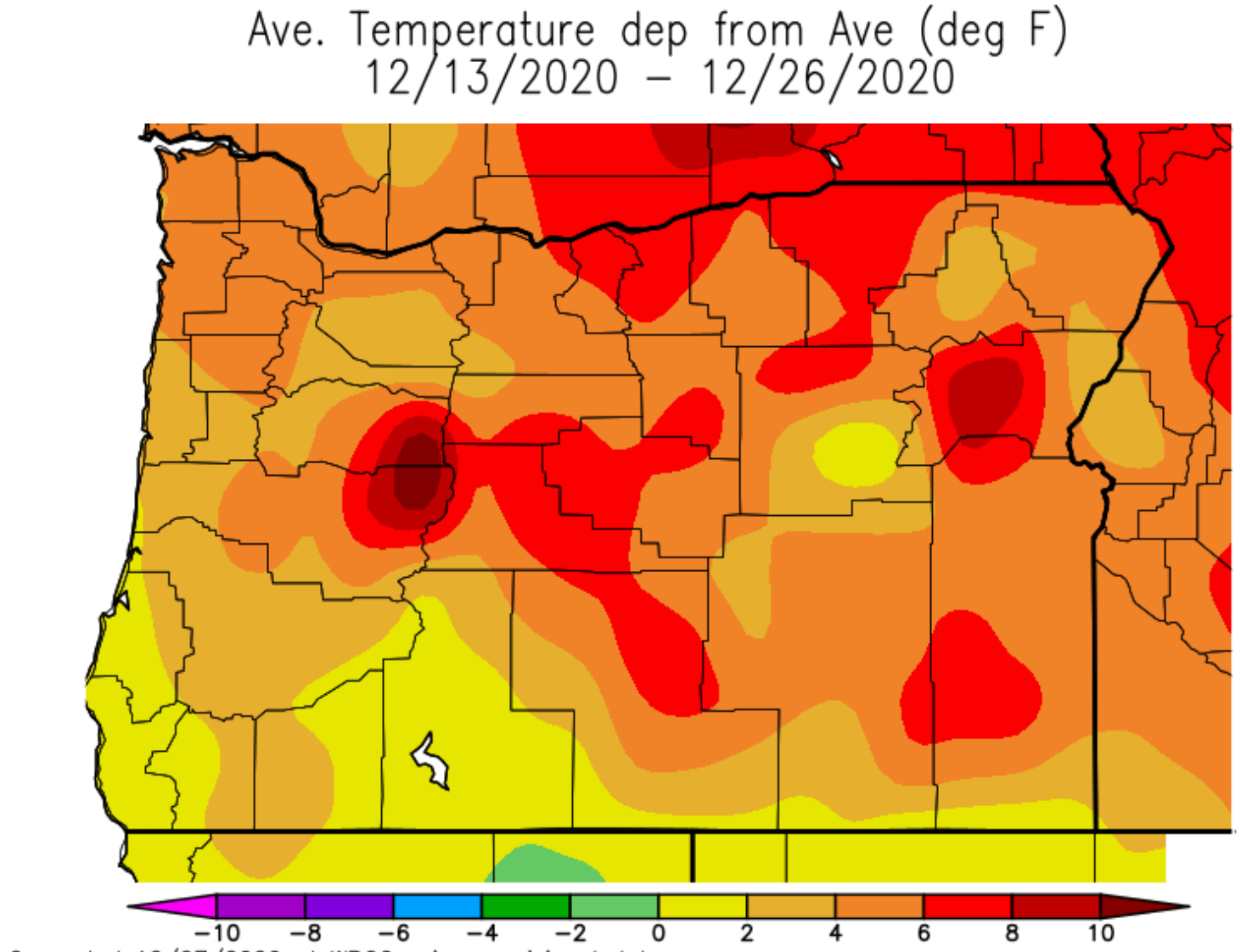
SNOW WATER EQUIVALENT



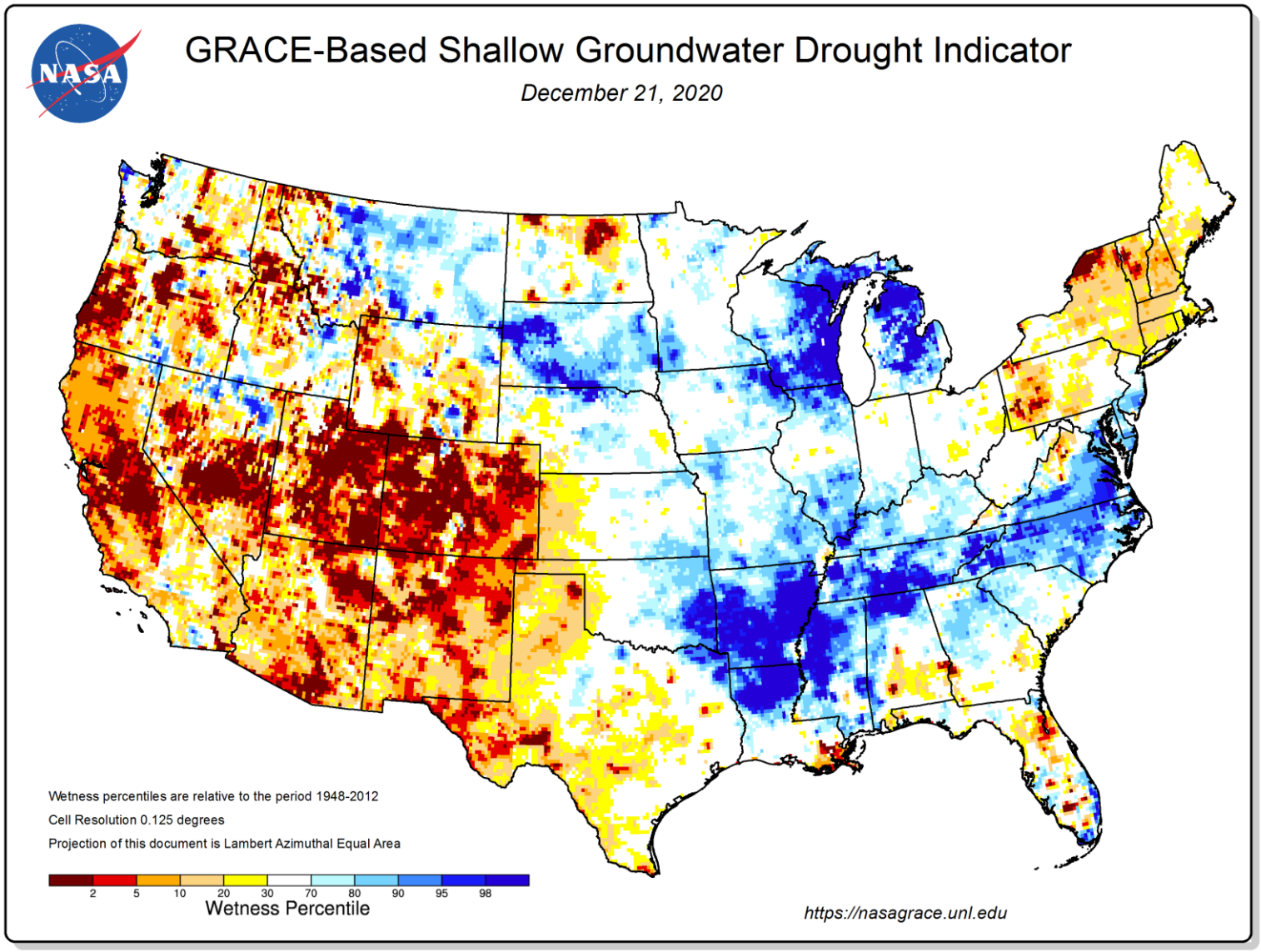
PRECIPITATION



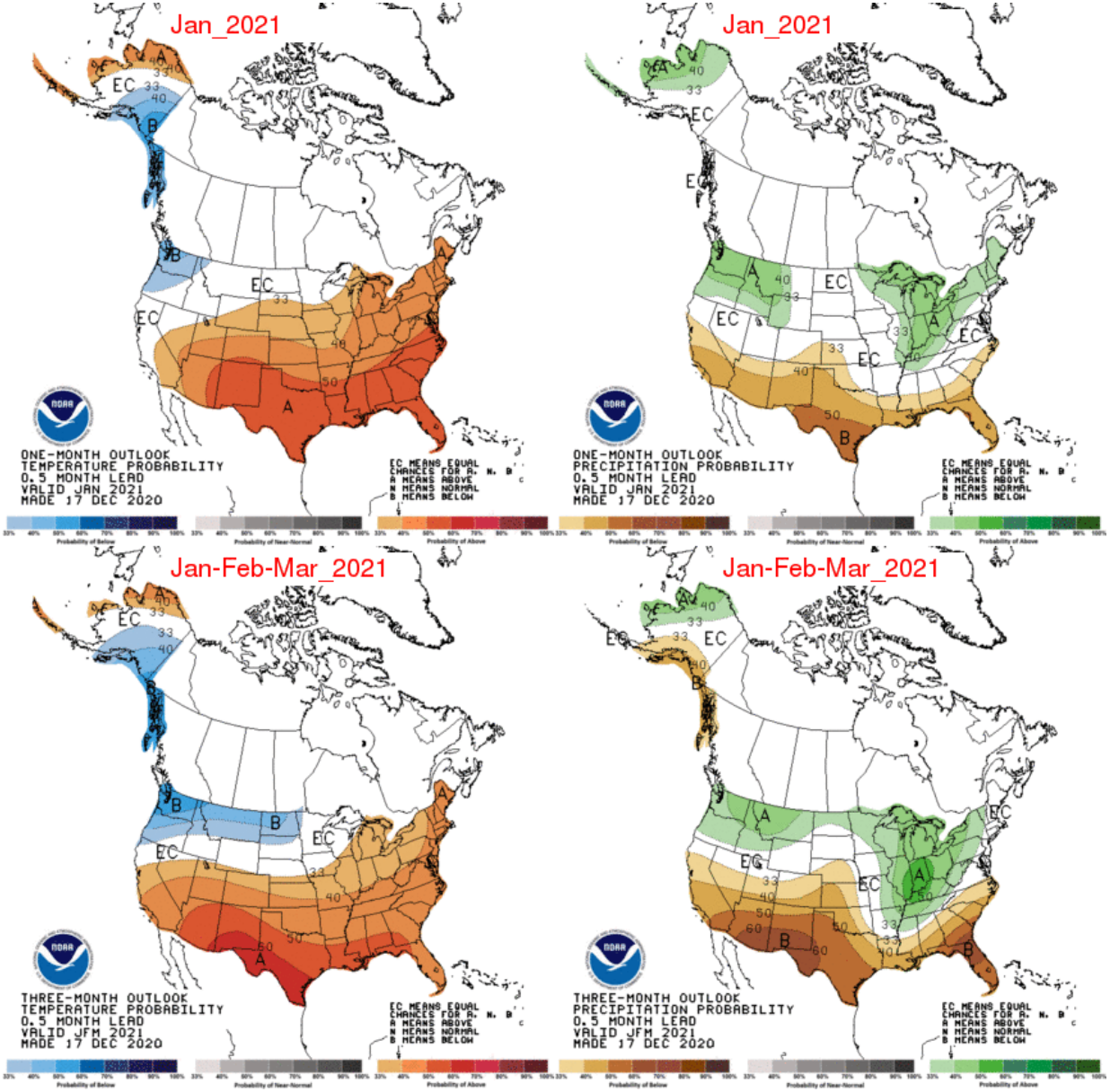
TEMPERATURE



SOIL MOISTURE

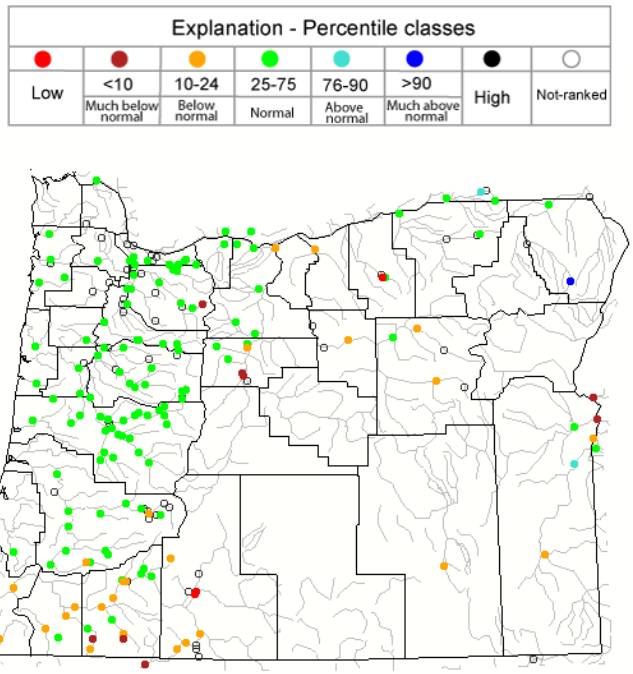


CLIMATE OUTLOOK



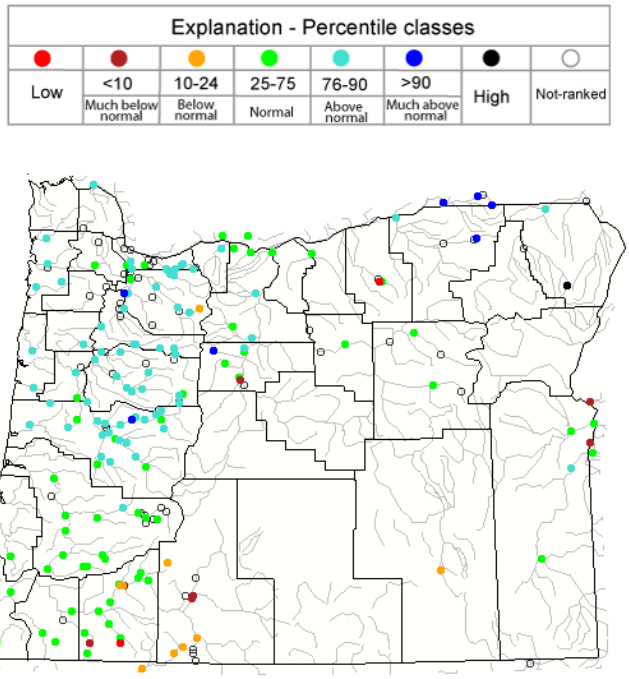
STREAMFLOW

Map of 28-day average streamflow compared to historical streamflow for the day of the year (Oregon)



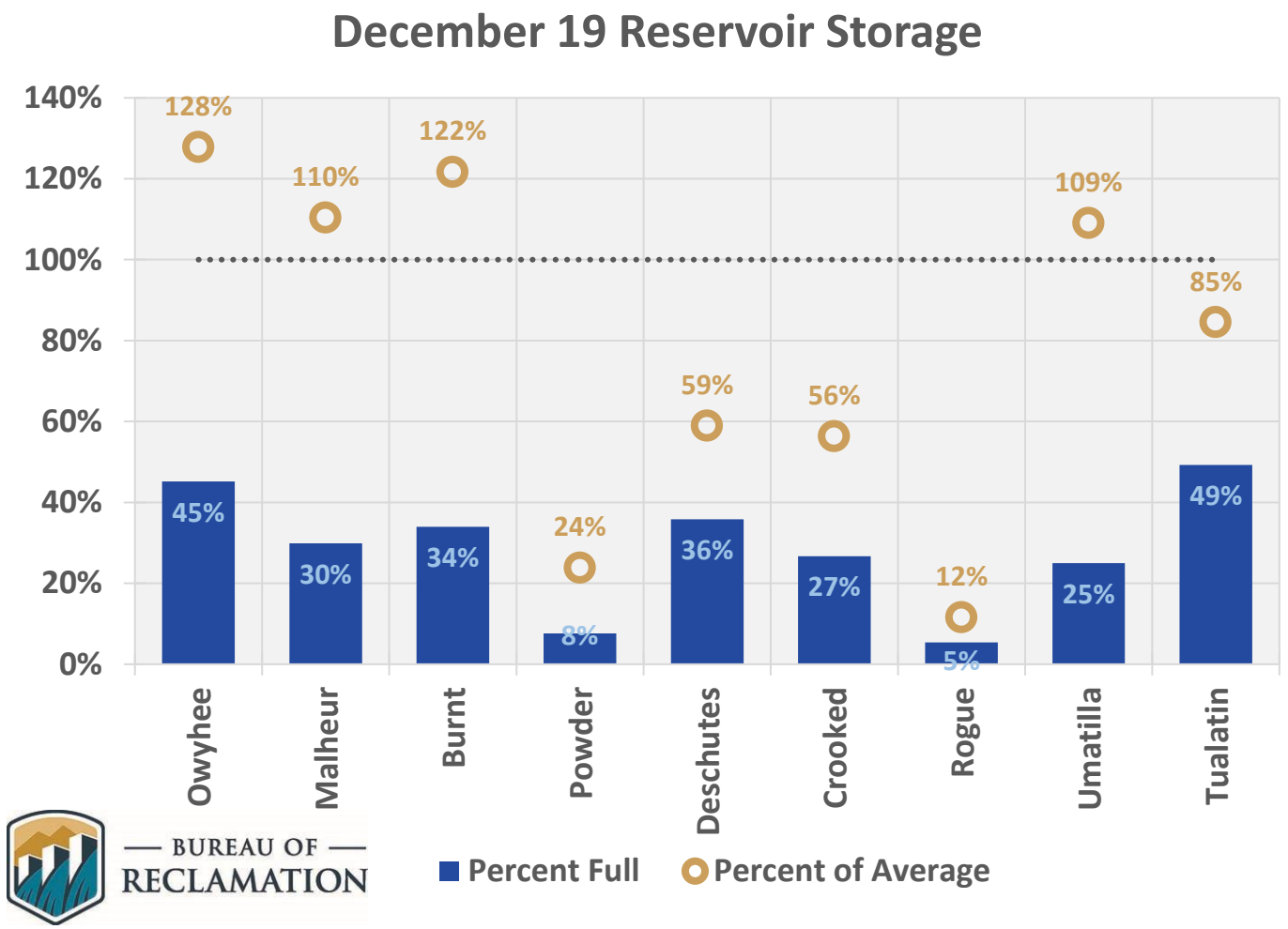
USGS

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



USGS

STORAGE


December 19 Reservoir Storage
140%
120%
100%
80%
60%
40%
20%
0%
128%
110%
122%
109%
85%
59%
56%
24%
12%
45%
30%
34%
8%
36%
27%
5%
25%
49%
Owyhee
Malheur
Burnt
Powder
Deschutes
Crooked
Rogue
Umatilla
Tualatin
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.