Oregon Water Conditions Report

June 1st, 2021

HIGHLIGHTS

Thus far in 2021, 16 counties have submitted local drought declarations in Oregon, with 8 receiving Executive Orders issuing a state of drought emergency.

Little snowpack remains throughout Oregon, where only the Hood-Sandy-Lower Deschutes, Rogue-Umpqua, Upper Deschutes-Crooked, and Willamette Basins have measurable snow water equivalent at NRCS SNOTEL sites.

Precipitation is measuring 83% of the long-term average at NRCS SNOTEL sites statewide. All basins are measuring below average, with Hood-Sandy-Lower Deschutes (95%) and Umatilla-Walla Walla-Willow (92%) near normal and trending downwards towards the south.

May precipitation was well below average for much of the state, with some areas receiving 3" less than the long-term average.

Temperatures over the past month were variable throughout the state. Much of eastern Oregon experienced temperatures 0 – 2 °F below average, however, some localized pockets of above average temperatures were evident. Western Oregon experienced above average temperatures in much of the valley, with cooler temperatures prevailing along the mid and south coast.

Soil moisture profiles are significantly poor in western Oregon and many areas in eastern Oregon. Winter wheat, pasture, and range conditions are suffering from drought stress throughout Oregon.

May streamflows suffered from severe precipitation deficits from previous months such that streamflow averaged just 48% statewide for the month. Although streamflows appeared near average in Jefferson County, streamflows in the eastern portion of the county were reportedly low.

Recent precipitation at the end of May benefitted streamflows which were previously at or near historic lows. 7-day average streamflows still remain well below normal in western Oregon.

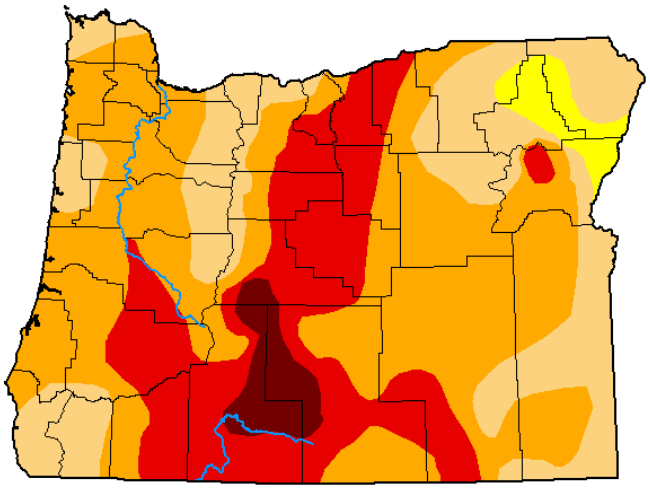
The 8 – 14 day climate outlook indicates probabilities favoring below-average temperatures statewide, with likelihood of precipitation varying regionally. There is potential for above-average precipitation for the northwestern quadrant, while below-average precipitation is probable in eastern Oregon.

DROUGHT CONDITIONS

The US Drought Monitor indicates 100% of the state is experiencing some form of drought conditions. Changes over recent weeks include expansion of D3 (extreme drought) coverage in Gilliam and Morrow Counties due to poor soil moisture conditions. Additionally, coverage of D1 (moderate drought) conditions has expanded in the northeastern corner of the state due to precipitation deficits at lower elevations.

U.S. Drought Monitor

Oregon



May 25, 2021

(Released Thursday, May. 27, 2021)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	97.08	72.03	27.36	3.57
Last Week 05-18-2021	0.00	100.00	92.66	71.73	26.09	3.57
3 Months Ago 02-23-2021	12.69	87.31	71.82	51.11	14.34	0.00
Start of Calendar Year 12-29-2020	8.57	91.43	83.53	68.71	27.74	0.00
Start of Water Year 09-29-2020	6.50	93.50	84.77	65.53	33.59	0.00
One Year Ago 05-26-2020	4.33	95.67	82.31	38.08	7.00	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:

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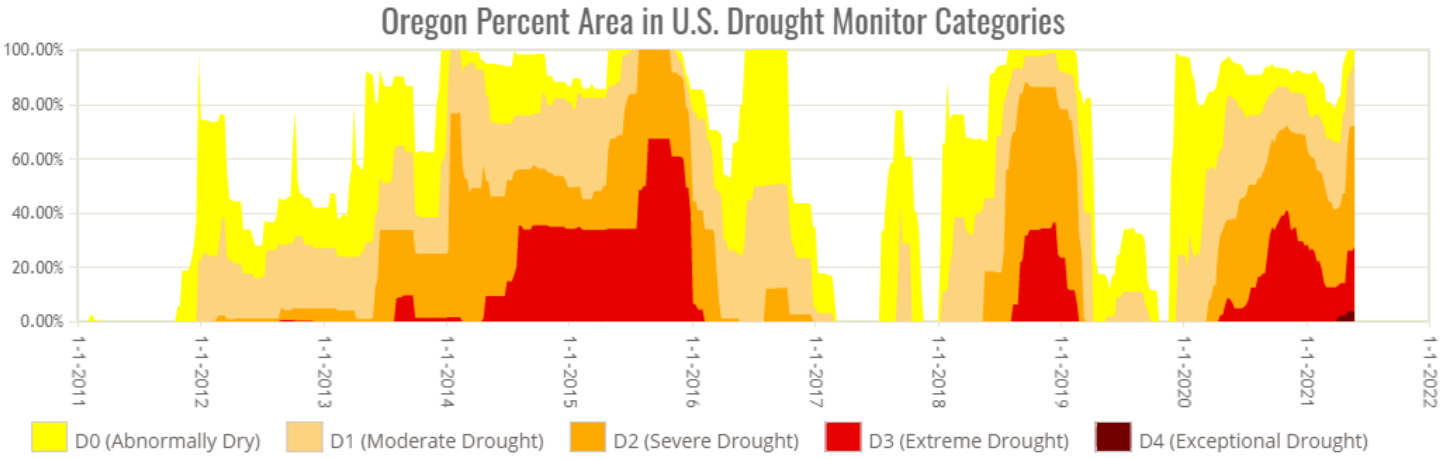
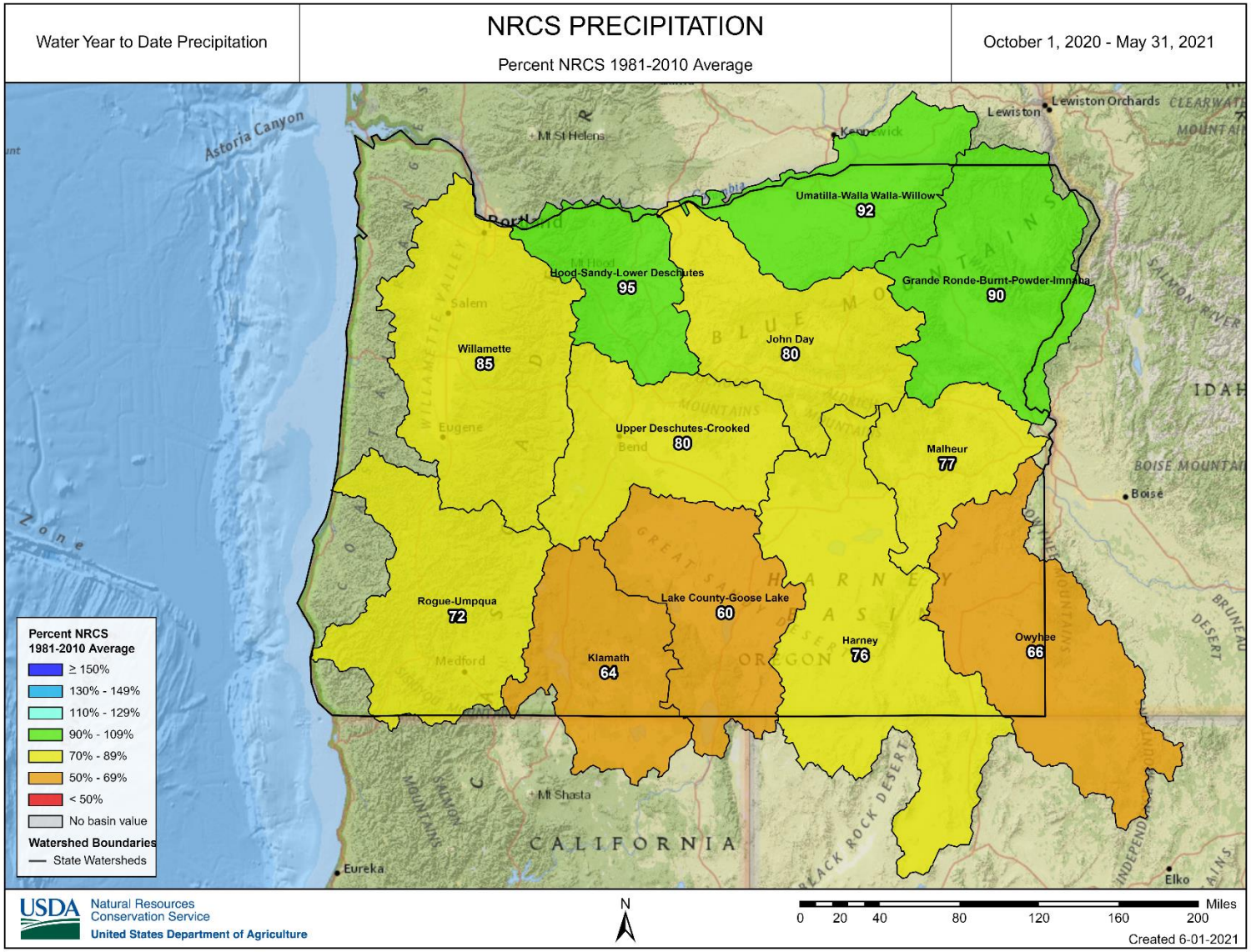
NOAA/NWS/NCEP/CPC

droughtmonitor.unl.edu

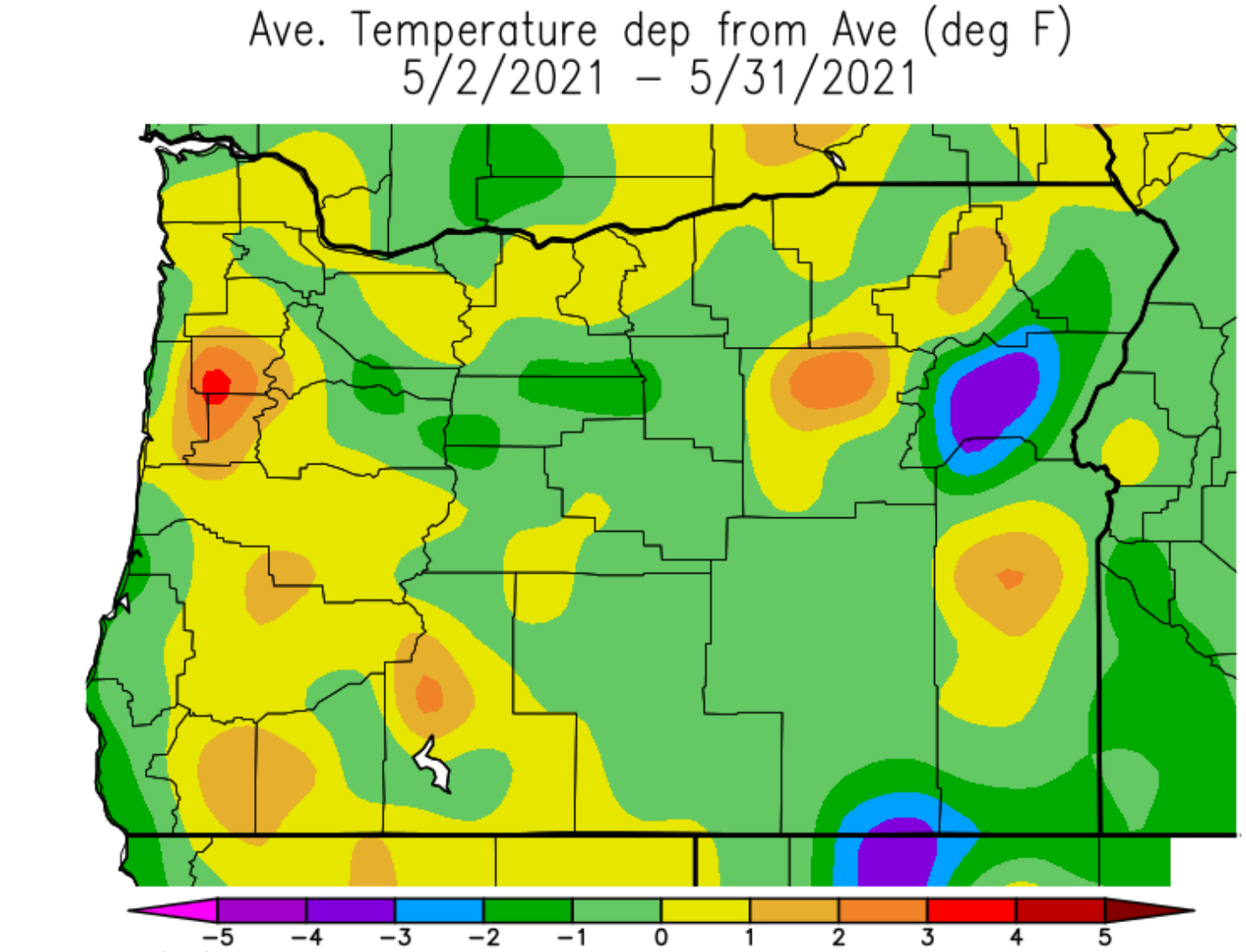


CLIMATE CONDITIONS

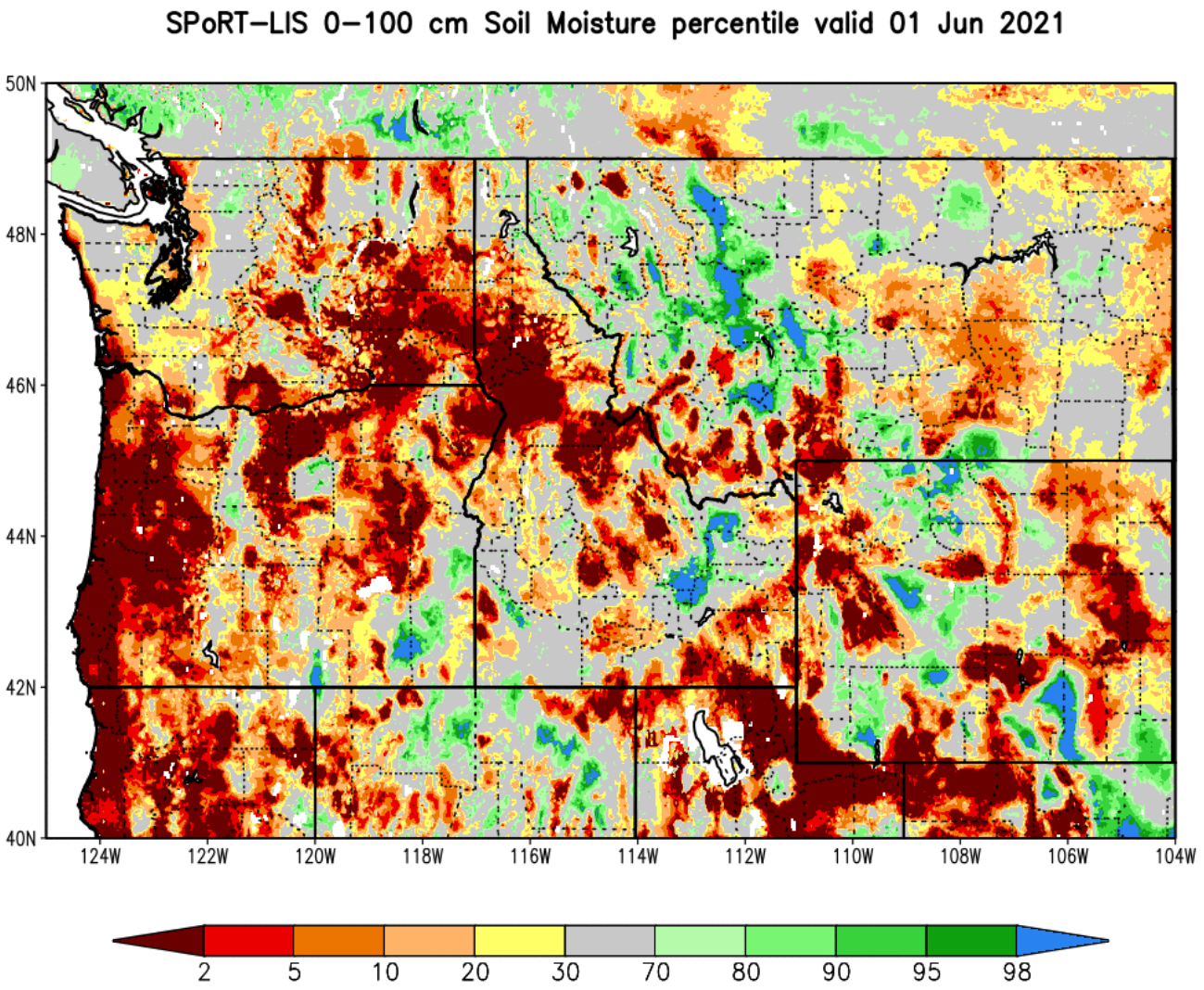
PRECIPITATION



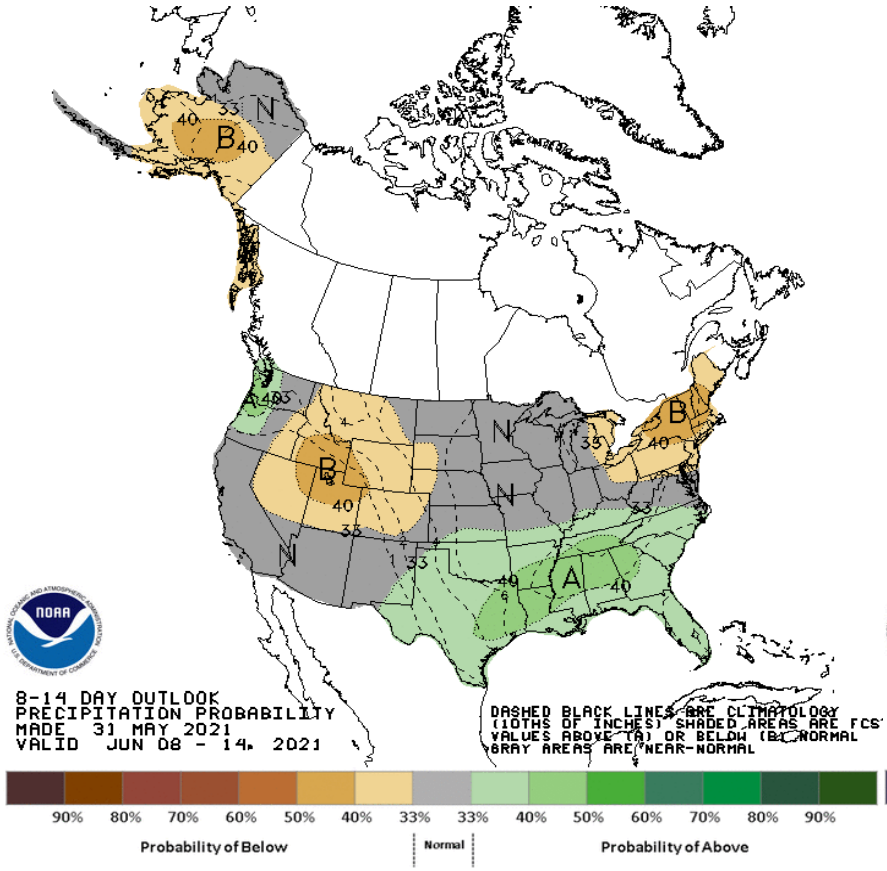
TEMPERATURE

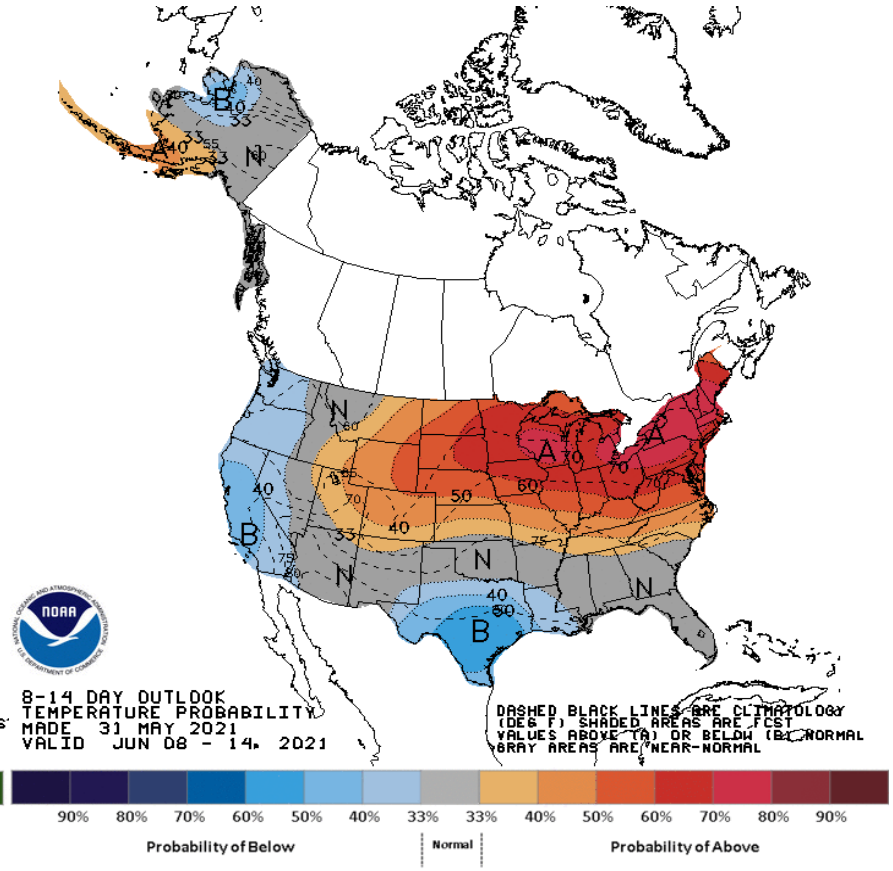


SOIL MOISTURE



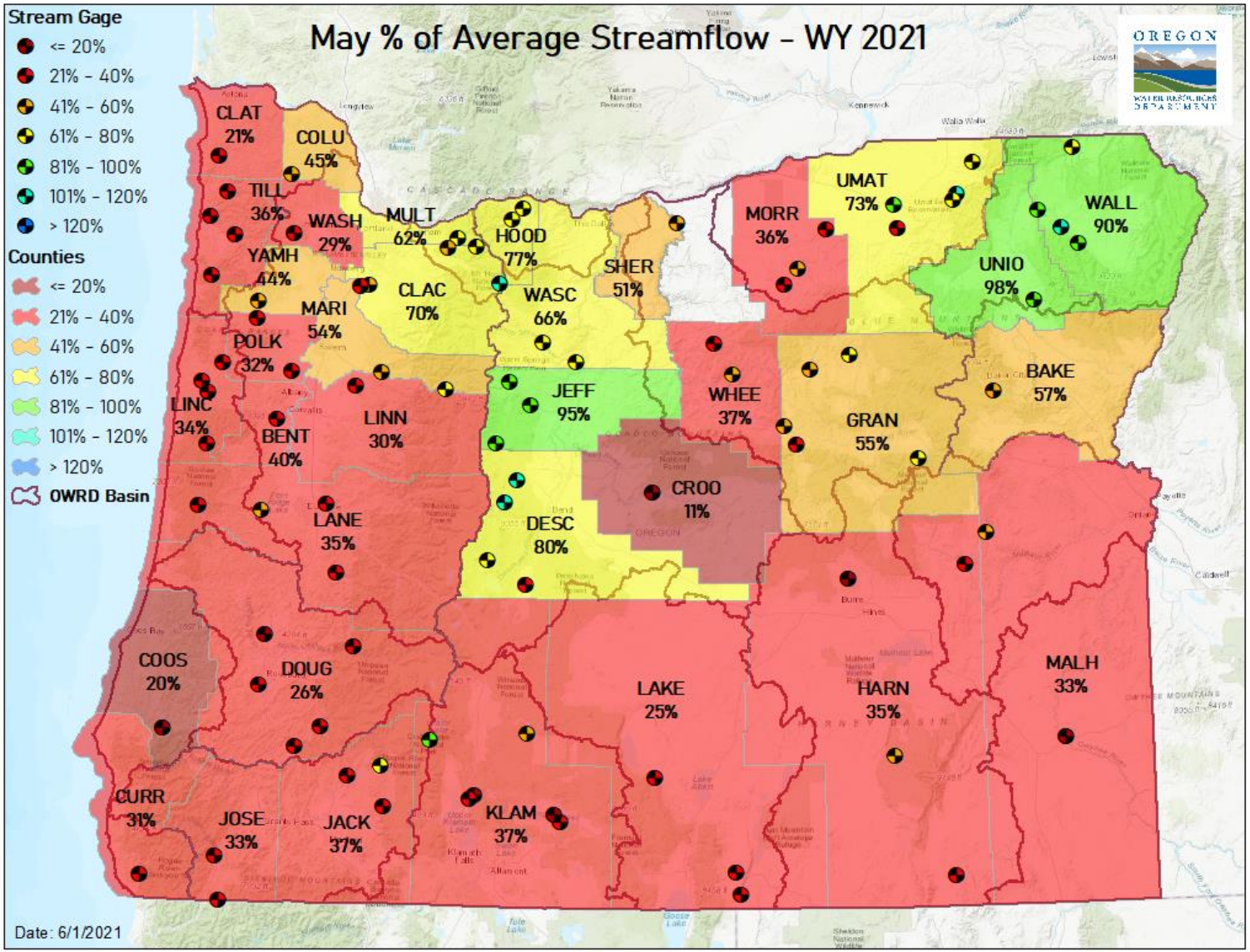
CLIMATE OUTLOOK
8-14 DAYS





STREAMFLOW

MAY

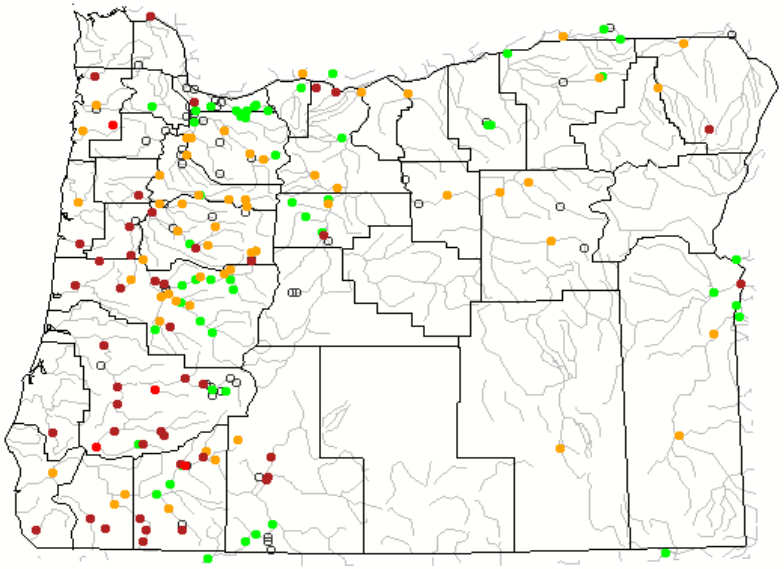


7-DAY

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

Oregon ▾ or Water-Resources Regions ▾ All Days

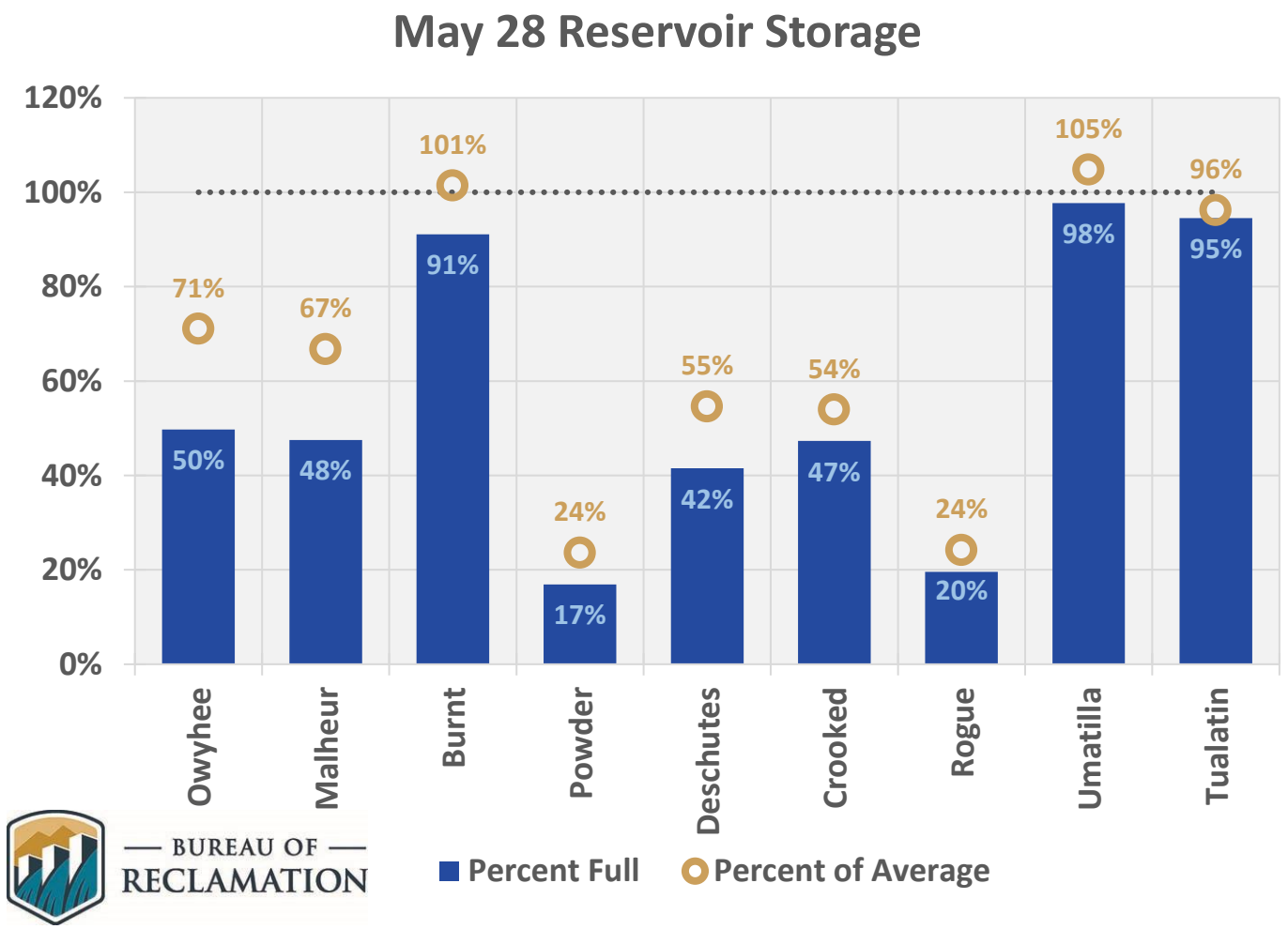
Monday, May 31, 2021



USGS

Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

STORAGE


May 28 Reservoir Storage
120%
100%
80%
60%
40%
20%
0%
71%
67%
101%
24%
55%
54%
24%
105%
96%
50%
48%
91%
17%
42%
47%
20%
98%
95%
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.