Oregon Water Conditions Report

April 19th, 2021

HIGHLIGHTS

To date, local drought disasters have been declared in three Oregon counties: Klamath, Jackson, and Lake. Executive Orders have been issued for both Klamath (March 31) and Jackson (April 13) Counties.

Reservoir storage contents are below normal for both USBR and USACE projects throughout Oregon, with exception of projects in the Tualatin, Umatilla, and Burnt basins. Current conditions are impacting management operations such as timing of releases and meeting minimum flow requirements.

Statewide snowpack is currently measuring 98% of the long-term median. Snowpack in all basins is melting out at a rate greater than what has been observed compared to the historic median, potentially leading to melt-out occurring earlier than usual.

NRCS SNOTEL precipitation is currently measuring 87% of the long-term average. Precipitation over the past two weeks has been well below average statewide (see below), where much of Oregon received little to no measurable precipitation.

Temperatures over recent weeks have been variable, where much of the northern half of Oregon experienced temperatures cooler than average. Portions of Klamath and Lane Counties experienced elevated temperatures of 4°F - 5°F above average.

Low soil moisture profiles throughout much of Oregon have exacerbated drought conditions. Several counties including Klamath, Lake, and Baker have notably low soil moisture conditions.

Streamflows over the past 28-day period have measured below normal throughout much of the state. With the exception of northeastern Oregon, many streams are experiencing below to well below normal streamflows. Several streams are measuring the lowest 28-day streamflows on record for April 18th. Many counties in southwestern and eastern Oregon are measuring well below average streamflows over the water year to date (see below).

Near-term climate outlooks for the next 8 – 14 days indicate probabilities favoring above average temperatures and precipitation throughout Oregon.

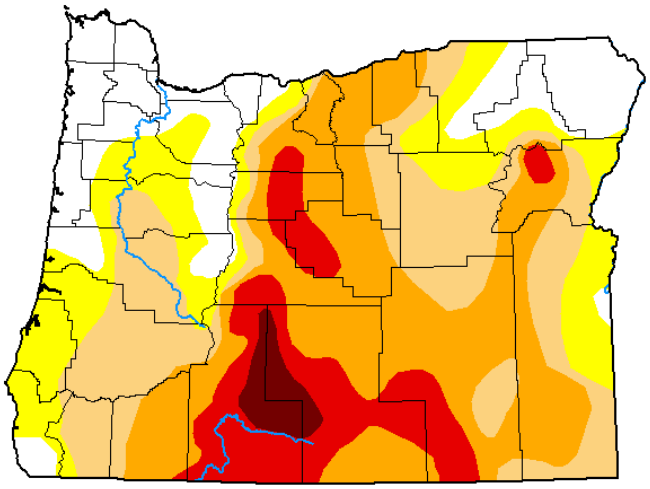
There is minimal fire potential over the next 7 days throughout much of Oregon, with exception of northeastern Oregon and southeastern Washington. The potential for fire elevates to above normal in the central corridor of Oregon in June and beyond.

DROUGHT CONDITIONS

The US Drought Monitor indicates just over 83% of the state is experiencing some classification of drought conditions. Spatial coverage and drought intensity has changed over recent weeks, which include a one-class degradation from D2 to D3 in Crook, Jefferson, and Wasco counties with potential for significant impacts to irrigators. Spatial coverage of the D4 classification in Klamath and Lake Counties has expanded slightly. Much of Jackson County has been classified as D2 due to low streamflows and dry soil moisture profiles.

U.S. Drought Monitor

Oregon



April 13, 2021

(Released Thursday, Apr. 15, 2021)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	16.95	83.05	65.95	42.60	14.12	2.22
Last Week 04-06-2021	17.73	82.27	65.94	41.68	13.22	1.48
3 Months Ago 01-12-2021	8.91	91.09	75.17	60.94	25.97	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 04-14-2020	10.53	89.47	60.46	26.20	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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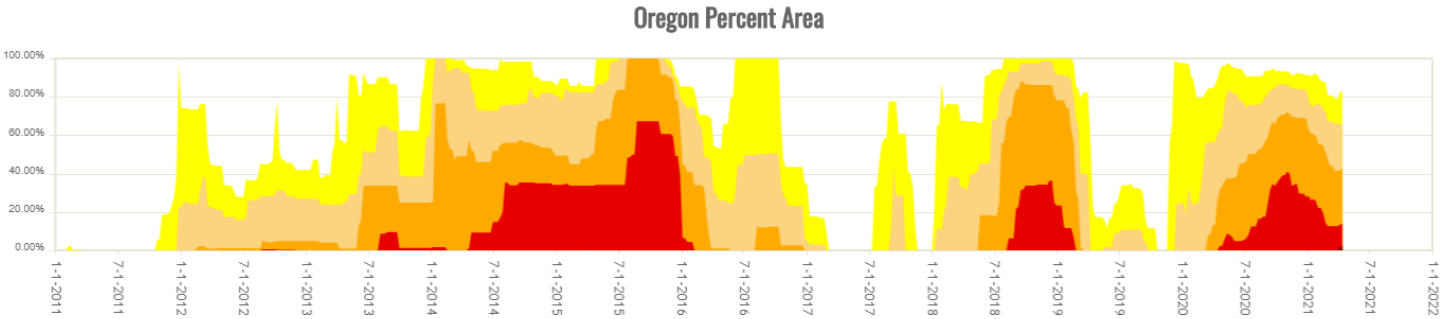
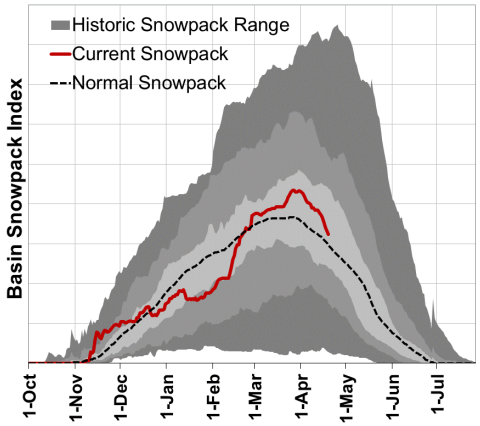
National Drought Mitigation Center

droughtmonitor.unl.edu

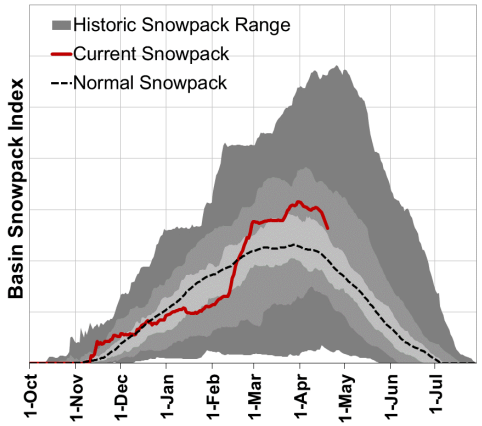


SNOWPACK

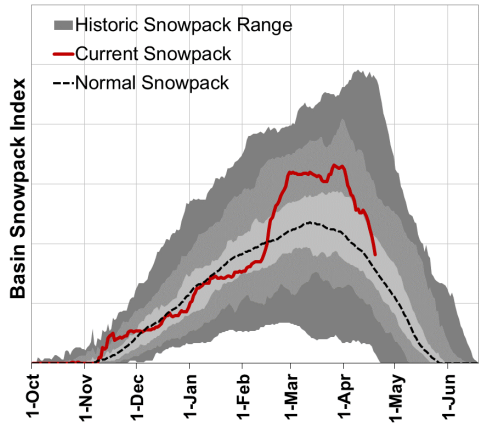
Willamette



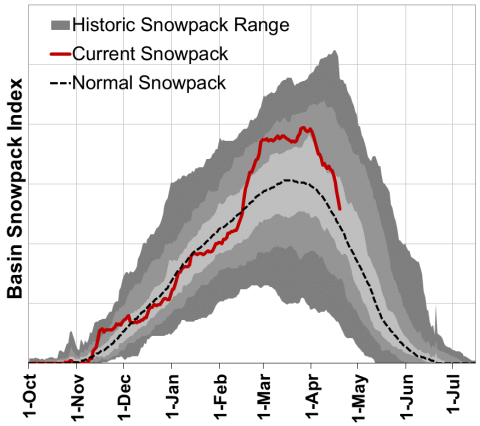
Hood-Sandy-Lower Deschutes



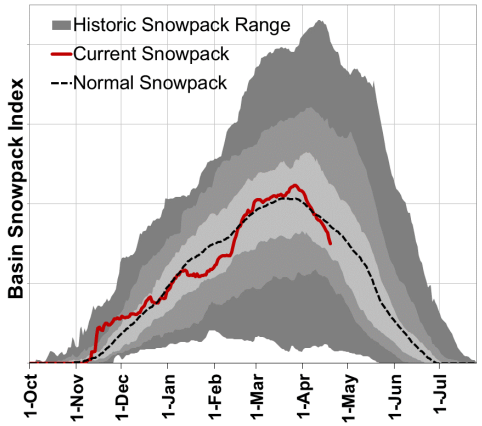
Umatilla-Walla Walla-Willow



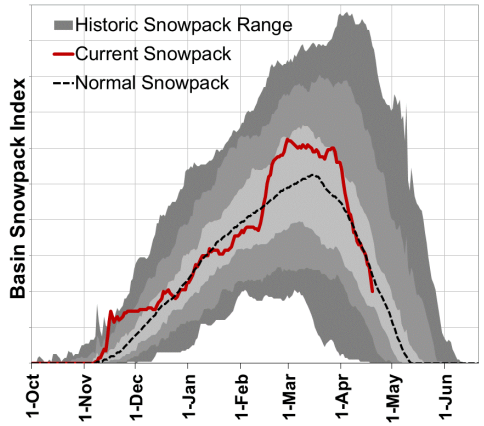
Grande Ronde-Burnt-Powder-Imnaha



Upper Deschutes-Crooked

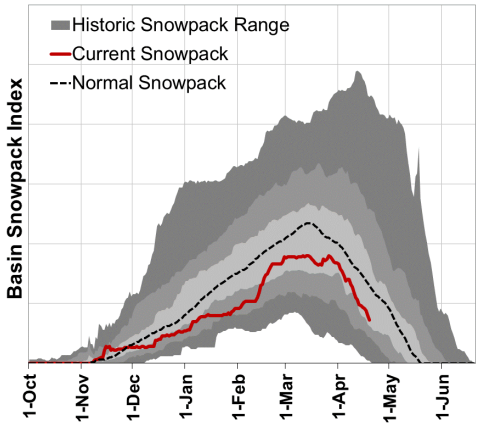


John Day

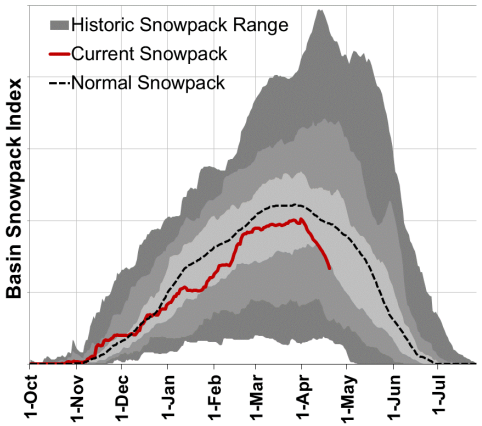


SNOWPACK

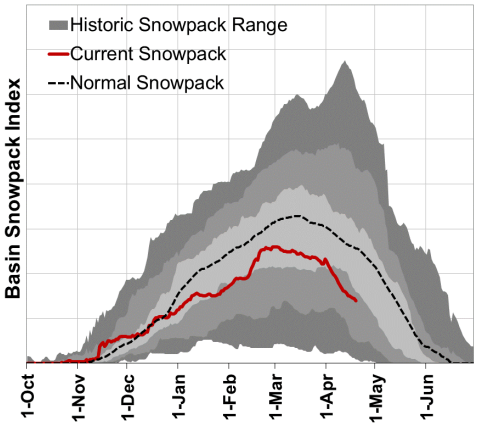
Owyhee



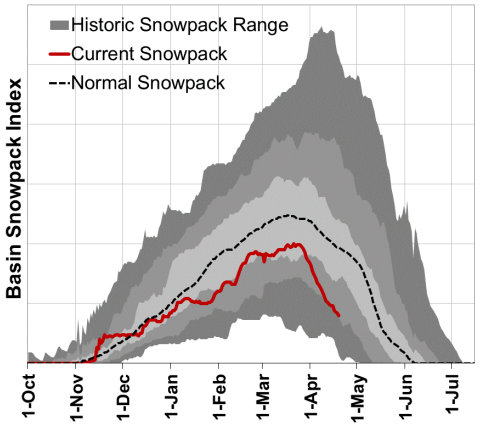
Rogue-Umpqua



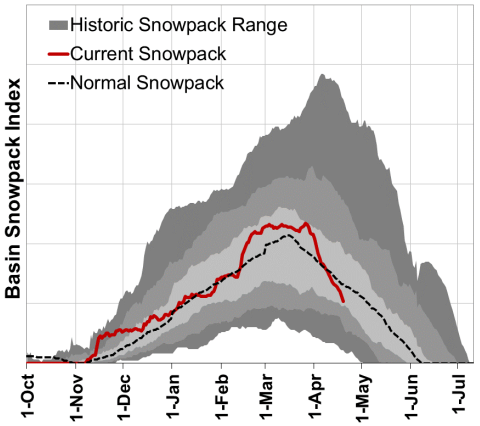
Klamath



Lake County-Goose Lake

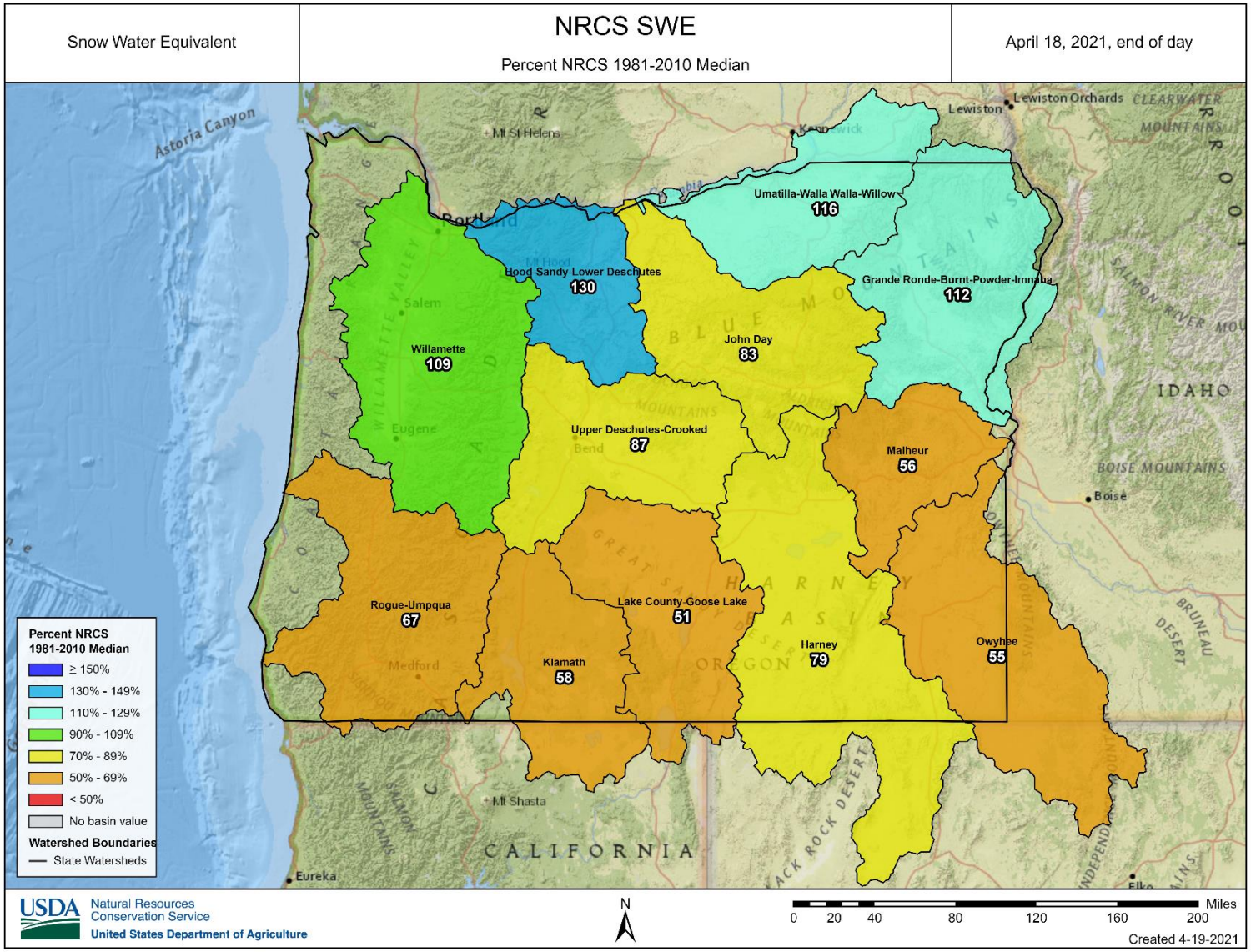


Harney

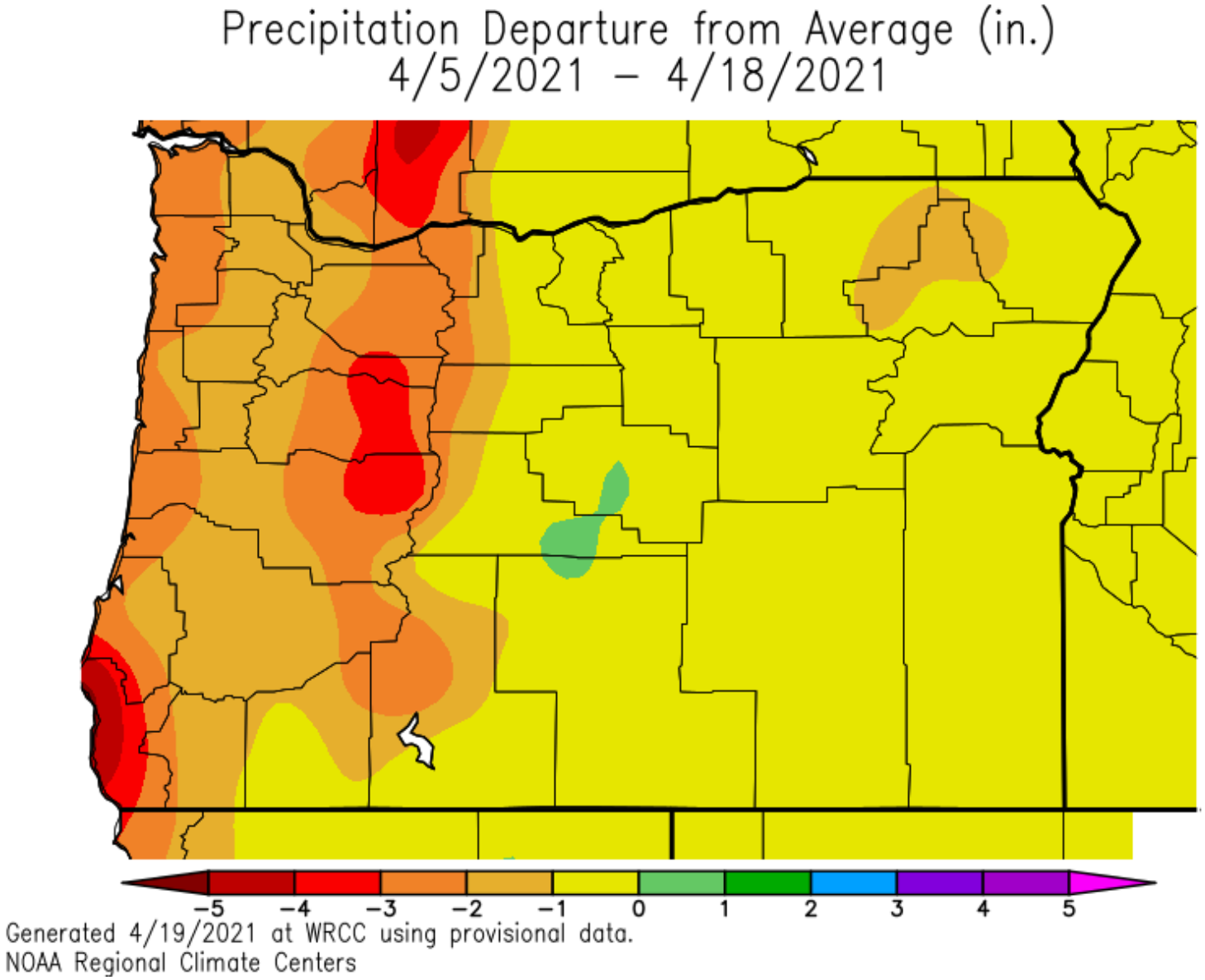


CLIMATE CONDITIONS

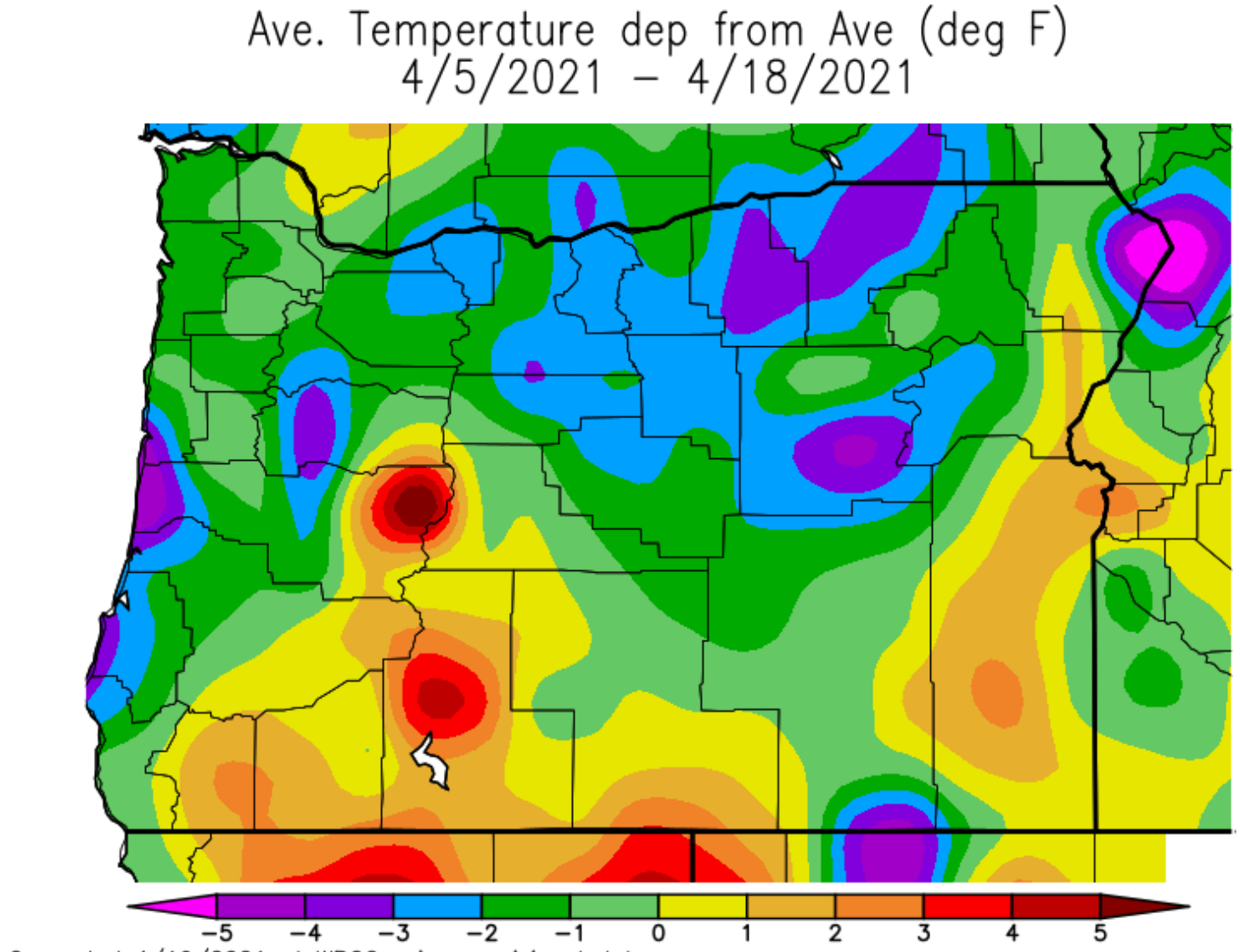
SNOW WATER EQUIVALENT



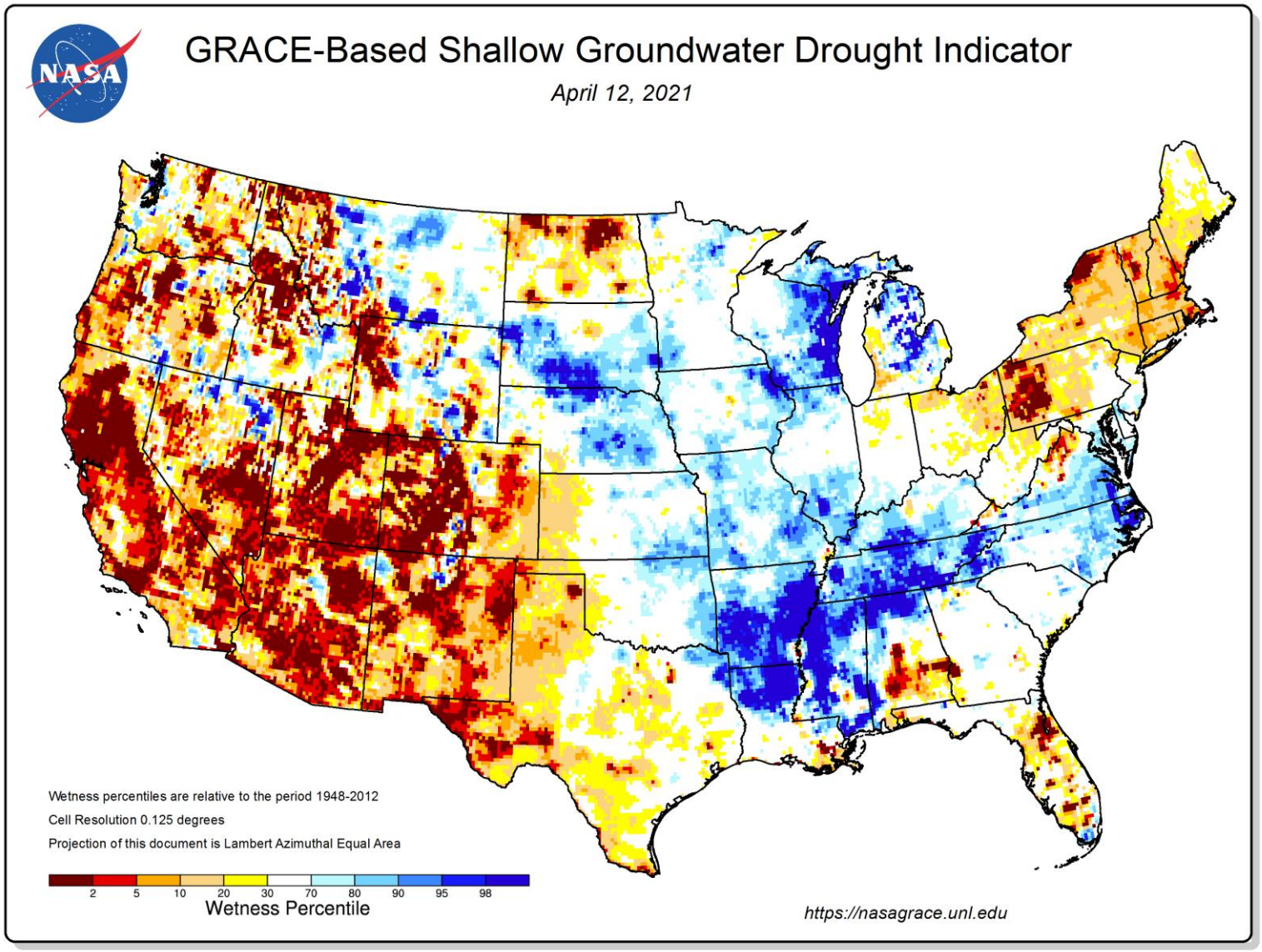
PRECIPITATION



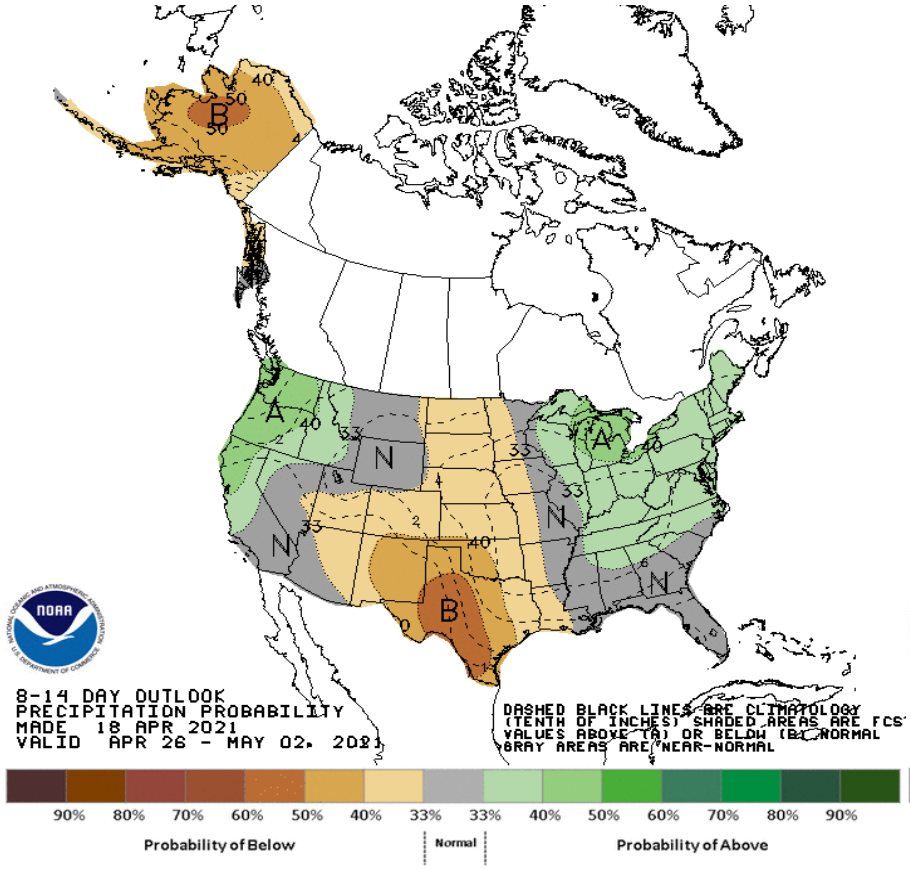
TEMPERATURE

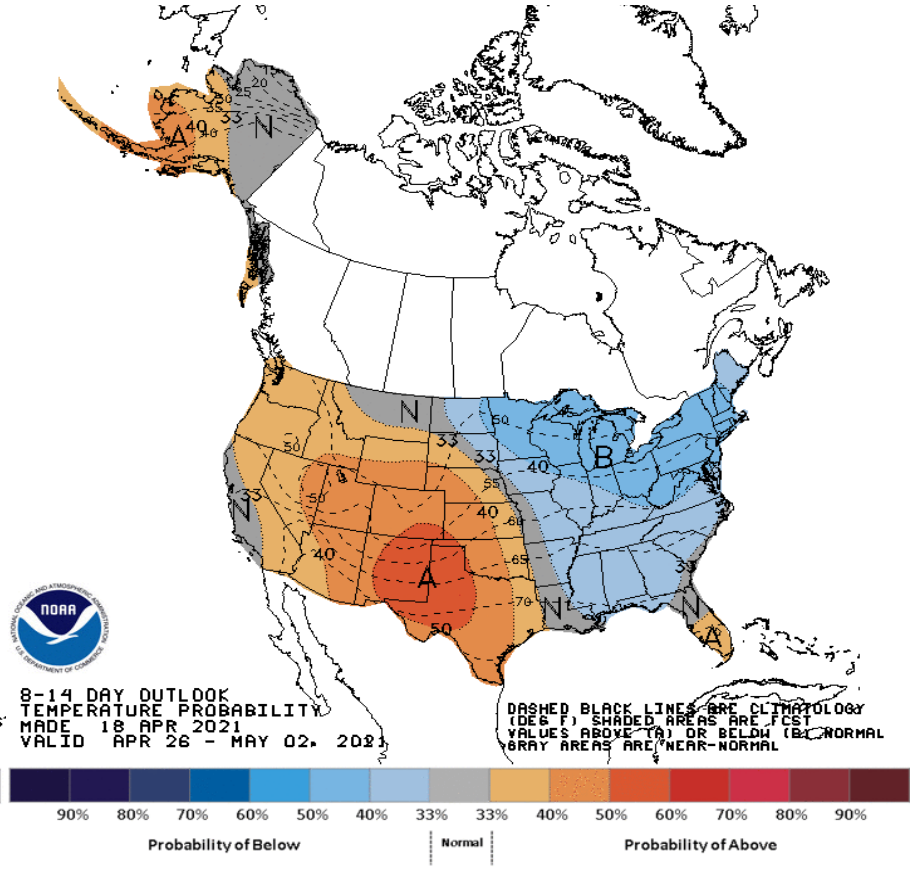


SOIL MOISTURE

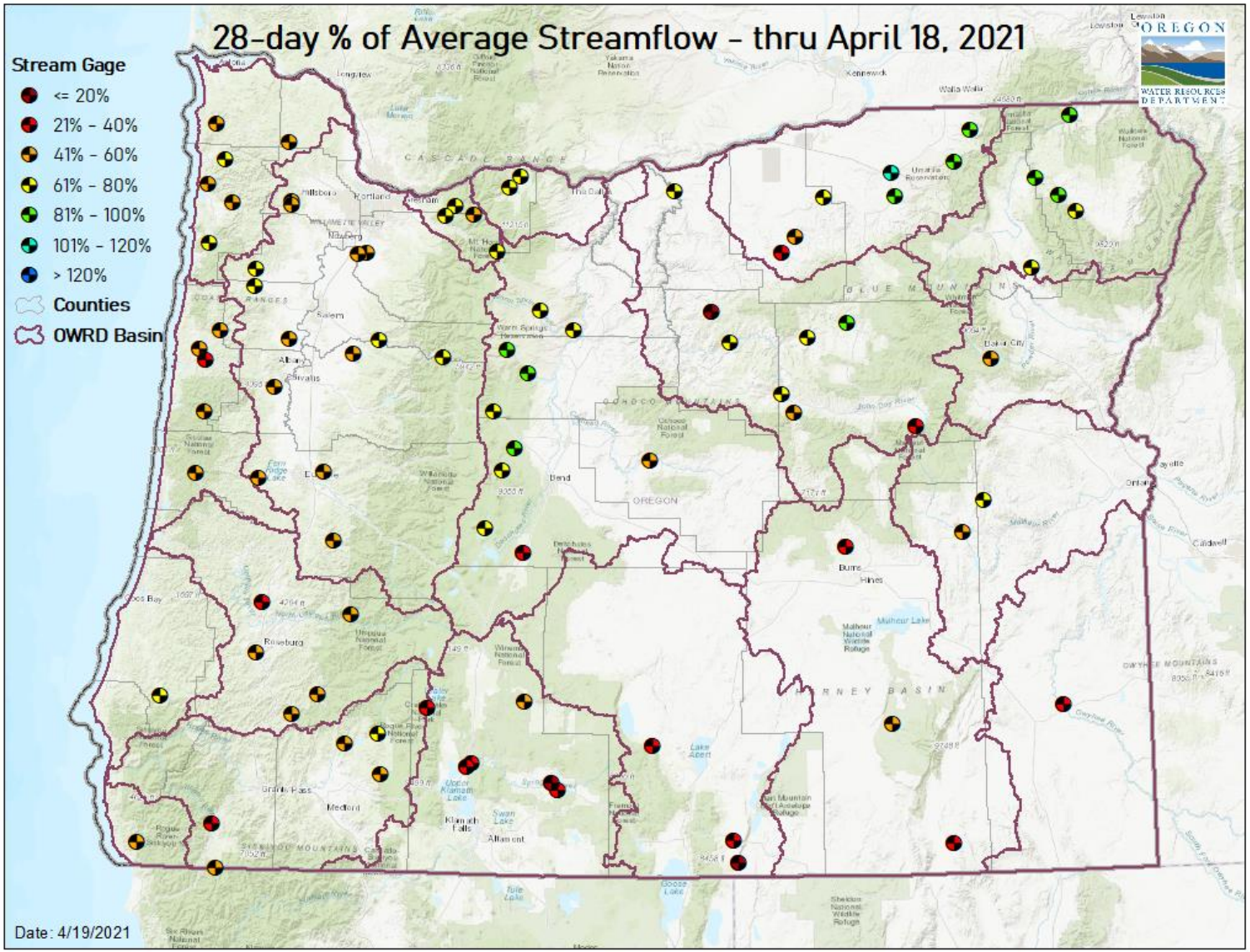


CLIMATE OUTLOOK

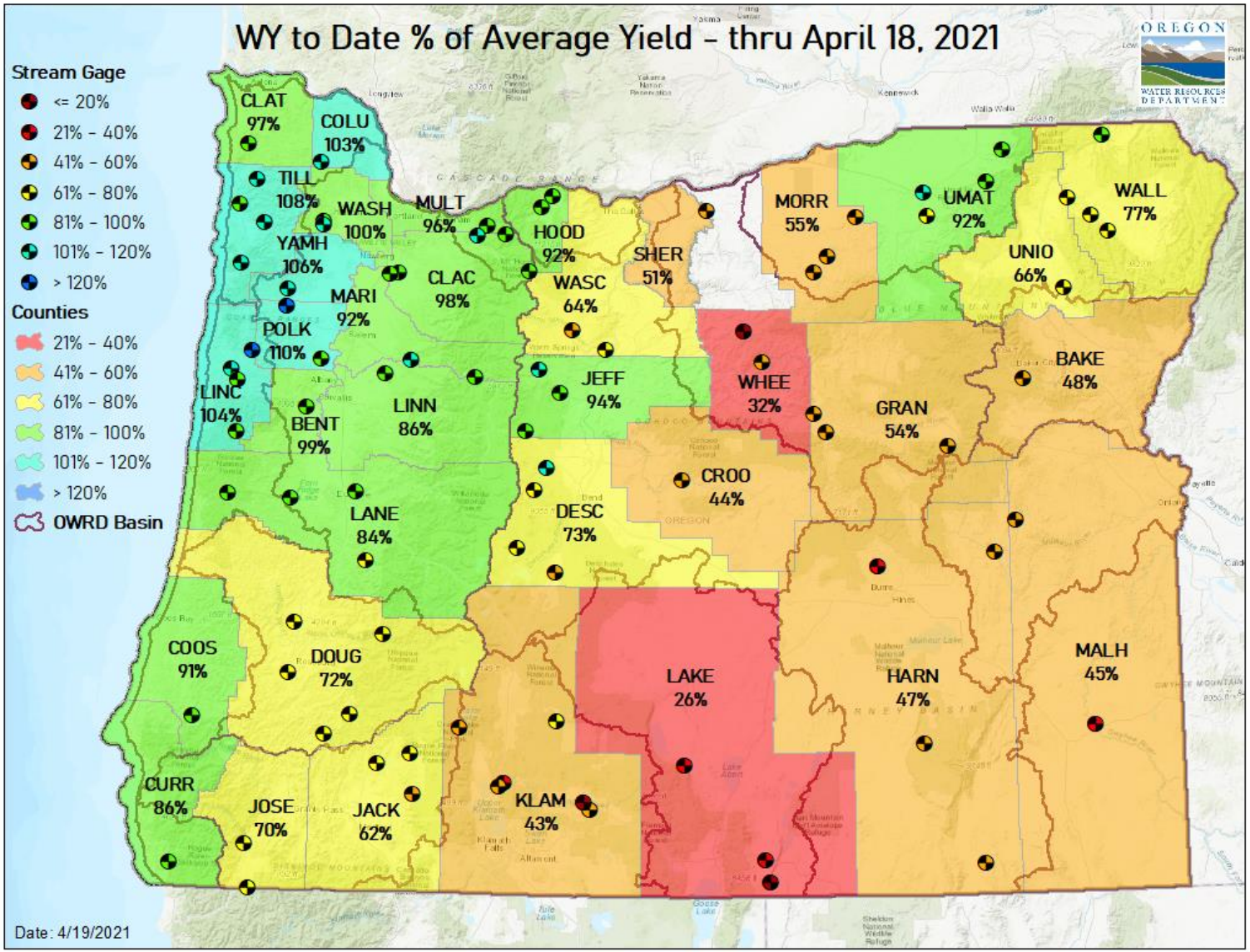


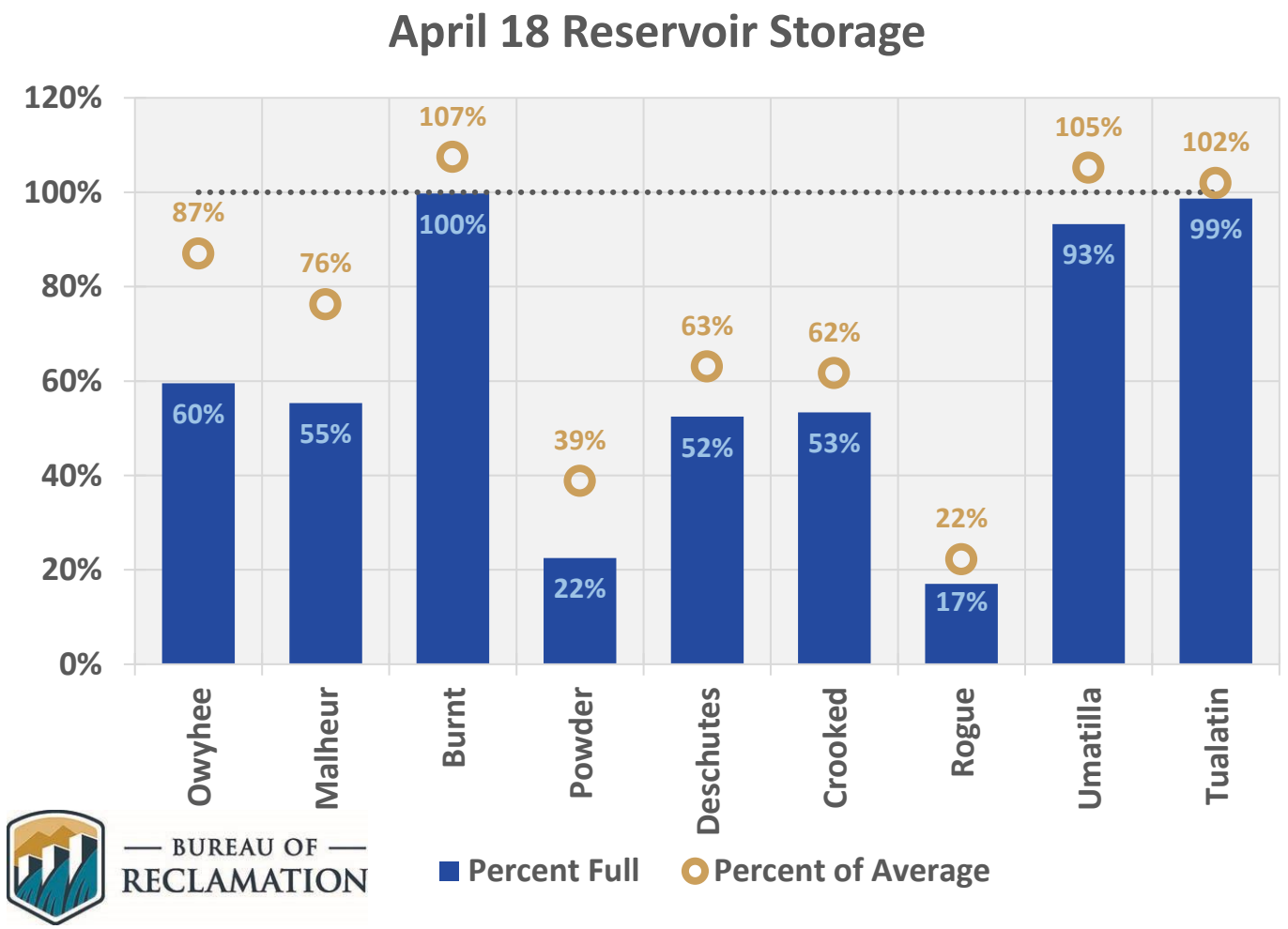


STREAMFLOW


28-day % of Average Streamflow - thru April 18, 2021
Stream Gage
<= 20%
21% - 40%
41% - 60%
61% - 80%
81% - 100%
101% - 120%
> 120%
Counties
OWRD Basin
OREGON
WATER RESOURCES DEPARTMENT
Date: 4/19/2021

STREAMFLOW


WY to Date % of Average Yield – thru April 18, 2021
OREGON
WATER RESOURCES DEPARTMENT
Stream Gage
<= 20%
21% - 40%
41% - 60%
61% - 80%
81% - 100%
101% - 120%
> 120%
Counties
21% - 40%
41% - 60%
61% - 80%
81% - 100%
101% - 120%
> 120%
OWRD Basin
CLAT 97%
COLU 103%
TILL 108%
WASH 100%
MULT 96%
HOOD 92%
SHER 51%
MORR 55%
UMAT 92%
WALL 77%
UNIO 66%
YAMH 106%
CLAC 98%
WASC 64%
MARI 92%
POLK 110%
LINC 104%
BENT 99%
LINN 86%
JEFF 94%
WHEE 32%
BAKE 48%
GRAN 54%
CROO 44%
LANE 84%
DESC 73%
COOS 91%
DOUG 72%
LAKE 26%
HARN 47%
MALH 45%
CURR 86%
JOSE 70%
JACK 62%
KLAM 43%
Date: 4/19/2021


April 18 Reservoir Storage
120%
100%
80%
60%
40%
20%
0%
87%
76%
107%
39%
63%
62%
22%
105%
102%
60%
55%
100%
22%
52%
53%
17%
93%
99%
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.