

Oregon Water Conditions Report



August 23rd, 2021

HIGHLIGHTS

Thus far in 2021, [22 counties](#) have received [Executive Orders](#) issuing drought declarations. One additional drought declaration request has been received from Yamhill County.

Much of Oregon is classified as D2 (severe drought) - D4 (exceptional drought) according to the [US Drought Monitor](#). Recent changes have been driven by low streamflows, poor soil moisture profiles, and extended periods of increased evaporative demand. See below for more information.

[Precipitation over recent weeks](#) has been below average statewide. Much of the state received [little to no precipitation](#) over this period, with exception of the northeastern portion of the state.

[Temperatures over the past two weeks](#) have been above average throughout much of the state. Much of the Willamette Valley and portions of central Oregon experienced temperatures 3 - 5 °F above the long-term average. However, northeastern Oregon and southern Malheur County measured below-average temperatures.

[Surface soil moisture profiles](#) continue to measure near historic lows throughout much of western Oregon. Dry soil profiles in central Oregon continue to persist as well.

The [8 - 14 day climate outlook](#) indicates probabilities favoring below average precipitation statewide. The southern half of the state is projected to experience above average temperatures, while near normal temperatures are favored for the northern half.

Recent streamflows have measured below to well below average throughout much of Oregon (see below). Some streams have experienced [record low flows](#) over these time periods.

Reservoir storage contents are below to well below average statewide in both [USBR](#) and [USACE](#) systems. [Klamath Basin reservoirs](#) continue to measure below average contents.

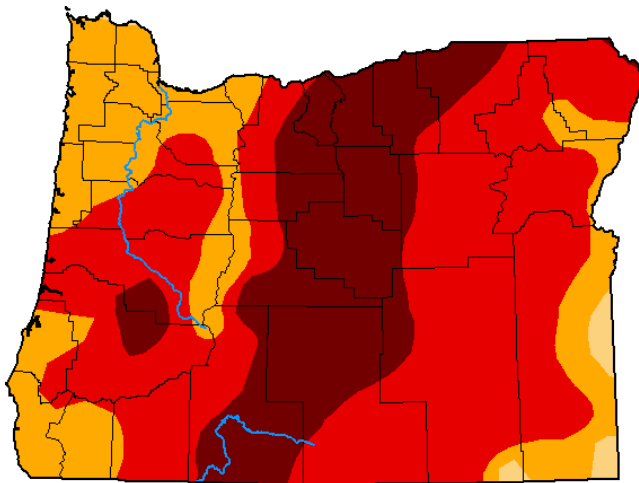
[Significant fire potential](#) over the next seven days is expected to be minimal or normal throughout much of the Pacific Northwest. Some regions will have elevated potential later on during this period.

DROUGHT CONDITIONS

The US Drought Monitor indicates 100% of the state is experiencing drought conditions. Major changes over recent weeks include introduced coverage of D4 conditions in Lane and Douglas Counties and further expansion of D3 conditions in portions of eastern and western Oregon.

U.S. Drought Monitor Oregon

August 17, 2021
(Released Thursday, Aug. 19, 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	100.00	98.71	76.65	25.58
Last Week 08-10-2021	0.00	100.00	100.00	96.06	73.73	24.33
3 Months Ago 05-18-2021	0.00	100.00	92.66	71.73	26.09	3.57
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 08-18-2020	9.20	90.80	76.00	52.69	16.42	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>

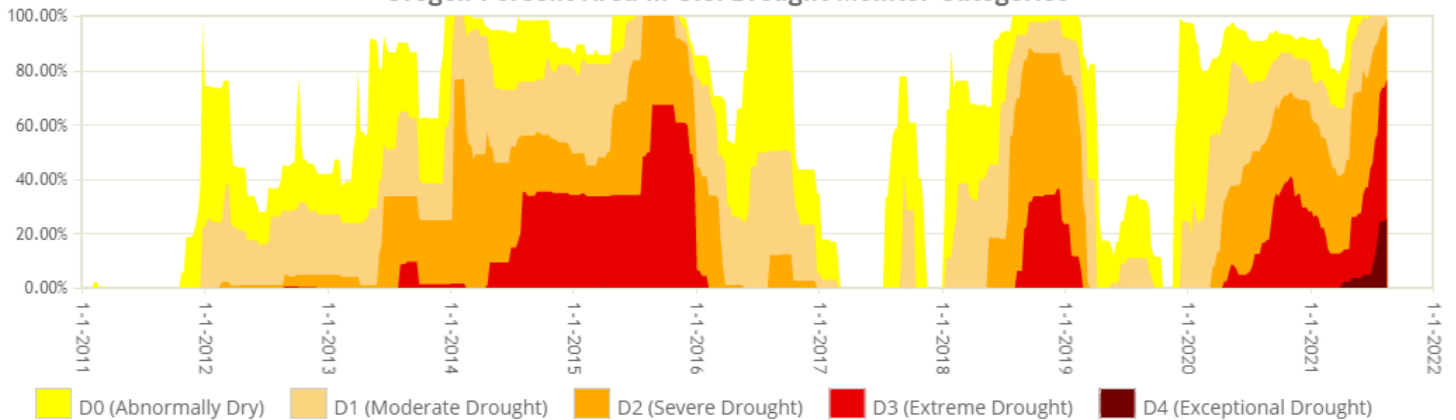
Author:

Curtis Riganti
National Drought Mitigation Center

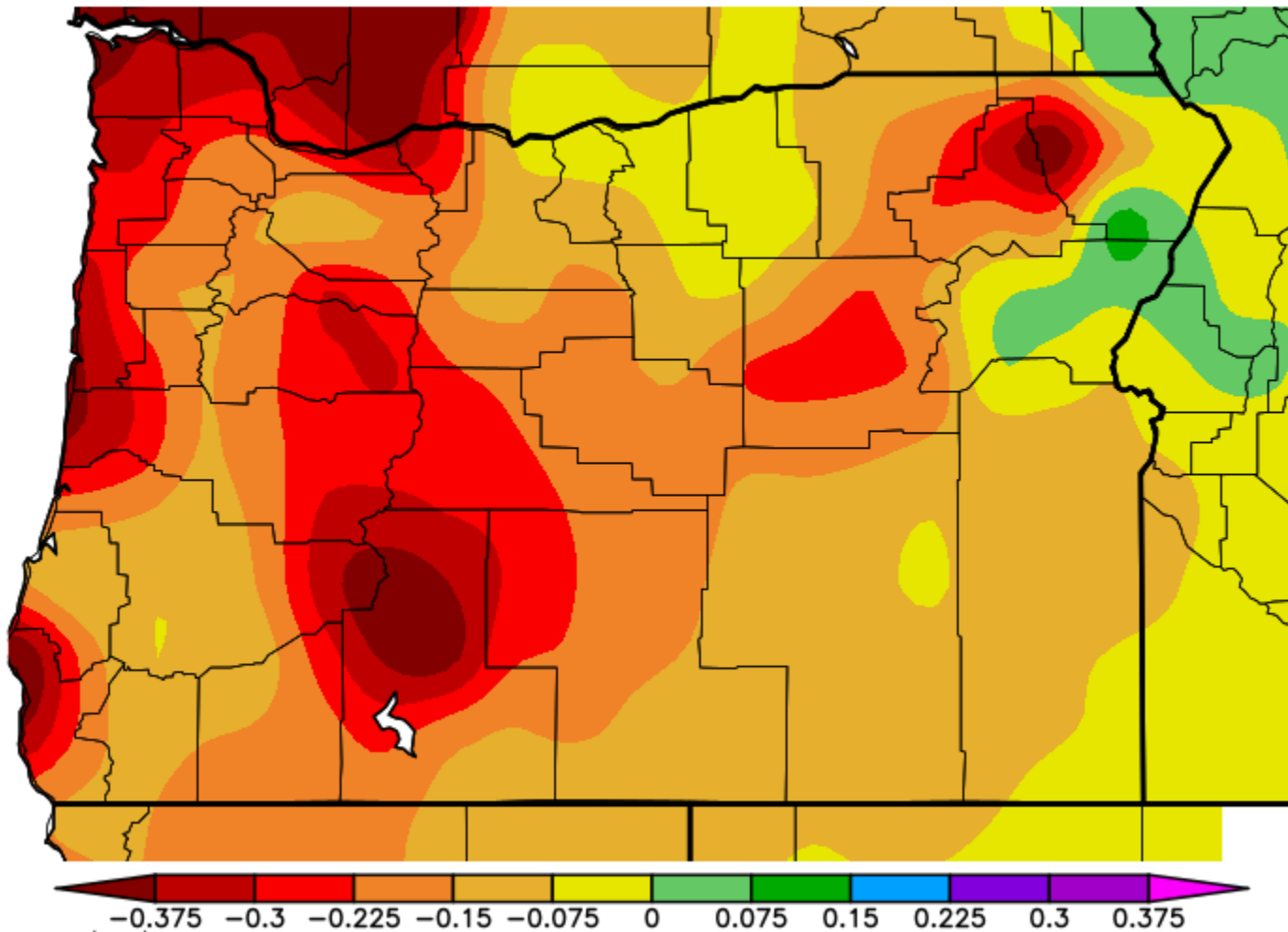


droughtmonitor.unl.edu

Oregon Percent Area in U.S. Drought Monitor Categories

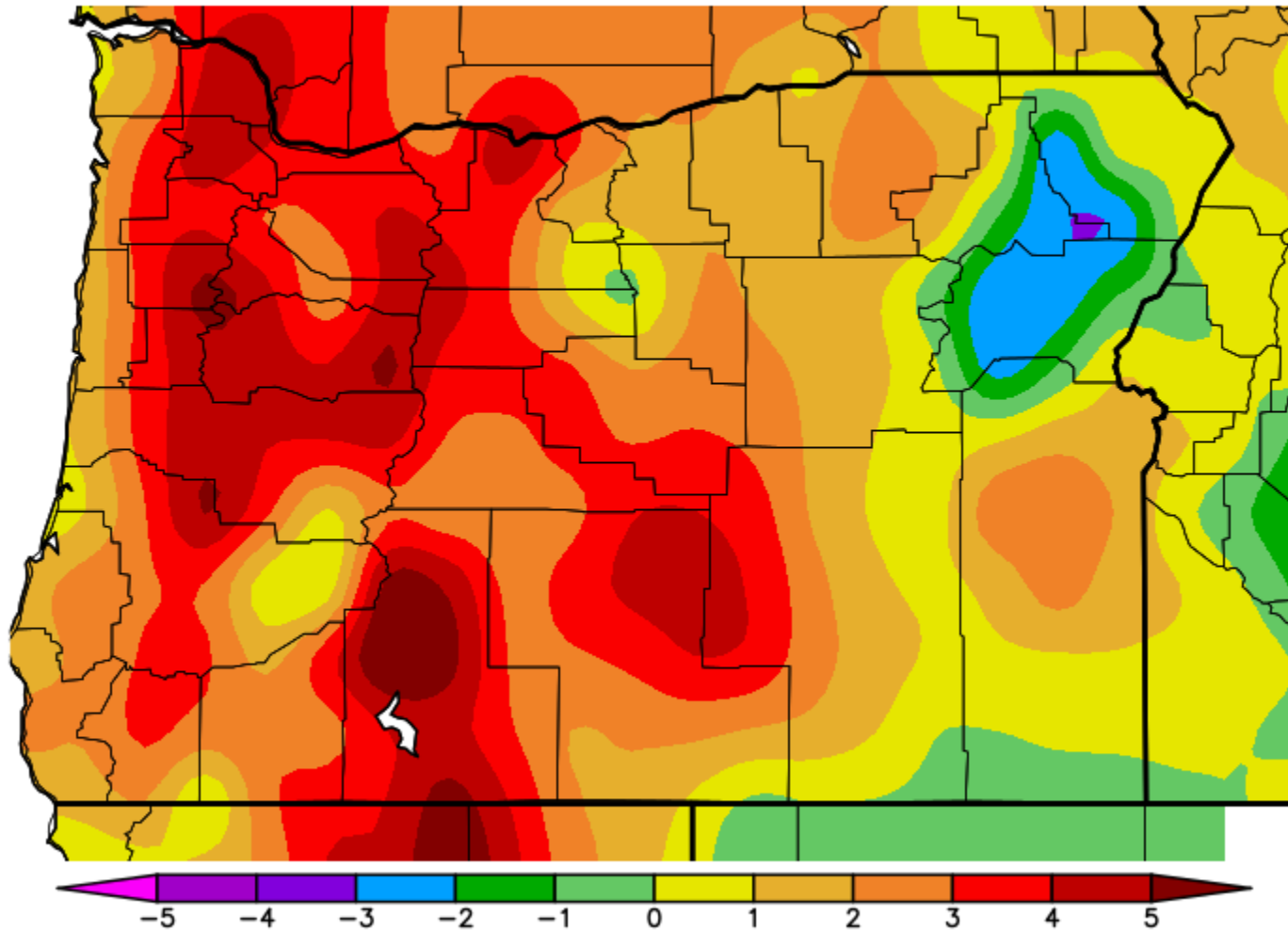


Precipitation Departure from Average (in.) 8/8/2021 – 8/21/2021



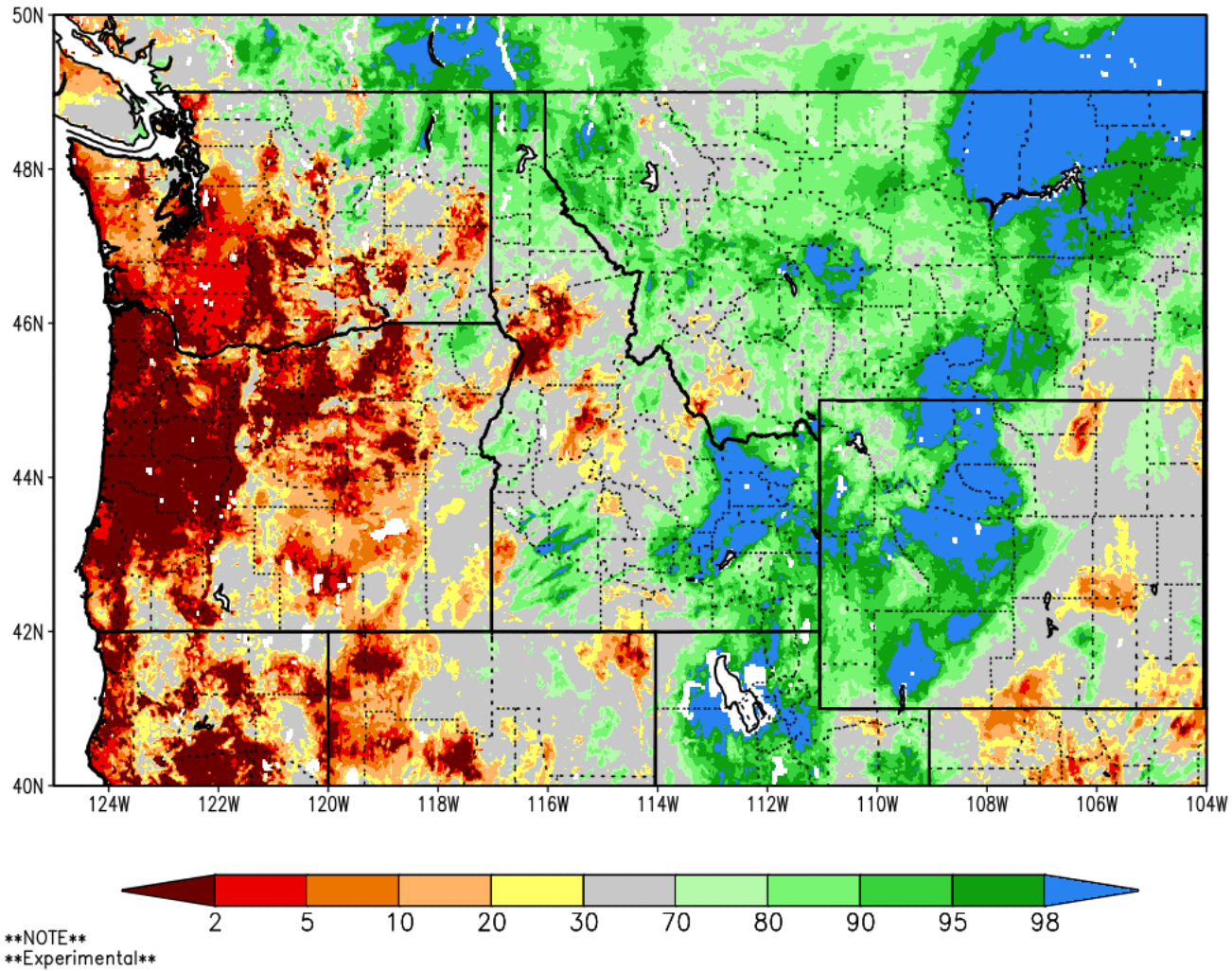
Generated 8/22/2021 at WRCC using provisional data.
NOAA Regional Climate Centers

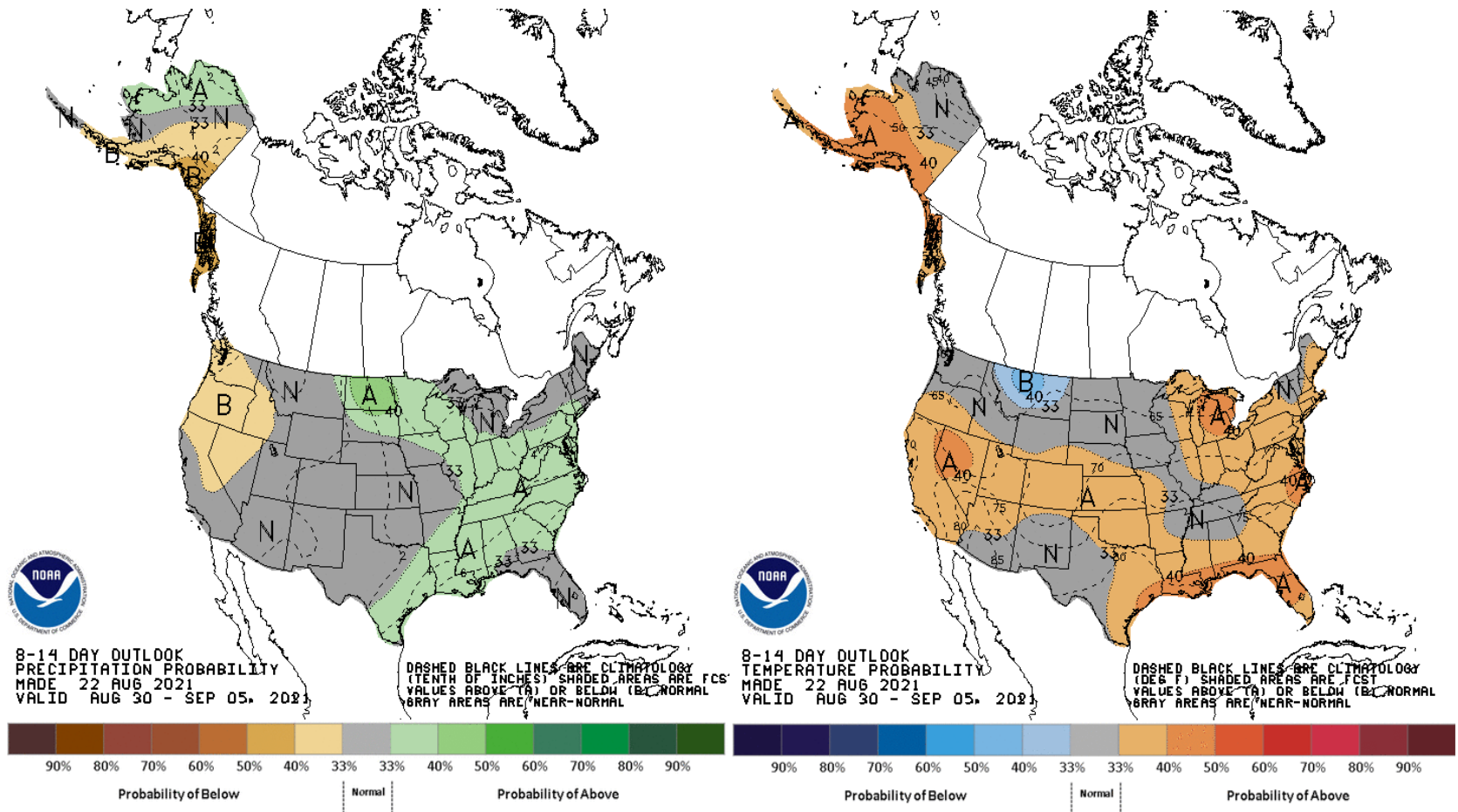
Ave. Temperature dep from Ave (deg F)
8/8/2021 - 8/21/2021



Generated 8/22/2021 at WRCC using provisional data.
NOAA Regional Climate Centers

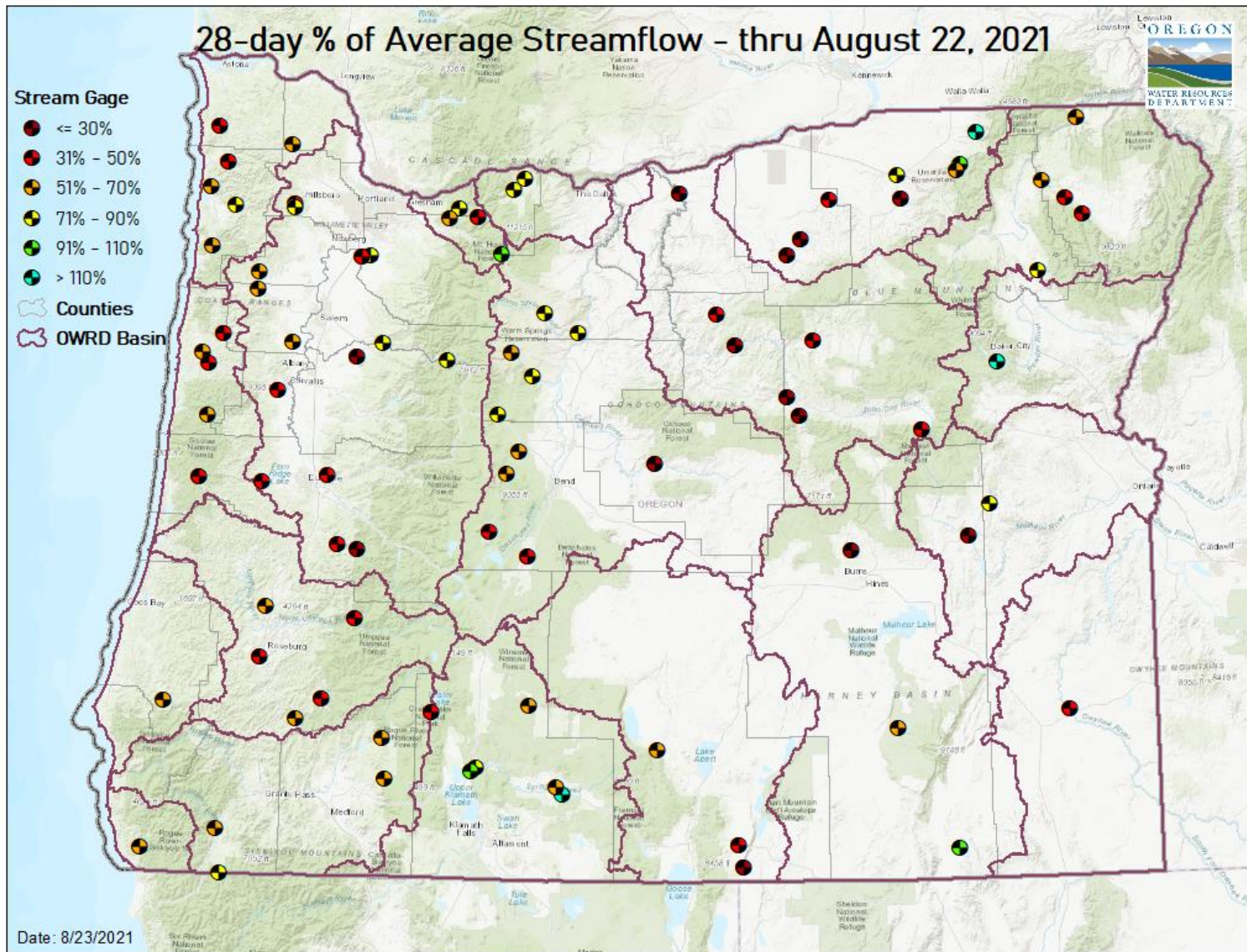
SPoRT-LIS 0-10 cm Soil Moisture percentile valid 23 Aug 2021

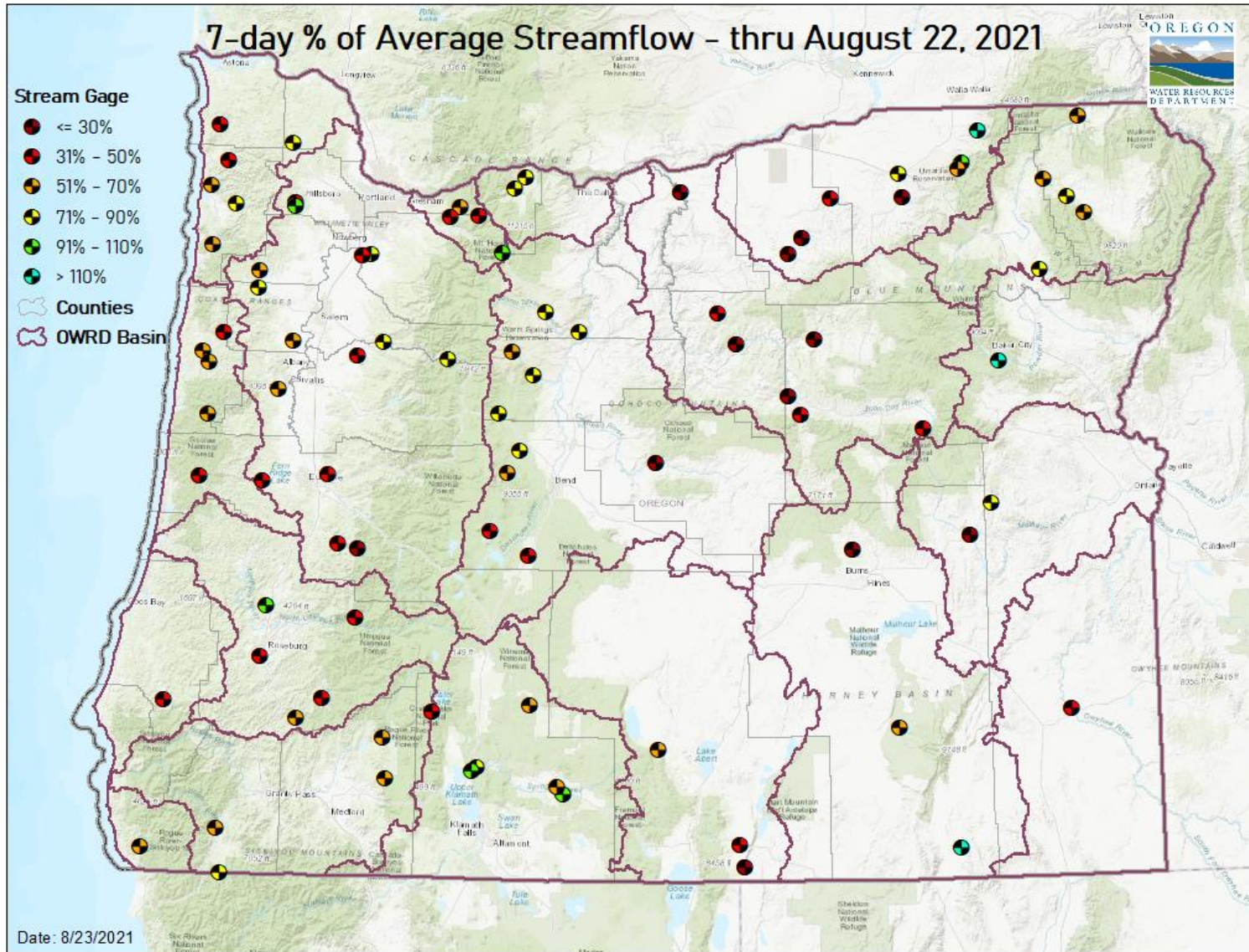




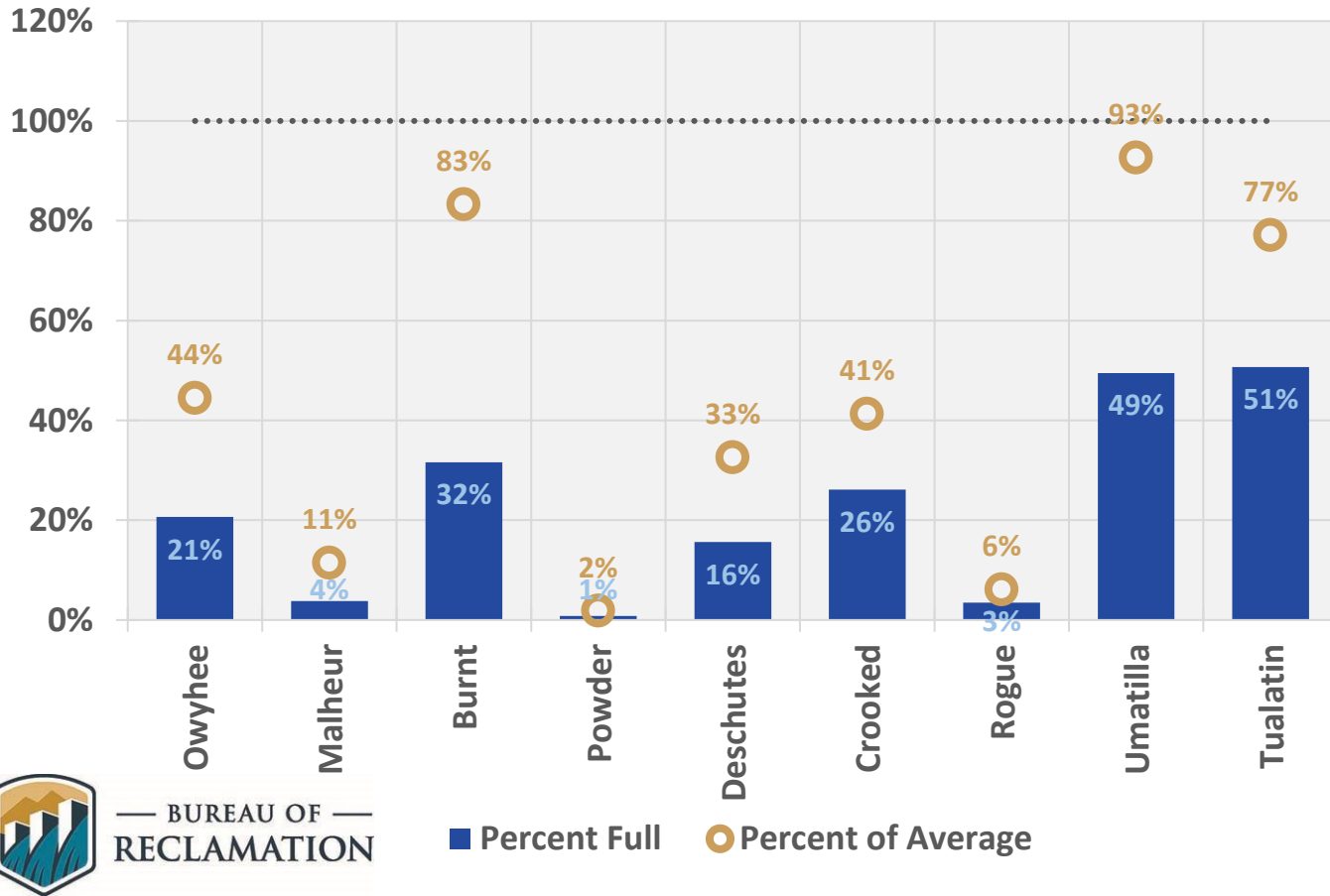
STREAMFLOW

28-DAY





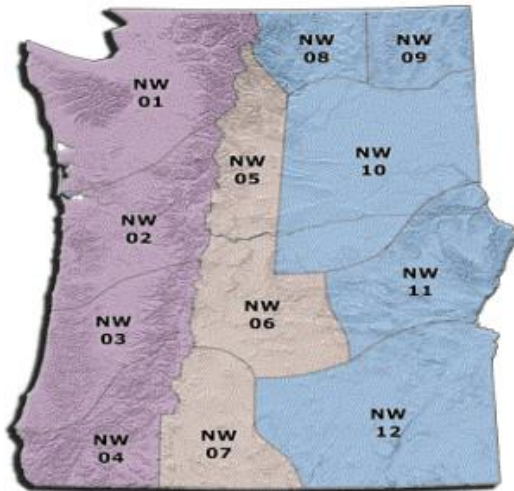
August 16 Reservoir Storage



Pacific Northwest 7 Day Significant Fire Potential



Sunday, 8/22/2021



Legend

Fire Environment (FEN) 4 levels	
Minimal	- The Overall Fire Environment suggests a very low risk for Large fires (less than 1% chance)
Normal	- The Overall Fire Environment suggests a <u>normal</u> risk for large fires (1 - 4% chance)
Elevated	- The Overall Fire Environment suggests a moderately high risk for large fires (5 - 19% chance)
High Risk	The risk for large fire(s) is very high (≥ 20%) Triggers: 1. ⚡ (Significant Lightning) 2. BEN (Critical Burn Environment)

The assessment of the overall fire environment considers multiple factors including weather, lightning amount and fuel dryness. Large Fire probabilities are derived objectively via statistical methods. **High Risk** levels (≥ 20% probability of a large fire) are almost always due to significant lightning as burning conditions alone rarely result in a large fire probability much above about 10%.

Predictive Service		Today	Mon	Tue	Wed	Thu	Fri	Sat
Areas	ytd							
NW01								
NW02								
NW03								
NW04								
NW05								
NW06								
NW07								
NW08								
NW09								
NW10								
NW11								
NW12								

NOTE: NWCC significant fire potential model run with old forecast data...results appear reasonable, but have degraded confidence.

Fire Weather: Expect morning clouds and a chance for patchy drizzle over much of the west today, while skies clear east of the Cascades, with maybe some lingering showers along the British Columbia border. General winds will remain gusty through the Columbia River Gorge and pick up over the Columbia Basin today. General winds decrease in most areas on Monday. Temperatures will remain below average today and Monday for most areas. Temperatures through at least mid-week should be near or slightly below normal with little or no lightning expected. There is potential for some warming toward the end of the week, but weather models lack consensus.

Watch your NWS forecasts for details in your area.

Fire Potential: Cooler temperatures and higher relative humidity along with diminished fire danger will combine to limit the potential for new significant fires. Elevated general winds today pose a risk of growth for ongoing incidents in eastern Washington but winds will decrease Monday and Tuesday.

Preparedness Level:

Northwest: 5
National: 5

- Eric Wise

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.