

DROUGHT UPDATE FOR NORTHWEST OREGON AND SOUTHWEST WASHINGTON

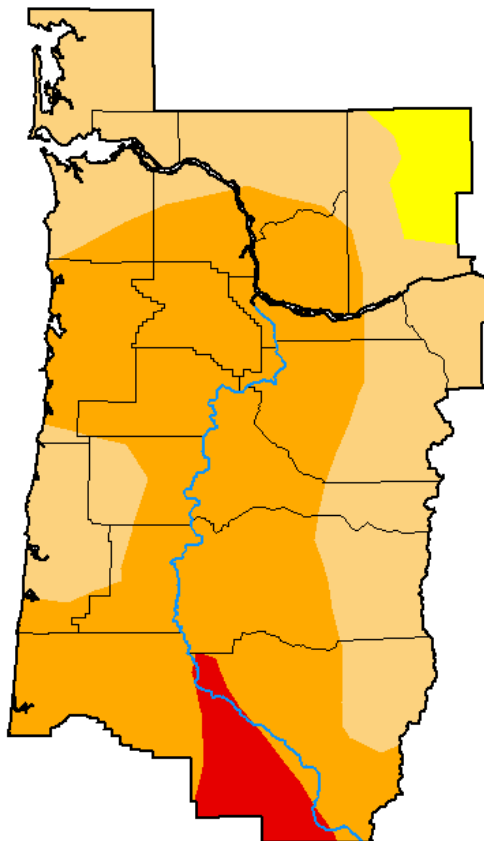
SYNOPSIS

Drought conditions have developed in Northwest Oregon and Southwest Washington due to below-average precipitation during spring 2021. The total of March, April, and May 2021 was only 20 to 60 percent of average. For much of the region, 2021 marked the driest March-April-May period on record. For example, Portland Airport measured 2.52 inches for March through May 2021, breaking the previous record low of 4.31 inches in 1994. The normal for this period is 9.37 inches.

The lack of precipitation has resulted in rapidly-declining streamflow, low soil moisture, and stressed vegetation in the region. For rivers draining the high terrain of the Cascade Range, streamflow has been boosted by snowmelt, but even for these rivers, the streamflow is below-average. For rivers draining the Coast Range, Willapa Hills and lower elevations of inland valleys and the Cascade foothills, streamflow is record-low or near-record-low for this time of year.

**U.S. Drought Monitor
 Portland, OR WFO**

June 1, 2021
 (Released Thursday, Jun. 3, 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	96.62	57.47	4.35	0.00
Last Week <i>05-25-2021</i>	1.72	98.28	96.59	57.47	4.35	0.00
3 Months Ago <i>03-02-2021</i>	73.13	26.87	10.96	0.00	0.00	0.00
Start of Calendar Year <i>12-29-2020</i>	39.27	60.73	50.96	23.95	0.24	0.00
Start of Water Year <i>09-29-2020</i>	19.02	80.98	60.00	30.82	12.86	0.00
One Year Ago <i>06-02-2020</i>	0.00	100.00	52.82	29.95	0.00	0.00

Intensity:

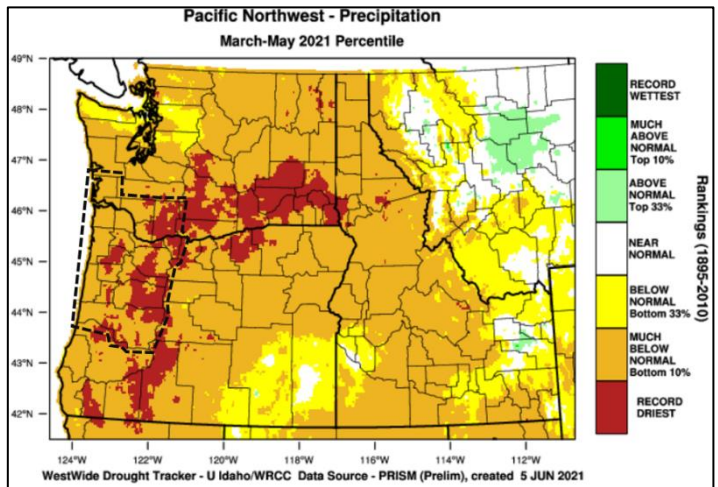
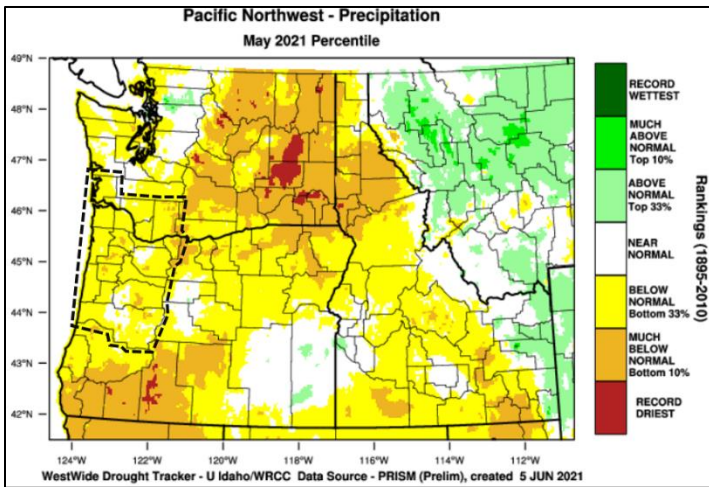
- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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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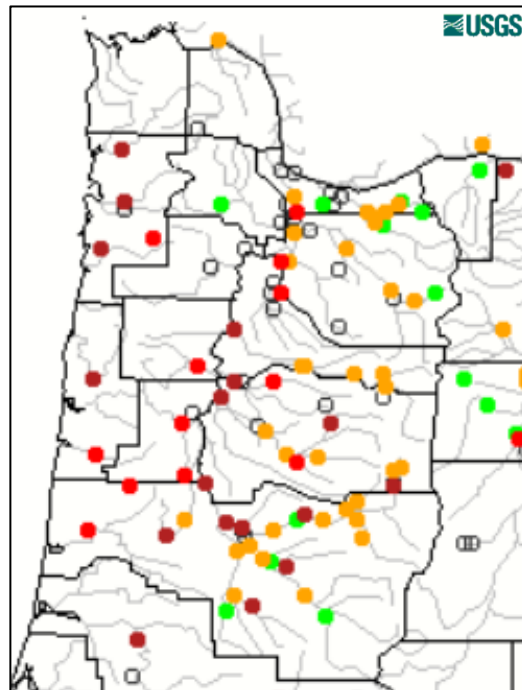
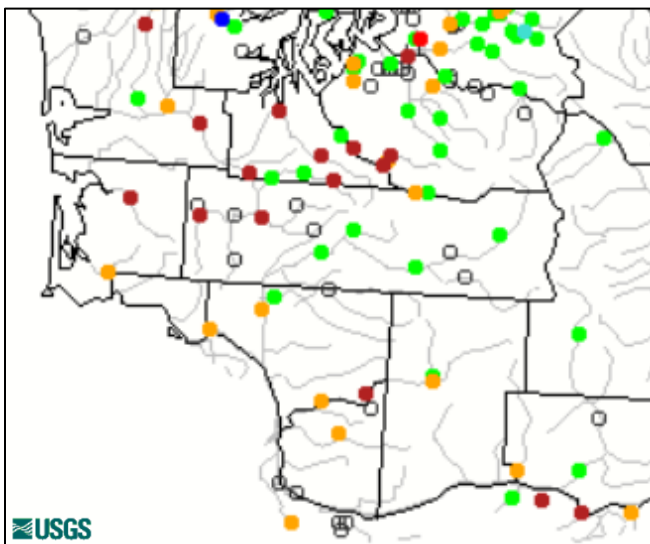




Precipitation for the Pacific Northwest, ranked relative to historical data, for May (left) and March-April-May (right)

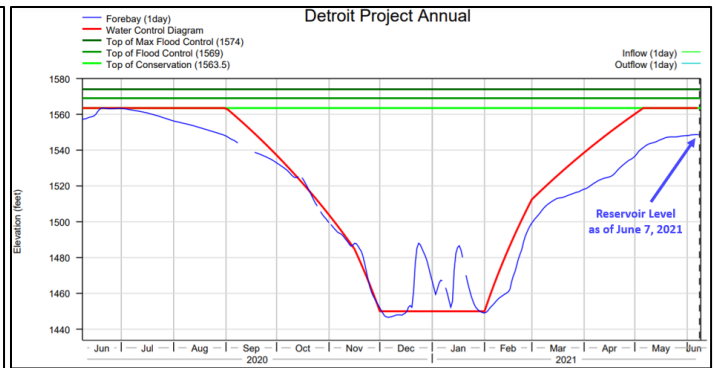
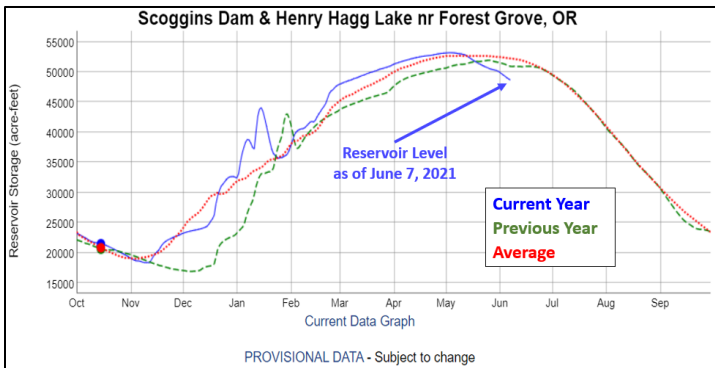
IMPACTS

The impacts of these unusually-dry conditions will likely be more pronounced in the summer. Streamflow will likely remain near record-lows through the summer, with many rivers and creeks comparable to 2015 and 2016 levels. This could result in restrictions or shortages for some irrigation districts and municipal water providers. The low streamflow also enhances the likelihood of warm water temperatures this summer, which is detrimental for many aquatic species, including salmon. Forest conditions as of early June are similar to what would be seen in July or August, meaning that fuel conditions for fire threat will likely be drier than normal through the summer. Reservoir storage is lower than average, and many reservoirs are being drawn down earlier than usual to supply water for downstream demands. Low reservoir levels will affect some recreation activities through summer and early fall. Other potential impacts include increased fire danger, reduced agricultural yield, and poor pasture conditions where irrigation water isn't available.



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

USGS WaterWatch 28-day Streamflow compared to long-term average for this same period for Southwest Washington (left) & Northwest Oregon (right)

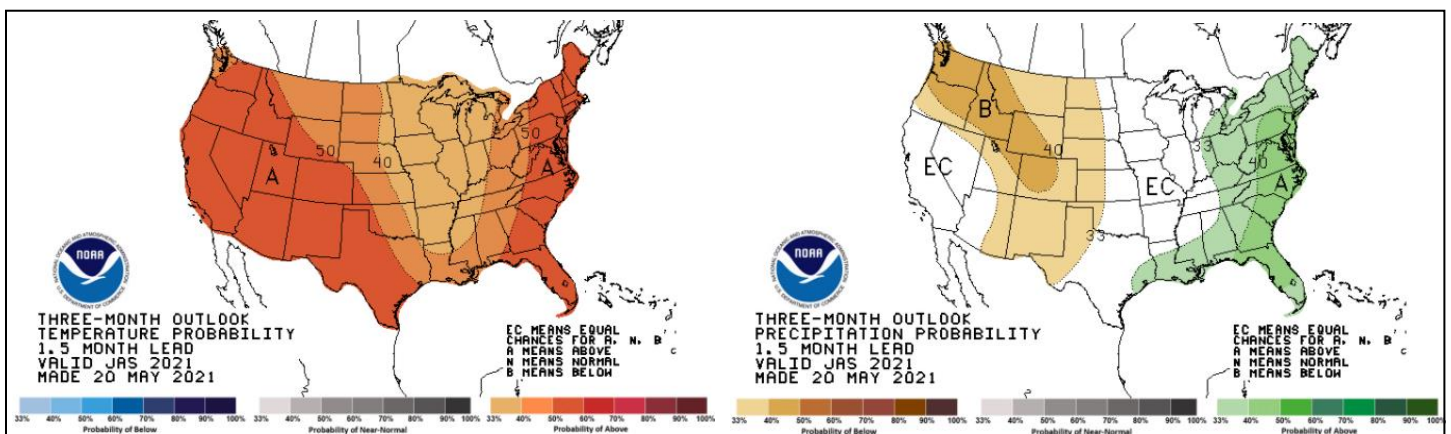
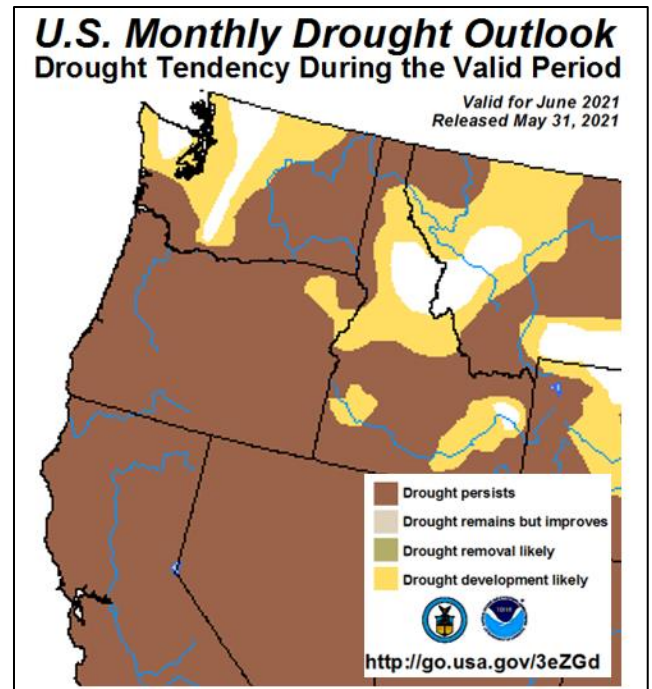


Reservoir storage graphs for Scoggins Dam (left) and Detroit Dam (right)

LOCAL DROUGHT OUTLOOK

NOAA's Climate Prediction Center (CPC) produces monthly and seasonal outlooks, in which there is a weighing of the odds of near-normal, above-normal, or below-normal temperatures and precipitation.

The outlook for June shows an enhanced likelihood of above average temperatures and below average precipitation. The July through September outlook also shows an enhanced likelihood of above average temperatures and below average precipitation. Based on the monthly and seasonal outlooks, CPC is indicating high likelihood of drought conditions persisting or worsening through the summer months. The prospects for above-average temperatures would be particularly impactful on summer drought conditions, causing increased vegetation stress, warmer stream temperatures, and increased demand for irrigation water.



July-August-September 2021 Outlook for Temperatures (left) and Precipitation (right) from NOAA's Climate Prediction Center

NOAA's Northwest River Forecast Center produces forecasts of streamflow volume for the time period April through September for numerous gages in Southwest Washington and Northwest Oregon. Below is a table of forecast streamflow volume for selected locations, along with a note of how this year's forecast ranks compared to the historical record for that location.

RIVER AND LOCATION	APR-SEP FORECAST* (Thousands of Acre-Feet)	PERCENT OF NORMAL	RANKING
...SW Washington...			
Cowlitz R at Castle Rock	1985	78	8 th lowest
Lewis R at Merwin Dam	807	72	6 th lowest
Willapa R near Willapa	38	46	2 nd lowest
...NW Oregon Coastal...			
Nehalem R near Foss	123	37	Lowest
Siletz R at Siletz	80	40	Lowest
Siuslaw R near Mapleton	99	36	Lowest
Trask R near Tillamook	62	43	Lowest
Wilson R near Tillamook	66	43	Lowest
...Willamette...			
Clackamas R at Estacada	496	68	6 th lowest
Luckiamute R near Suver	32	32	Lowest
McKenzie R near Vida	848	71	5 th lowest
North Santiam R at Mehama	556	66	5 th lowest
Pudding R at Aurora	53	30	Lowest
South Santiam R at Waterloo	261	44	3 rd lowest
South Yamhill R at McMinnville	40	22	Lowest
Tualatin R at West Linn	62	33	2 nd lowest
Willamette R at Salem	2329	49	Lowest
...Mt Hood area...			
Sandy R near Bull Run	405	70	8 th lowest
Hood R near Hood River	198	75	13 th lowest

* Forecast shown is the 50% Exceedance from the Ensemble Streamflow Prediction forecast analysis

NEXT ISSUANCE DATE

This product will be updated by July 12, 2021.

RELATED WEB SITES:

U.S. Drought Monitor: www.droughtmonitor.unl.edu

U.S. Drought Portal: drought.gov

Climate Prediction Center: www.cpc.ncep.noaa.gov

NWS Northwest River Forecast Center: www.nwrfc.noaa.gov

NWS AHPS Precipitation: water.weather.gov/precip/index.php?location_type=wfo&location_name=pqr

West-wide Drought Tracker: wrcc.dri.edu/wwdt/index.php

USACE Willamette Reservoir Conditions: www.nwd-wc.usace.army.mil/nwp/teacup/willamette/

US Bureau of Reclamation Pacific Northwest Reservoirs: www.usbr.gov/pn/hydromet/select.html

US Geological Survey WaterWatch: waterwatch.usgs.gov

USDA Natural Resources Conservation Service: www.nrcs.usda.gov/wps/portal/nrcs/main/or/snow/

ACKNOWLEDGEMENTS

The U.S. Drought Monitor is a multi-agency effort involving NOAA's National Weather Service and National Centers for Environmental Information, the U.S. Department of Agriculture (USDA), state and regional climatologists, and the National Drought Mitigation Center. Information for this statement was gathered from NWS and Natural Resources Conservation Service (NRCS) observation sites, river and reservoir data from the US Geological Survey, the US Army Corps of Engineers, the US Bureau of Reclamation, and state water resources and emergency management agencies.

CONTACT INFORMATION

If you have questions or comments about this Drought Information Statement, please contact the National Weather Service in Portland, Oregon.

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weather.gov/Portland