

Oregon Water Conditions Report April 20, 2020



Current Oregon statewide snow water equivalent is 91 percent of normal. Basin values range from well below normal at 66 percent in the Klamath basin to above normal at 119 percent in the Umatilla, Walla Walla, and Willow basin. Statewide snowpack continues to decrease due to warmer weather contributing to melt-out at all elevations.

Current Oregon statewide precipitation at NRCS SNOTEL sites is well below average at 77 percent for the water year. Basin precipitation values range from a low of 64 percent in the Klamath basin to 97 percent of average in the Umatilla, Walla Walla, Willow and Grand Ronde, Powder, Burnt, Burnt, and Innaha basins.

The NRCS [Basin Outlook Report](#) for April is now available. This report is published monthly from January through June.

Precipitation over the [past two weeks](#) has been below-normal across much of the state especially west of the Cascades where precipitation was up to three inches below normal. For the [month of March](#), precipitation was below-normal across most of the state.

Temperatures over the [past two weeks](#) have been warmer than normal across most of the state. For the [month of March](#), temperatures were cooler than normal across the state.

Over the next [8 to 14 days](#), the NOAA Climate Prediction Center is forecasting a higher than normal probability of above-normal temperature across the state. The precipitation outlook is for normal probability across most of the state with the exception of the southeast corner where below-normal probability of precipitation is forecast and the extreme northwest corner of the state where above-normal probability is expected. The most recent [three month outlook](#) indicates an increased probability of above-normal temperatures along with below-normal precipitation across the state. The next long-term outlook will be issued on May 21, 2020.

[ENSO-neutral](#) is favored for the Northern Hemisphere summer 2020 (~60% chance), remaining the most likely outcome through autumn. During March 2020, above-average sea surface temperatures were observed across most of the tropical Pacific Ocean. For a more complete report, refer to the April 9, 2020 [diagnostic discussion](#) issued by the Climate Prediction Center. The next diagnostic discussion is scheduled for May 14, 2020. Another source of information is the latest [ENSO blog](#) on the climate.gov website.

Statewide streamflow conditions for March were much lower than normal at 45 percent. Values ranged from a high of 78 percent of normal in parts of the Deschutes basin to a low of only 15 percent in the South Coast. After a brief respite, recent conditions reflect a return to dry and warmer weather. Flows in western Oregon are ranging from 70 percent of normal in the Sandy Basin to around 30 percent of normal in the South Coast and Umpqua Basins. In some areas west of the Cascades snowmelt is beginning to contribute to streamflow but there are many areas where this is still not evident and may not be realized

due to lower than normal snowpack. Flows in the Klamath and Owyhee basins are about 35 percent of normal while flows in the Umatilla are close to 70 percent.

USACE Reservoirs:

Rogue: The Rogue system is currently 76 percent full and 19 percent below rule curve. The current 10-day forecast shows dry and warming conditions across the basin, which has the potential for snowmelt runoff mid to late week. Lost Creek will be maintaining releases at 850 cfs in efforts to continue capturing as much inflows as possible, while still providing releases downstream to the fry that have recently entered the system. Applegate will continue to maintain a minimum release of 125 cfs through the week. Current fisheries goals are maintaining the fry rearing habitat.

Willow Creek: The Willow Creek Project is currently 101 percent full and 1 percent above Rule Curve. The current project objective is to release 13 cfs to satisfy the current irrigation demand of the senior water rights holders, as well as an additional 27 cfs to slow down the current fill rate. There are currently warm temperatures forecasted the next 10 days across the basin, and we are expecting to see a continuation of the snowmelt that started last week. Current inflow is around 37 cfs with outflows of about 30 cfs.

Willamette: The Willamette is 59 percent full and 27 percent behind rule curve. Only Dorena and Foster are forecast to fill on rule curve this week while the rest continue to lag behind. Monday's forecast shows 10 days of dry weather and a Salem flow of 10 kcfs by third week of April. Current agreement with NMFS & ODFW have no minimum target at Salem thru 15 April 2020 and releases of 1,200 cfs and 1,100 cfs from Big Cliff and Foster for spawning steelhead. The normal target is 1,500 cfs in these basins. The normal 16-30 April 2020 target at Salem is 17,800 cfs. Updated modeling efforts indicate that we are likely to experience a deficit year. This is also borne out by NOAA's Climate Prediction Center's Seasonal Drought Outlook which has had the Willamette basin in a 'Persistent Drought/Drought Likely' category since end of March. Flows in the Willamette River at Albany are 6,640 cfs with flows at Salem at 11,100 cfs.

USBR Reservoirs:

Tualatin River Basin: Scoggins reservoir is at 94 percent of capacity and maintaining storage levels with inflows around 48 cfs and outflows around 115 cfs.

Umatilla River Basin: McKay reservoir is at 95 percent of capacity and filling with inflows around 206 cfs and outflows around 115 cfs.

Deschutes River Basin: Prineville reservoir is at 76 percent of capacity and filling with inflows around 427cfs and outflows around 263 cfs. Ochoco reservoir is at 54 percent of capacity and maintaining storage levels with inflows around 50 cfs and outflows around 7 cfs. Crescent Lake is at 49 percent, Wickiup is at 68 percent and Crane Prairie is at 82 percent of capacity.

Malheur River Basin: Warm Springs reservoir is at 78 percent of capacity and maintaining storage levels with inflows around 312 cfs and outflows of around 198 cfs. Beulah reservoir is at 78 percent of capacity and filling with inflows around 230 cfs and outflows around 156 cfs. Bully Creek reservoir is at 100 percent of capacity and maintaining storage levels with inflows around 10 cfs and outflows around 19 cfs.

[Owyhee River Basin](#): Owyhee reservoir is at 85 percent of capacity and maintaining storage levels with inflows around 1098 cfs and outflows around 178 cfs.

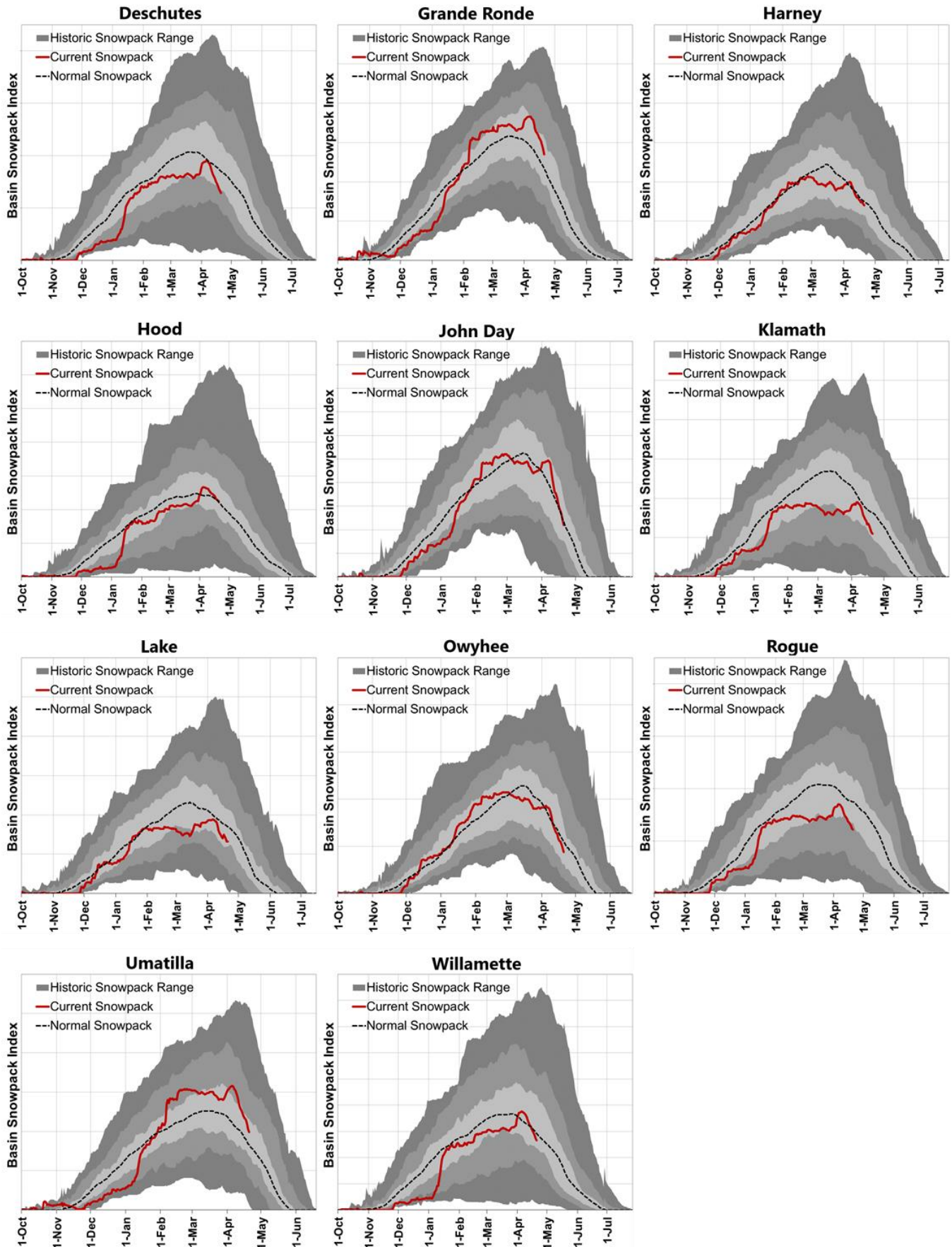
[Burnt and Powder River Basins](#): Unity reservoir is at 98 percent of capacity and filling with inflows around 226 cfs and outflows around 168 cfs. Phillips reservoir is at 41 percent of capacity and filling with inflows around 160 cfs and outflows around 35 cfs.

The most recent update to the [US Drought Monitor](#) indicates that close to 90 percent of the state is in D0 (abnormally dry) conditions, with over 60 percent of the state listed as in D1 (moderate drought) and now 26 percent is listed as in D2 (severe drought). Governor Brown declared a [drought emergency](#) in Klamath County in early March and it is very likely that more counties could follow in the near future.

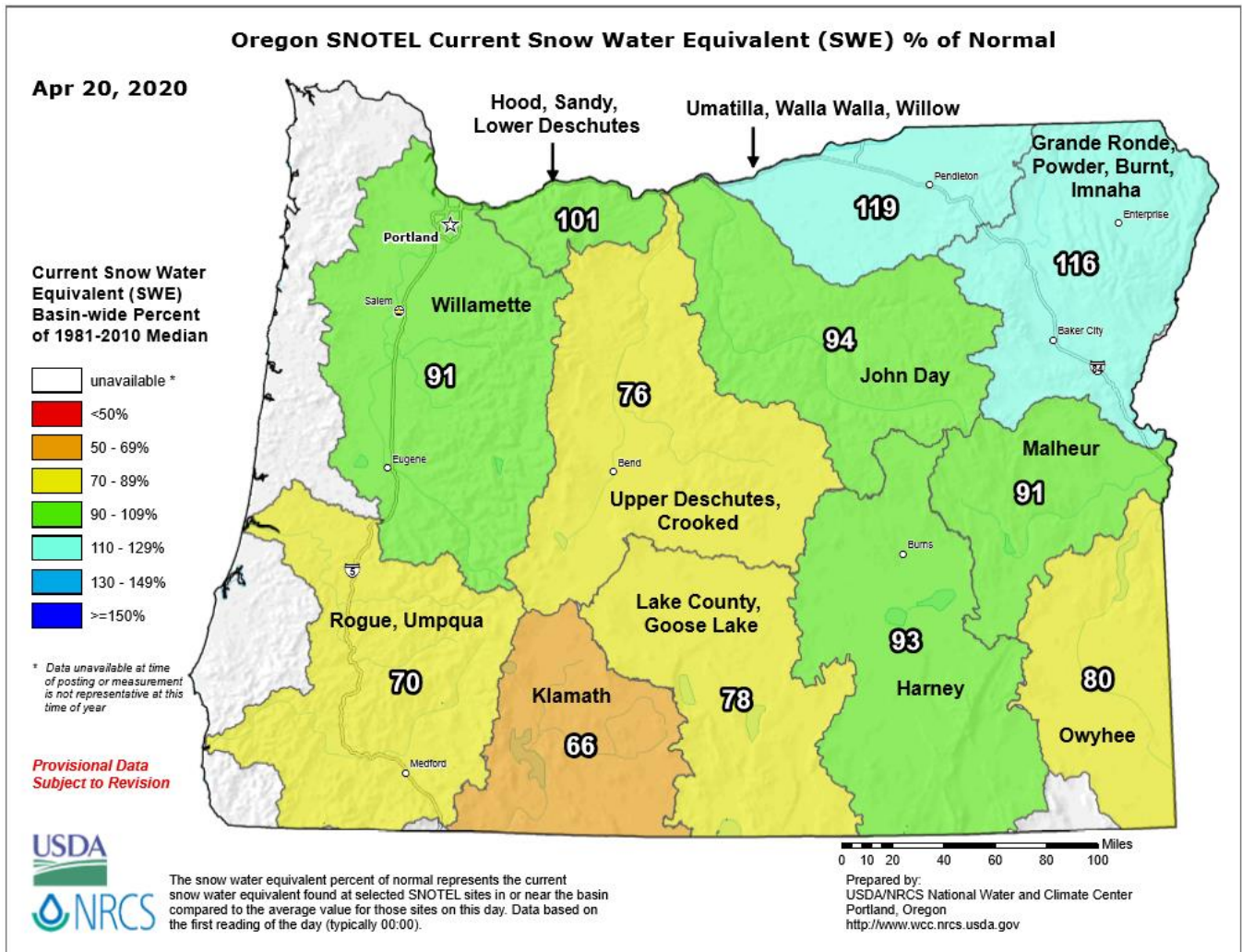
The Oregon Office of Emergency Management has assembled a new [hydrology/meteorology dashboard](#) featuring many of the data sources used to generate this report. Use the selection arrows at the bottom of your browser to navigate to the various data sources.

Data & Products:	Page:
Snowpack Graphs – April 20, 2020	4
Snow Water Equivalent (SWE) - Percent of Normal	5
Precipitation (Mountain) - Percent of Normal	6
Precipitation – (1 Month) Percent of Normal	7
Temperature – (1 Month) Departure from Normal	8
Three Month Temperature and Precipitation Outlook	9
Total Moisture - Percentile	10
U.S. Drought Monitor for Oregon	11
Streamflow Conditions by County – March, 2020	12
Streamflow Conditions – South Coast Basin (Josephine County)	12

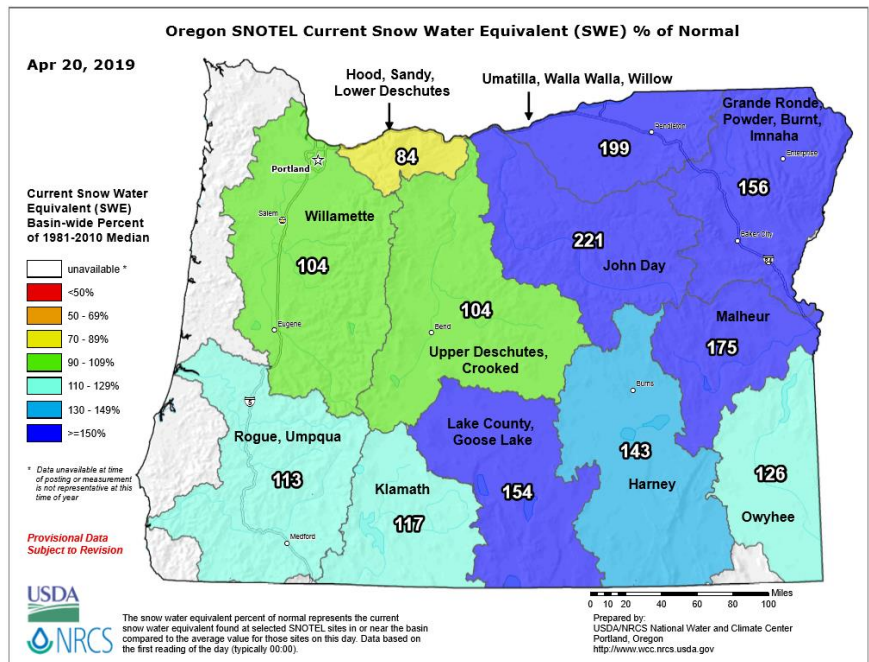
Snowpack Graphs – April 20, 2020



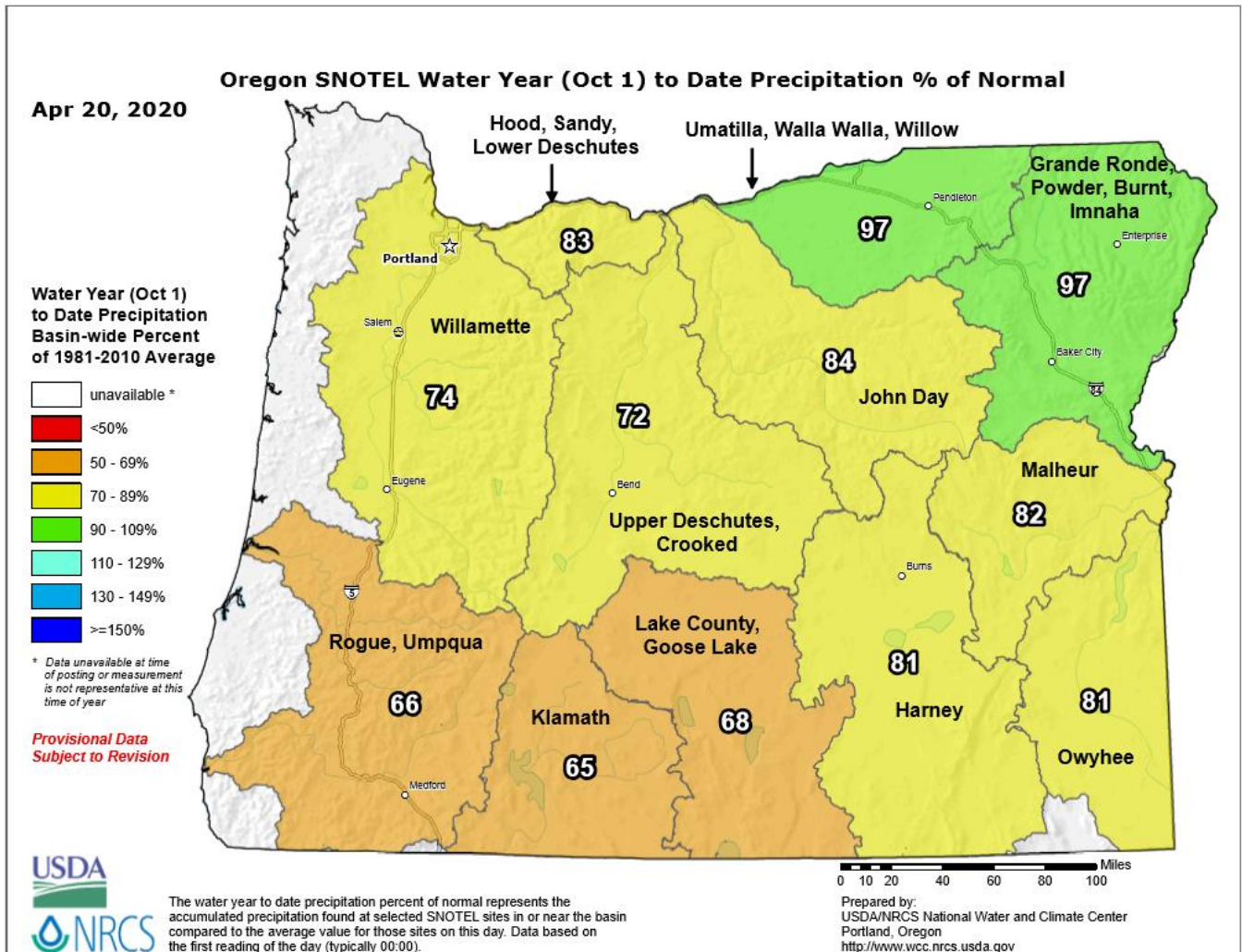
Snow Water Equivalent (SWE) - Percent of Normal



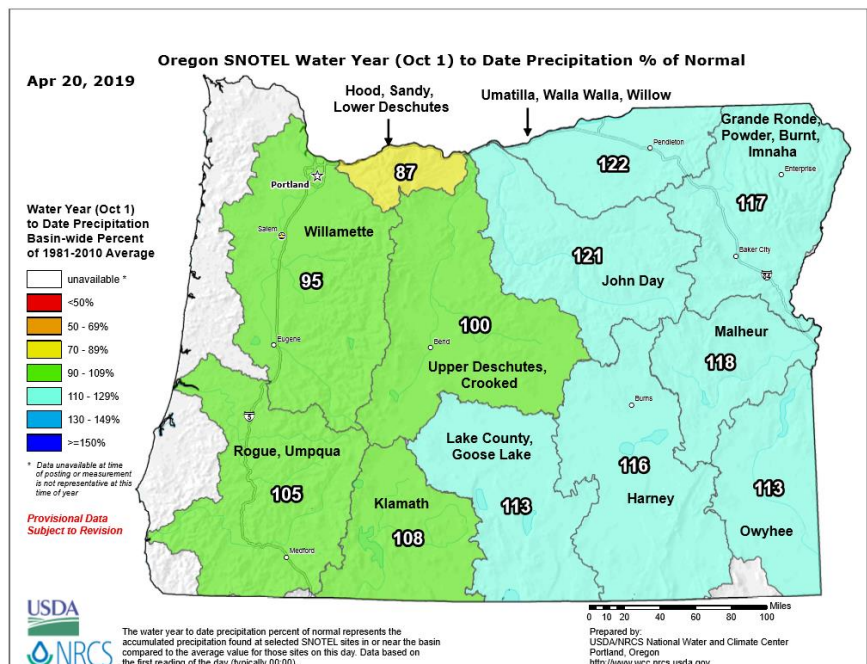
Compared to this time last year:



Precipitation (Mountain) - Percent of Normal



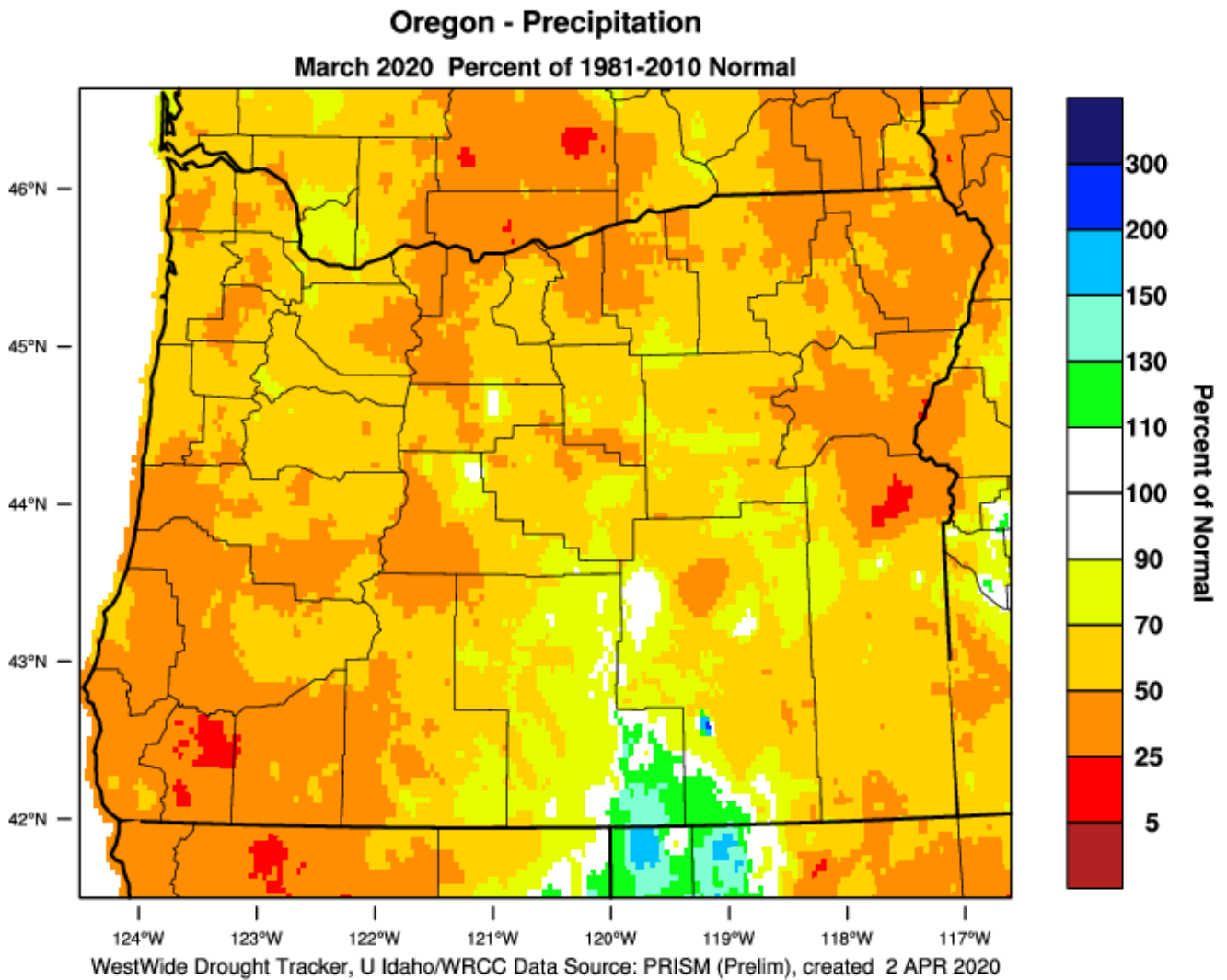
Compared to this time last
year:



Precipitation – (1 Month) Percent of Normal

Website: <https://wrcc.dri.edu/wwdt/index.php?folder=pon1>

PRISM > Precipitation Anomaly 1 Month > Oregon



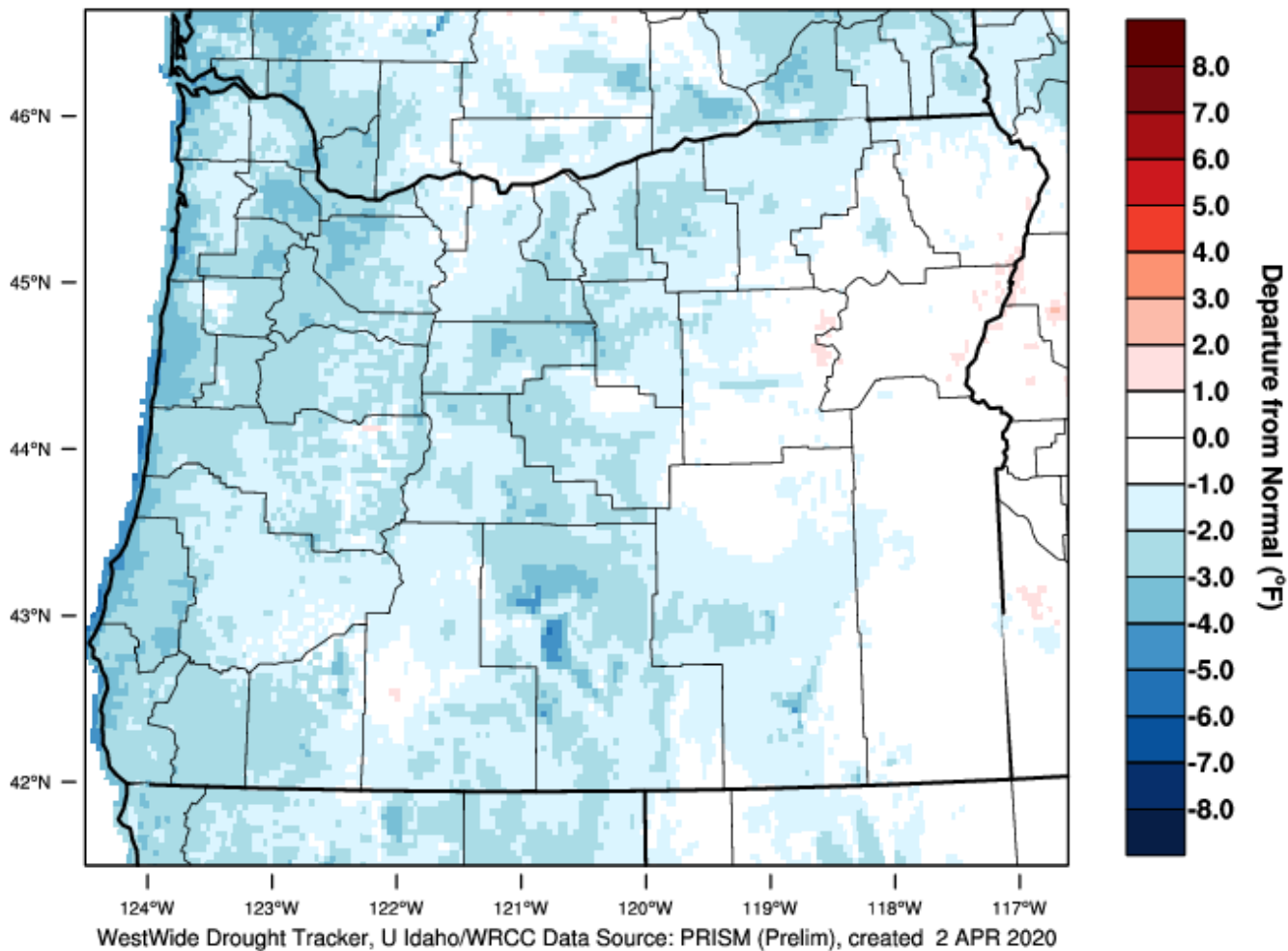
Temperature – (1 Month) Departure from Normal

Website: <https://wrcc.dri.edu/wwdt/index.php?region=or>

PRISM > Temperature Anomaly 1 Month > Oregon

Oregon - Mean Temperature

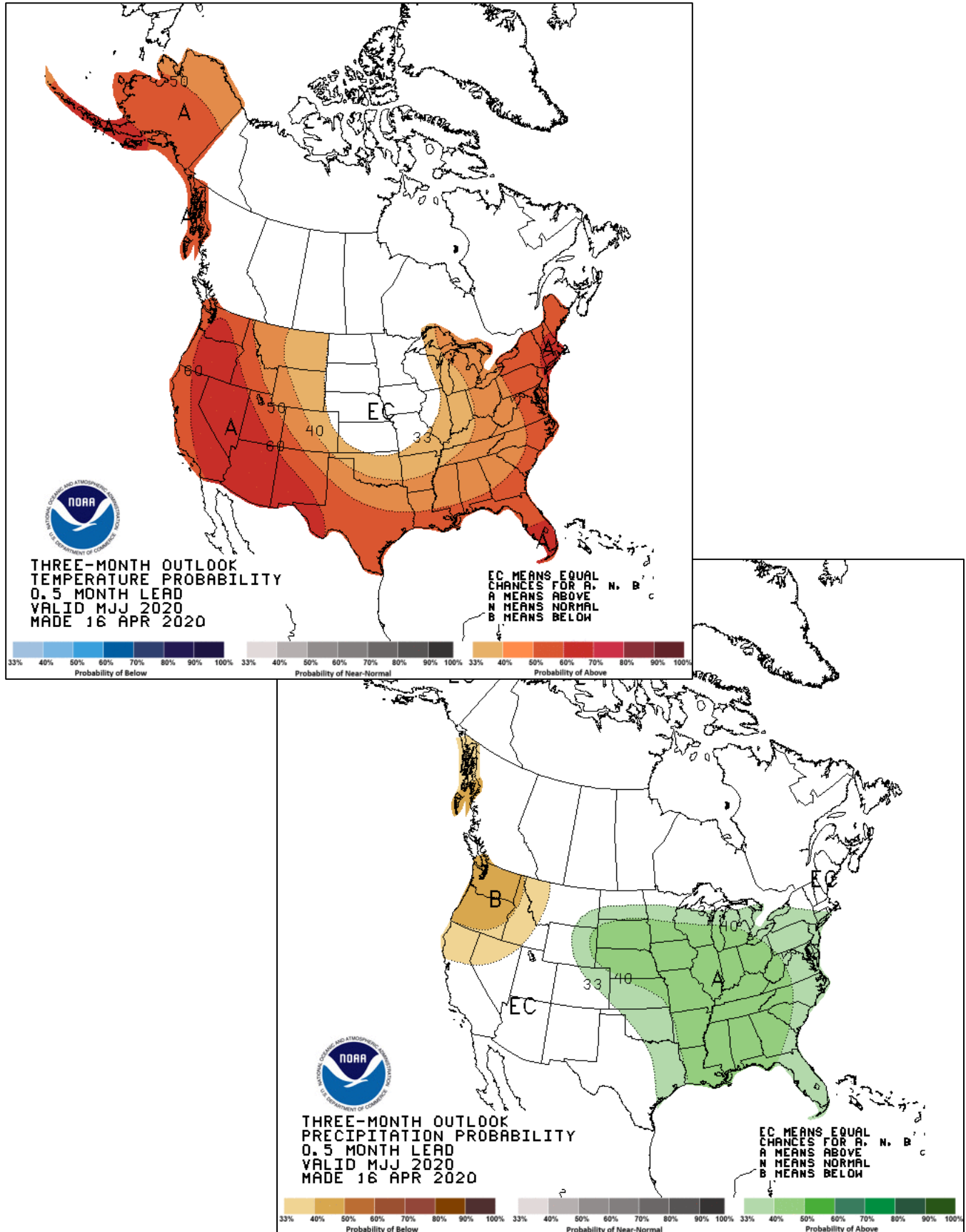
March 2020 Departure from 1981-2010 Normal



Three Month Temperature and Precipitation Outlook

April through June

Website: http://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=1



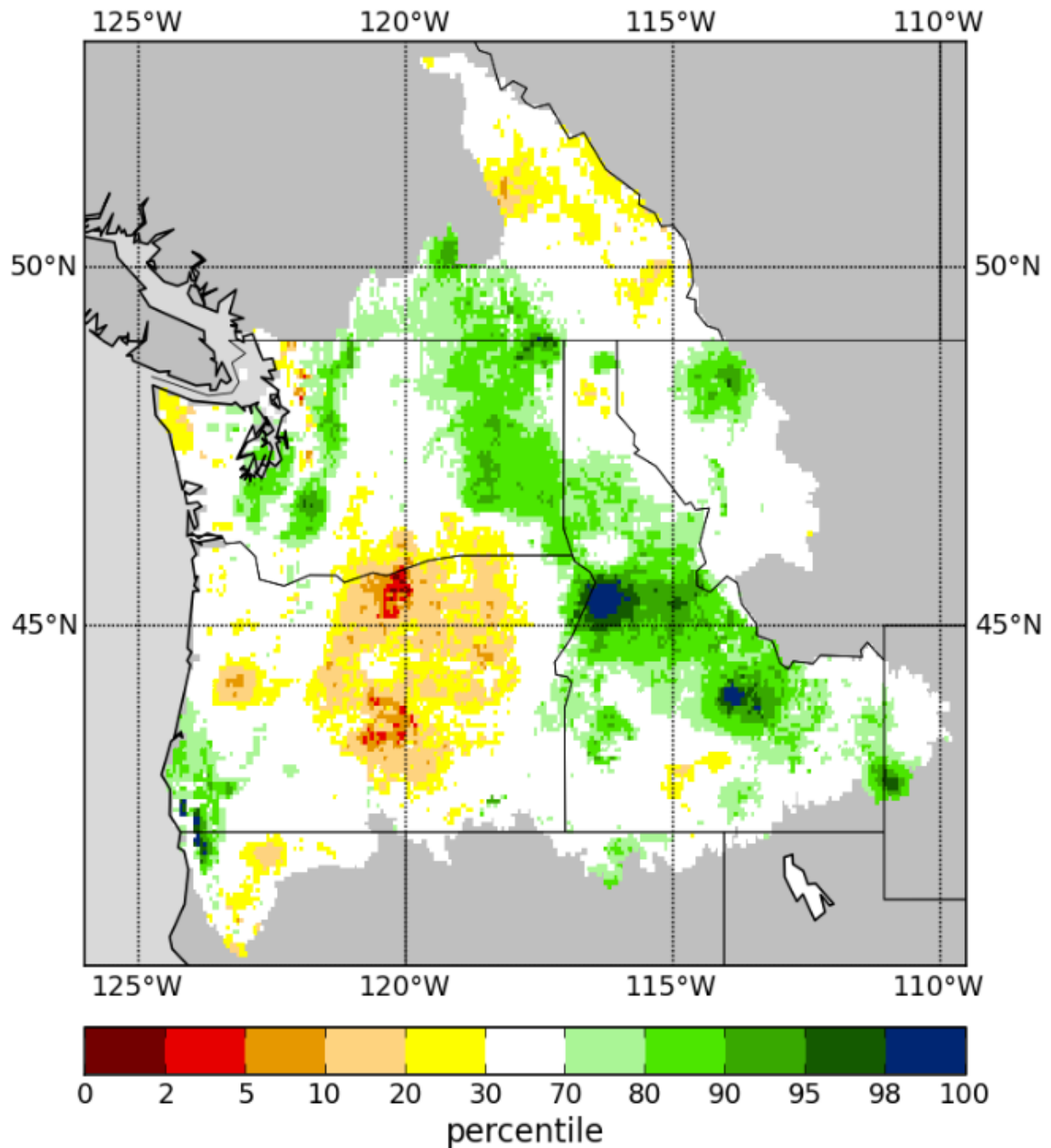
Total Moisture - Percentile

Total Moisture (STOT) is a moisture index calculated by adding Soil Moisture and Snow Water Equivalent. STOT represents the total water content of a region.

Website: http://www.hydro.ucla.edu/SurfaceWaterGroup/forecast/monitor_pnw/index.shtml

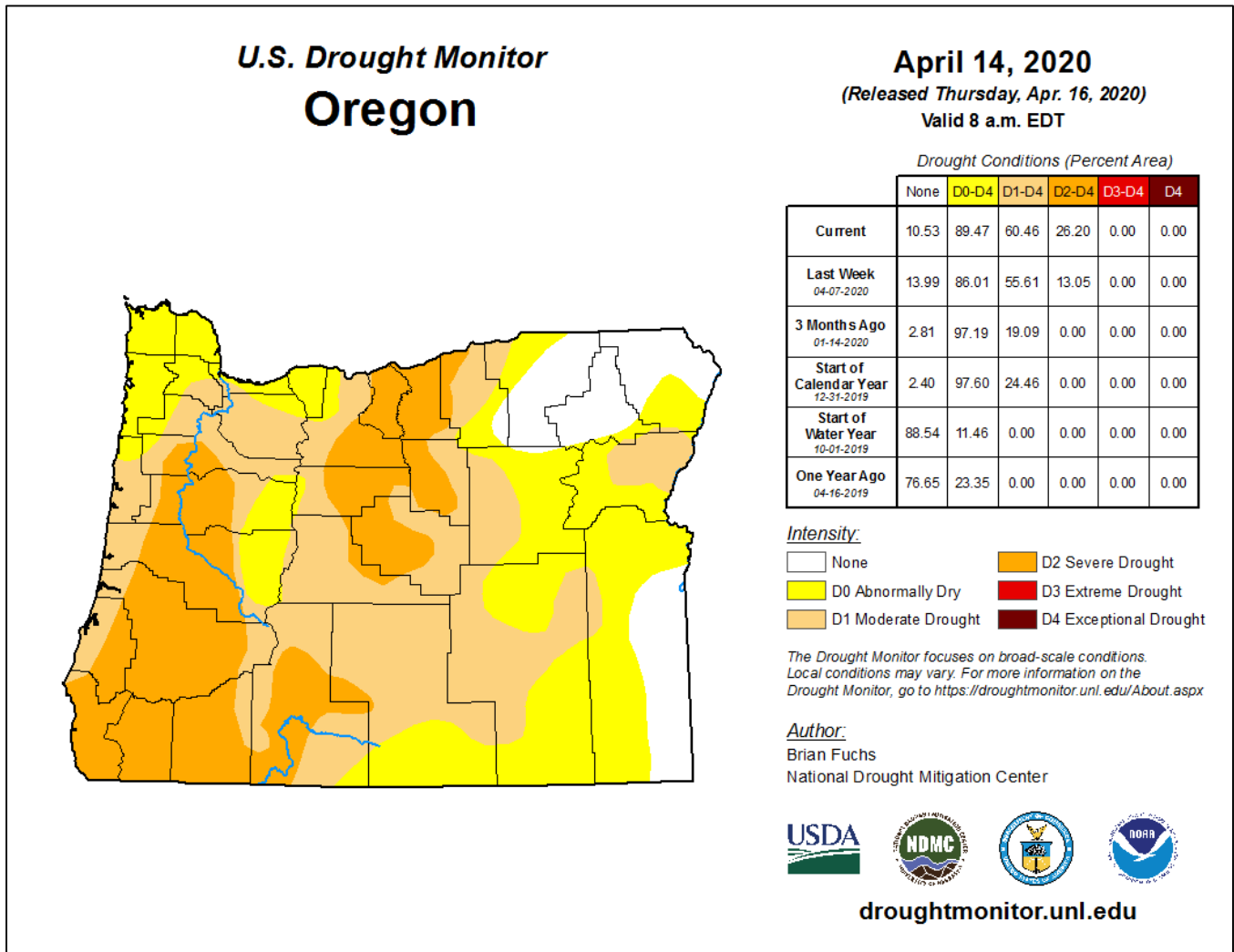
Total Moisture Percentile

2020--04--18

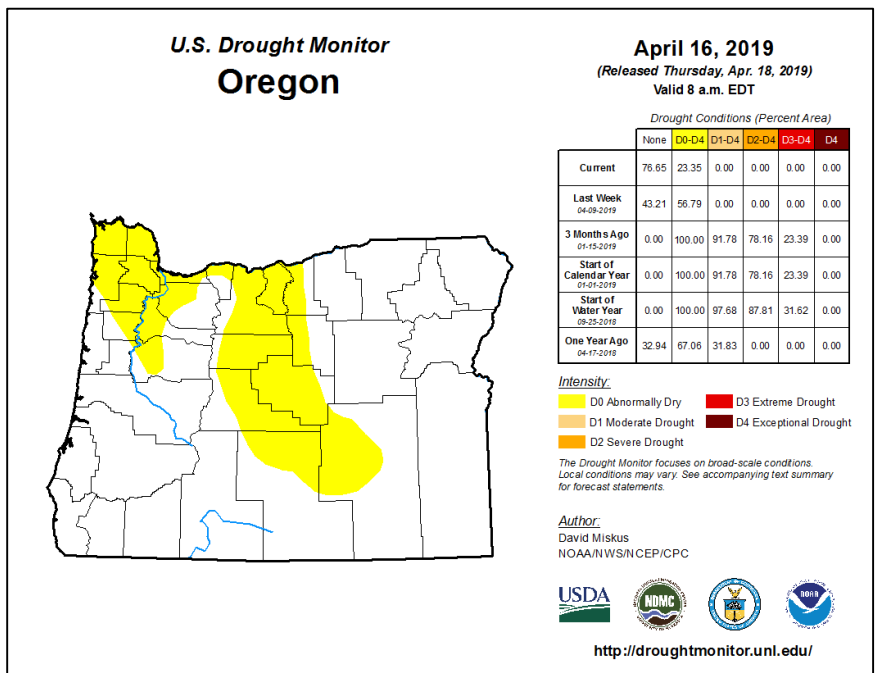


U.S. Drought Monitor for Oregon

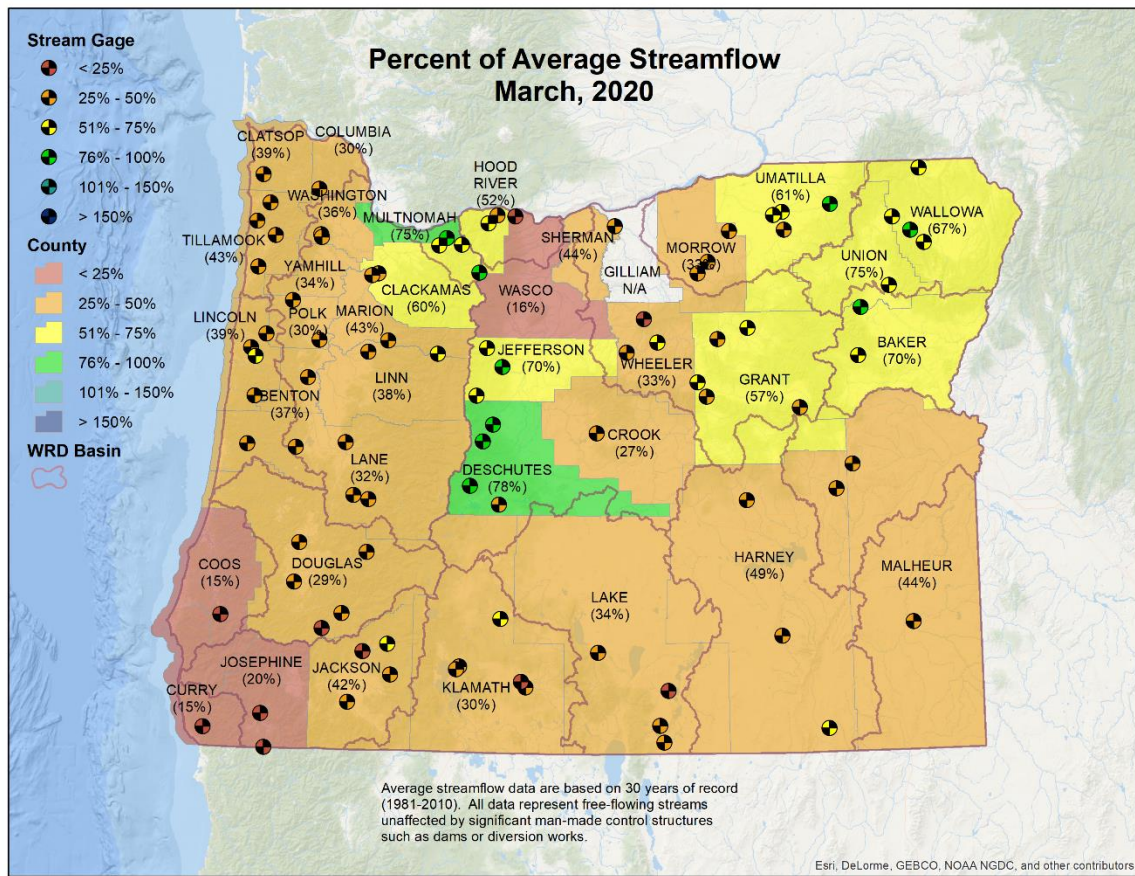
Website: <https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?OR>



Compared to this time last year:



Streamflow Conditions by County – March, 2020



Streamflow Conditions – South Coast Basin (Josephine County)

