Oregon
Water Conditions Report
March 23, 2020

OREGON
WATER RESOURCES
DEPARTMENT

Current Oregon statewide snow water equivalent is 85 percent of normal, decreased slightly from 86 percent two weeks ago. Basin values vary from as low of 67 percent of normal in the Klamath basin, to 115 percent of normal in the Umatilla, Walla Walla, and Willow basin. The northeast portion (Umatilla, Union, and Wallowa Counties) of the state continues to retain above normal snowpack, while the southwestern two-thirds of the state remains below normal for snow water equivalent.

Current Oregon statewide precipitation at NRCS SNOTEL sites is 76 percent of average, remaining below average for the water year. Basin precipitation values range from a low of 65 percent of average in the Klamath and Lake County, Goose Lake and Rouge, Umpqua basins, to 100 percent of average in the Umatilla, Walla Walla, Willow, and the Grand Ronde, Powder, Burnt, and Imnaha basins. Southwestern Oregon continues to be the driest region in the state with well below normal snowpack and water year precipitation being observed.

The NRCS Basin Outlook Report for March is now available. This report is published monthly from January through June. The March report states that the first week of February brought a storm to the northeast corner of the state that included heavy snow and heavy rain on snow, resulting in catastrophic flooding of the Umatilla and Walla Walla River systems. At the same time, the southwestern basins in the state received well below normal snow and precipitation, which led to significantly lower snow water equivalent and water year precipitation values on March 1 compared to a month ago.

Precipitation over the past two weeks has been below-normal across western and northeastern Oregon. Especially noteworthy in southwest Oregon where precipitation was up to 4 inches lower than normal. For the month of February, precipitation was below-normal across much of the state with the exception of areas of north central Oregon where precipitation was over 200 percent above.

Temperatures over the past two weeks have been primarily normal to below-normal in western and central Oregon and above-normal in eastern Oregon. For the month of February, temperatures were cooler to the west of the Cascades and warmer to the east.

Over the next 8 to 14 days, the NOAA Climate Prediction Center is forecasting below-normal temperature probability across the northwest third of the state, transitioning to above normal across the remaining two-thirds. The precipitation outlook is similar in geographic scope ranging from normal probability in the northwest to below normal for the remainder of the state. 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 April 16, 2020.

ENSO-neutral continues to be favored through Northern Hemisphere spring 2020 (~65 percent chance), continuing through summer 2020 (~55 percent chance). During February 2020, above-average sea surface temperatures were evident across the western,

central, and far eastern Pacific Ocean. For a more complete report, refer to the March 12, 2020 diagnostic discussion issued by the Climate Prediction Center. The next diagnostic discussion is scheduled for April 9, 2020. Another source of information is the latest ENSO blog on the climate.gov website.

February statewide streamflow ended up at 77 percent of normal for this time of year. This is lower than the 100 percent seen in January. Regionally for February, streamflow conditions were about 79 percent of normal east of the Cascades and 75 percent to the west. Flows varied widely across the state from only 30 percent in the South Coast and not surprisingly, up to 180 percent in the Umatilla.
Lately, streamflow continues to trend downward across a broad swath of southern Oregon, including parts of the Umpqua, South Coast, Rogue, Klamath Goose & Summer Lake and Harney basins. In Curry County, flows in the Chetco River are at record low levels for this time of year.

USACE Reservoirs:

Willamette: The Willamette system is 35 percent full and 29 percent below rule curve. Flows in the Willamette River at Albany are 5,730 cfs with flows at Salem at 9,950 cfs.

Rogue: The Rogue system is currently 62 percent full and 20 percent below rule curve. Lost Creek is 70 percent full and 16 percent below rule. Outflows are holding at about 1,100 cfs with inflows around 1380 cfs. Applegate is at 26 percent, 37 percent below rule, with releases currently at 125 cfs.

Willow Creek: The Willow Creek Project is currently 83 percent full and 1 percent below rule curve. Current inflow is around 14 cfs with outflows at about 3 cfs.

Umatilla River Basin: McKay reservoir is at 84 percent of capacity and filling with inflows around 121 cfs and outflows around 19 cfs.

Deschutes River Basin: Prineville reservoir is at 68 percent of capacity and filling with inflows around 278 cfs and outflows around 93 cfs. Ochoco reservoir is at 52 percent of capacity and maintaining storage levels with inflows around 24 cfs and outflows around 4 cfs. Crescent Lake is at 50 percent, Wickiup is at 69 percent and Crane Prairie is at 82 percent of capacity.

Malheur River Basin: Warm Springs reservoir is at 70 percent of capacity and filling with inflows around 294 cfs. Beulah reservoir is at 64 percent of capacity and filling with inflows around 193 cfs. Bully Creek reservoir is at 89 percent of capacity and filling with inflows around 141 cfs and outflows around 4 cfs.

Owyhee River Basin: Owyhee reservoir is at 82 percent of capacity and filling with inflows around 1856 cfs and outflows around 108 cfs.

Burnt and Powder River Basins: Phillips reservoir is at 32 percent of capacity and filling with inflows around 143 cfs and outflows around 15 cfs. Unity reservoir is at 82 percent of capacity and filling with inflows around 221 cfs and outflows around 43 cfs.

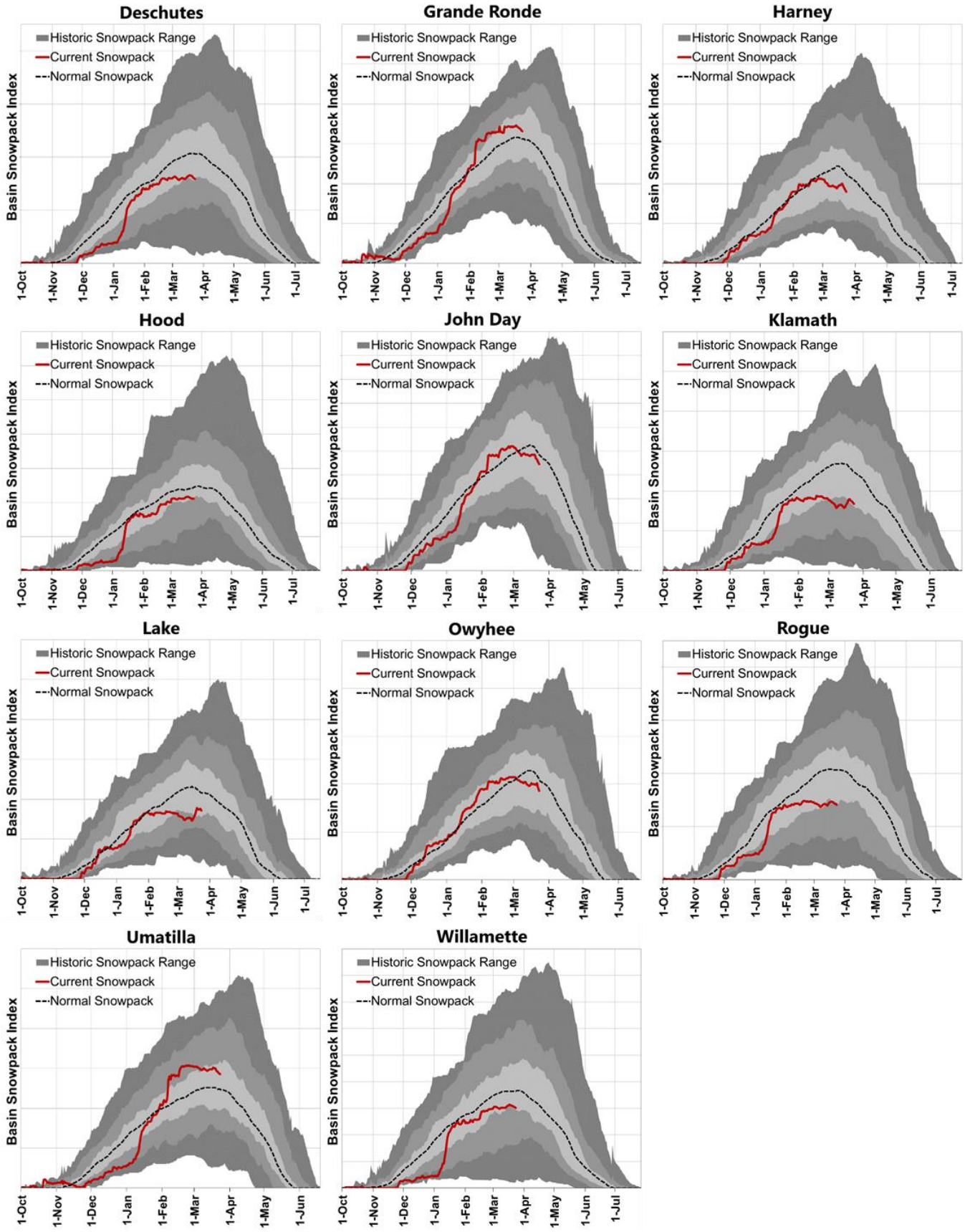
Tualatin River Basin: Scoggins reservoir is at 86 percent of capacity and maintaining storage levels with inflows around 57 cfs and outflows around 11 cfs.

The most recent update to the US Drought Monitor indicates that over 84 percent of the state is in D0 (abnormally dry) conditions, with just over 55 percent of the state listed as in D1 (moderate drought). This reflects the recent drier-than-normal conditions and is a degradation over the past two weeks.

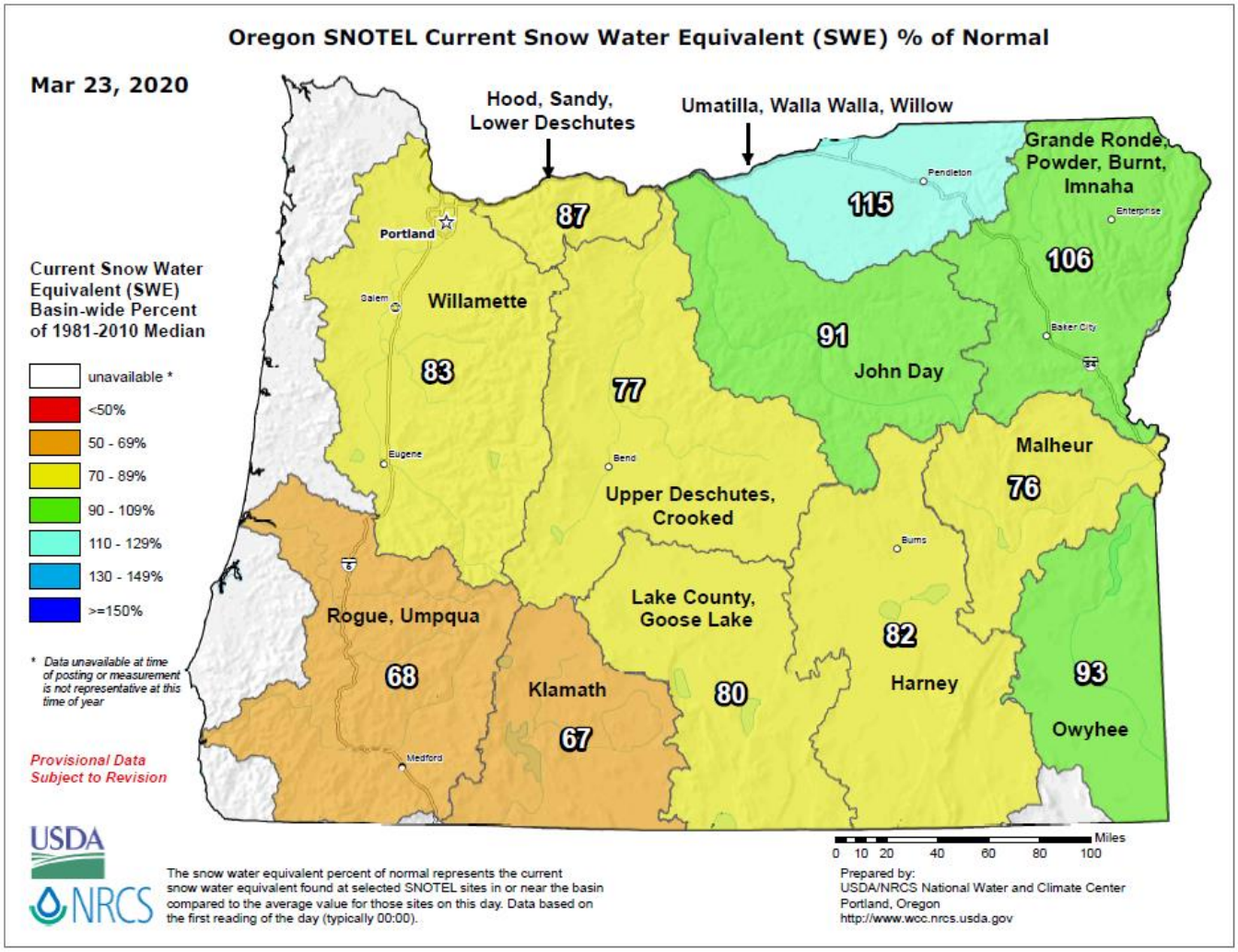
The Oregon Office of Emergency Management has assembled a new hydrology/meteorology dashboard featuring many of the data sources used to generate this report. Use the selection arrows at the bottom of your browser to navigate to the various data sources.

Data & Products: Page:

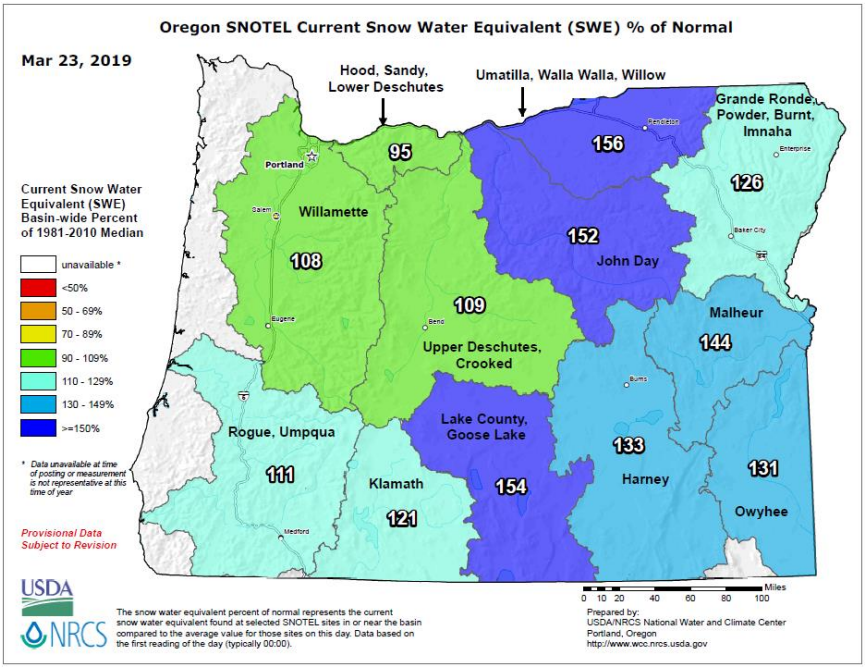
Snowpack Graphs – March 23, 2020



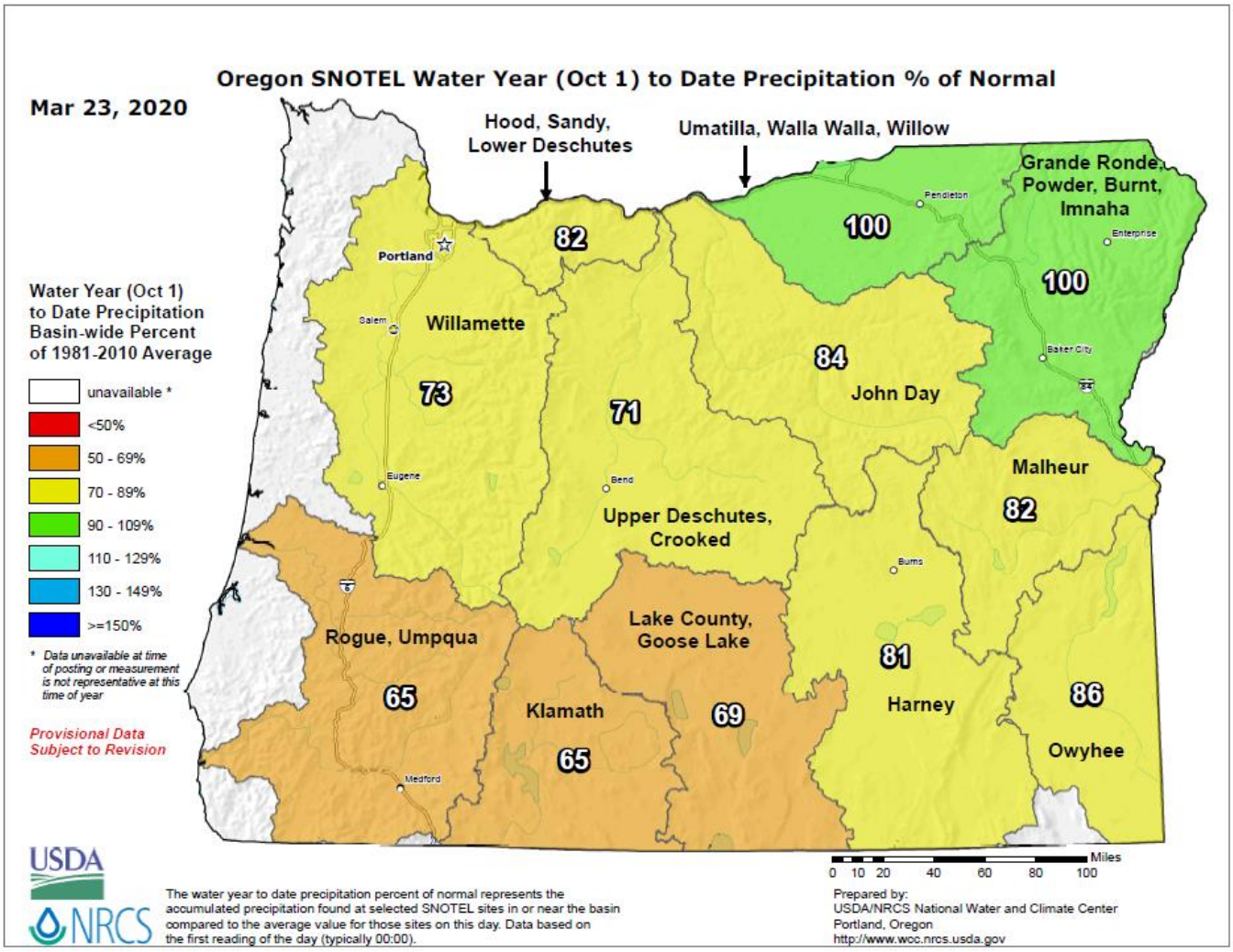
Snow Water Equivalent (SWE) - Percent of Normal



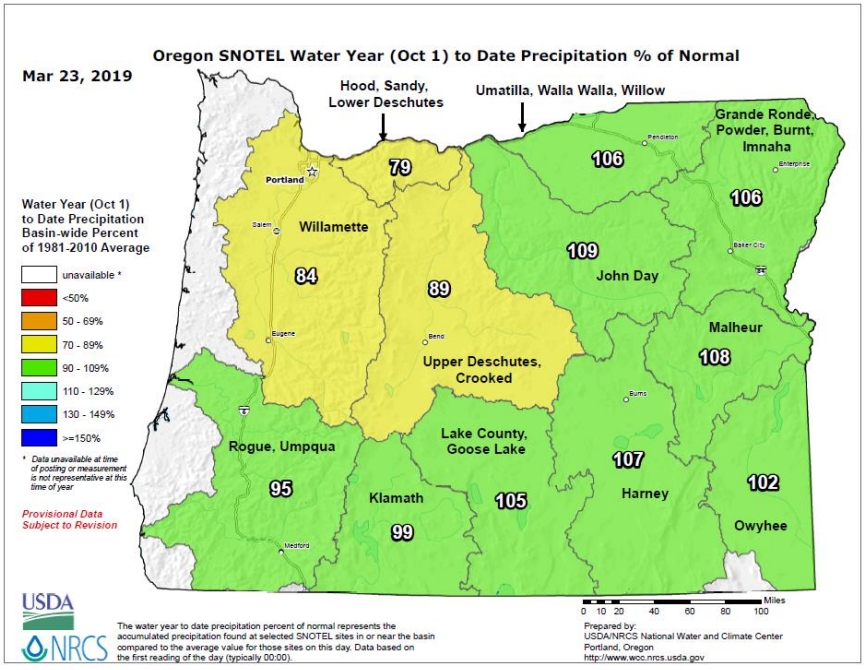
Compared to this time <u>last year</u>:



Precipitation (Mountain) - Percent of Normal



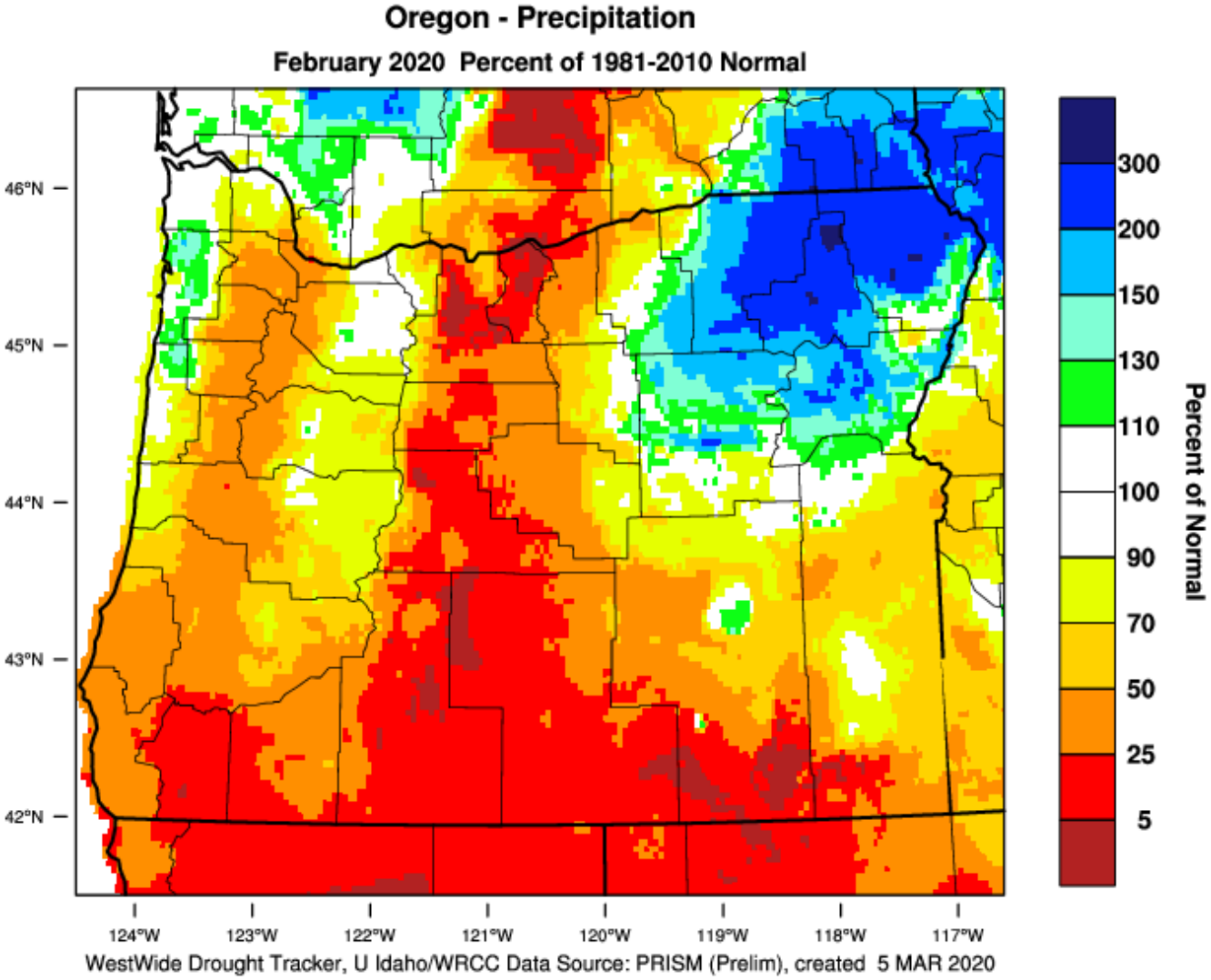
Compared to this time <u>last year</u>:



Precipitation – (1 Month) Percent of Normal

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

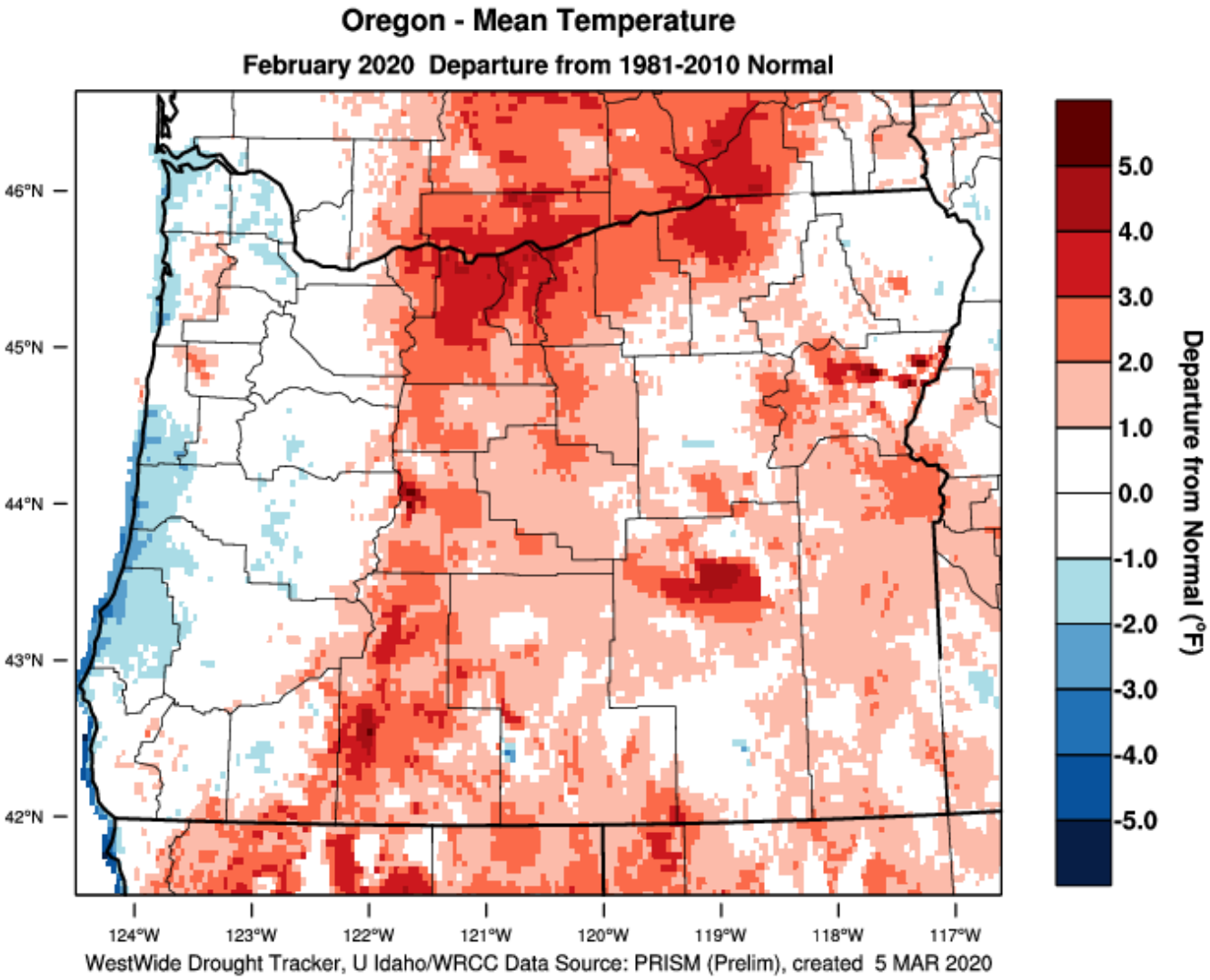
PRISM > Precipitation Anomaly 1 Month > Oregon



Temperature – (1 Month) Departure from Normal

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

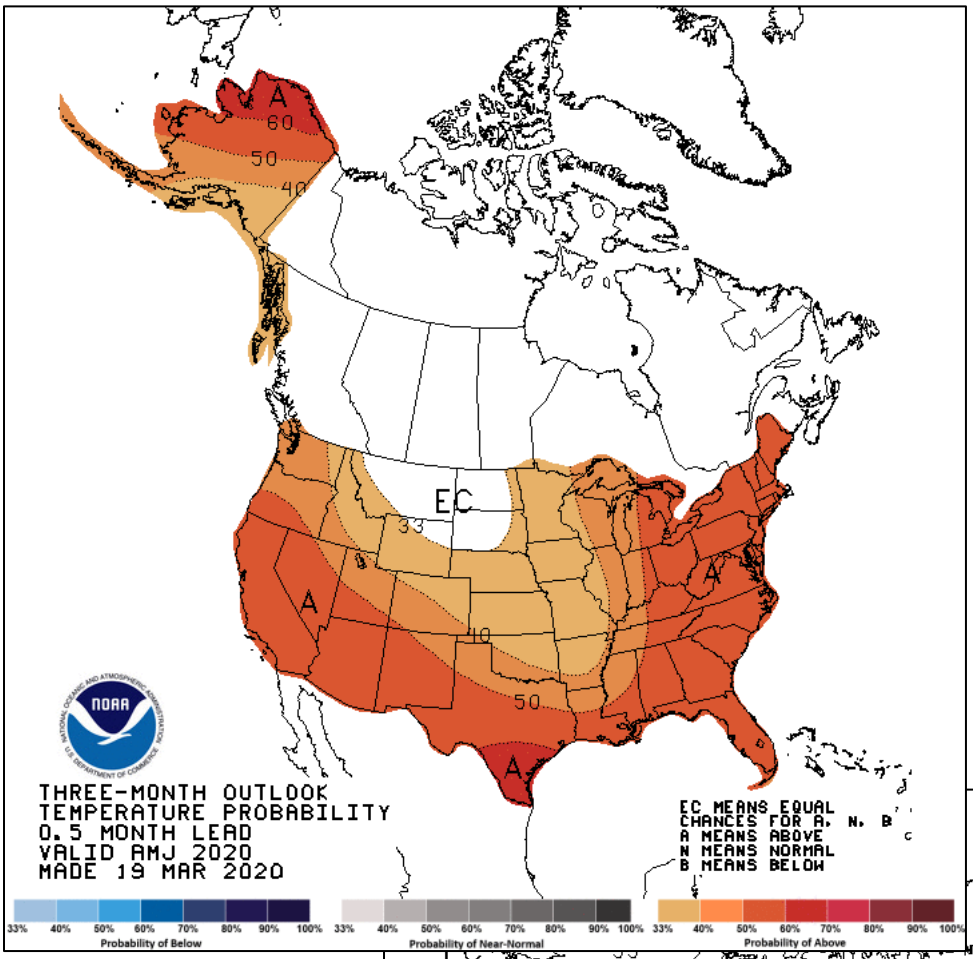
PRISM > Temperature Anomaly 1 Month > Oregon

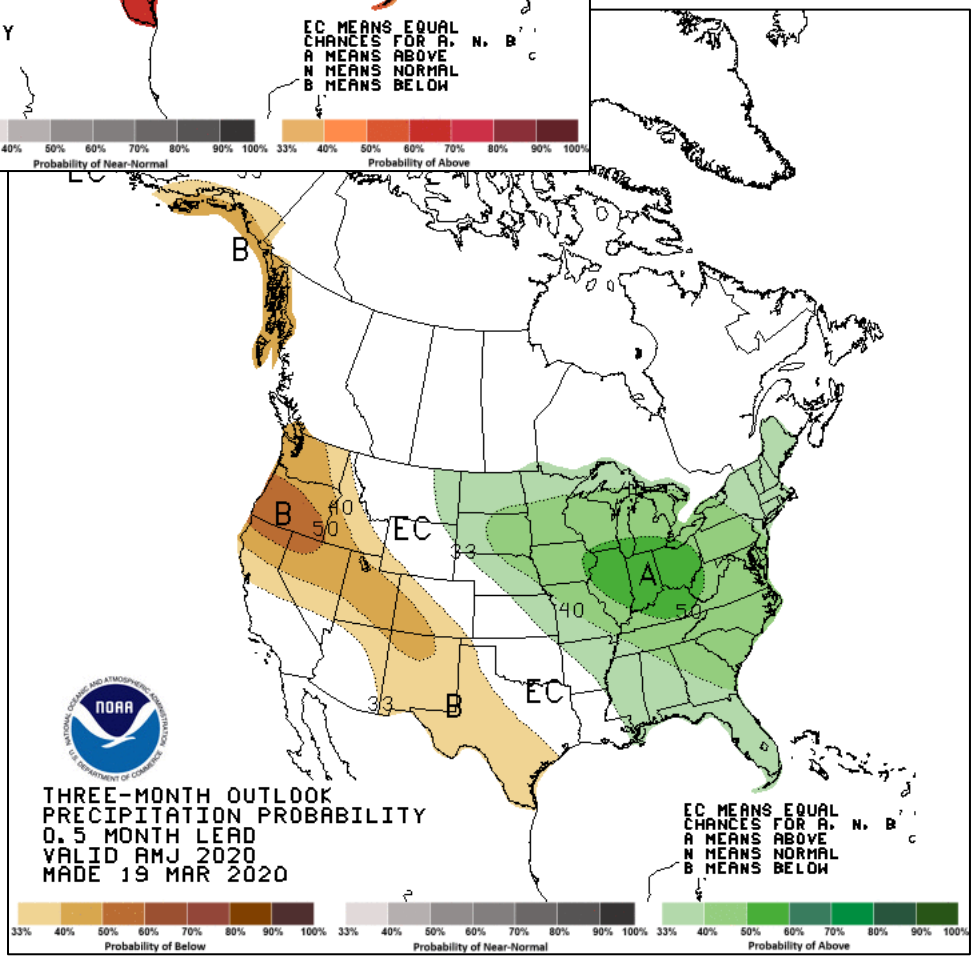


Three Month Temperature and Precipitation Outlook

April through June

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

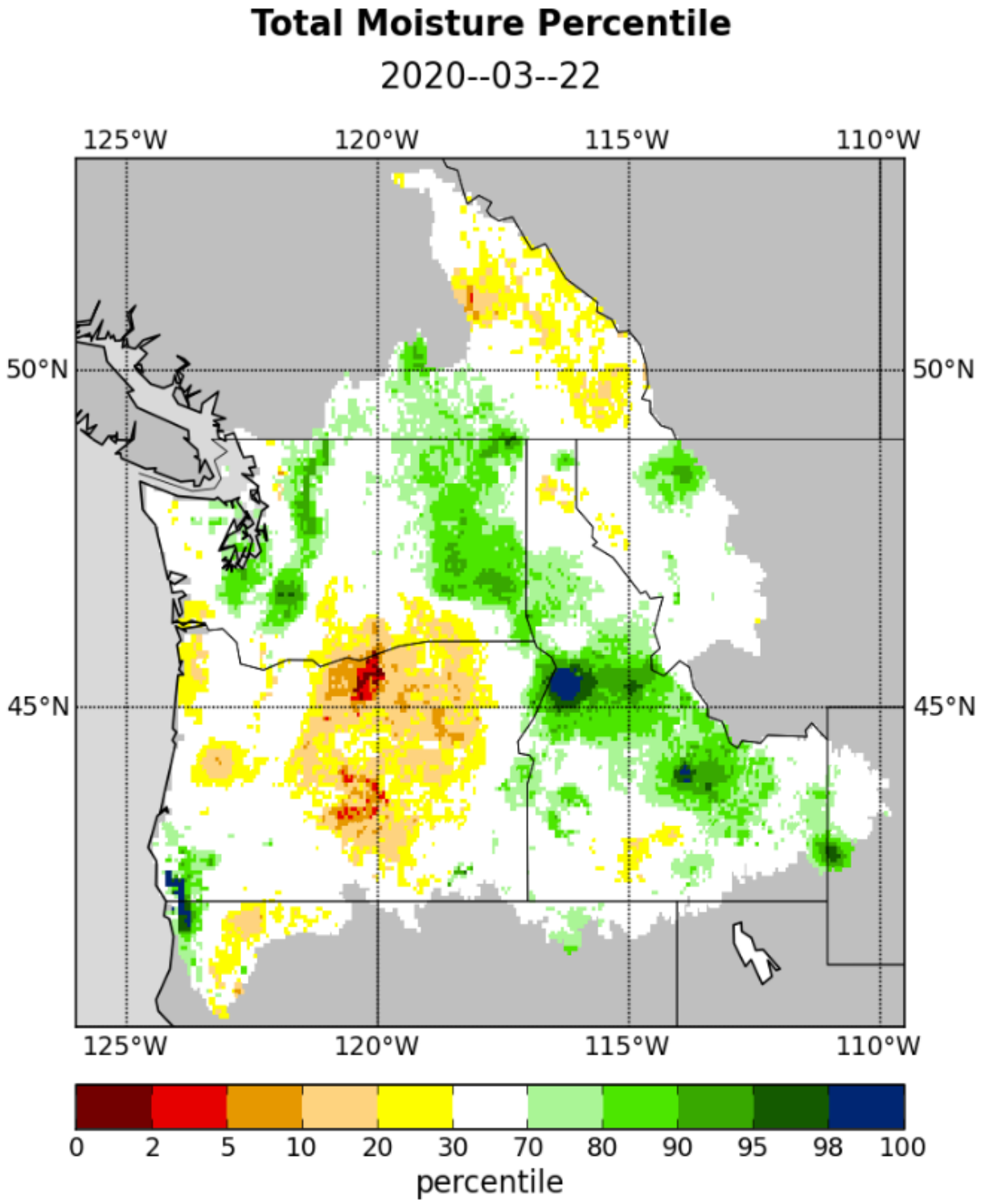




Total Moisture - Percentile

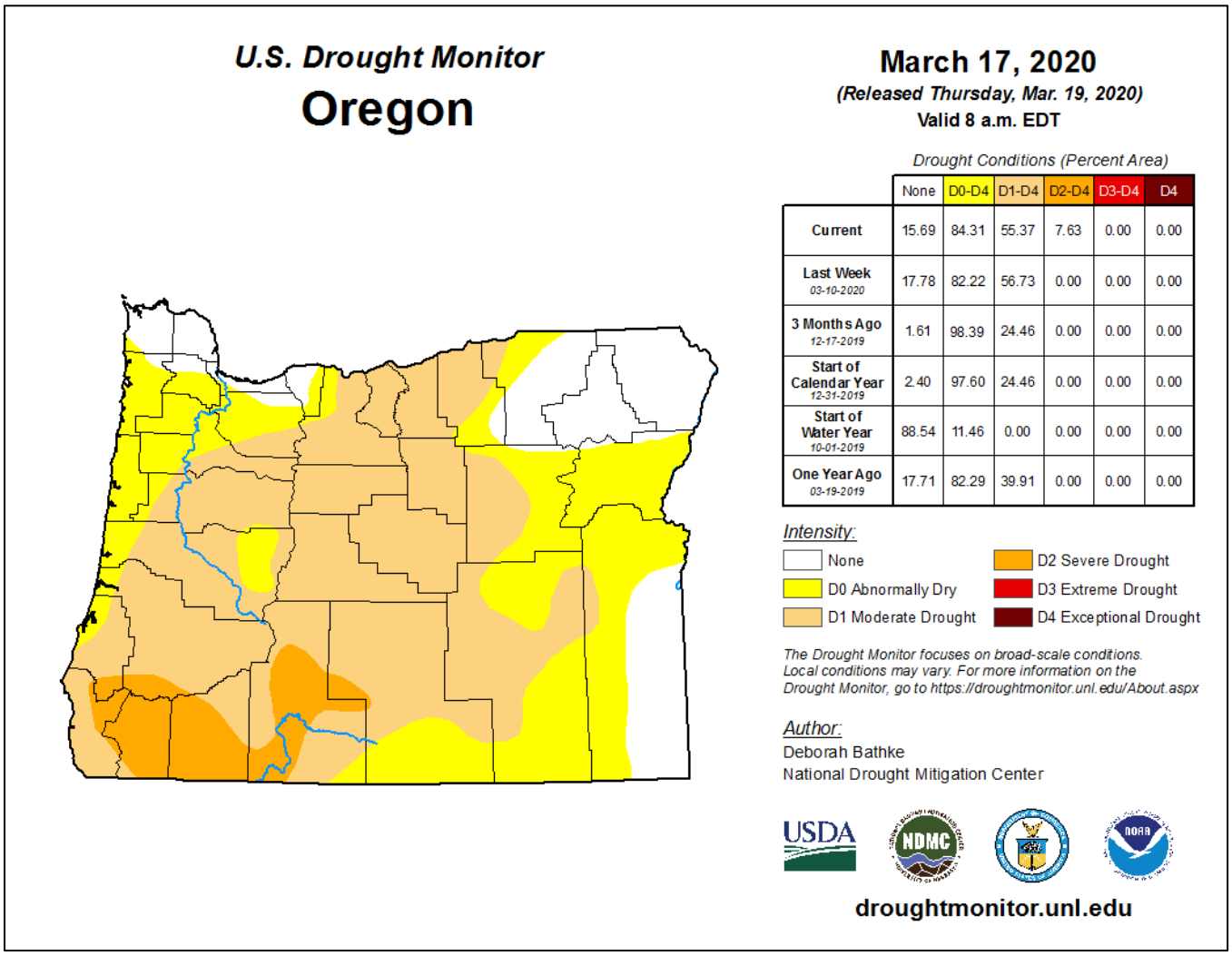
Total Moisture (STOT) is a moisture index calculated by adding Soil Moisture and Snow Water Equivalent. STOT represents the total water content of a region.

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

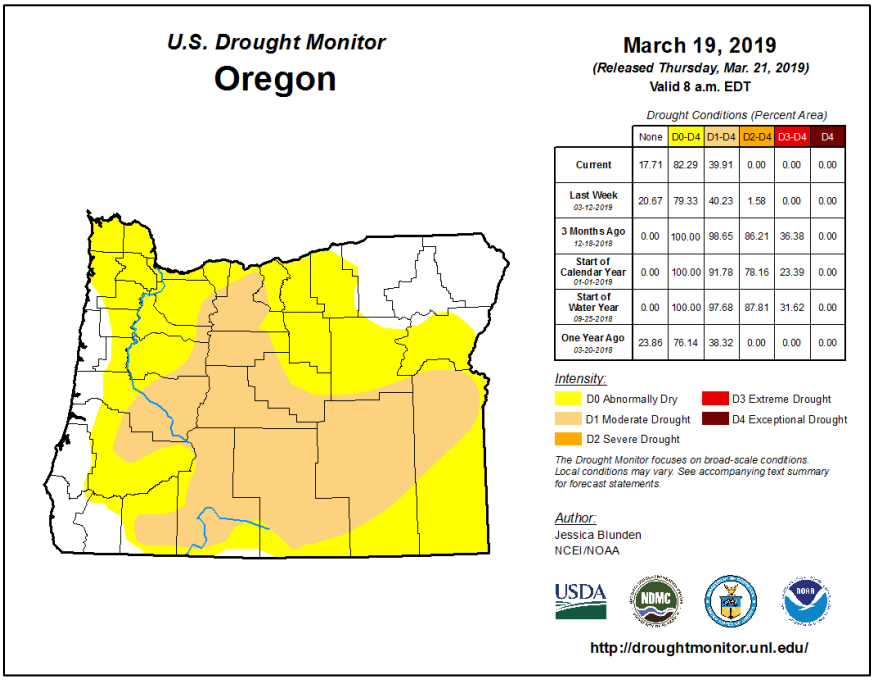


U.S. Drought Monitor for Oregon

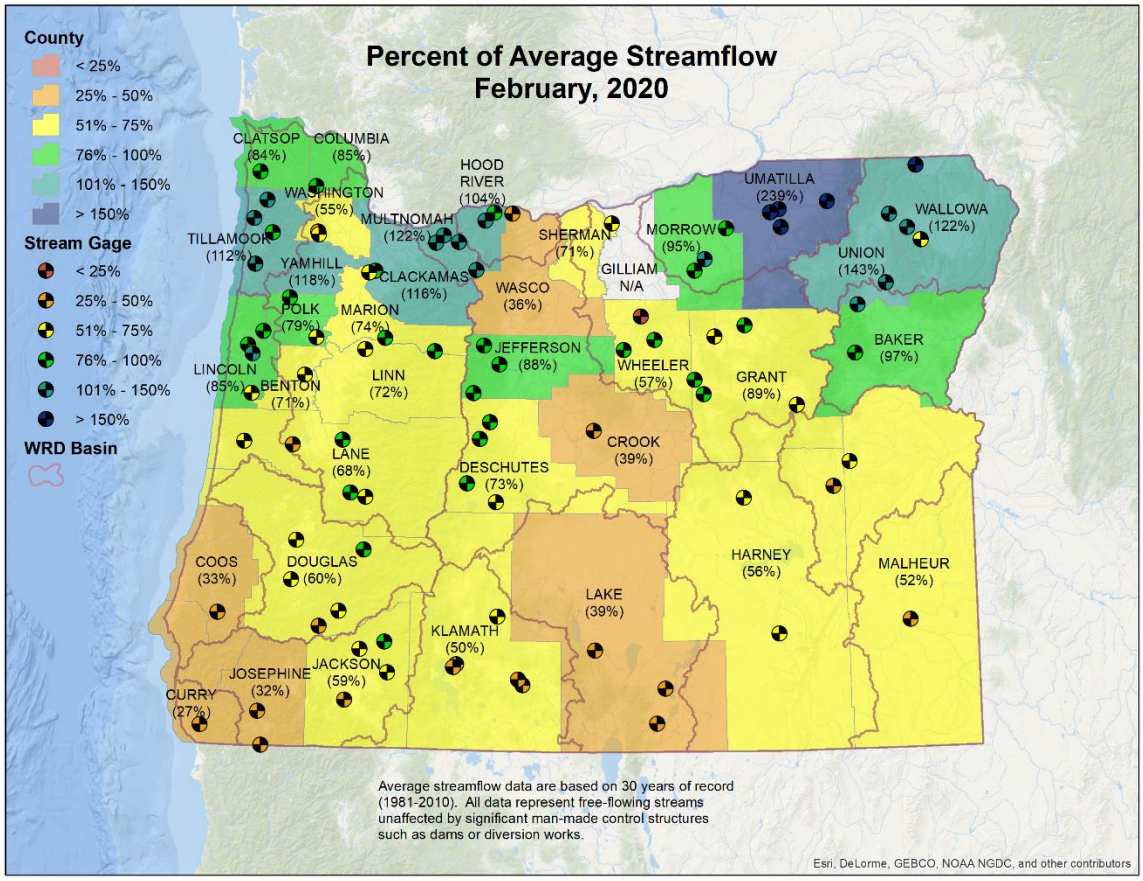
Website: https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?OR



Compared to this time last year:



Streamflow Conditions by County – February, 2020



Streamflow Conditions – South Coast Basin (Curry County)