OREGON WATER SUPPLY AND SPRING FLOOD OUTLOOK AS OF MARCH 4TH, 2020

The water supply forecast for the spring and summer of 2020 is near to above average for northeast Oregon, near to below average for northwestern Oregon, and below-average for central and all of the southern half of Oregon. Water supply forecasts decreased somewhat from one month ago for most Oregon watersheds, except for northeast Oregon. There is some potential for spring flooding in northeast Oregon, particularly the Grande Ronde basin. However, any flooding would likely be caused by a combination of snowmelt and rainfall. The potential for spring flooding is lower than usual for all other areas east of the Cascades, and spring snowmelt flooding has historically not occurred west of the Cascades.

The March outlook from the Climate Prediction Center highlights the likelihood of below-average temperatures for northwest Oregon, with equal chances for near, above, or below average temperatures for the rest of the state. The March precipitation outlook is also `equal chances` for all of Oregon. For more information on monthly and seasonal outlooks, visit cpc.ncep.noaa.gov.

Refer to the sections below and links provided for details regarding snowpack, precipitation, seasonal climate outlooks, reservoirs, streamflow, water supply forecasts, and spring flood potential.

The next update to this outlook will be issued by April 3, 2020.
Precipitation and Temperatures across Oregon

Precipitation for the 2020 water year thus far (Oct 1, 2019 through March 3, 2020) ranges from 50 to 70 percent of average for all of Oregon, except for 110 percent for the Grande Ronde basin. February precipitation was wildly variable, all the way from 250 percent of average in the Grande Ronde basin in far-northeast Oregon to about 20 percent of average in the Coquille and Rogue basins in southwest Oregon. In between, most of the state saw 40 to 80 percent of average.

 Temperatures so far this winter through January were above-average, generally 1 to 3 degrees. However, February temperatures were 1 to 3 degrees below average.

Graphics:
(Upper Left) AHPS Precipitation % of Normal for Water Year, October 1, 2019 through March 3, 2020
(Upper Right) AHPS Precipitation % of Normal for February 2020
(Lower Left) Mean Temperature departure from normal, Western Regional Climate Center

Additional Information:
NOAA National Weather Service - Northwest River Forecast Center
www.nwrfc.noaa.gov/water_supply/wy_summary/wy_summary.php
Snowpack across Oregon

As of early March, mountain snowpack is near-average for northeast and far-southeast Oregon and below-average for central Oregon mountains and the Cascades. Snowpack is particularly low for southwest and south-central Oregon. The highest is 121 percent of average in the Umatilla-Walla Walla-Willow basin, and the lowest is 65 percent in the Klamath basin.

Additional snowpack information:

NOAA National Weather Service - Northwest River Forecast Center
www.nwrfc.noaa.gov/snow/

USDA Natural Resources Conservation Service
www.nrcs.usda.gov/wps/portal/nrcs/main/or/snow/
Precipitation and Temperature Outlook

The Climate Prediction Center 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 March outlook from the Climate Prediction Center highlights the likelihood of below-average temperatures for northwest Oregon, with ‘equal chances’ for near, above, or below average temperatures for the rest of the state. The March precipitation outlook is ‘equal chances’ for all of Oregon.

The April through June outlook indicates an enhanced likelihood of above-average temperatures and below-average precipitation statewide.

Visit www.cpc.ncep.noaa.gov for more about seasonal outlooks.

Reservoirs

Storage for most irrigation reservoirs as of early March ranges from 50 to 80 percent of capacity, except for projects in southwest Oregon, which range from 20 to 50 percent.

Corps of Engineers flood control reservoirs in western Oregon are refilling slower than the spring refill plan due to relatively dry conditions in February.

Owyhee Reservoir, the largest irrigation project in the state, has storage of 541,000 acre-feet, 76 percent of capacity, as of early February. This is a 4 percent increase from a month ago.
Reservoir data is provided by the Natural Resources Conservation Service, the Bureau of Reclamation, and the US Army Corps of Engineers.

Additional reservoir information:

www.wcc.nrcre.gov/basin.html
www.usbr.gov/pn/hydromet/select.html
www.nwrd-wc.usace.army.mil/nwp/teacup/willamette/

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Observed Streamflow

Observed runoff so far this water year is below average for most Oregon rivers and particularly low for central and southwest Oregon rivers, where water-year runoff ranges from 20 to 60 percent of average. Water year runoff is near average for several north coast rivers and above average for far-northeast Oregon rivers, ranging from 120 to 160 percent of average, with much of that runoff occurring during February flooding.

February streamflow was much above average for far-northeast rivers, near average for northwest and southeast Oregon rivers, and below average for central, south-central, and southwest Oregon rivers.

Visit waterwatch.usgs.gov for details on observed streamflow. Water year and monthly runoff data is available at www.nwrfc.noaa.gov for several locations in Oregon.

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Water Supply Seasonal Forecasts

Water supply forecasts for April-September runoff volume vary widely across the state. Northeast Oregon basins are near to above average, ranging from 95 to 115 percent of average. Northwest Oregon basins are a little below average, ranging from 60 to 90 percent. Basins in southern and north-central Oregon are below average, ranging from 40 to 80 percent.

Precipitation in March and April could have a significant impact on these forecasts, so keep an eye on forecast trends through the spring.

The forecast for the Columbia River at The Dalles, which is a good index of conditions across the Columbia Basin, is 99 percent of average for April-September, a decrease of 7 percent from a month ago.

Details on basin-scale water supply forecasts:

NOAA/NWS Northwest River Forecast Center: www.nwrfc.noaa.gov/ws/
NOAA/NWS California-Nevada River Forecast Center:
Spring Flood Potential

There is some potential for spring flooding in northeast Oregon, particularly the Grande Ronde basin. However, any flooding would likely be caused by a combination of snowmelt and rainfall. The potential for spring flooding is lower than usual for all other areas east of the Cascades.

Historically, the frequency of spring flooding east of the Cascades is low, but when it does occur, it typically involves a combination of snowmelt and rainfall runoff. Snowmelt-driven spring flooding doesn’t occur in western Oregon. Stay tuned to snowpack conditions and streamflow forecasts at www.nwrfc.noaa.gov.