OREGON WATER SUPPLY OUTLOOK AS OF JUNE 5TH, 2020

The water supply forecast for the spring and summer of 2020 is below-average for most of Oregon, except for near- or above-average for northeast Oregon basins, including the John Day, the Grande Ronde, and Umatilla watersheds. Water supply forecasts are particularly low for basins in central, south-central, and southwest Oregon. Water supply forecasts have not changed significantly from a month ago, except for the John Day and Grande Ronde basins in northeast Oregon. What has changed from a month ago is the increasing certainty of the forecasts; this is primarily due to the high likelihood that there won’t be significant precipitation through the remainder of the summer.

The June outlook from the Climate Prediction Center highlights the enhanced likelihood of above-average precipitation in Oregon, with equal chances of near, above, or below average temperatures for the state. Based on the 6-10 and 8-14 day outlooks from CPC, the first half of the month looks generally cool and wet, relative to average. 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, and water supply forecasts.

This is the final water supply outlook of the season. However, NWS Portland will issue monthly drought information statements due to ongoing drought conditions affecting much of central and southern Oregon, starting in July.
Precipitation and Temperatures across Oregon

Precipitation for the 2020 water year thus far (Oct 1, 2019 through June 4, 2020) ranges from 45 to 90 percent of average for all of Oregon, except for 108 percent for the Grande Ronde basin. May precipitation was above average for most of the state, except below average in south-central and southeast Oregon.

May temperatures were above average, ranging from normal to +3.0 degrees relative to average.

Additional Information:

NOAA National Weather Service - Northwest River Forecast Center
www.nwrfc.noaa.gov/water_supply/wy_summary/wy_summary.php

NOAA NWS - California-Nevada River Forecast Center (Klamath basin)
www.cnrfc.noaa.gov/water_resources_update.php

AHPS Precipitation: water.weather.gov/precip/index.php?location_type=state&location_name=OR

Western Regional Climate Center West-Wide Drought Tracker: wrcc.dri.edu/wwdt/index.php?region=or
Snowpack across Oregon

As of June 4, seasonal mountain snowpack has almost completely melted across the state, with most snow monitoring stations (SNOTEL) reporting no snow. Peak snowpack this year occurred the first week of April for most snow monitoring stations. The highest snowpack, in terms of percent of average, was in northeast Oregon, where it was 100 to 120 percent of average. For the north and central Cascades and mountains in east-central and southeast Oregon, snowpack was 90 to 100 percent of average. For the south Cascades and Siskiyou, snowpack was about 80 percent of average. The snowpack melted rapidly in April and May.

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 for temperatures and precipitation.

The June outlook from the Climate Prediction Center highlights the enhanced likelihood of above-average precipitation in Oregon, with equal chances of near, above, or below average temperatures for the state. Based on the 6-10 and 8-14 day outlooks from CPC, the first half of the month looks generally cool and wet, relative to average.

The June through August outlook indicates an enhanced likelihood of above-average temperatures and below-average precipitation statewide, which would only increase drought concerns for much of Oregon.

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

June temperature and precipitation outlooks from the Climate Prediction Center
Reservoirs

Storage for most irrigation reservoirs as of early June ranges from 75 to 100 percent of capacity in eastern Oregon, 50 to 75 percent of capacity in central Oregon, and 25 to 65 percent of capacity in southwest Oregon.

 Corps of Engineers flood control reservoirs in western Oregon are refilling slower than the spring refill plan due to dry spring conditions and are at 89 percent of capacity as of early June. It appears likely that most Corps reservoirs in the Willamette basin will not fill completely to summer full pool levels.

Owyhee Reservoir, the largest irrigation project in the state, has storage of 571,400 acre-feet, 80 percent of capacity, as of early May. This is a 3 percent decrease from a month ago, due primarily to releases for irrigation downstream of the reservoir.

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.nrcs.usda.gov/basin.html
www.usbr.gov/pn/hydromet/select.html
www.nwd-wc.usace.army.mil/nwp/teacup/willamette/

Observed Streamflow

Observed runoff so far this water year is much below-average for most of the state and particularly low for central and southwest Oregon rivers, where water-year runoff ranges from 35 to 65 percent of average. At the other extreme, water year runoff is above average for far-northeast Oregon rivers, ranging from 100 to 140 percent of average, with much of that runoff occurring episodes of flooding in February and May. For the rest of the state, runoff ranges from 60 to 90 percent for the water year.

May streamflow was highly variable but generally near-average statewide. The combination of snowmelt and rainfall runoff resulted in above-average streamflow in northeast Oregon. Meanwhile, many rivers in
southwest, south-central, and north-central Oregon continue to experience below-average streamflow, with some streams in the driest areas near record-lows for this time of year.

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.

Water Supply Seasonal Forecasts

Water supply forecasts for April-September runoff volume vary widely across the state but are mostly below-average. The main exceptions are northeast Oregon basins, ranging from 95 to 140 percent of average. This includes the Grande Ronde, John Day, Umatilla, and Powder watersheds. Northwest Oregon basins, including the Willamette basin and north coastal watersheds, are somewhat below-average, ranging from 60 to 90 percent. Basins in southern and central Oregon are well below-average, ranging from 30 to 70 percent. The dry conditions in May across most of southern Oregon resulted in additional minor declines and increased certainty of below-average forecast volumes.

The forecast for the Columbia River at The Dalles, which is a good index of conditions across the Columbia Basin, is 106 percent of average for April-September, an increase of 10 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
www.cnrfc.noaa.gov/water_resources_update.php

USDA Natural Resources Conservation Service
www.wcc.nrcs.usda.gov/wsf/
Water Supply seasonal forecasts from the Northwest River Forecast Center and California-Nevada River Forecast Center