



Natural Resources Conservation Service  
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# Western Snowpack and Water Supply Conditions

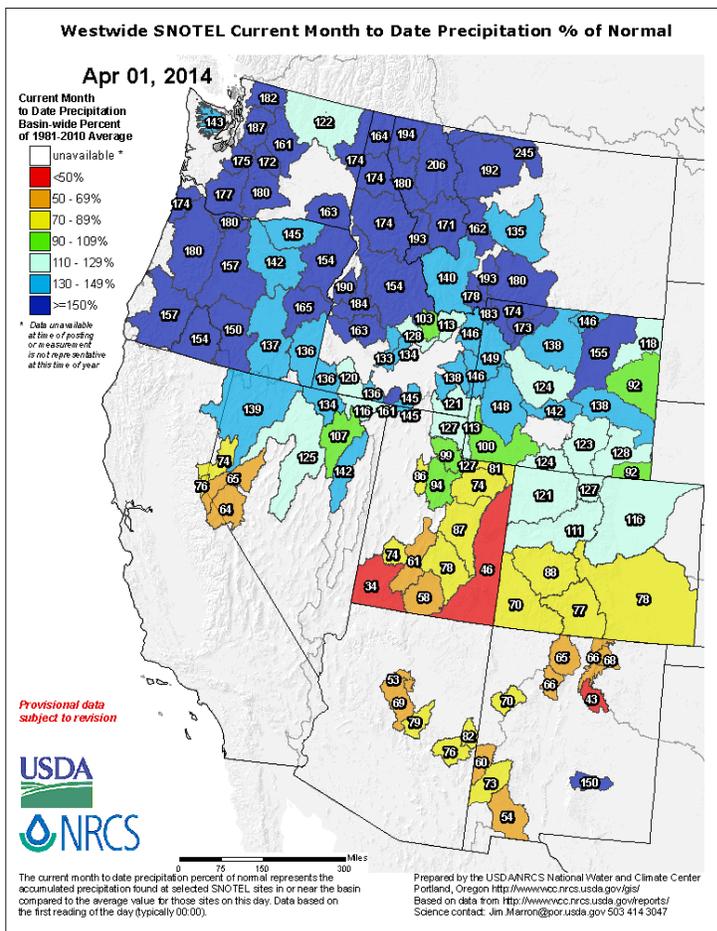
## April 2014

### Overview

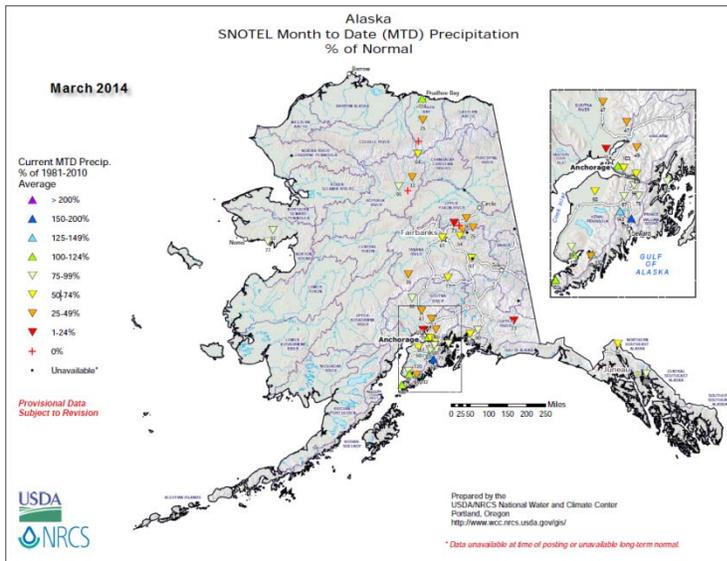
March continued to exhibit the extremes and variability that have been characteristic of the weather pattern across the West this winter. Precipitation for the month of March over the northern half of the West has been significantly above normal. The southern half of the West continues its dry pattern seen all winter.

Snowpack retains the sharp contrast between northern and eastern parts versus southern and western parts of the West, with the former being well above normal and the latter being well below normal. Streamflow forecasts closely follow the snowpack pattern. Reservoir storage for all states except Montana is below normal for this time of year.

### March Precipitation



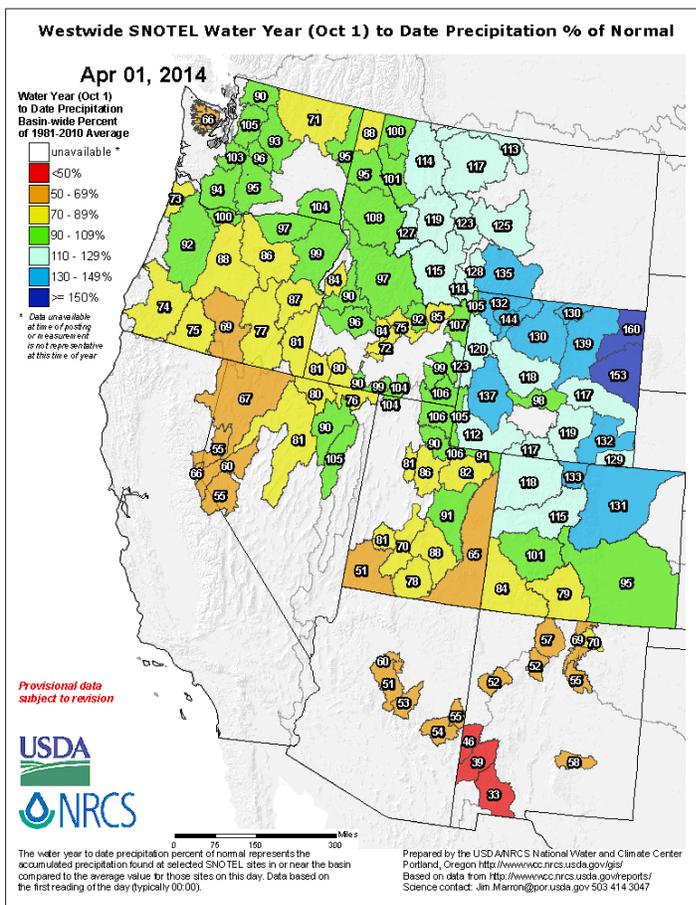
**Figure 1:** For March, precipitation was generally well above normal over the entire northern tier of the western states. Below normal amounts occurred over western Nevada, eastern and southern Utah, southern Colorado, Arizona, and New Mexico.



March was generally drier than normal over most of Alaska, with parts of the Kenai Peninsula recording near normal amounts.

Figure 2: March precipitation percent of normal for Alaska

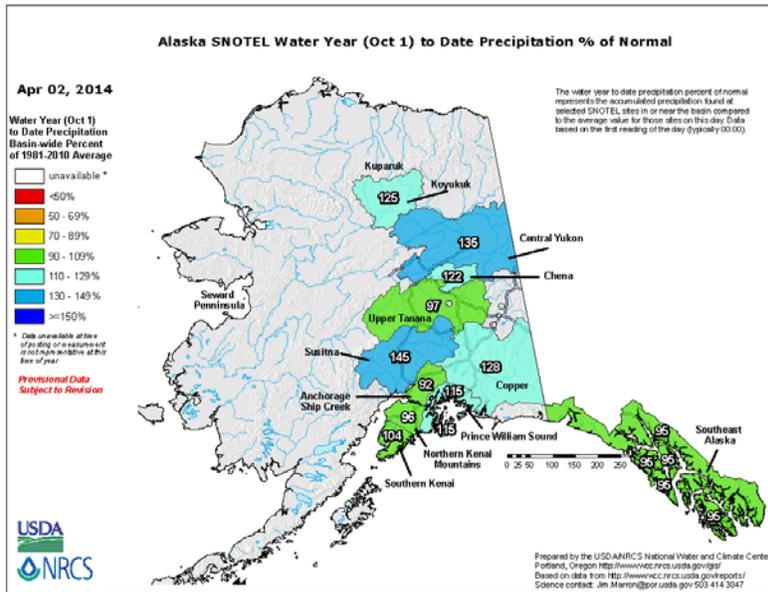
### Water Year-To-Date Precipitation



The precipitation percent of normal for the 2014 water year-to-date reflects a complex pattern of wet and dry regions.

The central portion of Montana, most of Wyoming, and the northern half of Colorado have received above normal precipitation for the first half of the 2014 water year. The northern Cascades, northern half of Idaho, the eastern Great Basin, and portions of southern Colorado have had near normal amounts. The remainder of the western U.S. -- the southern and western part -- has received below normal precipitation, with New Mexico having the greatest deficits.

Figure 3: Water year-to-date precipitation percent of normal



Precipitation percent of normal for Alaska for the [2014 water year-to-date](#) reflects average (Alaska Panhandle, Kenai Peninsula, and central-Interior) to above average conditions across the remainder of the state.

**Figure 4:** Water year-to-date precipitation percent of normal for Alaska

Maps containing monthly and daily updates of SNOTEL precipitation are available at: <http://www.wcc.nrcs.usda.gov/gis/precip.html>

## Snowpack

Snowpack as of April 1 (Figure 5) in the western U.S. and the Columbia Basin in Canada maintains the sharp contrast between the north and east regions versus the south and west regions, as has been the case all year. It has changed somewhat, however, due to the precipitation patterns for the month of March, as noted previously.

Snowpack has increased substantially since March 1 in northern Colorado, Wyoming, Montana, northern Idaho, British Columbia, as well as in the Cascades of Washington. These areas remain near normal to well above normal. Snowpack remains very low in New Mexico, Arizona, Nevada, California, and most of Oregon. Southcentral Alaska continues with below normal snowpack, whereas the Interior of Alaska retains near normal snowpack.

Maps with daily updates of the snowpack (SNOTEL data only) for the entire West, as well as for individual states, are available at the following link:

<http://www.wcc.nrcs.usda.gov/gis/snow.html>

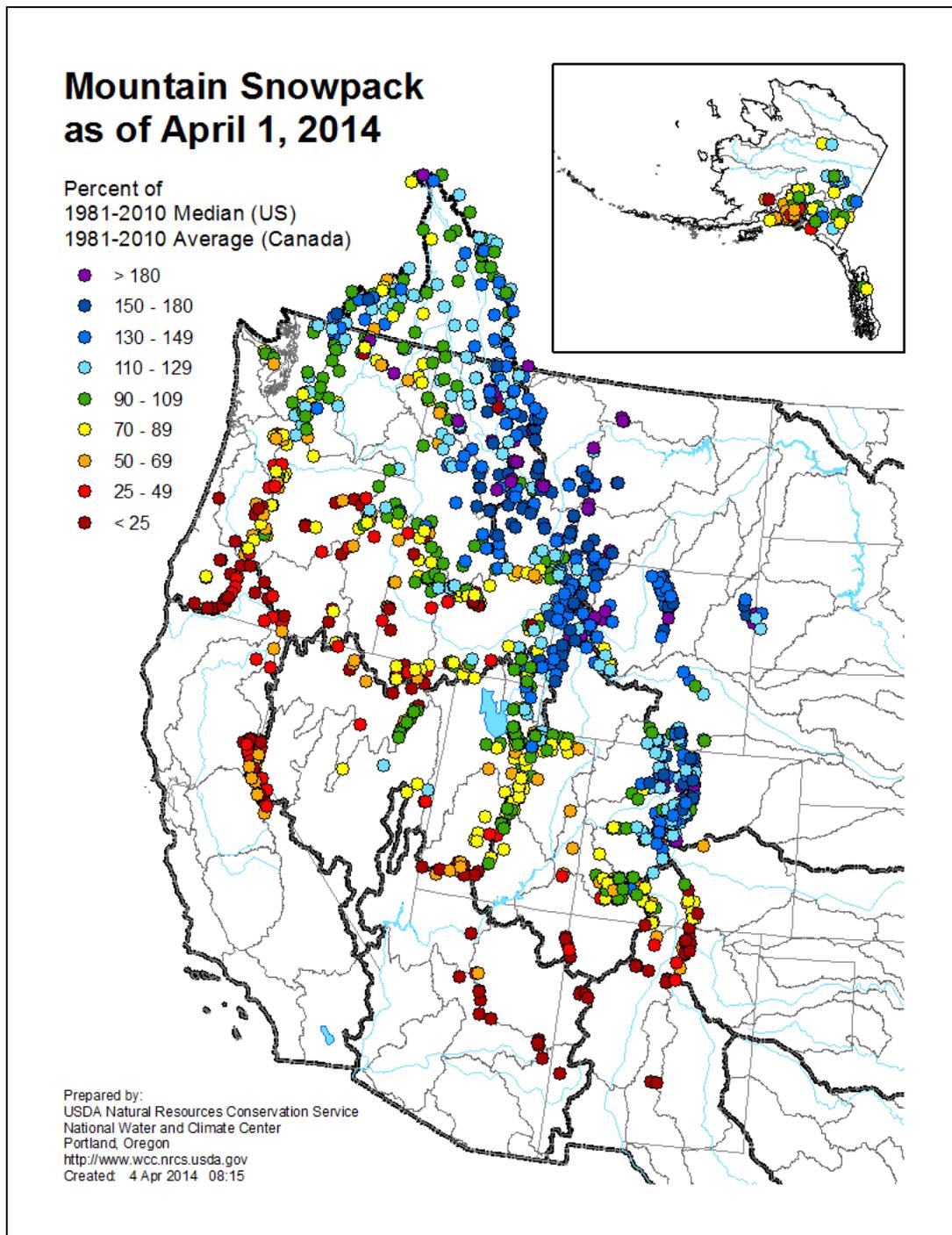
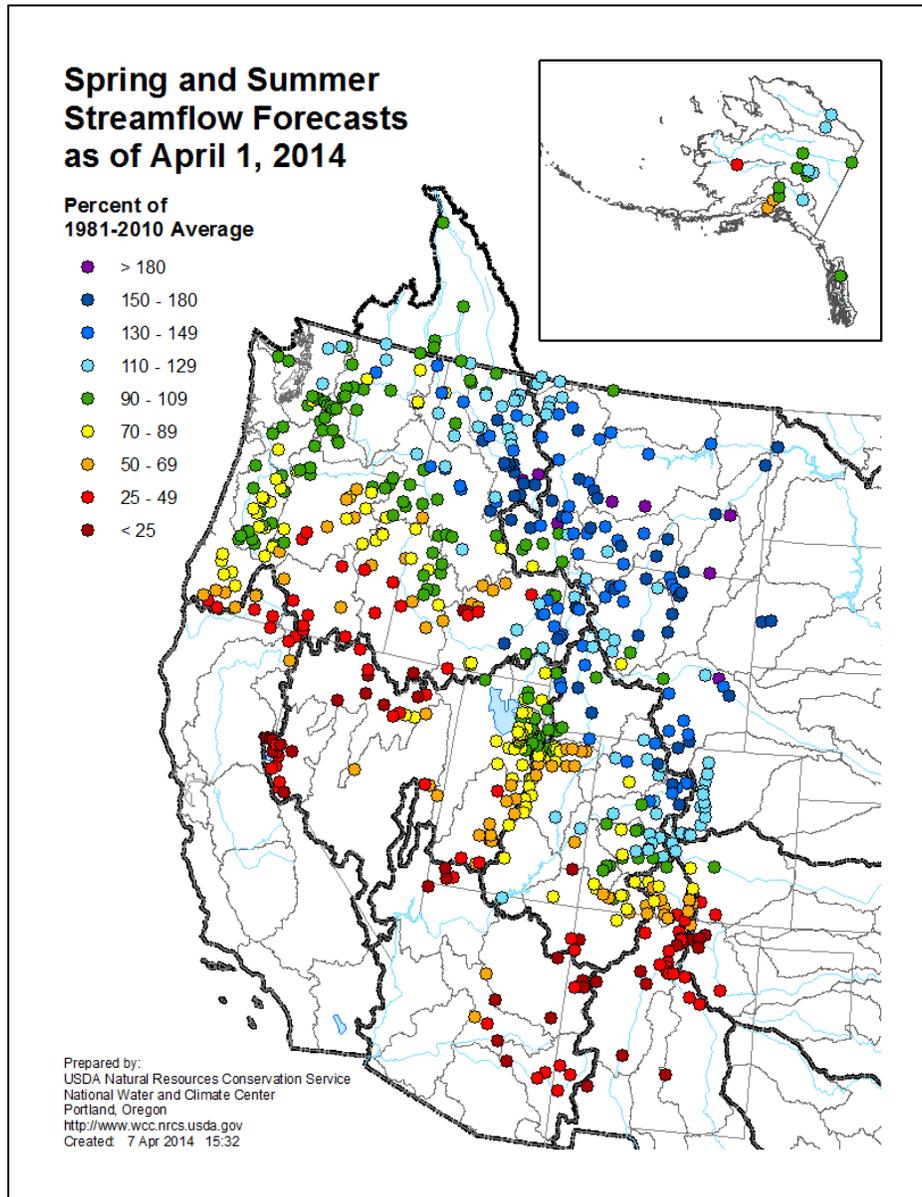


Figure 5: [Snow water equivalent](#) at SNOTEL sites and snow courses

## Streamflow Forecasts

Streamflow forecasts (Figure 6) reflect essentially the same spatial pattern as snowpack, with the sharp contrast between south and west versus north and east of the Rocky Mountains that has characterized this water year. Below to well below normal streamflow forecasts have been issued for basins in southern Oregon, southwestern Idaho, California, Nevada, Arizona, New Mexico, southern Utah, and southern Colorado. In contrast, near normal streamflow forecasts have been issued for basins in Washington, northern Idaho, northern Utah, and the Columbia River Basin in British Columbia, whereas above normal forecasts have been issued for most of Montana, Wyoming, and northern Colorado. Alaska streamflow forecasts are mostly near or above normal except for the southcentral and southwest part of the state.



**Figure 6:** [Streamflow forecasts](#)

Trends in streamflow forecasts in basins for which daily water supply forecast (DWSF) models are available can be followed at: [http://www.wcc.nrcs.usda.gov/wsf/daily\\_forecasts.html](http://www.wcc.nrcs.usda.gov/wsf/daily_forecasts.html)

For more detailed information, refer to the individual state Water Supply Outlook Reports at: [http://www.wcc.nrcs.usda.gov/BOR/state\\_outlook\\_reports.htm](http://www.wcc.nrcs.usda.gov/BOR/state_outlook_reports.htm).

## Reservoir Storage

Westwide charts, graphs, and tables (<http://www.wcc.nrcs.usda.gov/wsf/wsf-reservoir.html>) show that reservoir levels are below normal (as a percent of capacity) for all states with the exception of Montana (Figure 7). Data for California are available [here](#).

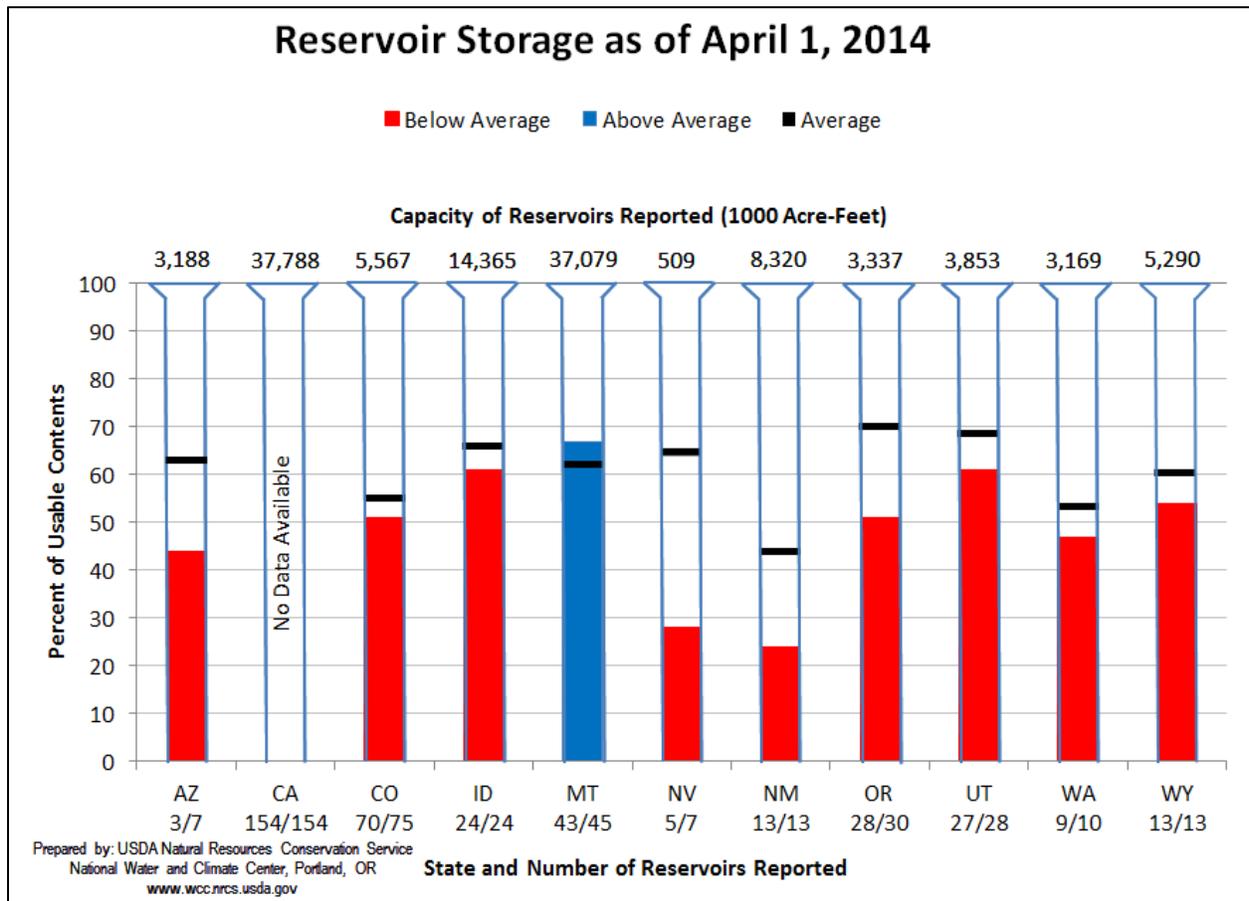


Figure 7: [Reservoir Storage](#)

## State Reports

*Click a state name to view the full report*

**Alaska:** Snowpack in Alaska continues to be variable this month. Most of Alaska received very little precipitation during March with most sites reporting one-third of average. With the exceptions of the Kenai Peninsula, western Bristol Bay, and the southeast, the snowpack didn't change much from last month. Western Alaska continues to have well below normal snowpack with less than half of normal snow. This trend also includes southcentral Alaska where north Cook Inlet has little more than half of normal snowpack. The Arctic and the eastern Interior continues to have normal to above normal snowpack. The most robust snowpack is in the northern half of the Tanana basin, the eastern Koyukuk basin, and north of the Brooks Range. Southeast snowpack has moderated, though several areas are still below normal.

**Arizona:** The only notable precipitation during March occurred from a minor storm at the beginning of the month. Every area is now in some level of drought. All major rivers are forecast to be less than 50% of normal, spring streamflow.

**California:** March precipitation helped keep things green by improving soil moisture but did little to increase snowpack or water storage in the reservoirs.

**Colorado:** The snowpack continues to track above normal for this time of year. However, there remains a large disparity between the northern and central regions of the state and the southern portion, with storm systems favoring the northern and central mountains this season.

**Idaho:** Back-to-back months of above average precipitation boosted the water supply outlook significantly in most areas, which is good news to farmers and boaters alike. However, some areas in central and southern Idaho were so far behind in snowpack that the last two months were still not enough.

**Montana:** The snowpack and streamflow runoff will require a watchful eye this spring with regard to potential flooding. Snowpack currently is at near record to record levels.

**Nevada:** Too little too late. Storms in late March helped to increase snowpack but did little to improve the overall water supply outlook. Expect a short and modest runoff.

**New Mexico:** Dry conditions continue to plague New Mexico. On top of that, warm and windy conditions are 'eating up' the minimal snowpack in place. Streamflow runoff forecasts continue to fall as meltout fast approaches.

**Oregon:** March ushered in a second month of above average precipitation for Oregon. While the wet month definitely boosted water supplies, drought conditions and water shortages are still expected this summer in many parts of the state.

**Utah:** Water supply conditions are near to above normal in the north and well below normal in southern Utah.

**Washington:** With nearly twice the normal rainfall in March, most areas in Washington have erased the previous deficits to come within striking distance of normal water year-to-date precipitation. With the addition of more snow and above normal precipitation, all streamflow forecasts increased by 5-20% over last month's forecasts.

**Wyoming:** Wyoming has water. Forecasted spring and summer streamflow is projected to be 145% of average. The median snow water equivalent for the state is currently at 138%.

## For More Information

The USDA-NRCS National Water and Climate Center website provides the latest available snowpack and water supply information. Please visit us at: <http://www.wcc.nrcs.usda.gov>