

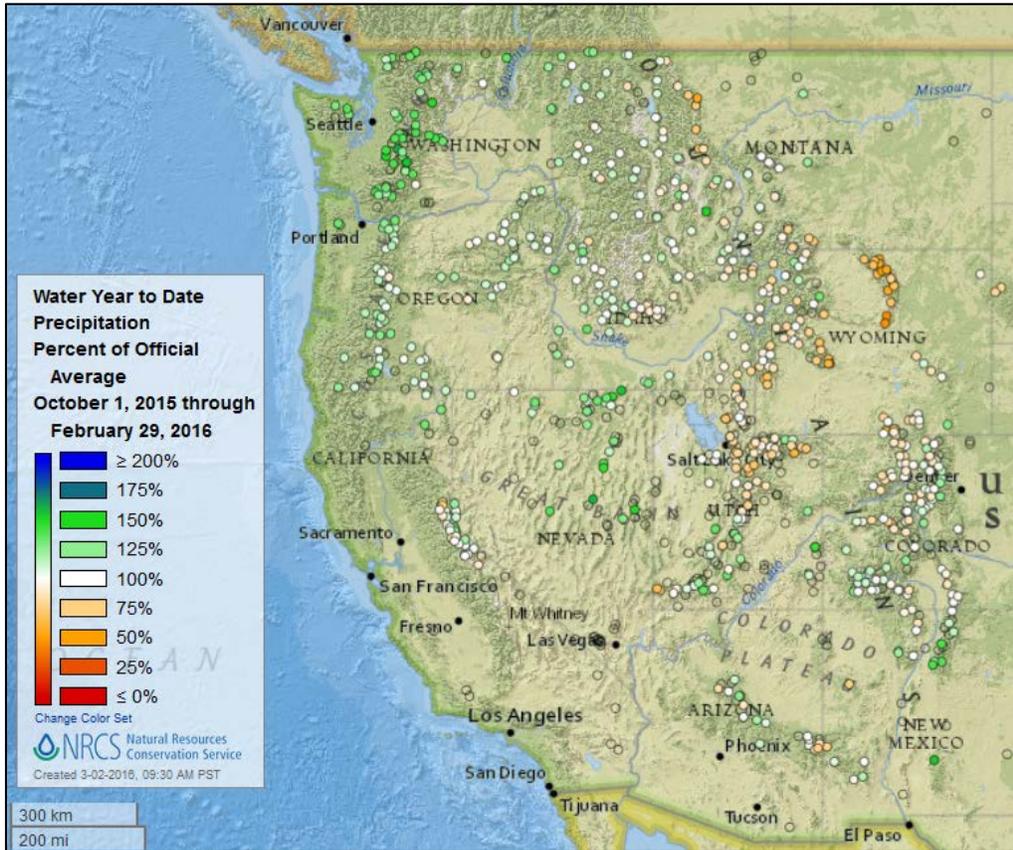
## Western Snowpack and Water Supply Conditions March 2016

### Overview

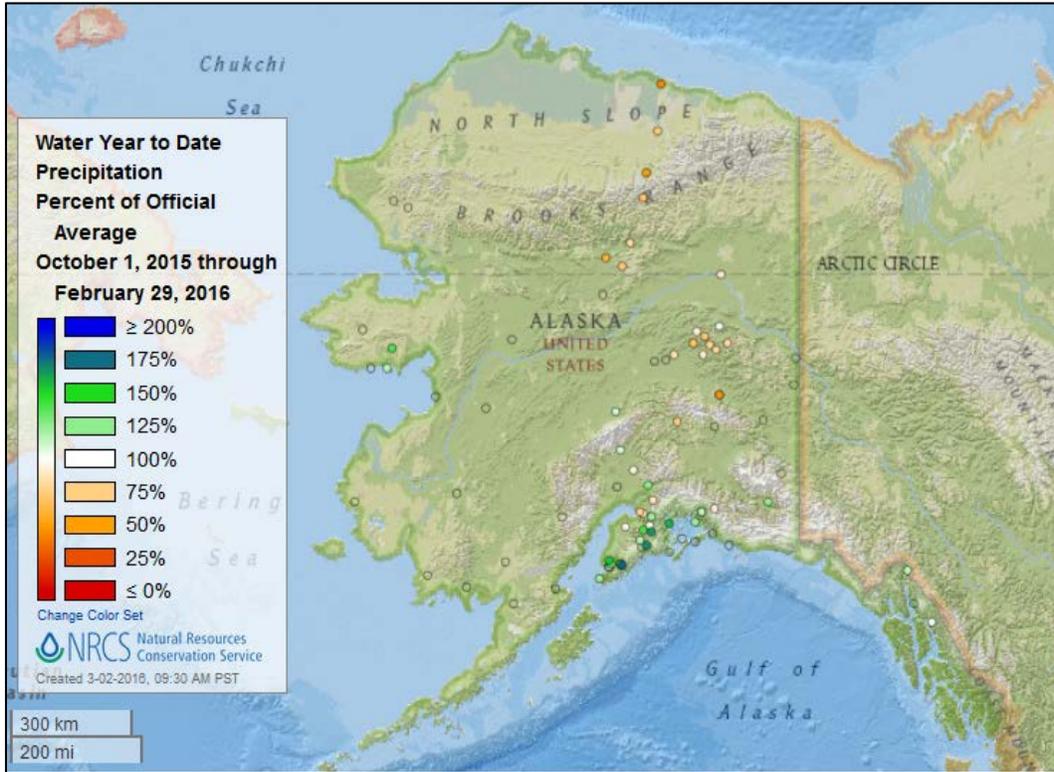
This report summarizes Snow Telemetry (SNOTEL) and snow course network data, streamflow forecasts, and reservoir storage data collected and analyzed by the [National Water and Climate Center](#).

**Precipitation** thus far in the water year (beginning October 1, 2015) has been near or above normal in most of the West except for Wyoming, northeastern Utah, and a small area in northwestern Montana. **Snowpack** has declined significantly in percent of normal since February 1 throughout the region. **Streamflow forecasts** have decreased over most of the area due to a lack of snow accumulation and early snowmelt during February. **Reservoir storage** is well below average in Arizona, Nevada, and New Mexico and above average or only slightly below average elsewhere.

### Water Year-To-Date Precipitation



[Precipitation for the 2016 water year-to-date](#) has been near to above average over most of the West. The main exception to this pattern is in northcentral and southwest Wyoming, northeast Utah, and a small area in northwestern Montana, where precipitation has been significantly below average.



[Precipitation in Alaska for the 2016 water year-to-date](#) has been near to above average in the southcentral and coastal areas and below average in the Interior.

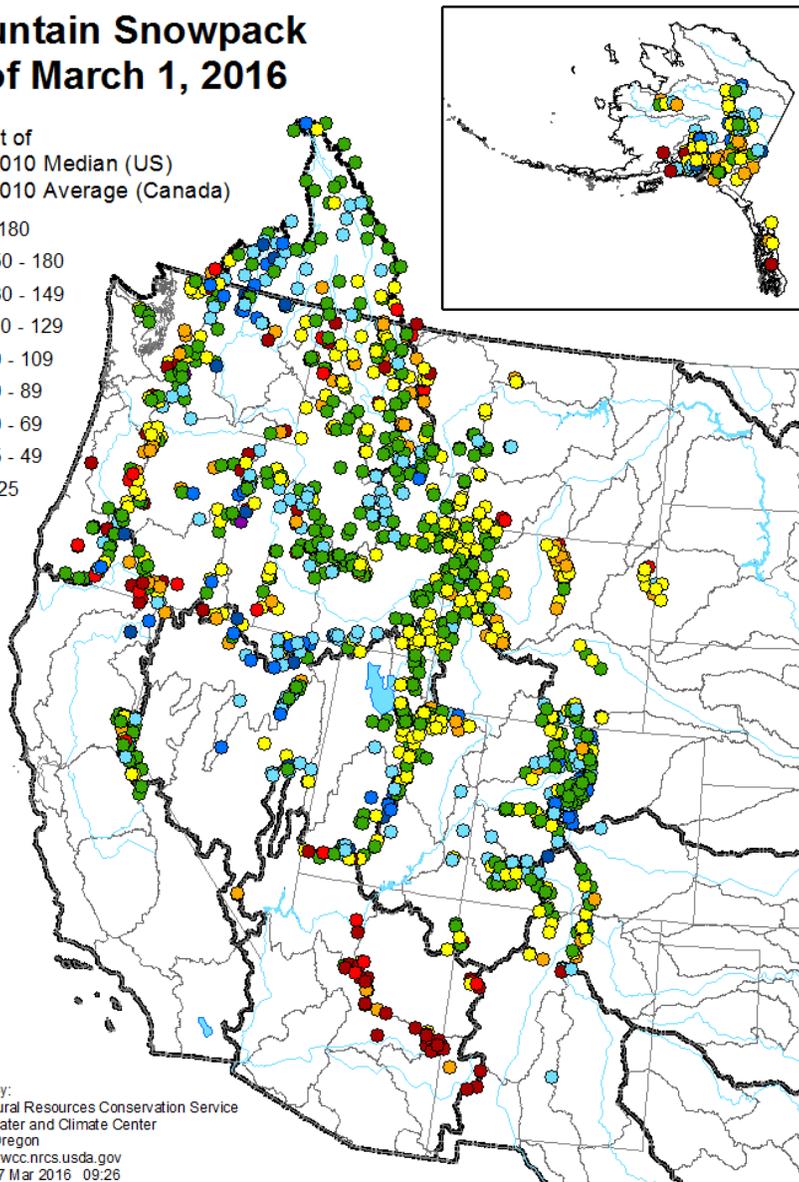
**Note:** Current versions of these interactive maps are available at the links in the figures and captions above. In addition, basin-filled maps containing monthly and daily updates of SNOTEL precipitation are available at: <http://www.wcc.nrcs.usda.gov/gis/precip.html>

## Snowpack

### Mountain Snowpack as of March 1, 2016

Percent of  
1981-2010 Median (US)  
1981-2010 Average (Canada)

- > 180
- 150 - 180
- 130 - 149
- 110 - 129
- 90 - 109
- 70 - 89
- 50 - 69
- 25 - 49
- < 25



#### [Snowpack at SNOTEL sites and snow courses as of March 1](#)

has generally declined since February 1 in terms of percent of median/average throughout the western U.S. and the Columbia Basin in Canada.

Some areas that have been low remain low, such as Wyoming and northwestern Montana. However, some areas that were high have not accumulated much or have even lost snow during the past month. The most noticeable such area is Arizona and southwestern New Mexico, but the Oregon Cascades also fall into this category.

Elsewhere, snow is still near or slightly below normal, but all areas declined in terms of percentage over the month.

Snowpack in Alaska has also declined somewhat, with near to below normal values throughout the state.

**Note:** Current snowpack values are available via the map links above. Additional maps with daily updates of the snowpack (SNOTEL data only) for the entire West, as well as for individual states, are available at: <http://www.wcc.nrcs.usda.gov/gis/snow.html>

## Streamflow Forecasts

[Streamflow forecasts](#) have declined in terms of percent of average since February over most of the region, due to generally warm and dry weather conditions. Nevertheless, many areas still expect near or only somewhat below normal streamflows. Well below normal forecasts remain in much of Wyoming, northern and eastern Montana, and northeastern Utah. Forecasts have declined dramatically in Arizona and southwestern New Mexico due to unusually early snowmelt.

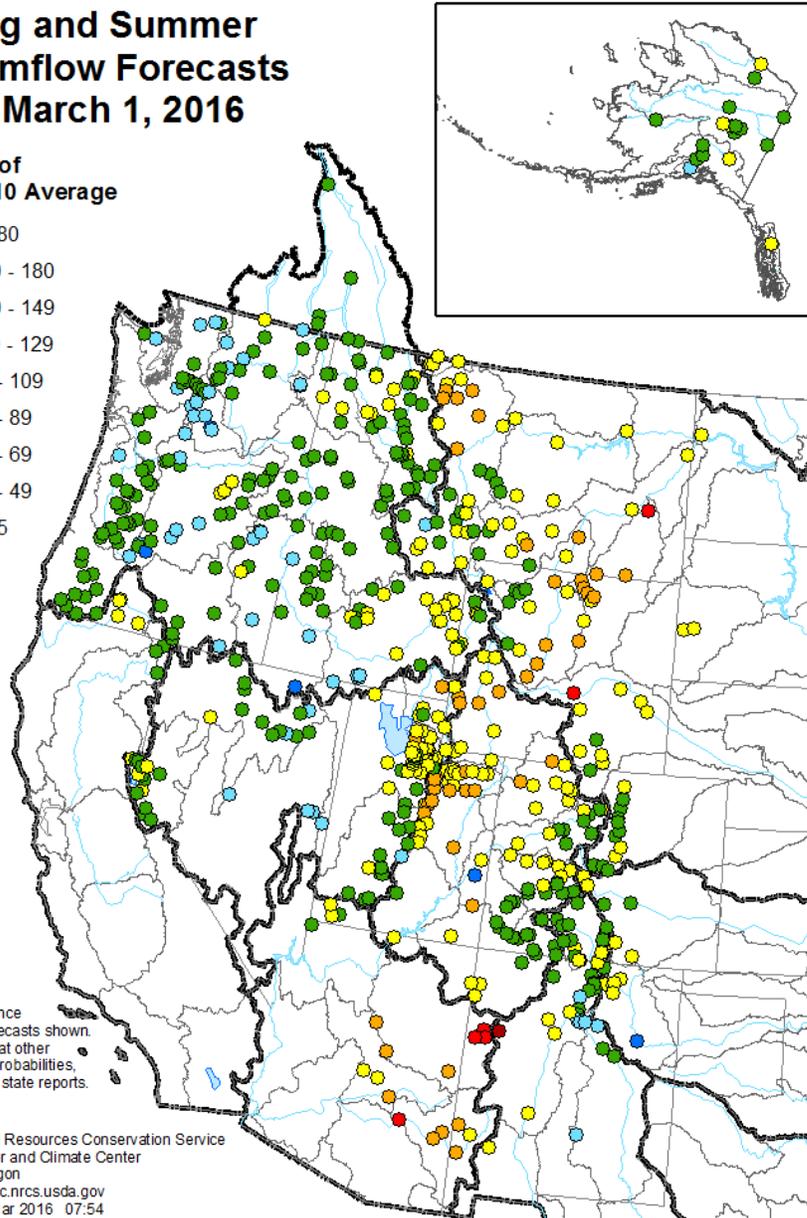
### Spring and Summer Streamflow Forecasts as of March 1, 2016

Percent of 1981-2010 Average

- > 180
- 150 - 180
- 130 - 149
- 110 - 129
- 90 - 109
- 70 - 89
- 50 - 69
- 25 - 49
- < 25

50% exceedance probability forecasts shown. For forecasts at other exceedance probabilities, see individual state reports.

Prepared by:  
 USDA Natural Resources Conservation Service  
 National Water and Climate Center  
 Portland, Oregon  
<http://www.wcc.nrcs.usda.gov>  
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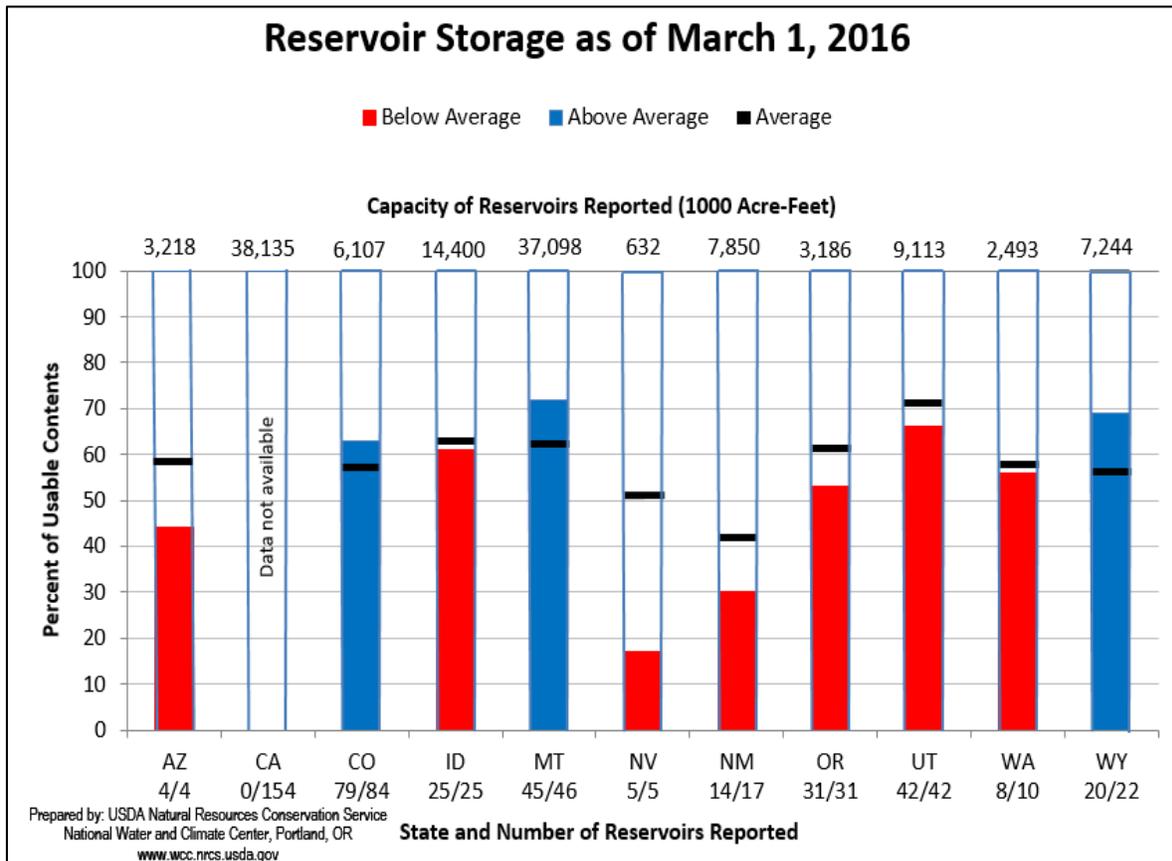
Trends in streamflow forecasts in basins for which daily water supply forecast models are available can be followed at: [http://www.wcc.nrcs.usda.gov/wsf/daily\\_forecasts.html](http://www.wcc.nrcs.usda.gov/wsf/daily_forecasts.html)

## Reservoir Storage

[Reservoir levels](#) are above average in Colorado, Montana, and Wyoming; only slightly below average in Idaho, Oregon, Utah, and Washington; and much below average in Arizona, Nevada, and New Mexico.

Further data and charts are available at: <http://www.wcc.nrcs.usda.gov/wsf/wsf-reservoir.html>

Data for California are summarized at: <http://cdec.water.ca.gov/cgi-progs/reservoirs/STORSUM>



## State Reports

*Click a state name to view the full report*

**Alaska:** February was an exceptionally dry or wet month, depending on the region. The Kenai Peninsula and western Prince William Sound were sodden, with sites reporting between 200%-350% of normal precipitation for the month. Southeast Alaska and northern Cook Inlet received near normal precipitation, whereas the rest of the state was abnormally dry with many Interior sites receiving no precipitation for the month. Snowpack across the state is likewise variable, but the majority of the snowpack across the state is somewhat below to slightly above normal.

**Arizona:** The month of February produced almost no precipitation and had record high temperatures. As a result, the snowpack is completely melted out at over half of the snow measurement sites, even though the first week of March marks the normal peak for snow water equivalent in the state.

**California:** February was very dry with only one storm during the month contributing a small amount of snow. As a result, the snowpack conditions dropped from average to slightly below average. However,

several large storms have begun to impact the state during the first week of March. These storms, which are warm in nature, will contribute significantly to the amount of water in the reservoirs.

**Colorado:** Snowpack accumulation and precipitation during February was the lowest in more than 30 years. However, thanks to a few bountiful months prior, snowpack and year-to-date precipitation are both near normal at 99% and 98%, respectively.

**Idaho:** Even with below normal February precipitation across the southern two-thirds of Idaho, snowpack ended the month near normal across most of the state. One or two more storms will help to ensure adequate irrigation supplies in most areas.

**Montana:** Snowpack has improved west of the Continental Divide due to the abundance of rain and snow during the month of February. East of the Divide, most basins experienced a decline in snowpack percentages due to below normal snowfall. Two basins remain well below normal for this date, the Sun-Teton-Marias (64%) and Lower Yellowstone (77%) and will be monitored closely this spring as we enter the climatically-favored period for these basins in terms of snowfall and precipitation.

**Nevada:** March 1 snowpacks remain near to above average across northern Nevada, even though monthly precipitation was only 30-60% of average in February. The dry spell caused statewide snowpack percentages to drop 30% from last month. Weather forecasts look very active for the first 10 days of March, and Nevada is hoping for a "Miracle March" like 1991, 1995, and 2011.

**New Mexico:** What a difference one month can make! Warmer than normal conditions spread over much of New Mexico during the month of February. Despite the mostly favorable water year precipitation and snowpack to date, the warmth and dryness raises concerns about snowmelt in the higher elevations.

**Oregon:** February was warm and dry across most of Oregon. The weather pattern took a noticeable turn from the persistent winter storm track that was responsible for piling up snow across the state in December and January. Even with February's hiatus from winter weather, most of the states mid to high elevations continue to bask in the glow of a near normal to above normal snowpack as of March 1. Although there was ample snow for winter recreation, snowpack in the northern Oregon Cascades continues to lag behind the rest of the state with a below normal snowpack. Given the near normal snowpack throughout most of the state, most streamflow forecasts are calling for near normal to above normal volumes for the summer water supply season.

**Utah:** February was exceptionally dry in Utah, and snow accumulation was poor. What was a very promising start to water supply conditions in Utah has deteriorated substantially since January. While not the boom year hoped for, snowpacks and water supply conditions across the state -- below to near normal -- are still much improved from recent years.

**Washington:** Rain and warm temperatures were plentiful in most areas of the state. This combination not only melted low- and mid-elevation snow but also led to a decline in snowpack percents of normal. This was more due to the lack of snow accumulation during February rather than the melt. These conditions also contributed to a sharp increase in snowpack density, reaching values about a month earlier than is typical.

**Wyoming:** The snow water equivalent across the state is below median for March 1 at 87%. Monthly precipitation for the basins was 51-142% of average for an overall average of 89%. The year-to-date precipitation average for the state is now at 83%, varying between 56-110% of average among the basins. Forecast runoff varies between 36-102% of average for an overall average of 81%. Reservoir levels range from 58-190% of average for an overall average of 120%.

## 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>