

We've finished the March 1, 2013 Water Supply Index (WSI) and Bulletin 120 (B120) forecasts. The forecasts include observed conditions through the end of February.

The forecasts are posted at:

WSI: <http://cdec.water.ca.gov/cgi-progs/iodir/wsi>.

B120: <http://cdec.water.ca.gov/cgi-progs/iodir?s=b120>

Forecast Summary:

The projected median April-July runoff in the major Sierra river basins ranges from 31 percent for the Tule River to 79 percent for the McCloud and Pit rivers. Forecasted median Water Year runoff ranges from 34 percent for the Tule River to 78 percent for the Feather and Yuba rivers. After a wet November and December, the extreme dry conditions in January persisted through the end of February. The WSI forecast can be summarized as follows:

Sacramento River Unimpaired Runoff Water Year Forecast	13.6 MAF
(50 percent exceedance)	(74 percent of normal)
Sacramento Valley Index (SVI)	6.4
(50 percent exceedance)	(Dry)
San Joaquin Valley Index (SJI)	1.9
(75 percent exceedance)	(Critical)

The SVI and the SJI have fallen into the 'Dry' and 'Critical' water year classifications, respectively.

Runoff:

Variability has characterized the winter flows. During December, 11 major rivers in Northern California and the Sierra flowed at a rate greater than 200 percent of normal. This contributed to the statewide average of about 190 percent of normal. During January, however, no major Sierra rivers flowed at a rate greater than 75 percent of normal and the statewide average was about 40 percent. The February flows in the Sacramento River, San Joaquin River, and Tulare Lake regions ranged from 34 to 37 percent of average.

Precipitation:

After a wet start to Water Year 2012-13, January and February have been extremely dry. For the Northern Sierra 8-Station Precipitation Index, both November (206%) and December (205%) recorded over twice the monthly average precipitation. Unfortunately, January recorded only 16% of the monthly average. February added 0.9 inches of precipitation to the 8-Station total which amounts to just 11% of the historic monthly average and represents the sixth driest February in the historic record. Combined precipitation totals for January and February resulted in the driest January and February on record at 2.3 inches. The 35.2 inches recorded by the end of February in the Northern Sierra represents 101 percent of average to date and 70 percent of the average Water Year total.

The San Joaquin region reported similar results. The 5-Station Index also recorded well-above average precipitation totals for November (134%) and December (185%) but January (17%) and February (9%) were equally as dry as the Northern Sierra. The 0.6 inches of precipitation observed in the San Joaquin 5-Stations represents just 9% of the historic monthly average. Just like in the Northern Sierra, the precipitation recorded during the months of January and February totaled 1.9 inches, registering as the driest January and February on record for this Index. The 21.0 inches of precipitation recorded by the end of February in the San Joaquin region represents 76 percent of average to date and 51 percent of the average Water Year total.

At the conclusion of the first five months of the water year, precipitation (based on all available reporting gauges per basin) was 95 percent of average to date in the Sacramento River Region, 80 percent of average to date in the San Joaquin River Region, and 66 percent of average to date in the Tulare Lake Region. Statewide, water year cumulative precipitation through February was 80 percent of average to date. The Statewide precipitation for the month of February was 17 percent of the historic average.

Snowpack:

Snowpack is monitored using two complementary methods: automatic snow sensor (or “pillow”) readings and manual snow course measurements. The snow sensors give us a daily snapshot of snow conditions while the manual snow course measurements provide a monthly verification of snow conditions in locations where snow has been measured in the same manner as far back as 100 years.

On March 1, snow sensors recorded a snow pack that was 69 percent of average in the Northern Sierra, 66 percent of average in the Central Sierra, and 59 percent of average in the Southern Sierra. Statewide, snow water equivalent based on snow pillow data was 65 percent of the historical March 1 average and 57 percent of the historical statewide April 1 average.

Results from the 212 snow courses measured this month revealed comparable snow pack conditions. Measurements in the Sacramento River Valley watersheds recorded a snow pack that is 58 percent of the historical March 1 average. Measurements in the San Joaquin Valley watersheds indicated a snow pack that is 66 percent of the March 1 average while those in the Tulare Lake region registered a snow pack that is 60 percent of the March 1 average. Statewide, the snow pack was measured at 62 percent of the March 1 average and 54 percent of the historical April 1 average.

Weather and Climate Outlook:

After an extremely wet November and December, dry conditions dominated California for the entire months of January and February. The first week in March provided a little relief with some rain and snow throughout the state. For the next six days, the weather outlook is dry. Today, freezing elevations are ranging between 4,500 to 6,000 feet and will rise to a range of 9,500 to 12,500 on Monday and then essentially plateau through Wednesday. For the next six to fourteen days, the weather outlook is predominantly warm and dry with above normal temperatures and below normal precipitation expected across most of California.

The NWS Climate Prediction Center’s (CPC) 30-day outlook for March, last updated on February 28, 2013, suggests increased chances of below normal temperatures for most of California with equal chances of above or below normal temperatures in the Colorado River region. The same outlook calls for increased chances of below normal precipitation for the state.

The CPC’s three month outlook (March thru May) was last updated on February 21, 2013. This outlook suggests increased chances of above normal temperatures for portions of the Southern Sierra Nevada, the Owens River basin, and the Mojave Desert. For the Shasta and Trinity River Basins, the outlook calls for increased chances of below normal temperatures. For all other areas, this outlook calls for equal chances of above or below normal temperatures. For precipitation, this same outlook calls for increased chances of below normal precipitation for all of California.

Next Update:

A Bulletin 120 Update for conditions on March 12 will be available Thursday, March 14. The April 1, 2013 Bulletin 120 and Water Supply Index forecasts will be available on April 9, 2013.

If you have any questions regarding this forecast, please contact a member of the Snow Surveys staff. We are happy to help.

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