

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

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 16 percent for the Tule River to 75 percent for the Pit River. Forecasted median Water Year runoff ranges from 24 percent for the Tule River to 74 percent for the Feather River. After a wet November and December, the extreme dry conditions in January and February were followed by a below average March. The WSI forecast can be summarized as follows:

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|---|------------------------|
| Sacramento River Unimpaired Runoff Water Year Forecast | 12.5 MAF |
| (50 percent exceedance) | (68 percent of normal) |
| Sacramento Valley Index (SVI) | 6.0 |
| (50 percent exceedance) | (Dry) |
| San Joaquin Valley Index (SJI) | 1.8 |
| (75 percent exceedance) | (Critical) |

The SVI and the SJI water year classifications are unchanged from last month.

Runoff:

For March, no west-side Sierra river flowed at a rate greater than 61 percent of average despite the flow volumes being enhanced by an early snow melt. The San Joaquin River region experienced the highest percent of average March flows (56 percent) followed by the Sacramento River (48 percent) and the Tulare Lake region (47 percent). The percent of average Water Year-to-date flows are higher due to the wet November-December period. The Sacramento Region has the highest Water Year-to-date average at 75 percent. The San Joaquin and Tulare Lake regions have flowed at rates of 67 and 50 percent of average.

Precipitation:

On January 1, almost all areas of the Sierra had experienced over 120 percent of average precipitation since October 1. Then, record dryness persisted not only for the first two months of the calendar year but for the January-March period also. For the Northern Sierra 8-Station Precipitation Index (8SI), both November (206 percent) and December (205 percent) recorded over twice the monthly average precipitation. Then, after January recorded only 16 percent, and February only 11 percent, March recorded only 62 percent of average. Consequently, the January-March precipitation was the **driest on record** for this index.

The San Joaquin Index (5SI), on January 1, was 148 percent of average for the date. Then, as with the 8SI, the 5SI experienced a record breaking January-March period due to 17, 9, and 38 percent of average precipitation for January, February and March. The 4.2 inch gain in the 5SI this year since January 1 was 3.2 inches less than for the same period in the drought year of 1977 and about 38 inches less than the same period in 1969 which was the wettest January-March period since 1950.

At the conclusion of the first six months of the water year, precipitation (based on all available reporting gauges per basin) was 88 percent of average to date in the Sacramento River Region, 74 percent of average to date in the San Joaquin River Region, and 59 percent of average to date in the Tulare Lake Region. Statewide, water year cumulative precipitation through March was 75 percent of average to date.

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 April 1, snow sensors recorded a snow pack that was 48 percent of average in the Northern Sierra, 55 percent of average in the Central Sierra, and 35 percent of average in the Southern Sierra. Statewide, snow water equivalent based on snow pillow data was 48 percent of the historical April 1 average.

Results from the 232 snow courses measured this month revealed similar snow pack conditions. Statewide there were 14 snow courses that could not be measured due to lack of snow cover area for snowmobiles and too much snow for ATVs (All Terrain Vehicle) and UTVs (Utility Terrain Vehicle-4 wheel drive). Measurements in the Sacramento River Valley watersheds recorded a snow pack that is 38 percent of the historical April 1 average. Measurements in the San Joaquin Valley and Tulare Lake regions registered a snow pack that is 48 and 36 percent of the April 1 average. Statewide, the snow pack was measured at 42 percent of the April 1 average.

Weather and Climate Outlook:

The weather outlook is dry for the next six days, during which freezing elevations will generally be above 9,000 feet for the Sierra until Sunday when, in some areas of the northern Sierra, the freezing level will drop to near 7,000 feet. For the following eight to fourteen days, the weather outlook continues to be dry with an increased chance of above normal temperatures and below normal precipitation.

The NWS Climate Prediction Center’s (CPC) 30-day outlook for April, issued on March 31, 2013, suggests equal chances of above and below normal precipitation for all of California. The same outlook calls for equal chances of above and below normal temperatures for California except for the Owens River basin, the Mojave Desert and the lower Colorado River region, where above normal temperatures are forecast.

The CPC’s three-month outlook (April through June), updated March 29, 2013, suggests equal chances of above and below normal temperatures for all of California except for the Mojave Desert and lower Colorado River region, where above normal temperatures are expected. The precipitation outlook calls for increased chances of below normal precipitation for the entire state except for far Southern California where equal chances of above and below normal precipitation are forecast.

Next Update:

A Bulletin 120 Update for conditions on April 16 will be available Thursday, April 18.

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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