

## **February 15, 2011 Water Supply Forecast Discussion**

This forecast includes observed conditions through the morning of February 15, 2011.

<http://cdec.water.ca.gov/cgi-progs/iodir?s=b120up>.

### **Forecast Summary:**

The projected median April-July runoff now ranges from 79 percent (Sacramento River at Bend Bridge) to 137 percent (Kern River) of average. All forecasts have dropped since the February 8, 2011 Bulletin 120 Update. Some precipitation fell in northern California the last two days before the forecast date, but little to no precipitation fell south of the American River. The forecast for the Total Inflow to Shasta Lake fell by 1 percent. At the other end of the spectrum, the forecast for the Kaweah River dropped by 7 percent of average. For rivers north of the Mokelumne River, the median April-July runoff forecast is less than 100 percent of average.

### **Runoff:**

The current February Unimpaired Runoff rates are well below their averages for most basins. All basins north of the San Joaquin River are flowing at less than 75 percent of the average rate for February and all major rivers from Lake Shasta through the Cosumnes are flowing at less than 45 percent of average. Only the Kings River and Kern River basins are flowing at a rate greater than average for February.

An interesting historical note: Twenty five years ago marked the onset of one of Northern California's major floods. On February 17, began a 3-day period of flows on the American River that set a record for Full Natural Flow (FNF) at Folsom Reservoir. The average FNF was 166,000 cfs. The average daily flow so far in February 2011 has been about 3000 cfs.

### **Precipitation:**

The Northern Sierra 8-Station Index has gained 1.5 inches (February 1-15) which is 19 percent of the historical February average. The seasonal total of 35.5 inches is now about 115 percent of average to date and 71 percent of an average water year. The San Joaquin 5-Station Index has increased just 0.1 inch since February 1 and has a current (February 15) accumulation of 35.1 inches which is about 146 percent of average to date and 86 percent of the water year average.

### **Snowpack:**

According to February 15 snow sensor data, statewide snowpack stands at 80 percent of the April 1 average and 105 percent of average to date. Regionally, the Northern Sierra, Central Sierra, and Southern Sierra have 90, 101, and 131 percent of average, respectively, for February 15.

### **Weather and Climate Outlooks:**

The storm door has finally been opened! Following a prolonged dry spell which has included most of January and February, a series of cold, winter storms hit California beginning late Sunday evening, February 13. These storms have mostly focused on Northern California and the Northern Sierra Nevada to date but have gradually moved south along the entire Sierra Nevada giving a much needed boost to precipitation and snow pack numbers. The latest 6-day weather outlook includes winter storm conditions throughout the Sierra Nevada over the next two to three days. Snow elevations during this period are expected to drop as low as 2000 feet and range as high as 5000 feet. The storm system will eventually taper off beginning Sunday over all of the Sierra Nevada. Early next week, only trace amounts of precipitation are expected across the state on Monday before drying out by Tuesday.

For the Upper Sacramento basins including the Feather, Yuba, and American River watersheds, a total accumulation of 2-3 inches of precipitation is expected over the next two days before the precipitation trails off for the weekend. Snow elevations will range from 2000-4000 feet during this time. For the San Joaquin Valley basins, a total of 2-3 inches of precipitation is expected over the next 2-3 days. Snow elevations in the Central and Southern Sierra Nevada are expected to range between 3000-5000 feet during this period.

The NWS Climate Prediction Center's (CPC) 30-day outlook for March, updated February 17, 2011, suggests increased chances of below normal temperatures for all of California except for the Mojave Desert region and the far southern end of the Sierra. The same outlook calls for increased chances of above normal precipitation for a narrow band along the Oregon border and conversely increased chances of below normal precipitation south of a line from Monterey Bay to the San Joaquin River basin. All other areas, which include the Northern and Central Sierra Nevada, show equal chances of above or below normal precipitation.

The CPC's three month outlook (March through May) was last updated February 17, 2011. This outlook suggests increased chances of below normal temperatures over a region north of Monterey Bay and Lake Tahoe. For all other areas of the Sierra Nevada south of Lake Tahoe, the outlook suggests equal chances of above or below normal temperatures. The same outlook calls for increased chances of below normal precipitation for the southern half of the state including all areas of the Sierra Nevada south of Lake Tahoe. Equal chances of above or below normal precipitation are forecasted elsewhere.

**Next Update:**

The next Bulletin 120 forecast update will be produced for conditions on February 22, 2011, and will be available by Thursday, February 24, 2011. If you need guidance before then, or have any questions, please contact us:

**Snow Surveys Staff Contact Information:**

Dave Rizzardo, Chief ([daver@water.ca.gov](mailto:daver@water.ca.gov)) 916-574-2983

John King ([kingji@water.ca.gov](mailto:kingji@water.ca.gov)) 916-574-2637

Steve Nemeth ([nemeth@water.ca.gov](mailto:nemeth@water.ca.gov)) 916-574-2634

Andy Reising ([areising@water.ca.gov](mailto:areising@water.ca.gov)) 916-574-2181

Richard Mora ([rmora@water.ca.gov](mailto:rmora@water.ca.gov)) 916-574-2636

**Important Links**

**Full Natural Flow Data:**

Daily FNF

[http://cdec.water.ca.gov/cgi-progs/snowsurvey\\_ro/FNF](http://cdec.water.ca.gov/cgi-progs/snowsurvey_ro/FNF)

Monthly FNF

[http://cdec.water.ca.gov/cgi-progs/snowsurvey\\_ro/FNFSUM](http://cdec.water.ca.gov/cgi-progs/snowsurvey_ro/FNFSUM)

Seasonal FNF

[http://cdec.water.ca.gov/cgi-progs/snowsurvey\\_ro/FLOWOUT](http://cdec.water.ca.gov/cgi-progs/snowsurvey_ro/FLOWOUT)

**Precipitation Data:**

Latest Northern Sierra 8-Station Precipitation Index

<http://cdec.water.ca.gov/cgi-progs/queryDaily?s=8SI&d=today>

Northern Sierra 8-Station Precipitation Tabulation Table

[http://cdec.water.ca.gov/cgi-progs/products/8-Stations\\_Tab.pdf](http://cdec.water.ca.gov/cgi-progs/products/8-Stations_Tab.pdf)

Latest San Joaquin 5-Station Precipitation Index

<http://cdec.water.ca.gov/cgi-progs/queryDaily?s=5SI&d=today>

San Joaquin 5-Station Precipitation Tabulation Table

[http://cdec.water.ca.gov/cgi-progs/products/5-Stations\\_Tab.pdf](http://cdec.water.ca.gov/cgi-progs/products/5-Stations_Tab.pdf)

2011 WY Precipitation Summary

<http://cdec.water.ca.gov/cgi-progs/precip/PRECIPSUM>

**Snow Data:**

Latest Snow Sensor Report

<http://cdec.water.ca.gov/cgi-progs/snow/PAGE6>

Latest Statewide Summary of Snow Water Equivalents

<http://cdec.water.ca.gov/cgi-progs/snow/DLYSWEQ>

Monthly Snow Course Report

<http://cdec.water.ca.gov/cgi-progs/snow/COURSES>

**Extended Regional Forecasts:**

California Nevada River Forecast Center 6 Day QPF and Snow Level Forecast

<http://www.cnrfc.noaa.gov/awipsProducts/RNOHD6RSA.php>

Climate Prediction Center One-Month Outlook Forecasts

<http://www.cpc.noaa.gov/products/predictions/30day/>

Climate Prediction Center Three-Month Outlook Forecasts

<http://www.cpc.noaa.gov/products/predictions/90day/>

**Drought Information:**

California Drought Information

<http://www.water.ca.gov/drought/>

U.S. Seasonal Drought Outlook

[http://www.cpc.ncep.noaa.gov/products/expert\\_assessment/seasonal\\_drought.html](http://www.cpc.ncep.noaa.gov/products/expert_assessment/seasonal_drought.html)