

## May 1, 2010 Water Supply Forecast Discussion

May 1, 2010 Bulletin 120 Forecast:

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

May 1, 2010 Water Year 2010 Water Supply Index (WSI) forecast:

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

### **Forecast Summary:**

Accumulated precipitation and snowpack remained above average through April. At the end of April, statewide water year-to-date runoff and reservoir levels stood at 75 and 95 percent of normal, respectively.

The projected median April-July runoff now ranges from 90 percent for the West Carson River to 147 percent for the Sacramento River at Delta above Shasta Lake. All forecasts have increased since the April 1, 2010 Bulletin 120 forecast, averaging 20 percent higher statewide. The largest increase (35 percent) was forecast on the Cosumnes River and smallest increase (8 percent) was forecast on the East Carson River.

Forecasted median Water Year runoff ranges from 60 percent on the Klamath River to 119 percent on the San Joaquin and Kaweah Rivers.

This WSI forecast can be summarized as follows:

<b>Sacramento River Unimpaired Runoff Water Year Forecast</b> (50 percent exceedance)	<b>15.6 MAF</b> (84 percent of normal)
<b>Sacramento Valley Index (SVI)</b> (50 percent exceedance)	<b>6.9</b> (Below Normal)
<b>San Joaquin Valley Index (SJI)</b> (75 percent exceedance)	<b>3.5</b> (Above Normal)

The SVI increased to 6.9 from 6.2 while the SJI increased to 3.5 from 2.9 from the April 1, 2010 WSI.

### **Runoff:**

April unimpaired flows in the Sierra ran above normal for 8 basins as opposed to 3 for the month of March. During April the Sacramento River region, the San Joaquin River region, and the Tulare Lake region had flows of 103 percent, 94 percent and 98 percent of average, respectively.

### **Precipitation:**

April statewide precipitation was well above average (204 percent). The statewide water year totals stood at 109 percent of average and 99 percent of an average water year. October through April precipitation (based on all available reporting gauges per basin) was 101 percent of average in the Sacramento River Region, 112 percent of average in the San Joaquin River Region, and 118 percent of average in the Tulare Lake Region.

The Northern Sierra 8-Station Precipitation Index gained 8.2 inches during April (210 percent of the historical April average). This brought the 8-Station water year-to-date total to 48.9 inches (107 percent of the seasonal average to date). In comparison, the 8-Station Index precipitation total for the month

of April 2009, was 1.7 inches (42 percent of the monthly average). As of May 11, 2010, the observed May 8-Station precipitation-to-date is 1.1 inches (52 percent of the average May total).

The San Joaquin 5-Station Precipitation Index gained 7.8 inches during April (223 percent of the historical April average). On April 30, 2010, the 5-Station Index water year-to-date total stood at 42.2 inches (114 percent of the seasonal average to date). As of May 10, 2010, the observed May 5-Station precipitation-to-date is approximately 0.5 inches (26 percent of the average May total).

#### **Snowpack:**

Snowpack is monitored using two complementary methods: automatic snow sensor (or “pillow”) readings and manual snow course measurements. On May 1, snow sensors recorded a snow pack that was 138 percent, 99 percent, and 112 percent of the historical April 1 average in the Northern Sierras and Trinities, Central Sierras, and Southern Sierras, respectively. Statewide, snow water equivalent based on snow pillow data was 33 inches, or 114 percent of the historical April 1 average. This level represented an increase of 8 percent since April 1.

Measurements from the snow courses this month revealed comparable snow pack conditions. Measurements in the Sacramento River Valley watersheds recorded a snow pack that is 99 percent of the historical April 1 average. Measurements in the San Joaquin Valley watersheds indicated a snow pack that is 116 percent of the April 1 average while the snow pack for the Tulare Lake region was 119 percent of the April 1 average. Statewide, the snow pack was measured at 109 percent of the historical April 1 average. This represented a statewide increase of 5 percent since April 1.

The network of snow pillows will be monitored and reported regularly until most of the snowpack has melted. A select group of snow courses will again be measured around June 1.

#### **Weather and Climate Outlook:**

The latest weather forecast for the next six days indicates no precipitation statewide. Freezing elevations will begin today at 7,000 feet and increase to over 12,000 feet by the end of the period.

The NWS Climate Prediction Center’s (CPC) 30-day outlook for May, last updated April 30, suggests an increased chance of above normal temperatures for the southern third of the interior of California and below normal temperatures for Northern California; otherwise equal chances of above or below normal temperatures for the rest of the state. The precipitation outlook suggests equal chances of above and below normal precipitation for all of the state.

The CPC’s three month outlook (May thru July) was last updated on April 15, 2010. This outlook suggests increased chances of above normal temperatures for the entire state with the greatest chance for the Sierra Nevada. For precipitation, this outlook suggests equal chances of above and below normal precipitation for the entire state. This precipitation outlook was the same as the CPC’s (April-June) outlook dated March 18, 2010.

#### **Next Update:**

This is the last first of month Bulletin 120 forecast and WSI of the season. However, the next weekly Bulletin 120 Update will be available this Thursday, May 13, 2010 for conditions on May 11. If you have any questions regarding these forecasts, please contact a member of the Snow Surveys staff. We are happy to help.

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**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>

2010 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/>

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)