

We have finished the June 9, 2020 Bulletin 120 (B120) forecast update. The forecast includes observed conditions through the morning of June 9, 2020. [This is the FINAL update of the Bulletin 120 this season.](#)

The forecasts are posted at: <http://cdec.water.ca.gov/b120up.html>

Forecast Summary:

The projected median April-July (AJ) runoff ranges in the major Sacramento river basins from 56 percent of average for the Feather River basin to 72 percent of average for the American River basin, in the major San Joaquin river basins from 55 percent of average for the Merced River basin to 68 percent of average for the Mokelumne River basin, and in the major Tulare basins from 43 percent of average for the Tule River basin to 55 percent of average for the Kings River basin.

Forecasts for all major Sierra Nevada river basins have either decreased or remained unchanged since the June 2, 2020 B120 Forecast update, due to the low amounts of precipitation this past week. The largest relative decrease in forecast was for the Kern River basin with a 4 percent of average drop. All other basins dropped by 2 percent of average or less. All adjustments to the forecast since last week were 10 TAF or less with the exception of the Kern River and Feather River basins where the forecast dropped by 20 TAF. For the Kern River basin, the percent of April-July runoff realized to-date is 72%. This is far behind the surrounding basins, 85-93% of observed runoff to-date. With little to no snow, and minimal chances of appreciable precipitation in June and July, we felt the forecast should drop to around 200 TAF.

Runoff:

Since last week, full natural flow rates in most Sierra Nevada river basins have significantly declined.

June full natural flow rates updated through June 8-9, 2020:

| River Basin | Percent of Historic Average |
|---------------------------|------------------------------------|
| Trinity | 30 |
| Shasta Inflow | 69 |
| Sacramento at Bend Bridge | 80 |
| Feather | 66 |
| Yuba | 58 |
| American | 65 |
| Cosumnes | 66 |
| Mokelumne | 52 |
| Stanislaus | 50 |
| Tuolumne | 41 |
| Merced | 34 |
| San Joaquin | 46 |
| Kings | 40 |
| Kaweah | 32 |
| Tule | 30 |
| Kern | 36 |

Precipitation:

All three precipitation indices showed little to no change since last week.

The accumulated average to date precipitation for Water Year 2020 and month to date are shown in the table below:

| Region/Index | WY-to-date precipitation as a percent of average (inches) through June 10, 2020 | Month-to-date precipitation as a percent of month total (inches) through June 10, 2020 |
|---------------------------------|---|--|
| Northern Sierra 8-Station Index | 63 (31.5 inches) | 20 (0.2 inches) |
| San Joaquin 5-Station Index | 63 (24.5 inches) | 0 (0.0 inches) |
| Tulare Basin 6-Station Index | 67 (18.6 inches) | 25 (0.1 inches) |

Snowpack:

The statewide snowpack based on snow sensors is 0.1 inches which corresponds to 0 percent of the April 1 average. Since, June 2 the statewide snowpack has decreased by 0.1 inches. Out of about 130 snow sensors statewide, only 6 are reporting any snow water content. Because nearly all snow sensors are not reporting snow, the last statewide Snow Water Content Report for the water year was run on June 8. However, data for individual snow sensors can still be accessed on the California Data Exchange Center (CDEC) webpage.

The regional snowpack levels as of the morning of June 8, 2020 stand at the following (based on snow sensors):

| Region | Snow Water Content (inches) | % of Average (Apr 1) | % of Average (June 8) |
|-----------|-----------------------------|----------------------|-----------------------|
| Northern | 0.2 | 1 | 6 |
| Central | 0.0 | 0 | 0 |
| Southern | 0.1 | 0 | 0 |
| Statewide | 0.1 | 0 | 0 |

Weather and Climate Outlooks:

According to the CNRFC 6-day forecast, warm and mostly dry conditions are expected today and tomorrow, across the State. Heat risk is moderate through Thursday. As the ridge shifts further east ahead of the approaching late-week trough, significantly cooler temperatures are expected across most of the State on Friday and Saturday. Few light showers are possible over the northern California on Friday. Starting early next week, it will be warm and dry, again.

June's roller coaster ride for freezing elevations continues this week. Today, freezing elevations are near 14,000 feet, and by Saturday they will be near 6,000 - 8,000 feet, except in southern California, where elevations will be near 13,000 feet. After the big drop on Friday/Saturday, elevations start to climb up, and by early next week they will be near 12,000 - 14,000 feet across the State.

The NWS Climate Prediction Center (CPC) one-month outlook for June 2020 issued on May 31, 2020, points to increased chances of above normal temperatures across the State, except for areas north of Redding to Oregon border where equal chances of above or below normal temperatures are expected. This same outlook suggests equal chances of above or below normal precipitation across the State, except for areas north of Redding to Oregon border where above normal chances of precipitation are expected.

The CPC three-month (June-July-August) outlook, issued on May 21, 2020, points to increased chances of above normal temperatures across the State. The same outlook suggests equal chances of above or below normal precipitation in central and southern California, and increased chances of below normal precipitation in far-northern California.

According to the latest El Niño/Southern Oscillation (ENSO) discussion issued by the Climate Prediction Center on June 08, 2020, ENSO-neutral conditions are present. Equatorial sea surface temperatures (SSTs) are near to below average across the central and eastern Pacific Ocean. The tropical atmospheric circulation is consistent with ENSO-neutral. There

is a ~65% chance of ENSO-neutral during Northern Hemisphere summer 2020, with chances decreasing through the autumn (to 45-50%).

Next Update:

This is the last B120 Forecast update for this water year. The B120 Forecasts for the next water year will begin in February, 2021. If you have any questions regarding this forecast, or would like further forecasting guidance this season, please contact a member of the Snow Surveys and Water Supply Forecasting Section via email.

Important Links:

Full Natural Flow Data:

Daily FNF

<http://cdec.water.ca.gov/reportapp/javareports?name=FNF>

Monthly FNF

<http://cdec.water.ca.gov/reportapp/javareports?name=FNFSUM>

Seasonal FNF

<http://cdec.water.ca.gov/reportapp/javareports?name=FLOWOUT>

NEW Tableau Dashboard – Historical FNF Comparison (Interactive Data Visualization)

https://tableau.cnra.ca.gov/t/DWR_Snow_WSFcast/views/FNF_V11/MonthlyFNFDashboard?iframeSizedToWindow=true&:embed=y&:showAppBanner=false&:display_count=no&:showVizHome=no

Precipitation Data:

Latest Northern Sierra 8-Station Precipitation Index Tabular Data

http://cdec.water.ca.gov/cgi-progs/products/TAB_ESI.pdf

Latest San Joaquin 5-Station Precipitation Index Tabular Data

http://cdec.water.ca.gov/cgi-progs/products/TAB_FSI.pdf

Latest Tulare Basin 6-Station Precipitation Index Tabular Data

http://cdec.water.ca.gov/cgi-progs/products/TAB_TSI.pdf

*Latest Northern Sierra 8-Station Precipitation Index Plot

http://cdec.water.ca.gov/reportapp/javareports?name=PLOT_ESI.pdf

*Latest San Joaquin 5-Station Precipitation Index Plot

http://cdec.water.ca.gov/reportapp/javareports?name=PLOT_FSI.pdf

*Latest Tulare Basin 6-Station Precipitation Index Plot

http://cdec.water.ca.gov/reportapp/javareports?name=PLOT_TSI.pdf

**This link is a new addition to the forecast email*

Snow Data:

Latest Snow Sensor Report

<http://cdec.water.ca.gov/reportapp/javareports?name=PAGE6>

Latest Statewide Summary of Snow Water Equivalent

<http://cdec.water.ca.gov/reportapp/javareports?name=DLYSWEQ>

NEW Tableau Dashboard – Regional Snow Water Equivalent Comparison (Interactive Data Visualization)

https://tableau.cnra.ca.gov/t/DWR_Snow_WSFcast/views/SWE_v2/SWEDashboard?iframeSizedToWindow=true&:embed=y&:showAppBanner=false&:display_count=no&:showVizHome=no

NEW Tableau Dashboard – Snow Product Comparison (Interactive Data Visualization)

https://tableau.cnra.ca.gov/t/DWR_Snow_WSFcast/views/SnowProductComparisons_V2/Dashboard1?iframeSizedToWindow=true&:embed=y&:showAppBanner=false&:display_count=no&:showVizHome=no

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

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

Climate Prediction Center Three-Month Outlook Forecasts

https://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=01

U.S. Seasonal Drought Outlook

http://www.cpc.ncep.noaa.gov/products/expert_assessment/sdo_summary.html

Weather Forecast Office California Service Area-Products

<http://www.cnrfc.noaa.gov/forecasts.php>

El Niño Southern Oscillation (ENSO) Conditions and Weekly Discussion (including La Niña)

http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.pdf

Bulletin 120:

NEW Tableau Dashboard – Bulletin 120 Forecast Performance Over Time (Interactive Data Visualization)

https://tableau.cnra.ca.gov/t/DWR_Snow_WSFcast/views/B120_Fct_Error/Story?iframeSizedToWindow=true&:embed=y&:showAppBanner=false&:display_count=no&:showVizHome=no

Historical Forecast Error Plots

http://cdec.water.ca.gov/snow/bulletin120/B120_error_fcst_plots.html

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