

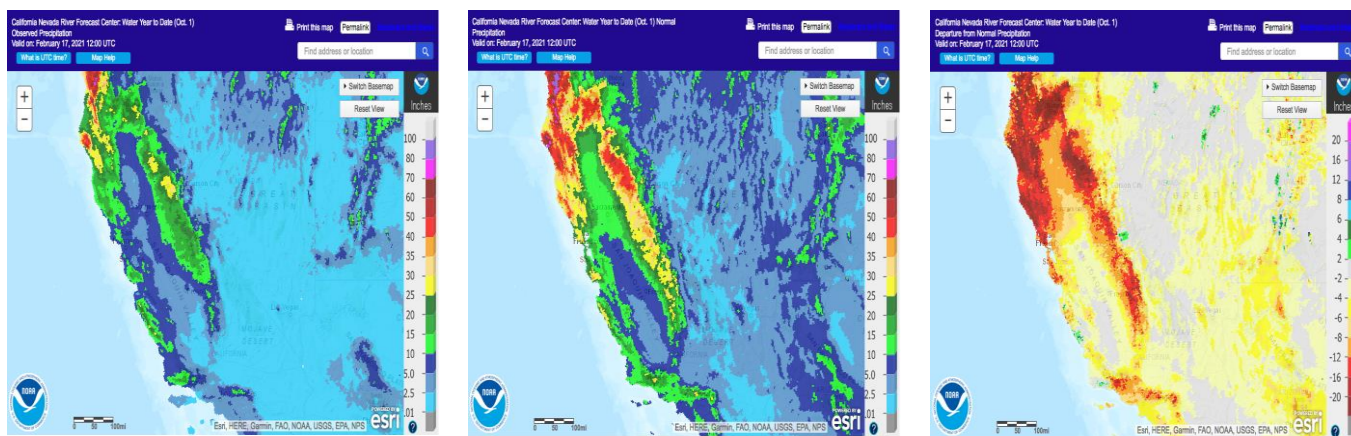
WY2021 Water Resources Update – February 18th, 2021

Highlights:

- A few storms brought significant precipitation to mainly the northern part of the region this winter
- Cumulative precipitation and snowpack are still running much below normal
- Seasonal runoff is therefore expected to be much below normal

Alan Haynes/CNRFC

Observed Precipitation

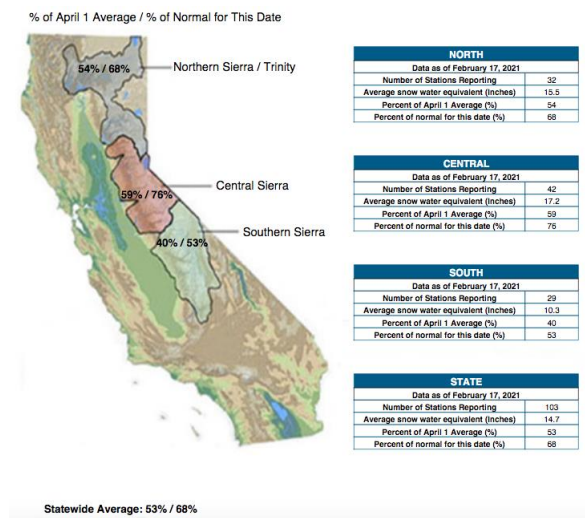


Accumulated precipitation since Oct. 1, 2020.

Average precipitation to date since Oct. 1, 2020.

Departure from average precipitation to date since Oct. 1, 2020.

Accumulated precipitation this water year (since October 1st, 2020) is below average in most places, with deficits of 10-20 inches over the Northern CA Coast, around Mt. Shasta and along the higher elevations of the Sierra Nevada.

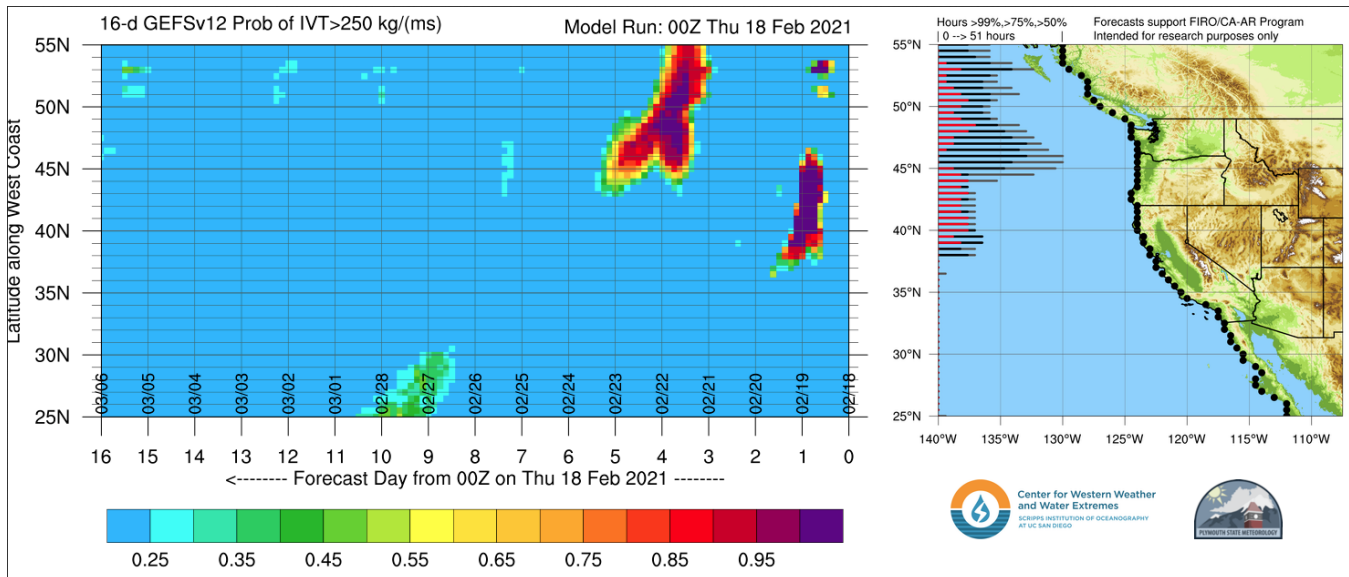


Current Regional Snowpack from Automated Snow Sensors

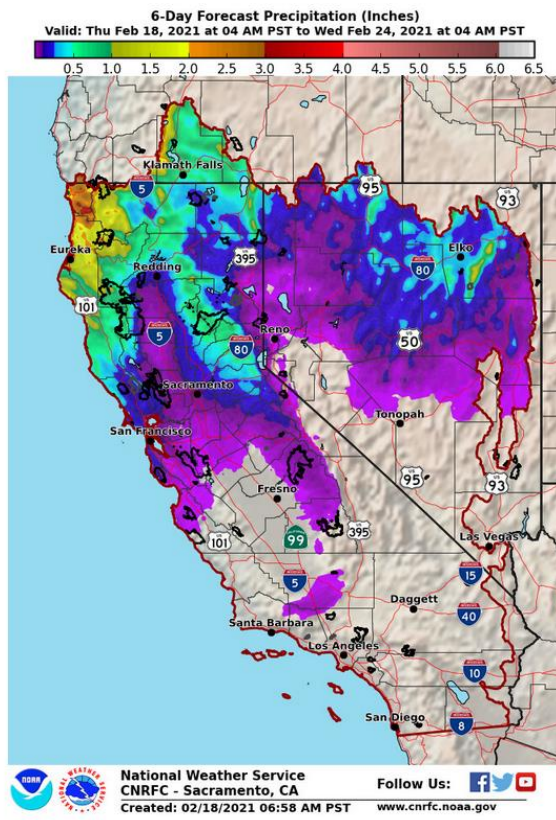
The statewide snowpack is about 53% of the April 1st average and about 68% of the season to date. The snowpack deficit is most notable in the Southern Sierra Nevada, where it amounts to only about half of the season to date average.

Source: <https://cdec.water.ca.gov/reportapp/javareports?name=swccond.pdf>

Forecast Precipitation



Source: http://cw3e.ucsd.edu/images/gefs/v12/GEFS_LandfallTool_250_coast_current.png

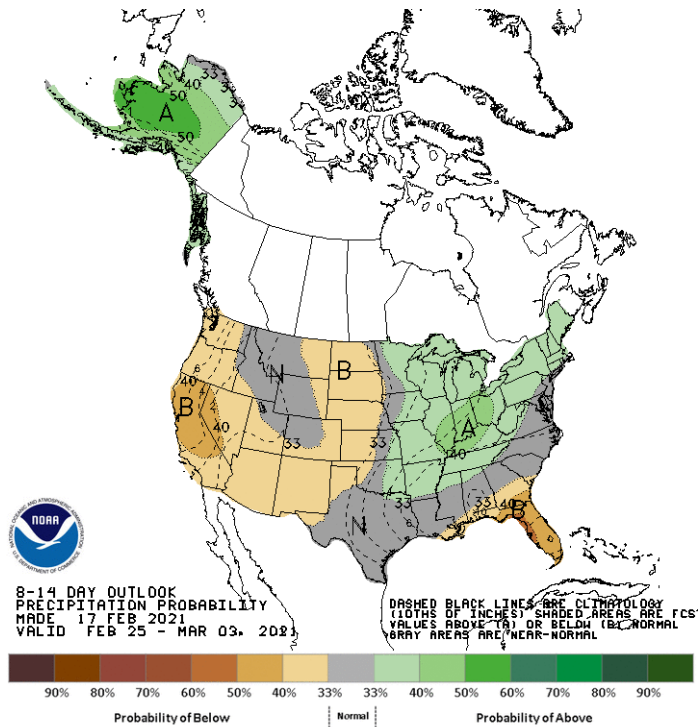


The Atmospheric River (AR) Landfall Tool from CW3E (depicted above) shows an AR poised to hit Northern CA over the next couple of days. Precipitation amounts from the AR will be quite modest, with the heaviest amounts expected on the far North Coast of CA with about 1-3 inches. Less than one inch of precipitation is expected in the region above Lake Shasta and over the Northern Sierra.

Storm activity will shift north into the Pacific NW later over the weekend and into next week, leaving California and Nevada dry.

Source: <https://www.cnrfc.noaa.gov/precipForecast.php?cwa=RSA&imgNum=1>

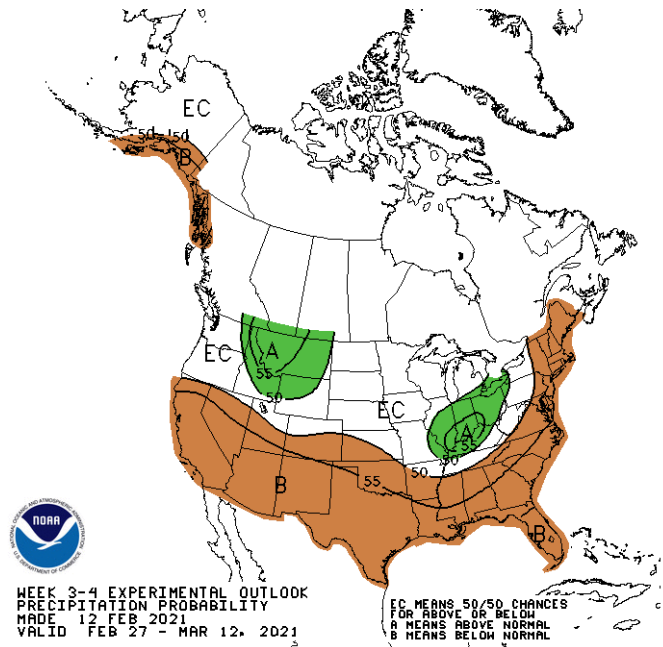
CPC Precipitation Outlook – 8-14 Days



Source:

<https://www.cpc.ncep.noaa.gov/products/predictions/814day/814prcp.new.gif>

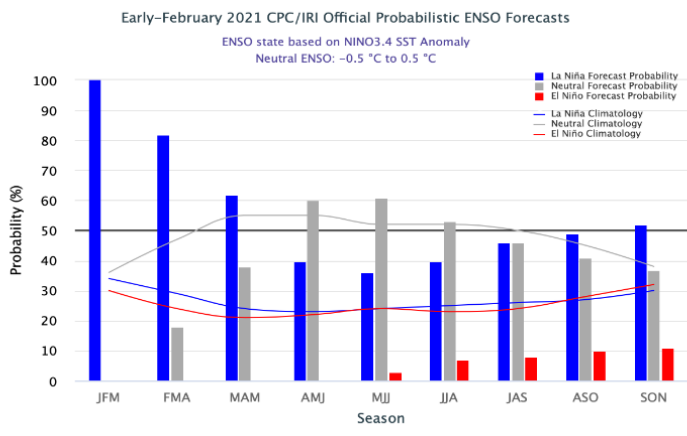
CPC Experimental Precipitation Outlook for Weeks 3-4



Source:

<https://www.cpc.ncep.noaa.gov/products/predictions/WK34/gifs/WK34prcp.gif>

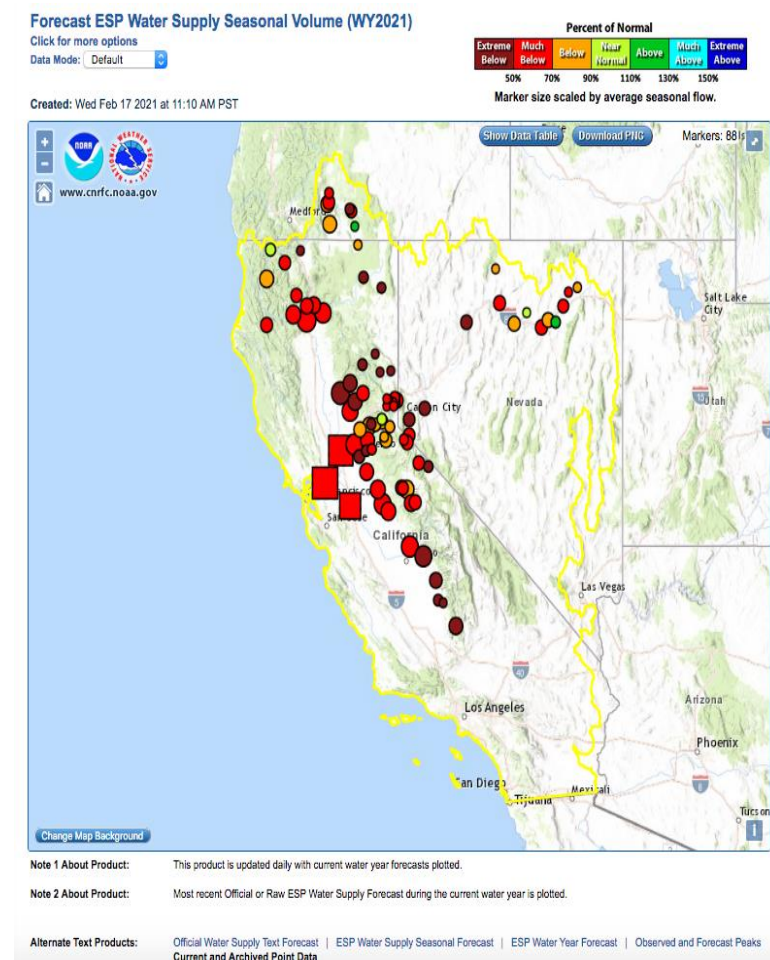
Probabilistic ENSO Forecast



La Nina conditions remain in place in the tropical Pacific, as equatorial sea surface temperatures (SSTs) are below average from the west-central to eastern Pacific Ocean. The tropical atmospheric circulation is consistent with La Nina. There is about a 60% chance of a transition from La Nina to ENSO-Neutral during the spring.

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

Forecast HEFS Water Supply Seasonal Volume (WY2021)



The CNRFC water supply seasonal volume (April-July runoff) forecast takes into account the current hydrologic model states, such as the snowpack Snow Water Equivalent (SWE) and soil moisture, the short-term weather forecast (0-15 days), and climatology beyond 15 days. Currently, most locations are projected to produce “much below normal” runoff (50%-70% of normal), with some locations projected to produce “extreme below normal” runoff (<50% of normal).

Source: https://www.cnrfc.noaa.gov/water_resources_update.php

Summary:

After a very dry fall, a few atmospheric rivers brought significant precipitation to mainly the northern part of the region, but not enough to erase the cumulative deficit from the fall. Another weather system will bring mainly light-moderate amounts of precipitation to Northern California and Northern Nevada over the next couple of days. Weather forecasts look dry beyond this weekend and climate projections indicate that relatively dry conditions are likely to persist into the spring. Given that the current snowpack is running well below average, and with no precipitation on the horizon beyond this weekend, seasonal runoff volumes are expected to be much below normal this spring and summer.