

From: Deirdre Des Jardins <ddj@cah2oresearch.com>
Sent: Wednesday, May 17, 2023 1:25 PM
To: Delta Council ISB <DeltaCouncilISB@deltacouncil.ca.gov>

Subject: Followup on escalating flood risk w/some info on Canada / Western US heatwave and snowmelt

Dear Delta Independent Science Board members,

Apologies for the broken link in my previous flooding brief. Here is a working link:
[Analysis: Proposed state investments inadequate to address increase in catastrophic flood risk – California Water Research \(cah2oresearch.com\)](#)

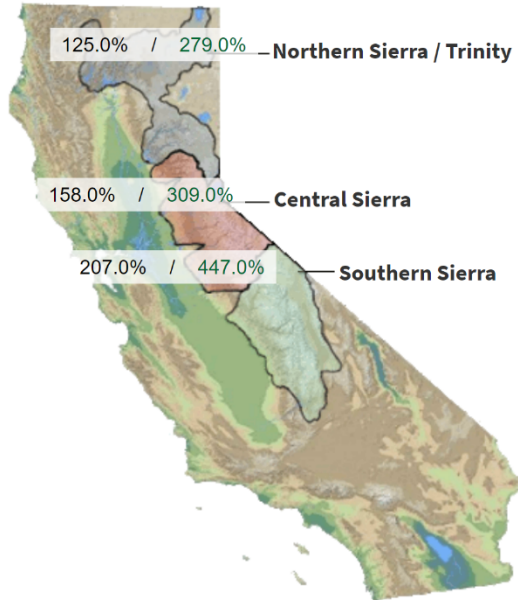
California's record snowpack:
[Snow Pack Conditions - Snow Water Content Chart \(ca.gov\)](#)

Snow Water Equivalents (inches)

Provided by the California Cooperative Snow Surveys

Data For: **17-May-2023**

% Apr 1 Avg. / % Normal for this Date



Change Date :

NORTH	
Data For: 17-May-2023	
Number of Stations Reporting	24
Average snow water equivalent	37.3"
Percent of April 1 Average	125%
Percent of normal for this date	279%

CENTRAL	
Data For: 17-May-2023	
Number of Stations Reporting	39
Average snow water equivalent	40.4"
Percent of April 1 Average	158%
Percent of normal for this date	309%

SOUTH	
Data For: 17-May-2023	
Number of Stations Reporting	24
Average snow water equivalent	41.0"
Percent of April 1 Average	207%
Percent of normal for this date	447%

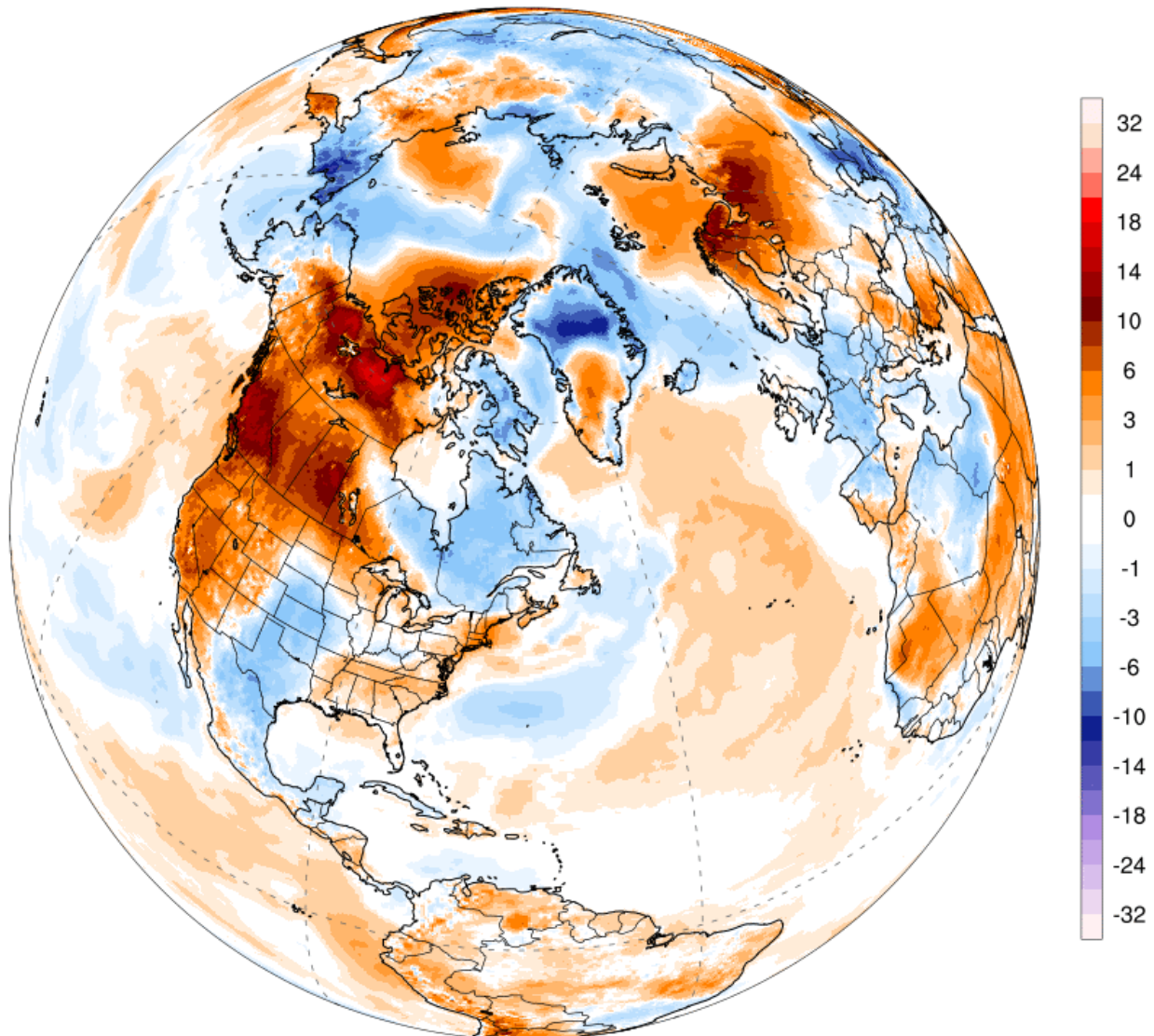
STATEWIDE SUMMARY	
Data For: 17-May-2023	
Number of Stations Reporting	87
Average snow water equivalent	39.7"
Percent of April 1 Average	158%
Percent of normal for this date	324%

[Printable Version of Current Data](#)

Here is the 2 m temperature anomaly as of May 16:

GFS 2m T Anomaly (°C) [CFSR 1979-2000 baseline]
1-day Avg | Tue, May 16, 2023

ClimateReanalyzer.org
Climate Change Institute | University of Maine

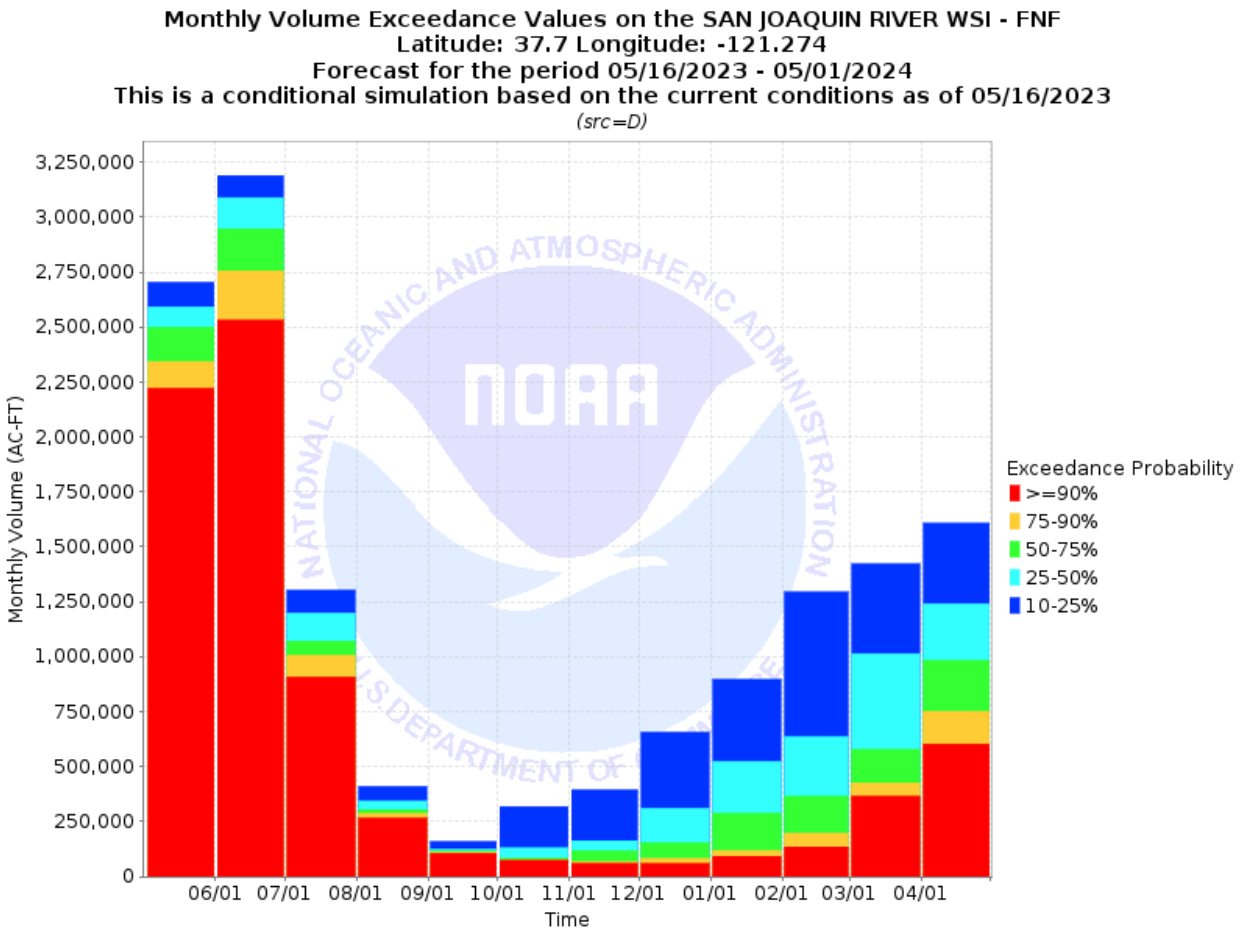


As of May 16, 2023 NOAA CNRFC was forecasting a total of 7.95 MAF of runoff into the major San Joaquin River watershed reservoirs for May, June, and July.

Total: May 3.57 MAF, Jun 2.95 MAF, Jul 1.07 MAF. (50% exceedance.) See [CNRFC - Ensemble Products - VNSCO \(noaa.gov\)](#)

The peak snowmelt will come too late in the growing season for diversions for flooding orchards to recharge groundwater. Orchards need to be dormant to survive inundation for more than 5 days or so.

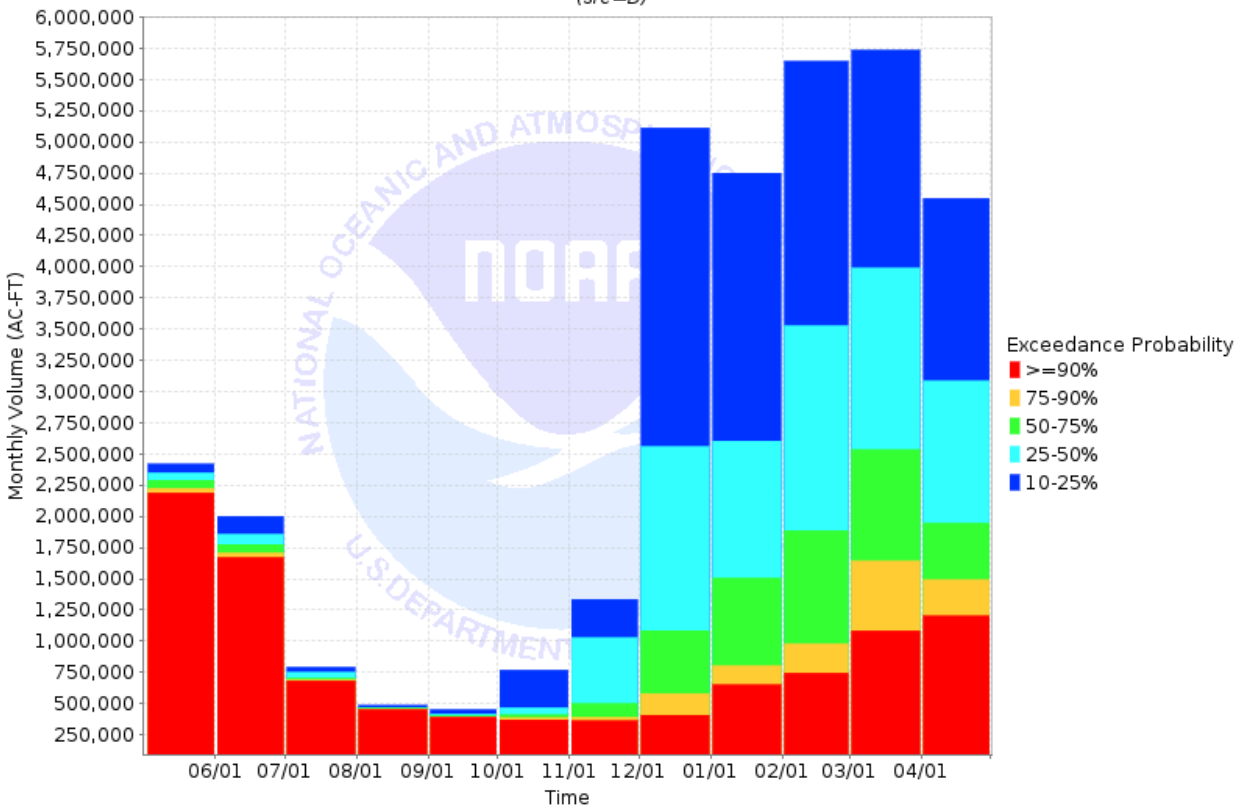
See my blog post: [Orchards are not resilient to floods or droughts – California Water Research \(cah2oresearch.com\)](#) The peak snowmelt is also occurring during the peak growing season for annual crops.



NOAA CNRFC is forecasting a total of 6.60 MAF of runoff into the major Sacramento River watershed reservoirs for May, June, and July.

Total: May 3.57 MAF, Jun 2.95 MAF, Jul 1.07 MAF. (50% exceedance.) See [CNRFC - Ensemble Products - VNSCO \(noaa.gov\)](#)

Monthly Volume Exceedance Values on the SACRAMENTO RIVER WSI - FNF
 Latitude: 38.546 Longitude: -121.51
 Forecast for the period 05/16/2023 - 05/01/2024
 This is a conditional simulation based on the current conditions as of 05/16/2023
 (src=D)



Deirdre Des Jardins
 California Water Research
 Integrative scientific synthesis



"We aren't just failing to address the growing climate crisis to come; we're unprepared even for the impacts already here—in part because they keep surprising us with their intensity and in part because we can't seem to fathom our genuine vulnerability." – David Wallace Wells

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