

USDA NRCS Snow Surveys Update

*DWR Annual Cooperative Snow Survey Meeting
Paso Robles, CA
November 6-7, 2019*

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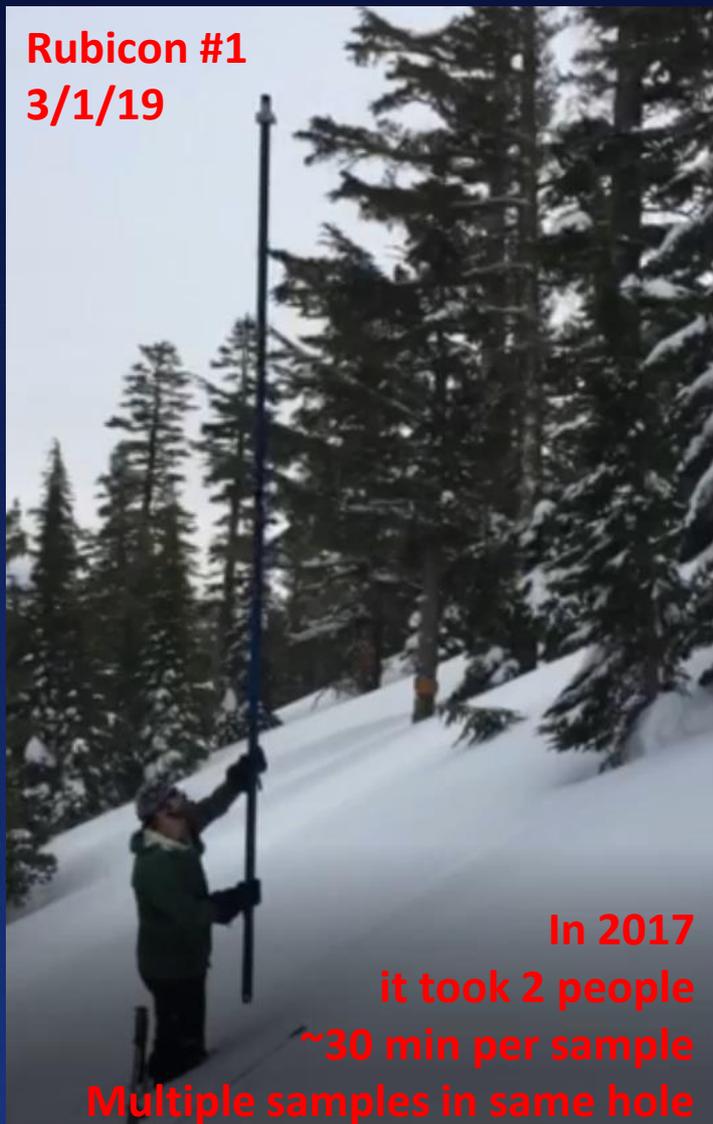
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Photo: Snow Arch near Latopie Lake, Sept 28, 2019

Credit: Ryan Lewthwaite, USFS

Rubicon #1
3/1/19



In 2017
it took 2 people
~30 min per sample
Multiple samples in same hole

2019 – Another Big Year for Lake Tahoe

Snowpack Character

Deep Less Dense

Less Ice Layers

A lot easier to sample than 2017

Extreme Snowfall = Plugged Precip Gages

In 2019 up to 27 out of 32 precipitation gages in the Eastern Sierra were plugged with snow. Many plugs contained 2 to 18in of water.

California/Nevada SNOTEL Snow/Precipitation Update Report							
Based on Mountain Data from NRCS SNOTEL Sites							
Provisional data, subject to revision							
Data based on the first reading of the day (typically 00:00) for Friday, March 08, 2019							
Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
LAKE TAHOE							
Heavenly Valley	8534	36.0	21.0	171	-M	22.5	*
Marlette Lake	7884	38.6	21.4	180	-M	23.6	*
Hagans Meadow	7742	28.3	15.4	184	30.5	21.2	144
Echo Peak	7653	64.3	38.3	168	-M	43.2	*
Rubicon #2	7619	39.0	24.3	160	-M	29.7	*
Tahoe City Cross	6797	29.6	13.0	228	42.6	26.6	160
Ward Creek #3	6745	62.0	32.0	194	-M	50.6	*
Fallen Leaf	6242	16.6	5.0	332	34.0	23.6	144
Basin Index (%)				185			150*
TRUCKEE RIVER							
Mt Rose Ski Area	8801	56.2	34.6	162	60.2	39.5	152
Independence Lake	8338	59.3	37.8	157	-M	33.7	*
Big Meadow	8235	37.3	18.9	197	-M	22.0	*
Squaw Valley G.C.	8013	60.3	45.8	132	-M	46.3	*
Independence Camp	6980	39.4	15.8	249	-M	23.3	*
Css Lab	6894	61.7	32.6	189	65.3	47.9	136
Little Valley	6493	24.9	N/A	*	32.8	N/A	*
Truckee #2	6509	-M	14.2	*	39.1	24.8	158
Independence Creek	6436	21.8	13.9	157	-M	23.6	*
Basin Index (%)				169			147*



Field effort to mix in plugs



Summer Highlights

Truckee #2
SNOTEL
Rebuild
Sept 2019

New Toy

Toolcat by Bobcat
Articulated Steering
Hydraulic Dump Bed
Diesel 4x4
Bucket





Toolcat hauling 2 barrels of
pillow fluid up ~25 degree slope
in Ruby Mtns, Nevada

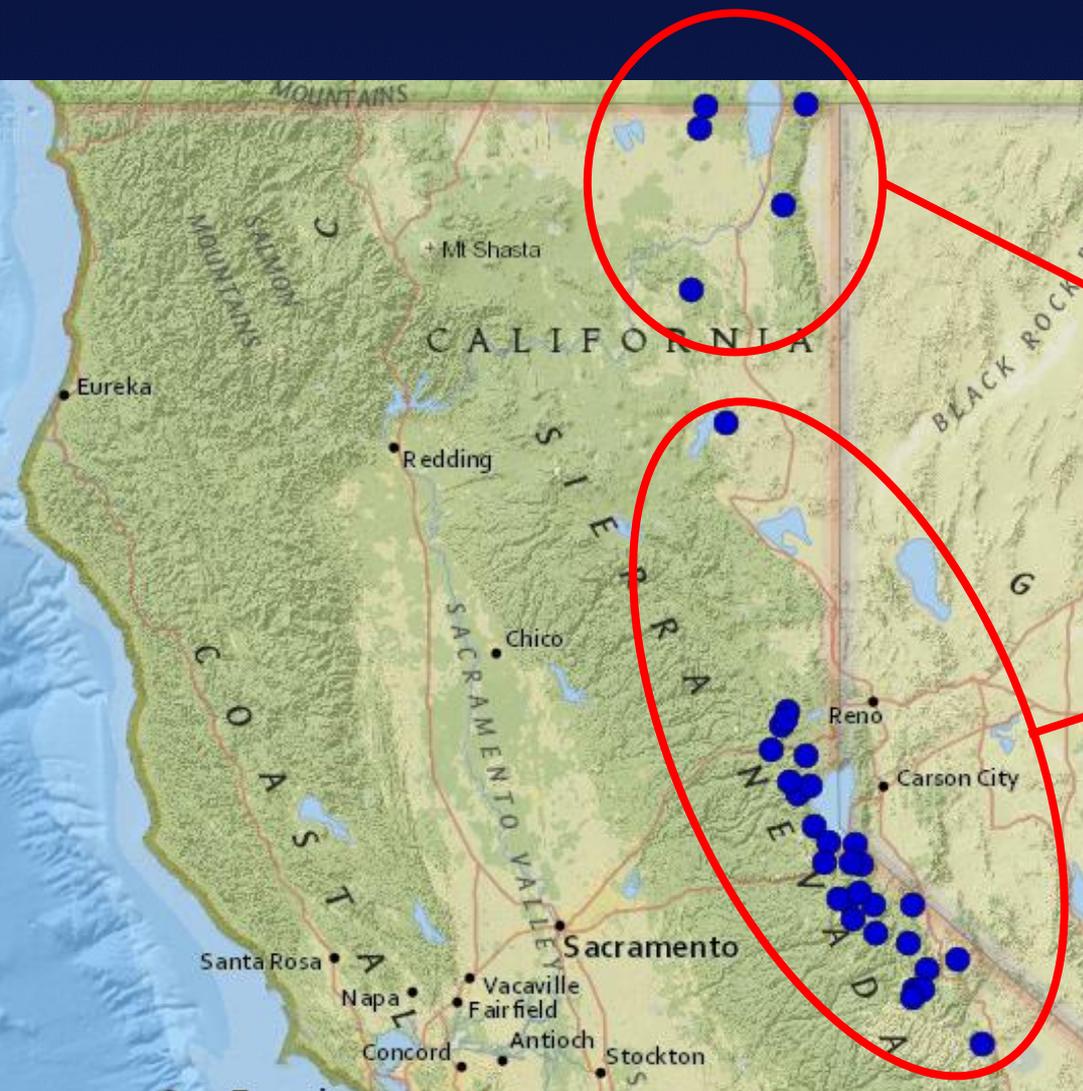
NRCS Data Collection in California



14 Snow Courses



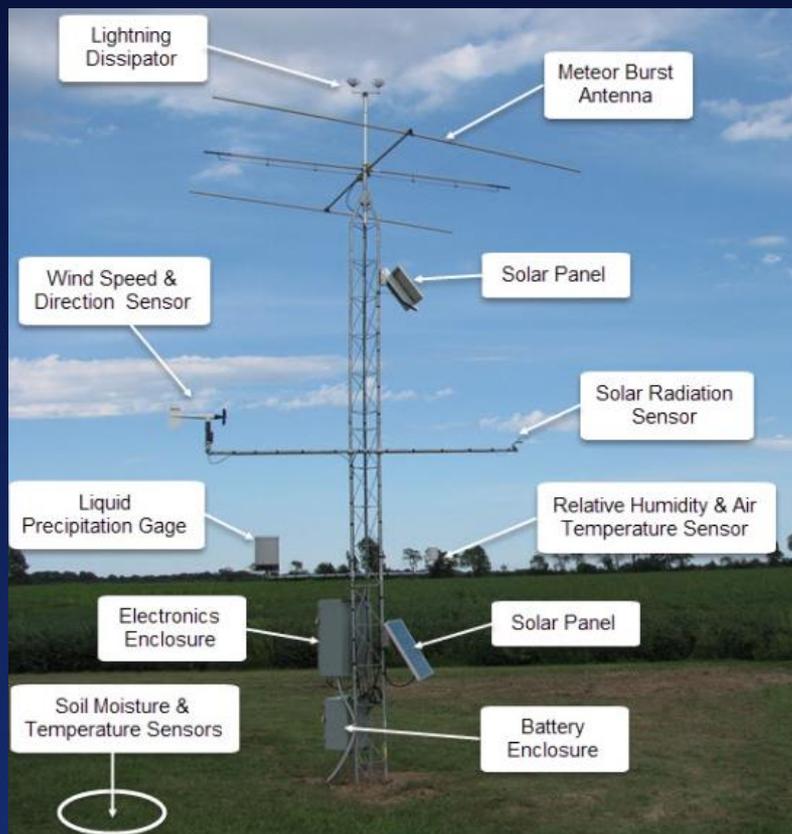
34 SNOTEL Sites in CA
(871 across western US)



SNOTEL and Snow Course Data Questions?

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SCAN Sites
(Soil Climate Analysis Network)

15 stations in California.



NRCS Streamflow forecasts:

Jolyne Lea

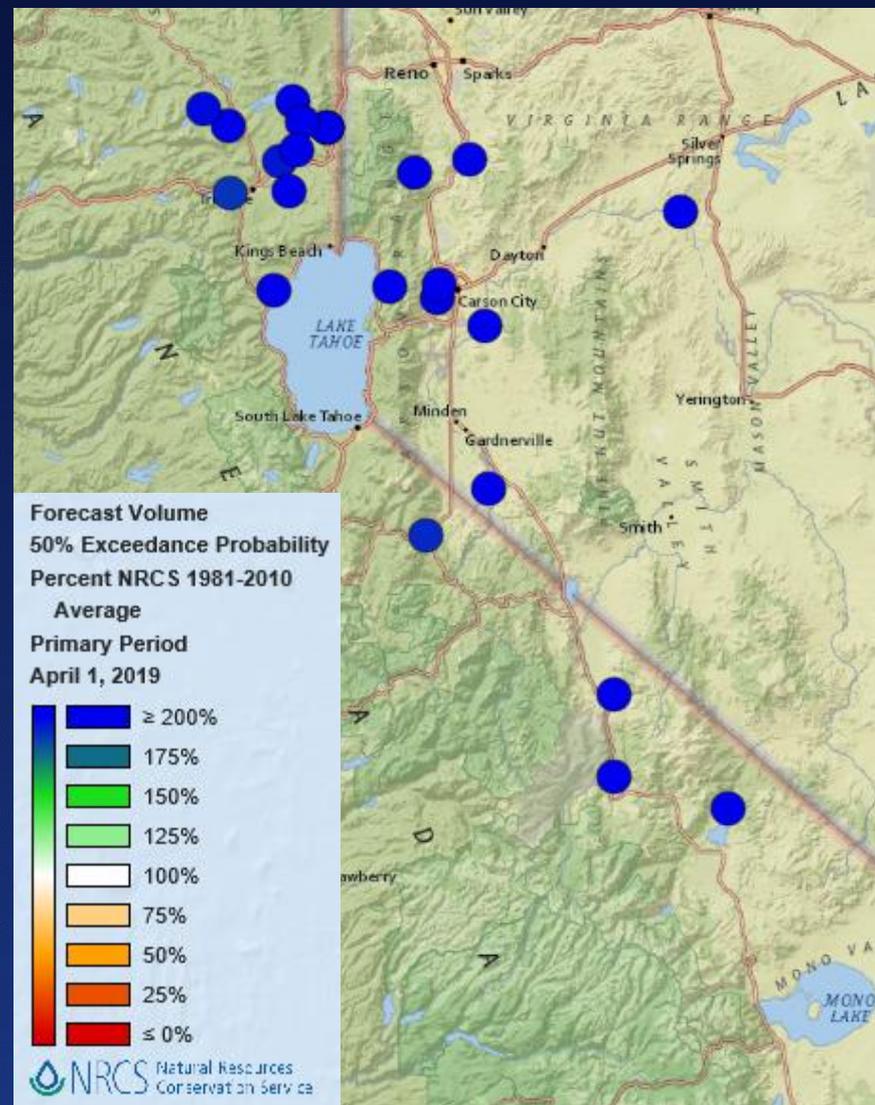
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Weekly Water and Climate Update

Published weekly
18 page report

National summary of:

Precipitation

Snowpack

Temperature

Drought

Fire

Soil Moisture

Streamflow

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Weather and Climate Outlooks

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 United States Department of Agriculture

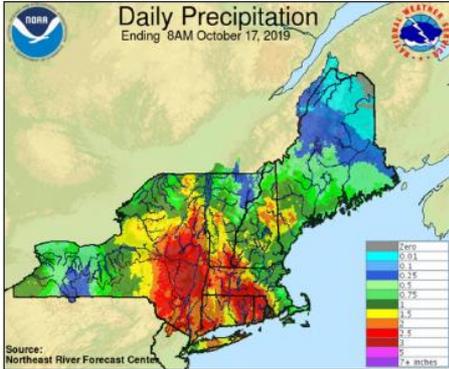
Water and Climate Update

October 17, 2019

The Natural Resources Conservation Service produces this weekly report using data and products from the [National Water and Climate Center](#) and other agencies. The report focuses on seasonal snowpack, precipitation, temperature, and drought conditions in the U.S.

Precipitation	2	Other Climatic and Water Supply Indicators	11
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Nor'easter intensifies into bomb cyclone



A Nor'easter is intensifying rapidly with the expected barometric pressure drop of 30 millibars in 24 hours, classifying it as a bomb cyclone. The storm has the equivalent strength and low pressure as a tropical storm, or category 2 hurricane. More than 550,000 homes and businesses are without power with wind damage, downed trees, and travel disruption in the area. Gusts were recorded up to 90 mph in Cape Cod, Massachusetts, while the New England extreme weather headquarters at Mount Washington, New Hampshire, recorded a gust of 128 mph. The heaviest rainfall reported was 6.14 inches in Waterford, Connecticut. This is the second strong storm to impact the Northeast in a week. The storm will continue to affect the area today.

Related:

[NWS NCEP Storm Summary Message](#) - NWS Weather Prediction Center
[A bomb cyclone is knocking out power and disrupting travel in the Northeast](#) - CNN
[Bomb cyclone or 'explosive cyclogenesis' knocks out power to 600,000 during a 'wild night'](#) - USA Today
[A 'bomb cyclone' takes aim at New York and Boston, bringing winds up to 55 mph](#) - NBC News
[More than 500,000 lose power to bomb cyclone in Northeast](#) - UPI.com

SNOTEL Status Updates via Email

United States Department of Agriculture
NRCS Natural Resources Conservation Service and National Water and Climate Center

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Highlighted Links

- Basin Data Reports
- Interactive Map
- Beta Website

Water Supply

- Forecasts
- Reservoirs
- Surface Water Supply Index

Climate Monitoring

- SNOTEL & Snow Course Data
- SCAN Data
- Tribal SCAN Data
- Other Climate Data
- 30 Year Normals

Quick Links

- Report Generator Data Search
- SNOTEL Update Report
- Weekly Water & Climate Update

Help Centers

- Report Generator Help
- Web Service Help
- Interactive Map Help

Snow Survey Programs by State

Welcome to the NRCS
National Water & Climate Center

Notice to all Users

October 17, 2019: Due to a technical problem with a critical server, there are 100+ data available. The sites affected are mainly in Alaska, but the outage also affects some sites in Idaho, Oregon, and Nevada. We are working on a solution and hope to have real-time data for these sites restored within 1-2 weeks. We will provide updates on the status of this data outage as more information becomes available.

Interactive Map Upgrade

On August 1, 2019, the National Water and Climate Center updated the interactive map. As part of this upgrade, **older versions of the map are no longer available.** If you have bookmarked map URLs, some of your bookmarks may no longer resolve. However, it's easy to convert the older URLs to the new map format. Here's a quick tutorial on [How to Convert Bookmarks](#).

[New Features in this Release](#)

NEW! Water Supply Forecast Charting Tool

Create regional water supply forecast exceedance probability charts using the new [Water Supply Forecast Charting Tool](#). This tool provides a visual representation of the streamflow forecast range showing the five exceedance probabilities compared to the 30-year average. [More on water supply forecast charts.](#)

[Open the Tool](#)

[System Downtime Schedule](#) | ["SnowNews" Quarterly Newsletter](#) | **Sign up for email update**

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USDA United States Department of Agriculture

Natural Resources Conservation Service
National Water & Climate Center

Due to a technical problem with a critical server, there are 100+ NRCS weather stations that do not have real-time data available. The sites affected are mainly in Alaska, but the outage also affects some sites in Idaho, Oregon, and Nevada. We are working on a solution and hope to have real-time data for these sites restored within 1-2 weeks. We will provide updates on the status of this data outage as more information becomes available.

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USDA

Questions for USDA Natural Resources Conservation Service? [Contact us](#)

Sign up here
<https://www.wcc.nrcs.usda.gov/>

NRCS WESTWIDE COOPERATIVE SNOW SURVEY TRAINING SCHOOL



Avalanche Safety



Winter travel



Winter Survival



Snow Measurement



Wilderness 1st Aid

NRCS 2020 West-wide Snow Survey Training School

February 9-14, 2019

Winter Park, Colorado

More information is at:

<http://www.wcc.nrcs.usda.gov/snowschoo/index.htm>

Unsure of next Lake Tahoe class.



Tahoe City, CA January 2015

Parting Thought...

Do you have the tools, knowledge
and spare parts to fix it in the field?



RZR Belt Failure 6/4/2019
Leavitt Lake, CA 9600ft