

USDA NRCS Snow Surveys Update

DWR Annual Cooperative Snow Survey Meeting
Kings Beach, CA
November 13-15, 2018

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and Water Supply Specialist
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Portland, OR

Leavitt Lake, California
7/26/2018

Darker snow remaining from winter of 2017

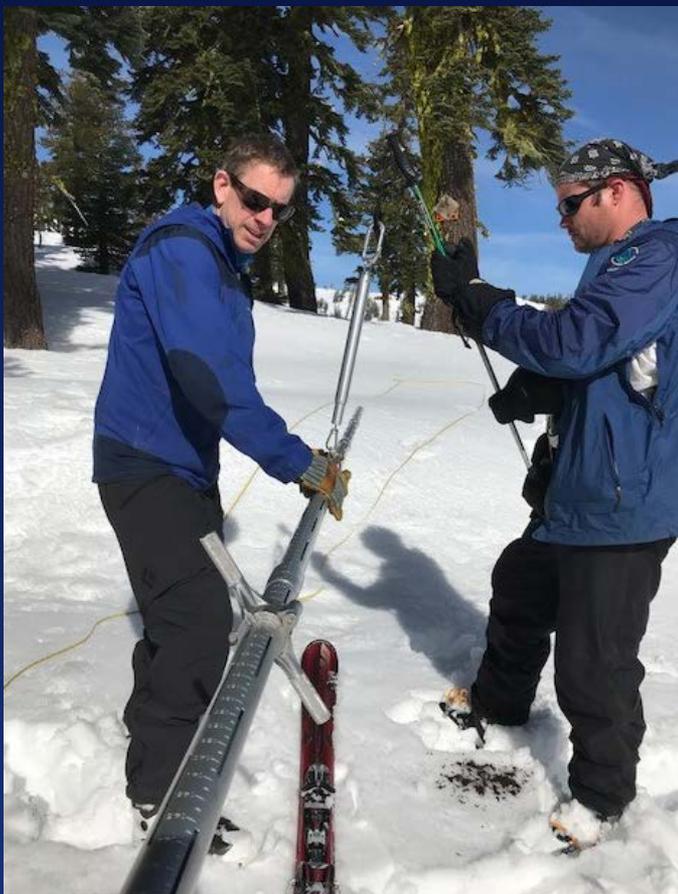


Lighter snow from
winter of 2018



Leavitt Lake, California
7/26/2018

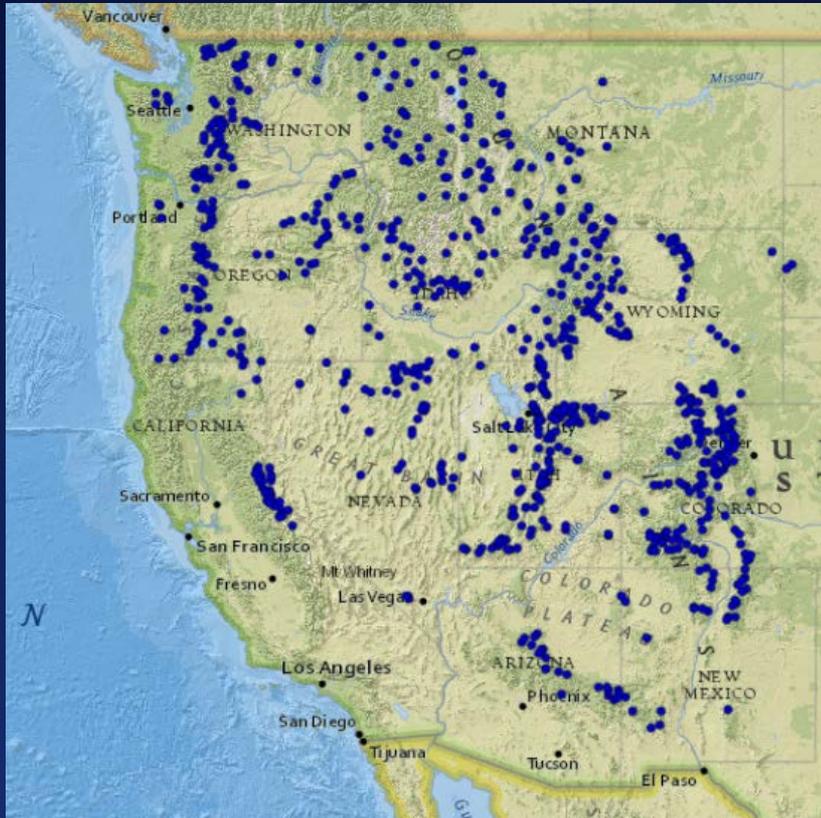
NRCS Data Collection



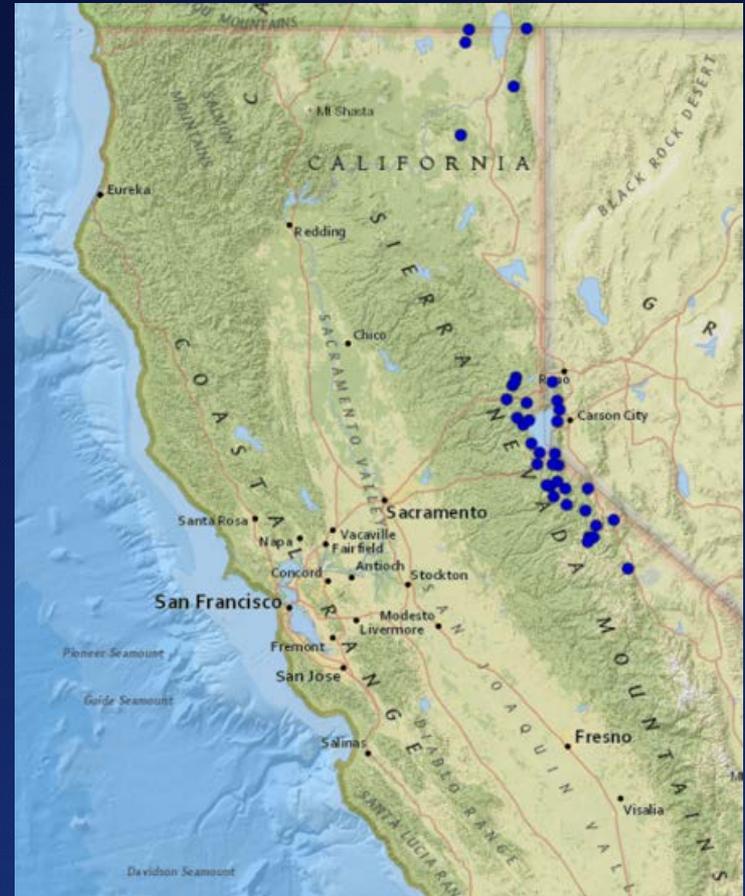
Snow Courses
(14 measured in CA)



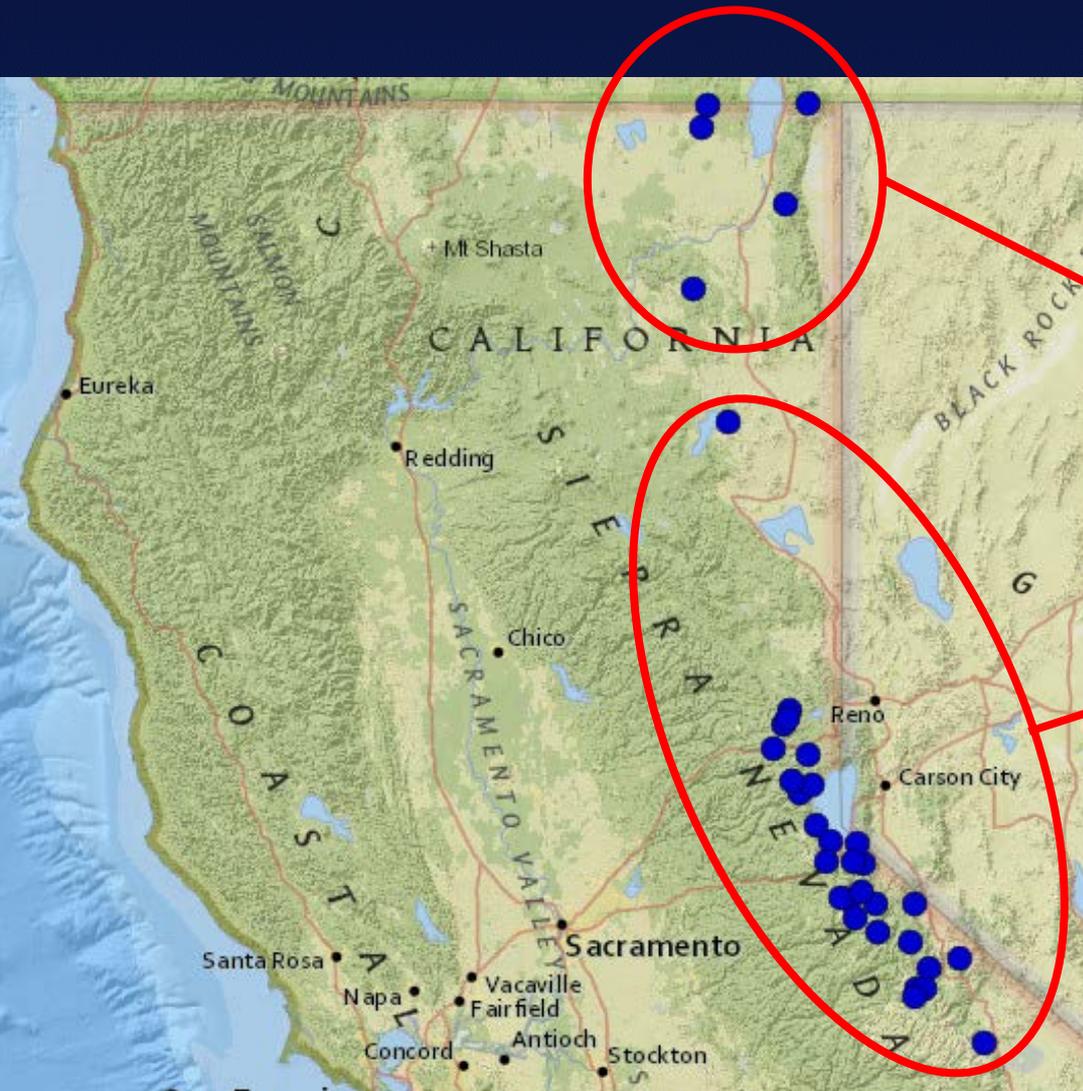
53 SNOTEL and SCAN Stations



West-wide including Alaska
the NRCS operates
~860 SNOTEL stations



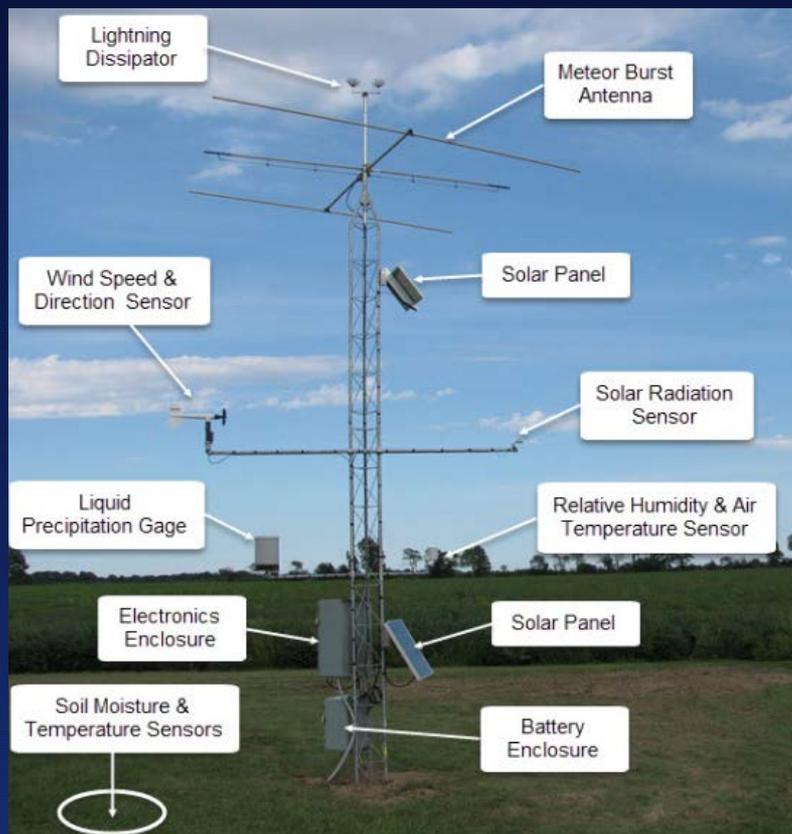
37 SNOTELS in
Sierra Nevada
and NE California



SNOTEL and Snow Course Data Questions?

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SCAN Sites
(Soil Climate Analysis Network)

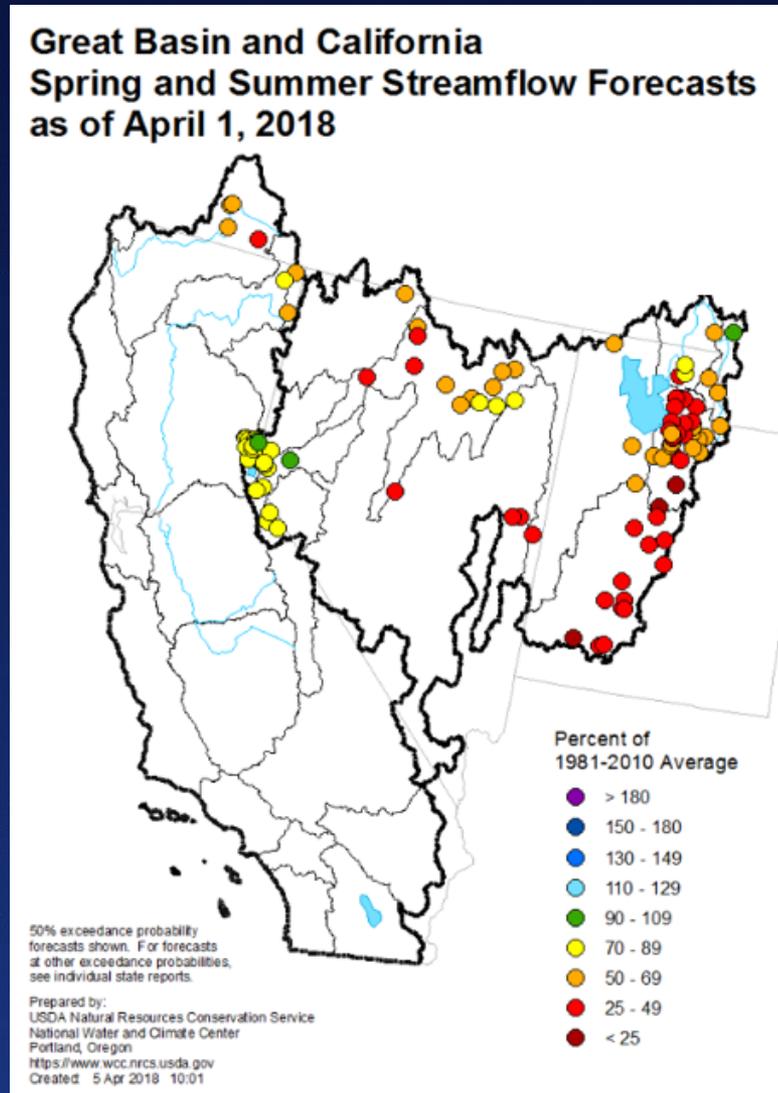
15 stations in California.



Other questions including:
streamflow forecasts, climate
information, water supply products,
etc...

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NRCS WESTWIDE COOPERATIVE SNOW SURVEY TRAINING SCHOOL



Avalanche Safety



Winter travel



Winter Survival



Snow Measurement



Wilderness 1st Aid

NRCS 2019 West-wide Snow Survey Training School

January 6 - 11, 2019

Crested Butte, Colorado

More information is at:

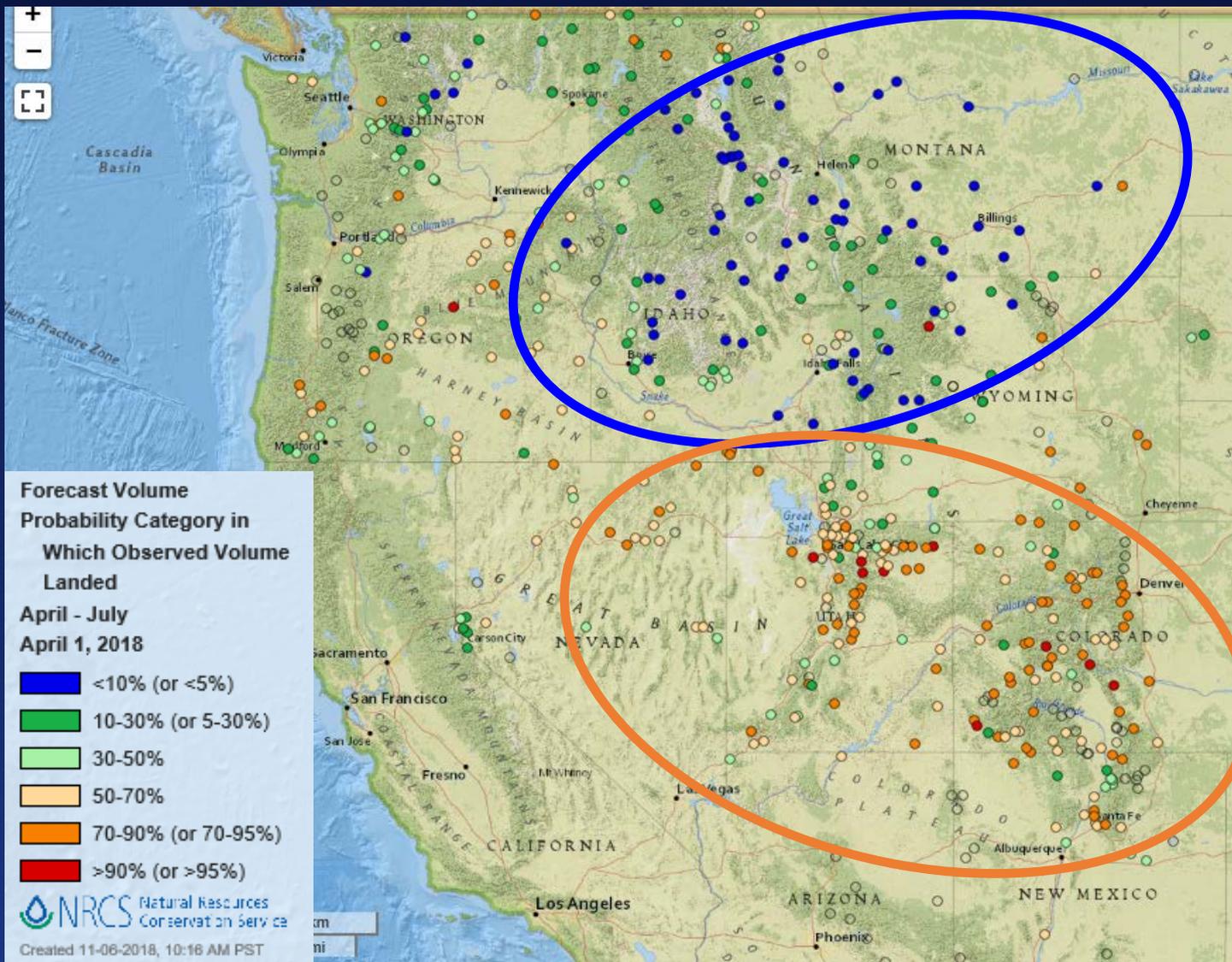
<http://www.wcc.nrcs.usda.gov/snowschoo/index.htm>

2020 class most likely in Utah. Unsure of next Lake Tahoe class.



Tahoe City, CA January 2015

New - Forecast Verification Products



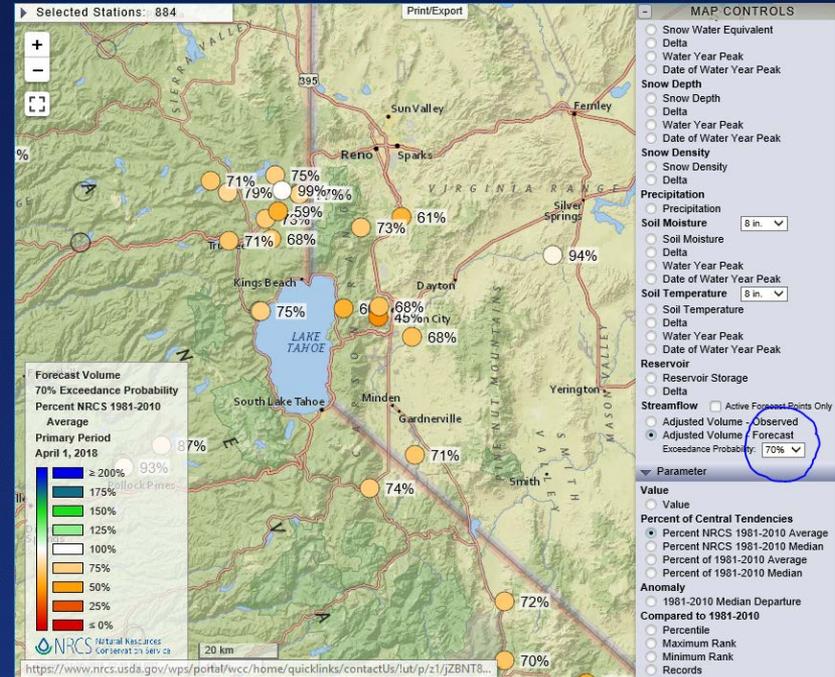
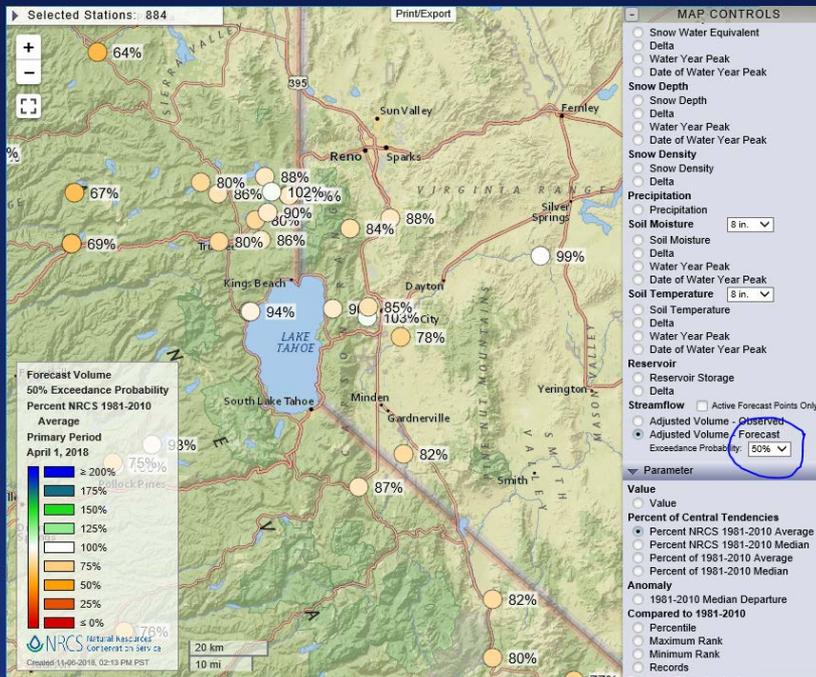
Observed was often more than 10% exceedance forecast

Observed was often between 70 and 90 exceedance forecast

New- Forecast exceedance probability maps for any forecast probability.

50 % Exceedance
(most probable – middle forecast)

70 % Exceedance
(drier conditions)



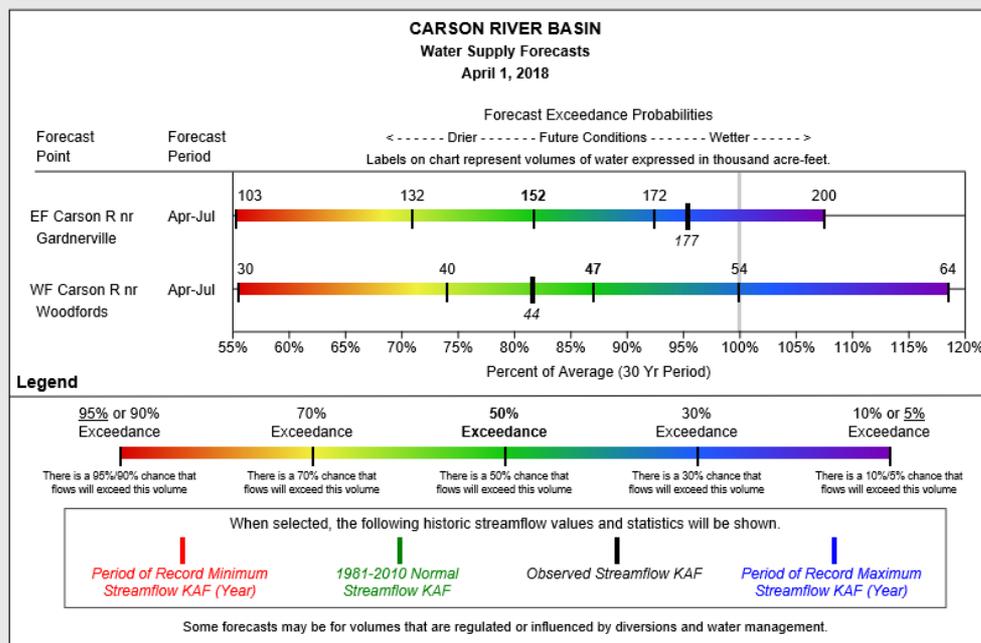
Water Supply Forecast Chart

State California	Forecast Periods All February-July February-September March-July March-August March-September April-July April-August April-September May-July May-September June-July June-September	Normal Type: <input checked="" type="radio"/> Average <input type="radio"/> Median	Include on Chart: <input checked="" type="checkbox"/> Observed <input checked="" type="checkbox"/> with label <input type="checkbox"/> Normal <input type="checkbox"/> with label <input type="checkbox"/> Max <input type="checkbox"/> with label <input type="checkbox"/> with year <input type="checkbox"/> Min <input type="checkbox"/> with label <input type="checkbox"/> with year <input type="checkbox"/> Years of Observed Data
Basin CARSON RIVER BASIN		Label Units: <input checked="" type="radio"/> Volume in KAF <input type="radio"/> Percent of Normal	Display Options: <input checked="" type="checkbox"/> Only Show Points With Forecast For Selected Period Chart Width: 800
Publication Year 2018		Forecast Labels: <input checked="" type="radio"/> All Exceedances <input type="radio"/> 50% Exceedance Only	
Publication Date April 1			

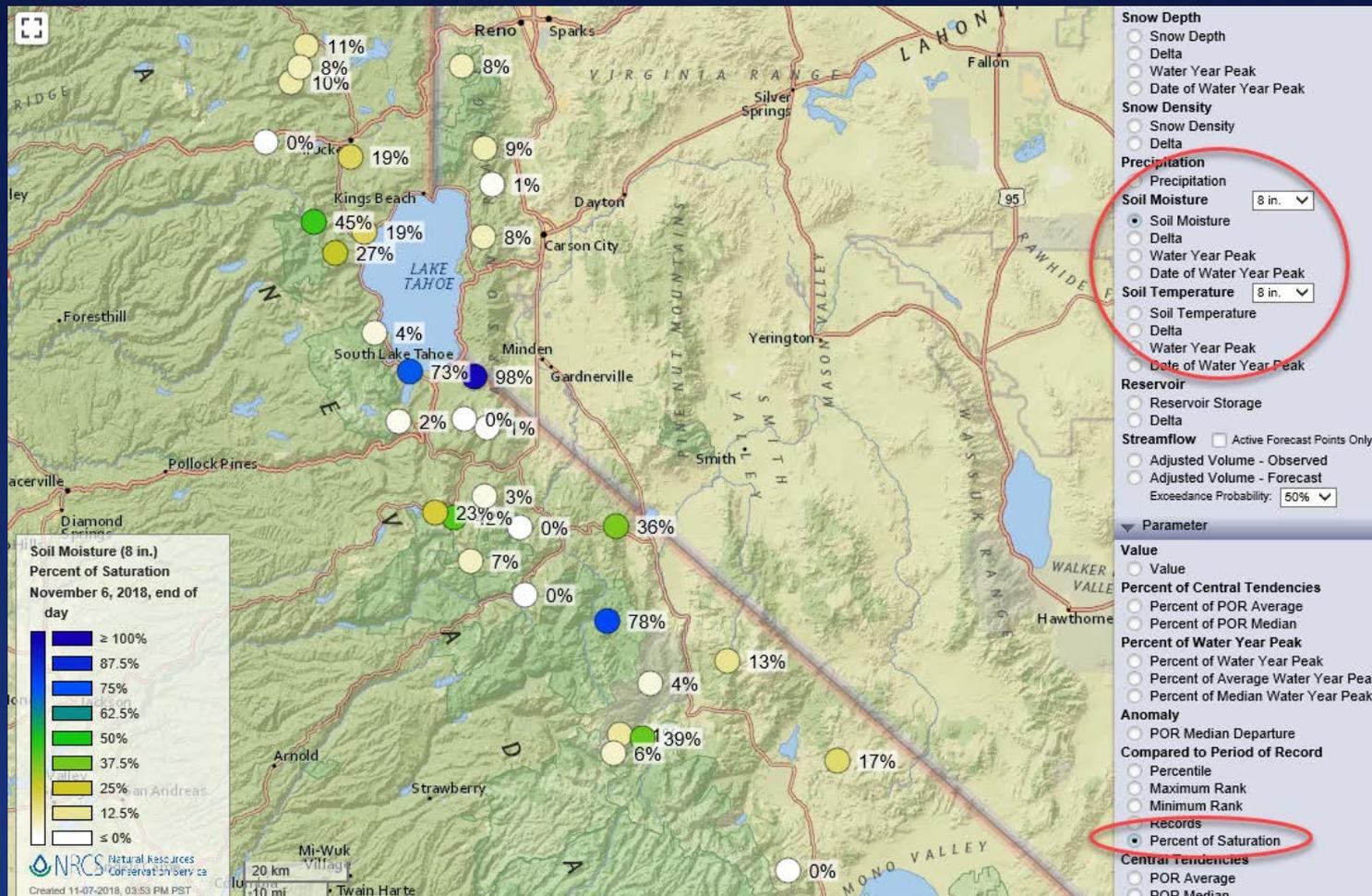
Some web browsers may not support image export. Tested in Chrome 55, Firefox 50, and Safari 11.

Export SVG

Export PNG



Soil Moisture map at any sensor depth



NRCS AgACIS

<http://agacis.rcc-acis.org>

AgACIS for Placer County

1. Location ? »

Selected station:
SQUAW VALLEY G.C.

Period of record:
Max Temperature:
1990-08-07 to 2018-11-03
Min Temperature:
1990-08-08 to 2018-11-03
Precipitation:
1980-10-01 to 2018-11-03
Snow Depth:
1998-07-23 to 2018-11-03

[View station menu](#)

[View map](#)

2. Product »

- Daily data for a month
- Daily almanac
- Monthly summarized data
- Calendar day summaries
- Daily/monthly normals
- First/last dates
- Temperature graphs
- Accumulation graphs
- TAPS
- FROST
- GROWTH
- WETS
- DAYS
- Station information

3. Options »

Year range: **2000 - 2018**

Criteria:
Min temp << 32

[Advanced options](#)

4. View »

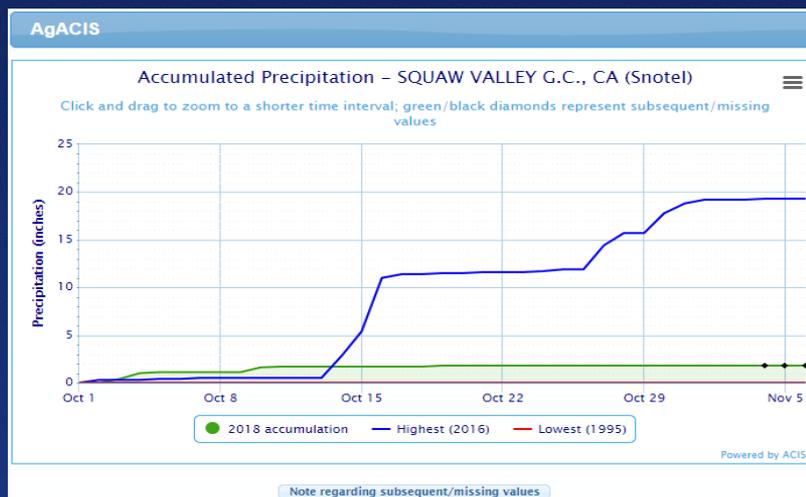
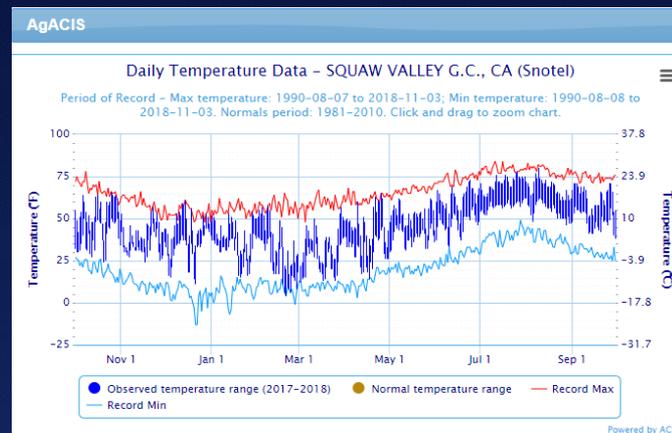
[Go](#)

Product Description:

FIRST/LAST DATES - determines annual first and last dates of event occurrences (such as last spring and first fall freeze) for the specified range of years. Season length (or difference) is the number of days in between these two dates (exclusive of both).

- Submit a question/comment -
- Select a different county -

Powered by **ACIS**
NOAA Regional Climate Centers



AgACIS

[Copy](#) [CSV](#) [Excel](#) [PDF](#) [Print](#)

Frost/Freeze Summary for SQUAW VALLEY G.C., CA (Snotel)

Each section contains date and year of occurrence.
Click column heading to sort ascending, click again to sort descending.

Year	Last	First	Season Length
2000	06-09 (2000)	09-01 (2000)	83
2001	06-13 (2001)	10-09 (2001)	117
2002	06-09 (2002)	10-01 (2002)	113
2003	05-19 (2003)	10-10 (2003)	143
2004	06-09 (2004)	09-18 (2004)	100
2005	06-18 (2005)	09-24 (2005)	97
2006	05-29 (2006)	09-15 (2006)	108
2007	06-07 (2007)	09-19 (2007)	103
2008	06-07 (2008)	09-01 (2008)	85
2009	05-02 (2009)	09-30 (2009)	150
2010	06-11 (2010)	09-09 (2010)	89
2011	06-29 (2011)	10-05 (2011)	97
2012	06-06 (2012)	10-21 (2012)	136
2013	06-19 (2013)	09-21 (2013)	93
2014	06-17 (2014)	10-20 (2014)	124
2015	05-18 (2015)	10-29 (2015)	163
2016	06-16 (2016)	09-22 (2016)	97
2017	06-13 (2017)	09-21 (2017)	99
2018	05-26 (2018)	10-07 (2018)	133
Mean	06-06	09-27	112



Theme is "***Warm Snow Environments***"

Suggested topics for paper submissions include: rain-on-snow, mid-winter melt, changing snow lines, drought definitions/regimes, and snow melt timing.

Monday - **Short Course**

"Mapping surface elevations and snow depth with Structure from Motion photogrammetry", led by Dr. McKenzie Skiles

Thursday - **Technical Tour**

Visiting the Dr. Church Archives at the University Nevada Reno, and various labs at the Desert Research Institute, including cloud seeding, ice core, climate, and the virtual reality "cube"