

# USDA NRCS Snow Surveys

NRCS California

Greg Norris

CA- DWR Annual  
Cooperative Snow  
Survey Meeting

November 6 – 8, 2013



# NRCS Contact for CA

## ■ Greg Norris

- NRCS, USDA  
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## ■ NRCS contact for:

- Snotel/snow course data, forecasts and products.
- NRCS Climate information and products.

## ■ Water supply forecasts and products

# SNOTEL Contacts

- Dan Greenlee, Nevada Water Supply Specialist.

**\*\*\* Retiring November 30!! \*\*\***

(775) 857-8500 ext. 152

Nevada Snow Surveys

Natural Resources Conservation Service

1365 Corporate Blvd.

Reno, NV 89502

***All California sites - local contact.***

- NRCS Data Collection Offices:

Oregon Data Collection Office

USDA NRCS

1201 NE Lloyd Blvd., Suite 900

Portland, OR 97232

**Sites in far northern CA**

Utah Data Collection Office

Oregon Snow Surveys

1201 NE Lloyd Blvd., Suite 900

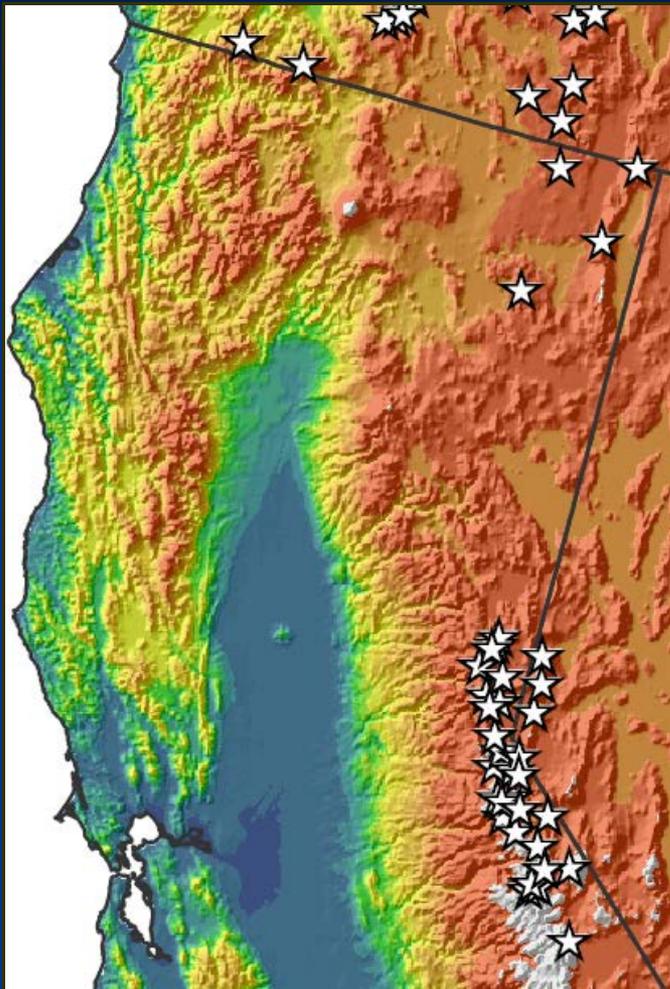
Portland, OR 97232

**Sites in Central Sierras.**

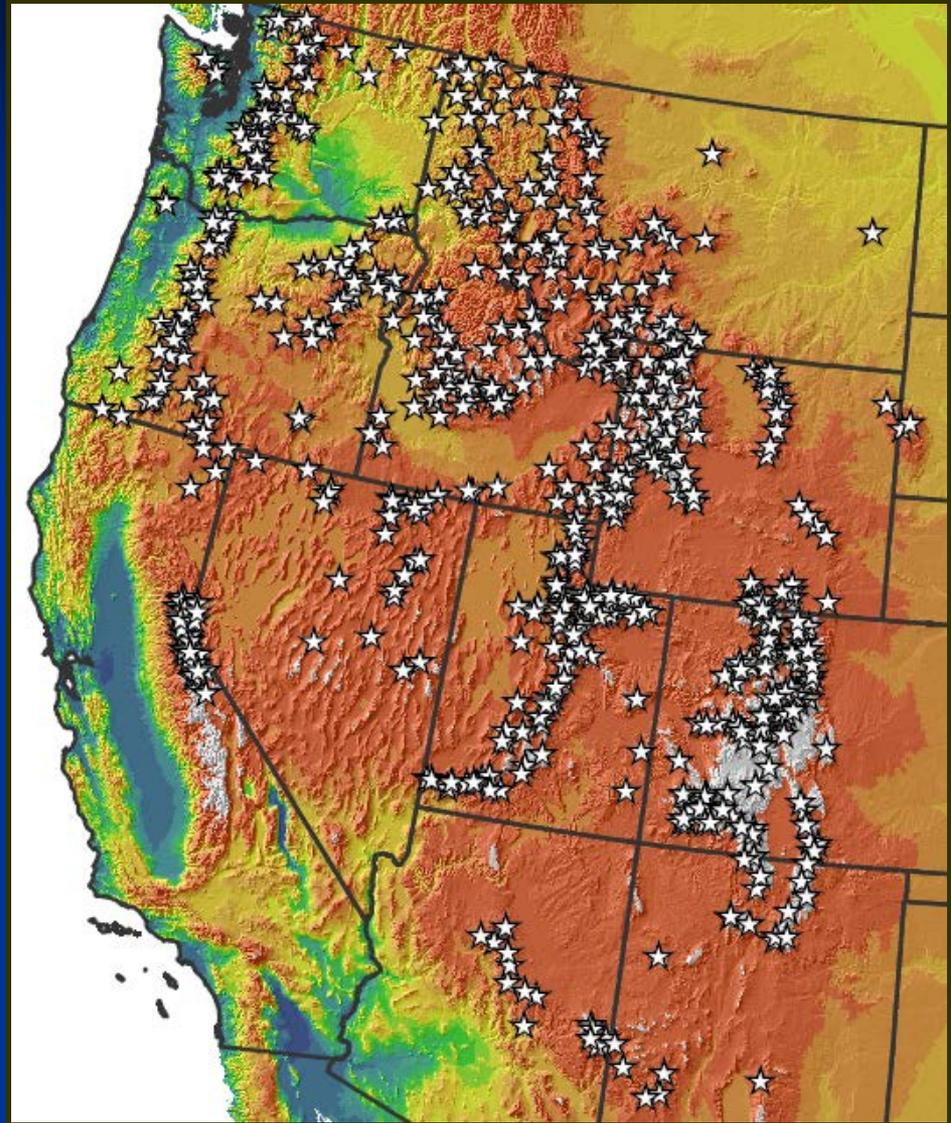


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# Westwide SNOTEL Network



33 SNOTEL sites in  
California

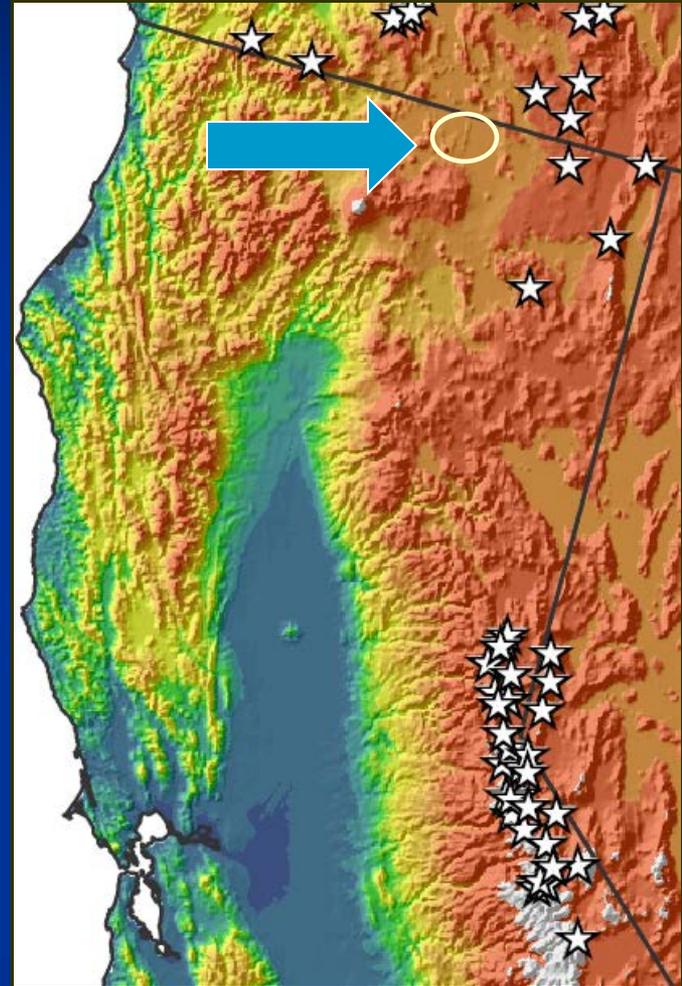


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# New SNOTEL Site

- A new SNOTEL site is proposed for the SE Klamath Basin near Clear Lake National Wildlife Refuge in Northeastern CA. The site will be located at the State Line Aerial Marker. There is very little data in this area, and forecasts for Clear Lake Inflow are poor. The Bureau of Reclamation will be supporting this new site, and it is planned for installation possibly in November 2013 or in 2014.



# Many SNOTEL Sites have climate and soil sensors

## ➤ Soil Moisture/Temperature Monitoring

- Vitel Hydra Probes located in a vertical profile at 2", 4", 8", 20" and 40"
- Complete soil descriptions, lab sampling, and bulk density measurements at monitoring sites



## ➤ Climate Monitoring

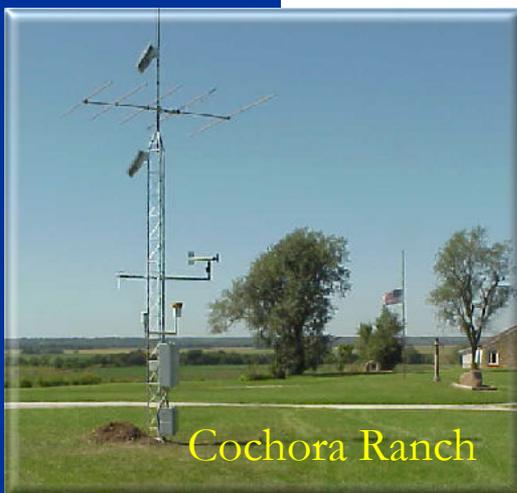
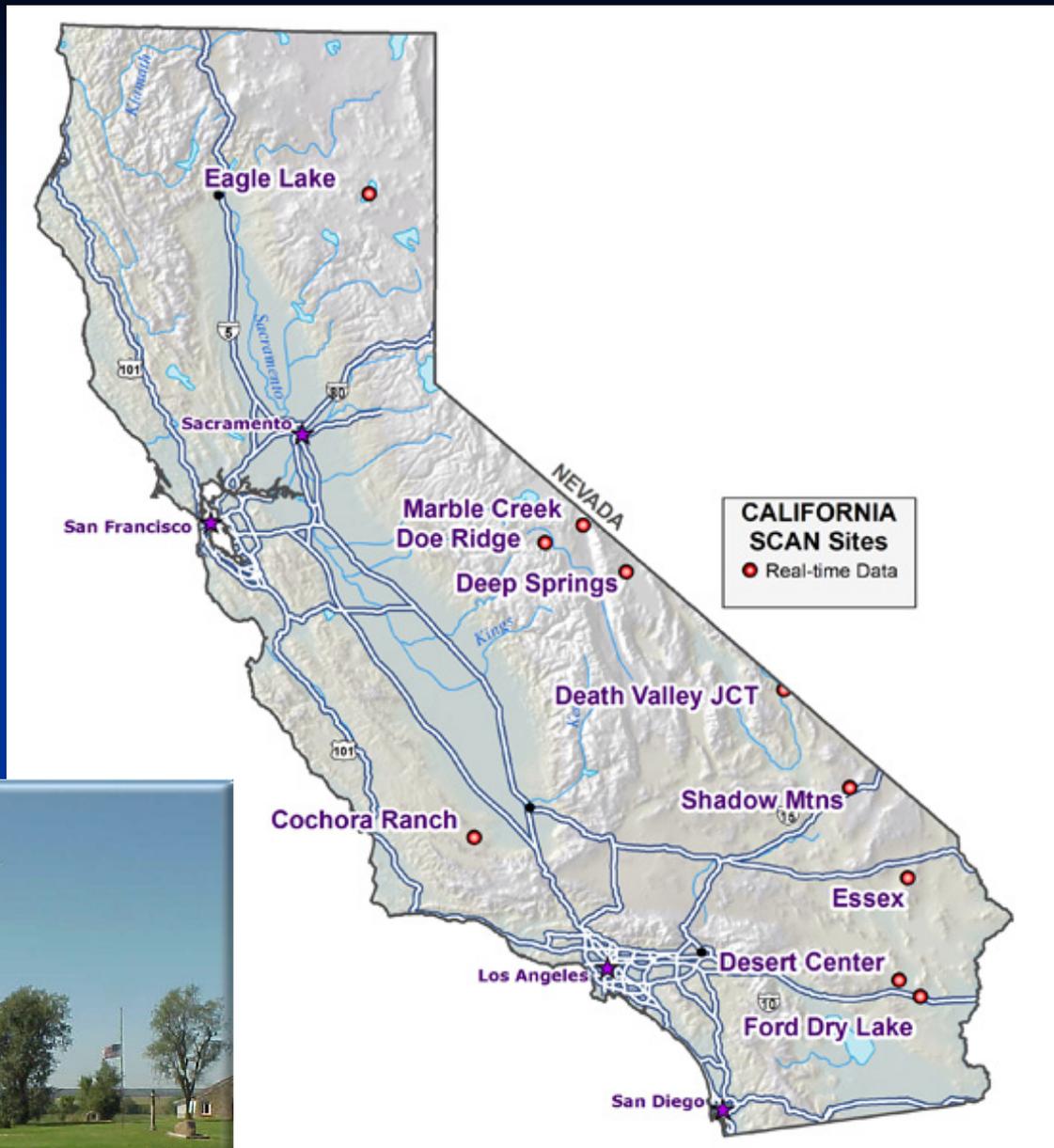
- Air Temperature
- Relative Humidity
- Solar Radiation
- Wind Speed & Direction
- Vapor Pressure



# NRCS SCAN Sites (Soil – Climate Analysis Network)

5 NEW sites will be installed in 2014 – 2015. These new sites are funded by the BLM.

Sites collect climate data as well as soil moisture and soil temperature.



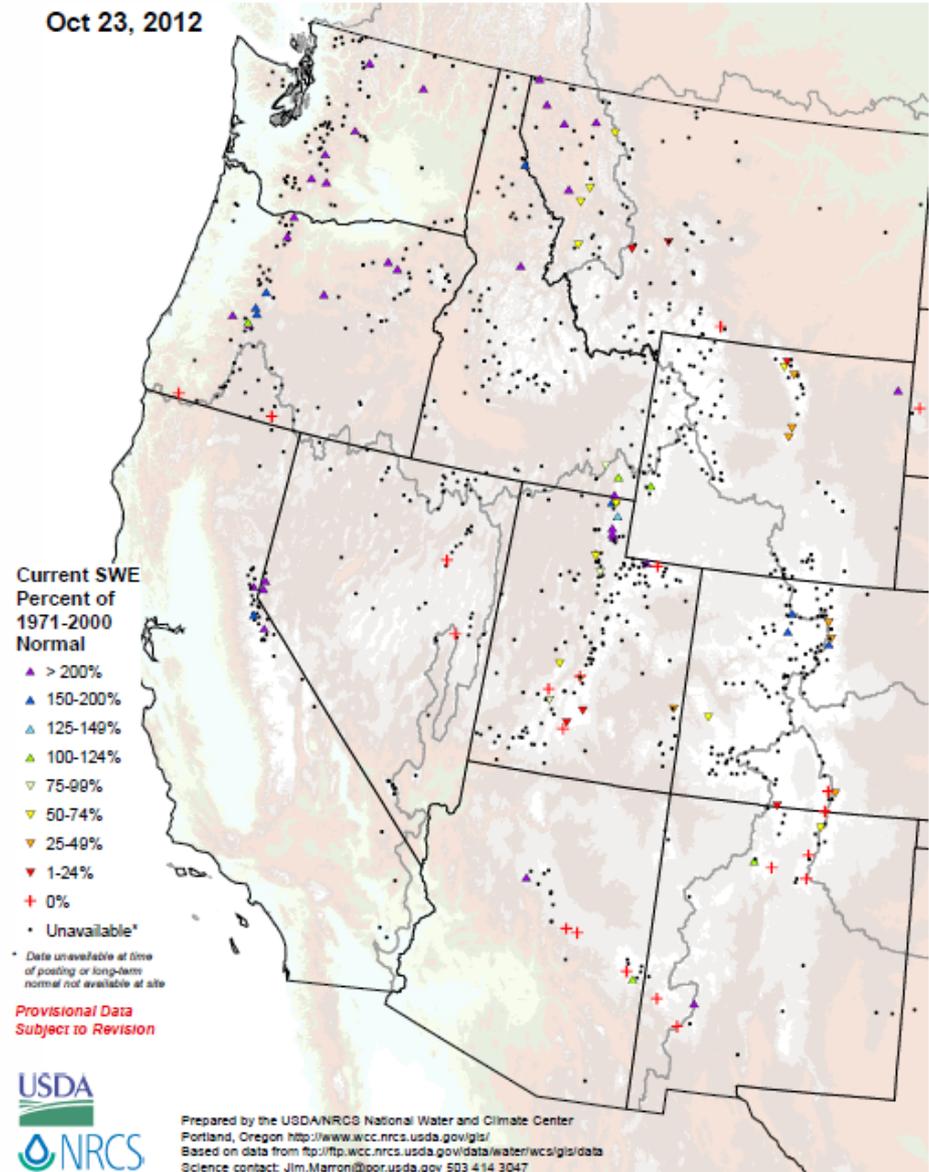
Cochora Ranch

# GIS Products:

- Current data maps.
- Changes over different selectable timeframes maps.
- State, basin and West maps.
- Data and percent of normal.

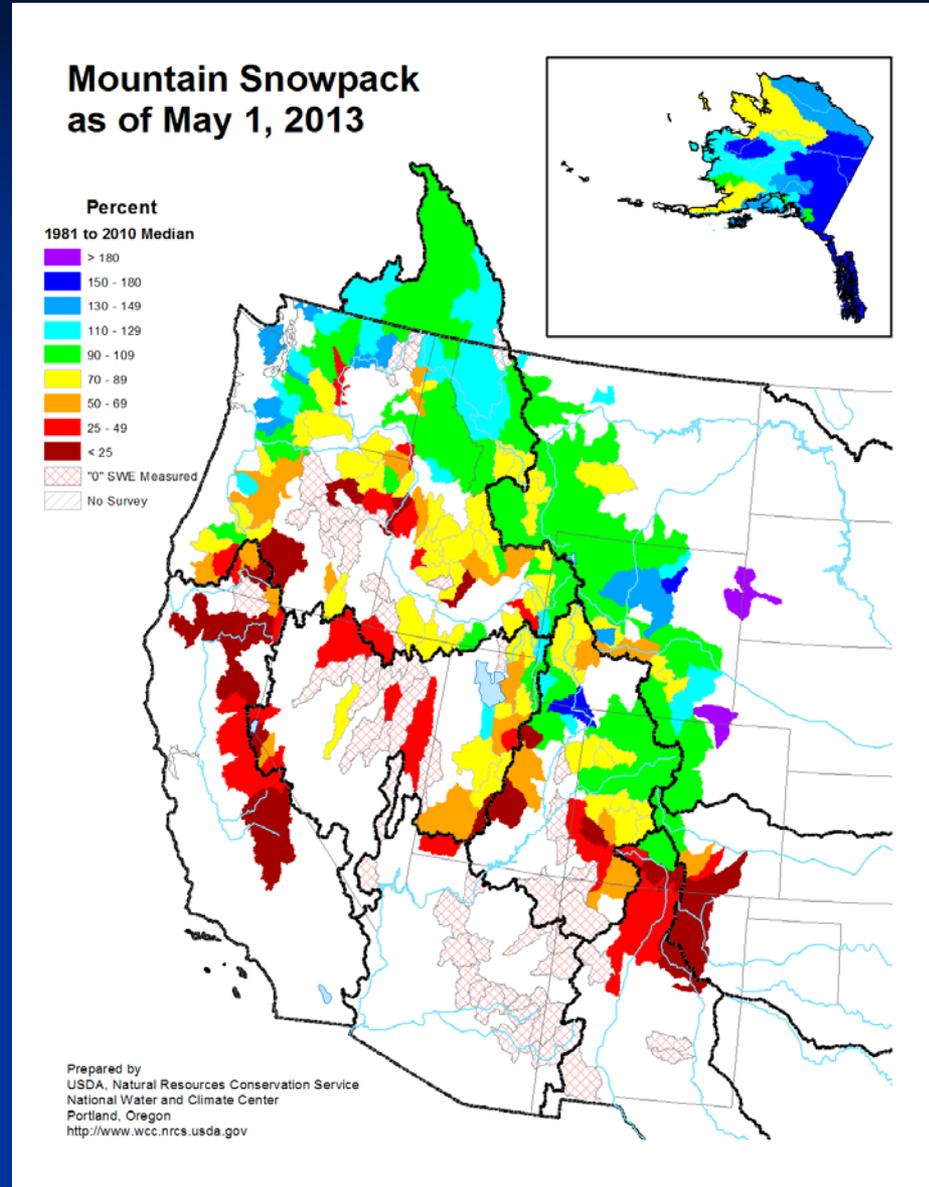
<http://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/gis/maps/WestwideSWEPercent.pdf>

SNOTEL Current Snow Water Equivalent (SWE) Percent of Normal  
Oct 23, 2012



# Where We Are:

Snowpack  
Last Year  
Conditions:



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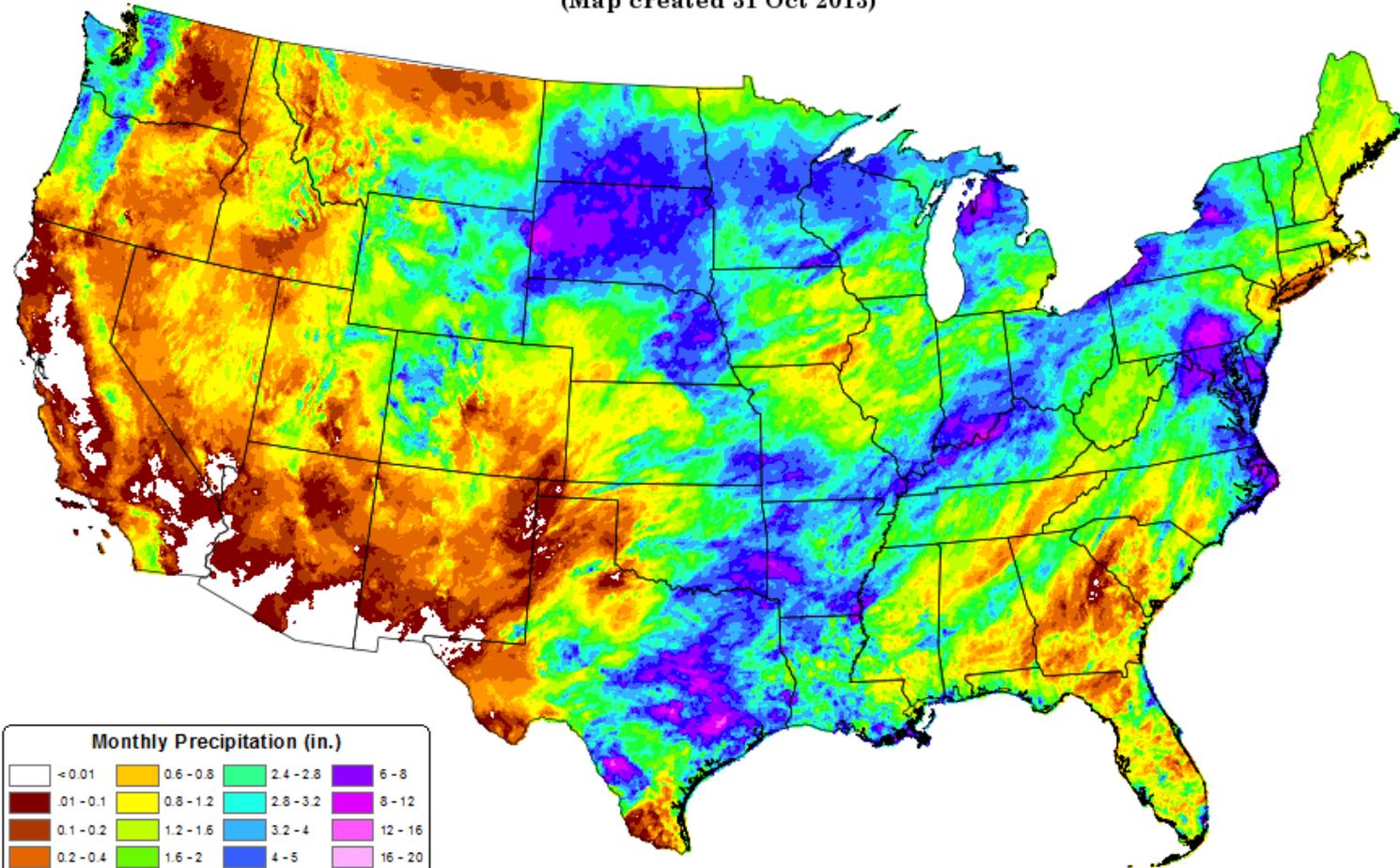
# PRISM – Precipitation for the start of 2014 water year.

*Precipitation Products supported by the NRCS.*

## Total Precipitation: 01 October 2013 - 30 October 2013

Period ending 7 AM EST 30 Oct 2013

(Map created 31 Oct 2013)

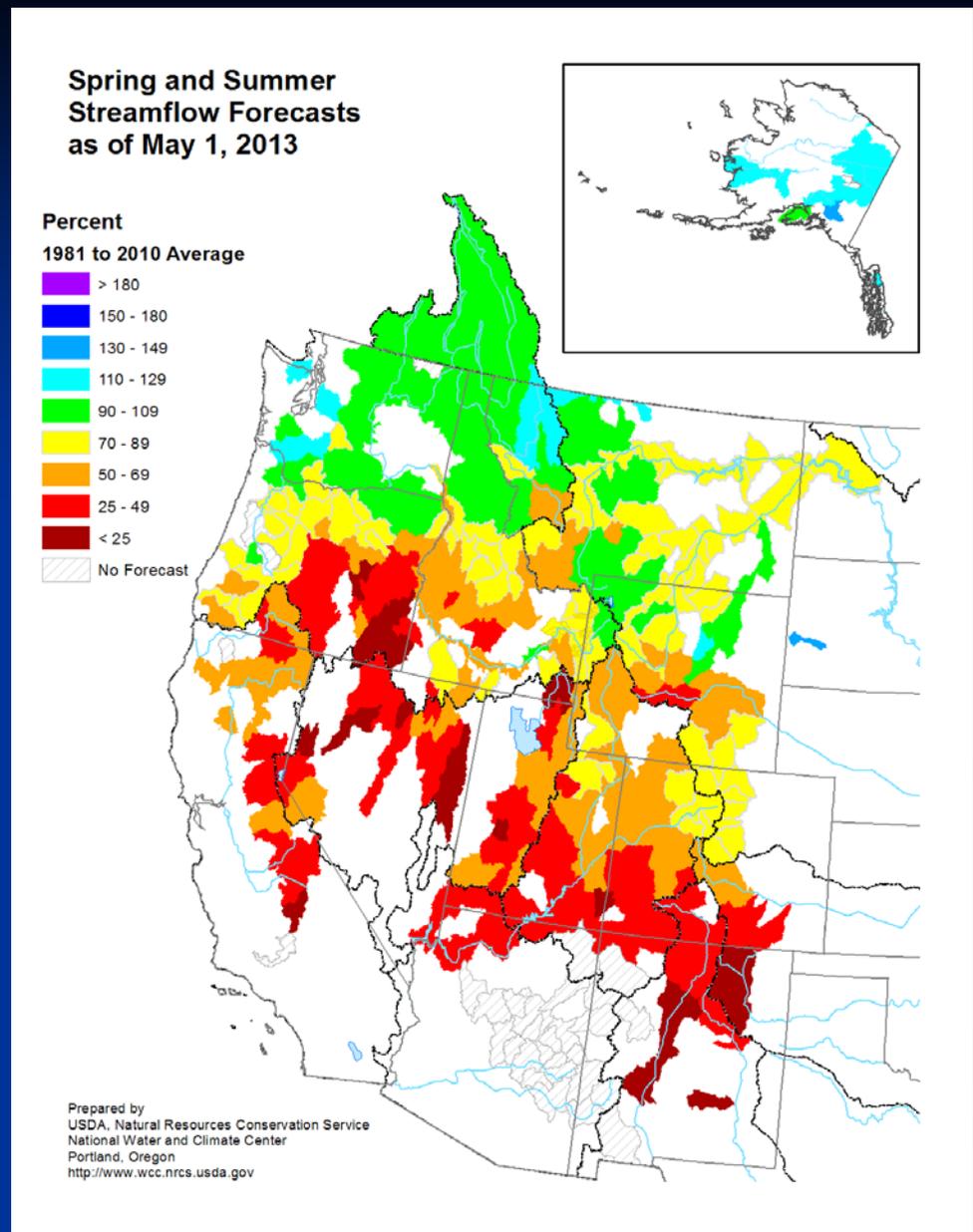


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Where we are:

- Last May Monthly Forecast Maps.

*This product combines NRCS forecasts with CA-DWR forecasts.*



# NRCS 2014 Snow School

- **January 12 - 17, 2014**
- Bend, Oregon
- Copies of the invitation letter are available.
- See Greg or the DWR folks for more info.
- [www.wcc.nrcs.usda.gov/snowschoo/index.htm](http://www.wcc.nrcs.usda.gov/snowschoo/index.htm)

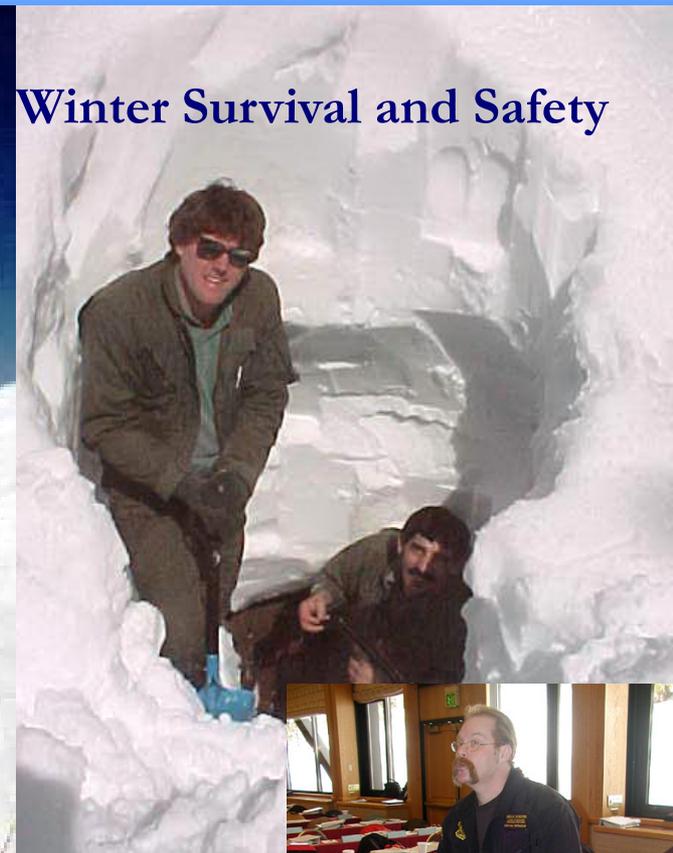
# NRCS WESTWIDE COOPERATIVE SNOW SURVEY TRAINING SCHOOL



Avalanche Training



Snow Measurement Training



Winter Survival and Safety



Winter travel



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