USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

National Water & Climate Center

# SnowNews

September 2013

Volume 3, Issue 1

## Western wildfires threaten, destroy SNOTEL sites

This year's wildfire season has been a rough one for the western U.S. Our Data Collection Officers (DCOs) and Water Supply Specialists (WSSs) have closely monitored fire conditions in their regions and provided the following updates.

**Scott Oviatt,** Montana DCO, reported that the Younts Peak SNOTEL (Snow Telemetry) site was destroyed by fire in late August. Scott and his team removed the electronics prior to the fire reaching the site. They are currently working with the Forest Service to gain access to replace the site components before the snow season.

Nearby, the Burroughs Creek SNOTEL site in northwest Wyoming stopped reporting data on September 1. A flyover confirmed the site was badly damaged by fire.

In mid-August, a wind event downed a tree onto the snow pillow at the Two Ocean Plateau site in Yellowstone National Park. The snow pillow was also damaged due to bear activity.

**Web resources on wildfire conditions for many of the western states are on page 10 of this issue.**

Crews also removed electronics from several other SNOTEL sites in Montana and Wyoming, including the Townsend Creek site in the Wind River Range. Fortunately, these sites were spared from fire damage.

In Nevada, the Rainbow Canyon SNOTEL site near Las Vegas sustained major damage in the Carpenter Fire.

*Younts Peak SNOTEL site in northwest Wyoming. The hexagonal footprint of the snow pillow is apparent in the center of the photo.*

In Idaho, WSS **Ron Abramovich** reported that the Dollarhide Summit SNOTEL was completely destroyed in the Beaver Creek fire.

The site, which began recording data in 1979, stopped reporting on August 15.

*...Continued pg 2*

Inside this issue:



Special points of interest:

- Snow School 2014
- PRISM data used by Risk Management Agency
- NWCC technology transfer
- Resource locator

# Wildfires in the western U.S. ...from page 1

A flyover in early September confirmed an intense fire at this high-elevation site (8,000 feet).

Road restrictions into fire areas have also meant that summer maintenance at many sites in Idaho will be delayed until October.

Lessons learned from past fires, such as the Atlanta Summit SNOTEL site in Idaho, show that snowpack accumulated in the same manner as before the fire occurred. However, it melted out 7-14 days earlier, due to the loss of forest canopy. Similar impacts can be expected in other basins from the loss of canopy.

According to **Randy Julander**, Utah DCO, SNOTEL sites in his state were spared from significant fire damage this year. But, Randy added that, in many parts of Utah, areas damaged in last season's wildfires are now experiencing mud and debris flows.

Snowpack accumulated in the same manner as before the fire...however, it melted out 7-14 days earlier.

*The Dollarhide Summit SNOTEL site in Idaho suffered an intense burn at 8,000 feet elevation.*

# Time to register for 2014 Snow School

Registration for the Snow Survey and Water Supply Forecasting (SSWSF) Program annual Snow School is now underway.

The 2014 Snow School is scheduled for **January 12–17.** This year's school will be held at the **Seventh Mountain Resort** in Bend, Oregon.

Annual Snow Survey School is required training for current and new NRCS employees and cooperators that perform snow survey duties as part of their job,. It is an intense week of training in data collection, safety and outdoor survival.

Most instructors are NRCS personnel who work directly with the SSWSF Program. Instructors in avalanche and outdoor survival are world-renowned experts in their fields.

Course work is about 50% Classroom lecture and 50% field exercises, including an overnight bivouac.

To register for 2014 Snow School:

- If you're an **NRCS employee,** beginning in October, register via AgLearn
- If you're a **cooperator, partner or other non-NRCS employee**, contact Jo Huelshoff, (503) 414-3031.

For questions or more information, contact Tony Tolsdorf, (503) 414-3006.

# EMF powers up new environmental chambers

The Electronics Maintenance Facility (EMF) in Portland is responsible for testing and qualifying all the pressure transducers used for snow pillows and storage precipitation gages at Snow Telemetry (SNOTEL) sites. And this is no small task!

## Background

Each year, EMF "burns in" (or pre-qualifies) more than 600 pressure transducers, which help measure snow water equivalent (SWE) and total precipitation. These electronic devices must be accurate and reliable.

Since 2006, EMF has used an environmental chamber to test and qualify every pressure transducer before it's deployed out to the field for installation at a SNOTEL site.

In the chamber, pressure transducers go through 100 cycles of temperature which takes a full 10 days, plus they get 1,000 cycles of pressure during this time.

With inventory, calibration and record keeping it takes a minimum of 14 days for each run of testing.

As a proof of effectiveness, using an environmental chamber and working closely with the vendor helped reduce the field failure rate on these parts from almost 23% to about 1%.

However, in 2011 the chamber began to fail, and repeated attempts at repair were unsuccessful.

In 2012 the environmental chamber failed completely. This left **John Weeks,** EMF lead technician, and **Steve Dunn**, electronics technician, without a mechanism to perform this important activity. The only short-term solution was to rely on a small set of spare transducers, often shared between Data Collection Offices (DCOs).

## Parts backlog

After over a year without this capability, EMF was faced with a backlog of parts requiring initial burn-in or routine calibration and maintenance.

According to John, "We had over 100 units waiting for initial testing. Plus, we had an additional 300 units waiting for calibration and return to the field."

This is because, in addition to testing new parts, transducers in the field must also undergo recalibration every three years. With about 1800 transducers currently in the network, the EMF team calibrates about 600 field units each year.

*The interior of one of the new environmental chambers at EMF. Each chamber can process 60 pressure transducers.*

## New chambers installed

With funding approval, the National Water and Climate Center (NWCC), was recently able to procure and install two, new environmental chambers in the EMF shop.

*...Continued pg 4*

Each year, EMF "burns in" (or pre-qualifies) more than 600 pressure transducers, which help measure snow water equivalent (SWE) and total precipitation.

# Environmental chambers increase productivity ...from pg 3

These chambers give the EMF team the ability to test more units at a time, and to test them in different conditions or states.

As an example, each chamber can hold 60 transducers. John staggers the beginning of each test group, since the burned in parts require further calibration and packaging before shipping to the field. While one run is being processed, the second run is started. This maximizes the efficiency of the process.

## Labview software upgrade

Another important tool in this process is the software used to setup, monitor and record the results of the testing.

In the past, this was a manual process, requiring the EMF team to transcribe the test results, enter them into the system and then interpret the results.

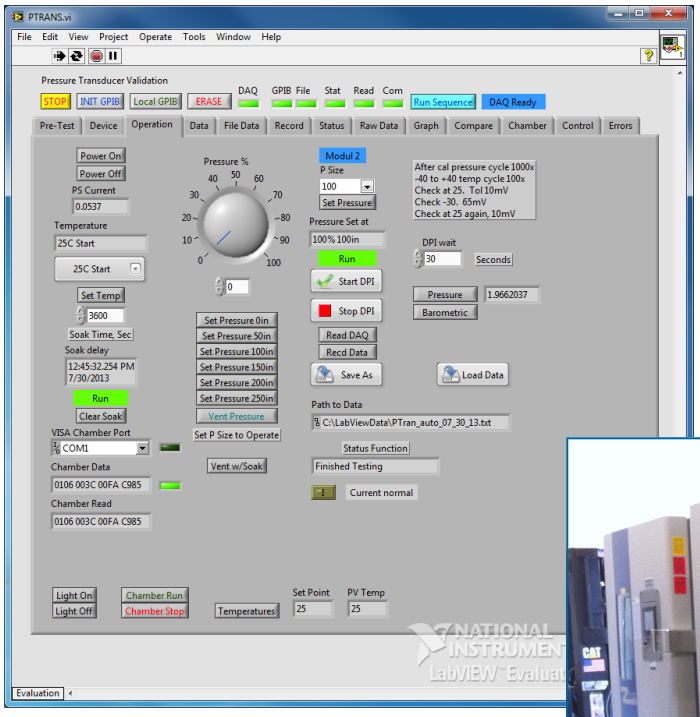
Now, the team uses a customized version of Labview software, allowing them to efficiently setup, monitor, record and interpret the results of the testing on a per-transducer basis. This upgrade has resulted in a major increase in productivity.

## What's next?

John estimates it will take them about three months to work through the backlog of transducers,

Once the backlog is under control, John plans to use the chambers to test the new Model 565 radios currently under development. The 565 radios will replace the 545 radios currently used at SNOTEL and SCAN stations.

According to John, "One of the more difficult things for us is to duplicate what's happening in the field. Sometimes things work fine in the shop, but fail in the field. The addition of the second chamber gives us enough capacity and flexibility that we can dedicate its resources to testing the radios in more realistic field conditions."




*Labview's customized dashboard allows for efficient setup and monitoring.*

*John Weeks uses Labview software to monitor the status of the pressure transducers under test. The two, new environmental chambers are at the left.*

# Spotlight On… Ron Abramovich

This issue's spotlight is on Rob Abramovich, Water Supply Specialist for the state of Idaho.

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A native Midwesterner, Ron left Ohio to attend Colorado State University. After graduating with a degree in Watershed Science, Ron spent a year working for the United States Geological Survey.

When the opportunity to join the NRCS arose in 1988, Ron joined the West National Technology Center (precursor to the National Water and Climate Center), based in Portland. While there, Ron was a forecaster trainee, forecasting for basins in eastern Oregon.

During this time, Ron also trained in data collection techniques at the Utah Data Collection Office (DCO) in Salt Lake City.

In 1991, the Idaho DCO opened a newly-created position for a Water Supply Specialist (WSS). Ron's experience as a forecaster, coupled with his training in data collection, made him well suited for the job.

In August 1991, Ron was selected to be the first WSS serving users in the state of Idaho.

Ron said that it took a while to learn the intricacies of the weather, climate and watersheds in the region.

But now that he's lived and worked in Idaho for over 20 years, he better understands the conditions in the area, and the needs of his users.

Ron's focus is on wise water resource management, and he gets great satisfaction from the relationships he's fostered with water managers, farmers, recreationists and other users in Idaho.

Ron and his wife, Janice, have two children, Abbie and Dylan. Abbie is entering her sophomore year at Western Washington University. In addition to her studies, Abbie is a well-rounded athlete, and plays Ultimate Frisbee in competitions at the national level.

Dylan is a recent graduate of Columbia College in Chicago and is beginning a career in video production.

For many years when the kids were younger, Janice was the director of the youth ski program at Bogus Basin ski resort near Boise. This allowed the family to spend lots of time on the slopes. For the last few years, Janice has been a 4th grade elementary school teacher.

Still an avid skier and recent "empty nester," Ron is currently enjoying the new-found ability to "go skiing any time I want."

*Snow School 2011 was held in McCall, Idaho. Here Ron participates in data collection activities.*

*Ron recently attended the 4th annual Pacific Northwest Climate Science Conference. This year's conference was held Sept. 5-6 in Portland.*

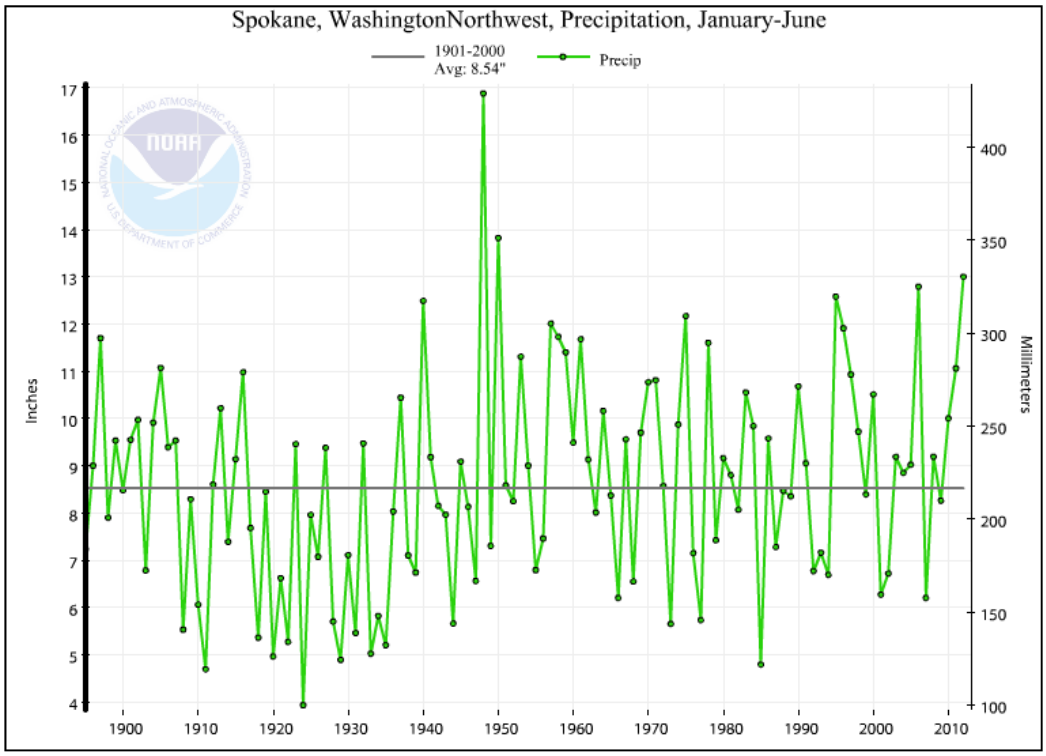
# NCDC Climatological Rankings data retrieval tool

NOAA's National Climatic Data Center (NCDC) offers a Climatological Rankings data retrieval tool. Look up monthly U.S., Statewide, Divisional, and Regional Temperature, Precipitation, Degree Days, and Palmer (Drought) rankings for 1-12, 18, 24, 36, 48, 60-month, and Year-to-Date time periods. Data and statistics are available from January, 1895 to the present.

To use the resource, simply select the period of time, parameter (such as precipitation or cooling degree days), location (such as state, region, or agricultural belt), year and month.

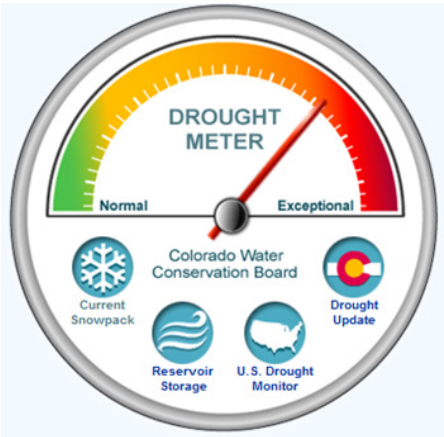
The resource returns the data requested as a table with links to historical data and charts.

"Data and statistics are available from January, 1895 to the present"




*Precipitation in the Northwest region, January through June*

# Drought response site features "drought meter"




Persistent drought conditions in Colorado have resulted in Governor Hickenlooper invoking the state's Drought Response and Mitigation Plan.

To help support the plan, the Colorado Drought Response Portal recently came online.

The portal features a Drought Meter, which provides an instant gauge on overall drought levels.

The Drought Meter also allows easy access to several sources of drought-related information, including SNOTEL snowpack , reservoir storage and US Drought Monitor data.

Users can also search for water restrictions by city, county or ZIP code within the state.

# USDA uses PRISM data to improve integrity of Federal Crop Insurance Program

**Jan Curtis**
**NWCC Climatologist**

The Federal Geographic Data Committee (FGDC) is an interagency committee that promotes the coordinated development, use, sharing and dissemination of geospatial data on a national basis. Here is a success story from the FGDC FY13 Annual Report.

**Challenge:** Owing to a gap in weather data across the US, when a producer submitted an insurance claim for crop loss, the Approved Insurance Providers (AIPs) who sell and service crop insurance did not have a consistent and reliable data source to determine if a producer's claim was valid.

**Action:** In response to this challenge, the USDA Risk Management Agency (RMA) contracted with Oregon State University's PRISM Climate Group to develop a web portal that both RMA and the AIPs could use to expedite claims, by determining if the weather event occurred and if the event supported a loss claim.

In addition, the NRCS National Water and Climate Center (NWCC), which had been funding the development of high resolution PRISM spatial climate datasets since the early 1990s, needed to provide a long-term context for a given weather event to support the release of the 1981-2010 climate normals. In the past, PRISM data had been restricted to monthly and annual time intervals.

The new portal provides daily PRISM data for the lower 48 states at 4-kilometer resolution with a turnaround time of 24-48 hours. With near real-time data available at individual field resolution, suspected fraudulent claims can be immediately challenged with greater confidence.

The new web portal contains:

**Recent Conditions**

- View national-level precipitation and temperature patterns
- See how recent conditions compare with historical patterns

**Explore long-term averages**

- See 30-year averages for precipitation and temperature
- Compare with averages over most recent 10 years

**View summary assessment**

- Select a particular location and time period
- Compare average conditions with 10- or 30-year data

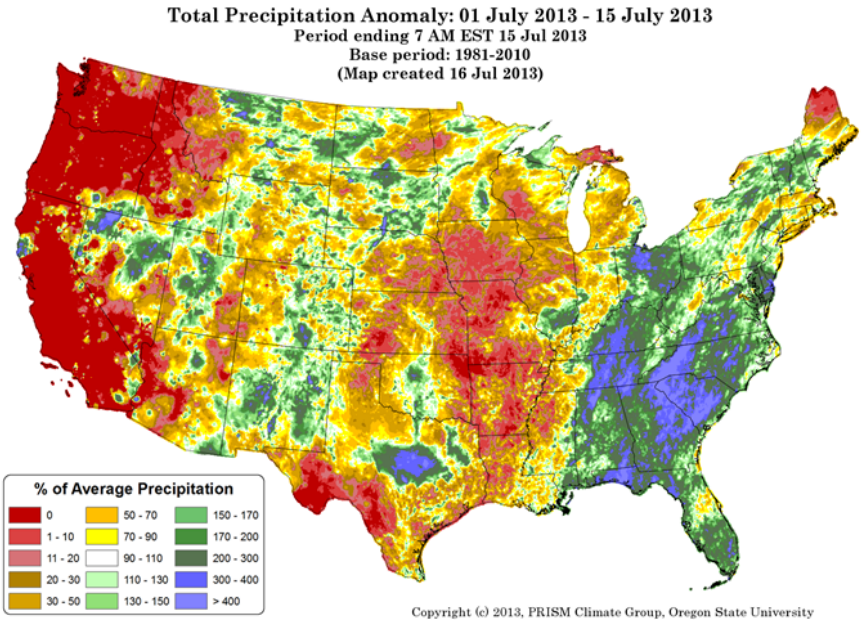
**Explore detailed data**

- View plots of time-series data for a selected location
- Download time-series data corresponding to that location

**Generate customized reports for prevented planting**

- Select a 16-month "insurance period" and location
- Get an on-demand report analyzing precipitation patterns

**Result:** Since the development of the PRISM/RMA Weather & Climate Portal, RMA and AIPs have a reliable weather tool to determine if producers' claims are valid.




*Accumulated precipitation during the first half of July 2013 compared to the longer-term 1981-2010 climate normals (averages). These data will be available to the public beginning September 30, 2013.*

# Timing of seasonal mountain pass closures in Washington state

**Nick Bond and Karin Bumbaco**
Office of the Washington State Climatologist

Summer is ending. With kids back at school, football on TV, days becoming shorter and jackets making an appearance, a question on the minds of readers is, "When will it cool down enough for snow in the high country and hence winter recreation?"

One way to gauge the timing of the onset of winter is by the dates of seasonal closures of passes through the Cascade Mountains. This summary focuses on the state of Washington, and examines the history of the autumn road closures in the North Cascades Highway, Cayuse Pass, and Chinook Pass.

The figure below shows the dates of the closures of the three passes for 1973 to 2012. The mean date of closure ranges from approximately November 19 (day 322) at Chinook Pass to November 29 (day 332) at Cayuse Pass.

The great majority of the years have closure dates between early-to-mid November and the middle of December; the year-to-year variations in closure dates are on the order of between two weeks and one month.

As might be expected, the three passes tend to act as a group in terms of being closed relatively early or late. The major accumulations of snow which are required to raise the avalanche hazard high enough to close these passes are rarely highly localized.

A notable year in the record is 1976 where no closure date is plotted for any of the passes. The passes remained open that winter due to the extremely low snowfall, especially during the early and middle portions of the season. Only two years in the record had closure dates that were delayed until January – the 1979/80 and 1989/90 winters.

There appears to be a weak trend toward earlier closure dates, particularly for Cayuse Pass. However, examining the longer record at Chinook Pass (1935-2012) reveals neither a positive or negative trend in the timing of the road closures (not shown).

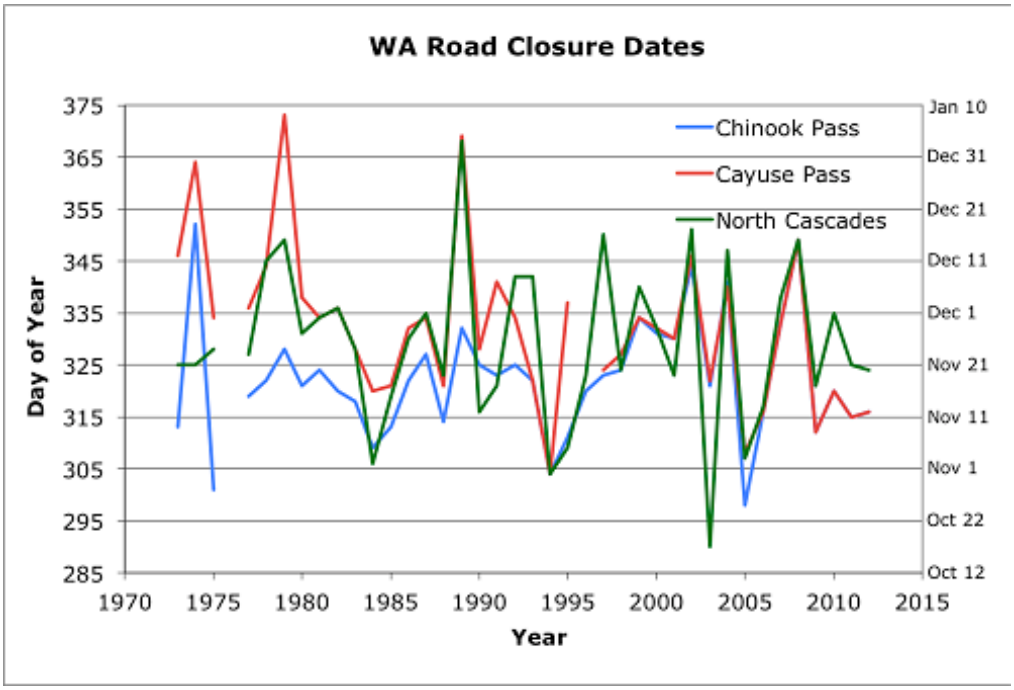
**Neutral ENSO conditions forecast**

Most of the seasonal forecast models predict a continuation of neutral El Niño-Southern Oscillation (ENSO) conditions through the autumn and winter. While there is not a strong correlation between neutral ENSO years and early cool season (October-December) precipitation, during La Niña years, there tends to be more snow than usual in the mountains of the Pacific Northwest.

The opposite is true for El Niño years in the Pacific Northwest. Is there a discernible relationship between ENSO and the closure dates? The answer may be a bit surprising.

We compared the closure dates shown in the figure with the mean Niño3.4 index for October through December of each year and found essentially no correspondence for the period of record (refer to the figure on page 9).

*...Continued pg 9*




*Dates of seasonal closures (day of year) of the North Cascades Highway, Cayuse Pass, and Chinook Pass for the years 1973-2012 from the Washington State Department of Transportation (http://www.wsdot.wa.gov/winter/PassDates.htm). For the purposes of easy graphing, January 1 is denoted at day 366, and the count continues through early January.*

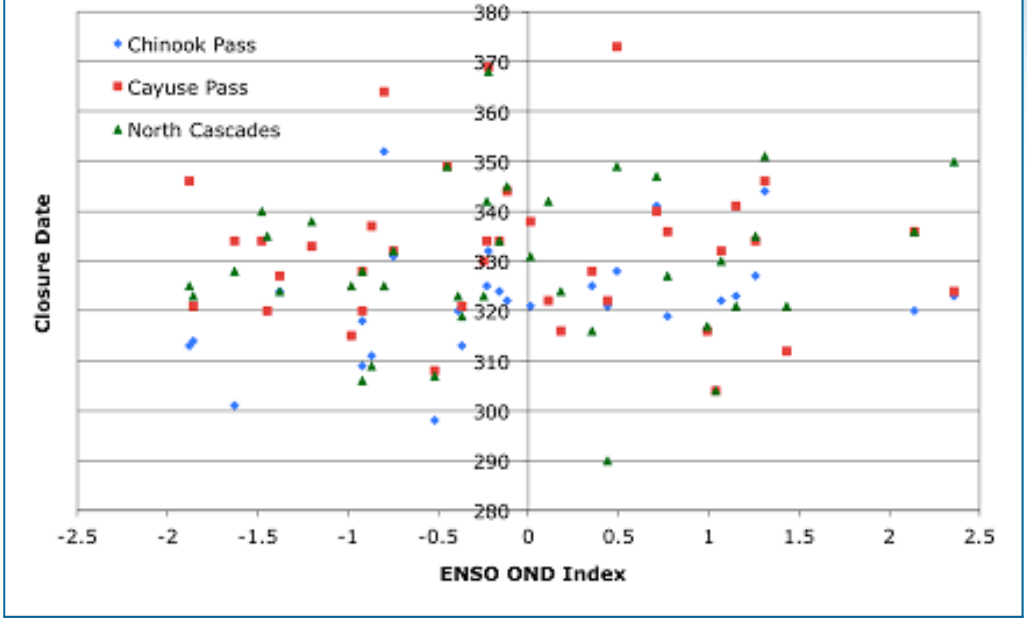
# Mountain pass closures ... from page 8

There is a weak indication that very late closures are rare during La Niña. This lack of correspondence is a good example of how climate-related factors such as ENSO can provide useful indications of seasonal mean weather in a probabilistic sense, but little or no help with regard to timing individual weather events.

The La Niña winter of 2010/11 in Washington nicely illustrates this aspect. For example, there was no way to anticipate going into that season that our best cold-air outbreaks would be in late November and late February rather than during December or January.

These three Cascades passes have striking scenery, and autumn has its special charms. But if you have your heart set on driving these routes this year, the past record suggests it is probably prudent not to wait too long into the month of November.

In case you're planning a trip of this sort, detailed mountain weather forecasts are provided by the **Northwest Avalanche Forecast Center** at http://www.nwac.us/ .




*Closure dates for Chinook Pass, Cayuse Pass and the North Cascades Highway compared to the average October through December (OND) Niño3.4 index for the eastern tropical Pacific Ocean.*

# Technology transfer at National Water and Climate Center

Here's a great example of collaboration and technology transfer between the NRCS National Water and Climate Center (NWCC) and U.S. Army Corps of Engineers (USACE).

NWCC's flagship tool for forecasting is named VIPER (Visually Interactive Prediction and Estimation Routines). VIPER was developed by the NWCC and contains all of our forecasting procedures. Some time ago, **Rashawn Tama** (NWCC Forecast Hydrologist) gave an overview of the VIPER forecasting environment at a Columbia River Forecast Group (CRFG) meeting. At the meeting, Rashawn suggested that other Federal agencies might benefit from using the tool for their forecast development work.

In 2012, USACE Seattle District staff contacted the NWCC about using VIPER, and requested training. **Dr. David Garen** (NWCC Modeling Hydrologist) coordinated with USACE staff and hosted training in Portland earlier this year. The initial training focused on the functional use of VIPER, including advanced model configuration analysis and optimization.

In the months following the training, USACE users gained a wealth of hands-on experience with VIPER. Their proficiency enabled them to more quickly build and evaluate different model configurations, as they worked toward implementing updated operational models for dam operations and reservoir management.

In early August of this year, David hosted a second workshop with the two principal staff members from Seattle, along with staff from the USACE NW Division office.

*...Continued pg 12*

# Monitoring wildfire conditions by state

September's forecast is calling for an above-normal threat for wildfires over much of California.

Here are web resources related to wildfire conditions for many of the western states.

Some links are portals to more information, and many show current conditions for the state.

Some links are national resources, allowing you to drill down to a specific area of the country.

Photo credit: www.nrcs.usda.gov

| | |
|---|---|
| Arizona | http://wildlandfire.az.gov/ |
| California | http://cdfdata.fire.ca.gov/incidents/incidents_current |
| Colorado | http://csfs.colostate.edu/pages/wf-current-info.html |
| Nevada | http://forestry.nv.gov/fire-program/fire-links/ |
| New Mexico | http://nmfireinfo.com/ |
| Utah | http://www.utahfireinfo.gov/ |
| Wyoming | https://sites.google.com/a/wyo.gov/wsfd-fire-information/ |

USDA Forest Service, Active Fire Mapping Program http://activefiremaps.fs.fed.us/lg_fire2.php

Fire danger across the US: http://www.fs.fed.us/land/wfas/fd_cls_f.png

Remote Sensing Applications Center, Fire Detection Maps http://activefiremaps.fs.fed.us/activefiremaps.php?op=maps&rCode=cgb

Incident Information System (inciweb) http://www.inciweb.org/

Predictive Services, Monthly Seasonal Outlook http://www.predictiveservices.nifc.gov/outlooks/monthly_seasonal_outlook.pdf

# Upcoming events

Events of interest in the coming months.

**What**: Geological Society of America 2013 Annual Meeting

**When**: October 27-30, 2013

**Where**: Colorado Convention Center; Denver

**How**: Meeting Information

**What:** Workshop: A Coordinated National Soil Moisture Network

**When:** November 13-14, 2013

**Where:** NOAA's National Weather Service National Training Center, Kansas City, MO

**More Information:** Mike Strobel, (503) 414-3055

**What**: Snow School

**When**: January 12-17, 2014

**Where**: Seventh Mountain Inn, Bend, OR

**How**: NRCS employees, register via AgLearn in October.
Cooperators, partners or other non-NRCS employees, contact Jo Huelshoff, (503) 414-3031

**More information:** Tony Tolsdorf, (503) 414-3006

# “Streamer“ online map traces rivers and streams

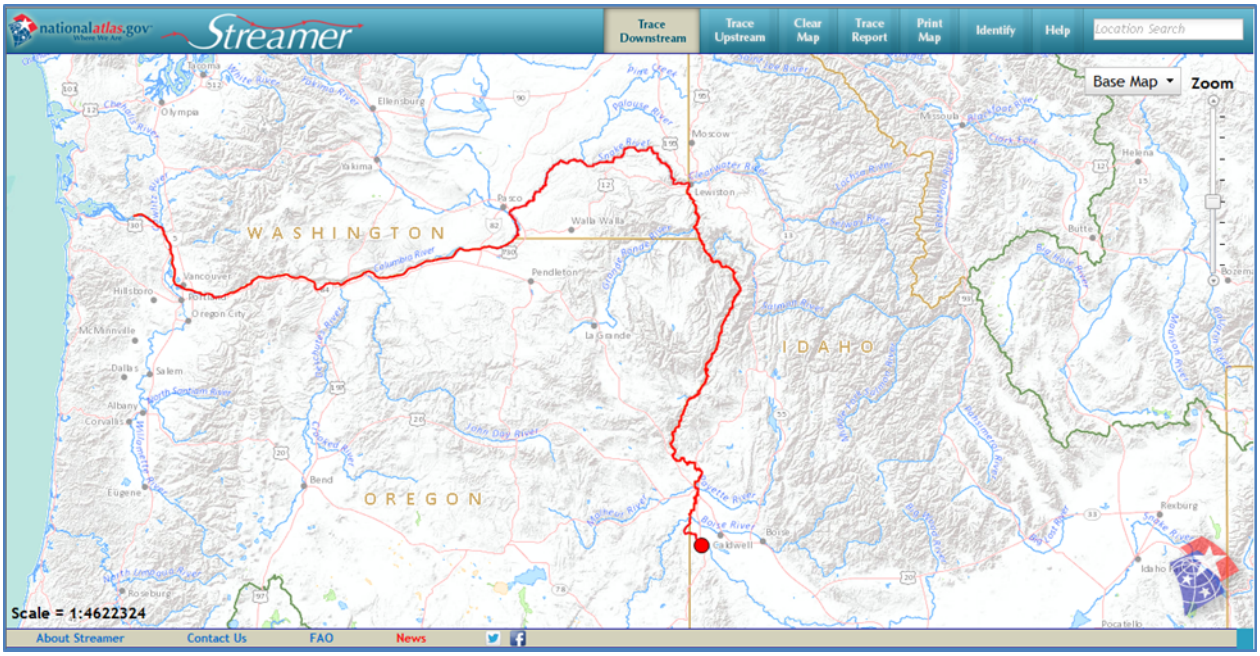
Streamer is a new, online service of the U.S. National Atlas. It lets you trace downstream or upstream along America’s major rivers and streams by simply picking a point on a stream.

The application will then map the route the stream flows. In addition, Streamer can:

- Locate areas of interest using latitude and longitude coordinates or USGS Streamflow Gaging Station IDs
- Print maps of downstream and upstream traces
- Create detailed or summary reports of traces
- Identify current or historical streamflow data

Streamer data are derived from the highly detailed National Hydrography Dataset, which is part of the National Map.

To use the application, you only need to zoom in to the area of interest, select a trace button (either upstream or downstream) and then select a river or stream to follow. The application will create a map of the river’s flow, which you can print, save or use to create a report.




*Downstream trace of the Snake River through Idaho, Oregon and Washington using Streamer*

# More stress management tips

**Tip #2: Visualize Calm**

It sounds New Age-y, but at least one study, done at the Cleveland Clinic Foundation, has found that it’s highly effective in reducing stress. The study recommends imagining you’re in a hot shower and a wave of relaxation is washing your stress down the drain.

Gerald Epstein, M.D., the New York City author of *Healing Visualizations* (Bantam Doubleday Dell Press, 1989), suggests the following routine: Close your eyes, take three long, slow breaths, and spend a few seconds picturing a relaxing scene, such as walking in a meadow, kneeling by a brook, or lying on the beach. Focus on the details—the sights, the sounds, the smells.

**Tip #5: Say Cheese**

Smiling is a two-way mechanism. We do it when we’re relaxed and happy, but doing it can also make us feel relaxed and happy. Smiling transmits nerve impulses from the facial muscles to the limbic system, a key emotional center in the brain, tilting the neurochemical balance toward calm. Go ahead and grin. Don’t you feel better already?

From: ***Reader’s Digest*** 37 Stress Management Tips.

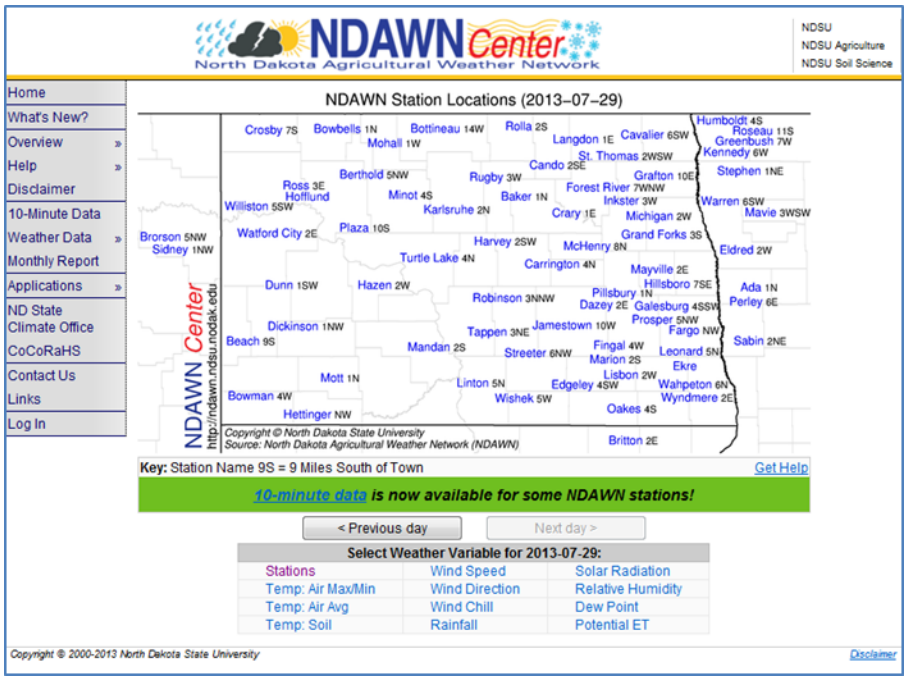
# NDAWN: Weather data and agricultural applications

The North Dakota Agricultural Weather Network (NDAWN) is a web resource developed by the Department of Soil Science at North Dakota State University.

The Network's portal contains a map-based interface, allowing access to data from 72 stations distributed across North Dakota, the Red River Valley and border regions of surrounding states.

Stations provide hourly averages or totals for all variables and hourly maximum wind speed plus daily summaries consisting of maximum and minimum air temperature, maximum wind speed, times of occurrence, and various totals or averages for all other variables. Data are available in English or metric units.

NDAWN also provides an Applications page, containing crop-related applications for various commodities and general agriculture applications, such as an irrigation scheduler.




*NDAWN's map interface lets users drill down to more weather data*

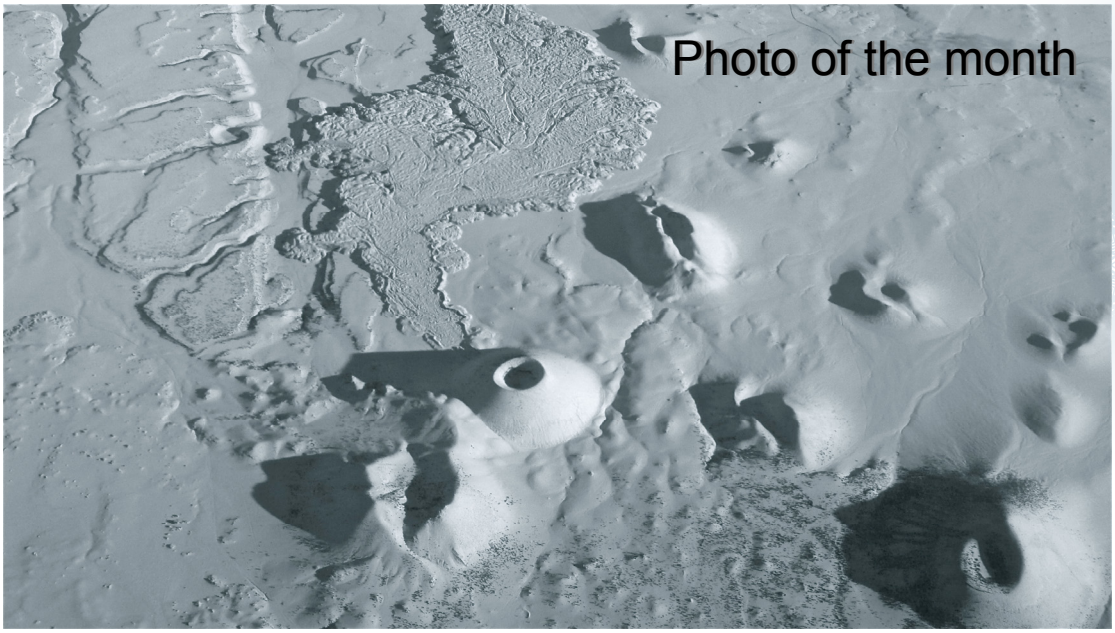
# Technology transfer ...from page 9

The most recent training was very successful. Because trainees were proficient with VIPER, the work and discussions focused on key issues relating to forecast modeling, including the philosophy and technical issues surrounding development of robust operational models.

Topics covered in the two-day training included:

- How and when to include climate teleconnections in forecast models.
- What constitutes an outlier value?
- What is the appropriate balance of consistent predictor variables vs. optimized model standard error?
- How early in the season is it appropriate to issue a forecast?
- What is the best aggregation period for precipitation predictors?

This type of collaboration with our Federal partners is a key aspect to our mission at NWCC. This successful technology transfer builds on earlier collaboration with water managers at the Denver Water Board, the Northern Colorado Water Conservancy District, and the Bay Area Water Supply and Conservation Agency in California. These examples of successful technology transfer from NWCC illustrate the value of innovative new tools to the broader forecasting community and the role NRCS plays in advancing the science of operational water supply forecasting.




*This photo of SP Crater in Arizona is courtesy of Jan Curtis, NWCC Climatologist. The photo received an Honorable Mention award in the 2014 Weatherwise Magazine photo contest.*

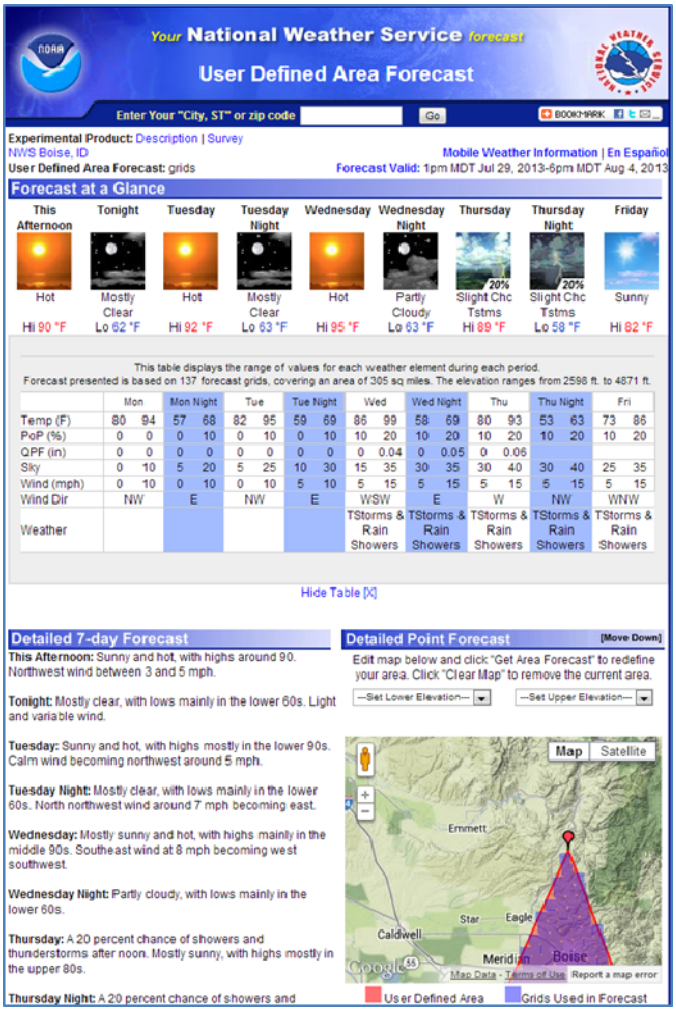
# User Defined Area Forecast application released

The National Weather Service (NWS) User Defined Area Forecast (UDAF) application lets users interact with the NWS netCDF database to get forecast information within a geographic area.

The application lets users define geographical boundaries in both area and elevation, and retrieve a forecast directly from the digital forecast database populated by NWS meteorologists.

Users define the geographic region by placing markers on a map in three locations. Output is presented in the same format as the Point-and-Click forecast, but based on an average value of the area specified.

Additionally, the application returns a table with maximum and minimum values, along with statistics about the size and elevation range of the selected area.




*User Defined Area Forecast data for Boise, Idaho*

# Resource Locator

Here's a handy reference for finding resources in the Snow Survey and Water Supply Forecasting Program.

| Where | What | Who How |
|---|---|---|
| Alaska | Forecast Hydrologist | Jolyne Lea 503-414-3040 jolyne.lea@por.usda.gov |
| | Data Collection Office Supervisor | Daniel Fisher 907-271-2424 daniel.fisher@ak.usda.gov |
| Arizona | Forecast Hydrologist | Gus Goodbody 503-414-3033 angus.goodbody@por.usda.gov |
| | Water Supply Specialist | Dino De Simone 602-280-8786 dino.desimone@az.usda.gov |
| California | Forecast Hydrologist | Jolyne Lea 503-414-3040 jolyne.lea@por.usda.gov |
| | Water Supply Specialist | Greg Norris 530-792-5609 greg.norris@ca.usda.gov |
| Colorado | Forecast Hydrologist | Cara McCarthy 503-414-3088 cara.s.mccarthy@por.usda.gov |
| | Hydrologist | Mage Hultstrand 720-544-2855 mage.hultstrand@co.usda.gov |
| | Data Collection Office Supervisor (acting) | BJ Shoup 720-544-2850 william.shoup@co.usda.gov |
| Idaho | Data Collection Officer | Phil Morrisey 208-685-6983 phil.morrisey@id.usda.gov |
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## NWCC highlights

The National Water and Climate Center (NWCC) has been selected to participate in the newly-created ***Regional Hubs for Risk Adaptation and Mitigation to Climate Change***.

Mike Strobel will be the NRCS lead in the proposal for the Pacific Northwest Region. Proposals were submitted on August 21. **Beatrice Van Horne**, Forest Service, is the proposed Hub Director, and **Stuart Hardegree**, Agricultural Research Service, is the proposed co-lead.

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**Tony Tolsdorf,** NWCC Hydrologist, along with **Deb Harms** and **Dr. Cathy Seybold**, National Soils Science Laboratory, are currently installing nine new SCAN (Soil Climate Analysis Network) stations in Texas. Tony and Deb will also be decommissioning a SCAN site in Missouri.

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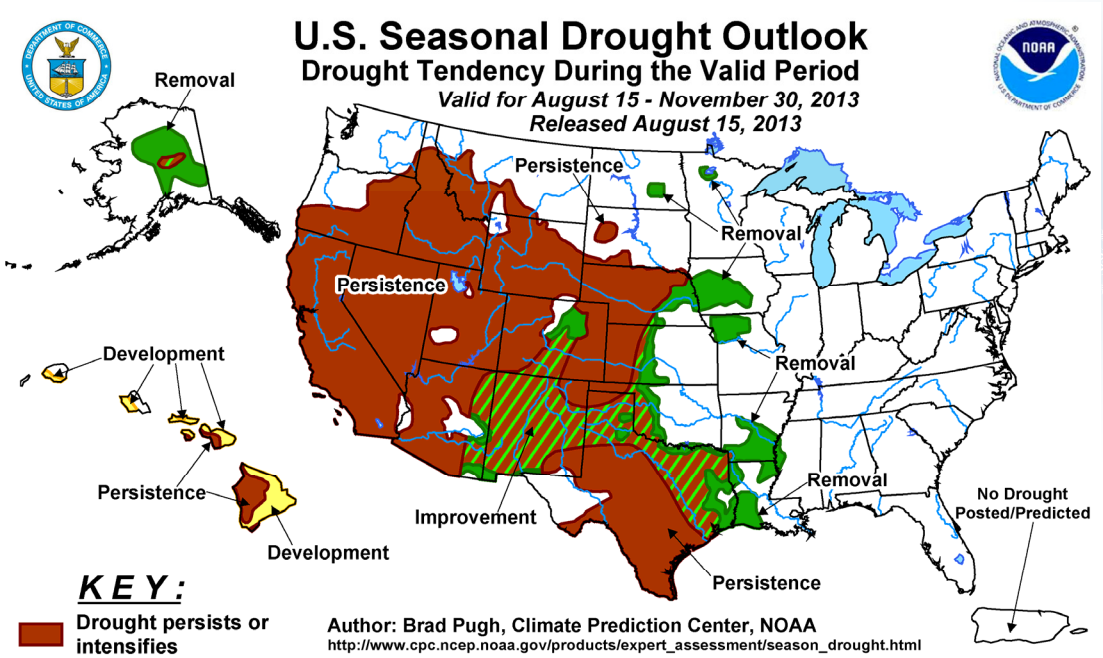
For the second year in a row, **Jan Curtis,** NWCC Climatologist, received an Honorable Mention award in the 2014 ***Weatherwise*** Magazine annual photo contest.

Jan's winning photo (shown on page 13 of this issue) featured SP Crater north of Flagstaff, Arizona under a blanket of snow.




# Products and resources on the web

### Drought Management Database Portal

This new web resource is a product of the National Drought Mitigation Center.

The U.S. Drought Management Database Portal is a collection of information about efforts in responding to and preparing for drought in the United States.

The portal is categorized by sector. For example, information of interest for farming, livestock production, water supply and quality, energy, recreation and tourism, fire, plants and wildlife (environment), and society and public health. Each sector is then further divided into subsectors.

A **Search** option lets you search by many more criteria, including dates, type of activity (planning, response, monitoring, etc.), decision-making scope (from individual through Federal government), by state, and by resource type. You can also perform a text search.

The portal has a **Featured Strategy** link, in addition to recent drought mitigation news.

### NCDC distributes U.S. climate normals products

NOAA's National Climatic Data Center (NCDC) offers a variety of climate normals products on their website. As an example, the site features links to:

- 1981-2010 U.S. Normals Data
- Climates of the States (CLIM60)
- Dynamic Normals Products
- Monthly Station Climate Summaries (CLIM20)

All the products are available to the public and are free of charge.

### Climate Science Digest

The North Pacific Landscape Conservation Cooperative (NPLCC) just released the first issue of Climate Science Digest. This monthly publication increases access to climate change information important to natural and cultural resource managers throughout the North Pacific LCC region. Each Science Digest focuses on 1) learning opportunities; 2) effects to species, habitats, and ecosystems; 3) adaptation 4) research on reducing emissions; 5) climate trends reports; and 6) significant climate change findings.

*Helping People Help the Land.*

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For issues of ***SnowNews*** go to:
www.wcc.nrcs.usda.gov/SnowNews/SnowNews_landing.htm

Our mission is: *"To lead the development and transfer of water and climate information and technology which support natural resource conservation."*

With a vision of the future as:

*"A globally-recognized source for a top quality spatial snow, water, climate, and hydrologic network of information and technology."*

From the Director's desk

# Valuing tomorrow's climate in today's world

Often when I give talks on the topic of climate change, I don't just focus on the data, but I also discuss public perception on the issue. It is interesting how many people question whether the climate is changing at all, regardless of what data reveal. And some people accept climate change, but attribute it to natural variations, with humans having a minor role in these trends. And then there are those who feel that human influence has a major impact on the climate.

One of the hurdles in the climate issue is discussing the future when people tend to focus on the present. It is that continual misunderstanding between what is climate and what is weather. They understand extreme events, but concern about climate seems to wax and wane as we experience different wet/dry and cold/hot years. Many times on cooler summer days I have had neighbors ask me what happened to global warming.

As discussed in a recent article by Cass Sunstein of Bloomberg News, there is strong evidence that most people have a "present" frame of mind. For example, a different news article mentioned that only half of Americans could come up with $2,000 in cash if an unexpected need arose and that only 66 percent of Americans have saved anything for retirement, with 57 percent having less than $25,000 in household savings and investments. A CNN article cited a study that said that almost half of Americans are contributing nothing to a retirement plan. You might say this is a factor of our economy, which may be the case for some. But I also have seen many of our family friends living for today and not saving for future needs. A recent CNBC report cited a survey that stated that more Americans are saving up for a new car or big vacation than are saving for their kids' college. Specifically, 60 percent of respondents stated that they are saving for a major purchase today, whereas only 48 percent with college-bound kids have started to save for those college costs.

I'm not judging people's choices, but I believe it is this same mindset that limits the concern many people often have with climate change. It is the future and that is far down the road. As scientists, we need to understand that some, but certainly not all, of the issue with public acceptance of climate change may be due to the impacts being more about tomorrow and less about today. If our models and trend analyses are correct, then the impacts of climate change are already happening and more is yet to come. But society may not place the same concern about it as those of us who measure and study those changes. This just stresses the point that it is as important for scientists to understand our audience as it is for our audience to understand the science. The challenge is to keep providing good data and improved forecasts as today moves into tomorrow.