



THE SNAKE PLAIN WEATHERVANE

National Weather
Service Pocatello, ID

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Idaho and The
Central Mountains

Inside this edition:

- StormReady
- Ice Jams
- SAFER
- Featured Coop
- Travel Web Page
- Blizzard 2010
- Staff Listing

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La Niña and the Winter Outlook for 2010-2011

By Mike Huston

Lead Forecaster

A strengthening La Niña will be the dominant climate factor influencing weather across the region this winter, according to the annual Winter Outlook (see Figs. 1 and 2) issued in mid October by the Climate Prediction Center (CPC) – a division of the National Weather Service. As you may know, La Niña is associated with cooler than normal water temperatures across the Equatorial Pacific Ocean. These cooler water temperatures in turn promote changes in the atmospheric weather circulations which impact North America (see Fig. 3). The overall result of these changes is an increased frequency of cold-air outbreaks across the northern states and considerable month-to-month variability exhibited in the storminess flowing into the region along the Pacific Jet Stream throughout the winter. Specifically for southeast Idaho, the changes result in a fairly reliable cooler than normal temperature signal across the region and a somewhat less reliable wetter than normal precipitation signal.

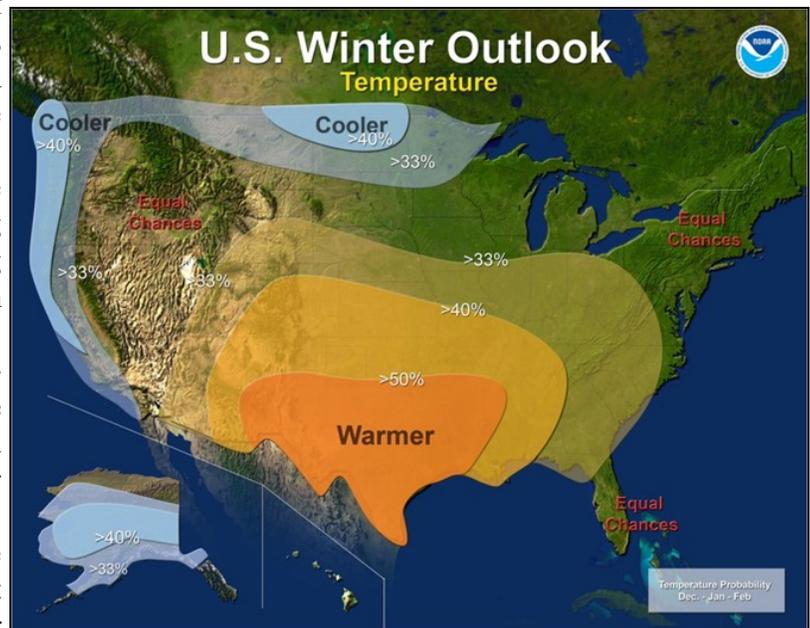


Figure 1. Temperature Outlook for December, January and February

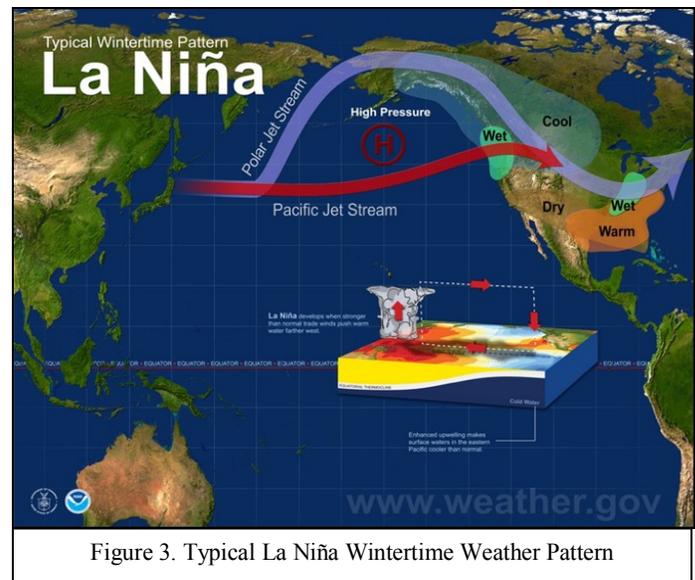
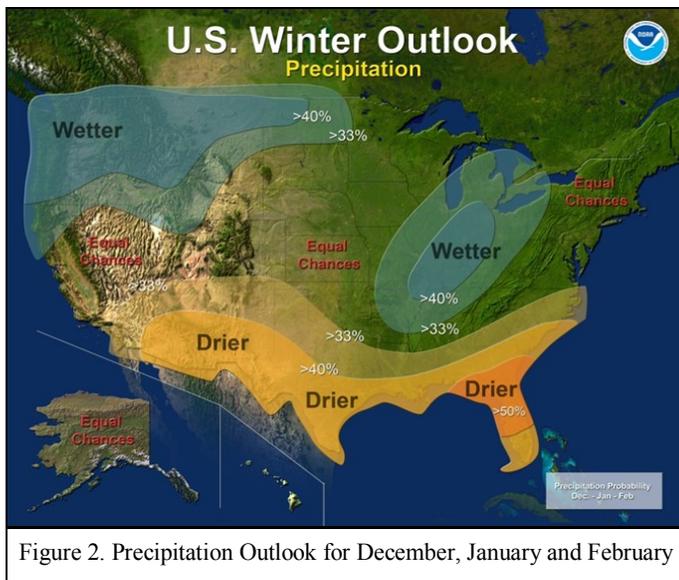
So one might ask, “Why does the official Winter Outlook indicate a level of uncertainty (ie. Equal Chances) with regards to the temperature outlook (Fig. 1) across southeast Idaho whereas the precipitation outlook (Fig. 2) seems more optimistic?” The answer is “the trend is your friend!” When a forecaster is saddled with making multi-month projections, experience has shown that capitalizing on recent climate trends improves the forecast. As you may have guessed then, the most recent trend in the data suggests that there is an increasing tendency toward wetter La Niña winters with a corresponding moderation in temperatures. This hedging in the forecast will



likely continue through November until a clearer trend is established. Updated outlooks are issued on the third Thursday of each month at:

http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/.

For now the most prudent action one could take is to approach winter armed with the expectations suggestive of the dominant climate influences discussed above while remaining prepared for the variability that will surely accompany the winter weather of 2010-2011.



When Seconds Count—StormReady Communities Are Prepared

By Vern Preston

Warning Coordination Meteorologist

Americans live in the most severe weather-prone country on Earth. Each year, Americans cope with an average of 10,000 thunderstorms, 5,000 floods, 1,000 tornadoes, and an average of 2 land-falling deadly hurricanes. And this on top of winter storms, intense summer heat, high winds, wild fires and other deadly weather impacts. You can make sure your community is ready for the weather with the National Weather Service's StormReady® program.

Some 90% of all presidentially declared disasters are weather related, leading to around 500 deaths per year and nearly \$14 billion in damage. StormReady, a program started in 1999 in Tulsa, OK, helps arm America's communities with the communication and safety skills needed to save lives and property before and during the event. StormReady helps community leaders and emergency managers strengthen local safety programs.

StormReady® communities are better prepared to save lives from the onslaught of severe weather through advanced planning, education and awareness. No community is storm proof, but StormReady® can help communities save lives.

Here in southeast Idaho, our natural environment and diverse terrain come coupled with severe weather risks in every season—especially from strong winds, winter storms and fire weather hazards. These risks require constant communication with community officials year round. The StormReady® process arms us with improved communication and safety skills needed to save lives and property – before, during and after a weather event.

To be recognized as StormReady®, a community must establish a 24-hour warning point and emergency operations center; have more than one way to receive severe weather forecasts and warnings and to alert the public; create a system that monitors local weather conditions; promote the importance of public readiness through community seminars; and develop a formal hazardous weather plan, which includes training severe weather spotters and holding emergency exercises.

Disaster preparedness is everyone's responsibility. Educating yourself and your family on environmental hazards, maintaining a disaster supply kit and having an emergency plan in place, are all ways you can be better prepared.

Idaho has been a leader in the StormReady® program over the years with 34 of our 44 counties receiving this recognition. In addition, 133 communities, 3 government sites, 1 Indian Nation and 2 universities have gone through the coordination. See all listings for Idaho on-line at: <http://www.stormready.noaa.gov/com-maps/id-com.htm>

Another unique aspect of StormReady is that businesses, schools and other entities often have established weather safety plans and actively promote severe weather safety awareness with their staff and can apply for StormReady Supporter recognition. We have five groups who have done this: Idaho Falls Regional Airport, Portneuf Medical Center, KIFI TV in Idaho Falls, KMVT TV in Twin Falls, The Sawtooth National Forest Avalanche Center and the NOAA Air Resources Laboratory in Idaho Falls. You can learn more about this program on-line at: <http://www.stormready.noaa.gov/supporter.htm>

Eastern Idaho has seen some first's both nationwide as well as in Idaho including:

Nationwide

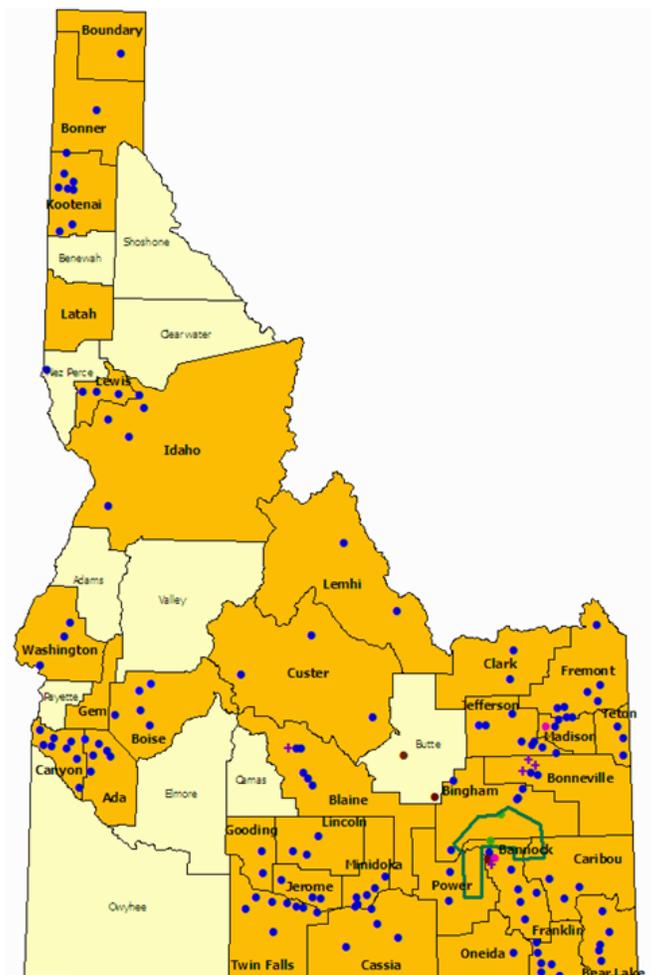
- 1st Government entity recognized - Idaho National Laboratory
- 1st Health district recognized - Southeastern District Health Department
- 1st National Monument recognized - Craters of the Moon National Monument and Preserve

StormReady® Supporter

- 1st NOAA entity recognized - NOAA Air Resources Laboratory - Field Research Division
- 1st Avalanche Center recognized - USFS Sawtooth National Forest Avalanche Center
- 1st Broadcaster recognized - KIFI Local News 8

In Idaho

- 1st Tribal Nation - Shoshone-Bannock Tribes
- 1st University(s) recognized (both on same day) - Idaho State University & BYU Idaho
- 1st Hospital – Portneuf Medical Center
- 1st Airport – Idaho Falls Regional Airport



Ice Jams

By Troy Lindquist
Service Hydrologist

Flooding is perhaps forgotten about or put in the back of our mind during the late summer and fall months when rivers and streams are typically near their lowest flow across eastern Idaho. However, the cold temperatures of winter and formation of ice on rivers and streams can bring a significant flood threat. Ice jams are a relatively common problem during the winter months across eastern Idaho. Ice accumulation and jams can occur on any river and stream across eastern Idaho during prolonged cold temperatures. Ice formation in waterways changes the way water flows through river and stream channels. The most common location for an ice jam to form is in an area where the river slope changes from relatively steep to flat. Ice jams also commonly form where a tributary stream enters a larger river, lake, or reservoir. River bends are frequently cited as ice jam instigators. Natural and constructed features in a river channel may play a role in the locations of ice jams as well.



Ice accumulation and jams in rivers and streams has led to flooding in eastern Idaho as early as December. In December of 2009, arctic air settled over eastern Idaho resulting in a lengthy period of below normal temperatures. Many waterways iced over and ice jam flooding occurred along the Falls River in Fremont County and along Indian Creek in Blaine County on December 11th and 12th of 2009.

Types of ice jams include freeze-up jams, breakup jams, and combinations of both. Freeze-up jams occur when prolonged sub-freezing weather allows an ice cover to develop on a river or stream. Breakup jams occur when the freezing weather is followed by significant warming, allowing the ice to break free and flow downstream. Water can quickly back up behind an ice jam causing localized flooding. Jams can release very quickly, and flash flooding is often the result as the water backed up behind the ice jam then rushes downstream. When snowmelt, rain or rain on snow occur along with the breakup of river ice, the result is often more intense flooding. Many ice jams form and do not cause flooding but may have significant environmental impacts by scouring river beds and vegetation. The ice may have structural impacts on bridges and diversion gates as well.

Report The Following Hazards By Calling: 1-800-877-1937

- Snowfall: Please report any amount, especially amounts greater than 3 inches.
- Freezing Rain: Any amount, especially amounts at or greater than $\frac{1}{4}$ inch.
- Strong Winds: Mainly if they are over 50 mph.
- Ice Jams: Any visible ice jam.
- Flooding: Any type or duration.
- Dense Fog: Any fog, especially dense fog with visibilities less than $\frac{1}{2}$ mile.

SAFER

**By John Keyes
Forecaster**

We've all heard: "It hit without warning." We've all heard stories about people driving into flooded areas and being swept away. This is happening despite all of the information being disseminated by the NWS, media and other outlets. The National Weather Service is setting out to find ways to better prepare people by applying improved communication skills, providing more decision support methods and using social science.

All Western Region offices are participating in a pilot program called SAFER, which stands for Societal Applications For Enhanced Readiness. The goal is to provide you, the customer, with better information to make more informed decisions during threatening weather events. For a long time, meteorologists have felt or thought they knew best when it came time to tell people what they should do to protect themselves and their property. However, after listening to our customers and social scientists, we've learned that we need to improve. For us, that means having a better understanding of ALL impacts during a given weather scenario, including what the impact is, who will be impacted and all costs involved (economics, mortality, time, etc.). It also means knowing how to better communicate what we know so YOU can make the best possible decision. How will we do all of this? It will involve several things, but a few of them are: 1) Gathering information about the impacts, whether it is a 2 inch snowfall for rush hour, a raging blizzard, severe thunderstorm or a hot summer afternoon. 2) Applying the information from social scientists whose expertise involves communication, economics, health, anthropology, etc. and 3) provide better decision support. This includes graphical displays to better show and display our messages along with enhanced "wording" of our message. We are also looking at communicating that information through social media, smartphones, etc.

Here at WFO Pocatello, we are committed to this program and have already started down this road. Some things you will see very soon, others will take some time. Rest assured though, we all want to make the world a SAFER place!



Weather Spotter, COOP and Aviation Observer Retires After 45 Years

By Gary Wicklund

Observation Program Leader

Beth Jones of Malta has contributed to the National Weather Service's Cooperative Weather Observation and Aviation observation program for 45 years. Her unselfish and unrelenting service in weather observing and weather record keeping for the community of Malta and the National Weather Service provided valuable climatic information to the state and the nation.

Beth received the Richard (Dick) H. Hagemeyer Award on July 30, 2010. This award was established in honor of Dick Hagemeyer (1924-2001) whose career with the National Weather Service (NWS) spanned 51 years. Early in his career he served as a Cooperative Program Manager and was an ardent supporter of the Cooperative Observer Program. The award is given to NWS Cooperative Weather Observers who accrue 45 years of service.

Beth volunteered to record rain and snowfall reports for the Malta, Idaho area on July 13, 1965. In the beginning, Beth never gave a thought as to how long she would record the weather. She simply recorded her observation every morning along with raising a family. Forty-five years later, she indicated her amazement at how quickly time passes. She might also be amazed of her contribution to the nation's climatology archives with over 16,000 daily observations. Beth has also been a certified aviation observer since 1975 and recorded over 8,000 observations for use by both General and Commercial Aviation.

Data collection from cooperative observers has spanned over 100 years and helps establish the climatic database for the United States. The information is routinely used at local, state, and national levels by many businesses and industries. Once the observer records precipitation and reports it to their local NWS office, the daily observations are compiled monthly, quality controlled for accuracy, and forwarded for archiving to the National Climatic Data Center (NCDC) in Asheville, North Carolina. NCDC uses the data to create "normal" temperature and precipitation records for an area. Locally, the data from cooperative observers are critical in the support of forecast and warning operations.

Across southeastern Idaho and northern Utah, nearly 70 volunteer weather observers provide valuable weather reports fundamental in assisting the NWS to more accurately predict the climate of the region. Mrs. Jones is among an elite group of dedicated people contributing their time to accurately collect weather information used in NWS climate forecasts. These superbly dedicated people are part of NWS's Cooperative program of nearly 12,000 volunteers. Many of these observing locations have made a family tradition of collecting daily weather information without interruption for over a century.



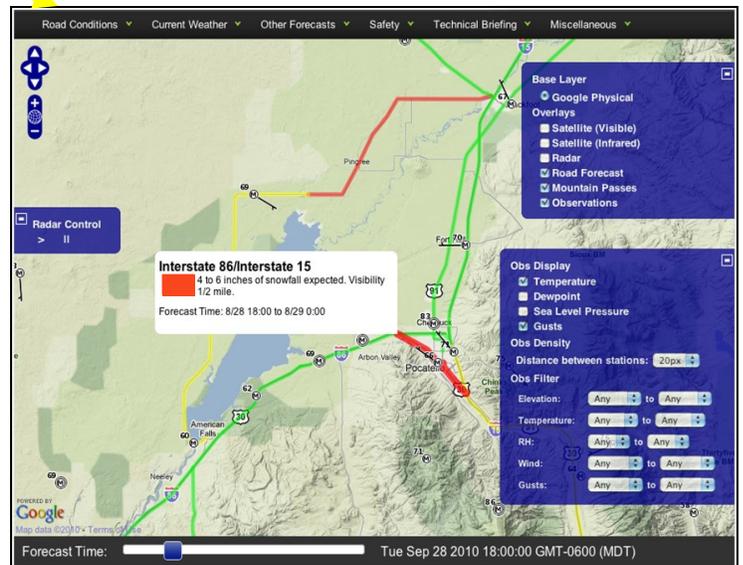
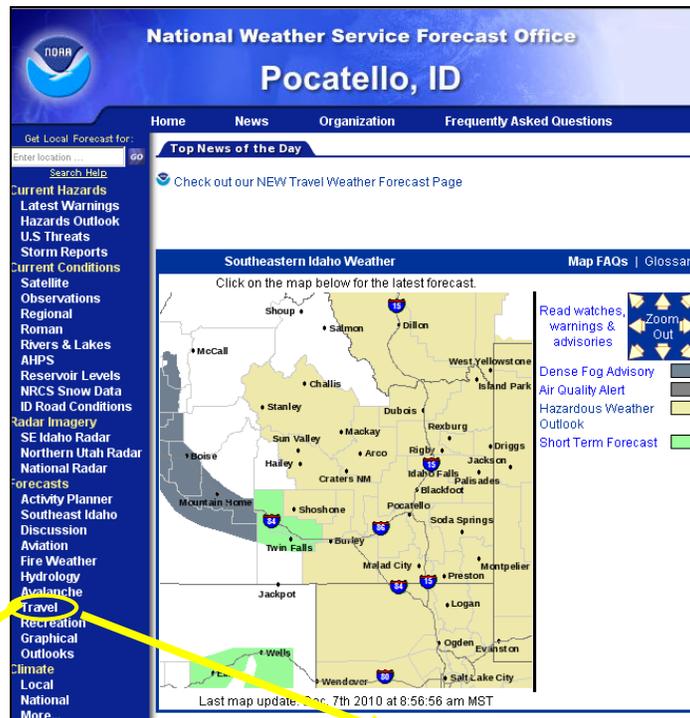
Rick Dittmann, Meteorologist-In-Charge, NWS Pocatello, presents the 45-year Dick Hagemeyer Length of Service award to Beth Jones

Winter Weather Travel Web Page

By Dan Valle

Lead Forecaster

The National Weather Service has just unveiled its new and innovative winter weather [travel web page](#). This page will provide you with a color coded forecast of the weather along your travel route through central or eastern Idaho. By scrolling over a road segment, you will see the forecast weather conditions appear in a pop-up. At the bottom of the map, you can select different time periods to view the forecast. The map is google-based; thus, you can zoom in or out. Satellite, radar or observations can be added to the map. At the top of the page, there are links to real-time road condition reports, road web cams, safety information and even flight travel delays. To get to the web page, click on Travel underneath Forecasts.



Blizzard 2010

By Dawn Harmon

Lead Forecaster

In a winter storm, the question is not just about how much snow will fall. A major concern is whether a person will be able to see more than a few feet while it's falling and the wind is blowing. In the days leading up to November 23rd, the Tuesday before Thanksgiving, National Weather Service meteorologists in Pocatello were seeing patterns that indicated white out conditions were becoming more and more likely. With relatively fresh memories of the Christmas Blizzard of 2008, and a similar atmospheric pattern, the forecast staff issued the warning. A blizzard would impact travel across portions of Eastern Idaho, just days before Thanksgiving. Travelers were strongly urged to rethink their plans, and wait for the storm to pass before hitting the road.

A deep upper trough had been lingering over the Pacific Northwest for several days, sending several systems of moderate strength through Eastern Idaho. Snow had been falling off and on since Saturday, November 20th. Most snow measurements across the region Tuesday morning ranged between 4 and 12 inches in valley locations. Higher elevations had even more snow. A very strong surface low was poised to swing through the region as the upper trough finally began swinging east. The strength of the low was sufficient to produce winds of 20 to 30 mph sustained, but the deep dynamics of the system helped mix some very strong mid atmospheric winds down to the surface as well.

The strongest winds accompanied the front as it moved through the region, passing over the NWS Pocatello office roughly mid morning. Idaho Falls, Pocatello, and Burley all recorded sustained winds over 40 mph with gusts over 50 mph during the storm. Visibilities were severely reduced across the region due to the blowing snow. Bursts of snow fell at a rate of 2 inches per hour according to satellite and radar estimates during the height of the storm. Roads across the region were severely impacted through the day, and several roads were closed. ITD and county road crews struggled to keep main artery roads open. Press reports indicated that several counties gave up trying to keep roads clear until after the storm passed.

By mid evening, the worst of the storm had passed. Winds were subsiding across the region, and the heaviest snowfall had moved east into Wyoming. Visibilities improved, and roads were gradually cleared and reopened. The Blizzard Warnings were cancelled at 8 pm. Icy roads and very cold temperatures were the only hazards that holiday travelers had left to deal with.



Photo Courtesy of the Blackfoot Journal



I-15 at Monida Pass during the November 23rd, 2010 blizzard

The NWS Staff

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	Jack Messick
	Travis Wyatt
Meteorological Intern	Chris Hattings
Hydrometeorological Technicians	Paul Angel
	Dave Phelps
Electronic Technicians	Rich Denning
	Bryan Tilly