



The Snake Plain WeatherVane



Fall 2006

SkyWarn Spotter News
National Weather Service
Pocatello/Idaho Falls, Idaho

Volume 1 issue 2

What to expect in this edition:

- Idaho on Fire
- Fire Weather Briefing
- Winter Outlook
- Snowfall Reports
- Hazards to Report
- A Severe Spring
- The Quiz
- IFPS and Your Forecast
- The MIC Corner
- Staff list

Spotter Highlight for Fall 2006

Lloyd Moon...

Lloyd is one of our network of CO-OP observers who reports daily weather during the year. This weather information he reports, including high/low temperatures and precipitation, is used to help build the local and national climate database. Lloyd is one of the group of folks at the Utah Power and Light Company in Grace who provide this data for us here at the National Weather Service. He has been providing data from the plant in Grace for almost 23 years!

“Weather’s an intricate part of our lives, I find it very fascinating,” noted Lloyd.

He’s been in Idaho for most of his life having grown up in Malad City on a farm to the south of town. He now resides in Grace with his wife. Their four children are scattered around the west.

He became interested in weather about 25 years ago, when he was first hired on with Utah Power and Light at a plant down in Utah. In his words it was the daily weather observations that got him hooked. He is intrigued by seeing how the weather affects everyone, including farmers. When asked to recall a favorite weather situation, Lloyd mentioned a strong storm from back in 1986 that hit the Grace area. In addition to wind damage, the storm produced dramatic changes in barometric pressure, which Lloyd admits, he enjoyed seeing. Another favorite weather memory for Lloyd were daily calls with Steve Cannon, a former broadcast meteorologist in Idaho Falls.

We here at the National Weather Service office in Pocatello would like to salute Lloyd for all of his efforts to provide accurate and very dependable weather information. Thanks Lloyd, keep up the great work!!

Idaho on Fire!



It’s been a record year for fires across the West.

Fire season 2006 was an extremely busy season for us here at the National Weather Service, and especially for land management agencies around the country. 2006 will go down as one of the busiest years in recent memory for many folks. At the epicenter of fire activity sat our beloved Idaho. At the writing of this article, active fires continued to burn across central portions of the state. Below are some statistics showing how fire season 2006 compared to other seasons since 1960.

Idaho Statistics: (Through Oct. 1st)

2006 –

Acres burned: 873,376

Total Fires: 1,744

In total Idaho had the third largest amount of acreage burned in all of the United States. For much of the summer Idaho led the nation in large active fires.

Story continued on page 7....

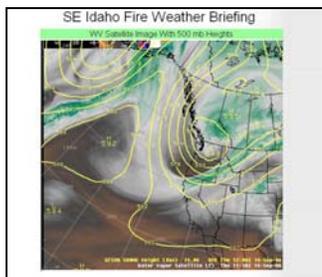
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Fire Weather Briefing by Dean Hazen

The Pocatello Forecast Office offered daily briefings to land management agencies for the first time during the 2006 fire season. Maps were generated by forecasters during the midnight shift and placed on the office webpage for the briefing each morning. The briefing provided satellite imagery, wind patterns near valley floors and ridgetops, daily trends in maximum (morning) and minimum (afternoon) relative humidity, and the potential for thunderstorm and lightning activity through 72 hours. The briefing also covered trends and changes in large scale weather patterns from 3 to 7 days.

back from the users in the field.

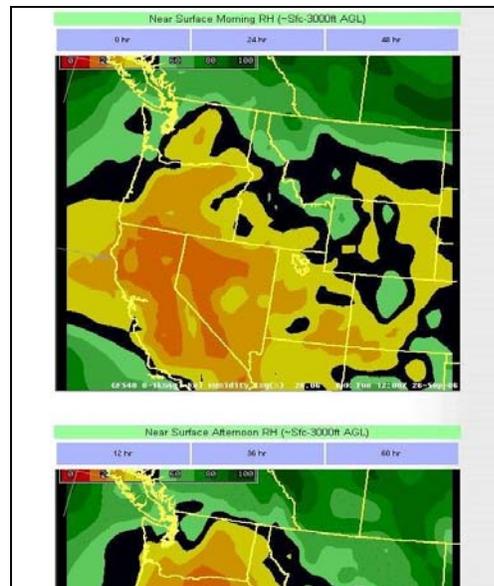
The daily briefing has been a hit with the fire community and therefore we expect to offer an enhanced version for the 2007 fire season.



The fire weather community of Eastern Idaho has benefited from daily weather briefings during the peak of the fire weather season.

Participants included Fire Management Officers (FMOs), Fire Behavior Analysts (FBANs), and Dispatchers from the Central Idaho, East Idaho and South-Central Idaho Interagency Fire Dispatch Centers. In addition, FMOs, FBANs and NWS Incident Meteorologists (IMETs) directly assigned to several large fires in central and southeastern Idaho participated in the briefing.

The briefing was designed to supplement the zone based Fire Weather Forecast which is issued twice daily during the fire season. The briefing provided a forum for FMOs, FBANs, IMETs and Dispatchers to interact with the Pocatello Fire Weather Forecaster and obtain insight into forecast reasoning and trends not covered in the Fire Weather Forecast format. The briefing also provided an opportunity for the Fire Weather Forecasters to obtain updated fuel status, fire behavior, fire growth, and forecast feed-



An example of Relative Humidity graphics used during the briefings.

“Change of weather is the discourse of fools”

-Thomas Fuller

How Much Snow Did You Get Last Night?

During the snow season one of the big struggles we have at our office is getting timely snowfall reports from across central and eastern Idaho. Many times we are left to estimate snowfall amounts using observational equipment. This method is accurate; however, there are many areas we serve that are not covered by these instruments. As a storm spotter you are extremely valuable in our efforts to gather snowfall data.

When the snow flies this winter season we encourage you to report your snowfall totals to us as soon as you can, whether the amount is big or small. These reports help us to verify warnings and advisories, as well as help us get this information to the media to help inform your friends and neighbors.

Please contact us on the 1-800 spotter hot-line to call in your reports. If you've lost this number give me a call at 1-208-232-9306 or send me an email at Michael.cantin@noaa.gov.

Thank you for your help, keep up the great work out there!



A snowy view below Bonneville Peak in January 2006.

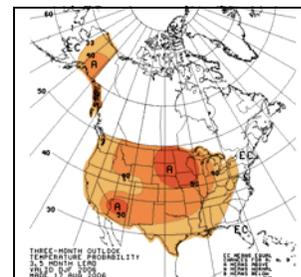
El Nino Returns: 2007 Winter Outlook By Mike Huston

Recent sea surface temperature trends and atmospheric precipitation patterns in the tropical Pacific Ocean are indicating a return to El Niño conditions. A majority of the models used to predict the evolution of sea surface temperatures over the course of the coming year indicate modest warming of the tropical Pacific Ocean which will lead to weak to moderate El Niño conditions through the early portion of 2007.

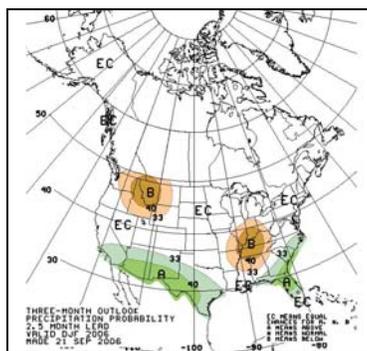
During El Niño conditions, the North Pacific storm track shifts south across the southern tier of states. Considerable variability in the intensity of the storm track is observed depending on the strength of the El Niño event. Historically, weak El Niño conditions typically deliver mild temperatures and slightly above normal precipitation for the mountains of southeast Idaho during the latter portion of the winter season (January through March). Moderate to strong events show a similar temperature pattern while the strongest precipitation accumulations shift south across California

and Arizona leaving southeast Idaho relatively dry.

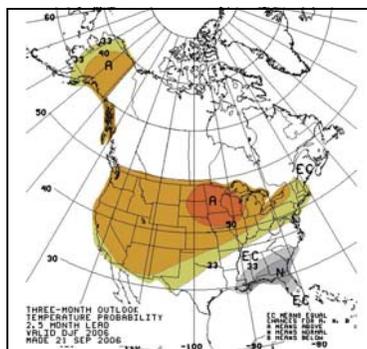
As the season transitions from fall into winter, the official Climate Prediction Center forecast appears to be leaning toward a moderate El Niño signature with below normal precipitation and above normal temperatures during the coming winter months (December through January are pictured below):



Climate outlooks available at www.cpc.noaa.gov



Winter Precipitation Outlook



Winter Temperature Outlook

Fall/Winter Hazards to Report:

- Snowfall:** Please report any amount, especially amounts greater than 3 inches.
- Freezing Rain:** Any amount, especially amounts at or great than 1/4 inch.
- Strong Winds:** Sustained winds at 30mph or greater, with gusts greater than or equal to 45 mph.
- Ice Jams:** Any visible ice jam.
- Flooding:** Any type or duration.
- Dense Fog:** Dense fog with visibilities less than 1/2 mile.

(For more information and/or monthly updates visit: http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/ensostuff/index.html)

“Everybody talks about the weather but nobody does anything about it.”

-Charles Warner



A peak above Sun Valley in spring of 2006.



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Severe Spring Storm: March 25th, 2006 *Compiled by Vern Preston*

Below is an example of a post-storm analysis performed by the Warning Coordination Meteorologist at our office (Vern Preston). The report describes the event, our service provided, and some pictures. The described event took place in late March, and was characterized by strong and damaging winds across much of SE Idaho.

User Response: Emergency managers said we handled the event very well and they were informed well in advance. EAS system was activated for each warning and NOAA Weather Radio at all three sites perform as needed. Local TV and print media gave us positive comments and noted we did an excellent job getting the warnings out.



Severe wind damage in Blackfoot. March 2006.

Event: A line of severe thunderstorms moved east at 40-50 mph up the Snake River Valley, and left damage in its wake. The strongest wind gust reported was 93 mph from an amateur radio mesonet site just north of Preston, Idaho. Numerous reports from 50 to 70 mph were reported in various mesonet observation platforms. Numerous trees were toppled with power outages to over 55,000 residents. Some 800 are still without power 3 ½ days after the event. An embedded tornado (approximately 758 pm) occurred in the city of Blackfoot which occurred during a severe thunderstorm warning. It was on the ground for some 2 miles with average width of 2 ½ blocks wide. Rated F0. Several wheel line irrigation systems were moved and damaged by the wind. After the cold front went by brief heavy snow blanketed the snake valley. Heavy snow warnings were in effect in the mountain areas...but will not be discussed in this writeup.

Comments: WFO Pocatello staff did an excellent job with this storm event. Warnings were issued well ahead of the line, and gave ample warning to those affected. The warnings themselves clearly indicated the type of weather to be expected, in this case, extreme winds. Many LSR products were issued during the event. Power was lost at the office and radar as the thunderstorms passed and the UPS and engine generator operated flawlessly. Because of power problems, the office lost it's WAN, LAN and telephone systems and had Boise perform backup operations for a time on Sunday until systems were restored by Sunday afternoon. Damage surveys were conducted from Pocatello, through Blackfoot to Shelley Idaho on March 27, 2006.

Service: Each warning clearly indicated the threat from high winds. Call-to-action statements were short, but to the point, stating that shelter was needed from this storm. Follow-up Severe Weather Statements further defined the extent of the storms and the damage expected, and further urged those in the path to take shelter. Numerous interviews were given by staff to radio, television and newspaper.



A cloud of dust forms along the leading edge of severe winds during the event.



Roof/carport damage in Blackfoot.



An overturned cinderblock wall in Blackfoot.



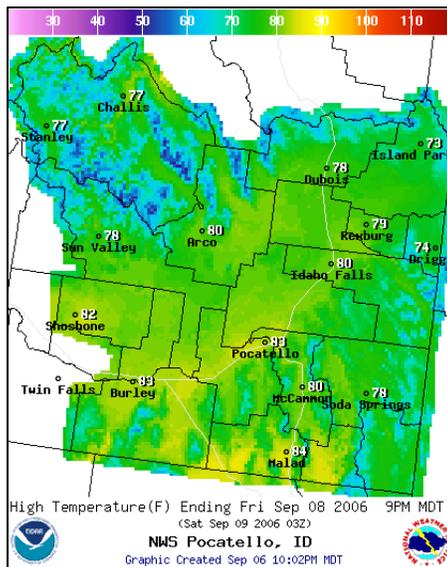
For safety information about Lightning please visit www.weather.gov.

IFPS and You... By Dawn Harmon

Have you ever wondered how a NWS Meteorologist produces a typical weather forecast? Did you even know that on a typical day, a team of meteorologists working a single shift can issue several different types of forecasts for different types of customers? Those forecasts can and should have the same weather forecast in them, but they may be in different formats to meet our customers' needs. How do we keep it consistent, yet accurate as well?

The answer lies in another acronym: IFPS. IFPS stands for the Interactive Forecast Preparation System. Our forecasters know it by another name: grids. Using a set of sophisticated software tools that make up IFPS, the entire country is broken down into a set of boxes that range from 2.5km square to 5km square. For each forecast element, each box gets a value that represents the average value over the area covered by that box. The forecasters use a software package called the Graphical Forecast Editor, or GFE, to "paint" their expected forecast values across Eastern Idaho. All of these values are saved in a database, which are then used to create a myriad of text and graphic products. Since each text product is created from the same initial database, they all stay consistent with each other. Furthermore, the software now creates the text products for the forecaster, so very little typing is involved! The textformats available are limited only by imagination, programming capability, and customer need.

The database we create for Eastern Idaho is merged with the information from offices around the country to produce what we call the National Digital Forecast Database, or NDFD. Graphical representations of forecast elements such as Maximum Temperature, or Chance of Precipitation are created and made visible on www.weather.gov. Customers that can use the national data set can download and import our huge database, and use it however they need.



Forecast "grids" are still relatively new in the NWS, but have radically changed how we do things. We are continually trying new methodologies to make our forecasts better. For now, the best way to access the grid forecast for your area is through our web page at <http://www.weather.gov/Pocatello>. There, you can click on the map and get the exact forecast for your point, or you can get a graphical picture, as below. In the future, who knows how your forecasts may be received? It may come through your cell phone, PDA, or even in your vehicle as you travel across our great land, customized for when, where, and how you need it. In today's digital forecast age, anything can happen!



We've got Eastern Idaho Covered from Stanley to Montpelier!

"When all is said and done, the weather and love are the two elements about which one can never be sure."

-Alice Hoffman

The MIC Corner... By Rick Dittmann

Hi, I'm the new guy. I arrived on the scene in the middle of April. Let's see, we were in the middle of snow-melt causing significant flooding throughout eastern Idaho. We were receiving an abundance of rain and mountain snow – which is a good thing when dealing with year after year of drought – but a bad thing when we get too much too soon. Then, just as we were letting go of the flood threat, things got hot and dry pretty quickly and thus came our fire season. Our staff worked long, hard hours providing exceptional support to those fighting the wildfires across the area for which we have responsibility.

I think we did a fantastic job providing

service during the past six months. And, I must say, we could not have done it alone. Weather spotters like you are essential to any forecast office. The challenges we face issuing forecasts, watches and warnings are huge. Receiving up to date "ground truth" reports from you, our spotters, helps us determine how weather systems impact certain areas differently. For instance, your snow reports let us know how microclimates set up for each particular storm. And, your hail, rain and wind reports let us know how thunderstorm structure changes each day in an ever-changing atmosphere. For example, one day we may see a radar return that produces penny-sized hail, while a similar radar return the next day might

result in pea-sized hail. Your reports actually help us calibrate our radar!

So, to you, our weather spotters, I say Thank you! — Rick Dittmann



Spotter Quiz! By Sherrie Hebert

Test Your Cold Weather Know-How

1. When cold-weather activities require physical exertion, layering is the best approach.

- True
- False

2. In cold, wet, windy weather a good choice for outer clothing would be:

- Goose down insulation
- Wool
- A synthetic fleece

3. Hypothermia results from frostbite.

- True
- False

4. Hot coffee laced with brandy is a quick cure when chills set in.

- True
- False

5. Frostbite is most similar to a:

- Bruise
- Burn
- Scrape

6. In extremely cold weather, one of the most important items is a warm .

..

- Pair of gloves
- Coat
- Hat

7. First-aid for frostbite includes vigorously rubbing affected areas.

- True
- False

8. If you are caught outside in frigid weather, a snow cave can save your life.

- True
- False

9. It is below freezing and your feet get wet crossing a stream.

You should . . .

- Head for a camp immediately
- Build a fire and get dry
- Walk briskly until your feet are dry

10. Dehydration is a common physical problem in cold weather.

- True
- False

To find more information about cold weather safety see:

www.weather.gov/om/winter/index.shtml



Mysterious mammatus Clouds.

“No matter how rich you become, how famous or powerful, when you die the size of your funeral will still pretty much depend on the weather.”

-Michael Pritchard



Spring 2006 brought Flooding to Eastern Idaho.

The National Weather Service Pocatello/Idaho Falls Idaho

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A shelf cloud hovers over the Eastern Magic Valley. March 2006

Idaho on Fire continued from page 1....

Acreage burned statistics during 2006 will go down as the highest amount seen between 1960-2006. Nationwide a total of 83,027 fires burned 9,033,694 acres. The second highest total since 1960 occurred last year when much of interior Alaska burned.

So what made 2006 such a huge year for fire activity, across the nation, and here at home in Idaho? To find this answer we have to examine several factors. Nationwide the highest percentage of acreage burned in 2006 occurred in the Intermountain West, Northern Rockies, Southwest (including western Texas), and California. Lets take a look at our neck of the woods...

Intermountain West/Northern Rockies:

For most of the last decade this area has seen persistent drought conditions. Just in the last two years some locations have begun to see enough snowpack to approach normal. This persistent drought caused widespread stress, and weakening, to vegetation. Timber has been especially hit hard, with many trees not receiving enough moisture during winter/spring months. This has led to large areas of bug-killed trees, and conditions ripe for rapid fire growth, even in higher elevations of central Idaho, Montana, and Nevada.

Just as vegetation began to reached its most stretched point, much of the area saw near to above normal snowpack in the winter 2005-06. This

snowfall caused rejoicing for area farmers and other water users, as area reservoirs and aquifers saw a great recharge during spring run-off. In fact so much snow fell, that when snowmelt began flooding became a big concern across the region. This great snowfall did little to impact the moisture deficit created in large fuels (like timber) over the past decade, but did instigate large amounts of growth in fine fuels (like grasses). Thus as spring turned to summer, and the hot and dry weather arrived, lots of grass had built up around the still dry timber.

In valley locations, such as the Snake River Plain, new grasses popped up on top of old grasses left over from growth during the spring/summer of 2005. This led to heavily loaded fuels, ripe for the burning. In fact some of the largest fires seen this year occurred in high valleys dominated by grasses, including the Crystal Fire which grew to over 200,000 acres near Aberdeen, ID.

With fire potential in mind, dry and loaded fuels are important, but a trigger to get the fires going is just as, if not more, important. This year the most efficient trigger, lightning, came frequently to the region. Several periods of lightning activity, combined with little rainfall, gusty winds and dry fuels, generated lots of new fires. These fires were able to spread quickly in the very dry fuels, allowing for rapid fire growth. The combination of heavily loaded dry fuels, lightning, gusty winds, and a dry weather pattern, combined to create the potential for a big fire year for the region.

At the National Weather Service we provide twice a day planning forecasts, spot forecasts (forecast for a specific location, like a fire), daily briefings, and warnings. These products are designed to help land managers get a handle on how the weather is going to affect how fires will burn, whether fires will start, and how to plan their fire suppression efforts in the safest and effective way possible. In addition to these services, specially trained meteorologists, called Incident Meteorologists, are available to travel to fire camps and provide on-site weather expertise to aid fire teams. This year was one of the busiest years for dispatches of IMETs in the history of the program. During the peak of the season IMETs were being called to the western US from Hawaii, Alaska, and offices all over the Midwest and East.

The NWS Pocatello/Idaho Falls Staff:

Meteorologist In Charge: Rick Dittmann

Administrative Support Assistant: Donna Mills

Science and Operations Officer: Dean Hazen

Warning Coordination Meteorologist: Vern Preston

Electronic Systems Analyst: Rick Stork

Observation Program Leader: Gary Wicklund

Electronic Technicians:

Richard Denning & Bryan Tilly

Information Technology Officer: Matt Williamson

Service Hydrologist: Sherrie Hebert

Lead Forecasters:

Dawn Harmon, Jeff Hedges, Mike Huston

Bob Survick, and Rick Winther

General Forecasters:

Mike Cantin, Greg Kaiser, Jack Messick,

Brian Waranauskas, and Bill Wojcik

Hydrometeorological Technicians:

Paul Angel

Dave Phelps

Thank you spotters! Keep up the great work!

If you'd like to receive an electronic copy of the newsletter, and help us save some paper.

Please send your email address to

michael.cantin@noaa.gov.

The National Weather Service

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