



The Inland Northwest Informer

Information For Storm Spotters, Cooperative Observers And Everyone

A Publication Of WFO Pendleton, Oregon

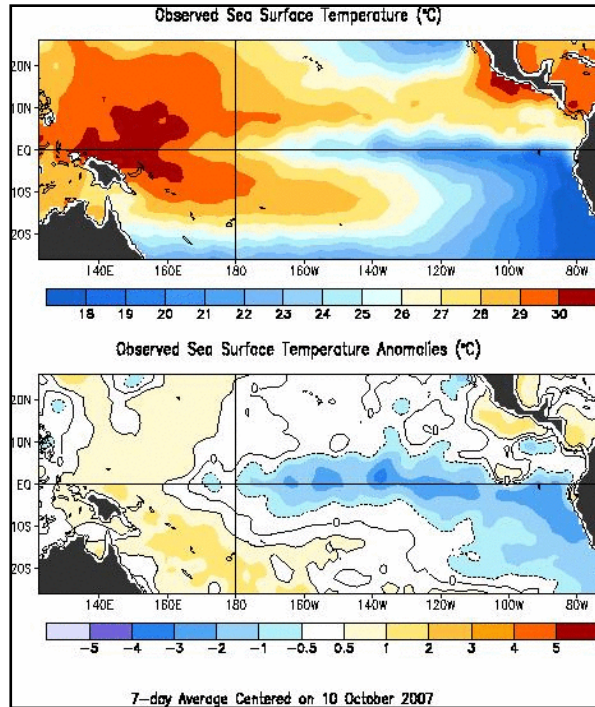
Fall 2007 - Volume 1

La Niña Returns!

By Jon Mittelstadt, Science and Operations Officer

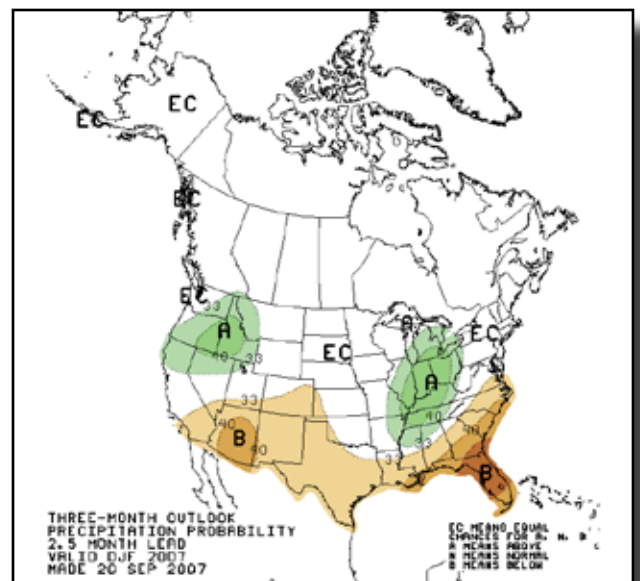
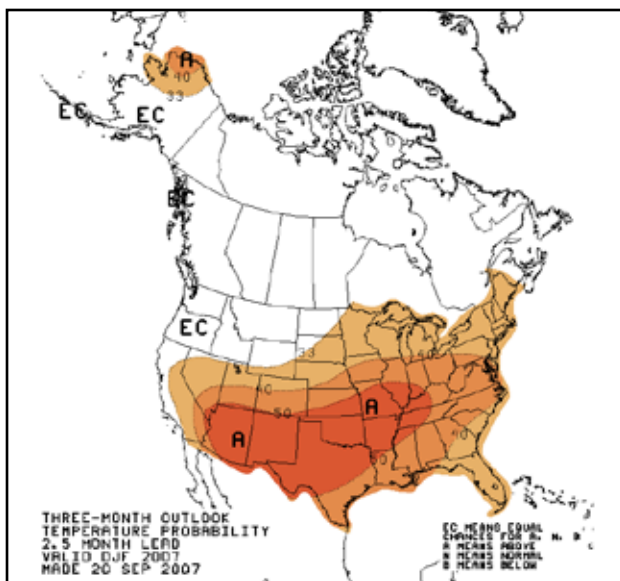
La Niña refers to the periodic cooling of ocean surface temperatures across the equatorial Pacific Ocean. The last time we had La Niña conditions was the winter of 2000/2001. (The opposite of La Niña is El Niño: warming of the ocean temperatures across the same region of the Pacific.) The cooler equatorial ocean of La Niña changes the locations of thunderstorm groupings near the equator, which in turn changes the location of the jet stream and storm track across the Pacific Ocean. In this way, La Niña (or El Niño) impacts the average weather for North America.

NOAA climate scientists expect La Niña conditions to persist at least through early 2008 and as a result



we should have a “La Niña Winter”. Based primarily on past La Niña winters, the NOAA Climate Prediction Center (CPC) outlook for winter 2007/2008 calls for wetter-than-normal conditions in the Pacific Northwest. Based on a combination of recent warming trends and past La Niña winters, the 2007/2008 winter temperature outlook calls for near-normal temperatures for the Pacific Northwest.

It’s important to remember that winter weather outbreaks are a possibility every cool season. National Weather Service watches, warnings and other products alert communities to changing winter conditions.



Water Year Precipitation

October 2006 - September 2007

By Marilyn Lohmann, Service Hydrologist

Station	Amount In Inches	Percent of Normal
Bend	9.26	93%
Condon.....	14.83.....	115%
Dayville	10.02.....	97%
Dufur.....	12.66.....	112%
Heppner.....	15.24.....	118%
John Day City	10.87.....	89%
Joseph.....	12.54.....	79%
LaGrande	13.09.....	84%
Madras 2N	8.15	76%
Meacham	31.04.....	102%
Milton-Freewater	14.80.....	104%
Mitchell 2NE.....	11.70	113%
Moro.....	11.29	114%
Pelton Dam	9.45.....	102%
Pilot Rock 1SE	12.99.....	100%
Prineville.....	9.98.....	107%
Redmond Airport	5.65.....	74%
Seneca	9.78	82%
The Dalles	13.36.....	114%
Union Exp Stn	9.15	69%
Wallowa	12.72	82%
Wickiup Dam.....	17.46.....	95%
Ellensburg.....	8.68.....	114%
Glenwood.....	32.96.....	132%
Hanford.....	6.29.....	108%
Ice Harbor Dam.....	8.51	90%
McNary Dam.....	7.56	108%
Mill Creek Dam.....	15.73	91%
Mt Adams RS.....	46.85.....	130%
Prosser	8.03.....	116%
Sunnyside	7.55.....	125%
Whitman Mission	13.66	107%
Yakima Airport	6.33.....	92%

The water year started off on a low note with October 2006 precipitation well below normal and little in the way of snow pack accumulation. November began unusually wet and warm, especially during the first 10 days with flooding across the East Slopes of the Washington Cascades. There were daily rainfall records of 10.34 inches at Easton Washington and 1.72 inches at Satus Pass Washington set on November 6th. Monthly precipitation amounts ranged from 250 to 300 percent of normal over the Washington Cascades to 120-150 percent of normal across the rest of Southeast Washington and Northeast Oregon. A cold spell during the last week of the month, allowed the snow pack to build, with the mountain basins seeing normal to above normal amounts.

December was cooler than normal with below normal precipitation in the mountains, while the lower elevation saw well above normal precipitation. Snow pack at the end of December saw below normal values across much of eastern Oregon with normal to slightly above normal values in southeast Washington. High pressure during January 2007 allowed little in the way of precipitation while there was a substantial decrease in the snow pack as temperatures were above normal. February brought some relief to northeast Oregon and south central Washington with above normal precipitation, but Central Oregon saw only 25 to 50 percent on normal precipitation. March was much warmer than normal with below normal precipitation and the snow pack continued to decrease with readings at the end of the month 40 to 75 percent of normal. April, May and June saw above normal temperatures and below normal precipitation with the mountain snow pack largely depleted by the end of May; which is about 1 month earlier than normal. Throughout July, August and September, precipitation was below normal with above normal temperatures in July and near to below normal temperatures for August and September.

Watch Out AFTER the Storm

Be sure to carefully follow the instructions for using portable heating devices. Last year's mid-December wind storm caused widespread power outages in the Pacific Northwest with winds over 90 mph in some cases. It was the deadly aftermath that caused even more concern as citizens scrambled to keep houses warm. Improper use of portable heaters produced carbon monoxide poisoning which claimed several lives and sickened many others.

Holiday Statistics

By Diana Koester, Forecaster

Thanksgiving

The following table lists the highest temperature, the coldest temperature, the highest amount of precipitation in inches, and the highest snowfall in inches for the date that falls on Thanksgiving Day for four different stations.

City	High Temp	Cold Temp	Precipitation	Snowfall
Pendleton	71 in 1960	2 in 1993	0.54" in 1942	2.5" in 1931
Yakima	60 in 1990	-5 in 1993	0.83" in 1960	3.3" in 1979
Redmond	66 in 1999	-11 in 1993	0.64" in 1961	2.3" in 1961
Kennewick	68 in 1998	7 in 1985	0.59" in 1917	3.0" in 1931

Christmas

The following table lists the highest temperature, the coldest temperature, the highest amount of precipitation in inches, and the highest snowfall in inches for the date that falls on Christmas Day (December 25) for four different stations.

City	High Temp	Cold Temp	Precipitation	Snowfall
Pendleton	61 in 1980	0 in 1990	0.49" in 1933	4.0" in 1933
Yakima	60 in 1972	3 in 1990	0.38" in 1996	4.4" in 1996
Redmond	61 in 1980	-2 in 1983	0.50" in 1968	5.7" in 1968
Kennewick	62 in 1957	-13 in 1924	0.55" in 1933	0.3" in 1913

Will we have a White Christmas?

A White Christmas was defined as having a trace or more of snow falling on December 25th. For Pendleton, Oregon, there have been 22 White Christmases in 79 years. This calculates as a 28% chance of a White Christmas. For Yakima, Washington, there have been 20 White Christmases in 61 years. This calculates as a 33% chance of a White Christmas.

Traveler's Forecast 21st Century Style

In the olden days, getting a traveler's forecast meant looking up the forecast for your destination city. But what about the weather conditions along the way? The National Weather Service is developing a Milepost Forecast to give you a weather forecast along your route. Look for it soon at <http://weather.gov/Pendleton>

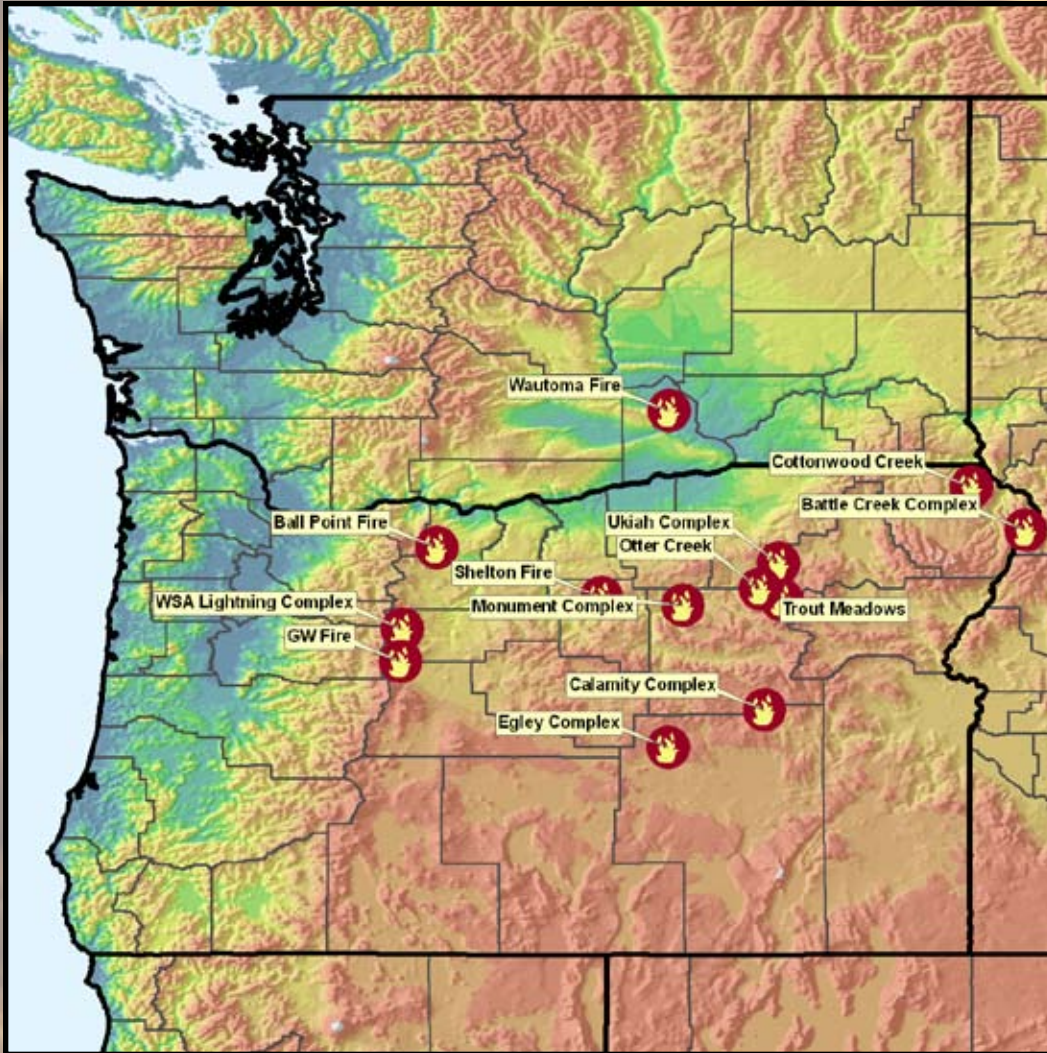
Drought Likely to Ease

As of mid-October, most of eastern Oregon and Washington was abnormally dry, while northeast Oregon was continuing severe to extreme drought conditions, which has only gotten worse since July. NOAA's Climate Prediction Center is calling above normal precipitation in November to January. Check for monthly updates at <http://www.cpc.noaa.gov/products/predictions/90day/>

Fire Statistics

By Mike Vescio, Meteorologist-in-Charge

Late spring and summer was drier than normal across the inland Pacific Northwest which allowed fire danger to increase as the summer progressed. As is typically the case, a few thunderstorm episodes occurred as monsoon moisture circulated into the area from the southwestern US. Although much



of the thunderstorm activity did produce at least some rain, the very dry fuels were susceptible to fire starts from lightning. As a result, numerous lightning-induced large wildfires occurred across the region (see map). Of the 13 major wildfires in the Pendleton forecast area, 11 were started by lightning (2 are under investigation). The Egley and Battle Creek Complexes became quite large burning 140,000 and 79,000 acres respectively. By September, thunderstorm activity diminished. Cooler temperatures and some rainfall helped end the fire activity across the area.

Fire Name	Start Date	Cause	Approximate Final Acreage	Geographic Location
Egley Complex	7/7/2007	Lightning	140360	10 Miles N of Riley, OR
Battle Creek Complex	7/13/2007	Lightning	79299	Hells Canyon Wilderness Area, OR
Wautoma Fire	8/16/2007	Under Investigation	67000	12 Miles N Benton City, WA
Monument Complex	7/13/2007	Lightning	54000	3 Miles NE of Monument, OR
WSA Lightning Complex	7/12/2007	Lightning	13047	21 WSW Warm Springs, OR
Cottonwood Creek	7/13/2007	Lightning	8100	30 Miles NE of Wallowa, OR
GW Fire	8/30/2007	Lightning	7357	2 Miles NW Black Butte Ranch, OR
Ukiah Complex	8/15/2007	Lightning	4764	20 Mile Radius from Ukiah, OR
Trout Meadows	8/4/2007	Lightning	3890	9 Miles NW of Granite, OR
Otter Creek	8/15/2007	Lightning	3039	10 Miles E of Dale, OR
Shelton Fire	8/2/2007	Under Investigation	2726	10 Miles SE of Fossil, OR
Calamity Complex	7/6/2007	Lightning	2276	16 Miles SE Seneca, OR
Ball Point Fire	7/12/2007	Lightning	1237	15 Miles SW of Dufur, OR



CoCoRaHS Is Coming To Oregon!

By Rachel Calder, Meteorologist

On December 1, 2007, a new volunteer weather watcher organization will be making its debut in Oregon. CoCoRaHS (the Community Collaborative Rain, Hail, & Snow Network) is expanding into the Pacific Northwest as a part of its push to have 20,000 observers by 2010. Currently, CoCoRaHS has 23 states in its network, and we need your help to make Oregon just as successful as the other participating states.

What is CoCoRaHS? It is a unique, non-profit, community-based network of volunteers of all ages and backgrounds working together to measure and map precipitation (rain, hail and snow). By using low-cost measurement tools, stressing training and education, and utilizing an interactive Web site (www.cocorahs.org), our aim is to provide the highest quality data for natural resource, education and research applications.

Why is CoCoRaHS important? Precipitation is essential for life. As most Oregonians know, it can vary greatly with topography, storm type and season. It really is true that it can pour on one side of the street and be dry on the other. A portion of a field may be pounded by hail while others nearby receive no damage. Snowfall may pile up in one neighborhood and only dust another. Meteorologists, engineers,

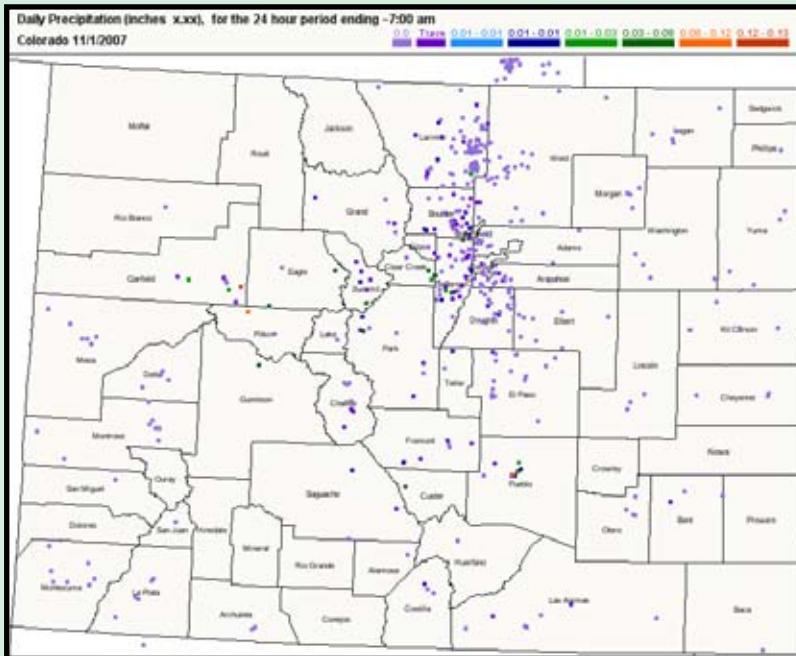
hydrologists, entomologists, insurance experts, and building contractors are all very interested in precipitation. And for some, like the many farmers of eastern Oregon, it is their very livelihood.

Why join CoCoRaHS? CoCoRaHS is a fun activity for our volunteers. If you have an interest in weather and would like to help your local community, as well as scientists and others interested in precipitation, then CoCoRaHS is for you. Many of you already record daily precipitation amounts. By inputting your data into our interactive website, you will now be able to see a map of how your rainfall compares to your

neighbor across town. It only takes a few minutes a day and gives you a chance to participate in real "hands-on" science. You may be amazed at what you will learn as you become more aware of the weather that impacts you and your neighbors.

How do you become a volunteer? You can become a volunteer by signing up via our Web site: www.cocorahs.org. The Oregon web page will become official on December 1, 2007.

However, you can begin signing up as early as mid-November. Online training materials are available, as well as links to purchase the official 4" rain gauges. You may also inquire about upcoming local training sessions in your area by contacting your local coordinator at Rachel.T.Calder@noaa.gov



Use Ventilation Index To Gauge Smoke Dispersal

If you use wood-burning heaters this winter, the Ventilation Index from the National Weather Service can tell you if the smoke will likely disperse or get trapped in an inversion. Index numbers less than 300 describe poor smoke dispersion, 300-600 fair dispersion, and above 600 is good smoke dispersion. You can see the Ventilation Index at <http://www.wrh.noaa.gov/pdt/forecast/fwxGraphicalVentilation.php?wfo=pdt>

Calling All Amateur Radio Operators (Hams)

By Alan Polan, KE4TRR, Meteorologist

An HF/VHF/UHF amateur radio transceiver and an HF antenna system have been installed at the Pendleton NWS Weather Forecast Office (WFO). Thus, in addition to its existing VHF/UHF amateur radio station, the Pendleton WFO now has an HF amateur radio station that gives it the capability of communicating with ham radio operators over long distances via the amateur radio HF bands. This gives the Pendleton WFO a means of augmenting its communications during severe weather outbreaks and also gives it a means of emergency communications backup when normal modes of communication fail. In order to put the HF station to effective use in severe weather, plans were needed to organize ham radio operators in support of an amateur radio HF SKYWARN™ Net for the Pendleton WFO's County Warning Area.

A planning meeting was held at the Pendleton WFO on May 19, 2007 for the purpose of organizing an amateur radio HF SKYWARN™ Net. It was decided to hold a weekly HF SKYWARN™ Training Net on Wednesday evenings on the 80-meter HF amateur radio band. The HF SKYWARN™ Training Net began in June and has had numerous hams checking-in to the net. In addition to the Training Net, the goal is for the HF SKYWARN™ Net to be activated when the potential for severe weather is high as when a Severe Thunderstorm Watch is in effect (net activated in "Standby" mode) or when severe weather has actually begun (net activated in "Active Emergency" mode).

The Pendleton NWS HF SKYWARN™ Net will use the frequency of 3838.0 kHz (3.838 MHz) in the 75/80-meter amateur radio band. This frequency will be used for the Training Net, as well as for the Standby and Active Emergency Nets. The weekly HF SKYWARN™ Training Net meets on Wednesdays at 1800 hours (6:00 PM PDT/PST) during the Fall and Winter and at 1930 hours (7:30 PM PDT) during the Spring and Summer. The starting time of the Training Net is subject to change, depending on the time of year.

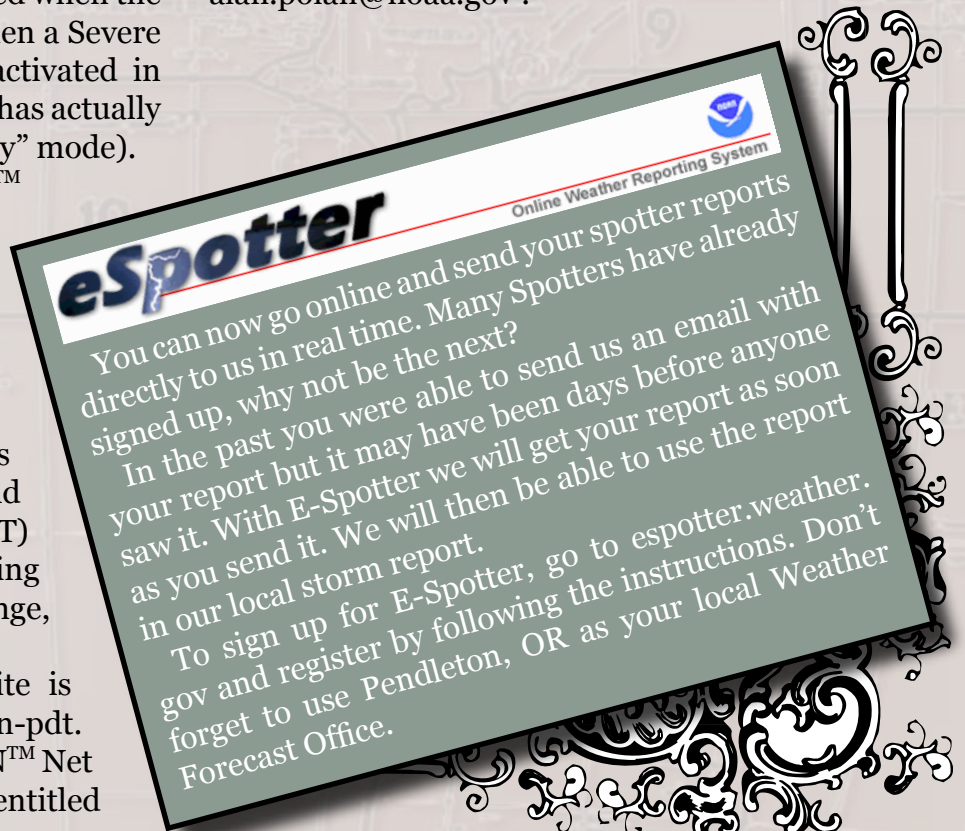
A new Pendleton SKYWARN™ website is online at the following address: skywarn-pdt.org. Information about the HF SKYWARN™ Net is available on this website under the link entitled

"Skywarn™ Forms".

I am looking for additional volunteers to join a group of hams committed to performing net control operations for the HF SKYWARN™ Training Net. The goal is to publish a monthly schedule of assigned net control duties. Weekly assignments would be made for the Net Control Station (NCS) and two Alternate NCSs. This would make it possible for several hams to be available in any given week to activate the Training Net. This approach will provide backup in depth for net control operations in any given week.

The hams assigned to NCS and Alternate NCS in a given week would be committed to conducting net control operations for the Training Net, and also for any Standby Net or Active Emergency Net required for an impending or ongoing severe weather emergency. It is important that a large number of hams be in this group of net control operators, the more the better, because it will allow the workload involved with net control operations to be equally distributed among many individuals.

Please contact me if you are interested in helping with net control operations (NCS and Alternate NCS) for the HF SKYWARN™ Net Training Net. I can be reached at the following e-mail address: alan.polan@noaa.gov.



eSpotter Online Weather Reporting System

You can now go online and send your spotter reports directly to us in real time. Many Spotters have already signed up, why not be the next?

In the past you were able to send us an email with your report but it may have been days before anyone saw it. With E-Spotter we will get your report as soon as you send it. We will then be able to use the report in our local storm report.

To sign up for E-Spotter, go to espotter.weather.gov and register by following the instructions. Don't forget to use Pendleton, OR as your local Weather Forecast Office.

New Pendleton SKYWARN™ Website Is Online

By Alan Polan, KE4TRR, Meteorologist

Over the past few months, Brandon Coughlin, KA7BPR, BE-511, has been working with the NOAA National Weather Service (NWS) office in Pendleton to create a new website for the Pendleton Skywarn™ program. The website came online in October of 2007. The website is designed to serve all Skywarn™ spotters.

In addition, the website contains information for ham radio operators participating in the amateur radio Skywarn™ Nets that are operated in Pendleton's County Warning and Forecast Area (CWFA). Skywarn™ Nets are organized at the local level using 2-Meter repeaters and at the regional (CWFA) level using the amateur radio HF bands. You can find the new website at skywarn-pdt.org.

Get Involved! While Doppler weather radar can sometimes "hint" at the conditions that are favorable for severe weather, they can't confirm that severe weather is actually occurring on the ground. That is why it's important for weather spotters to be active in their communities. Every spotter is a valuable part of the Skywarn™ network. If you are an amateur radio operator, it is important for you to get involved with your local Skywarn™ Net. To find out if your County has a Skywarn™ Net, you can visit the new Pendleton Skywarn™ website at skywarn-pdt.org and lookup your County, or, you can contact Alan Polan, KE4TRR, via e-mail at Alan.Polan@noaa.gov for more information. Alan is the amateur radio program leader for the Pendleton NOAA NWS office. If you don't have a Skywarn™ Net organized in your area, consider joining forces with a few of your fellow hams and take the lead by organizing a Net for your area.

Why Amateur Radio? Amateur Radio has several advantages over landline or cell phones when it comes to weather spotting. In the event of a serious storm, electricity and phone service could be some of the first casualties. With a handful of batteries, amateur radio operators can get their messages to the NOAA

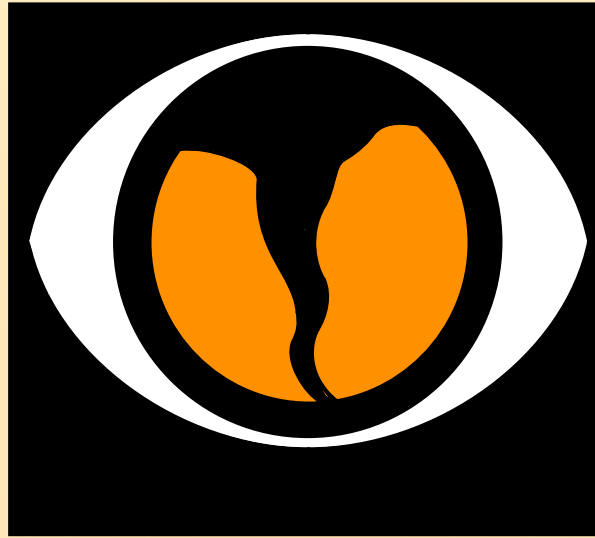
NWS – sometimes even before a person can pick up a phone to dial the number!

If you aren't an amateur radio operator, but are interested in finding out more about getting involved in this exciting hobby, you can find out more by visiting the website at www.hello-radio.org/whatis.html or by contacting your local ham radio club. Now it's easier than ever to get your ham radio license!

How Does A Skywarn™ Net Work? When the NWS issues a Severe Storm Watch or Warning, the Skywarn™ Net for the area included in the Watch or Warning may be activated on a local repeater. One station is designated the "Net Control Station", and another is designated as the "Net Logging Station". Net Control works to ensure that the Net is conducted in an orderly fashion. The Logging Station logs and prioritizes all the weather reports that are received over the Net. Reports

are prioritized by using what's called a "Priority Matrix". This quickly determines which reports are the most critical for the NWS to receive first. In other words, some reports are more significant than others and need to be relayed immediately. Once the Skywarn™ Net does all of this work, there is only one person making a single telephone call or radio contact to the NWS.

All Hams On Deck! You do not need to be a Certified Skywarn™ Spotter to participate in the Skywarn™ Net. Any amateur radio operator can participate in the local Skywarn™ Nets. It is recommended that you attend the Skywarn™ Spotter Training Class whenever it is in your area. You learn a lot about identifying different characteristics of a storm and thus how to accurately observe and report storms. You are eligible for door prizes and best of all you get a cool training certificate! Click on the links entitled "Spotters" and then "Spotter Training" on the Pendleton NOAA NWS website at www.wrh.noaa.gov/pdt/ for updates



SKYWARN™



Staff Spotlight

By Vincent Papol, Senior Meteorologist

One winter while growing up in New York City, I wondered why it was 30 degrees, and in Arizona it was 80! So at the age of nine I started my quest to become a Meteorologist and years later I graduated from the University of Arizona with an Atmospheric Science degree and minors in Math and Physics.

Upon graduating I was offered a position with Oceanroutes Inc. that is a private weather company in California. After a year in California, I was hired as a Meteorologist for the Weather Service Office in Augusta Georgia and I was lucky enough to attend the Masters Golf Tournament! Later, my career took me to the

National Weather Service in El Paso Texas and then I was promoted to Senior Meteorologist at WFO Goodland Kansas. Goodland is in tornado alley and a place where a lot of severe weather occurs. I was able to apply my meteorology skills to full use by trying to forecast the many dry lines, tornadoes, thunderstorms, high winds and blizzards! While spending time in Kansas I attended Fort Hays State University and received my Masters Degree of Liberal Studies with a concentration in Political Science and I saw my first tornado!

Finally, I made my home in Oregon where there are many forecasting challenges due to the varied terrain. While serving as WFO PDT Leadership Program Leader, I am also involved in the community having graduated from several leadership programs and I have participated in the area's leadership steering committee, youth committee, and becoming the states weapons champion in the martial arts. I have made many friends along the way and without their help, I couldn't have gotten to where I am today and I owe them a world of thanks.



NOAA 200 is Wrapping Up

The parent agency of the National Weather Service is NOAA (National Oceanic and Atmospheric Administration), which is celebrating the 200 year anniversary of the US Coast and Geodetic Survey. Back in 1807, one of the most important activities for the government

to accomplish was to accurately map the East Coast for safe passage and docking of ships. Government weather services started in 1870 with the Army and the Weather Bureau began in 1890 under the Department of Agriculture.

More information is available at <http://celebrating200years.noaa.gov>



Spotter Training

We would like to have all our spotters obtain refresher training at least every 5 years. This will give you up to date information on reporting procedures and observing techniques. The next round of spotter training will be during April and May. Check the website during late February and March for the scheduled dates, times, and locations.

<http://www.wrh.noaa.gov/pdt/weatherSafety/spotter/spotterTraining.php?wfo=pdt>

NOAA Weather Radios Recalled

Oregon Scientific recalling some of their NOAA Weather Radio receivers. The problem is that some were not activating or sounding the alarm during warnings. The model numbers are WR103NX, WR108, WRB308, and WRB308J. Free replacements are available by contacting Oregon Scientific at 800-203-4921 or <http://www2.oregonscientific.com>.

More information is available at <http://www.cpsc.gov/cpscpub/prerel/prhtml07/07292.html>.

Winter Preparations

By Ann Adams, Hydrometeorological Technician

With the arrival of winter, some of our observing techniques change. Let's revisit a few of these.

When snow is expected, remove the funnel and measuring tube from the overflow can.

Snow will accumulate in the overflow can and must be measured by obtaining the water equivalent. Do this by taking the snow indoors to melt it. Measure the water equivalent by pouring the melted snow into the measuring tube and measuring as if it were rain.

Sometimes high winds or drifting snow make it impossible for accurate direct measurements. When this occurs the best method is to take a core sample. To do this;

1. Find an area where drifting is minimal. This will usually be a flat area away from obstructions. Although obstructions at a distance are actually helpful.

2. Invert the overflow can and force it into the snow. The rim will cut a cylindrical, vertical sample. In the rare instances that the new snow is deeper than the can, empty the first sample into a container and take a second sample at the same spot. Add this to the previous sample. Take care not to push the can through snow that has already been measured.

3. Slip something over the opening of the can to prevent the snow from falling out.

4. Find the water equivalent as done above.

Be careful not to leave the water standing in the gauge as freezing weather will freeze the water and could cause the gauge to crack.

Measuring the depth of frozen precipitation is done in two ways. The first is the depth of newly fallen snow. This is measured and recorded to the nearest tenth of an inch (ie, 1.7" or 0.2"). Do this by placing the snow-measuring stick into the snow and directly measuring to the nearest tenth. This must be done in an area that is not prone to drifting. It is also a good idea to use a snow board for this. Any flat, sturdy board that won't blow away is good for this. Keep in mind that the surface must be painted white. After the snow is measured, it can be swept off to be ready for the next new snow.

The second way we measure snow is for total depth on the ground. This is reported to the nearest whole inch. Simply sink a snow-measuring stick into both the new and old snow and take the measurement. It's important not to simply add the new snow to the last reading because this won't take into account melting, compacting and such.

If your station has a recording rain gauge such as the Univesal weighing rain gauge or the Fischer & Porter gauge, don't forget to remove the funnel from the collector. The gauge must also be winterized with antifreeze and oil in the collection bucket. It's important not to add your own antifreeze or oil. This is because the National Weather Service is now using a non-hazardous antifreeze and mineral oil, both of which are environmentally friendly.

Most important, be careful when going out in the freezing weather. We wouldn't want you to slip and injure yourself.

All these procedures are taken from National Weather Service Observing Handbook No. 2 - Cooperative Station Observations. All observers should have a copy of this handbook. If you don't, give the Pendleton Weather Office a call.





Wallowa, OR Observer Honored

John Duckworth was recently honored with not only a 40 year length of service award but also the prestigious John Companius Holm award. The Holm award is presented to only 25 Cooperative Observers every year. The observer must be nominated and then pass a review board of all the National candidates.

John had assisted his mother with taking weather observations since the station moved to his residence. He continued to help until she passed away several years ago. He made sure the observations were taken when she was unable. John became the primary observer then and has continued taking quality observations every day.

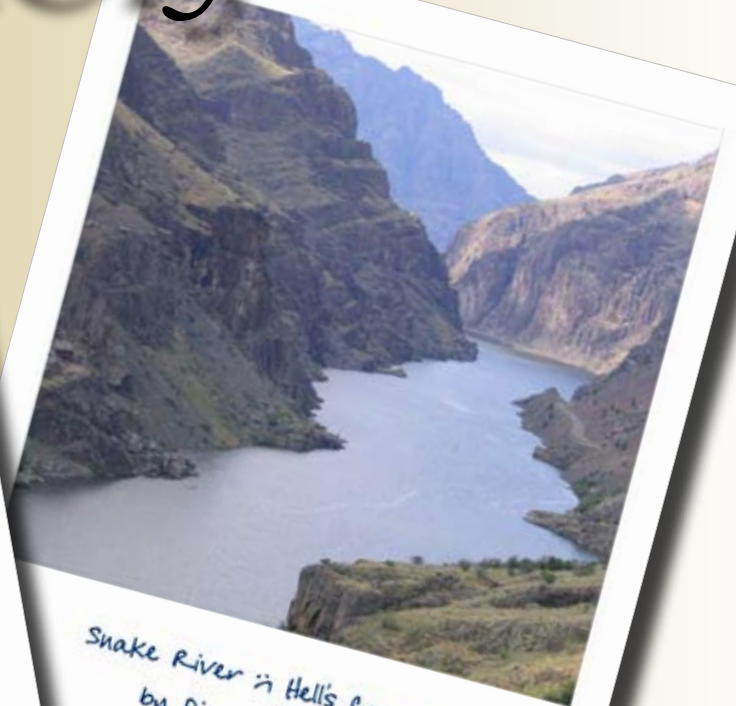
Storm Based Warnings to Replace County Based Warnings

Instead of a whole county being under a severe thunderstorm, tornado, or flash flood warning, now the National Weather Service will issue the warning for only the portion of the county that is being threatened. This will diminish the amount of area that is “falsely alarmed”, especially for large counties like we have in eastern Washington and eastern Oregon. It will also allow for very small portions of a county to be warned. So, the next time you see one of these warning areas on TV or the internet, it will likely have a shape that represents the true threatened area for that warning.

The Gallery



Abandoned building outside of John Day, OR
by Diana Koester



Snake River in Hell's Canyon
by Diana Koester



Keneva Falls, Columbia River Gorge
by Roger Cloutier



Columbia Gorge Scenic Byway
by Roger Cloutier