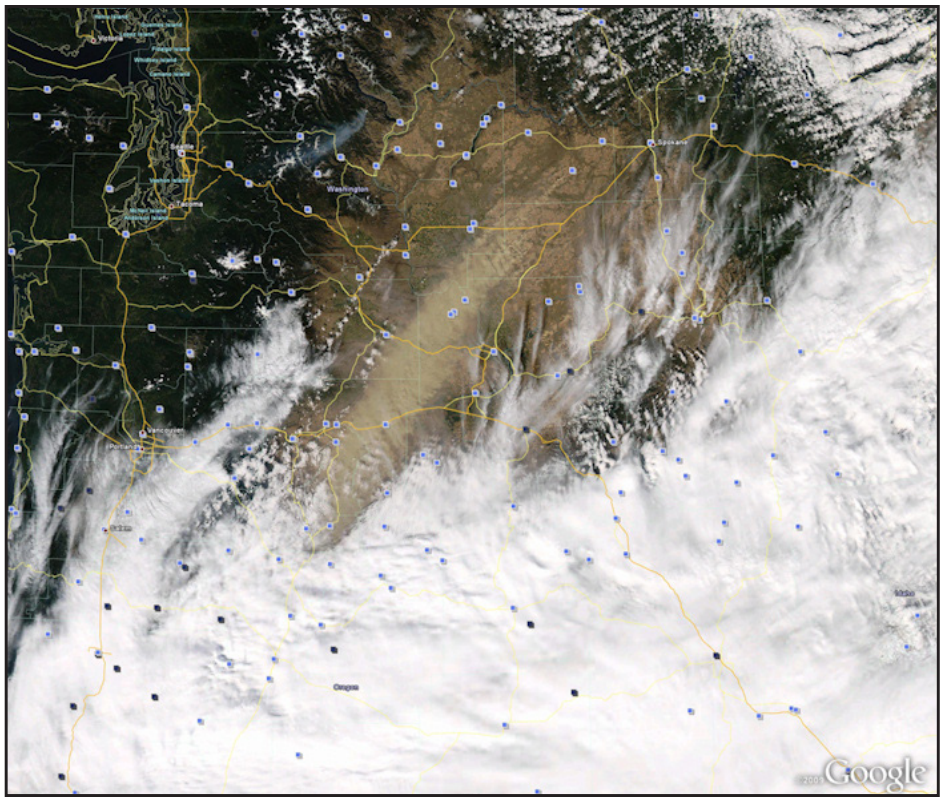
The Inland Northwest Informer
Information For Storm Spotters, Cooperative Observers And Everyone
A Publication Of WFO Pendleton, Oregon
Spring-Summer 2010 - Volume 6

Dust and Snow Storms

By Jon Mittelstadt, Science and Operations Officer

Blowing dust and snow storm conditions are not often associated with each other in the same area on the same day. Snow storms require cold, wet conditions while blowing dust storms usually occur on warm or hot days and require dry, windy conditions. However, in the interior Pacific Northwest these conditions sometimes occur on the same day, primarily in the spring or fall, when a cold front creates strong winds after a dry period. For example, the morning of March 15, 2009 heavy snow was reported along the east slopes of the Washington Cascades, including at Cliffdell, WA, while a few miles away blowing dust reduced visibilities below one-quarter mile in the lower Yakima Valley. That afternoon, two automobile accidents occurred near the Vernita Bridge (about 50 miles away from Cliffdell) on Washington state highways 243 and 26 in near-zero visibility due to blowing dust.



High-Resolution visible satellite image from noon PST Oct. 4, 2009. Yellow lines show interstates and highways.

Another example occurred over the weekend of October 2-4, 2009 when an unseasonably cold air mass from British Columbia moved into the Pacific Northwest. The system created strong winds and heavy rain and snow. Strong winds transported blowing dust Sunday, October 4th from eastern Washington into central Oregon, where it mixed with snowfall. Residents in Bend, OR reported "dirty snow" when the dust that originated in eastern Washington was collected and carried to the ground by falling snow. The visible satellite image (left) shows the dust at noon on Sunday being transported (from northeast to southwest) from eastern Washington north of I-90 towards central Oregon. Residents in Redmond, OR reported that after the rain evaporated it left behind dirt on cars and other surfaces. The dirt was created by dust that had been transported from eastern Washington and brought to the surface by rain in Redmond and by snowfall in Bend. ◇

In This Issue

One Inch Hail Criteria Now Operational

By Michael Vescio, Meteorologist-In-Charge

Many may remember that last severe weather season, WFO Pendleton and other NWS offices throughout the western and central U.S. were experimenting with raising the hail criteria for severe thunderstorm warnings (SVR) from ¾ inch to 1 inch. That experiment was successful and as a result on January 5th, 2010, the NWS adopted the 1 inch hail criteria on a permanent basis nationwide. This means that SVRs for hail will only be issued if we have indications on radar or a storm report of hail at least quarter size. Hail to the size of pennies (3/4") and nickels (7/8") will be covered with a Significant Weather Advisory (SWA) contained within a Special Weather Statement product. SWAs can also be issued for strong winds exceeding 40 mph but not to the severe threshold of 58 mph (which has not changed). The net effect of the new criteria is fewer SVRs for marginal storms and better public service. An example of an SWA from last year is posted below. ◊

ZCZC PDXSPSPDT

WWUS86 KPDT 042044
SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE PENDLETON OR
144 PM PDT THU JUN 4 2009

ORZ042-043-506-042145-
CENTRAL OREGON OR-NORTH CENTRAL OREGON OR-OCHOCO-JOHN DAY HIGHLANDS
OR-
144 PM PDT THU JUN 4 2009

...SIGNIFICANT WEATHER ADVISORY FOR NORTHWESTERN CROOK... NORTHWESTERN DESCHUTES AND JEFFERSON COUNTIES
UNTIL 245 PM PDT...

AT 141 PM PDT...STORM SPOTTERS REPORTED A STRONG THUNDERSTORM NEAR REDMOND...BEND AND PRINEVILLE MOVING NORTHWEST AT 25 MPH. THESE STORMS ARE PRODUCING LOCALLY HEAVY RAIN AND HAIL.

HAIL UP TO THE SIZE OF PENNIES IS EXPECTED WITH THIS STORM... ALONG WITH HEAVY RAIN.

LAT...LON 4477 12085 4431 12070 4379 12161 4404 12183
4411 12177 4413 12179 4420 12178 4429 12185
4442 12185
TIME...MOT...LOC 2043Z 154DEG 21KT 4424 12126

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NNNN

Walla Walla & Franklin Counties Join StormReady

By Dennis Hull, Warning Coordination Meteorologist

Walla Walla County and Franklin County are recognized as StormReady, which is a national program overseen by the NWS that helps local emergency management officials prepare their cities or counties to be ready before severe weather threatens.

"If a dangerous storm is headed for the area, the people who live, work or vacation in these counties will be more knowledgeable and be better prepared to handle these situations. Thanks to the efforts of the Emergency Management in Walla Walla and Franklin Counties, we have furthered the National Weather Service mission to show citizens on how they can protect their lives and property from the effects of Mother Nature's fury," said Mike Vescio, Meteorologist in Charge at the National Weather Service Forecast Office in Pendleton.

A ceremony to recognize Walla Walla County as StormReady was held in December. The Franklin County ceremony is scheduled for June 1st. More than 1500 communities nationwide have been named "StormReady."

"From big cities to small towns, StormReady guidelines prepare communities with an action plan that responds to the threat of all types of severe weather. StormReady Counties have established a way to better protect citizens from severe weather threats," said Vescio. "These counties have a strong commitment to putting the infrastructure and systems in place that will save lives and protect property in the event of these damaging and hazardous events."

The StormReady program is a voluntary preparedness program that establishes guidelines for communities to follow for readiness. Counties adopt requirements in the areas of communications, warning reception and dissemination, public outreach, awareness and administrative planning.

For more information about the StormReady program please visit http://www.stormready.noaa.gov.

Each NWS forecast office posts daily forecasts and severe weather warnings on their Web pages. Links to NWS offices across the country are available through http://weather.gov.

NOAA's National Weather Service is the primary source of weather data, forecasts and warnings for the United States and its territories. NWS operates the most advanced weather and flood warning and forecast system in the world, helping to protect lives and property and enhance the national economy. To learn more about NWS, please visit http://www.nws.noaa.gov. ◇

SKYWARN HF Net

Coordination and Planning Meeting on May 22, 2010

By Alan Polan, Meteorologist, KE4TRR

The National Weather Service (NWS) Weather Forecast Office (WFO) in Pendleton, Oregon will hold a Coordination and Planning Meeting for Amateur Radio operators for the SKYWARN HF Net from 3:00 PM to 5:00 PM PDT on Saturday, May 22, 2010. The meeting will start immediately after our Open House, which runs from 10:00 AM to 3:00 PM PDT on May 22. All Amateur Radio operators are invited to attend the Open House and the SKYWARN HF Net Coordination and Planning Meeting.

This meeting is being held as part of preparations for resumption of the SKYWARN HF Net after standing down the Net in October of 2009 due to the unusually prolonged minimum in sunspot activity between the end of sunspot cycle 23 and the start of sunspot cycle 24, which was responsible for poor radio frequency signal propagation on the Amateur HF bands.

With the help of Amateur Radio operators in central and northeast Oregon, and in south central and southeast Washington, beginning the week of May 24th the SKYWARN HF Net will resume its mission and raise its emergency preparedness readiness level for possible activation of a Standby or Emergency Net for severe weather. As such, all hams are requested to increase their level of preparedness for possible activation of the SKYWARN HF Net and/or a local SKYWARN 2-Meter Net. Hams are requested to keep batteries charged at all times for their handheld 2-Meter radios to enable them to check into a SKYWARN Net on designated 2-Meter repeaters. The Coordination and Planning Meeting will review the history of the SKYWARN HF Net and lessons learned since the spring of 2007. We will also have a brainstorming session for ideas on how to improve the SKYWARN HF Net. We will give particular emphasis to thinking of ways to increase the involvement of hams in the Net as Net Control operators, ideas to improve the readiness of hams for Net activation, ideas for ways to disseminate a request for Net activation, and ways to improve the organization and management of the Net.

Instead of using a single "watch" frequency for possible activation of the SKYWARN HF Net on the 80-Meter and 40-Meter bands, we will consider adopting several "watch" frequencies for each of these bands. We will consider possible activation of the SKYWARN HF Net in response to severe winter weather during the winter weather season beginning next fall and winter, and the required weather conditions for activating the SKYWARN HF Net in various seasons of the year. We will also discuss which night of the week and how often to hold the SKYWARN HF Training Net.

A SKYWARN Net is activated on the Amateur Radio bands when severe weather conditions or weather related hazards threaten the County Warning Area of the Pendleton NWS WFO. These nets provide critical, timely weather information that meets or exceeds specific reporting criteria to the Pendleton NWS WFO. The NWS Warning Forecasters use this information as a basis for issuing, or continuing in effect, weather warnings and advisories for the public and emergency management agencies. SKYWARN Nets thus help the NWS in its mission to save lives and protect property. In the spirit of public service that hams are well known for, I urge you to become involved in and support the SKYWARN HF Net and the SKYWARN 2-Meter Net nearest to you. Participation in the SKYWARN HF Net and SKYWARN 2-Meter Nets is a great way for Amateur Radio operators to apply their radio communications skills, operate their Amateur Radio stations under emergency net conditions, and to realize their potential for public service. A SKYWARN Net activation for severe weather is where the action is for Amateur Radio operators who want to be involved in emergency communications.

Please share this information regarding our Open House and the SKYWARN HF Net Coordination and Planning Meeting with your Amateur Radio friends. ◇

Water Year Precipitation
October 2008 - March 2009

By Marilyn Lohmann, Service Hydrologist

Station	Amount In Inches	Percent of Normal
Bend	10.31	134%
Condon	10.17	114%
Dufur	9.21	95%
Heppner	6.45	76%
John Day City	4.71	69%
Joseph	6.70	89%
LaGrande	6.42	63%
Meacham	18.72	68%
Milton-Freewater	9.43	96%
Mitchell 2 NE	7.19	133%
Moro	9.11	116%
Pelton Dam	6.55	89%
Pendleton, WFO	7.36	92%
Pilot Rock	7.28	89%
Prineville	5.70	90%
Redmond Airport	4.38	90%
Seneca	7.36	96%
The Dalles	11.85	102%
Union Exp Stn	5.50	78%
Wallowa	8.37	85%
Wickiup Dam	11.42	71%
Cle Elum	13.80	77%
Dayton	9.49	74%
Ellensburg	5.96	97%
Hanford	4.08	88%
Ice Harbor Dam	5.64	79%
Mill Creek Dam	11.95	94%
Mt Adams RS	35.46	99%
Prosser	5.29	102%
Sunnyside	4.44	93%
Whitman Mission	7.13	79%
Yakima Airport	5.53	98%

The water year began with much cooler and wetter conditions through the month of October. November and December were drier than normal across the region. January continued dry in the mountains with above normal precipitation at the lower elevations. February and March saw above normal temperatures with below normal precipitation. ◇

Did You Know?

On May 18, 1980, Mount Saint Helens erupted, spewing ash and smoke sixty-three thousand feet into the air. Heavy ash covered the ground to the immediate northwest, and small particles were carried to the Atlantic coast.

By April 14, 2005, two mornings of record breaking freezing temperatures in Yakima, Washington, led to an estimated 50 million dollars in damage to cherry crops. Temperatures at the Yakima Airport dropped to 20 degrees on the 13th and 23 degrees on the morning of the 14th.

On June 11, 1968, a severe thunderstorm produced golf ball sized hail and a tornado over Wallowa County. With a path between 8 and 10 miles long and nearly 2 miles wide, the tornado was one the strongest tonadoes to ever occurr in the pacific northwest. It destroyed approximately 1800 acres of prime timber.

On July 2, 1998, hail up to baseball size hit from Canyon City to Granite, Oregon. Hail up to 4 inches deep had to be cleared by snow plows.

On August 10, 1898, Pendleton reached 119 degrees, tying Prineville for the hottest ever reported in Oregon. This was the fifth day in a row above 105 degrees.

Low Winter Snowpack Does This Mean Drought?

By Marilyn Lohmann, Service Hydrologist

With the below normal amount of snow that fell in the mountains this past winter, many people across the region are wondering if we are in a drought.

Snowpack across the area was well below normal for a large part of the area this past winter with the Snowpack on April 1, 2010, 50 to 70 percent of normal over the Deschutes, Crooked River and John Day Basins. The Blue Mountains fared slightly better with amounts 70 to 90 percent of normal. The Upper Yakima Basin saw only 50 to 70 percent of normal with the Lower Yakima receiving just slightly below normal snowfall. [See image to right]

Across Oregon and Washington, drought is not only decided by the winter snow, but other parameters such as soil moisture, current stream levels and projected water supply. The National Weather Service does not declare a drought, but supplies data and other information to the states.

In Washington, the Water Supply Availability Committee (technical folks) and the Executive Water Emergency Committee (policy folks) review the current water supply outlook and determine if a drought declaration should be recommended at this time. At this time, although there has been pro-rationing for junior water users in the Yakima Basin, no declaration has been recommended. The committees will monitor the situation through the summer and take actions as needed.

In Oregon, a drought is declared on a county-by county basis. Individual counties may apply for a state and/or federal drought declaration. At the state level, requests are reviewed by the Drought Council and recommendations are made to the Governor's Office. Klamath County is the only county in Oregon that has declared drought at this time, but other counties may take action throughout the growing season.

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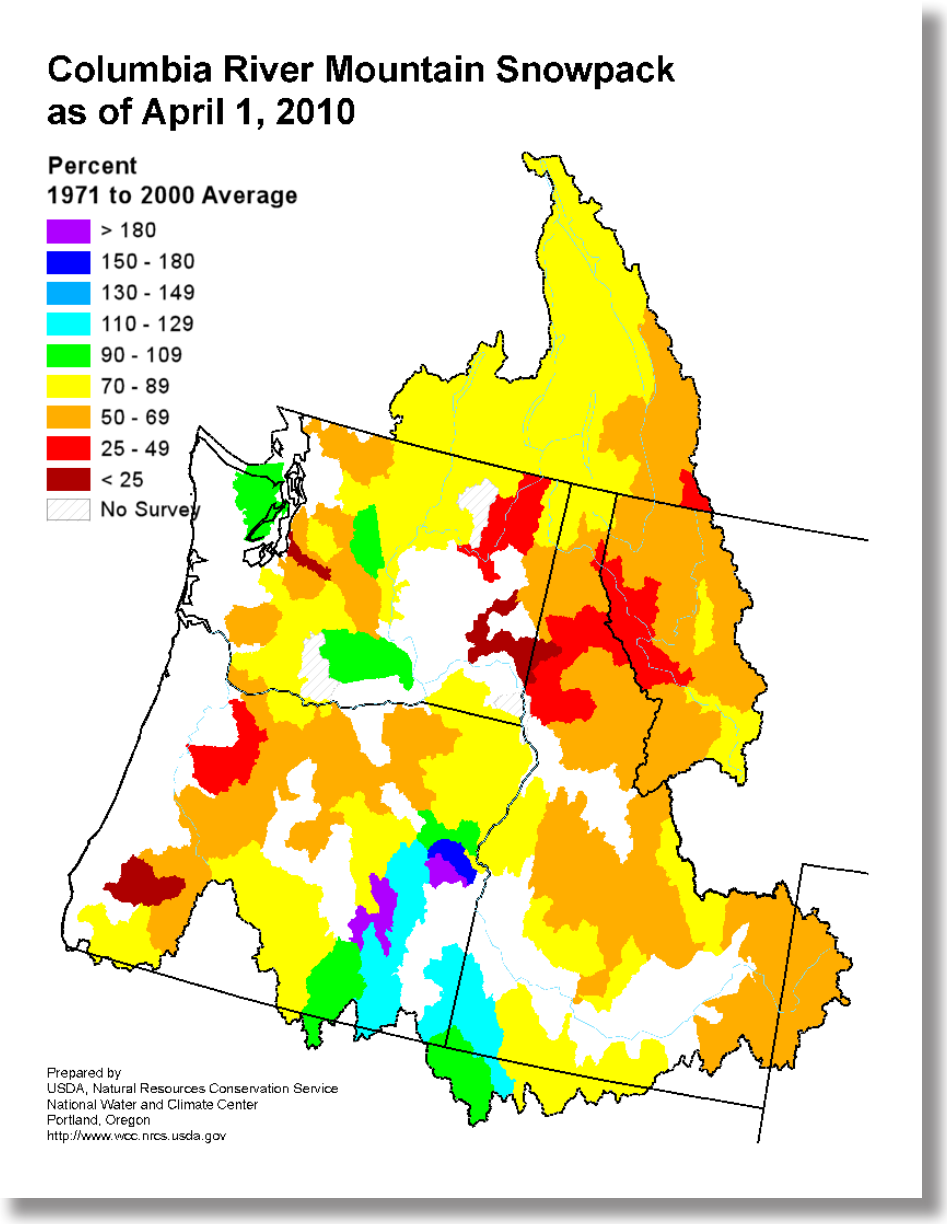

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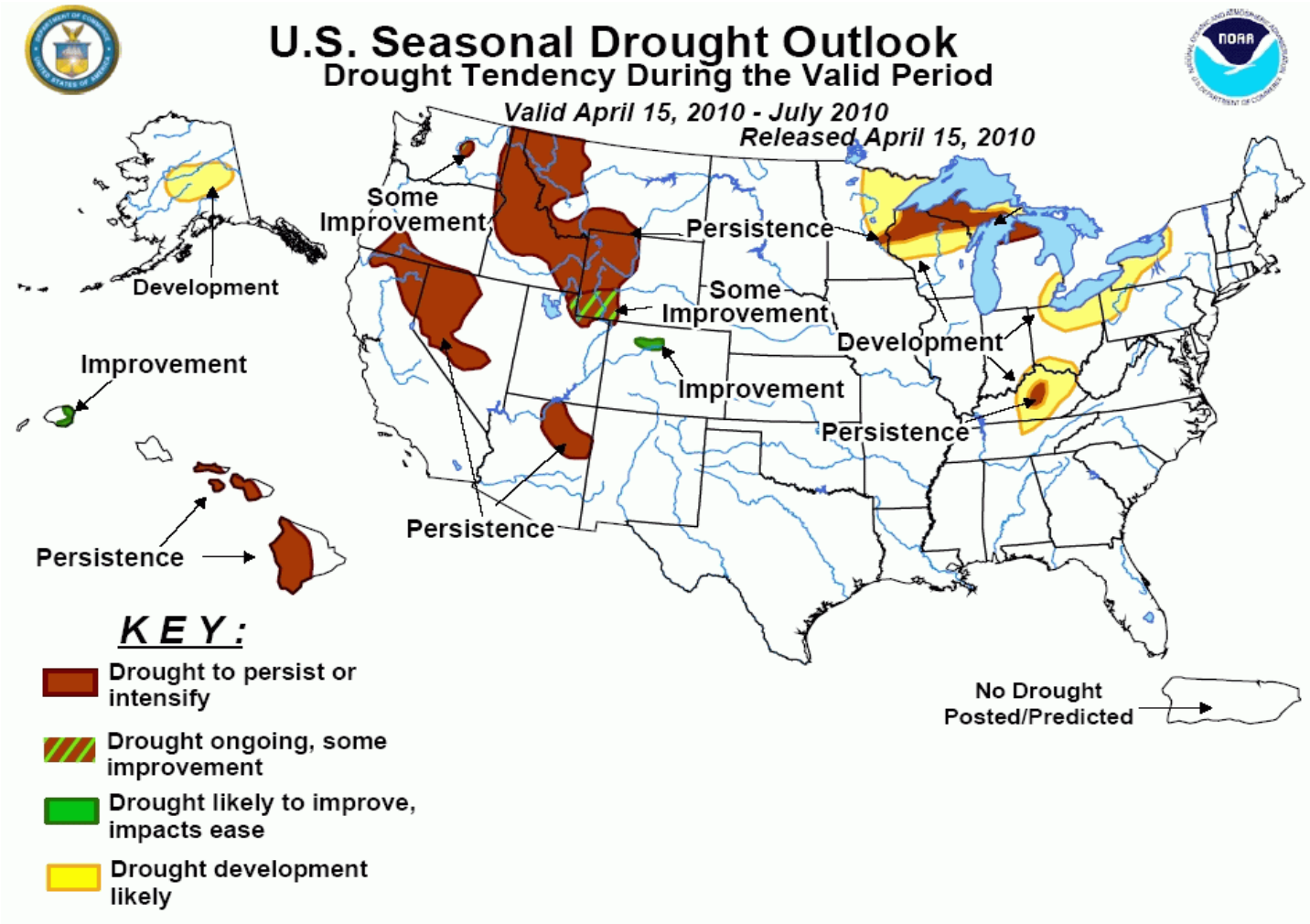
The Seasonal Drought outlook product from the Climate Prediction Center show little change across the area, with possible improvement in part of north central Washington. [See image below]

Weekly updates on drought conditions and impacts and other drought activities are available on the National Integrated Drought Information System webpage at www.drought.gov. ⋄



Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

Summer 2010 Outlook

By Diana Hayden , Meteorologist

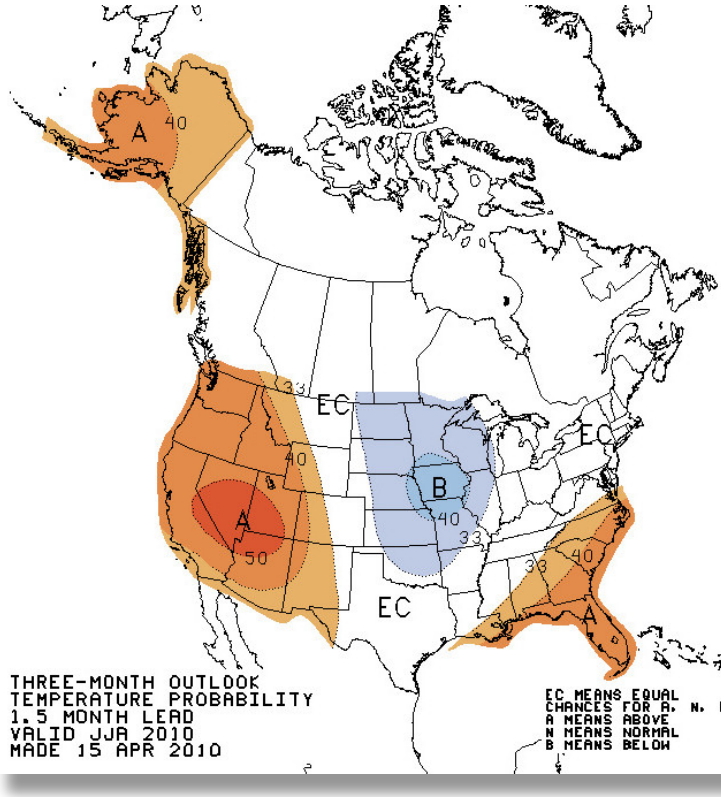
The Climate Prediction Center (CPC) reported the occurrence of a moderate El Niño during the winter of 2009-2010. These El Niño signals will continue to gradually decrease through the 2010 spring season with the CPC model runs currently indicating that the 2010 summer season will be under Neutral conditions.

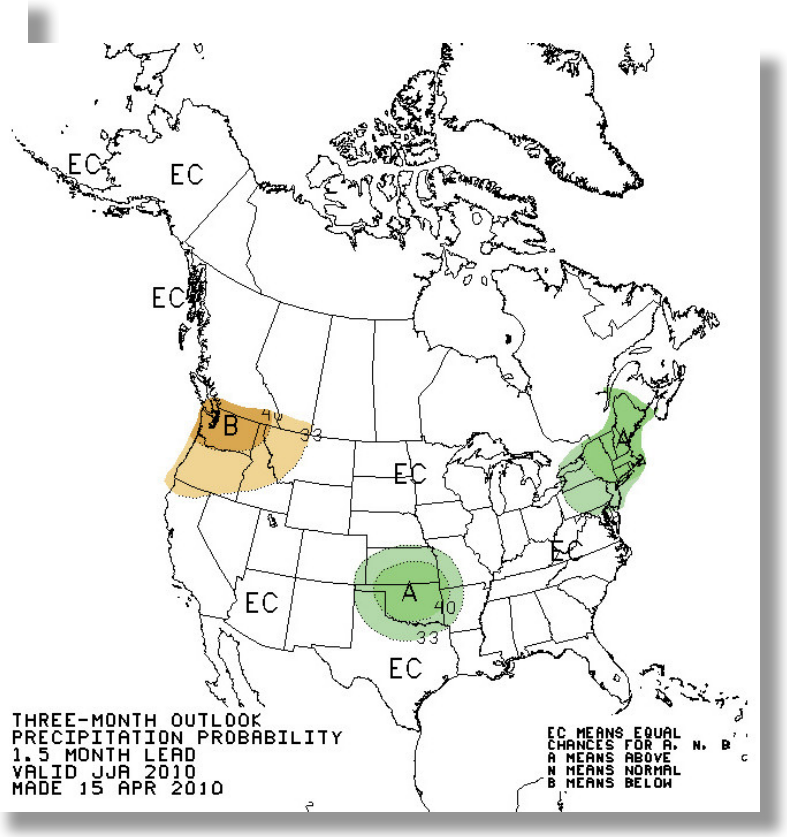
The CPC Summer Outlook for the three month period of June, July and August for Eastern Oregon and Eastern Washington shows a greater chance (40-50%) of above average temperatures. The Outlook also shows Eastern Oregon with a slightly better chance (33-40%) of below normal precipitation, while Eastern Washington shows a greater chance (40-50%) of below normal precipitation. These graphics are based on the chance of an area reporting above, near and below normal conditions. An equal chance (EC) of each category would mean a 33% chance of occurrence. As conditions favor one category, such as above normal temperatures, the percentage will increase for the above normal category and decrease for the below normal category. ◇

What is El Niño?

El Niño refers to the irregular warming in the sea surface temperatures from the coasts of Peru and Ecuador to the equatorial central Pacific. This causes a disruption of the ocean-atmosphere system in the tropical Pacific having important consequences for weather around the globe. This phenomenon is not totally predictable but on average occurs once every four years. It usually lasts for about 18 months after it begins. Discover more information on El Niño and its counterpart La Niña at

http://www.elnino.noaa.gov/index.html





National Weather Service Open House

Come To Our Open House!

WFO Pendleton will host an open house on Saturday, May 22. The open house is scheduled from 10 a.m. to 3 p.m. located at 2001 NW 56th Drive.

The open house will provide the public an opportunity to:

- **Visit a weather forecast office**
- **View the latest weather forecasting technologies**
- **Meet National Weather Service staff**
- **See examples of how NOAA benefits their communities**

Activities will include:

- **Office tours**
- **Weather forecasting and warning demonstrations**
- **Equipment displays, including a new fully-functional cooperative observer weather station.**

We are proud to say that our office has been providing forecasts and warnings for 15 years to the citizens of central and northeast Oregon and southeast Washington. It is also the National Weather Service's 140-year anniversary. Come help us celebrate our rich tradition and see how we do our job every day. The open house will be held rain or shine. We hope to see you there!

Photo Album

One of several thunderstorms over the Columbia Basin produced a funnel cloud, which was spotted near Echo, Oregon on April 27, 2010. Photo by E. Heintz.

A powerful squall approaching Pendleton from the west on New Years Day, 2010. A wall of high winds, driving rain and hail engulfed the weather office and city of Pendleton moments later. Photo by A. Adams.

A view west overlooking Roosevelt, Washington on the banks of the Columbia River. Photo by A. Adams.