The Inland Northwest Informer
Information For Storm Spotters, Cooperative Observers And Everyone
A Publication Of WFO Pendleton, Oregon
Fall/Winter 2010 - Volume 7

La Niña Seasonal Outlook

By Diana Hayden, Meteorologist

Climate scientists from NOAA expect the La Niña conditions, currently seen in the equatorial Pacific, to persist across much of the Pacific Ocean at least through the winter of 2010-2011. La Niña refers to the periodic cooling of ocean surface temperatures in the equatorial Pacific Ocean. 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 impacts the average weather for North America. El Niño, the opposite of La Niña, which is the warming of ocean surface temperatures across the same region of the Pacific, also impacts the average weather for North America.

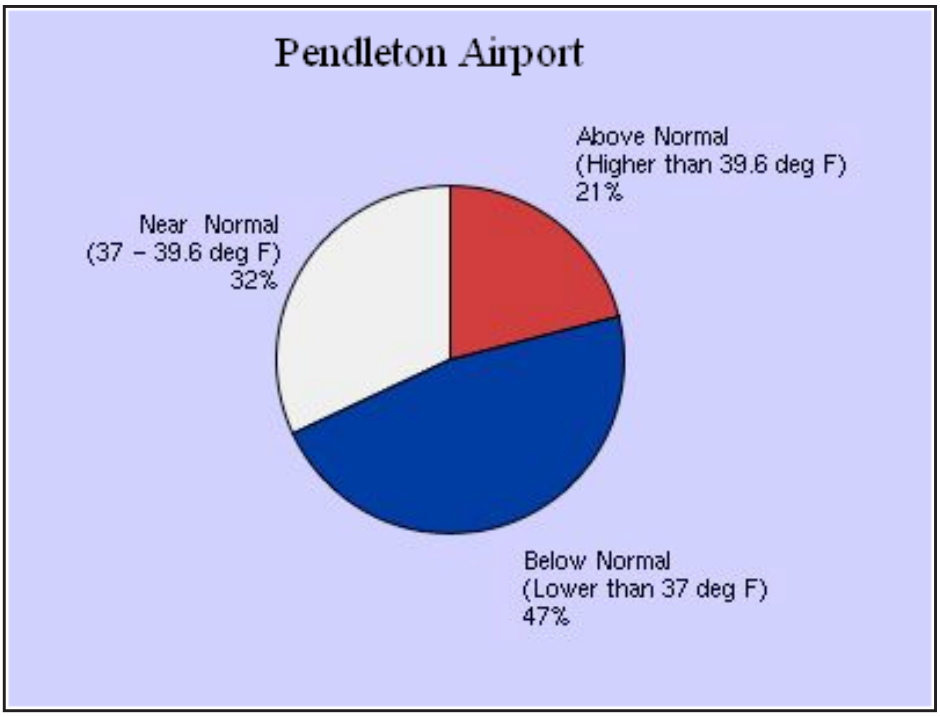

Figure 1. Seasonal temperature outlook for the Pendleton Airport, for January through March. Provided by NOAA's Climate Prediction Center.

The last time we experienced La Niña conditions was during the winter of 2007-2008, which was classified as a moderate La Niña. Based on the past La Niña winters, as well as other climate factors, the NOAA Climate Prediction Center (CPC) outlook for the winter of 2010-2011 calls for below normal temperatures and above normal precipitation for the Pacific Northwest. Locally, the three-month temperature outlook for the Pendleton Airport (Figure 1) for January, February and March indicates a 47 percent chance of below normal average temperatures. Other three-month average temperature graphs can be found on our website at weather.gov/pendleton Under the "Climate", menu, click on "Local", then click on the "Climate Prediction" tab and select "Local 3-Month Outlook".

These seasonal outlooks do not project where and when snowstorms may hit, or what the total seasonal snowfall accumulations may be. Snow forecasts are dependent upon winter storms, which are generally not predictable more than several days in advance. National Weather Service watches, warnings and other products alert communities to changing winter conditions.

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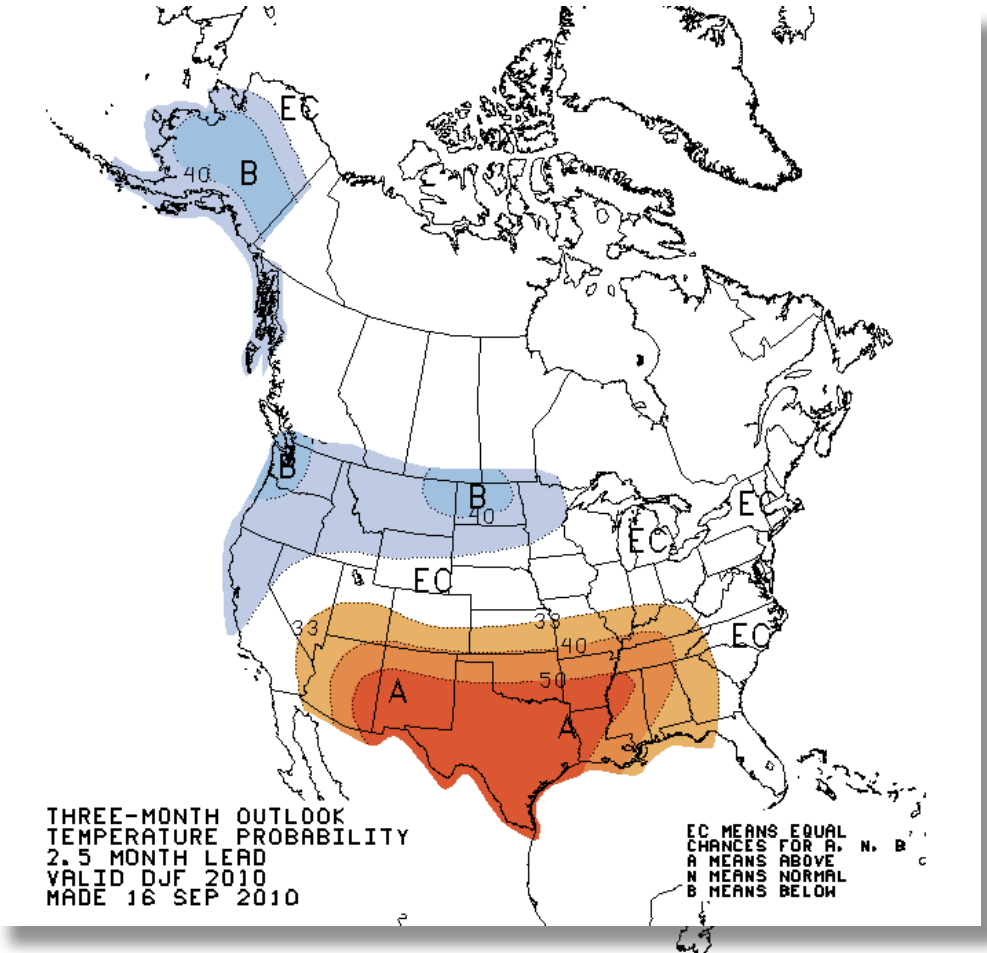
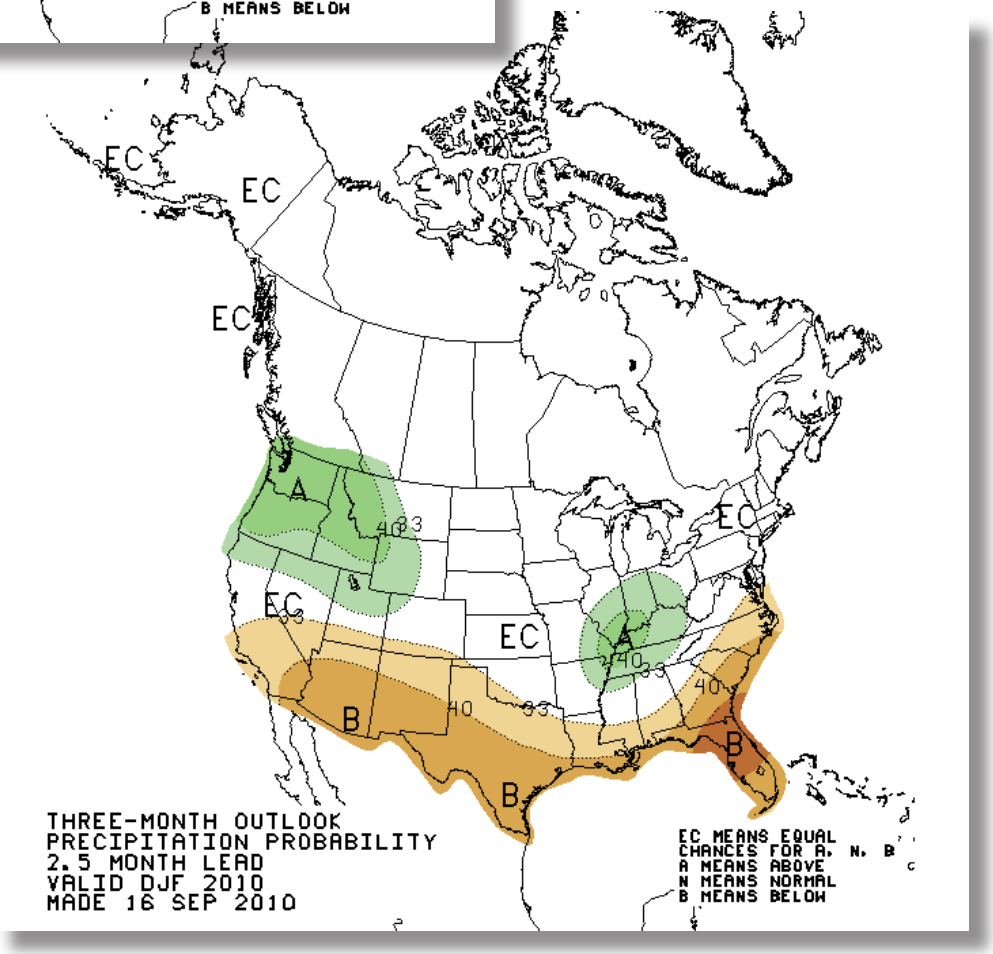


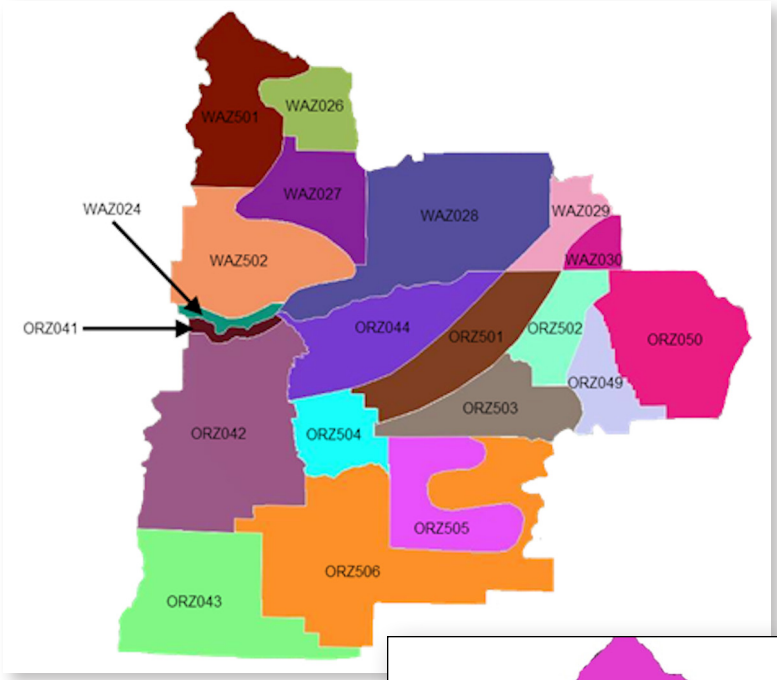
National Temperature Outlook.
Climate Prediction Center.



National Precipitation Outlook.
Climate Prediction Center.

WFO Pendleton Zone Alterations 2010

By Mike Vescio, Meteorologist-In-Charge



▲ *Figure 1 (above) WFO PDT old public zone configuration.*

WFO Pendleton reconfigured its public zones beginning on October 18th, 2010. A team of forecasters met at length to determine if new zone boundaries were appropriate. It was determined that in order to provide enhanced service, several changes would be beneficial. Therefore, most of the current zone boundaries were adjusted to better align with climatological regimes, especially during the winter. Several zones were changed substantially enough to be renamed and renumbered, one zone was discontinued, and one was added. The following maps show the old zone configuration (Fig. 1), and the new public zone configuration (Fig. 2). It is obvious from the new map that the irregular and detailed boundaries of many of the zones follow terrain deemed significant for weather/ climate across the region. Our office is committed to providing the best possible service to the residents of central and northeast Oregon and southeast Washington, and the new public zones will help us in this effort!

Figure 2 (right) WFO PDT new public zone configuration as of October 18th, 2010. ►

Water Year Precipitation
October 2009 - September 2010

By Marilyn Lohmann, Service Hydrologist

Location	Amount In Inches	Percent of Normal
Bend	15.38	131%
Condon	18.53	127%
Dufur	15.44	116%
Heppner	14.15	100%
John Day City	12.29	91%
Joseph	19.42	n/a
Meacham	35.74	110%
Milton-Freewater	17.18	108%
Mitchell	15.83	140%
Moro	16.16	141%
Pelton Dam	12.09	112%
Pendleton, WFO	15.82	124%
Pilot Rock	17.01	119%
Prineville	11.98	114%
Redmond Airport	9.27	108%
Seneca	14.72	108%
The Dalles	15.52	107%
Union Exp Stn	16.55	115%
Wallowa	18.38	106%
Wickiup Dam	17.67	80%
Cle Elum	22.94	100%
Dayton	20.39	104%
Ellensburg	10.93	120%
Hanford	8.67	124%
Ice Harbor Dam	12.14	111%
McNary Dam	8.26	102%
Mill Creek Dam	20.75	105%
Mt Adams RS	46.10	106%
Sunnyside	8.93	124%
Whitman Mission	14.40	100%
Yakima Airport	9.60	116%

The water year began with October 2009, being cooler and much wetter than normal across the region. Heavy rain, with measurable snow in the mountains, fell during the first few days of the month and again at month's end. November was slightly warmer and drier than normal. December was much colder and drier than normal. An arctic front moved in the region during the first part of the month with temperatures 15 to 20 degrees below normal. The rest of the month saw unsettled weather with light precipitation amounts. Precipitation amounts for December 2009 were only about 40 to 80 percent of normal with the mountain snowpack averaging 75 to 90 percent of normal.

January 2010 saw much warmer than normal temperatures and well above normal precipitation in the lower elevations, with the mountain areas much drier. February and March were much warmer and drier than normal with precipitation amounts 30 to 60 percent of normal. With the warm temperatures, there was a continued decrease in the mountain snowpack. April was cold and very wet. Numerous systems moved through during the month with several instances of heavy rain, including 1.13 inches of rain at Meacham Oregon on April 20th. On April 27th, thunderstorms formed along the Blue Mountain foothills with a funnel cloud reported near Echo Oregon. The cold and wet conditions continued through May with precipitation amounts 150 to 250 percent of normal and average temperatures 2 to 5 degrees below normal. The well below normal temperatures allowed the snowpack to remain steady and even grow a small amount, averaging 75 to 90 percent of normal. June was also much cooler and wetter than normal as a large scale trough of low pressure remained over the Pacific Northwest through mid month. July and August were cooler and drier than normal. The cool temperatures persisted into September, but an upper level low pressure system moved through during the first part of the month with heavy rain. It was followed by another strong system at mid month and several weaker systems during the rest of the month. Well above normal precipitation was seen region wide with new monthly precipitation records set at four locations (below).

City	Previous Record	New Record
Arlington, OR	2.00 in 1901	2.47
Moro, OR	1.95 in 1947	2.61
Redmond Airport, OR	1.25 in 1982	1.72
Whitman Mission, WA	1.69 in 1982	1.85

June Flooding In Northeast Oregon

By Marilyn Lohmann, Service Hydrologist

Heavy rain across the Blue Mountains of Oregon and Wallowa County during the last week of May set the stage for flooding during the first week of June. The mountains received two to three inches of rain during the last five days of May and another two to three inches of rain on June 2nd. The upper reaches of the John Day River rose substantially overnight with the John Day River at Service Creek rising above the flood stage of 11.5 feet on 3rd and crested at 12.48 feet on June 5th. There was field flooding through the low areas near the town of John Day and downstream of Service Creek. In Union County, there was a small landslide just east of the town of Cove along Stackland Road. There was field flooding along the Grande Ronde River from Island City through Imbler and Elgin.

Numerous county roads around the town of Union had water 5-10 inches running over roads with erosion of road shoulders. In Wallowa County, at the confluence of the Wallowa and Minam Rivers, water overflowed near the town of Minam, washing out the river gage at that location and causing minor damage to the Minam Hotel. A landslide occurred along the Lostine River near Turkey Flats on June 4th. The Imnaha River rose above the flood stage of 5.5 feet on June 4th and crested at 6 feet on June 5th. The Grande Ronde River at Troy rose above the flood stage of 10.0 feet on June 4th and crested at 10.8 feet on June 5th.

Photos at right: Taken upstream of the town of Imnaha, by Pacific Power field crew on June 10, 2010.

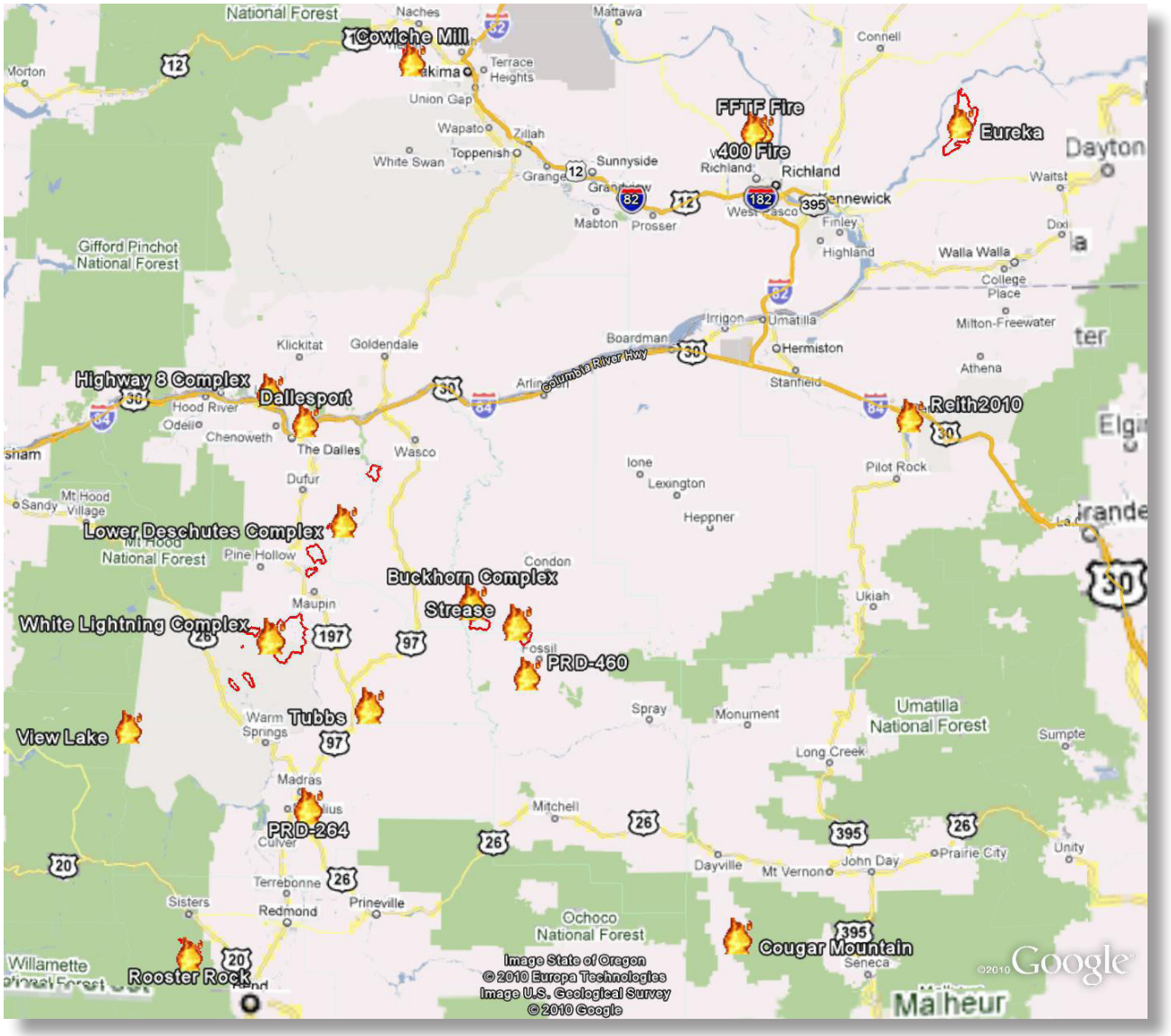
Photos taken by John Plechinger

Fire Weather Season 2010

Spring Rains Puts Damper On Burns

By Jon Bonk, Incident Meteorologist

A series of spring rain storms brought significant rains to the mountains of Northeast Oregon and Southeast Washington. This resulted in another delayed start to the fire season similar to last year. Conditions across the mountain areas were not overly favorable to support large wildfire growth, while the map (below) shows most significant fires this summer occurred across the lower elevation grass and rangelands. Normally, most wildfires across the region are started by lightning from storms producing little rain, moving and originating from leftover monsoon moisture transported to the area from the south. This year, however, the typical persistent high pressure area centered near the four corners region of the southwest Unites States did not develop until early fall...well after peak fire season. The thunderstorms that did occur this year originated from over the Pacific Ocean and carried significant rainfall. This helped temporarily dampen conditions and allowed firefighters a chance to suppress most new fire starts before they grew significantly large. Most large fire growth this year resulted from gusty winds and low relative humidity. The grass and rangelands are the most susceptible to this combination of factors, with most fires only showing significant growth for one afternoon and evening burning period. Increased humidity from temperatures dropping overnight and decreasing winds then allowed firefighters to contain the wildfires.



Open House Highlights

On May 22, 2010, WFO Pendlton held its fifth open house event in commemoration of 15 years at the current modernized forecast office building. Over 120 visitors from eastern Oregon and Washington attended the day-long event. Booths and tour stations were set up and manned, both inside and outside by weather office staff, as well as the Walla Walla County Emergency Management Office. Information was presented on the various programs within the office and the products issued to the public. There were videos to watch, live demonstrations, and a variety of activities to keep visitors engaged and informed on our day-to-day operations.

Cooperative Program Highlights

Presenting the award to Mr. Danielson on September 28, 2010 is Mike Vescio (inside-left), Meteorologist-In-Charge at WFO Pendleton. Also on hand for the ceremony were Hydro-Meteorological Technician Robert Brooks (far left) and Jim Smith (right), Observations Program Leader.

Recognizing 36 years of service to America, NOAA's National Weather Service has named Mr. Doug Daniels as a 2010 recipient of the agency's John Campanius Holm Award for outstanding service in the Cooperative Weather Observer Program. The award is one of the agency's most prestigious and only 25 are presented this year to cooperative weather observers from around the country. Meteorologist-In-Charge Mike Vescio, of the Pendleton weather forecast office, presented the award during a ceremony held at noon, September 28, 2010 at Mr. Daniels residence in Glenwood, Washington.

Cooperative observers are the bedrock of weather data collection and analysis. Satellites, high-speed computers, mathematical models, and other technological breakthroughs have brought great benefits to the Nation in terms of better forecasts and warnings. But without the century-long accumulation of accurate weather observations taken by volunteer observers, scientists could not begin to adequately describe the climate of the United States. We cannot thank Mr. Daniels enough for his years of service.

The National Weather Service's Cooperative Weather Observer Program has given scientists and researchers continuous observational data since the program's inception more than a century ago. Today, some 11,700 volunteer observers participate in the nationwide program to provide daily reports on temperature, precipitation and other weather factors such as snow depth, river levels and soil temperature.

Weather records retain their importance as time goes by. Long and continuous records provide an accurate picture of a locale's normal weather, and give climatologists and others a basis for predicting future trends. This data is invaluable for scientists studying floods, droughts and heat and cold waves. At the end of each month, observers mail their records to the National Climatic Data Center for publication in "Climatological Data" or "Hourly Precipitation Data."

The first extensive network of cooperative stations was set up in the 1890s as a result of an 1890 act of Congress that established the U.S. Weather Bureau. Many of the stations have even longer histories. John Campanius Holm's weather records, taken without benefit of instruments in 1644 and 1645, were the earliest known recorded observations in the United States.

Many historic figures have also maintained weather records, including Benjamin Franklin, George Washington and Thomas Jefferson. Jefferson maintained an almost unbroken record of weather observations between 1776 and 1816, and Washington took weather observations just a few days before he died. The Jefferson and Holm awards are named for these weather observation pioneers.

Cooperative Program Highlights

On May 20, 2010, the General Albert J. Myer Award for 65 continuous years of service, was presented to the Kennedy-Richardson family at the Richardson's Rock Ranch near Lower Hay Creek, Oregon. Accepting the award is Bonnie Richardson (center). Presenting the award is Mike Vescio (left), Meteorologist In Charge, NWS Pendleton and Susan Nelson, NWS Western Region Cooperative Program Manger.

On July 15, 2010, a 30 year length-of-service award was presented to the Grassl family. Accepting the award were Anne and Marvin Grassl. Presenting the award is Mike Vescio, Meteorologist In Charge, NWS Pendleton. Also on hand for the presentation were Meteorologist Diana Hayden and Program Leader Jim Smith.

Cooperative Program Highlights

A 50 year Institutional Award was presented to the staff of the Grant County PUD - Priest Rapids Dam on July 15, 2010. On hand for the award were Bryan Bird (center-right), and Miguel Rubio (far right). Presenting the award is Mike Vescio, Meteorologist In Charge, NWS Pendleton. Also present for the award are Meteorologist Diana Hayden and Program Leader Jim Smith.

A 50 year Institutional Award was presented to the Bureau of Reclamation's Easton Dam on July 15, 2010. Accepting the award was Chris Sandvig (right) Dam Keeper & Operator. Presenting the award is Mike Vescio, Meteorologist In Charge, NWS Pendleton and Meteorologist Diana Hayden.

Photo Album

Spectacular anvil from a thunderstorm cloud near Hermiston, Oregon. Photo by D. Hayden.

Strawberry Mountains, Grant County, Oregon. Photo by A. Adams.

Iridescent clouds over Umatilla County, Oregon. Photo by T.W. Earle. Note: Front page banner image also provided by T.W. Earle.