YOUR NATIONAL WEATHER SERVICE SPOKANE QUARTERLY REPORT

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The Weather Watcher

of the Inland Northwest

www.weather.gov/Spokane

La Nina Returns

El Nino dissipated during May 2010 as temperatures in the equatorial Pacific Ocean began to cool. Most of the seasonal range weather models were predicting ENSO-neutral conditions for the rest of the year. But there has been a growing trend toward the onset of colder, La Nina conditions. This is supported by the recent observations and signs of coupling of the ocean—atmospheric circulation. Therefore conditions are favorable for a La Nina to develop by late summer. For more information and details on La Nina, please see http://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/enso.shtml

What this means for the Inland Northwest? After our cool and wet spring, we can anticipate drier, summer weather to arrive especially by mid July and August. Yet the chance for unseasonably hot weather is low. If La Nina is expected to persist through the fall and winter, the cool trend will most likely continue— but keep your snow shovel handy! ☼ *Robin Fox*

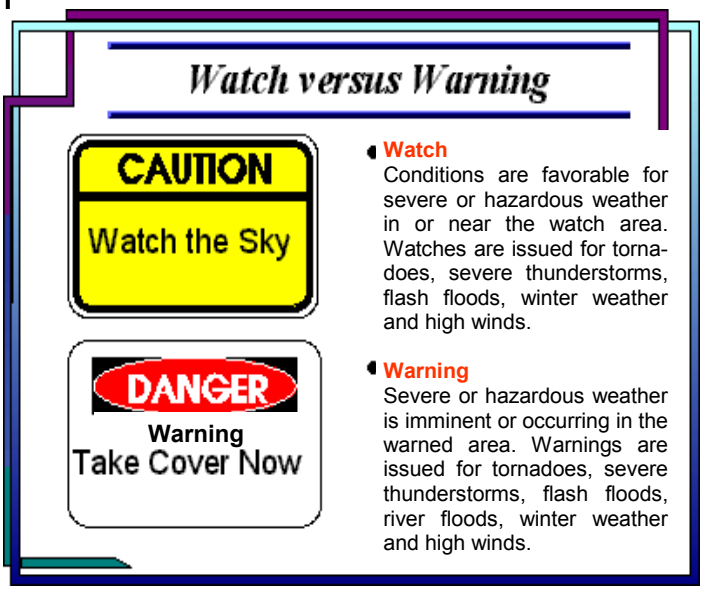
Funnel Cloud

Funnel Cloud near Creston, WA—courtesy KREM TV

On the afternoon of June 9th, a strong thunderstorm tracked through Lincoln county Washington. The NWS Doppler weather radar detected some weak rotation within the storm. Soon forecasters received a report of a funnel cloud from it near Creston. A funnel cloud is defined as a rotating column of air extending from a thunderstorm that does not touch the ground. This feature did not appear to reach the ground nor produce damage. Meanwhile, on May 19th, a weak tornado touched down northeast of Moses Lake with damage to a farm. The Inland Northwest experiences on average about one tornado a year! ☼ *Steve Bodnar*

Interested in being a Weather Spotter? Contact nws.spokane@noaa.gov

Watch vs. Warning— Do you know the Difference?



The main responsibility of the National Weather Service (NWS) is to issue severe and hazardous weather watches and warnings for public safety. These weather highlights are broadcast by the media to the public. It is important to understand the difference between a watch and a warning. A WATCH is issued hours in advance for a broad region, when severe weather conditions look favorable. A WARNING can be issued minutes in advance for a smaller area, when severe weather is occurring. ☼ *Robin Fox*

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Editor's Notes

Summer arrives June 21st at 4:28 am PDT. Summer brings its share of wild weather. Thunder, wind, rain, and hail balanced with sun and heat. It's the time of year for outdoor activities, like fishing, camping, hiking and biking. Remember to keep an eye to the sky when you're outdoors and find safe shelter when a storm approaches. ***National Lightning Awareness Week*** *is June 20-26.*

We are always looking for new ideas and stories for our publication. If you have any ideas or pictures you would like to share, please contact Robin at (509) 244-0110 or email nws.spokane@noaa.gov.

This newsletter and past issues are available online on our NWS Spokane web page. But if you would like a paper copy, please contact us and we will be happy to put you on the mailing list.

The main purpose of this publication is to keep our readers informed about our services and programs, and recognize those who help us with our mission, including weather spotters, observers, media, emergency managers, and government agencies.

All articles are written by the NWS staff. A special thanks to Ron Miller, John Livingston, Steve Bodnar & Bob Tobin for their help.

Bon Voyage—Bob Bonner!

At the close of April 2010, Robert "Bob" Bonner "changed his assignment" one more time and retired from the National Weather Service—this after over 40 years of service. His career has been one of adventure that covered the globe. He started right after high school and joined the Air Force in ground weather equipment operation. He was stationed both in Greenland and Homestead, Florida in the mid 1950s.

After going to college, he changed careers and joined Pan-Am on a missile tracking ship where he toured both the Atlantic and Pacific through the 1960s. After getting married in 1970, he decided settle down and join the NWS. His tour of duty criss-crossed the country—Portland, OR, Tallahassee, FL, Waycross, GA, Victoria, TX, Yakima, WA and many sites in Alaska, including Barrow, Kodiak and Yakutat. Bob joined the NWS Spokane office in 1995 as the Data Acquisition Program Manager (DAPM) where he was in charge of the cooperative observation program, in addition to being an expert upper air observer and chief coffee maker. We wish Bob the best of luck in his future adventures! ☼ *Robin Fox*

Spring Weather Statistics

Wenatchee Water Plant	Mar	Apr	May	Total
Avg High Temp	57.0	62.2	67.6	62.3
Departure from Norm	+2.1	-2.4	-5.5	-1.9
Avg Low Temp	34.2	39.9	45.7	39.9
Departure from Norm	+0.3	-0.9	-2.9	-1.2
Total Precip	0.28	0.60	1.51	2.39
Departure from Norm	-0.36	+0.09	+1.00	+0.73
Total Snowfall	0.0	0.0	0.0	0.0
Departure from Norm	-0.9	0.0	0.0	-0.9
Lewiston Airport	**Mar**	**Apr**	**May**	**Total**
Avg High Temp	56.7	62.0	65.7	61.5
Departure from Norm	+2.9	+0.4	-4.2	-0.3
Avg Low Temp	35.1	40.0	44.0	39.7
Departure from Norm	-0.5	-0.6	-2.9	-1.3
Total Precip	0.99	1.55	1.78	4.32
Departure from Norm	-0.13	+0.24	+0.22	+0.33
Total Snowfall	0.0	0.0	0.0	0.0
Departure from Norm	-1.1	-0.1	0.0	-1.2
Spokane Airport	**Mar**	**Apr**	**May**	**Total**
Avg High Temp	50.8	56.4	61.9	56.4
Departure from Norm	+2.2	-1.1	-4.3	-1.1
Avg Low Temp	31.5	37.1	40.7	36.4
Departure from Norm	+1.1	+1.6	-3.2	-1.7
Total Precip	1.20	1.21	2.15	4.56
Departure from Norm	-0.33	-0.07	+0.55	+0.15
Total snowfall	T	0.7	0.0	0.7
Departure from Norm	-3.6	-0.2	0.0	-3.8

Fire Season Outlook 2010

The long range summer forecast for the Inland Northwest has a better chance of below normal precipitation with more seasonal temperatures, according the NWS's Climate Predication Center.

The cool and rainy weather in April and May helped restore the snow and rain deficiency after a very dry January through March. Expect a normal begin date for the fire season in 2010, probably mid to late July.

The fire season this year appears poised to have drier weather than usual and what was experienced in the past two fire seasons, but not unusually hot. However, the vast majority of fire seasons provide sufficient dryness to support large fires. Dryness alone is not enough to truly boost the threat of wildfires.

Thunderstorms and lightning are needed for ignition of wildfires. Generally, only 10% of lightning outbreaks result in large fires across the Inland Northwest. With the current long range prediction of an upper atmospheric ridge to the west of the region and northwest flow aloft, lightning events may be less likely. The exception will be the North Cascades and the Idaho Panhandle which are both susceptible to lightning under northwest flow. At this point, the Inland Northwest has the potential for a usual fire season. ☼ *Bob Tobin*

Remember your Zeros

Nothing in the rain gauge this morning? Don't forget to report it. Zeros are important too. Summertime in the Inland Northwest brings hot and dry weather, along with thunderstorms. Knowing how much rain falls from a thunderstorm is important. Sometimes the rainfall can be a downpour or just a sprinkle. This precipitation information is useful for weather forecasters. ☼ *Robin Fox*

Want to report precipitation? Check out CoCoRaHS at *http://www.cocorahs.org*

The Spring that Never Ends—2010

We've said before, spring is the longest season in the Inland Northwest. Ignore what your calendar says, since it's based on the astronomical and not the climatological calendar. In our part of the world, spring starts around President's Day and doesn't end until the 4th of July. Just about every warm spell that starts to "look like summer" is followed by a cool spell, and this year was no different. Coming out of a mild winter, the question was whether we would see a warm and dry spring? At first, that looked to be the case.

March was a rather uneventful month, weatherwise. Temperatures hovered in the 50s to lower 60s, with a few cold spells. The first cold spell came on the 8th as a colder unstable air mass moved into the area. This didn't bring widespread precipitation as much as it did showers. If the showers occurred at night, valley snow accumulations occurred. An observer, near Boyds in Ferry county, picked up 4.5" of snow on the 12th. The 13th brought heavy rain and high elevation snow to many locations. Winchester, ID had 6.8" of snow by the morning of the 13th, while Republic picked up nearly an inch of rain. Temperatures moderated a bit, reaching the 60s for most every location on the 16th. Pullman had a record high for the day of 65º. The weather would remain seasonal until the end of the month when another wet and cool Pacific storm arrived. By the morning of the 30th, rainfall totals of ½ to 1" were observed in most locations with up to 3" of rain in the northern Panhandle and northeast Washington. Aside from these two events, March was warmer and drier than average.

The weather in early **April** was more March-like. Temperatures ran 5-10º below normal and snow showers were common, even during the afternoon at the lower elevations. Omak only reached 39º on the 2nd, setting a record for the day! The Spokane Airport officially measured 0.6" of snow on the 2nd. This pushed the seasonal total up to 14.3", which meant that this wasn't the least-snowy winter on record (14.2" in 1980/81 is the record). This past winter was characterized by rather weak storms, and thus, not much wind. At this point, the strongest cold front of the season pushed through the Inland Northwest on the 8th with widespread strong winds. The wind at the Spokane and Pullman airports gusted to 53 mph, with a 47 mph gust reported at Wenatchee. Some trees were damaged, leading to several power outages.

The first spring-like warm spell arrived in mid-April. Many locations saw their first daytime temperature in the 70s on the 16th. On the 19th , Lewiston, Moses Lake, and Ephrata all hit the 80º mark for the first time this spring and set records for the day. Colville also reached 85º! The warmth was short-lived, as a cold front brought widespread rain and cooler temperatures on the 21st. The month would finish out with a colder and wetter storm system. Rainfall on the 28th was generally ¾ to 1" in many locations, with 7-10 inches of snow in the mountains above 4500 feet. The weather remained unsettled through the 30th with numerous showers.

May started off windy. A very strong cold front ripped through the region on the 3rd bringing high winds to all locations. Wind gusts into the 50-60 mph range were commonplace knocking down trees and power lines. In fact, semi trucks were knocked over near Vantage and in Lewiston. The cool trend of late April continued into the first week of May. Daytime temperatures struggled to reach the lower 50s in some locations. Sitting at 4000 feet in elevation, Winchester saw 6.9 inches of snow during the evening of the 5th. Gradually the temperatures warmed into the 80s by the 15th and 16th. Another strong Pacific front blew through the area on the 19th, bringing an end to the warm temperatures. A weak tornado touched down northeast of Moses Lake causing some damage to a farm. Thunderstorm winds also caused damage to a roof in Moscow, injuring one person.

Semis blown over near Vantage 5/3/10 (WADOT)

Very cold and dry air moved in behind the front. Temperatures dropped below freezing in many areas on the 21st. Deer Park had a low of 25º and Priest Lake dropped to 26º. On the 24th, the low temperature at Spokane was 32º, which was only one day shy of the latest freezing temperature ever in Spokane. Only a few days later, a very wet and slow moving low pressure system took up residence over the Pacific Northwest bringing heavy rain to the area. Spokane received 0.98" of rain on the 27th, breaking the record for the day. Nespelem picked up 1.87" of rain in 24 hours. For the month, May was wetter and colder than normal across the region. In Omak, 2010 tied 1974 as the coldest May on record, and it was the 4th wettest May ever.

☼ *Ron Miller*

Blowing Dust on I-90 Dodson Rd 4/8/10 (WADOT)

Answer: At any moment, there are 1800 thunderstorms in progress on the earth—that's 16 million storms a year!

Remember your Summer Spotter Checklist

Tornado or **Funnel Cloud**
Strong Winds: 30 mph+ or damage
Hail: pea size or larger
Heavy Rain: Showery: 1/2" + in 1 hr Steady Rain: 1"+ in 12 hrs or 1.5"+ in 24 hrs
Any Flooding
Reduced Visibility: under a mile due to rain, dust...
Travel Problems or **Any Damage:** due to severe or hazardous weather.

Stay Lightning Safe!

Summer-time is a peak time for one of the nation's deadliest weather phenomena—lightning. Lightning is a major cause of storm related deaths. In 2009, 34 people were killed due to lightning in the country. So far this year, there have been 5 lightning-related deaths. Hundreds of others that are struck suffer permanent neurological disabilities.

Many lightning victims say they were "caught" outside in the storm and couldn't get to a safe place. It's important to have a plan in mind before a storm hits. Others say they waited too long before finding shelter. If they headed to shelter 5-10 minutes sooner, they could have been safe. Some say they were struck because they went back outside too soon. Stay inside for at least 30 minutes after you hear the last thunder clap.

Lightning is a serious danger. Remember, stay safe when you hear thunder and see lightning. Go indoors or inside a vehicle. Avoid open fields or open water. Stay clear of tall isolated trees or poles. For more information on lightning safety, visit *http://www.lightningsafety.noaa.gov/.* ☼ *Robin Fox*

Clean Air Advisory Council Opening: Meteorology

Spokane Regional Clean Air Agency (Spokane Clean Air) has an immediate opening for a "meteorology representative" on its volunteer Advisory Council. The Council advises and consults with the Board and Director in carrying out the purposes of the Washington Clean Air Act. The Council meets every month on the fourth Thursday between 8-9 am.

The successful candidate must be a Spokane County resident with experience in the field of meteorology. Interested and qualified applicants may apply for the position by submitting a letter of interest to Spokane Clean Air, 3104 E. Augusta Avenue, Spokane WA 99207. The letter should describe the applicant's experience in the field of meteorology and their interest in air quality regulatory issues. For more information, contact William Dameworth at 477-4727 ext. 121 or at wdameworth@spokanecleanair.org. Applications will be accepted until position is filled. For more information about this position, see http://www.spokanecleanair.org/advisory_council.asp ☼ *Lisa Woodard—Spokane Clean Air*

The Weather Watcher
Of the Inland Northwest

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Trivia: How many thunderstorms can be found in the world at one time?