YOUR NATIONAL WEATHER SERVICE SPOKANE QUARTERLY REPORT

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The Weather Watcher

of the Inland Northwest

www.weather.gov/Spokane

2016 Fire Weather Seasonal Outlook

We all know the fire season of 2015 will go down as one of the most devastating fire seasons ever encountered in the Inland Northwest. By the time the season was done, 1372 fires were observed with a record-smashing 913,430 acres charred. This shattered the old record of 367,199 acres just set one year previous.

Will we continue the trend of record-setting fire seasons in 2016? We can't state the answer for sure, but the odds look small at this point. How do we come to that conclusion? We had a much better year in regards to snow pack. As of early April most of the sites in eastern Washington and north Idaho had snow water equivalents (the amount of water in the snow) in the 95-125% range. Compare that value to 2015 when the snow pack sat at a mere 35-65% of normal. The near normal snow pack this year combined with above normal precipitation has led to the end of the severe drought which gripped the region for much of 2015. What is alarming is much of the snow melted off very quickly in April into early May due to unusually warm temperatures and relatively dry weather. This early melt has resulted in the fuels greening quicker than usual and subsequently curing at an earlier date than normal this summer. While the fuel conditions going into this spring started out much moister then they were last year, they have dramatically dried out over the past few weeks, with the exception of north Idaho.

The long range outlook for this summer calls for warmer than normal conditions from now through September. However, there are some indicators that in a year that we transition from a moderate to strong El Nino to a moderate to strong La Nina, August can be on the cool side of normal, bookended on either side by a warm July and a warm September. Meanwhile, the precipitation outlook is for near normal conditions, which would mean about the average number of lightning starts.

So what does that mean in terms of fire? Based on the early snow melt and the very warm start to the spring, we expect the fire season to start earlier than normal. Perhaps 2 -4 weeks in some cases. When looking back at past years similar to 2016 as far as the ENSO pattern they all had about the normal number of starts and below normal acres burned. This would make sense if August is on the cool side. The 20 year average is for 945 fire starts and 108,000 acres burned. As is always the case though, a large outbreak of mainly dry thunderstorms from late June through August can set the stage for a much busier than expected fire season. For more details on upcoming fire weather season, see www.nifc.gov ☼ *Jon Fox & Bob Tobin*

Significant Wildland Fire Potential Outlook

July 2016

Aug—Sept 2016

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INSIDE THIS ISSUE:

Editor's Notes

The Inland Northwest had an early taste of summer. Scorching temperatures topped in the 90s for a few early days in June, followed by severe thunderstorms and multiple wildfire and grass starts. Summer officially begins on June 20th at 4:52 am.

Summer weather can still bring exciting but dangerous weather. Remember all thunderstorms produce lightning. Lightning can strike miles from the storm. Keep an eye to the sky when having your fun in the sun this summer. Find more on lightning, at www.lightningsafety.noaa.gov.

We are always looking for new ideas and stories for our publication. Please send any submissions to nws.spokane@ noaa.gov.

This newsletter & past issues are available on the NWS Spokane web page.

The main purpose of this publication is to keep our readers informed about NWS 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 goes to Jon Fox, Bob Tobin, Jeremey Wolf & Krista Carrothus for their contributions.

2016 Spring in Review

After a drier than normal February, the pattern turned wet in **March**. The first 13 days were especially wet across Central Washington and the Upper Columbia Basin, with around 2.5 inches of rain falling in the Wenatchee area, with even higher amounts of 4-5.50 inches falling in the Leavenworth and Stehekin areas. The north Idaho Panhandle was also hard hit with 3-5 inches of precipitation. This rain contributed to several rock slides and debris flows near Omak, Entiat, Pateros, Evans, and Bonners Ferry. The rain fell as snow in the mountains and the Methow Valley on occasion with Holden Village picking up 43 inches of snow during this 13 day stretch, with 17 inches in Mazama. These wet storms also brought a couple bouts of windy conditions with Pullman recording a 52 mph wind gust on the 1st and 45 mph on the 13th. A couple more wet storms were observed during the second half of the month on the 22nd and 28th. Both storms resulted in rain…with even snow at times across the higher portions of the Spokane and Coeur D'Alene, Palouse, and Camas Prairie. The storm on the 28th brought 4.5 inches of snow to Rathdrum and 2 inches in Elk. The month finished on a sunny and mild note.

Record March rain totals include Davenport with 3.70 inches, Wenatchee Water plant 2.49 inches, as well as Lind with 2.46 inches. Other noteworthy cities include Chelan with 3.16 inches (2nd wettest), Winthrop 2.89 inches (3rd wettest), Spokane 3.30 inches (4th wettest), and Ephrata 1.60 inches (5th wettest).

After a wet March, **April** brought unseasonably warm temperatures. Here is a list of the stations that recorded the warmest April on record, along with a couple close calls. See the table below for all the statistics.

The month also was drier than normal for most of the Inland NW. The one exception was the Wenatchee area where in just three hours they received the normal monthly amount of April rainfall when 0.50 inches fell on the 14th. This rain fell as a quick burst of heavy snow in the mountains with snow covered roads over Blewett and Stevens Passes. Also, localized heavy rain from thunderstorms developed on the 22nd over the North Idaho Panhandle and northeast Washington Mountains. The Diamond Lake area was hardest hit with a few reports of dime to quarter size hail and 2.57 inches of rain. Another observer near Spirit Lake recorded 1.2 inches.

May started off like much of April with unseasonably warm temperatures for the first eight days. High temperatures in the 70s to mid 80s were common. A couple rounds of thunderstorms occurred on the 4th and 5th across Eastern Washington and north Idaho. As storms developed over the Blue Mountains on the 4th and tracked north a gust front tracked across the Columbia Basin into the Spokane area with 40-50 mph gusts and blowing dust. The rest of May brought typical spring weather…with several swings between cool and showery weather and mild…dry weather. In between these air mass changes thunderstorms resulted. This includes the 18th when a strong cold front brought showers and thunderstorms to Eastern Washington and north Idaho. On the 22nd, strong thunderstorms dumping heavy rain developed around the Spokane area, with the northwest side of town and Nine Mile Road hardest hit where 2-3 inches of rain in a short period of time led to water, debris, and significant standing and running water on area roads. ☼ *Jeremy Wolf*

Station	April 2016 Avg temp	Rank	Previous record	Year
Wenatchee Water plant	59.1 F	1st	58.5 F	1934
Bayview	48.2 F	1st	46.8 F	1987
Bonners Ferry	53.5 F	1st	52.2 F	1941
Boundary Dam	52.3 F	1st	49.5 F	1987
Grand Coulee	56.3 F	1st	54.0 F	1977
La Crosse	54.7 F	1st	54.1 F	1934
Mazama	52.1 F	1st	49.7 F	1977
Plain	51.7 F	1st	48.7 F	1941
Priest Rapids	61.6 F	1st	60.2 F	1977
Pullman 2 NW	53.2 F	1st	51.8 F	1987
Republic	51.6 F	1st	51.4 F	1934

June 8th Large Hail Craigmont

Funnel Cloud over the Palouse?

During the afternoon of May 16, the picture above was captured by Doug Gadwa south of the Pullman Airport. Showers were in the area and conditions were favorable for cold air funnels. Luckily, no damage was reported.

New Voice

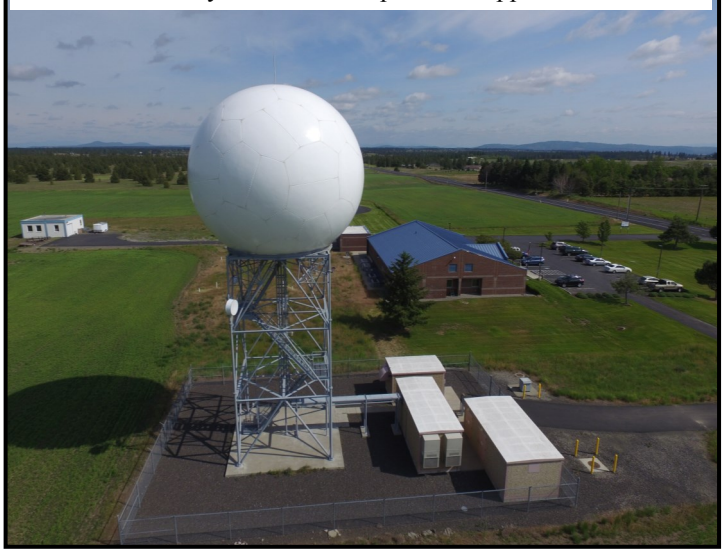
Fans of NOAA Weather Radio (NWR) are probably wondering, who's the new Voice? Did the weather office get a new employee? Well more like a new NWR system and new automated voice to report the weather forecasts. His name is Paul. He may have a few dialect differences, but he should be a welcome improvement from the older system. For more details on NOAA Weather Radio, see *www.nws.noaa.gov/nwr*☼

Staff News

After 16 years of federal service in her second career, Meteorologist Ellie Kelch has decided to hang up her weather hat and retire from the National Weather Service on May 13, 2016. Her career path lead her to the NWS in Boise, Albany, NY and finally Spokane. She will move back to her hometown of Albany and enjoy time with her family and friends. Ellie spent almost 10 years at NWS Spokane and was active with NWR, outreach and our office celebrations. Good luck Ellie!

It is with sadness that we report that former employee Bob Bonner passed away on April 15, 2016. He was the Data Acquisition Program Manager at NWS Spokane. He retired in April of 2010 after a long and distinguished career in weather including 42 years in the NWS. ☼

A bird's eye view of the Spokane Doppler radar.



ANSWER: In Spokane, there's 16 hours of daylight on June 20 vs 12 hours of daylight on Sept 20. That's a loss of 4 hours.

Spring Wildfires! This one was near Ford, WA. Courtesy of KXLY

Spring Weather Statistics

Wenatchee Water Plant	Mar	Apr	May	Total
Avg High Temp	55.5	71.7	75.1	67.4
Departure from Norm	+0.8	+7.5	+2.1	+3.5
Avg Low Temp	35.1	46.3	52.1	44.5
Departure from Norm	+0.8	+5.6	+3.3	+3.2
Total Precip	2.49	0.51	0.88	3.88
Departure from Norm	+1.88	-0.02	+0.19	+2.05
Total Snowfall	0.0	0.0	0.0	0.0
Departure from Norm	-0.4	0.0	0.0	-0.4
Lewiston Airport	**Mar**	**Apr**	**May**	**Total**
Avg High Temp	56.9	69.7	73.9	66.8
Departure from Norm	+2.0	+7.4	+3.0	+4.1
Avg Low Temp	37.0	45.2	50.0	44.0
Departure from Norm	+1.4	+4.9	+3.0	+3.1
Total Precip	2.11	1.60	1.53	5.24
Departure from Norm	+0.96	+0.28	-0.08	+1.16
Total Snowfall	0.0	0.0	0.0	0.0
Departure from Norm	-0.7	0.0	0.0	-0.7
Spokane Airport	**Mar**	**Apr**	**May**	**Total**
Avg High Temp	51.2	66.2	69.5	62.3
Departure from Norm	+2.3	+9.0	+3.1	+4.3
Avg Low Temp	34.2	43.2	47.6	41.7
Departure from Norm	+2.6	+6.4	+3.8	+4.3
Total Precip	3.30	0.32	0.78	4.40
Departure from Norm	+1.69	-0.96	-0.84	-0.11
Total snowfall	0.6	0.0	0.0	0.0
Departure from Norm	-2.9	-1.0	-0.1	-4.0

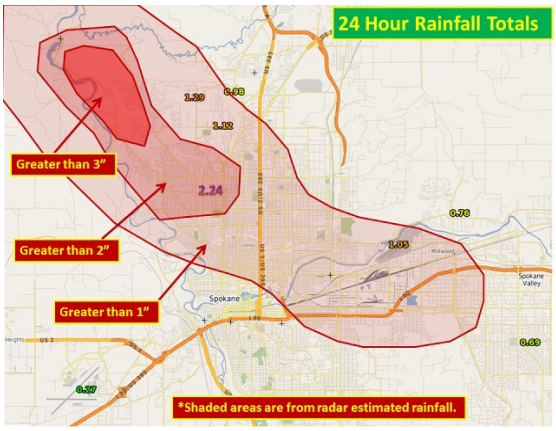
Want to report precipitation? Check out CoCoRaHS at *http://www.cocorahs.org*

Remember your Summer Spotter Checklist

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

Flash Flooding in north Spokane

On May 21, 2016, north Spokane got hit by a strong thunderstorm that produced an excessive amount of rain over a short period of 45 minutes requiring a Flash Flood Warning to be put out for the Indian Trail neighborhood. The thunderstorm started to build around 2:30 pm and continued to build over the next half hour before dissipating. There were many reports of rain from as little as .69" in Spokane Valley to 2.24" in North Central Spokane with possible higher amounts that were not recorded. A gust front formed as a result of the quick development of the thunderstorm. A temperature drop of 10˚ over the Spokane area within an hour. Below is an image of the 24 Hour Rainfall Totals. The shaded areas below are estimates generated from the radar–most of the values within the shaded areas were verified by storm spotters in the area. These values may include light rainfall data that may have occurred before and after the initial storm, but it gives a rough estimate of where the majority of the rainfall took place. ☼ *Krista Carrothus*



Watch : Conditions are favorable for severe or hazardous weather around the watch area.
CAUTION—Watch the Sky!

Warning : Severe or hazardous weather is likely or is occurring in the warned area.
DANGER—ACT NOW!

The Weather Watcher
Of the Inland Northwest

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Trivia: What is the daylight change in Spokane on the first day of summer to the last day of summer?