YOUR NATIONAL WEATHER SERVICE SPOKANE QUARTERLY REPORT

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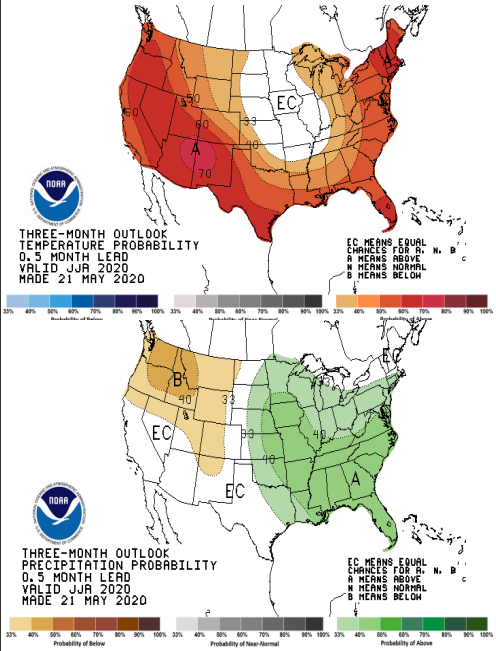
The Weather Watcher

of the Inland Northwest

www.weather.gov/Spokane



Summer Outlook

After an active spring, many are wondering what the summer has in store for the Inland Northwest.

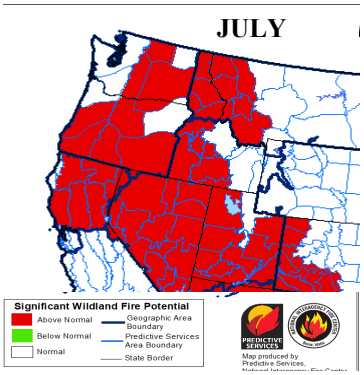
While the first half of June remained cool and showery, seasonal trends are leaning toward a warm and dry summer for the Inland Northwest. The Climate Prediction Center indicates better chances of above normal temperatures and below normal precipitation for June, July and August.

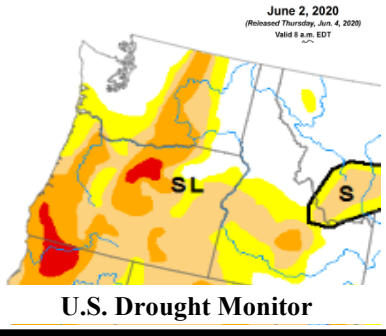
The spring snowmelt and runoff season was close to normal this year. There were a few basins that reached flood stage during times of rapid warming and/or heavy precipitation in May. These basins included the Stehekin, the Okanogan and the Kettle rivers which received snowmelt from the north Cascades and southern B.C. Flows on the Kootenai and the Pend Oreille ran high although stayed near bank-full this spring. The chances for any additional flooding looks low. Fortunately, the high mountain snow pack that persisted through the spring will give way to a slightly above normal water supply for the summer months on many of the main-stem rivers.

With the warm and dry outlook for the summer, the fire season looks to be shaping up with an increase of significant wildland fire potential by July into August. These months are typically the driest and warmest time of the year. After a wet spring, the abundance of grasses and fine fuels will dry out quickly early this summer and could be a concern on dry, windy days. The wild card looks to be lightning chances leading to any fire starts.

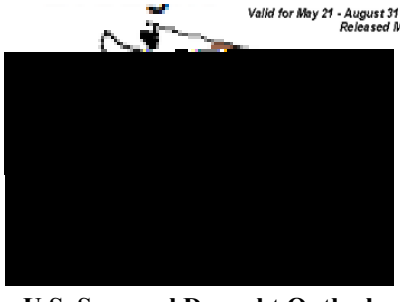
Most of the spring precipitation benefited extreme eastern Washington and the Idaho Panhandle. While meager amounts of rain were found in central Washington. The current drought conditions will likely persist across central Washington through the summer season. ☼

Significant Wildfire Potential





U.S. Drought Monitor



U.S. Seasonal Drought Outlook

INSIDE THIS ISSUE:

Editor's Notes

We have had many reports of the vivid displays of lightning this spring across the Inland Northwest. Although Mother Nature puts on quite a stunning electric show, it's important to not forget how deadly lightning can be. One lightning strike can reach temperatures of 50,000 °F—that's hotter than the sun. And one lightning strike contains about 300 million Volts of electricity, which could keep a compact fluorescent light bulb lit for about 1 year! For more stories about lightning, see https://www.weather.gov/safety/lightning

The Summer Solstice will occur on Saturday, June 20th at 2:43 PM PDT, the longest day of the year.

We're always looking for new ideas and stories for our publication. Please send to nws.spokane@ noaa.gov. Newsletters are available on the NWS Spokane web page.

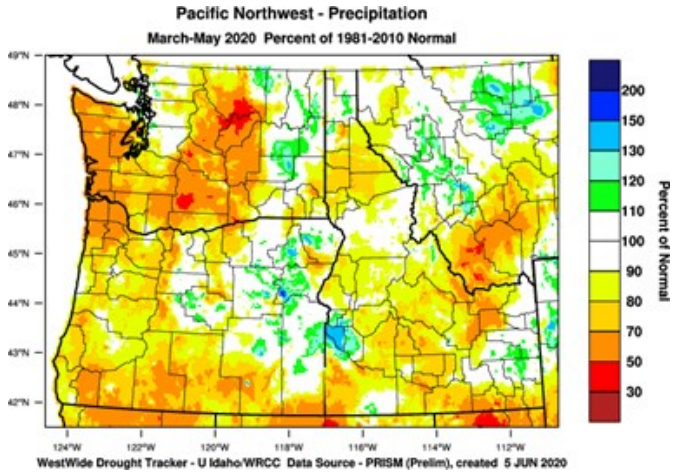
The main purpose of this publication is to keep our readers informed about NWS services and programs, and recognize those who help us with our mission, including weather spotters, observers, media, emergency managers, and government agencies.

All articles are written by the NWS staff. A special thanks goes to Jeremy Wolf for his contributions.

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

Spring in Review

Spring finished with below normal precipitation over much of Central Washington where drought conditions persist over portions of Okanogan, Chelan, Douglas, and Grant counties. The map below shows % of normal precipitation this spring.



March brought several active weather events including strong winds, snow, and thunderstorms. On the 4th a strong cold front early in the morning brought down a few trees around Osburn, Pinehurst, and Spirit Lake. Wallace gusted to 45 MPH and Spokane 42 MPH. Meanwhile 35-45 MPH wind gusts brought patchy blowing dust on I-90 between Dodson Road and Moses Lake. A brief shot of winter returned on the 13th and 14th as a significant winter storm brought cold and snowy conditions and gusty northeast winds. A band of snow set up from the Upper Columbia Basin to Airway Heights with 3-6" of accumulation. Lewiston also received significant snow with 3.5". Winds were strongest over the North ID Panhandle with 61 MPH at US 95 Byway, 55 MPH Sandpoint, and 53 MPH in Sagle. Downed trees and power outages resulted. Interstate 90 closed between Spokane and Moses Lake due to blowing snow. High temperatures on the 14th only reached 23°F in Spokane. Another round of winter weather arrived on the 25th as a band of snow set up over NE Washington into the Idaho Panhandle. Priest River received 4-6", Newport 3", and Coeur d'Alene 2.5". On the 30th a strong front brought rain and a few embedded thunderstorms. One even turned severe as it raced from North Spokane through Diamond Lake and Newport with areas of downed trees and power lines.

April was a dry month! In fact, several locations in Central Washington including Wenatchee only recorded one day of measurable precipitation for the entire month. Dry soils contributed to a couple significant blowing dust events across the region. The month started on a cool note with even snow in some places with a half inch measured on the 1st in Moscow and Kellogg while Sandpoint received 2" on the 3rd. On the 11th a cold front from the north brought gusts to around 45 MPH down the Okanogan Valley into the Moses Lake area. The winds resulting in blowing dust between Moses Lake and Ritzville which contributed to a seven car pileup on I-90. Cold morning low temperatures resulted behind the front on the 13th with Deer Park and Rosalia down to 15°F, Naples 17°F, and Coeur d'Alene 19°F. On the 27th another dust storm occurred three miles west of Dusty closing Highway 26 for six hours after a car versus semi collision. Also on this day scattered showers and thunderstorms were observed across NE Washington into the Idaho Panhandle.

After a dry April, **May** brought a major pattern shift towards wet conditions with active weather with several rounds of showers, thunderstorms, and gusty winds. But there were a few rounds of blowing dust early in the month to contend with. A strong cold front on the 2nd brought blowing dust to the Columbia Basin with a wall of dust reported in Ephrata. Meanwhile over SE Washington thunderstorms developed and tracked northeast. Outflow winds ahead of the rain led to significant blowing dust on the Palouse with near zero visibility on Highway 195 north of Colfax and in Spangle. On the 6th a strong cold front early in the morning brought blowing dust to Lewiston. Silcott Island west of Clarkston gusted to 65 MPH, and Alpowa Summit 55 MPH. In Wenatchee, gusts to 45-55 MPH were recorded with a tree blown down damaging a minivan. A band of moderate rain was welcome over the Columbia Basin with 0.65" in Grand Coulee and 0.42" Moses Lake. Republic received around 1" of rain, which fell as heavy snow up on Sherman Pass. From the 17th through the 20th a slow moving weather system brought a wide variety of weather including three funnel clouds reported in Pullman, Ritzville, and Post Falls. In Ephrata, a thunderstorm dumped 1.11" of rain in 75 minutes, which is well above the 0.65" normal for the entire month of May! On the 20th there was an extreme case of contrasting weather between Central and Eastern Washington. Spokane had its wettest day since 2004 with 1.40" of rain. Even higher amounts were recorded in Cheney with 2.24". Pullman recorded its 4th wettest day in May on record with 1.25". Meanwhile in Central WA dry and windy conditions was the rule with a peak wind gust of 52 MPH in Wenatchee. Temperatures then warmed from the 26th through the 30th with highs reaching the mid 80s to low 90s. The warmth ended with a very active day on the 30th! A strong cold front along with thunderstorms brought strong winds. In Sunland area north of Vantage several trees were blown down along with broken windows and shingles ripped off roofs. Unofficial gust of 97 MPH was recorded by a weather station in the area, while Mattawa recorded a gust to 68 MPH. In the Columbia Basin strong winds blew down power poles including 30 in Mohler and 12 in Washtucna along with several large trees uprooted. In Harrington several trees were knocked down on a golf course. Penny size hail was reported in Tum Tum. A band of heavy rain ended the month when an estimated 0.50-1.00 inches of rain in 30-60 minutes in Moscow with minor flooding on Paradise Creek. ☼ *Jeremy Wolf*

Question: What percentage of annual precipitation falls in the summer across the Inland NW?

NWS Spokane

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Wx Spotter Notes

There were several opportunities for live virtual spotter training in the last two months. We had around 100 spotters in attendance! A recording of the training was posted on the NWS Spokane web page along with a copy of the slide notes. If you didn't get a chance to take part, feel free to view at your leisure. Currently there are now over 1460 weather spotters registered in the Inland Northwest! That's amazing!

A suggestion came up, if weather spotters can approve to be listed in a database accessible to other local weather spotters in their town so they can get together, socialize with people of similar interests, start clubs, get additional people interested and otherwise improve service. If anyone is interested to a meet and greet with others, email nws.spokane@noaa.gov and we can set something up.

It has been a busy thunderstorm season so far. A big thanks to all of the spotters that have reported in the last few weeks. We appreciate ALL your reports & pictures. ☼ *Robin Fox*


May 2nd T-storms & Dust—Spangle, WA

Staff News

Lead Forecaster Matt Fugazzi retired from federal service at the end of May, after 25 years in the National Weather Service and 6 years in the U.S. Marine Corp. He plans to relocate to upstate New York to be closer to his extended family.

Valerie Thaler is one of our newest Meteorologists. She just finished grad school at Portland State University while working at NWS Portland. She plans to arrive in Spokane by mid July.

Lastly Robin Fox will take on the role of Service Hydrologist by mid June. She has been a Meteorologist at NWS Spokane for 22 years.

Best of luck to all, and safe travels to Matt and Valerie. ☼

CoCoRaHS Corner

With the dry conditions in parts of the region, it's important to know the impacts that water users may be experiencing. Did you know you can report drought impacts?

To learn more about climate and drought monitoring, see https://droughtimpacts.unl.edu/ConditionMonitoringObservations.aspx This link provides a mobile friendly online survey tool to record an impact observation for any sector and include pictures.

Keep your daily reports coming in, even if it's just a zero. Currently we have over 160 CoCoRaHS observers in eastern WA and north Idaho. Keep up the good work. ☼

Spring Weather Statistics

Wenatchee Water Plant	Mar	Apr	May	Total
Avg High Temp	55.7	65.2	73.1	64.7
Departure from Norm	+0.6	+1.0	+0.1	+0.6
Avg Low Temp	32.4	40.1	49.5	40.7
Departure from Norm	-1.9	-0.6	+0.7	-0.6
Total Precip	0.33	0.02	0.33	0.68
Departure from Norm	-0.28	-0.51	-0.36	-1.15
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	54.1	64.6	72.0	63.6
Departure from Norm	-0.9	+2.3	+1.1	+0.8
Avg Low Temp	34.4	40.0	48.5	41.0
Departure from Norm	-1.2	-0.3	+1.5	0.0
Total Precip	0.83	0.57	3.10	4.50
Departure from Norm	-0.32	-0.75	+1.49	+0.42
Total Snowfall	3.5	T	0.0	3.5
Departure from Norm	+2.8	0.0	0.0	+2.8
Spokane Airport	**Mar**	**Apr**	**May**	**Total**
Avg High Temp	47.8	58.8	66.2	57.6
Departure from Norm	-1.1	+1.5	-0.2	+0.1
Avg Low Temp	29.6	36.4	45.2	37.1
Departure from Norm	-2.0	-0.4	+1.4	-0.3
Total Precip	0.81	0.29	3.24	4.34
Departure from Norm	-0.80	-0.99	+1.62	-0.17
Total snowfall	6.4	0.6	0.0	7.0
Departure from Norm	+2.9	-0.4	-0.1	+2.4

ANSWER: Roughly 14% to 19% of the annual precipitation falls June, July and August.

Remember your Summer Spotter Checklist

Tornado or **Funnel Cloud**
Hail: pea size or larger
Strong Winds: 30mph+ or damage
Any Flooding
Reduced Visibility: under a mile due to fog, snow...
Heavy Rain: Showery: 1/2" + in 1hr Steady: 1"+ in 12hr/1.5"+ in 24hr
Snow: 2"+ valleys & 4"+ mountains
Any **Mixed Precipitation**
Travel Problems or Damage: due to severe/hazardous weather

Funnel Clouds

May was an active month, weather-wise. There were three consecutive days of funnel clouds which included: May 18th—Pullman, May 19th Ritzville, and May 20th—Post Falls. A NWS staff member traveled to Pullman to look for damage. Fortunately there were no confirmed touchdowns, but dozens of amazing pictures. It was determined these were cold air funnels.

Pullman, WA—May 18, 2020
Joel Whitman—KXLY

Pullman, WA—May 18, 2020
Stephanie Kramer—FB

Cold air funnels form beneath showers or weak thunderstorms when the air aloft is especially cold, especially when an upper level trough is over an area. The funnels are most common in the fall and spring when the sun is able to heat up the lower levels of the atmosphere, causing convection to bubble up and form showers, but temperatures at 20,000 feet above the ground are quite cold. Cold air funnels are usually harmless, but on rare occasions they can touch down and cause EF-0 level (winds up to 85 mph) tornado damage.

Pullman, WA—May 18, 2020
Mary Morgan—Twitter

May tends to be the peak month for tornado reports in the Inland Northwest, most likely due to cold air funnels. Cold air funnels are also difficult to detect on radar since they are very weak. Spotter and public reports are essential when cold air funnels are in the area. A Tornado Warning will still be issued if it is felt that a funnel will touch down and lead to damage. A big thank you to weather spotters for submitting your reports and pictures! ☼

The Weather Watcher
Of the Inland Northwest

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