

The Weather Watcher of the Inland Northwest

www.weather.gov/Spokane

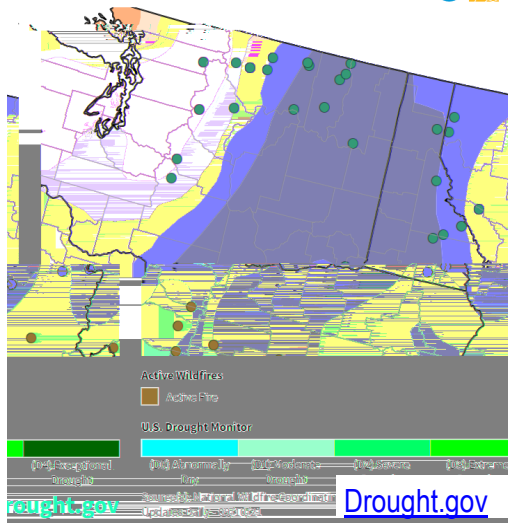


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Drought and Fires

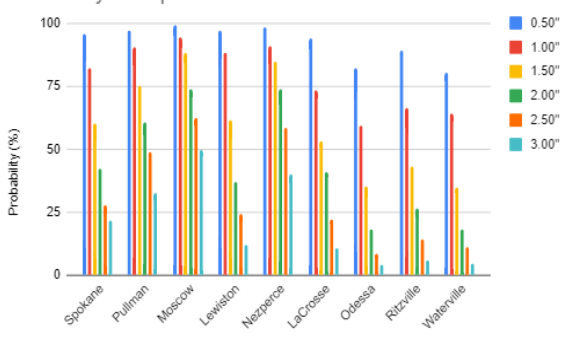
Current Fire Conditions: Active Wildfires



Drought continues to grip the Inland NW. Despite the welcome August rains in parts of eastern Washington and north Idaho, deficits in precipitation still abound. In July, the [U.S. Drought Monitor](#) elevated most of the region to the D4 level or Exceptional Drought. For Washington, this was the first occurrence of D4 in over 20 years. The top drought impact has been dryland agriculture which reported historic low yields in both the winter and spring wheat, barley and pasture lands. Low stream flows were observed in many basins, especially those not used for irrigation. Wildfires and their smoke were other impacts. While summer storms did bring needed rain, they also brought lightning which led to fire starts from the timber lands to grasslands. This will be a concern when the wetter weather does return, elevating the risks of flash flooding and debris flows near burn scars.

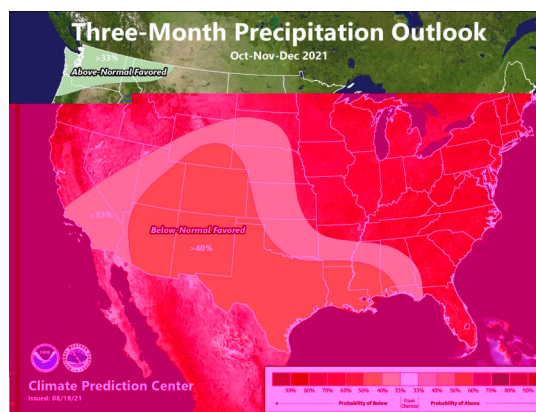
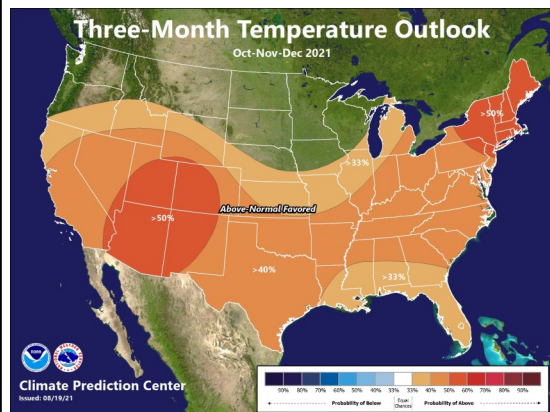
The [Seasonal Drought Outlook](#) does not show much change in the coming months with drought likely to persist through the calendar year. This may impact agriculture into the next growing season. We're all looking forward to the fall rains. Based on past events, there are better odds of seeing light amounts of rain in September and October across the region. Chances of significant rainfall amounts of 2 to 3 inches look less likely as seen in the following graph. ☀️ *Robin Fox & Ron Miller*

Probability of Sep-Oct Rainfall



Seasonal Outlook

The NWS [Climate Prediction Center](#) is favoring a better chance for above normal precipitation and equal chance of at, below and above normal temperatures for October through December 2021. ☀️



Editor's Notes

September marks National Preparedness Month. It's the time to get yourself, your family and household prepared for the change of seasons and any natural disasters. After a busy fire season, many of us have heard or even experienced the sudden alerts for evacuations. Having a Go-Bag or an Emergency kit prepared is important. Also knowing what to do when the power goes out is also a good idea and worth planning.

The Autumn Equinox arrives on Wednesday, September 22 at 12:20 PDT. This marks the equal time between day and night. After this date, expect shorter day hours and longer nights for the rest of the calendar 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.

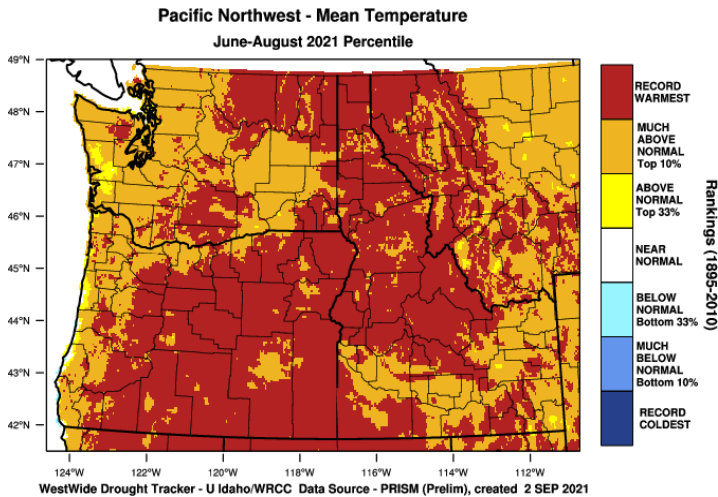
All articles are written by the NWS staff. A big thanks to Jeremy Wolf and Ron Miller for their contributions.

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

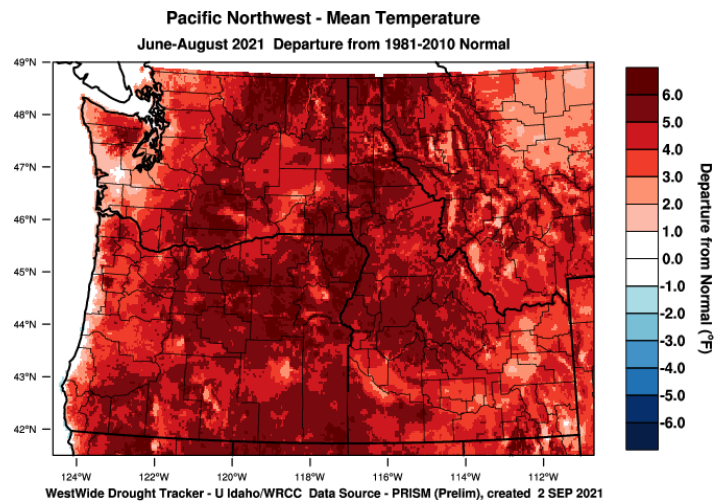
Summer 2021 in Review

The hottest summer on record was observed across many locations of the Inland NW. Spokane warmed into the 90s or warmer 42 days, breaking the previous record of 39 days. See the charts below on how [this summer compared to normal](#) by Rankings and Departures from normal. June and July were HOT!

Some of the largest fires include the Snake River Complex south of Lewiston (109,444 acres), as well as the Lick Creek and Green Ridge fires which combined together in the Blue Mountains, consuming over 120,000 acres as of August 31st. Two large fires burned near the Methow Valley including Cub Creek (70,186 acres) and Cedar Creek (55,198 acres). Several of the large fires unfortunately led to burned structures including Ford Corkscrew Fire near Clayton with 143 structures lost.



Besides heat, drought, and fires, let's talk about some specific significant weather events of the summer. In June, a strong cold front on the 5th delivered windy conditions to the region. Wind gusts include 47 MPH in Athol, 46 MPH Spokane Airport, and 43 MPH in both Moses Lake and Ephrata. On the 13th thunderstorms tracked from Wenatchee up through Omak and Republic producing brief heavy rain and gusty winds. Nespelem recorded a 53 MPH wind gust. On the 15th severe weather struck southeast Washington into the Idaho Panhandle in the early morning hours. Storms produced brief heavy rain, hail, and gusty winds. Large hail ranging from 1-1.5" in diameter fell on the Palouse as a severe thunderstorm tracked from Hay and La Crosse up through Endicott and Saint John. Other severe storms brought 1" hail to Pomeroy to Moscow, and 1.25" hail in Kellogg.



July had a few significant thunderstorm events as well. The 7th was a critical fire weather day as scattered dry thunderstorms tracked from the Blue Mountains into the Lewiston-Clarkston Valley and Camas Prairie, igniting several large wildfires. On the 8th slow moving wet thunderstorms contributed to a flash flood 12 miles SW of Mazama blocking NF-4440 Road with flow approximately four feet deep stranding two vehicles. A rockslide was also reported on US 20 two miles west of Cutthroat Creek Road with water over the road. Despite all the rain, new fires were also ignited in and around the Methow Valley. To close out July, thunderstorms on the 31st brought gusty outflow winds including downed power lines near Soap Lake with blowing dust on Highway 28. Spokane recorded a 43 MPH from gusty outflow winds.

Several locations tied or exceeded **all-time** station temperature records on the 29th or 30th of June, the peak of the heat wave. Some of the hottest readings include Omak (117°F), Ephrata (116°F), Odessa (115°F), Wenatchee Airport (114°F), Lind (114°F), Northport (113°F), Entiat (113°F), Mazama (112°F), Chelan (111°F), Chewelah (110°F), and Spokane Airport (109°F). The heat impacted the entire Pacific Northwest region with Portland reaching 116°F which smashed its previous all time record of 107°F. SeaTac reached 108°F, also an all-time record. Across Washington, Oregon, and British Columbia nearly 800 people died from the heat according to media sources.

August brought another round of thunderstorms. On the 3rd into the morning of the 4th brought thunderstorms with abundant lightning from the Cascades into the Okanogan Highlands and NE Washington mountains. Downed trees were reported in portions of Chelan county including Ardenvoir, Winton, and Lake Wenatchee. Several new fire starts from lightning occurred as well. The second half of August brought some much needed rain bringing some relief to the ongoing wildfires. Although thunderstorms brought too much rain around Conconully and Twisp and rain amounts as high as 2.36". Four miles south of Conconully, a debris flow 4-6" deep went over a road. Mud and debris was also reported over a road in Twisp. Near Entiat a rock slide partially blocked a road near Desert Canyon Golf Course. ☀️ *Jeremy Wolf*

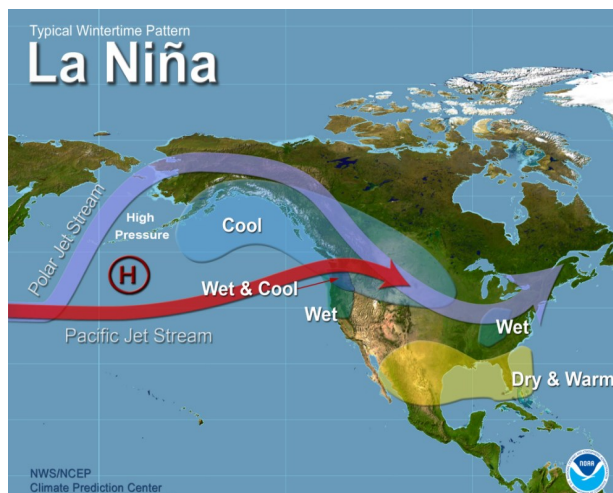
Add record heat to an extreme to exceptional drought, with several lightning events and you get a very active fire season. Through August over 500,000 acres has been consumed across Washing-

Summer Weather Statistics

| Wenatchee Water Plant | Jun | Jul | Aug | Total |
|-----------------------|-------|-------|-------|-------|
| Avg High Temp | 86.9 | 95.3 | 88.9 | 90.4 |
| Departure from Norm | +7.3 | +6.3 | +0.7 | +4.8 |
| Avg Low Temp | 60.5 | 66.9 | 62.9 | 63.4 |
| Departure from Norm | +4.7 | +4.8 | +1.8 | +3.8 |
| Total Precip | 0.21 | T | 0.17 | 0.38 |
| Departure from Norm | -0.39 | -0.22 | -0.01 | -0.61 |
| Total Snowfall | 0.0 | 0.0 | 0.0 | 0.0 |
| Departure from Norm | 0.0 | 0.0 | 0.0 | 0.0 |
| Lewiston Airport | Jun | Jul | Aug | Total |
| Avg High Temp | 90.5 | 97.6 | 89.2 | 92.4 |
| Departure from Norm | +10.5 | +6.8 | -0.9 | +5.5 |
| Avg Low Temp | 61.0 | 66.5 | 62.7 | 63.4 |
| Departure from Norm | +7.0 | +5.6 | +2.4 | +5.0 |
| Total Precip | 0.41 | 0.02 | 0.23 | 0.66 |
| Departure from Norm | -0.84 | -0.45 | -0.28 | -1.57 |
| Total Snowfall | 0.0 | 0.0 | 0.0 | 0.0 |
| Departure from Norm | 0.0 | 0.0 | 0.0 | 0.0 |
| Spokane Airport | Jun | Jul | Aug | Total |
| Avg High Temp | 83.8 | 91.4 | 82.9 | 86.0 |
| Departure from Norm | +10.1 | +7.0 | -0.9 | +5.4 |
| Avg Low Temp | 58.4 | 63.6 | 58.4 | 60.1 |
| Departure from Norm | +7.6 | +6.0 | +1.7 | +5.1 |
| Total Precip | 0.43 | 0.12 | 0.15 | 0.70 |
| Departure from Norm | -0.74 | -0.30 | -0.32 | -1.36 |
| Total snowfall | 0.0 | 0.0 | 0.0 | 0.0 |
| Departure from Norm | 0.0 | 0.0 | 0.0 | 0.0 |

La Nina Returns

The NWS Climate Prediction Center has issued a [La Nina Watch](#) for this coming winter. Remember last year was a La Nina winter and we saw a healthy snow pack to the Cascades. Then it weakened to Neutral conditions for the spring and summer. The long range forecasts are indicating La Nina's return again and trending toward above normal precipitation by the winter season for the Pacific Northwest. This may be good news for drought weary folks. The typical La Nina pattern does favor increased precipitation and snowfall region-wide. But keep in mind, no two La Nina's are the same. The region needs much more than normal precipitation to [end the drought](#). ☀



Staff News

More changes are anticipated with the NWS Spokane staff this fall. A retirement is planned for the Observation Program Leader, Mark Turner. He has been active with the Cooperative Observers since he arrived at NWS Spokane over 11 years ago. A retirement is also being planned for the Facilities Technician, Mike Belarde who has been at NWS Spokane for over 25 years and has been valuable on keeping our office functioning properly. In addition, Science Operations Officer, Travis Wilson will be leaving the agency later this year and taking a position at the Global Systems Laboratory in Boulder, CO. We wish the best of luck and safe travels to Mark, Mike and Travis on their future plans. ☀

Training Opportunities

Virtual spotter and observer training will be held this fall. We plan to offer classes on [cold season spotter training](#) along with [CoCoRaHS](#) snow observation training. Once the schedule is set, it will be posted on the NWS web site and emails sent out to current volunteers. Please share these training opportunities with your friends and neighbors who want to join the fun!

Calling all CoCoRaHS observers! We know there have been more dry days than not. But keep in mind, zeros are important to report. Remember, the CoCoRaHS form does have entries for [Condition Monitoring Reports](#). Please use this form to share dryness and drought conditions. ☀

NWS Spokane

Meteorologist In Charge
Ron Miller

Warning Coordination Meteorologist
Andy Brown

Science Operations Officer
Travis Wilson

Administrative Assistant
Jodi Fitts

Information Technology Officer
Todd Carter

Service Hydrologist
Robin Fox

Observation Program Leader
Mark Turner

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Jon Fox
Greg Koch
Steve Bodnar
Jeremy Wolf
Charlotte Dewey

Meteorologists
Rocco Pelatti
Laurie Nisbet
Miranda Coté
Steven Van Horn
Joey Clevenger
Jenn Simmons
Valerie Thaler
Rebekah Cheatham
Ken Daniels

Electronic Systems Analyst
Mike Henry

Electronic Technician
Paul Kozsan

Facilities Technician
Mike Belarde

Remember your Autumn Spotter Checklist

First Snow of the Season!!!

Reduced Visibility:
< 1 mile due to dust, smoke, fog...

Strong Winds:
30mph+ or wind damage

Hail: pea size or larger

Tornado or Funnel Cloud

Heavy Rain:
Showery: 1/2" + in 1hr
Steady: 1" + in 12hr/1.5" + in 24hr

Snow:
2"+ valleys & 4"+ mountains

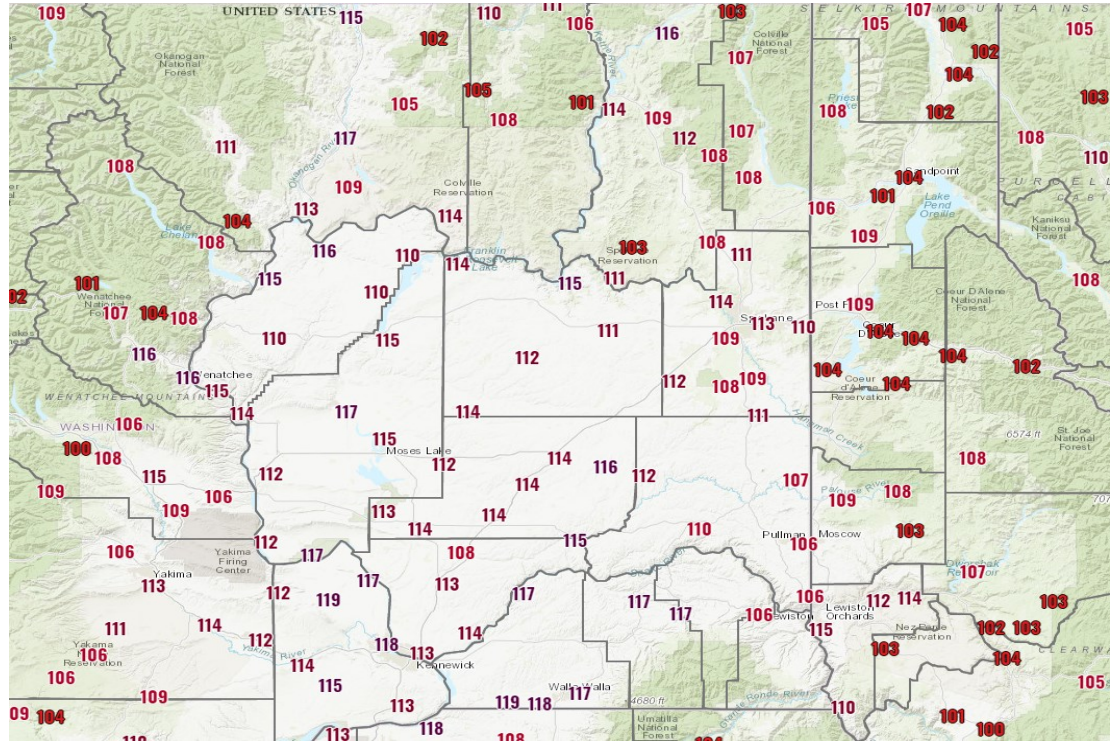
Any Mixed Precipitation

Any Flooding




Travel Problems or Damage:
due to severe/hazardous weather

Heatwave 2021

Here is a map from the historic heatwave of 2021 with high temperatures from June 29th. Triple digits were observed at every reporting site across the Inland NW. Many long time records were broken. ☀



After the Storm: POWER OUTAGE

-  **Use flashlights, not candles**
This will avoid risk of fire. Turn on flashlights before entering buildings, to avoid producing a spark that could ignite leaking gas.
-  **Practice portable generator safety**
Use outdoors, at least 20 feet away from doors/windows/garages to avoid carbon monoxide poisoning. Properly ground, and don't overload.
-  **Be careful with food and water**
Food in the fridge can start to spoil after as little as 4 hours. Drink bottled/boiled water only, as purification systems may not be working. Use camp stoves/grills outdoors only.



Prepare

This is a great time to prepare for the next season or next disaster. Plan now for yourself and your family. Learn more: [Ready.gov](https://www.ready.gov) ☀

Build a kit with everyone in mind



Forecast Zone Update—Central WA

For those of you who reside or travel to the east slopes of the northern Cascades, there will be a change to how you view the weather forecast. The one large forecast zone has now been separated into 3 distinct new zones. This new configuration will optimize the issuance of hazard products across this region. The new change went into effect on September 8, 2021.

The old configuration of Zone 42 is now composed of: Zone 49—western Okanogan county including the Methow Valley, Highway 20 and Washington Pass, Zone 48—western Chelan county including Stevens Pass on Highway 2, and Zone 47—central Chelan county including Plain, Leavenworth and Ardenvoir. ☀

Question: When is the average first freeze across the Inland NW?

