

2022 Fire Weather Summary

South Central and Southeast Washington

Central and Northeast Oregon



Crocketts Knob Fire–Malheur National Forest–Inciweb

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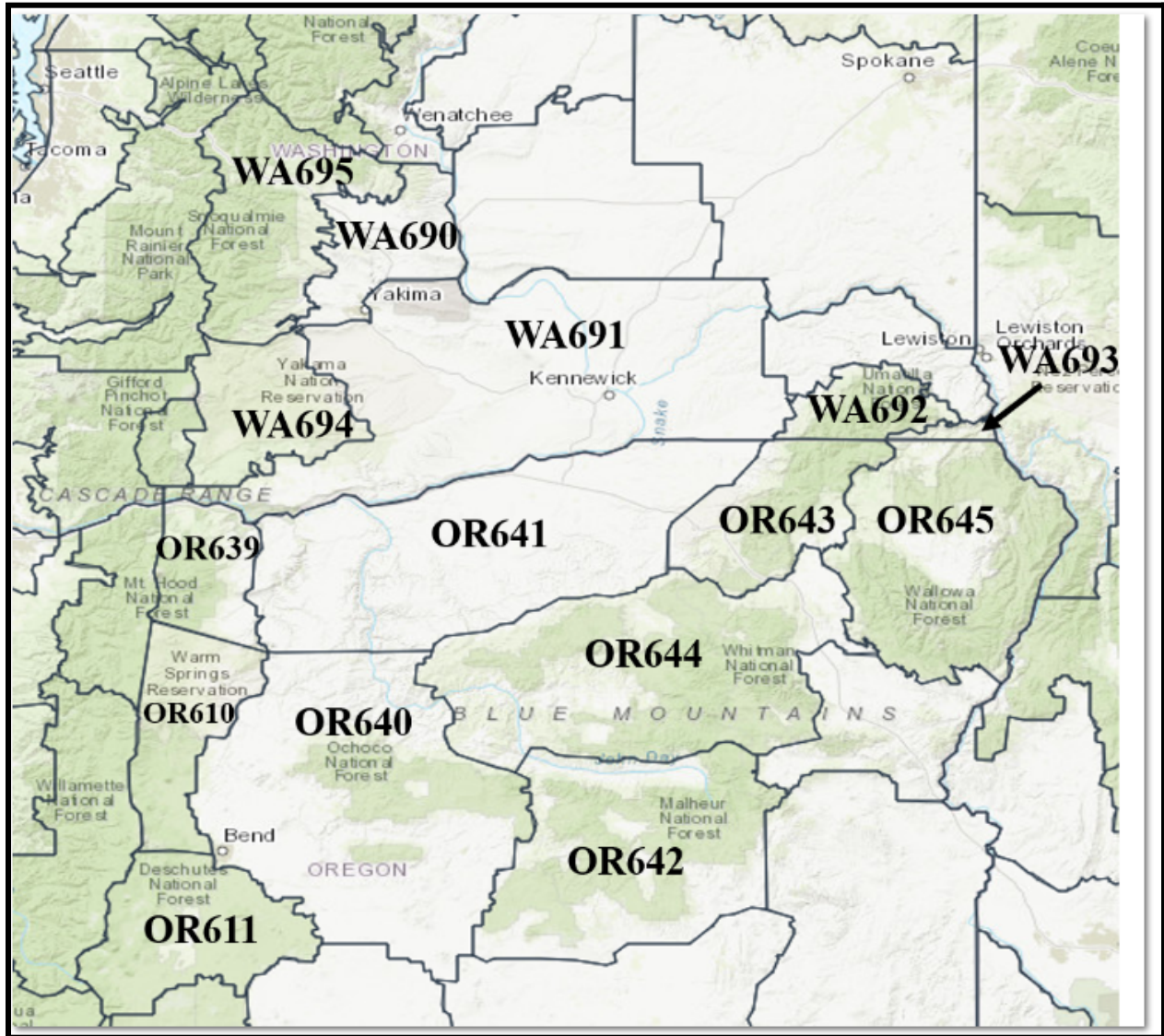
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FIRE WEATHER ZONE MAP



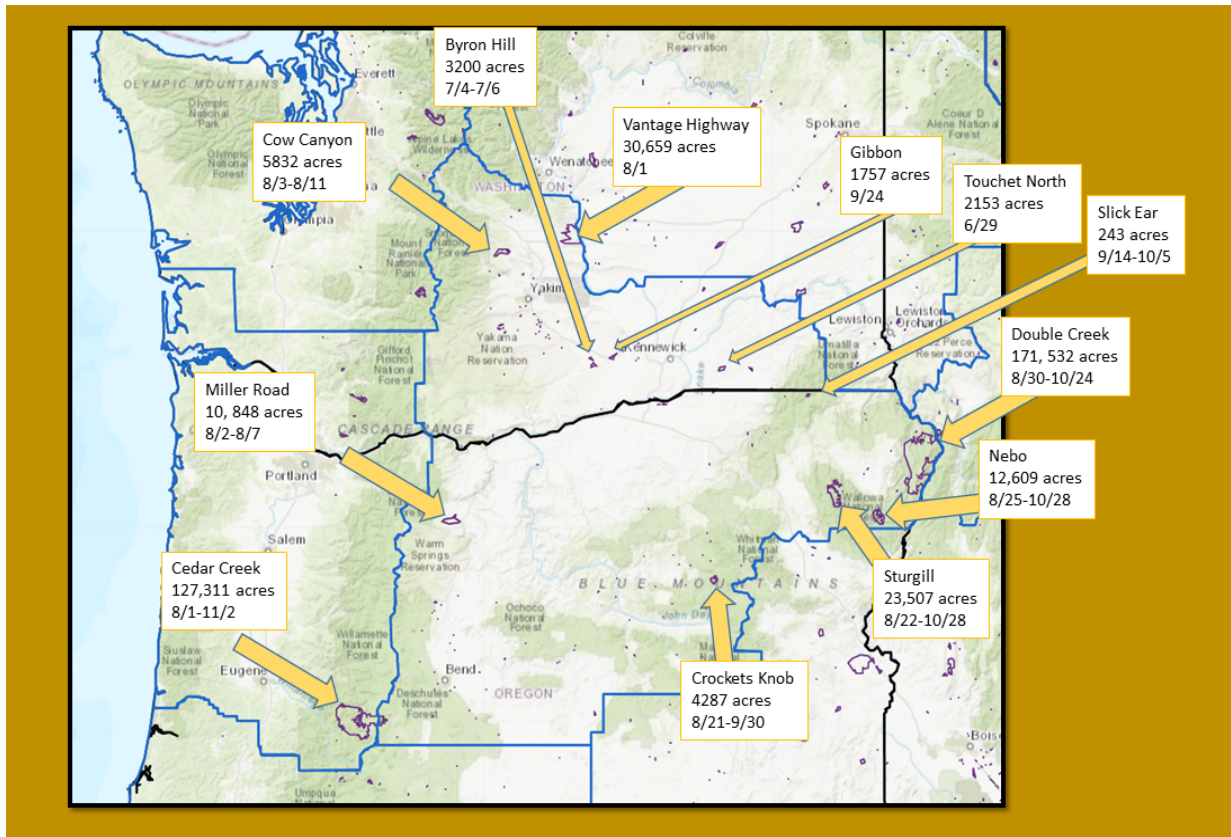
There are 15 fire weather zones in the forecast area of NWS Pendleton—six in Washington and nine in Oregon. Note: the fire weather zones in eastern Washington changed in March 2022 for both coverage and fire zone identification.

FIRE ACTIVITY SUMMARY

The Northwest Coordination Center in Portland reported that 3,611 wildfires occurred in Washington and Oregon in 2022 which fell slightly lower than the 10-year average of 3,717 fires. The total acres burned in 2022 for both states combined were 631,605 acres and were significantly lower than the 10-year average of 1,193,381 acres. While most fires reported were human caused, lightning was responsible for most acres burned. The largest fire in the NWCC's area was the Double Creek Fire near Imnaha, Oregon, totalling 171,532 acres.

The start of the summer season was wet, and weather conditions were not favorable for large wildfires. There were grass fires reported in late June and July, including a 3200 acre fire near Mabton and Prosser (Byron Hill Fire) that was created from fireworks on July 4. The fire season in NWS Pendleton's forecast area ramped up in August, and lightning contributed to the largest wildfires for the season. The cluster of fires in Wallowa County—Double Creek, Nebo and Stugill—as well as the Crockets Knob Fire near Prairie City were started by lightning storms from August 21-23. The Cedar Creek Fire east of Oakridge, Oregon, was also caused by lightning on August 1. Although the fire was initiated outside of the forecast area, it spread to the east and covered a small area of the southern Deschutes National Forest. The cause of the Miller Road Fire in Wasco County and the Cow Canyon Fire near Wenas, Washington, have been undetermined.

September was a particularly dry month, and air quality deteriorated across both Washington and Oregon. Many of the fires continued through September and the first half of October, and cooler and wetter conditions later in October aided in fire containment.



2022 wildfires in NWS Pendleton's forecast area

WEATHER REVIEW

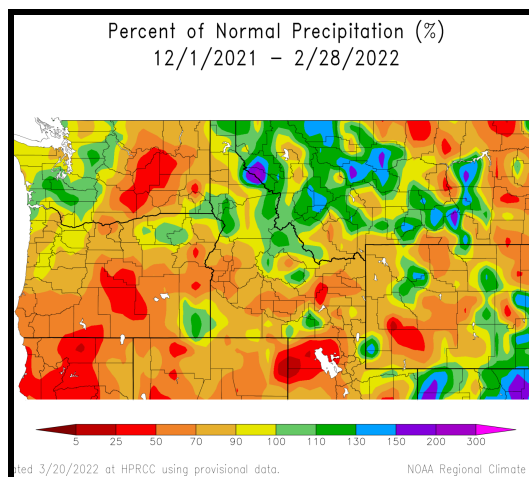
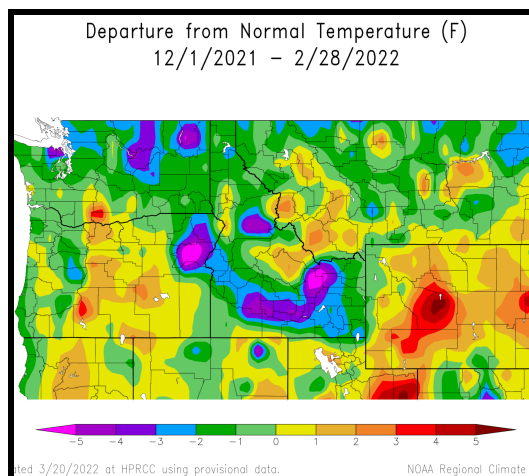
WINTER (DECEMBER 2021-FEBRUARY 2022)

Temperature and precipitation anomalies varied throughout Washington and Oregon during the winter 2022. Most of eastern Washington and northeast Oregon were cooler than average, but central and south central Oregon were warmer. Precipitation in the northern Blue Mountains and the Washington Cascades was above average for the winter season. The rest of NWS Pendleton's forecast area was relatively dry.

It was a fairly active weather pattern in **December 2021** with slightly above average precipitation along the Cascades and the northeast mountains. In general, temperatures during the month were near to slightly above average across the region.

In **January 2022**, most of eastern Washington and northeast Oregon were cooler than average. The central Washington Cascades as well as the Kittitas and Yakima Valleys were also noticeably wetter as well compared to other areas that received near to below average precipitation. Once again, central Oregon was warmer than average for the month.

The first two weeks of **February 2022** were met with warm and dry conditions, but an arctic front during the middle of the month brought much colder temperatures and mountain snow. However, the precipitation that did occur was not significant enough to bring precipitation above average for the month. Almost all areas were drier than average for February.



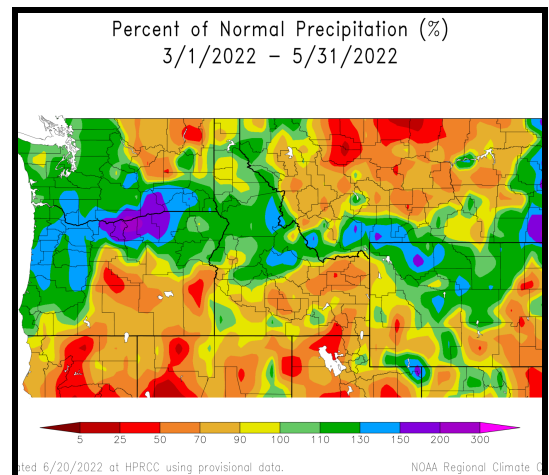
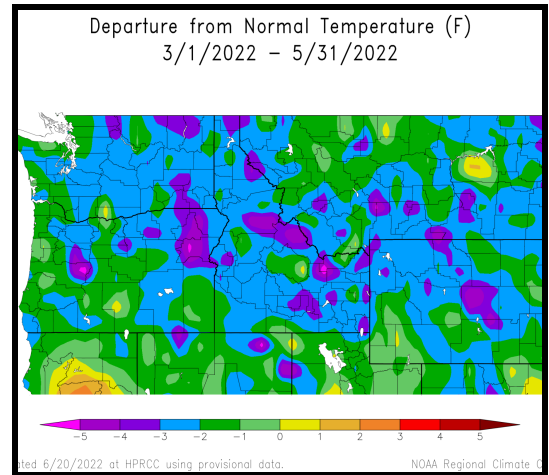
SPRING (MARCH- MAY 2022)

It was a cool and wet spring across eastern Washington and northeast Oregon. Although it was cooler than seasonal average over central and southeast Oregon, precipitation was below average in this area.

March 2022 was warmer and drier than average. Temperatures were about 0-3 degrees above average, and precipitation was around 25-50 percent of average. It was primarily a dry westerly flow during the month.

Almost all areas observed cool and wet conditions in **April 2022**. A late season snow event arrived in mid-April that brought snow down to the lowest elevations. Thunderstorms at the end of the month also brought significant rainfall to portions of northeast Oregon and southeast Washington.

In general, temperature anomalies were about -3° to -6° compared to monthly averages in **May 2022**. Precipitation anomalies varied. Precipitation across the Washington and northern Oregon Cascades, the Lower Columbia Basin, and northeast Oregon was around 150-200% of normal. Over central Oregon, including the Ochoco Mountain, precipitation was around 30-70% of normal. There were a series of rain events and thunderstorms in May, and minor flooding was observed in the valleys adjacent to the Blue Mountains at the end of the month.



SUMMER (JUNE- AUGUST 2022)

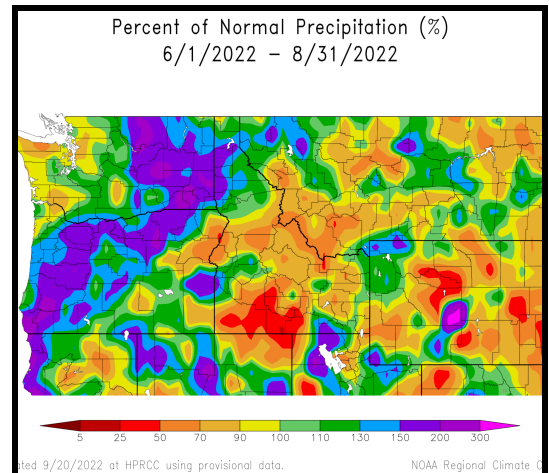
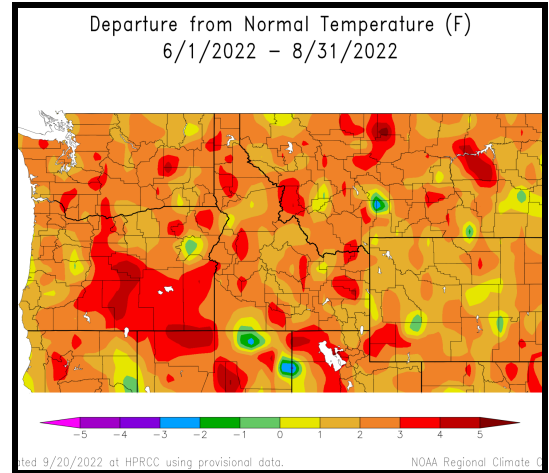
Temperatures were above average for the summer, mainly during July and August. The above average precipitation across eastern Washington, north central Oregon, and the Lower Columbia Basin of northeast Oregon occurred in June. It was predominantly dry east-southeast of the Blue Mountains, and southeast Oregon received near to above average precipitation this summer.

It was a noticeably wet **June 2022** with precipitation around 200% of average (Baker County and far southern Wallowa County were drier at 50-70% of average).

Temperatures were near to below average. Showers and thunderstorms in the first half of the month contributed to significant rainfall in many areas. Warm and dry conditions were observed during the last week of June.

Overall, **July 2022** was warm and dry. There were several thunderstorm events that brought localized heavy rain, but most areas received 25-50% of average precipitation. A record breaking heat wave at the end of July contributed to the above average temperatures—2° to 4° above seasonal average.

The heat wave continued into early **August 2022**. The heat and very dry conditions set the stage for significant thunderstorms that brought heavy downpours, damaging winds, and large hail. The Nebo, Sturgil, and Double Creek Fires in the Wallowa-Whitman National Forest and the Crocket's Knob Fire in the Malheur National Forest were started from lightning storms on August 21-23. August was warm and dry, although southeast Oregon had above average precipitation for the month, associated with monsoonal moisture that kept periods of showers and thunderstorms in this area.



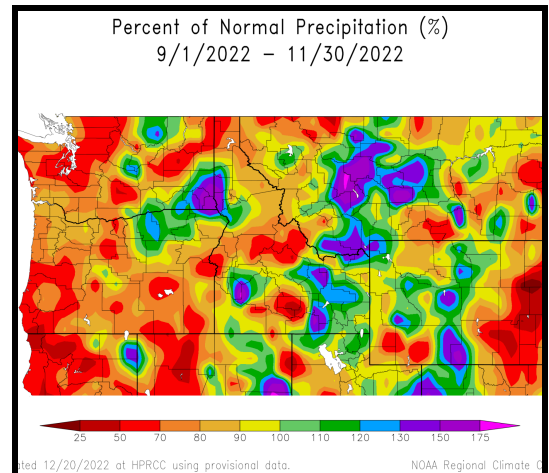
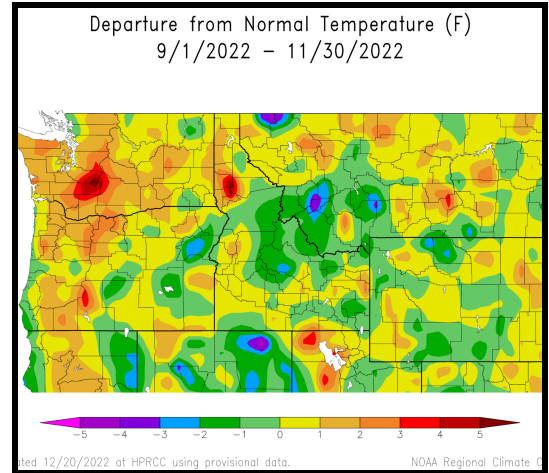
FALL (SEPTEMBER- NOVEMBER 2022)

In a nutshell, fall could be summarized as near to above average temperatures but precipitation varied from one area to another. Precipitation was near to above average in southeast Washington and northeast Oregon and below average elsewhere.

September 2022 was dry, and most reporting stations measured less than 0.5 inch of rainfall for the month. There were no extreme heat waves during the month, but temperatures were slightly above average for all stations. Dry and stable conditions led to area wide smoke and poor air quality.

The first three weeks of **October 2022** were unusually warm and dry. Around the 21st of the month, a transition to cooler and wetter conditions brought relief to the wildfires in the Pacific Northwest. Periods of rain and high elevation snow brought precipitation anomalies to 100-120% of average in the Lower Columbia Basin and central Oregon. The rest of the forecast area was below average (50-90% of normal). Temperatures were around +4° to +8° with the highest anomalies in south central Washington and north central Oregon.

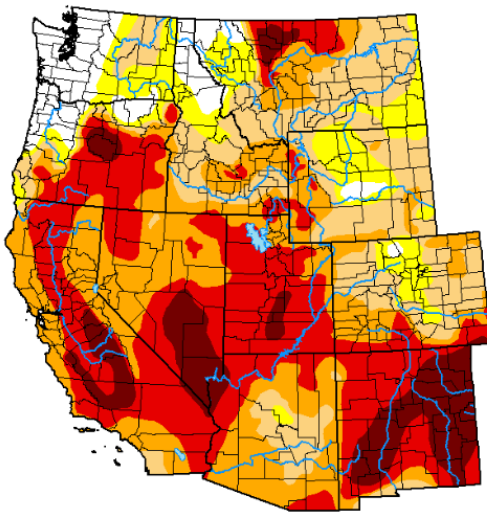
It was cooler than average in **November 2022**, and precipitation was near to above average. The first of the month was met with moderate to heavy rain and strong gusty winds, followed by a period of dry conditions. Rain and snow returned at the end of the month. Many of the lower elevation areas measured the first snow of the season.



US DROUGHT MONITOR

The images below compare the drought conditions in early June and early October. There was slight improvement over central Oregon with less D4–exceptional drought–coverage in central Oregon by early October. Most of the Pacific Northwest saw conditions increase in category to “D0 abnormally dry” to “D1 moderate drought”.

U.S. Drought Monitor West



June 7, 2022
(Released Thursday, Jun. 9, 2022)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	6.65	93.35	83.72	63.78	38.15	10.07
Last Week 05-27-2022	6.27	93.73	86.82	68.77	38.00	9.57
3 Months Ago 03-08-2022	5.15	94.85	90.17	70.74	23.88	2.91
Start of Calendar Year 01-04-2022	3.68	96.32	89.29	64.90	23.85	3.94
Start of Water Year 09-26-2021	2.21	97.79	89.60	75.38	52.46	18.40
One Year Ago 06-08-2021	7.82	92.18	83.03	67.64	48.62	23.75

Intensity:

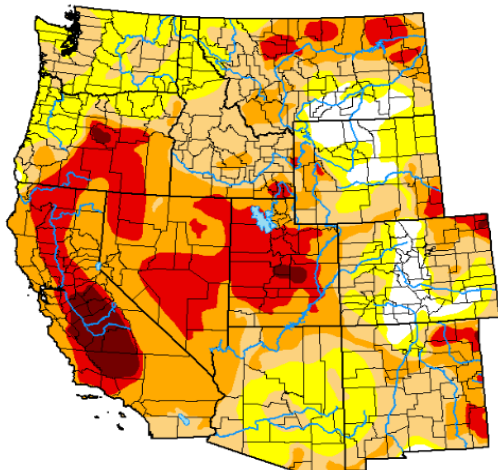
- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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U.S. Drought Monitor West



October 4, 2022
(Released Thursday, Oct. 6, 2022)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	5.35	94.65	73.35	47.43	19.32	2.65
Last Week 09-27-2022	3.89	96.11	73.90	47.71	19.37	2.63
3 Months Ago 07-05-2022	15.19	84.81	74.73	59.83	32.34	6.06
Start of Calendar Year 01-04-2022	3.68	96.32	89.29	64.90	23.85	3.94
Start of Water Year 09-26-2021	3.89	96.11	73.90	47.71	19.37	2.63
One Year Ago 10-05-2021	1.95	98.05	89.87	75.37	52.66	17.90

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

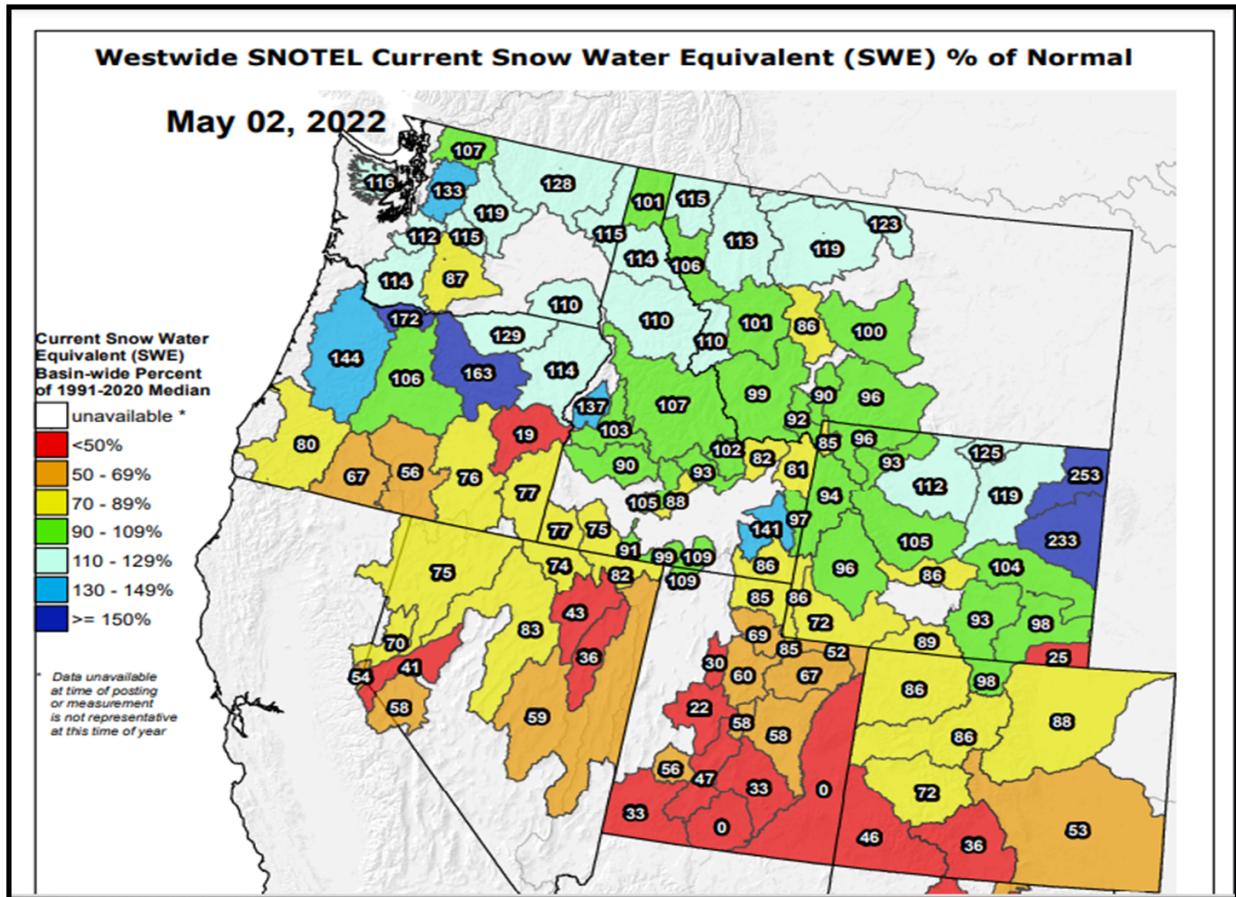
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SNOW WATER EQUIVALENT PERCENT OF NORMAL–MAY, 2022

The snowpack in the Pacific Northwest during late spring and before the typical onset of fire season ranged from around 90% of average in the Yakama Basin to 160% in the southern Blue Mountains. (The 19% in the Lower Treasure Valley was an outlier compared to surrounding basins.)



LIGHTNING STRIKES (JUNE 1- SEPTEMBER 30)

Data provided by the Northwest Coordination Center Portland, Oregon

FIRE ZONE	610	611	639	640	641	642	643	644	645	690	691	692	693	694	695
6/01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6/02	0	0	0	0	6	4	3	36	2	0	0	0	2	0	0
6/03	91	93	25	468	263	134	185	505	71	118	195	197	21	40	66
6/04	0	0	0	1	24	41	109	146	348	4	11	56	16	0	3
6/05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/06	1	26	0	418	227	322	358	531	162	49	108	72	6	0	49
6/07	0	0	0	6	17	0	3	12	1	0	17	0	0	0	0
6/08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/09	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
6/10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/12	0	0	0	8	0	9	0	9	0	0	0	0	0	0	0
6/13	0	0	0	63	0	96	0	57	98	0	0	0	10	0	0
6/14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/17	36	6	0	3	2	0	0	0	0	1	0	0	0	0	1
6/18	0	58	0	51	0	10	0	69	0	0	0	0	0	0	0
6/19	0	0	0	1	0	1	0	0	2	3	0	0	0	0	4
6/20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

FIRE ZONE	610	611	639	640	641	642	643	644	645	690	691	692	693	694	695
6/23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/29	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0
6/30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
7/02	9	1	0	1	0	0	0	0	13	0	0	0	0	0	0
7/03	48	331	2	313	403	9	509	417	359	0	341	144	9	0	132
7/04	0	19	0	86	15	45	67	414	265	39	153	42	3	0	11
7/05	0	0	0	0	0	0	0	0	11	1	0	0	0	0	0
7/06	0	0	0	0	5	0	3	6	0	0	22	3	0	0	0
7/07	6	0	45	31	7	0	0	12	47	58	296	3	1	72	0
7/08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/09	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0
7/10	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0
7/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/13	0	16	0	10	4	59	36	342	399	0	95	18	4	2	0
7/14	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0
7/15	0	16	0	1	0	0	0	0	0	0	1	0	0	0	0
7/16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

FIRE ZONE	610	611	639	640	641	642	643	644	645	690	691	692	693	694	695
7/18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/22	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
7/23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/24	0	0	0	0	0	0	0	0	0	1	0	0	0	0	3
7/25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/28	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
7/29	4	1	0	0	0	0	0	0	0	0	16	0	0	0	0
7/30	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
7/31	32	1	0	0	0	0	0	0	0	0	0	0	0	0	0
8/01	91	140	0	24	0	37	0	80	5	0	0	0	0	0	0
8/02	0	98	0	124	2	269	0	21	0	0	0	0	0	0	0
8/03	0	60	0	115	0	57	0	0	0	0	0	0	0	0	0
8/04	0	0	0	12	0	54	0	51	6	0	0	0	0	0	0
8/05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/08	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0
8/09	20	42	1	91	2	16	0	0	0	0	0	0	0	0	9
8/09	20	42	1	91	2	16	0	0	0	0	0	0	0	0	9

FIRE ZONE	610	611	639	640	641	642	643	644	645	690	691	692	693	694	695
8/09	20	42	1	91	2	16	0	0	0	0	0	0	0	0	9
8/10	192	622	30	958	87	46	55	165	8	0	31	17	1	3	1
8/11	0	0	0	0	251	8	473	200	104	0	474	148	40	0	41
8/12	0	0	0	0	0	0	70	98	345	0	0	4	21	0	0
8/13	0	0	0	0	0	2	0	3	453	0	8	1	6	0	0
8/14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/18	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0
8/19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/21	0	0	0	0	0	157	130	372	323	0	0	60	4	0	13
8/22	5	0	3	5	72	4	515	432	374	0	4	94	14	0	0
8/23	0	0	0	0	0	0	20	8	207	0	0	29	8	0	0
8/24	0	0	0	0	0	0	12	0	22	0	0	3	0	0	0
8/25	0	0	0	0	0	2	3	33	413	0	0	10	3	0	7
8/26	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0
8/27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/01	0	0	0	0	0	0	0	0	0	2	7	0	0	0	0

FIRE ZONE	610	611	639	640	641	642	643	644	645	690	691	692	693	694	695
9/02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/04	0	0	0	0	0	0	6	0	6	0	4	5	2	0	0
9/06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/07	0	0	0	4	0	0	1	2	10	0	0	0	0	0	0
9/08	0	19	0	42	0	78	0	11	2	0	0	0	0	0	0
9/09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/13	0	28	0	27	0	5	0	0	0	0	0	0	0	0	0
9/14	0	0	0	2	56	230	87	75	266	3	134	64	8	0	68
9/15	0	0	0	0	0	0	0	9	127	0	0	0	0	0	0
9/16	0	0	0	0	0	270	0	9	126	0	0	0	0	0	0
9/17	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0
9/18	33	87	2	41	82	91	12	261	26	0	18	10	0	4	0
9/19	0	0	0	4	0	26	14	84	1	0	0	0	0	0	0
9/20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/21	0	25	0	88	0	99	0	30	0	0	0	0	0	0	0
9/22	0	0	0	0	0	43	0	15	6	0	0	0	0	0	0
9/23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

FIRE ZONE	610	611	639	640	641	642	643	644	645	690	691	692	693	694	695
9/26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/28	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0
9/30	0	0	0	0	0	0	1	0	13	0	0	2	2	0	0

RED FLAG WARNING EVENTS AND VERIFICATION

Date	Zones	Reason	Verification	Lead Time
July 2-3	OR641, WA691	Abundant Lightning	Missed Event	
July 13	WA690, WA691	Wind/Low RH (WA690) Abundant Lightning (WA691)	Yes—WA690 Missed—WA691	8.11 hrs.
July 15	WA690, WA691, OR641 <i>All zones preceded by a watch</i>	Wind/Low RH	Yes--WA691, OR641 No--WA690	10.34 hrs.
July 21	OR640, WA691	Wind/Low RH	Missed Event	
July 31 - August 1	OR610, OR611, OR640	Abundant Lightning	Yes--OR610, OR611 No--OR640	9.65 hrs.

August 1-3	OR640, OR642, OR644, OR645 Warnings extended Aug. 3 OR642, OR644	Abundant Lightning	Yes–OR642, OR644 No–OR640, OR645	25.45 hrs.
August 1-3	WA690, WA691, OR640, OR641 Warnings extended Aug. 3 WA690, WA691, and OR641	Wind/Low RH	Yes–WA690, WA691, and OR641 Missed–OR640	22.57 hrs.
August 9	OR610, OR611, OR640, OR641, OR642, OR643, OR644	Abundant Lightning	Yes–OR610, OR611, OR640, OR642, OR644 Missed-OR641, OR643	14.54 hrs.
August 12	OR640, OR642	Wind/Low RH	Missed Event	
August 20	WA692, OR642, OR644	Abundant Lightning	Missed Event	
August 22	WA692, WA693, OR643, OR644, and OR645 <i>All zones preceded by a watch</i>	Abundant Lightning	Yes–All zones	37.80 hrs.

August 24	OR645	Abundant Lightning	Missed Event	
August 26	WA691, OR641	Wind/Low RH	Missed Event	
August 30	WA691, OR639, OR641	Wind/Low RH	Yes—OR641 No—WA691 and OR639	22.02 hrs.
Sept. 2-3	OR640, OR642, OR644, OR645 OR610, OR611, OR641	Haines 6 with wind/Low RH Wind/Low RH	Yes—All Yes—OR610, OR611 Missed—OR641	14.01 hrs.
Sept. 6-7	WA692, WA693, OR640, OR642, OR643, OR644, OR645 WA690, WA691, OR610, OR611, OR639, OR641	Haines 6 and Low RH Wind/Low RH	Yes—All zones Yes—WA690, WA691, OR610, OR641 No—OR611, OR639	24.80 hrs.

Sept. 10-11	WA690, WA691, WA694, WA695, OR610, OR611, OR639, OR640, OR641 <i>All zones except WA694 preceded by a watch</i>	Wind/Low RH	Yes–OR640, OR641 No–other zones	25.41 hrs.
Sept. 13	WA692, OR643	Abundant Lightning	Missed Event	
				Average: 16.46 hrs.

2022 Red Flag Warning Totals

Total # of Warnings	60	POD	0.69
Total # of Events	64	FAR	0.27
Verified Warnings	44	CSI	0.55
Missed Warnings	20	ALT	987.50
		(Min)	
Unverified Warnings	16	ALT	16.46
		(Hrs)	
		Total	
Watches issued	28	Min	63200
Verified Watches	15		
Warnings Preceded by Watches	23		

2022 Red Flag Warning Synoptic Totals

Total # of Warnings	41	POD	0.76
Total # of Events	38	FAR	0.29
Verified Warnings	29	CSI	0.58
Missed Warnings	9	ALT	1076.3
		(Min)	9
Unverified Warnings	12	ALT	17.94
		(Hrs)	
		Total	
Watches Issued	21	Min	40903
Warnings Preceded by Watches	18		

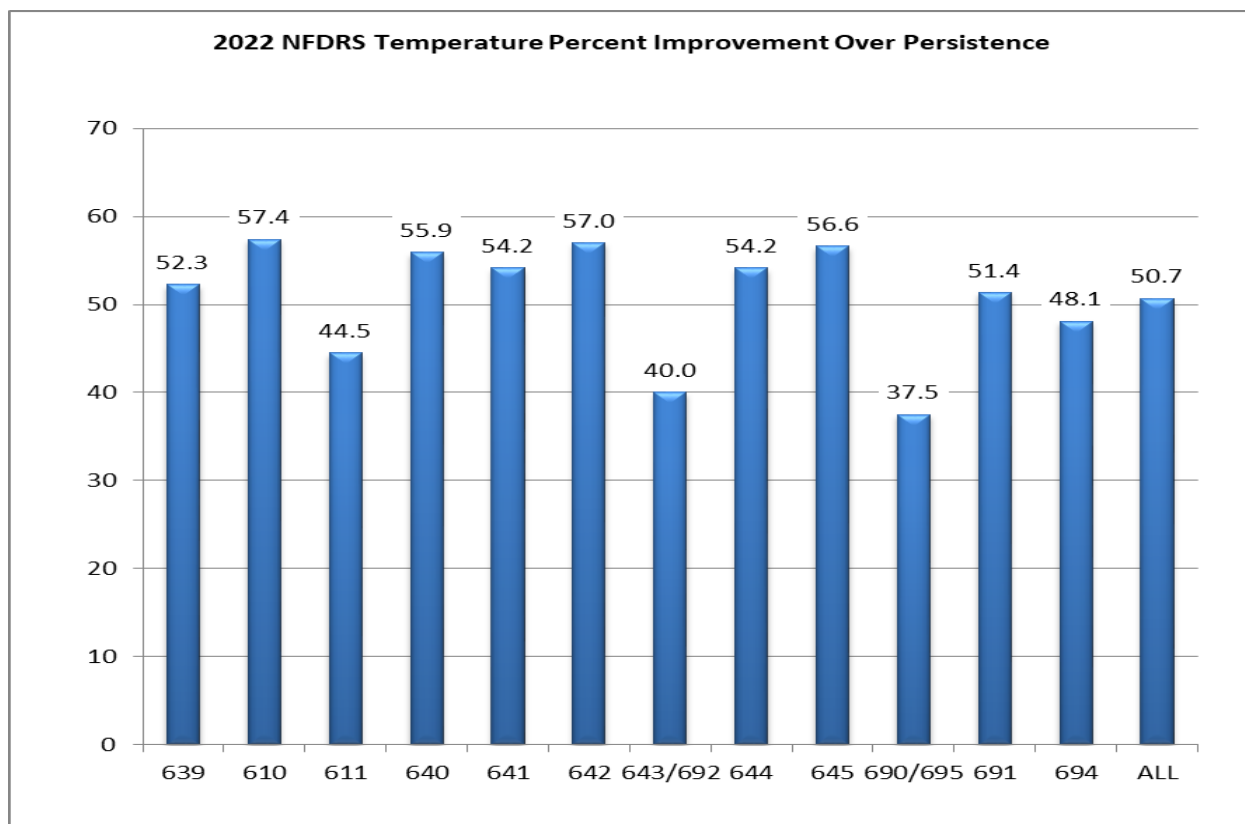
2022 Red Flag Warning T-Storm Totals

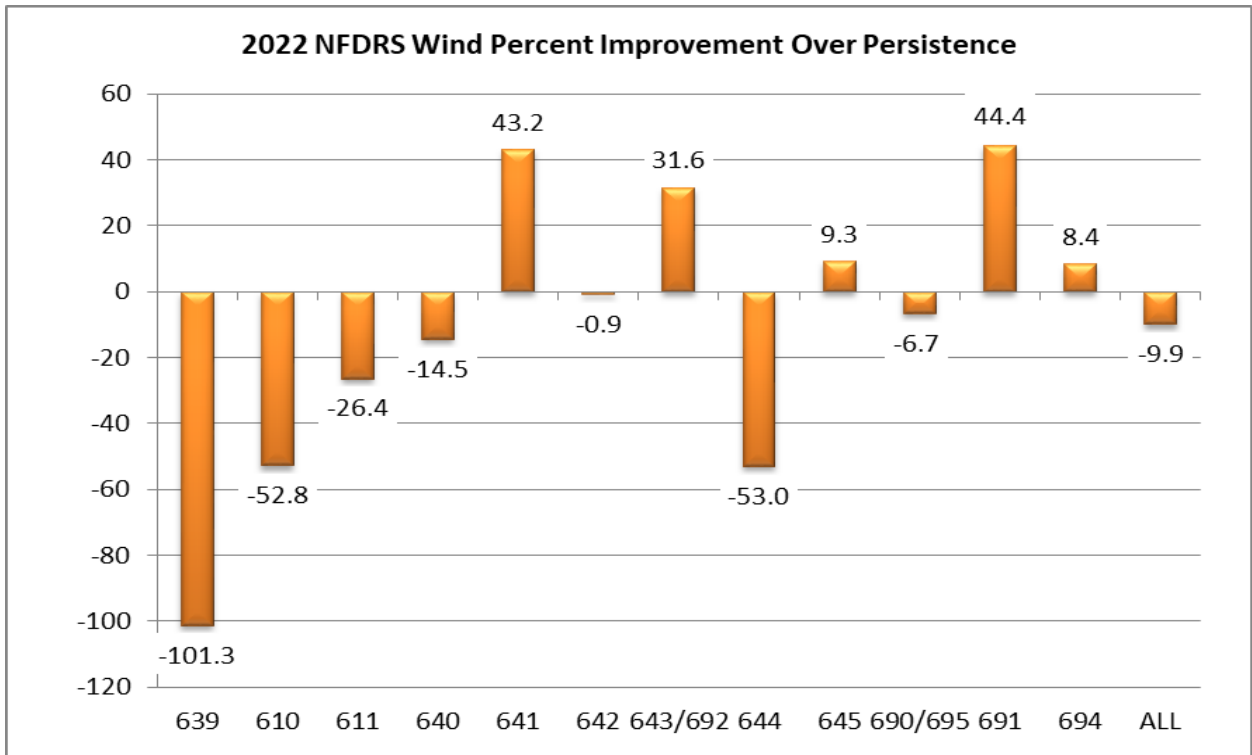
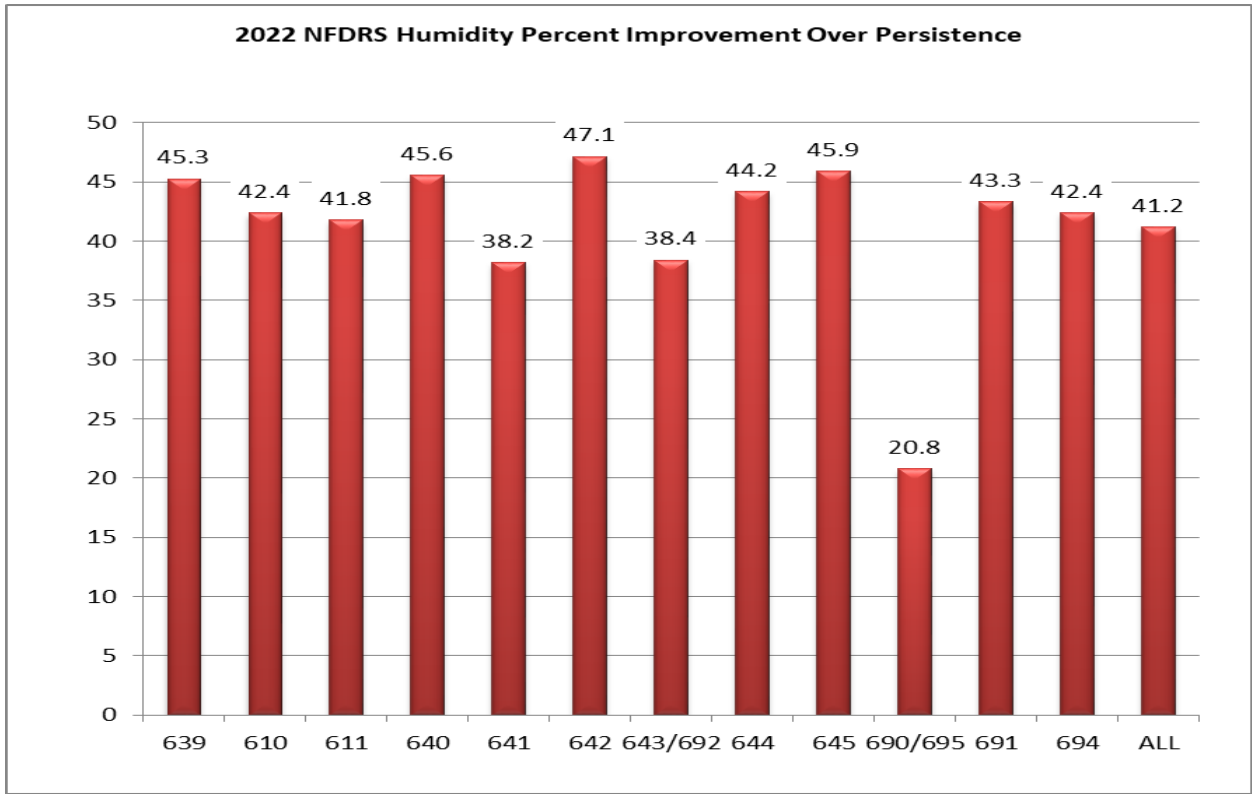
Total # of Warnings	19	POD	0.58
Total # of Events	26	FAR	0.21
Verified Warnings	15	CSI	0.50
Missed Warnings	11	ALT	847.19
		(Min)	
Unverified Warnings	4	ALT	14.12
		(Hrs)	
		Total	
Watches Issued	7	Min	22027
Warnings Preceded by Watches	5		

NATIONAL FIRE DANGER RATING SYSTEM (NFDRS) VERIFICATION

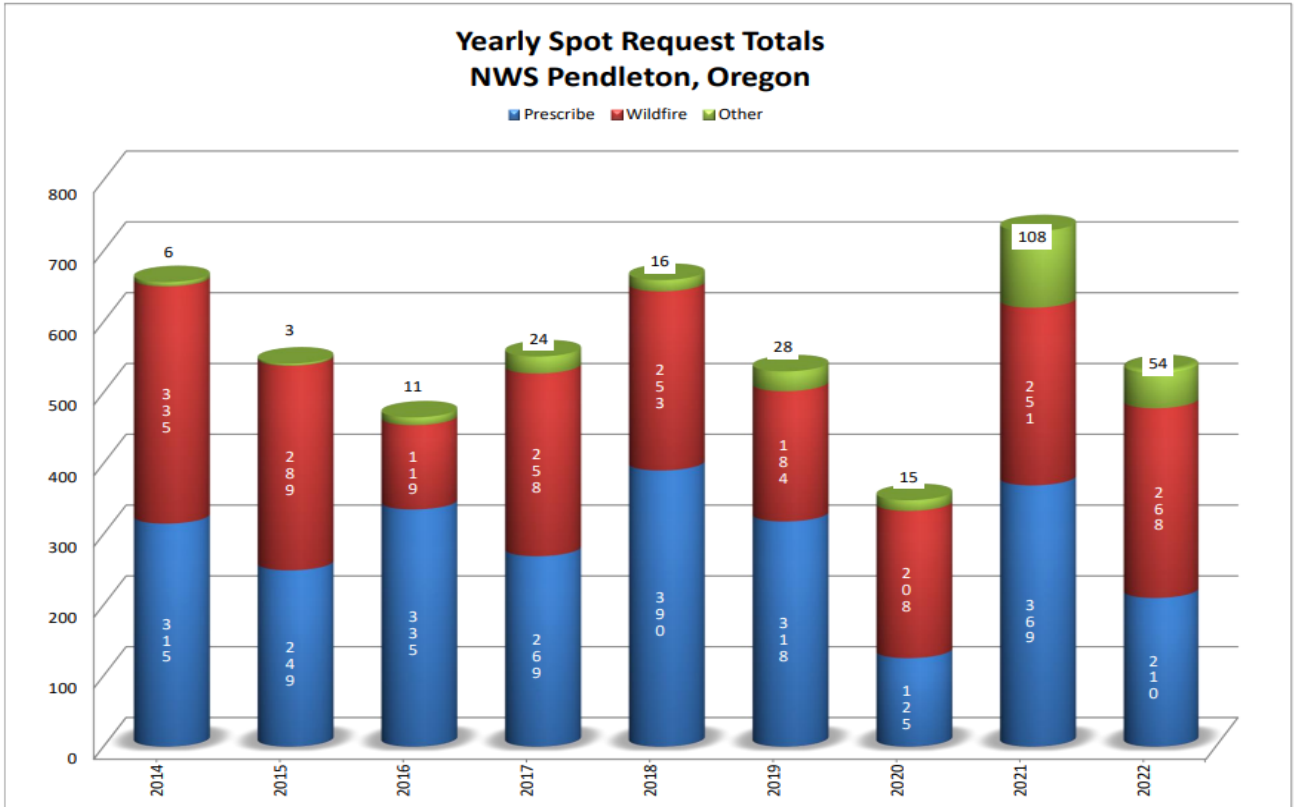
National Weather Service Offices provide input into the National Fire Danger Rating System with a seven-day forecast covering a variety of weather related elements. Forecast comparisons against actual observations taken the following day at 1300 PST (1400 PDT) determine the amount of error with 1 point counted for each degree. The wind verification also uses 1 point for each mph difference. However, if the forecast error is within 3 mph from the actual observation, the error differences are discarded. The June 1 through September 30 time frame is covered.

Temperature and Relative Humidity show very good improvement over persistence. Wind forecasts for 2022 varied from individual forecast zones with good improvement over central Oregon (fire zone OR640), the Columbia Basin (fire zones WA691 and OR641), and the Blue Mountain zones (fire zones WA692 and OR643). Other zones did not meet improvement over persistence, and the contributing factors are the complex terrain and a trend towards forecasting too high of winds on some RAWs locations that will need to be addressed.





SPOT FORECASTS



In 2022, NWS Pendleton issued a total of 532 spot forecasts—210 for prescribed burns, 268 for wildfires, and 54 for miscellaneous.

type	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Rx	11	19	13	22	44	11	2	0	1	62	22	3
WF	0	0	1	1	1	5	22	124	65	48	0	1
SAR	0	1	1	1	0	2	3	0	1	0	0	0
HAZ	0	1	1	0	0	0	0	2	1	0	0	0
OTH	1	0	1	6	8	3	1	2	14	4	0	0
total	12	21	17	30	53	21	28	128	82	114	22	4

AIR QUALITY ALERTS AND ADVISORIES

Per collaboration with the Department of Environmental Quality (DEQ) in Oregon and the Department of Ecology and other county Clean Air Authorities in Washington, NWS Pendleton will issue Air Quality Alerts/Advisories due to wildfire smoke.

September 2-3	Benton, Columbia, Franklin, Kittitas, Klickitat, and Yakima
September 3-8	Deschutes, Wallowa
September 8-14	Deschutes, Wallowa, Umatilla, and Union
September 10-12	Columbia and Walla Walla
September 12-14	Columbia, Walla Walla, Benton, Franklin, Kittitas and Yakima Umatilla, Union, Crook Grant, Wheeler, and Deschutes
September 14-16	Deschutes, Crook, Grant and Wheeler
September 16-19	Deschutes
October 20-21	Kittitas
October 20-24	Deschutes

IMET DISPATCHES

The following table shows the large fires that required IMTs and IMETs in NWS Pendleton's forecast area.

Dates	Name of Fire	IMETs served
August 4-11	Cow Canyon	Bob Tobin...Northwest Team 12
August 28-September 29, 2022	Crocketts Knob near Prairie City, Oregon	Derek Williams...Elko...Aug. 28-Sept. 9 James White (Trainee)...Eureka...Sept. 5-9
September 3-23, 2022	Double Creek near Imnaha, Oregon	Christian Cassell...Great Falls...Sept. 3-17 Michael Brown (Trainee)...Pittsburgh...Sept. 7-21 Jack Messick...Pocatello...Sept. 15-23

Mary Wister, NWS Pendleton IMET, served on the following fire in 2022.

Dates	Name of Fire	IMETs served
August 17-September 14, 2022	Four Corners near Cascade, Idaho	Mary Wister...Pendleton...Aug. 17-31 Steven Van Horn (Trainee)...Spokane...Aug. 21-31 Rick Davis...Tampa...Sept. 1-14 John Keyes (Trainee)...Pocatello...Sept. 1-14

TRAINING AND OUTREACH

January 31	S-390	Central Oregon Community College Bend, Oregon	Wister (instructor) Callihan (student)
March 2-22	IMET CEE workshop	Boise, ID	Wister/Callihan
March 30	Fire Weather Seminar	NWS Pendleton	staff
April 11	Northern Blues Cooperators Meeting	Walla Walla Ranger District	Wister/Callihan
April 18	Eastern Oregon Emergency Managers Meeting	Prineville	Wister John Saltenberger, NWCC
April 22	Annual Operating Plan Meeting	virtual	Wister/Callihan
April 27	Fire Refresher for Union Hot Shots	La Grande	Wister
April 28	Fire Refresher for Grande Ronde Rappel Crew	La Grande	Wister/Callihan
May 3	Fire Refresher for Malheur Rappel Crew	John Day	Wister
May 5	Integrated Weather Workshop	virtual	Wister/Austin/ Nierenberg
May 11-12	S-290	ODF The Dalles	Wister
May 16	S-390	Pendleton	Wister
May 19	Fire Season Outlook presentation for Air Quality Commission	Pendleton	Wister
May 19	FBAN/IMET meeting	virtual	Wister

November 29-30	NWS meeting with DEQ	Bend	Wister/Branham
December 7 and 15	Air Quality presentation for Sunridge MS	Pendleton	Wister