

Spokane Fire Weather 2013

New for 2013:

- The experimental bulleted FWF format is now official for Region 6.
- A section in the main operating plan was added regarding the use of social media, such as Twitter and Facebook.
- A new zone (FWX Zone 674) was added to the Spokane forecast area.

LOCATION:

National Weather Service Office
2601 North Rambo Road
Spokane, WA 99224-9164

HOURS:

Office hours at NWSO Spokane for Fire Weather will be as follows: Daily 24 Hour forecast and briefing coverage

The Fire Desk is staffed daily 0700-1500 Mid April - Mid October

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John Fox	Senior Forecaster/IMET
Paul Bos	Senior Forecaster
Matt Fugazzi	Senior Forecaster
Greg Koch	Senior Forecaster
Jeffrey Cote	Forecaster
Robin Fox	Forecaster
Laurie Nisbet	Forecaster
Rocco Pelatti	Forecaster

Ellie Kelch Forecaster
Steve Bodnar Forecaster
Steven Van Horn Forecaster

COMMUNICATIONS:

All forecasts are available on WIMS, and on Spokane's Internet home page. Customers who do not have access to WIMS, or Internet can still have forecasts faxed to them.

Internet Address:

<http://www.wrh.noaa.gov/firewx/?wfo=otx>

<http://www.wrh.noaa.gov/otx>

<http://www.weather.gov/spokane>

WEATHER BRIEFINGS

Internet based weather briefings are available from the Spokane office as needed. During peak fire season, normally mid June-early October briefings will be daily at 0900 PDT. During Land Management season briefings are available by customer request and are usually held twice per week for planning purposes. The phone number is 877-783-9070. The passcode is available by calling our office. Phone briefings are available 24 hours per day by calling 509-244-5031.

SOCIAL MEDIA

NWS Spokane has a Facebook page, Twitter account, and a YouTube channel. Information about current Fire Weather may be included in these social media feeds, but such information is intended as supplemental information for the general public; it is not intended to meet the specialized needs of the wildland firefighting community.

FORECAST DISTRICT:

The NWSO Spokane has fire weather forecast responsibility for a large portion of protected lands in eastern Washington. Exceptions are the Blue Mountains area, the Yakama Indian Nation lands, the DOE Hanford Site, and portions of the Southeast Department of Natural Resources (DNR) land. These protected lands are the forecast responsibility of the National Weather Service Office Pendleton Fire Weather program.

NWSO Spokane Fire Weather's area of responsibility for Eastern Washington is divided into six districts for fire weather forecasting. In addition, these forecast districts are further sub-divided into ten fire weather zones. See the map for general locations of districts and zones for eastern Washington. The weather zones are comprised of fire danger stations with similar weather and similar trends in weather changes.

NWSO Spokane has forecast responsibility for the Central and Northern Idaho Panhandle. This district has one (1) zone (101) covering the Idaho Panhandle National Forests, Idaho State Lands, and Coeur d'Alene Indian Agency lands.

Agencies Served:

Land management agencies served by the Spokane Fire Weather Office include:

USFS....	Colville NF Wenatchee NF Okanagan NF Idaho Panhandle NF
BLM....	Spokane District Coeur d'Alene District
BIA....	Confederated tribes of the Colville Reservation Spokane Indian Tribe of Indians Coeur d'Alene Tribe of Indians Kalispel Tribe of Indians
NWR...	Turnbull National Wildlife Refuge Columbia National Wildlife Refuge Kootenai National Wildlife Refuge Lake Pend Oreille Wildlife Refuge Sinhalekin Wildlife Refuge
Washington DNR...	Northeast Area Resource Protection Division Southeast Area Resource protection Division
Idaho...	Department of State Lands
Other Public Agencies...	Coulee Dam National Recreation Area Lake Chelan National Recreation Area

FORECAST SERVICES:

Fire Weather Watches and Red Flag Warnings

Red Flag criteria for eastern Washington and Northern Idaho are as follows:

- **“dry thunderstorm” Red Flag criteria is defined as follows:**

Abundant lightning in conjunction with sufficiently dry fuels.

“Abundant” and “Sufficient” are locally defined and verified by NWS offices and their fire agency customers using the following GACC AOP-wide guidelines:

Abundant Lightning:

- 1) Number of lightning strikes that meet climatologically significant criteria, or

2) Areal coverage of lightning such as “Scattered” or $\geq 25\%$

Sufficiently Dry Fuels:

- 1) GACC dryness levels remaining out of the ‘green’ category on the day of and the day following a thunderstorm event, or
- 2) ERC or BI values meeting climatologically significant percentiles or
- 3) Land management declaration

- Sustained surface winds exceeding a 10 minute average of 15 mph combined with relative humidity less than:
 - 15% in the Columbia Basin (zone 673)
 - 25% in the mountainous areas
 - 20% in the lower valley zones (including zone 674)

This is typically (but not always) associated with a dry cold front passage.

These conditions must be verified by at least 2 observation sites (RAWS, METAR, DOT, Agrimet etc) for 2 consecutive hours. **For Idaho Zone 101 the criteria will be at least 2 observations sites for any 3 hours in an 8 hour period.** When using observation sites other than RAWS sites wind speeds will be converted to 10 minute averages.

Special consideration will be given whenever very hot temperatures are combined with very low relative humidity.

- Haines Index of 6 when combined with low relative humidity, typically 15% or below.
- Strong winds Winds that will overcome the environment no matter what the relative humidity.
- An unusually unstable atmosphere This would be associated with a strong thermal trough which typically forms along the east slopes of the Washington Cascades.

The issuance of Red Flag Warnings will take into account fuel conditions, and will be coordinated with land management agencies and other applicable fire weather offices. Typically when 1000 hour fuels are at or below 11%, 100 hour fuels are at or below 6-11% and Live Fuels at or below 120%. In 2013 the NWSFO Spokane will be utilizing the NWCC dryness levels as input into the decision making process for issuing fire weather watches and red flag warnings.

Red Flag Warning Verification Points: Any observation point in the Fire District can be used for verification. The following will be key stations for monitoring purposes.

Zone 673

- Douglas RAWS, Escure RAWS, Saddle Mountain RAWS

Zone 674

- Escure RAWS, TurnBull Wildlife Refuge RAWS, Spokane METAR

Zone 676-677

- Camp Four RAWS , Dry Creek RAWS , Entiat RAWS , Ellensburg METAR

Zone 686 Spokane County portion

- Wellpinit RAWS, Midnight Mine RAWS, Deer park METAR

Zones 680, 682, 685

- NCSB , RAWS, Leecher RAWS , Signal Peak RAWS, Peoh Point RAWS

Zone 684

- Nespelem RAWS , Kramer RAWS , Douglas Ingram RAWS , Oroville RAWS...*****If Kramer RAWS and Oroville RAWS are used to meet red flag conditions at least one other RAWS in the fire zone will need to meet the criteria for at least one hour*****

Zones 686-687

- Kettle Falls RAWS , Midnite Mine RAWS , Gold Mountain RAWS, Deer Mt. RAWS

Zone 101

- Bonners Ferry RAWS, Hoodoo RAWS, Fish Hook RAWS
Magee Peak RAWS, Line Creek RAWS , Nuckols RAWS
Priest Lake RAWS , Saddle Pass RAWS

*****For Idaho Zone 101 the criteria will be at least 2 observations sites for any 3 hours in an 8 hour period.*****

Spot Forecasts

Official spot forecasts will be prepared and disseminated 24 hours a day. All prescribed fire spot forecast requests **MUST BE** accompanied by a recent weather observation that is representative of the burn site. More observations from the burn area will generally result in better spot forecasts. Feedback is imperative to increase the accuracy of spot forecasts. **In addition valid times for spot forecasts will be twelve hours from forecast issuance.** If a fire has a longer duration, a new spot forecast should be requested. In addition if a spot is requested for the next day please provide afternoon observations and indicate in the remarks section if the spot is needed immediately for planning or for a specific time the next burn period.

Spot forecasts may be requested by a telephone call to the fire weather forecaster or through the spot forecast request web page available on the Spokane fire weather web page at: **<http://spot.nws.noaa.gov/cgi-bin/spot/spotmon?site=otx>**

“Spot forecasts are available year-round to all Federal, State and Local government entities for wildfire suppression, prescribed burns (for hazardous fuel reduction), search

and rescue missions, HAZMAT incidents, or for any other land management activity that directly supports federal resources or the safety of civilians and forests. Spot forecasts cannot be provided to Local and State governments for non-fire/range management activities such as spray projects, road building, tree planting, recreational events, and prescribed burns (other than for hazardous fuel reduction) that do not have the potential to escape and threaten life and property."

GEOGRAPHICAL AREA DESCRIPTIONS

The National Weather Service Office in Spokane has fire weather forecast responsibility for protected lands in the northern and central part of eastern Washington and the northern and central Idaho Panhandle. Exceptions are the Blue Mountains area, the Yakama Indian Reservation, and portion of the Southeast Department of Natural Resources (DNR) protected lands. Forecasts for these areas are handled out of the National Weather Service office in Pendleton (see zone descriptions below).

WFO Spokane's eastern Washington fire weather area is divided into six districts. In addition, these forecast districts are further sub-divided into eleven fire weather zones. See the map for general locations of districts and zones for eastern Washington. The fire weather zones are comprised of fire danger stations with similar weather and similar trends in weather changes.

South Central District:

This district consists of two zones. Zone 676 lower elevations and Zone 680 higher elevations. The south central district covers those areas of the southern Washington Cascades north of the Yakama Indian Reservation to Mission Ridge. The district boundary also runs west to east from the Cascade crest to Interstate 82. This includes the Naches and Cle Elum Ranger Districts of the Wenatchee National Forest. This district has pronounced climate differences, from the marine air influence near the Cascade crest, to the dry arid climate of the valleys. This district has a relatively low frequency of lightning, and averages about 7-10 storm-days per season from June through September.

Central District:

This district has two zones. Zone 677 lower elevations and Zone 682 are the two zones in this district. This district extends from Mission Ridge north to Sawtooth Ridge, and from the Cascade crest east to the Columbia River. It includes the northern part of the Wenatchee NF. Lightning frequency averages around 10-15 storm-days per season. The summer climate is similar to the South Central District, but winds tend to be stronger and more persistent, and day to day weather changes are more pronounced. This district contains some of the highest fire hazard areas in the Pacific Northwest.

Northern District:

This district has three zones. Zone 687 is the Okanogan Highland zone. Zone 684 lower elevations, mainly the Okanogan River Valley, and zone 685 higher elevations of the North Cascades. This district extends across the north part of eastern Washington from the Cascade crest to the Kettle River Ranger District on the east. It includes the Okanogan NF, the Republic Ranger district of the Colville NF, land under the protection

of Northeast Department of Natural Resources, and the western and central parts of the Confederated Tribe of the Colville Indians. The marine influence is minimal in this district compared to the south central and central districts due to its more continental location. Winds are generally lighter than central and south central districts. Lightning activity though is greater, averaging about 15 storm-days per season.

Northeast District:

Zone 686. The northeast district extends from the Kettle River to the Idaho border, and south to the Spokane and Little Spokane rivers. It covers the remainder of the Colville NF and The Confederated Tribe of Colville Indians, as well as lands under the jurisdiction of Northeast DNR and the Spokane Tribes of Indians. This district is normally a bit wetter than the other districts since it extends into the western foothills of the Rocky Mountains. The southern portion around the lower elevations in the vicinity of Deer Park is slightly drier, windier section of this district. Lightning frequency is the greatest of any of the districts averaging 15-20 storm-days per season.

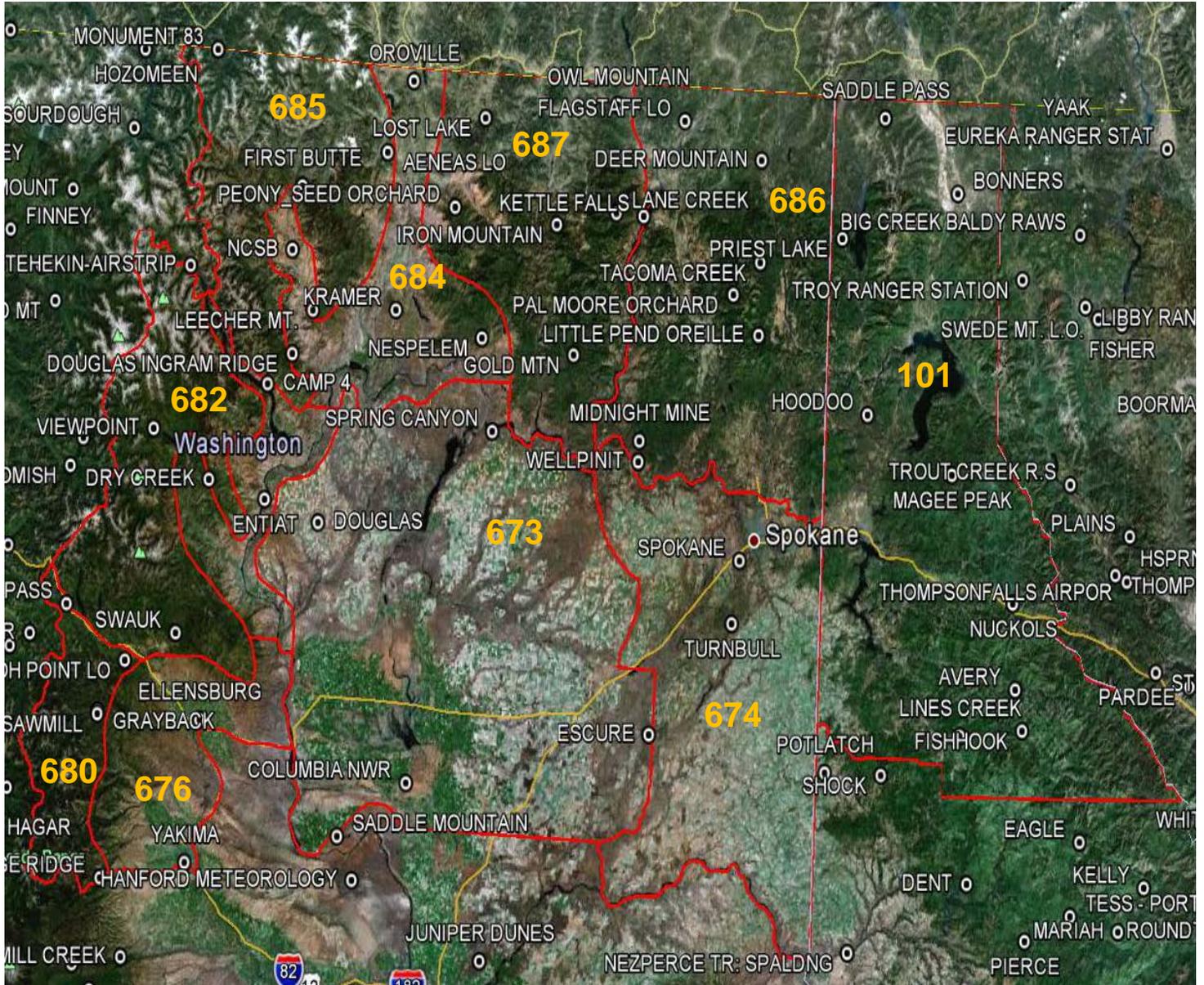
Northern Columbia Basin District:

This district has two zones. Zone 673, and A NEW Zone 674 (See map on next page). Pendleton weather office has responsibility for a large portion of Washington State DNR Southeast Region lands, Yakama IA, and DOE Hanford. The southern boundary is I-90 for that part of the Yakima Firing Center in Kittitas County then follows county lines west to east across Grant, Adams, and Whitman Counties. The western part of the district boundary is the Columbia River at the Grant County line. The northern boundary is the same as previous years following the Columbia River to the eastern Ferry County then south across the northeast part of Lincoln County to Highway-2 near Davenport then east along the Spokane and Little Spokane rivers to Idaho state line. Fuels in this district consist of mainly grass and sage with areas of mixed conifer developing for the northeast portion of zone 674. Zone 673 includes the Waterville Plateau which contains low ridges and coulees and the lower Columbia basin. Most of the district is at fairly low elevations between 900 and 3,000 ft...the exception being Badger Mountain near Waterville at 4,221 feet. Zone 674 includes the Washington Palouse to the south...the west Plains near Spokane and Mica peak to the north. This zone is slightly higher and wetter than zone 673 with elevations from 900-100- feet near the Snake river with several buttes and small mountains above 3000 feet with the highest point at Mica Peak at over 5000 feet. Due to the relatively low elevations and locations, these are the warmest and driest districts. Winds in some areas can be very strong. Lightning activity is the least of the districts, averaging about 6 storm-days per season.

Northern and Central Idaho Panhandle District:

This District is part of Region 1 and has one zone. Northern and Central Idaho Panhandle Zone 101 - Northern and Central Idaho Panhandle. This zone includes...Idaho Panhandle National Forests, Coeur d'Alene Tribes of Indians, and Idaho State protected lands in the following counties: Boundary, Bonner, Kootenai, Benewah, Shoshone, and the northern part of Latah County where a part of the St. Joe District resides. Zone 101 is broken into three (3) separate zones the Northern zone, Central zone and Southern zone. This area averages 12-15 thunderstorm days per season.

Spokane Fire Weather Forecast Zones in Washington



NWS Spokane NFDRS Station Index

<u>ZONE</u>	<u>NAME</u>	<u>Type</u>	<u>NUMBER</u>	<u>OWNER</u>	<u>LAT</u>	<u>LON</u>	<u>ELEV</u>
673	Escure	R	453601	BLM	47.07	-117.98	1725
673	Columbia NWR	R	453102	FWS	46.87	-119.33	890
673	Spring Canyon	R	453002	NPS	47.93	-118.93	1340
673	Saddle Mtn	R	452701	FWS	46.69	-119.69	650
673	Douglas	R	452601	BLM	47.62	-119.90	2530
674	Escure	R	453601	BLM	47.07	-117.98	1725
674	Turnbull Wildlife	R	453506	FWS	47.41	-117.53	2250
674	Spokane Airport	M	453505	NWS	47.60	-117.50	2365
676	Ellensburg	M	452203	DNR	47.03	-120.54	1560
677	Dry Creek	R	452134	USFS	47.72	-120.53	3480
677	Camp 4	R	452132	USFS	48.02	-120.23	3773
677	Entiat	R	452136	USFS	47.67	-120.21	796
680	Peoh Point	R	452206	DNR	47.15	-120.95	4020
680	Sawmill Flats	R	452221	USFS	46.98	-121.08	3500
680	Sedge Ridge	R	452306	DNR	46.58	-120.90	4300
682	Viewpoint	R	452128	USFS	47.85	-120.87	3760
682	Swauk	R	452219	USFS	47.25	-120.67	3773
682	Alpine Lookout	M	452127	USFS	47.80	-120.85	6237
684	NCSB	R	452030	USFS	48.43	-120.14	1650
684	Oroville	R	452039	BLM	48.96	-119.49	1360
684	Nespelem	R	452009	BIA	48.21	-119.02	1782
684	Douglas Ingram Rdg	R	452035	USFS	48.12	-120.10	3460
684	Kramer	R	452040	BIA	48.27	-119.52	2720
685	83Monument	R	452036	USFS	49.00	-120.65	6500
685	Leecher	R	452020	USFS	48.25	-120.00	5019
685	First Butte	R	452006	USFS	48.62	-120.11	5500
685	Aeneas	R	452001	DNR	47.70	-119.60	5167
686	Midnite Mine	R	452913	BLM	47.94	-118.09	2693
686	Pal Moore Orchard	R	452915	USFS	48.39	-117.43	3120
686	Kettle Falls	R	452916	NPS	48.61	-118.12	1310
686	Tacoma Creek	R	453413	USFS	48.49	-117.43	3300
686	Little Pend Oreille	R	453416	FWS	48.27	-117.43	2020
686	Deer Mountain	R	453412	USFS	48.80	-117.45	3300
686	Wellpinit	R	452918	BIA	47.88	-118.10	2240
687	Peony	R	452038	USFS	48.59	-119.21	3600
687	Brown Mountain Ochd	R	452514	USFS	48.54	-118.69	3210
687	Owl Mountain	R	452513	USFS	48.94	-118.30	4400
687	Lane Creek	R	452511	USFS	48.61	-118.28	4500
687	Gold Mountain	R	452510	BIA	48.18	-118.49	4636
687	Iron Mountain	R	452512	USFS	48.56	-118.62	4325

687	Lost Lake	R	452029	USFS	48.87	-119.06	3760
687	Peony	R	452038	USFS	48.59	-119.21	3600
101	Bonnors Ferry	R	100101	USFS	48.72	-116.35	2310
101	Magee Peak	R	100425	USFS	47.89	-116.31	4856
101	Fish Hook	R	100421	USFS	47.86	-115.91	4700
101	Hoodoo	R	100208	USFS	48.05	-116.84	2270
101	Lines Creek	R	100424	USFS	48.15	-116.29	5120
101	Nuckols	R	100423	USFS	47.54	-115.97	4000
101	Priest Lake	R	100204	USFS	48.60	-116.96	2600
101	Saddle Pass	R	100107	USFS	48.98	-116.79	5120