

NWS Great Falls Fire Weather Services and Information

Location

The National Weather Service Office in Great Falls is located at 5324 Tri-Hill Frontage Road, 1 mile southwest of I-15 exit 277 on Tri-Hill Frontage Road. The mailing address is:

National Weather Service
5324 Tri-Hill Frontage Road
Great Falls, Montana 59404-4933

Contact Information

Fire Weather Desk: 406-453-8429 Forecast Operations: 406-453-2081 Fax: 406-453-3812	Donald Britton Meteorologist in Charge Donald.Britton@noaa.gov
Bob Hoenisch Incident Meteorologist Fire Weather Program Assistant Manager Robert.Hoenisch@noaa.gov	Megan VanDenHeuvel Warning Coordination Meteorologist Megan.VanDenHeuvel@noaa.gov
Brian Waranauskas Lead Forecaster Fire Weather Program Manager Brian.Waranauskas@noaa.gov	

Websites

Great Falls area general weather information: <http://weather.gov/greatfalls>

Great Falls area fire weather information: <http://www.wrh.noaa.gov/firewx/?wfo=tx>

National fire weather information: <http://weather.gov/fire>

Operational Hours

NWS Great Falls is staffed 24 hours a day, 7 days a week with meteorologists trained in handling fire weather support requests.

Fire Weather Services

Fire Weather Planning Forecasts, site specific Spot Forecasts, NFDRS Forecasts, Fire Weather Watches, and Red Flag Warnings will generally follow the format as outlined in the **Basic Fire Weather Forecast Services** of the **Northern Rockies Fire Weather Operations Plan**. The Fire Weather Planning Forecast product will be issued on a routine basis through the fire season for various land and fire managers within the Great Falls Fire Weather District. The specific beginning/ending dates of these products vary slightly each year depending on fire season activity.

Non-routine products such as the Fire Weather Watch and Red Flag Warning will be issued when conditions warrant. Coordination between the Great Falls forecast office and the land management agencies is of utmost importance to keep each other informed on fuel and weather conditions. The agency dispatch offices in the Great Falls fire weather district will be alerted via telephone upon issuance of any Fire Weather Watch or Red Flag Warning.

Routine Product Issuance Times

[Fire Weather Planning Forecasts](#)

Spring: Mornings daily 0600-0630

Wildfire Season Mornings Daily 0600-0630 and Afternoons Daily 1500-1530

Fall: Mornings daily 0600-0630

[Graphical Forecast Products](#)

Daily 0600 and 1600

[National Fire Danger Rating System \(NFDRS\) forecast product](#)

Daily 1500-1530

Spot Forecasts

Spot forecasts are requested and disseminated using an Internet website-based protocol. This system is interactive, and may be accessed by land/fire managers, fire crews and dispatchers. Users will be asked to specify their primary concerns on an individual project such as smoke dispersion, eye-level winds, afternoon relative humidities, etc. Forecasters will address these concerns and provide general fire weather information in the Spot forecast, providing a detailed, timely decision-making tool to our fire weather partners. For assistance on submitting and processing Spot requests, please contact NWS Great Falls. As a back-up to the website-based system, Spot requests can be submitted via fax (406 453-3812) or phone call (406-453-8429). When faxing requests, a call should be made to NWS Great Falls to give a heads-up and verify fax receipt.

Fire Weather Briefings and Email Notification

NWS Great Falls will offer fire weather briefings via conference call for local land/fire managers as conditions warrant or upon request. Briefings will include an informational package containing data such as satellite images, weather observations, and forecast model data. This information will be accessible to participants via the Internet through the GoToMeeting/GoToWebinar programs.

To request a conference call, contact us anytime. Participant pass-code along with phone number and website information will be made available via email prior to the conference call. Please give as much notice as possible when requesting an internet briefing.

Emails may periodically be sent to provide overviews of upcoming weather events which will have high fire impacts. It is important that you provide the NWS Great Falls a current email address to receive these updates.

Training Services

The Great Falls forecast office has a cadre of meteorologists that are available to support fire weather training requests such as S290, S390, pre-season refresher training and Engine Academies. Refer all training requests or technical support questions to our fire weather program managers or the meteorologist in charge. Due to the nature of and labor rules regarding the forecast office's rotating shift schedule, please provide 3-4 weeks' notice when requesting NWS participation in training events or meetings.

Supported Agencies

The NWS Great Falls fire weather program serves a variety of federal, state and local users across north central and a portion of southwest Montana.

1. **United States Forest Service:** [Lewis and Clark National Forest](#) and [Helena National Forest](#)
2. **Bureau of Land Management:** [Lewistown](#)
3. **Bureau of Indian Affairs:** [Blackfeet, Fort Belknap and Rocky Boy's Reservations](#)
4. **National Wildlife Refuges and National Monuments:** [Benton Lake NWR](#), [Creedman Coulee NWR](#), [Black Coulee NWR](#), [Lake Thibadeau NWR](#), and [Upper Missouri River Breaks NM](#)
5. **Wilderness Areas:** [Gates of the Mountains](#), [Eastern portion of the Bob Marshall Wilderness Complex](#)
6. **State of Montana:** [MT Dept of Natural Resources and Conservation \(DNRC\)](#), various land offices
7. **Counties:** Glacier, Toole, Liberty, Pondera, Hill, Blaine, Phillips, Teton, Fergus, Lewis & Clark, Chouteau, Powell, Cascade, Judith Basin, Wheatland, Meagher, Jefferson, Broadwater, Gallatin

RED FLAG CRITERIA

These are Red Flag events when they occur with Very High or Extreme fire danger conditions:

1. Scattered dry thunderstorms. These are defined as lightning storms accompanied by less than a wetting rain (0.10 inch precipitation or less), often producing erratic, gusty winds.
2. Increased thunderstorm activity, wet or dry, during an extremely dry period.
3. A combination of low relative humidity (RH) and strong or gusty surface winds, or abrupt change in wind direction due to the approach and passage of a cold front, squall lines, or other weather phenomena other than isolated thunderstorms. See the Red Flag Decision Chart below for additional details.
4. Anytime the forecaster foresees a change in weather that would result in a significant increase in fire danger.

Eastern Montana Off-Season Red Flag Warning Criteria

Off-season Red Flag Warning criteria will be utilized during the fall through spring period (generally mid-November through early April), prior to greenup, when the potential for grassland fire development exists during periods of strong winds. Local fire community input is strongly encouraged in order to assess area fuel conditions during this period of limited data.

- Criteria:
- A prolonged period without snow cover
 - Significantly above normal temperatures
 - A combination of strong winds and relative humidity less than 25 percent
 - Conditions expected to persist for 3 hours or more in an 8-hour period

Note that Red Flag Warnings will be issued in addition to and separate from High Wind Warnings for applicable events.

RED FLAG VERIFICATION

Red Flag Warnings for winds and low RH will be considered verified when sustained winds are observed at 15 mph or higher, or gusts of 25 mph or higher, combined with a RH of 20 percent or lower for three observations within, or near the border of, a given fire zone. The three observations can be from one sensor or multiple sensors, but must encompass 3 separate hours out of a consecutive 8-hour period.

RED FLAG DECISION CHART

NWS Great Falls fire weather forecasters utilize this Red Flag Decision Chart as a "first look" at the need for a Red Flag Warning, based on increasing wind and low RH. Typically, Red Flag Warnings are issued when fire danger is rated Very High or Extreme; however, there may be exceptions, as a combination of other current or forecast conditions may exist, beyond the chart values here, that will play into the Red Flag Warning issuance decision. When these exceptions occur, forecasters will coordinate with land/fire managers to ensure all groups understand the factors involved in the decision.

Winds here are the sustained 10-minute average (RAWS).



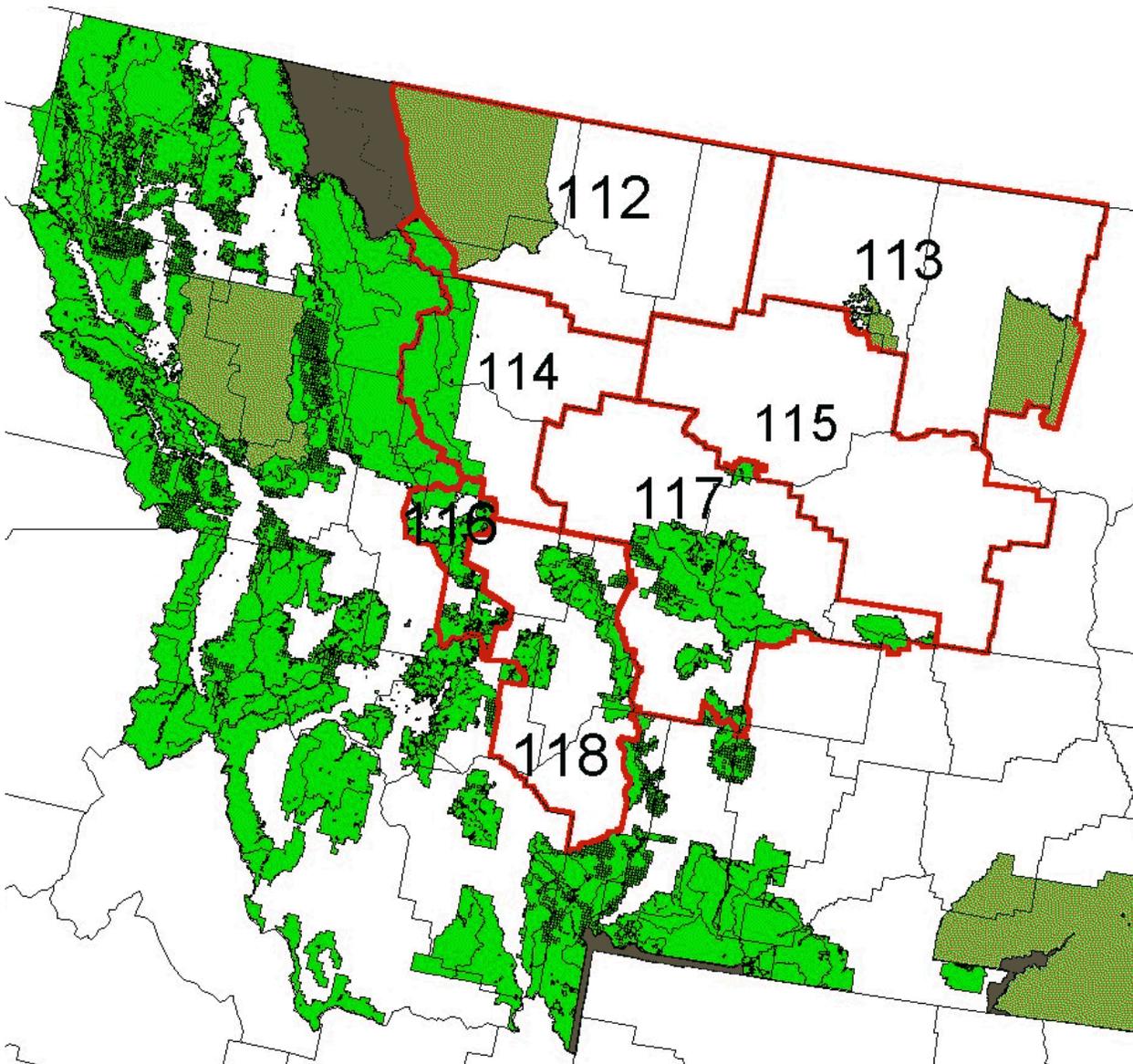
RED FLAG DECISION CHART



		RELATIVE HUMIDITY							
		40%	35%	30%	25%	20%	15%	10%	5%
W I N D M P H	5	NO	NO	NO	NO	NO	Poss	Poss	YES
	10	NO	NO	NO	NO	Poss	Poss	YES	YES
	15	NO	NO	NO	Poss	Poss	YES	YES	YES
	20	NO	NO	Poss	Poss	YES	YES	YES	YES
	25	NO	Poss	Poss	YES	YES	YES	YES	YES
	30	Poss	Poss	YES	YES	YES	YES	YES	YES

Fire Weather District

The NWS Great Falls Fire Weather District covers zones 112 through 118 across north central and a portion of southwest Montana. The map of all wildland fire zones in Montana can be found here: [MT fire zones](#).



NWS Great Falls Zone Descriptions

Zone 112: Blackfoot Indian Reservation/Eastern Glacier County/Toole County/Liberty County/most of Pondera County

This zone starts at the intersection of Glacier National Park (GNP)/Blackfoot Indian Reservation at the Canadian border. The western boundary follows south along the eastern GNP border and intersects and runs south along the eastern border of the Lewis and Clark National Forest (LCNF) until the Pondera/Teton county border. The zone then extends east from this border to include the remainder of Glacier and Pondera counties and all of Toole and Liberty counties.

Zone 113: Hill and Blaine counties including the Rocky Boy's and Fort Belknap Indian Reservations

This zone includes all of Hill County and the majority of Blaine County including all of the Rocky Boy's and Fort Belknap Indian Reservations. This zone however excludes the Upper Missouri National Wild and Scenic River along the southern edge of Blaine County.

Zone 114: Lewis and Clark NF - Rocky Mountain District and portions of the Rocky Mountain Front

The western boundary of this zone begins at the intersection of U.S. Highway 2/GNP/Blackfoot Indian Reservation and runs southwest along U.S. Route 2 until the Continental Divide. The western boundary continues southward along the Continental Divide to include all the western boundary of the Rocky Mountain District of the LCNF until the intersection of the Continental Divide and State Route 279. The northern boundary of the zone starts at the intersection of U.S. Highway 2/GNP/Blackfoot Indian Reservation and runs along the eastern forest boundary until the Pondera/Teton county line. From this point, the zone extends south and east to include all of Teton County and northern and central Lewis and Clark County. More specifically in Lewis and Clark County, the southern border extends due east from the intersection of MT State Route 279, along the 4700' parallel, to the Cascade County line.

Zone 115: Chouteau/Fergus Counties

This zone includes all of Chouteau County, but excludes the Highwood Mountains of the LCNF and the extreme southwest section of the Rocky Boy's Indian Reservation. The zone then extends southeast to include the majority of Fergus County including the Upper Missouri National Wild and Scenic River but excludes the LCNF northern and eastern boundaries, including the Big and Little Snowy Mountains.

Zone 116: All Areas within the Helena and Lincoln Ranger Districts of the Helena National Forest (HNF), but excludes the Scapegoat Wilderness Area and Areas east of I-15

This zone extends from the southern boundary of the Northern Rocky District of the LCNF and the southern boundary of the Scapegoat Wilderness Area southward to include all the HNF, including the Lincoln and Helena Ranger Districts west of Interstate 15.

Zone 117: All of the Central and Eastern LCNF Areas, including Cascade, Meagher, and Judith Basin Counties

This zone includes all of Cascade and Judith Basin counties, including a small portion of southern Chouteau County to include the Highwood Mountains (LCNF), and east to include the southwest portion of Fergus County specified in Zone 115. The zone then continues south through Meagher County with the western border being along the eastern edge of the HNF and the southern border being along the southern Meagher county line until the Crazy Mountains. The southern border of the zone includes the LCNF portion of the Crazy Mountains.

The southern zone boundary then finishes up along the Meagher/Wheatland county line where it intersects with the southern edge of the Little Belt Mountains (LCNF).

Zone 118: Areas within the Helena NF east of Interstate 15, including the Townsend and Helena Ranger Districts

This zone includes portions of southern Lewis and Clark County, western Meagher County, all of Broadwater County, eastern Jefferson County, and northwest Gallatin County.

List of RAWS/NFDRS Stations by Fire Weather Zone

Zone	Station Name	WIMS #	County	Lat	Long	Elevation	Info
112	St. Mary	240303	Glacier	48.70	113.40	4500	SRYM8
112	Deep Creek BFA	240308	Glacier	48.36	113.11	5340	DCRM8
112	Browning BFA	240307	Glacier	48.56	113.01	4384	BGRM8
112	Heart Butte		Pondera	48.29	112.86	4439	HRTM8
113	Fort Belknap	240705	Blaine	48.33	108.72	2665	FBLM8
113	Little Bull Whacker	240704	Blaine	47.81	109.02	3100	LBCM8
113	Rocky Boy	240601	Hill	48.26	109.78	3800	RBCM8
114	Benchmark	241901	Lewis & Clark	47.49	112.87	5350	BEFM8
114	Gates Park	241909	Teton	47.79	112.94	6900	GPKM8
114	Gleason	241802	Teton	47.87	112.67	5200	GSNM8
115	Armells Creek	242205	Fergus	47.58	108.87	2820	ARMM8
115	Little Snowy	242207	Fergus	46.75	109.02	4975	LSNM8
116	Lincoln	241904	Lewis & Clark	46.97	112.64	4597	LNCM8
117	Porphyry	243402	Meagher	46.84	110.72	8232	PHYM8
117	White Sulphur Springs	243403	Meagher	46.53	110.89	5060	WSSM8
117	Dearborn		Lewis & Clark	47.13	111.91	3518	DBOM8
117	South Fork Judith		Judith Basin	46.72	110.41	6300	SFJM8
118	Helena	241907	Lewis & Clark	46.72	112.00	3840	HRWM8
118	Ginger	243302	Broadwater	46.33	111.59	4370	GINM8
118	Elkhorn		Broadwater	46.3147	111.70	6010	EKHM8