

2008 NWS Great Falls Fire Weather Office

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

Michael Mercer
Meteorologist in Charge
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Dan Reilly
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Bob Hoenisch
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Fire Weather Program manager
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Fire Weather Desk: (406)-453-8429
Office: (406)-453-2081
Fax: (406)-453-3812

Internet Address

General Weather Information: <http://www.wrh.noaa.gov/greatfalls> or
weather.gov/greatfalls

Operational Hours

The National Weather Service Office at Great Falls is staffed 24 Hours a day with meteorologists adept in handling fire weather requests.

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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

June - September Daily 1530

Fire 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 Managers within the Great Falls Fire Weather District. The specific beginning/ending dates of these products are negotiable depending on how active the fire season is.

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 will be of utmost importance here as far as keeping each other informed on fuel and weather conditions. The dispatch offices in the Great Falls Fire Weather district will be alerted via telephone upon issuance of any Fire Weather Watch or Red Flag Warnings.

Spot Forecasts

Spot forecasts are requested and disseminated using a "web-based system" via the Internet. This system is interactive, and may be accessed by the individual burners as well as the 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 focus on these concerns, and therefore provide a more useful decision-making aide to the users in a more timely manner. All the above parameters will be included in the case of a wildfire spot request. For detailed instructions on working with this system, please contact the NWS at Great Falls. As a "back-up" to the web-based system, the Spot Forecast may be requested via the old "FAX Method" [(406) 453-3812]. When faxing requests, a call should be made to the Great Falls office to give a heads-up and for verification of receipt.

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Fire Weather Briefings

The National Weather Service in Great Falls and Billings will offer fire weather briefings via conference call for local land managers. The conference call briefings will be held twice a week. During wildfire season, conference call briefing frequency can be increased at the request of the local land managers. The exact start date and times of these briefings will be decided in coordination with local land managers.

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 prior to each conference call. Please go to the web-briefing page five to ten minutes prior to the conference call to ensure all data can be downloaded by the start of the briefing.

To participate in the conference call, please call our office (406-453-8429) for the participant pass code and phone #. The internet site for Fire Weather Briefings is will be linked to the Great Falls and Billings fire weather web sites and available upon request before the briefings begin.

RED FLAG CRITERIA

These are Red Flag events when they occur with Very High, or Extreme Fire Dangers.

1. Scattered dry thunderstorms. (A lightning storm accompanied by less than a wetting rain, 0.10 inch precipitation or less, often with very gusty winds).
2. Increased thunderstorm activity, wet or dry, during an extremely dry period.
3. A combination of low RH's and increasing strong or gusty surface winds, or abrupt change in direction due to the approach and passage of a cold front, squall line, or other weather phenomena other than isolated thunderstorms. See the Red Flag Decision Chart.
4. Anytime the forecaster foresees a change in weather that would result in a significant increase in fire danger.

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RED FLAG VERIFICATION

Red Flag Warnings for Winds and RH will be considered verified when sustained winds are observed at 15 mph or higher, or Gusts of 25 mph or higher, combined with an RH of 20 percent or lower for three observations within, or near the border of, a given 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

Great Falls Fire Weather Forecasters utilize a 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 greater. However, there may be exceptions. This chart is by no means an absolute.

Winds are 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

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Agencies Served

The Great Falls Fire Weather program serves a variety of Federal and State users across north central and a portion of southwest Montana.

1. United States Forest Service

[Lewis and Clark National Forest](#)

[Helena National Forest](#)

2. Bureau of Land Management

[Lewistown](#)

3. Bureau of Indian Affairs

Blackfeet

Fort Belknap

Rocky Boys

4. National Wildlife Refuges

Benton Lake

Creedman Lake

Black Coulee

Lake Thibadeau

Upper Missouri National Wild and Scenic River

5. Wilderness Areas

[Gates of the Mountains](#)

Eastern portions of the [Bob Marshall](#)

6. State of Montana

[Department of Natural Resources and Conservation](#)

Various Land Offices

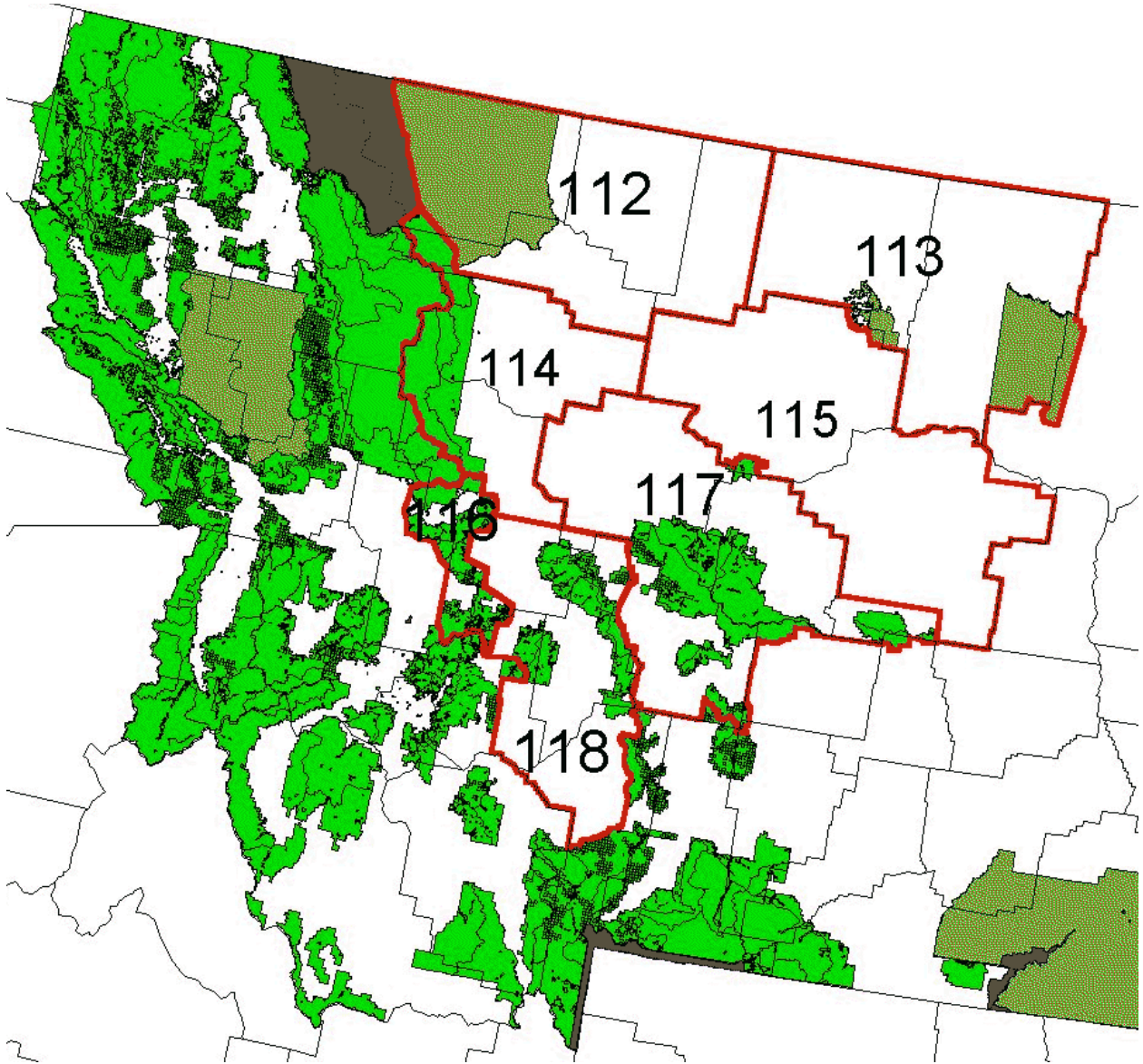
7. Counties

Glacier, Toole, Liberty, Pondera, Hill, Blaine, Phillips, Teton, Fergus, Lewis & Clark, Chouteau, Powell, Cascade, Judith Basin, Wheatland, Meagher, Jefferson, Broadwater, Gallatin

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Fire Weather District

The NWS Great Falls Fire Weather [District](#) covers zones 112 through 118 across north central and a portion of southwest Montana.



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NWS Great Falls Zone Descriptions

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

This zone starts at the intersection of Glacier NP/Blackfeet Indian Reservation at the Canadian border. The western boundary follows south along the eastern Glacier NP border and intersects and runs south along the eastern border of the Lewis and Clark NF 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 Boys and Fort Belknap Indian Reservations

This zone includes all of Hill county and the majority of Blaine county including all of the Rocky Boys 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. Route 2/ Glacier NP/Blackfeet 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 Lewis and Clark NF until the intersection of the Continental Divide and State Route 279. The northern boundary of the zone starts at the intersection of U.S. Route 2/Glacier NP/Blackfeet 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 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 to exclude the Highwood Mountains of the Lewis and Clark NF and the extreme southwest section of the Rocky Boys Indian Reservation. The zone then extends southeast to include the majority of Fergus county including the Upper Missouri National Wild and Scenic River but excluding the northern and eastern boundary of the Lewis and Clark NF which includes the Big and Little Snowy Mountains.

Zone 116: All Areas within the Helena and Lincoln Ranger Districts of the Helena NF, but to exclude the Scapegoat Wilderness Area and Areas east of I-15

This zone extends from the southern boundary of the Northern Rocky District of the Lewis and Clark NF and the southern boundary of the Scapegoat Wilderness Area...south to include all the Helena NF, including the Lincoln and Helena Ranger Districts west of I-15.

Zone 117: All of the Central and Eastern Lewis and Clark NF 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 of the Lewis and Clark NF, 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 Helena NF and the southern border being along the southern Meagher county line until the Crazy Mountains. The southern border of the zone includes the Lewis and Clark NF 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 of the Lewis and Clark NF.

Zone 118: Areas within the Helena NF east of I-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, and northwest Gallatin county.

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List of RAWS/NFDRS Stations by Fire Weather Zone

Zone	Station Name	WIMS #	County	Lat	Long	Elevation
112	St. Mary	240303	Glacier	48.70	113.40	4500
112	Deep Creek BFA	240308	Glacier	48.36	113.11	5340
112	Browning BFA	240307	Glacier	48.56	113.01	4384
113	Fort Belknap	240705	Blaine	48.33	108.72	2665
113	Little Bull Whacker	240704	Blaine	47.81	109.02	3100
113	Rocky Boy	240601	Hill	48.26	109.78	3800
114	Benchmark	241901	Lewis & Clark	47.49	112.87	5350
114	Gates Park	241909	Teton	47.79	112.94	6900
114	Gleason	241802	Teton	47.87	112.67	5200
114	Badger Pass	241601	Pondera	48.13	113.02	6900
115	Armells Creek	242205	Fergus	47.58	108.87	2820
115	Little Snowy	242207	Fergus	46.75	109.02	4975
116	Lincoln	241904	Lewis & Clark	46.97	112.64	4597
117	Porphyry	243402	Meagher	46.84	110.72	8232
117	White Sulpher Springs	243403	Meagher	46.53	110.89	5060
118	Helena	241907	Lewis & Clark	46.72	112.00	3840
118	Ginger	243302	Broadwater	46.33	111.59	4370

2008 NWS Great Falls Fire Weather Operations Plan