

# Glasgow Fire Weather 2012

## Location

The National Weather Service in Glasgow, Montana is located across the street from the Glasgow International Airport. The mailing address is:

National Weather Service  
101 Airport Road  
Glasgow, MT 59230

## Important Phone Numbers and Office Information

24 Hour Fire Weather Desk: (406) 228-9622 or (406) 228-4042  
Administrative line: (406) 228-2850  
Fax (406) 228-9627

Internet <http://www.weather.gov/glasgow>

Fire Wx Site <http://www.wrh.noaa.gov/firewx/?wfo=ggw>

Benjamin Moyer  
Meteorologist in Charge  
E-mail: [Benjamin.Moyer@noaa.gov](mailto:Benjamin.Moyer@noaa.gov)

Patrick M. Gilchrist  
Fire Weather Program Manager / Incident Meteorologist  
E-mail: [patrick.gilchrist@noaa.gov](mailto:patrick.gilchrist@noaa.gov)

Rob Smith  
Assistant Fire Weather Program Manager / Incident Meteorologist Trainee  
E-mail [rob.smith@noaa.gov](mailto:rob.smith@noaa.gov)

Tanja Fransen  
Warning Coordination Meteorologist  
E-mail: [tanja.fransen@noaa.gov](mailto:tanja.fransen@noaa.gov)

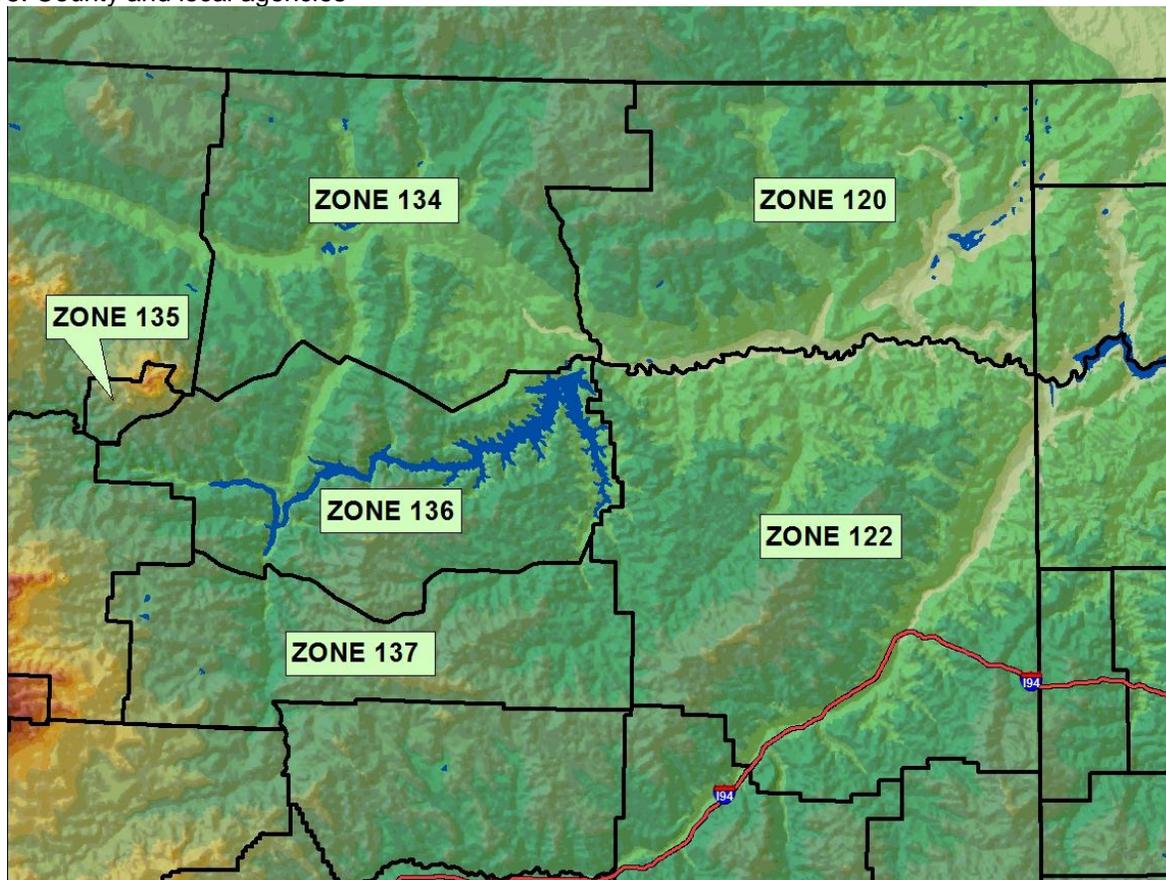
## Area and Agencies Served

The Glasgow Fire Weather District covers Zones 134 through 137 and Zones 120 and 122 in Northeast Montana. The Glasgow NWS office will issue detailed forecasts to fire control agencies in the area encompassing northeast Montana. Agencies served include:

1. Bureau of Land Management  
Lewistown and Miles City District
2. Bureau of Indian Affairs  
Fort Peck Reservation
3. US Fish and Wildlife Service  
Bowdoin Refuge  
Charles M. Russell Refuge  
Hewitt Lake Refuge  
Lamesteer Refuge  
Medicine Lake Refuge  
War Horse Refuge

4. Montana Department of Natural Resources and Conservation

5. County and local agencies



#### Forecast Zone Descriptions

##### **ZONE 134: NORTHERN VALLEY AND NORTHERN PHILLIPS COUNTIES**

This area consists of Phillips and Valley Counties in Northeast Montana north of Beaver and Willow creeks excluding portions of the Fort Belknap Indian Reservation lands in Phillips County, and excluding portions of Fort Peck Indian Reservation in Valley County. This also includes portions of the Lewistown District of the BLM, Montana state lands, and National Wildlife Refuge lands.

##### **MTZ135: THE LITTLE ROCKIES**

This zone is defined on the north by the Fort Belknap Indian Reservation boundary; on the west by the Phillips County line; to the south by the CMR boundary; and to the east by highway 191. This zone includes the portions of the Lewistown District of the BLM, and Montana state lands.

##### **ZONE 136: THE LOWER MISSOURI RIVER BREAKS INCLUDING THE CHARLES M RUSSELL NATIONAL WILDLIFE REFUGE**

This zone is defined on the north by Beaver and Willow creeks; on the west by highway 191 and the western CMR boundary; on the south by Dovetail creek, the

middle fork of Lodge Pole creek and Big Dry creek; and on the east by the eastern CMR boundary. This zone includes the entire CMR NWR north and south of the Missouri river, as well as portions of the Lewistown and the Miles City Districts of the BLM, and Montana state lands.

### **ZONE 137: SOUTHERN PETROLEUM AND SOUTHERN GARFIELD COUNTIES**

This area consists of Petroleum and Garfield Counties in northeast Montana south of Dovetail creek, the middle fork of Lodge Pole creek and Big Dry creek. This also includes portions of the Lewistown District and the Miles City district of the BLM, and Montana state lands.

### **ZONE 120: FORT PECK INDIAN RESERVATION**

Northeast Montana includes the Fort Peck Indian Reservation, portions of the Lewistown District of the BLM, and Montana state lands, and National Wildlife Refuge Lands. This area consists of Daniels, Sheridan, and Roosevelt Counties, including all of the Fort Peck Indian Reservation within Valley County.

### **ZONE 122: McCONE/RICHLAND/DAWSON/PRAIRIE/WIBAUX COUNTIES**

Zone 122 in Northeast Montana includes portions of the Miles City District of the BLM, and Montana state lands, and National Wildlife Refuge Lands. The area consists of McCone, Richland, Dawson, Prairie, and Wibaux Counties.

## **FORECAST SERVICES**

### **Routine Forecasts:**

Morning Fire Weather Planning Forecasts are issued between 0330 and 0400, 7 days a week during fire season, usually March to November. Specific dates in the above timeframe will be dictated by user needs. Afternoon Fire Weather Planning Forecasts are issued between 1430 and 1500, 7 days a week in July, August, and September. Specific dates of the above timeframe will also be dictated by user needs. Forecasts will be updated when needed.

Since zones 134, 135, 136, 137 and 122 have elevations that fall into the High Level and Mid Level Haines index categories, 2 Haines index values will be provided. The correct Haines Index can then be applied to the appropriate elevation of concern.

### **Non-Routine Products:**

Spot forecasts will be issued upon request. Red Flag Warnings and Fire Weather Watches will be issued as needed. All products will be updated when there is a significant change in the weather and the product is no longer representative of conditions. The following conditions will be considered for Red Flag events when the fire danger is Very High or Extreme:

1. Scattered dry thunderstorms or increased thunderstorm activity, wet or dry, during an extremely dry period.
2. A combination of low relative humidity 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 Red Flag Decision Chart below.
3. In coordination with customers, anytime the forecaster foresees a change in weather that would result in a significant increase in fire danger.

Northeast Montana has a history of very large fall and spring grass fires, which fall

outside the “normal fire season”. A Fire Weather Watch and or Red Flag Warning will be issued to alert users when favorable fire weather conditions are present outside the “normal fire season”.

Rarely, there will be times when extreme or “exceptional” fire weather conditions may overpower flashy fuels, regardless of fuel moisture and season, driving extreme fire behavior. These exceptional conditions, such as single digit humidity and 30 mph winds, will almost always warrant a Red Flag Warning for the impacted zone.

### **Experimental Grassland Fire Danger Index Graphic**

The National Weather Service Office in Glasgow, MT will issue an **experimental** grassland fire danger (GFDI) graphical forecast on its webpage starting in the spring of 2012. The purpose of this product is to provide a decision support tool to local fire wardens, chiefs, and county commissioners who must make the decision on whether or not to issue burn permits for public burning. Forecast elements used in the calculation of the GFDI include temperature, relative humidity, and wind. The GFDI does not incorporate Burning Index, ERC, or Rates of Spread, and relies solely on satellite derived greenness maps to account for fuel status.

The experiment will last through the 2013 fire season at which a product review, which will include customer feedback, will be conducted to evaluate the effectiveness of the graphical product. Other Northern Rockies offices may join in the experiment during its experimental phase.

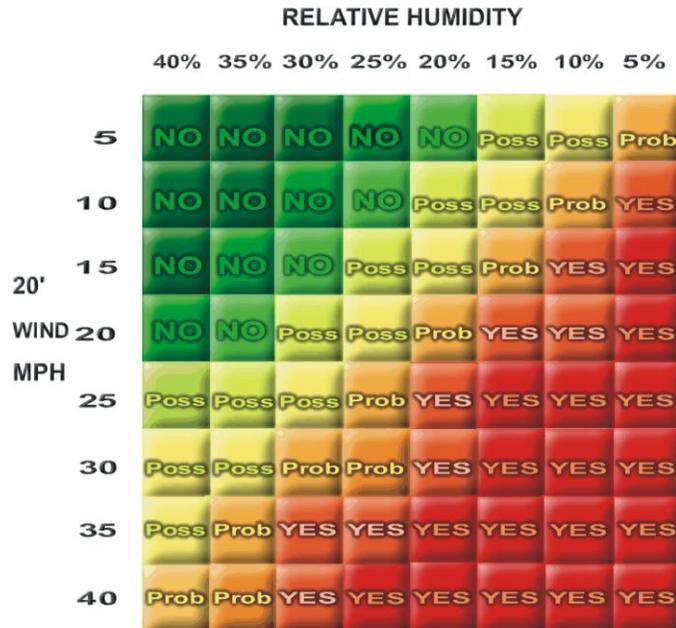
The Graphical GFDI product will be posted to the web automatically at 0400 LDT and 1500 LDT daily. The graphic will display the forecast grassland fire danger index for today, tomorrow and day three. The graphic will provide GFDI values on a scale from 0 to 4 on the following scale:

0. (L)	Low	0 to 2
1. (M)	Moderate	3 to 7
2. (H)	High	8 to 19
3. (V)	Very High	20 to 49
4. (X)	Extreme	50+
(-)	Missing	

### **Red Flag Decision Chart**

The following chart is used as a guideline in the decision making process of a Red Flag Warning when relative humidity and wind are expected to be a factor. This chart is by no means an absolute, and there may be exceptions depending on the weather and fuel situation. Winds are sustained 10 minute averages as RAWS observations measure.

## RED FLAG DECISION CHART



### Verification:

In order to verify a Red Flag Warning, 2 observation sites in a fire weather zone will need to hit red flag conditions as specified above for a combined 3 hours in an 8 hour period. When lightning activity is part of the warning, observed lightning coverage will also be taken into consideration.

### Eastern Montana Off Season Red Flag Warning Criteria

Off Season (Mid November through Early April) Red Flag Warning criteria are to be utilized from Fall through the Spring, prior to Greenup, when the potential for explosive grassland fire development exists during periods of strong winds. Local fire community input is strongly encouraged in order to assess area fuels conditions during this period of limited data.

- Criteria:
- Forecasters should consider how long it has been since significant snow and or rain fell across an area, as well as current fuel conditions.
  - A combination of Strong Winds and Relative Humidity less than 25 percent
  - Conditions persist for 3 hours or more in an 8 hour period

Red Flag Warnings will be issued in addition to and separate from High Wind Warnings.

### NFDRS Forecasts:

Point Forecasts for NFDRS issued between 1400 and 1500, 7 days a week in fire season. The locations for point forecasts include:

<u>WIMS ID</u>	<u>Location</u>	<u>Zone</u>
240807	Zortman Mine	135
240809	Manning Corral	136
240902	Bluff Creek	134
240903	King Coulee	136
241102	Medicine Lake	120

242302	Chain Buttes	136
242303	Dry Blood Creek	137
242403	South Sawmill	136
242501	Poplar	120
244002	Big Sheep Mountain	122

### LIST OF REFERENCE RAWS STATIONS BY FIRE WEATHER ZONE

<b>Zone</b>	<b>Station Name</b>	<b>WIMS #</b>	<b>County</b>	<b>Location</b>	<b>Elev</b>	<b>Aspect</b>
135	Zortman Mine	240807	Phillips	47 deg 55 min N 108 deg 33 min W	4660	Ridge
134	Bluff Creek	240902	Valley	48 deg 52 min N 106 deg 57 min W	2550	Flat
136	King Coulee	240903	Valley	47 deg 48 min N 107 deg 1 min W	2760	Ridge
120	Poplar	242501	Roosevelt	48 deg 8 min N 105 deg 4 min W	2223	Flat
120	Medicine Lake	241102	Sheridan	48 deg 29 min N 104 deg 29 min W	1975	Flat
136	Chain Buttes	242302	Petroleum	47 deg 31 min N 108 deg 3 min W	2928	Ridge N-S
137	Dry Blood Creek	242303	Petroleum	47 deg 15 min N 108 deg 22 min W	3140	Ridge S
136	Manning Corral	240809	Phillips	47 deg 42 min N 108 deg 29 min W	3080	Slope SW
136	South Sawmill	242403	Garfield	47 deg 34 min N 107 deg 32 min W	3230	Ridge W
122	Big Sheep	244002	Prairie	47 deg 1 min N 105 deg 49 min W	3150	Valley W-E
122	Pine Hill		Wibaux	46 deg 47 min N 104 deg 35 min W	2650	Slope E