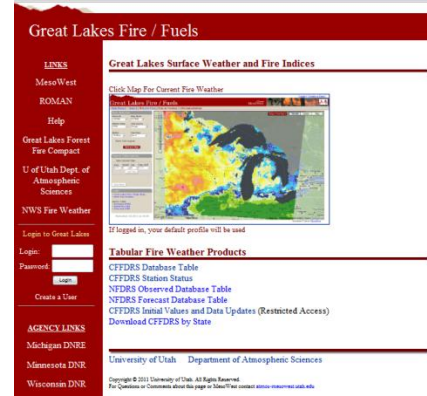


Great Lakes Fire and Fuels

<http://glffc.utah.edu>

Web Portal. Version 1.0

March 1, 2011



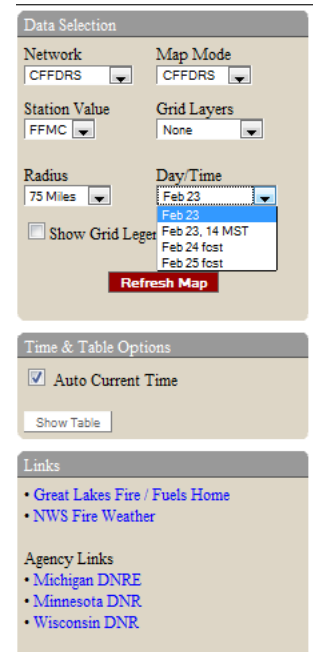
Background

With the support and direction of [Michigan DNRE](#), [Minnesota DNR](#), and [Wisconsin DNR](#) and under the auspices of the [Great Lakes Forest Fire Compact](#), the Great Lakes Fire and Fuels web portal is now available. The purpose of the web portal is to provide retrospective, current, and future information regarding weather and fuel conditions in the Great Lakes region. This product has been under development and available for testing during the past year. It has been extensively revised for the upcoming fire season. Although many of these changes are “under the hood”, users will have simpler access to existing and new features beginning from a new entry page: <http://glffc.utah.edu/>. Please bookmark this page.

Selecting Data

The options to control the map displays have been greatly simplified. The options are:

1. **Network:** type of stations displayed
2. **Radius:** region in which station values are displayed
3. **Map Mode:** MesoWest, CFFDRS, and NFDERS. Options vary depending on the map mode.
 - a. MesoWest mode emphasizes current weather conditions (see <http://mesowest.utah.edu> for more information)
 - b. CFFDRS mode emphasizes current and predicted weather and fuel state for determining wildfire potential
 - c. NFDERS mode provides information on wildfire potential for RAWS stations only ([Explanation of the NFDERS variables](#))



CFFDRS Mode Options

1. **Station Value:** Variable to be displayed. [Explanation of the core CFFDRS variables](#). In addition, Temp (temperature °F), RH (relative humidity, %), Wind (speed in mph), and Precip (precipitation in either past day or hour in inches) are available.
2. **Grid Layers:** None, Image, Image + capability to see gridded values. Grids are computed from NWS analysis and forecast products.
3. The “Show Legend” checkbox defines the colors associated with the station and gridded values.

Time and Table Options

CFFDRS values are computed for conditions daily at 18 UTC (1 PM CDT/2 PM EDT) with some products available for the most recent hour as well. There are 4 times available for all products:

1. Most recent 18 UTC that has already occurred (1 PM CDT/2 PM EDT)
2. Most recent hour (local time is shown)
3. Forecast for next 18 UTC (for example, in the morning, this would be later that day)
4. Forecast for the subsequent 18 UTC (for example, late Friday afternoon this would be Sunday at 1 PM CDT/2 PM EDT)

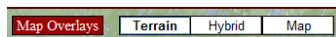
	Date	Temp	RH	Wspd	Pcp	FFMFC	DMC	DC	ISI	BU	FWI	DSR	FDR(Pnts)	FDR
CASS LAKE	2011/3/04	22	54	10	0.02	82	3	11	3.8	3	2	0	None	N
	2011/3/03	21	60	9	0	81.4	3	11	3.8	3	1	0	None	N
	2011/3/02	4	38	4	0	81.1	3	11	3.8	2	1	0	None	N
BARNES	2011/3/04	31	53	7	0.11	61	2	12	2.7	1	0	0	Moderate	Me
	2011/3/03	23	62	10	0	83.8	4	12	4	4	3	0	High	H
	2011/3/02	11	35	5	0	84.8	4	12	4	3	2	0	High	H
Mead	2011/3/04	35	79	5	0.3	36	4	8	3.8	0	0	0	Moderate	Me
	2011/3/03	26	68	13	0	81.9	8	18	7.8	4	4	0	High	H
	2011/3/02	14	39	6	0	81.9	8	18	7.8	2	2	0	High	H
HIBBING	2011/3/04	25	52	10	0.02	87.5	6	15	6	7	6	1	None	N
	2011/3/03	19	65	10	0	90.3	6	15	6	10	8	1	None	N
	2011/3/02	4	0	6	0	98.6	6	15	6	23	16	4	None	N
BAUDETTE	2011/3/04	17	65	10	0.02	82.6	6	15	6	4	3	0	None	N
	2011/3/03	15	58	8	0.01	83	6	15	6	3	2	0	None	N
	2011/3/02	8	37	3	0	83	6	15	6	2	1	0	None	N
LITTLE FALLS	2011/3/04	26	72	11	0.01	78.9	5	15	5.5	3	2	0	None	N
	2011/3/03	21	77	9	0	78.1	5	15	5.5	2	1	0	None	N
	2011/3/02	5	52	4	0	77.9	5	15	5.5	1	1	0	None	N
SEAGULL	2011/3/04	23	55	9	0.05	72.6	6	15	6	1	1	0	None	N
	2011/3/03	15	67	11	0.02	80.9	6	15	6	3	2	0	None	N
	2011/3/02	3	39	9	0	83.2	6	15	6	3	3	0	None	N
MN VALLEY	2011/3/04	29	75	14	0.05	70.3	6	15	6.2	2	1	0	None	N
	2011/3/03	26	81	9	0	78.6	6	15	6.2	2	1	0	None	N
	2011/3/02	10	46	3	0	78.6	6	15	6.2	1	1	0	None	N
HOLLY	2011/3/04	40	76	15	0.08	63.2	0	0	0.2	2	0	0	Low	N
	2011/3/03	26	60	9	0	73.9	0	0	0	2	0	0	Low	N
	2011/3/02	26	48	10	0.02	67.7	0	0	0	1	0	0	Low	N
LIND	2011/3/04	30	61	8	0.09	62.9	2	18	3.7	1	0	0	Moderate	Me
	2011/3/03	22	68	10	0	81.5	4	18	5.1	3	2	0	High	H
	2011/3/02	11	35	5	0	84.8	4	12	4	3	2	0	High	H

By default, the “Auto Current Time” check box is enabled, which corresponds to the present day. Deselecting this check box allows users to select a different year, month, day, or hour. Not all resources (e.g., grids) are available for prior years. You can also select the previous day, or, if the date is set to a prior time, then it is possible to step through a series of days.

Users can toggle between map and tabular summary displays. Selecting a header allows the user to sort the data in ascending or descending order. Values in black refer to the most recent 1800 UTC conditions while blue values indicate forecast values. In the afternoon, the most current values will be for that day with forecasts for the next two CDT days. In the morning, the most current values are from the previous day and the forecasts are for later today and tomorrow.

Selecting the station link will lead to a popup display for that station with access to additional information through the links at the bottom of the popups.

Other Map Features



1. Map Overlays. In addition to the typical Google Maps Layers, users can select NWS Watches/Warnings, NWS radar, county boundaries, and selected other graphical displays of current fire and smoke conditions.
2. Search Option. Enter a street address, latitude/longitude pair, or city, ST to center the map on a specific location
3. Active Fires Option. If an active fire is in the Great Lakes region, select that to center the map on the location of the fire. Options to display smoke, large hotspots, and large fire boundaries are also available.

Profiles

Save Profile | Update Profile | Load Profile

1. In order to use profiles, you must first have a valid "My MesoWest" user account, which can be created at <http://glffc.utah.edu>.
2. To create a default map profile that will be used when logging in, select all the options you prefer, and then select "Save Profile". Give this profile a name and select the "Save as default profile" checkbox.
3. Selecting the "Share this profile with others" checkbox allows you to email others the profile simply.
4. You may create as many profiles you like from map, graphical, and tabular displays and manage them from the "Saved Profiles" popup.
5. Use [this link](#) as an example of a saved profile. If you don't have an account, you may still display the profile using the "View Profile without Logging In" option.

Profile Options

Save a new profile...

Profile Name:

Description:

Share this profile with others?: (yes)

Save as default profile?: (yes)

Save Profile Cancel

WOODRUFF

Observation Closest to 02/22/11 @ 12:00 CST 18:00 UTC [OK](#)

Weather Conditions

Temperature: 29 °F Wind: 5 MPH
Humidity: 46% 24 hr Precipitation: 0 in

CFFDRS: [Temp](#) [Wind](#) [Precip](#) **[FFMC/FWI/ISI](#)** [BUI](#) [DMC](#) [DC](#) [CDSR](#) [help](#)

	2011/2/22	2011/2/23	2011/2/24
FFMC:	84.5	83.9	83.3
DMC:	4	4	4
DC:	13	13	13
BUI:	3	5	4
ISI:	4.3	4.3	4.3
FWI:	2	3	3
DSR:	0	0	0

[Change to UTC Time](#) [More Weather info: WUFW3](#) [Year to Date CFFDRS](#) [Download Data](#)

Map Roll-overs and Popups

1. In CFFDRS mode, rolling the mouse over a station will provide more information for the most recent 18 UTC conditions, i.e., the values of the rollover will not match forecast conditions.
2. Clicking on a station will lead to a popup display that contains thumbnail graphs of daily conditions over the past ten days (solid lines) with the forecasts for the next two daily values shown by dashed lines.
3. The roll-overs and popups in MesoWest and NFDRS modes provide additional information specific to those suites of products.

Station Tabular Displays

1. In CFFDRS mode, selecting "Year to Date CFFDRS" on the bottom of the popup will provide access to tabular displays for a station.
2. Past daily conditions are in black, future in light blue.
3. Selecting the current or past day will provide access to hourly values.
4. Many other options are available in the left menu bar.
5. In NFDRS mode, selecting

STATION INFORMATION

ID: WUFW3
NAME: WOODRUFF
LATITUDE: 45.8875
LONGITUDE: -99.6508
ELEVATION: 1619 ft
MNET: RAW5

[Surface Weather Map](#)
[Contour/Terrain Map](#)

USEFUL LINKS

[Help](#)
[Change to Metric Units](#)
[Change to GMT](#)
Change year: 2011

CFFDRS for WUFW3 in 2011

Hourly CFFDRS are available by clicking on dates.

Observations in italics have either been manually inserted or are averages of observations adjacent in time.

Using the NDFD forecast available on 2/23 at 5:00 CST and 18 hrs observed precipitation.

January 1, 2011 - 12:00		February 24, 2011 - 12:00 CST											
Date Time (CST)	Temperature	Relative Humidity	Wind Speed	Precipitation	FFMC	DMC	DC	ISI	BUI	FWI	DSR	Cumulative DSR	Fire Danger Rating (Obs)
	°F	%	mph	in									
2/24 12:00	27.1	65.0	11.4	0.00	83.3	3.6	13.0	4.3	4.2	2.9	0.2	2.5	High
2/23 12:00	29.9	63.0	11.4	0.00	83.9	3.6	13.0	4.3	4.6	3.1	0.2	1.3	High
2/22 12:00	29.0	46.0	5.0	0.00	84.5	3.6	13.0	4.3	2.9	1.6	0.1	1.1	High
2/21 12:00	21.0	29.0	6.0	0.01	84.3	3.6	13.0	4.3	3.1	1.8	0.1	1.0	High
2/20 12:00	27.0	63.0	6.0	0.00	81.9	3.6	13.0	4.3	2.3	0.9	0.0	0.9	High
2/19 12:00	26.0	46.0	4.0	0.00	81.9	3.6	13.0	4.3	1.9	0.8	0.0	0.9	High
2/18 12:00	26.0	56.0	10.0	0.01	80.0	3.6	13.0	4.3	2.6	1.2	0.0	0.9	High

STATION INFORMATION

ID: CUTM5
NAME: CUTFOOT
LATITUDE: 47.6364
LONGITUDE: -94.0544
ELEVATION: 1300 ft
MNET: RAW5

[Surface Weather Map](#)
[Contour/Terrain Map](#)

USEFUL LINKS

[Help](#)
[Change to Metric Units](#)
[Change to GMT](#)
Change year: 2011

NFDRS for CUTM5 in 2011

Tabular Listing: January 3, 2011 - 13:00 through March 1, 2011 - 13:00 CST

Date Time (CST)	MDL	Temperature	Relative Humidity	Wind Speed	Precipitation	IC	SC	ERC	BI	TEN	HUN	THOU	KBDI	STL	ADJ
		°F	%	mph	in										
3/1 13:00	7N	18.0	42.0	6.9	0.02	0.0	0.0	0.0	0.0	35.0	28.0	34.0	3.0	1	L
2/25 13:00	7N	4.0	34.0	4.6	0.09	0.0	0.0	0.0	0.0	35.0	28.0	31.0	5.0	1	L
2/17 13:00	7N	39.0	85.0	6.9	0.00	0.0	0.0	0.0	0.0	35.0	29.0	33.0	5.0	1	L
2/16 13:00	7N	63.0	24.0	6.9	0.00	0.0	0.0	0.0	0.0	35.0	30.0	37.0	3.0	1	L
2/7 13:00	7N	5.0	47.0	4.6	0.01	0.0	0.0	0.0	0.0	35.0	28.0	34.0	0.0	1	L
2/3 13:00	7N	25.0	63.0	5.8	0.00	0.0	0.0	0.0	0.0	35.0	28.0	30.0	0.0	1	L
2/2 13:00	7N	12.0	38.0	5.8	0.01	0.0	0.0	0.0	0.0	35.0	28.0	29.0	0.0	NA	L
2/1 13:00	7N	13.0	42.0	3.5	0.00	0.0	0.0	0.0	0.0	35.0	28.0	32.0	0.0	1	L
1/31 13:00	7N	4.0	67.0	4.6	0.00	0.0	0.0	0.0	0.0	35.0	28.0	35.0	0.0	1	L
1/27 13:00	7N	26.0	82.0	2.3	0.00	0.0	0.0	0.0	0.0	35.0	28.0	31.0	0.0	NA	L
1/25 13:00	7N	17.0	74.0	6.9	0.00	0.0	0.0	0.0	0.0	35.0	28.0	33.0	0.0	1	L
1/24 13:00	7N	19.0	73.0	2.3	0.00	0.0	0.0	0.0	0.0	35.0	29.0	35.0	0.0	1	L

Year to Date NFDRS, on the popup leads to a tabular display as shown on the right.

- In MesoWest mode, the "Additional Tabular and Graphical Displays" provides detailed information using all available parameters measured.
- Users should be cautioned that it is possible to select options that exit the GLFFC web portal to the MesoWest web site.

STATION INFO
 ID: KY51
 NAME: Viroqua Municipal Airport
 LATITUDE: 43.8794
 LONGITUDE: -90.9131
 ELEVATION: 1292 ft
 MNET: NWS/FAA
 LAND COVER: 2001 USGS
 DATA COURTESY OF: National Weather Service

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OTHER DISPLAYS
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Change to Weather Map
 Change to Graphical Display
 Change to Metric Units
 Change to UTC Time
 Change Date/Time
 Download Data
 2 Week Summary

Weather Conditions for KY51

Current time: March 3, 2011 - 10:29 CST

Most Recent Observations at March 3, 2011 - 10:15 CST

Graphical Links	With Prior Obs	10:15	Max since Midnight	Min since Midnight	24 Hour Max	24 Hour Min
Temperature	Temperature	29.7° F	29.7 at 10:15	17.6 at 0:35	29.7 at 10:15	11.7 at 10:35
Dew Point	Dew Point	22.5° F	22.5 at 10:15	5.9 at 0:15	22.5 at 10:15	-2.7 at 10:35
Wet Bulb Temperature	Wet Bulb Temperature	27.1° F	27.1 at 10:15	14.9 at 0:35	27.1 at 10:15	8.9 at 10:35
Relative Humidity	Relative Humidity	74%	81 at 8:35	59 at 0:15	81 at 8:35	40 at 15:55
Wind Speed	Wind Speed	13 mph from SE	21 at 8:55	8 at 5:35	21 at 8:55	0 at 13:15
Wind Gust	Wind Gust	20 mph	24 at 8:55	18 at 4:15	24 at 8:55	18 at 4:15
Pressure	Pressure	30.28 in	28.95 at 0:15	28.78 at 10:15	29.12 at 10:35	28.78 at 10:15
Sea Level Pressure	Sea Level Pressure	30.23 in	30.45 at 0:15	30.23 at 10:15	30.65 at 10:35	30.23 at 10:15
Altimeter	Altimeter	30.16 in	30.34 at 0:15	30.16 at 10:15	30.52 at 10:35	30.16 at 10:15
1500 m Pressure	1500 m Pressure	25.17 in	25.32 at 0:15	25.17 at 10:15	25.47 at 10:35	25.17 at 10:15
Weather conditions	Weather conditions	overcast	-	-	-	-
Visibility	Visibility	10.00 miles	10.00 at 0:15	10.00 at 0:15	10.00 at 10:35	10.00 at 10:35
Ceiling	Ceiling	6000 feet	12000 at 0:35	5000 at 6:55	12000 at 14:15	5000 at 6:55

Tabular Listing: March 2, 2011 - 10:29 through March 3, 2011 - 10:29 CST

Time(CST)	Temperature	Dew	Wet Bulb	Relative Humidity	Wind Speed	Wind Dir	Wind Gust	Quality	Pressure	Sea Level	Altimeter	1500 m	Weather conditions	Visibility	Ceiling
	° F	° F	° F	%	mph	dir	check		in	in	in	in		miles	feet
10:15	29.7	22.5	27.1	74	13	SE	OK	28.78	30.23	30.16	25.17		overcast	10.00	6000
9:55	28.6	21.9	26.3	76	15	SSE	OK	28.79	30.24	30.17	25.18		overcast	10.00	6000
9:35	27.3	21.4	25.3	78	17	SE	OK	28.79	30.25	30.17	25.18		overcast	10.00	6000
9:15	26.4	20.7	24.5	79	18	SE	OK	28.79	30.25	30.17	25.18		overcast	10.00	6000

Station Graphical Displays

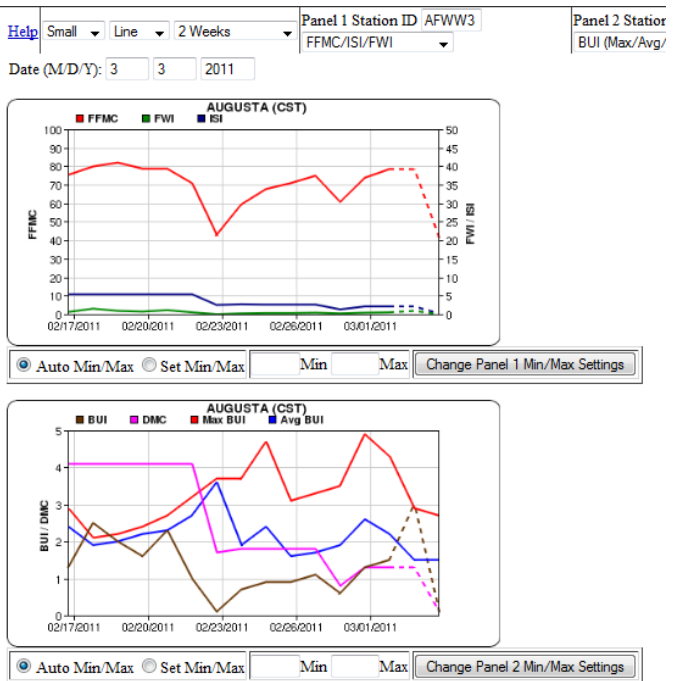
- In CFFDRS mode, it is possible to toggle between Tabular and Graphical Displays.
- Two separate graphics of selected variables can be compared simultaneously.
- In some cases, present conditions are contrasted to the average and maximum values available from prior years. The number of years available for that station can be seen by toggling the "Change year" option in the left menu.

STATION INFORMATION
 ID: AFWW3
 NAME: AUGUSTA
 LATITUDE: 44.6981
 LONGITUDE: -91.1342
 ELEVATION: 970 ft
 MNET: RAW5

Surface Weather Map
 Contour/Terrain Map

USEFUL LINKS
 Help
 Change to Metric Units
 Change to GMT
 Change year: 2010
 Download CFFDRS Data
 Change to Tabular Display
 Data Quality
 Station Information
 Station Status
 Restrictions

DATA COURTESY OF
 Bureau of Land Management
 and
 Wisconsin Bureau of Forest Protection



Station Metadata

Selecting the Station Information option in the left menu bar of the Graphical or Tabular Displays provides access to station siting information.

This information is provided from the MesoWest web site.

AFWW3 station information

SITE INFORMATION
 ID: AFWW3
 NAME: AUGUSTA
 LATITUDE: 44.6981
 LONGITUDE: -91.1342
 ELEVATION: 970 ft / 298 m
 MNET: RAW5

OVERVIEW MAPS
 See other maps:
 • Terrain/topo Map
 • Satellite Map
 • Road Map
 From Google Maps

DATA COURTESY OF
 Bureau of Land Management
 and
 Wisconsin Bureau of Forest Protection

MORE SITE INFO
 COUNTY: Eau Claire
 URBAN/RURAL: METROPOLITAN
 STATE: WISCONSIN
 COUNTRY: US
 TIMEZONE: Central
 NWS REGION: CENTRAL
 CWA: MPX
 NWS ZONE: WI028 Eau Claire
 NWS FIRE: MPX028
 ZONE:
 GACC: EACC Eastern
 SUBGACC: SE MN Central WI Eastern Area

Go to AFWW3 Current Data

LAND COVER & ROUGHNESS

Category	Percent of area
Developed, Open Space	10%
Developed, Low Intensity	5%
Deciduous Forest	24%
Mixed Forest	0%
Grassland/Herbaceous	1%
Pasture/Hay	16%
Cultivated Crops	35%
Woody Wetlands	10%

NEARBY STATIONS

6 mi SE D4731 APRSWXNET/CWOP
15 mi WNW ECRW3 WIDOT
20 mi NNE STRW3 WIDOT
21 mi NW KEAU NWS/FAA
25 mi ESE D0938 APRSWXNET/CWOP
27 mi SSE BRWV3 WIDOT
31 mi SSE BFWW3 RAW5
31 mi SSE BFWW3 HADS
36 mi NE DMLW3 RAW5
37 mi WNW UP460 UPR
37 mi SSW ACW3 WIDOT
38 mi WNW KLUM NWS/FAA
41 mi W DURW3 HADS
44 mi S GALW3 HADS

Scroll down for more stations

How the CFFDRS Station and Gridded Values Are Calculated

Fuels are initialized at stations at the beginning of the fire season and can be updated as needed throughout the year. Observed station values of temperature, wind, moisture, and precipitation are then used following the guidelines of the [Canadian Forest Fire Danger Rating System](#) to calculate the various indices at daily and hourly intervals.

Hourly analyses of temperature, wind, relative humidity, and precipitation are obtained from the [NCEP Real Time Mesoscale Analysis](#) on a 5 km grid nationally. CFFDRS indices for each gridpoint within the Great Lakes region are calculated daily at 18 UTC and hourly.

Forecast weather values for 6-hour periods out to 2 days are obtained four times per day from the [National Weather Service National Digital Forecast Database](#) on the same 5 km grid available for the RTMA. The gridded values are displayed as graphical images with the capability to rollover and see specific values at each gridpoint. The nearest gridded values to specific stations are used to compute the station forecast values.

- At 18:30 UTC, forecast values for the next two days are updated using the NDFD gridded values
- At 00:30 UTC, analyzed weather values from the RTMA grids or station values are used to update what has already taken place. NWS forecasts for the remaining 18 hours of the forecast period for the next day at 18 UTC are then used. Day 2 forecasts use the most current information from the NWS.
- At 06:30 UTC, analyzed values from the RTMA grids or station values over the past 12 hours are used. NWS forecasts for the remaining 12 hours of the forecast period for the present day at 18 UTC are then used. Day 2 forecasts use the most current information from the NWS.
- At 12:30 UTC, precipitation values from the RTMA grids or station precipitation over the past 18 hours are used. NWS forecasts for the remaining 6 hours of the forecast period for the present day at 18 UTC are then used. Day 2 forecasts use the most current information from the NWS.