

National Fire Danger Rating System (NFDRS) Services Provided by the State of Vermont, Department of Forests, Parks & Recreation

The Vermont Department of Forests, Parks & Recreation monitors wildland fuel and weather conditions and provides daily fire danger forecasting for the state of Vermont using the National Fire Danger Rating System ([NFDRS](#)). A daily fire danger rating is issued for each of Vermont's 5 Fire Danger Rating Areas (FDRA) spring through fall. This document serves as a summary of the process and a procedure for implementation.

The Vermont Department of Forests, Parks & Recreation Fire Danger Program is managed by Protection Foresters: [Dan Dillner](#) and [Emily Meacham](#).

Remote Automated Weather Stations

The Vermont Department of Forests, Parks & Recreation in partnership with the US Forest Service operates 5 Remote Automated Weather Stations (RAWS). The [Vermont RAWS](#) stations are: Essex, Elmore, Mt. Tabor, Nulhegan, and Woodford. These RAWS are part of the NFDRS and provide the daily weather inputs for determining fire danger in Vermont. Each of Vermont's 5 Fire Danger Rating Areas contain a RAWS that is representative of that area.

RAWS maintenance is important to ensure the stations are meeting federal NFDRS standards, and data is accurate. Annual RAWS Maintenance procedure:

- Monitoring Vermont RAWS year-round to detect malfunctions.
- Schedule and order sensors for required annual RAWS maintenance from Remote Sensing / Fire Weather Support Unit (RSFWSU) in Boise, ID for RAWS stations: Essex, Nulhegan, Elmore, and Woodford. (Mt. Tabor RAWS is maintained by USFS).
- Swap sensors and return for credit to RSFWSU (within a specific time – 1 month)
- Update Wildland Fire Management Information (WFMI) to reflect dates when sensors were swapped, etc.

Weather Information Management System (WIMS)

The Weather Information Management System ([WIMS](#)) is a comprehensive web-based system that helps manage weather information. WIMS serves as the host for the National Fire Danger Rating System. WIMS allows users to retrieve weather information by providing timely access to weather information sources and efficient tools for managing data for each RAWS. WIMS procedure:

- Maintain station catalog for each RAWS in WIMS.
- Calculate breakpoints used to calculate adjective rating and percentile values prior to start of fire danger forecasting in spring using Fire Family Plus application.
- Validate the recorded data for accuracy and upload the 1300-hr observations from all Vermont RAWS daily March-November and weekly December-February.
- Daily check to confirm that each station is transmitting. Use other local stations to verify data.
- Check site conditions for each RAWS to make sure fire danger indices make sense with fuel conditions, precipitation, snow cover, etc.

Cooperation with Partners:

Vermont Department of Forests, Parks & Recreation partners with several agencies to coordinate wildland fire danger and fire weather information. Annual meetings with these partners prior to spring fire season, to set start date for fire weather and fire danger products and share any new information for upcoming season. Partners include:

- National Weather Service (NWS) offices in [Burlington](#) and [Albany](#). Coordinate during fire season regarding current conditions of fuels, weather and increase in fire danger. Coordinate Red Flag warnings or other fire weather watches.
- Green Mountain and Finger Lakes ([GMFL](#)) National Forest to coordinate messaging during periods of high fire danger and red flag warnings.
- Northeastern Interagency Coordination Center ([NECC](#)): Provide daily fire danger and fire activity via email using template provided by NECC. NECC dispatcher assists with updating daily observations in WIMS and sends daily fire danger for the GMFL National Forest.
- Eastern Area Coordination Center ([EACC](#)) produces predictive service products in anticipation of increased fire activity.

Daily Fire Danger Forecast Distribution

Daily fire danger ratings are issued for each Fire Danger Rating Area ([FDRA](#)) from early spring until mid-November (depending on weather conditions and snowpack). Daily fire danger ratings are posted on the FPR website: <https://fpr.vermont.gov/forest/wildland-fire/monitoring-fire-danger>, sent out in a daily email, and Twitter: [@VTFireDanger](#). Fire danger forecast dissemination procedure:

- Log into WIMS after 1500 each afternoon to verify weather observations, current danger indices, and forecast fire danger indices for next day.
- Update the ANR Fire Danger GIS application to autogenerate the email and map. This is usually done in preceding afternoon; however, update can occur up to 0630 daily.
- Daily email is automatically sent at 0645. (Currently the list has about 800 names including Vermont state and federal agency fire managers, town forest fire wardens, volunteer fire chiefs and firefighters, dispatch centers, Vermont Emergency Management, and members of the public).
- “Tweet” to [@VTFireDanger](#) followers each morning following email. (Current Twitter following is 392 including fire departments and other fire related organizations, firefighters, news and weather outlets and Vermont Emergency Management).
- Work with Vermont DII (Dept. of Information and Innovation) to seasonally start and end email and GIS application.

This document was last modified in November 2021 and will be reviewed and updated annually by Forest, Parks and Recreation or following a critical failure of this procedure.