NATIONAL WEATHER SERVICE, ALBANY, NY

2020 F I R E W E A T H E R

A N N U A L O P E R A T I N G P L A N

FOR

EAST CENTRAL NEW YORK AND ADJACENT WESTERN NEW ENGLAND

PREPARED BY
DAN THOMPSON
FIRE WEATHER PROGRAM LEADER
NATIONAL WEATHER SERVICE ALBANY, NY
MARCH 7, 2020
UPDATED APRIL 28, 2020

TABLE OF CONTENTS

Section 1. NWS Albany Fire Weather Program Overview 3

Section 2. Fire Weather Products 5

Section 3. Red Flag Program 19

Section 4. Fire Weather Spot Forecasts 26

Section 5. Coordination Procedures 34

Section 6. Additional NWS Albany Fire Weather Services 37

LISTING OF FIGURES AND EXAMPLES

Figure 1. NWS Albany Forecast Area 4

Figure 2. NWS Albany Fire Weather Forecast Grids Webpage 6

Figure 3. NWS Albany Main Webpage 7

Figure 4. Area Forecast Discussion (AFD) Icon 7

Figure 5. NWS Albany Forecast Zones 12

Figure 6. NWS Albany Primary Geographic Descriptors 12

Example 1. Fire Planning Forecast (FWF) Sample Product 13

Example 2. NFDRS Forecast (FWM) Sample Product 17

Example 3. Fire Warning (FRW) Sample Product 18

Example 4. Fire Weather Watch (RFW) Sample Product 20

Example 5. Red Flag Warning (RFW) Sample Product 22

Example 6. Special Weather Statement (SPS) Sample Product 24

Example 7a. Spot Forecast Request – Graphical 27

Example 7b. Spot Forecast Request – Text (STQ) Sample Product 28

Example 8. Returned Spot Forecast (FWS) Sample Product 30

Example 9. Spot Forecast Request Page – Graphical 33

SECTION 1. NWS ALBANY, NY FIRE WEATHER PROGRAM OVERVIEW

Meteorologist in Charge (MIC)	Raymond O'Keefe
Warning Coordination Meteorologist (WCM)	Stephen DiRienzo
Fire Weather Program Leader	Dan Thompson

This document is based on the Fire Weather Directive (10-401) issued by the National Weather Service (NWS), with input from the Eastern Region Fire Weather Watch/Red Flag Program supplement. NWS Albany, NY issues the following fire weather products consisting of:

1. Fire Weather forecast grids
2. Fire Weather forecast discussion
3. Fire Weather Planning Forecast (FWF)
4. National Fire Danger Rating System Forecast (NFDRS) (FWM)
5. Spot Forecasts (upon request)
6. Fire Weather Watch (RFW)
7. Red Flag Warning (RFW)
8. Special Weather Statements (SPS)
9. Fire Warning (FRW)

The NWS Albany, NY Fire Weather Program provides forecast and warning services in support of fire management planning and control operations leading to the effective prevention, suppression, and management of forest and rangeland fires. The objective of the NWS Albany, NY Fire Weather Program is to provide a service which will meet the meteorological requirements of federal and state wild land management agencies in the protection and enhancement of the Nation's forests and rangelands. NWS Albany, NY provides these forecasts and services for east central New York, southern Vermont, western Massachusetts, and northwestern Connecticut (Figure 1).

Throughout the entire year, NWS Albany, NY fire weather support, including fire weather grids and Spot forecasts, are available 24 hours a day, 7 days a week. The 2020 NWS Albany, NY fire weather season runs from **March 7 through November**. The exact end of the season will be determined by antecedent conditions and collaboration with our users. In addition to the creation of fire weather grids and a fire weather forecast discussion, the FWF will also be generated twice daily with the 4am/4pm forecast packages, and the FWM will be sent once daily around 3 pm.

CONTACT INFORMATION: To obtain fire weather services mentioned in this plan, local, state, or federal officials may contact NWS Albany, NY at 518-435-9575 or by email via ALB.Stormreport@noaa.gov or Dan.B.Thompson@noaa.gov.

Written requests should be addressed to:

National Weather Service Office
CESTM, 251 Fuller Road, Suite B300
Albany, NY 12203

Attn: Dan Thompson

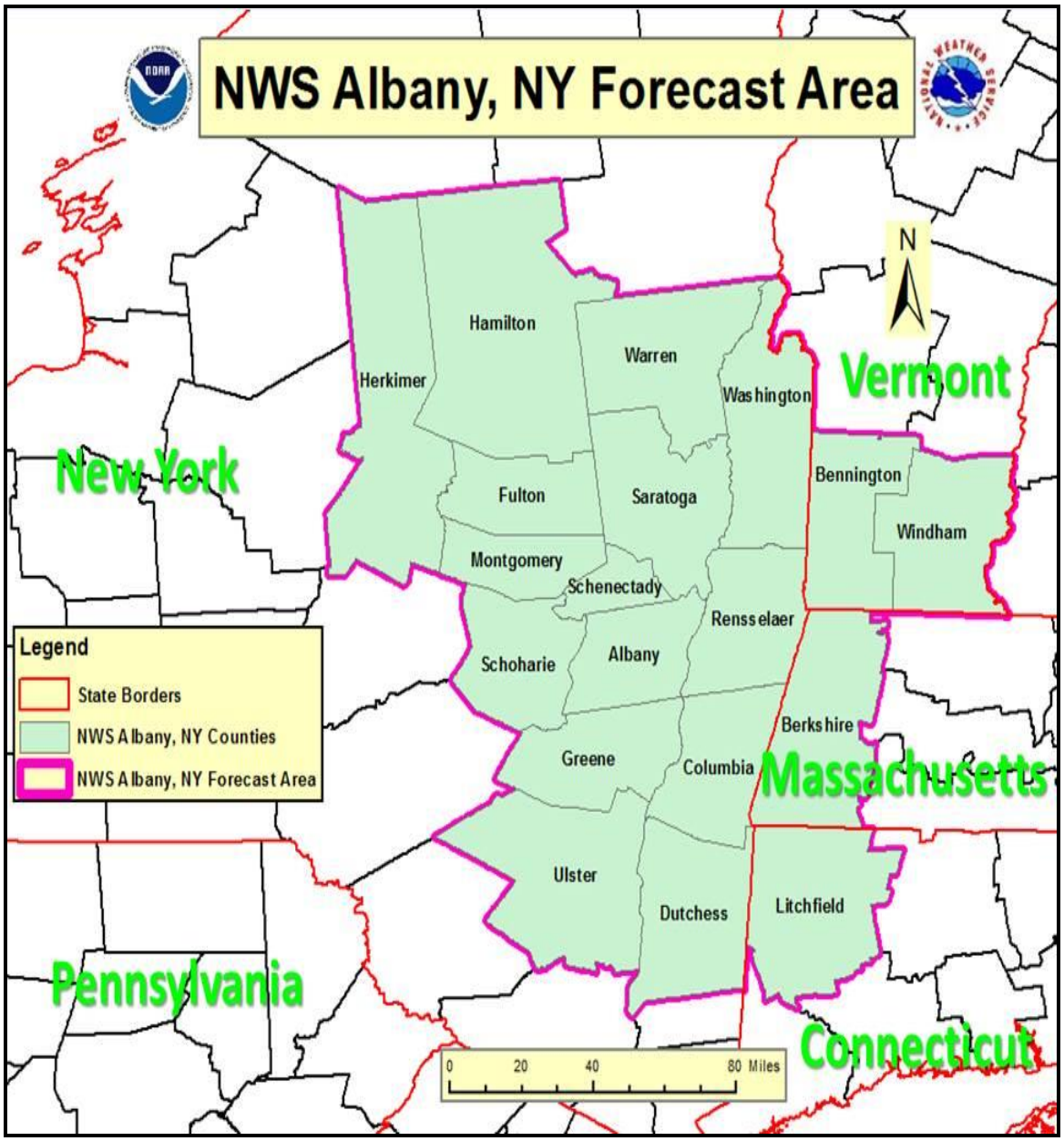


Figure 1. NWS Albany, NY forecast area.

SECTION 2. FIRE WEATHER PRODUCTS

INTRODUCTION

The following fire weather products are issued by NWS Albany, NY during the fire weather season:

1. Fire Weather forecast grids
2. Fire Weather forecast discussion
3. Fire Weather Planning Forecast (FWF)
4. National Fire Danger Rating System Forecast (NFDRS) (FWM)
5. Spot Forecasts (upon request)
6. Fire Weather Watch (RFW)
7. Red Flag Warning (RFW)
8. Special Weather Statements (SPS)
9. Fire Warning (FRW)

1. FIRE WEATHER FORECAST GRIDS

Fire Weather forecast grids (Figure 2) are populated all year long, twice a day, around 4am/4pm. These forecast grids can be obtained by accessing the following link:

http://graphical.weather.gov/sectors/alyFireDay.php

Fire weather users can also access other aspects of the forecast by visiting the NWS Albany, NY webpage (Figure 3):

http://www.weather.gov/aly

From this page (http://www.weather.gov/aly), forecasts can be generated by clicking a single point on the map or by typing in a zip code. Additionally, fire weather users can access the Area Forecast Discussion (AFD), a text product that describes the thinking behind forecasts, by clicking on the circled icon (Figure 4) located near the bottom of page 6.

NWS Albany, NY also has a webpage solely dedicated to fire weather:

http://www.weather.gov/aly/fire

Once at this link, users can access an abundance of fire weather information including the latest version of the Annual Operating Plan (AOP), graphical forecasts, text forecasts, fire weather guidance, and Spot forecasts.

2. FIRE WEATHER AREA FORECAST DISCUSSION (AFD)

The Area Forecast Discussion (AFD) is a text product that describes the thinking behind forecasts. During the fire weather season, a specific Fire Weather section is added to the AFD, outlining forecast thinking behind specific fire weather meteorological issues. The Fire Weather portion of the AFD can be found near the bottom of the text product, underneath the Aviation section and above the Hydrology section.

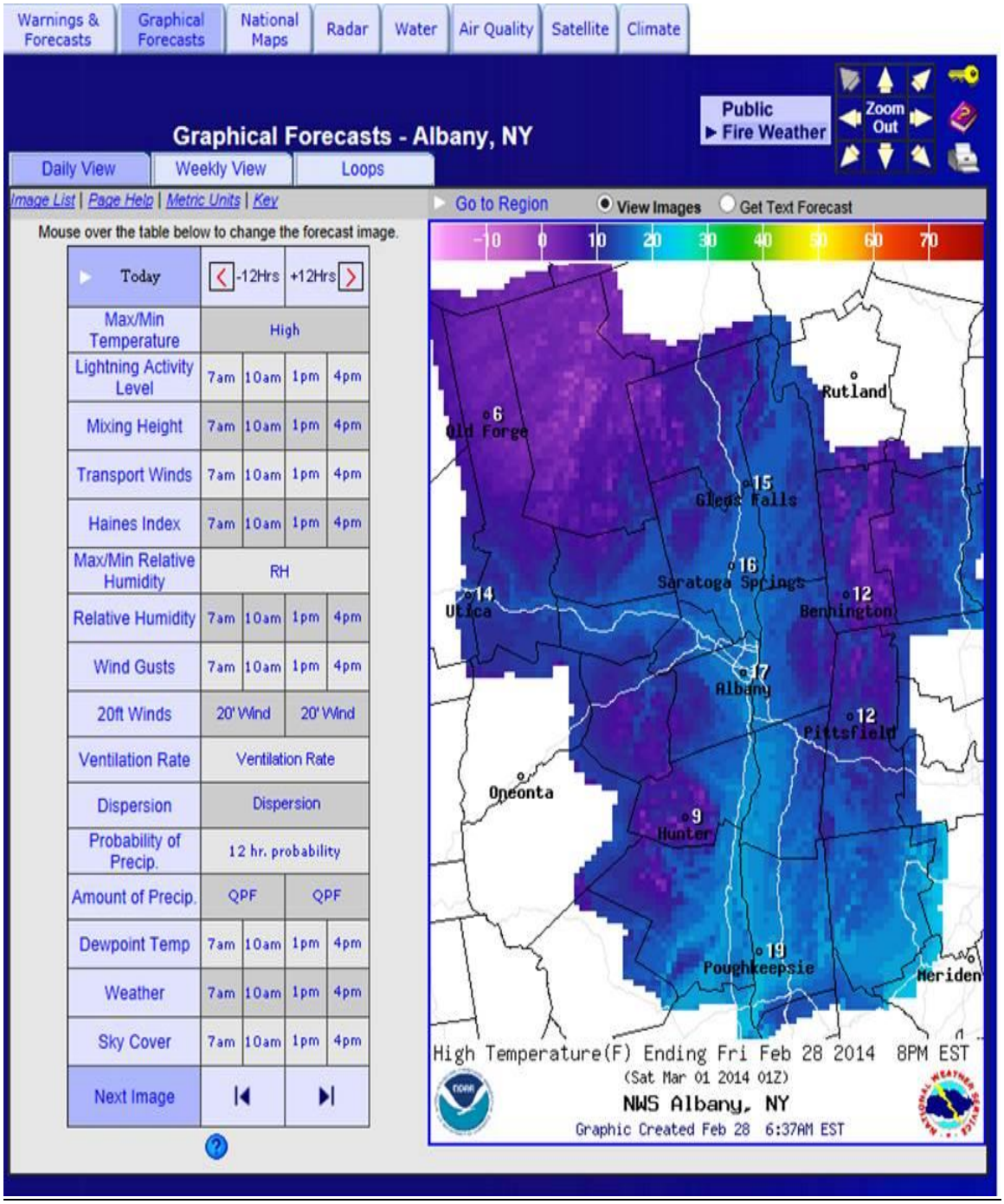


Figure 2. NWS Albany, NY fire weather forecast grids webpage.

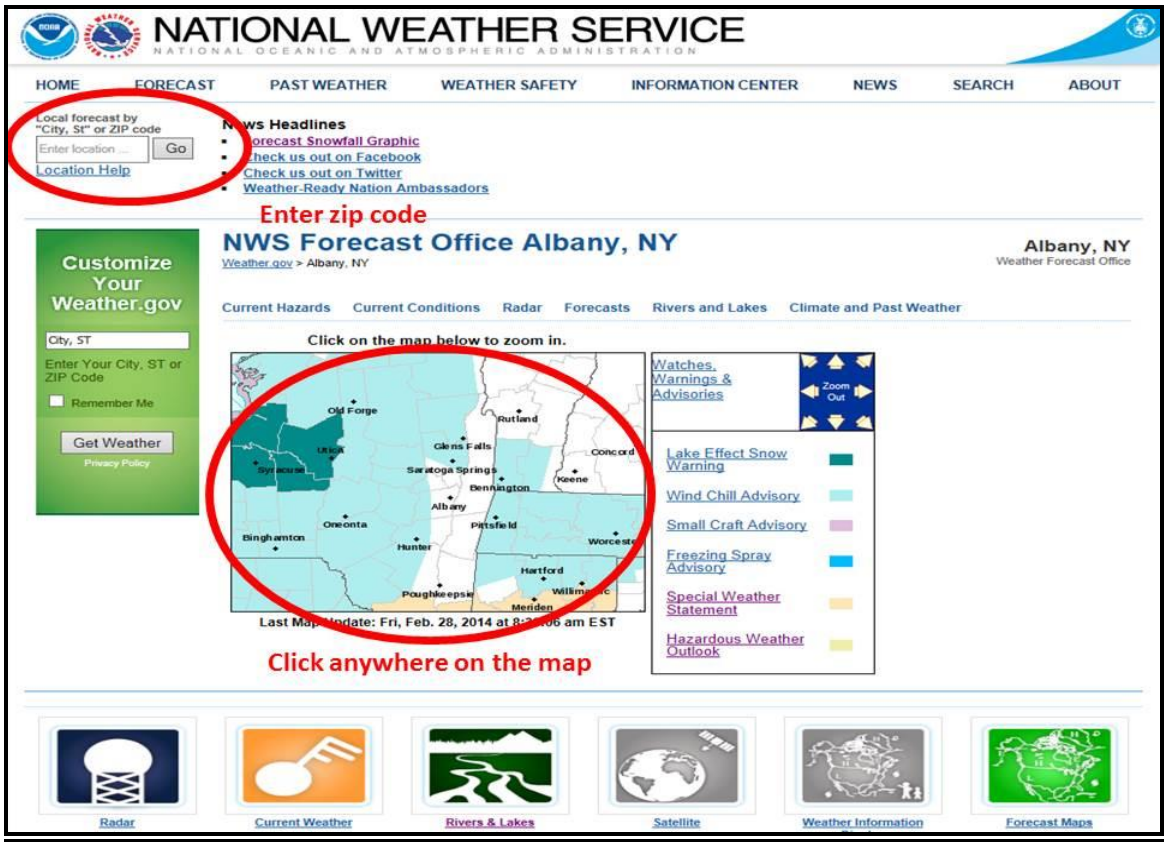


Figure 3. NWS Albany main webpage. Red circles indicate locations where forecast can be obtained.

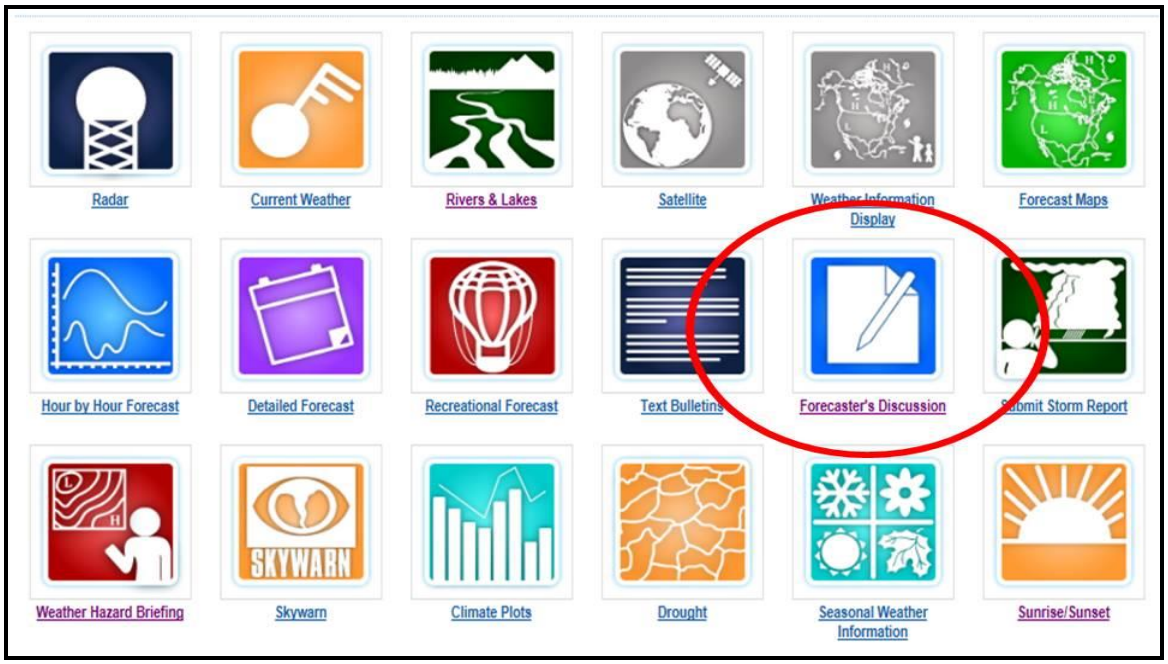


Figure 4. Area Forecast Discussion (AFD) icon, denoted by the red circle.

3. FIRE WEATHER PLANNING FORECAST (FWF)

The Fire Weather Planning Forecast (FWF) is issued twice daily during the fire weather season around 4am and 4pm EST/EDT. The FWF forecasts the average fire weather-focused meteorological conditions across the NWS Albany, NY forecast area.

The FWF is a general zone forecast and may not necessarily reflect the exact current conditions at any exact given location. When a more precise, localized forecast is required, the user is referred to Section 4 (Spot Forecasts).

Fire control and forest officials in each state are familiar with their own local weather influences. Therefore, the FWF may be used as a general overview forecast, and adapted for local conditions.

New York, Vermont, Massachusetts and Connecticut use the 1964-67 National Fire Danger Rating System (NFDRS) for calculating fire danger, as well as the 1978 and 1988 NFDRS.

The basic information contained in the FWF provides fire control officials with sufficient data to calculate fire danger indices for all versions of the NFDRS mentioned above.

The NWS Albany, NY forecast area of fire weather responsibility includes east central New York, southern Vermont, western Massachusetts, and northwest Connecticut. The forecast area is divided into 34 zones (Figures 5 and 6). Example 1 outlines an example of the FWF product.

DEFINITION OF FWF TERMS

- Day period: Between the hours of 7 am and 7 pm LST.
- Night period: Between the hours of 7 pm and 7 am LST.
- Zone: Refer to Figures 5 and 6 for the NWS Albany, NY forecast area.
- AGL: Above Ground Level
- MSL: Mean Sea Level

BODY OF FORECAST

1. Headline: A headline is required when a Fire Weather Watch (RFW) or Red Flag Warning (RFW) is in effect and should include the watch/warning, what areas are affected, reason for issuance, and effective time period. The headlines are automatically generated by the Graphical Forecast Editor (GFE) software. Significant trends of locally defined critical weather elements will also be headlined for non-watch/warning periods.

2. Discussion: Per NWS Directive 10-401, the discussion is a brief, clear and non-technical description of the weather systems impacting the NWS Albany, NY forecast area. Emphasis is placed on the first two days, but longer periods can be included if significant weather is expected and the forecaster has reasonable confidence that it will occur. The discussion will mention significant trends in temperature, RH and winds, as well as any unusual instability/stability parameters (i.e. high Haines index of 6) as these parameters are used significantly by the fire weather community.

3. Cloud Cover (%)
   a. (CLR) Clear..... 0 TO 6 percent coverage.
   b. (MCLEAR) Mostly clear…7 to 30 percent coverage.

c. (PCLDY) Partly cloudy...31 to 69 percent coverage.
d. (MCLDY) Mostly cloudy…70 to 94 percent coverage.
e. (CLDY) Cloudy…95 percent or more coverage.

4. Precip Type
   a. Rain: continuous liquid precipitation.
   b. Showers: an intermittent precipitation.
   c. Drizzle: very light liquid precipitation, may not measure.
   d. Sleet: solid precipitation of small ice pellets.
   e. Snow: continuous solid crystallized precipitation.
   f. Flurries: intermittent light snow, little no accumulation.
   g. Hail: ice precipitation of varying size and intensity.
   h. Thunderstorms (TSTMS): showers, with thunder/lightning and possibly, strong gusty winds and/or hail.

5. Chance Precip (%)…Probability of precipitation (.01 inch or more) during a 12-hour period.

6. Temp (24hr Trend)...Highest and lowest dry bulb temperature expected during the day or night time period as indicated (°F). The 24-hour trend is the difference between the previous forecasted high/low temp and the current forecast high/low temp.

7. Relative Humidity (RH) (24hr Trend)…The lowest daytime relative humidity (%), or the highest nighttime relative humidity for the period indicated. Note, relative humidity is a direct function of the dry bulb temperature and dewpoint temperature.

8. 20 FT Am Wind...Average 20-foot wind direction and speed (mph) during the morning. (7am – 12pm).

9. 20 FT Pm Wind...Average 20-foot wind direction and speed (mph) during the afternoon for the daytime period (12pm – 7pm), and at night for the nighttime period (7pm – 7am).

10. Precip Amount...Amount of liquid equivalent precipitation (rain or melted frozen precipitation) during the 12-hour period, in inches.

11. Precip Duration...Expected duration of precipitation during any 12-hour period.

12. Precip Begin...Beginning time of precipitation during the period (or continuing from the previous period).

13. Precip End...Ending time of precipitation during the period (or continuing through the period).

14. Mixing Hgt (ft-AGL)...The mixing height is forecast during the day. It is the height to which the air near the surface is well mixed through turbulence. It is typically located at the base of a capping temperature inversion. The mixing height is quite variable in space and time, and in fair weather, typically rises from a few tens of meters at sunrise, to 1 to 4 km at the time of maximum temperature. Because of its typically

low elevation under an early morning surface inversion, the mixing height is frequently assumed to fall to near zero overnight, and often not included in a FWF for the nighttime periods. To determine it, estimate the maximum temperature, and lift it dry adiabatically until it reaches the forecast sounding temperature. During the summer, if neither a low-level inversion nor warm advection is present, daytime heating will produce a mixed atmosphere of 4000 to 7000 feet in depth. The more unstable the atmosphere, the greater the mixing depth.

15. Transport Wind…The average direction and speed of the wind (mph) throughout the lower layer of air to the mixing height.

16. Ventilation Rate...An index which calculates the product of the mixing height times the transport wind speed. It is a measure of the horizontal transport of air within the mixed layer. When the mixing height is low and the transport winds are light, the Ventilation Rate will be poor. The ventilation rate is calculated for the daytime periods only.

100000 and up	(Excellent)
61000-100000	(Good)
41000-60000	(Average)
2100-40000	(Fair)
20000 or less	(Poor)

Example - Mixing height 4500 feet, Transport Wind speed 20 mph (4500 x 20=90000)

17. Dispersion…The dispersion is the average dispersion during the day. General guidance for dispersion is based on surface winds.
    0-4 mph: Very Poor to Poor (VP to PO)
    5-7 mph: Fair (FA)
    8-9 mph: Good (GD)
    10 mph or greater: Excellent (EX)

18. LAL...Lightning Activity Level category. Ranges from 1 to 6 and relates to areal coverage of thunderstorms corresponding to Lightning Activity Levels. LAL and areal coverage correspond as follows:

LAL Level	Coverage (%)	Descriptor
1	< 15	None
2	15-24	Isolated/Widely Scattered (Slight Chance)
3	25-54	Scattered (Chance)
4	55-74	Numerous (Likely)
5	> 74	Widespread (Categorical/Definite)
6 (Dry lightning)*		Widely Scattered or greater

*Dry lightning, which is lightning with little or no rain, is **extremely rare** in the eastern United States.

19. Haines Index...The Haines Index (HI) is calculated during the daytime period, but not the night period. It is a measure of stability and moisture (not incorporating wind or fuel moisture) in the low-levels of the atmosphere. The HI ranges from 2 to 6, which is a sum of two components, a temperature difference (categorized from 1 to 3), and a moisture/dewpoint difference (also categorized from 1 to 3). The HI is customized by

elevation using a single point to represent each of the 34 NWS Albany, NY forecast zones. There are different options available in the Haines Index, each customized for elevation. Elevations below 1000 feet MSL, use the low-level HI calculation. Elevations between 1000 and 3000 feet MSL use a mid-level Haines calculation. Elevations above 3000 feet MSL use a high level Haines calculation. The larger the Haines Index number, the better chance of seeing large (plume) fire development, mainly where winds are not a factor.

Haines Index

2-3 VERY LOW (Stable Atmosphere)
4 LOW (Neutral Atmosphere)
5 MODERATE (Unstable Atmosphere)
6 HIGH (Very Unstable Atmosphere)

20. Remarks...Any unusual or pertinent facts, not described in the body of the forecast. These may include wind shifts with frontal passages, temperature inversions, any potential severe weather, smoke management comments, etc.

21. Forecast Extended...A general forecast of weather and temperature trends beyond the first three forecast periods out to Day 7, located at the end of the 34-zone FWF.

22. Outlook 8 to 14 Day...Temperature and precipitation trends of near, above, or below normal for the time of the season. These forecasts are issued directly from the Climate Prediction Center (CPC).

Intermediate FWF Updates – Issued only when the weather scenario changes significantly from earlier thinking during the daytime hours. Potential examples of when an intermediate FWF update may be needed:

1. Red Flag criteria met, but not previously anticipated, or vice versa.
2. If observed wind speeds differ by 10 mph or greater and/or wind direction differs by 90 degrees from forecast with a prevailing wind 10 mph or greater.
3. RH falls below 30%, when forecast to be 40% or greater.
4. RH exceeds 40%, when forecast to be below 30%.
5. A wetting rain likely, when not forecast or vice versa.
6. Convection changes two categories or more (i.e. slight to likely/likely to slight)
7. Any unexpected weather conditions that will significantly impact fire weather operations.

The link during the fire weather season for the NWS Albany, NY FWF can be found at:

http://forecast.weather.gov/product.php?site=NWS&issuedby=ALY&product=FWF

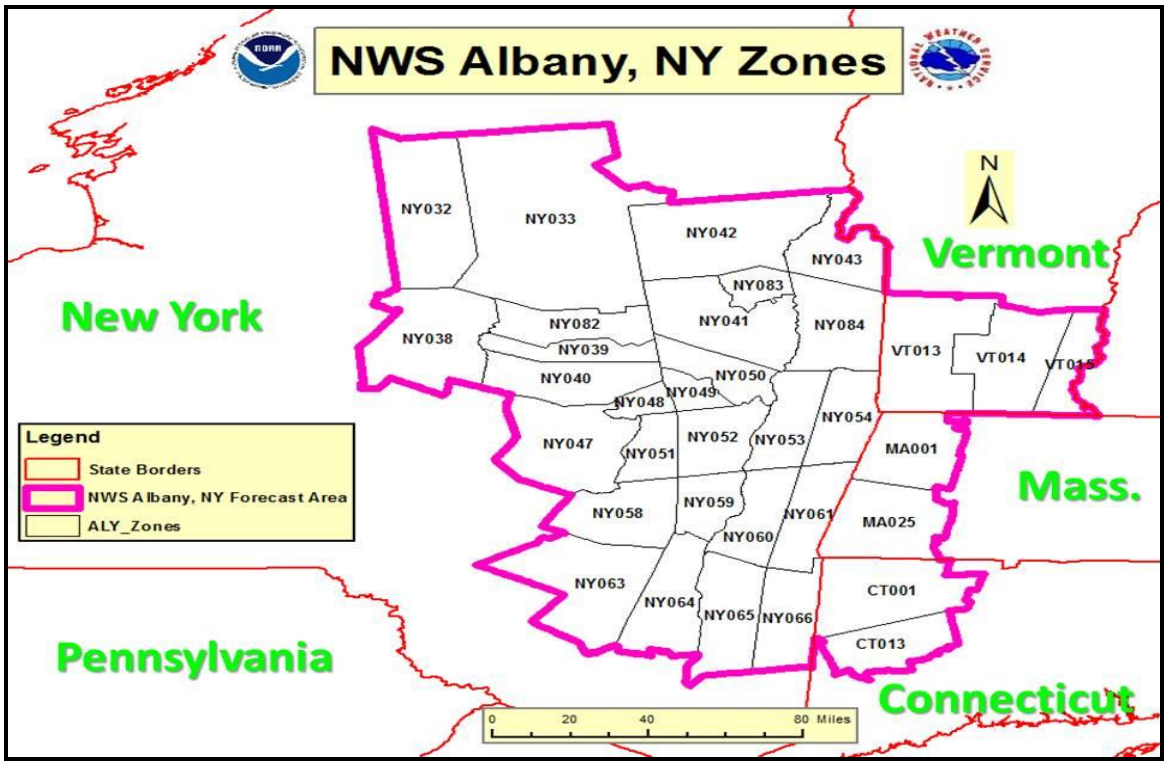


Figure 5. NWS Albany, NY forecast zones.

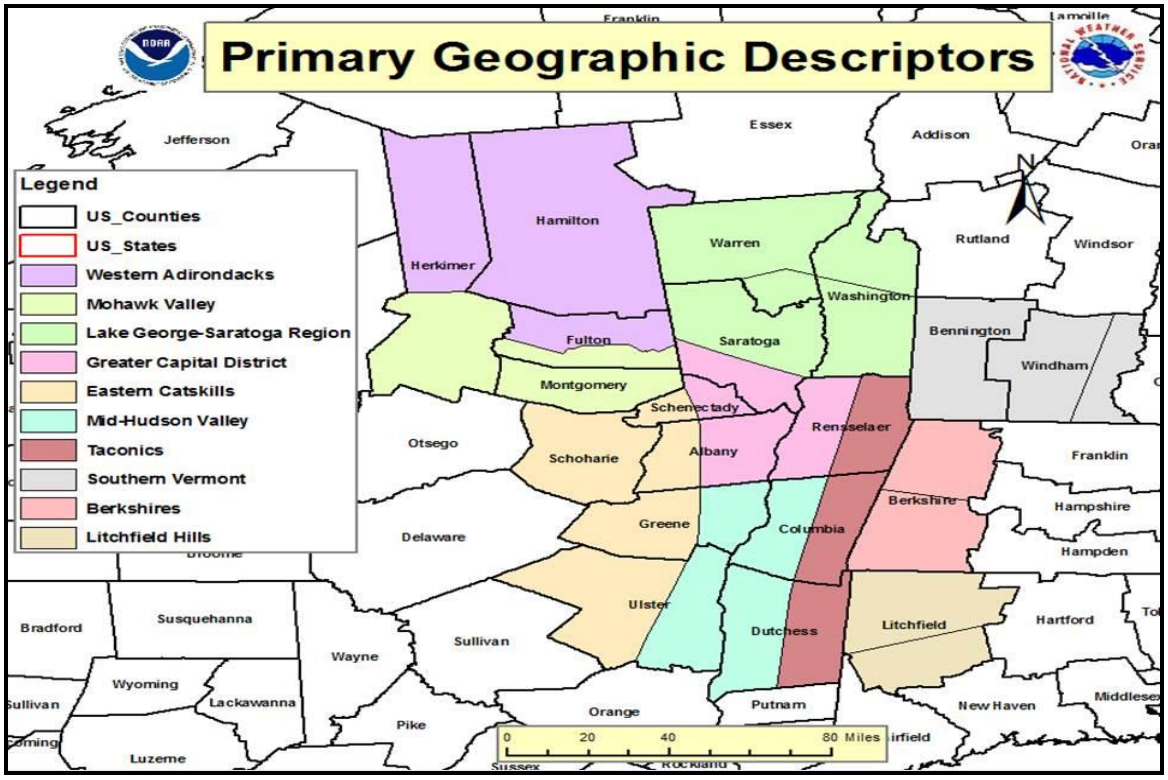


Figure 6. NWS Albany, NY primary geographic descriptors.

Example 1. FWF Sample Product

```
FIRE WEATHER PLANNING FORECAST FOR EASTERN NEW YORK...SOUTHERN
VERMONT...WESTERN MASSACHUSETTS AND NORTHWEST CONNECTICUT
NATIONAL WEATHER SERVICE ALBANY NY
424 PM EDT Fri May 11 2018

.DISCUSSION...
...Relative humidity values around 20 to 30 percent with wind
gusts around 20 to 25 mph will persist into early this
evening...

High pressure will remain in place across the region through
this evening, bringing cool temperatures. Then, a frontal
boundary and weak area of low pressure will move eastward across
Ohio and Pennsylvania and will spread showers northward into
our area late tonight into Saturday. Our region will remain on
the cool side of the boundary, with temperatures well below
normal. Drying will occur across most of the region by Saturday
night, as weak high pressure builds back in. A pleasant Mother's
Day is expected with milder temperatures, and only some extra
clouds south of Albany.

Relative humidity values will recover to between 65 and 85
percent tonight, only dropping to minimum values of 55 to 70
percent on Saturday with the cool temperatures and showers. Max
RH values of 90 to 100 percent are expected Saturday night.

Winds tonight will be light and variable, becoming easterly
around 5 mph on Saturday. Winds Saturday night will be northerly
around 5 mph.
```

```
NYZ032-120915-
Northern Herkimer-
```

```
Including the cities of Big Moose, Eagle Bay, McKeever,
Old Forge, Atwell, Nobleboro, and Northwood
424 PM EDT Fri May 11 2018

                      Tonight      Sat          Sat Night    Sun

CLOUD COVER           PCldy        MCldy        PCldy        PCldy
PRECIP TYPE           None         Showers      None         None
CHANCE PRECIP (%)     0            60           0            0
TEMP (24H TREND)      31 (-7)      53 (-1)      33           65
RH % (24H TREND)      71 (-16)     51 (+17)     92           28
20FTWND-AM(MPH)                    SE  8                     Lgt/Var
20FTWND-PM(MPH)       Lgt/Var      S  5         Lgt/Var      S  6
PRECIP AMOUNT         0.00         0.13         0.00         0.00
PRECIP DURATION                    2
PRECIP BEGIN                       6 AM
PRECIP END                         5 PM
MIXING HGT(FT-AGL)                 5350                      7030
TRANSPORT WND (MPH)                NW  3                     SE  5
VENT RATE (KT-FT)                  16050                     28120
DISPERSION                         5                         5
LAL                   1            1            1            1
HAINES INDEX          4            3            3            4

REMARKS...None.
```

There will be 33 additional zone forecast like this one, one per zone. After that, there will be an Extended Forecast. (Days 3-7) followed by the 8-10 Day Temperature/Precipitation Outlook.

```
.FORECAST FOR DAYS 3 THROUGH 7...
.MONDAY...Mostly cloudy. Lows in the mid 40s. Highs in the upper
60s. South winds around 5 mph.
.TUESDAY...Partly cloudy. Lows in the lower 50s. Highs in the mid
70s. Southwest winds 10 to 15 mph.
```

```
.WEDNESDAY...Mostly cloudy with a chance of showers. Lows in the
mid 50s. Highs in the lower 70s. South winds 10 to 15 mph.
.THURSDAY...Mostly cloudy with a chance of showers. Lows in the
mid 50s. Highs in the upper 60s. Northwest winds 5 to 10 mph.
.FRIDAY...Mostly cloudy with a chance of showers. Lows in the
upper 40s. Highs in the lower 60s. Northeast winds 10 to 15 mph.

.OUTLOOK 8 TO 14 DAYS...
Temperatures above normal.  Precipitation above normal.
```

4. NATIONAL FIRE DANGER RATING SYSTEM (NFDRS) (FWM)

The National Fire Danger Rating System (NFDRS) forecast, hereafter referred to as the FWM, measures wildfire danger and is issued around 3pm EST/EDT (Example 2). The NWS role in NFDRS involves forecasting weather input which, when combined with input from the fire weather community (fuel moisture, etc.), allows the NFDRS software to predict the next day's fire danger index.

New for 2020: The FWM forecast period will be extended to 7 days on an experimental basis between 2 March and 31 May 2020. At the end of the experimental period, a decision will be made whether or not to make the expanded product operational. For more information, please see the Public Information Statement and Product Description Document:

https://www.weather.gov/media/notification/pns20-05nfdrs_experimental.pdf
https://nws.weather.gov/products/PDD/PDD_7DayNFDRS_ExpExpandedProduct_2020.pdf

Feedback may be sent to Dan Thompson, Fire Weather Program Leader, WFO Albany, NY
Dan.b.thompson@noaa.gov

Per NWS Directive 10-401, a fire weather observation must be received for a NFDRS forecast to be generated. These forecasts are currently issued for 5 New York locations, with 1 location in southern Vermont. The current NWS Albany, NY NFDRS locations are as follows:

NEW YORK

#300011	Albany Pine Bush (Albany County) Elevation: 325' MSL Coordinates: 42° 43' 10.35" N 73° 51' 55.87" W Owner: New York State DEC Forest Rangers Contact: Tyler Briggs
#301111	Belleayre Mountain (Ulster County) Elevation: 1925' MSL Coordinates: 42° 08' 37.12" N 74° 29' 43.12" W Owner: New York State DEC Forest Rangers

Contact: Captain Jaime Laczko

#300411 Lake Pleasant (Hamilton County)
Elevation: 1790' MSL
Coordinates: 43° 28' 12.57" N 74° 24' 47.04" W
Owner: New York State DEC Forest Rangers
Contact: Captain Jaime Laczko

#305103 Stony Kill (Dutchess County)
Elevation: 230' MSL
Coordinates: 41° 32' 29.70" N 73° 57' 06.52" W
Owner: New York State DEC Forest Rangers
Contact: Captain Jaime Laczko

#301901 Saratoga Battlefield (Saratoga County)
Elevation 375" MSL
Coordinates: 43° 00' 09.7" N 73° 32' 05.50" W
Owner: New York State DEC Forest Rangers
Contact: Captain Jaime Laczko

VERMONT

#431303 Woodford (Bennington County)
Elevation: 2317' MSL
Coordinates: 42° 53' 25" N 73° 02' 06" W
Owner: Vermont Department of Forests, Parks, and Recreation
Contact: TBA

FWM FORMAT

NFDRS forecasts are launched via the GFE FWM Forecast Formatter. The FWM format is as follows…

FCST,######,YYMMDD,13,W,T,RH,Y,M,D,SP,,TX,TM,HX,HM,P1,P2,F
Where:

#####	NFDRS Station Identifier (see above)
YYMMDD	Year Month Day (forecast valid date which is the next day) 060321 (March 21, 2006)
13	Time (forecast valid time 1300 hours/100 PM the next day). Never changes.
W	Weather (Codes) 0- Clear 5- Drizzle 1- Scattered clouds 6- Rain 2- Broken clouds 7- Snow/sleet 3- Overcast 8 -Showers 4- Fog 9- Thunderstorms *There is no coding for freezing rain.
T	Dry Bulb Temperature at 1300 LST tomorrow
RH	Relative Humidity at 1300 LST tomorrow
Y	Lightning Activity Level (period 1300 LST today to 0600 LST tonight (1 is for none, 2 is 1-8 strikes, 3 is 9-15 strikes, 4 is 15-25 strikes, 5 is more than 25 strikes, 6 is dry lightning)
M	Lightning Activity Level (period 0600 LST tonight to 1300 LST tomorrow (see

	above for values))
D	Wind direction (N, NE,E,SE, etc)
SP	Wind Speed (10-minute average in MPH)
,,	Between SS and TX commas are needed to hold the place for 10-hour fuel moisture values which the NWS does NOT forecast at this time. Space is held for the time being.
TX	Maximum Temperature from 1300 LST today to 1300 LST tomorrow
TM	Minimum Temperature from 1300 LST today to 1300 LST tomorrow
HX	Maximum Relative Humidity from 1300 LST today to 1300 LST tomorrow
HM	Minimum Relative Humidity from 1300 LST today to 1300 LST tomorrow
P1	Precipitation duration (1300-0600 LST Period) in whole hours
P2	Precipitation duration (0600-1300 LST period) in whole hours
F	Wet Flag "Y/N" (use Y for widespread, moderate to heavy rainfall)

Example 2. FWM Sample Product

FNUS81 KALY 202250
FWMALY

FCST, 300011,130327,13,2,44,52,1,1,WNW12,,,,45,28,83,43,0,0,N

Decoded: NFDRS Forecast for the Albany Pine Bush, issued on March 27, 2013, forecast through 1300 LST March 28, 2013. Forecast for a Broken sky at 1300 LST (3/28/2013), 44 degrees at 1300 LST (3/28/2013), relative humidity 52% at 1300 LST (3/28/2013), No lightning activity expected from time of issuance through 0600 LST, no lightning activity expected from 0600-1300 LST (3/27/12), forecast WNW wind, 12 mph, at 1300 LST (3/28/2013),(,,) 10-hour fuel NOT forecasted at this time, 45 is projected maximum temperature through 1300 LST (3/28/2013), 28 is the projected minimum temperature through 1300 LST (3/28/2013), 83% maximum humidity forecast through 1300 LST (3/28/2013), 43% minimum relative humidity forecast through 1300 LST (3/28/2013), no precipitation duration expected from time of issuance through 0600 LST (3/28/2013), no precipitation expected 0600 LST through 1300 LST (3/28/2013), and Wet Flag not forecast.

NFDRS (FWM Forecasts) can be directly found at the following link.

http://www.weather.gov/aly/fire

From here, NFDRS forecasts can be obtained for the six NWS Albany, NY NFDRS sites, along with a link to a NFDRS Decoder.

5. SPOT FORECASTS

Spot forecasts are detailed, localized forecasts that are issued in support of wildfire suppression and natural resource management. More about Spot forecasts can be found in Section 4.

6. FIRE WEATHER WATCH (RFW)

A Fire Weather Watch (RFW) is issued 12-96 hours before a potential Red Flag event, when a combination of meteorological and fuel conditions are favorable for critical fire weather behavior. More about Fire Weather Watches can be found in Section 3.

7. RED FLAG WARNING (RFW)

A Red Flag Warning is issued up to 48 hours ahead of time when the combination of critical meteorological fire weather conditions coincide with significantly dry fuels. More about RFWs can be found in Section 3.

8. SPECIAL WEATHER STATEMENTS (SPS)

Special Weather Statements (SPS) are issued when conditions support enhanced fire weather behavior, but at levels below Red Flag criteria. SPSs can also be issued to raise elevated fire awareness amongst the fire weather community and the general public. More about SPSs can be found in Section 3.

9. FIRE WARNING (FRW)

A Fire Warning may be issued by NWS Albany upon partner request, similar to a Civil Emergency Message. According to NWSI 10-518, a Fire Warning is "A warning of a spreading structural fire or wildfire that threatens a populated area. Evacuation of areas in the fire's path may be recommended by authorized officials according to state law or local ordinance." We anticipate such an issuance would be a very rare event. There were no FRWs issued anywhere in the US between 2016 and 2018.

Example 3. FRW Sample Product

```
408
WOUS44 KOUN 162218
FRWOUN
OKC153-170030-

BULLETIN - IMMEDIATE BROADCAST REQUESTED
FIRE WARNING
WOODWARD COUNTY EMERGENCY MANAGEMENT
RELAYED BY NATIONAL WEATHER SERVICE NORMAN OK
518 PM CDT MON MAR 16 2015

THE FOLLOWING MESSAGE IS TRANSMITTED AT THE REQUEST OF THE
WOODWARD COUNTY EMERGENCY MANAGEMENT.

PEOPLE LOCATED IN NORTHEAST WOODWARD COUNTY TO THE EAST OF STATE
HIGHWAY 50 AND NORTH OF E W 30 ROAD HAVE BEEN REQUESTED TO EVACUATE
TO THE WEST OR SOUTH AWAY FROM A WILDFIRE LOCATED NORTHEAST OF
WOODWARD AND SPREADING NORTH AND NORTHEAST. THIS EVACUATION
REQUEST INCLUDES ALABASTER CAVERNS STATE PARK.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

DO NOT DRIVE INTO AREAS OF SMOKE.
```

***FORECAST BACKUP**

In the event that NWS Burlington, VT is unable to issue their fire weather forecasts, NWS Albany, NY is their primary backup. In the event that NWS Binghamton, NY is unable to issue their fire weather products, NWS Albany, NY is their secondary backup.

If NWS Albany, NY is down, NWS Burlington, VT is our primary backup and NWS Binghamton, NY is our secondary backup to issue our fire weather forecasts, watches and warnings.

SECTION 3. RED FLAG PROGRAM

From NWS Directive 10-401:

"Forecasters shall issue Fire Weather Watches/Red Flag Warnings when the combination of dry fuels and weather conditions support extreme fire danger and/or fire behavior. These conditions alert land management agencies to the potential for widespread new ignitions or control problems with existing fires, both of which could pose a threat to life and property."

A Red Flag event is the combination of critical meteorological fire weather conditions coinciding with significantly dry fuels. This combination can lead to the occurrence of large and dangerous wildfires. Since the potential for Red Flag conditions does not exist without receptive fuel conditions, knowledge of existing fuel conditions is essential.

NWS ALBANY, NY RED FLAG CRITERIA

NWS Directive 10-401 and locally conducted fire weather research state that both fuel and weather parameters are important considerations. The following weather criteria are to be considered (must all be occurring simultaneously).

During Vegetation Stage I & II – Pre Green-Up (cured/transition fuels - Spring/Fall)

1. Wind….sustained or frequently gusting at or above 25 mph for two or more consecutive hours.
2. RH….less than 30% for two or more consecutive hours.
3. Rainfall….less than 1/4 inch during previous 5 or more days.
4. Temperatures….greater than, or equal to, 50°F for two or more consecutive hours.
5. Fuels….Dry fine surface fuels.

During Vegetation Stage III – Green-Up (green fuels - Summer)

1. Winds….sustained or frequently gusting at or above 25 mph, for two or more consecutive hours.
2. RH….less than 30% for two or more consecutive hours.
3. Rainfall….less than 1/4 inch during previous 8 or more days.
4. Temperatures….greater than, or equal to, 50°F for two or more consecutive hours.
5. Fuels….Keetch Byram Drought Index (KBDI) at or above 300.

*NOTE: Wind, RH, and temperature criteria can only be considered AFTER rainfall criteria (e.g. there must be an extended dry period to prime the fuels for the remaining meteorological criteria)

Local fire weather users will notify NWS Albany, NY of the following:

1. Current fuel stage (I, II, III)
2. When the measured KBDI:
   a. Approaches 300
   b. Is over 300
   c. Falls back below 300

Fire Weather state liaison contact points shall determine when a particular state is fully "Greened-up" and will coordinate with NWS Albany, NY accordingly.

FIRE WEATHER WATCH (RFW)

A Fire Weather Watch (RFW) may be issued anywhere from 12 to 96 hours in advance of the expected onset of Red Flag criteria. The Fire Weather Watch is issued under the AWIPS PIL…ALBRFWALY (Example 4). A Fire Weather Watch is issued when there is a moderate to high potential (50-79%) for the development of a Red Flag Event (per Directives 10-401). The Fire Weather Watch is issued by zone.

*NWS Albany, NY fire weather users MUST be contacted at least once for coordination of the issuance of a Fire Weather Watch. If contact cannot be made, a Fire Weather Watch will be issued if it meets the 50-74% confidence level. A Fire Weather Watch DOES NOT require NAWAS activation.

*The FWF/HWO/Fire Weather AFD MUST be updated if a Fire Weather Watch is issued.

*A Fire Weather Watch will appear as a DARK TAN color on the NWS Albany, NY webpage: www.weather.gov/aly

Example 4. Fire Weather Watch (RFW) Sample Product

```
URGENT - FIRE WEATHER MESSAGE
NATIONAL WEATHER SERVICE ALBANY NY
401 PM EDT MON APR 18 2016

CTZ001-013-MAZ001-025-NYZ032-033-038>043-047>054-058>061-063>066-
082>084-VTZ013>015-191015-
/O.NEW.KALY.FW.A.0001.160419T1700Z-160419T2200Z/
NORTHERN LITCHFIELD-SOUTHERN LITCHFIELD-NORTHERN BERKSHIRE-
SOUTHERN BERKSHIRE-NORTHERN HERKIMER-HAMILTON-SOUTHERN HERKIMER-
SOUTHERN FULTON-MONTGOMERY-NORTHERN SARATOGA-NORTHERN WARREN-
NORTHERN WASHINGTON-SCHOHARIE-WESTERN SCHENECTADY-
EASTERN SCHENECTADY-SOUTHERN SARATOGA-WESTERN ALBANY-
EASTERN ALBANY-WESTERN RENSSELAER-EASTERN RENSSELAER-
WESTERN GREENE-EASTERN GREENE-WESTERN COLUMBIA-EASTERN COLUMBIA-
WESTERN ULSTER-EASTERN ULSTER-WESTERN DUTCHESS-EASTERN DUTCHESS-
NORTHERN FULTON-SOUTHEAST WARREN-SOUTHERN WASHINGTON-BENNINGTON-
WESTERN WINDHAM-EASTERN WINDHAM-
401 PM EDT MON APR 18 2016

...FIRE WEATHER WATCH IN EFFECT TUESDAY AFTERNOON FOR ALL OF
```

```
EASTERN NEW YORK AND ADJACENT WESTERN NEW ENGLAND...

THE NATIONAL WEATHER SERVICE IN ALBANY HAS ISSUED A FIRE WEATHER
WATCH WHICH IS IN EFFECT TUESDAY AFTERNOON FOR ALL OF EASTERN
NEW YORK AND ADJACENT WESTERN NEW ENGLAND.


* WINDS...NORTHWEST 10 TO 15 MPH WITH GUSTS UP TO 30 MPH.

* TIMING...100 PM TO 600 PM EDT.

* RELATIVE HUMIDITY...AS LOW AS 20 PERCENT.

* TEMPERATURES...50S HIGHER TERRAIN...60S IN THE VALLEYS.

* IMPACTS...THE COMBINATION OF DRY FUELS...LOW RELATIVE HUMIDITY
  AND GUSTY WINDS AROUND 25 MPH COULD MAKE FOR CRITICAL FIRE
  WEATHER CONDITIONS.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A FIRE WEATHER WATCH MEANS THAT CRITICAL FIRE WEATHER CONDITIONS
COULD OCCUR. LISTEN FOR LATER FORECASTS AND POSSIBLE RED FLAG
WARNINGS.
```

RED FLAG WARNING (RFW)

If Red Flag conditions appear imminent or is already occurring (out to 48 hours), along with a high confidence level (75% or greater), a Red Flag Warning (RFW) will be issued. The RFW is issued under the AWIPS PIL…ALBRFWALY (Example 5). A RFW must meet the specified Red Flag criteria outlined above. The RFW is issued by zone.

*State warning points MUST BE CONTACTED via NAWAS when a RFW is issued.

*NWS Albany, NY fire weather users MUST be contacted at least once for coordination only if a Red Flag Warning is issued without a prior Fire Weather Watch issuance. Coordination is not

required if a Fire Weather Watch is already in effect.

*The FWF/HWO/Fire Weather AFD MUST be updated if a RFW is issued.

*A Red Flag Warning will appear as a DEEP PINK color on the NWS Albany, NY webpage: www.weather.gov/aly

Example 5. Red Flag Warning (RFW) Sample Product

```
URGENT - FIRE WEATHER MESSAGE
NATIONAL WEATHER SERVICE ALBANY NY
347 AM EDT TUE APR 19 2016

CTZ001-013-MAZ001-025-NYZ032-033-038>043-047>054-058>061-063>066-
082>084-VTZ013>015-192200-
/O.UPG.KALY.FW.A.0001.160419T1700Z-160419T2200Z/
/O.NEW.KALY.FW.W.0001.160419T1600Z-160419T2200Z/
NORTHERN LITCHFIELD-SOUTHERN LITCHFIELD-NORTHERN BERKSHIRE-
SOUTHERN BERKSHIRE-NORTHERN HERKIMER-HAMILTON-SOUTHERN HERKIMER-
SOUTHERN FULTON-MONTGOMERY-NORTHERN SARATOGA-NORTHERN WARREN-
NORTHERN WASHINGTON-SCHOHARIE-WESTERN SCHENECTADY-
EASTERN SCHENECTADY-SOUTHERN SARATOGA-WESTERN ALBANY-
EASTERN ALBANY-WESTERN RENSSELAER-EASTERN RENSSELAER-
WESTERN GREENE-EASTERN GREENE-WESTERN COLUMBIA-EASTERN COLUMBIA-
WESTERN ULSTER-EASTERN ULSTER-WESTERN DUTCHESS-EASTERN DUTCHESS-
NORTHERN FULTON-SOUTHEAST WARREN-SOUTHERN WASHINGTON-BENNINGTON-
WESTERN WINDHAM-EASTERN WINDHAM-
347 AM EDT TUE APR 19 2016

...RED FLAG WARNING IN EFFECT FROM NOON TODAY TO 6 PM EDT THIS
EVENING FOR LOW RELATIVE HUMIDITY AND GUSTY WINDS FOR ALL OF
EASTERN NEW YORK AND WESTERN NEW ENGLAND...

THE NATIONAL WEATHER SERVICE IN ALBANY HAS ISSUED A RED FLAG
WARNING FOR LOW RELATIVE HUMIDITY AND GUSTY WINDS...WHICH IS IN
EFFECT FROM NOON TODAY TO 6 PM EDT THIS EVENING. THE FIRE WEATHER
```

```
WATCH IS NO LONGER IN EFFECT.

* AFFECTED AREA...ALL OF EASTERN NEW YORK AND WESTERN NEW ENGLAND.

* WINDS...NORTHWEST 10 TO 15 MPH WITH GUSTS UP TO 30 MPH.

* TIMING...THIS AFTERNOON THROUGH EARLY THIS EVENING.

* RELATIVE HUMIDITY...AS LOW AS 20 TO 30 PERCENT.

* TEMPERATURES...RANGING FROM THE MID 50S OVER THE HIGHER
  ELEVATIONS TO THE MID 60S IN VALLEY AREAS.

* IMPACTS...THE COMBINATION OF DRY FUELS...LOW RELATIVE HUMIDITY
  AND GUSTY WINDS WILL MAKE FOR CRITICAL FIRE WEATHER CONDITIONS.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A RED FLAG WARNING MEANS THAT CRITICAL FIRE WEATHER CONDITIONS
ARE EITHER OCCURRING NOW....OR WILL SHORTLY. A COMBINATION OF
STRONG WINDS...LOW RELATIVE HUMIDITY...AND WARM TEMPERATURES CAN
CONTRIBUTE TO EXTREME FIRE BEHAVIOR.
```

“NEAR RED FLAG” AND “WET FLAG” CONDITIONS

Conditions that approach “Near Red Flag” are to be highlighted with a headline in the Fire Weather portion of the Area Forecast Discussion (AFD).

*DO NOT mention the terms “Near Red Flag” or “Wet Flag” in the discussion.

Examples of these situations can include the following:

…Gusty winds over 25 mph today…

(The relative humidity is above the 30% criteria for a Red Flag or 5 days of rainfall below 0.25 inch have not elapsed yet).

…Gusty winds 15-25 mph…

(Other conditions are met for a Red Flag but the winds are not projected to be strong enough and the RH is forecast to be 30 percent or lower.)

…High Haines Index Today (6)…
(5 if RH values drop to 20 or less.)

…Scattered (or greater coverage) of thunderstorms…

…Significant wind shift expected…

…Lack of dew expected at night…
(Rare and only after Green-up)

… Any other meteorological element deemed significant in forecaster's judgment…

SPECIAL WEATHER STATEMENTS

Special Weather Statements (SPS) are issued when conditions support enhanced fire weather behavior, but at levels below Red Flag criteria. SPSs can also be issued to raise elevated fire awareness amongst the fire weather community and the general public. SPSs will be issued when the following occurs:

- Red Flag criteria is met, but temperatures ARE BELOW 50°F, and requested by our users.
- NWS Albany, NY fire weather users request the issuance of a SPS to raise "elevated fire awareness" for the fire weather community and/or the general public. This is only issued at the request of our main state contacts.
- Use the following headline for SPSs "…Elevated Risk For Fire Spread During (Day)…"

Example 6. Special Weather Statement (SPS) Sample Product

```
Special Weather Statement

National Weather Service Albany NY

400 AM EDT Fri May 11 2018


MAZ001-025-112200-

Northern Berkshire-Southern Berkshire-

Including the cities of Dalton, Hancock, Pittsfield, Florida,

North Adams, Sandisfield, Great Barrington, and South Egremont

400 AM EDT Fri May 11 2018


...ELEVATED FIRE WEATHER CONCERNS FOR TODAY...


Fire weather officials in Massachusetts have advised that fire

behavior today could see an elevated fire spread potential due to

the combination of the expected weather and very dry fuel

conditions.
```

```
North winds may gust to 20 mph this morning, while minimum
relative humidity values away from the coast will reach between 20
and 30 percent.

Please use extreme caution if burning today.
```

SECTION 4. FIRE WEATHER SPOT FORECASTS

SPOT FORECAST REQUEST

Spot forecasts are detailed forecasts of local conditions in support of wildfire suppression and natural resource management. They can also be requested/issued for hazardous material spills or in support of air quality measures. These forecasts differ based on the specific activity and its location. Fire weather Spot forecasts are requested by state and federal officials, with local officials requesting through state or federal officials, based on the need of the fire weather user and type of activity anticipated (i.e. prescribed burns). Spot forecasts will alarm in one of two ways: graphically on the NWS Albany, NY Spot forecast website www.weather.gov/spot (Example 7a), and as an AWIPS text product under the PIL…ALBSTQALY (Example 7b).

When unscheduled fire weather Spot forecasts are needed, officials are requested to give NWS Albany, NY personnel as much advance notice as possible to ensure that staffing provisions, if needed, are in place for the requested service. Requests can be made via phone at 518-435-9575, or by filling out an online request form available at the following link:

www.weather.gov/spot

Fire weather Spot forecasts are to be issued under the following circumstances and conditions:

- Upon request of any federal official who represents that the spot forecast is required.
- Upon request of any state, tribal, or local official who represents that the spot forecast is required to carry out their wildland fire management responsibilities in coordination with any federal land management agency participating in the Interagency Agreement for Meteorological Services.
- Upon request of any public safety official who represents the spot forecast is essential to public safety, e.g. due to the proximity of population centers or critical infrastructure. A "public safety official" is an employee or contract agent of a government agency at any level (federal, state, local, tribal, etc.) charged with protecting the public from hazards including wildland fires of whatever origin and/or other hazards influenced by weather conditions such as hazardous material releases.
- In support of search and rescue operations.

The following information must be provided in a fire weather Spot forecast:

1. Location. (MUST be entered in coordinates, with negative values for longitude)
2. Type of terrain (including slope).
3. Elevation (above mean sea level).
4. Incident on ground, or elsewhere.
5. Size of incident.
6. Existing weather, in as much detail as possible.
   Preferably including: temperature, dew point or relative humidity, wind speed and Direction, significant weather and, if possible, precipitation amounts.
7. Activity time periods for which forecast is requested (including date(s) and hours)
8. Information on limits (conditions) affecting the operation or activity.
9. Fuel type (slag, brush, etc).
10. Agency and person in charge of (responsible for) project (including phone number).
11. Name and telephone number for person to contact regarding changes, questions, etc.

If insufficient information can be collected for a Spot forecast request, NWS Albany, NY can reject the request based on the acting Lead Forecaster decision. If the Spot forecast is rejected, the reason must be recorded in the station log, and the Fire Weather Program Leaders must be notified.

Fire weather Spot forecasts are typically issued within an approximate twenty minute turnaround time after the initial request. If the request cannot be completed in that timeframe, the forecaster should contact the requester and explain why the forecast will be delayed.

The forecaster can use the graphical forecast grids as a first guess for the forecast, provided he/she feels that they are representative of the actual forecast. The forecaster can deviate from the grid forecast should it be unrepresentative (i.e. populating the latest model guidance or manually tweaking the forecast based on latest observations). Once the forecast grids are finished, the Spot forecast will be issued using the GFE formatter, and selecting the "12 – New Fire Weather Spot Forecast" option under the "Products" pull-down menu. The issuance of the Spot forecast will be under the AWIPS PIL…ALBFWSALY (Example 8). This forecast will update on the webpage:

www.weather.gov/spot

and be available by the requestor to view.

Example 7a. Spot Forecast Request - Graphical

Shiawassee NWR piles

Prescribed Fire

Forecast Start Time:2019-03-08 9:00 AM EST
Request Time: 2019-03-07 4:05 PM EST
Deliver Time: 2019-03-08 7:00 AM EST
Forecast Complete At: 2019-03-08 5:38 AM EST

Requested By: usfws
Contact:
Phone:
Fax:

Location Legal:
Lat/Lon: 43.3231 / -83.9684
Quad:
Calculated: 43.3231 / -83.9684

Elevation: 596
Drainage:
Aspect:
Size: 1
Fuel Type: piled 10 hour fuels (unsheltered)

Observations

Site	Date	Elev	Wind	Temp	WB	RH	Td	Sky	Wx	Rmks
No observations available										

Submit New Observation

Requested Parameters		Remarks
X X X	Sky/Weather	
X X X	Temperature	
X X X	Humidity	
X X X	Wind (Eye Level)	
X X X	Mixing Height	
X X X	Transport Winds	
. . .	Haines Index	
X X X	Ventilation Rate	

Example 7b. Spot Forecast Request – Text (STQALY)

```
714
BMBB91 KALY 161303
STQALY

A SPOT FORECAST REQUEST HAS BEEN RECEIVED FOR INCIDENT TYPE
PRESCRIBED NAMED "APB GROUPER Rx Fire"

       REQUEST TYPE:  IMMEDIATE
               DATE:  01/16/19
               TIME:  0900
       DELIVER DATE:  01/16/19
       DELIVER TIME:  0803
        SUBMIT DATE:  01/16/19
        SUBMIT TIME:  0803
       PROJECT NAME:  APB GROUPER Rx Fire
       PROJECT TYPE:  PRESCRIBED
     REQUEST REASON:  PUBLIC SAFETY
  REQUESTING AGENCY:  APB
REQUESTING OFFICIAL:  Tyler Briggs
    EMERGENCY PHONE:  555-555-5555
              EMAIL:
              STATE:  NY
               DLAT:  42.7006
               DLON:  73.8746
               CLON:  -73.8746
                FAX:
           EXPOSURE:
          FUEL TYPE:
```

```
         SHELTERING:
   BOTTOM ELEVATION:
      TOP ELEVATION:  310
       SIZE (ACRES):
 REQUESTING HYSPLIT:  NO
             FORMAT:  N
           INTERVAL:  1,1,1,1

WEATHER CONDITION AT INCIDENT OR NEARBY STATIONS

...REMARKS...

...WEATHER PARAMETERS REQUESTED...
          VENTILATION RATE:  0,0,0,0
              WIND (20 FT):  1,1,1,1
    CHANCE OF WETTING RAIN:  1,1,1,1
                  DEWPOINT:  0,0,0,0
           SMOKE DISPERSAL:  0,0,0,0
       MAX/MIN TEMPERATURE:  1,1,1,1
          WIND (EYE LEVEL):  1,1,1,1
                  HUMIDITY:  1,1,1,1
                DISPERSION:  0,0,0,0
               SKY/WEATHER:  1,1,1,1
      PRECIPITATION AMOUNT:  1,1,1,1
              SURFACE WIND:  1,1,1,1
           TRANSPORT WINDS:  1,1,1,1
             MIXING HEIGHT:  1,1,1,1
BEGIN/END OF PRECIPITATION:  1,1,1,1
              HAINES INDEX:  1,1,1,1
   CHANCE OF PRECIPITATION:  1,1,1,1
```

```
          MAX/MIN HUMIDITY:  1,1,1,1
               TEMPERATURE:  1,1,1,1


SITE: ALY
OFILE: 1900329.0
TIMEZONE: EST5EDT
```

Example 8. Spot Forecast Text Sample Product (FWSALY)

```
Spot Forecast for APB IOTA Rx Fire...APB
National Weather Service Albany NY
737 AM EDT Thu Oct 18 2018

Forecast is based on ignition time of 0800 EDT on October 18.
If conditions become unrepresentative...contact the National Weather
Service.

Please contact our office at alb.stormreport@noaa.gov, if you have questions
or concerns with this forecast.

.DISCUSSION...
Very chilly today with gusts 25 to 35 mph and minimum relative
humidity values in the 30s this afternoon. Milder and dry
Friday with minimum relative humidity values mainly in the
mid 40s to mid 50s.

.TODAY...

Sky/weather.........Sunny (10-20 percent).
CWR................MISSING.
```

```
Chance of pcpn......10 percent.
Begin/end of pcpn...
Max temperature.....Around 43.
Min humidity........35 percent.
Min humidity........35 percent.
Eye level winds.....Northwest winds 13 to 17 mph with gusts to
                    around 14 mph.
Surface winds.......Northwest winds 13 to 17 mph with gusts to
                    around 24 mph.
Wind (20 ft)........
 Slope/valley.......Northwest winds 13 to 17 mph with gusts to
                    around 19 mph.
Mixing height.......400-800 ft AGL increasing to 4400-5400 ft AGL
                    in the late morning and afternoon.
Transport winds.....Northwest around 29 mph.
Haines Index........4 or low potential for large plume dominated
                    fire growth.
Pcpn amount.........0.00 inches.

.TONIGHT...

Sky/weather.........Mostly clear (20-30 percent).
CWR................MISSING.
Chance of pcpn......0 percent.
Begin/end of pcpn...
Min temperature.....Around 33.
Max humidity........82 percent.
Max humidity........82 percent.
Eye level winds.....West winds 7 to 10 mph shifting to the
                    southwest 5 to 7 mph after midnight.
```

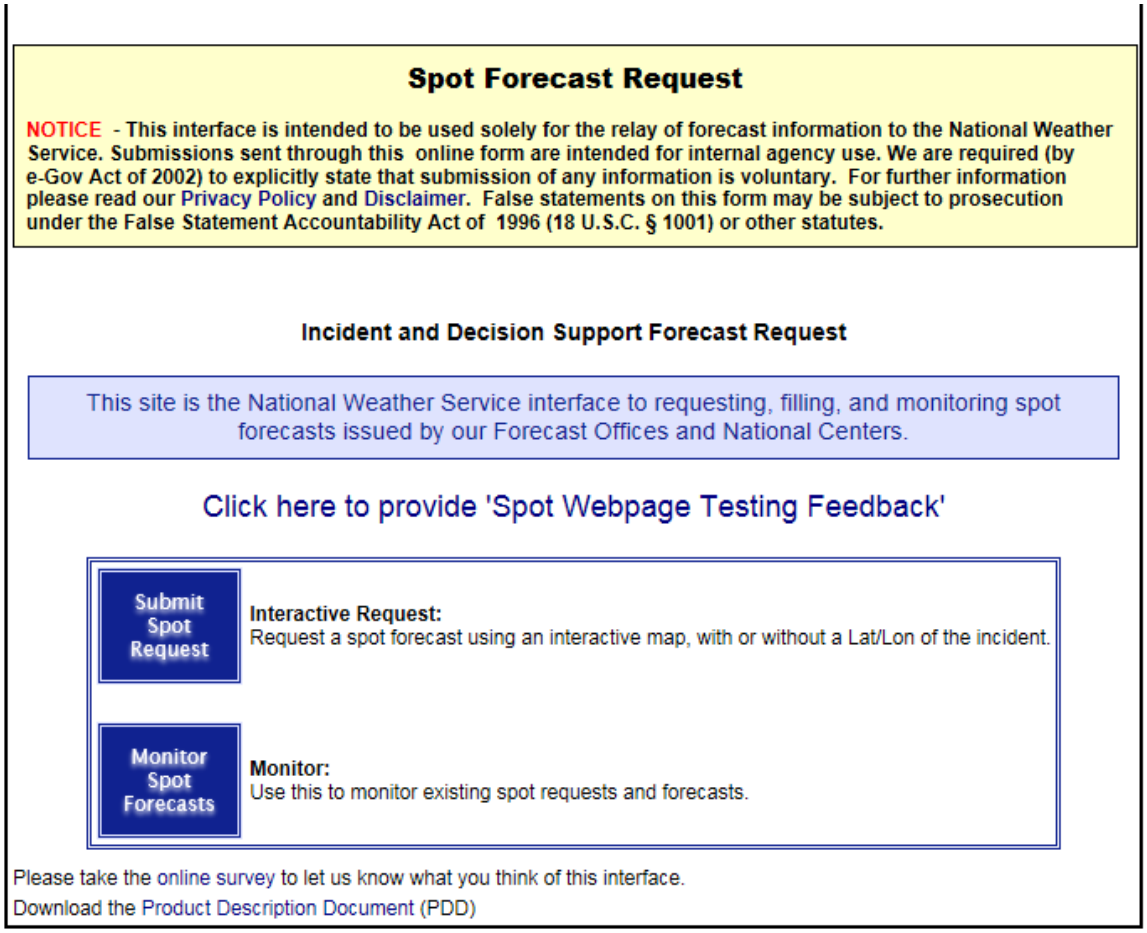
```
Surface winds.......West winds 7 to 10 mph shifting to the
                    southwest 5 to 7 mph after midnight.
Wind (20 ft)........
 Slope/valley.......West winds 7 to 10 mph shifting to the
                    southwest 5 to 7 mph after midnight.
Mixing height.......4500 ft AGL decreasing to 100-300 ft AGL.
Transport winds.....West around 29 mph.
Haines Index........4 or low potential for large plume dominated
                    fire growth.
Pcpn amount.........0.00 inches.

.FRIDAY...

Sky/weather.........Sunny (15-25 percent).
CWR................MISSING.
Chance of pcpn......0 percent.
Begin/end of pcpn...
Max temperature.....Around 59.
Min humidity........49 percent.
Min humidity........49 percent.
Eye level winds.....Southwest winds 6 to 12 mph.
Surface winds.......Southwest winds 6 to 12 mph.
Wind (20 ft)........
 Slope/valley.......Southwest winds 6 to 12 mph.
Mixing height.......100-1500 ft AGL increasing to 700-2500 ft AGL
                    in the afternoon.
Transport winds.....West around 23 mph.
Haines Index........4 or low potential for large plume dominated
                    fire growth.
Pcpn amount.........0.00 inches.
```

```
$$
Forecaster...MSE
Requested by...Tyler Briggs
Type of request...PRESCRIBED
.TAG 1817038.0/ALY
.DELDT 10/18/18
.EMAIL
```

Example 9. Spot Forecast Request - Graphical



SECTION 5. COORDINATION PROCEDURES

NWS Albany, NY will only be in direct contact coordination with our NY contact, Captain Jaime Laczko . The VT contacts (Dan Dillner and Lars Lund), CT contact (Kevin Grady), and MA contact (Margaret Carnevale) will be coordinated through NWS Burlington, VT and NWS NortonNorton, MA/Upton, NY respectively.

Coordination of products is still required with surrounding NWS offices (BUF, BGM, BTV, OKX, GYX, BOX), and is strongly preferred with SPC.

NWS Albany, NY will ideally have one person dedicated for all fire weather coordination procedures, fire weather grids, and product issuances/cancellations in collaboration with the near/short term forecaster.

Coordination for Red Flag products is only required once for the issuance of a Fire Weather Watch. If a Fire Weather Watch is already in effect, coordination with our fire weather users is not required for a Red Flag Warning, although coordination with surrounding NWS offices and SPC is still strongly urged regarding issuance times, end times, etc.

At any time during the coordination process, our fire weather users have the final say in what products are or are not issued. The only time NWS Albany, NY will have precedence over user input is in cases where coordination was attempted and there was no response.

Any time a Red Flag product is issued, the Fire Weather section of the AFD will be updated to include the following headline: "A [Fire Weather Watch / Red Flag Warning / Special Weather Statement] has been issued at the request of the [New York State DEC Forest Rangers and Emergency Management / Vermont Department of Forests, Parks, and Recreation / Massachusetts Department of Conservation and Recreation / Connecticut DEEP Division of Forestry] and is in effect from [start time] until [end time] for the following counties: [list counties].

A PowerPoint and PDF have been created that contain decision trees outlining the NWS Albany, NY coordination process and is available here on the NWS Albany, NY Fire Weather intranet page. Additionally, an automated fire weather DSS briefing is available and should be sent for potential or ongoing Red Flag events for NY zones only. This briefing presentation is available on the NWS Albany, NY Fire Weather intranet page. If extra staffing is needed (e.g. on-going brush fires with several Spot forecasts expected, weekends, unusually difficult Red Flag situation, forecaster's discretion), it will be pursued using established call-back procedures.

Specific coordination procedures for each state can be found below:

State of NY – Captain Jaime Laczko will serve as the NY state fire weather contact. If a possible Red Flag event is over 12 hours out, the communication method is to be email. If a possible Red

Flag event is less than 12 hours out, the communication method is to be phone. It is best to call after 5am. If he cannot be reached, call the NYSDEC 24-hour dispatch number, and ask for the Forest Ranger Statewide Duty Officer. If no one can be reached after 1 hour, issue the relevant products based on the level of confidence that the meteorological conditions will occur.

Additionally, if a possible Red Flag event is over 12 hours out, an email should also be sent to the NY EM's (same email that would go to Captain Jaime Laczko). This email should be a brief description (no more than a paragraph) outlining the meteorological reasoning/threats behind the potential issuance of any Red Flag product.

Any cancellations of Red Flag products in effect across our NY zones must be coordinated with Captain Jaime Laczko or the Forest Ranger Statewide Duty Officer, and surrounding NWS offices (BUF, BGM, BTV, BOX, OKX, GYX) and SPC.

State of VT – NWS Burlington, VT will serve the primary role in coordination with our VT fire weather contacts (Dan Dillner and Lars Lund). Coordination procedures regarding any Red Flag products should be done directly with NWS Burlington, VT via email, phone, NWS Collaboration, etc. This coordination will involve asking NWS Burlington, VT what the VT fire weather contact's input is as relayed to them. In a short-fused situation (12 hours or less), if NWS Burlington, VT does not respond to coordination after 1 hour, the relevant products should be issued based on the level of confidence that the meteorological conditions will occur.

The only time NWS Albany, NY will directly call the VT fire weather contact is if instructed to do so by NWS Burlington, VT.

Any cancellations of Red Flag products in effect across our VT zones must be coordinated with NWS Burlington, VT, as well as other surrounding NWS offices (BOX, GYX) and SPC.

State of MA – NWS Norton, MA will serve the primary role in coordination with our MA fire weather contact, Margaret Carnevale. Coordination procedures regarding any Red Flag products should be done directly with NWS Norton, MA via email, phone, NWS Collaboration, etc.

Additionally, NWS Norton, MA will host conference calls if any part of MA has the potential for a Red Flag event. NWS Albany, NY will sit in on these calls and provide our input, but will not be required to conduct the calls. In a short-fused situation (12 hours or less), if NWS Norton, MA does not respond to coordination after 1 hour, the relevant products should be issued based on the level of confidence that the meteorological conditions will occur.

The only time NWS Albany, NY will directly call Margaret Carnevale is if instructed to do so by NWS Norton, MA.

Any cancellations of Red Flag products in effect across our MA zones must be coordinated with NWS Norton, MA, as well as other surrounding NWS offices (BTV, GYX) and SPC.

State of CT – NWS Norton, MA and NWS Upton, NY will serve the primary roles in coordination with our CT fire weather contact, Kevin Grady. Coordination procedures regarding

any Red Flag products should be done directly with NWS Norton, MA and NWS Upton, NY via email, phone, NWS Collaboration, etc.

Additionally, either NWS Norton, MA or NWS Upton, NY will host conference calls if any part of CT has the potential for a Red Flag event. NWS Albany, NY will sit in on these calls and provide our input, but will not be required to conduct the calls. In a short-fused situation (12 hours or less), if both NWS Norton, MA and NWS Upton, NY do not respond to coordination after 1 hour, the relevant products should be issued based on the level of confidence that the meteorological conditions will occur.

The only time NWS Albany, NY will directly call Kevin Grady is if instructed to do so by NWS Norton, MA or NWS Upton, NY.

Any cancellations of Red Flag products in effect across our CT zones must be coordinated with NWS Norton, MA and NWS Upton, NY, as well as SPC.

SECTION 6. ADDITIONAL NWS ALBANY, NY FIRE WEATHER SERVICES

SUPPLEMENTAL WEATHER BRIEFINGS

Supplementary weather briefings may be requested by certain officials, such as emergency managers, to provide more detailed weather information in support of fire weather issues and concerns. These briefings may be provided via phone, GoTo Meeting, and/or email.

If a fire weather-focused briefing is requested, the following information should be provided:

1. A general short term weather outlook for planning purposes.
2. A long-range weather outlook for planning purposes.
3. Detailed fire weather information, including meteorological parameters and fire behavior.
4. Expected impacts/issues/concerns pertaining to the fire weather community.

INCIDENT METEOROLOGIST (IMET) SERVICES

In the event a fire weather hazard (i.e. large, uncontained wildfire) involves significant support from the fire weather community, an Incident Meteorologist (IMET) may be requested to assist in on-site meteorological services. NWS Albany, NY will also assist in coordination efforts, providing critical weather forecasts and briefing information to those working in the field.

ON-SITE SERVICES/COORDINATION

Modularized, Air Transportable Mobile Units (ATMU) are stored and dispatched from a United States Department of Agriculture (USDA) forest fire cache on a seasonal basis. These units are available, upon request, for duty at an incident fire, critical prescribed burn project, or other fire weather sensitive incidents.

Further information concerning the ATMU, such as weight, size, forms needed, etc. can be obtained from the USDA forest service dispatch meteorologist in Boise, ID at (208) 334-9824.

The unit is to be operated only by a certified IMET working closely with the fire behavior analyst (FBA) or planning section chief (PSC) in setting up the unit at the incident site.

Agencies requesting an ATMU and/or IMET should provide the following information:

1. Name of the fire or incident.
2. Location of the fire or incident.
3. Directions to the place of the fire or incident.
4. Name of the incident commander, and of the FBA or PSC.

The requesting agency is responsible for:

1. Coordinating transportation of the ATMU and IMET to and from the incident.
2. If commercial air is used to transport the ATMU to the incident.
3. Storage of the ATMU while in transit.
4. Shelter and provisions for the IMET.
5. Shelter for the ATMU at the incident site.
6. Provision of daily telephone access for short periods.

Upon arrival at the incident site, the IMET will:

1. Brief the FBA, PSC and incident commander on current and expected weather as it affects the incident.
2. Establish a schedule with the incident commander and FBA for written forecasts and/or formal briefings.
3. Request a briefing of the incident situation (fire) and potential problems, as time and resources permit.
4. Request an aerial inspection trip, current fire line maps and a radio with fire line frequency, if possible.
5. In cooperation with the FBA and PSC, arrange for a schedule of observations from key points around the fire. This information can be provided from belt weather kits.

The IMET will work closely with NWS Albany, NY staff to assist the requesting agency in fulfilling any fire weather services/operations/coordination that is required.

A NWS meteorologist is available, at times, to assist state and federal agencies with training needs. Written requests for assistance should be forwarded to the "Meteorologist-in-Charge" (MIC) at the NWS Albany office as soon as dates for such training are known.

Other special services include, but are not limited to:

1. Forest and fire weather research projects.
2. Weather advisor to the northeastern forest fire protection commission.
3. Participation in the northeast forest fire protection compact (including weather presentations and ATMU equipment displays and demonstrations).

PRESCRIBED/CONTROLLED BURNS

The NWS Albany, NY Fire Weather Program Leaders may be available to provide on-site support during prescribed and controlled burns. The requesting agency should request participation at least 48 hours in advance and provide appropriate clothing/boots/apparel to allow for sufficient time to accompany any scheduling changes. Requests should be forwarded to the Fire Weather Program Leaders, with a cc: to the WCM and MIC.

Dan Thompson (Dan.B.Thompson@noaa.gov),

cc: Stephen DiRienzo (Stephen.Dirienzo@noaa.gov)

cc: Raymond O'Keefe (Raymond.Okeefe@noaa.gov).

SPECIAL REQUESTS

Special meteorological services are those services and/or training uniquely requested by the fire weather community, which require NWS personnel to be away from their duty station and/or, in emergency situations, to be on overtime.

Fire weather agencies must pay the costs for:

1. Overtime.
2. Travel and per diem (food, lodging, etc.).
3. Other miscellaneous costs pertaining to these special services.

Costs will be coordinated with the NWS Albany, NY administrative assistant.