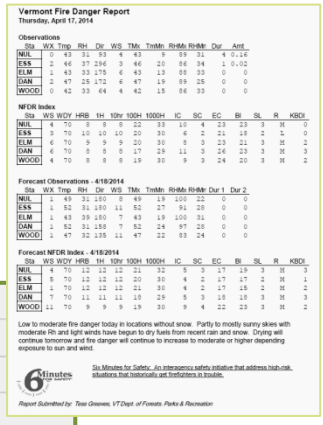
Fire Weather Program

Vermont Fire Danger Report
Column Definitions for Daily Weather Observations


Vermont Fire Danger Report
Thursday, April 17, 2014

Observations

Sta	WX	Tmp	RH	Dir	WS	TMx	TmMn	RHMx	RHMn	Dur	Amt
NUL	0	43	31	93	4	43	9	59	31	6	0.16
ESS	2	46	37	296	3	46	20	86	34	1	0.02
ELM	1	43	33	175	6	43	13	86	33	0	0
DAN	2	47	25	172	6	47	19	89	25	0	0
WOOD	0	42	33	64	4	42	15	86	33	0	0

NFDR Index

Sta	WS	W/DY	HRB	1H	10hr	100H	1000H	IC	SC	EC	BI	SL	R	KBDI
NUL	4	70	8	8	8	22	33	10	4	23	23	3	M	0
ESS	3	70	10	10	10	20	30	6	2	21	18	2	L	0
ELM	6	70	9	9	9	20	30	8	3	23	21	3	M	2
DAN	6	70	8	8	8	17	29	11	3	26	23	3	M	3
WOOD	4	70	8	8	8	19	30	9	3	24	20	3	M	2

Forecast Observations - 4/18/2014

Sta	WX	Tmp	RH	Dir	WS	TMx	TmMn	RHMx	RHMn	Dur 1	Dur 2
NUL	1	49	31	180	8	49	18	100	22	0	0
ESS	1	52	31	180	11	52	27	91	28	0	0
ELM	1	43	39	180	7	43	19	100	31	0	0
DAN	1	52	31	158	7	52	24	97	28	0	0
WOOD	1	47	32	135	11	47	22	83	24	0	0

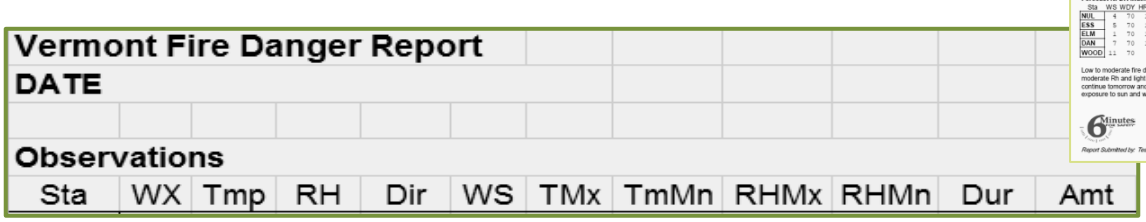
Forecast NFDR Index - 4/18/2014

Sta	WS	W/DY	HRB	1H	10hr	100H	1000H	IC	SC	EC	BI	SL	R	KBDI
NUL	4	70	12	12	12	21	32	5	3	17	19	3	M	3
ESS	5	70	12	12	12	20	30	4	2	17	17	2	M	1
ELM	1	70	12	12	12	21	30	4	2	17	15	2	M	2
DAN	7	70	11	11	11	18	29	5	3	18	16	3	M	3
WOOD	11	70	9	9	9	19	30	9	4	22	23	3	M	2

Low to moderate fire danger today in locations without snow. Partly to mostly sunny skies with moderate Rh and light winds have begun to dry fuels from recent rain and snow. Drying will continue tomorrow and fire danger will continue to increase to moderate or higher depending exposure to sun and wind.

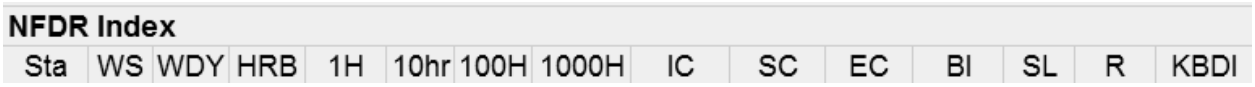
6 Minutes — Six Minutes for Safety: An interagency safety initiative that address high-risk situations that historically get firefighters in trouble.

Report Submitted by: Tess Greaves, VT Dept. of Forests, Parks & Recreation


Vermont Fire Danger Report
DATE
Observations
Sta WX Tmp RH Dir WS TMx TmMn RHMx RHMn Dur Amt

Column Heading	Name	Description	
Sta	Station	Nulhegan (NUL) – Station ID 430402	
		Essex (ESS) – Station ID 430501	
		Elmore (ELM) – Station ID 430601	
		Danby (DAN) – Station ID 431301	
		Woodford (WOOD) – Station ID 431303	
Wx	State of the Weather	**Description of the weather at the time of observation.**	
		0	Clear, less than 10% cloud cover
		1	Scattered clouds, 10-50% cloud cover
		2	Broken clouds, 60-90% cloud cover
		3	Overcast, 100% cloud cover
		4	Fog
		5	Drizzle or mist
		6	Rain
		7	Snow or sleet
		8	Showers
		9	Thunderstorms
Tmp	Temperature	Observed dry bulb air temperature in Fahrenheit	
RH	Relative Humidity	The ratio of the actual amount of water vapor in the air to the amount necessary to saturate the air at that temperature and pressure.	
Dir	Wind Direction	The direction from which the wind is blowing entered as a numeric value representing the compass direction (90 for east, 315 for winds coming out of the northwest). Calm winds have a zero value.	
WS	Wind Speed	Wind, in miles per hour, measured at 20 feet above the ground and averaged over at least ten minutes. 0 is calm.	
TMx	Maximum Temperature	Observed maximum temperature in the last 24 hours (Fahrenheit)	
TmMn	Minimum Temperature	Observed minimum temperature in the last 24 hours (Fahrenheit)	
RHMx	Maximum RH	Observed maximum relative humidity in the last 24 hours	
RHMx	Minimum RH	Observed minimum relative humidity in the last 24 hours	
Dur	Precipitation duration	Actual number of hours of precipitation observed in the last 24 hours, cumulative total of all occurrences.	
Amt	Precipitation amount	Amount of precipitation observed in the last 24 hours.	

Vermont Fire Danger Report
Column Definitions for National Fire Danger Rating (NFDR) Index



Column Heading	Name	Description
Sta	Station	Same as daily weather observations
WS	Wind Speed	Wind, in miles per hour, measured at 20 feet above the ground and averaged over at least ten minutes. 0 is calm.
WDY	Live Woody Fuel Moisture	Calculated field that represents the water content of **LIVE** woody plants expressed as a % of the oven-dried weight of the plants.
HRB	Live Herbaceous Fuel Moisture	Calculated field that represents the water content of **LIVE** herbaceous plants expressed as a % of the oven-dried weight of the plants.
1H	1-hour dead fuel moisture	Calculated one-hour timelag fuel moisture content, in percent, of **DEAD** herbaceous plants and roundwood less than 1/4 inch in diameter, also includes the uppermost layer of the forest floor.
10H	10-hour dead fuel moisture	Calculated ten-hour timelag fuel moisture content, in percent, of **DEAD** fuels consisting of roundwood 1/4 to 1 inch in diameter, and roughly, the layer of litter extending from just below the surface to 3/4 inch below the surface.
100H	100-hour dead fuel moisture	Calculated 100-hour timelag fuel moisture content, in percent, of **DEAD** fuels in the 1-3 inch diameter class.
1000H	1000-hour dead fuel moisture	Calculated 1000-hour timelag fuel moisture content, in percent, of **DEAD** fuels in the 3-8 inch diameter class.
IC	Ignition Component	A calculated field which provides an index indicating the probability that a heat source, natural or man-made, will cause a fire requiring suppression action. IC values range between 0 and 100.
SC	Spread Component	A calculated field which provides a relative index of the forward rate of fire spread. The scale for SC values is open ended.
EC	Energy Release Component	A calculated field which provides a relative index of the available energy (heat) (Btu) per square foot within the flaming front at the head of a fire. The scale for ERC values is open ended.
BI	Burning Index	A calculated field which provides an index indicating the difficulty of containing a single fire. The BI has a linear relationship to flame length at the head of the fire (10 times the predicted flame length) and is derived from the SC and the ERC. The scale for BI values is open ended.
SL	Staffing Level	Readiness level that represents a way of linking fire danger information to fire management decisions. Levels set by Agency. Used by Green Mountain National Forest.
R	Adjective Fire Danger Rating	The fire Danger Rating is used to communicate fire danger to the public (Smokey's arm). L=low; M=moderate; H=high; V=very high; E=extreme.
KBDI	Keetch-Byram Drought Index	A calculated field which is used to estimate deep drying of litter and duff. The value is calculated based on observations where 0 represents saturated, 800 represents maximum drought.

Vermont Fire Danger Report
Column Definitions for Forecasted Weather Observations and NFDR Index

Forecast Observations - Date											
Sta	WX	Tmp	RH	Dir	WS	TMx	TmMn	RHMx	RHMn	Dur 1	Dur 2

Forecast NFDR Index - Date														
Sta	WS	WDY	HRB	1H	10hr	100H	1000H	IC	SC	EC	BI	SL	R	KBDI

These sections are calculated values based on the current day's fire weather observations and the forecasted weather observations from the National Weather Service. These observations are then used to calculate the NFDR outputs. All fields have the same description as the actual observations and NFDR outputs except for Dur 1 and Dur 2 of the forecast observations section.

Dur 1 (first 16 hours of forecasted precipitation)	Displays the forecasted duration of precipitation, in hours, from 1: 00 pm to 5: 00 am (1300 to 0500).
Dur 2 (Next 8 hours of forecasted precipitation)	Displays the forecasted duration of precipitation, in hours, from 5: 00 am to 1: 00 pm. (0500 to 1300).