

# *Virginia Department of Fire Programs*

## Policy and Procedures Manual



PROCEDURE: Outdoor Training Activities  
During Extreme Weather Conditions

EFFECTIVE DATE: January 15, 2018

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A handwritten signature in black ink that reads "Michael T. Reilly". The signature is written in a cursive style with a large initial "M".

Signature

# Virginia Department of Fire Programs

## Outdoor Training Activities During Extreme Weather Conditions

### Policy and Procedures

**Purpose:** This policy shall serve as a guide to the instructor in making reasonable judgments and decisions with regard to outdoor training activities under extreme weather conditions.

**Policy:** It is the responsibility of each instructor to monitor weather conditions and use the following guidelines to adjust or cancel related activities as conditions warrant. It is also the responsibility of the instructor to monitor students individually during extreme weather conditions, as age, physical condition, and other factors may influence an individual's limitations to physical activity. VDFP Staff reserves the right to cancel or modify classes where weather conditions may be of concern.

The heat and wind chill indexes as developed by the National Weather Service will be used as the guide for determining extreme heat and cold conditions. Weather information local to the class site should be used. Where VDFP courses are being conducted in jurisdictions that have established more stringent weather policies with regard to training or outdoor activities, those policies shall be followed.

**Procedure:** I. Extreme Heat:

A. Outside training activities requiring physical activity or full protective clothing shall not be conducted when the heat index reaches more than 110°F. Consideration should be given to the factors that full protective clothing may add 10° to the heat index value, and age/physical condition of individual students may affect susceptibility to heat disorders. Direct sunlight may also add an additional 10° to the heat index value. Where the heat index is between 100° and 110° F, conditions may be considered hazardous. The instructor shall use discretion with regard to outside activity cancellation/modification (other factors such as time of day and type of activity may influence the instructor's decision). Outside training activities requiring physical activity or full protective clothing may be conducted under the following conditions:

1. Live-fire and structural burns should be evaluated case by case. Activities other than live fire fighting can be safely conducted with reduced protective clothing (i.e., helmet, gloves, and boots or safety shoes). An adequate supply of cool drinking water is available at the training site. Strenuous physical activity is monitored and limited to 15 to 20 minutes. A rehabilitation area is established for rest and rehydration (a cool, shady area is preferred).

# NOAA's National Weather Service

## Heat Index

Temperature (°F)

	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

Classification	Heat Index	Effect on the body
Caution	80°F - 90°F	Fatigue possible with prolonged exposure and/or physical activity
Extreme Caution	90°F - 103°F	Heat stroke, heat cramps, or heat exhaustion possible with prolonged exposure and/or physical activity
Danger	103°F - 124°F	Heat cramps or heat exhaustion likely, and heat stroke possible with prolonged exposure and/or physical activity
Extreme Danger	125°F or higher	Heat stroke highly likely

The Heat Index is a measure of how hot it really feels when [relative humidity](#) is factored in with the actual air temperature.

### II. Extreme Cold:

A. Wind chill factors may vary depending on the training location's proximity to wind barriers. Frostbite is possible at temperatures less than 0 degrees F and temperatures are considered dangerous at 20 degrees F. Outside training activities should not be conducted when the wind chill factor is less than 20 degrees F, unless:

B. Students are properly dressed for an appropriate cold weather activity;

C. The cold weather will not affect the safe and proper function of tools,

equipment, and apparatus;

D. An adequate supply of warm liquids and/or food is available at the training site;

E. Strenuous physical activity is monitored and limited to 15 to 20 minutes;

F. A heated indoor rehabilitation area is in close proximity to the training site;

G. When conducting outside training activities in temperatures where climbing/walking surfaces are subject to freezing and may create a slip hazard, instructors shall exercise due caution.



## Wind Chill Chart



Temperature (°F)

Wind (mph)	Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5		36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10		34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15		32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20		30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25		29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30		28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35		28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40		27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45		26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50		26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55		25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60		25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

**Frostbite occurs in 15 minutes or less**

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T = Air Temperature (°F)

V = Wind Speed (mph)

Effective November 2001

### III. Other Conditions:

A. Instructors shall consider other extreme weather-related conditions and modify or cancel outside training activities accordingly. These conditions include but are not limited to:

- High winds
- Snow or snow on ground
- Ice
- Sleet
- Hail
- Rain
- Lightning
- Thunderstorm warning
- Tornado warning

Instructors assigned to VDFP training programs should coordinate decisions on class cancellation or activities in extreme weather-related conditions with both the local representative and the assigned VDFP Division Chief. While instructor and student safety is primary, the desires of the host locality and the employee/student situation will affect any decisions.