









REM 244: Introduction to Fire Weather			
Weather is a critical driver of fire behavior. One of the primary			
factors influencing the weather are <u>day-to-day and site-to-site</u>			
variations in the surface temperature. Surface temperature is			
influenced by:			
1. Air moisture content and pollutants			
Weters and encode about rediction reducing			
amount of incoming solar radiation hitting the surface			
amount of mooning solar radiation maining the surface.			
2. Solar Insolation			
The second of th			
amount of radiation - i.e. seasons aspect time of day			
amount of radiation - i.e., seasons, aspect, time of day.			

























Source: Firefighters Handbook of Wildland Firefighting, TEIE (2005

## REM 244: Wind Hazards

Thunderstorms: Very dangerous! Downdrafts (rapid decent of cold air at storm center) can be felt over 25 miles away and can cause havoc on fires. Mountains can funnel and accelerate these winds.

Firewhirls: These are miniature cyclones caused by strong convection currents and updrafts. What to watch for:

- Clear skies (unstable air) - Light surface winds
- Strong solar heating Lee slope from prevailing winds





REM 244: Relative Humidity (RH)			
Definitio amount	n: The % of v possible (i.e.	vater vapor in air relative to the greatest saturation) at a given temperature.	
10° C Water	30° C 20° C Water	Air moisture and thus RH has direct affects on fuel moisture and fire behavior.	
100 % Relative Resultive	S2 % 28 % Relative Relative Renatify Research	Fires burn slower at night because the fine fuels absorb moisture from the damp night air. RH and Temperature are linked: • The dew point is the temperature at which the RH is 100%. • For every 10°C temperature increase at 1000mb, RH drops by ~50%. If you know dew point and temperature, you can predict RH.	
Temperature (°C)	Vapor (g) per Kilogram of Dry Air		
50	88.12		
40	49.81		
30	27.69		
20	14.85		
10	7.76		
0	3.84		





















