

**PHOENIX REGIONAL
STANDARD OPERATING PROCEDURES**

RED FLAG WARNINGS

M.P. 202.15C

04/20-N

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PURPOSE

The purpose of this procedure is to develop standard actions and considerations when a Red Flag Warning is issued.

DEFINITIONS

A Red Flag Warning is issued by the National Weather Service for weather events which may result in extreme fire behavior that will occur within 24 hours. A Red Flag Warning is the highest level of weather-related fire warning. A Red Flag Warning will normally be issued for severe fire weather events less than 12 hours in the future. The area affected, onset time, and a statement describing the conditions will be included in the forecast. Thresholds for Red Flag Warnings vary based on vegetation type, topography and other factors, but in the Phoenix area they are generally Sustained winds ≥ 20 mph and relative humidity $\leq 20\%$, scattered thunderstorms, increased thunderstorm activity after a prolonged dry period, abrupt change in wind speed and direction that may affect the area.

POLICY

When the Phoenix Fire Department Regional Dispatch Center (PFDRDC) receives notification of a Red Flag Warning they should notify all on-duty units via an MCT message. If a Red Flag Warning extends from one shift into the next shift, the MCT message should be repeated at 0800 immediately following shift change to notify the new on-duty crews. The message from PFDRDC to on-duty crews should include the standard Red Flag Warning details:

- *Affected Area:* This may include counties, cities or fire weather zones
- *Wind:* Speed and direction
- *Timing:* The hours the Red Flag Warning will be in effect
- *Relative Humidity:* Fine fuels found in the Phoenix area such as grass and bushes are particularly susceptible to fire when humidity is low
- *Other:* Include any additional pertinent information provided by the National Weather Service

An all-call on channel one will also be made to all stations that there is a Red Flag Warning in effect. This warning should be issued when the Red Flag Warning comes into the PFDRDC and repeated at 0830 for each shift the warning is in effect.

OPERATIONAL CONSIDERATIONS

Wildland Urban Interface: In Wildland Firefighting, a Red Flag Warning represents the highest probability of a wildfire occurring. The warning also indicates a significant danger to firefighters when operating on a wildfire incident. Red Flag conditions such as sustained winds >20 mph, abrupt wind speed and direction changes and low relative humidity combine to create a very dynamic and dangerous incident. During a Red Flag Warning, Company Officers should ensure that each crew establishes lookouts, communications, escape routes and safety zones (LCES) prior to exiting the vehicle to begin operations. Weather and wind conditions should be communicated to all crew members frequently. Any direct fire attack during a Red Flag Warning should occur from the burned side of the fire. Command officers should be pessimistic in their evaluation of potential cut-offs and fire breaks. Wildfires are extremely difficult to control during Red Flag conditions and have a high

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probability of spreading. Outside aid from state, tribal and federal resources should be considered early in the incident.

Structural Firefighting: A Red Flag Warning represents the same extreme danger during structural firefighting incidents as the danger in the wildland. Wind driven fires have led to firefighter injuries and fatalities across the United States. According to the National Institute of Standards and Technology (NIST), wind speeds as little as 10 miles per hour can cause rapid fire progression in a structure regardless of the structure type (houses, apartments, high-rise, etc.). When sizing-up the incident, all members should pay particular attention to wind direction and attack the fire from the windward side when possible. Opening any door on the leeward side of the fire will create a flow path and cause the fire to grow. Disciplined door control will help to alleviate the potential for firefighters being caught in a flow path. Transitional attacks from the windward side are very effective at cooling the interior prior to entry. All crews should closely coordinate any ventilation including windows, doors or vertical ventilation.