

# **NWCG Standard for the Fire Danger PocketCard for Firefighter Safety**

This standard establishes minimum requirements for content and implementation for the Fire Danger PocketCard for Firefighter Safety, hereafter referred to as the PocketCard.

The purpose of the PocketCard is to provide, through a graphical interpretation of daily fire danger, a means for firefighters to understand the fire potential for a given local area during any day of the fire season.

## Authority

PocketCards are intended for local fire agency use. If an agency with fire protection authority elects to implement the PocketCard on its jurisdiction, it is responsible for producing the cards. For the purposes of this document such agencies will be referred to as the Authority Having Jurisdiction.

## Compliance

Compliance with this standard including content quality, currency, and application of the PocketCard, is the responsibility of the Authority Having Jurisdiction.

## Content

### *Area*

Information displayed on the PocketCard refers to a specific area of interest to the Authority Having Jurisdiction. This area is described on the card with text or a map.

### *Weather Station and Data*

Fire weather and fire danger information displayed on the PocketCard is generated with weather observation data from at least one weather station representing the area of interest.

A disclosure of the type of weather station(s) and length of the data record(s) used to create the PocketCard is displayed. Specifically, the disclosure establishes:

- 1) whether or not the weather station(s) comply with the NWCG NFDRS Weather Station Standard, PMS 426-3,
- 2) how many years of weather data were used in the creation of the PocketCard.

### *NFDRS Fuel Model and Index*

The PocketCard displays information about an NFDRS fuel model and an NFDRS index or component that are appropriate for the area.

The fuel model and the fire danger rating index or component are the same as what is referred to in routine daily briefings and communications of fire weather/fire danger.

A brief explanation of the fuel model and index appear on the PocketCard.

### *Seasonal Trends*

The PocketCard displays the following information in the form of one or more graphs:

- 1) The plot through the fire season of the average value for the chosen index,
- 2) A plot of the all-time worst (usually the maximum) value for the index,
- 3) A plot of the index during one or two recent fire seasons. This plot also describes the timing and index value for one or two significant fire events that happened in the area.
- 4) Each of these plots also describes an index value corresponding to either a critical percentile or a fire business threshold. A critical percentile is an index value that represents a climatological threshold for the index, such as the 90<sup>th</sup> percentile value. A fire business threshold is the value of an index that has been statistically related to fire occurrence.

A brief explanation for average, worst, specific fire seasons, and the critical percentile or fire business threshold is provided.

### *Fire Danger Interpretation*

The PocketCard displays an interpretation of firefighting activity that is generally possible, given a value of the fire danger index.

### *Critical Threshold Values*

Critical threshold values for temperature, relative humidity, wind, and live fuel moisture conditions are displayed on the PocketCard. These are values for each observation at which locally significant fire activity generally occurs.

### *Supplemental Information*

Briefly, supplemental information in text format is provided

- 1) About the significant fire events described above, and

- 2) To highlight unique local events that influence fire danger and large fire potential (e.g. sundowners, East winds).

### Currency

The year when the PocketCard was developed and approved for use by the Authority Having Jurisdiction is clearly visible.

PocketCards based on a weather dataset of 10 or more years are updated every other year. PocketCards based on a weather dataset of less than 10 years are updated every year.

### Implementation

The PocketCard is used to help fire personnel develop an awareness of daily fire potential.

The PocketCard is used to interpret the daily current and forecasted outputs of the National Fire Danger Rating System.

The PocketCard is used as a visual aide to explaining fire potential in an area during routine daily briefings, initial fire size-up, initial attack, and extended attack.

The PocketCard is used as a training aide to reviewing basics of fire danger rating during pre-season annual refreshers.

Current and forecasted values of the index on the PocketCard are communicated daily to fire personnel of the Authority Having Jurisdiction.

The weather station/fuel model/index combination on the PocketCard matches the weather station/fuel model/index combination used to develop the daily communication of fire danger to fire personnel.

PocketCards are distributed with a verbal interpretive briefing relating the information displayed to current and forecasted fire danger rating.

### Appendix

#### *Recommendations*

A template for creating PocketCards can be found in the program *FireFamily Plus*. The latest version of this software can be obtained at <http://www.fs.fed.us/fire/planning/nist/distribu.htm#Distribution>. Further information on PocketCards, including development guidelines, can be obtained at <http://famweb.nwcg.gov/pocketcards/>.

**Content: Area:** The area to which the PocketCard applies should be a fire danger rating area, which is an area of uniform fire danger rating. If such areas have not been determined, the following examples are suggested: administrative unit, sub-geographical region, watershed, fire weather forecast zone, protection zone, fire climate zone, predictive service area.

**Content: Fuel Model and Index:** FireFamily Plus software should be used to determine the appropriate fuel model and index or component to use on the PocketCard. This is done through analyses of weather, fuel, and fire occurrence data for the area.

**Content: Fire Danger Interpretation:** One successful method utilizes bands of color displayed in the background of each graph. The meaning of each color is briefly explained. Other methods may also be useful for this purpose.

**Content: Critical Threshold Values:** Critical threshold values (for measures such as wind speed, relative humidity, temperature, live fuel moisture) should be determined through analysis of each observation with fire occurrence data using FireFamily Plus.

### *Definitions*

NFDRS: The National Fire Danger Rating System

PMS: Publications Management System