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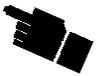


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NWCG

National Fire Danger Rating System **Weather Station Standards**

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NATIONAL FIRE DANGER RATING SYSTEM

Weather Station Standards

A publication of the NWCG Fire Weather Working Team

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Interagency RAWS Web Page <http://www.fs.fed.us/raws>

This publication is available on line at <http://www.fs.fed.us/raws/standards.shtml>



* Changes to the Feb. 2004 revision of this document are indicated using the pointing hand icon.



PREFACE

The National Fire Danger Rating System (NFDRS) is a system used by wildland fire management agencies to assess current fire danger at local and national levels. It consists of a variety of indices that portray current potential fire danger conditions.

The weather station network supporting NFDRS has grown in a piecemeal fashion over the past 30 years. **Inconsistent station standards, maintenance, fire weather network analysis, data communication and archiving has left the system with some deficiencies** - - both real and perceived. This fragmented approach has compromised system reliability and data integrity. The data from these stations support interagency fire danger predictions and provide quantification of risk elements that are critical for daily decisions regarding firefighter resource placement, staffing levels, appropriate suppression response, and strategic decisions at local, regional, and national levels. The most important value among those provided by these data is consideration for firefighter safety. Firefighter safety is our number one priority.

As stated by Mary Jo Lavin, former Director, USFS Fire & Aviation Management, "We cannot afford breakdowns in this important element of the fire management program for many reasons, including the accomplishment of safe and efficient fire management program operations. We need to strengthen management of this program element to ensure accurate, timely, and consistent data collection is provided from every NFDRS reporting station--no matter what, we must insure that this is done!" The NWCG Fire Weather and Fire Danger Working Teams are committed to better planning, technology transfer, and life-cycle management as we move to the NFDRS update.

This NFDRS Update will be a more passive (less human interaction required) and explicit (in space and time) fire management decision support tool. Several complexities in the current NFDRS have recently been removed; specifically the human and lightning risk factors. A new dead fuel moisture model that depends solely on sensed data is being field-tested. Human entry state-of-the-weather will no longer be required. This means that every automated observation entering the system can be processed and archived. Our historical databases tell us, time and time again, that critical fire weather observations are often missing during periods of high fire activity.

The vision of the NFDRS Update is to move towards fire behavior based information (versus climatologic) that smoothly transitions between information needs for both fire behavior and fire danger. We hope to do this by more completely describing the state of the fuels (arrangement and moisture) with much less human intervention.

Stations compliant with the NFDRS Update will provide remotely sensed weather data--temperature, humidity, precipitation, wind and solar radiation on an hourly basis via the GOES satellite.

Over the past ten years, several attempts have been made at implementing standards for interagency weather stations supporting NFDRS. As we plan for the NFDRS Update, it is critical that we establish and implement weather station standards to support this technology.