UNIT FIRE DANGER OPERATING PLAN 7842

(July 2015)

A Fire Danger Operating Plan (FDOP) is a fire danger rating applications guide developed by local Units and utilized for fire business decision support. An FDOP documents the establishment and management of the local Unit fire weather system and incorporates fire danger modeling into local unit fire management decisions by utilizing the National Fire Danger Rating System (NFDRS).
Unit fire management decisions, often referred to as fire business, are identified and thresholds developed using the most appropriate NFDRS output(s). This can be numeric thresholds within the various indices known as decision points. Common fire business decisions include Dispatch Level, Staffing Patterns, Seasonal Assessments, Staffing Augmentation, Industrial Notifications, and Public Notifications. The FDOP is developed within the framework of NFDRS using a detailed analysis of historical fire occurrence and weather data derived from Remote Automated Weather Stations (RAWS). Completed and updated FDOPs shall be submitted to the CAL FIRE Fire Environment Program Manager and respective Region Fire Environment Point of Contact.

FIRE DANGER OPERATING PLAN DEVELOPMENT 7842.1

(July 2015)

The development of the Fire Danger Operating Plan (FDOP) is required by all CAL FIRE Units. The FDOP shall be developed by the Unit Fire Environment Working Group. The key to a successful plan development is the full understanding of the plan's purpose and application. Development of the FDOP requires the involvement of multiple individuals from various programs within the Unit. Fire Family Plus software shall be used to conduct climatological and fire occurrence analysis. Interagency consideration should be given to fully enhance the capability of the FDOP. Unit management needs to determine and communicate the fire business decisions that the FDOP shall be supporting.

FIRE DANGER OPERATING PLAN PARAMETERS 7842.1.1

(July 2015)

Format and structure of the Fire Danger Operating Plan (FDOP) has the flexibility to be developed at the discretion of the Unit. The goal is for the plan to work in a way that implementation and understanding is successful. To accomplish these goals there is a need for FDOP minimum requirements and parameters. The FDOP requires the following parameters to be included;

- Objectives and statement of purpose
- Roles and Responsibilities and FDOP Support
- Fire Danger Rating Inventory
    - Fire Danger Rating Area Layers
- Fire Danger Indices used and Fire Business Analysis
- Fire Danger Based Decisions
    - Dispatch Levels
    - Fire Danger Adjective Class Definitions
    - Pocket Cards
- Operational Procedures to Support FDOP
    - WIMS maintenance
    - RAWS coordination
- Program Needs
- Appendix
    - Documentation on FDOP development decisions

FIRE DANGER OPERATING PLAN MAINTENANCE 7842.2

(July 2015)

The Fire Danger Operating Plan (FDOP) shall be reviewed and reevaluated on an annual basis for currency and applicability. Updating the FDOP is required, at a minimum of three years, or as conditions impacting the execution of the plan change. The Fire Family Plus database, including quality controlled weather and fire occurrence data shall be updated annually. To execute FDOP updates current data and analysis shall be used. Changes to existing FDOPs shall be clearly delineated to ensure impacts to operations are identified.

FIRE DANGER RATING AREAS 7842.3

(July 2015)

The Fire Danger Rating Area (FDRA) is an area delineated by homogeneous layers of fuels, climate, and topography covering a geographical area where the fire problem is the greatest. The purpose of the FDRA is to delineate where all fire based decisions will be the same. Administrative and operational boundaries (Unit, Agency, Battalion, Roadways, Dispatch Areas, etc), may be considered, but should not be the primary factor on determining FDRA boundaries. FDRA's are very large and may range from 10,000-100,000 acres in size.

FDRA's were originally established in California in 1958, digitized in 2005. The boundaries of these delineations were hand drawn on maps and had no association with any administrative or operational boundaries. These FDRA's are used by all of the wildland fire agencies in California. Over the years, the need to include factors involving administration and operations has become apparent. The need to include some degree of administration and operations is now recognized at the national level, but still shall not be the principal factor in determining FDRA boundary delineation. No single agency has autonomous authority to change the California FDRA boundaries.

CALIFORNIA FIRE DANGER RATING AREA MAP 7842.3.1

The California Wildfire Coordination Group (CWCG) has authorized CAL FIRE to be the responsible custodian of the official California FDRA map. The CAL FIRE Fire Environment Program Manager has been delegated this responsibility. To make changes to the California FDRA map requires approval by the FDRA subcommittee of the Fire Scope Predictive Service Specialists Group under the CWCG. The FDRA subcommittee is comprised of a representative from CAL FIRE, US Forest Service, US Department of the Interior, and Local Government.

LOCAL OPERATIONAL FIRE DANGER RATING AREAS 7842.3.2

(July 2015)

To meet the needs of CAL FIRE operations, it may be necessary for Units to develop Local Operational FDRA's independent from the California FDRAs. The process to develop Local Operational FDRAs shall still follow the principals of the National Fire Danger Rating System (NFDRS) with consideration of local operational factors such as Dispatch Areas, Responsibility Areas, Administrative Boundaries, etc). If these Local Operational FDRAs meet NFDRS criteria and do not negatively impact other agencies, strong consideration should be made to execute changes to the California FDRAs.

POCKET CARDS 7842.4

(July 2015)

Pocket Cards provide a format for interpreting and communicating key index values provided by the National Fire Danger Rating System. The objective of the Pocket Card is to lead to greater awareness of fire danger and subsequently increased firefighter safety. The Pocket Card provides a description of seasonal changes in fire danger in a local area. It is useful to both local and out-of-area firefighters.

The Pocket Card has very important day-to-day "pre-suppression" use. When the morning and afternoon weather is read each day, the actual and predicted indices are announced. Firefighters can reference their Pocket Cards and assess where the current day falls in the range of historical values for danger-rating. This important information should be discussed at daily crew meetings, tailgate safety meetings, incident briefings, etc.

The development and distribution instructions of the Pocket Card shall be included in the Unit's Fire Danger Operating Plan (FDOP). The Unit's FDOP Working Group will be responsible for the development of the Pocket Card. All Pocket Cards shall meet the National Wildfire Coordination Group (NWCG) standards (See http://fam.nwcg.gov/fam-web/pocketcards/guidelines.htm). The current NWCG standard for Fire Danger Pocket Cards provides minimum expectations for content, currency, and implementation. Pocket Cards that meet the NWCG standard are posted to the Fire and Aviation Management Website (FAMWEB) View Pocket Cards (See http://fam.nwcg.gov/fam-web/pocketcards/pocketcards.htm) for the general use and benefit of the interagency wildland fire management community. Content and currency of each card is the responsibility of the Unit's Fire Environment Point of Contact.

DISPATCH LEVELS 7842.5

(July 2015)

(See HB 8100p200 – Dispatch Levels)
(See Policy 7833.4 – Recording WIMS Observations)

All CAL FIRE Units shall set Dispatch Levels based upon National Fire Danger Rating System (NFDRS) Indices and/or Components as described in the Unit Fire Danger Operating Plan (FDOP). Index/Component values shall be retrieved using the Weather Information Management System (WIMS). The Dispatch Level decision thresholds and appropriate Index/Components used shall be identified in the FDOP. Decision thresholds are defined as the point where a different decision is required based upon a combination of climatology, fire history, and management input (i.e. the point where dispatch levels change from low to medium, medium to high, etc). The decision thresholds are developed using analysis of climatological and fire occurrence data as well as input from experienced local Unit fire management staff.

Units shall execute updated Dispatch Level notifications and announcements in accordance to their FDOP during transitional staffing, peak staffing or additionally as directed in the FDOP.

FIRE DANGER ADJECTIVE CLASS RATINGS 7842.6

(July 2015)

The United States Forest Service and CAL FIRE have agreed to establish a standard Adjective Class Definition of five levels of fire danger for use in public information, industrial notifications, press releases and fire prevention signage. Generally, Adjective Class is developed for communicating with non-fire agency entities. Adjective Classes can be in the form of specific word descriptors such as Low, Moderate, High, Very High, and Extreme Fire Danger with a corresponding color code.

Fire Danger Adjective Class Ratings are calculated utilizing historical climatology in conjunction with real-time weather to rate fire danger. CAL FIRE and the United States Forest Service have agreed to use Ignition Component and

Burning Index as the selected indices, and the 90th and 97th percentile climatological breakpoints to set the upper and lower threshold limit values within the WIMS system.

Percentile is a statistical term for denoting thresholds or boundary values within data sets. For example, applying the 97th percentile to Burning Index would mean that the data occurrence exceeds the 97th percentile threshold limit 3% of the time. The 90th percentile would mean that the data occurrence exceeds the threshold limit 10% of the time.

Put another way, within the 97th percentile, 97 percent of the data occurs below the threshold limit.

(see Next Section)

(see Handbook Table of Contents)

(see Forms and Form Samples)