FIRE WEATHER - CLIMATOLOGY DATA MANAGEMENT 7832

(July 2015)

(See HB 8500 Exhibit CFMA Agreement)
(See Policy 7833 – Weather Information Management System)
(See Policy 7835 – Fire Family Plus)

The collection, validation, and storage of fire weather data is a critical component to the development of fire based decisions used by fire line managers both operationally and administratively. It becomes critical for future statistical use and analysis that accurate historical weather data is accessible to users on an interagency basis. The need for interoperability applications of data are required to ensure consistency in serving the wildland fire agency fire based decision process.

The wildland fire agencies party to the California Master Cooperative Wildland Fire Management and Stafford Act Response Agreement (CFMA) agreement shall cooperate in the gathering, processing, and use of fire weather data, including the purchase of compatible weather sensing platforms and when feasible, making joint use of computer software.

Acquisition of data is required to conduct analysis and aid in decision making through the use of mathematical models and computer based software systems. A common location for accessing quality data is necessary for easy access to data and promoting a common language between users. The Unit Fire Environment Point of Contact shall annually validate and submit the Microsoft Access (.mdb) fire weather and fire occurrence data file to the CAL FIRE Fire Environment Program Manager prior to May 1st.

Data validation and correction is an integral part of NFDRS and an effective fire business decision support system. Validation and correction is a continuous process from the hourly RAWS weather observations to the historical fire occurrence data for a Unit. There are numerous places where errors can be introduced, whether by automated systems or human input. Poor data quality will cause critical NFDRS outputs such as IC, BI, ERC, and SC to be inaccurate, rendering the decision support system ineffective.

WEATHER DATA VALIDATION 7832.1

(July 2015)

(See Policy 7833.4 - Recording WIMS Observations)
(See Policy 7833.5 - WIMS Data Quality Control and Validation)

Personnel assigned to the task of validating and correcting weather observations should have training in NFDRS and/or WIMS, to ensure an understanding of weather data.

There are three sources of error that affect the quality, or even the existence of weather data. These sources are:

1. Observer – the person, who on a daily basis processes the data so it becomes part of the FAMWEB database. An example is when the RAWS data in WIMS is converted from "R" weather station data, to a recorded "O" observation to be archived in FAMWEB.
2. Weather Station – poor siting or lack of maintenance leading to inaccurate weather data or no data transmission from the RAWS to WIMS.
3. Operational Procedures – station catalog errors in WIMS will affect how the NFDRS model is managed for that station.

The tools available in the Fire Family Plus software program or in WIMS shall be used to identify weather data errors. Once the data errors have been identified, two tasks need to be completed. The first is to correct the cause of the data error (i.e. replace/repair station sensors or provide training for WIMS data entry). The second is to correct the weather data in the historical FAMWEB Warehouse database.

WEATHER DATA STORAGE 7832.2

(July 2015)

Historical weather data is available from several sources. Standard formats are required for exchange of data between programs. The most current format for NFDRS historical fire weather is the .fw13 file format. Older weather observations will have the .fwx or .fw9 file format, which are also compatible.

The sources of this data are as follows:

1. FAMWEB (Fire and Aviation Management Website) KCFAST Weather observations in various Fire Family Plus formats (.fwx, .fw9, and .fw13.) are available for download from this site. Data from KCFAST is posted immediately following Observation Edits made in the WIMS system. Data is acquired by specific date range and KCFAST posts the requested data a generic .ftp site where the weather files can then be downloaded for use.
   The web address for this site is: https://fam.nwcg.gov/fam-web/kcfast/mnmenu.htm

2. FAMWEB Data Warehouse
   The Data Warehouse has weather data and station catalogs. Weather data is updated nightly and contains data through the prior day.
   The web address for this site is:
   https://fam.nwcg.gov/fam-web/ and select FAMWEB Data Warehouse

3. FAMWEB Static Website
   The Static Website is located at the FAMWEB Home Page under *Wildland Fire Related Links > Fire and Weather Data*. This data is posted annually for all RAWS station catalogs, RAWS observations, and fire occurrence data.
   The web address for this site is: http://fam.nwcg.gov/fam-web/weatherfirecd/

4. WIMS (Weather Information Management System)
   The WIMS site contains weather data only. A password is required to access the data. Weather data in WIMS is only available for the previous 180 days from the current date.
   The web address for this site is: https://fam.nwcg.gov/fam-web/
   The user will need to select WIMS.

5. Western Regional Climate Center (WRCC)
   The WRCC site contains weather data only. The data is current to the hour and contains only the RAWS observations. All of CAL FIRE's historical raw data is archived at this location. A password is required for data over 30 days old. The password can be acquired directly from the WRCC or the Fire Environment Program Manager.
   The web address for this site is: http://www.raws.dri.edu/index.html

(see Next Section)

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(see Forms and Form Samples)