



Appendix B. Station Field Glossary

10-Hr TL Fuel Moisture

The moisture content of the 10-hour time lag fuel. Desired Entry to improve Fuel Moisture computations. If an observed 10-Hr TL Fuel Moisture is not available, then it will be calculated internally by the system. Otherwise, the entered value will be corrected for the age of the fuel stick.

1-HOUR Timelag Fuel Moisture (1-h TL FM)

The moisture content of the 1-hour timelag fuels.

100-HOUR Timelag Fuel Moisture (100-h TL FM)

The moisture content of the 100-hour time lag fuel.

1000-HOUR Timelag Fuel Moisture (1000-h TL FM)

The moisture content or the 1,000-hour timelag fuels.

Access Control List

List of users with the access that they are allowed for a particular station, i.e., edit, delete, enter obs, edit obs.

Agency Codes

1	USDA FS	Forest Service
2	USDA BLM	Bureau of Land Management
3	USDI NPS	National Park Service
4	USDI BIA	Bureau of Indian Affairs
5	State	State Agencies
6	Local Govt	City, County, Special District
7	PVT/COMMRL	Private or Commercial
8	OTH Federal	Other Federal Agencies
9	UNKNOWN	Unknown
10	DOI-FWS	Fish and Wildlife Service
11	DOD	Dept. of Defense
12	NOAA-NWS	National Weather Service

Associated Manual Station

This is a previously cataloged manual station used to acquire human risk and lightning information when using the Edit Existing OBS on RAWS stations. This station must not only exist

it cannot be a station type RAWS (4). Not all RAWS stations have Associated Stations.

Aspect

0	N	North	360
1	NE	Northeast	45
2	E	East	90
3	SE	Southeast	135
4	S	South	180
5	SW	Southwest	225
6	W	West	270
7	NW	Northwest	315
8	FL	Flat/None	0

Indicates the direction in which the station faces with any of the wind systems.

Burning Index (BI)

A number related to the contribution of fire behavior to the effort of containing a fire.

See INT-169 – The 1978 National Fire Danger Rating System: Technical Documentation for more information

Climate Class

- 1 Arid-Desert & Steppe
- 2 Subhumid-Dry season
- 3 Subhumid-Adequate rain
- 4 Wet-Rain Forest

Dew Point

The temperature at which a parcel of air being cooled reaches saturation (100 percent relative humidity).

Display Classes

Enter a one-digit number of display classes (3-9) for Staffing Index used by owning agency. NFDRS provides seven ratings for the use of the fire manager.

Any one of the seven may be used as the basis for determining the display class or readiness level of the suppression organization. The Forest Service uses the 90th and 97th percentile

Burning Index values for each station's fuel models to determine Display Classes. These percentile values are determined from a statistical analysis of historical fire weather observations. These values provide the criteria for ranking the relative severity of the burning conditions on a given day. The Bureau of Land Management uses the 80th and 95th percentiles of the BI. The 90th and 97th values are used to generate a table of values against which the Staffing Index for each model can be compared. There are always 10 such test values, corresponding to a nine-class system (nine classes plus zero).

Dry Bulb Temperature/Temperature Codes

Mandatory - This is the current temperature in degrees. The initial catalog determines whether (F) or (C). Temperature Codes <1> degrees F <2> degrees C

Elevation

Mandatory - Feet above sea level, one to five-digits.

Energy Release Component (ERC)

A number related to the available energy (Btu) per unit area (square foot) within the flaming front at the head of a fire.

See INT-169 The 1978 National Fire Danger Rating System: Technical Documentation for more information.

Fire Load Index (FLI)

A rating of the maximum effort required to contain all probable fires occurring within a rating area during the rating period. 0-100

See INT-169 The 1978 National Fire Danger Rating System: Technical Documentation for more information.

Forecast Zone

Weather Forecast Zone - A three-digit number (001-999) assigned and used by the National Weather Service to designate the fire-weather/land management forecast zone. The first digit usually corresponds with the Forest Service Region number (for example 503 is a fire weather zone in California).

Forest Name

Use three-letter ICS unit ID codes for all agencies units.

Fuel Model

You must enter at least 1 fuel model per catalog. If more than 1, the first one listed is the one used to calculate the indices.

A one-letter code for the fuel model (A to U only)

ID	Model Name
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- A Annual Grass
- B Mature Chaparral
- C Open Timber/Grass
- D Southern Rough
- E Hardwoods (winter)
- F Intermediate Brush
- G Closed, short-needle conifer (heavy dead)
- H Closed, short-needle conifer (normal dead)
- I Heavy Slash
- J Medium Slash
- K Light Slash
- L Perennial Grass
- N Sawgrass
- O Pocosin
- P Southern Plantation
- Q Asaskan Black spruce
- R Hardwoods (summer)
- S Alaskan Tundra
- T Sagebrush Grass

Grass Type

"A" for Annual

"P" for Perennial

Herbaceous-Vegetation Stage

One of: (2) Green, (4) Cured, or (5) Frozen.

Enter GREEN each time the herbaceous plants react to improved growing conditions. This is usually once a year in the spring. Several times a year are possible in desert climates. The program greens up the model's living fuels at a rate set by the CLIMATE CLASS. One, 2, 3, or 4 weeks will be used. The choice will correspond to climates 1, 2, 3, or 4. Enter FROZEN when cold temperatures kill herbaceous plants and force woody fuels into dormancy. Enter CURED

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when the program does not kill the herbaceous plants on a timetable matching phenological curing. It is also used to signal the death of herbaceous plants due to cold temperatures when the temperature is not low enough to effect woody plants. (See FROZEN above.)

NOTE: The station actually has two Herbaceous stages: User input and program determined condition.

Herb Date (Format is DD-MON-YR)

The actual date at which the herbaceous vegetation condition representing the fuel model(s) for a particular station reaches that stage, i.e., green, cured, or frozen.

Human Risk

Mandatory - A numerical rating of the potential occurrence of human-caused fires. Calculated for local area. Rating may change on weekends and holidays.

Human Risk is no longer being used in the NFDR calculations. An entry is required, enter 1.

Human Risk - Forecasted

Mandatory on Regular Observation entry. Do not enter on Special Observation or Archive data.

Human Risk – Forecasted is no longer being used in the NFDR calculations. An entry is required, enter 1.

Humidity Entry & Code

Mandatory - Determined on initial catalog entry or Update Station at any time.

Manual stations - Wet bulb temperature or dewpoint temperature.

RAWS stations - Relative humidity.

The humidity entry identifies the type of moisture variable which is expected in Observations, Special, or Archived weather data from that specific station.

Humidity Code:

A 1-digit number indicating the moisture variable to be entered.

1 - Wet-bulb temperature (Deg.F)

2 - Relative Humidity (percent)

3 - Dewpoint temperature (Deg.F)

4 - Wet-bulb temperature (Deg.C)

5 - Dewpoint temperature (Deg.C) winds will be recorded in meters/minute

Ignition Component (IC)

A rating of the probability that a firebrand will cause a fire requiring suppression action.

See INT-169 The 1978 National Fire Danger Rating System: Technical Documentation for more information.

Lightning Activity Level

Enter the lightning activity level that best describes the lightning situation in the vicinity of the weather station.

Lightning Activity Level is no longer being used in the NFDR calculations. The field can be left blank.

Lightning Fire Occurrence Index (LOI)

A numerical rating of the potential occurrence of lightning-caused fires.

Lightning Fire Occurrence Index (LOI) is no longer being used in the NFDR calculations. The field can be left blank.

Lightning Scaling Factor

Legal values may range from 0.01 through 5.0 with 1.0 as the default value.

Lightning Scaling Factor is no longer being used in the NFDR calculations. The field can be left blank.

Latitude/Longitude

Mandatory - The station location is used to calculate changing day length, computer graphics, and for fire behavior interpolation of the standard observation to other locations and times of day. The correct format is Degrees/Minutes/Seconds.

Maximum Relative Humidity

Desired Entry - Maximum recorded relative humidity in past 24 hour period to 100%.

Minimum Relative Humidity

Desired Entry - Minimum relative humidity observed in past 24 hour period.

NESDIS ID

This is an eight digit (letter & number) identification number assigned by NOAA/NESDIS that becomes the RAWS (Remote Automatic Weather Station) identification number, i.e 324564E0.

NFDR Date

Enter the Date (DD-MON-YR).

NFDR TYPE

O – Published Observation

R- Unpublished Observation

N – NFDR Record based on Nelson 1- and 10- hour dead fuel moistures

F - Forecast

S - Special

Observation Date

This will normally default to the current date. May be changed.

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Observation Time

A two-digit number indicating to the nearest hour the time at which the station normally takes fire weather observations (for example, 13 for 1300 hours). The time-of-observation entered in OBS and Update will be required to be within 2 hours of this standard observation time. Remember, Standard Time, NOT Daylight Savings Time. This is the observation that will be in the NIFMID.

Observation Type

- O - Standard
- S - Special
- R - RAWS (any automatic station)

Observed Maximum Temperature

This is the maximum temperature observed in the last 24 hours.

Observed Minimum Temperature

This is the minimum temperature observed in the last 24 hours.

Observing Agency

A one-digit code indicating the agency responsible for station operation. Use the following table:

1	USDA FS	Forest Service
2	USDA BLM	Bureau of Land Management
3	USDI NPS	National Park Service
4	USDI BIA	Bureau of Indian Affairs
5	State	State Agencies
6	Local Govt	City, County, Special District
7	PVT/COMMRL	Private or Commercial
8	OTH Federal	Other Federal Agencies
9	UNKNOWN	Unknown
10	DOI-FWS	Fish and Wildlife Service
11	DOD	Dept. of Defense
12	NOAA-NWS	National Weather Service

Precipitation Amount

Mandatory – The actual measured amount in either inches/millimeters (from station catalog). (If 0 precipitation then 0 duration) If amount is less than 0.005 enter "T" (trace), and you must enter at least 1 in duration.

Rainfall Code:

<1> Inches (in) <2> Millimeters (mm)

Precipitation Duration

Mandatory - Actual number of hours of precipitation in past 24 hour period. (If 0 precipitation amount then 0 precipitation duration) If amount is less than 0.005 enter "T" (trace), and you must enter at least 1 in duration.

Don't use "--" to indicate wet fuels. Use Y in Wet Indicator field.

Previous Station

This is to provide continuity or historical information. If a station was moved or changed from manual to RAWS you can identify it, or a number changed, you can cross reference the stations.

Region Number

The USDA Forest Service Region number (1, 2, 3, 4, 5, 6, 8, 9, or 10). Enter the number even if the station is run by an agency other than the Forest Service.

Relative Humidity (RH)

The ratio of the actual amount of water vapor in the air to the amount necessary to saturate the air at that temperature and pressure. It is expressed as a percentage .

Season Code 88 NFDRS only

- 1 Winter
- 2 Spring
- 3 Summer
- 4 Fall

Sensor Description

Enter a description of any additional sensors or data that is collected. Enter these in the order of the ID. Example: Peak Hourly Gusts, Water Temperature sensors, soil moisture & temperature, solar radiation, Max/Min RH, Max/Min Temp, 10 hour fuel moisture, etc.

Must be entered in Platform sequence: 1 = A, 2 = B etc.

SHEF Codes – Standard Hydrologic Exchange Format

Parameters 1 - 8 MUST occur in the following order; 9-16 have no established order, however, NESDIS may establish one in the future.

Do not enter 1-8 in the extra data fields.

- 1 PC Precipitation
- 2 US Wind Speed
- 3 UD Wind Direction
- 4 TA Atmospheric Temperature
- 5 MT Fuel Temperature
- 6 XR Relative Humidity
- 7 VB Battery Voltage
- 8 PA Atmospheric Pressure
- 9 MF Fuel Moisture

- 10 UX Wind Gust Direction
- 11 UG Wind Gust Speed
- 12 TX Atmospheric Temperature Maximum
- 13 TN Atmospheric Temperature Minimum
- 14 XS Relative humidity Maximum
- 15 XQ Relative Humidity Minimum
- 16 RD Solar Radiation – Direct Beam

Sig Name - (S)pecial (I)nterest (G)roup

Forecast Zone SIG's are ALWAYS numerical and coincide to the forecast zone in which they reside, i.e., 102 (Region 1) or 620 (Region 6) Private SIG's MUST begin with an alpha character, i.e. S620, SISQ, etc. User specific 4 character name.

- Display data from several stations.
- Relate stations
- Define SIG's of fire danger rating stations that fulfill a particular need.
- Allow inclusion of stations not owned or co-owned.
- May not conform to any one geographical or political boundary, i.e., different agencies or regions.

Site

A one-digit indicator for type of site:

- 1 - Valley bottom or flat
- 2 - Midslope
- 3 - Ridge or peak top

Slope Class

A one digit number representing slope percent.

- 1 - 0-25
- 2 - 26-40
- 3 - 41-55
- 4 - 56-75
- 5 - greater than 75

Spread Components (SC)

A rating of the forward rate of spread of a head fire.

See INT-169 – [The 1978 National Fire Danger Rating System: Technical Documentation](#) for more information.

Staffing Index

Staffing Index used by owning agency. The SI is the abbreviation of the NFDRS component or

index on which the staffing guides of the suppression organization are based.

Abbreviation	Staffing Index (SI)
BI	Burning Index
EC	Energy Release Component
FL	Fire Load Index
IC	Ignition Component
KB	Keetch-Byram Drought Index
LO	Lightning-caused Occurrence Index
MO	Human-caused Occurrence Index
SC	Spread Component

Staffing Index - Low Percentile

Enter 80, 90, or appropriate low percentile.

The Bureau of Land Management uses the 80th and 95th percentiles of the Burning Index and the Forest Service uses the 90th and 97th percentiles. If your agency staffs on an index different than the BI, enter the appropriate percentile for that component or index.

Staffing Index - High Percentile

Enter 95, 97 or appropriate high percentile.

The Bureau of Land Management uses the 80th and 95th percentiles of the Burning Index and the Forest Service uses the 90th and 97th percentiles. If your agency staffs on an index different than the BI, enter the appropriate percentile for that component or index.

Staffing Index - Low Value

Enter the low value for the low percentile, i.e., if you are using 90th percentile and the value is 44, enter 44. If you are using the 80th percentile and the value is 23, enter 23.

Staffing Index - High Value

Enter the high value for the high percentile, i.e., if you are using the 97th percentile and the value is 55, enter 55. If you are using the 95th and the value is 35, enter 35.

State of Weather

- 0 - Clear, less than 1/10 cloud cover
- 1 - Scattered clouds, 1/10 - 5/10 cloud cover
- 2 - Broken clouds, 6/10 - 9/10 cloud cover
- 3 - Overcast, 10/10 cloud cover

- 4 - Fog
- 5 - Drizzle
- 6 - Rain
- 7 - Snow or sleet
- 8 - Showers
- 9 - Thunderstorms

5, 6, and 7 cause all indices to be set to zero because generalized precipitation over the protection unit is assumed. 8 and 9 assume localized precipitation and will not zero indices.

Station ID

Contact your local fire-weather forecaster for a station number. Identifies the cataloged station. The first two digits identify the state, the second two digits identify the county, the last two digits identify the local area within a state and county. Stations with the last two digits ranging from 90 to 99 are NOT archived and are known as dummy stations.

Mandatory - 6-digit numerical identifier. Contact your local National Weather

Station Type

A one-digit indicator for type of station.

- 1 Non-NFDRS Manual
- 2 NFDRS Manual
- 3 Non-NFDRS RAWS
- 4 NFDRS RAWS
- 5 NFDRS RAWS Non-satellite, Non-NFDRS
- 6 NFDRS RAWS Non-satellite, NFDRS
- 7 Historic, Non-active
- 8 Dummy
- 9 Unknown

Station Neumonic

An entry of one to twenty alphabetical characters. Use the Unit Identifier identified for each unit.

See Unit Identifiers, PMS 931 for more information.

Time Zone

The standard time zone in which the station is located AST (Atlantic Standard Time), AKST (Alaska Standard Time), BST Bering Standard Time, CST (Central Standard Time), EST (Eastern Standard Time), GMT (Greenwich Mean Time), HST (Hawaiian Standard Time)

Unit Name

Enter the name of the Unit that owns the station, for instance, Boise NF.

User Comments

Optional Entry - Field is NOT archived. Comments will remain with record while in WIMS but are lost when transferred to NFWDL. May be used to send a type of local interest information in codes or format of your choice, for example, cumulus cloud build-up status, altimeter setting, comments to local weather office, etc.

User Identification

WIMS User ID. Examples include FS1072, BLM1234, NWS5678, NPS001

Wet Fuels Indicator

Yes or No - This is to indicate whether there is precipitation or fuels are wet at observation time. Also if snow or ice cover the sticks, but no precipitation has fallen that day enter Yes. Indices will be set to 0.

Wind Direction/Wind Direction Codes

Not Required (Recommended) (If it is NOT entered a M (missing) must be input. Wind direction may be entered in regular 8-point form, in 16-point two-digit form, in degrees-of-the-compass, 3-digit form, or in 16-point letter codes. All of the following will give the same wind direction: 1, 02, 045, NE. (The direction is stored and archived as eight-point.)

A zero or M must be entered for Wind Direction if a zero is entered for Wind Speed.

Wind Direction Codes:

- <1> 16-point letter
- <2> 3-digit degrees
- <3> 8-point 1-digit
- <4> 16-point 2-digit

Wind Speed/Wind Speed Codes

Mandatory - Actual measured speed.

Wind Speed Codes

- <1> English (mph)
- <2> Metric (kph)

Woody Moisture Content

A numeric value representing the live woody fuel moisture which is measured and recorded for a particular weather station. The entered value will be used to guide the calculations for the next 30 days. If another measurement is not made within that period and the parameters updated, the program will compute the moisture internally without considering the old measured value. Minimum value is 50, Maximum value is 250.

Programs and Information**AUTOMATIC CALCULATION OF NFDR FOR OBSERVATIONS**

NFDR components and indices are calculated and stored automatically whenever official

observations are entered in WIMS. The official observation is the observation recorded at the standard observation time (1300). This applies to both manual and automatic (RAWS) observations. If NFDR are not recalculated when the official observation is updated, the user can request to display (recalculate) an NFDR output for any station for any time.

NFDR outputs are calculated and stored when the official observation is entered for days in the past. Care must be taken to enter missing data from the oldest data first to the most recent data to ensure calculation of each day's NFDR output is dependent on the carryover values from the previous day. If data from the previous day is missing then default carryover values are used.

AUTOMATIC CALCULATION OF NFDR FORECASTS

NFDR outputs are calculated and stored automatically whenever the official forecast is recorded for a station. The official forecast is the 1300 -hour forecast for the next day. When an official trend forecast is entered, all point forecasts in the zone are recalculated and stored. NFDR is not recalculated when point or trend forecasts are updated.

AUTOMATIC STORAGE OF NFDR

A single NFDR record is stored for each station for 60 days in the WIMS database. An indicator is stored to identify whether the NFDR was calculated from an observation or a forecast. The observation has precedence. If an official observation is present, NFDR is calculated from a forecast and stored only in the absence of an official observation for that station.