

Glossary

A

ACL. See Access Control List.

Access Control List (ACL). A defined list of WIMS logon IDs that is associated with a station number. For each WIMS logon ID, this list determines the type of station access, including editing and/or deleting station information and entering and/or editing station observations.

access level. In WIMS, a defined set of menus and files that a WIMS user is allowed to access.

AFFIRMS. See Automated Forest Fire Information Retrieval and Management System.

ambient. Surrounding, enveloping conditions. As it pertains to weather at the earth's surface, the conditions measured in the instrument shelter are considered ambient.

analog. See fuel moisture analog.

annual. A plant that lives for one growing season, starting from a seed each year.

ANSI standards. Standards for uniform naming conventions established by the American National Standards Institute.

aspect. The slope direction of the station to the wind.

Automated Forest Fire Information Retrieval and Management System (AFFIRMS). Before the implementation of WIMS, AFFIRMS provided a user-oriented interactive computer program to enter and retrieve fire-weather observations data. WIMS replaced the AFFIRMS system.

average relative humidity. The arithmetic average of the maximum and minimum relative humidities measured at a fire-danger station from one basic observation time to the next.

B

base area. An area representative of the major fire problem on a protection unit. From the base area, the base fuel model and slope class are chosen.

base fuel model. The fuel model that best represents the fuels on the base area.

batch job. A request or job submitted from the Data General computer to the Kansas City computer (NCC-KC) that includes all information necessary to process without further user direction. The job is sent to NCC-KC, processed, and returned to the submitting site.

basic observation time. The time established to take the fire-danger observation. It should be at that time of day when the fire danger is normally the highest.

BI. See Burning Index.

boundary conditions. The temperature and relative humidity of the boundary layer.

boundary layer. The EMC commensurate with the boundary conditions and precipitation events of the preceding 24 hours.

brush. Scrub vegetation and stands of tree species that do not produce merchantable timber. (Not a synonym for slash.)

bulletin. A group of NFDRS observations that are bundled together by fire-weather zones at prescribed time intervals.

Burning Index (BI). A number related to the contribution of fire behavior to the effort of containing a fire.

C

CICS. See Customer Information Control System.

command. An instruction entered in the command line of a form.

component weight. In NFDRS, an assigned weight from between 01 and 99 that represents the influence it has on the calculation.

containment. The completion of a control line around a fire and any associated spot fires which can reasonably be expected to check the fire's spread.

control. The completion of a control line around a fire and any associated spot fires, which can reasonably be expected to hold under foreseeable conditions. Control implies that the line has been burned out and all hot spots that threaten the line have been eliminated.

Customer Information Control System (CICS). A general purpose database/data communications system that controls terminals and interfaces to online applications.

D

Daily Activity Level (DAL). A subjective estimate of the status of a human-caused fire risk source relative to what is normally experienced on that day of the week. Five activity levels are defined: None, Low, Normal, High, and Extreme.

DAL. See Daily Activity Level.

data. Raw, unorganized material used as input to a computer program.

database. An organization of cross-referenced files. In WIMS, the NIFMID relational database.

Database Administrator (DBA). A person or persons assigned to oversee the management and administration of the WIMS/NIFMID database.

DBA. See Database Administrator.

dead fuels. Naturally occurring fuels whose moisture content is governed by relative humidity and precipitation.

default. Data, selection, or configuration automatically assigned to a field, file, or system.

delete. An action taken to remove a given code, file, or record from the WIMS/NIFMID database.

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

DG. The Data General computer system and peripherals.

diurnal. Pertains to daily cycles of temperature, relative humidity, and wind.

drought. A period characterized by a serious moisture deficiency, extensive in area and time.

dry bulb temperature. The temperature of the air.

duff. The partially decomposed organic material of the forest floor that lies beneath the freshly fallen twigs, needles, and leaves.

E

EC. See Energy Release Component.

edit. The process of adding, changing, or rearranging data.

EMC. See Equilibrium Moisture Content.

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.

Equilibrium Moisture Content (EMC). The moisture content that a fuel particle will attain if exposed for an infinite period in an environment of specified constant temperature and humidity. When a fuel particle has reached its EMC, the net exchange of moisture between it and its environment is zero.

ERC. See Energy Release Component.

expected number of fires. The number of fires that will occur *on the average* over numerous days with the same LOI or MCOI.

extinction moisture content. The fuel moisture content, weighted over all the fuel classes, at which the fire will not spread.

F

Federal Information Processing Standard (FIPS). An American National Standard Institute (ANSI) system of uniform codes that identifies state and county names and codes.

field. A set of one or more characters treated as one item of data. An area used to input or display a defined type of data on a screen, form, or printout.

FIPS. See Federal Information Processing Standard.

fine fuels. The complex of living and dead herbaceous plants and dead woody plant materials less than one-fourth inch in diameter.

Fine Fuel Moisture (FFM). An adjustment to the 1-h TL FM that compensates for the presence of living plant material and the moisture content of that material. The FFM is used in the manual calculation of fire-danger ratings. It replaces the 1-h TL FM and the herbaceous fuel moisture.

firebrand. Any source of heat, natural or human-made, that is capable of igniting natural fuels.

fire-danger rating area. A geographical area within which the fire danger can be assumed to be uniform. It is relatively homogenous in climate, fuels, and topography.

fireline intensity. The rate of heat release per unit length of fire front. The most commonly used units in current fire literature are Btu/sec/ft.

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.

FL. See Fire Load Index.

flaming front. That zone of a moving fire where the combustion is primarily flaming. Behind the flaming front the combustion is primarily glowing or involves the burning out of larger fuels (greater than about three inches in diameter.)

FLI. See Fire Load Index.

FM. See Fuel Moisture Content.

forb. A non-grasslike herbaceous plant.

forecast area. The geographical area for which a fire weather forecast is specified.

fuel class. A group of fuels possessing common characteristics. In NFDRS, dead fuels are grouped according to their timelag (1-, 10-, 100-, and 1,000-h TL). Living fuels are grouped by whether they are herbaceous (annual or perennial) or woody.

fuel model. A simulated fuel complex for which all the fuel descriptors required by the mathematical fire spread model have been specified.

Fuel Moisture (FM). See Fuel Moisture Content.

fuel moisture analog. A device that emulates the moisture response of specific classes of dead fuels. Examples are basswood slats that represent the 1-h TL fuels and half-inch ponderosa pine dowels that represent the 10-h TL fuels. An analog may also be constructed of inorganic materials.

Fuel Moisture Content (also Fuel Moisture) (FM). The water content of a fuel particle expressed as a percent of the oven-dry weight of the fuel particle.

function key. A key that is programmed to perform a specific function in one keystroke.

G, H

greenup. The beginning of a new cycle of plant growth. The greenup date may occur at different dates for different fuel models.

herb. A plant that does not develop woody, persistent tissue but is relatively soft or succulent and sprouts from the base (perennials) or develops from seed (annuals) each year. Included are grasses, forbs, and ferns.

herbaceous fuels. Undecomposed material, living or dead, derived from herbaceous plants.

herbaceous vegetation moisture content. The water content of a live herbaceous plant expressed as a percent of the oven-dry weight of the plant.

HO. See Human-caused Fire Occurrence Index.

holdover fires (also sleeper fires). Fires set by lightning but not discovered during the first burning period. In the NFDRS it is assumed that 25 percent of the fires are not discovered until succeeding burning periods.

HR. See Human-caused Risk.

Human-caused Fire Occurrence Index (HCOI). A value derived from the Human-caused Risk (HCR) sources in a rating area and the Ignition Component (IC). HCOI is interpretable in terms of expected numbers of fires on the rating area.

Human-caused Risk (HCR). A number related to the expected number of human-produced firebrands capable of starting fires that a rating area will be exposed to during the rating period.

human-caused risk scaling factor. A number relating human-caused fire incidence to the Ignition Component (IC) on a rating area. The factor is a statistic based on three to five years of fire occurrence and fire weather data that adjusts the prediction of the basic human-caused fire occurrence model to fit local experience.

humidity. A measure of the water-vapor content of the air.

I, J

IC. See Ignition Component.

Ignition Component (IC). A rating of the probability that a firebrand will cause a fire requiring suppression action.

information. Data organized into a logical structure or sequence.

initiating fire. A fire that has recently started and is not crowning or spotting.

input. The source data used as input for processing.

insolation. Solar radiation received at the earth's surface.

instrument shelter (also thermoscreen). A naturally or artificially ventilated structure used to shield temperature-measuring instruments from direct sunshine and precipitation.

JCL. See Job Control Language.

job. A series of instructions that completely defines a unit of work for a computer. A job typically includes all computer programs, linkages, files, and instructions to the operating system.

Job Control Language (JCL). An IBM language that interprets instructions from the user and then processes them to tell the central processor what to do with the user's program.

K

KCCC. See National Computer Center - Kansas City.

KCC-IBM. See National Computer Center - Kansas City.

keyboard. An input device used to communicate with the system.

L

LAL. See Lightning Activity Level.

lesser live fuels. Grasses and forbs; low nonwoody plants, annual and perennial.

LID. See WIMS logon ID.

Lightning Activity Level (LAL). A numerical rating of one to six, keyed to the start of thunderstorms and the frequency and character of cloud-to-ground lightning, forecasted or observed on a rating area during the rating period.

Lightning Fire Occurrence Index (LOI). A numerical rating of the potential occurrence of lightning-caused fires.

Lightning Risk (LR). A number related to the expected number of cloud-to-ground lightning discharges capable of starting fires that a rating area will be exposed to during the rating period.

lightning risk scaling factor. A factor derived from local thunderstorm and lightning-caused fire records that adjusts the predictions of the basic lightning fire occurrence model to local experience. It accounts for factors not addressed directly by the model such as susceptibility of local fuels to ignition by lightning, fuel continuity, topography, and regional characteristics of thunderstorms.

litter. The top layer of the forest floor, typically composed of loose debris such as branches, twigs, and recently fallen leaves or needles; little altered in structure by decomposition.

live fuels. Naturally occurring fuels whose moisture content is controlled by physiological processes within the living plant. The NFDRS considers only herbaceous plants and woody plant material small enough (leaves and needles, and twigs) to be consumed in the flaming front of a fire.

live fuel moisture recovery value. See x1000.

LO. See Lightning Fire Occurrence Index.

logon ID (LID). See WIMS logon ID.

LOI. See Lightning Fire Occurrence Index.

LR. See Lightning Risk.

M

MCOI. See Human-caused Fire Occurrence Index.

MCR. See Human-caused Risk.

menu option. A choice on a menu.

menu. A list of options. You can select an option by entering its number or fastpath in the selection field.

moisture of extinction. See extinction moisture content.

N

National Fire Danger Rating System (NFDRS). A uniform fire-danger rating system that focuses on the environmental factors that control the moisture content of fuels.

National Information Technology Center (NITC). The USDA National Computer Center in Kansas City, formerly known as the National Computer Center. (NCC)

National Interagency Fire Management Integrated Database (NIFMID). An ORACLE database that contains wildland fire report and weather data.

NCC (NCC-KC). See National Information Technology Center - Kansas City.

Nesdis ID. A number used to retrieve RAWs data directly from the National Environmental Satellite Data Information Service.

NFDRS. See National Fire Danger Rating System.

NIFMID. See National Interagency Fire Management Integrated Database.

NITC. See National Information Technology Center - Kansas City.

normalization. The process of bringing into accord with a norm or standard.

O

1-h TL FM. See 1-hour Timelag Fuel Moisture.

1-hour timelag fuels. Fuels consisting of dead herbaceous plants and roundwood less than one-fourth inch in diameter. Also included is the uppermost layer of litter on the forest floor.

1-hour Timelag Fuel Moisture (1-h TL FM). The moisture content of the 1-hour timelag fuels.

100-h TL FM. See 100-hour Timelag Fuel Moisture.

100-hour timelag fuels. Dead fuels consisting of roundwood one to three inches in diameter, and, very roughly, the forest floor from three-fourths inch to four inches below the surface.

100-hour Timelag Fuel Moisture (100-h TL FM). The moisture content of the 100-hour timelag fuels.

1,000-h TL FM. See 1,000-hour Timelag Fuel Moisture.

1,000-hour timelag fuels. Dead fuels consisting of roundwood three to eight inches in diameter or the layer of the forest floor more than about four inches below the surface or both.

1,000-hour Timelag Fuel Moisture (1000-h TL FM). The moisture content of the 1,000-hour timelag fuels.

option. Menu option. Any choice or procedure listed on a WIMS menu.

ORACLE. 1) The manufacturer of ORACLE software. 2) The product name for a set of related computer programs for a highly sophisticated relational database.

P

page. A fixed group of fields that appear on the terminal screen at one time.

partial risk. The contribution of a specific source to the Human-caused Risk. The partial risk is derived from the daily activity level assigned a risk source and its risk source ratio.

password. A set of characters defined with a logon ID and used to secure access to computer hardware, software, and data.

PC. An IBM or IBM-compatible personal computer.

perennial. A plant that lives for more than two growing seasons. For fire-danger rating purposes, biennial plants are classed with perennials.

point forecast. A weather forecast for a SIG or station.

precipitation. Any or all the forms of atmospheric water, liquid, or solid, that reach the ground. (Usually measured to the nearest one-hundredth of an inch.)

precipitation duration. The time, in hours and fraction of hours, that a precipitation event lasts. More precisely, for fire-danger rating purposes, it is the length of time that fuels are subjected to liquid water during the day.

probability. A numerical rating on a scale of 0 to 1 that a specific event will occur. A "1" translates to perfect certainty that the event will occur; a "0" that it will not.

public SIG. A Special Interest Group assigned by the National Weather Service.

R

rating area. See fire-danger rating area.

rating period. The period of time for which a fire-danger rating value is considered representative. Normally it is the calendar day, midnight to midnight.

RAWS. See Remote Automatic Weather System.

record. A collection of related fields that defines a particular set of information.

Remote Automatic Weather System (RAWS). A WIMS satellite station that automatically tracks and stores weather information.

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.

residence time. 1) The time required for the flaming zone of a fire to pass a stationary point. 2) the width of the flaming zone divided by the rate of spread of the fire.

RH. See Relative Humidity.

risk source. An identifiable human activity that historically has been a major cause of wildfires on a protection unit. It is one of the eight general causes listed on the standard fire report.

risk source ratio. The portion of the human-caused fires that have occurred on a protection unit chargeable to a specific risk source. A risk source ratio is calculated for each day of the week for each risk source.

roundwood. Boles, stems, or limbs of woody material; that portion of the dead wildland fuels which are roughly cylindrical in shape.

S

save. To retain edited data.

SC. See Spread Component.

screen. A fixed group of fields that appear on the monitor at one time.

scroll. To move the cursor up or down through a list of items on the screen.

session. The period of time that your DG or PC is connected to WIMS.

SHEF. See Standard Hydrological Exchange Format.

shrub. A woody perennial plant differing from a perennial herb by its persistent and woody stem; and from a tree by its low stature and habitat of branching from the base.

SI. See Staffing Index.

SIG. See Special Interest Group.

slash. Branches, bark, tops, cull logs, uprooted stumps, and broken or uprooted trees left on the ground after logging; also debris resulting from thinnings or wind.

slope. Rise or fall (in feet) per 100 feet of horizontal measurement, expressed as a percentage.

slope class. A code designating the most common slope in the base area. There are five classes: 0-25, 26-40, 41-55, 56-75, and greater than 75 percent.

Special Interest Group (SIG). A group of manual and/or RAWS stations that define a common geographical location, region, or political boundary.

spread component (SC). A rating of the forward rate of spread of a head fire.

SQL. See Structured Query Language.

standard drying day. A day producing the same net drying as a 24-hour period where the dry bulb temperature is maintained at 80° F and the relative humidity at 20 percent.

Staffing Index (SI). A code that identifies the fuel model and forms the basis for fire-danger rating decisions.

Standard Hydrological Exchange Format (SHEF). A code that identifies the type of sensor(s) installed on a RAWS station.

state of weather. A code entered in column two of the ten-day Fire Danger Weather Record Form that indicates the amount of cloud cover, kind of precipitation, and/or restrictions to visibility at the fire-danger station at basic observation time.

station catalog. A file that contains all the information defined for a manual or RAWS station.

station ID. A six-digit number assigned to a specific station by the servicing National Weather Service Fire Weather Office. Digits one and two identify the state, digits three and four identify the county, and digits five and six identify the number of the station in the county.

Structured Query Language (SQL). A relational database management and data retrieval language.

submit. A function that passes a job to the computer system for processing.

surface area-to-volume ratio. The ratio of the area of the surface of a fuel particle (square feet) to its volume (cubic feet). The higher the ratio, the *finer* the particle; for example, for grasses this ratio ranges above 2,000; for a half-inch fuel moisture stick it is 109.

T

10-h TL FM. See 10-hour Timelag Fuel Moisture.

10-hour timelag fuels. Dead fuels consisting of roundwood one-fourth to one inch in diameter and, very roughly, the layer of litter extending from just below the surface to three-fourths inch below the surface.

10-hour Timelag Fuel Moisture (10-h TL FM). The moisture content of the ten-hour timelag roundwood fuels.

thermoscreen. See instrument shelter.

trend forecast. A forecast that generates point forecasts by trending today's observed weather for stations within a public SIG.

U, V

unnormalized human-caused risk. The sum of the partial risks computed for the risk sources active on a protection unit.

update. To change data of an existing file or record.

user. Any person authorized to access the WIMS system.

user ID. See WIMS logon ID.

volatiles. Readily vaporized organic materials which, when mixed with oxygen, are easily ignited.

W

Weather Information Management System (WIMS). A comprehensive system that manages fire-weather information. WIMS replaced AFFIRMS.

wet bulb temperature. The temperature of a properly ventilated wet-bulb thermometer.

wildcard. A symbol, usually an asterisk (*), used to symbolized all possible file names.

WIMS. See Weather Information Management System.

WIMS Janitor. A user-transparent program operating in WIMS that performs routine maintenance, including deletion of user files.

WIMS logon ID. A set of letters and numbers that uniquely identifies a user to WIMS.

windspeed. Wind, in miles per hour, measured at 20 feet above the ground or the average height of the vegetative cover, and averaged over at least a ten minute period.

X

x1000 (live fuel moisture recovery value). An independent variable in the calculation of herbaceous fuel moisture, it is a function of the daily change in the 1000-timelag fuel moisture and the average temperature. The x1000 variable better relates the response of the live herbaceous fuel moisture model to the 1000-hour timelag fuel moisture value. The x1000 value decreases at the same rate as the 1000-hour timelag fuel moisture value, but has a slower rate of increase during periods of precipitation, and therefore limits excessive herbaceous fuel moisture recovery.

