Oregon State Fire Marshal

NFIRS INCIDENT CODE GUIDE

Helpful tips from the OSFM Analytics &

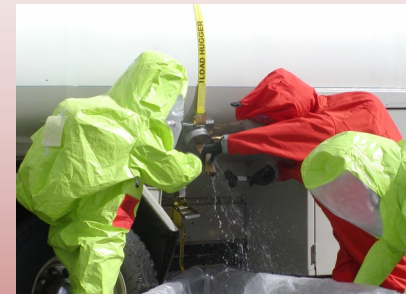*Intelligence for completing incident reports.*

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Prevention ◆ Preparedness ◆ Response

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INCIDENT REPORTING REQUIREMENTS

The Office of State Fire Marshal (OSFM) is responsible for collecting information about fire related incidents in Oregon as described in ORS 476.090. Every fire agency in Oregon is required to provide a full report of every fire occurring in their jurisdiction to the OSFM under ORS 476.210.

In addition to fires, OSFM requires reporting of incidents that involve a threat or actual injury to a human, wildlife, domestic animal, or in which damage to the environment, or any property loss occurs resulting from a hazardous material or waste as described in ORS 453.342 and OAR 837-085-0380.

The OSFM reporting requirements are based on National Fire Information Reporting System (NFIRS) 5.0 standards with the following Oregon specific requirements:

- If the Incident Type is 100 or 113-118 (confined fires) then the Fire and Structure Fire modules must also be completed.

- If the Incident Type is 410-413; 420-424; 430 or 431 (hazmat incidents) then the Hazmat module must also be completed. The following are exempted from this reporting requirement:

  o Motor fuels which are spilled in quantities of less than 42 gallons from a vehicle, unless it enters a waterway; or is determined to endanger the public safety or immediate or surrounding environment, including groundwater;

  o Sewage overflows

- When completing the Hazmat module, in addition to NFIRS required fields, the following fields are also required by the State of Oregon:

  o Responsible Party;
  o Agencies Responding

INTRODUCTION

On January 1, 2010, the Oregon Office of State Fire Marshal (OSFM) adopted the National Fire Incident Reporting System (NFIRS) Version 5.0, as the standard which fire agencies in Oregon shall use to report incidents they respond to. NFIRS 5.0 is a modular, all-incident reporting system designed by the U.S. Fire Administration (USFA), with input from the fire service and other users of the data. The uniformity of definitions used in NFIRS 5.0 makes aggregation of statewide and national data possible.

This booklet is designed to assist those responsible for completing NFIRS reports. It contains many common situations and how they should typically be coded. However, these situations can and may vary. Professional judgment should always be applied.

If you have any questions, please call us at 503-934-8250 or 877-588-8787 toll free.

You may also e-mail us at: osfm.data@state.or.us

Additional information on reporting, annual reports, resource directories, statistics, and other reports may be found and downloaded from our website at: http://www.oregon.gov/OSP/SFM/pages/dataunit.aspx

Additional information on NFIRS can be found at www.fema.nfirs.gov

INCIDENT TYPE

One of the most important fields in NFIRS is the Incident Type. It determines which NFIRS modules need to be completed to fully illustrate all the facts concerning the incident. The Incident Type is defined as the actual situation that emergency personnel found on the scene when they arrived. It is not always the type of incident initially dispatched to.

Incident Types are three digit codes which are grouped into 9 categories or Series:
100 - Fire
200 - Overpressure, rupture, explosion, overheat (no fire).
300 - Rescue and Emergency Medical Service incidents
400 - Hazardous condition (no fire)
500 - Service call
600 - Good intent call
700 - False alarm and false call
800 - Severe weather and natural disaster
900 - Special incident type

For incidents that involve fire and hazardous materials or fire and EMS, use the fire codes. The NFIRS standard is to always use the lowest numbered series and code that applies to the incident.

Throughout NFIRS, the use of codes that end in zero should be avoided when and where possible. These are 'other' codes that are generic and non-specific, and should be used only when no other code applies. This is especially true with Incident Types.

An Incident Type code should begin with a 1 for any incident that involves a fire. Conversely, if the incident did not involve actual flames, the Incident Type code should not begin with a 1.

Civilian casualties (deaths or injuries) should NOT be entered in Section H1 of the Basic Module unless the Incident Type is in the 100 series. Seeing as entries in the civilian fields of Section H1 are only for civilian casualties as a direct result of a fire, the Incident Type has to be in the 100 series. Civilians include emergency personnel who are not members of the fire department, such as police officers or utility workers.

DEFINITIONS

Alarm - Any notification made to the fire department that a situation exists or may exist that requires a response.

Area of Origin - The use of the room or area within the property where the fire originated.

Civilian—Any person who is not an employee (paid or volunteer) of a fire department. Included are police, utility company personnel, non-fire service EMTs, and civilians.

Fire - Any instance of destructive and uncontrolled burning, including explosion, of combustible solids, liquids, or gasses. Fire does not include the following, except where they cause fire or occur as a consequence of fire:
- Lightning or electrical discharge
- Rupture of a steam boiler, hot water tank, or other pressure vessel due to internal pressure and not to internal combustion
- Explosion of munitions or other detonating material
- Accident involving ship, aircraft, or other vehicle
- Overheat conditions

Incident date - The date the responding fire agency was notified to respond to an incident. It is NOT necessarily the actual date of the incident.

Material First Ignited - The combustible that is set on fire by the heat of ignition.

Property Use - The use to which a property is put. As an example, a building could serve as a garage, a hospital, or a department store. It does not define ownership.

Reportable Fire - Any unfriendly, hostile fire that comes to the attention of an agency keeping fire records. Included are fires that may be discovered in progress or discovered after extinguishment.

WIldland - Land in an uncultivated, more or less natural state and covered by timber, woodland, brush, or grass. An area in which development is essentially nonexistent except for roads, railroads, power lines, and similar facilities.

Wildland Fire - Any fire involving vegetative fuels, other than prescribed fire, that occurs in the wildland. A wildland fire may expose and possibly consume structures (Incident Type 141).

CONFLAGRATIONS

When Oregon structural fire agencies are deployed on conflagrations, they are generally responding to assist local agencies with the protection of structures from wildfires. In essence, they are providing a form of mutual aid. Understanding this should make it easier to know how to code responses to these incidents.

But should we be completing an NFIRS report for conflagrations? Under the NFIRS standard, which Oregon adopted in 2010, anytime fire resources respond to an incident, an NFIRS report should be completed.

When completing an NFIRS report for a conflagration deployment, the only real difference from any other aid given situation will be the time spent on the call. As mentioned in the section on Aid Given or Received, be sure to indicate that mutual aid was given. The agency that has original jurisdiction and received aid will be responsible for completing the information regarding origin, and cause.

Conflagration deployments are the same as any type of long running incident, regardless if you are the receiving or giving aid department. Every instance of resources being deployed should be documented as if they were responding to the scene. While deployed, even though there are rest periods away from the line, treat resources as if they are still 'on-scene' until they are demobilized. If that same resource is later deployed to the same fire, it can be listed more than once on the same report, just make sure to enter the correct date and time for each deployment if you are using the apparatus/personnel module.

To demonstrate, if fire department 'A' deploys resources to the conflagration, their alarm time will be when they were notified to respond and their en route and arrival times will be the actual respective times. The last unit cleared time will be the date and time when their last unit cleared.

If fire department 'A' maintains resources on-scene and rotates resources in and out, those responses can all be done on the same incident report, even if the same resources deploy, return, and re-deploy. However, once all resources for fire department 'A' have cleared, any additional resources deployed from their department should be entered on a separate report.

BARKDUST FIRES

There has been and will most likely continue to be varying viewpoints on how to properly code these types of incidents. What is important to note is that the methodology indicated below is based on the current NFIRS standard. In order to obtain uniformity, it is important to maintain consistency with the standard.

Barkdust fires (otherwise known as mulch) should be classified as Incident Type **142** - Brush or brush-and-grass mixture fire. This includes ground fuels lying on or immediately above the ground such as duff, roots, dead leaves, fine dead wood, and downed logs. Other codes in the 100 series deal with structures, mobile property (vehicles), rubbish, storage or cultivated crops before harvest.

Barkdust can be found on a variety of Property Use types from schools, to churches, to houses, and even in median strips in parking lots. The key here is to be as specific as possible and avoid using **900** - Outside or special property, other. Almost all barkdust fires occur outside, so this code would not be helpful in data analysis.

The Item First Ignited should be **72** - Light vegetation (not crop), which includes grass, needles, leaves, chaff, mulch, and compost. Provided the barkdust (or mulch) is not artificial, which most is not, the Material First Ignited should be **61** - Wood chips, sawdust, wood shavings.

For this example, we will say this fire was on the median strip along a sidewalk and started by a cigarette tossed out of a car.

EXAMPLE		
Incident Type	142	Brush or brush-and-grass mix fire
Property Use	938	Cared-for plots of land
Heat Source	61	Cigarette
Area of Fire Origin	92	Street; on or near
Item First Ignited	72	Lightweight vegetation
Material First Ignited	61	Wood chips
Factors Contributing	11	Abandoned or discarded material
Equipment Involved	N/A	

BARBECUE FIRES

Barbecues (or grills) are supposed to have fires in them, aren't they? Yes, but sometimes the fire gets out of control and damages or spreads beyond the BBQ, this would be considered a BBQ fire.

BBQ fires are not considered contained fires, even if the fire does not extend beyond the BBQ. Under the NFIRS standard, for an incident to be considered a confined fire (Incident Type 113 – 118) the following rules must apply: The fire must be confined to a non-combustible container. A non-combustible container is not capable of igniting and burning, is designed to come in contact with a non-hostile flame, and may not be an appliance such as a dryer, oven, microwave, toaster, BBQ, etc.

Most BBQs are located on porches, patios, or decks. As such, BBQ fires should be coded as **111** - Building fire or **112** - Fire in a structure other than a building. Where a BBQ catches fire that is not in, on, or part of a structure or building, it should be coded as **162** - Outside equipment fire.

Although BBQs are generally used in residential settings, they may be used in any type of Property Use. You will need to identify the appropriate Property Use, and as always, avoid using Property Use codes that end in '0' if possible.

The Area of Fire Origin is often **93** - Courtyard, patio, terrace, but is not restricted to this. The Heat Source would be **11** - Spark, ember or flame from operating equipment.

The Item First Ignited is usually **95** - Film, residue; or the food on the BBQ which would be **76** - Cooking materials. Material First Ignited is also usually either **57** - Food; or **31** - Fat, grease. With propane BBQs, the Item First Ignited for a loose or damaged propane line would be **63** - Flammable gas escaping before burner; and the Material First Ignited would be **12** - LP gas.

Below is an example of a BBQ fire on a covered patio attached to a house that was caused by an excess buildup of grease due to lack of cleaning.

EXAMPLE		
Incident Type	111	Building fire
Property Use	419	1-or 2-family dwelling
Area of Fire Origin	93	Patio
Heat Source	11	Flame from operating equipment
Item First Ignited	95	Film, residue
Material First Ignited	31	Fat, grease
Factors Contributing	55	Failure to clean
Equipment Involved	643	Grill, hibachi, barbecue

AID GIVEN OR RECEIVED

Aid Received (mutual or automatic) is defined as a fire department that handles an incident within its jurisdiction with additional manpower or equipment from one or more fire departments outside its jurisdiction.

Aid Given (mutual or automatic) is defined as a fire department that responds into another fire department's jurisdiction to provide assistance at an incident or to cover a vacated station while the receiving fire department is busy at an incident.

Other Aid Given is defined as a fire department that covers and responds to another jurisdiction or locale that has no fire department.

Departments giving aid need only complete the NFIRS Basic Module. Departments receiving aid will be responsible for completing any additional NFIRS modules for that incident, as it is their incident to report. The key to not having to fill out additional modules for departments giving aid is being sure to select either mutual aid given or automatic aid given.

The department receiving aid reports any civilian casualties in Section H1 of the NFIRS Basic module. It is critical to the system that the aid receiving department always report the total number of civilian casualties associated with the incident. Each department reports the details of its own fire service casualties.

As you can see in the definitions above, only fire departments are mentioned. That is intentional. Under the NFIRS standard, fire departments can only receive or give aid to other fire departments. For example, fire department 'A' cannot receive or give aid to the local police department. While fire department 'A' may actually give or receive assistance from the local police department, it cannot be reported in NFIRS as such. The same is true of other agencies that may engage in fire related activities, but are not actual fire departments, such as the Department of Forestry, US Forest Service, National Guard, etc.

EXPOSURES

An exposure is defined as a fire resulting from another fire outside that building, structure, or vehicle, or a fire that extends to an outside property from a building, structure, or vehicle. An example would be a building fire that ignites a car parked outside, the car would be an exposure.

In the case of buildings with internal fire separations, treat the fire spread from one separation to another as an exposure. Treating ownership of property within a building (e.g. condominiums) as exposures, unless separated by fire-rated compartments, is discouraged.

Although the Incident Number permits all properties in a fire incident to be related together, the Exposure Number identifies each separate property type involved in the fire. his makes it possible to capture the specific details of the fire in each exposure and to relate all the exposures to the basic incident, if necessary. The Exposure Number, in conjunction with other required Section A fields, uniquely identifies each incident itemized in Section C.

When a fire involves more than one building, each building fire should be considered a separate fire, with the ignition for all but the original building fire classified as exposure fires.

When reporting an exposure (Exposure Number is greater than 0) the number of buildings involved in Section B2 of the Fire Module should be 0. Entering anything more than a 0 in Section B2 of the Fire Module for an exposure fire will create an NFIRS error. The total number of buildings involved is captured in the original incident. (Exposure Number of 0).

CAR FIRES

The Incident Type for a simple car fire is **131** - Passenger vehicle fire. As happens, people often park or work on their cars in the garage or carport (whether attached or not). When a car is parked inside a garage or carport and catches fire, it would be coded as a car fire unless the fire spreads beyond the car. In that case, the Incident Type would become **111** - Building fire, and the car would be considered contents of the structure.

You will need to identify the appropriate Property Use. Avoid using Property Use codes that end in '0' if possible.

Remember, the Area of Origin is somewhere *in or on the car* (the engine, trunk, etc.), so the code would be in the **8_** - Transportation, Vehicle Area category.

The Heat Source could be anything from a lit cigarette that fell on the car seat, to an electrical arc, to overheated brakes. Judgment will need to be used when selecting the Heat Source code.

Mobile property information (year, make, model) is entered in Section H2 on the Fire Module. When entering the estimated value and loss, if a fire from a vehicle parked in a garage spreads beyond the vehicle, it is considered a part of the contents of the structure.

Where more than one vehicle is burned, if the vehicles are all located on the same Property Use and owned by the same owner, they can all be included in the same incident report. If they are located on different Property Uses or have different owners, separate exposure reports will have to be completed for each vehicle.

Below is an example of a car parked in a garage that catches fire as a result of an electrical problem and the fire spreads to the garage.

EXAMPLE		
Incident Type	111	Building fire
Property Use	419	1-or-2 family dwelling
Area of Fire Origin	83	Engine area
Heat Source	13	Electrical arcing
Item First Ignited	95	Film, residue
Material First Ignited	27	Lubricating oil
Factors Contributing	33	Short circuit from worn insulation
Equipment Involved	N/A	Complete mobile property section instead

CHIMNEY/FLUE FIRES

Flue fires most often occur in residential buildings that have either a masonry fireplace or a factory-built woodstove. Sometimes they're found in a backyard shop. They are structure fires and Incident Type = **114**, if the fire is confined to the chimney or flue. If the fire escapes and the building catches on fire then Incident Type = **111**.

Where is it? Most often they're in Property Use category **4_ _** - Residential, but they are not restricted to those property uses.

The Area of Fire Origin is classified as the first area where ignition occurred. For example, If the chimney is associated with a fireplace in the family room, the code would be 14. The chimney is considered Equipment Involved in Ignition.

The rest of the coding for this situation is *easy*! The Factor Contributing to Ignition is usually **55** - Failure to clean. The Heat Source is usually **11** or **12** Spark or heat from operating equipment (the fireplace or woodstove). The Item First Ignited is **95 -** Chimney film or residue which, globbed together to form the Material First Ignited **34**—Creosote. The Equipment Involved in Ignition for chimney/flue fires are usually in category **12 _** . You must determine the type of chimney or fireplace (masonry or factory built).

Here's a common example of a flue fire that did not get out of the chimney, and was connected to a masonry fireplace located in the den.

EXAMPLE		
Incident Type	114	Chimney or flue fire
Property Use	419	1-or-2 family dwelling
Heat Source	12	Heat from operating equipment
Area of Fire Origin	14	Den, family room, lounge
Item First Ignited	95	Film, residue
Material First Ignited	34	Resin, soot, pitch
Factors Contributing	55	Failure to clean
Equipment Involved	121	Fireplace, masonry

CANCELLED EN-ROUTE

As mentioned earlier, the type of incident is not based on what the department was dispatched to, but what type of situation is found upon arrival. In many instances, Departments are cancelled prior to arriving. When that happens, the Incident Type should be **611** - Dispatched and cancelled en route. However, if the responding unit arrives on the scene, a different but applicable Incident Code should be used.

In situations where units are cancelled en route and never arrive on scene, under the NFIRS standard, the only Action Taken can be **93** - Cancelled en route. If any action was taken other than this, it would mean the unit arrived on scene to take that action. In that event, the Incident Type should reflect the type of situation found upon arrival.

When a unit arrives on scene and is met immediately upon arrival by another person in authority and told they can cancel, this would not be a cancelled en route situation; even if no one ever got out of the truck!

An example of this is when a unit responding to a vehicle accident is met by police immediately upon arrival and told the situation is under control because there are no injuries, so they can cancel. In this scenario, the unit did arrive. The Incident Type should be **324** - Motor vehicle accident with no injuries; the Action Taken could be either **84** - Refer to proper authorities; as the police are handling it, or **86** - Investigate; which includes collecting information for incident reporting purposes. At the very least the name of the officer should be collected.

In instances where dispatch taps out the wrong department and then cancels that department, an NFIRS report is not required. This is an error on the part of dispatch, not a false call or cancelled en route.

TRAFFIC ACCIDENTS

When dispatched to a traffic accident, there is no telling what you will find when you get there. What you do find however, is what needs to be reported.

A traffic accident with injuries is an Incident Type **322**;
a motor vehicle accident involving a pedestrian is an Incident Type **323**;
a motor vehicle accident without injuries is an Incident Type **324.**

If the department is called for the sole purpose of clearing away debris (except for hazardous materials) that would be Incident Type **463** - Vehicle accident, general cleanup.

With no fire involved, the NFIRS Basic module is all that is required for traffic accidents. The EMS, Personnel, and Apparatus Modules are optional.

Should you arrive to find a vehicle fire as a result of an accident, the appropriate Incident Type code from the **13 _** - Vehicle fire category should be selected.

Property Use codes for traffic accidents will generally be coded in the **9_ _** - Outside or special property category.

Civilian casualties (deaths or injuries) resulting from vehicle accidents are only reported in Section H1 of the NFIRS Basic Module if the accident resulted in a fire and the death or injury was a direct result of the fire. In instances where a death occurs, it may not be clear if the person died as a result of the accident or the fire. In those cases it is permissible to report it as a civilian fire casualty until the medical examiner determines otherwise.

Keep in mind that you may need to go back and change or update the report if a person with a serious injury later dies as a result of a fire or if the medical examiner determines a death was not the result of a fire. It is important to do this in order for the data to be accurate.

Civilian deaths or injuries in traffic accidents that do not involve a fire should be reported in the EMS Module.

CIGARETTE FIRES

In the course of determining the cause of a fire, it can sometimes be difficult to say for certain what the cause was. This is true for fires started by cigarettes. However, when they are believed to be the cause, it is important to properly document this in the report.

Cigarette fires can be coded as several different Incident Types and Property Uses based on the location of the fire. Judgment needs to be used in determining the proper codes for these.

Cigarette fires are categorized as such, based on the Heat Source, which is **61** - Cigarette. This is a key element to capture where cigarettes are the suspected cause.

The Area of Fire Origin can vary widely, as can the Item and Material First Ignited. Judgment needs to be used in determining the proper codes for these as well.

The Factor Contributing to Ignition would be **11** - Abandoned or discarded materials.

There would be no Equipment Involved in Ignition.

The example below is a house fire that was started by a cigarette discarded on a wood balcony/deck.

EXAMPLE		
Incident Type	111	Building fire
Property Use	419	1-or-2 family dwelling
Area of Fire Origin	72	Exterior balcony
Heat Source	61	Cigarette
Item First Ignited	14	Floor surface
Material First Ignited	63	Sawn wood
Factors Contributing	11	Abandoned or discarded material
Equipment Involved	N/A	

GREASE FIRE IN KITCHEN

Let's suppose this fire escapes from the pan and catches an apartment on fire. The Incident Type is a structure fire, again code **111**. *Remember, if the fire was confined to the pan with no damage to the pan, then the Incident Type is coded 113.*

Where is it? Most often they're in Property Use category **4_ _** - Residential, but they are not restricted to those property uses.

The Area of Fire Origin is **24** - Kitchen. The Heat Source is generally the stove, which for gas stoves would be **11** - Spark, ember or flame from operating equipment, and for electric stoves would be **12** - Radiated or conducted heat from operating equipment. The Item First Ignited would be **76** - Cooking materials (excluding cooking utensils (26)), but the Material First Ignited varies from oil, to grease, to starchy substances.

Nine times out of ten, the Factor Contributing to Ignition is **11** - Abandoned or discarded materials, which unattended cooking would fall under.

Most often, Equipment Involved in Ignition is the stove (electric or gas) or the oven, which are all coded **646** - Range or kitchen stove with or without oven or cooking surface. Other kitchen equipment will be in the category of **6_ _** - Kitchen and Cooking Equipment. Less often we see deep fat fryers or toasters and the like -- *but they do happen*! The equipment codes are pretty specific so be sure to select the correct one.

In addition to selecting the correct code to identify the equipment involved, if possible collect and report the brand, model, serial #, and year of the piece of equipment.

EXAMPLE		
Incident Type	111	Building fire
Property Use	429	Multi-family dwelling
Area of Fire Origin	24	Cooking area, kitchen
Heat Source	12	Heat from operating equipment
Item First Ignited	76	Cooking materials
Material First Ignited	31	Fat, grease, butter, lard
Factors Contributing	11	Abandoned material
Equipment Involved	646	Range or kitchen stove

DOWNED POWERLINES

Power lines are interesting situations that happen often enough to warrant a spot in this guide, but they vary enough to make one coding recipe difficult.

Downed power lines are Incident Type **444** - Power line down. This excludes people trapped by downed power lines, which would be Incident Type **372** - Trapped by power lines.

The Property Use will be in the **9_ _** - Outside or Special Property category. Many times it will be coded as **983** - Pipeline, power line, or other utility right of way; unless the line happens to cross over another Property Use such as a residential street, or yard (codes **962** and **938** respectively).

Unless the power line actually starts a fire, the remaining elements are not used.

Remember, should the downed power line actually cause a fire, the appropriate code from the **100** - Fire category will need to be selected. Always select the lowest numbered code that applies to the situation. The Area of Fire Origin will typically be **92 -** Highway, parking lot, street; on or near.

The Heat Source will be **13** - Electrical arcing and the Equipment Involved will be **211** - Electrical power line; unless it is the line from the pole to the structure which will be code **212**. The Item First Ignited , Material First Ignited, and Factors Contributing will all vary depending on the situation.

The example below involves a downed powerline that was blown down by high winds into a field and started a fire.

EXAMPLE		
Incident Type	143	Grass fire
Property Use	931	Open land or field
Area of Fire Origin	94	Open area, outside
Heat Source	13	Electrical arcing
Item First Ignited	72	Light vegetation
Material First Ignited	54	Hay, straw
Factors Contributing	61	High wind
Equipment Involved	211	Electrical power line