

12 - Wildland/Urban Firefighting



Wildland Urban Interface

The wildland/urban interface is defined as the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels. (Federal Wildland Fire Management Policy and Program Review, Dec 1995)

“The operational role of Federal agencies as a partner in the wildland/urban interface is wildland firefighting, hazardous fuels reduction, cooperative prevention and education, and technical assistance. Structural fire protection is the responsibility of local governments. Federal agencies may assist with exterior structural suppression activities under formal Fire Protection Agreements that specify the mutual responsibilities of the partners, including funding.” (Federal Wildland Fire Management Final Report, December 1995)

Structural & Vehicle Firefighting

The BLM Manual 9200 states: Structural firefighting is not the functional responsibility of the Bureau. Bureau assistance in suppressing structure fires may only be performed on an emergency basis to save lives or to keep the fire from spreading onto public lands. Bureau suppression personnel will be made aware of safety hazards associated with suppression activities around developments and transportation systems.

Clarification

- 1 Bureau resources will not be planned for, nor dispatched as normal response for structure or vehicle fires, except in those cases where these fires pose significant threat to Bureau responsibility lands. In these situations, Bureau resources should only be planned for wildland protection. Bureau employees may only take direct action on structure or vehicle fires when adequate local firefighting forces are not yet present. Actions will be limited to the exterior of the structure or vehicle unless there is immediate threat to human life. Employees must not knowingly be placed in a position where exposure to noxious gases or chemicals or other situations require the use of self-contained breathing apparatus. BLM units will withdraw from the suppression of structural fires and will work to protect adjoining wildland resources when local fire agency units arrive in sufficient force.

- 2 The number, type, and location of Bureau firefighting resources will not be based on nor justified by structure or vehicle firefighting needs.
- 3 No Bureau employee should respond to a structure or vehicle fire prior to receiving specialized training in hazard awareness and unique safety considerations associated with structure and vehicle protection. In most cases, a local fire department with responsibility for structure and vehicle fire protection will provide this training.
- 4 Bureau employees, in interagency dispatch centers, should not provide dispatch service for cooperating agencies having structure fire, vehicle fire, or emergency medical responsibility unless (1) a current interagency agreement is in effect, (2) the Bureau dispatcher has been trained the same as the cooperating agency dispatchers, and (3) the Bureau employee has been given a delegation of authority for those activities outside the normal scope of the Bureau. In these instances, our employees will be acting as agents of that agency and will **only** communicate information contained in that agency's dispatch plan or as directed by an official from that agency.

Protection Agreements and Planning

Managers must ensure that all wildland/urban interface areas are covered by Fire Protection Agreements or renegotiate existing agreements as needed to reflect a Federal responsibility that is compatible with Federal policy and to ensure that State and local responsibilities are apportioned appropriately. Incorporate wildland/urban interface considerations into all agreements, operating plans, land management plans and Fire Management Plans.

Safety

Wildland/Urban Watch Outs

- Wooden construction and wood shake roofs
- Poor access and narrow one-way roads – Observe bridge limits when using heavy equipment
- Inadequate water supply
- Natural fuels 30 feet or closer to structure
- Extreme fire behavior
- Strong winds
- Evacuation of public (panic) and pets (horses, dogs)
- Structures located in chimneys, box canyons, narrow canyons, or on slopes of 30% or more in flashy or heavy brush fuel types
- Power lines and poles – Watch for both overhead and fallen lines
- Propane and above ground fuel tanks with nearby vegetation or wooden improvements
- Local citizens attempting suppression actions
- Airtanker retardant drops and helicopter bucket operations

Sizeup

The primary considerations are firefighter safety, public safety, potential fire behavior, access, egress, nature of the threat, hazardous materials, and water supplies. The following checklists are designed for incidents that BLM normally does not respond to unless specifically trained. Distribute these checklists only to those who are trained and qualified to perform these tasks.

Structure Assessment Checklist

Address/Property Name

- Numerical street address, ranch name, etc.
- Residents on site?

Road Access

- Paved, gravel, dirt
- Number of lanes, vegetation clearance, defensible space, safety zones
- Undercarriage problems, 4x4 only?
- Turnouts, turnarounds
- Bridges – adequate support structure?
- Creek Crossings – approach angle, crossing surface
- Terrain – road slope, position on slope, near chimneys, saddles, canyon bottom
- Grade – greater or less than 15%

Structure/Building

- Single residence, multiple occupancy, barn, fuel storage, unknown storage.
- Exterior walls – stucco or other non-combustible, wood frame, wood shake, or other combustible. Large unprotected windows facing heat source?
- Roof – asphalt or fiberglass shingle, tile, rock, metal or other low combustible material; wood shake or other easily combustible material?
- Eaves – covered and little overhang; exposed with large overhang exposure?
- Other – exposed wooden structural elements, overhangs slope, attached wood deck, firewood piles, wooden patio furniture, wooden fences attached to house.

Clearances/Exposures/Defensible Space

- 100' vegetation clearance, max. 18" high, 15% or less slope, good ground clearance, vegetation is low combustible type, or is clearance less than described?
- Predominant fuel bed in area surrounding structure is light, medium, heavy, continuous, non-continuous?
- Flammable trees adjacent to structure?

- Other combustibles adjacent to structure?
- High voltage lines or transformers near apparatus placement areas?
- Structure located on narrow ridge, knoll, narrow canyon, chimney, mid-slope; defensible space less than 200 feet?
- Propane and above ground fuel tanks with nearby vegetation

Hazardous Materials

- Pesticides, herbicides, DOT/NFPA/UN symbols, propane, oil, fuels, paints

Available Water

- Hydrant or standpipe, water storage tank with valve, swimming pool with access

Evacuation Needs

- Describe

Estimated Resources for Protection

- Number and type engines, number water tenders, number crews, number dozers?

Structure Triage

There are three categories of structures: those that are threatened; those that are not threatened; and those that are lost or are too dangerous to protect.

Factors that may make an attempt to save a structure hopeless or too dangerous are:

- Fire is making a sustained run and there is little or no clearance.
- Fire behavior is extreme; spot fires are numerous and out pacing your ability to control them.
- Water supply will not last as long as the threat.
- Fire's intensity dictates you leave the area NOW.
- Roof is more than ¼ involved.
- There is fire inside the structure or windows are broken.
- You cannot safely remain at the structure and your escape route could become unusable.

Initial Action

The following checklists are designed to guide you in response to situations that may occur. The checklists provide you with factors to consider for a safe and effective response.

Structure Protection Checklist

- Always stay mobile.
- Back equipment in for quick escape.
- Coil a short 1½" charged line with fog nozzle on your engine for safety and quick knock down.
- Don't make long hose lays.
- Know bridge limits, alternate access, and turnarounds for you and support vehicles.
- Keep at least 100 gallons of water reserve in your tank.
- Check roads before the fire hits.
- Check each home for defense. Use Structure Assessment Checklist.
- Determine if residents are home. Leave home lights on inside and out, day and night.
- Close garage door.
- Place owner's ladder at a corner of home on least fire threat side.
- Coil and charge garden hoses.
- Check and mark HazMat, i. e., LPG, pesticides, paint storage.
- Don't enter a burning structure unless you are trained, equipped, and authorized.
- If a home becomes well involved, **leave it**. Move on to one you can save.
- **Always wear your safety gear, all of it.**
- Firefighter safety and survival is the number one priority.

A course, Introduction to Wildland Firefighting for the Structural Company Officer, has been developed by the National Fire Academy and will be available July 1998. The course covers two primary areas. The first is what a Company Officer can expect when assigned to a major wildland fire incident, and the second is the basics of wildland firefighting. The course is designed to have a wildland fire instructor participate. It is highly recommended that Bureau fire managers participate in the local instruction of this course whenever possible.

Hazardous Materials

All individuals responding to wildland fire incidents should be familiar with the current publication of the Department of Transportation's Emergency Response Guidebook DOT P 5800.7 1996, its purpose and use. It is recommended that Engine and Crew vehicle operators complete Hazardous Materials awareness training. This training usually takes about four hours and is available either through agency HazMat coordinators or local fire departments.

IC HazMat Checklist

- Approach Cautiously** Resist the urge to rush in; you cannot help others until you know what you are facing. Stay upwind and uphill.
- Identify the Hazards** Placards, container labels, shipping papers and knowledgeable persons on the scene are valuable information sources. Evaluate all of them and then consult the recommended guide page before you place yourself or others at risk.
- Secure the Scene** Without entering the immediate hazard area, do what you can to isolate the area and assure the safety of individuals and the environment. Move and keep individuals away from the scene and the perimeter. Allow room enough to move and remove your own equipment.
- Obtain Help** Advise dispatch to notify responsible agencies and call for assistance from trained experts through CHEMTREC and the NATIONAL RESPONSE CENTER.
- Decide on Site Entry** Any efforts you make to rescue persons, protect property or the environment must be weighed against the possibility that you could become part of the problem.

Above All Do not walk into or touch spilled material. Avoid inhalation of fumes, smoke and vapors, even if no hazardous materials are known to be involved. Do not assume that gasses or vapors are harmless because of lack of smell—odorless gasses or vapors may be harmful.

- 1-800-424-9300 **CHEMTREC** (Chemical Transportation Emergency Center) – for immediate information about a chemical or to seek assistance from a manufacturer
- 1-800-424-8802 **National Response Center** – To report spills of oil and hazardous materials

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HazMat Checklist

Assume role of IC until relieved by responsible agency

- Assign safety officer
- Develop action plan for area security and evacuation. Advise dispatcher.
- Advise all units of changes in situation.
- Document all actions taken and contacts.
- Document employee exposure.

Rules for Isolation Distances

- Minor event (1 drum, 1 bag, etc.) = 150 feet
- Major event (1 drum or more, etc.) = 500 feet
- Residential and light commercial = 300 feet
- Open areas = 1000 feet
- BLEVE (Boiling Liquid Expanding Vapor Explosion) potential = 2500 feet (½ mile)
- Stage arriving units 2500 feet upwind.
- Position vehicles headed out.

Think Safety

- Safe approach, upwind/upgrade/upstream
- Identify, isolate and deny entry
- Notify agency dispatcher
- Request needed assistance via safe route

Scene Management

- Goal is to protect life, environment and property
- Attempt to identify substance using DOT Emergency Response Guide, occupancy/location, placards/labels, container shapes/colors, Material Safety Data Sheets (MSDS), shipping papers. **Use binoculars!**
- Assess situation – exact location, identity and quantity of material involved, exposures and hazards

HazMat Response Acronyms Reference: NFES 2148

Safety – Responder safety is #1 priority.

Isolation & Deny Entry – Isolate material and don't let anyone enter hazard area.

Notifications – Local, state, and federal responders and regulators.

Command/Management – Implement command. IC must be identified/assigned.

Identification & Assessment – ID material and hazards associated with it.

Action Planning – State law requires written action plan. ICS 201 will work.

Protective Equipment – Determine appropriate level for responders.

Containment & Control – Mitigate hazardous material involved only if you are trained, equipped, and authorized.

Protective Actions – Secure area, evacuate or shelter in place.

Decontamination & Cleanup – Up to responsible party or local health department.

Disposal – Very expensive. Special permits required for hauling.

Documentation – Document everything!

Vehicle Accident IC Checklist

Report on conditions

- Hazards – fuel, electrical, traffic, access, etc.
- Need for law enforcement, ambulance, helicopter, tow truck, extrication tools
- Injuries – number of victims, severity
- Vehicles – number, type
- Periodic update to dispatch

Establish traffic control.

- Place apparatus between oncoming traffic and rescuers. Keep exhaust from pointing at scene, victims.
- Chock the involved vehicle, if on a hill.
- Place warning devices.
- Establish positive communications.

Assess fire hazard or potential.

- Take suppression action as needed if trained, equipped and authorized.
- Be aware of fuels running downgrade.
- Keep engine running.

Perform patient assessment.

- Administer first aid or triage until responsible medical service arrives.
- If there are fatalities, do not give names or other information over radio that would reveal identity. Do not move bodies.

Begin incident report.

- Document all events.