NWCG S-130: Glossary of Terms

Firefighter Training

Compiled on October 02, 2025

Source: NWCG S-130 Instructor Guide

Introduction

Generating a comprehensive glossary of terms from the NWCG S-130 course, covering Units 1 through 12, to support wildland firefighter training and certification (Firefighter Type 2, FFT2). Terms are extracted from course materials, including slides, exercises, and text, with definitions as provided or contextualized.

Unit 1: Briefings

Briefings

Term	Definition
Briefing	The action of informing or instructing someone, providing all information for the safe completion of a task, including who, what, when, where, why, and how of the operational period.
Leader's Intent	The responsibility of all leaders of firefighters to ensure firefighters have been provided all the information for a safe completion of a task.

Briefing Checklist

Term	Definition
Briefing Checklist	A standardized checklist used to ensure a consistent and consistent briefing, focusing on 6 primary categories: Situation, Mission/Execution, Communications, Service/Support, Risk Management, and Questions or Concerns.
Situation	What is happening, a category in the briefing checklist.
Mission/Execution	What are we going to do and how, a category in the briefing checklist.
Communications	How are we going to talk to each other and other resources, a category in the briefing checklist.
Service/Support	What do we have to help us accomplish the mission, a category in the briefing checklist.
Risk Management	What are the hazards to the mission and how can we manage those hazards, a category in the briefing checklist.
Questions or Concerns	Does anyone have any, a category in the briefing checklist.

Incident Briefings

Term	Definition
Incident Action Plan (IAP)	A common element of on-going incidents, reflecting the overall incident strategy and specific tactical actions and supporting information for a designated operational period, which may be oral or written, including incident objectives, organization assignment list, division assignment, incident radio communication plan, medical plan, traffic plan, safety plan, and incident map.
Incident objectives	Key components of the IAP, outlining the goals for the incident.
Organization assignment list	Key components of the IAP, detailing the assignment of personnel.
Division assignment	Key components of the IAP, specifying assignments to divisions.
Incident radio communication plan	Key components of the IAP, detailing communication methods.
Medical plan	Key components of the IAP, outlining medical support.
Traffic plan	Key components of the IAP, detailing traffic management.
Safety plan	Key components of the IAP, outlining safety measures.
Incident map	Key components of the IAP, providing a map of the incident area.
Morning Briefing	A daily element of all on-going incidents where the IAP is distributed to incident resources.

Daily Briefings

Term	Definition
Daily Briefing	Also known as shift briefing, a common occurrence for all fire crews when not on an incident, incorporating crew agenda for the day, crewmember assignments, known incidents in local area, resource availability in local area, weather forecast in local area, and fire indices in local area.
Shift Briefing	Another term for daily briefing, conducted when not on an incident.
Crew agenda	Information included in shift briefing, outlining the day's agenda.
Crewmember assignments	Information included in shift briefing, detailing assignments.
Known incidents	Information included in shift briefing, listing incidents in the local area.
Resource availability	Information included in shift briefing, detailing available resources in the local area.
Weather forecast	Information included in shift briefing, providing the local weather forecast.

Continued on next page

Term	Definition
Fire indices	Information included in shift briefing, detailing fire indices in the local area.

Common Briefing Components

Term	Definition
National Incident Management Situation Report (IMSR / SIT Report)	A document providing a summary of national wildland fire activity that occurred the previous day, also reporting non-fire incidents when significant wildland fire resources are committed.
Fire Danger Ratings	Common briefing component, indicating the level of fire danger.
Fire Indices	Common briefing component, used to assess fire potential.
National Preparedness Level	A metric briefed in groups using the IMSR / SIT Report, indicating the national readiness for fire response.
National Fire Activity	A metric briefed in groups using the IMSR / SIT Report, summarizing national fire activity.
Activity level	A metric briefed in groups using the IMSR / SIT Report, for the geographic area the class is in.

Unit 2: Demands of the Position

Arduous Fitness Rating

Term	Definition
Arduous Fitness Rating	The scale in which minimum fitness standards are evaluated for wildland firefighters to safely perform their duties to mitigate potential illness and/or injuries.

Heat-Related Injury

Term	Definition
Heat-Related Injury	Conditions that can cause heat stress, heat cramps, and heat exhaustion, as discussed in the Incident Response Pocket Guide (IRPG), PMS 461.

Fitness and Nutrition

Term	Definition
Fitness	The body's ability to perform physical activity without distress or injury, playing an important role in personal wellness and job performance for wildland firefighters.

Unit 3: Personal Equipment

Personal Protective Equipment (PPE)

Term	Definition
Personal Protective Equipment (PPE)	Equipment worn by firefighters to protect themselves from hazards, ensuring correct use and awareness, especially for gloves and sleeves.
Wildland fire boots	Boots that must meet mandatory criteria: minimum 8-inches high, leather lace-up style, and lug style melt-resistant sole.
Helmet with chinstrap	A protective headgear component of required fireline PPE, worn to protect the head.
Goggles/safety glasses	Eye protection component of required fireline PPE, used to shield eyes from hazards.
Ear plugs/hearing protection	Protective equipment for ears, part of required fireline PPE to prevent hearing damage.
NFPA 1977 compliant long-sleeved flame-resistant shirt	A flame-resistant shirt (yellow recommended) complying with NFPA 1977 standards, part of required fireline PPE.
NFPA 1977 compliant flame-resistant trousers	Flame-resistant trousers complying with NFPA 1977 standards, part of required fireline PPE.
Leather or leather/flame-resistant combination gloves	Gloves made of leather or a combination with flame-resistant material, part of required fireline PPE.

Line Gear

Term	Definition
Line gear	A backpack meant to carry enough gear to sustain a firefighter with all that is needed for a 12–16-hour operational period, including specialized equipment, food, water, and miscellaneous items. Weight limitation is 20 pounds (without water).

Personal Gear

Term	Definition
Personal gear	A larger bag meant to carry all necessary gear to sustain a firefighter for a 14–30-day assignment, with a weight limitation of 45 pounds. Agencies are not responsible for nonessential items lost, stolen, damaged, or destroyed.

Unit 4: Resources and Organization

The Crewmember

Term	Definition
Crew member (FFT2)	An entry level wildland firefighter who will, in most cases, fill positions on three types of resources used in suppression activities: hand crews, engines, and helitack. The function is similar between the three resources, used in the control and containment of any wildland fire under the supervision of highly qualified leadership.

Resources - Hand Crews

Term	Definition
Hand Crews	A number of individuals that have been organized and trained and are supervised principally for operational assignments on an incident.
Type 1 IHC crews	Interagency national resource funded by fire management, with higher standard handline production rates, physical training, and conditioning expectations; full-time organized crews.
Type 2IA crews	Local agency resources used mainly for suppression responsibilities on the land managed by that agency, can respond nationally; some are full-time organized, others formed by experienced personnel on short notice.

Continued on next page

Term	Definition
Type 2 crews	Can be federal, state, local government, or privately contracted; have lower standards to maintain, not required to be full-time organized, fight fire as a crew when requested.

Resources - Engine Crew

Term	Definition
Engine Crew	A resource that includes an engine of a specific type, specifying tank capacity, pump rating, hose capacity, and number of personnel.
Type 7 Engine	Engine type with specific tank capacity and pump volume (details not provided in content).
Type 6 Engine	Engine type with specific tank capacity and pump volume (details not provided in content).
Type 5 Engine	Engine type with specific tank capacity and pump volume (details not provided in content).
Type 4 Engine	Engine type with specific tank capacity and pump volume (details not provided in content).
Type 3 Engine	Engine type with specific tank capacity and pump volume (details not provided in content).

Resources - Helitack Crew

Term	Definition
Helitack Crew	A crew of firefighters specially trained and certified in the tactical and logistical use of helicopters for fire suppression.
Type 1 Helicopter	Heavy helicopter used in wildland fire operations.
Type 2 Helicopter	Medium helicopter used in wildland fire operations.
Type 3 Helicopter	Light helicopter used in wildland fire operations.

Chain of Command

Term	Definition
Chain of Command	A series of management positions in order of authority, for which tasks and objectives are developed and distributed for execution and completion within an organization.

Continued on next page

Term	Definition
Task Force Leader (TFLD)	Position in the incident chain of command, to which engine crews report.
Division Supervisor (DIVS)	Position in the incident chain of command, to which task force leaders report.
Operations Section Chief (OSC)	Position in the incident chain of command, to which division supervisors report.
Incident Commander (IC)	Top position in the incident chain of command, to which operations section chiefs report.
Squad Boss	Position in hand crew and engine crew chain of command, to which crew members report.
Assistant Supervisor	Position in hand crew chain of command, to which squad bosses report, and reports to the supervisor.
Supervisor	Top position in hand crew chain of command, to which assistant supervisors report.
Assistant Engine Boss	Position in engine crew chain of command, to which squad bosses report, and reports to the engine boss.
Engine Boss	Top position in engine crew chain of command, to which assistant engine bosses report.
Helicopter Crew Member (HECM)	Position in helitack crew chain of command, reports to the helicopter manager.
Helicopter Manager (HMGB)	Top position in helitack crew chain of command, to which helicopter crew members report.

Span of Control

Term	Definition
Span of Control	The supervisory ratio of three to seven individuals, with five-to-one being optimum, a measure of how many resources a leader should directly supervise at any given time.
Crew Boss (CRWB)	Position in hand crew span of control, supervises squad bosses and firefighters.
Firefighter (FFT)	Entry-level position in hand crew span of control, supervised by squad bosses.

Unit 5: Risk Management

10 Standard Firefighting Orders

Term	Definition
Keep informed on fire weather conditions and forecasts	Stay updated on current and predicted fire weather to understand potential fire behavior.
Know what your fire is doing at all times	Continuously monitor the fire's current activity and behavior.
Base all action on current and expected fire behavior	Make decisions based on the fire's present and anticipated behavior.
Identify escape routes and safety zones and make them known	Determine and communicate paths to safety and areas free of significant fuel for refuge.
Post lookouts when there is possible danger	Assign personnel to observe and warn of potential hazards, such as tree falling or air operations.
Be alert. Keep calm. Think clearly. Act decisively	Maintain awareness, stay composed, and make prompt, effective decisions during firefighting.
Maintain prompt communications with your forces, your supervisor, and adjoining forces	Ensure timely and clear communication with all relevant personnel and teams.
Give clear instructions and ensure they are understood	Provide unambiguous directions and confirm that they are comprehended by recipients.
Maintain control of your forces at all times	Keep command and coordination of firefighting personnel throughout operations.

Continued on next page

Term	Definition
Fight fire aggressively having provided for safety first	Engage the fire with vigor only after ensuring safety measures are in place.

Common Denominators of Fire Behavior on Tragedy Fires

Term	Definition
On relatively small fires or deceptively quiet areas of large fires	Fires that appear manageable but can transition to complex, dangerous conditions, including during mop-up phases.
In relatively light fuels, such as grass, herbs, and light brush	Fires in easily ignitable, fine fuels like annual grasses, which dry out quickly and carry fire.
When there is an unexpected shift in wind direction or in wind speed	Changes in wind due to frontal passages, thunderstorm outflows, foehn winds, or diurnal shifts affecting fire behavior.
When fire responds to topographic conditions and runs uphill	Fires accelerating on slopes, with rate of spread doubling at 30% and again at 55% slope, enhanced by canyons and drainages.
Critical burn period between 1400 and 1700	Time frame (2:00 PM to 5:00 PM) with high risk of rapid fire behavior, with an average 24-minute window from increased activity to entrapment.

LCES (Lookouts, Communications, Escape Routes, and Safety Zones)

Term	Definition
Lookouts	Personnel positioned to observe both objective hazards (e.g., tree falling, air operations) and firefighters, ensuring safety.

Continued on next page

Term	Definition
Communications	Effective and prompt exchange of information among firefighting forces, supervisors, and adjoining teams.
Escape Routes	Pre-identified paths for firefighters to reach safety zones, considering factors like fatigue, barriers, and fire spread rate.
Safety Zones	Areas with minimal fuel, providing refuge, influenced by factors like fuel type, flame length (radius at least four times flame length), wind, topography, and space for vehicles.

Safety Zone Size and Escape Time

Term	Definition
Safety Zone Size	Determined by factors including surrounding fuel type, vegetation height, flame length (radius at least four times), wind, topography, and need for vehicles; assumes no slope or convective heat.
Escape Time	Time required for the slowest person to reach a safety zone, affected by fatigue, temperature, barriers (topography, soils, rocks, vegetation), route length, and proximity of vehicles compared to fire spread rate.

Unit 7: Suppression

Fire Triangle Review

Term	Definition
Fuel	Separate the fuel to prevent combustion or remove fuel during fireline construction.
Oxygen	Suffocate the fire with dirt or water to rob the fire of oxygen.
Heat	Cool the fire by applying water, dirt, retardant, or a combination.

Fireline Construction Standards

Term	Definition
Fireline	The part of a containment or control line that is scraped or dug to mineral soil.

Strategies for Attack

Term	Definition
Direct Attack	Any treatment applied directly to burning fuel such as wetting, smothering, or chemically quenching the fire or by physically separating the burning from unburned fuel.
Indirect Attack	A method of suppression in which the control line is located some considerable distance away from the fire's active edge.

Suppression Techniques

Term	Definition
Hotspotting	Checking the spread of fire at points of more rapid spread or special threat, usually the initial step in prompt control with emphasis on first priorities.
Cold Trailing	A method of controlling a partly dead fire's edge by carefully inspecting and feeling with the hand for heat to detect any fire, digging out every live spot, and trenching any live edge.
Scratch Line	An unfinished preliminary control line hastily established or constructed as an emergency measure to check the spread of fire.
Fireproofing Fuel	Covering some fuels outside the control line with dirt or spraying them with water and foam.
Burning Out	Setting a fire inside the control line to consume the fuel between the fire and the control line, usually used with indirect fire line.
Blackline	Preburning of fuels adjacent to a control line before igniting a prescribed burn; in suppression, denotes a condition where there is no unburned material between the fireline and the fire edge, ensuring fuels and heat remain inside the control line and prevents the fire from making a run at the control line.

Fire Control Line

Term	Definition
Control Line	An inclusive term for all constructed or natural barriers and treated fire edges used to control a fire, effective when down to mineral soil, permafrost, or water level.
Handline	Example of a constructed control line.
Machine Line	Example of a constructed control line (dozer, tractor plow, etc.).
Wet Line	Example of a constructed control line.
Retardant Line	Example of a constructed control line.
Constructed Barriers	Example of a constructed control line.

Continued on next page

Term	Definition
Cold Fire Edge	Example of a natural barrier.
Fire Scars	Example of a natural barrier.
Bodies of Water	Example of a natural barrier (streams, lakes, ponds).
Areas of Sparse Fuels	Example of a natural barrier (rockslides).

Threats to Control Line

Term	Definition
Spotting	Wind gust or convection column can pick up embers and carry them across the control line, threatening control line and hampering suppression efforts and safety.
Rolling Debris	Can threaten control line and hamper suppression efforts and safety.
Creeping	Can threaten control line and hamper suppression efforts and safety.
Radiant Heat	Can threaten control line and hamper suppression efforts and safety.

Mechanical Control Line

Term	Definition
Mechanical Control Line	Using machinery to construct fireline, often quicker than constructing handline, with procedures to ensure it is secured once constructed.

Suppression Equipment Safety

Term	Definition
Engines	Equipment used in suppression, requiring daily preventative maintenance checks (pump, chassis, pump and vehicle motors) and specific safety procedures when working with and around them.
Heavy Equipment	Machinery used in suppression, requiring specific safety procedures when working around, such as maintaining a safe distance depending on fuels and terrain.

Unit 8: Tools and Equipment

Cutting Tools

Term	Definition
Single Bit Axe	A cutting tool with a head, cutting edge, eye, handle (wood or nupla), shoulder, butt, and metal/wood wedges; used for felling snags, breaking up stumps/logs, with a 45-degree swing angle; requires a minimum 2 ½-inch taper on each side with an even bevel for sharpening.
Pulaski	A cutting tool with a head, cutting edge, grubbing edge, eye, handle (wood or nupla), shoulder, butt, and metal/wood wedges; cutting edge used like a single bit axe, grubbing edge for digging roots/trenching/marking; cutting edge has a minimum 2 ½-inch taper, grubbing edge a 45-degree angle and 3/8-inch-wide bevel.
Adze/Hazel Hoe	A cutting tool with a head, grubbing edge, eye, and handle; used for cutting brush, digging roots, removing grass/surface fuel, trenching; sharpening maintains a 3/8-inch-wide bevel with a 45-degree angle on the inside edge.

Scraping Tools

Term	Definition
Shovel	A scraping tool with a blade, cutting edge, handle, heel, handle rivets, shank, face, and point; used for digging, scraping, smothering, beating, cutting light fuels, throwing dirt; cutting edge maintained up to 1 ½ inches from heel to center point, filed towards the tip, sheathed when not in use.
McLeod	A scraping tool with a head, cutting edge, rake, rivet, shank, and handle; used for scraping, cutting; cutting edge maintained at a straight, square 45-degree angle on the outside face, sheathed when not in use.
Combination (Combi) Tool	A scraping tool with a head, pick/grub hoe, blade, hinge/hinge bolt, friction nut, rivet, shank, handle, and cutting edge; used for digging, scraping, smothering, cutting, picking in lighter fuels, working between rocks; both pick and blade sharpened at a 45-degree angle on the face, sharp edges taped.

Common Equipment

Term	Definition
Chainsaws	Equipment used for felling, limbing, bucking trees, clearing brush, constructing control lines, clearing hazards, creating safety zones/escape routes, and mopping up; requires S-212, Wildland Fire Chainsaws, for operation; common brands include Stihl and Husqvarna.

Continued on next page

Term	Definition
Lightweight Portable Pressure Pumps	Equipment for initial attack fires, not for robust hydraulic operations; two- or four-cycle engines, weigh around 30 pounds, performance 37-65 gallons per minute (gpm) at 50 PSI; examples include Honda GXH50, Shindaiwa GP45.
Wick-375 Mark III High Pressure Portable Pumps	High pressure portable pumps used for initial attack, mopup, structure protection, hose lays; generate more pressure/flow than other portable pumps; examples include Pacific Wildfire Mark III, Wick 375; fuel mix ratio 24:1 per IRPG.
Floatable Pressure Pump	Equipment like Waterous Floto-pump, common in Eastern, Southern, Alaska areas; suitable for marshy, steep, rocky areas, irrigation ditches, portable tanks; no suction hose, dry weight 45 pounds, operational weight exceeds 60 pounds, 2-cycle engine, performance 56 gpm @ 50 psi to 150 gpm @ 20 psi.
Volume Pump	Equipment for transferring large water volumes under lower pressure, filling tanks/tenders/engines from streams/rivers/lakes; 3-inch inlets/outlets, flow capacity 290 gpm, 4-cylinder gas engine, dry weight 26 pounds, efficient for short distances over level ground.

Alternative Tools

Term	Definition
Council Tool	A scraping tool with handle, shank, tines, screws/bolts; used for final sweep of the line, useful in rocky areas; sharpened on both sides of each tine at a 45-degree angle from base to tip on outside face.
Standard Fire Swatter	A scraping tool with handle, flap, rivets; used for beating out fire in light fuels, smothering fire; flap has no holes and is secured with 4-6 rivets.

Unit 9: Wildland Urban Interface (WUI)

General Terms

Term	Definition
Wildland-Urban Interface (WUI)	The zone where structures and human development meet or intermingle with undeveloped wildland or vegetative fuels, increasing fire risk.

Continued on next page

Term	Definition
Structure Triage	The process of quickly assessing structures in the WUI to prioritize firefighting efforts based on defensibility, fire behavior, and available resources (e.g., categorizing as "defensible," "needs preparation," or "not defensible").
Defensible Space	An area around a structure where vegetation and fuels are managed (e.g., cleared, reduced, or replaced with less flammable materials) to slow fire spread and provide a safe working area for firefighters. Typically extends 30–100 feet or more, depending on slope and fuel type.
Structure Protection	Firefighting tactics focused on protecting buildings in the WUI, such as applying water or foam, clearing fuels, or creating control lines around structures. Often combined with wildland suppression efforts.
Fireline	A control line scraped or dug to mineral soil to stop fire spread; in the WUI, often built around structures or between wildland fuels and developments to protect property.
Control Line	A natural or constructed barrier (e.g., fireline, road, or wet line) used to stop or check fire spread in the WUI, often leveraging existing features like driveways or fences.
Anchor Point	A secure starting point (e.g., a road, driveway, or previously burned area) for constructing fireline in the WUI to prevent fire from flanking structures or firefighters.
LCES	Lookouts, Communications, Escape Routes, Safety Zones: A safety system critical in the WUI, where complex terrain and structures require heightened awareness to avoid entrapment.
10 Standard Firefighting Orders	Ten safety rules (e.g., "Know what your fire is doing at all times") applied in WUI to ensure safe operations amid structures and variable fire behavior.
18 Watch Out Situations	Eighteen hazard scenarios (e.g., "Attempting frontal assault on fire" or "Building fireline downhill with fire below"), especially relevant in WUI due to unpredictable fire spread near structures.
Situational Awareness	Perception of environmental elements (e.g., fire behavior, structure layout, escape routes) to make safe decisions in the WUI's complex environment.
Fuels	Combustible materials (e.g., grass, shrubs, trees, or ornamental plants) in or near the WUI; includes both wildland fuels and flammable materials like wooden decks or propane tanks.
Spot Fire	A fire ignited outside the main fire by embers carried by wind, a major concern in the WUI as embers can ignite structures or landscaping far from the fire front.
Backfire	An intentional fire set along a control line's inner edge in the WUI to consume fuel (e.g., vegetation near structures) and reduce the intensity of an advancing fire.

Continued on next page

Term	Definition
Direct Attack	Suppression along the fire's edge in the WUI, used when fire intensity is low enough to safely extinguish or contain flames near structures.
Indirect Attack	Building fireline away from the fire's edge in the WUI, often used when high-intensity fires threaten structures, leveraging barriers like roads or cleared areas.
Mop-Up	Extinguishing residual fires and hot spots in the WUI to prevent re-ignition, especially critical around structures to avoid damage from smoldering fuels.
Personal Protective Equipment (PPE)	Fire-resistant gear (Nomex clothing, hard hat, gloves, boots, fire shelter) essential for WUI operations due to risks from radiant heat and structure-related hazards.
Fire Shelter	A portable, aluminized tent-like device for emergency protection in WUI entrapment scenarios, where structures may limit escape options.

Unit 10: Water Use

Backpack Pump

Term	Definition
Backpack Pump	A portable sprayer with hand-pump, fed from a liquid filled container fitted with straps, used mainly in fire and pest control. Also known as a bladder bag, particularly useful in hot spotting and mopup.

Water Delivery Methods

Term	Definition
Engine	A water delivery system with specific type, capabilities, capacity, limitations, pump and pump engine specifications, and water resupply procedures, as referenced in the Incident Response Pocket Guide (IRPG), PMS 461.
Portable Pump	A water delivery system with specific type, capabilities, limitations, pump and pump engine specifications, set up procedures, and starting procedures, as referenced in the Incident Response Pocket Guide (IRPG), PMS 461.

Hose

Term	Definition
Synthetic lightweight lined type 1 hose	Most common wildland fire hose, used for various applications.
Abrasion resistant synthetic lightweight lined type 2 hose	Often yellow, used for durability in wildland fire operations.
Cotton-synthetic jacket, rubber lined hose	A type of hose used in wildland fire operations.
High pressure hose	A hose designed for high pressure water delivery in wildland fire operations.
Linen or unlined hose	A type of hose, typically unlined, used in wildland fire operations.
Suction hose	A hose used for drawing water into the pumping system in wildland fire operations.
3/4 inch hose	Also known as garden, toy, or pencil hose, a standard wildland fire hose size.
1 inch hose	A standard wildland fire hose size.
1 1/2 inch hose	A standard wildland fire hose size.
50 feet hose	A common length of wildland fire hose.
100 feet hose	A common length of wildland fire hose.

Hose Couplings and Threads

Term	Definition
Rocker lug	A type of standard threaded coupling used in wildland fire hose connections.
Pin lug	A type of standard threaded coupling used in wildland fire hose connections.
Quick connect (quarter-turn)	A type of standard threaded coupling for rapid connection in wildland fire hose operations.
Female coupling	One of the two connectors on each length of hose, designed to receive the male coupling.
Male coupling	One of the two connectors on each length of hose, designed to fit into the female coupling.

Continued on next page

Term	Definition
National Pipe Straight Hose (NPSH)	A thread type universally used, with non-tapered threads allowing connection to NH fittings.
National Hose (NH)	A thread type universally used, with tapered threads for hose connections.
Garden Hose (GHT)	Also called NH, a thread type used for garden hose connections in wildland fire operations.

Fittings and Connections

Term	Definition
Thread adapter	Used to connect hoses together that have different thread types.
Reducer	Used to reduce from a larger diameter to a smaller diameter in hose connections.
Increaser	Used to increase from a smaller diameter to a larger diameter in hose connections.
Double female coupling	Used to connect two male ends of hose or fittings.
Double male coupling	Used to connect two female ends of hose or fittings.
Tee with cap	A variation of in-line tee used for branching, with a cap for closure.
Tee with shut-off valve	A variation of in-line tee used for branching, with a shut-off valve for control.
Plain wye	Used to divide a single line into two lines.
Siamese wye	Used to combine two lines into a single line.
Gated wye valve	Used to divide a single line into two lines with the ability to open/close valves on either line.
Siamese gated wye valve	Used to combine two lines into a single line with the ability to open/close valves on either line.
Check and Bleeder Valve	Used to allow air to escape from the hose and prevent loss of prime when the pump is shut down.

Unit 11: Firing Devices

Firing Device PPE

Term	Definition
Hardhat	Required personal protective equipment (PPE) for firing operations.

Continued on next page

Term	Definition
Flame resistant pants	Required PPE for firing operations, ensuring protection from fire.
Flame resistant shirt	Required PPE for firing operations, with sleeves rolled down for safety.
Leather gloves	Required PPE for firing operations to protect hands.
Approved boots	Required PPE for firing operations, ensuring foot protection.
Eye protection	Required PPE for firing operations to protect eyes from hazards.
Over the calf, wool blended socks	Additional recommended PPE specific to drip torch use for leg protection.
Full water bottle or small fire extinguisher	Additional recommended PPE specific to drip torch use for emergency fire suppression.
Nomex neck and face shroud	Additional recommended PPE specific to drip torch use for neck and face protection.

Common Devices (Drip Torch)

Term	Definition
Drip Torch	A handheld device used for igniting fires in any fuel type, dripping flaming liquid fuel on materials to be burned, commonly using a 4:1 diesel to gasoline mix.
Igniter (wick)	Part of the drip torch, used to ignite the fuel.
Nozzle and nozzle bore	Part of the drip torch, through which fuel is discharged.
Discharge spout	Part of the drip torch, where fuel exits for ignition.
Vent cap and breather tube	Part of the drip torch, allowing air flow for fuel combustion.
Handle	Part of the drip torch, used for carrying and operating.
Tank cover lock ring	Part of the drip torch, secures the tank cover, with a gasket location.
Tank	Part of the drip torch, holds the fuel mixture.
Tank cover	Component of the drip torch spout, covers the fuel tank.
Discharge plug	Component of the drip torch spout, can be parked open for fuel flow or in transport position when plugged.

Common Devices (Fusee)

Term	Definition
Fusee	A handheld disposable ground ignition device with a self-contained ignition system, widely used to ignite backfires and prescribed fires, effective in dry fuels like grass, pine needles, leaves, and brush.
Ferrule (handle)	Component of a fusee, used as a handle for operation.
Protective striker cap	Component of a fusee, protects the striker mechanism.
Striker cap tape	Component of a fusee, secures the striker cap.
Body	Main part of a fusee, contains the ignition material.
Wax coating	Coating on a fusee, weather-resistant for storage and use.
Scratch tip	Component of a fusee, used to initiate ignition.
Striker compound	Component of a fusee, material used to ignite the fusee.

Common Devices (Hand-Launched Flares)

Term	Definition
Hand-Launched Flare	A device used to increase fire depth and influence spread direction on or near the control line, with a 20 to 30-second fuse time delay for safe short-distance throwing, effective in dry fuels like grass, pine needles, leaves, and brush.

Common Devices (Flare Launchers)

Term	Definition
Flare Launcher	A device used to create depth, increase heat, and manipulate spread direction during burnout and backfiring, effective in dry, light, continuous ground fuels, often used in steep or inaccessible terrain.

Alternative Devices

Term	Definition
Terra Torch	An alternative firing device for igniting fuels, discussed in the unit.
Propane torches	An alternative firing device for igniting fuels, discussed in the unit.

Continued on next page

Term	Definition
Plastic sphere launchers (PyroShot launcher)	An alternative firing device for igniting fuels, discussed in the unit.
Slingshots	An alternative firing device for igniting fuels, discussed in the unit.

Unit 12: Mopup

General Terms

Term	Definition
Mopup	One of the most important phases of fire suppression, involving removing burning debris to prevent rekindling and threatening the control line.
Cold Trail Method	A method of controlling a partly dead fire edge by carefully inspecting and feeling with the hand for heat, digging out every live spot, and trenching any live edge.
Dry Mopup	A mop up method involving the use of hand tools, chainsaws, and hands and knees to remove burning material, mixing it with dirt to extinguish heat.
Wet Mopup	A mop up method using water to make the process easier and faster, delivered through various methods like hose lays, mopup kits, and aerial delivery.
Gridding	To search for a small fire by systematically traveling over an area on parallel courses or gridlines.
Minimum Impact Suppression Tactics (MIST)	The application of strategy and tactics that effectively meet suppression and resource objectives with the least environmental, cultural, and social impacts.

Securing the Control Line

Term	Definition
Cold Trailing	A method used to secure a control line by ensuring the black edge is cold and out, constructing small check lines where intermittent heat is found, with special attention to wet lines and retardant lines.
Check Line	Small pieces of line constructed to connect cold black to cold black during cold trailing.
White Ash Pits	Areas to focus on while cold trailing, indicating potential heat sources.

Continued on next page

Term	Definition
Stump Holes	Areas to focus on while cold trailing, indicating potential heat sources.
Duff Edges	Areas to focus on while cold trailing, indicating potential heat sources.
Smell of Smoke	An indicator to focus on while cold trailing, suggesting potential heat sources.
Insects Hovering	An indicator to focus on while cold trailing, suggesting warm areas with potential heat sources.

Mopup Methods

Term	Definition
Dry Mopping Tools	Includes hand tools, chainsaws, and hands and knees, used for dry mopping with specific benefits for removing burning material.
Mineral Soil	The layer reached during dry mopping to ensure all heat sources are removed and extinguished, especially in heavy duff layers.
Wet Mopping Tools	Includes hose lays, mopup kits, wands, sprinkler kits, bladder bags, backpack pumps, blivets, helmet/hardhat or collapsible buckets, and aerial delivery methods.
Foam	A substance used and discussed for its effectiveness in wet mopping operations.
Water Conservation	The practice of conserving water, especially when hose lay is supported by engines, during wet mopping.

Mopup Safety

Term	Definition
Blowback	A safety concern during mopup, occurring when applying water to hot areas, potentially causing hazards.
Smoke and Dust Inhalation	A safety concern during mopup operations, posing health risks to firefighters.
Ash Pits	A safety concern during mopup, representing hazards like hidden heat sources.
Complacency	A safety concern during mopup, where firefighters may become less vigilant, increasing risk.
Snags	Weakened standing fuels by fire, representing a hazard during mopup operations.

Securing the Fire Perimeter

Term	Definition
Gridding	To search for a small fire by systematically traveling over an area on parallel courses or gridlines, using methods like leapfrog or progressive based on module size.
Leapfrog Method	A gridding method where personnel move forward in a staggered manner, led by the person on the control line determining pace and spacing.
Progressive Method	A gridding method based on module size, ensuring systematic coverage of an area.
Green Grid	A grid conducted in unburned areas to detect spot fires, with specific tactics and procedures if unidentified spots are found.
Saw Teams	Teams placed in grid lines during mopup, performing tasks like limbing trees, bucking hot ends, and bonepiling fuels, considering safety factors like blowing embers.