

Abandonment: Abandonment occurs when an emergency responder begins treatment of a patient and then leaves the patient or discontinues treatment prior to arrival of an equally or higher trained responder.

Abrasion: A scrape or brush of the skin usually making it reddish in color and resulting in minor capillary bleeding.

Absolute Pressure: The measurement of pressure, including atmospheric pressure. Measured in pound per square inch absolute.

Absorption: A defensive method of controlling a spill by applying a material that absorbs the spilled material.

Accelerant: Flammable fuel (often liquid) used by some arsonists to increase size or intensity of fire.

Accelerator: A device to speed the operation of the dry sprinkler valve by detecting the decrease in air pressure resulting in acceleration of water flow to sprinkler heads.

Accountability: The process of emergency responders (fire, police, emergency medical, etc...) checking in as being on-scene during an incident to an incident commander or accountability officer. Through the accountability system, each person is tracked throughout the incident until released from the scene by the incident commander or accountability officer. This is becoming a standard in the emergency services arena primarily for the safety of emergency personnel.

Adapter: A device that adapts or changes one type of hose thread, type or size to another. It allows for connection of hoses and pipes of incompatible diameter, thread, or gender. May contain combinations, such as a double-female reducer. Adapters between multiple hoses are called wye, Siamese, or distributor.

Administrative Warrant: An order issued by a magistrate that grants authority for fire personnel to enter private property for the purpose of conducting a fire prevention inspection or similar purpose.

AED (Automated External Defibrillator): A portable computer-driven device that analyses a patient's heart rhythm and delivers defibrillation shocks when necessary.

Aerial Apparatus: Fire apparatus having an attached extension ladder, ladder-bucket, or similar device for reaching areas beyond the length of ground ladders.

Aerial Firefighting: Use of aircraft in support of ground resources to combat fires.

Air Drop: Delivery of water supplies with or without fire retardant from the air.

Air Monitoring Devices: Used to determine oxygen, explosive, or toxic levels of gas in air.

Air Operations: Group tasked with coordinating aerial-based observation, supply, rescue and suppression at a wildfire.

Airpack: Jargon for self-contained breathing apparatus (SCBA).

Air-Tanker: Fixed-wing aircraft capable of transport and delivery of water or other liquid or powder fire retardants.

Alarm: System for detecting and reporting unusual conditions, such as smoke, fire, flood, loss of air, HAZMAT release, etc; Also, a specific assignment of multiple fire companies and/or units to a particular incident, usually of fire in nature.

Allergic Reaction: The body's reaction to a substance to which there is an allergy.

American with Disabilities Act: Public law that bars discrimination on the basis of disability in state and local services. Enacted in 1960.

Anchor Point: A safe location from which to begin line construction on a wildland fire.

ANFO: The acronym that is used for ammonium nitrate fuel oil mixture, which is a common explosive. ANFO was used in the Oklahoma City bombing incident.

Anthrax: A biological material that is naturally occurring and is severely toxic to humans. It is commonly used in hoax incidents.

Application Rate: Amount of foam or foam solution needed to extinguish a fire. Usually expressed in gallons per minute per square foot.

Apparatus: Fire engines, trucks, tankers, and combinations; can also refer to other equipment.

Aqueous Film-Forming Foam (AFFF): A synthetic foam that as it breaks down forms an aqueous layer or film over a flammable liquid. (sometimes called "A-Triple-F")

Aquifer: A formation of permeable rock, gravel, or sand holding water or allowing water to pass through it.

Arson: Maliciously or recklessly setting fire to property, especially a dwelling for profit or vengeance (punishable in various degrees, depending upon the circumstances).

Articulating Boom Ladder: An apparatus with a series of booms and a platform on the end. It is maneuvered into position by adjusting the various boom sections into place to position the platform at the desired location.

Asphyxiation: Condition that causes death due to lack of oxygen and an excessive amount of carbon monoxide or gases in the blood.

Atmospheric Pressure: The pressure exerted by the atmosphere, which is 14.7 pounds per square inch at sea level.

Atomization: The separation of atoms and molecules into an uncommon state where they are in suspension rather than in liquid form.

Attack Hose: A fire hose connected to a pump or other pressure source used to apply water or other fire fighting agent directly to a fire or burning substance. Typically of 1 ½ to 2 ½ inches in diameter.

Attic Ladder: A narrow, collapsible ladder used to access an attic space via a scuttle hole or other access point. Also known as a closet ladder.

Authority Having Jurisdiction (AHJ): Organization or agency with legal authority over a given type of incident; may change or overlap as incident changes, as where fire becomes arson investigation once danger is over, or Motor Vehicle Accident becomes police business after vehicle extrication, fire, and HAZMAT issues are complete.

Autoextended: When a fire goes out the window on one floor, up the side of the building and extends through the window or cockloft directly above.

Automated External Defibrillator: A portable computer-driven device that analyses a patient's heart rhythm and delivers defibrillation shocks when necessary.

Automatic Sprinkler System: System of valves and pipes for automatically directing water to a fire when it is detected. May be pressurized with water ("wet") or with air ("dry"). When a sprinkler-head or sensor detects fire or heat the valve opens releasing the water. Typically, the system is also supported by firefighters upon arrival.

Automatic or Constant Pressure Nozzle: Nozzle with a spring mechanism built in that reacts to pressure changes and adjusts the flow and resultant reach of the nozzle.

Auxiliary Appliance: Another term for protective devices, particularly sprinkler and standpipe systems.

Available Flow: Total amount of water that can be put on a fire, depending upon water supply, pump size, hoses, and distance to the fire. The Incident Commander must assess available flow to determine whether additional apparatus or streams are required.

Axial Load: A load passing through the center of the mass of the supporting element, perpendicular to its cross section.

Back Burning: Precautionary fire set downwind of main fire for controlled fuel clearing by backing it into the main fire.

Backdraft: A fire phenomenon caused when heat and heavy smoke accumulate inside a compartment, depleting the available oxygen, and then oxygen is re-introduced, completing the fire triangle and causing sudden, violent reignition (combustion).

Backfire: A fire set along the inner edge of a fire-line to consume the fuel in the path of a wildfire and/or change the direction or force of the fire's convection column.

Backfiring: A tactic used in wildland firefighting associated with indirect attack, by intentionally setting fire to fuels inside the control line. Most often used to contain a rapidly spreading fire, placing control lines at places where the fire can be fought on the firefighter's terms.

Backflow Preventer: Automatic valve used to ensure water flows only in one direction. Used in permanent fire department connections to sprinklers and dry standpipes, as well as portable firefighting devices.

Balloon Frame: A style of wood frame construction in which studs are continuous for the full height of the building structure.

Bambi Bucket: Collapsible bucket for lifting and moving water or other fire retardant with a helicopter.

Bank Down: A condition in which the heat, smoke and fire gases have reached the uppermost level in the compartment and, instead of continuing up, begin to push down from the ceiling toward the floor creating several layers of heat and smoke at different temperatures -- the coolest at the bottom.

Barrier: Any obstruction to the spread of fire.

Base: Staging and/or command center location for fire operations.

Basic 9-1-1: Telephone system that automatically connects a person dialing 9-1-1 to a predetermined answering point (usually an emergency dispatch center) through normal telephone service facilities. The telephone number and the address are not normally provided with this system.

Beam: A structural member subject to loads perpendicular to its length.

Bed Ladder: The non-extending section of an extension ladder.

Bight: A double section of rope, usually made along the standing part that forms a U-turn in the rope that does not cross itself.

Biological Agents: Microorganisms that cause disease in humans, plants, and animals; they also cause the victim's health to deteriorate. Biological agents have been designed for warfare purpose.

Biomimetic: A form of gas sensor that is used to determine levels of carbon monoxide. It is of the type of sensors used in home CO detectors. It closely re-creates the body's reaction to CO and activates an alarm.

Blackline: A condition where no combustible fuels remain between the fireline and the main fire.

Blister Agents: A group of chemical agents that cause blistering and irritation of the skin. Sometimes referred to as vesicants.

Blood Agents: Chemicals that affect the body's ability to use oxygen. If they prevent the body from using oxygen, fatalities result.

Blowup: Sudden increase in fireline intensity or rate of spread of a fire sufficient to preclude direct control or to upset existing suppression plans. Often accompanied by violent convection and may have other characteristics of a firestorm.

Boiling Liquid Expanding Vapor Explosion (BLEVE): Describes the rupture of a container when a confined liquid boils and creates a vapor pressure that exceeds the container's ability to hold it.

Boiling Point: The temperature at which liquids must be heated in order to turn it into a gas.

Bolt Throw: The distance the bolt of a lock travels into the jamb or strike plate.

Booster Hose: Small-diameter fire hose (3/4-1 inch), often carried on booster reel, preconnected to pump of an engine for putting out small fires without having to connect to a fire hydrant.

Booster pump: Generally refers to pump in a relay series for pumping uphill beyond the lift of the previous pump.

Brachial Artery: A major artery in the inside of the upper arm that supplies blood to the arm.

Bresnan Distributors: Has six or nine solid tips or broken stream openings designed to rotate in a circular spray pattern. Used to fight fire in basements or cellars when firefighters cannot make a direct attack on the fire.

British Thermal Unit (BTU): A measurement of heat that describes the amount of heat required to raise 1 pound of water 1 ° F.

Brush Blade: Rake attachment for cutting or ripping brush and roots out of a fireline.

Brush Gear: Another term for a wildland protective ensemble.

Brush Hook: Cutting tool used to clear brush, longer than a machete, usually with a heavy, solid, curved blade bolted to the end of an arm's-length handle.

Brush Truck: Small fire truck outfitted for wildland fire.

Bulk Tank: A large transportable tank, comparable to a tote, but considered to be the larger of the two.

Bump Up: To move to another location. Can refer to anything from moving to another location on a fireline, to an entire crew moving to another fire. Bump back means to return to your previous location.

Bunkers: Colloquial term for protective pants and boots kept near a firefighters bunk for rapid deployment; more modernly includes firefighting jacket. Today it refers to entire protective clothing ensemble.

Bushfire: A bushfire is a wildfire that occurs in the forests, scrubs, woodlands or grasslands.

Butyric Acid: A fairly common lab acid that has been used in many attacks on abortion clinics. Although not extremely hazardous, it has a characteristic stench that permeates the entire area where it is spilled.

Bypass Eductor: Eductor with two waterways and a valve that allows plain water to bypass the venture or through the venture to create foam solution.

Calibration: Used to set the air monitor and ensure that it reads correctly. When calibrating a monitor, it is exposed to a known quantity of gas to make sure it reads the values correctly.

Cantilever Beam: A beam that is supported at only one end.

Carbon Dioxide (CO₂): An inert colorless and odorless gas that is stored under pressure as a liquid that is capable of being self-expelled and is effective in smothering Class B and C fires.

Carbon Monoxide: Colorless, odorless, poisonous gas that when inhaled combines with the red blood cells excluding oxygen.

Carcinogen: A material that is capable of causing cancer in humans.

Cardiovascular System: The heart, blood vessels, and blood within the body.

Carotid Pulse: The pulse located on either side of the neck.

Ceiling Level: The highest exposure a person can receive without suffering any ill effects. It is combined with the PEL, TLV, or REL as maximum exposure.

Cellar Nozzle: A rotating distributing type nozzle that is inserted through an opening in the floor and into the space below, typically a basement or cellar. The nozzle directs a broken stream horizontally, either extinguishing or controlling the fire enough to allow a direct attack to be safely made.

Chain of Command: Common fire service term that means to always work through one's direct supervisor. The fire service is viewed as a paramilitary organization and because of this all request for information outside the assigned workplace should go through the supervisor.

Charged Line: Fire hose under pressure.

Check Valve: A valve installed to control water flow in one direction, typically when different systems are interconnected.

Chemical Burns: Burns caused by chemical substances that come into contact with the skin or tissue of the body, creating a caustic reaction.

Chemtrec: The Chemical Transportation Emergency Center, which provides technical assistance and guidance in the event of a chemical emergency; a network of chemical manufacturers who provide emergency information and response teams if necessary.

Choking Agents: Agents that cause a person to cough and have difficulty breathing. The terrorism agents that are considered choking agents are chlorine and phosgene, both very toxic gases.

Chord: The top and bottom components of a beam or truss. The top cord is subject to compressive forces; the bottom cord is subject to tensile force.

Chronic: A continual or repeated exposure to hazardous material.

Cistern: An underground water tank capable of storing large quantities typically located in areas not served by municipal water mains and hydrants (sometimes used as a backup supply).

Clandestine Drug Labs: Illegal labs set up to manufacture street drugs.

Class A: Classification of fire involving ordinary combustibles such as wood, paper, cloth, plastic, and rubber.

Class B: Classification of fire involving flammable and combustible liquids, gases, and greases. Common products are gasoline, oils, alcohol, propane, and cooking oils.

Class C: Classification of fire involving energized electrical equipment, which eliminates using water-based agents.

Class D: Classification of fire involving combustible metals and alloys such as magnesium, sodium, lithium, and potassium.

Class K: A new classification of fire as of 1998 that involves fires in combustible cooking fuels such as vegetable or animal oils and fats.

Clipping: Term associated with the use of two-way radios that is used to describe instances when either the first or last part of a message is cut off as the result of either speaking before pressing the transmit key or releasing the key prior to the end of the message.

Closet Hook: Pike pole under 5 ft long.

Closet Ladder: See Attic ladder.

CO2 Extinguisher: Fire extinguisher that releases carbon dioxide gas to smother and cool a fire, such as a flammable liquid.

Cockloft: Structural space above ceiling and below rafters, often connecting adjacent occupancies and permitting fire to spread laterally, often unseen.

Collapse Zone: The area around a structure that would contain debris if the building were to collapse. As an absolute minimum this distance must be at least 1 ½ times the height of the building.

Column: A structural element that is subjected to compressive forces – typically a vertical member.

Combination Attack: A combined attack based on partial use of both offensive and defensive attack modes.

Combination Fire Attack: A blend of the direct and indirect fire attack methods, with firefighters applying water to both the fuel and the atmosphere of the room.

Combination Nozzle: A spray nozzle that is capable of providing straight stream and spray patterns, which are adjustable or variable by the operator. Most fog nozzles used today are combination nozzles.

Combustion: The chemical action in which heat and light are produced and the heat is used to maintain the chemical chain reaction to continue the process.

Command Vehicle: Typically used by the chief officer of the incident.

Communicable Disease: A disease that can be transmitted from one person to another.

Company: A small group of firefighters organized as a team, led by a fire officer, and equipped to perform certain operational functions.

Compound: A combination of substances joined in a chemical bond.

Compressed Air Foam System (CAFS): A foam system where compressed air is injected into the foam solution prior to entering any hoselines. The fluffy foam created needs no further aspiration of air by the nozzle.

Compression: A force that tends to push material together.

Concentrated Load: A load applied to a small area.

Confined Space: A space that is large enough to be entered but is not design for continuous occupancy.

Conflagration: A large and destructive fire sometimes involving numerous structures.

Constant or Set Volume Nozzle: Nozzle with one set volume at a set pressure. For example, 60 gpm at 100 psi. The only adjustment is the pattern.

Constricted: A condition of the pupils where they are much smaller than normal and may appear almost like a “pinpoint.”

Control Line: An inclusive term for all constructed or natural barriers and treated (retardant) fire edges used to control a wildland fire.

Control Room: A room on the ground floor of a building where all building systems controls is located.

Controlled Burn: See Prescribed Burn.

Crash Tender: An airport fire engine capable of spraying foam.

Cribbing: The use of various dimensions of lumbar arranged in systematic stacks to support an unstable load.

Critical Incident Stress Debriefing: A formal gathering of incident responders to help defuse and address stress from a given incident.

Critical Incident Stress Management: A process for managing the short and long-term effects of critical incident stress reactions.

Cross Lay: Arrangement of hose on a pumper such that it can be quickly unloaded from side of the apparatus; often pre-connected to a pump outlet and equipped with a suitable nozzle.

Crown Fire: A fire that advances from top to top of trees or shrubs.

Cryogenic Gas: Any gas that exist as a liquid at very cold temperature, always below -150° F.

Damming: The stopping of a body of water, which at the same time stops the spread of the spilled material.

Dangerous Cargo Manifest: The shipping papers for a ship, which lists the hazardous materials on board.

Dead Lay: A load of hose on a pumper, but not connected to a pump outlet. Often used for larger supply lines.

Dead Load: The weight of the building material and any part the building permanently attached or built-in.

DECIDE Process: A management system used to organize the response to a chemical incident. The factors of DECIDE are detect, estimate, choose, identify, do the best, and evaluate.

Deck Gun: A master stream device mounted to top deck of pumper.

Decontamination: The physical removal of contaminates (chemical) from people, equipment, or the environment. Most often used to describe the process of cleaning to remove chemicals from a person.

Defensive Attack: A calculated attack on part of a problem or situation in an effort to hold ground until sufficient resources are available to convert to an offensive form of attack.

Deflagrates: A slow explosion traveling at lesser speed than a detonation.

Dehydration: A loss of water and vital fluids in the body.

Deluge Gun: A master stream device that can be positioned on the ground where needed.

Deluge System: Type of sprinkler system in which sprinkler heads do not have individual valves, and the water (or other extinguishing agent) is disbursed from all sprinkler heads simultaneously when a central (or zoned) valve is triggered by a sensor (or manually). Typically reserved for industrial areas where rapid fire spread must be prevented at the cost of damaging non-burning materials.

Density: The mass per unit volume of a substance under specific conditions of pressure and temperature.

Denver Door Opener: Heavy pry bars connected with a hinge, one with an adjustable foot, used for prying open doors.

Design Load: A load the engineer planned for or anticipated in the structure design.

Detergent-Type Foams: Use synthetic surfactants to break down the surface tension of water to create a foaming blanket.

Diffusion: A naturally occurring event in which molecules travel from levels of high concentration to areas of low concentration.

Diking: A defensive method of stopping a spill. A common dike is constructed of dirt or sand and is used to hold a spilled product.

Dilated: A condition of the pupils where they are much larger than normal and can take up almost the whole colored portion of the eye.

Dilution: The addition of material to the spilled material to make it less hazardous. In most cases water is used to dilute a spilled material, although other chemicals could be used.

Direct Attack: "Putting the wet stuff on the red stuff." A form of fire attack in which hoses are advanced to the fire inside a structure and hose streams directed at the burning materials.

Discharge Flow: The amount of water flowing from a pump or a fire hydrant.

Displacement: The relocating of major parts (i.e., doors, roof, dash, steering column, seats, etc.) of a vehicle.

Distributed Load: A load applied equally over a broad area.

Distributor Pipe: A device that is directed into holes to reach basements, attics, and floors that cannot be accessed by personnel.

Double Female: An adapter with two female-threaded ends back-to-back; used for connecting two male couplings together (may also adapt different sizes on either side).

Double Male: An adapter with two male-threaded ends back-to-back; used for connecting two female couplings together.

Drafting: The process of pumping water from a static source (i.e. pond, stream, river, lake) using suction hose.

Drills: Training during which an emergency is simulated and the trainees go through the steps of responding as if it were a real emergency.

Drip Torch: Hand-carried fire-starting device filled with flammable liquid that is poured across a flaming wick, dropping flaming liquid onto the fuels to be burned (typically used in prescribed burns and wildland fires).

Dry Chemical: A fire extinguishing agent. It works by breaking the chemical chain reaction in the fire tetrahedron.

Dry Hydrant: A dry hydrant is typically a pipe connected to a water source such as a pond or lake that can be used to draft water.

Dry Chemicals: Dry extinguishing agents divided into two categories. Regular dry chemicals work on Class B and C fires; multipurpose dry chemicals work on Class A, B, and C fires.

Dry Sprinkler System: A sprinkler system having pressurized air (rather than water) in the distribution pipes until a heat-activated sprinkler head opens and releases the pressure, which opens a water valve to flow water to the open head; used where the protected premises are not heated during freezing temperatures or where pressurized water in overhead sprinkler pipes could create another hazard.

Dry Powders: Extinguishing agents for Class D fires.

Duff: Layer of decaying forest litter consisting of organics such as needles, leaves, plant and tree materials covering the mineral soil. Duff can smolder for days after a fire. Extinguishing smoldering duff is key to successful mop-up operations.

Dump Site: The area where tenders or tankers are unloaded or their loads dumped.

Dutchman: A short fold of hose or a reverse fold that is used when loading hose and a coupling comes at a point where the fold should take place or when two sets of couplings end up on top of or next each other. The Dutchman moves the coupling to another point in the load.

Ears: Elongated folds or flaps at the ends of a layer of hose to assist in pulling that layer.

Eccentric Load: A load perpendicular to the cross section of the supporting element that does not pass through the center of mass.

Eckert Hook: Sharp hook on pike pole for cutting metal siding or roofs.

Eductor: Suction device operated by hose pressure to pull fluid from a reservoir or container and mix it with the hose stream; often used to add foam or other agents to water streams.

Elevator Key: Control panel override key to take the elevator car to the desired floor. May also refer to special tool used to open elevator shaft-protection doors from outside.

Electrical Conductor: Any material that will permit electricity to flow through it.

Emergency Decon: The rapid removal of material from a person when that person (or responder) has become contaminated and needs immediate cleaning. Most emergency decon setups use a single hoseline to perform a quick gross decon of a person with water.

EMS (Emergency Medical Services): The delivery of pre-hospital emergency medical service(s).

Emergency Response Guidebook: Book provided by the DOT that assists the first responder in making decisions at transportation-related chemical incidents.

EMT: An Emergency Medical Technician trained and certified to provide basic life support emergency medical care.

Encapsulated Suit: HAZMAT protective clothing used with SCBA inside the suit to protect a firefighter (HAZMAT technician) from contaminants.

Encoder: A device that converts an “entered” code into paging codes, which in turn activates a variety of paging devices.

Endothermic Reaction: A chemical reaction in which heat is absorbed, and the resulting mixture is cold.

Engulfed: To swallow up or overwhelm.

Engine: A fire suppression vehicle that has a water pump and typically designed to carry firehose and a limited supply of water. Generally, vehicles outfitted to pump water are called engines, while those which do not pump water (ladder trucks, tankers, rescues, etc.) are not.

Engine Company: A group of firefighters assigned to an apparatus equipped a water pump, firehose and other tools related to fire extinguishment.

Enhanced 9-1-1: An automatic telephone system capable of providing the caller’s telephone number and address -- a useful tool for dispatchers when the caller has an emergency but cannot speak.

Escape Fire: An intentional fire ignited by a fire crew, usually in a grassland environment, to escape a dangerous situation.

Etiological: A form of a hazard that includes biological, viral, and other disease-causing material.

Evolution: Uniform sequence of practiced steps by squad carrying out common tasks such as selection and placement of ladders, stowing hoses in hose bed, putting hoses and tools into service in particular patterns; intended to result in predictability during emergencies.

Exothermic Reaction: Chemical reaction giving off heat in the process, such as combustion and resulting mixture is hot.

Explosive Limits: A concentration of gas or liquid that is not too rich or too lean to ignite with force.

Exposure: A contact with potentially disease-producing organism; the contact does not necessarily produce the disease in the exposed individual.

Exposure Fire: Property near fire that is threatened by the transfer of heat or burning material from a fire.

Extension Ladder: A ladder with one or more movable sections that extends beyond a base section, typically using a rope and pulley mechanism for lifting and locking cams to latch the moving sections at a selected height.

Extinguisher: Device containing fire suppressant, often pressurized to expel the suppressant when triggered. It is important to properly select type of extinguisher appropriate to type of material burning (wood, grease, electrical, etc). May be portable or permanently installed for special suppression purposes, such as fires in aircraft engines, restaurant exhaust hoods, or computer rooms.

Extrication: Removal of a trapped victim such as a vehicle extrication, confined space rescue, or trench rescue; sometimes using hydraulic spreader, Jaws of Life, or other technical equipment.

Extrication Gloves: Work gloves specially designed for vehicle extrication and other rescue applications, but not rated for firefighting.

FAST (F.A.S.T.): Firefighter Assist and Search Team also called Rapid Intervention Team (RIT). Firefighters assigned the team stand by for rescue of other firefighters inside a structure; an implementation to support the Two-in, two-out rule; may have specialized training, experience and tools.

Femoral Artery: A major artery located on the upper legs near the groin that supplies the leg with blood. Can be used as a pressure point for controlling bleeding in the lower extremities.

Fill Site: The area where tenders or tankers are filled or get their water.

Fire Department Connection (FDC): A fire department pipe connection typically located at the wall of a building that the fire engine connects a fireline to. The connection supplies the building standpipe and or sprinkler system.

FFFP: Fluoroprotein film forming foam.

Fire Alarm Control Panel: System for receiving and announcing location of fire based upon input from smoke, flame or heat detectors, or manual call points or pull stations.

Fire Axe: There are two main types of axes used in firefighting, a flathead axe and a pickhead axe.

Fire Behavior: The manner in which a fire reacts to the influences of fuel, weather, and topography.

Fire Camp: Temporary camp established at large wildland fires to provide food, rest, and other necessities to fire crews.

Fire Code: Regulations for fire prevention and safety involving flammables, explosives and other dangerous operations and occupancies.

Fire Department Keys: Special keys provided to firefighters to access a lockbox, located on some commercial buildings, containing additional keys required for entry or other safety features.

Fire Escape: A building structure arranged outside to assist in safe evacuation of occupants during an emergency; may connect horizontally beyond a fire wall or vertically to a roof or (preferably) to the ground, perhaps with a counter-weighted span to deny access to intruders.

Fire Flow: The amount of water being pumped onto a fire, or required to extinguish a hypothetical fire. A critical calculation in light of the axiom that an ordinary fire will not be extinguished unless there is sufficient water to remove the heat of the fire.

Fire Flow Capacity: The amount of water available or amount that the water distribution system is capable of flowing.

Fire Flow Requirement: A measurement comparing the amount of heat the fire is capable of generating versus the amount of water required for cooling the fuels below their ignition temperature.

Fire Grenade: Glass bottle filled with carbon tetrachloride or similar fire extinguishing fluid; meant to be thrown and shatter at base of fire to mix with air to produce non-combustible mixture; Similar to extinguishers comprised of glass fixtures with spring-loaded clapper released by heat-fusible link. Limited effectiveness, and phased out in 1950s when better extinguishers became available (and more importantly because of the dangers involved in the use of carbon tetrachloride in fighting fires).

Fire Hazard: Any condition, situation, or operation that could lead to the ignition of unwanted combustion or result in proper combustion becoming uncontrolled.

Fire Hose: A flexible conduit used to convey water or other agent from a water source to the fire.

Fire Hydrant: Pressurized water source for a fire engine with hose and steamer connection fittings. Typically part of a municipal water system.

Fire Hydraulics: The study of pumps, hoses, pipes, accessories and tools for moving water or other extinguishing agents from a water supply to a fire.

Fire Inspector: A person responsible for issuing permits and enforcing the fire code, including any necessary premises inspection (sometimes used inter-changeably with fire marshal as the position may include the duties of fire marshal as well).

Fire Intensity: A measurement of BTUs produced by a fire. Sometimes measured in flame length in the wildland environment.

Fire Line: A boundary of a fire scene established for public safety and to identify the area in which firefighters may be working.

Fire Load: An estimate of the amount of heat energy that will be given off during ordinary combustion of all the fuel in a given space or building – sometimes expressed in BTU.

Fire Marshal: Administrative and investigative office for fire prevention and arson investigation (sometimes used inter-changeably with fire inspector as the position may include the duties of fire inspector as well).

Fire Plug: Slang for fire hydrant.

Fire Point: Temperature at which materials give off flammable gases that will sustain fire, typically higher than flash point. Temperature at flashover.

Fire Prevention: Fire safety standards for minimizing fire hazards.

Fire Resistive: The capacity of a material to withstand the effects of fire.

Fire Retardant: Any substance (except plain water) that by chemical or physical actions reduces flammability of fuels or slows their rate of combustion.

Fire Shelter: An aluminized tent offering some protection by means of reflecting radiant heat in a fire entrapment situation. Carried as a safety tool, fire shelters should only be used in life threatening situations, as a last resort, as severe burns or asphyxiation often result. Commonly used in the wildland fire fighting environment.

Fire Shirt: Distinctive yellow shirts made of Nomex or other lightweight materials of low combustibility, used as uniform PPE of wildland firefighters.

Fire Stopping: Pieces of material, usually wood or masonry, placed in stud or joist channels to slow the extension of fire.

Fire Stream: Water (possibly mixed with foam or other agents) as it leaves the nozzle and directed at burning materials.

Fire Tetrahedron: The fire tetrahedron is based on the components of igniting or extinguishing a fire. Each component represents a property necessary to sustain fire: fuel, oxygen, heat, and chemical chain reaction. Extinguishment is based upon removing any one of

these properties.

Fire Wall: Building structure designed to delay horizontal spread of a fire from one area of a building to another.

Fire Watch: Patrols that watch for signs of fire or fire hazards so that any necessary alarm can be quickly raised or preventive steps taken.

Fire Weather: Weather conditions that affect fire vulnerability, fire behavior and suppression.

Fire-Resistant: Materials designed or treated to have an increased fire point.

Firebreak: A natural or constructed barrier used to stop or check fires that may occur, or to provide a control line from which to work.

Firefighter: People who respond to fire alarms and other emergencies for fire suppression, rescue, and related duties.

Firefighter Assist and Search Team: See FAST.

Fireground: The operational area at the scene of a fire; area in which incident commander is in control. Also used as name of radio frequency to be used by units operating in the fireground, as in Responding units switch to fireground.

Firehose: See also hose, below.

Firehouse: Another term for Fire station. Where fire apparatus is stored and where full-time firefighters work.

Fireline: The part of a control line that is scraped or dug to mineral soil. Also called fire trail. More generally, working a fire is called being on the fireline." May also refer to a "wet line" where water has been used to create a burn boundary in light fuels such as grass.

Fireline Handbook: A small red booklet carried by U.S. firefighters on the firelines, as a quick reference on various firefighting topics.

Fireman's Key: Set of tools used for opening elevator doors from the lobby during rescues; come in many different shapes and sizes, each designed for a specific elevator type.

Firestorm: A conflagration of great enough proportions to noticeably create its own wind conditions.

First Responders: A group designated by the community as those who may be the first to arrive at an emergency incident; usually composed of police, EMS providers and fire fighters.

Fit Test: Periodic test of how well the facepiece of an SCBA fits a particular firefighter.

Flammable Limits: The concentration level of a substance at which it will burn.

Flammable Range: Ratio of gas to air that will sustain fire if exposed to flame or spark.

Flanks of a Fire: The parts of a fire's spread perimeter that are roughly parallel to the main direction of spread.

Flare-Up: Any sudden acceleration in rate of spread or intensification of the fire. Unlike blowup, a flare-up is of relatively short duration and does not radically change existing control plans.

Flash Fuels: Fuels such as grass, leaves, draped pine needles, fern, tree moss and some kinds of slash, which ignite readily and are consumed rapidly when dry.

Flash Point: The temperature at which a liquid will liberate a flammable gas.

Flashover: A sudden event that occurs when all the contents of a container reach their ignition temperature simultaneously.

Flow: The rate or quantity of water delivered, usually measured in gallons per minute.

Fly Ladder: The moving portions of an extension ladder.

Foam: The aerated solution created by forcing air into, or entraining air in water containing a foam concentrate by means of suitably designed equipment or by cascading it through the air at a high velocity. Foam reduces combustion by cooling, moistening and excluding oxygen.

Fog Nozzle: A nozzle that discharges water in small droplets. Oftentimes, the nozzles are adjustable, permitting the pattern to range from a straight stream to a narrow fog to a wide fog stream. Can also be designed to automatically adjust pressure depending upon selected pattern.

Fog Stream: A fire stream characterized by small droplets of water. The droplets are unable to travel very far, but absorb heat very quickly because of the high surface area they present.

Foot Valve: Backflow preventer at inlet of suction hose used in drafting; helps avoid losing prime by keeping water from running back out of the suction hose.

Forcible Entry: Gaining entry to an area using force to disable or bypass security devices, typically using force tools, sometimes using tools specialized for entry (e.g., Halligan, K-tool).

Forward Lay: Procedure of stringing water supply hose from a water source toward a fire scene; compare with reverse lay.

Freelancing: Dangerous situation at an incident where an individual carries out tasks alone or without being assigned; violation of personnel accountability procedures.

Freezing Point: The temperature at which liquids become solids.

Friction Loss: Reduction of flow in a firehose caused by friction between the water and the lining of the hose. Depends primarily upon diameter, type and length of hose, and amount of water (GPM) flowing through.

Frontage: That portion of a property that faces and actually touches the street.

Fuel Load: The mass of combustible materials available for a fire usually expressed as weight of fuel per unit area (e.g., 20 tons per acre).

Fuel Moisture: Percent water content of vegetation, an important factor in rate of spread.

Fuel Type: An identifiable association of fuel elements of distinctive species, form, size, arrangement, or other characteristics that will cause a predictable rate of spread or resistance to control under specified weather conditions.

Fuelbreak: A natural or manmade change in fuel characteristics which affects fire behavior so that fires burning into them can be more readily controlled.

Fully Involved: Term of size-up meaning fire, heat and smoke in a structure are so widespread that internal access must wait until fire streams can be applied.

Gas: A state of matter that describes the material in a form that moves freely about and is difficult to control. Steam is an example.

Gate Valve: Indicating and non-indicating valves that are opened and closed to control water flow.

Gauge Pressure: Measures pressure without atmospheric pressure. Normally fire department gauges measure in psi or psig.

Glass-Master tool: Brand of specialized vehicle extrication tool, most notably including a glass cutting saw for removal of automobile windshields.

Glazing: The glass or other clear material portion of the window that allows light to enter.

GPM: Gallons Per Minute or how many gallons are being pumped out of a piece of equipment every minute

GPM Method: Calculation of how much water, in GPM, will be necessary to extinguish a given volume of fire, under the circumstances.

Gravity Tank: Water storage tank for fire protection; arranged above protected area to provide flow of water by gravity when needed.

Grease Fire: A fire involving any manner of cooking oil or other flammable cooking or lubricating materials.

Gross Decon: The portion of decontamination process that removes the majority of the chemicals through a flushing process. The gross washing is done using large amounts of water and usually done by the individual or the individual's partner.

Gross Negligence: Occurs when an individual disregards training and continues to act in a manner without regard for others.

Ground Fire: Fire that consumes the organic material beneath the surface litter ground, such as peat fire.

Ground Ladder: A portable ladder designed to rest on the ground. Compare aerial ladder and roof ladder.

Ground Pads: Sheets of plywood, planks, aluminum sheets or similar material used to distribute weight over a larger area.

Guideline/Lifeline: Rope used as a crew is searching a structure to assist them in finding their way back out.

Gussett Plate: A connecting plate used in truss construction to hold structural pieces together.

Halligan Tool: Forcible entry tool with a pointed pick and a wedge at right angles on one end of a shaft and a fork or cat's paw at the opposite end. Used in combination with maul or flat-headed axe for forcing padlocks, doors and windows. Forms the "irons" when nested with a flathead axe.

Halon: Chemical gas fire extinguishing agent; used mainly in closed computer rooms, aircraft, and other high-value installations where corrosive chemicals or water extinguishers are judged inappropriate. Effective at low concentrations (5%) as compared with CO₂ (34%). Being phased out with suitable replacements in most applications, with very restricted exemptions, due to international environmental concerns with this and other CFCs.

Halyard: Utility rope for raising or lowering moving parts of extension ladder.

Hand Crew: A number of individuals that have been organized and trained and are supervised principally for operational assignments in wildland firefighting.

Hard Suction Hose: Non-collapsible sections of hose, usually 10 feet long, used when drafting.

Hardware: Equipment used in conjunction with life safety ropes and harnesses (carabiners, figure eights, rappel racks, etc.).

Harnesses: Webbing sewn together to form a belt, seat harness, or seat and chest harness combination.

Hazard: A source of danger of personal injury or property damage; fire hazard refers to conditions that may result in fire or explosion, or may increase spread of an accidental fire, or prevent escape from fire.

Hazardous Materials: Hazardous materials, including solids, liquids, or gasses that may cause injury, death, or damage if released or triggered.

Head of a Fire: The running top or aggressive end of the fire away from the start point.

Head Pressure: Measures the pressure of a column of water in feet (meters). Head pressure gain or loss results when water is being pumped above or below the level of the pump. A head of 2.32 feet would equal 1 psi.

Heat Resistance: The ability of foam to stand up to the heat of the fire or to hot surfaces near the fire.

Heat Sink: The term used to denote a place where heat is drained away from a source.

Helispot: A natural or improved takeoff and landing area intended for temporary or occasional helicopter use, typically in remote areas without other access.

Helix: The metal or plastic bands or rings used in hard suction hose to prevent its collapse under draft conditions.

Higbee Cut: A tapered thread termination in a firehose coupling for avoiding cross-threading, the location of which is indicated by a notch cut into a single lug on a hose coupling. If the notches are aligned on mating couplings, the Higbee cuts are aligned and the threads will immediately engage when the swivel fitting is turned.

High-Rise Building: Any building taller than three or four stories, depending upon local usage, requiring firefighters to climb stairs or aerial ladders for access to upper floors.

High-Rise Pack: Hose bundle prepared for carrying normally as a shoulder load to a standpipe in a high-rise building, usually consisting of 50 or more feet of 1 3/4-inch hose and a combination nozzle.

Hoistway: The shaft in which an elevator or a number of elevators travel.

Hook: Forged steel hook at end of a pole of 3' – 12' lengths; used for piercing and pulling building materials away from walls, ceilings and other material. Also known as a pike pole.

Horizontal Ventilation: Channeled pathway for fire ventilation via horizontal openings.

Hose: Flexible conduit for moving liquids under pressure; made of various materials including cotton, rubber or plastic; construction may be braided, woven, wrapped or extruded, often in layers (liner and jacket); hose construction and size differs according to its intended use (e.g., hard suction, attack, forestry, booster); typically stocked in standard lengths and coupled together with standardized fittings.

Hose Bed: Part of fire engine (or hose wagon) where hose is stored for transport and easy access; stocked in layers or rows for quick selection of the desired length, diameter and type of hose; may include hoses pre-connected to pump outlets on the engine.

Hose Bridge: Mechanical ramps permitting vehicle tires to roll over top of hose without pinching or damaging the hose. Sudden hose-pinch can cause dangerous backpressures in a running hose and at the pump and release of the pinch can cause a staggering surge at the nozzle end.

Hose Cap: It caps the end of a hoseline or appliance to prevent water flow.

Hose Cart: A handcart or flat cart modified to be able to carry hose and other equipment around large buildings. Some departments use them for high-rise situations. Also, see hose wagon.

Hose Clamp: A device to control the flow by squeezing or clamping the hose shut. May work by lever, screw or hydraulic mechanisms.

Hose Coupling: Rigid interlocking end-pieces on fire hose; used for connecting hose to hydrants or fire engine pumps and other hose appliances (nozzles, wyes, manifolds, strainers, etc); standardized sizes and threads or other (non-threaded) pressure-sustaining interlocks (e.g., Storz" or other "quarter-turn" connectors); lugs cams or pins are used to tighten and loosen couplings by hand or with a hose wrench.

Hose Jackets: Metal or leather devices used for stopping leaks without shutting down the line that is fitted over the leaking area and either clamped or strapped together to control the leak.

Hose Roller: Rigid frame with rollers designed to fit over windowsill or roof parapet to prevent chafing as hose is pulled across it.

Hose Strap: A short strap with a forged handle and clip attached. Used to help maneuver hose and attach hose to ladders and stair rails.

Hose Tower: Structure for hoisting hoses to permit them to drain and dry.

Hose Wagon: A handcart, vehicle, or trailer adapted for storing and hauling hose and related equipment; used by industrial fire brigades with large buildings, or where supplemental hoses are needed beyond that normally carried on a fire engine; also used for taking attack hose into a

high-rise and for returning dirty, wet hose to the station instead of loading the hose bed with it. Vehicular hose wagon may carry 1,000 to 3,000 feet of hose.

Hose Wrench: Tool for holding hose couplings against opposite turning forces (tighten/loosen); may be one of several designs for different shapes of cleats or lugs on couplings (round, flat, recessed, etc), and also of different sizes according to the couplings being handled, and come in various combinations to minimize the number of different tools necessary on the fire ground. Also known as a “Spanner” wrench.

Hot Spot: A particularly active part of a fire.

Hot Zone: Contaminated area of HAZMAT incident that must be isolated; requires suitable protective equipment to enter and decontamination upon exit; surrounded by “warm zone” where decontamination takes place.

Hotshot Crew: An extensively trained group of approximately twenty people which specializes in wildfire suppression with little or no outside logistical support.

Hotshot Crew: Intensively trained wildland fire crew used primarily in hand line construction, and organized primarily to travel long distances from fire to fire as needed rather than serving only one geographic location.

Hurst Tool (Jaws of Life): Mechanical levering device with hydraulic cylinders powered by a pump; used for forcible entry or spreading vehicle or structure parts to permit extrication of a victim. Normally includes cutter and ram/jacking features.

HVAC: Acronym for heating, ventilation, and air-conditioning unit.

Hydrant: Pressurized water source for a fire engine. May also be a “dry hydrant” for drafting from static water source.

Hydrant Valves: A valve connected to the hydrant by the first due engine allowing the second due engine to boost the pressure in the intake line. Used for hydrants with low pressure, attaching multiple engines to one hydrant, or boosting pressure in the intake line to accommodate for friction loss.

Hydrant Wrench: Tool for opening valve of fire hydrant; may be simple spanner, box wrench, or adjustable wrench, or a specialized tool for use on “anti-vandalism” valves. For example some valves require a magnet to activate a cam in order for the valve to be turned on.

Hydraulic Spreader: Mechanical levering device with hydraulic cylinders powered by a pump; used for forcible entry or spreading vehicle or structure parts to permit extrication of a victim.

Hydraulics: The study of fluids at rest and in motion.

Hydrocarbon: Any of numerous organic compounds, such as benzene and methane, that contain only carbon and hydrogen.

Hyperbaric Chamber: A chamber that is usually used to treat scuba divers who ascend too quickly and need extra oxygen to survive. The chamber re-creates the high pressure atmosphere of diving and forces oxygen into the body. It is also successful in the treating of carbon monoxide poisoning and smoke inhalation, because both of these problems require high amounts of oxygen to assist with the patient's recovery.

Hypoperfusion: A serious condition caused by a problem or failure of the circulatory system that results in a decrease of oxygen and vital nutrients to the body's tissues. Also known as shock.

Hypoxia: A deficiency of oxygen.

IDLH: Any situation deemed Immediately Dangerous to Life and Health. More narrowly defined by OSHA. See main IDLH article. An area of maximum danger to firefighters.

Ignition: The point at which the outside heat application ceases and a material sustains combustion based on its own generation of heat.

Ignition Point: The temperature at which a substance will continue to burn after the source is removed.

Ignition Temperature: The temperature of a liquid at which it will ignite on its own without an ignition source.

Immediately Dangerous to Life and Health (IDLH): The maximum level of danger one could be exposed to and still escape without experiencing any effects that may impair escape or cause irreversible health effects.

Impact Load: A load that is in motion when it is applied.

Implied Consent: The assumption of acceptance of emergency medical treatment by an unconscious patient or child with no parents or legal guardians present.

Incendiary Agents: Chemicals that are used to start fires, the most common being a Molotov cocktail.

Incident Action Plan: A strategic and tactical plan developed by the incident commander.

Incident Command System (ICS): System first developed to provide a command structure to manage large wildfires in the United States, now widely used by many emergency management agencies. Designed to keep order and to follow a sequence of set guidelines.

Incident Commander: The officer in charge of all activities at an incident.

Incident Safety Officer: The officer in charge of scene safety at an incident.

Indian Tank/Pump: A brand of five-gallon water can, or back-pack bladder, featuring a short hose and hand pump for use in wildland firefighting. Contains 5 US gal, and is used on hot spots and during mop up. Also called bladder bag (if collapsible), piss pump, or Fedco.

Indirect Attack: Method of wildland firefighting in which water is pumped onto materials above or near the fire so that the splash rains onto the fire, often used where a structure is unsafe to enter.

Indirect Fire Attack: An attack made on interior fires by applying a fog stream into a closed room or compartment, thus converting the water into steam to extinguish the fire.

Infection Control: Procedures and practices for firefighters and emergency care providers to follow to prevent the transmission of diseases and germs from a patient to themselves or other patients.

Infrared Sensor: A sensor that uses infrared light to determine the presence of flammable gases. The light is emitted in the sensor housing and the gas passes through the light. If it is flammable the sensor will indicate the presence of the gas.

Initial Assessment: The initial investigative action taken by care providers to determine if the patient has the basic signs of life as well as any serious, life-threatening injuries.

Initial Attack: First point of attack on a fire where hose lines or fuel separation are used to prevent further extension of the fire.

In-Line Eductor: Eductor in which the waterway is always piped through a venture.

Inorganic: A substance that is not of any living organism.

Intake: Part of pump where water enters when pump forms partial vacuum.

Intake Relief Valve: Required on large-diameter hose at the receiving engine that functions as a combined over-pressurization relief valve, a gate valve, and an air bleed-off.

Interface Firefighting: Fighting wildland fire and protecting exposed structures in rural settings.

Intervention: The act of intervening; to come between as an influencing force. Typically a reactive action.

Interface Zone (also wildland/structural interface or urban/wildland interface): The zone where wildfires threaten structures or structural fires threaten wildlands, such as in residential areas adjacent to forests. This requires both wildland firefighting and structural firefighting in the same location, which involve very different tactics and equipment.

Irons: Pairing of a flat-head axe and a Halligan tool. A common combination used in forcible entry operations to gain access for search and rescue as well as interior fire attack.

Irritant: A material that is irritating to humans, but usually does not cause any long-term adverse health effects.

Isolation Area: An area that is set up by responders and is intended to keep people, both citizens and responders, out. May later become the hot zone as the incident evolves. Is the minimum area that should be established at any chemical spill.

ISO Rating: (Insurance Services Office Fire Insurance Rating) This is a rating published by the Insurance Services Office. Insurance companies use this number to determine homeowner fire insurance premiums.

J-bar: A stiff, j-shaped tool for reaching an inside door handle.

Jacket: The outer part of the hose, often a woven cloth or rubberized material, which protects the hose from mechanical and other damage.

Jack-knifing: Jargon for position of articulated aerial ladder such that tractor is at an angle to the trailer; provides improved stability when ladder is hoisted, rotated and extended.

Jamb: The mounting frame for a door.

Jet Dump: A device that speeds the process of dumping a load of water from a tanker/tender.

Jet Siphon: A device (a venture appliance) that speeds the process of transferring water from one tank to another.

Joist: A wood framing member that supports floor or roof decking.

K-tool: A forcible entry tool for disabling cylinder locks.

Kelly tool: A prying tool much like a Halligan tool without the right-angle pointed tip.

Knock down: To reduce the flame or heat on the more vigorously burning parts of a fire edge.

Knox Box: A rapid entry system developed for property owners and fire departments. When a fire breaks out or there is a medical emergency, a Knox-Box allows immediate entry without forced entry damage or delay. Property owners store entrance keys and access cards in high-security Knox-Boxes mounted near building entrance. Each KNOX-BOX is keyed to a single special master key controlled by the fire department.

Laceration: A cut to the skin and underlying tissue that leaves an irregular, even pattern.

Ladder Company: A group of fire fighters, officers and engineers that staff a ladder truck.

Ladder Fuels: Flammable vegetation that helps a ground fire move into the canopy.

Ladder Pipe: An appliance that is attached to aerial ladder and used to direct heavy stream from advantageous height.

Ladder truck: A truck outfitted for fire which is operated by a ladder company, and in most cases is not outfitted to pump water. Not to be confused with engine.

Laminated Glass: Glass composed of two or more sheets of glass with a plastic sheet between them. The purpose of the plastic sheet is to hold the glass together if broken, thus reducing the hazard of flying glass.

Large Diameter Hose: (LDH) Fire hose with a diameter of 4 inches or greater. LDH is typically used to supply water from a fire hydrant to fire apparatus such as an engine or tanker.

Leatherhead: Slang denoting a fire fighter.

Let-Burn Policy: Administrative decision to defer fire suppression, perhaps because of wilderness and long-term forest conservation considerations or for other life safety considerations.

Lethal Concentration (LC50): A value for gases that provides the amount of chemical that could kill 50 percent of the exposed group.

Lethal Dose (LD50): A value for solids and liquids that provides the amount of a chemical that could kill 50 percent of the exposed group.

Level A Protective Clothing: Fully encapsulated chemical protective clothing. It is gas and liquid tight and offers protection against chemical attack.

Level B Protective Clothing: A level of protective clothing that is usually associated with splash protection. Level B requires the use of SCBA. Various clothing styles are considered Level B.

Level I, II, III Incident: A HAZMAT term denoting the severity of the incident and the type of response that may be necessary, where Level III is the largest or most dangerous.

Liability: The possibility of being held responsible for individual actions.

Life Safety: Term applied to the fire protection concept in which buildings are designed to allow for the escape of building occupants without injuries. Life safety usually makes the building more fire resistant, but this not the main goal.

Life Net: Portable net for attempting to catch victims falling or jumping from upper floors of

burning structure.

Life Safety Code: An NFPA publication.

Life Safety Line: A rope used where its failure could result in serious injury; a rope used for connecting a firefighter/rescuer to a fixed anchor point or to another person.

Light Water: An additive to use with water in the extinguishing of petroleum and similar fires.

Live Line: A fire hose under pressure from a pump. Also, an energized electrical line that may cause a hazard to firefighters.

Live Load: The weight of all materials and people associated with but not part of a structure.

Load Bearing Wall: Any wall that supports other walls, floors, or roofs.

Loaded Stream: A hose stream that has an added alkali salt as an antifreeze agent, typically associated with some older fire extinguishers.

Loading: The weight of building materials or objects in a building.

Lookouts: Safety person positioned to monitor the location and behavior of a fire, ready to signal a crew to escape; Fire lookout, the person who works in the fire lookout tower.

Lower Explosive Limit (LEL): The lower part of the flammable range, and is the minimum required to have a fire or explosion.

Mass Casualty Incident: Any incident that produces a large number of injured persons requiring emergency medical treatment and transportation to a medical facility. The exact number of patients that makes an incident mass casualty" is defined by departmental procedures and may vary from area to area.

Master Stream: A large nozzle, either portable or fixed to a pumper, capable of throwing large amounts of water relatively long distances. Capable of delivering over 350 gpm and consequently, not a hand hand-held appliance.

Material Safety Data Sheet (MSDS): Information sheet provided specific information about a chemical, with attention to health effects, handling, and emergency procedures.

Mattydale Lay (Mattydale Load): The concept of storing preconnected Attack Lines on an engine, as well as storing them such that they are presented at the sides of the apparatus instead of the rear. Commonly called a Cross Lay, the technique allows for rapid deployment of attack lines from either side of the apparatus.

Mayday: A universal call for help. A Mayday indicates that an individual or team is in extreme danger.

McLeod: Hand tool used in wildland fireline construction, consisting of a combination rake and hoe.

Means of Egress: A safe and continuous path of travel from any point in a structure leading to a public way. Composed of three parts: the exit access, the exit, and the exit discharge.

Medium-Diameter Hose (MDH): A hose with diameter between 2 ½ or 3 inch hose.

Med-Vac: An ambulance that transports patients by air. Typically, med-vac units are helicopters with highly trained EMS personnel on board.

Melting Point: The temperature at which solids become liquids.

Miscible: Having the ability to mix with water.

Mitigation: Actions taken to eliminate a hazard or make less severe or less likely to cause harm.

Mop-Up: Extinguishing or removing burning material near control lines, felling snags, and trenching logs to prevent rolling after an area has burned, to make a fire safe, or to reduce residual smoke.

Multi-Gas Detector: Measuring device designed to indicate concentrations of four selected gases, such as oxygen, carbon monoxide, volatile organic compounds, hydrogen cyanide, etc.

Multiple Alarms: A request by an incident commander for additional personnel and apparatus. Each department will vary on the number of apparatus and personnel on each additional alarm.

Mutual Aid: An agreement between nearby fire departments or agencies to assist each other during emergencies by responding with available manpower and apparatus; cross-jurisdictional assistance with emergency services by pre-arranged agreement.

National Fire Protection Association (NFPA): Fire and safety standards organization that uses a consensus process to develop model fire prevention codes and firefighter standards.

National Institute for Occupational Safety and Health (NIOSH): A federal institute tasked with investigating fire fighter fatalities and making recommendations to prevent reoccurrence, including respiratory protection and SCBA.

National Hose (NH): National Standard Thread (NST) design of threaded couplings used on fire hose in various diameters.

Negligence: Acting in an irresponsible manner or different from the way in which someone was trained; differing from standard care.

Nerve Agents: Chemicals that are designed to kill humans, specifically in warfare. They are chemically similar to organophosphorus pesticides and cause the same medical reaction in humans.

NFPA 1001: NFPA standard for Fire Fighter Professional Qualifications, a standard for job performance.

NFPA 1404: NFPA standard for SCBA requirements and the associated training and maintenance.

NFPA 1500: NFPA standard for protective equipment.

NFPA 72: NFPA standard for Fire Alarms.

NFPA 1931: NFPA standard for fire service ladders.

Nomex®: Brand of approved, fire retardant, synthetic, aramid cloth and thread used in personal protective equipment for wildland firefighting, and jumpsuits.

Nozzle: A device attached to the end of a fire hose that directs, shapes and regulates the flow of the water or fire fighting agent pumped into the hose.

Nozzle Flow: The amount or volume of water that a nozzle will provide, measured in gpm.

Nozzle Pressure: Pressure in a fire hose measured at the nozzle, measured in psi.

Nozzle Reach: The distance the water will travel from the nozzle tip before breaking up or evaporating due to air friction or heat.

Nozzle Reaction: When water is pumped through a nozzle it produces a force in the opposite direction of the water flow and against the firefighter holding the nozzle.

Occupancy Classification: A zoning and safety code term used to determine how a structure is permitted to be used; general categories for purpose of safety planning, such as for hospital, assembly, industrial, single-family dwelling, apartment building, commercial, etc. Further broken down by types of hazards associated with particular occupancies, such as gas stations.

Occupant Use Hose: Light-weight firehose coupled to standpipe for emergency use by building occupants prior to arrival of firefighters. Often accessible by breaking glass to unlock secure enclosure.

Offensive Attack: Method of firefighting in which water or other extinguisher is taken directly to the seat of the fire, as opposed to being pumped in that general direction from a safe distance.

On-Call: Personnel who can be summoned when necessary to respond to an incident.

One/Two Person Rope: NFPA requires a one-person rope to have a min. tensile strength of 4,500 pounds; a two-person rope requires 9,000 pounds of tensile strength.

Open-Circuit SCBA: A type of SCBA unit in which exhaled air is vented to the outside atmosphere and not reused by the system.

Operations Level: The next level of training above awareness that provides the foundation which allows for the responder to perform defensive activities at a chemical incident.

Organic: A substance derived from living organisms.

OSHA: U.S. government agency concerned with regulating employee safety, particularly in hazardous occupations such as firefighting.

Outside Fire: Urban fire not inside a building or vehicle, often found to be burning trash which could extend to nearby structures or vehicles if not dealt with properly. A suburban, interface, or rural outside fire could also be a wildland fire.

Outside Stem and Yoke Valve (OS&Y): Type of gate valve actuator arranged such that the valve stem moves in and out of the handle, thus externally indicating whether the valve is open or shut, unlike the more common gate valve wherein the stem rotates and only the gate moves up and down inside the fixture.

Overhauling: Late stage in fire-suppression process during which the burned area is carefully examined for remaining sources of heat that may re-ignite the fire. Often coincides with salvage operations to prevent further loss to structure or its contents, as well as fire-cause determination and preservation of evidence.

Oxidizer: A catalyst in the breakdown of molecules.

Oxygen Deficient Atmosphere: An atmosphere with an oxygen content below 19.5 percent by volume.

Overpacked: A container that is placed in a larger container to contain a possible leakage from the smaller container.

Packaging: The bandaging and preparing of a patient to be moved from the place of injury to a stretcher.

Palmer Drought Severity Index: Technique for measuring impact of soil moisture changes on vegetation, for predicting fire danger and fire behavior.

Panic Doors, Panic Hardware: Fire safety hardware permitting locked doors (typically self-

closing) to be opened from the inside when pressed with sufficient force, thus permitting a person to open the door without having to turn a knob or lever.

Parallel Attack: Fire containment method where crews construct fireline at some distance from the edge of the fire and then burn out the fuel in the buffer as the fireline is completed.

Parapet: The projection of a wall above the roofline of a building.

PASS Device: An alarm device which emits a loud signal that a firefighter is in trouble. It can be activated manually by the firefighter, or activates automatically if the firefighter stops moving. May be integral to SCBA or separately activated.

Personnel Accountability System: System in which each firefighter has an identification document (sometimes call a Passport) that is collected by the person in charge of accounting for the current location of the respective individuals, and returned to the firefighter when he or she leaves the dangerous area.

Pickhead Axe: Standard fire axe having a 6 or 8 pound steel head with a cutting blade on one edge and a pointed pick on the opposite side.

Pike Pole: See Hook.

Pitot Gauge: A device with an opening in its blade-shaped section that allows water to a Bourdon gauge and registers the flowing discharge pressure of an orifice.

Plan View: A drawing or diagram of a building or area as seen from directly overhead.

Platform Framing: A style of wood frame construction in which each story is built on a platform (the floor structure), providing fire stopping at each level.

Plec-Tron: A brand-name of an early radio-frequency paging system for summoning firefighters.

Point of Origin: An element of fire behavior, indicating where a fire began, supporting further analysis of where the fire went or will go; evidence of specific origin is often obscured or destroyed by suppression tactics.

Polar Solvent: A material that will mix with water, diluting itself.

Pompier Ladder: A style of ladder that is also known as a Scaling Ladder". It is used to climb from one window to another. It differs from other ladders in that it does not rest on the ground it instead uses a large hook at the top to attach to a window sill. The word "Pompier" is French for fireman.

Portable Hydrant/ Manifold: Like a large water thief and may have one or more intakes and numerous outlets to allow multiple hoselines to be utilized without a engine/pumper at the fire

location.

Portable Water Tank: Collapsible reservoir used for storing water transported to fireground. May be inflatable or supported by a frame. Water is dumped from tankers/tenders into the portable water tank.

Positive Pressure: Pressure at higher than atmospheric; used in SCBA facepieces to keep toxic gases from entering, and in smoke-proof stairwells to reduce entry of smoke or fumes through small openings.

Positive Pressure Ventilation: Ventilation of an area by the use of a fan to push clean air into that space and controlled use of openings for the escape of smoke and gasses.

Post Indicator Valve: A type of valve used for underground sprinkler shutoff, having a lockable actuator atop a post with a window indicating "open" or "shut" status of the valve.

Pre-Planning: Fire protection strategy involving visits to potentially hazardous occupancies for inspection, follow-up analysis and development of a plan of actions to be taken in case of specific incidents.

Preconnect: Firehose on a fire engine which has one end connected to a pump outlet, and usually a nozzle attached to the other end. May also be a preconnected inlet hose (e.g., soft suction). Reduces steps at scene of fire.

Prescribed Burn: Deliberately ignited fire for the purpose of forest or prairie management, often to remove heavy fuel buildup or simulate natural cycles of fire in an ecosystem. Also called controlled burn.

Probie: A new firefighter (rookie) on probation (a period of time during which his or her skills are improved, honed, tested, and evaluated).

Public Alarm: Means for public to report a fire, includes telephone, street-corner pull-boxes, building pull-stations, and manual bells or sirens in rural areas.

Pulaski: Combination axe and grub hoe tool with a straight handle, used for building handline. Also known as P-tool".

Pulmonary Edema: Fluid filling the lungs causing death by drowning.

Pump Operator (aka chauffeur): A person responsible for operating the pump on a pumper and typically for driving the pumper to an incident.

Pumper: Vehicle apparatus for pumping water and other fire suppressants. See fire engine.

Pumper Company: Squad or company that mans a fire engine (pumper) and carries out duties

involving getting water to the fire.

Puncture: An injury caused by an object that has stabbed the body.

Purlins: A series of wood beams placed perpendicular to the steel trusses to help support roof decking.

Pyrolysis: Thermochemical decomposition of organic material at elevated temperatures in the absence of oxygen.

Quint: A combination fire service apparatus with components of both engine company and truck company.

Rabbit Tool: A hand-powered portable hydraulic ram, specially designed for insertion between a door and its frame for rapid forcible entry.

Radial Pulse: The pulse located in either wrist.

Radiant Extension: Fire that has transferred ignition heat to adjacent materials across open space. One reason some fire codes prohibit windows facing each other in adjacent warehouses.

Radiological Dispersion Device: An explosive device that spreads radioactive material throughout an area.

Rafter: A wood joist that is attached to a ridge board to help form a peak.

Rapeller: Crew of specialist hot-shot firefighters who are trained to access a fire area by sliding down ropes suspended from a hovering helicopter. Also used for delivering wilderness first aid if a rapeller is an EMT.

Rapid Intervention Team: A company or specially trained group designated to search for and rescue trapped or lost firefighters. Depending on department may be called FAST.

Ready Team: A group of firefighters waiting to be relieved by another company.

Reburn: Repeat burning of an area over which a fire has previously passed, but left fuel that later ignites when burning conditions are more favorable.

Recommended Exposure Limit: An exposure value established by NIOSH for a ten-hour day, forty-hour workweek.

Recovery: Location and removal of deceased victims. Also, the time needed for a firefighter to spend in rehab before being considered ready to continue working the incident.

Red Card: Credentials issued to qualified wildland firefighters, listing their qualifications and specialties.

Red-Flag Day: Weather conditions creating a critical fire hazard, may require closing the forest to non-emergency activities in order to minimize the risk of accidental wildland fires.

Reducer: An adapter for connecting a larger hose to a smaller hose.

Reflash Watch: A person assigned to observe and monitor an extinguished fire, to ensure that it does not reflash or re-kindle.

Reflash, Re-Kindle: A situation in which a fire, thought to be extinguished, resumes burning.

Rehab: An area for physical and mental recuperation. This rest area enables firefighters to relax, cool off (or warm up) and regain hydration by way of preventing injury. An EMT may be assigned to monitor firefighter vitals when they enter and leave rehab.

Relief Valve: A valve set to open at a specified pressure so as to not exceed safe operating pressure in hoses or pumps.

Remote Shutoffs: Valves that can be used to shut off the flow. The term remote is used to denote valves that are located some distance away

Reportable Quantity: It is the quantity of a hazard product that may require some type of action, such as reporting and accident involving a certain chemical.

Rescue: Physical removal of a live person or animal from danger to a place of safety.

Rescue Company: The unit designation of a group of firefighters trained and equipped to enter adverse conditions and rescue victims of an incident.

Rescue Specialist: A firefighter with specialized training in areas such as confined space, trench, structural collapse, or vehicle extrication.

Residential Sprinkler System: A sprinkler system arranged for fire suppression in a dwelling.

Residual Pressure: The amount of pressure in a system after water has begun flowing.

Respiratory Protection Program: Management program designed to ensure firefighter respiratory protection is followed as required.

Reverse Lay: The process of stringing hose from a fire toward a source of water, i.e., a fire hydrant.

Ricin: A biological toxin that can be used by a terrorist or other person attempting to kill or injure someone. It is the easiest terrorist agent to produce and one of the most common.

Risk –Based Response: An approach to responding to a chemical incident by categorizing a chemical into a fire, corrosive, or toxic risk. Use of a risk-based approach can assist the responder in making tactical, evaluation, and PPE decisions.

Risk-Benefit: An evaluation of potential benefit that a task will accomplish in relationship to the hazards that will be faced while completing the task.

Risk Management: The process of minimizing the chance, degree, or probability of damage, loss, or injury.

Rollover: A phenomenon where the burning of super-heated gases from fire extends into top areas of the compartment in the upper thermal layers.

Roof Ladder: A single-section ladder with hooks on one end. The hooks are put over the ridge or peak of a roof to hold the ladder in place.

Rope Hose Tool: Short strap or rope with a hook at both ends for wrapping around a charged hose to secure it in position or to assist in moving it.

Run Card System: A system of pre-planning for fire protection in which information about specific detectors, hazards, or other emergency response plans is indexed by location, for rapid reference during an alarm.

Running End: End of the rope that is not rigged or tied off.

S-130/S-190: The basic wildland fire training course given to all U.S. firefighters before they can work on the wildland fire lines.

Safety Container: A storage can that eliminates vapor release by using a self-closing lid. Also contains a flame arrestor in the dispenser opening.

Safety Zone: In wildland fire fighting operation it is an area cleared of flammable material used for escape in the event the line is outflanked or in case a spot fire causes fuels outside the control line to render the line unsafe. In firing operations, crews progress so as to maintain a safety zone close at hand allowing the fuels inside the control line to be consumed before going ahead. Safety zones may also be constructed as integral parts of fuel breaks; they are greatly enlarged areas which can be used with relative safety by firefighters and their equipment in the event of blowup in the vicinity.

Salvage, Salvage Cover: Heavy-duty tarpaulins folded or rolled for quick deployment to cover personal property subjected to possible water or other damage during firefighting.

Sawyer: Chainsaw crew qualified to cut down trees or snags perhaps while the tree or snag is burning.

SCBA: Self Contained Breathing Apparatus, or air-pack, worn by firefighters to protect

against breathing toxic fumes and smoke, or where the air has insufficient oxygen. Often incorrectly called "oxygen mask" by laypersons. Typically of open circuit style with a supply of compressed air where expired air is exhausted, rather than closed circuit where it is filtered, re-oxygenated from compressed oxygen, and inhaled again which is used where an air supply is needed for an extended period.

Scene Safety: Steps taken at or near an emergency scene to reduce hazards and prevent further injuries to workers, victims or bystanders.

Scuttle Hatch: Ready-made opening in roof that can be opened for vertical ventilation.

Search and Rescue (or SAR): Entering a fire building or collapse zone for an orderly search for victims and removal of live victims. Becomes "recovery" if victims are not likely to be found alive. Also attempts by fire and emergency service personnel to coordinate and implement a search for a missing person other than at a fire incident (such as in woodland areas) and then effect a rescue.

Secondary Containment: Any approved method that will prevent the runoff of spilled hazardous materials and confine it to the storage area.

Secondary Hole: A ventilation hole that is opened only after the primary holes have been opened.

Secondary Line: Any wildland fireline constructed at a distance from the fire perimeter concurrently with or after a line already constructed on or near to the perimeter of the fire. Generally constructed as an insurance measure in case the fire escapes control by the primary line.

Sector: A physical or operational division of an incident; an area supervised as a branch in the Incident Command System. A typical system for structure fires names the "front" of the building "sector A" and continues clockwise around the building (B, C, D) with interior sectors denoted by the floor number (1, 2, 3, etc.). A "rehab" sector is one example of an operational division at an incident where personnel are assigned after strenuous work in another sector.

Self-Contained Breathing Apparatus: See SCBA

Shear: A force that tends to tear a material by causing its molecules to slide past each other.

Sheetrock: A trademark and another name for plasterboard.

Shelter in Place: A form of isolation that provides a level of protection while leaving people in place, usually in their homes. People are usually sheltered in place when they may be in further danger by an evacuation.

Shock: A serious condition caused by a problem or failure of the circulatory system that results in a decrease of oxygen and vital nutrients to the body's tissues. Also known as hypoperfusion.

Shock Load: A load or impact being transferred to a rope suddenly and all at once.

Shoring: The use of timbers to support and/or strengthen structural members (roofs, floors, walls, etc.) in order to avoid a secondary collapse during the rescue operation.

Short-Term Exposure Limit: A fifteen minute exposure to a chemical followed by a one-hour break between exposures. Only allowed four times a day.

Shoulder Load: The hose load designed to be carried on the shoulders of firefighters.

Shove Knife: Semi-rigid metallic blade of various shapes and sizes used for forcing spring latches during forcible entry.

Shuttle Operation: The cycle in which mobile water supply apparatus is dumped, moved to a fill site for refilling, and is returned to the dump site.

Siamese: Hose coupling for merging two streams into one, i.e., two female coupling inlets and one male coupling outlet. The device is equipped with gate valves or clapper valves to prevent loss of water if only one line is connected.

Sides A, B, C, and D: Terms used by firefighters labeling the multiple sides of a building starting with side A or Alpha being the front of the structure and working its way around the outside of the structure in a clockwise direction. This labels the front side A or Alpha, the left side B or Bravo, the rear side C or Charlie, and the right side D or Delta.

Size-Up: Initial evaluation of an incident, in particular a determination of immediate hazards to responders, other lives and property, and what additional resources may be needed. Example: Two-story brick taxpayer with heavy smoke showing from rear wooden porches and children reported trapped.

Skidder Unit: Pre-configured tank, pump, hose for attachment to a logging skidder (large 4-wheel-drive tractor with a dozer blade, winch or grapple) to be carried to a fireline.

Slash: Debris resulting from such natural events as wind, fire, or snow breakage; or such human activities as road construction, logging, pruning, thinning, or brush cutting. It includes logs, chunks, bark, branches, stumps, and broken under-story trees or brush.

Slip-On: A small water pump and tank that can be temporarily mounted on a pickup or other truck.

Small-Diameter Hose: Generally accepted to be fire hose 2 ½ inches or less in diameter.

Smoke Detector: Part of a fire alarm system that detects and signals presence of smoke; self-contained household device for same purpose but with its own noisemaking device.

Smoke Ejector: Powerful fan for moving large amounts of air and smoke as part of ventilation task while fighting fire in a burning structure. May be operated by electricity or gas motor for positive or negative pressure ventilation.

Smoke Explosion: See backdraft.

Smoke-Proof Stairwell: Building structure which isolates escape stairwells with relatively fireproof walls, self-closing doors, and positive pressure ventilation, to prevent smoke or fumes from entering the stairwell during evacuation of occupants during a fire or other emergency.

Smokechaser: Colloquial term for a wildland firefighter. Now mostly archaic, except in Minnesota where state Department of Natural Resources firefighters are officially known by that name.

Smokejumper: A specifically trained and certified firefighter who travels to remote wildfires by fixed-wing aircraft and parachutes into a jump spot (that may include trees) close to the fire.

Smoldering: A fire burning without flame and barely spreading.

Soda-Acid Extinguisher: Weak water/acid solution inside a pressure vessel which activates bicarbonate of soda when triggered, expelling the mixture under pressure from the resulting carbon dioxide. Obsolete and often replaced with a multipurpose extinguisher.

Soft Suction Hose: A short piece of woven fire hose, usually 10 to 20 feet long, usually of large diameter, used to move water from a fire hydrant to the fire engine. Also known as a soft sleeve.

Solid: A state of matter that describes materials that may exist in chunks, blocks, chips, crystals, powder, dust, and other types. Ice is an example.

Solid Stream Nozzle: Type of nozzle that delivers an unbroken or solid stream of water to the fire. Also called solid tip, straight bore, or smooth bore.

Solid Stream: Fire stream from round orifice of nozzle. Compare straight stream.

Solubility: A liquid's ability to mix with other liquids.

Span of Control: The ability of one individual to supervise a number of other people or units. The normal range is three to seven units or individuals, with the ideal being five.

Spanner (Spanner Wrench): Rigid tool for tightening or loosening firehose couplings.

Special Egress Control Device: Locking device on doors used for delaying opening for short period (10-15 seconds) after release is pressed. Permitted as panic hardware in limited

circumstances. May also refer to a security system that releases electronic door locks when a fire alarm is activated, such as in stairwells of a high-rise building.

Specific Gravity: Weight of a liquid in relation to water. Water is rated 1.

Spike Camp: Remote camp usually near a fireline, and lacking the logistical support that a larger fire camp would have.

Sprinkler System: Fire suppression system in a building, typically activated by individual heat-sensitive valves, or remotely controlled by other types of sensors, releasing water onto the fire. May be wet" (water-filled) or "dry" (air-pressurized).

Staging: Sector of incident command where responding resources arrive for assignment to another sector.

Standard Operating Procedure (SOP): Rules for the operation of a fire department, such as how to respond to various types of emergencies, training requirements, use of protective equipment, radio procedures; often include local interpretations of regulations and standards. In general, "procedures" are specific, whereas "guidelines" are less detailed.

Standpipe: System of pipes inside a building for conducting water for firehose attachments; may be pressurized with water (wet) or remain "dry" until activated in an emergency; supplied either from a fire hydrant attachment or from a fire engine's pump. Permits firefighters to reach higher levels of tall buildings without having to run hoses up the stairs.

Static Pressure: The pressure in a water system when the water is not flowing.

Staypoles: The stabilizing poles attached to the sides of Bangor ladders that are used to assist in raising the ladder.

Steamer Connection/Outlet: The large diameter connection on fire hydrants.

Storz Couplings: One of the most popular of the non-threaded hose couplings, usually found on large diameter hose. The coupling is sexless, and secures with a 1/4 turn of the coupling. The coupling may or may not have some sort of locking device.

Straight Stream: A round hollow stream generated by a combination nozzle, characterized by a long reach and large water drops. It is essentially the narrowest of fog patterns that can be produced.

Strainer: A large metal device attached to the end of a suction hose that prevents debris from entering the hose or the pump. Some strainers have a float attached to keep them near the top of the water surface and off the bottom.

Strategic Goals: The overall plan developed and used to control an incident.

Stream Straighter: A metal tube, sometimes with vanes inside it, used with nozzles to reduce any turbulence in the stream, allowing the stream to flow straighter.

Stretch: Command to lay out (and connect) firehose and nozzle.

Strike Plate: The metal piece attached to a door jamb into which the latch or lock bolt slides.

Strike Team: Specified combinations of the same kind and type of resources, with communications, and a leader.

Structure Fire (or structural fire): A fire in a residential or commercial building. Urban fire departments are primarily geared toward structural firefighting. The term is often used to distinguish them from wildland fire or other outside fire.

Suction Hose: A large, semi-flexible and non collapsible hose used to move water from a static source such as a pond, pool or storage tank to a fire pump by means of suction. The whole process is often known as drafting. Many suction hoses are not approved for use with pressurized hydrants.

Superficial Burns: Burns affecting the outermost layer of skin, which typically causes redness of the skin, swelling, and pain.

Supply Line, Supply Hose, Large-Diameter Hose: Fire hose, usually larger than 3 ½ inches in diameter, used to move water from one source to another, such as from a hydrant to a fire engine or from one engine to another. Common sizes are 4 and 5 inches. Short pieces of this hose used to attach to a hydrant are often called Soft Suction.

Suppression: All the work of extinguishing or confining a fire beginning with its discovery.

Suppression Crew: Two or more firefighters stationed at a strategic location for initial action on fires. Duties are essentially the same as those of individual firefighters.

Surface Fire: Fire that burns loose debris on the surface, which include dead branches, leaves, and low vegetation.

Surface-to-Mass Ratio: Exposed exterior surface area of a material divided by its weight.

T-Boner: A car crash situation, where one car has hit the side of another (broadside), generally these crashes are quite severe and much fuel is spilled.

Tactics: The specific operations performed to satisfy the strategic goals for the incident.

Tactilely: Using the sense of touch to feel for any differences or abnormality.

Tag Accountability: System in which each firefighter is issued two identification tags, one of which is then collected by a safety officer and held while the firefighter is in a hazardous area.

To reclaim the tag, the firefighter must present the matching tag upon exit from the hazard. Any unclaimed tags after an event (such as a collapse or explosion) means the corresponding firefighters are missing. May be implemented as passport system in which first tag is presented to staging officer upon arrival (for tracking) and second tag is held by the safety officer

Tag Lines: Tag lines are the ropes held and controlled by firefighters on the ground or lower elevations in order to keep items being hoisted from banging against or getting caught on the structure as they are being hoisted.

Tailboard: Portion at rear of fire engine where firefighters could stand and ride (now considered overly dangerous), or step up to access hoses in the hose bed.

Tanker, Tender: Large, mobile tank of water or other firefighting agent; may be airborne, as used in wildland firefighting, or truck-mounted. Essential in rural areas lacking hydrants.

Task Force: Any combination or single resources assembled for a particular tactical need, with common communications and a leader. A Task Force may be pre-established and sent to an incident, or formed at an incident.

Taskforce Tip: A popular brand of adjustable fog stream Combination Nozzle, now a ubiquitous term for that type of nozzle.

Taxpayer: 1 to 2 story store, or place of business, auto repair, supermarket etc.

Technician Level: A high level of training that allows specific offensive activities to take place, to stop or handle a chemical incident.

Tempered Glass: Plate glass that has been heat treated to increase its strength.

Tender/Tanker: A land-based mobile water supply apparatus or vehicle.

Tensile Strength: Breaking strength of a rope when a load is applied along the direction of the length, generally measured in pound per square inch.

Tension: A force that pulls materials apart.

Terrorism: Acts of violence that are arbitrarily committed against lives or property and intended to create fear and anxiety.

Tether Line: A rope that is held by a team on shore during a water rescue to be used to haul the rescuer and the victim back to shore.

Thermal Burns: Burns caused by heat or hot objects

Thermal Imaging Camera: Ruggedized infrared equipment used by some firefighters to detect hidden people, animals, heat sources (i.e., fire) and structural compromise.

Thermal Layering: The stratification of gases produced by fire into layers based on their temperature.

Thermal Plume: A column of heat rising from a heat source/

Threshold Limit Value (TLV): An exposure value that is similar to the PEL. It is based on an eight-hour day.

Through-the Lock Method: A method of forcible entry in which the lock cylinder is removed and the lock mechanism is operated to open the door.

Torsion Load: A load parallel to the cross section of the supporting member that does not pass through the long axis. A torsion load tries to “twist” a structural element.

Total Flooding System: Used to protect an entire area, room, or building by discharging an extinguishing agent that completely fills or floods the area to smother or cool the fire or break the chain reaction.

Tote: A large tank usually 250 – 500 gallons, constructed to be transported to a facility and dropped for use.

Tower Ladder: An apparatus with a telescoping boom that has a platform on the end of the boom or ladder.

Toxicity: Poisonous level of a substance.

Toxins: Disease-causing materials that are extremely toxic.

Trash Line: A preconnected attack line that is typically 1 3/4 diameter and stored either on the front bumper of the apparatus or in an exterior (exposed) side well. Trash Lines are typically shorter length than Cross Lays and are intended for use against dumpster fires, etc. where a longer length of hose (and consequent rebedding after the suppression is complete) is not desired.

Tree Jump: A Smokejumper can sometimes parachute into the tree canopy if a clearing is not available or suitable.

Triage: A quick and systematic method of identifying which patients are in serious condition and which are not, so that the more serious may be treated first.

Triple Combination Engine Company: Apparatus that carries water, pumps water, hose and other equipment.

Truck Company: A group of firefighters assigned to an apparatus that carries ladders, forcible entry tools, possibly extrication tools and salvage covers, and who are otherwise equipped to

perform rescue, ventilation, overhaul and other specific functions at fires.

Truckie: A firefighter typically responsible for tactical aerial operations, ventilation, search, and overhaul.

Tunnel Vision: The focus of attention on a particular problem without proper regard for possible consequences or alternate approaches.

Turn Around: A widened part of a fire break used for turning vehicles around, also used as a safe area during entrapment.

Turnout Gear: The protective clothing worn by firefighters, made of a fire-resistant material such as Nomex or Aramid, and designed to shield against extreme heat. Sometimes called bunker gear. Includes helmet, jacket and boots, and some departments include fire-resistant pants.

Turntable: Rotating base of an aerial ladder that permits the ladder to be elevated and extended in any direction from a fixed location.

Two-In/Two-Out: Refers to the standard safety tactic of having one team of two firefighters enter a hazardous zone, while at least two others stand by outside in case the first two need rescue thus requiring a minimum of four firefighters on scene prior to starting interior attack. Also refers to the "buddy system" in which firefighters never enter or leave a burning structure alone.

Type I, II, III, IV, V Construction: Classification system for fire resistance of building construction types, including definitions for: "resistive" Type I, "limited combustibles" Type II, "ordinary" Type III, heavy timber Type IV and "wood frame construction" Type V (i.e. made entirely of wood).

Understory Burn: A controlled burn of fuels below the forest canopy, intended to remove fuels from on-coming or potential fires.

Unified Command: The structure used to manage an incident involving multiple response agencies or when multiple jurisdictions have responsibility for control of an incident.

Universal Precautions: The use of safety barriers (gloves, mask, and goggles) to limit an emergency responder's contact with contaminants, especially fluids of injured patients.

Upper Explosive Limit (UEL): The upper part of the flammable range. Above the UEL, fire or an explosion cannot occur because there is too much fuel and not enough oxygen.

Urban Interface: The Interface zone where man-made structures inter-mingle with wildlands, creating risk of structural involvement in a wildland fire incident.

Utility Rope: A rope not designed or maintained for life safety purposes.

Vacuum Pressure: The measurement of the pressure less than atmospheric pressure, which is usually read in inches of mercury (in. Hg) on a compound gauge.

Valve: Mechanical means for stopping and starting flow in a conduit; many types used in firefighting, including gate, foot, clapper (backflow preventers), sprinkler-heads, etc.

Vapor Density: Weight of gas in relation to air. Air is rated 1.

Vapor Dispersion: The intentional movement of vapors to another area, usually by the use of hose lines or master streams.

Vapor Pressure: The amount of force that is pushing vapors from a liquid. The higher the force the more vapors (gas) being put into the air.

Vapor Suppression: Ability to contain or control the production of fuel vapors.

Variable, Adjustable, or Selectable Gallonage Nozzle: Nozzle that allows the operator to select the flow, with usually two or three choices, and pattern.

Veins: The blood vessels within the body that carry blood lacking oxygen and nutrients back to the heart for replenishment.

Vehicle Fire: Type of fire involving motor vehicles themselves, their fuel or cargo; has peculiar issues of rescue, explosion sources, toxic smoke and runoff, and scene safety.

Velocity Pressure: The forward pressure of water as it leaves an opening.

Veneer: A covering or facing material, typically a wall covering such as brick or stone.

Venous Bleeding: Bleeding from a vein.

Ventilation: Important procedure in firefighting in which the hot smoke and gases are removed from inside a structure, either by natural convection or forced, and either through existing openings or new ones provided by firefighters at appropriate locations (e.g., on the roof). Proper ventilation can save lives and improper ventilation can cause backdraft or other hazards.

Ventilation Saw: A high-powered saw with metal-cutting teeth or disc for quickly making large openings in roofing materials.

Venturi Effect: Creating a partial vacuum using a constricted fluid flow, used in fire equipment for mixing chemicals into water streams, or for measuring flow velocity.

Vertical Ventilation: Ventilation technique making use of the principle of convection in which heated gases naturally rise.

Vesicants: A group of chemical agents that cause blistering and irritation of the skin. Commonly called blistering agents.

Voids: Enclosed portions of a building where fire can spread undetected. Also spaces within a collapsed area that are open and may be an area where someone could survive a building collapse,

Vollie: A volunteer firefighter.

Volunteer Fire Department: A group of individuals who are not paid, but volunteer to fight fires. Often professionally trained and equipped similar to paid firefighters.

Wall-Indicator Valve: Type of control valve for sprinkler systems which is mounted to an outside wall and indicates open" or "shut" in an indicator window on the valve body.

Water Curtain Nozzle: A nozzle designed to throw a fan of water to form a "curtain" in an attempt to reduce radiated heat from igniting a nearby exposure.

Water Drop: A forest fire fighting technique when an aircraft drops a supply of water onto an exposed fire from above.

Water Flow Alarm: An audible alarm indicating that one or more sprinkler heads have been activated.

Water Hammer: Large, damaging shock wave in a water supply system caused by shutting a valve quickly or by permitting a vehicle to drive across an unprotected fire hose.

Water Mist Fire Suppression: A sprinkler-like system that uses a very fine mist featuring much lower water flow than conventional sprinklers to suppress or extinguish the fire.

Water Table: The level of ground water under the surface.

Water Tender: Any ground vehicle capable of transporting quantities of water.

Water Thief (valve): Type of gated wye having one or more outlets smaller than the largest outlet, typically has a 2 ½ inch inlet and one 2 ½ inch and two 1 ½ inch outlets.

Waybill: A term that may be used in conjunction with consist, but is a description of what is on a specific railcar.

Weapon of Mass Destruction (WMD): A term that is used to describe explosive, chemical, biological, and radiological weapons used for terrorism and mass destruction.

Wedges: Wooden blocks for temporary shut-off of activated sprinkler heads or holding doors open during firefighting or rescue operations.

Wet Line: Temporary control line using water or other fire retardant liquid to prevent a low-intensity fire from spreading in surface fuels.

Wet Pipe Sprinkler System: Sprinkler system containing pressurized water rather than air, such that water will flow immediately upon release of a heat-sensitive head.

Wet Water: Water into which a surface tension reducing agent has been introduced. The resultant mixture, with its reduced surface tension, is more able to penetrate burning product more deeply and extinguish deep seated fire.

Wildfire: A fire occurring on wildland that is not meeting management objectives and thus requires a suppression response.

Wildfire or Wildland Fire: Fire in forests, grasslands, prairies, or other natural areas, not involving structure fires (although wildland fires may threaten structures or vice versa - see interface zone).

Wildland: An area in which development is essentially nonexistent, except for roads, railroads, power lines, and similar transportation facilities. Structures, if any, are widely scattered.

Windfall: Tree knocked over or broken off by wind, increases fuel loading and hampers building fireline. Also sometimes called blowdown.

Wire Glass: Glass with wire mesh embedded between two or more layers of glass to provide increased fire resistance.

Working End: The end of the rope that is utilized to secure and or tie off the rope.

Working Fire: Term used to describe a fire that is occurring in one or more spaces (or rooms) of the building.

Wye: Hose coupling for splitting one line into two or more outlets, often a larger line split into two smaller ones; often a gated wye having separate valves for each outlet. Not to be confused with Siamese, which is used to bring two smaller lines together into one.

Y-Connect: Same as a Wye.

Yield: What other drivers are supposed to do when they see or hear emergency vehicles approaching with lights and/or sirens activated.

Z-Adapter: Large hose appliance for connecting supplemental pumps into long supply lines, in the form of a "Z"; may be improvised from two gated wye valves and a double female between two of the gated outlets or from a Siamese that has one inlet connected to one outlet of a gated wye.

Zone: An area established and identified for specific reason, typically because a hazard exists

within the zone. The zones are usually referred to as hot, warm, and cold zones and provide an indication of the expected hazard in each zone.