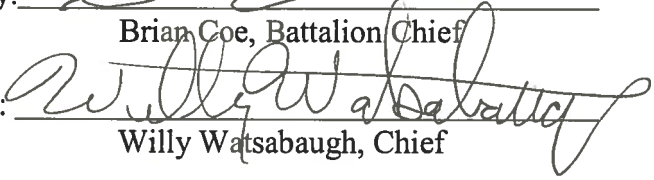




Jackson Hole Fire/EMS Operations Manual

Developed by: 
Brian Coe, Battalion Chief

Title: **Initial Structure Fire
Tactics**

Approved by: 
Willy Watsabaugh, Chief

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PURPOSE

To establish consistent tactics at structure fires.

SECTION I – DEFINITIONS

Tank Attack – use of Engine tank water with 2nd due engine providing water supply.

Door Control – The entry door utilized by firefighters should only be opened when firefighters are ready for entry. After firefighters enter the structure, a firefighter will be assigned to maintain the entry door at 2/3rds of the way closed.

Confinement – strategy to contain the problem to the smallest area possible.

Control – strategy to directly reduce or abate an emergency problem, i.e. direct attack on a fire.

SECTION II – WATER SUPPLY

The water flow requirement will be evaluated en route to the incident and re-evaluated once on scene. Water flow requirements will be matched with water supply options, including:

- Tank Attack
 - Consider tactic for single family dwelling < 25% involved
- Tagging a Hydrant
- Drafting from a Static Source
- Connect directly to a Tender
- Tender Shuttle
- Relay Pumping

If hydrants will be used outside of the Town of Jackson, it is the Incident Commander's responsibility to contact or designate Dispatch to contact the responsible party for the water utility.

Consider establishing a Water Supply Group Supervisor for operations that require a tender shuttle or relay pumping.

SECTION III – UPON ARRIVAL

The first in Fire/EMS personnel shall give a brief and concise radio report to include:

- Unit number and “on scene”.
- If applicable, Officer/Crew Lead will tie in with the emergency response agencies on scene (Police Department, Sheriff’s Office, etc.) in order to confirm who will be in Command.
- If no ICS is in place, assume command of the situation and name the incident.
 - Example: “Jackson, Engine 21”, “Firefighter Smith will be Command of the 123 West Street Incident”
- Communicate Command Frequency and a brief description on the situation found
 - See Appendix 1 – Jackson Hole Fire/EMS Structure Fire Size-up Card

After informing Dispatch that they are on scene every arriving apparatus will automatically switch operations traffic to Assigned Tactical frequency. Subsequent radio frequencies can and will be designated as the IC deems necessary. JH Fire/EMS repeater will be the default Command channel unless other channel is designated as such by the IC.

- Evaluate Hazards through the Risk Assessment Process and develop a Safe Action Plan, including Incident Objectives per the Risk Assessment and Decision Making Policy 16-1.

SECTION IV – TACTICAL CONSIDERATIONS

RECEO-VS will be utilized to determine tactics based upon Incident Objectives. RECEO-VS will assist an Incident Commander in prioritizing actions.

Rescue – Assist in Evacuation of all Residents. Immediacy of search and rescue will be based on rescue and survivability profiles.

If adequate resources and a high survivability profile, ensure the following:

- Assign crews to both interior fire suppression and search and rescue.
- The ventilation flow path should be controlled through door control. Interior doors should be utilized to isolate hazardous conditions, maintaining tenability.
- Interior fire suppression crews should keep ceiling temperatures below 500°F in order to reduce risk to occupants and firefighters. Smoke is fuel. Cool the smoke to reduce chances of flashover with short bursts of water in a straight stream.
- A Primary and Secondary Search will be conducted by separate interior search teams.

If inadequate resources and a high survivability profile, ensure the following:

- A Search and Rescue crew will be assigned. The search and rescue crew will utilize a hose line to keep ceiling temperatures below 500°F. Smoke is fuel. Cool the smoke to reduce chances of flashover with short bursts of water in a straight stream.
- The interior crew will initiate a Primary Search with fire confinement.

Exposure – Prevents a fire from spreading to the uninvolved building(s), uninvolved parts of the fire building or other exposure(s).

- Protection will be provided by cooling with an appropriately sized hose line. If adequate water supply, use a Blitzfire Master Stream Device.
- Attached exposures will be protected by creating Positive Pressure in the exposure with a gas-powered fan per the Positive Pressure Attack protocol 16-19.

Confinement – Confinement of the fire to a single compartment, single floor, single unit, etc. Tactics for confinement must be based upon limiting firefighter risk. Tactics available include:

- Direct Attack

- Transitional Attack
- Positive Pressure Attack
- Supplementing building fire suppression systems

All avenues of fire spread must be considered, i.e. shafts, openings, utility raceways, ducts, etc.

Extinguishment – Extinguishment should occur in a timely, efficient manner. Size and number of hose lines are important considerations. Factors that influence size and number are as follows:

- Water Flow Requirements
 - Fire streams must deliver an effective rate of flow (GPM) in order to overcome the amount of heat generated by the fire.
 - $GPM = \frac{\text{building length} \times \text{width}}{3} \times \% \text{ Involved}$
- Placement
 - Between the fire seat and firefighters/victims to facilitate Life Safety
 - Between the fire seat and exposures to confine
- Speed
- Mobility vs. Available Resources
- Water Supply
- Nozzle Pattern Selection:
 - Straight Stream produces a greater fire flow with penetrating power.
 - Fog Streams absorb the greatest amount of heat, but can disrupt the thermal layer with long bursts due to steam created.

General Precautions/Actions:

- A straight stream nozzle pattern should be utilized when limiting the disruption of the thermal layer, cooling smoke or when the seat of the fire is accessible.
- If no life safety risk, a fog pattern should be utilized within a compartment.
- Small droplets created by a fog stream can also be utilized in a transitional attack to flow into the under-pressure of a ventilation opening. The small droplets have the ability to be carried to the seat of the fire in the flow path.
- Select the size of hose line that will eventually be required from the beginning.
- Do not operate exterior streams into compartments where interior firefighters are operating.
- Consider the amount and weight of water that you put into a building during extinguishment. A building weakened by the fire may collapse under the weight of water added to floors within.

Overhaul – Overhaul efforts should be aggressive to make sure the fire is completely out. Interior crews and the Safety Officer will identify unsafe conditions, notifying all crews of precautions.

- Products of combustion, including carbon monoxide and many carcinogenic materials are present. Reduce Exposure Risk to Firefighters by wearing SCBA during overhaul activities.
- Overhaul operations must be properly coordinated with fire investigation efforts.

Ventilation – Ventilation should be: Coordinated with fire attack, Systematic to improve effectiveness and members shall be Disciplined in only ventilating when and where needed and ordered to do so.

Ventilation openings will initially be limited to the structure and/or compartment with fire involvement, through Door Control.

Once fire extinguishment has taking place, steam and products of combustion will be released out of horizontal ventilation openings, assisted by natural and Positive Pressure Ventilation.

Vertical ventilation is extremely dangerous, time consuming and in most cases ineffective. Vertical ventilation will be considered in the case of a backdraft.

Salvage – Salvage is a critical piece of property conservation, which shall be implemented as early into the incident as possible. Efforts will be made to safe guard personal belongings, furnishings and unaffected portions of a structure from the effects of heat, smoke, fire and weather. Salvage will include:

- The use of salvage covers/plastic
- Removing water from the structure
- Removing furniture and personal belongings to a safe location
- Debris and smoke removal
- Covering openings to keep weather out and to secure the building

All members are expected to perform in a manner that continually reduces loss during fire operations.

SECTION IV – RESOURCE MANAGEMENT

Resources will be allocated to accomplish tactics. The Duty Officer, or prior to the Duty Officer going en route, the Officer in the first en route unit will ensure that the appropriate resources have been notified and coordinate the response. Incident Command will be established upon arrival. The Incident Commander will be responsible for ordering additional resources.

- On scene resources will maintain crew integrity and send the crew leader to check in with the Incident Commander at the Incident Command Post.
- Arriving companies and units will check in with the Incident Commander prior to arrival on scene to receive direction on apparatus placement and Incident Command Post location.
- Mutual Aid Resources will need to be given the command frequency upon notification and check in with the Incident Commander prior to arrival on scene.
- Stage resources not immediately needed according to Staging Guidelines 14-4.
- Stand down resources that will not be needed.

When Jackson Hole Fire/EMS resources are requested for Mutual Aid response, all resources will follow the On Scene Radio Communication protocol. The Jackson Hole Fire/EMS Liaison, the Duty Officer or the Officer in the first en route unit, will contact the Incident Commander via the designated command frequency. Requests to increase Jackson Hole Fire/EMS response to a Mutual Aid call will be at the discretion of the Duty Officer. Stand down requests will be the responsibility of the Incident Commander.

SECTION V – BUILDINGS WITH FIRE SPRINKLER SYSTEMS

First engine to arrive will investigate the Fire Alarm System indicating water flow, water from the main drain or occupant interviews should be initiated. If no fire, immediately shut off sprinkler system at the main riser and start salvage operations. If there is evidence of a fire, determine the location of the fire through occupant interviews, annunciator panel (if available) or interior investigation.

Second engine to arrive at the scene of a building equipped with a sprinkler shall establish a water supply, position the apparatus at the Fire Department Connection (F.D.C.) and connect to the system.

- 3 Inch Supply Line should be used to supply the F.D.C.
- The Engineer will await orders from the Incident Commander or Operations to charge the system.
- Once ordered to charge lines, the Engineer will charge lines to 150 PSI discharge pressure.

Engines should be connected to hydrants (if available).

The following fire ground operations will occur:

- If safe to do so, a minimum of 2 firefighters should be sent to the main sprinkler riser.
- Hose lines must be ready, charged and in position for confinement and control before the sprinklers are shut off.
- Normally, 1 ¾" hand lines may be used for fire streams in sprinklered buildings. If the building has a high fuel load, high piled stock or large areas, 2 ½" hand lines should be considered.
- Personnel assigned to ventilation must be in position to initiate positive pressure ventilation or be in a position to initiate available on site automatic systems on command from the Incident Commander or Operations.
- When all of the above have been accomplished, the sprinkler system should be shut down to allow proper ventilation and overhaul of the fire.
- In the event that the hand lines are unable to affect control, the sprinkler system should be turned on again until fire streams can control the fire.
- Initiate prompt salvage and water removal operations to protect property from water damage.
- After fire operations are complete, the building owner must be notified that the fire suppression system is not operational and a service representative will be needed to put the system back in operation.

SECTION VI – LARGE VOLUME BUILDINGS



Special hazards are often associated with Large Volume Buildings:

- Multiple occupancy types within the building.
- Large amount of available air will increase fire behavior.
- Exposed steel exposed to heat, resulting in steel expansion, failure of structural members and collapse.
- Fire loading, stacked or rack storage, hazardous materials.
- Floor openings, i.e. shafts, elevated work platforms without barricades, etc.
- Increased distance that firefighters must travel away from egresses.
- Limited number of egresses/building openings.
- Poor radio transmission due to building structure.

Considerations:

- Additional resources should be ordered early, anticipating increased fire ground operations.
- Divisions created by floor or building side to assist with command and control of resources.
- Adequate water supply established.
- Consider the use of 2 ½" hand lines for fire control.
- Support standpipe systems with adequate discharge pressure to achieve appropriate nozzle pressure.
- Confine, if possible, through door control, placement of hand lines, and pressurizing fire sprinkler systems.
- Ventilation – One 18" gas powered fan can effectively ventilate approximately 3,000 sf. Use multiple gas powered fans strategically placed on the exterior and interior of the building to create positive pressure.
- If safe to do so, utilize human repeaters to relay radio transmissions.

Appendix 1 - Jackson Hole Fire/EMS Structure Fire Size-Up Card

 STRUCTURE FIRE SIZE-UP/INITIAL REPORT 	
Incident Name:	Incident Commander:
STRUCTURE	
Stories:	1 2 3 4+ W/ Basement
Occupancy:	Outbuilding Single Family Apartment/Condo Commercial Industrial
Construction:	Wood Frame Log Modular Concrete Steel
Size:	20 x ____ 30 x ____ 40 x ____ 50 x ____ 60 x ____
Exposures:	None 1 2 3 Multiple
FIRE/SMOKE	
Smoke:	None Light Moderate Heavy
Smoke Color:	White Grey Black Brown
Fire:	Non-Visible Visible Vented
% Involved	0% 25% 50% 75% Fully
WATER SUPPLY GPM = (LxW)/3	Tank Attack Hydrant or Draft Site Tender Tender Shuttle Relay Operation
HAZARDS	Access Light-Weight Construction Construction or Abandoned HazMat Other
RISK VS. BENEFIT	Rescue Profile Survivability Profile Savable Property
ACTIONS	Rescue Exposures/ Evacuation Ventilation Defensive Attack Transitional Attack Offensive Attack Salvage
COMMUNICATIONS	Command Channel Tactical Channel
ADDITIONAL RESOURCES	

IF Life Safety = THEN SAR with a Hose Line, PPA or VES
IF Fire is Self-venting = THEN Transitional Attack
IF Savable Property = THEN Limit Exposure during Offensive Attack
IF Fire Burning Structural Members > 5 minutes = THEN Defensive or Transitional Attack
IF No Savable Property = THEN Defensive Attack