



# Fire Protection Training

Procedures Handbook 4300

VEGETATION FIRES

**TOPIC:** Structure Protection During Wildland Fires

**TIME FRAME:** 3 Hours

**LEVEL OF INSTRUCTION:**

**BEHAVIORAL OBJECTIVE:**

*Condition:* A written quiz

*Behavior:* The student will list and describe key procedures involved in protecting structures during wildland fires.

*Standard:* With a minimum of 70% accuracy

**MATERIALS NEEDED:**

- Appropriate visual aids
- Audio visual equipment

**REFERENCES:**

- Structure Defense In Wildland Fires, by Jim Bishop and Dan Miller.
- Wildland Fire Structure Protection For Engine Companies, by Kim Pennington and Brian F. Weatherford.
- Stand and Fight or Cut and Run, CDF

**PREPARATION:**

Due to rapid population growth in California and the extensive construction of homes in wildland areas, thousands of homes are exposed to wildland fires. From small initial attack fires, which may only threaten out buildings or improvements, to large fires which require protection of hundreds of structures (many simultaneously), well trained, knowledgeable fire personnel often make the difference between structural survival and disaster.





# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<ul style="list-style-type: none"><li>b. Current</li> <li>c. Expected</li><li>6. Topography<ul style="list-style-type: none"><li>a. Slope</li><li>b. Chutes and chimneys</li><li>c. Canyon</li></ul></li><li>B. Physical Features and Improvements<ul style="list-style-type: none"><li>1. Roads<ul style="list-style-type: none"><li>a. Paved or dirt</li><li>b. Widths</li><li>c. Gates and locks</li><li>d. Traffic patterns</li><li>e. Traffic control</li></ul></li><li>2. Fuel Breaks<ul style="list-style-type: none"><li>a. Natural</li><li>b. Constructed</li><li>c. Location, type and size</li></ul></li><li>3. Structures<ul style="list-style-type: none"><li>a. Number</li><li>b. Type</li></ul></li></ul></li></ul>	<p>Does the inversion lift every afternoon? Sundowner winds, etc.</p>





# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<ul style="list-style-type: none"><li>a. Name</li><li>b. Channel</li><li>c. Frequency</li></ul> <p>2. Command net</p> <ul style="list-style-type: none"><li>a. Name</li><li>b. Channel</li><li>c. Frequency</li></ul> <p>3. How to get air support</p> <ul style="list-style-type: none"><li>a. Contact supervisor or go direct?</li><li>b. Name</li><li>c. Channel</li><li>d. Frequency</li></ul> <p>4. Number of units/divisions using the same channel/frequency; If more than one active division assigned to the same tactical net, expect overload.</p> <p>D. Organizational Structure</p> <ul style="list-style-type: none"><li>1. Your position</li><li>2. Your subordinate</li><li>3. Your supervisor</li><li>4. Adjoining forces/supervisors</li><li>5. How are air operations organized?</li></ul>	<p>Talk about how situations may change this</p>





# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<ol style="list-style-type: none"><li>1. Offensive - control fire where possible</li><li>2. Defensive - direct structure protection when necessary</li><li>3. Close co-ordination required<ol style="list-style-type: none"><li>a. Resources must know entire plan</li><li>b. Resources must know which mode they are in</li><li>c. Actions must complement each other</li></ol></li><li>4. If direct control effort fails, rapid change to defensive mode may be necessary</li></ol> <p>C. Defensive Mode;</p> <ol style="list-style-type: none"><li>1. No direct control effort on fire<ol style="list-style-type: none"><li>a. Lack of time</li><li>b. Lack of resources</li><li>c. Extreme fire behavior</li></ol></li></ol>	<p>Example: Firing operations must take into consideration what will be accomplished and what will be at risk as a result of this action</p> <p>All resources adjacent to the firing operation must know of the firing plan</p> <p>Last Choice: Protect structures as fire moves through</p>



# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<ul style="list-style-type: none"> <li>2. May be only option</li> <li>3. Tendency to become stuck in defensive mode               <ul style="list-style-type: none"> <li>a. Fire passes on to threaten other property or resources</li> <li>b. Sooner or later, the fire must be stopped</li> </ul> </li> </ul>	<p>Question: Why do forces tend to get stuck in defensive mode? Answer - Tunnel vision takes away flexibility. We miss opportunities to go on the offensive.</p>
<p><b>III. TRIAGE AND PROTECTION DECISIONS</b></p> <ul style="list-style-type: none"> <li>A. Losers - Features Which May Cause a Structure to be Written Off as "Unsaveable"           <ul style="list-style-type: none"> <li>1. Poor construction features               <ul style="list-style-type: none"> <li>a. Shake or shingle roof</li> <li>b. Wood siding</li> <li>c. Exposed decks or overhangs</li> <li>d. Large square footage of window area, especially if facing side of expected fire approach side</li> </ul> </li> </ul> </li> </ul>	<p>"Eliminate the hopeless, ignore the unnecessary, deal with the rest."</p> <p>Brands will fly into and lodge between the shakes or shingle</p>



# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<ul style="list-style-type: none"> <li>e. Many vents and openings in roof, attic, and sub floor, especially if unscreened.</li> </ul> <p>2. Poor location</p> <ul style="list-style-type: none"> <li>a. Mid-slope; do not expect that fire will back towards structure</li> <li>b. Top of slope - expect rapid fire run</li> <li>c. Top of chimney; intense fire funneled at structure</li> <li>d. Isolated from other structures; resources unable to protect more than one at a time</li> <li>e. Long distance from water source</li> <li>f. Hidden from view</li> </ul> <p>3. Poor access</p> <ul style="list-style-type: none"> <li>a. Narrow, long drive; slow travel, difficult in smoke</li> <li>b. Heavy fuels along access; heat generated precludes access or egress while burning</li> <li>c. Access crosses chimney</li> <li>d. Access has snags near it</li> </ul> <ul style="list-style-type: none"> <li>e. Unsafe escape route</li> </ul>	<p>Snags may fall across and block escape route</p> <p>Wash outs, dips and bumps that could cause high centering, etc.</p>



# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<p>4. Poor clearance</p> <ul style="list-style-type: none"> <li>a. Fuels right up to side of structure</li> <li>b. Brush within 30' of structure, (100' on steep slope)</li> <li>c. Trees overhanging or near structure; especially when fire has been spreading vertically or is crowning</li> <li>d. Vertical continuity of fuels is sufficient to expect fire spread into the crowns</li> <li>e. Woodpile, hay or other concentrated flammables near structure with no time to move or adequately cover them</li> </ul> <p>5. Structure has already caught fire and has substantial involvement</p> <p>B. Winners - Features Which May Allow a Structure to Survive</p> <ul style="list-style-type: none"> <li>1. Fire resistant construction <ul style="list-style-type: none"> <li>a. Composition shingles</li> <li>b. Tile or metal roof</li> <li>c. Stucco, brick, or metal siding</li> </ul> </li> </ul>	<p>4291 Considerations</p> <p>Write this off unless this is the only structure that needs to be saved. Don't waste time on it if other structures are only threatened.</p>





# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<ul style="list-style-type: none"> <li>d. No snags that would fall across access</li> <li>e. More than one route of ingress or egress</li> <li>f. Egress safe even while fire is burning</li> </ul> <p>4. Good clearance</p> <ul style="list-style-type: none"> <li>a. All flammable vegetation at least 30' away</li> <li>b. On slopes, brush and trees at least 100' away</li> <li>c. Woodpiles and other flammable materials away from structure</li> <li>d. No ladder fuels present. Break in continuity of ground, surface, and aerial fuels.</li> <li>e. Fire resistant vegetation</li> </ul>	<p>Escape route secure</p> <p>Complies with 4291 regulations</p> <p>Flammable material. May be moved or covered if there is time</p> <p>Vertical spread is restricted</p> <p>Ice plant, ivy</p>
<p>C. Designating "Winners" and "Losers"</p> <ul style="list-style-type: none"> <li>1. Flagging system           <ul style="list-style-type: none"> <li>a. Red flagging = "loser"</li> <li>b. White flagging = "Winner"</li> </ul> </li> </ul>	



# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<ul style="list-style-type: none"><li>c. No flagging = unknown</li><li>2. Placed on street near access route</li><li>3. Other systems may be employed</li> <li>4. A system may be needed to designate when a structure is being protected<ul style="list-style-type: none"><li>a. Long drives</li><li>b. Structure not visible from road</li></ul></li> <li>D. When To Protect "Losers"<ul style="list-style-type: none"><li>1. Never protect a structure if it is unsafe to do so. A structure with no escape route and/or no safety area should not be protected, even if extra resources are available.</li><li>2. When all threatened "winners" are protected, resources are still available, and there is time</li><li>3. Enough resources and time are available to safely overcome deficits such as shuttling water, clearing brush, etc.</li><li>4. Fire behavior and/or weather changes reduce control problems (intensity, rate of spread, flame lengths, etc.)</li><li>5. Direction of fire approach changes; backing fire rather than head on</li></ul></li></ul>	<p>All resources must know what the system is for designating "winners" and "losers"</p>



# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<p>6. Contents dictate attempt to protect.(I.E. water treatment plant containing 70,000 pounds of hazardous materials may need to have extra resources assigned.) Un-cover "winners" to do this if necessary. Need to make this one a "winner".</p> <p>E. When Not to Protect a "Winner"</p> <ol style="list-style-type: none"> <li>1. Does not need protection to survive and resources needed elsewhere</li> <li>2. Change in fire behavior or direction causes "winner" to become a "loser"</li> <li>3. Not enough resources to protect all the "Winners" threatened at one time</li> </ol> <p><b>IV. PREPARING THE STRUCTURE</b></p> <p>Use time wisely to prepare for the fires approach. Improve your chances of success</p> <p>A. Exterior</p> <ol style="list-style-type: none"> <li>1. Ladder the roof. Use owners if available, at corners, away from power drop and away from fires approach.</li> <li>2. Clean roof; remove leaves, twigs, pine needles etc.</li> <li>3. Cover swamp coolers and other vents <ol style="list-style-type: none"> <li>a. Wet cover using garden hose</li> <li>b. Cover roof, attic, and subfloor vents</li> <li>c. Pile dirt around subfloor vents</li> </ol> </li> </ol>	<p>Can be done by homeowner. Be sure to include the gutters</p>



# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<ol style="list-style-type: none"><li>4. Pre-treat with wildland foam if available and water supply allows</li><li>5. Cut limbs overhanging roof</li><li>6. Close windows and doors but leave them unlocked</li><li>7. Remove or cover flammable items and wet cover with garden hose</li><li>8. Remove vehicle or place in garage<ol style="list-style-type: none"><li>a. Facing out</li><li>b. Windows up</li><li>c. Key in ignition</li><li>d. Unlocked</li><li>e. Out of the way of fire apparatus</li></ol></li><li>9. Place flammable items inside structure, i.e., lawn chairs</li><li>10. Remove vegetation<ol style="list-style-type: none"><li>a. Utilize fire crews or dozers to increase clearance</li><li>b. Scatter brush away from upwind or downhill side of structure, DO NOT PILE</li></ol></li><li>11. Use dozer or fire crew to construct control lines around structures or groups of structures</li><li>12. Remove wooden fences near structure</li></ol>	<p>Ask students to name some common types; i.e., woodpiles, hay etc.</p>



# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<ul style="list-style-type: none"><li>13. Consider removing or modifying decks, overhangs, etc. Use chain saw to remove overhanging deck.</li><li>14. Shut gas off, know where electric shutoff is<ul style="list-style-type: none"><li>a. Electricity may be needed for lights and water pumps</li><li>b. Turn off electricity if structure becomes involved</li></ul></li><li>15. Have large wheeled vehicles or equipment moved to safe location<ul style="list-style-type: none"><li>a. Well away from structure. Don't lose them both.</li><li>b. If owner not available to move, consider towing to safer location</li></ul></li><li>16. Cover flammable roofs of small out buildings with layer of dirt</li><li>17. Pre-connect garden hoses, layout for best use</li><li>B. Interior<ul style="list-style-type: none"><li>1. Become familiar with floor plan, have occupant show you</li><li>2. Know access to attic, may want to ladder</li><li>3. Remove light curtains from windows, close insulated drapes</li><li>4. Put pets and valuables in car or least exposed room</li></ul></li><li>C. Evacuate Occupants</li></ul>	



# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<ol style="list-style-type: none"><li>1. Legal responsibility for evacuation lies with law enforcement. Physical evacuation may be carried out by fire suppression crews.</li><li>2. Advise occupant to leave<ol style="list-style-type: none"><li>a. Advise them they are complicating the protection of their structure</li><li>b. It is voluntary, you cannot force them to leave</li><li>c. Call for law enforcement if you believe they must leave</li><li>d. Advise them what to leave</li><li>e. Advise of established places to go such as evacuation centers at local schools, churches etc.</li><li>f. Advise about possible time of return</li><li>g. Get information from occupant such as layout of structure and any particulars</li><li>h. Get them out before egress is threatened by fire or they get in the way of fire control activities</li></ol></li><li>3. If they stay;<ol style="list-style-type: none"><li>a. Make sure they have separate transportation. Don't overcrowd cab of engine.</li><li>b. Advise them to stay in the structure when the fire hits</li></ol></li></ol>	<p>Use apparatus as a last resort for evacuation</p>



# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<p>c. Instruct them on how to patrol for fire inside and how to contact you</p> <p>d. Advise them of signal to evacuate</p> <p><b>V. APPARATUS PLACEMENT, HOSE DEPLOYMENT, AND PERSONNEL PLACEMENT</b></p> <p>A. The First Rule in Structure Protection is Stay Loose, Be Flexible, and Stay Mobile</p> <p>B. Back in. Always be ready to drive out in poor conditions.</p> <p>C. Mark long drive to show that protection is in place. Very important if structure cannot be seen from the road. Avoids confusion and wasted time during the heat of battle.</p> <ol style="list-style-type: none"><li>1. Multiple ribbons at end of drive on street</li><li>2. Ribbon across drive</li><li>3. Sign</li><li>4. Other pre-determined signal</li></ol> <p>D. Park Apparatus in a Cleared Area, i.e., Burn, Pavement, or Scrape Area</p>	<p>Ask students for types of signals that could be used; i.e. siren, air horn, etc.</p> <p>Note: do not block roadways, or access if possible. The roadway is where help will come from, keep it clear.</p>



# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<ul style="list-style-type: none"><li>E. Protect your Engine, Use Structure to Shield Apparatus</li><li>F. Keep Egress Route Clear<ul style="list-style-type: none"><li>1. Stage extra vehicles on street</li><li>2. Keep hose off drive</li></ul></li><li>G. Use 100-200' Pre-connected 1-1/2" or Larger lines. Minimize Hose Deployment. Stay Mobile!</li><li>H. Set Up Hose Lines Direct from Hydrant if Close, but Avoid Long Lays</li><li>I. Use Portable Pump in Pool or Pond. Save Tank Water, Stay Topped Off</li><li>J. Have a 20-30', 1-1/2" Protection Line Coiled On Top of Apparatus, Charged and Ready</li><li>K. Be Able to Reach All Exterior Portions of Structure with a Hoseline. Have Two Lines Deployed to Back Each Other Up in Case of Failure.</li><li>L. Keep Hose Bed covered, Compartments closed, Windows Rolled Up</li><li>M. If Using Multiple Engines, Have Each Deploy a Line in Case One Pump Fails There Will Be a Backup</li><li>N. Charge and Bleed Hose Lines as Fire Gets Near</li><li>O. Place Garden Hose in Tank, Top off Tank and Turn On When Pumping</li><li>P. Establish Escape Routes and Safety Zones. Make Sure Everyone Knows Them.</li><li>Q. Try to Keep Sight Contact with All Personnel. Communicate Face to Face if possible.</li><li>R. Establish "Cut and Run" Signal</li></ul>	



# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<p>S. Rest Personnel when Possible, be Ready to Act</p> <p><b>VI. FIGHTING THE FIRE</b></p> <p>A. If Possible, Burn Out from Control Lines</p> <ol style="list-style-type: none"><li>1. Reduces impact of main fire</li><li>2. Increases width of line</li><li>3. Reduces length of time committed<ol style="list-style-type: none"><li>a. Coordinate with supervisor and adjoining forces</li><li>b. Consider wind direction, slope, and fuel continuity</li><li>c. Control lines surround entire structure</li><li>d. Burning out should not threaten other operations</li><li>e. Time firing correctly, it looks bad if main fire never gets there</li></ol></li></ol> <p>B. Backfire Small Area Ahead of Fire Front</p> <ol style="list-style-type: none"><li>1. Used to reduce intensity of main fire front</li><li>2. Takes advantage of main fire draft</li><li>3. Timing is critical</li></ol> <p>C. Fighting the Wildfire</p> <ol style="list-style-type: none"><li>1. Conserve water</li><li>2. Try to fight fire in lighter fuels but don't over extend yourself</li><li>3. Knock down surface fire before it spreads to the crowns. Get it while its easy to work with.</li></ol>	



# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<p>4. Get behind objects to protect yourself from radiant heat, save water to fight fire. Cooling the environment is not effective.</p> <p>5. Watch for re-burns. Particularly in crowns, generated by a distant, downhill heat source.</p> <p>D. Fighting the Structure Fire</p> <ol style="list-style-type: none"><li>1. Turn electricity off if structure is involved. Treat it like you would any structure fire.</li><li>2. Direct application of water to heated surfaces is best. Water curtain is ineffective and wasteful.</li><li>3. Consider a 1-3/4" or 2-1/2" blitz attack to knock down roof fire. It is sometimes better to give it all you have, rather than conserve to the point of failure.</li><li>4. Avoid application of water on windows or glass doors, as it can break them</li><li>5. If it is too well involved, write it off, and move on to next structure</li><li>6. Save the last 100 gallons of water as a reserve</li><li>7. Request assistance if needed</li><li>8. Use garden hose for mop-up</li></ol>	<p>What is a re-burn? Fire burns through area a second time consuming fuels left after first burn through.</p>



# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<p><b>VII. IF YOU ARE OVERRUN</b></p> <p>A. Retreat to Safety Area Inside Structure or to the Protected Side of Structure. (Maintain Control of All Personnel.)</p> <p>B. Use Structure as a Refuge</p> <ol style="list-style-type: none"><li>1. Go into structure, take hose with you. (House will burn down slower than passing fire). Take handie talkie with you.</li><li>2. Declare an emergency, let your supervisor know of your situation</li><li>3. Request airdrops (don't count on them.)</li><li>4. Wear turn outs if available</li><li>5. Take SCBA with you</li><li>6. Keep forest fire shelter and drinking water with you</li><li>7. Come out when safe</li></ol> <p>C. Engine Cab as a Refuge</p> <ol style="list-style-type: none"><li>1. Keep pump running</li><li>2. Use looped 1-1/2" hose line to deploy a fog pattern over the engine. Do not take inside.</li><li>3. Take SCBA into cab with you</li><li>4. Wear turn outs if enough available</li><li>5. Use fire shelters or salvage covers to reflect radiant heat. Cover windows and get low.</li><li>6. Declare an emergency. Advise supervisor, keep handie-talkie available, engine may fail.</li></ol>	



# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<ol style="list-style-type: none"> <li>7. Request air drops</li> <li>8. Stay inside the cab until you are sure it is safe. (If there's not enough oxygen for the engine to run, there's not enough for you outside.)</li> <li>9. Exit and check engine</li> <li>10. Suppress fires, determine whether to stay or move on</li> </ol>	
<p><b>VIII. PULLING OUT</b></p> <p>A. Rapid Pull out required</p> <ol style="list-style-type: none"> <li>1. Consider need to cut hose lines</li> <li>2. Bleed pressure and fold hose loosely on top of engine, keep vehicle protection line charged</li> <li>3. If present, advise occupant that you're leaving</li> </ol> <p>B. Rapid Pullout Not Critical</p> <ol style="list-style-type: none"> <li>1. Do a complete check for extension. It looks bad if it burns down after you "saved" it.</li> </ol>	<p>Note: In life threatening situations, when occupants are present, encourage them to leave immediately (In their own vehicle if possible)</p>



# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<ul style="list-style-type: none"><li>a. Roof</li><li>b. Attic</li><li>c. Ventilation system</li><li>d. Interior</li><li>e. Sub floor</li></ul> <ul style="list-style-type: none"><li>2. Limit mop-up to structural threats<ul style="list-style-type: none"><li>a. Burning trees</li><li>b. Rolling material</li><li>c. Debris piles</li><li>d. Others</li></ul></li><li>3. Take every opportunity to top off tank</li><li>4. Remove marker at end of drive designating your presence</li></ul>	
<p><b>IX. GENERAL SAFETY</b></p> <ul style="list-style-type: none"><li>A. Always the primary concern!<ul style="list-style-type: none"><li>1. Always wear and use appropriate protective clothing and equipment</li><li>2. Protect your engine as well as the structure</li><li>3. When moving around on the fireline in smoky conditions, slow down, keep your headlights and red lights on</li><li>4. Always have escape routes</li><li>5. Be aware of intense radiant heat and convective heat moving uphill ahead of fire</li></ul></li></ul>	



# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

PRESENTATION	APPLICATION
<ol style="list-style-type: none"><li>6. Park your engine in a safe area, headed out the escape route. Don't block the roadway. Back in.</li> <li>7. Avoid excessive idling with lights, radios, etc., unless you can maintain adequate R.P.M.'s to keep battery charged.</li> <li>8. Never leave your engine unattended on the fire unless it is parked in a safe area.</li> <li>9. Stay in contact with all personnel</li></ol>	<p>If backing in is not practical, drive in, then take what ever time necessary to turn around so the apparatus is headed out.</p>



# Fire Protection Training

Procedures Handbook 4300

STRUCTURE PROTECTION  
DURING WILDLAND FIRES

---

## ***SUMMARY:***

Protecting structures during a Wildland Fire can be the most complex, stressful, and dangerous fire fighting operation. Decisions you make not only affect the lives and property of the public, but also your safety. Because of the increasing frequency that these situations occur, it is extremely important that we be well prepared to make the hard decisions that are required in these situations.

## ***EVALUATION:***

A written quiz.

## ***ASSIGNMENT:***

To be determined by instructor(s).