

# "YOU'VE GOT STRUCTURE PROTECTION"

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## INTRODUCTION:

Hearing the statement, "You've got structure protection", when you report to a wildland fire can stir a variety of thoughts. For some it will be a welcomed challenge, for others, it may be the start of a very long assignment. It comes down to your comfort level based on your knowledge and experience. .

Structure protection can be a situation that varies from sitting around protecting a community miles from the action, to a situation that is extremely dangerous and stressful. At times, the latter will involve split second decisions that could mean the difference between a successful operation and tragedy. These decisions must be made based on continually changing SITUATIONAL CONDITIONS that should paint a mental picture to enable you to formulate an accurate SITUATIONAL AWARENESS. The ability to quickly and accurately analyze the situation while **conducting community/structural triage** comes from your knowledge, experience level, and your ability to think clearly under stressful conditions.

Following the tragic turnover of USFS Engine 57 on the Esperanza Fire resulting in the loss of five firefighters, many have given considerable thought about what went wrong. It is unknown if the following recommendations would have made a difference, but perhaps this will help in the future. The question is how the current system could be improved to increase firefighter safety during Structure Protection Operations.

It is my belief that the following recommendations will improve the current system. Additionally, this information covers some random thoughts about situations that have resulted in serious injuries and deaths during Structure Protection Operations.

Based upon my experience, the overall system could be enhanced if five firefighting tactics were established and used when resources are assigned to **structure protection**. These five tactics should be presented at the annual wildland fire refresher training to certify that all personnel are aware of what they represent and insure that every one is on the same page. Additionally these tactics and terminology should be discussed during briefings on the fire ground.

## STRUCTURE PROTECTION TACTICS

The selection of what tactics an Engine Company, Crew, or Strike Team should utilize for a given set of fire ground factors should be the decision of the ranking officer at whatever level is appropriate at the time. Using a sports analogy, the following five tactics are your play list, "YOU ARE THE QUARTERBACK, CALL THE RIGHT PLAY." When making this selection the correct interpretation of the situational

conditions and implementing practical and realistic L.C.E.S. measures is of the utmost importance.

1. **"PREP. AND GO"**

This tactic should be used when there is time to prepare structures ahead of the fire front, but too dangerous for resources to stay in the area during the anticipated fire behavior. Prep. i.e. Would include, but not limited to, structure triage, updating citizens concerning evacuation status, reducing vegetation, foaming structures, setting up sprinkler systems, etc. Resources should then leave the area well ahead of the fire front. When to leave is time critical and should have an established and communicated trigger point.

2. **"PREP. AND STAY"**

This tactic should only be used if you have a safe zone for your personnel AND your apparatus, i.e. engine, crew bus, tenders, etc. Normally resources are told to stay mobile, in other words, don't lay a lot of hose. **In this case, you are there for the duration!!** Companies should take whatever steps are necessary to establish a solid water supply to save structures. The water supply needs to be adequate to extinguish anticipated fires in the area. This water supply could be accomplished by using several options i.e. water tenders, wells, swimming pools, water shuttle, siphon ejectors, hydrant system etc. It is very important not to assume that a community fire hydrant system is working properly, you should always flow test it. **THE DECISION TO STAY MUST BE BASED ON YOUR ABILITY TO MENTALLY PROCESS THE OVERALL CHANGING SITUATIONAL CONDITIONS.** To break and run at the last minute could be extremely dangerous. This tactic should include the possibility of taking shelter in the structure as the heat wave and fire front pass through the area.

Any citizens/residents still in the area should be advised of any updated evacuation notices for the area. If it is too late to safely evacuate the area, firefighters should instruct them on where and how to shelter-in-place.

3. **"HIT AND RUN"**

Companies must keep moving with the fire to knock down numerous spot fires to save as many structures as possible. This tactic should be utilized when the risk to personnel is minimal, i.e. typical housing sub-division with no threat of being over run by the fire front. This tactic will provide the best use of limited resources.

4. **"STAGE AND GO"**

This should be used to save structures in an area that is classified too dangerous to place resources in ahead of the fire front. After the passing of the fire front an assessment by the Division Sup; Strike Team Leader, or Structure Protection Group, etc. should be made based on the changing situational conditions. Resources should then be given assignments and moved from the staging area into the community. All resources must be heads up for additional changing conditions, i.e. secondary burns. Practical and realistic L.C.E.S. measures must be continually monitored.

## 5. "PATROL STATUS"

This should be used to extinguish spot fires or late developing fires near the structures. This tactic should be implemented after the main fire front has passed but the threat to structures remains high. Traditionally it's during this period that many structures have been lost when resources move out of the area prematurely. All resources must be heads up for changing situational conditions, i.e. secondary burns, changing weather conditions. All resources should monitor the radio for possible re-assignment into another threatened area.

### **Advantages of using the defined terminology and tactics:**

- Stimulates officers to make a more accurate assessment of the *SITUATIONAL CONDITIONS* and communicate the chosen tactic.
- Better communications to establish tactics to be used.
- Short, concise phrases to make sure all resources in a geographic location are on the same page.
- Provides additional choices, over and above the existing choices of *offensive, defensive or combination*.
- Better communications between adjoining resources.
- Provides additional options, other than turning down an assignment.
- The system provides for a very fluid transition from one tactic to another, as conditions or geographic locations change while assessing community/structural triage..

***Note: During Structural Protection operations, resources will be confronted with citizens/residents that have not followed evacuation orders given by the Incident Commander. These Evacuations orders should be relayed to any residents in the designated evacuation area.***

### ***RANDOM THOUGHTS CONCERNING LESSONS LEARNED DURING STRUCTURE PROTECTION OPERATIONS***

- *Situational Conditions + The ability to Correctly Analyze the Conditions = Situational Awareness*
- *Strike Team Leaders, scout area before you commit resources.*
- *Establish safe zones for personnel and equipment*
- *Time and timing are critical factors on the fire ground.*
- *Before safe zones can be determined, an accurate estimate of the fire behavior must be established by using current and predicted factors.*

- *When moving resources, Strike Team Leaders must confirm that a clear travel/escape route is available within the fire area, i.e. civilian vehicles, news media, fire and smoke conditions may block your travel.*
- *Always evaluate the risk to gain factor. If you can't save it safely, pick another tactic.*
- *In particularly dangerous locations, i.e. mid-slope or narrow roads move one vehicle at a time, don't let your resources bunch up. These types of areas should be known to all resources, as a "no man's land", until scouted out.*
- *Always plan for the worst, hope for the best.*
- *Consider using the Campbell Prediction System in your analysis or at least have a system.*
- *TRIGGER POINTS must allow time for all of your resources to evacuate the area.*
- *Keep the radio clear, have a reason for why you're on the radio.*
- *Use face to face communication whenever possible, it is more effective.*
- *Consider using your cell phone. Obtain cell phone numbers at your briefing. Operational issues that pertain to all resources should be transmitted over the radio to insure that everyone stays updated and informed.*
- *When traveling as a strike team, consider forming your companies in numerical order, this will help when things get busy.*
- *Consider designating an ASSISTANT STRIKE TEAM LEADER.*
- *Always let your personnel know what mode or tactic you expect them to operate in.*
- *When protecting structures, don't go after the fire, it will come to you--- always conserve your water, don't put green between you and the structure.*
- *Wetting down the brush ahead of an active fire front is NOT effective.*
- *Flying embers will burn holes in your hose lines; this will run your tank dry.*
- *Strike Team Leaders; check the apparatus locations of companies protecting structures. A bad spot could put the apparatus and the crew in danger. A bad spot may also be an indication of tunnel vision or the crew's experience level.*

- *Don't request electrical power shut down in a community, if the area has wells; you just lost a possible water supply. Additionally, houses with the lights left on will go dark and be hard to locate*
- *Always know where you are and be able to tell someone how to get there.*
- *If you ever need to "cut and run", your planning missed something.*
- *If things go bad, how are you going to evacuate the injured?*
- *Don't depend on air support for personnel safety.*
- *Cover your hose beds to keep flying embers from burning holes in the hose. Gear bags stored on the top of engine companies are also very prone to ignition by flying embers.*
- *Keep windows rolled up in all vehicles.*
- *Strike Team Leaders must demonstrate LEADERSHIP, lead by example, i.e. conduct strong practical briefings, ensuring that all personnel have proper PPE's on when you leave base or staging areas, recon and communicate clear instructions before committing resources.*
- *Formulate plans that include PRACTICAL AND REALISTIC L.C.E.S. measures.*
- *Company Officer's, include worst case scenario planning in your briefings. This should include pre-planning for last ditch survival, i.e. shelter in a structure, jump in the pool, etc.*
- *The Marine Corp uses P.A.C.E. in their mission planning, PRIMARY-ALTERNATE-CONTINGENCY-EMERGENCY PLANS.*
- ***IT'S ALL ABOUT ATTITUDE!** at all levels. Every year as a Structure Protection Specialist and a Safety Officer, wildland firefighters have stated, "I'm not comfortable with structure protection". The question is, what are they willing to do about it. Any low occurrence, high risk operation can be mitigated by additional practical training.*

**Note: "WE ALL NEED TO TRAIN AS IF OUR LIFE DEPENDS ON IT, BECAUSE IT DOES"**



## Structure Protection Tactics

### Prep and Go

Establish **trigger points** to leave;  
Triage the community or house;  
Prepare as many homes as possible for fire;  
Leave the area.

### Prep and Stay

Establish **safety zones**;  
Triage the community or house;  
Prepare as many homes as possible for fire;  
Remain at the structure; do not leave the area once fire arrives.  
Will water supply outlast fire?

### Hit and Run

Too many homes, too few resources.  
Take action necessary on structure prior to moving onto the next structure—Don't get bogged down—KEEP MOVING

### Stage and Go

Stage units in a safe area until fire passes.  
Once fire passes, engage structure protection in the area.  
Used in areas unsafe for firefighters to be in when fire approaches

### Patrol

Used in an area after fire has passed. Units must be aware of rekindles.

Structures can be placed in 1 of 3 scenarios:  
1. Can survive on own; 2. Need FD assistance; 3. Will not survive.

**Analyze your situational conditions to produce situational awareness!**

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