



**Cal OES**  
GOVERNOR'S OFFICE  
OF EMERGENCY SERVICES

*FIRE AND RESCUE DIVISION*



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# California Fire Service and Rescue Emergency Mutual Aid System

## **STRIKE TEAM (ENGINE) / TASK FORCE LEADER MANUAL**

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MANUAL OF PROCEDURES AND DUTIES  
STRIKE TEAM (ENGINE) / TASK FORCE LEADER

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## INTRODUCTION

On January 1, 2009, the Governor's Office of Emergency Services (OES) merged with the Office of Homeland Security (OHS) under provisions set forth under Assembly Bill 38 and became the California Emergency Management Agency (Cal EMA). In 2013, the agency was renamed the California Governor's Office of Emergency Services (Cal OES); herein throughout the remainder of this document, all current references to the Governor's Office of Emergency Services (OES) and the California Emergency Management Agency (Cal EMA) will now reflect the name change, Cal OES, while historical references will remain as OES and Cal EMA, respectively.

This document is provided for Cal OES (OES) and local government (LG) Strike Team Leaders-Engine (STEN) / Task Force Leaders (TFLD) and Company Officers. It will provide guidance in the preparation and operation of your Cal OES (OES)/LG Strike Team at any incident. The information presented is based on past experience, recognized standards, and Cal OES/LG policies and procedures.

The Strike Team/Task Force has become an effective tool in the emergency management of incidents of all types. The use of Strike Teams and/or Task Forces enables the responsible jurisdiction to make incident assignments on a team basis. Fire apparatus and crews, with a team leader, arrive as a team, work as a team, and are released or reassigned as a team.

## ENGINE STRIKE TEAM TYPES AND MINIMUM STANDARDS

Requests for apparatus should always be by ICS Type and Kind:

KIND	Strike Team Types	Number/ Type	MINIMUM EQUIPMENT STANDARDS							MINIMUM STAFFING		
			Pump Cap.	Water Cap.	2½" Hose	1½" Hose	1" Hose	Ladder	Heavy Stream	S/T Leader	Per Single Res.	Total Pers.
ENGINE	A	5-Type 1	1000 GPM	400 Gal	1200 Ft	400 Ft	200 Ft	20 Ft Ext.	500 GPM	1	4	21
	B	5-Type 2	500 GPM	400 Gal	1000 Ft	500 Ft	300 Ft	20 Ft Ext.	N/A	1	3	16
	C	5-Type 3	120 GPM	300 Gal	N/A	1000 Ft	800 Ft	N/A	N/A	1	3	16
	D	5-Type 4	50 GPM	200 Gal	N/A	300 Ft	800 Ft	N/A	N/A	1	3	16

In the Incident Command System (ICS) terminology a "Strike Team" is defined as:

**"Specified combinations of the same kind and type of resources, with common communications and a leader."**

In some instances, due to the nature of an incident, Task Forces may be formed. A Task Force is defined as:

**"A group of resources with common communications and a leader, that may be pre-established and sent to an incident, or formed at an incident."**

It is important to understand the difference between Strike Teams and Task Forces. An engine Strike Team is a specified number (5) and type of engines (Type I, II, III, or IV), assembled for a tactical assignment on an emergency. A Task Force could be any combination of engines, mixed with other types of suppression and rescue resources. An example of a Task Force is two engines, a water tender, and a hand crew with a leader.

If you are a Strike Team Leader or Company Officer, many thoughts will flash through your mind when your department is assigned to a major emergency.

- Is a Strike Team Leader Trainee (STEN-T) available?
- What personal items and clothing do you need to pack?
- Is all personal protective equipment (PPE) needed? Wildland and Structural?
- Will your strike team respond together or will you assemble at the emergency?
- Do you know where the incident is located? How will you get there?
- Do you need an Incident Order Number and Request Number?
- Can you communicate with your supervisor? Radio? Cell Phone?
- Who do you contact if you have a problem enroute to the emergency?
- On arrival, who do you report to?
- Will you need to complete special forms?
- Will a Cal OES Agency Representative (AREP) be at the incident?

The list of questions you might ask yourself may be endless. The purpose of this document is to present the information you need to answer these questions. **Our goal is to prepare you to respond to any incident and perform the tasks you have been trained for.**

## RESPONSE PREPARATION

Many fire departments in California have developed STRIKE TEAM KITS, which may be carried in a staff vehicle or on an engine. You may also wish to develop a checklist to assist you before leaving on an assignment that will require you to travel long distances and be of an extended duration.

***REMEMBER: It may be some time before you eat and get a place to sleep. You can get wet, dirty, and cold. Be prepared to take care of your personal needs. Being properly prepared strengthens personal confidence and security.***

## NEEDS

- Credit Cards - Fuel, Personal, ATM, telephone calling card.
- Money - to be used for food, phone calls, other needs while traveling to and from the incident.
- Change of clothes, underwear, socks, and proper footwear.
- Personal items: toothpaste, toothbrush, shaving gear, toilet paper, bandanna, towel, replacement eye glasses/contact lens, etc.
- Medicine or medication, if required.
- Canteen, non-perishable food (freeze dried or MRE), canned juices, etc.
- Sleeping bag, blankets, cot, or sleeping pad.
- Safety equipment: Structural and wildland turnouts, helmet, gloves, fire shelter, goggles, boots (high top, all leather, lace-up, sewn lug sole), etc.
- Breathing apparatus (with spare bottles).
- First Aid Kit, eye-wash, aspirin, snake bite capability.
- Flash light, extra batteries.
- Portable (field programmable) VHF High Band radio, extra batteries, charger.
- Cellular telephone, pager, etc., extra batteries, chargers.
- Maps: AAA, Thomas Guide, topographic, etc.
- Belt weather kit and/or other Kestrel type device.
- Compass, GPS device, clipboard, tape, pencils, flagging, etc.
- Other items you may require for a long assignment.

**NOTE: Don't forget the apparatus and its needs. If not carried, bring:**

- Extra engine oil, transmission fluid.
- Engine drive belts.

It is important to know the proper procedures to follow in the event problems develop while enroute to, or returning from, a Strike Team/Task Force response. Do you have the authority to purchase fuel, food, motel accommodations, or to repair apparatus and equipment? If you do not have the authority, it is important to know whom to contact for assistance. This document will address Cal OES policies and procedures that apply to fire departments assigned a Cal OES-owned (OES) fire engine. In any case, if you have an emergency, contact the closest fire agency for temporary assistance. It is extremely important that you notify your Operational Area Fire and Rescue Coordinator (dispatch center) if you encounter problems on the road. They can make necessary arrangements, provide direction, and contact your department for you.

You should have these phone numbers with you at all times:

1. Operational Area Fire and Rescue Coordinator Dispatch Center
2. Regional Fire and Rescue Coordinator Dispatch Center
3. Cal OES Fire and Rescue Division, Sacramento 24-Hour Number  
(916) 845-8911 (ask for the Fire Duty Officer)

## **DUTIES AND RESPONSIBILITIES**

The Strike Team/Task Force Leader selected to command the strike team **SHOULD BE AN EXPERIENCED CHIEF OFFICER**, knowledgeable in both structural and wildland fire control. Personnel responding to a Forest Agency or Master Mutual Aid (MMA) request for overhead positions shall meet the training requirements established for the ICS position to be filled. (Reference: 2006 NWCG 310-1 and CICC) Fire departments, with the assistance of their Operational Area Fire and Rescue Coordinator, will take part in the required Strike Team/Task Force Leader training classes. Following successful completion of classes, individuals may be placed on a list as a Strike Team/Task Force Leader Trainee, if authorized by the Chief of their department and approved by the Operational Area CICC Peer Review Committee. Strike Team/Task Force Leader "lists" are normally maintained by the Operational Area Fire and Rescue Coordinator's dispatch center.

**The Strike Team (Engine) / Task Force Leader is Responsible for:**

1. Overall safety and condition of the strike team, personnel and equipment.
2. Movement of the strike team traveling to and returning from the emergency.

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3. Operational deployment of the strike team at the incident, as directed by the Incident Commander, or other member of the Incident Management Team.
4. Familiarity with strike team operations, including assembling, responding, and directing the actions of the assigned units, keeping the team accounted for at all times.
5. Assembling the units at the incident if the strike team is dispatched on an Initial Attack basis.
6. Contacting the Cal OES AREP for assistance with problems encountered on the incident, including mechanical, operational, or logistical issues.
7. Ensuring your vehicle has adequate communications capability. (FIREScope Field Operations Guide, ICS 420-1, Appendix A)
8. Submitting all Apparatus Inventory forms (Cal OES/OES engine only) and Emergency Activity Record (F-42) forms for each engine company to Cal OES Fire & Rescue Division, 3650 Schriever Ave., Mather, CA, 95655.
9. The safety of all personnel and apparatus during a deployment. This includes emergency operations, while in staging areas, mobilization center, and when returning to home jurisdictions.
10. Maintaining positive public relations for Cal OES, the incident, the agencies represented on your Strike Team/Task Force, and the California Fire Service.

Simply stated, the Strike Team Engine (STEN) / Task Force Leader (TFLD) must have the capability and experience for managing, coordinating, and directing the actions of fire crews/companies at a wide variety of emergency situations. This includes maintaining all required records, and ensuring the logistical needs of all personnel are met during the entire activation of the strike team/task force.

A Strike Team/Task Force should include a Strike Team/Task Force Leader Trainee as a reimbursable member of the unit. The Trainee will be covered under the Strike Team/Task Force order-request number and will only be identified on a separate Cal OES F-42 if from a different agency than the Strike Team/Task Force Leader. The Strike Team/Task Force Leader Trainee should check in with the Incident Training Specialist. The Trainee shall travel with the Strike Team/Task Force Leader in the same vehicle. Personnel filling Strike Team/Task Force Leader Trainee positions shall be certified at the Strike Team/Task Force Leader Trainee level per Wildland Fire Qualification; 2006 NWCG 310-1 Sub System Guide or the California Incident Command Certification System (CICCS).

## OPERATIONAL PROCEDURES

The Strike Team/Task Force Leader will receive instructions at the time of dispatch by the Operational Area Fire and Rescue Coordinator Dispatch Center. Information should consist of the following:

### I. INCIDENT ASSIGNMENT

- A. **Incident Name and Type** - if known; e.g., "Pinecrest Incident, interface fire with structural threat".
- B. **Incident Order Number** - You will receive an Incident Order Number (example: CA-TGU-002791) if the Department of Forestry and Fire Prevention (CAL FIRE), the United States Forest Service (USFS), the Bureau of Land Management (BLM), the National Park Service (NPS), or the Bureau of Indian Affairs (BIA) is the requesting agency. If local government is the requesting agency, you may receive this number after arrival at the incident. Enter this number on the Emergency Activity Record (Cal OES Form F-42, Box 3).
- C. **Request Number** - Associated with the Incident Order Number, you must receive a Request Number (example: TGU-E202). Enter on the Emergency Activity Record (Cal OES Form F-42, Box 4).
- D. **Reporting Location and Travel Route** - Obtain detailed information, if needed; e.g., "Pinecrest Staging Area, Pasadena Convention Center, 2738 New York Avenue, Pasadena, California".

Westbound I-210 Freeway to Altadena Off Ramp, north to New York Avenue. Follow signs when approaching staging area. Report to Captain John Doe, Pasadena Fire Department. Check-In on arrival. Radio contact, "Pinecrest Staging, on 154.280 - White One."

- E. **Obtain Strike Team Number**. The number is your identification and will be used to track and direct all movements of your strike team, both emergency and non-emergency. (The Strike Team Number consist of a 3-letter designator; a 4-digit number, and a letter, e.g., (EMA) OES 2801A or XAL 2004A)

**DO NOT CHANGE OR ALTER THIS NUMBER**; it is yours from the beginning to the end of this period of mobilization.

- F. **Communication Frequency** - You will receive the radio frequency for your contact point on arrival at the incident; e.g., Staging Area 154.280 (White One) or Division A Supervisor 154.295 (White Three) for a line assignment.

**II. INITIAL ATTACK, IMMEDIATE, OR PLANNED NEED**

The Requesting Agency should determine whether a Code-3 response is necessary. For INITIAL ATTACK or IMMEDIATE NEED, a Code-3 response is generally warranted for response within an Operational Area or to an adjacent Operational Area to PROTECT LIFE OR PROPERTY imminently threatened by the event.

If the assignment is a PLANNED NEED, and will not begin until the next operational period, or a designated time subsequent to the next period, it will be determined how much time is needed for the resources to prepare and respond, and whether they will assemble at an established rendezvous point or at the incident. This will in turn determine the departure time of the resources. If time permits, it is desirable for the resources to assemble and be briefed by the Strike Team/Task Force Leader prior to arriving at the incident.

<b><u>MODE</u></b>	<b><u>TIME FRAME</u></b>	<b><u>LOCATION OF INCIDENT</u></b>
<p><b><u>INITIAL ATTACK</u></b>                      Usually a Code-3 response for protection of life and property</p>	<p>Instantly or as quickly as possible</p>	<ul style="list-style-type: none"> <li>• Closest available mutual aid resources within operational area or adjacent operational area.</li> <li>• Resources will normally rendezvous <i>at the incident.</i></li> </ul>
<p><b><u>IMMEDIATE NEED</u></b>                      May or may not be a Code-3 response</p>	<p>Responding within 30 minutes</p>	<ul style="list-style-type: none"> <li>• Mutual aid resources respond to incident within 30 minutes from time of dispatch within operational area, adjacent or other operational area.</li> <li>• May or may not rendezvous prior to departure.</li> </ul>
<p><b><u>PLANNED NEED</u></b>                      Normally not a Code-3 response</p>	<p>Planned incident arrival time determines departure time. Should be able to be en-route to rendezvous within 1 hour of request.</p>	<ul style="list-style-type: none"> <li>• Mutual aid resources respond within the operational area, adjacent operational area, region, or state- as needed for the next operational period or as determined by requesting agency.</li> <li>• Usually will rendezvous before departure and travel together</li> </ul>

### III. AT THE RENDEZVOUS POINT

- A. Introduce yourself, the Trainee, the Company Officers, and team members.
- B. Inform the team what you know about the incident, and the strike team's assignment. Determine your response route; consider time of day and fueling stops. Select one Engine Company Officer to "bring up the rear" while traveling, and to lead the Strike Team/Task Force in your absence (identified as "Alternate" STEN). Identify a common radio frequency for enroute strike team communications.
- C. Conduct an assessment of the strike team to determine crew size and capability, apparatus capability, special equipment carried, communication capability, etc.
- D. Identification – Cal OES (OES) Strike Team Leaders should have a Cal OES Strike Team Leader Kit. If you do not have one, contact the Cal OES Assistant Chief assigned to the incident. The kit includes:
  1. Operations Bulletin #8 (Cal OES Emergency Activity Record)
  2. Form F-42 (Cal OES Emergency Activity Record)
  3. Apparatus Inventory forms (Cal OES Form F-157), including sample
  4. Form ICS-214, Unit Log
  5. Strike Team Leader Control Record
  6. Bumper Stickers
  7. Strike Team (Engine) / Task Force Leader Manual

This packet of information is intended to make the required record keeping easier; however, it should not hamper your primary mission if you do not receive the "kit".

At time of response, you may be requested to respond directly to a Division/Group Supervisor for immediate assignment. The Strike Team/Task Force Leader should check-in and obtain a briefing from the Division/Group Supervisor as soon as possible after arrival.

### IV. ACTIVE ASSIGNMENT

- A. Reporting Location - Obtain detailed information.
- B. Incident Information - you should receive the following at time of dispatch:
  1. Incident Type and Check-In location

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2. Name of incident, if known
3. Incident Order and Request Number
4. Your Strike Team/Task Force designator
5. Communications frequency (travel and tactical)
6. Name of person to whom you are to report and radio call number

The following is a position statement for a Strike Team/Task Force Leader. It will serve you as an operational checklist at an incident. This information is found in the FIREScope "Field Operations Guide" (FOG), Operations Section, Chapter 8 (FOG, ICS-420-1).

The Strike Team/Task Force Leader reports to a Division/Group Supervisor and is responsible for performing tactical assignments assigned to the Strike Team or Task Force. The Leader reports work progress, status of resources, maintains work records on assigned personnel, and relays other important information to their supervisor.

- Review Common Responsibilities, found in Chapter 1 of the FIREScope "Field Operations Guide."
- Review assignments with subordinates, and assign tasks.
- Monitor work progress and make changes when necessary.
- Coordinate activities with adjacent strike teams, task forces and single resources.
- Travel to and from active assignment area with assigned resources.
- Retain control of assigned resources while in available or out-of-service status.
- Submit situation and resource status information to Division/Group Supervisor.
- Maintain Unit/Activity Log (ICS Form 214).
- Refer to the FIREScope "Field Operations Guide" (FOG, ICS-420-1).
- Refer to the National Wildfire Coordinating Group (NWCG) "Incident Response Pocket Guide" (NFES 1077).

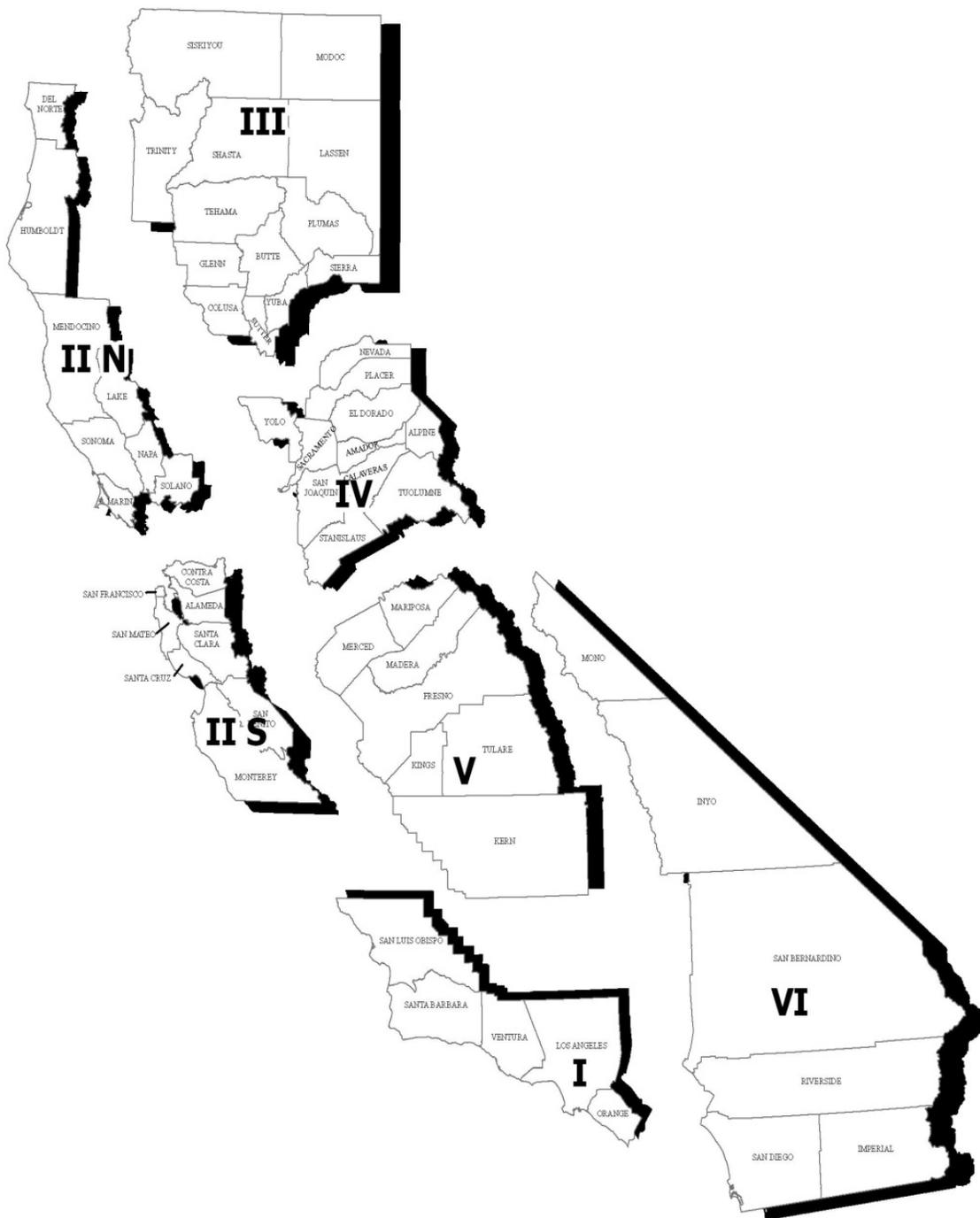
## PROCEDURES AND POLICIES – Cal OES (OES) ENGINES

The following procedures and policies apply to Cal OES (OES) Engines. If you have questions or doubts regarding any procedures, contact the Cal OES Assistant Chief at the scene, or contact the Cal OES Fire and Rescue Division's 24-Hour number: (916) 845-8911, and ask for the Fire Duty Officer.

1. The Voyager credit card carried on the Cal OES (OES) engine is to be used **ONLY** for the assigned unit, and is restricted to certain purchases. (See Cal OES Operations Bulletin #11 - *Credit Card Use*, in the Cal OES [OES] Engine Log Book.)
  - Gasoline or diesel fuel
  - Fan belts (emergency purchase only)
  - Tire repairs (emergency repair)
2. Repair of Cal OES (OES) fire engines, in excess of \$50.00, must have Cal OES Fire and Rescue Division approval.
3. Cal OES (OES) Type I or Type II Engines are commonly requested for structural protection in a wildland or urban interface fire environment. They are not designed for operations on narrow, rough, unsafe roads, dozer or brush trails. Use good judgment when deploying Cal OES (OES) fire apparatus during emergency operations. Plan ahead.
4. Water tanks on Cal OES (OES) fire engines **are not** to be emptied to facilitate a faster response.
5. Only qualified members of the assigned department shall drive and operate Cal OES (OES) fire engines.
6. Cal OES (OES) Engine Log Books are to be carried on all Cal OES (OES) Engines. Record all losses, repairs, and maintenance. When completing the Cal OES Fire Report, attach all fuel delivery receipts and forward to Cal OES Headquarters at Mather, monthly.
7. **WARNING** – Cal OES (OES) engines are heavy fire apparatus. Avoid excessive speed, especially on grades. Frequent brake application causes brake fade and the brake system will be ineffective.
8. The purchase of tires requires approval of the Cal OES Fire and Rescue Division. It is acceptable to borrow (if possible) a tire from a local fire agency during an emergency response. The Cal OES Fire and Rescue Division will replace the local fire service agency's stock as soon as possible. During a major fire emergency, tire service is normally available at or near the incident base (contact the Ground Support Unit).

# Cal OES FIRE and RESCUE MUTUAL AID REGIONS

**Cal OES 24-HOUR -- (916) 845-8911**



## ENGINE STRIKE TEAM / TASK FORCE RESPONSIBILITIES

### DO NOT:

- **DO NOT** bring non-fire related equipment on engines (e.g. mattresses, chairs, etc.). If it doesn't fit in the compartments, do not take it. You are responding to an emergency.
- **DO NOT** have major repairs done on Cal OES (OES) engines, without Cal OES authorization. You may have to pay the bill yourself. This includes tires and batteries. (Refer to "Procedures and Policies- Cal OES (OES) Engines" in this manual)

### DO:

- **DO** be prepared to be unsupported for 24-hours.
- **DO** provide staffing of three or four firefighters, safely belted in the cab of the apparatus. All personnel must have full turnouts for structure fires, and all required wildland personal protective equipment (PPE). All members will wear and use PPE when appropriate.
- **DO** take a change of clothing, toothbrush, soap, towel, sleeping bag, and air mattress. Rations should be carried on the engine for emergencies. Take cash, credit cards and get receipts for all purchases. Do take an ice chest for crew, to be stored in a compartment. A small portable radio/TV is permissible. Bring reading material, camera, etc. (Caution: Lost or damaged personal items may not be replaced or repaired by the Incident.)
- **DO** notify your Cal OES Operational Area and/or Region Dispatch Center on a daily basis.
- **DO** treat all firefighters, officers, and the public with respect.
- **DO** contact your fire department by phone once every 24-hours. The person in charge of the engine should report to headquarters on the following information:
  1. Condition of personnel
  2. Condition of equipment
  3. Location -- who or where you are assigned
  4. Length of stay or assignment, if known
  5. Relay messages to be passed on to families or staff
- **DO** call Cal OES Fire and Rescue Division Headquarters by phone 24-Hours at (916) 845-8911 (ask for Fire Duty Officer), if a mechanical problem occurs on the way to or from an assignment. They will advise you how to handle the problem.

## **CODE OF CONDUCT FOR STRIKE TEAMS**

- 1. No alcohol or illegal drugs will be transported or consumed at any time.**
- 2. Normal radio procedures will be utilized. Radio traffic between units will be kept to a minimum.**
- 3. This is not a vacation.**
- 4. Know whom you are working for.**
- 5. Limit the procurement of equipment to what is needed.**
- 6. All equipment issued at the incident must be returned before you are demobilized. Theft of equipment is a crime.**
- 7. Crews will maintain a state of readiness when not assigned.**
- 8. While resources are unassigned, personnel shall conduct themselves in a professional manner.**
- 9. Maintain and wear all safety clothing.**
- 10. Wear appropriate clothing that reflects your agency or as determined by the incident.**
- 11. Your actions are a reflection of your organization.**
- 12. Do not enter any residence without the owner's permission except to fight a fire in that structure. Respect the property of the residents you are protecting. See Appendix B, page 52.**
- 13. If assigned to commercial lodging for off shift rest, know and comply with the proper procedures and policies. (See Appendix C)**

## **TACTICS AND SAFETY - (This is meant to be a guide only.)**

REMEMBER -- A WISE PERSON IS ONE WHO HAS LEARNED FROM HIS OWN EXPERIENCES AND THE EXPERIENCE OF OTHERS.

### **SUPPLEMENTARY INFORMATION NO. 1**

#### **Fire Engine Capabilities and Tactics**

- I. **THE CAPABILITY OF AN ENGINE ON A WILDLAND FIRE IS DEPENDENT ON SEVERAL THINGS; INCLUDING THE ENGINE TYPE, PERSONNEL, AND TOOL AND EQUIPMENT COMPLEMENT.**
  - A. Structural or wildland and its hose complement:
    1. Single or double jacket hose
    2. Amount of 1" and 1½"
    3. Reel or hard lines
  - B. Water tank capacity:
    4. 200 gal + (Type IV or Patrol)
    5. 300 gal + (Type III)
    6. 400 gal + (Type II or Type I)
  - C. Open or closed cab:
    7. An open cab is very dangerous on wildland fires. For example, there has never been a recorded instance where a firefighter was burned to death in a closed vehicle, but numerous firefighters have been burned, out in the open, or on the back of an engine.
    8. Hose bed -- is it covered and with what? (NOTE: Don't load hose bed with out of county bags, sleeping bags, etc, which could ignite from burning ambers.)
  - D. Conventional or 4-wheel drive:
    9. Depending on terrain, a 4-wheel drive may be required.
    10. Remember: 4-wheel drive engines may require longer travel time on the highway.
    11. They are not always as readily available as structural engines.

- E. Number of Personnel: You cannot expect a 3-person crew to complete a progressive hoselay in the same time as a 4- or 5-person crew.
- F. Mechanical condition:
  - 1. At times, strike teams are assigned relief engines (not first-line) limiting their capability.
  - 2. Engines may not be equipped with adequate air cleaner protection (flying embers in paper elements -- motor quits).
  - 3. Tires may not be adequate for off-road use.
- G. Pump type:
  - 1. Main pump (usually only for stationary pumping).
  - 2. PTO (may be capable of pump and roll).
  - 3. Auxiliary pump (is best for pump and roll).
- H. Equipment complement (number and type of hand tools)
- I. Training and experience of crew members will determine the company's capability.

**II. THE TYPE OF ASSIGNMENT FOR AN ENGINE OR STRIKE TEAM WILL HELP YOU DETERMINE THE BEST-SUITED ENGINE FOR THE JOB.**

- E. Mobile attack on grass fires:
  - 1. Ability to pump and roll
  - 2. Shorter wheel-base and high road clearance engines are generally better
- F. Stationary pumping into hose lines.
  - 1. Length of hoselay may indicate the need for a larger water tank if water supply is being shuttled.
  - 2. Hoselay elevations may require a pump that will pump over 450 PSI pressure.
- G. For primarily off-road pumping, it is generally best to use Type III or IV engines.
- H. Structure protection:

1. Water tank capacity is important -- the larger, the better. For example, a strike team of Cal OES (OES) Type I or II engines can operate longer without replenishing their water because they have larger water tanks (750 - 850 gallons)
2. Depending on the terrain and the area you're working, smaller and shorter wheel-base engines may be better due to narrow winding roads and short, steep driveways.

### III. FIRE ENGINE AND STRIKE TEAM TACTICS ON WILDLAND FIRES.

E. Strike teams may be dispatched to staging areas or directly to the fire:

1. On arrival at the staging area, the Strike Team Leader must check in with Staging Area Manager and/or the Check-In Recorder.
  - a. A staged strike team is considered an available resource and must be able to respond within **three minutes**. Keep the Strike Team together in the staging area.
  - b. A staged strike team is under the direct supervision of the Operations Section Chief.
2. A strike team responding directly to a fire assignment will report to a Division/Group Supervisor. The Strike Team Leader must report the Strike Teams arrival (by radio or in-person) to obtain their assignment.

F. Deployment of equipment:

1. When in a staging area, keep crews together. Park - ready to respond.
2. When assigned to fireline, engine deployment can be critical.
  - a. Always have an escape route.
    - (1) Back engines in
    - (2) Use buildings or natural barriers for protection.
    - (3) Don't park at top of draws, chimneys, or natural funnels.
  - b. Try to keep engines working as a team. Don't spread them out too far.
  - c. The Strike Team Leader should survey the area to check for special conditions or hazards.
  - d. Unless absolutely necessary, do not have engines lay long hoselays. This cuts mobility and could burn up a lot of hose.

G. Use of water:

1. Water conservation -- with hydrant supply.
  - a. Consider the effect of heavy water consumption on other lines taking water from the same main.
  - b. What about the adjacent water mains? Are other fire companies working out of your sight? What about residents or firefighters taking water from your supply using garden hoses?
  - c. Do not wet down vegetation ahead of fire; extinguish only that which is absolutely necessary. Do not waste water on shingle roofs -- they dry very fast. Wet down (Preferably with class A foam or Thermo Gel), immediately before the fire arrives, or as burnout begins.
  - d. Let everything burn that is not vital to fire control or not an exposure hazard to objects of value. You may not be able to protect everything. Prioritize your targets.
2. Do not lay line just because there is a lot of fire. Have a valid reason. If lines have to be left at a fast moving fire, take the fittings with your apparatus, if possible.
3. Water use with tank supply. Conserve limited supplies. Use hand tools in conjunction with a hose line when working on brush.
4. Water tender use. Where water supply is a problem, Strike Team Leaders, Division Supervisor, or Operations Section Chief should order sufficient water tenders to keep strike teams adequately supplied.
  - a. Depending on travel time and distance, one or two water tenders can usually keep a strike team supplied.
  - b. Water conservation is a must when working with water tenders.

H. Protecting structures (ahead of fire):

1. Close windows, garage doors, etc.
2. Leave lights on
3. Put combustible garden furniture in garage (or in the house). Place furniture so that it will not expose a structure.
4. Move wood piles away from structures.
5. Move combustible fences away from structures.

6. Chop down highly combustible shrubbery and place it where it will not expose a structure, e.g., juniper, cypress hedges, small highly combustible trees, etc.
  7. Ask residents to move lace-type curtains from windows on exposed sides. Heavy drapes may be advantageous.
  8. Remove all combustibles from vicinity of LPG tanks.
  9. Shut off gas.
  10. Shut off electricity where practical. CAUTION: Private or home water systems may rely on residential electricity to operate well pumps, etc.
  11. Have civilians place stepladders, etc., on front porch or where readily visible.
  12. A 24-foot extension fire department ladder can be split into two straight ladders.
  13. Hook up available homeowner garden hose and test for water pressure. Use to replenish the tank supply, not fight fire.
  14. Remove leaves/needles from roofs and gutters.
- I. Protecting structures (when fire hits):
1. A structure seldom will burst into flames; it usually will start as a small fire in one or more spots. Some possible ignition sources are:
    - a. Blowing sparks trapped under shingle or shake roofs.
    - b. Heat or flames trapped beneath the eaves of a roof.
    - c. Burning debris blown through ground vents or attic vents.
    - d. Windows broken from heat and drafts.
    - e. Doors or windows left open.
    - f. Exposures from burning (remove if possible and desirable) objects.
      - (1) Shrubby, trees
      - (2) Combustible garden furniture
      - (3) Fences
      - (4) Wood piles
      - (5) Automobiles

(6) Adjacent structures

(7) Combustible rubbish

2. Considering construction, topographical factors, equipment, available personnel, and fire travel, survey ahead of the fire and give priority to protection.
3. Some common errors:
  - a. Laying hose lines too far ahead of the fire or too much hose and tiring out firefighters. Meet the fire where a good stand can be made.
  - b. Excess fire equipment, when less equipment will handle the job.
  - c. Parking equipment where it is unnecessarily exposed -- park across road, behind house, etc.
  - d. Laying unnecessary lines.

J. Civilian motor vehicles:

1. Put in garage -- preferably heading out.
2. Close all windows.
3. Park where they are least exposed, but not in a driveway where fire apparatus could operate or hose lines could be laid. Do not park on a narrow street -- front lawn would be better, if possible.

K. Protecting structures:

1. Wet down shingle roofs and adjoining property only when ample water is available, fire is approaching, and you are sure depleting the water supply will not jeopardize adjoining areas.
2. If fire is too hot, retreat into structure temporarily, then extinguish burning exterior.
3. Do not face an intense fire without a specific purpose. Retreat to protection (behind fence, ledge, house) and go to work at a more favorable moment. Let the fire run past, then attack residual fires.

L. Keep apparatus mobile. At a fast moving fire, it is called "bump-and-run":

1. Move from structure to structure with the fire.
2. Leave a firefighter at difficult situations.

3. If the civilian owner is present, point out possible places of dangerous flare-ups before you leave.
4. Park behind a structure (from the anticipated flame front), heading out of driveway.
5. Park on roadway adjacent to structures. Choose between heading with direction of fire travel or heading towards a possible escape route.
6. When protecting structures and also making a stand along a road, make every effort to detail firefighters to prevent fires from spotting across.
7. "Fire out" (burn flammable vegetation) around structures where possible. Be aware of how your "firing out" may affect other exposures or firefighters.

M. Information for Civilians:

1. Normally, evacuation is a law enforcement function, leaving the fire department free to fight fire.
2. Encourage civilians, especially elderly or excitable individuals, to leave fire area on foot or in vehicles, if practical. CAUTION: Civilian fatalities have occurred when private vehicles have been overrun by fire while exiting the area on mid-slope roads.
3. Inform civilians of the danger of running up hills, canyons, or draws ahead of moving fire.
4. Explain that, in almost all instances, a person is safe in a well-built structure when a fire sweeps past, even though it may eventually be destroyed.
5. If a civilian is determined to stay with his home, explain the value of removing any exposures (furniture, shrubs, wood pile, etc.), how to protect himself, and how to handle a garden hose.
6. Try to impress parents/adults with the importance of keeping their family together. This reasoning sometimes assists the evacuation effort.

## **STRUCTURE TRIAGE**

From NWCG Publication "Wildland Fire Suppression Tactics Reference Guide" NFES 1256

Structure triage is the sorting and prioritization of structures requiring protection from wildland fire. Triage can be required of anyone at any time on a wildland/urban fire incident.

The goal of triage is to do the most good with what you have and to not waste resources or time. It requires categorization of threatened structures as:

- Needing little or no attention for now
- Needing protection, but savable
- Indefensible

There are no absolute answers but five factors to help make a triage decision are:

- Firefighting safety
- The structure itself
- Surrounding fuels
- Fire behavior
- Available resources

Considering the following:

### A. Firefighting Safety

1. Ingress/egress routes
  - a. One way/two way
  - b. Slope and steepness of road
  - c. Bridges
2. Power lines
3. Smoke/visibility
4. Hazardous materials
5. LPG and overhead fuel storage

### B. Structure construction features, condition, and exposure

1. Roof
  - Combustible – wood shakes, tar paper, etc.
  - Non-combustible – tile, metal, or fiberglass, etc.
  - Pitch-debris on roof or in gutters
2. Siding
  - Combustible – wood
  - Non-combustibles – metal, brick, etc.
3. Heat traps
  - Open gable
  - Vents without screens or non fire resistant screens
  - Overhanging decks
4. Windows
5. Size of building

6. Shape of building
7. Position on slope

C. Surrounding fuels

1. Size and arrangement
2. Age
3. Proximity to structure
4. Loading
5. Types
  - Resistant or flammable
  - Landscape/ornamental
  - Grass, brush, timber (palmetto, etc.)
  - Wood piles
6. Landscaping – railroad ties, wood fences
7. Defensible space, access
8. Yard accumulation
9. Flame or heat duration
10. Explosive – liquefied petroleum gas (LPG) tanks, diesel, or gas storage tanks.

D. Fire behavior

1. Rate of spread and direction
2. Topographic influence
3. Weather influence
4. Flame length
5. Spotting
6. Natural or other barriers

E. Available resources

1. Kind and type of equipment available
  - On site resources (water, equipment, ladders)
  - Location
  - When available
2. Capabilities and limitations
  - Mobility
  - Water/foam
  - Retardant

## **Structural Situations that Shout “Watch Out”**

By Don Johnson, Rural Metro Corp. Phoenix, Arizona

1. Structures are wooden construction with shake shingle roofs
2. Access is poor, i.e. roads are twisting with sharp curves, narrow single lane roads, dead end roads, inadequate turning radius at road ends, etc.
3. You have inadequate water supplies to attack the fire.
4. Natural fuels are within 30 feet of the structures.
5. There are strong winds and erratic fire behavior is occurring.
6. Structures are located in a “chimney” or canyon situation.
7. There are panic-stricken public in the vicinity (known or suspected).
8. Structures have open crawl spaces and contain added fuels under the structure.
9. Bridges in the vicinity are narrow and/or have light or unknown load limits.
10. There are propane tanks or elevated fuel tanks present (most rural situations have).
11. There are septic tanks and leach lines (most rural situations have).
12. There are garages with closed, locked doors.
13. The structure is burning with puffing vs. steady smoke emissions.
14. Windows of the structure are black or smoked over.
15. Windows of the structure are bulging.

## **SUPPLEMENTARY INFORMATION NO. 2**

### **Wildland Hoselays**

#### **1. TWO BASIC TYPES**

##### **A. Simple:**

- 1) Laid point-to-point dry, then charged when completed.
- 2) Typically used as a supply line.
- 3) No protection for crew when being laid.

##### **B. Progressive:**

- 1) Each length is charged as it is added.
- 2) Normally put in on fire perimeter; fire is suppressed as the hoselay progresses.
- 3) When needed, 1" lateral lines with tees are added every 200' to be used for subsequent mop-up.

#### **2. HOSE USED**

- A. 1" and 1½" single jacket hose with light alloy couplings in 100' lengths.
- B. Rolled single or double doughnut with brass and hose clamps, or on special hose packs.

#### **3. RULES OF THUMB**

- A. Under average conditions assign at least three engines with at least nine personnel per hose lay.
- B. Select the pumping engine based on tank capacity and pressure capability (head pressure can be critical in wildland hose lays; relay pumping might be required).
- C. Allow sufficient engines or water tenders and sufficient travel time to provide a constant supply of water:
  - 1) 2 min./mile for paved road
  - 2) 4 min./mile for unpaved road
  - 3) 15 min. for filling tank

- D. Allow four to five minutes per 100' of hose for a progressive hoselay. This includes suppression time. Remember that steep terrain, thick fuel, and personnel fatigue can reduce this production rate.
- E. A current study of production rates indicates that well trained crews may lay as much as 50' per minute in the initial attack stages of a fire.
- F. Based on their minimum required hose complements, ICS Type 3 Engines are normally most suitable for this type hoselay.

#### **4. HOSE LAY SAFETY**

- A. Avoid using booster lines and other 1" lines on extended hose lays in heavy fuels. Friction loss is too great. There will be an inadequate volume of water to protect the nozzle operator in case of a dangerous intensifying of the fire. Combination nozzles providing a particulate fog pattern will add an extra measure of safety.
- B. Always provide communications between the nozzle operator and the pumping engine.
- C. Always have an anchor point for your hoselay. Avoid the danger and embarrassment of an outflanked line and burned hose!

## FRICITION LOSS CHARTS

### FRICITION LOSS - GPM TABLES

1" HOSE @ 50 PSI NP						100 PSI NP
TIP	1/8	3/16	¼	5/16	3/8	3/8 COMB
FL 100'	1	2	5	12	25	40
GPM	3	7	12	19	28	42

1½" HOSE @ 50 PSI NP						100 PSI NP
TIP	1/4	5/16	3/8	1/2	5/8	5/8 COMB
FL 100'	1	2	3	10	25	44
GPM	12	19	28	50	81	116

2½" HOSE @ 50 PSI NP							
TIP	5/8	¾	7/8	1	1-1/8	1¼	1½
FL 100'	1	4	7	10	17	25	50
GPM	80	117	160	209	265	325	472

### FRICITION LOSS FACTORS 100' 2½" HOSE

TIP	FACTOR	50 PSI	100 PSI
7/8"	1/7 OF NP =	7	14
1"	1/5 OF NP =	10	20
1-1/8"	1/3 OF NP =	17	33
1-1/4"	1/2 OF NP =	25	50
1-1/2"	1 OF NP =	50	100

### GPM METHOD 100' 2½" HOSE

GPM	100	150	200	250	300	350	400	450	500
F.L.	3	6	10	15	21	28	36	45	55

**NP + FL + A ± H = EP**

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NP	-	TIP	-	50 PSI		COMB - 100 PSI
FL	-	2½"		2 LINES	,	1/4
				3 LINES	,	1/9
				4 LINES	,	1/16
		¾"		HARDLINE		4 X FL 1" HOSE
A	-	<u>5 PSI</u>		<u>25 PSI</u>		<u>80 PSI</u>
		TEES		MONITOR		LADDER PIPE
		WYES		STANDPIPE APPLICATOR		
H	±	100' ELEV. - 43 PSI		50' ELEV. - 22 PSI		5 PSI/FLOOR

<b>LATERALS</b>	NP FOR 1½" HOSE ONLY FL FOR EA. LAT. + 1½" LINE
<b>LEADER PIPES</b>	NP, FL FOR ONE 1½" ONLY GPM FOR BOTH NOZZLES
<b>STAND PIPES</b>	NP, FL FOR TOP FLOOR ONLY GPM FOR EACH NOZZLE
<b>IDENTICAL L (SEP. DISCH.)</b>	NP, FL FOR ONE LINE ONLY

<b>HYDRANT CAPACITY</b>	10% DROP - CAN ADD 3 LINES 15% DROP - CAN ADD 2 LINES 25% DROP - CAN ADD 1 LINE
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<b>RELAY PUMPING</b>	FL @ RATED ENG. GPM X L.L. IP (INTAKE PRESS 20) <u>± H</u> EP
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## Burnout vs. Backfire – Is there a difference?

*Over the years, the definition of the wildland fire terms Burnout and Backfire have become confused. To some agencies they are the same action, and the term is used interchangeably. To other fire organizations, the meanings have been reversed or changed altogether. **Burnout and Backfire do not mean the same thing.***

**Burnout:** (also known as burning out or firing out) involves setting fire inside of a fire line, including scratch lines or a wet line, to consume fuel between the edge of the control line and the fire to strengthen the fireline (create a blackline). Burning out removes the danger of fuel near the line burning at a later date when no one is around or when conditions are such that flare-ups near the line would spot across the line. Typically 'burning out' around a residential dwelling to protect it from an advancing fire, fits this description. In this case, the goal is to protect the structure by removing the available fuel between the structure and the fire's edge. Burning out should reduce the threat by adding to the existing clearance already located around the structure. If no pre-fire clearance has been accomplished by the homeowner, then this will create at least a minimum clearance.

Firing out an existing road to strengthen its conversion into a wider fire line falls into this same realm. These are defensive actions. In both of these examples, firefighters are literally defending the structure or the road by burning out, and reducing the threat posed by unburned vegetation. Sometimes the wind, slope and fuel arrangements are with you and sometimes they aren't. But if the effort is not made, the chances of the fire advancing beyond those limits are great.

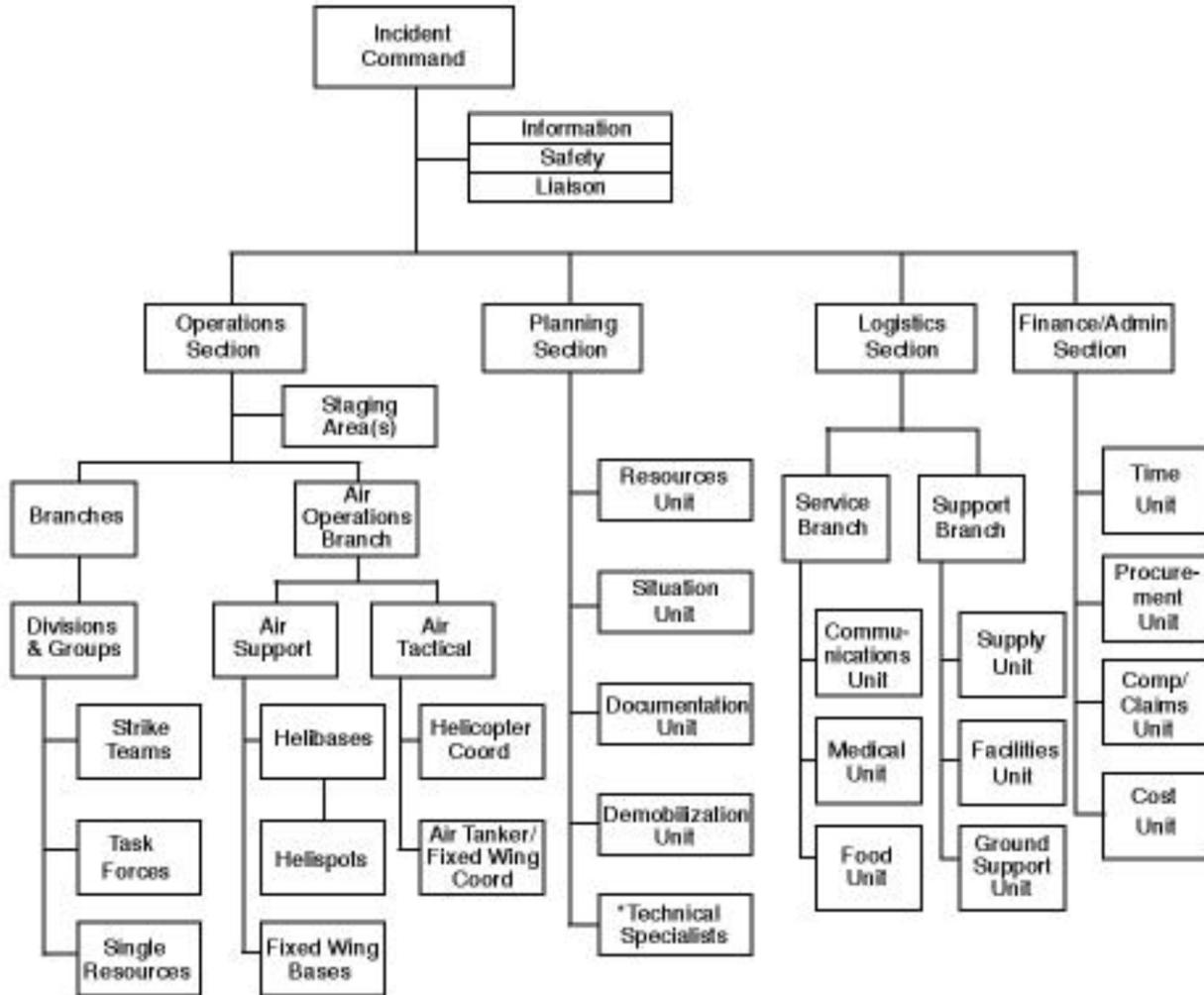
Most often, these types of operations may be performed by individual engine companies under the direction of a company officer, or by several engines under the direction of a Strike Team – Task Force Leader.

**Backfire:** A fire set along the inner edge of a control line, again to consume the fuel in the path of an advancing fire, or to change the direction or force of the main fire's spread. Backfires are normally conducted on a much larger scale than burning or firing out. Backfires are usually associated with pronounced topographic features, e.g. ridge tops, or are executed from wide roadways or pre-constructed firelines.

A backfire is a much more complex effort. It is considered an offensive tactic. It may involve numerous Strike Teams and may be executed by Firing Specialists. Coordination and timing is key to a safe backfire. A maneuver of this scale is well thought out in advance and approved by the Operations Section Chief. Typically, backfires are supported by fixed-wing airtankers or Type I helicopters that 'pre-treat' the unburned side of the line with retardant.

# STANDARD INCIDENT COMMAND SYSTEM

## INCIDENT COMMAND SYSTEM ORGANIZATION CHART



\* May be assigned wherever their services are required.

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## UNIT LOG ICS 214

<b>UNIT/ACTIVITY LOG</b> <b>ICS-214 5-94</b>		1. INCIDENT NAME <b>Hondo Fire</b>		2. DATE PREPARED <b>10/16/00</b>	3. TIME PREPARED <b>0700</b>
4. ORGANIZATION POSITION <b>STL</b>		5. UNIT LEADER (NAME AND POSITION) <b>Borman, T.</b>		6. OPERATIONAL PERIOD <b>0600 - 1800 hrs.</b>	
7. PERSONNEL ROSTER ASSIGNED					
Name		ICS Position		Home Base	
<b>Borman, T.</b>		<b>S/T Leader</b>		<b>Napa F.D.</b>	
<b>Bradley, G.</b>		<b>S/T Leader Trainee.</b>		<b>Napa F.D.</b>	
<b>Engine 3372</b>				<b>Napa F.D.</b>	
<b>Engine 18</b>				<b>Napa F.D.</b>	
<b>Engine 11</b>				<b>American Canyon F.P.D.</b>	
<b>Engine 16</b>				<b>Napa F.D.</b>	
<b>Engine 17</b>				<b>St. Helena F.D.</b>	
8. ACTIVITY LOG (CONTINUE ON REVERSE)					
TIME	MAJOR EVENTS				
<b>1500</b>	<b>Received briefing from Div. "C" Supervisor</b>				
<b>1530</b>	<b>Briefed Strike Team on assignment</b>				
<b>1610</b>	<b>Deployed Engines to structure protection assignment on</b>				
	<b>Thompson Avenue and Elm Lane</b>				
<b>1830</b>	<b>Meet with Div. "C" supervisor to plan/discuss</b>				
	<b>firing out operations.</b>				
<b>1915</b>	<b>Briefed Strike Team on firing out operations and</b>				
	<b>cautioned all regarding precautions</b>				
	<b>to be taken.</b>				
<b>1950</b>	<b>Met with adjoining S/T Leaders to review their</b>				
	<b>status and share information</b>				
<b>0500</b>	<b>Advised by Div. "C" Supervisor to get prepared to</b>				
	<b>be relieved.</b>				
<b>0600</b>	<b>relieved by XSN ST 2376 A</b>				
<b>0700</b>	<b>Arrived at Incident Base</b>				

## OBJECTIVES ICS 202

<b>OBJECTIVES</b>	<b>ICS 202</b>	1. INCIDENT NAME <b>Crest</b>	2. DATE PREPARED <b>8/20/00</b>	3. TIME PREPARED <b>2100</b>
4. OPERATIONAL PERIOD (Date/Time) <b>8/21/00                      0600-1800</b>				
5. OVERALL INCIDENT OBJECTIVE:				
<b>1. Contain fire north of Cleghorn Canyon</b>				
<b>2. Contain fire south of Summit Valley Recreation Development.</b>				
<b>3. Contain fire less than 3,000 acres.</b>				
6. OBJECTIVES FOR THIS OPERATIONAL PERIOD:				
<b>1. Keep fire east of Highway 15 in Cajon Pass.</b>				
<b>2. Keep Fire west of Cleghorn Pass and out of Silverwood State Park.</b>				
<b>3. Protect Criden Canyon Archeological site</b>				
7. WEATHER FORECAST FOR OPERATIONAL PERIOD				
<b>Continued hot and dry. Temp mid-90's, winds s/w 15-20, fuel moisture 3.0 to 3.5, humidity around 18 percent</b>				
8. GENERAL SAFETY MESSAGE				
<b>Air operations use caution when working around transmission lines.</b>				
<b>Rolling rocks could be a problem in the Lost Lake area.</b>				
9. ATTACHMENTS (4 IF ATTACHED)				
<input type="checkbox"/> ORGANIZATION LIST - ICS 203		<input type="checkbox"/> MEDICAL PLAN - ICS 206		<input type="checkbox"/>
<input type="checkbox"/> DIV. ASSIGNMENT LISTS - ICS 204		<input type="checkbox"/> INCIDENT MAP		<input type="checkbox"/>
<input type="checkbox"/> COMMUNICATIONS PLAN - ICS 205		<input type="checkbox"/> TRAFFIC PLAN		<input type="checkbox"/>
<b>ICS 202</b> <b>5-94</b>	10. PREPARED BY (Planning Section Chief)		11. APPROVED BY (Incident Commander)	

## ASSIGNMENT LIST ICS 204

1. BRANCH	2. DIVISION/GROUP <b>A</b>	<b>ASSIGNMENT LIST (5-94)</b>	<b>ICS 204</b>						
3. INCIDENT NAME <b>Crest</b>		4. OPERATIONAL PERIOD DATE: <u>8-21-00</u> TIME: <u>2100</u>							
5. OPERATIONS PERSONNEL OPERATIONS CHIEF <u>R. Hardy</u> DIVISION/GROUP SUPERVISOR <u>E. Haskins</u> BRANCH DIRECTOR _____ AIR ATTACK SUPERVISOR NO. _____									
6. RESOURCES ASSIGNED THIS PERIOD									
RESOURCE DESIGNATOR	LEADER	NUMBER PERSONS	TRANS. NEEDED	DROP OFF PT./TIME	PICK UP PT./TIME				
<b>XNA ST 2201 A</b>	<b>Borman, T.</b>	<b>17</b>							
<b>(EMA)OES ST 2800 A</b>	<b>Sanders, R.</b>	<b>21</b>							
<b>CDF ST 9142 C</b>	<b>White, J.</b>	<b>18</b>							
<b>CDF ST 9180 G</b>	<b>Bennett, B.</b>	<b>35</b>							
<b>CDF ST 9118 L</b>	<b>Mann, G.</b>	<b>5</b>							
<b>KNF ST 3601 C</b>	<b>Harris, W.</b>	<b>21</b>							
7. CONTROL ASSIGNMENT(S) <b>Construct and hold line from point of origin to Cleghorn Ridge. Protect housing tract south of Cleghorn Pass. Lay hose and use water drops to support hand line.</b>									
8. SPECIAL INSTRUCTIONS/SAFETY MESSAGE <b>ANF H-531 will support with water drops out of Lost Lake Helibase</b>									
9. DIVISION/GROUP COMMUNICATION SUMMARY									
FUNCTION	FREQ.	SYSTEM	CHAN.	FUNCTION	FREQ.	SYSTEM	CHAN.		
COMMAND	LOCAL	<b>168.100</b>	<b>Boise C-2</b>	<b>4</b>	SUPPORT	LOCAL	<b>154.295</b>	<b>Firemars</b>	<b>3</b>
	REPEAT	<b>170.450</b>	<b>Boise C-2</b>	<b>5</b>		REPEAT	<b>154.280</b>	<b>Firemars</b>	<b>4</b>
DIV/GROUP TACTICAL	<b>159.330</b>	<b>CDF</b>	<b>3</b>	GROUND TO AIR	<b>170.000</b>	<b>Boise</b>	<b>6</b>		
PREPARED BY (RESOURCE UNIT LEADER)			APPROVED BY (PLANNING SECTION CHIEF)			DATE	TIME		

## DEMOBILIZATION/RELEASE

The Planning Section is responsible for the preparation of the Demobilization Plan to ensure that an orderly, safe, and cost effective movement of personnel and equipment is accomplished from the incident. The Logistics Section is responsible for implementing the plan.

1. Demobilization and release will take place in accordance with the Incident Demobilization Plan using ICS Form 221. **(Follow Demob Plan)**.
2. Obtain necessary supplies to assure that the Strike Team leaves in a **"state of readiness"**. If unable to replace lost or damaged equipment, notify your Cal OES AREP and get written acknowledgment from the Incident Commander prior to leaving the incident. Return all radios and equipment on loan to you from the incident.
3. Instruct company officers that inventory of Cal OES (OES) engines will be required at demobilization or reassignment to another incident. The Cal OES AREP on scene will collect the inventories.
4. **Timekeeping:** The Cal OES Form F-42 (Emergency Activity Record) is utilized to record and substantiate activities of Cal OES (OES)/Local Government apparatus. It is designed to record information on personnel and equipment. The Cal OES Form F-42 **must** be completed and signed with the signature and title of the requesting agency official for any response to a reimbursable incident. When completed, submit forms to the Cal OES AREP if available or mail to Cal OES Headquarters at 3650 Schriever Ave., Mather, CA, 95655.
5. **Debriefing:** Incident Personnel Performance Rating form, ICS 225, will be filled out for each subordinate. Notify personnel that the area/facilities should be returned to the pre-incident condition.
6. Vehicle Safety Inspections may be required before a Strike Team can be released. This takes time, plan ahead. ICS form 212, the Incident Demobilization Vehicle Safety Inspection form, will be filled out by the inspector (usually an agency mechanic).
7. Instruct personnel on travel procedures to return home or to new incident. (Determine any planned stops and disassembly points).
8. Have Region and Operational Area notified of your release, travel route, and estimated time of arrival back home.
9. Have all apparatus notify the Cal OES Operational Area upon their return.

### DEMOBILIZATION CHECKOUT ICS 221 (3/07)

<b>DEMOBILIZATION CHECKOUT</b>		
1. Incident Name/ Number	2. Date/Time	3. Demob. No.
4. Unit/Personnel Released		
5. Transportation Type/No.		
6. Actual Release Date/Time	7. Manifest? <input type="checkbox"/> Yes <input type="checkbox"/> No Number	
8. Destination	9. Notified: <input type="checkbox"/> Agency <input type="checkbox"/> Region <input type="checkbox"/> Area <input type="checkbox"/> Dispatch Name: Date:	
10. Unit Leader Responsible for Collecting Performance Rating		
<b>11. Unit/Personnel</b>		
You and your resources have been released subject to sign off from the following: <i>Demob. Unit Leader check the appropriate box</i>		
Logistics Section		
<input type="checkbox"/> Supply Unit		
<input type="checkbox"/> Communications Unit		
<input type="checkbox"/> Facilities Unit		
<input type="checkbox"/> Ground Support Unit		
Planning Section		
<input type="checkbox"/> Documentation Unit		
Finance Section		
<input type="checkbox"/> Time Unit		
Other		
<input type="checkbox"/>		
<input type="checkbox"/>		
12. Remarks		
13. Prepared by (include Date and Time)		

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**Instructions for completing the Demobilization Checkout (ICS form 221)**

Prior to actual Demob Planning Section (Demob Unit) should check with the Command Staff (Liaison Officer) to determine any agency specific needs related to demob and release. If any, add to line Number 11.

Item No.	Item Title	Instructions
1.	Incident Name/No.	Enter Name and/or Number of Incident.
2.	Date & Time	Enter Date and Time prepared.
3.	Demob. No.	Enter Agency Request Number, Order Number, or Agency Demob Number if applicable.
4.	Unit/Personnel Released	Enter appropriate vehicle or Strike Team/Task Force ID Number(s) and Leader's name or individual overhead or staff personnel being released.
5.	Transportation	Enter Method and vehicle ID number for transportation back to home unit. Enter N/A if own transportation is provided. <i>Additional specific details should be included in Remarks, block # 12.</i>
6.	Actual Release Date/Time	To be completed at conclusion of Demob at time of actual release from incident. <i>Would normally be last item of form to be completed.</i>
7.	Manifest	Mark appropriate box. If yes, enter manifest number. <i>Some agencies require a manifest for air travel.</i>
8.	Destination	Enter the location to which Unit or personnel have been released. <i>i.e. Area, Region, Home Base, Airport, Mobilization Center, etc.</i>
9.	Area/ Agency/ Region Notified	Identify the Area, Agency, or Region notified and enter date and time of notification.
10.	Unit Leader Responsible for Collecting Performance Ratings	Self-explanatory. <i>Not all agencies require these ratings.</i>
11.	Resource Supervision	Demob Unit Leader will identify with a check in the box to the left of those units requiring check-out. Identified Unit Leaders are to initial to the right to indicate release.  Blank boxes are provided for any additional check, (unit requirements as needed), i.e. Safety Officer, Agency Rep., etc.
12.	Remarks	Any additional information pertaining to demob or release.
13.	Prepared by	Enter the name of the person who prepared this Demobilization Checkout, including the Date and Time.

## Incident Demobilization Vehicle Safety Inspection

**Vehicle Operator: Complete items above double lines prior to inspection**

Incident Name		Order No.	
Vehicle: License No.		Agency	
Type ( Eng., Bus., Sedan)		Reg/Unit	
		Veh. ID No.	
Odometer Reading			
Inspection Items	Pass	Fail	Comments
1. Gauges and lights. See back *			
2. Seat belts. See back *			
3. Glass and mirrors. See back *			
4. Wipers and horn. See back *			
5. Engine compartment. See back			
6. Fuel system. See back *			
7. Steering. See back *			
8. Brakes. See back *			
9. Drive line U-joints. Check play			
10. Springs and shocks. See back			
11. Exhaust system. See back *			
12. Frame. See back *			
13. Tire and wheels. See back *			
14. Coupling devices. Emergency exit (Buses) *			
15. Pump Operation			
16. Damage on Incident			
17. Other			
<b>* Safety Item - Do not Release Until Repaired</b>			
Additional Comments:			
HOLD FOR REPAIRS		RELEASE	
Date	Time	Date	Time
Inspector Name (Print)		Operator Name (Print)	
Inspector Signature		Operator Signature	

This form may be photocopied, but three copies must be completed.

Distribution: Original to Inspector, copy to vehicle operator, copy to Incident Documentation Unit

**INSPECTION ITEMS**

(Ref: Federal Motor Carrier Safety Regulation)

**HOLD FOR REPAIRS IF:**

<p>1. Gauges &amp; Lights</p>	<p>-Speedometer inoperative. (Federal Motor Carrier Safety Regulation (FMCSR 393.82)                  -All required lighting devices, reflectors and electrical equipment must be properly positioned, colored and working. (FMCSR 393.9)</p>	<p>8. Brakes</p>	<p>-Brake system has any missing, loose, broken, out of adjustment or worn out components.                  -Brake system has any air or fluid leaks. (FMCSR Appendix G, Sub. B)                  -Brake system has any other deficiencies as described in FMCSR Appendix G, Sub. B.</p>
<p>2. Seat Belts</p>	<p>-Any driver's or right outboard seat belt, missing or inoperative. (FMCSR 393.93)                  -Passenger carrying have missing or inoperative seat belts in passenger seats, Buses excepted.</p>	<p>10. Springs &amp; Shocks</p>	<p>-Any U-bolt, spring, spring hanger or any other axle positioning part is cracked, broken, loose or missing resulting in any shifting of an axle from it's normal position. (FMCSR Appendix G, Sub. B)</p>
<p>3. Glass &amp; Mirrors</p>	<p>-Any windshield crack over 1/4" wide.                  -Any damage 3/4" or greater in diameter.                  -Any 2 damaged areas are closer than 3" to each other.                  -Any crack less than 1/4" wide intersects with any other crack. (FMCSR 393.60)                  -Any crack or discoloration in the windshield area lying within the sweep of the wiper on either side of the windshield (FMCSR Appendix G, Sub. B)                  -Any required mirror missing. One on each side, firmly attached to the outside of the vehicle, and so located as to reflect to the driver a view of the highway to the rear along both sides of the vehicle. See Exceptions (FMCSR 393.80)                  -Any required mirror broken.</p>	<p>11. Exhaust</p>	<p>-Any leaks at any point forward of or directly below the driver and/or sleeper compartment.                  -Bus exhaust leaks or discharge forward of the rearmost part of the bus in excess of 6' for Gasoline powered or 15" for other than Gasoline powered, or forward of any door or window designed to be opened on other than Gasoline powered bus. (Exception: emergency exit)                  -Any part of the exhaust system so located as would be likely to result in burning, charring, or damaging the wiring, fuel supply or any combustible part of the vehicle. (FMCSR Appendix G, Sub. B)</p>
<p>4. Wipers &amp; Horn</p>	<p>-Wiper blade(s) fail to clean windshield within 1" of windshield sides. (FMCSR 393.78)                  -Horn, missing, inoperative, or fails to give an adequate and reliable warning signal. (FMCSR 393.81)</p>	<p>12. Frame</p>	<p>-Any cracked, broken, loose or sagging frame member.                  -Any loose or missing fasteners including those attaching engine, transmission, steering gear, suspension, body or frame to contact the tire or wheel assemblies.                  -Adjustable axle assemblies with locking pins missing or not engaged. (FMCSR Appendix G, Sub. B)</p>
<p>5. Engine Compartment</p>	<p>-Low fluid levels                  -Loose or leaking battery                  -Excessive leaks                  -Cracked or deteriorated belts or hoses.                  -Any condition of impending or probable failure.</p>	<p>13. Tires &amp; Tread</p>	<p>-Tread depth less than 4/32" on steering axle.                  -Less than 2/32" on any other axle.                  -Any body ply or belt material exposed through tread or sidewall.                  -Any tread or sidewall separation.                  -Any cut exposing ply or belt material.                  -Any tire marked "Not for highway use".                  -A tube-type radial tire without radial tube stem markings.</p>
<p>6. Fuel System</p>	<p>-Visible leak at any point.                  -Fuel tank cap missing.                  -Fuel tank not securely attached to vehicle by reason of loose, broken or missing mounting bolts or brackets. (FMCSR Appendix G, Sub. B)</p>		<p>-Any mixing of bias and radial tires on the same axle.                  -Any tire not properly inflated or overloaded.                  -Any bus with recapped tires. (FMCSR Appendix G, Sub. B)</p>
<p>7. Steering</p>	<p>-Steering wheel does not turn freely, has any spokes cracked, loose spokes or missing parts.                  -Steering lash not within parameters, see chart, in FMCSR 393.209.                  -Steering column is not secure                  -Steering system; any U-joints worn, faulty or repaired by welding.                  -Steering gear box is loose, cracked or missing mounting bolts.                  -Pitman arm loose.                  -Power Steering; any components inoperative.                  Any loose, broken or missing parts. Belts frayed, cracked or slipping.                  -Any fluid leaks, fluid reservoir not full. (FMCSR 393.209)</p>		<p>-Lock or slide rings; any bent, broken, cracked, improperly seated, sprung or mismatched ring(s).                  -Wheels and rims; any cracked or broken or has elongated bolt holes.                  -Fasteners (both spoke and disc wheels). Any loose, missing, broken, cracked, stripped or otherwise ineffective fasteners.                  -Any cracks in welds attaching disc wheel disc to rim.                  -Any crack in welds attaching tubeless demountable rim to adapter.                  -Any welded repair on aluminum wheel(s) on a steering axle or any welded repair other than disc to rim attachment on steel disc wheel(s) on steering axle. (FMCSR Appendix G, Sub. B)</p>



## APPENDIX A – COMMUNICATIONS (1/08)

FIRESCOPE Radio Communications Guidelines are derived from the Cooperative Agreements for Use of Radio Frequencies between fire service agencies of California allowing for mutual use of radio channels during mutual aid efforts.

VHF Highband is the default radio frequency band utilized by the California fire service. There are seventy (70) specific channels that should be preprogrammed into all VHF radios utilized by fire service agencies providing mutual aid in California (see the FIRESCOPE STATEWIDE CHANNEL PLAN).

Fire service agencies whose normal dispatch system is on a band other than VHF Highband, should ensure that their mobile radios, portable radios, and dispatch centers are properly licensed and programmed to operate on the UHF and 800 MHz. interoperability channels contained within the FIRESCOPE STATEWIDE CHANNEL PLAN.

### IMPORTANT COMMUNICATIONS ISSUES

#### Travel Net Change

CALIFORNIA TRAVEL NET channel is no longer to be used after January 1, 2007. The California Emergency Services Radio System (CESRS) may be utilized as a travel net in the simplex, direct mode only by federal, state, and local government agencies. Strike Teams or other resources in travel status should use the “CESRS Direct” talk-around channel for line-of-sight communications. Use of CESRS repeaters is currently not authorized for use as a travel net unless an executed use agreement is in place with Cal OES.

#### Narrow-Banding

ALL VHF radios used on Federal Government radio channels and some State of California radio channels should have already been re-programmed within the last three years to accommodate the transition to narrow-banding.

The National Telecommunications and Information Administration (the Federal Government’s frequency manager) mandated that the federal agency VHF frequencies be narrow-banded by January 1, 2005. Although the FCC rules provide that most state and local government frequencies are not required to be narrow-banded until 2013, this migration has already affected state and local government agencies. California fires service agencies including CAL FIRE and Cal OES are targeting 2010 for narrow-

**banding all statewide channels. All federal agency channels (including USFS, BLM, NPS and the NIFC National Incident Radio Support Cache radios) are now narrow-banded. In addition to the federal changes, certain State of California frequencies have been converted to narrow-band operation.**

It is imperative that qualified service personnel inspect all mobile and portable VHF radio communications equipment immediately in order to determine if it is capable of, and programmed for, narrow-band operation. Of particular importance is the inspection of all VHF radio equipment manufactured prior to January 1, 2000.

Any non-compliant radio equipment used on narrowband channels may present a ***life-safety hazard*** for all users.

Radios that are not capable of narrow-band technology should be completely taken out-of-service and not placed into service by another fire service agency (e.g. donations, personal volunteer use, etc.) Any radios returned to the vendor or disposed of as surplus should have all programming deleted or crystals removed.

For additional information, see the Narrowband Migration Plan on the Communications Specialist Group page of the FIRESCOPE website.

## **GUIDELINES**

1. While numerous radio channels/talk-groups can be preprogrammed into radios, it is important to note that in order to transmit on those channels/talk-groups (including channels listed in the FIRESCOPE STATEWIDE CHANNEL PLAN) the user: 1) must be authorized by the FCC or NTIA to transmit on those frequencies, 2) must have a radio use agreement or Memorandum of Understanding with the agency which is licensed for the channels, or 3) must be assigned to an incident with that channel/talk-group listed on the Incident Radio Communications Plan (ICS Form 205).
2. Any agency requesting mutual aid will advise responding agencies of an initial contact channel/talk-group for the incident. Generally, the initial contact channel will be WHITE 1. Incident Communications Centers (ICC's) and Staging Area Managers should monitor WHITE 1 or another specified initial contact channel/talk-group to assist resources arriving at the incident.
3. Local policy will dictate radio channel/talk-group assignments for an incident until a Communications Unit Leader (COML) establishes the Incident Radio Communications Plan (ICS Form 205).
4. The Incident Commander or, if assigned, the Communications Unit Leader is responsible for managing assigned radio channels/talk-groups and must clear the use of local, state and federal frequencies with the controlling agencies prior to inclusion in an Incident Radio Communications Plan (ICS Form 205).

5. Clear text (plain English) should be used for all communications. CODES SHALL NOT BE USED. Standardized channel/talk-group names should be stated, e.g. "WHITE 2", or "NIFC TAC 2". Channel/talk-group numbers corresponding to how a specific radio is programmed should not be used (e.g. "Channel 1", or "Channel A14".)
6. Data communications (i.e. automated or push button status keeping for "computer aided dispatch" [CAD] systems) shall not be used outside the local agency's normal area of operation.
7. Radio programming that enables data signaling (e.g. MDC1200 push-to-talk identification) is prohibited on interoperability channels (e.g. WHITE 1, WHITE 2, WHITE 3, etc.).
8. Vehicular repeater systems (mobile extenders) shall not be used outside the local agency's normal area of operation.
9. The use of gateways (including portable, mobile or fixed) shall be limited to the smallest geographical area of coverage to meet the temporary needs of the incident. Gateways shall only be used on channels/talk-groups that are specifically licensed for that type of operation (e.g. temporary mobile relay) and must be specifically authorized based upon an approved Incident Radio Communications Plan (ICS Form 205) or be recognized as a fixed gateway, included in the California Statewide Communications Interoperability Plan (CalSCIP).
10. Family Radio Service (FRS) radios are prohibited from use on Federal and State of California incidents. Use of any non-public safety radio (e.g. FRS, etc.) or use of a frequency/talk-group not identified on the Incident Radio Communications Plan (ICS Form 205) is prohibited on any incident.
11. The use of any frequency outside the agency's normal, licensed area of operation is prohibited by FCC rules and will likely cause harmful interference to other users (e.g. Strike Teams using a local tactical channel in a distant part of the state).

### **FIRESCOPE STATEWIDE CHANNEL PLAN**

The FIRESCOPE Statewide Channel Plan was developed to assist California Fire Service agencies in buying and programming synthesized radios so as to maximize their effectiveness for mutual aid responses.

Regardless of the radio system used on a daily basis, all California Fire Service agencies should maintain an adequate number of VHF mobile and portable radios to support mutual aid operations. In addition to the VHF interoperability channels, UHF and 800 MHz. interoperability channels are also available to support mutual aid and all-risk incidents.

**USAGE NOTES for ICS 217A COMMUNICATIONS RESOURCE WORKSHEETS:**

1. The WHITE channels require individual agency licensing from the FCC. WHITE channel operational policies are outlined in Cal OES Fire Operations Bulletin #28 and/or the California Statewide Communications Interoperability Plan (CalSCIP). Contact Cal OES Fire and Rescue for information.
2. Use of CALCORD is subject to the CALCORD Plan, under an executed CALCORD agreement with Cal OES and/or in accordance with the California Statewide Communications Interoperability Plan (CalSCIP). Contact Cal OES Telecommunications for information.
3. **Federal and State of California agencies use the following sixteen standard tones for repeater access. These must be included for repeater use. These tones must be programmed on the transmit side *only* of mobile and portable radios.**

<u>1. 110.9</u>	<u>2. 123.0</u>	<u>3. 131.8</u>	<u>4. 136.5</u>
<u>5. 146.2</u>	<u>6. 156.7</u>	<u>7. 167.9</u>	<u>8. 103.5</u>
<u>9. 100.0</u>	<u>10. 107.2</u>	<u>11. 114.8</u>	<u>12. 127.3</u>
<u>13. 141.3</u>	<u>14. 151.4</u>	<u>15. 162.2</u>	<u>16. 192.8</u>

4. **Important- Some radios do not function properly on the following channels: V-CALL, V-TAC 2, and V-TAC 4. Note: Communications Unit Leaders should not assign those specific channels for incident use if it might be possible that Bendix-King EPH radios (including the current NIFC, CAL FIRE, and Cal OES (OES) cache radios) might be utilized on their incident. Prior to use on an incident it is important to determine whether or not another manufacturer's radio models have V-CALL, V-TAC 2 or V-TAC 4 functioning problems.**
5. **Transmitters are to be set to lowest available power setting on these channels (V-TAC's, U-TAC's, CAL FIRE Tacticals, NIFC Commands, NIFC Tacticals, etc.).**
6. **Use of the NIFC Commands and NIFC Tacticals is based upon an approved Incident Radio Communications Plan (ICS Form 205). Communications Unit Leaders must obtain authorization for the use of these channels through the NIFC Communications Duty Officer.**
7. **For use based upon an approved Incident Radio Communications Plan (ICS Form 205). Communications Unit Leaders must obtain authorization for the use of these channels through the CAL FIRE Southern Region/South Operations GACC or Northern Region Command Center/North Operations GACC.**
8. **Specific channel usage guidelines are still being determined, and will be published in the California Statewide Communications Interoperability Plan (CalSCIP). Until the CalSCIP is finalized, these channels are for inter-agency/inter-discipline use.**

**No single-agency, routine communications permitted. Tone 6 (156.7 Hz.) is used as the common tone (mobile transmit side only at this time).**

9. **These channels are for inter-agency/inter-discipline use. No single-agency, routine communications permitted. Tone 6 (156.7 Hz.) is used as the common tone (transmit and receive).**
10. **Use as a fire and fire-based EMS single-agency or strike-team common channel is permitted. Tone 6 (156.7 Hz.) is used as the common tone (transmit and receive). Use is subject to an executed use agreement with Cal OES until such time as the California Statewide Communications Interoperability Plan (CalSCIP) is finalized. Contact Cal OES Telecommunications for information.**
11. **Not available for use in Imperial, Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, and Ventura counties.**
12. **AIR GUARD – 168.625 MHz. – A National Interagency Air Guard frequency for government aircraft assigned to incidents. It is used for emergency communications by aviation. A separate receiver is required to permit continuous monitoring in aircraft. Transmitters on this channel should encode a CTCSS of 110.9 Hz. All Incident Radio Communications Plans (ICS Form 205) on incidents that use federal or CAL FIRE aircraft should have AIR GUARD programmed in the last available channel slot of cache portable radios. Communications Unit Leaders should consider placing AIR GUARD in channel slot 14 (Bendix-King EPH), channel slot 16 (Bendix-King GPH and DPH and other manufacturers who use 16 channels in a zone/group), and channel slot 20 (Bendix-King GPH-CMD and DPH-CMD).**

**AIR GUARD is restricted to the following use:**

- a. **Air-to-air emergency contact and coordination.**
  - b. **Ground-to-air emergency contact.**
  - c. **Initial call, recall, and re-direction of aircraft when no other contact frequency is available.**
13. **CALIFORNIA TRAVEL NET channel is no longer to be used after January 1, 2007. The California Emergency Services Radio System (CESRS) may be utilized as a travel net in the simplex, direct mode only by federal, state, and local government agencies. Strike Teams or other resources in travel status should use the “CESRS Direct” talk-around channel for line-of-sight communications. Use of CESRS repeaters is currently not authorized for use as a travel net unless an executed use agreement is in place with Cal OES.**

**NOTE: For additional information concerning the appropriate usage of channels identified in the FIRESCOPE STATEWIDE CHANNEL PLAN, contact Cal OES Telecommunications or your respective Communications Unit Leader (COML).**

CALIFORNIA GOVERNOR'S OFFICE OF EMERGENCY SERVICES  
STRIKE TEAM (ENGINE) / TASK FORCE LEADER MANUAL

<b>COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET</b>					Frequency Band <b>VHF HIGHBAND</b>			Description <b>FIRESCOPE STATEWIDE CHANNEL PLAN – 2008</b>		
ICS 217A 031207					Page 1 of 6					
Channel Configuration	Channel Name/Trunked Radio System Talk-group	Eligible Users	RX Freq N or W	RX Tone/NAC	TX Freq N or W	Tx Tone/NAC	Mode	Remarks		
Simplex – Base/Mo	<b>WHITE 1</b>	Fire	154.2800 W	None	Simplex	None	A	Usage Note 1		
Simplex – Mo only	<b>WHITE 2</b>	Fire	154.2650 W	None	Simplex	None	A	Usage Note 1		
Simplex – Mo only	<b>WHITE 3</b>	Fire	154.2950 W	None	Simplex	None	A	Usage Note 1		
Simplex – Mo only	<b>CALCORD</b>	Any Public Safety	156.0750 W	None	Simplex	None	A	Usage Note 2		
Simplex – Base/Mo	<b>VCALL10</b>	Any Public Safety	155.7525 N	None	Simplex	156.7	A	Usage Note 4, 8		
Simplex – Base/Mo	<b>VTAC11</b>	Any Public Safety	151.1375 N	None	Simplex	156.7	A	Usage Note 5, 8		
Simplex – Base/Mo	<b>VTAC12</b>	Any Public Safety	154.4525 N	None	Simplex	156.7	A	Usage Note 4, 5, 8		
Simplex – Base/Mo	<b>VTAC13</b>	Any Public Safety	158.7375 N	None	Simplex	156.7	A	Usage Note 5, 8		
Simplex – Base/Mo	<b>VTAC14</b>	Any Public Safety	159.4725 N	None	Simplex	156.7	A	Usage Note 4, 5, 8		
Simplex – Mo only	<b>OES 1</b>	Fire	154.1600 W	None	Simplex	None	A			
Simplex – Mo only	<b>OES 2</b>	Fire	154.2200 W	None	Simplex	None	A			
Simplex – Mo only	<b>CESRS D</b>	Travel Net	153.7550 W	None	153.7550 W	None	A	Usage Note 13		
Repeater Pair	<b>CESRS</b>	Authorized Users	153.7550 W	None	154.9800 W	Multi	A	Usage Note 3, 13		
Repeater Pair	<b>CDF C1</b>	Fire	151.3550 W	None	159.3000 W	Multi	A	Usage Note 3, 7		
Repeater Pair	<b>CDF C2</b>	Fire	151.2650 W	None	159.3300 W	Multi	A	Usage Note 3, 7		
Repeater Pair	<b>CDF C3</b>	Fire	151.3400 W	None	159.3450 W	Multi	A	Usage Note 3, 7		
Repeater Pair	<b>CDF C4</b>	Fire	151.4000 W	None	159.3750 W	Multi	A	Usage Note 3, 7		
Repeater Pair	<b>CDF C5</b>	Fire	151.3700 W	None	159.2850 W	Multi	A	Usage Note 3, 7		
Repeater Pair	<b>CDF C6</b>	Fire	151.2500 W	None	159.3600 W	Multi	A	Usage Note 3, 7		
Repeater Pair	<b>CDF C7</b>	Fire	151.4600 W	None	159.3900 W	Multi	A	Usage Note 3, 7		
Repeater Pair	<b>CDF C8</b>	Fire	151.4450 W	None	159.3450 W	Multi	A	Usage Note 3, 7		
Repeater Pair	<b>CDF C9</b>	Fire	151.1750 W	None	159.4500 W	Multi	A	Usage Note 3, 7		
Repeater Pair	<b>CDF C10</b>	Fire	151.1900 W	None	159.2250 W	Multi	A	Usage Note 3, 7		
Simplex – Mo only	<b>CDF T1</b>	Fire	151.1450 N	None	Simplex	None	A	Usage Note 5, 7		
Simplex – Mo only	<b>CDF T2</b>	Fire	151.1600 W	None	Simplex	None	A	Usage Note 5, 7		

The convention calls for frequency lists to show four digits after the decimal place, followed by either an “N” or a “W”, depending on whether the frequency is narrow or wide band. Mode refers to either “A” or “D” indicating analog or digital (e.g. Project 25) or “M” indicating mixed mode. All channels are shown as if programmed in a control station, portable or mobile radio. Repeater and base stations must be programmed with the Rx and Tx reversed.

CALIFORNIA GOVERNOR'S OFFICE OF EMERGENCY SERVICES  
STRIKE TEAM (ENGINE) / TASK FORCE LEADER MANUAL

<b>COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET</b> ICS 217A 031207						Frequency Band <b>VHF HIGHBAND D</b>			Description <b>FIRESCOPE STATEWIDE CHANNEL PLAN – 2008</b>	
Channel Configuration	Channel Name/Trunked Radio System Talk-group	Eligible Users	RX Freq	N or W	RX Tone/NAC	TX Freq	N or W	Tx Tone/NAC	Mode	Remarks
Simplex – Mo only	<b>CDF T3</b>	Fire	151.1750	W	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>CDF T4</b>	Fire	151.1900	W	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>CDF T5</b>	Fire	151.2500	W	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>CDF T6</b>	Fire	151.3250	W	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>CDF T7</b>	Fire	151.3400	W	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>CDF T8</b>	Fire	151.3700	W	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>CDF T9</b>	Fire	151.3850	W	None	Simplex		None	A	Usage Note 5,7
Simplex – Mo only	<b>CDF T10</b>	Fire	151.4000	W	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>CDF T11</b>	Fire	151.4450	W	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>CDF T12</b>	Fire	151.4600	W	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>CDF T13</b>	Fire	151.4750	N	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>CDF T14</b>	Fire	159.2250	W	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>CDF T15</b>	Fire	159.2700	W	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>CDF T16</b>	Fire	159.2850	W	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>CDF T17</b>	Fire	159.3150	W	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>CDF T18</b>	Fire	159.3450	W	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>CDF T19</b>	Fire	159.3600	W	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>CDF T20</b>	Fire	159.3750	W	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>CDF T21</b>	Fire	159.3900	W	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>CDF T22</b>	Fire	159.4050	W	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>CDF T23</b>	Fire	159.4500	W	None	Simplex		None	A	Usage Note 5, 7
Repeater Pair	<b>NIFC C1</b>	Fire	168.7000	N	None	170.9750	N	None	A	Usage Note 3, 5, 6
Repeater Pair	<b>NIFC C2</b>	Fire	168.1000	N	None	170.4500	N	None	A	Usage Note 3, 5, 6
Repeater Pair	<b>NIFC C3</b>	Fire	168.0750	N	None	170.4250	N	None	A	Usage Note 3, 5, 6
Repeater Pair	<b>NIFC C4</b>	Fire	166.6125	N	None	168.4000	N	None	A	Usage Note 3, 5, 6

The convention calls for frequency lists to show four digits after the decimal place, followed by either an “N” or a “W”, depending on whether the frequency is narrow or wide band. Mode refers to either “A” or “D” indicating analog or digital (e.g. Project 25) or “M” indicating mixed mode. All channels are shown as if programmed in a control station, portable or mobile radio. Repeater and base stations must be programmed with the Rx and Tx reversed.

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STRIKE TEAM (ENGINE) / TASK FORCE LEADER MANUAL

<b>COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET</b> ICS 217A 031207					Frequency Band <b>VHF HIGHBAND</b>			Description <b>FIRESCOPE STATEWIDE CHANNEL PLAN – 2008</b>		
Channel Configuration	Channel Name/Trunked Radio System Talk-group	Eligible Users	RX Freq	N or W	RX Tone/NAC	TX Freq	N or W	Tx Tone/NAC	Mode	Remarks
Repeater Pair	<b>NIFC C5</b>	Fire	167.1000	N	None	169.7500	N	None	A	Usage Note 3, 5, 6
Repeater Pair	<b>NIFC C6</b>	Fire	168.4750	N	None	173.8125	N	None	A	Usage Note 3, 5, 6
Repeater Pair	<b>NIFC C7</b>	Fire	162.9625	N	None	171.7875	N	None	A	Usage Note 3, 5, 6
Simplex – Mo only	<b>NIFC T1</b>	Fire	168.0500	N	None	Simplex		None	A	Usage Note 5, 6
Simplex – Mo only	<b>NIFC T2</b>	Fire	168.2000	N	None	Simplex		None	A	Usage Note 5, 6
Simplex – Mo only	<b>NIFC T3</b>	Fire	168.6000	N	None	Simplex		None	A	Usage Note 5, 6
Simplex – Mo only	<b>NIFC T4</b>	Fire	164.1375	N	None	Simplex		None	A	Usage Note 5, 6
Simplex – Mo only	<b>NIFC T5</b>	Fire	166.7250	N	None	Simplex		None	A	Usage Note 5, 6
Simplex – Mo only	<b>NIFC T6</b>	Fire	166.7750	N	None	Simplex		None	A	Usage Note 5, 6
Simplex – Mo only	<b>NIFC T7</b>	Fire	168.2500	N	None	Simplex		None	A	Usage Note 5, 6
Simplex – Mo only	<b>FSR5 T4</b>	Fire	173.9125	N	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>FSR5 T5</b>	Fire	173.9625	N	None	Simplex		None	A	Usage Note 5, 7
Simplex – Mo only	<b>FSR5 T6</b>	Fire	173.9875	N	None	Simplex		None	A	Usage Note 5, 7
Simplex – Air/Mo	<b>AIRGUARD</b>	Fire	168.6250	N	None	Simplex		110.9	A	Usage Note 12
Simplex – Air/Mo	<b>FS A/G</b>	Fire	170.0000	N	None	Simplex		None	A	Usage Note 5, 6
Simplex – Air/Mo	<b>BLM A/G</b>	Fire	167.9500	N	None	Simplex		None	A	Usage Note 5, 6
Simplex – Air/Mo	<b>CDF A/G</b>	Fire	151.2200	N	None	Simplex		None	A	Usage Note 5
Simplex – Mo only	<b>168.350</b>	Federal Agencies	168.3500	N	None	Simplex		None	A	Usage Note 5, 6
Simplex – Mo only	<b>163.100</b>	Federal Agencies	163.1000	N	None	Simplex		None	A	Usage Note 5, 6
Simplex – Mo only	<b>168.550</b>	Federal Agencies	168.5500	N	None	Simplex		None	A	Usage Note 5, 6

The convention calls for frequency lists to show four digits after the decimal place, followed by either an “N” or a “W”, depending on whether the frequency is narrow or wide band. Mode refers to either “A” or “D” indicating analog or digital (e.g. Project 25) or “M” indicating mixed mode. All channels are shown as if programmed in a control station, portable or mobile radio. Repeater and base stations must be programmed with the Rx and Tx reversed.

CALIFORNIA GOVERNOR'S OFFICE OF EMERGENCY SERVICES  
STRIKE TEAM (ENGINE) / TASK FORCE LEADER MANUAL

<b>COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET</b>					Frequency Band			Description		
ICS 217A 031207					UHF			<b>FIRESCOPE STATEWIDE CHANNEL PLAN – 2008</b>		
Page 4 of 6										
Channel Configuration	Channel Name/Trunked Radio System Talk-group	Eligible Users	RX Freq N or W	RX Tone/NAC	TX Freq N or W	Tx Tone/NAC	Mode	Remarks		
Repeater Pair	<b>UCALL40</b>	Any Public Safety	453.2125 N	None	458.2125 N	156.7	A	Usage Note 8		
Repeater Pair	<b>UTAC41</b>	Any Public Safety	453.4625 N	None	458.4625 N	156.7	A	Usage Note 5, 8		
Repeater Pair	<b>UTAC42</b>	Any Public Safety	453.7125 N	None	458.7125 N	156.7	A	Usage Note 5, 8		
Repeater Pair	<b>UTAC43</b>	Any Public Safety	453.8625 N	None	458.8625 N	156.7	A	Usage Note 5, 8		
Simplex – Base/Mo	<b>UCALL40D</b>	Any Public Safety	453.2125 N	None	Simplex	156.7	A	Usage Note 8		
Simplex – Base/Mo	<b>UTAC41D</b>	Any Public Safety	453.4625 N	None	Simplex	156.7	A	Usage Note 5, 8		
Simplex – Base/Mo	<b>UTAC42D</b>	Any Public Safety	453.7125 N	None	Simplex	156.7	A	Usage Note 5, 8		
Simplex – Base/Mo	<b>UTAC43D</b>	Any Public Safety	453.8625 N	None	Simplex	156.7	A	Usage Note 5, 8		

The convention calls for frequency lists to show four digits after the decimal place, followed by either an “N” or a “W”, depending on whether the frequency is narrow or wide band. Mode refers to either “A” or “D” indicating analog or digital (e.g. Project 25) or “M” indicating mixed mode. All channels are shown as if programmed in a control station, portable or mobile radio. Repeater and base stations must be programmed with the Rx and Tx reversed.

CALIFORNIA GOVERNOR'S OFFICE OF EMERGENCY SERVICES  
STRIKE TEAM (ENGINE) / TASK FORCE LEADER MANUAL

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A 031207 Page 5 of 6						Frequency Band <b>800 MHz. (prior to Re- banding)</b>		Description <b>FIRESCOPE STATEWIDE CHANNEL PLAN – 2008</b>		
Channel Configuration	Channel Name/Trunked Radio System Talk-group	Eligible Users	RX Freq N or W	RX Tone/NAC	TX Freq N or W	Tx Tone/NAC	Mode	Remarks		
Repeater Pair	<b>I-CALL</b>	Any Public Safety	866.0125 W	156.7	821.0125 W	156.7	A	Usage Note 9		
Repeater Pair	<b>I-TAC1</b>	Any Public Safety	866.5125 W	156.7	821.5125 W	156.7	A	Usage Note 9		
Repeater Pair	<b>I-TAC2</b>	Any Public Safety	867.0125 W	156.7	822.0125 W	156.7	A	Usage Note 9		
Repeater Pair	<b>I-TAC3</b>	Any Public Safety	867.5125 W	156.7	822.5125 W	156.7	A	Usage Note 9		
Repeater Pair	<b>I-TAC4</b>	Any Public Safety	868.0125 W	156.7	823.0125 W	156.7	A	Usage Note 9		
Repeater Pair	<b>FIREMARS</b>	Fire & Fire based- EMS	868.9875 W	156.7	823.9875 W	156.7	A	Usage Note 10		
Repeater Pair	<b>FIREMARS 2</b>	Fire & Fire based- EMS	866.9125 W	156.7	821.9125 W	156.7	A	Usage Note 10, 11		
Simplex – Base/Mo	<b>I-CALLD</b>	Any Public Safety	866.0125 W	156.7	Simplex	156.7	A	Usage Note 9		
Simplex – Base/Mo	<b>I-TAC1D</b>	Any Public Safety	866.5125 W	156.7	Simplex	156.7	A	Usage Note 9		
Simplex – Base/Mo	<b>I-TAC2D</b>	Any Public Safety	867.0125 W	156.7	Simplex	156.7	A	Usage Note 9		
Simplex – Base/Mo	<b>I-TAC3D</b>	Any Public Safety	867.5125 W	156.7	Simplex	156.7	A	Usage Note 9		
Simplex – Base/Mo	<b>I-TAC4D</b>	Any Public Safety	868.0125 W	156.7	Simplex	156.7	A	Usage Note 9		
Simplex – Base/Mo	<b>FIREMARS D</b>	Fire & Fire based- EMS	868.9875 W	156.7	Simplex	156.7	A	Usage Note 10		
Simplex – Base/Mo	<b>FIREMARS 2D</b>	Fire & Fire based- EMS	866.9125 W	156.7	Simplex	156.7	A	Usage Note 10, 11		
NOTE: After being re-banded, the NPSPAC national interoperability channels will be 15 MHz. lower. The California Statewide Interoperability Executive Committee (CALSIEC) is considering the adoption of a national Interoperability channel naming standard.										

The convention calls for frequency lists to show four digits after the decimal place, followed by either an “N” or a “W”, depending on whether the frequency is narrow or wide band. Mode refers to either “A” or “D” indicating analog or digital (e.g. Project 25) or “M” indicating mixed mode. All channels are shown as if programmed in a control station, portable or mobile radio. Repeater and base stations must be programmed with the Rx and Tx reversed.

CALIFORNIA GOVERNOR'S OFFICE OF EMERGENCY SERVICES  
STRIKE TEAM (ENGINE) / TASK FORCE LEADER MANUAL

<b>COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET</b> ICS 217A 031207					Page 6 of 6			Frequency Band <b>800 MHz. (post-Rebanding)</b>		Description <b>FIRESCOPE STATEWIDE CHANNEL PLAN – 2008</b>	
Channel Configuration	Channel Name/Trunked Radio System Talk-group	Eligible Users	RX Freq N or W	RX Tone/NAC	TX Freq N or W	Tx Tone/NAC	Mode	Remarks			
Repeater Pair	<b>8CALL90</b>	Any Public Safety	851.0125 W	156.7	806.0125 W	156.7	A	Usage Note 9			
Repeater Pair	<b>8TAC91</b>	Any Public Safety	851.5125 W	156.7	806.5125 W	156.7	A	Usage Note 9			
Repeater Pair	<b>8TAC92</b>	Any Public Safety	852.0125 W	156.7	807.0125 W	156.7	A	Usage Note 9			
Repeater Pair	<b>8TAC93</b>	Any Public Safety	852.5125 W	156.7	807.5125 W	156.7	A	Usage Note 9			
Repeater Pair	<b>8TAC94</b>	Any Public Safety	853.0125 W	156.7	808.0125 W	156.7	A	Usage Note 9			
Repeater Pair	<b>CAFIRE1</b>	Fire & Fire based- EMS	853.9875 W	156.7	808.9875 W	156.7	A	Usage Note 10			
Repeater Pair	<b>CAFIRE2</b>	Fire & Fire based- EMS	851.9125 W	156.7	806.9125 W	156.7	A	Usage Note 10, 11			
Simplex – Base/Mo	<b>8CALL90D</b>	Any Public Safety	851.0125 W	156.7	Simplex	156.7	A	Usage Note 9			
Simplex – Base/Mo	<b>8TAC91D</b>	Any Public Safety	851.5125 W	156.7	Simplex	156.7	A	Usage Note 9			
Simplex – Base/Mo	<b>8TAC92D</b>	Any Public Safety	852.0125 W	156.7	Simplex	156.7	A	Usage Note 9			
Simplex – Base/Mo	<b>8TAC93D</b>	Any Public Safety	852.5125 W	156.7	Simplex	156.7	A	Usage Note 9			
Simplex – Base/Mo	<b>8TAC94D</b>	Any Public Safety	853.0125 W	156.7	Simplex	156.7	A	Usage Note 9			
Simplex – Base/Mo	<b>CAFIRE1D</b>	Fire & Fire based- EMS	853.9875 W	156.7	Simplex	156.7	A	Usage Note 10			
Simplex – Base/Mo	<b>CAFIRE2D</b>	Fire & Fire based- EMS	851.9125 W	156.7	Simplex	156.7	A	Usage Note 10, 11			

The convention calls for frequency lists to show four digits after the decimal place, followed by either an “N” or a “W”, depending on whether the frequency is narrow or wide band. Mode refers to either “A” or “D” indicating analog or digital (e.g. Project 25) or “M” indicating mixed mode. All channels are shown as if programmed in a control station, portable or mobile radio. Repeater and base stations must be programmed with the Rx and Tx reversed.

## APPENDIX B

STATE OF CALIFORNIA



GOVERNOR'S OFFICE OF EMERGENCY SERVICES

Fire and Rescue Branch  
P.O. Box 419047-9047  
Rancho Cordova, CA. 95741-9047  
Phone (916) 845-8711  
Night-Weekends: (916) 845-8911  
Fax: (916) 845-8396  
E-Mail: OES\_Fire@oes.ca.gov

GRAY DAVIS, Governor



June 6, 2002

OES Fire Regional and Operational Coordinators

Please share the contents of this letter with all Regional and Operational Area personnel, especially with Division/Group Supervisors and Strike Team/Task Force Leaders.

At times, during structure protection assignments, fire personnel may need to consider entering unoccupied and/or evacuated dwellings. The following guidelines must be applied by Strike Team/Task Force Leaders to fire crews working on these assignments:

- The Strike Team/Task Force Leader has been given permission by the property owner to enter the structure. That permission and the owners contact information must be documented on the ICS 214.
- The dwelling is in imminent danger from an approaching fire and entry is warranted to conduct appropriate protective measures: i.e. closing windows, removing flammable curtains, closing doors, etc.
- The crew must take refuge inside dwelling to retreat from the fire.

It is expected that all fire personnel granted permission to enter a dwelling will treat the property with due respect, and conduct themselves in a professional manner. Failure to adhere to these basic concepts in the past has resulted in legal action.

All entries into any dwelling must be recorded on the Company and Strike Team/Task Force Leader Unit Log (ICS 214) and reported to the Division/Group Supervisor as soon as operationally feasible.

We have an obligation to the citizens we protect to respect their property, and to maintain the Public Trust we have earned.

Thank you for your continued support of the Fire and Rescue Mutual Aid System, and your efforts to share this important information.

Sincerely,

A handwritten signature in black ink, appearing to read "Kim Zagaris".

KIM ZAGARIS, Chief  
Fire and Rescue Branch

c: File

KL/Bea

## APPENDIX C

### Motel Guidelines

**There will be occasions when local government resources may be put up in motels. During those occasions, follow the guidelines provided below. These same guidelines are given to CAL FIRE employees to follow.**

- Check-in with the CAL FIRE Motel Manager upon arrival at the ICP. Provide current personnel count (male / female) along with your Strike Team identifier and phone numbers.
- When placed in accommodations, you are **ON DUTY – UNASSIGNED**. Remember that you are still on the clock, representing your department and Cal OES.
- **Each individual** is required to sign the motel roster daily. The CAL FIRE Form AO-341 “Emergency Meal – Hotel Purchase Report” will be utilized.
- Meals will be provided at Incident Base unless specifically directed otherwise by the Incident. If you choose to eat off-site, it is your responsibility and not reimbursable.
- Telephone calls, pay-per-view television, room service, etc. from rooms are **NOT AUTHORIZED**.
- Crew Rotations: If numbers or makeup of personnel in your Strike Team changes, advise Motel Unit Leader and update phone numbers.

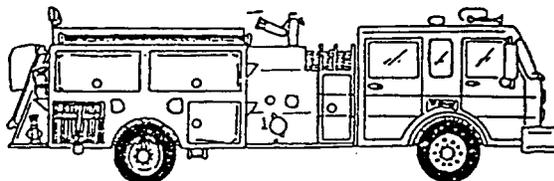
**Mistakes and errors in judgment made here will impact the entire California Fire Service !!!**

## APPENDIX D

### Minimum Equipment Engine Standards by ICS Engine Type

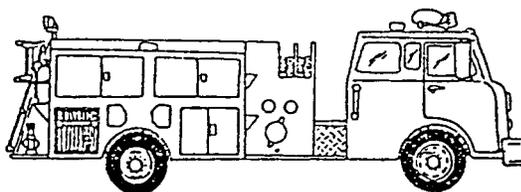
#### Type One Engine Company

- ◆ 1,000 gpm
- ◆ 400 gallon tank
- ◆ 1,200 ft. 2 ½" hose or larger
- ◆ 400 ft. 1 ½" or 1 ¾" hose
- ◆ 200 ft. 1" hose
- ◆ 20 ft. extension ladder
- ◆ 500 gpm heavy stream
- ◆ 4 personnel



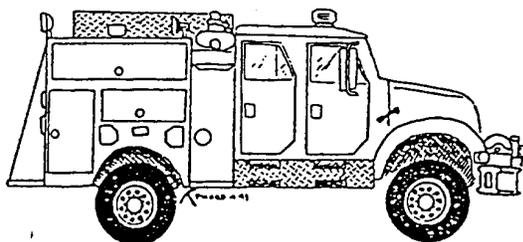
#### Type Two Engine Company

- ◆ 500 gpm
- ◆ 400 gallon tank
- ◆ 1,000 ft. 2 ½" hose or larger
- ◆ 500 ft. 1 ½" or 1 ¾" hose
- ◆ 300 ft. 1" hose
- ◆ 20 ft. extension ladder
- ◆ 3 personnel



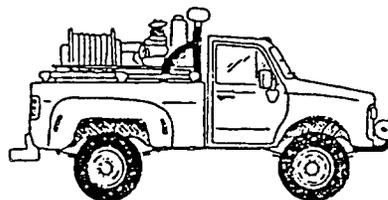
#### Type Three Engine Company

- ◆ 120 gpm
- ◆ 300 gallon tank
- ◆ 1,000 ft. 1 ½" hose
- ◆ 800 ft. 1" hose
- ◆ 3 personnel



#### Type Four Engine Company

- ◆ 50 gpm
- ◆ 200 gallon tank
- ◆ 300 ft. 1 ½" hose
- ◆ 800 ft. 1" hose
- ◆ 3 personnel



Graphic courtesy of Fire Publications, Inc., & Phillip L. Queens, Fighting Fire in the Wildland Urban Interface

## **ICS ENGINE STANDARDS**

As orders for Type 3 Engine Strike Teams have increased, and as local interface problems have been identified, many local government fire agencies have acquired Type 3 Apparatus.

Keep in mind that the above stated standards are minimum requirements. Just because an engine meets the minimum standards on the chart, does not necessarily mean that it can carry out the mission of Type 3 Apparatus. An example would be a full sized Type 1 Engine that has the extra 1 ½" and 1" hose added so it can also meet Type 3 standards.

A typical Forest Agency Type 3 Engine has a number of features that enhance it's capability to operate on a narrow, steep, or unimproved roads and to allow the efficient application of water or other agents. These features include:

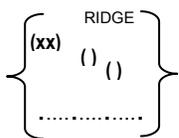
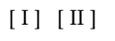
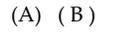
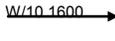
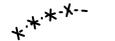
- Short Wheelbase
- High Ground Clearance
- High Angle of Approach & Departure
- Auxiliary Motor Powered Pump to allow Pump & Roll
- Unit # on Roof
- 2X4 or 4X4
- Class A Foam
- Progressive Hose Lay Packs
- Lower GVW than a Type 1 or 2
- Wildland Hand Tools
- Portable Pump
- Chainsaw
- Fusee's or drip torch
- Hard suctions for drafting
- Back Pumps

The Forest Agencies have the expectation that when a Local Government Type 3 strike team arrives at an incident, it can perform all of the missions that their own Type 3's can. This may or may not be true, depending upon the training that the Local Government crews have taken. Specifically, Type 3 Engine crews should be adequately trained in the following:

- Wildland Strategy & Tactics
- Wildland Fire Behavior
- Wildland Hose Lays
- Wildland Fire Safety
- Backfiring
- Hand Line Construction
- Structure Triage
- Prepping a Structure

As overall suppression costs go up and as the reimbursement rate for strike teams also goes up, Forest Agencies are expecting all local government Type 3 strike teams to be capable of going where Type 3's were designed to go and doing what Type 3 crews are trained to do.

## APPENDIX E: ICS Map Display Symbolology

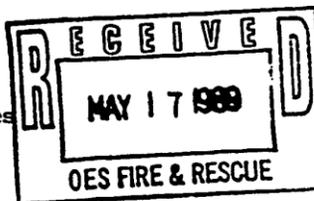
ICS MAP DISPLAY SYMBOLOLOGY	
SUGGESTED FOR PLACEMENT ON BASE MAP	SUGGESTED FOR PLACEMENT ON OVERLAYS
<p><b>MINIMUM RECOMMENDED</b></p> <p><b>BLACK</b> {  } HIGHLIGHTED GEOGRAPHIC OR MANMADE FEATURES</p> <p><b>BLACK</b> {  } COMPLETED DOZER LINE</p> <p><b>BLACK</b> {  } * COMPLETED LINE</p> <p><b>BLACK</b> {  } LINE BREAK COMPLETED</p> <p><b>RED</b> {  } FIRE ORIGIN</p> <p><b>RED</b> {  } * HAZARD (IDENTIFY TYPE OF HAZARD, e.g. POWER LINES)</p> <p><b>BLUE</b> {  } * INCIDENT COMMAND POST</p> <p><b>BLUE</b> {  } * INCIDENT BASE</p> <p><b>BLUE</b> {  } * CAMP (IDENTIFY BY NAME)</p> <p><b>BLUE</b> {  } * HELISPOT (LOCATION AND NUMBER)</p> <p><b>BLUE</b> {  } * HELIBASE</p> <p><b>BLUE</b> {  } * REPEATER/MOBILE RELAY</p> <p><b>3 Stripes You're Out</b>  LIFE HAZARD</p> <p><b>OPTIONAL</b></p> <p><b>BLUE</b> {  } TELEPHONE</p> <p><b>BLUE</b> {  } FIRE STATION</p> <p><b>BLUE</b> {  } POND WATER SOURCE (IDENTIFY TYPE, i.e. POND, CISTERN, HYDRANT) or e.g. MOBILE WEATHER UNIT</p> <p><b>BLUE</b> {  } IR GROUND LINK</p> <p><b>BLUE</b> {  } * FIRST AID STATION</p>	<p><b>RED</b> {  } * UNCONTROLLED FIRE EDGE</p> <p><b>RED</b> {  } SPOT FIRE</p> <p><b>RED</b> {  } * HOT SPOT</p> <p><b>ORANGE</b> {  } * FIRE SPREAD PREDICTION</p> <p><b>BLACK</b> {  } * PLANNED FIRE LINE</p> <p><b>BLACK</b> {  } * PLANNED SECONDARY LINE</p> <p><b>BLACK</b> {  } * BRANCHES { INITIALLY NUMBERED CLOCKWISE FROM FIRE ORIGIN</p> <p><b>BLACK</b> {  } * DIVISIONS { INITIALLY LETTERED CLOCKWISE FROM FIRE ORIGIN</p> <p><b>BLACK</b> {  } * WIND SPEED AND DIRECTION</p> <p><b>BLACK</b> {  } * PROPOSED DOZER LINE</p> <p><b>BLACK</b> {  } * FIRE BREAK (PLANNED OR INCOMPLETE)</p> <p><b>BLUE</b> {  } * STAGING AREA (IDENTIFY BY NAME)</p> <p>ALL OVERLAYS MUST CONTAIN REGISTRATION MARKS. THESE MAY CONSIST OF IDENTIFIED ROAD INTERSECTIONS, TOWNSHIP/RANGE COORDINATES, MAP CORNERS, ETC.</p>
* - TO BE USED ON INCIDENT BRIEFING AND ACTION PLAN MAPS (NO COLOR)	

## APPENDIX F

### Backfire Authority Memorandum

#### Memorandum

To : Mr. Kim Zagaris  
Office of Emergency Services  
2800 Meadowview Road  
Sacramento, CA 95832-1499



Date : May 12, 1989  
F-31

Telephone: ATSS ( ) 445-9445  
( )

From : Department of Forestry and Fire Protection

Subject : 1000 CIVIL DEFENSE & EMERGENCIES OTHER THAN FIRE  
1050 State Office of Emergency Services  
Authority for backfiring during wildland fire suppression operations

You requested information about CDF authority for backfiring during wildland fire suppression operations. You also wanted to know if a local government cooperator had the same backfiring authority as CDF.

Public Resources Code (PRC) Section 4113 charges CDF officers to prevent and extinguish forest fires. PRC 4118 states "The burning of growing, dead, or downed vegetation is for a public purpose if the department has determined that the burning of such vegetation is necessary for the prevention or suppression of forest fires." PRC 4426 elaborates further and states "A person shall not set a backfire, or cause a backfire to be set, except under the direct supervision or permission of a state or federal forest officer, unless it can be established that the setting of such backfire was necessary for the purpose of saving life or valuable property." I think it is clear that CDF and federal officers have backfiring authority but must certainly exercise care and good judgement in this activity.

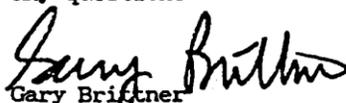
Regarding an OES cooperator's authority to backfire, I think it is clear they have authority when directed by CDF, or when it is necessary to protect life and valuable property. I do not think they have authority to go about the countryside setting backfires without direction or cause. Under those conditions I think they would be acting in bad faith and may be grossly negligent. Certainly we would not allow local government cooperators to fight fire without proper supervision.

Government Code (GC) Section 850 et seq. outline general fire service liability for departments and employees. In particular, Sec. 850.4 immunizes public entities and employees for any injury caused in fighting fires. It is my understanding that this section has been interpreted many times in court cases that a firefighter is not liable for actions unless the person acts in bad faith or is grossly negligent.

I have reviewed the OES/CDF/USFS tri-party agreement, and the State Master Mutual Aid Agreement and they are silent on the liability issue.

After researching this matter I think our local government cooperators can backfire when directed by CDF, or a federal fire officer, and when they need to use it as a tactical method to protect life and valuable property.

Please call me at 445-9445 if you have any questions.

  
Gary Briftner  
Division Chief  
Cooperative Fire Services

# STRIKE TEAM LEADER DISPATCH WORKSHEET

Date: \_\_\_\_\_ Time Dispatched: \_\_\_\_\_ Name of Incident: \_\_\_\_\_

Incident Order # \_\_\_\_\_ Request # E - \_\_\_\_\_ Strike Team # \_\_\_\_\_

Situation: \_\_\_\_\_

Requesting Agency: \_\_\_\_\_ Dispatch Phone # \_\_\_\_\_

Reimbursement:  Master Mutual Aid (Non-Reimbursed)  CFAA (Reimbursed)

Response:  Initial Attack  Immediate Need  Planned Need - Depart Time: \_\_\_\_\_

Rendezvous Point: \_\_\_\_\_ Time: \_\_\_\_\_ Map Ref: \_\_\_\_\_

Incident Reporting Location: \_\_\_\_\_ Time: \_\_\_\_\_ Map Ref: \_\_\_\_\_

**COMMUNICATIONS:**

Phone Numbers (cell, pager, Cal OES, etc.)

Travel Frequency: \_\_\_\_\_

Staging Frequency: \_\_\_\_\_

Base/Check-In Frequency: \_\_\_\_\_

Command Frequency: \_\_\_\_\_

Tactical Frequency: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**ASSIGNED UNITS:**

STEN (T): \_\_\_\_\_

ENG #	CAPTAIN	AGENCY	3-LTR	TYPE	FUEL	PUMP	TANK	FOAM	4WD	PUMP&ROLL

**TRAVEL ROUTE:** \_\_\_\_\_

\_\_\_\_\_

Planned Stops: \_\_\_\_\_

**NOTES:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



## **A STRIKE TEAM BRIEFING CHECKLIST**

- ❑ **STEN's General Message and Incident Update**
    - ❑ Introduce self, STEN Trainee, and identify “ALT. STEN” (most experienced engine Captain **not** the Trainee)
    - ❑ Provide brief overview of known incident information and assignment
    - ❑ Work ethic, professionalism, human relations expectations
  - ❑ **Communications**
    - ❑ Identify cell phone numbers, travel and tactical radio frequencies
    - ❑ Determine radio designators for engines/captains, STEN, and STEN (T)
    - ❑ Radio traffic will be kept brief, professional, and to a minimum
    - ❑ Information will normally be exchanged up and down via Captains' Meetings and chain of command.  
*Exception: Immediate and/or unresolved safety issues*
    - ❑ Distribute portable radios/batteries if available/needed
  - ❑ **Engine Readiness**
    - ❑ Full water tank
    - ❑ Rig for probable assignment\*\*
    - ❑ Identify engines
      - ❑ Strike team designator in upper right corner of windshield with white shoe polish applicator
      - ❑ Engine designator/Captain’s name lower right corner of windshield
  - ❑ **Safety**
    - ❑ Review known or probable incident hazards, emphasizing LCES
    - ❑ Engine protection line\*\* & 100 gallon reserve rule
    - ❑ Identify EMS resources on team
    - ❑ Fire shelters in the cab, PPE donned\*\*
    - ❑ Affirm crew evacuation signals and procedure (e.g. where to reform, PAR procedure)
  - ❑ **Travel Procedures**
    - ❑ Response urgency, including appropriate use of Code-3
    - ❑ Travel route, planned stops, reporting location
    - ❑ Keep formation tight; slowest engine in front, ALT. STEN engine bringing up the rear
    - ❑ Advise when approaching quarter fuel during travel, at least half fuel at time of deployment
    - ❑ Fuel payment procedure
  - ❑ **Operations**
    - ❑ Briefly review essential elements of anticipated tactics (e.g. structure protection, progressive hose lay, running attack), emphasizing water conservation and mobility
    - ❑ Identify members having special experience/qualifications, e.g. Hot Shot, sawyer, mechanic
    - ❑ Assignments will primarily be based on crew experience, capability, and readiness
    - ❑ No freelancing. Captains will advise me when their assignments are completed or if they are receiving conflicting orders from Division Supervisor, etc.
    - ❑ Staging means 3-minute ***maximum*** ready time, ***all the time***
    - ❑ Accountability and behavior expectations during unassigned time
    - ❑ I'll try to work with Staging and the Resource Unit to get us in the game, but no guarantees
    - ❑ All supply requisitions will go through the STEN or designee
    - ❑ If anyone is unable to commit to this assignment for at least 96 hours, advise as soon as possible.
  - ❑ **Closing Comments/Questions**
- \*\* May postpone until approaching incident.