



Fireground S.O.P.s (1999 Edition)



THE NEW SOUTH WALES GOVERNMENT

A NSW Rural Fire Service (RFS) Publication

For the use of
Captains
Group Captains
Fire Control Officers
and deputies of all the above.

Suggested distribution:

All fire fighting vehicles – one copy
All Firecoms and bases – one copy

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Fireground SOPs

~ Introduction ~

- Fireground Standard Operating Procedures (SOPs) describe the standard method by which various fireground activities are normally to be carried out.
- While every fire or incident is different, they all share many common features. By working out, in advance, how to react to those common features, you are able to focus all of your attention on the unique features of the particular incident. This reduces your decision making workload at an incident and reduces the possibility that something important might be missed.
- Fire officers do not have to memorise SOPs (the whole point of documenting them is so that the need to carry “everything in your head” is avoided). Commonly used SOPs might be memorised, but those that are used infrequently can, and should, be referred to on the fireground (e.g. by using the “Pocket Tactics” and “Pocket Procedures”).
- By having SOPs, firefighters can also more easily anticipate the actions of each other, lessening the risk of working at cross purposes, which may lead to accidents and/or ineffective firefighting.
- SOPs are usually reflected in RFS training material. If there is a conflict between training material and current SOPs (e.g. because procedures have changed since the training material was produced due to changes in technology, etc.) then the current SOP is to be used.
- Fire Control Officers (FCOs) may issue local SOPs, not inconsistent with these SOPs, which clarify their local application, fill gaps not covered by these SOPs, or modify them to take into account local variations in equipment or situation.
- Fireground SOPs cancel and replace equivalent sections of the Bush Firefighter Health and Safety Code of Practice; in particular section 6, “Fire and Other Emergency Operations”.
- While these SOPs have been based on good firefighting practices, situations might occasionally arise when they are inappropriate to use. If using one in some particular circumstances would contradict the basic priorities given in SOP #1, then the officer affected may, and indeed should, use alternative procedures that better meet those basic priorities. Any such anomalies should be reported to the RFS Head Office via the usual chain of command within 7 days of the incident.
- While some of these SOPs are general in nature and might be used regularly, others are only applicable to specific situations and might only need to be used rarely. In some brigades, some might not be used at all; for example, in a brigade with no structural firefighting role, SOPs #22 and #23 would not be relevant.

S.O.P. #1

Basic Priorities

Scope

This SOP covers the basic priorities to be observed at all fires and other incidents.

Procedure

- The priorities at all fires and other incidents are as follows:
 - Overriding Priority
 - First Priority
 - Second Priority
 - Third Priority
 - Firefighter safety
 - Protect people
 - Protect property
 - Help restore normality.
- **Firefighter Safety** - The Incident Controller is accountable for safety at the incident. Every officer is responsible for the safety of firefighters under their direct control. All firefighters should contribute to the safety and health of other firefighters and other persons in the area. On the fireground everyone should be aware of possible hazards and identify methods to eliminate, reduce or avoid them.
- **Service to those in need** – Consistent with safety, all officers and firefighters should provide the firefighting and related services reasonably needed and wanted by the community. These services should be provided with courtesy and sensitivity. Wherever possible, a better than expected service should be provided. Everyone on the fireground should regularly ask themselves, “If I was the victim of this incident, how would I need and want to be treated? And, what treatment would be beyond what I expect, but really appreciated?”
- **Priority 1** - The first concern should always be, “Is anyone in danger? If so, what can we safely do to protect them?”
- **Priority 2** - The second concern should be, “Is there anything of value in danger? If so what can we safely do to protect it?”
- **Priority 3** - The third concern should be, “Is there anything we can safely do to help restore normality to the affected area?”
- Fire officers are authorised to do any safe, reasonable and legal thing to satisfy the above priorities, even if it does not comply with normally accepted practices.

Definitions

Property - Property includes anything which has a financial, environmental, cultural or personal value.

S.O.P. #2

Pre-Incident Planning

Scope

This SOP covers the procedures for pre-incident planning.

Procedure

- Firefighters should be familiar with the general characteristics and layout of their brigade territory, and the equipment and procedures they are expected to use.
- Officers should have a detailed knowledge of their territory of operation and/or have access to detailed information about that area.
- Officers should have a detailed knowledge, or immediate access to information, about the strategy and tactics to be used at the type of incidents they could reasonably be expected to encounter. All firefighting vehicles should carry a map or street directory for the area, and information (eg: Pre-incident planning data sheets), about significant fire risks in their area.
- At a District level, pre-incident plans shall be developed and maintained to cater for large scale incidents.
- At a Regional level, guidance and support shall be provided for the development of pre-incident plans.
- At State level, guidance and support shall be provided to standardise the format and improve the ease of use of pre-incident plans.

Definitions

Pre-incident Planning Data Sheet (PPD) - A sheet containing information about fire hazards, layout, access, utilities and fire protection features that may be useful during an incident.

S.O.P. #3

Alarm and Dispatch

Scope

This SOP covers the procedure for receipt and dispatch of all emergency calls.

Procedure

- Upon receiving a “000” call, or any emergency call, the NSW Rural Fire Service member receiving the call is to accurately record all details of the incident; in particular
 - type of incident: such as house fire, bush/grass fire, car accident or other emergency.
 - location of incident: such as address, property name, land feature / grid reference.
 - details of who reported the incident, (if available), including name and phone number.
- If the person receiving the call is not a Firecom or Base operator, or the call is of a type or is from a location not covered by the Firecom/Base, they should pass it on immediately to the Firecom, Base or responsible agency.
- Unless local SOPs specify otherwise, the Firecom or Base receiving an emergency call relevant to their area is immediately to dispatch the following minimum response:
 - Bush/Grass Fire: Small: 1 unit – suitably equipped for bush/grass fires.
 Medium: 2 units – suitably equipped for bush/grass fires.
 Large: 5 units – suitably equipped for bush/grass fires.
 - Structure Fire: 2 units with pumps and equipment suitable for village firefighting, (equipped with total of 4 CABA, if available).
 - Vehicle Accident/Fire: 1 unit – suitably equipped for motor vehicle incidents.
 - Other Incidents: Units as specified in local SOP’s, pre-fire plans, or as determined by the Fire Control Officer or designated duty officer.
- Note: Larger initial responses may be specified for grass/bush fires on days of high (or above) fire danger or for structure fires or vehicle incidents which are known to be large.
- See SOP #13 for special precautions during high, very high and extreme fire danger conditions.

Definitions

Unit - A firefighting appliance, eg: a Tanker.

CABA - Compressed air breathing apparatus.

S.O.P. #4

En-route Procedures

Standard Operating Procedure Number 4 – En-route Procedures has been superseded by the [Safe Driving Standard Operating Procedures](#).

S.O.P. #5

Approach and Size-up

Scope

This SOP covers the procedures to be adopted during approach and arrival at an incident.

Procedure

- Incidents are to be approached from the safest known available direction; taking into consideration the type of incident, access and egress routes, wind direction and strength, slope and surface of terrain and specific hazards.
- The Officer in Charge (OIC) of each crew is to brief their crew with known details of the call, known conditions (e.g. weather), known or likely hazards and appropriate precautions; preferably while approaching the incident.
- The OIC of the first arriving crew/s is to assume control (become the Incident Controller), size up the overall situation, report the details by radio to Firecom or Base, and request any needed assistance. Calls for further assistance may be made while still approaching the scene if needed.
- Unless instructed otherwise by their Firecom/Base, the OICs of later arriving crews are to call the Incident Controller (callsign: "(Name of incident) Control" for further instructions when approaching the incident. (Note: In some cases, these OICs may be requested to report to the Incident Controller in person on arrival, or to report to a Staging Area.)
- Size-up is to take into consideration:
 - Safety of operations;
 - Size of incident;
 - Type of incident;
 - Probable development;
 - Specific hazards;
 - Support needed;
 - Identification of safe refuge areas.
- The Incident Controller is to determine the control objectives and strategies for the incident. The Incident Controller is to work out an overall plan of attack and pass on details of it to any subordinate OICs of crews. Tasks are to be allocated by the OIC of each crew to their crew members in accordance with that overall plan of attack.
- Refer to SOP #11 for approach considerations at some specific incidents.

Definitions

Nil

S.O.P. #6

Unit Placement and Staging

Scope

This SOP covers the placement of vehicles and the staging of vehicles at an incident.

Procedure

- First arriving units are to take up safe initial attack positions. These positions are not to obstruct access to or egress from the area, are to be clear of hazardous areas including potential fire, building or tree collapse areas, and be within a safe striking distance. The availability of water supply is also to be considered, where needed.
- Back up units, when approaching the incident, are to call the Incident Controller for further instructions unless advised otherwise by the Firecom/Base. Back up units are to act in accordance with these instructions.

- **Staging Area/s**

The Incident Controller or a person delegated by them may establish staging area(s) to prevent congestion on the fireground from large numbers of incoming units. A Staging Officer may be appointed to co-ordinate activities at the staging area(s). Units will be called to the fireground from the staging area/s when and as needed.

Note: Once a staging area is established, T-cards should be brought into use to account for units at the scene.

- **Assembly Area/s**

The Incident Controller or a person delegated by them, may establish an assembly area/s for the rest, replenishment, briefing and debriefing of personnel and resources at larger incidents.

- Members proceeding to incidents separately from their unit (e.g. in their own car) are to park in a safe location and report to the officer in charge of their unit or a staging area (if established) for briefing before commencing activities on the fireground.

Definitions

Staging area – A suitable location in which units can be marshalled prior to being given specific tasks at an incident. They are designed to eliminate congestion at the incident.

Assembly area – A suitable location, complete with facilities, in which units and crews can be rested, replenished, briefed, debriefed and attended to as necessary.

S.O.P. #7

Rescue Phase Activities

Scope

This SOP covers operations during the period when protecting people is the dominant priority.

Procedures

- Determine if anyone is endangered, and what can be safely done to protect or separate them from the danger.
- Evacuate endangered people to a safe location/s if that is appropriate (evacuation of able-bodied people during a bush fire may not be appropriate). Cordon off the danger area to prevent entry/re-entry by non-emergency personnel. Call or arrange for support for these actions (e.g. Police) if needed.
- Systematically check the area affected by the incident, but which is safe for firefighters to enter, for victims (“primary search”).
- Arrange for any victims already out of danger to be cared for. Assist any victims trying to escape. Safely locate, protect or remove victims who are still endangered. Avoid moving casualties without medical supervision unless they are in grave and imminent danger if left in position.
- If you cannot conduct all needed rescues together, rescue people who are most endangered first and/or such that the most number of people can be rescued as soon as possible.
- Use conventional means of rescue (e.g. via doors or windows) if available, in preference to slower unconventional means (e.g. ladders or cutting in).
- Support rescue operations as needed with such activities as forcible entry, ventilation and the use of hose streams.
- Once rescued, ensure all victims are given emergency care. Normally this will involve a hand over of victims to Ambulance Service care.
- When resources are available, conduct a more detailed check (secondary search) of the fire affected area.

Definitions

- Rescue phase – That part of a firefighting operation when the emphasis is on protecting people. It begins on arrival and ends when it is reasonably certain that all saveable victims have been located and protected or removed from danger.

S.O.P. #8

Suppression Phase Activities

Scope

This SOP covers operations during the period when protecting property (anything of economic, cultural or environmental value) is the dominant priority.

Procedures

- Determine if property is involved or endangered, and what can be safely done to protect it.
- Select a firefighting strategy appropriate to the situation:
 - For a small fire in its early stages – use a first-attack strategy (e.g. extinguisher or hose-reel)
 - For a developed fire – if safely possible, use an offensive strategy (e.g. direct, parallel or indirect attack in bush firefighting, or interior attack by a breathing apparatus team in structural firefighting).
 - For a developed fire – if an offensive attack is not a safe or possible option, use a defensive strategy (e.g. protecting property from bush fire, or an external attack at a structural fire).
 - Where a risk of fire exists, but no actual fire – use a preventative strategy (e.g. use of class A foam to protect structures from a bush fire, or use of class B foam to cover a fuel spill).
- Match the size of the attack to the size of the incident (e.g. big fire – large hoses/nozzles, small fire – small hoses/nozzles).
- Select the available firefighting agent (e.g. water, foam, powder, vaporising liquid, CO₂, etc.) best matched to the type of fuel involved in the incident.
- Direct the initial attack to protect people and their means of escape, then protect exposures in order of importance, then confine and eliminate the fire.
- Use fireground features to best effect to support firefighting operations e.g. use of natural firebreaks (bush fires) and walls and doors (structure fires).
- Support suppression operations as needed with such activities as forcible entry, ventilation, illumination, salvage and the provision of water supply.

Definitions

- Suppression phase – That part of a firefighting operation when the emphasis is on protecting property. It begins at the end of the rescue phase and ends when it is reasonably certain that the incident is under control.

S.O.P. #9

Overhaul Phase Activities

Scope

This SOP covers operations during the period when helping to restore normality is the dominant priority.

Procedures

- Determine whether handing back control to the normal occupier, or securing the scene for investigation, repair or demolition is the most appropriate action.
- Consider using smaller nozzles or nozzle settings for overhaul work.
- Consider using fresh relief crews for overhaul work.
- Arrange for resetting of any automatic fire protection systems.
- Secure the area against entry of non-emergency personnel, if appropriate.
- Advise Police of any fatalities or serious injuries. Persons who are obviously deceased should be left in position until advised otherwise by the Police.
- Generally, do not remove personal effects from victims. If they need to be removed, mark the effects with the victim's identity.
- Record any valuables found. Hand them over to the Police and/or to persons positively identified as the owners, and have the hand over witnessed.
- Determine the probable fire cause. If the cause is suspicious advise the Police. If the cause is difficult to determine, request the attendance of a specialist fire cause investigator.
- Support overhaul operations as needed with forcible entry, ventilation, salvage, illumination and water supply activities.
- Maintain full PPE and use respiratory protection where appropriate.

Definitions

- Overhaul phase – That part of a firefighting operation when the emphasis is on helping to restore normality. It begins at the end of the suppression phase and ends when operational units are no longer needed at the scene.
- PPE – personal protective equipment

S.O.P. #10

Post-Incident Activities

Scope

This SOP covers activities after the end of an incident.

Procedures

After completing operations at an incident:

- All appliances and equipment used should be cleaned, checked and re-stowed.
- Water, foam, vehicle fuel, pump fuel, chain saw fuel/oil and drip torch fuel tanks and containers should be checked and replenished.
- Any damaged, unserviceable, depleted* or worn out equipment (including personal protective equipment) should be appropriately tagged/marked and replaced.
- An operational debriefing of the crew should be conducted by the officer in charge, including discussion of procedures and equipment used; performance of the crew (both positive and negative aspects); and any equipment, procedural, training or maintenance needs that were identified.
- Any injuries to firefighters or damage to equipment during the incident should be reported to the local Fire Control Officer.
- All firefighter accidents or safety incidents are to be reported. The officer in charge is to conduct, or arrange for, an investigation of any firefighter accidents or safety incidents that occurred. The officer in charge, if possible, should take action to prevent a recurrence, or recommend to their Fire Control Officer what action needs to be taken.
- The officer in charge should arrange for a critical incident debriefing (CID) for crew members (through their Fire Control Officer) if a critical incident has occurred.
- The officer in charge should complete an incident report. (For large incidents, other officers at the incident may assist the officer in charge in completing the report.)

Definitions

- “depleted” equipment refers to things such as a discharged fire extinguisher which needs to be sent for recharging or an empty breathing apparatus cylinder.

S.O.P. #11

Procedures for Specific Incidents

Scope

This SOP covers the additional specific procedures for a range of common incidents (Tactical Operating Procedures – or TOPs). In particular they include:

- **SOP 11 part A** - **Bush and forest fires**
- **SOP 11 part B** - **Grass and crop fires**
- **SOP 11 part C** - **Structural fires**
- **SOP 11 part D** - **Hazmats (first responder awareness only)**
- **SOP 11 part E** - **Common flammable liquid fuel incidents**
- **SOP 11 part F** - **Common flammable gas fuel incidents**
- **SOP 11 part G** - **Vehicle incidents**
- **SOP 11 part H** - **Railway incidents**
- **SOP 11 part I** - **Aviation incidents**
- **SOP 11 part J** - **Marine incidents**
- **SOP 11 part K** - **Electrical incidents**

Note: Local SOPs, not inconsistent with these, may also be developed for specific local situations.

Procedures

- Use the other Fireground SOPs in so far as they apply generally to the situation.
- Plus, use one or more of the parts of this SOP, if they match the specific situation.
- Refer to Fireground SOP 28 for incidents where you are working with another agency.
- If you are the Incident Controller, select and put into effect the strategy that is safe and best for the current and anticipated conditions.
- Re-evaluate your strategy if conditions change, are anticipated to change, and at regular intervals (at least every two hours during long operations).
- If you are not the Incident Controller, apply tactics consistent with the Incident Controller's selected strategy. If the selected strategy and/or tactics are not safe, tell the officer supervising you immediately that you need to change them.

Definitions

- Hazmats – means hazardous materials.
- Vehicle incidents – includes car, truck and bus fires or accidents.
- Railway incidents – includes train fires and accidents and fires within railway property.
- Aviation incidents – includes aircraft accidents and fires, fires on airports and fires involving navigation aids.
- Marine incidents – includes fires and accidents involving small marine craft, marinas, navigation aids and associated facilities.
- Electrical incidents include fires and accidents involving electrical equipment and/or electrocution.

S.O.P. #11 - Part A

Bush and Forest Fires

Hazards and Precautions

- Use low risk driving practices.
- Monitor the weather, (i.e. temperature, relative humidity, wind & atmospheric stability).
- During very high or extreme fire danger (and also during high fire danger in heavy fuel areas) avoid areas, trails or roads vulnerable to sudden fire over-run.
- Work from safe operating positions. Use the "LACES" checklist - Lookouts, Awareness, Communications, Escape routes and Safety refuges.
- Beware hazardous trees, logs (rolling) and electrical hazards.
- Use appropriate tactics, procedures, equipment and protective clothing.
- Pace work appropriately. Monitor crew wellbeing. Have adequate water intake and rest breaks. Eat appropriate food. Observe appropriate hygiene arrangements. Use SPF 15+ sunscreen when needed. Have critical incident debriefing, if needed.

Approach

- If possible, approach from upwind and downhill, along a flank. Only use a front-on head attack if your position is a safe refuge from fire overrun.

Rescue

- Keep people clear of endangered areas. (Police are responsible for any decision to evacuate members of the public. The RFS recommends non-able bodied people should be evacuated early, but able-bodied people are safer to remain in well prepared structures during a serious wildfire.) Account for people.

Suppression

- If the flame height, given the expected conditions, is likely to be no more than about 1.5 metres, a direct (offensive) attack is recommended.
- If the flame height, given the expected conditions, is likely to be between about 1.5 to 3.0 metres, a parallel (offensive) attack is recommended.
- If the flame height, given the expected conditions, is likely to be between 3.0 to 5.0/10.0 metres, an indirect (offensive) attack is recommended.
- If the flame height, given the expected conditions, is likely to be greater than about 5.0 to 10.0 metres, a defensive strategy is recommended.

Overhaul

- Check for hazardous trees/logs. Mop up thoroughly, and patrol until the risk of reignition is absent.
- Secure the suspected point of origin, preserve evidence of fire cause and arrange for fire cause determination and investigation if needed.

Other operations

- Support operations, if needed, with other activities such as co-ordinated reconnaissance, back-burning, communications, safety officer duties, water supply, catering, refuelling, replenishing, setting up camps and firefighter transport.

S.O.P. #11 – Part B

Grass and Crop Fires

Hazards and Precautions

- Use low risk driving practices.
- Monitor the weather, (i.e. temperature, relative humidity, wind & atmospheric stability).
- During very high or extreme fire danger, avoid areas, trails or roads vulnerable to sudden fire over-run.
- Work from safe operating positions. Use the “LACES” checklist - Lookouts, Awareness, Communications, Escape routes and Safety refuges.
- Beware tree and electrical hazards.
- Use appropriate tactics, procedures, equipment and protective clothing.
- Pace work appropriately. Monitor crew wellbeing. Have adequate water intake and rest breaks. Eat appropriate food. Observe appropriate hygiene arrangements. Use SPF 15+ sunscreen when needed. Have critical incident debriefing, if needed.

Approach

- If possible, approach from upwind and downhill, along a flank. Only use a front-on head attack if your position is a safe refuge from fire over run.

Rescue

- Keep people clear of endangered areas. (Police are responsible for any decision to evacuate members of the public. The RFS recommends non-able bodied people should be evacuated early, but able-bodied people are safer to remain in well prepared structures during a serious wildfire.) Account for people.

Suppression

- If the flame height, given the expected conditions, is likely to be less than about 3 to 4 metres, a direct (offensive) attack is recommended. (Direct attack may need to be limited to a flame height of 1.5 metres if attacking from the front or if using only hose-reels rather than 38mm branches)
- If the flame height, given the expected conditions, is likely to be between about 4 to 5 metres, a parallel (offensive) attack is recommended.
- If flame height, given the expected conditions, is likely to be greater than about 4 to 5 metres, a defensive strategy is recommended unless a very well established firebreak is available. If safe, contain lower intensity flank fires.
- Use pre-established firebreaks, graders and/or aircraft, or other equipment to advantage.

Overhaul

- Mop up thoroughly, and patrol until the risk of re-ignition is absent. Re-secure cut fences if possible.
- Secure the suspected point of origin, preserve evidence of fire cause and arrange for fire cause determination and investigation if needed.

Other Operations

- Support operations as needed with other activities such as co-ordinated reconnaissance, back-burning, communications, safety officer duties, water supply, catering, refuelling, replenishing.

S.O.P. #11 – Part C

Structural Fires

Hazards and Precautions

- Use low risk driving practices.
- Look out for and avoid building collapse, electrical, hazmat and blood borne hazards.
- Beware of dust explosion (e.g. in grain storage or handling facilities)
- Use appropriate tactics, procedures, equipment and protective clothing (including against cross-infection, if needed).
- Use safety lines to secure persons working in unguarded, elevated positions (e.g. on a sloping roof). Tie off or securely foot ladders when in use.
- Turn off electrical power at switchboard before any offensive firefighting or overhaul operations (preferably while using face protection and insulating gloves).
- Pace work appropriately. Have adequate water intake and rest breaks.
- Monitor crew wellbeing. Have critical incident debriefing, if needed, etc.

Approach

- If possible, position so as not to obstruct others, clear of collapse areas, within a safe striking distance and close to water supply.
- If “no fire showing”, investigate (take a radio, keys/tools and firefighting gear with you) while crew set up hoses and other equipment.
- Where practicable, position appliances to enable specialist appliances such as Rescue and Hazmat to set up when operating at such incidents.

Rescue

- If building is, or might be, occupied, ensure Ambulance has been called. Initiate a primary search. Account for people. Carry out rescues as needed.

Suppression

- If the fire is small and uncomplicated, a first-attack strategy is recommended. An appropriate extinguisher, hose-reel or fire blanket should typically be used.
- If the fire is developing, but the building is still safe to enter for crews equipped and certified in the use of breathing apparatus, then an offensive strategy is recommended. 38mm hose lines should typically be used.
- If the fire has developed and the structure is not safe to enter, or breathing apparatus crews are not available, a defensive strategy is recommended. 38mm or 65mm hose lines should typically be used.
- Fight the fire from the unburnt side of the structure.
- Consider selecting a strategy that will minimise peripheral damage.

Overhaul

- Mop up thoroughly, check hidden areas for fire/heat.
- Leave any sprinkler systems running until fire is out and charged hose lines in place.
- Arrange for any automatic fire detection or protection systems to be reset/serviced.
- Preserve evidence of fire cause.
- Secure building or hand back to appropriate person.

Other operations

- Support operations as needed with such activities as co-ordinated forcible entry, ventilation, illumination, salvage and water supply activities.

S.O.P. #11 – Part D

Hazmat (First Responder Awareness)

Hazards and Precautions

- Hazmats may be explosive, flammable, reactive, oxidising, poisonous, radioactive, corrosive, biological or otherwise hazardous. Precautions may include to:
 - Treat all calls as potential hazmats: Always look for signs of hazmats.
 - Maintain safe distance, minimise time exposure, and maximise shielding and protective clothing/equipment with suspected hazmats.
 - Avoid eating, drinking and smoking if contamination suspected, until checked.
 - Use defensive strategy. (Offensive strategy to be used only by NSW Fire Brigades.)

Approach

- If possible, approach from upwind and uphill. Remain well clear. Call combat authority (NSW Fire Brigades) immediately if hazmat suspected.

Rescue

- Safely evacuate and cordon off danger area. Account for people. Conduct rescue only if safely possible. Note: Victims may need decontamination.

Suppression

- Assume it is a hazmat until positively confirmed otherwise. Only specialised hazmat units (e.g. NSW Fire Brigades) are to conduct offensive operations.
- Only if safe, carry out defensive actions: prevent further spillage, protect exposures, remove other hazards and control other fires.
- Small uncomplicated fires/spills involving common flammable liquid or gas fuels may be dealt with by RFS units: see SOP 11 parts E and F.

Overhaul

- Keep a record of any suspected exposure to hazmats.

Other operations

- Where applicable, support NSW Fire Brigades operations in accordance with Memorandum of Understanding and associated procedures.

S.O.P. #11 – Part E

Common Flammable Liquid Fuel Incidents

Hazards and Precautions

- Hazards may include ease of ignition, rapid build-up of fire intensity, flow or splash of burning/spilt liquid, bursting of liquid containers. etc. Precautions may include to:
 - Control crowd and cordon off the area
 - Remain well clear, upwind and uphill.
 - Eliminate ignition sources (unignited spillage).
 - Consider firefighting from protected location or with unmanned equipment.
 - Use appropriate tactics, procedures, equipment and protective clothing.

Approach

- Approach from upwind and uphill and remain well clear. Call for additional foam and supplementary agents (e.g. extinguishing powder or CO₂) if needed.

Rescue

- Evacuate endangered area, account for people and cordon area off. Initial attack to protect people and establish a rescue path (e.g. with available foam).

Suppression

- If safe, stem leak, contain spillage and prevent it from entering drains.
- Small fire – use a fire blanket or an appropriate type of extinguisher (not water-type).
- Larger incident – call NSW Fire Brigades. In the interim, if safe:
 - Protect exposures, but ensure water does not interfere with foam blanket.
 - Commence foam attack if sufficient equipment and concentrate is at scene. (At least one 225 L/min foam branch per 50 square metres of fire/spill area. Sufficient concentrate for 30 mins is needed – one 20L drum lasts 90 seconds when used with a 225 L/min foam branch, therefore 20 drums will be required).
 - Use extinguishing powder, CO₂ or vaporising liquid as supplementary agents if appropriate.
- If spillage with no fire, evacuate endangered area, blanket spill with foam, remove ignition sources, contain spillage and stem leak, if safely possible.

Overhaul

- Continue applying cooling foam after extinguishment - don't "turn over and damp down" fire area. Avoid actions that disturb the foam blanket, and re-apply foam when and if needed.
- Avoid washing spillages to where they may be a pollution or fire risk. Consider allowing spillages which do not impose a threat to evaporate.

Other operations

- Support operations as needed with such activities as foam and water supply.

S.O.P. #11 – Part F

Common Flammable Gas Fuel Incidents

Hazards and Precautions

- Hazards may include ease of ignition, instant build up of fire intensity, explosions (PUVCE and BLEVE) etc. Precautions may include to:
 - Evacuate firefighters and others from endangered area,
 - Remain well clear, upwind and uphill, not in line with ends of cylinders;
 - Eliminate ignition sources (unignited leak); and
 - Consider fighting the fire from a protected location or with unmanned equipment.
 - Use appropriate tactics, procedures, equipment and protective clothing.
- **Note:** Some (not common) gases (e.g. hydrogen) may burn with almost invisible flames. Some gases (e.g. acetylene and vinyl chloride) may undergo chemical changes if heated. This may lead to internal heating and failure of a cylinder well after the original fire is out. Treat as a hazmat.

Approach

- Approach from upwind and uphill and remain well clear. Determine if a sealed container or pipe is impinged by flames (if so, a BLEVE hazard exists).

Rescue

- Evacuate endangered area, account for people and cordon area off.
- If a large BLEVE hazard exists, safe distances may be 500 metres from sides and several kilometres from ends of the container and firefighters are to withdraw.
- For leakage without fire, beware of PUVCE. Expect explosive ignition at any time. If safe, eliminate all ignition sources (including radios, telephones and other electrical devices).

Suppression

- Don't extinguish burning gas without cutting off the leaking supply.
- For small fires/leaks involving portable LP Gas cylinders - if safe, shut off valve with gloved hand. If cylinder on side, setting it upright may reduce leakage.
- Larger Incident – call NSW Fire Brigades. In the interim, if safe:
 - Protect exposures. (A minimum of 2000 L/min is needed to protect each point of flame impingement on a large gas cylinder.)
 - Shut off valves to control escaping gas if safely possible. Use a five firefighter fog attack to approach valve/s if needed.
 - Water spray may help to disperse or direct an escaping gas cloud. (Note: The warmth of water applied to a leaking cylinder may increase the rate of leakage.)

Overhaul

- Continue applying cooling water for at least 30 minutes after extinguishment.

Other operations

- Support operations as needed with evacuation and water supply, and other logistics as required.

S.O.P. #11 – Part G

Vehicle Incidents

Hazards and Precautions

- Hazards may include traffic, electricity, hazardous components, vehicle roll/tip, dangerous contents, SRS airbags and blood. Precautions may include to:
 - Apply traffic control and appropriate appliance and firefighter positioning.
 - Use appropriate tactics, procedures, equipment and protective clothing (including against cross-infection where needed).
 - Look out for electrical hazards (such as downed power lines, power kiosk).
 - Chock vehicle and disconnect battery, only if needed (earth terminal first, then active terminal).
 - Make spillages safe (e.g. use of foam).
 - Avoid air bags, bumpers, shock absorbers and magnesium wheels, gas filled boot and bonnet struts, and seatbelt fittings.

Approach

- If possible, position so as not to obstruct others, out of hazardous areas, upwind, uphill and within a safe striking distance of the incident. Consider use of a vehicle to shield work area from traffic.

Rescue

- If vehicle is, or might reasonably be occupied, ensure Ambulance has been called. Initiate a primary search. Account for people. Protect search and rescue with a charged 38mm hose line (or equivalent) with fog/spray nozzle. Consider use of foam if fuel spillage is present.
- Protect and provide emergency care for trapped or injured persons. Unless no alternative is available (e.g. due immediate threat from fire), leave removal of casualties to accredited rescue units.
- Protect victims and rescue workers from fire.

Suppression

- Small electrical or engine fire – use appropriate extinguisher or hose-reel.
- Fire in other compartments or abandoned vehicle fire – use a 38mm hose line (or equivalent) - beware of possible hazmats.

Overhaul

- Ensure vehicle cannot roll or tip, contain or cover spillages, disconnect battery (earth terminal first, then active terminal), cool hot exhausts and remove ignition sources.
- Use gentle water or foam application. Avoid disturbing foam blanket.
- Check for hot spots in tyres, upholstery, floor coverings, wiring, luggage, air filters and inside concealed areas (safely feel for hot/warm spots).
- Protect vehicle or cargo recovery operations

Other operations

- Support operations as needed with such activities as co-ordinated forcible entry, ventilation, illumination, salvage and water supply activities.

S.O.P. #11 – Part H

Railway Incidents

Hazards and Precautions

- Hazards may include rolling carriages, rail traffic, electricity, diesel fuel, automatic fire suppression systems and hazardous cargo. Precautions may include to:
 - Remain clear of active rail lines.
 - Liaise with rail authorities and warn approaching trains.
 - Avoid overhead wires and wire collapse areas.
 - Have train crew isolate electric traction power.
 - Use appropriate tactics, procedures, equipment and protective clothing (including against cross-infection, if needed).

Approach

- Do not enter railway property without informing the rail authority. Identify the location by the numbers fixed to railway posts, signals, bridges or tunnels.
- Advise the railway authority via radio or via railway telephones at rail signal posts.
- Maintain a lookout in both directions and post persons at least one kilometre away to flag down trains with a red rag by day or a red light by night.

Rescue

- Treat passenger carriages like a structure fire. Evacuate passengers to carriages remote from the fire if safe. Do not evacuate persons onto adjacent tracks.
- Extensive use of breathing apparatus equipped and certified crews will be needed for any incidents involving tunnels.

Suppression

- Ensure the train crew has shut down power to fire affected areas and has operated any fire protection system, if appropriate.
- Small fire – use appropriate extinguisher or hose-reel.
- Larger fires – use a 38mm hose line (or equivalent). Avoid running hose across tracks. Consider use of foam if large amounts of flammable liquid fuel are involved. Beware of hazmats at freight train incidents.
- Fresh water fog at 850+ kPa may be applied to fires involving electric trains, unless it is a major derailment or collision. Do not touch electrical equipment on or near trains until power is isolated. If there is a risk of overhead wires collapsing or an incident in a tunnel, power will need to be isolated on all tracks before action is taken.

Overhaul and other operations

- Support operations as needed with forcible entry, water and foam supply activities and other logistics as required.

S.O.P. #11 – Part I

Aviation Incidents

Hazards and Precautions

- Hazards may include propellers and rotors, other aircraft, fuel, combustible metal or synthetic structure, hazardous cargo, radar emissions, oxygen cylinders, pyrotechnics, armaments, canopies, ejection seats, blood, etc. Precautions may include to:
 - Look out for and remain clear of runways and associated areas.
 - Remain clear of any radar, armament, canopy or ejection seat danger areas.
 - Liaise with aviation staff (airport staff, pilot/s, air traffic control, etc.).
 - Use appropriate tactics, procedures, equipment and protective clothing (including against cross-infection, where needed).
 - Make spillages safe (e.g. use of foam).
 - Avoid interfering with wreckage, switches or controls.

Approach

- Liaise with aviation staff for guidance. If standing by for an abnormal landing, set up equipment ready for an immediate large foam attack supported by supplementary agents (e.g. extinguishing powder).
- If possible, position so as not to obstruct others, upwind, uphill and within a safe striking distance of the incident.
- Do not position in the line of fire of armaments or radar (combat aircraft).

Rescue

- Direct initial firefighting (usually using Class B foam) to create a fire free/safe area in the vicinity of trapped persons and create a rescue path for them.

Suppression

- Small electrical or engine fire – use appropriate extinguisher or hose-reel.
- Large fire – use foam, applied rapidly and massively to the spilt fuel and any burning components (other aircraft parts do not normally need to be smothered). Magnesium components may need to be smothered with dry earth or sand.
- Treat fires in airport buildings like structure fires, but expect flammable liquids to also be involved. Treat fires in radio navigation aids like an electrical fire. Note that such aids will have more than one power supply.

Overhaul

- Leave the area as intact as possible for accident investigators. Make spillages safe and remove ignition sources.
- You may remove people, animals and mail from a crashed aircraft and move it if it is causing a hazard. Take photographs and record actions taken for investigators.

Other operations

- Support operations as needed with forcible entry, illumination, foam, water supply activities and other logistics as required.

S.O.P. #11 – Part J

Marine Incidents

Hazards and Precautions

- Hazards may include fuel, fuel vapour in bilge spaces, gas cylinders, flares and hazardous contents, and capsizing of vessel. Precautions may include to:
 - Maintain look out, and approach and position appropriately.
 - Use appropriate tactics, procedures, equipment and protective clothing (including against cross-infection where needed).
 - Make spillages safe (e.g. use of foam).
 - Avoid excessive use of water or foam.

Approach

- If approaching by boat, if possible approach to a safe attack distance from upwind, upswell/stream, keeping your bow pointed towards the incident.
- Remain clear of spilt fuel and hazardous flotsam.

Rescue

- Look out for victims on board or in the water.
- Direct initial firefighting to create a fire free/safe area in the vicinity of trapped persons and create a rescue path for them.

Suppression

- Small electrical or engine fire – use appropriate extinguisher (e.g. CO₂).
- Large fire – use a 38mm line or equivalent. Consider use of foam if large amounts of fuel are involved.
- Treat fires in marinas like structure fires, but expect flammable liquids to also be involved.

Overhaul and other operations

- Support operations as needed with forcible entry, illumination, foam, water supply activities and other logistics as required.

S.O.P. #11 – Part K

Electrical Incidents

Hazards and Precautions

- Hazards may include ladders touching power lines, fallen or exposed power lines or wiring, accidents involving electrical installations, conduction through hose streams or damp equipment, arcing of high voltages to earth through smoke/flame, step potential and hazmats in electrical components. Precautions may include to:
 - Look out for electrical hazards.
 - Use care when using ladders, hose streams and electric lights/tools.
 - Have electrical power isolated.
 - Avoid potential wire collapse areas.
 - Remain well clear of fallen wires.
 - Use special precautions when using water.

Approach

- Always look out for electrical hazards. Check for wires before getting out of a vehicle. Remain well clear of collapsed wires.
- If power distribution equipment is involved, remain generally upwind and uphill, and well clear, and call for electricity authority emergency personnel.

Rescue

- Person in contact with live conductor – ensure power is isolated before rescue. If voltage is less than 650 volts, person may be dragged clear using insulating materials, but their skin must not be touched until clear of power.
- Wires down on vehicle – Have occupants drive clear if possible. If not have them remain in vehicle until power is isolated. If vehicle on fire, occupants may jump clear as a last resort, but must not touch vehicle and ground at same time and must jump or hop until well clear.
- Person inside sub-station enclosure – call them to the fence, have them avoid any electrical equipment, then wait until electricity authority arrives.

Suppression

- Small electrical fire – if safe, turn off power and use appropriate extinguisher (not water, wet chemical or foam).
- Large electrical fire – get assistance and advice from electrical authority - beware of possible hazmats.
- Use water only with special precautions (voltage known, fresh water used, sufficient distance, water fog used, indirect application, insulated position).

Overhaul

- Ensure power remains isolated during overhaul – e.g. safety lock and “danger” tag switches or retain removed fuses.

Other operations

- Turning off power to buildings by firefighters only to be done at domestic switchboards, preferably while using face protection and insulating gloves.

S.O.P. #12 - Part A

Emergency Procedures – Bush & Grass Fires

Scope

This SOP covers emergency procedures if a crew is threatened by bush and grass fires. Note that these are procedures of “last resort” and there is no guarantee they will be successful in preventing death, injury or damage. Avoidance of circumstances which may lead to a crew being threatened by fire is always preferred.

Procedure

- In vehicles;
 - Warn everyone who may be in immediate danger.
 - Send an emergency radio call giving details, callsign and location.
 - Ensure all firefighters are wearing full personal protective equipment (PPE), and that all PPE is correctly fastened and adjusted.
 - Park vehicle in an open space or burnt ground (if possible), close all vents and windows and leave engine running.
 - Ensure all crew are sheltered under blankets, if available.
 - Operate protective equipment (spray bars).
 - Operate emergency lights and headlights.
 - After the fire has passed, assess the situation and, if the vehicle is still safe, remain with the vehicle.
 - If the vehicle has become hazardous, remain together as a crew and move to a safer location, (crew members are to take blankets with them, if available, for supplementary protection).

- On foot;
 - Move to bare ground or the area of least vegetation.
 - Ensure all PPE is correctly worn and fastened.
 - Attempt to shelter in a depression or embankment, or behind other shelter.

- In a structure;
 - Turn off all electrical and gas systems.
 - Fill bath and sinks with water.
 - Ensure gutters are clear, then block downpipe and fill with water.
 - Close all doors and windows and seal gaps with towels or similar material.
 - If possible have a battery powered radio and torch in working order.
 - Once the fire has passed, move outside and extinguish any hot spots, and check the house for any signs of fire, especially the roof and under the house.

Definitions

PPE - Personal Protective Equipment (e.g. overalls, boots, helmet, gloves, goggles, emergency entrapment hood.)

S.O.P. #12 – Part B

Emergency Procedures – Village Fires

Scope

This SOP covers the emergency procedures to be used at structure fires, vehicle incidents and other similar village-type fires/incidents.

Procedure

- If a danger to the crew is identified, those in danger are to be warned and the Officer-in Charge (OIC) notified immediately. Upon observing or being advised of danger to the crew, the OIC is to:
 - Activate a standard emergency signal;
 - Advise crew of what action to take.
- Upon hearing an emergency signal, crew members are to evacuate the area of operations and report to their appliance.
- Local SOP's should indicate the preferred emergency signal/s to be used.
- When operating in compressed air breathing apparatus (CABA) and a Distress Signal Unit (DSU) is heard, CABA team members are to render immediate assistance to the person in distress.

Definitions

Emergency Signals may consist of any or all of the following:

- Repeated whistle blasts;
- Intermittent blasts of siren at 5 second intervals;
- Repeated tugs on guide lines and hose lines;
- Emergency radio message.

S.O.P. #13

Special Precautions During High, Very High or Extreme Bush Fire Danger

Scope

This SOP covers special precautions to be applied during bush or grass firefighting during periods of high, very high or extreme bush fire danger

Procedures

- All units assigned to bush or grass fires are to be advised of the current (grassland and/or forest) fire danger index and rating (high, very high or extreme), the Haines Index (indicates atmospheric instability), and their significance regarding the recommended selection of firefighting and safety standards.
- All units are to be advised of any forecast significant changes in weather conditions. These include a worsening of the fire danger rating, passage of a front or change, significant wind changes, expectation of severe weather (e.g. thunderstorms), or severe wind shear (from Bureau of Meteorology Doppler radar, where available).
- All units are to be advised of any significant operational hazards relevant to them, such as aircraft or heavy earth moving equipment engaged in firefighting with them, and any locations close to them known to be threatened by fire over run.
- All units are to be advised of any unusual command, control or communications arrangements, such as a Section 44 declaration or use of non-standard radio channels.
- All units are to be advised of any relevant special (SOP #24) safety warnings, to avoid areas, trails or roads vulnerable to sudden fire over-run (e.g. along ridges or hillsides in the vicinity of fire) and to re-evaluate their current strategy at least every two hours.
- Normally, the above information is to be supplied to units by the RFS District Firecom, according to local procedures. These may include by radio when units depart their station, by general broadcast, via pagers, by other electronic means, by the distribution of information sheets, verbally or by any combination of these methods.
- The information may be passed either directly to units, or indirectly via the Incident Controller and chain of command at an incident, or by means of a briefing or information sheet supplied at an assembly or staging area, etc.
- Where units normally communicate with a Base or a “home-based” Firecom, rather than an RFS District Firecom facility, the above procedures are not mandatory, but are recommended wherever feasible.

Definitions

Section 44 declaration – a declaration that firefighting at a particular incident or within a defined area is being coordinated under the provisions of section 44 of the Rural Fires Act, 1997.

Atmospheric instability – a meteorological condition in which a rising parcel of air in the atmosphere will tend to continue to rise rather than quickly stabilise. Instability is associated with potentially fiercer and “freakier” fire behaviour.

S.O.P. #14

Grassland Firefighting from Moving Vehicles

Standard Operating Procedure Number 14 – Grassland Firefighting from Moving Vehicles has been superseded by the [Safe Driving Standard Operating Procedures](#).

S.O.P. #15

Access and Forcible Entry

Scope

This SOP covers obtaining access and making forcible entry in association with firefighting and related activities.

Procedures

- Any officer of the rank of Deputy Captain or above can enter premises, without notice, in a Rural Fire District if:
 - Signs of fire (including smoke, flames, odours, heat or sounds) are emanating from the premises.
 - Cries of distress or alarm are emanating from the premises.
 - There is reasonable concern that fire is present on the premises or that persons are trapped and perhaps unable to call for help.
 - For the purposes of investigating the cause and origin of a fire or for determining whether a person was trapped by the fire or incident, following the incident.
- Force may be used if:
 - Persons or animals are in grave or imminent danger (or there is reasonable suspicion to that effect).
 - The damage or injury done using force is likely to be less than the damage or injury that would result if force was not used.
- If there is no sign or suspicion of fire at secured premises to which a call has been received, await the arrival of a key-holder rather than commencing forcible entry.
- If an owner or occupier actively prevents access, you may not use force unless the Police are present and have directed the use of force.
- When cutting through wire fences for access, use diagonal cuts so that temporary repairs can be made to the fence afterwards.
- Minimise overall damage during any forcible entry. Use standard means of entry (doors, windows, stairs, etc.) in preference to non-standard means of entry (e.g. ladders, through roof tiles, cutting in, etc.) where possible.
- Use forcible entry tools in such a way as not to cause a risk of injury to the operator, any persons trapped and any persons nearby.
- Use forcible entry techniques to gain access to any fire hidden within building or vehicle structure.

Definitions

- Forcible entry – The use of tools or equipment to gain access to secured premises or to parts of a building or vehicle structure that are normally hidden.

S.O.P. #16

Use of Water and Water/Chemical Mixes

Scope

This SOP covers the use of water and water/chemical mixes for firefighting.

Procedures

- The hose stream pattern should be selected according to firefighting conditions. For example, use a straight stream pattern for a long striking attack, a fog pattern for close-quarters firefighting, etc.
- Unless otherwise specified by the manufacturer, recommended nozzle pressures are:
 - Standard branches with straight nozzles of 12mm or less diameter – 250 kPa
 - Combination jet/spray nozzles up to 20mm diameter and dial-a-jets – 500 kPa
 - Larger nozzles, fog nozzles and foam making branchpipes – 700 kPa.
- As a “rule of thumb” in pumping operations, friction loss in typical RFS operations may be calculated using a figure of 100 kPa per 30 metre length of hose.
- Height loss/gain in pumping operations may be calculated by adding 10 kPa to the pump pressure for every metre the nozzle is above the pump, or subtracting 10 kPa for every metre the nozzle is below the pump.
- Do not use hard suction hose when obtaining water from a hydrant system.
- Each line of hose used to supply water through a pump relay should not be expected to carry any more than:
 - 1000 litres per minute for 65 mm hose
 - 500 litres per minute for 50 mm hose
 - 250 litres per minute for 38mm hose.
- Do not use firefighting chemicals (foam, retardants, etc.) in areas where run off will enter rivers, streams or other watercourses.
- Foam for flammable liquid firefighting (eg. AFFF) shall be used in a 6% concentrate in water solution, unless specified otherwise by the manufacturer.
- Foam for bush, grass, structural and similar firefighting (eg BFFF) shall be used at 0.1 to 0.25% concentration for mop-up, 0.25 to 0.75% concentration for general firefighting and 1% for heavy duty firefighting (eg. protection of structures against intense wildfire).
- As soon as possible wash any part of the body contaminated by a firefighting chemical with clean water. Use all precautions specified in the appropriate Material Safety Data Sheet when decanting or handling open containers of firefighting chemical concentrates (if not specified, as a minimum use PVC gloves and protective goggles).

Definitions

- Nil

S.O.P. #17

Backburning Activities

Scope

This SOP covers backburning - both strategic and tactical.

Procedure

- Backburning is used in indirect and parallel attacks and may be used to help defend a specific asset during defensive operations.
- Strategic backburning is used as the primary means to halt the main fire. It needs to be carefully co-ordinated, suitably resourced and must only be conducted under orders from the overall Incident Controller.
- Tactical backburning is used to protect a specific asset. It must not interfere with other firefighting operations and must only be conducted under orders from the officer in charge of the area which it will affect.
- All backburning must be strictly supervised. Officers in charge must ensure:
 - Weather and fuel conditions are suitable for a controllable backburn.
 - Adequate time and resources are available for the backburning operation (eg: tankers, firefighters, look-outs, communications, etc).
 - Backburning is commenced from suitable, safe “anchor” point/s.
 - Firefighters light-up on the correct side of the firebreak.
 - Spotovers can be quickly extinguished.
 - Firebreaks are sufficiently wide to be effective.
 - Wind direction and strength and relative humidity are monitored for change.
 - If firefighters can no longer see or communicate with one another, they are to cease lighting-up until they can.
- Backburning is not to be conducted when:
 - People or savable property is in the path of a backburn.
 - The fire is running in extreme conditions or the weather is forecast to create extreme conditions before the backburn is likely to be secured.
 - Long distance spotting is occurring.
 - The location of the fire edge is unknown.
 - There are no adequate control lines.
 - There is insufficient time or resources to conduct the backburn.

Definitions

Backburning: Igniting a fire so that it burns “back” towards the main fire along the inner edge of a control line to consume the fuel in the path of the main fire.

S.O.P. #18

Use of Chainsaws

Scope

This SOP covers the use of chain saws during firefighting and related operations.

Procedures

- Unless otherwise approved by the Fire Control Officer, operations involving the use of a chainsaw are only to be carried out by a certified chainsaw operator.
- The use of a chainsaw is at the discretion of the chainsaw operator, and no other person is to "direct" them to undertake such operations.
- The falling of trees on the fireline is only to be conducted by a certified chain saw operator (Fire Line Tree Felling level), or a certified chainsaw operator (Intermediate Tree Felling level) working under the supervision of a certified chainsaw operator (Fire Line Tree Felling level).
- At fires or incidents that may require tree falling operations, the Incident Controller should request a fireline tree falling team to be made available.
- Members of a fireline tree falling team are to be certified to at least intermediate (simple) tree falling level, with at least one operator certified to fireline tree falling level. One operator is to act as a falling safety officer during tree falling operations.
- Tree falling activities are only to be carried out when there is no other safer means of resolving the threat of a hazardous tree.
- Tree falling operations are to be confined to daylight hours unless there is an urgent safety requirement to fall the tree, and adequate floodlighting of the tree, its canopy and surrounds can be provided at the scene.
- The falling of "hung up" trees is not be conducted without the use of machinery or mechanical assistance.

Definitions

- Certified chain saw operator – A person who is certified as competent to an appropriate level by the NSW Rural Fire Service (RFS) or other nationally registered training provider. Appropriate levels are:

NSW RFS Qualification	Equivalent Forestry Harvesting Units:
Fire Line Cross Cutting	H4.7 – Trim and cross-cut fallen trees
Intermediate Tree Felling	H5.1 – Fall trees manually - intermediate
Fire Line Tree Felling	H6.1- Fall trees manually - advanced

S.O.P. #19

Use of Earthmoving Equipment

Standard Operating Procedure Number 19 – Use of Earthmoving Equipment has been superseded by the [Use of Heavy Plant Standard Operating Procedures](#).

S.O.P. #20

Use of Remote Area Firefighting Teams

Scope

This SOP details where and when it is appropriate to use Remote Area Firefighting Teams (RAFT) and the considerations associated with their use.

Procedures

- RAFT's are used where vehicle access is not possible and the early intervention of such teams is safely possible, and would be of significant benefit.
- RAFT operations are not to be implemented where actual or forecast fire danger conditions are Very High or Extreme.
- RAFT operations may only be implemented during High Fire Danger where conditions are forecast and confirmed as improving. Dedicated aerial support for extraction must be available at all hours to the team if deployed during High Fire Danger.
- Requirements for a RAFT deployment include:
 - The RAFT must have at least two methods of extraction, one of which does not depend on external assistance (e.g. helicopter).
 - The team is to consist of a minimum of 5 crew with at least 2 being first aid qualified and at least 1 being a chainsaw operator CSO (if carried).
 - The team must have reliable communications with the Incident Controller, or a person delegated by them, available at all times. Regularly scheduled (at least hourly during times of activity) communications are to be maintained.
 - Regular, scheduled communications must be implemented between the Incident Controller and the RAFT.
 - Rescue operations will be implemented if 2 or more consecutive scheduled transmissions are missed.
 - The team is to be self-sufficient for the planned duration of their deployment, plus 24 hours.
 - RAFT operations may only be implemented within the area of coverage of aero-medical evacuation services.

Definitions

Remote area firefighting – firefighting in areas which are only accessible by helicopter insertion, by boot or by hiking or riding in for typically more than about one hour.

S.O.P. #21

Use of Aircraft in Firefighting

Scope

This SOP covers the use of aircraft during firefighting and related operations.

Procedures

- The use of aircraft may be approved and funded at a local level by a Fire Control Officer or at a state level by NSW Rural Fire Service (NSW RFS) State Operations.
- Aircraft may be used for any of the following tasks:
 - Strategic reconnaissance (e.g. high altitude infra-red linescan).
 - Tactical reconnaissance (e.g. low altitude visual spotting).
 - Fireground reconnaissance (e.g. observation of fire behaviour and firefighting operations from a manned aircraft or an unmanned aerial vehicle (UAV)).
 - Air attack (e.g. water/retardant/incendiary dropping by fixed or rotary wing aircraft).
 - Air attack supervision (supervision of aircraft conducting attacks on fire).
 - Aerial transport of firefighting crews, equipment and supplies.
 - Aerial insertion and recovery of remote area crews (e.g. rappel insertion).
 - Airborne command, control and/or communications.
- The Incident Controller is to consider requesting temporary restricted airspace be declared in the vicinity of a major fire when two or more aircraft or a UAV is involved in protracted operations.
- Aircraft operations are to be at the discretion of the pilot, and no other person is to “direct” them to undertake such operations.
- Persons rappelling from helicopters, or operating as Air Observers, Air Attack Supervisors, Helicopter Winch Operators or as part of a support team for aircraft operations shall be certified as competent to the level/s specified by the NSW RFS.
- Air attack is to be limited to those circumstances where it is known to be appropriate and effective. These may include:
 - To slow the progress of a fire so that there is time to mount an offensive attack against it, or so that it will impact on an area at a more favourable time.
 - To help protect specific threatened assets.
 - To assist with remote area firefighting operations.
 - To assist with lighting up and/or patrolling a backburn.
- Personnel are not to be in, or close, to areas targeted for aerial attack.
- Communication is to be immediately available between the Incident Controller and persons conducting aerial operations at an incident, either directly or through their normal chain of command and communications.

Definitions

Nil

S.O.P. #22

Ventilation of Fires

Scope

This SOP covers the use of ventilation as an aid to firefighting in structures or at similar incidents.

Procedures

- Ventilation may be used to:
 - Reduce the risk of backdraught and improve visibility for firefighters.
 - Improve survivability for trapped persons and assist rescue operations.
 - Help control the direction of travel and minimise the spread of fire.
 - Reduce damage caused by smoke and other fire products.
 - Reduce or prevent potential, or actual occurrence of flashover.

- Ventilation may be either:
 - Horizontal – e.g. by opening doors/windows upwind and downwind of the fire.
 - Hydraulic – i.e. ventilation assisted by the use of a water fog spray.
 - Mechanical – i.e. ventilation assisted by fans (positive or negative pressure).
 - Vertical – e.g. by opening roof vents or roof structure.

- Vertical ventilation may only be used when it does not involve firefighters needing to be positioned in a vulnerable area above the fire - e.g. remotely opening roof vents is permissible, but not cutting through roof structure when a fire is below.

- Ventilation is to be closely co-ordinated with other fireground activities. When used to assist fire suppression, ventilation shall not be commenced until adequate hoseline/s are ready for firefighting in the area.

Definitions

- Ventilation – making openings to release smoke and circulate air through a fire affected structure to improve safety and assist firefighting.

- Positive pressure ventilation (PPV) – a form of mechanical ventilation in which a fan/s is placed so as to force clear air into and through a fire affected structure.

- Negative pressure ventilation (NPV) – a form of mechanical ventilation in which a fan/s is placed so as to extract contaminated air from within a fire affected structure.

S.O.P. #23

Salvage Activities

Scope

This SOP covers salvage activities associated with firefighting or similar operations.

Procedures

- Salvage activities typically include:
 - Moving, covering or protecting goods threatened by fire, smoke or water.
 - Using hoses in such a way as to minimise water damage.
 - Control of water accumulation and runoff.
 - Using “clean” firefighting agents (e.g. CO₂) and techniques on sensitive items.
 - Cleaning up and preventing corrosion from fire products.
 - Protecting and securing items of particular value.
 - Securing the building after the incident.
- Salvage activities may be commenced as soon as rescue activities have been completed and when sufficient, appropriate resources are at the scene.
- During salvage or similar activities, use safety lines to secure persons working in unguarded, elevated positions (e.g. on a sloping roof). Tie off or securely foot ladders when in use.
- Salvage activities must not interfere with fire cause determination. If a fire is suspicious or the cause is unknown, salvage operations will need to be curtailed or limited to prevent loss of evidence.

Definitions

- Salvage – any actions done to minimise or repair the damage from a fire/incident or fire/incident control operations.

S.O.P. #24

Special Safety Warnings

Scope

This SOP covers special safety warnings transmitted from a State, Regional, District or incident control level of the Rural Fire Service (RFS) to firefighters on the fireground.

Procedures

- A special safety warning is to be issued by an RFS state, regional, district or incident control level unit upon becoming aware of any matter which may significantly affect the safety of people operating at a fireground under their operational jurisdiction.
- Special safety warnings are to be limited to significant safety issues, and are not be issued for trivial matters. Examples of significant safety issues include:
 - warnings of the use of air attack or heavy earthmoving machinery in an area,
 - a hazardous location or event, (e.g. a damaged bridge),
 - an approaching wind change and/or thunderstorm activity;
 - a revised forecast indicating the fire danger will be worse than originally expected.
- Special safety warnings should normally include a recommended response to the warning. It should also tell the person/unit receiving it to record what they did in response to it and the time they did it.
- Special safety warnings may be issued by e-mail, fax, telephone or radio. Generally speaking, e-mail or fax shall be used down to District level, with units in the field being advised by radio.
- If you issue a special safety warning:
 - keep either a copy or a record of its content,
 - record the time it was issued,
 - list the units or persons to whom it was directly issued,
 - keep a record of the response to the warning by those units or persons.
- If you send a special safety warning and is not responded to within 30 minutes or 10 minutes if transmitted by radio, contact the unit/person involved and ensure they have received it.
- If you receive a special safety warning,
 - record the time it was received,
 - keep a copy, or record its content,
 - record and report back your response to it.

Definitions

Nil

S.O.P. #25

Fireground Organisation

Scope

This SOP covers how the fireground should be organised during an incident. It should be used in association with Fireground SOP #26.

Procedures

- As a general principle, no person should directly control or supervise more than about 8 units, or groups of units, on the fireground. If there are more, then some or all of the control or supervision should be delegated.
- The Incident Controller, or any officer with a delegated control or supervisory function may organise the units or groups of units working directly under them in the way that they believe will best achieve control of the incident.
- To enable such delegated control or supervision, units may be organised into “single resources”, “strike teams” (if all units are of the same type), or “task forces” (if made up of units which are not alike). There is to be an overall commander and a common system of communications within each task force/strike team.
- To enable effective management of the fireground, the Incident Controller or Operations Officer may divide it into sectors, each with a sector officer in charge. If needed, sectors may be grouped into divisions, each with a division officer in charge.
- Sectors or divisions may be named after geographic features, compass points, or be given a code letter or number. At structure fires, sectors surrounding a building are given letters, A, B, C...etc., starting from the side facing the main entrance in a clockwise direction, as viewed from above. Sectors for floors correspond to the floor number (eg: Basement, Ground, 1, 2, 3...etc).
- Persons or teams which have a function that extends across several sectors or divisions may report directly to a another senior officer, but need to keep any affected sector/division officers-in-charge informed of their activities.
- While fireground functions do not necessarily correspond to any rank, at small incidents it would normally be expected that a Brigade level officer would be the Incident Controller. At medium incidents a Group Officer might typically be the Incident Controller. At very large incidents it would typically be expected that brigade Officers (or equivalent) would be in charge of units and teams, and Group Officers (or equivalent) would be in charge of sectors and/or divisions.

S.O.P. #26 – Part A

Incident Management - General

Scope

This SOP covers how the Incident Control System (ICS) should be applied.

Procedures

- The Incident Control System (ICS) is to be used at all incidents.
- Only one ICS position, the “Incident Controller”, is mandatory. Having a specific officer fill any of the other positions is optional.
- If an ICS position is not delegated, its function is carried by the position which normally supervises it, unless advised otherwise by the Incident Controller.
- The total number of officers supervising incident activities should not normally exceed about 25% of the total number of personnel involved. The total number of members of a core incident management team (IMT) should not normally exceed 5% of the total number of personnel involved. As examples:
 - Small incident - normally no ICS positions delegated - all functions carried by the Incident Controller – the Incident Controller is typically the local Captain or Deputy Captain - incident action plan is usually unwritten.
 - Medium incident - normally the ICS Operations function is delegated - Incident Controller is typically the local Captain, Group Captain or Deputy Group Captain - incident action plan is usually in a simple written format, and typically supported by use of maps and T-cards.
 - Large incident - normally the ICS Operations, Planning and Logistics functions are delegated - Incident Controller is typically the local senior officer - incident action plan is fully documented.
 - Very large incident - positions within Planning and Logistics functions are usually delegated - Incident Controller is typically someone nominated in the local fire management plan - incident action plan is fully documented.

Definitions

- ICS – A structure of delegation to ensure that all vital management and information functions are adequately performed.
- Core IMT – Core Incident Management Team – this includes only the Incident Controller, and if delegated, persons carrying out the Operations Officer function and any Planning or Logistics functions. It does not include Division/Sector officers, technical specialists, agency representatives or other miscellaneous officers.
- For the purposes of this SOP, a typical small incident is one which involves up to about 20 personnel, a medium incident about 40, a large incident about 100, and a very large incident about 500 or more.

S.O.P. #26 – Part B

ICS – The Incident Controller Function

Scope

This SOP covers how the ICS Incident Controller function should be applied.

Procedures

- The officer in charge of the first arriving unit/s is the Incident Controller, unless/until control is taken over by a more senior officer or a relieving officer.
- The Incident Controller is normally from the agency with legislative responsibility for the incident, or is appointed under relevant legislation, or is appointed in accordance with a relevant Bush Fire Operations Plan.
- The initial Incident Controller should assume control, assess the incident, plan and approve the combat of the incident, ensure the safety of all personnel, allocate tasks, report the situation, appropriately liaise with any supporting personnel/public/media, and manage the overall incident.
- If the incident expands or extends, in addition to the above and if needed, the Incident Controller should appropriately delegate ICS functions, conduct changeover briefings, review the existing incident action plan, and supervise the incident management team.
- As guidelines, when scaling an incident up or down:
 - Small incident - normally no ICS positions delegated – control point is wherever the Incident Controller is located at the incident.
 - Medium incident - normally the Operations function is delegated and the Incident Controller carries the Planning and Logistics functions – an incident Safety Officer may be appointed – control point is typically the Incident Controller's vehicle (e.g. a Group Officer's vehicle) at the incident.
 - Large incident - normally the Operations, Planning and Logistics functions are delegated – Control Point is usually a Communication's centre/bus.
 - Very large incident - positions within the Planning and Logistics functions are also usually delegated.

Definitions

- ICS – A structure of delegation to ensure that all vital management and information functions are adequately performed.
- For the purposes of this SOP, a typical small incident is one which involves up to about 20 personnel, a medium incident about 40, a large incident about 100, and a very large incident about 500 or more.

S.O.P. #26 – Part C

ICS – The Operations Function

Scope

This SOP covers how the ICS Operations function should be applied.

Procedures

- An Operations Officer need only be appointed if the incident is of such proportions that the Incident Controller can no longer carry that function alone, or if it is specified for multi-agency operations.
- The Operations Officer is normally from the agency with greatest expertise in combating the incident and/or the most resources committed to the incident.
- The Operations Officer is to be briefed by the Incident Controller, develop the Operations portion of the incident action plan, manage overall incident combat operations, manage allocated resources, report accidents and maintain a log of activities; and may establish/maintain staging and/or assembly areas.
- Operations are to be conducted according to the incident action plan approved by the Incident Controller.
- Strategies and tactics are to be developed from the objectives in the incident action plan. Strategies and tactics may be adjusted to changing circumstances to better meet the incident objectives, if needed.
- Resources at the incident may be grouped into functional teams (called “groups” in some agencies), strike teams or task forces.
- The incident ground may be subdivided into Sectors, if needed, with a Sector Officer in charge of each.
- Sectors may be grouped under Divisions, if needed, with a Division Officer in charge of each.
- Specific tactics are directed by the various subordinate Officers who report to the Operations Officer via the Sector/Division chain of command. They are also responsible for the supervision of all resources allocated to them, including monitoring their location and activities.

Definitions

- ICS – A structure of delegation to ensure that all vital management and information functions are adequately performed.
- The Operations Officer is the officer responsible for implementing the incident action plan. Division and sector officers are responsible for implementing their division and sector plans, consistent with the overall incident action plan.

S.O.P. #26 – Part D

ICS – The Planning Function

Scope

This SOP covers how the ICS Planning function should be applied.

Procedures

- A Planning Officer need only be appointed if the incident is of such proportions that the Incident Controller can no longer fulfil that function.
- The Planning Officer is normally a person, regardless of rank or agency, who has a high level of expertise in planning for the type of incident involved.
- The Planning Officer is to keep track of the current situation, predict the developing situation, monitor the status of resources, monitor the strategy being employed and develop alternatives, consultatively develop the incident action plan, organise incident demobilisation and manage the planning team (if one is assembled).
- At very large incidents, the Planning Officer may delegate functions to a Situation Unit (weather, reconnaissance, mapping, incident prediction), Resources Unit (disposition of resources), Management Support (clerical, etc.), Information Service (e.g. public and media) and Technical Specialists.
- Usually the Planning Officer is to coordinate development of the incident action plan for the next shift, or other suitable next cycle of incident control, not for the current incident control activities.
- The incident action plan usually needs to consider “best case”, “worst case” and “likeliest case” scenarios in the appreciation process.
- The incident action plan is to be sufficiently flexible to enable Operations personnel to adapt strategies and tactics to changing situations, to better meet incident control objectives during the life of the plan if needed, without additional reference to the Planning Officer.
- The Planning Officer is to monitor the disposition of resources as regards their general status and location. (Note: Monitoring the specific activities of units/persons within a team, strike team, task force, sector or division is the responsibility of the officer to whom those resources are directly reporting. It is not the Planning Officer’s function.)

Definitions

- ICS – A structure of delegation to ensure that all vital management and information functions are adequately performed.
- The Planning Officer is the officer in an incident management team reporting to the Incident Controller and responsible for co-ordinating overall planning.

S.O.P. #26 – Part E

ICS – The Logistics Function

Scope

This SOP covers how the ICS Logistics function should be applied.

Procedures

- A Logistics Officer need only be appointed if the incident is of such proportions that the Incident Controller can no longer fulfil the function.
- The Logistics Officer is normally a person, regardless of rank or agency, who has a high level of expertise in the logistics function.
- The Logistics Officer is to be briefed by the Incident Controller, estimate resource requirements (in consultation with the Planning and Operations officers), participate in the development of the incident action plan, acquire resources, provide incident communications facilities and manage the Logistics team (if one is assembled).
- At very large incidents, the Logistics Officer may delegate functions to a Supply Unit (personnel, equipment and supplies), a Facilities Unit (control centre, sanitation and accommodation), a Ground Support Unit (fuelling, mechanical maintenance, security and traffic planning), a Communications Unit (communications facilities), a Medical Unit (first-aid or medical staff), a Catering Unit and a Finance Unit.
- The Logistics Officer is responsible for acquiring resources for incident control from outside of the incident. The Operations Officer becomes responsible for operation's resources once they have arrived and are committed to the incident.

Definitions

- ICS – A structure of delegation to ensure that all vital management and information functions are adequately performed.
- The Logistics Officer is the officer in an incident management team reporting to the Incident Controller and responsible for overall logistical support for the incident.

S.O.P. #27

Command and Control

Scope

This SOP covers who should be the officer in command and/or control at incidents and procedures for handing over command or control to another officer.

Procedures

- Unless specified otherwise by a local bush fire management plan, local SOP, the Fire Control Officer (or duty delegated officer); the officer in overall command of Rural Fire Service units at an incident shall be:
 - For small incidents, the senior officer assigned to the incident from the brigade in whose area the incident has occurred.
 - For medium incidents, the senior group officer assigned to the incident from the brigade group in whose area the incident has occurred.
 - For large incidents, the person designated under the arrangements given in the local fire management plan.
- Except in the multi-agency situations detailed in SOP #28, the officer in overall control of all firefighting agencies at a fire or similar incident in a Rural Fire District is the same officer as that specified above to be in command of the RFS units at that incident.
- An officer taking over command or control of an incident, or a unit or group of units, is to carry out a hand-over/take-over procedure. The hand-over/take-over procedure is to include a briefing, a formal statement of taking over (e.g. "I have control"), and advising the changeover to those immediately above and below in the chain of command.
- The briefing from the officer handing over to the officer taking over is to include:
 - Situation – fire situation, weather, resources.
 - Mission – objectives to be achieved.
 - Execution – strategy, tactics and tasks allocated.
 - Amin./assistance – water supply, food and fuel arrangements, support.
 - Command/control /communications – chain of command, comms. system.

Definitions

- **Command** – The direction of members and resources of an agency in performance of the organisation's role and tasks. Authority to command is established in legislation or by agreement within an agency. Command relates to agencies and operates vertically within an agency.
- **Control** – The overall direction of response activities in an emergency situation. Authority for control is established in legislation or an emergency response plan, and carries with it the responsibility for tasking and co-ordinating other agencies in accordance with the needs of the situation. Control relates to situations and operates horizontally across agencies.

S.O.P. #28

Multi-Agency Operations

Scope

This SOP covers procedures for operations involving other firefighting agencies.

Procedures

- Where the Commissioner of the NSW Rural Fire Service, or a person delegated by the Commissioner, has taken charge of bush firefighting operations under Section 44 of the Rural Fires Act, 1997 the Incident Controller is the person specified by the Commissioner or by the person delegated by the Commissioner.
- At hazardous materials incidents on land or inland waterways, the Incident Controller is the officer assigned that role by the NSW Fire Brigades (NSWFB).
- At bush or grass fires in a national park, state forest or similar area, the Incident Controller shall be the person assigned that role in the local bush fire operations plan.
- Unless specified otherwise by the Fire Control Officer, (or delegated duty officer); at all other fires or similar incidents in a NSW Rural Fire District, the Incident Controller shall be:
 - For small incidents, the senior officer assigned to the incident from the RFS brigade in whose area the incident has occurred.
 - For medium incidents, the senior group officer assigned to the incident from the RFS brigade group in whose area the incident has occurred.
 - For large incidents, the person designated under the arrangements given in the local fire operations plan.
- At a joint operation involving a structure fire within a NSW Rural Fire District, the senior NSW Rural Fire Service officer on the scene will be the Incident Controller and the attending NSW Fire Brigades (NSWFB) officer will normally be the Operations Officer.
- At a joint operation involving a bush or grass fire within a (NSWFB) Fire District, the senior NSW Fire Brigades member on the scene will be the Incident Controller and the attending NSW Rural Fire Service officer will normally be the Operations Officer.
- If the scale and complexity of a joint operation does not warrant having a separate Operations Officer, attending officers from each agency may jointly determine that the Operations Officer function is to be carried by the Incident Controller.
- Wherever possible, units operating at multi-agency incidents shall use a common incident communications network.
- Operations should be consistent with the local Mutual Aid Agreement (MAA).

Definitions

- Joint operation – a firefighting operation or similar activity involving units of both the NSW Fire Brigades and NSW Rural Fire Service within a defined Mutual Aid Zone (MAZ).

S.O.P. #29

Issuing Orders

Scope

This SOP gives a model for issuing orders at an incident.

Procedures

Use the SMEAC acronym, as described below. For simple situations, such as detailing a specific task to firefighters, the orders might consist of only a couple of sentences. For large and complex situations, such as detailing the overall handling of a large incident, the orders may include a comprehensive and detailed briefing.

- **S - Situation** – Describe what is happening.

Consider including the overall situation, what's at risk, the topography, current and expected fire behaviour, current and forecast weather, resources available, resources en-route, disposition of resources, and problems encountered.

- **M - Mission** – Describe what needs to be achieved.

Consider including your overall mission, specific objectives, who or what is saveable, where you want to stop the fire.

- **E - Execution** – Describe how you want things done.

Consider including how to execute the attack, strategies and/or tactics to be used and timing of activities. Safety considerations are to be emphasised.

- **A – Administration / Assistance** – Describe how it will be supported.

Consider including what logistical support is needed and/or will be provided for the attack (such as personnel, fuel, food, water, supplies, facilities), and where and/or when it will be needed/provided.

- **C – Command / Control / Communications** – Describe how it will be co-ordinated.

Consider including fireground organisation (such as sectors), who is in charge, the chain of command, the communications channels and procedures to be used.

Definitions

- Nil

S.O.P. #30

Situation Reports (Sitreps)

Scope

This SOP covers giving situation reports (sitreps) at incidents

Procedures

- At all incidents, verbal sitreps shall be given:
 - by the officer in charge, to the District Firecom or Base
 - by any other officer in the chain of command established at the incident, to the officer they are directly reporting to at the incident.
- Verbal sitreps should be given:
 - shortly after arrival at the incident,
 - whenever the situation or resources change significantly,
 - when major benchmarks have been achieved (e.g. building all clear of occupants, fire under control, operations completed, etc.),
 - if any event occurs which may attract public or media attention,
 - and, if none of the above apply, every 30 minutes, unless otherwise requested.
- Verbal sitreps given by radio shall be in the format detailed in NSW Rural Fire Service (RFS) Communications SOPs.
- Written sitreps are normally only prepared for large, complex or notifiable incidents.
- Written sitreps are required to be supplied to the NSW RFS State Operations Centre by the Fire Control Officer (FCO), or a person delegated by the FCO, for all notifiable incidents. (Only a summary sitrep and map of the incident is normally required. A copy of the full incident action plan is not to be sent unless specifically requested.)
- Written sitreps for long duration incidents are to be forwarded at least twice each day, unless specified otherwise by RFS State Operations.

Definitions

- Notifiable incident – An incident which:
 - involves death or serious injury,
 - involves a serious incident not related to the incident being attended,
 - is likely to cause media attention (such as evacuations, major road closures),
 - requires assistance from outside the District or other agencies,
 - involves a significant non-fire emergency (such as hazmat, flood, earthquake),
 - is a fire controlled under the provisions of section 44 of the Rural Fires Act, 1997.
- Note: Notifiable incidents do not include:
 - attending a motor vehicle accident for fire protection,
 - assisting at a local search and rescue,
 - assisting at a minor hazmat,
 - the closure of a bush track or local road.

S.O.P. #31

Use of Radio at Incidents

Scope

This SOP covers the use of radio at incidents. It should be used in association with RFS Communications SOPs.

Procedures

- When leaving their station/shed to go to an incident, units should call on their local Firecom/Base channel. The local Firecom/Base operator will advise them if they need to change to a different channel for the incident.
- During an incident, units should communicate and maintain a listening watch on the same channel as the unit that is in direct charge of them.
- During an incident where multiple channels are in use, units which are in charge of others may need to maintain a listening watch both on the channel used by the people reporting to them, and the channel used by the people to whom they are reporting.
- If a unit does not have a serviceable or compatible radio, they should team up with another unit with whom they are operating, which does have a serviceable, compatible radio.
- If radio communication is lost, unless it would be unsafe to do so, a unit may continue with their current activity while attempting to re-establish contact.
- If a unit needs to operate in an area where there is no reliable radio communications, they should team up with a “buddy” unit and communicate with each other on an agreed (simplex working) channel. These buddy units should be close enough together to render assistance and/or fetch help should an accident or breakdown occur, but not so close that they are likely to both be caught by the same accident.
- After leaving an incident, units should call the local Firecom/Base for the area and report their departure. If there is a group of units, a single call may be made for the entire group.
- When returning from an incident outside the local Rural Fire District, units should report when they are back in their own District to their local Firecom/Base. If there is a group of units, a single call may be made for the entire group.
- At all other times, units should maintain a listening watch on the local Firecom/Base channel for the area in which they are operating.

Definitions

- Firecom – The callsign of the local Rural Fire District Communications Centre.
- Base – The callsign of an RFS communications unit other than the Rural Fire District Communications Centre (e.g. a Homestead, Brigade or Brigade Group base station).

S.O.P. #32

Neighbouring Assistance

Scope

This SOP covers obtaining assistance from neighbouring Rural Fire Districts in the event of their help being needed at a large or complex incident.

Procedures

- Arrangements for neighbouring assistance should be established by the Fire Control Officers involved and promulgated in a local District Assistance Plan (DAP). These arrangements should include the number and type of units likely to be available to provide such assistance under various conditions.
- Neighbouring assistance should only be requested and provided in accordance with a DAP.
- Neighbouring assistance should be requested if the resources needed by the Incident Controller exceed those available locally and/or if neighbouring units are closer.
- When requesting neighbouring assistance, the need for sufficient, suitably qualified officers, communications arrangements and logistical support also needs to be considered. If these are not available locally, they may also need to be requested.
- When requesting neighbouring assistance, if possible, supply the following information:
 - The type and probable duration of the incident.
 - The number and type of units needed.
 - To where those units should proceed.
 - To whom those units should report.
 - On which channel/s they should communicate.
- When being requested to provide neighbouring assistance:
 - If possible, obtain details about the incident (as listed in the section above).
 - In accordance with the DAP, call out the appropriate units.
 - As units call on departure from their station/shed, advise them of where they are to go, who they should report to and what channel/s to use for communication when they are approaching the incident.
 - If the above information is unavailable, advise units to call the Firecom or Base of the District requesting assistance as they approach it for further information.
- Neighbouring units should proceed under normal road rules (not respond under lights and siren) to the incident, unless specifically requested to do otherwise.
- While providing assistance, units from neighbouring areas should operate under the command, control and communications arrangements specified for the incident by the Incident Controller.

Definitions

- Neighbouring assistance – Fast assistance from outside the local District, provided on a locally agreed basis as in the DAP. It does not involve state or regionally arranged task forces. (**Note:** Normally, if an Incident Controller requests more assistance, the local Firecom/Base will determine if that assistance needs to be called from neighbouring Districts.)

S.O.P. #33

Out-of-Area Assistance

Scope

This SOP covers obtaining assistance from an organised task force/s from out-of-area in the event of help or relief being needed at a large, complex or long duration incident.

Procedures

- Arrangements for out-of-area assistance should be established by NSW Rural Fire Service (RFS) regional offices or State Operations.
- Units and crews earmarked for use in out-of-area task forces should be available for such deployments within the notice specified and for the duration specified.
- Out-of-area assistance may only be requested and provided in accordance with the Regional Assistance Plan (RAP) and State Assistance Plan (SAP).
- Out-of-area assistance should be requested if the resources needed exceed the number and/or operational endurance of those available under local arrangements.
- Requests for out-of-area assistance should be directed to the appropriate RFS regional office. The request should include the following information:
 - The type of incident and probable duration of need for out-of-area assistance.
 - The number and preferred type of units needed.
 - To where those units should proceed and report.
 - What, if any, logistical support will be provided locally for them.
- When being requested to provide out-of-area assistance:
 - Obtain details about assembly of the task force/s (units needed, time and place).
 - In accordance with the RAP and SAP, call out the appropriate units.
 - As units call on departure from their station/shed, advise them of where they are to assemble, who they should report to and what channel/s to use for communication when they are approaching the assembly area.
- An out-of-area task force/s should proceed under normal road rules and convoy arrangements (not respond under lights and sirens) to the incident.
- The commander of an out-of-area task force/s is to be briefed and allocated a mission/s by the Incident Controller, or an officer delegated by the Incident Controller.
- While providing assistance, units from out-of-area task forces should operate under the command, control and communications arrangements specified for the incident by the Incident Controller.

Definitions

- Out-of-area assistance – Assistance provided on a regional or state arranged basis in the form of an organised task force/s. Each usually includes a minimum of five appropriate firefighting units, relief crews, command and support units, a designated commander and a common communications system. It is normally requested by the District Fire Control Officer or a Section 44 Controller.

S.O.P. #34

Fire Cause Determination

Scope

This SOP covers determining the cause or causes of fires.

Procedures

- All firefighters/officers should make a note of anything that might assist determining the cause of a fire and advise it to the officer in charge. These might typically include:
 - Suspicious activities or persons at, or leaving, the scene.
 - Fire conditions on arrival (what's involved, fire intensity, smoke, flames, odours).
 - Fire behaviour during the fire (rate and direction of spread, unusual behaviour).
 - Signs of a break in, multiple points of ignition or evidence of accelerants.
 - Statements or comments by occupiers or onlookers.
 - A consistent pattern of fires.
- Until the cause is determined, overhaul activities are to be confined to preventing re-ignition and making the area safe for authorised entry. Every effort is to be made to preserve the scene, especially the point of origin, as intact as possible for investigation.
- If a fire involved a fatality or serious injuries, or was suspicious and involved or threatened significant property, the Police are to be immediately called.
- The officer in charge or the District's Fire Control Officer may request the attendance of a certified fire cause investigator to determine the cause of the fire. This should normally be done if significant property has been lost or was threatened, or where it they may be helpful to assist a Police investigation. Fire cause investigators may be contacted via the NSW Rural Fire Service Head Office Call Centre.
- Fire cause investigators are to operate in compliance with the appropriate Memorandum of Understanding between the Police and Fire Services.
- In other cases, the officer in charge should determine the probable point of origin of the fire, the probable cause of ignition and the probable type of material first ignited.
- Any costs of investigation by Fire Service personnel are to be regarded as part of the cost of the suppression of a fire and funded accordingly.

Definitions

- Suspicious fire - A fire which has, or might have been, deliberately lit for profit, malice or other gain.

S.O.P. #35

Operational Debriefing

Scope

This SOP covers operational debriefing: that is, the debriefing conducted after an incident and designed to analyse the operation and improve future operations.

Procedures

- A debriefing should be conducted after all incidents, although debriefings for small “day to day” incidents will usually be short, uncomplicated and not recorded, except for comments, if needed, on the fire report.
- Each crew leader should conduct a debriefing of the members of their crew, preferably immediately after an incident.
- Each sector officer, division officer and officer in charge should conduct a debriefing of those persons who reported directly to them during the incident, each preferably as soon as possible after any debriefings at a lower level in the chain of command have been completed.
- Debriefings should neither praise nor condemn actions, but seek to improve future operations. The following aspects should normally be considered:
 - The facts – that is: what happened and what was done.
 - Analysis – that is: relevance of equipment, procedures and training.
 - Recommendations – that is: what can be improved.
- A written report should be made of the debriefing when specified by the Fire Control Officer, or in any case where it is believed it might be helpful to pass on recommendations to the Fire Control Officer for later reporting back to those who made the recommendations.
- A written report of an operational debriefing to the Commissioner is required for any fire co-ordinated under Section 44 of the NSW Rural Fires Act, 1997.
- Operational debriefings are not to be combined with critical incident debriefings.

Definitions

- Operational debriefing – a debriefing conducted after an incident and designed to analyse the operation and improve future operations.
- Critical incident debriefing – a debriefing conducted after a critical incident and designed to mitigate the likelihood and/or effects of critical incident stress.

S.O.P. #36

Critical Incident Support Services

Scope

This SOP covers critical incident support services (CISS): that is, services provided in response to a critical incident and designed to mitigate the likelihood and/or effects of critical incident stress.

Procedures

- A critical incident support service should be arranged by the Fire Control Officer for any incident which involves a fatality or serious injury or other event which could result in critical incident stress.
- Critical incident support services may be requested at any time by a member through their Fire Control Officer. Fire Control Officers can arrange critical incident support services through the NSW Rural Fire Service Head Office Call Centre (1800 049 933).
- Persons trained in critical incident support services may be assigned to be available at or near the scene during large, complex or protracted incidents.
- Critical incident debriefings may include persons from outside the NSW Rural Fire Service, but not “observers” or members of the media.
- Critical incident debriefings are not to be recorded and operational debriefings are not to be combined with critical incident debriefings.

Definitions

- Critical incident debriefing – a debriefing conducted after a critical incident as part of critical incident support services and designed to mitigate the likelihood and/or effects of critical incident stress.
- Operational debriefing – a debriefing conducted after an incident and designed to constructively analyse the operation and improve future operations.

S.O.P. #37

Incident Reporting

Scope

This SOP covers the reports to be provided after a fire or incident.

Procedures

- A report shall be prepared for all incidents attended by the NSW Rural Fire Service.
- The report shall be submitted as soon as possible after the incident. Reports for small incidents should normally be provided within 24 hours of the end of the incident. Narrative reports attached to the incident report for larger incidents should normally be completed within seven days of the end of the incident.
- The report is to use relevant components of the Australian Incident Reporting System (AIRS) as specified for use in the NSW Rural Fire Service.
- The person submitting the primary report is normally to be the officer in charge (Incident Controller) at the time when the most number of units were allocated to the incident. The officers in charge of other units (other than that Incident Controller) may submit a secondary report to record their attendance and activities.
- At larger incidents, normally under the control of a Group Officer or higher ranking officer, a narrative report should be attached to the incident report, giving times and details of the development of the incident, key decisions made, and the allocation of resources and tasks.
- Incident reports may be submitted, using the standard form, via the Fire Control Officer to the NSW Rural Fire Service Head Office Call Centre. Alternatively, with the approval of the Fire Control Officer, they may be submitted over the telephone to the NSW Rural Fire Service Head Office Call Centre, or submitted by direct entry into the system through an on-line computer.

Definitions

- Nil

S.O.P. #38

Media Liaison

Scope

This SOP covers liaison with the media regarding fires and incidents.

Procedures

- The media should be treated with courtesy and given any reasonable assistance in accurately informing the community of events of interest.
- Media statements should only be made by the Commissioner and Fire Control Officers of the NSW Rural Fire Service or persons within their chain of command specifically approved by them.
- Media liaison officers may be appointed for specific incidents and/or in accordance with local SOPs.
- Media statements should be factual, clear and concise.
- Media statements should avoid speculation about the cause or consequences of incidents, not criticise agencies or individuals, and not release the name of any persons killed or injured (refer any such requests to the Police).

Definitions

- Nil

S.O.P. #39

Public Liaison

Scope

This SOP covers liaison with the public regarding fires and incidents.

Procedures

- All members of the public should be treated with courtesy.
- In addition to providing firefighting and similar services, firefighters and officers should attempt to provide a better than expected service to the victims of incidents. This might typically include such actions as:
 - Ensuring that firefighters and officers speak and act with appropriate sensitivity.
 - Ensuring that victim's property is treated with appropriate respect.
 - Ensuring victims are under constant care until handed over to another agency, unit or appropriate person (e.g. the Ambulance Service, Chaplain or relative).
 - When appropriate, providing an accurate and understandable description of what has happened and what has been done at the incident.
 - Finding out if they have any anxieties (e.g. a fear that a fire might re-ignite) and reassuring them through appropriate words and actions.
 - Contacting, or providing a means of contact, with relatives/friends.
 - Arranging or providing transport (e.g. when stranded at the scene of a car fire).
 - Arranging for welfare services, such as securing of damaged premises or caring of pets.
- In essence, firefighters and officers should put themselves in the position of the victim/s, ask themselves how they would expect to be treated, then do at least that and, if possible, do better.
- Firefighters and officers should ensure "victims" do not attempt to interfere with or conceal evidence of their complicity in a suspicious fire.
- If valuables are recovered, they should be passed on to the Police. Handover of valuables to victims should be in the presence of a Police Officer and only after the identity of the owner of the valuables has been confirmed.
- Personal effects should normally not be removed from victims. If it is necessary, ensure both the person and the effects are appropriately identified (e.g. tagged).

Definitions

- Nil

S.O.P. #40

Fireground Health, Safety and Welfare

Scope

This SOP covers health, safety and welfare issues when firefighters are operating on the fireground. It should be used in association with other Fireground SOPs and Firefighter Health and Safety SOPs.

Procedures

- Members of the NSW Rural Fire Service are not to undertake activities while they are suffering the effects of any injury, illness, fatigue, medication, alcohol or other drugs to an extent which could affect their health or safety, or that of others.
- Universal precautions are to be used at incidents involving the handling of casualties or possible contact with blood or similar.
- Officers are to keep track of the location and activities of units or personnel assigned to their immediate command. At larger incidents (e.g. typically controlled by a Group Officer or higher) or when staging or assembly areas are established, a T-card system or similar is to be used to keep track of units and personnel assigned to the incident.
- Officers should stay aware of the condition of firefighters under their control and arrange for rest, rotation, refreshment and welfare of those firefighters when needed.
- Officers are to keep track of the location and safety of members of other agencies or the general public within their area of control on the fireground.
- Members of the NSW Rural Fire Service are not to work alone on a fireground unless they have reliable two-way communication with another unit and maintain regular contact with them (at least once every 30 minutes).
- A Safety Officer, reporting directly to the Incident Controller, should be assigned to larger incidents (e.g. if using an unmonitored radio channel). The Safety Officer is to monitor safety conditions (e.g. fire behaviour, weather, strategy and tactics, etc.) on the fireground and may stop activities that he/she believes present an inordinate risk.
- Firefighters should be available to provide timely assistance to firefighters who get into difficulties at an incident. At large fires, a team or teams kept in reserve to provide such assistance and an Ambulance on stand-by should be considered.
- Sufficient potable water is to be carried in firefighting vehicles and personnel carriers for drinking and treatment of burns. As a minimum, 2 litres is to be carried for each crew position on the vehicle.
- Incidents involving a civil disturbance, such as crime, riots or aggressive behaviour should be regarded primarily as a Police responsibility. Firefighting units should remain clear until the incident scene is secured.
- All safety incidents/accidents are to be reported.

Definitions

Nil

S.O.P. #41

Use of Personal Protective Equipment (PPE)

Scope

This SOP details the personal protective equipment (PPE) to be used by members while operating on or close to a fireground.

Procedures

Bush (Including Grass Land Firefighting) Firefighting PPE

Prior to the commencement of the 2000/2001 fire season, or the 1st October 2000, whichever occurs sooner, the following is to apply:

- While engaged in bush firefighting activities, members are to wear, and have correctly adjusted, the following equipment:
 - Approved two piece bush firefighting outfit, or bush firefighting overalls.
 - Approved bush firefighting boots and helmet.
- In addition, while engaged in bush firefighting activities, members are to have the following equipment readily available to them and correctly use it when needed:
 - Approved bush firefighting gloves and goggles.
 - Approved bush firefighting protective respiratory mask.
- If exposure to bush fire entrapment is imminent, members should also use an:
 - Approved emergency entrapment hood (carried on person).
 - Approved supplementary protection blanket (carried on vehicles).

Village Firefighting PPE

- While engaged in defensive structural firefighting or other “village-type” incidents, members are to wear, and to have correctly adjusted, the following equipment:
 - Approved bush firefighting PPE as already listed above.
 - Approved structural firefighting turn-out jacket, if available.
- While engaged in offensive structural firefighting or similar, members are to wear and to have correctly adjusted the following equipment:
 - Approved structural firefighting turnout pants, worn over the top of two piece bush firefighting outfit pants.
 - Approved offensive structural firefighting turn-out jacket.
 - Approved structural firefighting boots, helmet and gloves.
 - Approved structural firefighting protective hood.
 - Approved compressed air breathing apparatus, complete with a distress signal unit.
- In addition, members are to have the following equipment readily available to them and correctly use it when needed during offensive (carried on person) or defensive (carried on vehicles) village firefighting and similar operations:
 - Approved firefighter’s torch.
 - Approved gloves and goggles for protection against blood-borne pathogens.

Definitions

Nil

S.O.P. #42

Use of Fire Trails

Scope

This SOP details the procedures for the use of fire trails.

Procedures

- During periods of low or moderate fire danger conditions, fire trails may be used without any special precautions, apart from normal safe driving procedures.
- During periods of high or very high fire danger, sections of fire trails vulnerable to fire over-run are not to be used unless they are confirmed as safe for use.
- In determining whether a section of fire trail is vulnerable to fire over-run, the following factors are to be taken into account:
 - Whether active fires are in the area.
 - The type, quantity and arrangement of fire fuels.
 - The height, slope and aspect of the terrain.
 - The current and forecast weather conditions.
 - The characteristics and condition of the trail.
 - The presence of suitable refuges.
- In confirming whether the trail is safe for use, consideration is to be given to the statistics that most fire over-runs have typically occurred:
 - on an uphill slope,
 - in light “flashy” fuels,
 - at small fires or quiet sections of larger fires,
 - during an unexpected change in fire behaviour, and
 - sometimes within less than one minute of the firefront being sighted.
- Confirming the trail is safe usually means either:
 - The trail itself is an adequate refuge along its entire length, or
 - There is a means of observing whether the trail is threatened by fire, and vehicles are able to move clear of any threatened section in under one quarter the expected time it would take for the fire to over-run it.
- During extreme fire danger and/or when the atmosphere is dry and unstable (e.g. Haines Index = 6), the use of fire trails in or near the vicinity of fires should be avoided.

Definitions

Nil

S.O.P. #43

Safety Refuges from Bush and Grass Fires

Scope

This SOP details the features needed for an effective safety refuge from a bush or grass fire, and the circumstances in which they need to be provided and used.

Procedures

- A safety refuge needs to be available to firefighters while operating at any bush or grass fire.
- A safety refuge is an area clear of any significant combustibles to a horizontal distance (in the direction of an approaching fire) of at least four times the predicted flame height.
- All firefighting is to be anchored from (commenced from) a suitable safety refuge.
- Under conditions when a direct attack is safely possible, the already burnt out area may be regarded as a safety refuge.
- Under conditions when a parallel attack is safely possible, the area already back-burned out may be regarded as a safety refuge.
- During indirect firefighting operations:
 - A safety refuge is to be available within 100 metres of where any firefighter is working, if only one escape route to a safety refuge is available.
 - The distance to a safety refuge may be increased to 250 metres if two or more different escape routes to safety refuges are available.
 - The escape route shall be such that a firefighter could move along it on foot to the safety refuge at a jogging pace, if needed.
 - Firefighters are to be told where their safety refuge is located and how to get to it.
 - A lookout is to be posted to warn firefighters of any approaching fire or spot fire.
 - A means of immediately warning firefighters of any danger is to be available.
 - Firefighters are to proceed to their safety refuge area if warned of danger from any approaching fire or spot fire.
- During defensive firefighting, firefighters are to operate only from within safety refuges.
- A vehicle or building should not be regarded as a safe haven from a fire unless it is located within a safety refuge area and has been properly prepared as a safe haven from fire. (Note: In a life threatening emergency, a poorly situated building or vehicle might be the only available shelter from a fire, but safety cannot be assured.)

Definitions

Significant combustibles – means any combustible material other than very short grass, or limited amounts of vegetation or materials of a type unlikely to become involved in the fire.