



A systematic approach to embedding safety, well-being and risk management when responding to interstate and international deployments

Julian Smith, Graeme Dudley, Andrew Stanios, David Sayce, and Andrew Collins

Drivers



Create a safe workplace Insurance Claims Providers Contact

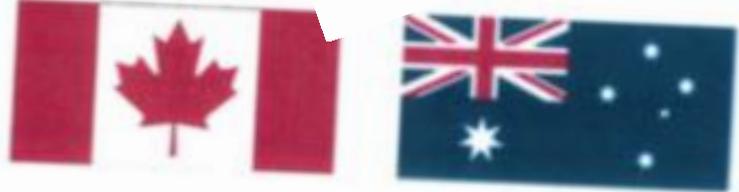
Home >

Occupational Health and Safety Act and Regulations

The Occupational Health and Safety Act 2004 and related regulations aim to keep Victorian workplaces safe.



OPERATING PLAN FOR THE EXCHANGE OF WILDLAND FIRE MANAGEMENT RESOURCES BETWEEN UNITED STATES OF AMERICA AND AUSTRALIAN PARTICIPANTS



ARRANGEMENT BETWEEN THE DEPARTMENT OF NATURAL RESOURCES OF CANADA AND EMERGENCY MANAGEMENT AUSTRALIA ON THE EXCHANGE OF WILDLAND FIRE MANAGEMENT RESOURCES

Arrangement for Interstate Assistance Fire and Emergency Services

Part 1 of 2 Principles

Commissioners and Chief Officers Strategic Committee

Version 3 August 2016

Version No. 095 Forests Act 1958

No. 6254 of 1958

Version incorporating amendments as at 28 November 2007



Drivers



International Experience



Strange Landscapes



Different People



Different Practice and Culture



Response – Standard Operating Procedure

**Interstate and International Deployments
- Outbound**
Doc ID: 20-SOP- 2.7.2
Date effective: 05/07/2018
Forest Fire Management

History of changes

| Ver | Approved | Effective | Summary of Changes | Owner | Approver |
|-----|------------|------------|--------------------|---|--------------------|
| 1.0 | 05/07/2018 | 05/07/2018 | New Document | Command and Control Support Unit, Forest and Fire Operations Division | Chief Fire Officer |

1.0 Purpose
This document, and its subordinate Work Instructions, provide guidance on how Forest Fire Management Victoria (FFMV) supports the safe and effective deployment of our resources under various mutual aid arrangements. It is recognised that such deployment request is unique and requires a high level of flexibility and dynamism to be

**Interstate and International Deployments
– Safety Systems Comparison**
Doc ID: 20-WI- 2.7.2.1
Date effective: 05/07/2018
Forest Fire Management

History of changes

| Ver | Approved | Effective | Summary of Changes | Owner | Approver |
|-----|------------|------------|--------------------|--|--------------------|
| 1.0 | 05/07/2018 | 05/07/2018 | New Document | Command and Control Support Unit, Office of the Chief Fire Officer | Chief Fire Officer |

1.0 Purpose
This work instruction seeks to support the FFMV: SOP – Interstate and International Deployments – Outbound by defining a risk based approach to comparing partner agencies' safety systems.

2.0 Context
The Department of Environment, Land, Water and Planning (DELWP) is a signatory to a variety of mutual aid arrangements that provide support to partner agencies both interstate and internationally. DELWP currently has 13 different partnership agreements with other organisations which include interstate and

Interstate and International Deployments – Risk Assessment

Doc ID: 20-WI- 2.7.2.2
Date effective: 05/07/2018
Forest Fire Management
History of changes

| Ver | Approved | Effective | Summary of Changes | Owner | Approver |
|-----|------------|------------|--------------------|---|--------------------|
| 1.0 | 05/07/2018 | 05/07/2018 | New Document | Command & Control Support Unit, Forest & Fire Operations Division | Chief Fire Officer |

1.0 Purpose

This work instruction seeks to support the Standard Operating Procedure – Interstate and International Deployments – Outbound

Response – Risk Analysis

| International / Interstate Agency request - risk assessment tool | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--------------|---|--------------|-----------|---------------------|--|--|--|----------|-------------------------|--------------|--|--|-------|---------|----------|------|---|---|--------|---|---|-----|---|---|--------------|---|---|
| See SOP 2.7.2 International/Interstate deployments - overview | | | Completed risk assessment to be forwarded to SACRAC DM website | | | | | | <table border="1"> <tr> <th colspan="3">Risk Summary</th> </tr> <tr> <th>Being</th> <th>Current</th> <th>Residual</th> </tr> <tr> <td>High</td> <td>0</td> <td>0</td> </tr> <tr> <td>Medium</td> <td>0</td> <td>0</td> </tr> <tr> <td>Low</td> <td>0</td> <td>0</td> </tr> <tr> <td>Job Creation</td> <td>0</td> <td>0</td> </tr> </table> | | | Risk Summary | | | Being | Current | Residual | High | 0 | 0 | Medium | 0 | 0 | Low | 0 | 0 | Job Creation | 0 | 0 |
| Risk Summary | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Being | Current | Residual | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Medium | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Job Creation | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Document number: N/A | | | Risk assessment completed by: Dan de la Cruz & John Smith | | | | | | Date of assessment: 13/9/19 | | | | | | | | | | | | | | | | | | | | |
| Request date: Thursday, 2 August 2018 | | | State or Regional level: State | | | | | | Date assessment completed: 13/9/19 | | | | | | | | | | | | | | | | | | | | |
| Requesting agency: Canada | | | State or Regional level: State | | | | | | Date assessment completed: 13/9/19 | | | | | | | | | | | | | | | | | | | | |
| Description of emergency: Significant wildfire | | | State or Regional level: State | | | | | | Date assessment completed: 13/9/19 | | | | | | | | | | | | | | | | | | | | |
| Location: Canada | | | State or Regional level: State | | | | | | Date assessment completed: 13/9/19 | | | | | | | | | | | | | | | | | | | | |
| ASSESSMENT DECISION: Request Approved with restrictions | | | State or Regional level: State | | | | | | Date assessment completed: 13/9/19 | | | | | | | | | | | | | | | | | | | | |
| Identified Risk | Description | State/Region | Initial risk assessment | Current Risk | Unfunded | Current risk rating | Risk treatment Strategy | Action Owner | Current Risk | Unfunded | Estimated Residual Risk | Comments | | | | | | | | | | | | | | | | | |
| Safety & Wellbeing | Example: Requested deployment team coincide with ongoing operational burning program. This could require change of program in region. Critical Incident Plan (CIP) in place? | Region | Yes both national and Victorian | Major | Very High | High | Emergency with deployment resources are not critical for deployment team program | SAC | Major | High | Acceptable | | | | | | | | | | | | | | | | | | |
| | Safety standards comparison between agencies within and across | State | Has being completed and will be a clear prior to field deployment | Critical | High | High | Additional responsibilities allocated to national and field leaders to maintain currency of system compliance | National/Leaders | Critical | Low | Acceptable | | | | | | | | | | | | | | | | | | |
| | Does the deployment plan include specific safety and wellbeing information to adequately manage the participating personnel? | State | Yes both national and Victorian | Critical | Low | Acceptable | | | | | | | | | | | | | | | | | | | | | | | |
| | Police management pre, during and post deployment | State | FFMVIC and deployment fatigue management guidelines and plans | Critical | Low | Acceptable | | | | | | | | | | | | | | | | | | | | | | | |
| | Medical and fitness requirements met and aware | State | Pre-require for deployment | Critical | Very low | Full Coverage | | | | | | | | | | | | | | | | | | | | | | | |
| | Provision has been made to support liaison officer into the relevant COCCs, to ensure that FFMVIC personnel are valued appropriately, safely and effectively | State | National and field liaison requested | Major | Low | Acceptable | | | | | | | | | | | | | | | | | | | | | | | |
| | Role reciprocity exists between the agencies | State/Region | Role assessment has been done | Critical | Medium | CO Coverage | Role clarity when on deployment needs to be accounted for - responsibility of field and national liaison to ensure clarity in field an appropriate crew selection has been carefully made to ensure the right mix of experience and skills | National/Leaders | Critical | Low | Acceptable | | | | | | | | | | | | | | | | | | |
| | FFMVIC have the appropriate skills, experience or capacity, or those can be developed in time | State | Send in where ground crew teams will be used to ensure risk additional risks in areas because of scale of geography and events | Critical | High | High | National and field liaison appointed to monitor safety and wellbeing issues. Additional risks in areas because of scale of geography and events | State/Regional/national liaison/field liaison/field leadership roll over | Critical | Low | Acceptable | | | | | | | | | | | | | | | | | | |
| | Adequate provision has been made to ensure participating staff are effectively briefed, inducted and trained in the relevant work practices to maintain safety standards before commencing deployment | State/Region | Briefing process in place and throughout the national deployment plan - need to ensure that relevant and critical briefings happen on specific tasks in the field | Critical | Medium | CO Coverage | Additional responsibilities allocated to national and field leaders and field leadership to maintain currency of system compliance | National/Leaders/field leadership roll over | Critical | Low | Acceptable | | | | | | | | | | | | | | | | | | |
| | Personnel willing to deploy to potentially unfamiliar situations | State/Region | Confirmed through the activation and ICI Process | Major | Very low | Full Coverage | | | | | | | | | | | | | | | | | | | | | | | |
| Flexibility | Flexibility confirmed in agreed in advance | State | Contractors confirmed | Major | Low | Full Coverage | | | | | | | | | | | | | | | | | | | | | | | |
| | Contingency needed between each agency in terms of the individual and organizational levels | State | Contingency to be completed | Major | High | CO Coverage | Avaliability of contingency per person to field not too difficult to assess the cost benefit ratio | State/FFOD business management | Major | Low | Acceptable | | | | | | | | | | | | | | | | | | |
| | Have 'what if' scenarios been considered effectively e.g. those associated with Logistics? | State | Have not - significant levels of time spent on it | Major | Medium | Acceptable | | | | | | | | | | | | | | | | | | | | | | | |
| | Any additional driver or infrastructure to the business through retaining staff in the deployment (e.g. emergency work or back filling) | Region | Have not spent hours of time on personnel | Major | Medium | Acceptable | | | | | | | | | | | | | | | | | | | | | | | |
| People & Culture | Personal selection process for deployment fair and equitable | State | With the benefits of ICI process consideration for gender, agency, and expansional development was considered | Major | Medium | Full Coverage | | | | | | | | | | | | | | | | | | | | | | | |
| | Consentation for individual resources targeted for deployment (e.g. fatigue management including hours worked (HWC), forward planning for availability for FFMVIC controlled activity, business continuity?) | Region | Considered through the regional activation and prioritization process | Major | Medium | Acceptable | | | | | | | | | | | | | | | | | | | | | | | |
| | Are staff being communicated with effectively (both participants and those who miss out)? | State | Clustering down from state to region and through the NISC process once crews are formed up at staging area | Major | Medium | Full Coverage | | | | | | | | | | | | | | | | | | | | | | | |
| Political/Reputational | Reputational and political risks and benefits at the state, national and departmental/partner agency levels are considered (e.g. helping out at an agency during a federal natural disaster can generate a large amount of good will) | State | Yes | Major | Medium | Acceptable | Generate a lot of good will including reputational benefits if we require additional crew in our own states | | | | | | | | | | | | | | | | | | | | | | |
| | Have all participants agreed to the standards of conduct for the deployment? | State | Yes | Major | Low | Full Coverage | | | | | | | | | | | | | | | | | | | | | | | |
| Legal | Are the correct legal arrangements and insurance in place to enable the deployment? | State | Being reviewed to ensure correct level of arrangement | Major | High | CO Coverage | Legal advice to ensure that arrangements are up to scratch | State/Legal | Major | Low | Acceptable | | | | | | | | | | | | | | | | | | |
| | Is there any impact on standard departmental insurance that need to be considered? | State | In place | Major | Low | Acceptable | | | | | | | | | | | | | | | | | | | | | | | |
| | Has FFMVIC and the Department formally agreed to the terms of the deployment? | State | Needs to be reviewed | Critical | Very high | High | Insurance arrangements in place | State/Legal | Major | Low | Acceptable | | | | | | | | | | | | | | | | | | |
| Service & Program Delivery - Business as Usual | Deployment does not compromise FFMVIC agencies' and departmental business as usual activities that are delivered particularly if likely to be a protracted event | Region | Considered through the regional activation and prioritization process | Major | Medium | Acceptable | | | | | | | | | | | | | | | | | | | | | | | |
| | For each person consider the departure from an usual program or program work. Is there a business continuity plan in place? Can the program be stopped for the duration of the deployment? Who will be able to replace the participant for the duration of the deployment? | Region | Considered through the regional activation and prioritization process | Major | Medium | Acceptable | | | | | | | | | | | | | | | | | | | | | | | |
| | At the overall state level, are there any intra- or inter- regional interactions that may alter the decision to allocate roles to regions or individuals to roles? | State | Considered through the state activation and prioritization process | Major | Medium | Acceptable | | | | | | | | | | | | | | | | | | | | | | | |
| Service & Program Delivery - Emergency management readiness | Deployment does not compromise the capacity of FFMVIC to prepare for emergency response and fire management tasks (e.g. training, tools, maintenance of personnel, resources, knowledge as per the Standard of Care) | Region | Considered through the state activation and prioritization process | Major | Medium | Acceptable | | | | | | | | | | | | | | | | | | | | | | | |
| | Deployment does not compromise our ability to deliver our operational requirements within Victoria, including readiness arrangements, particularly in and around emergency response | State | Considered through the state activation and prioritization process | Major | Low | Acceptable | | | | | | | | | | | | | | | | | | | | | | | |
| Res Treatment & Cultural | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Hazards - Driving



Hazards - Driving



Hazards – Tree Risks



Hazards – Tree Risks



Hazards - Working in isolation



Hazards – Working with Plant



Hazards – Working with Plant



Hazards – Working with Plant



Hazards - Fatigue



Hazards - Psychological wellbeing



Response – Safety Planning, Briefings and Training



Future inclusions – Working with Aircraft



Future work – AFAC Tree Hazard National Guidelines

| TREE HAZARD MITIGATION MATRIX JSOP 8.03 - TREE HAZARD - BUSHFIRE (SCHEDULE 4) | | | | | | | |
|---|--|---|--|--|--|-----------|--|
| | | | | | | | |
| | | | | | | | |
| TREE STAGE | PRE & POST FIRE | PRE & POST FIRE | PRE FIRE | PRE FIRE | POST FIRE | POST FIRE | |
| DEFINITION | UN-ASSESSED TREE Tree yet to be assessed. | SOUND TREE An assessed sound tree that is not currently hazardous and is not likely to become a CPD tree when exposed to fire or other disturbance associated with the incident. | POTENTIAL CPD TREE PROTECTION ASSURED A tree which in its current state does not appear hazardous , but may become a CPD tree if it catches alight or is impacted by wind or other fire related disturbance. It has a high probability of surviving the fire impact based on the proposed protection measures and likely response resources available. | POTENTIAL CPD TREE PROTECTION NOT ASSURED A tree which in its current state does not appear hazardous , but may become a CPD tree if it catches alight or is impacted by wind or other fire related disturbance. It does NOT have a high probability of surviving the fire impact based on the proposed protection measures and likely response resources available. | CLEAR AND PRESENT DANGER TREE A tree or branch that is likely to fall within the expected timeframe of the current operation and impact personnel in its potential impact zone. | | |
| HAZARD STATUS | UNKNOWN | LOW | LOW | INCREASED HAZARD | EXTREME | | |
| MARKING SYMBOL | NO MARK | NO MARK - APPEARS SOUND | YELLOW DOT | YELLOW CROSS | YELLOW K | | |
| DESCRIPTION | | Tree appears 'sound' with no obvious defects which would significantly weaken the trunk or allow entry of a fire. No large dead branches or widow makers present. | Tree has a number of the following: • Exposed butt scars • Hard to reach elevated hollows • Small diameter and surrounded by accumulated heavy fuel. | Trees with a stem or branch greater than 10cm in diameter above shoulder height and one assessed to be at risk of partial or total collapse based on (but not limited to) one or more of the following indicators: • Dead and/or decaying point in the main trunk or major branch • Suspended limbs or broken branches • Evidence of longitudinal cracking or a weak fork • Significant lean with current cause or indicators of failure • Evidence of the roots being or on under cut or disturbed root system • 100% decrease in sound and solid cross section at any point. | Tree is on fire (actively burning) and not able to be extinguished safely and reliably and will be weakened to failure point by fire. or Tree has incurred severe structural damage by recent fire and appears very unstable. or Tree has been impacted by some other factor and appears likely to fall within the timeframe of the current operation (backed into by bulldozer, damaged by nearby tree fall). | | |
| INSTRUCTIONS FOR HT ASSESSMENT CREW | Tree not assessed or in condition unknown. To avoid doubt, during or post fire, all un-assessed trees should be considered CPD trees until an assessment can be conducted. | Assessed and deemed sound. Carefully check both sides of tree for obvious matching potential CPD or CPD trees. If in doubt regarding its soundness, err on the side of Fire Fighter Safety. | Mark with a yellow 'V' provided tree can be reliably protected from fire by measures and resources available. If not able to be protected, tree should be marked for removal. Tree can be safely worked under. | Mark with a yellow 'X' for removal. If there is doubt on the tree being hazardous or not, refer to the site of activity and mark for removal. Note: Small trees may burn through quickly. Trees may fall uphill under the influence of strong wind. | Only approach and mark tree if safe to do so. Mark with a yellow 'K' and establish an exclusion zone of 2m along the ground potential impact zone. Another treatment option is to re-locate the control line safely from the impact zone. | | |
| INSTRUCTIONS FOR FIRE LINE PERSONNEL | Approach un-assessed trees with caution. If approaching tree to assess presents hazard to personnel, use rope to create an exclusion zone to identify the CPD tree. Assessments must be conducted on fire and not by 'Drive-by'. | Normal precautions, tree may be worked under. Dynamic Risk Assessment (DRA) | Pre-Fire - Clear around and protect from fire, normal precautions apply. Fire does not touch this tree may be worked under. Additional actions such as ground applied retardant or wetting down pre-fire cording under controlled conditions and intensive control may be required. Post Fire - If protection fails and tree catches alight, it should be fully extinguished as soon as possible, if safe to do so. If the tree cannot be reliably and fully extinguished, and if there is the work operational line, it becomes a CPD tree and is treated (marked and excluded) accordingly with a 'K'. | Ensure tree removal as soon as practicable. If tree has deteriorated noticeably on CPD and create an exclusion zone. Tree presents significant additional risks but is currently assessed as unlikely to fall during the current operation may be worked under with caution following dynamic risk assessment during the emergency as necessary. Monitor condition to ensure tree has not sought alight or deteriorated to a CPD tree. | Already too dangerous to work under. Ensure tagged-off exclusion zone for personnel and vehicles (unless specifically approved for this task of removing the tree) is established and maintained until the tree falls or can be removed. | | |
| INSTRUCTIONS FOR PLANT OPERATORS OR FALLER | Prohibit personnel entry into 'Not Assessed' areas for mop-up or block-up / patrol until hazard tree assessment and recovery has been implemented. | None (Although tree removal may be required for other control line construction purposes). | Provide adequate width of moment each block around tree to protect it from anticipated fire conditions. This must be achieved without damage to the tree, including the roots. | Remove, provided the operator or faller deems it safe to do so. | Remove with extreme caution, only when safety can be assured. Whenever possible remove by plant to prevent hand falling. | | |

Thank You

