

The Hon Jihad Dib MP

Minister for Customer Service and Digital Government
Minister for Emergency Services
Minister for Youth Justice

OFFICIAL



M24/1(115)

The Hon. Michael Daley MP
Attorney General
GPO Box 5341
SYDNEY NSW 2340

Re: NSW Rural Fire Service Response to the 2019/2020 NSW Bushfires Coronial Inquiry

Dear Attorney General *Michael,*

As you are aware, in March 2024, the State Coroner handed down findings and recommendations from the 2019/2020 NSW Bushfires Coronial Inquiry.

In accordance with the Premier's Memorandum (M2009-12), I am required to advise you of actions being taken to implement the Coroner's recommendations.

Twenty-three of the recommendations were directed towards the NSW Rural Fire Service (RFS) and two were joint recommendations towards RFS and NSW Police Force.

The RFS' response to the recommendations are attached for your consideration.

Sincerely

A handwritten signature in blue ink, appearing to read "Jihad Dib".

The Hon Jihad Dib MP
Minister for Customer Service and Digital Government
Minister for Emergency Services
Minister for Youth Justice

04/10. / 2024

Coronial Findings and Recommendations into the Black Summer bush fires: RFS response.

Recommendation	RFS response	Responsible owner	Status
<p>Recommendation 1</p> <p>The NSW Rural Fire Service review its training for Aviation and Incident Management Roles and ensure (if it does not already) that the training emphasises that tasking decisions for Very Large Air Tankers and Large Air Tankers are not to be made at a local Incident Management Team level, but at the level of State Operations.</p>	Accepted	Deputy Commissioner Field Operations / Deputy Commissioner Preparedness and Capability	<p>The RFS is in the process of updating its operational doctrine. It will review training for aviation and incident management roles as part of that process.</p> <p>A first draft of the ICMI review has been received by the RFS.</p> <p>All necessary updates and delivery requirements for training for aviation and incident management roles will be made following the review.</p>
<p>Recommendation 2</p> <p>The NSW Rural Fire Service develop a Flight Risk Assessment Tool for decisions about the tasking of Large Air Tankers/Very Large Air Tankers.</p>	Accepted. Work underway.	Deputy Commissioner Field Operations / Executive Director Technology Finance and Legal	<p>The RFS has already commenced this work as part of its aviation safety management system. This recommendation aligns with the ATSB safety recommendation requiring the RFS to:</p> <p><i>Take further action to address the absence of policies and procedures for personnel to effectively manage and communicate task rejections on the basis of operational safety concerns.</i></p> <p>Whilst the RFS considers that ultimate responsibility for assessing risk and accepting or rejecting taskings must sit with the pilot in command, it has undertaken a body of work including a review of its aviation doctrine to include task rejection policies and procedures for all operational personnel, pilots/aircrew and other key stakeholders.</p> <p>The RFS will also develop a risk assessment framework for the tasking of aircraft. This information will be distributed to flight operators and will be used by pilots and crew to inform their individual risk assessments.</p>
<p>Recommendation 3</p> <p>The NSW Rural Fire Service identify further guidance in its <i>Operating Guidelines for Air Tanker Operations</i> thresholds or assessment considerations for what constitutes 'forecast adverse weather, poor visibility, turbulence', such that an Initial Attack certified pilot requires a Birddog and/or Air Attack Supervisor.</p>	Accepted. Work underway	Deputy Commissioner Field Operations	<p>The RFS interagency SOP and Large Air Tanker Guidelines now include a matrix to determine when a lead plane will be required. Additional work will be undertaken over the next 12 months to further refine the guidance and develop guides along with integrating into all IMT training</p> <p>Note: aligns with Recommendation 1.</p>
<p>Recommendation 4</p> <p>The NSW Rural Fire Service amend its Operational Management Procedure: <i>Rejection of Aviation Dispatch/Tasking</i> to consistently record that, as well as a tasking rejection, the reason for the tasking rejection is to be communicated by the State Air Desk to other aircraft tasked, or likely to be tasked, to that region.</p>	Accepted and implemented	Deputy Commissioner Field Operations	<p>The Operational Management Procedure has been updated to record tasking information, including tasking rejections in ICON. The process is manual at present, with a digital solution being scoped to also facilitate links to the Athena bush fire intelligence and the ARENA fire and emergency systems</p>

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<p>Recommendation 5</p> <p>Policies/procedures be developed to ensure that pilots are provided with the following information:</p> <ol style="list-style-type: none"> a. weather forecast for the shift or tasking area, including fire danger and expected winds; b. any local area assets' rejections of taskings, where the reasons for the rejection of tasking would be relevant to other aircraft; c. any reports received from the local area, including information from other aircraft and ground crews as to conditions such as wind conditions and visibility; d. any known hazards; e. contact details (including phone numbers and radio frequencies) for the fire ground or target, as well as other aircrafts assigned to the incident; f. summary of assets in the area, including ground crew and other aircraft, and the status of those assets; g. targets or mission intent and locations in formats that can be used by aircrafts, assets for protection and strategy for aerial operations to support the fire ground; h. fire status and condition; and i. air space, temporary flight restrictions and airport closures. 	Accepted. Work underway	Deputy Commissioner Field Operations	<p>Links to Recommendation 2.</p> <p>The RFS has implemented a Large Air Tanker specific tasking sheet which includes most of the information outlined in the recommendation..</p> <p>The RFS proposes to expand the provision of this information to all aircraft resources to assist with dispatch.</p> <p>The process is manual at present. The RFS is looking at how best to digitise and distribute the information and emergency response platform.</p> <p>The RFS will consult with aviation stakeholders to determine the best way forward (see also Recommendation 7).</p>
<p>Recommendation 6</p> <p>Pilots be provided with any current Incident Action Plans for any fire to which they are tasked. Such Incident Action Plans is to include at a minimum:</p> <ol style="list-style-type: none"> a. contact details (including phone numbers and radio frequencies) for the tasking fireground or target; and b. contact details for other aircraft assigned to the incident. 	Accepted	Deputy Commissioner Field Operations	<p>The RFS will provide the field version of Incident Action Plans to operators as part of the package of information at Recommendation 5.</p> <p>The RFS will also include Incident Action Plans in its morning pilot briefings. The RFS notes that the provision of contact details at b may be difficult, given the fluid nature of incidents and their impacts on resourcing as they evolve.</p>
<p>Recommendation 7</p> <p>The NSW Rural Fire Service, in consultation with stakeholder representatives, consider what improvements may be possible with communication systems and processes between aircraft, incident ground resources, Incident Management Teams and the State Air Desk.</p>	Accepted	Deputy Commissioner Field Operations	<p>Links to Recommendation 5. Through consultation with industry representatives and RFS pilots, the RFS will identify potential improvements and resource implications</p>
<p>Recommendation 8</p> <p>On days of heightened fire activity across the State, resources be made available so that the State Air Desk can be organised such that there are duty and aviation officers assigned to specific regions (for example, Central-Metro, Southern, Northern, Western).</p>	Noted.	Deputy Commissioner Field Operations	<p>The RFS will review the current structure of the State Air Desk and look for opportunities to be able to undertake these roles, as well as providing ongoing capability building and expertise across all 7 area commands. These will also provide the capacity for implementation of other recommendations</p>
<p>Recommendation 9</p> <p>The NSW Rural Fire Service conduct pre-season briefings/inductions with pilots in respect of NSW Rural Fire Service communications and NSW Rural Fire Service operational functions and capabilities.</p>	Accepted and Implemented	Deputy Commissioner Field Operations	<p>Implemented as part of the 2023-24 bush fire season. A post briefing package for pilots entering Australia after the season commences is being progressed.</p> <p>The RFS is also investigating the development of an online format for pre and post season briefings. The format will include certification following briefings for record keeping purposes. A platform for the development of online briefings/inductions will also be identified.</p> <p>The pre-season briefing for aviation operators and pilots was held on 5 September 2024. It included update on contract information, season outlook, operational functions and capabilities (including state air desk and pre-determined dispatch for aircraft), task rejection and airspace management. The briefing was held in</p>

Coronial Findings and Recommendations into the Black Summer bush fires: RFS response.

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			<p>person at RFS HQ as well as live streamed and recorded. A link to the recorded briefing was included in Aviation Communique #43 circulated to all aviation operators on 18 September 2024.</p> <p>A specific requirement implemented for the 2024/25 season is that each aviation operator must ensure all their pilots have listened to the pre-season briefing before being tasked to bushfire operations. The process of recording the pre-season briefing and requiring pilots to listen to this before being engaged for bushfire taskings will continue for future seasons.</p>
<p>Recommendation 10</p> <p>The NSW Rural Fire Service conduct training simulations for its officers of potential situations where aerial firefighting aircraft will need to be dispatched, with an aim to educate regarding tasking, decision-making and communication.</p>	Accepted. Work underway	Deputy Commissioner Field Operations	<p>Training simulations were piloted as part of the 2023 State Exercise Alinta</p> <p>Note: links to recommendations 1 and 3.</p>
<p>Recommendation 11</p> <p>That the NSW Rural Fire Service review its Authorised Fire investigator training and consider providing refresher training to specifically incorporate the following matters:</p> <ol style="list-style-type: none"> a. that an Authorised Fire investigator is encouraged, as part of their canvassing, to contact the Police Officer-in-Charge of a bushfire investigation to request any information relating to origin and cause of the fire, obtained by the Officer-in-Charge up to that point, that the Officer-in-Charge is prepared to release; b. that an Authorised Fire Investigator may advise the Police Officer-in-Charge of a bushfire investigation of the desirability to seize exhibits if they have not already done so; c. that an Authorised Fire Investigator is encouraged as part of their canvassing to contact private landowners or land tenure managers (such as the National Parks and Wildlife Service, the Forestry Corporation of NSW, or Crown Lands NSW) at the area where a bushfire is believed to have originated, to inquire about any information which may be relevant to determining the cause and origin of the bushfire; d. d, that an Authorised Fire Investigator should include within their report any information obtained at the scene which might bear upon their conclusion as to cause and origin, even if that information is contrary to the final conclusion reached; and e. e. the appropriate procedure to be followed when an Authorised Fire Investigator becomes aware of information, after their fire investigation report has been finalised, which causes them to change their opinion as to the cause and origin of the fire. 	Accepted	Deputy Commissioner Field Operations	<p>The RFS is considering how best to implement the recommendation across each of its 7 Area Commands, taking into account:</p> <ol style="list-style-type: none"> a) Resource considerations - Fire Investigation Co-ordinators will be required to run training and recertification programs for staff and volunteers in their Area Command b) Location based training needs c) Changes in court and evidentiary procedures d) Ongoing professional development and changes in investigation processes and procedures to ensure continuing best practice. <p>This will include an enhanced capability to investigate complex incidents and undertake further work with NSW Police to support independent reviews.</p>
<p>Recommendation 12</p> <p>That the NSW Rural Fire Service review Standard Operating Procedures 3.1.9 to:</p> <ol style="list-style-type: none"> a. incorporate matters referred to in Recommendations 11 and 25d; and b. provide that, where it is suspected that a wildfire has breached containment lines or proposed containment lines, leading to a significant escalation of a fire, the Fire Investigation and Compliance Unit should consider: <ol style="list-style-type: none"> i. asking an Authorised Fire Investigator to examine the scene of the containment line breach to determine the cause of the breach; and ii. asking the NSW Rural Fire Service's Predictive Services Unit to undertake modelling to consider what would have occurred if the backburn in question had not been done. 	Accepted in part	Deputy Commissioner Field Operations	<p>Links to Recommendation 25</p> <p>The RFS has an established process in place to update its operational doctrine, including Standard Operating Procedure 3.1.9.</p> <p>The RFS will re-examine SOP 3.1.9 within the context of the recommendation. Including developing triggers for when this will be required noting not all breaches will require the same examination and the focus will be on those that cause impact or significant escalation.</p> <p>The RFS' Predictive Services team is developing a consistent methodology to model what would have happened had the backburn in question not been done. This work is expected to be complete ahead of the commencement of the 24/25 Fire Season.</p>

Coronial Findings and Recommendations into the Black Summer bush fires: RFS response.

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<p>Recommendation 13 The NSW Rural Fire Service review its training for positions within an Incident Management Team to ascertain whether there is scope for improvement to better equip staff to determine:</p> <ul style="list-style-type: none"> a. whether intelligence needs to be verified; and b. the appropriate steps to be taken to obtain that verification. 	Accepted and implemented	Deputy Commissioner Preparedness and Capability	<p>The Intelligence IMT Training Package has been developed and now delivered twice over the past 18 months.</p> <p>To date, training has been delivered to 29 candidates. Course is identified in the Public Safety Program as package "Manage the Intelligence Function at an Incident (PUAOPE004).</p> <p>This has also been incorporated into Public Liaison Officer training.</p> <p>The RFS will make further refinements to its Incident Management Training including decision making and record keeping in ICON, and how information relating to assessments may appropriately be captured.</p> <p>Note: links to recommendations 1 and 13.</p>
<p>Recommendation 14 The NSW Rural Fire Service investigate the possibility of improved integration of the emergency alert system within the Rural Fire Service system, with a view to limiting the duplication of the entry of information, such as polygons and the text of emergency warnings.</p>	Noted.	Executive Director Technology Finance and Legal	<p>The possibility of integration into the current Emergency Alert system is being explored and RFS continues to work with Emergency Management Victoria in respect of this, including for spatial shapes.</p> <p>The current Emergency Alert system is due to expire in September 2025. The addition of the National Messaging System will (once established) also enhance communications to mobile phones and devices during a crisis or emergency event, by delivering telephony based warning messages regionally and nationally in near real time.</p> <p>RFS is engaged with NEMA, along with other jurisdictions, as part of developing the National Messaging System program, and this includes tabling requirements for integration.</p> <p>NMS, RFS is investigating the implications of integration into either or both of Emergency Alert or the National Messaging System, including cost, risks involved (such as cybersecurity risks) and required timeframes and these must be weighed against the benefits.</p> <p>A user interface for the national messaging system is approximately three years away. This is something that the RFS will target as part of the implementation of the next generation of Emergency Alert.</p> <p>Linkage of updated version of Emergency Alert to Hazard Publisher will also be examined.</p>
<p>Recommendation 15 The NSW Rural Fire Service develop training for Public Liaison Officers and Incident Controllers that addresses the significance of early warning to communities with limited access to reliable communication systems.</p>	Accepted and implemented	Deputy Commissioner Preparedness and Capability	<p>This recommendation has been integrated into training for Public Liaison Officers and Incident Controllers.</p> <p>The RFS will review the training package to determine whether further enhancements may be made.</p>
<p>Recommendation 16 The NSW Rural Fire Service amend its policies and training (where required) to ensure that where a breakout prediction has been carried out, the completion of that prediction is logged in the ICON system.</p>	Accepted. Work underway	Deputy Commissioner Preparedness and Capability	<p>The RFS is examining the ability for breakout predictions to be built into Athena. Planning for strategic burns to be incorporated into Athena to inform operational response are also being considered, as well as other scenarios such as weather and contained fires.</p> <p>Complex predictions will continue to be managed by Fire Behaviour Analysts. A classification system will be developed for this purpose.</p> <p>Updates to the Fire Behaviour Analyst handbook is underway..</p>

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<p>Recommendation 17</p> <p>In establishing automated alerts in the Athena system, the NSW Rural Fire Service ensure that alerts are to be sent to the Incident Controller, Fire Behaviour Analysts within the Incident Management Team, and the Public Liaison Officer of the completion of any fire prediction within the section 44 declaration area of that Incident Management Team.</p>	Accepted	Executive Director Technology Finance and Legal	Any predictions built into Athena will be appropriately disseminated to all relevant staff. Notifications will also be sent through Athena and the Incident Management Personnel and Role Assignment Solution.
<p>Recommendation 18</p> <p>The NSW Rural Fire Service carry out a review to determine:</p> <ol style="list-style-type: none"> a. appropriate means to better ensure the prompt uploading of reports from the fireground onto the ICON system, including through the use of technology in note taking; b. whether there is a need for further training of Incident Management Team personnel to ensure that information relevant to fire prediction is provided promptly to Fire Behaviour Analysts; and c. whether there is a means to make available to NSW Rural Fire Service staff recordings of telephone calls and radio messages in the period immediately after the receipt of that call or message. 	Accepted. Work underway.	Executive Director Technology Finance and Legal	<p>Points A and B have been addressed through the Computer Aided Dispatch, ICON, implementation of Field Mapping Solution (Firemapper) and Mobile Data Terminal platforms.</p> <p>Field intelligence has been enhanced and is immediately visible in and across Incident Management Teams.</p> <p>The RFS will also rollout training so that its members can harness the information made available and record their decision making.</p> <p>With respect to point C, the RFS Operational Communications Centre has instant playback capability for calls being received in its Operation Centres.</p> <p>The RFS will examine the ability for relevant mobile phone conversations to be recorded and accessed when needed. The Executive Director Technology Finance and Legal will lead this review.</p>
<p>Recommendation 19</p> <p>The NSW Rural Fire Service, either itself (if feasible) or through the Australasian Fire Authorities Council, cause the Vesta Mk II fire prediction model to be incorporated within the SPARK software.</p>	Accepted	Deputy Commissioner Preparedness and Capability	<p>The RFS acknowledges that the onboarding of Vesta Mk II into Spark will benefit multiple stakeholders, including AFAC and the Bureau of Meteorology.</p> <p>Vesta Mark II has been incorporated into the Spark Modelling tool and is being used operationally by the RFS and its NSW partners. The national release is updated product is due this calendar year and is imminent.</p>
<p>Recommendation 20</p> <p>The NSW Rural Fire Service continue to work with the Bureau of Meteorology towards:</p> <ol style="list-style-type: none"> a. developing fire-atmosphere coupled modelling; and b. obtaining a better understanding of the interrelationship between atmospheric instability and bushfire, including to develop ensemble forecasting capabilities, to be integrated into training of Fire Behaviour Analysts and the development or refinement of models for fire prediction. 	Noted	Deputy Commissioner Preparedness and Capability	<p><i>The RFS supports the intent of this recommendation and recognises it is a national issue that would be contingent on collaboration between the States and Territories.</i></p> <p>Some research collaboration is already underway which contributes to our understanding in these areas. This includes research projects in collaboration with the Bureau of Meteorology and funded by the Natural Hazards Research Australia to progress Coupled Fire Atmosphere Modelling by using case studies such as the Lake Conjola reconstruction.</p> <p>The RFS has also been in discussions with the Bureau of Meteorology in respect of new research proposals. This includes research proposals made by the Bureau of Meteorology to Natural Hazards Research Australia to better understand the relationship between atmospheric instability and bushfire.</p> <p>In addition, we have also worked with the AFAC/ Bureau of Meteorology on developing training for fire behaviour analysts and fire meteorologists in understanding fire coupled atmospheric conditions to assist them to provide strategic advice to incident commands. This training package is in its final review stages.</p> <p>The Australian Fire Danger Rating System, which the RFS has developed on behalf of the Australian jurisdictions, would benefit from ensemble forecasting capability. Ensemble forecasting capabilities could also be integrated with Athena.</p>

Coronial Findings and Recommendations into the Black Summer bush fires: RFS response.

Recommendation	RFS response	Responsible owner	Status
<p>Recommendation 21</p> <p>That the NSW Rural Fire Service engage Monash University Accident Research Centre, or an equivalent expert body, to:</p> <ul style="list-style-type: none"> a. establish a fit for purpose set of rollover and falling object test criteria; and b. assess potential design solutions for rollover and falling object protection in an experimental setting. 	Accepted. Work underway	Deputy Commissioner Preparedness and Capability	<p>In response to the Bushfire Inquiry, the RFS engaged Monash University Accident Research Centre to review key safety features of the fleet. The project looked at a range of factors known to influence emergency vehicle safety, specifically the adequacy of the current rollover and falling object protection systems on the vehicles.</p> <p>This research is particularly significant, given the number of falling object incidents during the 2019/20 fires. A key recommendation was to develop design standards and test the effectiveness of vehicle protection systems.</p> <p>This work is currently being progressed. The RFS has entered into an agreement with Monash University for this work. In-field testing will be required to prove concept and define the parameters for new protection systems. These new designs will then be incorporated into the Next Generation Fleet project.</p> <p>Criteria for testing have been developed, and testing is expected to be completed by 24/25 FY end. Funding will be required to engage the manufacturer and test solutions</p>
<p>Recommendation 22</p> <p>That, in its role as a participating member of Australasian Fire Authorities Council, NSW Rural Fire Service is to make representations to Australasian Fire Authorities Council to the effect that Australasian Fire Authorities Council is to consider engaging with Standards Australia in relation to the development of a data supported minimum Australian Standard (or Standards) which addresses the crashworthiness test criteria and experimental setting for testing of rollover protection, falling object protection structures, and cabin strength for frontal impacts for such firefighting appliances, noting that any such representation should not impede the work of NSW Rural Fire Service in implementing safety measures at the State level.</p>	Accepted	Deputy Commissioner Preparedness and Capability	<p>Links to Recommendation 21.</p> <p>AFAC has commenced work to develop a standard tanker. The RFS is contributing to this work.</p> <p>Note: Loss/risk thresholds across Australian jurisdictions are not consistent. This will be factored into the work undertaken by AFAC. A set of standards will be developed.</p>
<p>Recommendation 23</p> <p>That the NSW Rural Fire Service provide Australasian Fire Authorities Council with a copy of the following documents:</p> <ul style="list-style-type: none"> a. Expert Reports of Professor Raphael Grzebieta dated 14 December 2022 and 26 March 2023; b. NSW Rural Fire Service: Fleet Safety Summary Report of Monash University Accident Research Centre dated March 2023; c. NSW Rural Fire Service: Vehicle Safety Technical Report of Monash University Accident Research Centre dated March 2023; d. Transcript of the oral evidence of Professor Grzebieta, Associate Professor David Logan, and Dr Shane Richardson given on 29 March 2023; and e. Copy of any findings relevant to: <ul style="list-style-type: none"> i. the Vehicle Design & Safety Stage 2 Inquiry; ii. the Inquest into the death of Geoffrey Keaton and Andrew O'Dwyer; and iii. the Inquest into the death of Samuel McPaul. 	Accepted and implemented	Deputy Commissioner Preparedness and Capability	<p>The RFS Director of Logistics and Equipment has met with the AFAC Fire Appliance Technical Group lead and discussed the evidence of the experts referenced in this recommendation.</p> <p>All relevant material has been provided to AFAC by the Monash University Accident Research Centre.</p>

Recommendation	RFS response	Responsible owner	Status
Joint recommendations to RFS Commissioner and NSWPF Commissioner			

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<p>Recommendation 25</p> <p>That in the course of undertaking the five yearly review of the Memorandum of Understanding, Joint Agency Fire Investigation in New South Wales consideration be given to:</p> <ul style="list-style-type: none"> a. directly incorporating the provisions of State Coroner's Bulletin No 22 – October 2022; b. expressly recording that a bushfire suspected of having started as an unintended result of a strategic backburn <u>may</u> meet criteria requiring a report to the Coroner as relating to a safety issue that is of public interest; c. providing that in such cases where there is suspicion of a bushfire having started as an unintended result of a strategic backburn, the NSW Police Force may request modelling from the NSW Rural Fire Service to consider what might have occurred if the backburn had not occurred; and d. noting that the Officer-in-Charge of any Police Investigation into a bushfire must be notified (whether by the Forensic Evidence and Technical Services Command or by the NSW Rural Fire Service or both) in the event that a cause and origin examination of a particular scene requested by the Officer-in-Charge is not going to occur as contemplated by the request. 	Accepted	Deputy Commissioner Field Operations	The RFS will work with the NSWPF on reviewing the MOU and defining the triggers aligned to (b).
<p>Recommendation 26</p> <p>That the NSW Rural Fire Service develop, and the NSW Police Force participate in, an additional ICON training and awareness session to assist officers from Strike Force Tronto navigate ICON in order to:</p> <ul style="list-style-type: none"> a. locate information earlier recorded for individual fires that later merge and are managed on ICON as one larger fire or fire complex; and b. understand NSW Rural Fire Service naming conventions used when a fire spreads across a Local Government Area or other boundary and is accordingly renamed and managed as a new fire. 	Accepted	Deputy Commissioner Preparedness and Capability n	The RFS will develop an online training package for Police.

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Update on RFS projects and initiatives following the 2019/20 bushfire season

NSW Bushfire Inquiry

The NSW Bushfire Inquiry made 148 recommendations to enhance the State's preparedness, response to and recovery from, fire seasons. The majority of recommendations (87) were directed to the RFS to implement. The RFS has invested significant effort in implementing the recommendations, particularly given its operational tempo in the time since the Black Summer bushfires. Key initiatives introduced include:

Aviation

- The building of a Centre of Aviation Excellence at Dubbo, NSW. The Centre contains four aviation simulator rooms, two training rooms and accommodation for 24 trainees. The Centre of Excellence provides training for RFS aviation firefighting specialists, along with interstate personnel through the National Aerial Firefighting Centre.
- Pre-Determined Dispatch (PDD) to improve early fire suppression in areas of high bush fire risk. Following a trial in three strategic locations during the 2020/21 bush fire season, PDD has since expanded, with aircraft expected to be based in approximately 16 locations for the 2024/25 fire season. PDD has proven very effective in helping prevent fires from taking a strong hold, enhancing protection to communities across the State.
- Continued development of night time search and rescue capabilities across the RFS' rotary wing fleet, with trials of night time bombing, winching and training ongoing. The RFS will continue to develop this capability in the 2024/25 fire season with the RFS owned Chinook having an internal tank installed.
- The RFS fleet now consists of 11 Aircraft with a further two Blackhawk helicopters being operationalised. Ongoing funding to address increases in operating and contract charges is being worked through with NSW Treasury to ensure capacity can be maintained

Fleet and Infrastructure

- The RFS continues to roll out new and refurbished firefighting tankers. In response to the Bushfire Inquiry, the RFS was allocated an additional \$280.6 million over 10 years to deliver new and refurbished tankers.
- Since July 2020, 986 'red fleet' vehicles have been replaced and/or upgraded to meet the relevant standards—including 643 firefighting appliances. More than \$100 million is forward committed to continue this valuable work to ensure our firefighters have the vehicles they need to respond quickly, effectively and safely.
- In the past year the RFS has delivered 143 new and 69 refurbished firefighting tankers to brigades across the state. Most new trucks have been deployed to regional areas, benefiting communities from Balranald to Eurobodalla and Armidale to Gilgandra, with the state's south receiving the largest uplift following the devastating 2019/20 Black Summer fires. The refurbishment of 69 existing trucks will also make them safer for crews, with a halo sprinkler system for the cabin, custom-fitted heat curtains, electric hose reels, and portable Public Safety Network and fireground radio chargers.
- Investment in development of eight Fire Control Centres co-located with Emergency Operations Centres. To date, facilities at Armidale and Cudgegong have been completed.
- The construction of a new Neighbourhood Safer Place (NSP) at the Bell RFS station has been completed.

Bush fire risk

- Next Generation Bush Fire Risk Management Plans (BFRMP) are currently being developed, using the best available science and fire spread modelling to provide a quantitative assessment of bush fire risk

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to assets. BFRMP are strategic documents that identify a local community's assets at risk from bush fire and set out a five-year program of coordinated multi-agency treatments to mitigate the risk to life and property. Annual mitigation works programs are prepared to implement the treatments identified in the plans.

- Bush Fire Management Committees across the State are working on their next generation plans. As at mid-July 2024 seven plans have been approved and are now being implemented:
 - Hunter Valley
 - Lower Hunter
 - Coffs Coast
 - Hornsby/Ku-ring-gai
 - The Hills
 - South West Slopes
 - Mosman / North Sydney / Willoughby
- Another eight plans have recently completed their public exhibition. Existing Plans remain in effect until the new plans are developed and endorsed.
- All Fire Access and Fire Trail Plans have been completed and endorsed by the Bush Fire Coordinating Committee.
- The Government has invested \$10 million over two years for 100 additional temporary mitigation crew members. These personnel are on top of the existing 318 Mitigation Crew positions, including dedicated Aboriginal and Torres Strait Islander (ATSI) crews in rural locations.
- Crews prepare control lines for burns and help with burns during the week, when volunteers may not be routinely available. They also help the elderly and at-risk residents prepare their properties through the AIDER program, maintain Neighbourhood Safer Places and establish Asset Protection Zones around vulnerable assets such as medical facilities and schools.

Technology

In the time since the 19/20 bushfire season, the RFS has:

- Developed ATHENA, an artificial intelligence system that provides enhanced situational awareness to decision makers by predicting fire patterns and the impact of fire on various values and assets.
- Implemented a new Computer Aided Dispatch System to support incident response
- Commenced the rollout of Mobile Data Terminals in all of its fire fighting appliances to enable effective dispatch to emergencies, improve situational awareness and in-field communication and intelligence. As of July 2024, MDTs are now live in 11 Districts: Far South Coast, Central Coast, Lake George, Mid Coast, Cudgegong, Clarence Valley, North West, Tamworth, Chifley Lithgow, Canobolas and Far North Coast, with a total of 1,400 MDTs installed. The program continues to roll out across NSW, with 8 more districts to be completed by December 2024.
- Developed an app (RFS ACTIV) to support volunteer response. RFS ACTIV allows members to signal their availability, receive notifications and instantly respond to incidents. The app streamlines the response process so that brigades can be responded in a more effective manner when the community needs their help.
- RFS vehicles will also be equipped with Vehicle as a Node (VaaN) technology to ensure RFS personnel can communicate during a disaster in the most remote locations or if communication systems go down. The Starlink satellite technology will enable the use of radios, mobile phones, and other handheld devices anywhere and at any time – even in remote areas or if communication infrastructure has been

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damaged during a disaster. More than 5,000 RFS operational vehicles will be equipped with the new technology over three years under the \$69 million Vaan project.

- The NSW Government has also invested in a refresh of the mission-critical RFS paging network. This capability is vital for the RFS and other emergency service organisations responding to critical incidents and disasters.

Firefighter safety

- The RFS has delivered new personal protective equipment for firefighters – new respiratory protection, bush fire and structural firefighter helmets and second sets of personal protective clothing.
- In response to the Bushfire Inquiry, the RFS engaged Monash University Accident Research Centre to review key safety features of the fleet. The project looked at a range of factors known to influence emergency vehicle safety, specifically the adequacy of the current rollover and falling object protection systems on the vehicles.
- This research is particularly significant, given the number of falling object incidents during the 2019/20 fires. A key recommendation was to develop design standards and test the effectiveness of vehicle protection systems. This work is currently being progressed (see above Recommendation 21).

Flood Inquiry

In collaboration with the SES, the RFS has made progress in supporting the delivery of the 2022 Flood Inquiries. This includes:

- training local flood rescue teams in isolated communities, including starting to deliver vessels to identified brigades
- equipping appliances with 4,000 flood rescue throw kits
- providing Flood Rescue Awareness training to members
- the Hazards Near Me App - developed by the RFS, SES and DCS, building upon the Fires Near Me app
- with SES, developing a practical on-water flood rescue and in water flood rescue training courses.

Keelty Review

The Keelty Review resulted in 12 recommendations for wide-ranging and ongoing reforms. Initiatives implemented to date include:

- a State-wide rollout of automatic vehicle location (AVL) capability as part of upgrades to radio terminals. The roll-out of AVL across the RFS fleet (enhanced through the delivery of Mobile Data Terminals) is interlinked with the ongoing roll-out of the Public Safety Network program (previously the Government Radio Network), led by the NSW Telco Authority.
- The elimination of fire boundaries for call and dispatch purposes. The RFS and Fire and Rescue NSW continue to exchange location and capability data for their resources, enhanced by the rollout of Computer Aided Dispatch across RFS Districts.
- Revising public information and warning procedures, including the establishment of a role for the ABC at the State Operations Centre during bush fire incidents, and the ability for public information and warnings to be issued through the ABC Manager Emergency Broadcast and Community Development ABC Radio.

Royal Commission into National Natural Disaster Arrangements

- The Australian Government has utilised the NAFC's procurement activities and leasing arrangements to enhance the nation's aerial firefighting capability. The RFS has recently purchased a large Type 1 heavy (Chinook) helicopter, contributing to the sovereign availability of large aircraft. This will enhance overall aerial firefighting capability in the region.