



April 11, 2020

Air Chief Marshal Mark Donald Binskin AC (Retd),
The Honourable Dr Annabelle Claire Bennett AC SC, and
Professor Andrew Kerr Macintosh

Commission of inquiry, National Natural Disaster Arrangements

VFFA Submission - National Natural Disaster Arrangements

The NSW Volunteer Fire Fighters Association (VFFA) is an independent volunteer organisation representing the views and issues that affect volunteer rural fire fighters in NSW.

Land Management, including Hazard Reduction

This section addresses the terms of reference:

f. ways in which Australia could achieve greater national coordination and accountability – through common national standards, rule-making, reporting and data-sharing – with respect to key preparedness and resilience responsibilities, including for the following:

i. land management, including hazard reduction measures,

ii. wildlife management and species conservation, including biodiversity, habitat protection and restoration, and

g. any ways in which the traditional land and fire management practices of Indigenous Australians could improve Australia's resilience to natural disasters.

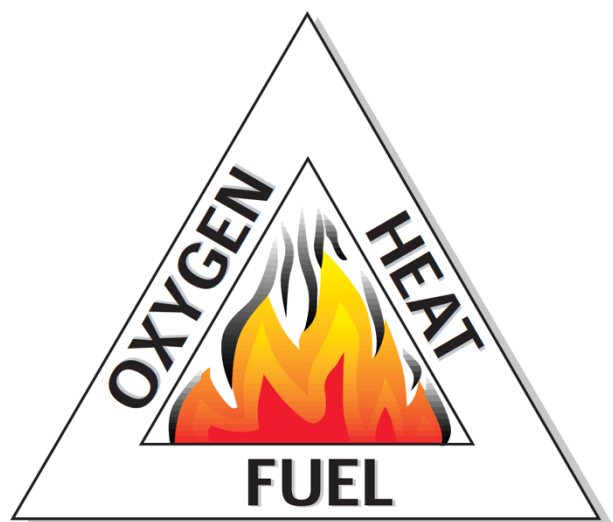
All firefighters in Australia are taught that the first step to identifying and controlling the hazards of fire is to understand fire itself.

The components necessary for a fire to burn, or continue to burn are heat, fuel and oxygen.

This is known as the fire triangle or the triangle of fire.

The fire triangle image (right) shows heat, fuel and oxygen in the correct order because heat is required to cause the fuel to become a vapour which can then burn if there is enough oxygen. A chemical chain reaction (fire tetrahedron) takes over as the heat caused by the combustion acts upon the remaining fuel, causing the fire to grow in intensity until the fuel is totally consumed or sufficient cooling is applied.

It stands to reason that during drier and hotter climatic conditions, the fuel will already be warmer, and less fuel moisture will need to be removed before the fuel reaches a point that ignition is likely, but the fuel must be available for this to occur.





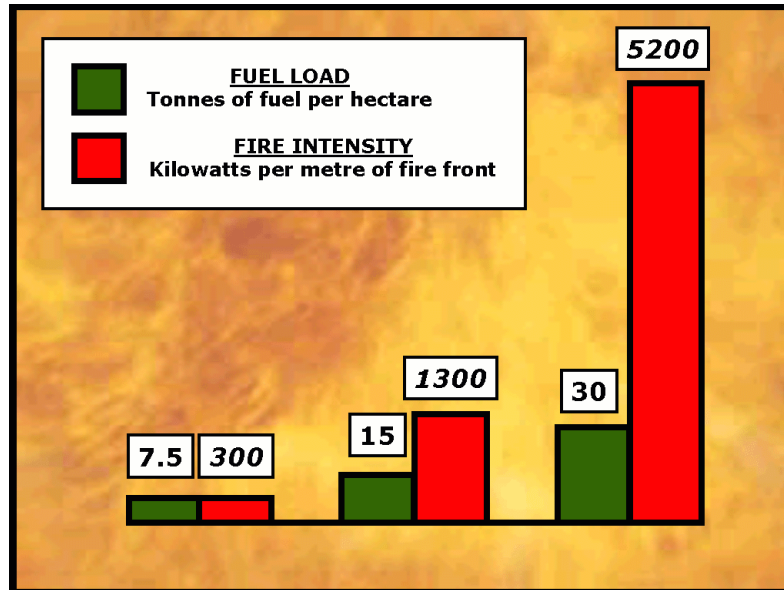
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The heat of the day, the fuel dryness and the oxygen in the air are all contributing factors, but with high fuel loads, the chain reaction becomes a bigger problem because the fire intensity continues to grow and the heat from the combustion applies even more heat.

On a windy day, the oxygen is turned up in a similar manner to that of a blacksmith operating the bellows to bring up the heat causing a further increase in the oxidisation process.

Without fuel, the blacksmiths forge would not function and with less fuel our fires would not reach the intensity that we experienced in the 2019 – 2020 fire season.

Fires run on fuel



Graph using data supplied by the RFS (Bush Firefighter Manual – page 189 (i) In Forest Fuels)

Fuel builds up in the Australian bush at an average of two tonnes per hectare per year.

The diagram (above) shows the exponential rise of fire intensity in kilowatts per meter (kW/m) related to fuel loads in tonnes per hectare (t/ha).

Scientists studying the heat output of bushfires use the Byram Fire Intensity Index, which is measured in megawatts per metre of fire front.

7.5 t/ha is very easily managed as it produces 300 kW/m (0.3 MW/m).

Increase the fuel load x 4 to 30 t/ha and the fire intensity is increased by over 17 times to an uncontrollable wildfire.

3,000 kW/m (3 MW/m) is about the limit of modern fire suppression capability including everything from fire tankers to heavy plant and aviation firefighting techniques.

The chart (above) only goes up to 5,200 kW/m (5.2 MW/m) of fire front.

It was estimated that the 2019 - 2020 bushfires were running at an intensity of approximately 30,000 kW/m (30 MW/m) and may have exceeded 70,000 kW/m (70 MW/m) in many areas.

The evidence of the fire intensity can be seen as:

- total destruction of the environment,
- ongoing degradation and erosion of heavily impacted bushland, and
- silt, soil, soot and ash choking aquatic life as it washes into our creeks and rivers.

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70,000 kW/m is 13.4 times the fire intensity than the chart shows (page 2) and 23 times the fire intensity that humans can extinguish by any means.

1 kW/m (0.001 MW/m) is equivalent to the energy output of a single bar electric radiator.

70,000 kW = 70,000 single bar radiators stacked one on top of each other for each metre of fire front.

Massive, catastrophic or even unprecedented heat energy cannot be generated without unprecedented fuel loads.

Frequency

The frequency of many recurring tasks can have an impact upon the ease and success of such tasks.

One simple analogy is mowing the lawn. If the lawn is left to grow too long, it becomes more difficult to manage, blocks up the lawn mower and takes a lot longer to complete.

Similarly, if bushfire fuel management is left unchecked the fuel loads increase to a point where it becomes more difficult to reduce those fuel loads to acceptable levels without scorching the environment. This type of neglect has created a situation where modern hazard reduction is seen to be destructive.

If the frequency was appropriately managed, the fuel loads could be reduced in a manner that is lower impact, more appealing to the public and with a greater level of safety for land manager and the environment.

High Fire Project

The term "land management" is preferred over the term "fuel reduction" because it suggests a wide range of land management methods to improve forest and native grassland health and reduce fuel loads. Land management is not limited to the use of fire as a land management tool.

A good example of successful land management is the work of Barry Aitchison on his parcel of land at Snowy Plain, NSW High Country (Snowy Mountains).

The High Fire Project was conducted on Barry's land a result of the inquiry led by then-Eden-Monaro MP Gary Nairn into the 2003 bushfires.

Barry was a member of that inquiry and previously served as a fire control officer for more than 30 years in the Snowy Mountains, NSW. He was quoted as saying "We have vegetation coming back that burns hotter. And with hot fires we're changing the ecology, changing the vegetation."

On Barry's property, he has been participating in the research for the High Fire Project. He fenced off sections of his pasture to conduct controlled experiments that measure the effects of grazing and prescribed burns on the ecology and carbon emissions.

On half of each paddock he has been conducting regular slow burns for weed and pasture control, while the other half is left alone.



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One of the research plots on Barry's property pictured early 2019. To the right of the dividing line is regularly burned. The High Fire Project looked at water yield, carbon flux and the effects of grazing - water quality and yield. The results were already clear with the delineation of pasture regrowth in the two halves of the paddock, it's even more striking now the entire area has been decimated by the January 2020 bushfires.



The same plot after January's devastating bushfires. The left half suffered greater damage. The untreated area (left) burnt so hot even the soil has been damaged, but the other half that had been regularly burnt in a controlled manner clearly suffered less damage.

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This photo was taken on the same day (Jan 2020) after the Dunn's Road fire came through.

As the picture (above) shows, the fire was much cooler because of less fuel, and it has not burnt the canopies or crown of the trees. A cooler fire gives the flora and fauna a chance to survive.



The same area again, this time pictured after the 2019 – 2020 fire, showing significantly more regrowth on the right, fire-managed half.

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Fuel reduction and land management can reduce the severity of damage

The public tends to notice damage to the crown of a forested area, but there is often less focus upon the damage that occurs to the soil and humus layer.



Burnt hot (above and below), right down to mineral earth.

When fires burn hot, it not only damages the crown, it destroys the soil and humus layer allowing runoff into our creeks and rivers. The environmental impact extends to aquatic life.



Note: The leaf and bark (above) has fallen and blown in post fire.

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This image (above) shows the extend of runoff of material that should remain on the forest floor.



Reduced fuel protected the soil and humus layer.

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Although the area with the reduced fuel (on previous page) was burnt, it had a lower fuel load because the property owner had been conducting frequent burns. The trees in the treated area did not crown and that persons property was spared whilst other surrounding properties were destroyed. The soil and humus layer remained intact and the local environment was able to survive without total destruction.

Intense fires cause more damage

McArthur (1962) noted that fire damage was closely related to fire intensity.

A reduction in the destructiveness of wildfires can generally be achieved by broadscale prescribed burning where the primary objective is to reduce the accumulation of fuel over a wide area. Such broadscale reduction in fuel should result in significantly decreased rates of spread and intensities of a wildfire, which should in turn assist suppression forces in controlling the fire (McArthur 1962).

Expected effects on eucalypt forests of fire of different intensities

Fire intensity (kW/m)	Remarks from Cheney (1981)	Remarks from Christensen et al. (1981) based on a community dominated by leguminous species
< 500	Low - maximum flame height of 1.5m. Upper limit recommended for fuel reduction burning.	Little tree canopy scorch, but understory species may be partially or wholly damaged; can expect vegetative regeneration, but little or no seed regeneration.
500 - 1700	Moderate - maximum flame height of 6m. Scorch of complete crown in most forests.	Defoliation and death of most understory species; damage to branchlets of overstory and some fire scarring on boles of overstory may occur. Would expect regeneration by both vegetative and seed means.
1700 - 3500	Moderate / high - flame height between 6m and 15m. Scorch of complete crown in most forests, with crown fire in low forest types (< 15m high).	Significant physical damage to bole and crown of trees. Epicormic shoots generally stimulated.
3500 - 7000	High - maximum flame height of 15m. Crown fires in low forests (< 15m high).	Crown fires in forests < 15m height, with tree canopies defoliated over large areas; understory woody stems destroyed, and mineral soil exposed. Vegetative regeneration may not occur due to outright death of plants.
7000 - 70 000	Very High - flame heights of greater than 15m. Crown fire in most forest types, with firestorm conditions at the upper fire intensities.	Death of almost all above-ground foliage of most species; can cause uprooting and fracturing of trees.

Notes: The effects are based on surface fine fuels only; not all fine fuels.

Hazard reduction burns should be kept below 300 kW/m (0.3 MW/m).

Site visits

The VFFA would be very happy to facilitate site visits by commission members to see this evidence and talk to the landowners and project stakeholders.

These visits could be conducted in a manner that maintains appropriate hygiene and social distancing. Alternatively, these areas could be visits using live streaming or video.



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Modern day hazard reduction is giving burning a bad name

You only have to conduct a Google search using the term “Hazard Reduction” to see what is happening:



Most of the images that will pop up in an internet search will reveal a trend that we are introducing too much fire (all at once) and calling that hazard reduction.

It is no wonder that many people are not supporting fuel reduction programs that use fire as a tool.

It is time to rethink how we burn and when we burn, with a removal of the red tape that surrounds the use of fire.

Location and timing

In some cases, the causes of fire may be preventable but there will always be the risk of lightning strikes.

The factors contributing to the frequency, intensity, and location of bushfires has a lot to do with the way that we manage the landscape.

It is hard to manage the “timing” but early detection and early suppression, when coupled with a sensible land management regime will help to keep unwanted fires smaller at a “time” that we don’t want them.

Weather, drought and climate all have an impact upon fuel dryness.

Fuel loads have the biggest impact upon fire behaviour, but we have the capacity to manage fuel loads. In fact, it is the only part of the fire triangle that we can manipulate.

Red tape

Human activity is also sometimes stifled by way of “red tape”. One of the biggest hindrances to hazard reduction is the 29-page, Bushfire Environmental Assessment Code.

If fire managers carry out hazard reductions that contravene the code, they can be prosecuted. These over complications often place sensible land management in the “too hard basket”.

Local fire brigades used to manage their own fire risk, and this proved a lot more successful. The focus was on local brigades performing low intensity burns in the off season. All planning and execution were done at the local level drawing on vast local knowledge and expertise.

Locally controlled land management programs (without the red tape) offered superior environmental outcomes, enhanced protection of the community, assets and infrastructure and a safer working environment for fire fighters.

Every Coronial, State and Federal government inquiry into major bushfire events have drawn the same conclusion - the severity of the fires was due to excessive fuel loads and the need for an increase in hazard reduction burning or land management.



Preparation and Planning

This section addresses the terms of reference:

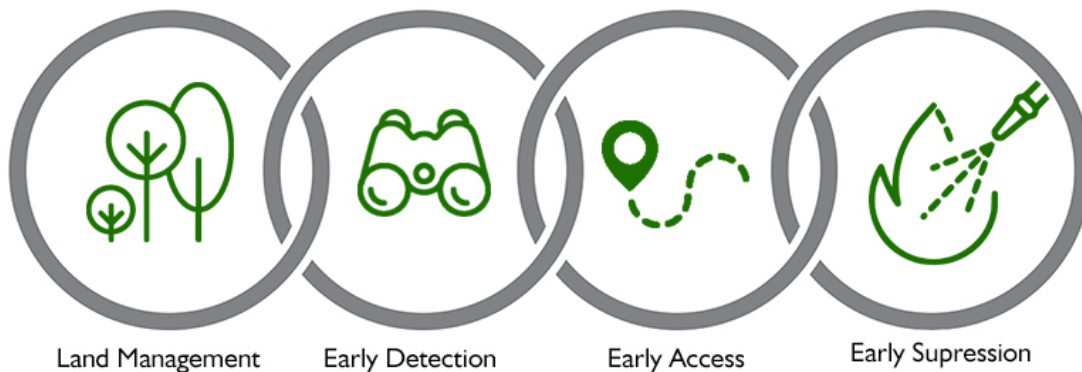
a. the responsibilities of, and coordination between, the Commonwealth and State, Territory and local Governments relating to preparedness for, response to, resilience to, and recovery from, natural disasters, and what should be done to improve these arrangements, including with respect to resource sharing, and

b. Australia's arrangements for improving resilience and adapting to changing climatic conditions, what actions should be taken to mitigate the impacts of natural disasters, and whether accountability for natural disaster risk management, preparedness, resilience and recovery should be enhanced, including through a nationally consistent accountability and reporting framework and national standards.

The VFFA has been promoting a campaign of action that could become the foundation of changes to current laws, practices and strategies. This simple concept is based around prevention and early response to bushfires. Fire service standards can be developed to work within this proposed model.

The proposed model is known as **the Bushfire Survival Chain**.

The Bushfire Survival Chain



Early intervention improves other emergency response scenarios such as a first aid response to cardiac arrest. The first aid version of this principle is known as the **survival chain**.

Early detection and early suppression have greatly improved the survivability of people and property in an urban firefighting context, so why shouldn't we adopt the same principles to look after the bush?

Land management

The alternatives to a sensible land management regime are grim at best. Just take a look around at the devastation created by locking up public land and to make matters worse, we have a tendency to put out naturally occurring fires (lightening) without returning to finish off the job during a safer period. Perhaps if we had let nature deal with land management without our intervention, the fuel loads would not have become so extreme.

NSW alone has 22 million hectares of bush fire prone land. Currently NSW was hazard reducing less than 1% of bush fire prone lands annually.

The Royal Commission into the Victorian 2009 Black Saturday fires recommended a minimum of 5% of bush fire prone lands be treated annually.



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The percentage difference may not seem like much, but hazard reducing 5% annually would see bush fire prone lands treated every 20 years, as opposed to 100 years at the 1% rate.

On page 54 of the 2018 NSW RFS Annual Report, the RFS was seeking to achieve a hazard reduction target of 187,041 ha for that year. 220,000 ha would need to be treated to reach the 1% target but the RFS fell well short and the fuel loads continued to build.

Another problem associated with the auditing of land management targets is that the audits don't consider the quality of the land management. It has become a numbers game as government departments ensure that their annual reports look good.

When it comes to public land, the State and Federal Governments could begin a campaign aimed at engaging more Indigenous Australians as "Indigenous Rangers" who actively participate in land management jobs all year round. Mixed crews that don't exclude any race or gender will ensure that everyone is given an opportunity to learn these land management skills.

Now is the time to think about improved land management projects, we can't get sidetracked and wait 10 to 15 years or we will end up facing a similar predicament.

The Canobolas Model was accepted by the NSW Rural Fire Service but was never properly administered.

The Canobolas Model guidelines for land management were:

- Hazard Reduction Burns to be carried out in a period of time that is identified by the Bush Fire Management Committee (BFMC) and the Group Captains, Captains and Local Brigades.
- Hazard reduction targets of fuel loads in National Parks and private land identified by conducting studies in the field and relaying back to mapping of these areas.
- Post assessment, fuel loads should be reduced using a mosaic pattern.
- Burning Periods of 1 to 4 years (cool burn) in high fuel load country.
- Burning at the right time would cause little damage to the environment and good outcome for all.
- 10 to 15 years for slightly less fuel loading country.
- 15 to 25 years - identified by mapping.
- 25 to 30 years - less fuel loading again.
- 30 to 40 years - fairly sparse country.

Note: At the current rate of 1%, it would take 100 years to treat our bush fire prone land.

Early detection

Smoke detectors have had a major impact on structural fire detection and helped to promote early escape and suppression. Why can't we embrace the technologies that already exist to detect a bushfire in its early stages?

In the past, we have operated a few fire towers in strategic positions around the state of NSW, but they are not generally staffed all year round.

With modern technology, it would be possible to install automated scanning technologies that could detect fires in the early stages all year round.





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Another alternative or additional strategy is the use of drones or unmanned aircraft to scan the landscape at certain times.

Bush fire scanning technology may be costly but when compared with reactive firefighting measures such as aircraft and aviation services, the pro-active expenditure becomes more palatable.

Early access

Easy and early access is essential if we are going to keep bushfires small. Aircraft can assist if we have the resources available at a moment's notice and ground crews can get around a smaller fire quickly if we can get them to the fire.

Neglected fire trail maintenance that provide easy access to the bush for fire crews and plant (trucks, dozers and graders) is a contributing factor that slows our response rate to such emergencies.

Even when a fire trail remains open, the lack of turn around bays and the restrictions placed upon the width of fire trails puts firefighters at risk.

Unfortunately, we have to remove trees to construct and maintain a suitable fire trail network. But other trees can be planted elsewhere and the benefit to the surrounding tress is easy access to protect them from fire.

A good fire trail network can also be used to create strategic fire breaks if they are wide enough.

The Canobolas Model (NSW) was accepted by the NSW Rural Fire Service but was never properly administered.

The Canobolas Model guidelines for fire trails were:

- Fire Trails - Boundary trails to be 60m wide, each side of a boundary fence, the first 20m to be graded, the next 20m to be cleared of all timber which can be grassed. The last 20m to be clear of all trees because of the amber attack and risk of spot overs.
- Internal Fire Trails - 2 x 4 x 2 trails, which means 4m of graded trail with 2m either side to be clear of timber or heavy scrub so that brigade trucks can pass or overtake one another.
- Turning bays every 250 to 500m so that in the event of an emergency, fire crews can escape. They are able to turn around and leave the area easily and expeditiously.



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See the example below of a wide boundary trail (on one side of the boundary fence only) that was used during the 2019 – 2020 fire season to burn from (backburn).



A good example of a boundary fire trail – ideally the cleared country should extend as shown but on both sides of the boundary fence.

Early suppression

If we can get to the fire early, we stand a better chance to keep it from getting too large. Ground crews, aviation support and Remote Area Fire Teams (RAFT) are all viable suppression resources if they have early access.

When it comes to bushfire suppression in NSW, the NSW RFS Commissioner has stated that firefighters put fires out not aircraft. The VFFA will support any strategies that are aimed at achieving a more rapid suppression of any unwanted fire. Early intervention is the key to success.

The State and Federal Governments should ensure that there is sufficient resourcing and training budget to cover a wide range of wildfire capability that includes:

- Ground crews.
- Remote Area Fire Teams (RAFT), and
- Aviation support.

Former NSW Fire + Rescue Commissioner, Greg Mullins (Ref: SMH February 28, 2020) stated that it was a ridiculous bushfire funding rule that is preventing emergency services from waterbombing small fires before they turn into mega blazes that destroy homes and kill people.

The “don’t put it out, its not big enough yet” mentality must stop.

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Responses to Bushfires

Our response to bushfire becomes less problematic and much safer if we reduce fuel loads.

Once our fuel loads are in check, we then need to focus upon maintaining a system that promotes early suppression.

Our network of fire stations and firefighters (full time, part time and volunteers) are our most important asset but the support network often fails those people.

In NSW, the further away from Sydney that a firefighting resource is located, the less likely they are to have all of the tools and equipment that their city-based counterparts enjoy.

The concept behind a standardised approach is less successful in the NSW Rural Fire Service (RFS) than it is with Fire + Rescue NSW (FRNSW). FRNSW Brigade in rural areas don't have the same equipment capability to that of their city counterparts but the gap is not as wide when compared with the RFS.

In terms of equipment and support, it appears that the NSW RFS is more heavily influenced by location when compared with FRNSW. For example, an RFS Brigade that is located in a wealthy suburb or location has greater access to tools, equipment and resources.

Fire behaviour is indiscriminate and so should our response to providing the tools, equipment and resources to fight fire.

Standardisation or compatibility of equipment between the many firefighting agencies and services is a key factor that can impact upon the efficiency and coordinated responses in an operational sense.

NSW examples include:

- Storz (fire hose coupling) size incompatibility between FRNSW (referred to as 70mm) and RFS (referred to as 65mm).
- The Storz fitting incompatibility is sometimes problematic within the same service with RFS trucks having to carry adaptors. At a glance, it is difficult to notice the difference between a 65mm and a 75mm Storz fitting (2.5" and 3").
- Radio communications are still problematic between services at times.
- Fireground radios are not readily available to all RFS firefighters.
- Incompatibility becomes an even bigger problem when working across state borders.
- Access to tools and equipment.

Coordination and deployment

Coordination of our firefighting resources was addressed after the Tathra Fire in NSW, but there is still much to do to ensure that coordinated deployments are occurring.

Recommendation 2 of the Bega Valley Fire Independent Review called for immediate steps to eliminate fire boundaries for call and dispatch purposes to create an agnostic approach to the threat of fires from both a departmental and organisational perspective.

Recommendation 6 of the same review stated that as a matter of priority, commence the roll out of Automatic Vehicle Location (AVL) capability for the RFS fleet, completing as much work as possible before the 2018/19 bushfire season, capitalising where necessary on current and future work undertaken with the NSW Government Radio Network to ensure both officer safety and situational awareness.

We are still waiting for AVL capability in NSW and these principles should extend across state borders and can be dovetailed into Federal support and assistance.

In previous NSW fire inquiries, the VFFA has recommended that the NSW Government appoints an overseeing Fire Service Commissioner that the other two department heads (or Commissioners) report to. A

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suitable person may need to be sourced externally (not from within the NSWRF or FRNSW). This strategy may lead to the development of a single fire service in NSW with the overriding principle being “One badge, one boss and a team of firefighters”.

The single fire service concept has many benefits and would tend to open the door for volunteer firefighters who may wish to move into a full-time firefighting role. A single service model might even be extended into other disciplines.

In rural NSW, the various emergency services are all competing for the same person and in many cases the one person wears many hats (and patches). It stands to reason that consideration should be given to combining these services over time.

Perhaps it is time to create a National approach towards standardisation of equipment, resourcing and recognition of training standards and qualifications so that our firefighters can carry industry recognised skill sets to other fire service engagements.

Strategies for the Future

The VFFA strongly recommends a shift in focus towards:

1. Improved land management
2. Further development of early detection systems
3. Improved access and fire trail networks
4. Constant improvement of systems and support to promote early fire suppression

A single fire service model (State based) might assist in the future by providing a more coordinated focus upon these four points.

Ecological Considerations

This section further addresses the term of reference:

b. Australia’s arrangements for improving resilience and adapting to changing climatic conditions, what actions should be taken to mitigate the impacts of natural disasters, and whether accountability for natural disaster risk management, preparedness, resilience and recovery should be enhanced, including through a nationally consistent accountability and reporting framework and national standards,

Lightning - a natural fire starter

One of the most compelling factors when debating how much fire should be used to reduce fuel in the Australian bush is the fact that lightning causes a large number of fires in Australia and for many decades, we have been putting out fires caused by lightning.

It is interesting to consider what our bush would look like today if we had left those fires burning.

If humans had left the bush to burn (as nature intended) from the early days, then perhaps a fire caused by lightning would not be such a big deal.

We cannot wind the clock back, and we now have to deal with the huge fuel loads that require early suppression, but we can strive to bring the fuel loads back to reasonable levels over time so that a lightning strike, once again is not such a big deal.

If we get back to that point, we may be able to let some of those lightning strikes burn under supervision if they are doing a good job.

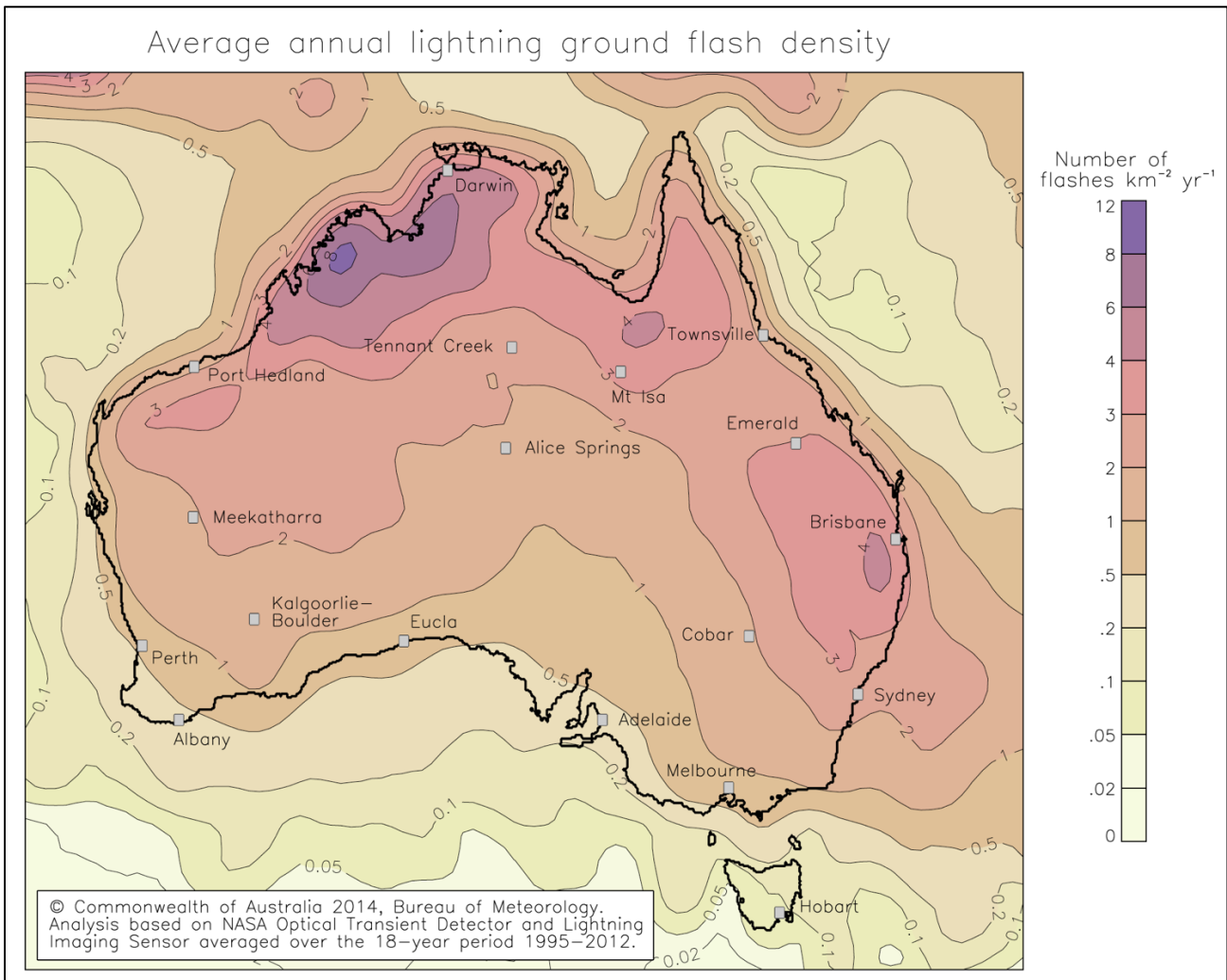


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NSW RFS Canobolas Zone Inspector Brett Bowden examines a lightning tracker showing the spread of strikes across the Orange region - Jan 2019. Source: www.rfs.nsw.gov.au

Contrary to the common expression, lightning can and often does strike the same place twice.



This map from the Australian Bureau of Meteorology shows the average annual lightning ground flash density.

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Proactive Action or Reactive Spend

The Deloitte, Access Economic report - Building resilience to natural disasters in our states and territories (2017), refers to a double dividend in a disaster resilience and safer communities' context as being:

An investment which can provide two types of benefits. In the context of resilience, investment may reduce costs of a natural disaster, as well as improve economic growth and wellbeing through a number of co-benefits that occur even in the absence of a disaster.

The VFFA supports the Deloitte statement in a land management context with the following points:

- (a) Resilience - reducing the costs of a bushfire disaster:
 - a. Land management can be completed on a shoestring budget when compared to the costs of:
 - i. Aviation based firefighting strategies.
 - ii. Costs associated with land based firefighting strategies.
 - iii. Potential property losses.
 - iv. Disruption to business.
 - v. Agricultural losses.
 - b. Removal of the "red tape" and allowing more people to engage in land management programs will further reduce the costs.
 - c. Improved land management can greatly reduce the costs to the environment with extraordinary large losses of fauna and flora in the 2019 – 2020 fire season.
- (b) Economic growth and wellbeing co-benefits:
 - a. The development of a paid workforce to assist with land management tasks across our public lands can provide work for many people and remains economically viable when considering potential losses of inaction.
 - b. The paid workforce can include a many Indigenous Australians to:
 - i. Provide jobs for Indigenous Australians.
 - ii. Create cross-pollination of Indigenous land management practices with new technologies and a wide range of other cultures.
 - c. Improved land management can improve the health and wellbeing of our National Parks.
 - d. It has been said by many farmers that the worse neighbour that anyone can have is the NSW State Government. This perception can be changed with a pro-active approach to land management and boundary fire trails.

Federal Government Intervention

This section addresses the terms of reference:

a. the responsibilities of, and coordination between, the Commonwealth and State, Territory and local Governments relating to preparedness for, response to, resilience to, and recovery from, natural disasters, and what should be done to improve these arrangements, including with respect to resource sharing,

b. Australia's arrangements for improving resilience and adapting to changing climatic conditions, what actions should be taken to mitigate the impacts of natural disasters, and whether accountability for natural disaster risk management, preparedness, resilience and recovery should be enhanced, including through a nationally consistent accountability and reporting framework and national standards,

c. whether changes are needed to Australia's legal framework for the involvement of the Commonwealth in responding to national emergencies, including in relation to the following:

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- i. thresholds for, and any obstacles to, State or Territory requests for Commonwealth assistance,*
- ii. whether the Commonwealth Government should have the power to declare a state of national emergency,*
- iii. how any such national declaration would interact with State and Territory emergency management frameworks,*
- iv. whether, in the circumstances of such a national declaration, the Commonwealth Government should have clearer authority to take action (including, but without limitation, through the deployment of the Australian Defence Force) in the national interest.*

Federal government intervention and support is justified if State resources are being depleted or overrun. It would be difficult to argue that this situation was not the case in the 2019 - 2020 fire season.

This situation and the need for Federal government support could be avoided if we improved our land management to reduce fuel loads.

Safety First

The massive fuel loads, poorly maintained and overgrown fire trails were the biggest threat to the safety of our first responders in the 2019 - 2020 fire season.

Fatigue was also a factor, given the size of the firegrounds and duration of operational tasks.

There was also concerns for the respiratory protection of our firefighters in NSW with many choosing to purchase their own upgrades, crowdfunding or receiving donations.

Many volunteers do not have access to a second set of firefighting PPE, so they had to wear contaminated firefighting apparel for many consecutive days.

The laundering of contaminated firefighting apparel (PPE and PPC) is another issue that needs to be addressed. Possibly the most affordable outcome is the installation of dedicated washing machines at fire stations, but many rural brigades don't even have power.

Communications

Effective and efficient communications will always be a challenge.

Given the complexities and scale of the fire this season, it would be hard to be too critical of the NSW RFS and the NSW Government on this occasion.

Having said that, there was evidence that the NSW RFS Commissioner was reluctant to seek Federal assistance.

In Summary

The best way to improve the delivery of firefighting services to the people of Australia, in a bushfire context is to begin with improving our land management.

The best thing about improved land management is that it can be accomplished on a shoestring budget when compared to the enormous cost of reactive firefighting strategies, the cost of recovery and the untold damage to our fauna and flora.



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The VFFA would like to request an opportunity to meet with the committee to discuss the points in this submission. We would also be interested to facilitate some field trips to review the results of two sites which clearly demonstrate the benefits of sensible land management.

Thank you for the opportunity to provide this submission.

A handwritten signature in black ink, appearing to read 'Mick Holton', is written over a light blue horizontal line.

Mick Holton
President
Volunteer Fire Fighters Association