

Submission of the National Aerial Firefighting Centre  
to the  
Senate Environment and Communications References Committee  
**Inquiry into the response to, and lessons learnt from, recent bushfires in remote  
Tasmanian wilderness**  
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## **BACKGROUND**

1. The National Aerial Firefighting Centre (NAFC) was formed in 2003 by the Australian states and territories, with the support of the Australian Government, to provide a national arrangement for the provision of aerial firefighting resources for combating bushfires.
2. NAFC is literally a Cooperative of state and territory governments. All Australian states and mainland territories are members of the Cooperative.
3. NAFC aims to improve the effectiveness and efficiency of aerial firefighting in Australia by facilitating cooperation and collaboration, including the sharing of aircraft and related resources, between states and territories.
4. NAFC was formed primarily because state and territory governments and the Australian Government saw an opportunity to better utilise highly specialised, highly mobile, relatively scarce and relatively expensive aerial firefighting resources, through national collaboration and cooperation.
5. A single Resource Management Agreement (RMA) is maintained between NAFC and the member states and territories. The RMA provides a straightforward mechanism to share resources.
6. NAFC coordinates the leasing of a national fleet of highly specialised firefighting aircraft which are made available to state and territory fire agencies.
7. These aircraft supplement specialised aircraft that are engaged directly by, or owned by, individual states and territories. The NAFC contract arrangements and the RMA allow the contracted aircraft to be shared between jurisdictions and moved around the country to address bushfire risk.

8. One of the main benefits of these national arrangements is the ability of states and territories to access increased capacity, or “surge” capacity, for aerial fire suppression at times of peak bushfire activity. It is not practical, sensible or cost-effective for each individual state and territory to maintain the necessary specialised resources for all situations.
9. The fixed (standing) costs of the leased national fleet are met by the states and territories. However, recognising the benefits of a collaborative, cooperative approach, the provision of the national fleet is also supported by the Australian Government. Under a funding agreement with the Commonwealth, the Australian Government currently contributes through NAFC in the order of \$15M annually (exclusive of GST) towards the fixed costs of making the contracted national fleet available.
10. State and territory agencies then utilise the contacted aircraft for bushfire suppression, meeting all of the operational costs.
11. NAFC also plays a key role in ensuring standardisation of operating practices for use of aircraft in fire management across Australia. Appropriate standardisation is an important requirement for sharing of aircraft and support resources, and also to ensure safety of operations.
12. NAFC also provides collaborative national support systems for aircraft operations to support fire and emergency management. For example all contracted aircraft are “tracked” in real time through a national satellite-based system. NAFC is currently developing a national shared information system, known as ARENA, which will assist states and territories with managing and administering aviation resources. ARENA will also provide decision-support tools to assist with resource allocation and dispatch.

## **AERIAL FIREFIGHTING**

13. Use of aircraft to assist in the suppression of bushfires in Australia is a proven, efficient and cost-effective technique, providing valuable protection of communities and environmental values. All Governments in Australia recognise the importance of having access to a sophisticated aerial firefighting capability to respond to bushfires, protect communities and to support firefighters on the ground.
14. Aircraft contribute to fire suppression efforts in a wide variety of roles including, for example: direct suppression or asset protection by dropping fire suppressants or retardants; insertion of firefighters into remote areas; and gathering of information to support response planning and provision of updates and warnings to communities.
15. Direct suppression of bushfires by aircraft is rarely effective on its own. Aircraft can be successful in a fire suppression role, but usually only when used in a coordinated effort with ground firefighters.
16. Aircraft can be of limited benefit in conditions that are often experienced during bushfires such as high winds, heavy smoke and low level cloud. Generally aerial suppression of bushfires cannot be employed at night, although other aerial tasks such as mapping and reconnaissance can be achieved at night.
17. Aircraft require specialised management, supervision and support to ensure they operate efficiently, effectively and safely in controlling bushfires.
18. Not all aircraft are effective in all situations. It is important to have a mix of specialised aircraft available, and to match appropriate aircraft to required tasks.

## **2015-16**

19. For the 2015-16 bushfire season the national aerial firefighting fleet leased through NAFC comprised 128 Services – a mixture of fixed-wing aircraft and helicopters - provided by 123 individual aircraft (some aircraft provide more than one Service, where fire season timing is complementary). For example the two heavy helicopters normally positioned in Tasmania during the summer bushfire season also provide services in the Queensland winter-spring bushfire season.)
20. In previous years NAFC has normally positioned 6 dedicated aerial firefighting Services (5 helicopters, 1 fixed-wing) in Tasmania for the bushfire season, at a total standing cost of approximately \$1.65M, to which NAFC has allocated approximately \$0.93M of Australian Government funding. For 2015-16, at the request of Tasmania, an additional dedicated fixed-wing service was made available. The standing costs of this additional service were met jointly by Tasmania and the Australian Government. For 2015-16 the total Australian Government contribution through NAFC towards the standing costs of the 7 dedicated services positioned in Tasmania was approximately \$1.1M.
21. As the bushfire risk developed in Tasmania during the 2015-16 season, NAFC and other states and territories assisted the Tasmanian agencies to access additional aerial firefighting resources. These included NAFC-contracted aircraft services redeployed from other states, state-owned resources redeployed from NSW, as well as local and interstate aircraft engaged on a “Call When-Needed” (ad hoc hire) basis. In all, in excess of 40 specialised aircraft were sourced and utilised to support Tasmanian bushfire operations during the season.
22. Additional aerial resources provided in Tasmania during 2015-16 included large fixed-wing airtankers (refer below) and two “scooping” firebombing aircraft (AirTractor 802F, with a capacity of 3,200 litres). Specialist intelligence gathering aircraft equipped with infrared sensing and mapping equipment were also provided.
23. In addition to the aircraft assets, other states and territories made available trained specialist personnel to assist Tasmania to manage, supervise and support aircraft operations during 2015-16. Moving specialist personnel around Australia to support surges in aerial firefighting activity has become relatively routine in recent years and is a key feature of the collaborative arrangements. In an environment where levels of bushfire activity in individual jurisdictions can vary widely from year to year and even within a season, this makes the best overall use of specialised personnel, who rely in high levels of training and experience.

## **LARGE FIXED WING AIRTANKERS**

24. In the past, large land-based, fixed-wing airtankers have been trialled and used operationally in Australia on various occasions. Recently a newer generation of larger, faster airtankers with improved drop system technology has become available.
25. In 2015-16 the nationally contracted fleet incorporated four of these larger aircraft (capable of carrying greater than 10,000 litres), including a very large airtanker (capable of carrying greater than 40,000 litres). The standing costs of providing these four large aircraft have been largely met by special one-off allocations from New South Wales and Victoria. The Australian Government provided a \$0.5M contribution to assist with retaining the aircraft in Australia for an extended bushfire season across southern Australia.
26. All four large fixed wing airtankers were utilised in Tasmania during the 2015-16 season.

27. Assessments of large airtankers contracted for Victoria in 2014-15 and NSW in 2015-16 indicated that these newer generation large fixed-wing airtankers can assist firefighters to better protect Australian communities from bushfires and will provide a valuable capability that is complementary to existing arrangements. The benefits from protecting environmental assets in Tasmania during 2015-16 has not yet been formally assessed.
28. Larger airtankers also provide a capability that is effective in bushfire situations where other resources may not be available, deployable or effective. This is a critical concern as these are the often fires that are likely to spread and threaten communities and environmental values. It should be recognised however, that aircraft alone will generally not extinguish small or large fires and ground resources will also be required.
29. Importantly, large fixed-wing airtankers are extremely mobile and able to quickly deploy across the country or operate effectively in multiple jurisdictions in the one day.
30. Given suitable funding, there is an opportunity to develop, in future years, a sophisticated national large airtanker capability for Australia.

## **CONCLUDING REMARKS**

31. In recent years, there have been significant improvements in the ability of states and territories to effectively utilise aerial resources to respond to bushfires, protect communities and the environment, and to support firefighters on the ground, as a result of implementing collaborative arrangements and a national capability through NAFC. The collaborative approach also ensures optimum value is obtained from the investment made in aerial firefighting.
32. Australian Government funding has been a significant factor in catalysing the success of the NAFC arrangements. The Australian Government funding is, however, forecast to diminish in real terms, whereas the cost of providing aerial resources will rise. This may lead to a reduction in access to aerial resources in the future.
33. Firefighters are likely to face extended, hotter fire seasons in the future, with more days of extreme fire danger. Along with changing demographics and land use pattern, this is likely to increase demand for aerial firefighting resources. There is an imperative to continue the current, collaborative national arrangements to ensure efficient use of resources and to provide reliable access to surge capacity. There will also be a need to consider the provision of enhanced capabilities necessary to meet forecast increased demand.
34. Large fixed-wing airtankers are likely to be an important component of enhanced bushfire suppression capability in Australia. A shared, national large fixed-wing airtanker capability is logical and is an attractive strategy.
35. The successful NAFC business model is likely to have wider applicability, in particular to the sharing of fire management and emergency resources other than aircraft. NAFC, in conjunction with the Australasian Fire and Emergency Service Authorities Council (AFAC), is currently examining the possibility of extending co-ordinated national resource sharing arrangements to cover other resources and to cover activities other than aerial firefighting.