



BUSHFIRE FRONT

"mild fires not wild fires"

A Critique of the 'Response Only' Bushfire Strategy for Southwest WA

*A Bushfire Front (WA) paper
November 2024*

The fundamental requirement of a bushfire management system is that it is effective in unfavourable conditions. In other words, it must be able to cope with many simultaneous fires, occurring under hot and dry weather conditions when there are gale-force winds, when access to the fires is difficult, when lives and residential areas are under threat and when resources are taxed to the last firefighter.

Firefighters in the south-west of WA face unfavourable conditions like this nearly every summer, and must prepare for them, or they will go under, taking the lives and assets of Western Australians and our beautiful forests with them.

Against this background, the Bushfire Front has observed environmental activists and green academics busy in WA recently, organizing seminars and rallies, writing letters to newspapers, issuing press releases, phoning talk-back lines and badgering the State's firefighters and land managers. They are advocating radical changes to the State's bushfire management approach: the adoption of a 'response only' approach in the south-west.

However, the proposed changes are not based on a sound understanding of bushfire science and operations, and if adopted would have disastrous outcomes. The activists' principal target is the fuel reduction burning program in south-west forests. Their aim is to severely curtail or shut this down.

There is nothing new here – green opposition to prescribed burning goes back to the 1970s and their message has not changed over that time.

First, it is asserted, fuel reduction burning is destroying forest ecosystems, causing extinctions of native flora and fauna. No evidence of this has ever emerged. In fact, cool frequent burning maintains forest health and protects plants and animals from devastating bushfires.

Second, they contend that smoke from burning threatens public health, causing deaths and suffering. But whereas measures are in place to minimize the impact on residential areas of smoke from fuel reduction burning, the smoke from bushfires is denser and cannot be managed.

Finally, fuel reduction is unnecessary; if the forest is left unburnt (they believe) Mother Nature will gradually take charge, bushfire fuels will melt away and the bush will become non-flammable. This is fantasy.

But not only is their basic message false, the alternative bushfire approach they espouse will not work. They propose an approach based solely on suppression of fires after they start.

New technology, it is asserted, will allow bushfire ignitions to be detected and pinpointed instantly, enabling firefighters to pounce on the fires and put them out before they become a problem.

The new detection technology will comprise cameras and satellites, and fires will be extinguished using aircraft (including drones) that will flood incipient fire outbreaks with water or chemical retardant.

The new approach is spelled out in a recent press release from one of the activist groups:

"... it's time to fund new early detection and rapid suppression firefighting technology and stop senselessly torching vulnerable ecosystems ... more effective fire management [will] better safeguard our communities, and ... stop the rapid loss of WA's ecosystems and wildlife in destructive and failing prescribed burns."

The proposal is that WA's current approach to bushfire management be abandoned. This current approach already includes the most up-to-date fire detection and aggressive response. Importantly, it also includes a major investment in fire mitigation - the preparation of potential firegrounds so that when fires start, they can be controlled more easily, safely and at a lower cost and will be less damaging. The key to the success of this strategy is the program of fuel reduction burning, which creates a mosaic of low fuel/low flammability areas across the forest. This bushfire mitigation program would cease, or would become ineffectual, if the "response only" approach was adopted.

There is nothing new about this proposed new "response only" approach. It is well known to bushfire people and was tried in our south-west forests in the 1900s and failed. [The Americans have the biggest and best fire detection and suppression systems, including early detection, a fleet of very large aircraft, and thousands of well-equipped firefighters, but they are unable to stop multiple bushfires burning in heavy fuels under

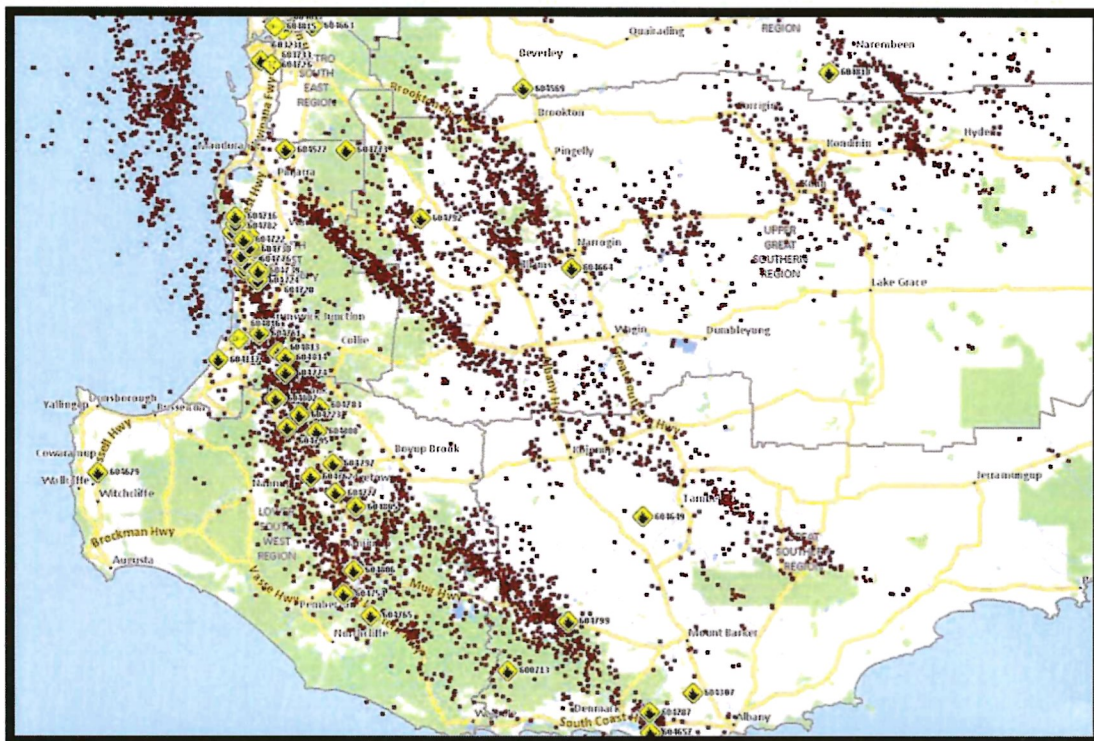
severe weather conditions.] 'Response only' is the fire control system of choice in NSW and Victoria, but has failed spectacularly. The entire firefighting resource of eastern Australia was overwhelmed by the Black Saturday fires which decimated national parks, forests, farmland and residential areas.

In forest country, the 'response only' approach has a major flaw: it will only work under the most favourable conditions. In other words, 'response only' will be effective only when there are few fires, the weather is mild, fuels are light and there is a large and uncommitted firefighting resource available at short notice.

'Response only' will always fail when many fires are started simultaneously in heavy forest under extreme weather conditions.

'Response only' stakes everything on two premises: (i) that every ignition in the forest will be identified and pin-pointed within a few minutes of starting by infallible technology in the hands of infallible humans; and (ii) that there will always be a sufficient resource of trained and well-equipped firefighters close at hand to ensure every new fire outbreak is immediately pounced upon and successfully extinguished.

Experienced firefighters know how improbable these assumptions are, especially in the absence of a fuel reduction burning program. In heavy fuels, under hot, dry windy conditions a single ignition can develop from a spark to a crown fire in less than 30 minutes.



Lightning strikes in the south-west of WA from a single thunderstorm, demonstrating the potential for multiple simultaneous fire outbreaks

We know that:

- a lightning storm can start thirty fires, in random locations, almost simultaneously, and that this can happen at night.
- arsonists/terrorists can start multiple fires, and that they often target the worst possible places for a fire to start.
- the location of new fires can be hard to pinpoint at night, under hazy, smoky conditions or when the bush is slightly damp and a fire will “go to sleep” for a day or two before flaring up.
- crown fires generate ember storms and will throw spot fires up to 5 km downwind, massively increasing fire rate of spread and perimeter, and overwhelming small teams of firefighters.

The ‘response only’ advocates demonstrate a profound ignorance of forest firefighting. They think that controlling a forest fire is simply a matter of attending it and treading it out. In fact, there are four phases in controlling a bushfire after it has been detected:

- finding the fire on the ground and getting firefighters to it;
- stopping the running fire;
- building a containment line, mopping it up and making sure the edges are secure; and
- patrolling the fire over succeeding days to ensure it does not break away.

All four phases are essential, all can “go wrong” due to difficult terrain, changes in weather conditions, failure of machines or technology or human error; all demand and tie up resources, and all are more difficult and take longer in forests with heavy fuels.

For the ‘response only’ approach to succeed under adverse conditions, a standing army of thousands of firefighters (with all their equipment and support) would be needed, almost permanently in readiness over the summer months, day and night, and located within a half-hour or so of every potential ignition point in the forest. On a day of catastrophic fire weather, it would take only three or four fires to “get going” for the response system to collapse. No government has ever had the sort of funds that would enable the sort of firefighting resource envisaged by the ‘response only’ advocates to be established and equipped ... and maintained for ever.

‘Response only’ advocates grossly over-estimate the effectiveness of aerial water and retardant dropping. In fact, aircraft do not and cannot control forest fires, not even fires burning under relatively mild conditions. They can assist firefighters by “holding” a small fire until ground forces arrive, and in some cases the dropping of chemical retardant will slow (i.e. retard, as the name implies) the spread of a flank fire. But they cannot extinguish a fire, build a secure containment line, mop up the edges and make it safe to leave. They are especially ineffective on fires in forests with a high, dense canopy and heavy ground fuels through which the drop will not always penetrate.

Aircraft cannot operate in high winds, during electrical storms, at night or in heavy smoke. It is worth recalling that the towns of Dwellingup, Holyoake, Nanga Brook, Karridale and Yarloop all burned at night under high winds when water bombers could not operate (even had they been available).



High intensity bushfire – way beyond the capability of firefighters to tackle and control by direct attack

To rely on aircraft to control forest fires is to rely on something that is fundamentally incapable of doing the job asked of it.

Finally, the most significant flaw in the approach of the 'response only' proponents is that they want to shut down the prescribed burning program before the new detection and suppression technology they espouse has been acquired, installed or field tested, and before technical staff have been recruited and trained to operate the new systems.

All of this explains why WA firefighters and land managers have opted to include fuel reduction burning as part of the fire management package for south-west forests and why it is so important that the burning program is maintained. Put simply, having a mosaic of areas with light fuel across the forest gives firefighters a better chance of success, even under the most adverse conditions.

Fires in light fuels (say less than 8-10 years in time since last fire) are:

- **Less fierce and easier to control and mop up;**
- **Less likely to "crown" and throw spotfires;**
- **Less likely to injure or kill firefighters;**
- **Less likely to provide a favourable site for ignition by lightning or arsonists;**
- **Less damaging to the environment and human values and assets; and**
- **Cheaper to control.**

The presence of fuel reduced areas throughout the forest allows fire controllers to 'triage' their response in multiple ignition situations, and they provide refuge for firefighters and a safe edge for control operations. Mild intensity fires regenerate flora and provide fresh food resources for fauna. They have never been shown to cause the extinction

of native flora and fauna. Fuel reduction burning does not prevent forest fires from starting, but it massively shifts the odds of success in favour of firefighters. Firefighting is still required, but the task has been made easier and safer.

We conclude that advocates for a 'response only' bushfire approach for southwest forests have only the most superficial understanding of bushfire history, science or operations, and profoundly underestimate the difficulties of dealing with multiple fires occurring under extreme conditions. They advocate a system that will always fail when needed most. They can only afford to do so because they are not responsible for bushfire outcomes and they know they will never be held accountable if a misguided government adopts the policies they advocate.

The Bushfire Front comprises trained and experienced fire scientists and bushfire managers.

Our aim is to minimise the damage resulting from large, high-intensity bushfires in Western Australia.



BUSHFIRE FRONT

"mild fires not wild fires"

www.bushfirefront.org.au

info@bushfirefront.org.au



A low-intensity prescribed burn reducing the tonnage of bushfire fuels in the forest under mild weather conditions. Burned areas effectively mitigate the intensity of wildfires for at least another 6-8 years