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**Submission Number: NND.001.01040**

**Submission Of: Christopher Crump**

### Your Details

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What is your submission based on? I am making this submission based on my professional knowledge, qualifications or experience or on behalf of a group or organisation

What is your area of professional expertise?

If you are lodging your submission on behalf of a group or organisation, what is the name of the group or organisation? Mathoura Red Gum Sawmills

### Your Submission

In your experience, what areas of the bushfire emergency response worked well?

In your experience, what areas of the bushfire emergency response didn't work well?

In your experience, what needs to change to improve arrangements for preparation, mitigation, response and recovery coordination for national natural disaster arrangements in Australia?

There needs to be a close examination of the build up of coarse woody debris and its control in our forests.

Is there anything else you would like to tell the Royal Commission?

Please see attachment.

Do you agree to your submission being published? Yes I agree to my submission being published in my name

Supporting material provided:

Federal Royal Commission.pdf

Mathoura Red Gum Sawmills,  


24 April 2020

## Submission to Royal Commission on Bushfires

The terms of reference for this Royal Commission, section (b) asks *what actions should be taken to mitigate the impacts of natural disasters?*

I would suggest that the Federal government can mitigate one of the impacts of bushfire by introducing a standard which encourages each state to observe minimum levels of fire fuel on the ground.

During the recent bushfire disasters frequent mention was made in reports of the high levels of weeds and woody debris which had been allowed to build up within our forests.

I live next to the river red gum national park along the Murray in which the rangers are instructed to ensure that the level of coarse woody debris does not fall below 45 tonnes per hectare. This level was “borrowed” by the NSW Natural Resources Commission from the Victorian Environment Assessment Council’s study which resulted in all of that state’s major red gum forests being declared national parks. The figure of 45 tonnes per hectare was arrived at thus: VEAC used a paper written in 2000 by scientist Ralph Mac Nally (et al) who had in turn used as a source a dissertation from a young student striving for an honours degree in environmental science.

Here’s how Professor Mac Nally backed his claim that white settlers had decimated the forests’ natural levels of coarse woody debris:

*We used information from an apparently undisturbed, unmanaged site in the Millewa forests of southern New South Wales as a basis. Wood density there corresponded to a mean figure of 125 tonne/ha wood-mass density. By using this figure, we estimate that CWD levels on the southern Murray-Darling basin may be of the order of 15% of pre-European-settlement levels.*

The professor apparently did not check the student’s work. Had he done so he might have found that the high level of fallen timber was not from an old growth forest at all. In fact old maps show that early in the 20<sup>th</sup> century there was no forest where the student believed he had found one. VEAC did not examine the claim either and published the following recommendation to the state government:

*The estimated current level of coarse woody debris in river red gum forests is approximately 20 tonnes per hectare, reduced from a pre-European level of about 125 tonnes per hectare. The main cause of this reduction is firewood collection.  
 Animals dependent on coarse woody debris such as the yellow-footed antechinus only occur at sites with around 45 tonnes per hectare.*

The original VEAC recommendation called for a minimum level of 125 tonnes per hectare but in the final report, following an outcry from bushfire scientists, foresters and volunteer firemen, the figure was reduced to 45t/ha because Professor Mac Nally had been able to trap *antechinus flavipes*, commonly known as a marsupial mouse, only in areas where the debris was at least 45t/ha.

Yet the antechinus had survived for decades when, in order to reduce the bushfire threat, foresters were instructed to gather all debris from the forest floor and when safe to do so, to burn it. Old photographs show clean forest floors with little debris visible.

But because a small mouse-like creature refused to cooperate with a learned academic we have to live with a potential time bomb.

There are probably many more edicts which, with the best of intentions, put forests and people in danger, because here is what one of Australia's leading fire scientists had to say on the subject following the 2009 fires in Victoria:

*The science is simple. A fire disaster of this nature requires a combination of hot, dry, windy weather in drought conditions. It also requires a source of ignition. In the past, this purpose has been served by lightning. In this disaster, lightning has not played a big part, and for this Victorians should be grateful. But other sources of ignition are ever-present. When the temperature and wind increase to extreme levels, small events – perhaps the scrape of metal across a rock, a transformer overheating or sparks from a diesel engine – are capable of starting a fire that can in minutes become unstoppable if the fuel is present.*

*The third and only controllable factor in this deadly triangle is fuel: the dead leaves, pieces of bark and grass that become the gas that feeds the 50m high flames that roar through the bush with the sound of jet engines.*

*Fuels build up year after year at an approximate rate of one tonne a hectare a year, up to a maximum of about 30 tonnes a hectare. **If the fuels exceed about eight tonnes a hectare, disastrous fires can and will occur.** Every objective analysis of the dynamics of fuel and fire concludes that unless the fuels are maintained at near the levels that our indigenous stewards of the land achieved, then we will have unhealthy and unsafe forests that from time to time will generate disasters such as the one that erupted on Saturday.*

*The Australian, February 10, 2009. My emphasis.*

I have worked in the timber industry all my life and have assisted in fighting a number of forest fires. I hope the inquiry will look into the regulations that presently govern the fuel loads, guided by the advice of real bushfire experts.

Thank you for the opportunity of commenting.

Yours faithfully,

Chris Crump.