Victoria's Bushfire History

1802 to Present

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This painting by John Longstaff in 1898, depicts the Red Tuesday bushfires, 1 Feb 1898, one day within Victoria's worst ever season for bushfire weather severity in 1897/98 (based on maximum seasonal dryness and maximum number of very hot days (> 35^0C)).

Victoria's Bushfire History 1802 to Present

'Those who fail to learn from history are condemned to repeat it.'
Winston Churchill, 1948 speech to the House of Commons

Our forebears self-defended against bushfire attacks as second nature. They saw the bushfire as a natural disaster whose embers and spot fires and fire fronts destroyed their homes and livelihoods. They had no choice. They protected their lives and livelihoods by instinct. They worked as a team to defend house and town. A lot of failures. A lot of successes. They fought with self-respect and self-reliance, and rebuilt their lives with dignity and community support.

Since government has taken state wide responsibility for bushfire prevention and suppression, it began to encourage, and lately, order people to run from the bushfire attack. Nowadays, it encourages people to leave home on severe weather days, even before a bushfire is reported. This recent save-lives-at-all-costs policy is an over-reaction to 173 deaths on Black Saturday.

- It is counter-productive because evacuation creates vacant undefended houses. Government has ignored consistent research findings that mass house loss occurs in vacant undefended houses under severe bushfire attack. Saving lives has increased house losses.
- "Run and hide" is contrary to our national psyche as Australians, as this document demonstrates

Thus, government has created an environment where people are now government-reliant. It believes it owns the bushfire problem, believes it has the answers, and foists its solutions onto the people. Big Brother government has arrived.

People now lose homes after obeying government instructions. This means its solutions are wrong. Loss of a home is life shattering. Displaced people are at the mercy of insurance payouts and benevolent government response. This document shows our worst ever fire season was 1897/98 when pioneer settlers lived within the forests in primitive huts. Fires that year burnt over 1 million ha, destroyed thousands of homes, and killed 12 people. A century later, 2009 was a severe season. It burnt half that area, destroyed 2000 homes and killed 173 people. Yet we now have better weather forecasts, much better bushfire behaviour knowledge, much better technology and equipment, much better bushfire prevention laws, stricter government regulated building design rules. Government solutions are clearly not working against severe bushfire attacks and the people are suffering more hardship.

As a bushfire professional, I know severe bushfires are a deadly but preventable scourge. I know houses can survive severe bushfire attack. Despite Big Brother's wishes, we know that 45% of properties self-defended on Black Saturday afternoon. I was on one of them. We safely defended people, house, horses and cars on a forested property on Black Saturday afternoon from the ember attack and spot fires using a professional self-defence technique I developed based on bushfire behaviour science, bushfire threat management principles and dry firefighting techniques I learnt and practiced as a forester. Our pioneers used similar techniques, defiance and will power.

I have studied entire towns under severe attack to understand the why's and how's, the do's and don'ts.

As a bushfire professional, I ask - Why do we people still tolerate the annual bushfire menace in their area? This document shows that the individual settler could only control the bushfire problem on his property. Government however can change state wide policies to control the bushfire problem on whole areas. Many areas are already bushfire-protected. Government could readily bushfire-protect entire areas.

When government took ownership of the bushfire problem, why did it not resolve to eradicate the bushfire menace from Victoria, like, for example, it eradicated the rabbit and other problems? We can deduce they continued to accept that bushfires are natural disasters, and therefore Mother Nature is in charge and we have to get better at responding because we will always have bushfires in Victoria. But wait a minute. Our new understanding of bushfire behaviour shows us they are not natural disasters. Take away their fuel and there is no flame. This means we can control where they burn and where they do not burn. They are therefore fully preventable disasters.

The bushfire protection budget has grown exponentially. I have noticed most has gone into improving the suppression response model. In my judgement, the suppression response model has little influence on the life loss and house loss toll in severe bushfire attacks because it is the wrong and vastly inadequate tool against the inferno flame and ember threat on those days. Logic says we have to apply bushfire behaviour knowledge to denature the flame to meet our suppression capability. Unfortunately, such logic is yet to guide government policy. More shiny red trucks and more aerial water bombers win government money.

I have noticed that ever increasing government investment in bushfire suppression in recent decades corresponds with an increase in the damage toll. The toll should be decreasing. I fear our fire authorities tolerate a worsening damage toll because they expect collateral damage in natural disasters. How have we let the government get it so wrong? Are our taxes being misplaced, funding a worsening bushfire menace?

I hope this document encourages people to revive our pioneer Australian attitudes of defiance against the foe and self-reliance and persuade government to infuse this attitude into reform of its bushfire response - eradicate the severe bushfire threat rather than tolerate its damage tolls.

I put these records together because I want to document how our pioneers coped with bushfires when government was not even interested enough in bushfires to keep records. I want to identify if government policies are making the bushfire situation worse or better. I am particularly interested in how people in Victoria have dealt with and were affected by bushfire attacks, and the corollary, how they used broad area fire to sustain or improve their everyday life.

Official records of the past are sketchy, so I went to their sources – the early newspapers - to get a better feel for the actions and attitude of our pioneers. I want to see what we can learn for application today. I found much of great relevance.
Let me explain:

There are four eras in the bushfire study, pre-European residents (before 1835), pioneers and settlers without government support (1835 – 1900), people operate with limited government interest (1900 – 1945), people operate within state-wide government controls (1945 – now).

My initial observation is that during the century-long hands-off government period, people became empowered and self-reliant under their own clear goal of "defend our houses and our settlement when under bushfire attack". Their community-minded self-defence response was second nature. They did not ask for government help nor expect it. They complained when government policies endangered their communities. They ignored laws that threatened their communities. They always fought hard to save the houses of their settlements from attack, often winning, but sometimes losing houses and assets.

In the non-government period, the strong goal of the people was to protect the houses of their settlement at all costs with all hands to the pump. By protecting their houses and sheds, they protected their lives and their stock. Preventing the spread of fire was low priority because there were no resources. Instead, riders would race ahead to the next settlement to warn them – "it is coming your way".

THEN
Reaction to bushfire attack in severe weather was this:
People apply their own resources to property protection or whole-of-town protection from unstoppable spreading fire fronts, and warn other threatened towns to also prepare for their defence

My next observation is that the damage toll (measured as life loss and house loss) is rising in the current era because the government has progressively usurped the role of the self-protector from the people to the point of denying their self-reliance and making them irrelevant bystanders and dependent on government. But the government is only delivering **part** of the protection recipe. Sure, they seek to prevent fire spread and they try to protect lives by evacuating towns. But protecting houses is now a low priority. They brush off house loss as unavoidable or expected collateral damage with patronising excuses like "you can rebuild a house, but not a life", and "we admire your resilience" and "you are insured" and empty promises of rehabilitation funding and counselling. But losing a house and all possessions is life shattering for most people, even when insured.

NOW
Reaction to bushfire attack in severe weather is this:
Government applies its resources to unstoppable spreading fire fronts, evacuates people from threatened towns, praises their resilience after their town is wiped out.
Losses high, costs huge: suppression, rehabilitation and insurance costs

There is one constant that bedevils all Victoria's bushfire eras. It has not been acknowledged and remains unaddressed.
The fires that get away cannot be stopped. The destructive period is when they are unstoppable.
Our pioneers let them go as they protected their houses
Our current day fire fighters try to stop their spread in full flight

They deploy more and more shiny red trucks and aircraft, but fail
The goal is futile
If only they would change their focus to prevent damage during the runaway phase of the bushfires …
And if only they would adopt a new objective - zero house loss …
They will not only prevent a house damage toll while the unstoppable fires spread, but because protecting the house also protects the house and the life, they will prevent a life loss toll.
Fire fighters are helpless against the unstoppable severe fire.
It wreaks havoc.
Eventually, the unstoppable fire stops by itself in moderating weather or in no-fuel areas.
Fire fighters then mop up its perimeter.

My hope after completing this study is that when people finally convince the government to adopt a strong policy that protect their houses from bushfires (I suggest – ZERO HOUSE LOSS), government will combine their budget, technology and skills with latent people power imbued with the self-defence spirit of our pioneers, and together we will eventually eliminate the bushfire menace from Victoria.

Protect the house? Saving the house saves the house and the life, and lets people resume normal life the day after the bushfire attack. Self-reliance with a house is better than resilience without a house.

Eliminate the bushfire menace? Remove the bushfire's fuel source from the right areas and we eliminate the bushfire menace. Many parts of Victoria already have no bushfire threat. Our first goal should be to bushfire-protect all our towns and settlements. Our performance indicator will be "Number of communities not yet bushfire-protected". Our aim is 100%.

What gets measured gets done

FUTURE
Reaction to bushfire attack in severe weather will become:
Government applies some resources to unstoppable spreading fire fronts and some to bushfire-protected towns and settlements where residents are also empowered to self-defend.

Explanation of source material

I have identified and assessed media material about bushfires in Trove and other historic records and presented their quotes as their contemporaries read. It indicates their then level of knowledge and attitude to bushfire attack.

I began to corroborate reported events with official government sources of information about past bushfires, but soon found the official records were woefully incomplete and superficial.

Framework for additions
This collection is a start. It is not a complete record yet. There are too many source gaps. It is a work in progress. It provides a useful framework to insert additions and amendments.
I invite people to send private records, diary notes, newspaper reports, book references which can be added to the record.

Presentation of annual bushfire data
The chronology has four policy eras and the chapters more or less match them.

Pre 1835	aboriginal practices
1835 to 1900	negligible government activity and controls
1901 to 1945	increasing government activity and controls
Post 1945.	State-wide government controls

Each annual entry has a framework
Seasonal weather (explained below)
Official reports about bushfire events of that year
Reports by media and others about bushfire events
Reports / stories related to bushfires
Observations by author. Some are opinionated. Let me know if you agree or disagree.

Text is colour coded to some extent.
Boxes with yellow background are typically quotes from media – newspaper, TV, radio, internet publisher. In the PDF version, the box outlines are a bit patchy.
Boxes with blue background are quotes from books or references

Blue text includes:
Observations by the author
Emphasising a statement
Stories of self-defence by people under bushfire attack.
Insightful comments about understandings how management of fuel load can save houses.

Red text includes:
Reports of a death
Legislation and court transcripts
The known or suspected causes of a bushfire.
Dimensions of a bushfire

Green text includes:
Damage toll
Reports by inquiries and royal commissions

Weather descriptions
To properly analyse people's response to bushfires, I used available Weather Bureau data back to 1855 to develop an objective measure of seasonal severity based on variation from monthly rainfall and number of very hot days (> 35C) per month. They help put bushfire events in perspective.

Seasonal Severity Level (SSL) is calculated from Dryness Index for the months from Sept to April, and number of very hot days (>35^{0}C) in the same period. Seasonal Dryness Index is calculated from divergence from monthly average rainfall exaggerated by monthly evaporation rate. Thus SSL combines two independent inputs that are indicative influencers of bushfire behaviour in fuel beds of dead grass or litter bed on the forest floor. SSL is tested against number of Total Fire Ban Days per season, which is an excellent indicator of potential for severe bushfire attacks, and found to have a reasonable correlation. Average SSL for the past 163 years is 97. The weather Table for each year ranks them from Below average to Highest as follows:

Dryness Index	Days >35^{0}C	Seasonal Severity Level

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

More details about SSL are found here:
http://www.redeagle.com.au/wp-content/uploads/2019/01/Bushfire-History-Victoria-Part-1-Indicators-of-historical-weather-severity-1850s-to-Present.pdf
The reader will note that the Seasonal Dryness Index in this History is the original SDI divided by 100. This is done to equalise visual scale with the two other measures.

The sources of all entries are referenced
Mostly the source is referenced with the quote.
Almost all sources can be traced on the internet.

Two Forests Commission officers from the 1940's are often quoted - Carver and Tainsh as is one officer from the Weather Bureau in the 1940's - Foley.

Official sources include:
VBRC
COAG
EMA data base www.emknowledge.org.au
ICA Catastrophe Data Insurance Council of Australia
www.icadataglobe.com/access-catastrophe-data/

Other sources are available from the author or can be found on the internet

Acronyms and terms

BOM	Bureau of Meteorology
CFA	Country Fire Authority
COAG	Council of Australian Governments
CSIRO	Commonwealth Scientific and Industrial Organisation
DELWP	Department of Environment, Land, Water and Planning
DMBCL	Department that Manages Bushfire on Fire Crown Land, eg, DELWP and its predecessor names
EMA	Emergency Management Australia
EMC	Emergency Management Commissioner (Vic)
EMV	Emergency Management Victoria
FCV	Forests Commission Victoria
FDI = FFDI	Forest Fire Danger Index Scale of bushfire weather severity, designed by McArthur to run from 1 to 100, where 100 means worst possible.
Fire Authorities	CFA, DELWP, MFB, EMV / EMC
FRB	Fuel reduction burning = Control burning
ICA	Insurance Council of Australia
IGEM	Inspector-General for Emergency Management
Land management agencies	DELWP, NPS, Lands Department,
MFB	Metropolitan Fire Brigade
NPS	National Parks Service
TFB Day	Total Fire Ban Day Forecast FDI exceeds 50.
VBRC	Victorian Bushfire Royal Commission 2009 - 2010
VNPA	Victorian National Parks Association

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Chapter 1 Bushfire management by pre European residents

Observations of aboriginal practices by European exploration parties before 1835

1802 – 1803

The first European explorers of Port Phillip Bay witnessed the frequent application of fire by the aborigines, and assumed they lived in high density around the Bay. It is possible, as suggested by my former colleague Ron Hateley (2010) [Hateley R F (2010) "The Victorian Bush: its original and natural condition" Polybractea Press, Melbourne Australia] that some of the smoke could have been signalling, some purposefully lit to clear away scrub, or to generate green pick, that some was natural bushfire, and some accidental. But we can be sure the frequent use of fire by local aborigines maintained a grassy open woodland environment around the Bay and beyond, whereas their use of fire in denser forests was spasmodic or accidental, meaning their undergrowth could range from scrubby to open. They tended to avoid large areas of dense forests, but over the years they developed passageways and trade routes to traverse them, often running alongside water courses or linking water holes.

John Murray saw the summer fires. His first observation of the Port Phillip Bay area was of smoke too dense to map the shoreline of Sorrento back beach. The easterly wind was blowing across what must have been a large blaze on the Mornington peninsular. His second entry indicates the smoky haze from fires on the Geelong side, and the variability of the weather. His final entries refer to substantial firing activity all around the Bay in late summer, early autumn. Flinders and Grimes saw evidence of recent burns and their influence on vegetation composition and structure. We can interpret their observations as a snapshot of typical local aboriginal practices and deduce that the running flames and smoky skies must have been a feature of the Port Phillip Bay summers for centuries before European settlement.

(1) John Murray January to March 1802
Tuesday, 5th January. Winds from south-east to east with cloudy weather. At quarter past 1 P.M. Cape Shank bore north-east by north 9 miles. Kept running down along the land steering west and west by north in order to traverse the whole of this land, found it impossible to survey any part of the coast as yet from the numerous native fires which covered this low shore in one volume of smoke.

"Wednesday, January 27th. From noon till 8 P.M. variable winds, hot sultry weather, dull fiery sky and so thick that we could not see above a mile ahead; kept making for Cape Albany (Otway). …at 4 A.M. the wind settled into a westerly gale attended with heavy squalls and rain. By 9 A.M. it turned into a clear gale and a very high sea

"Monday, February 15th. The southern shore of this noble harbour is bold high land in general and not clothed as all the land at Western Point is with thick brush but with stout trees of various kinds and in some places falls nothing short, in beauty and appearance, of Greenwich Park.
I went on shore and walked through the woods a couple of miles. The ground was hard and pleasant to walk on. The trees are at a good distance from each other and no brush intercepts you. The soil is good as far as we may be judges. I saw several native huts and very likely they have burnt off several hundred acres of ground. Young grass we found springing up over all the ground we walked;

"Tuesday, February 16th. After dinner I took a walk through the woods of this part of the country, attended by one soldier and our carpenter to examine the wood. To describe this part I walked through is simply to say that it nearly resembles a walk on Blackheath and the Park

"Friday, February 19th. Numbers of native tracks, fires and huts were seen. One native fire in sight on Arthur's Seat distant about 10 miles.

Tuesday, February 23rd. We walked through the country some distance, found the soil invariably good, the ground almost clear and the ranges of trees as regular as they are in general in the Park, with fine strong short grass underfoot.

"Saturday, February 27th. A number of very large native fires on the hills round the eastern and western shores of the Port have been seen these two days past.

Wednesday, March 10th. For these last two or three days great numbers of native fires have been seen all round the Port except between Arthur's Seat and Point Palmer (= near Pt Nepean)

(2) April 1802 by Matthew Flinders
Observed in April 1802 by Matthew Flinders and reported in 1814
Indented Head, at the northern part of the western peninsula, had an appearance particularly agreeable; the grass had been burned not long before, and had sprung up green and tender; the wood was so thinly scattered that one might see to a considerable distance. (quoted in Scott 1914)

(3) Grimes January 1803
23 January Arthurs Seat The country all newly burnt.

29 January Hill behind Frankston . I ascended a hill where I could see eight or ten miles, hills without trees, narrow valleys with scrubby brush.

11 February Werribee plains Went to the top of the hill; it is stony; could see about ten miles around us a level plain with a few straggling bushes. The face of the ground is one-third grass, one-third stone, and one-third earth, mostly newly burnt.

8 February North Bellarine The land is a light sand from the point of the hill, and in some places swampy; the timber something larger, consisting of gum, oak, Banksia, and mimosa, some small pine, one half of it dead by the country being lately burnt.

One of his conclusions: The country in general is newly burnt.

Later that year (October to December) 1803), James Tuckey was an officer of the temporary first settlement of Port Phillip Bay near Sorrento. His observations confirmed the frequent burning around the fringe of the bay created an open grassy woodland, but there were other areas where the forest and scrub were impenetrable, eg, south of Arthurs Seat.

The soil (except in a few places where marle is found mixed with vegetable mould,) is invariably sandy, and its blackness proceeds from the ashes of the burnt grass, which has everywhere been set fire to by the natives. The timber, within five miles of the beach, is chiefly the she-oak, which is only fit for cabinet word; the trees are open, and the country is entirely free from underwood, except in the swamps, which are always covered with an impenetrable brush. The other kinds of timber trees are very thinly scattered within the above limits; they are the blue-gum, stringy-bark, honeysuckle, box, and a kind of pine (probably Casuarina).

As our track to Western Port had never diverged more than five miles from the sea, it was determined, on returning, to endeavour to penetrate through the country in a NW direction, which we supposed would bring us to Port Philip at about twenty miles distance from the camp. We accordingly set off at daylight of the third day, from our night's station, which was about five miles from the entrance of Western Port, and had scarce walked a quarter of a mile when we came to an immense forest of lofty gum-trees. The country here becomes very mountainous: in the valleys or rather chasms between the mountains, small runs of water

trickle through an almost impenetrable jungle of prickly shrubs, bound together by creeping plants. After passing eight of these deep chasms in six miles, which was accomplished with infinite difficulty in four hours, we found the country grows still more impenetrable, vast fields of shrub as prickly as furze arresting our progress every moment. Several of our people who carried the water, being unable to bear the fatigue any longer, we were obliged to give up our intention; and after a short rest, we shaped our course to the SW in order to approach the sea, where the country becomes open and less hilly.

In this direction we found the country well-watered, the soil very rich, and in many places meadows of from fifty to an hundred acres, covered with grass five feet high, and unencumbered with a single tree. At sun-set we reached the sea at Cape Schanck, and, halting for the night, arrived at the camp in the afternoon of the next day.

Tuckey at Sorrento 1803. Oct to Dec
A Voyage to Establish a Colony at Port Philip in Bass's Strait on the South Coast of New South Wales, in His Majesty's Ship Calcutta, in the Years 1802-3-4
Author: James Hingston Tuckey (1776-1816) A Project Gutenberg Australia eBook

17 November 1826
Dumont D'Urville's party explored the area around Sandy Point [Westernport]. They went all over this tongue of land … applied themselves to hunting kangaroos … came upon a watercourse which seemed to belong to a river, although the water was still brackish, and he [Gaimard] noted recent traces of the presence of natives … the open terrain is delightfully undulating. Here there are fine stands of trees easy to get through, there are vast grass-covered clearings, with well defined paths and linked by other tracks so regular and well-marked that it is hard to conceive how these could have happened without the hand of man. (Fels, 2011)

Conclusion
Thus, the open grassy plains seen by the European explorers and settlers were probably caused by the regular frequent burning by the aborigines. It makes sense that they maintained a habitat that was favoured by their largest source of protein, the kangaroo – grassy patches with scattered trees, grassy patches ringed by denser vegetation and grassy understorey in open forests. The regular burning, often called fire stick farming, created a mosaic of recently burnt areas in summer that a running flame would eventually hit and self extinguish, or that became a refuge area if a running fire was caught by a strong wind or a wind change.

1.2 Observations during early settlement phase 1835 – 1850's

The meeting of cultures – the learning and the tension

Aborigines apply fire for green pick by grazing animals and for food gathering
In 1841 Squatter William Brodribb observed that 'the natives had burnt all the grass in Gippsland late in summer'. By autumn, he continued, 'the whole country was very green. It had the appearance of young cornfields, the grass was about six inches high and in places very thick'. (from Wellington Shire Heritage Study, 2005)

Cahir quotes GA Robinson July 1841 in western Vic:
'Native women were spread over the plain as far as I could see them, collecting pannin, murnong, a privilege they would not be permitted except under my protection.

I inspected their bags and baskets on their return and each had a load as much as she could carry. They burn the grass, the better to see these roots but this burning is a fault charged against them by squatters.'

Europeans recognise aboriginal knowledge of fire application

1840 An old man…went and set fire to the Bush…I bid him desist but he said - Black fellow would not know where they were if he did not make fire, and made one so [effectively] about him that I could not get aside him.
[The fire] Burnt furiously beyond conception for a thick scrub but a quantity of old grass [decayed] was underneath which accounted for it. The Old Man persisted, at half past one I again went where it was burning and to my great surprise what 2 hours before was a dense forest was now passable… I came up [to] the old man who had an old close body coat on, which I suppose he had put on to keep his body from being burnt and kept perhaps for the purpose as I never saw him with it on before. … I went on till I came to the end of that already burnt [section] about half a mile and was surprised at the extent [of the fire.] As far as the eye could take in was still in flames and burning. At a little distance it sounded like water coming down a gentle fall, [but the] fire appear[ed] like a wall around you… (Cahir quotes William Thomas, Cape Schanck, c.1840)

Vendetta fires harry the European invader or deprive their stock of feed

'The fires in the bush are often the work of the natives, to frighten away the white men' (Cahir quotes Kirkland, 1838)

'The landscape was being deliberately torched to drive us away' (Cahir quotes Webster 1840).

Rawson and some of the men from Jamieson's visited and complained that the blacks had set fire to the bush all round, and 200 cattle had strayed. 2 March 1840 William Thomas journal

'The woods are on fire every night. The blacks [Djabwurrung] set them alight in retaliation for being driven away' (Cahir quotes Chabrillan, 1850s)

Europeans recognised aboriginal knowledge of how to avoid bushfire threat

Local Aboriginal people would educate them in how to fight fire by: 'running for bushes, put them into the immigrants hands, and show how to beat back the flame as it licked up the grass.' Cahir quotes Gilmore (1934)

Newspapers in Port Phillip at this time need to be read with caution. Mrs Madeleine Scott's letter to the editor, published 13 March 1841 is a good example. She wrote that the newspaper had published an account the previous week stating that the blacks had set fire to her property. In fact, they were helping her to put the fire out. This is a similar experience to Thomas at Meyrick's (Fels, 2011).

'It was the local Aboriginal people who saved Captain Hepburn's family from the inferno descending upon them on Black Thursday by directing them to a safe spot near a creek". Cahir quotes The year was 1851

The Macdonald family, Portland Bay District recalled how 'The Black Friday fires swept through "Retreat", but the men were able to save most of the stock by putting them in the dry river bed. Mary was very ill and the [presumably Gunditjmara] aboriginal couple saved her and the children by taking them to a water hole and then returned to save the house.' Cahir quotes

Fires of 1854 in western Victoria were, according to one squatter 'fought with as many of his black troop as he could muster' and in 1858 'The blacks are busy fighting fires for me' Cahir quotes

"Send for the blacks!" was the first cry on every settlement when a fire started' Cahir quotes

Notes by Dr Fred Cahir Fire and Aboriginal People in Colonial Victoria
Associate Professor in Aboriginal History, Federation University
Living with bushfire community conference October 2015 Federation University
https://federation.edu.au/__data/assets/pdf_file/0004/280057/01-Fire-and-Aboriginal-People-Dr-Fred-Cahir.pdf

Aboriginal burning declines
The early settlers were attracted by open grassy woodland areas and brought stock onto them. As the sheep population encroached into aboriginal territory and as the aboriginal population declined, mainly due to western diseases, aboriginal burning declined.

Cahir quotes early observers (Le Souef (1840-60), Robinson (1840s) and Howitt (1890)), who considered dense undergrowth returned when the Aboriginal firing regime had declined. Robinson, for instance noted in 1844 that once the Aboriginal peoples in Gippsland had been usurped of their land: 'the country in consequence is unburnt, and that this is the reason the country is so scrubby.' This may have been the case in specific areas of high activity aboriginal areas. Indeed, Cahir concludes that the written accounts of Aboriginal burning practices in Victoria indicate that the application of fire was managed, frequent and over generally small areas of grassland plains.

The analysis by Hateley (2010) allows a broadening of this conclusion - that so-called aboriginal firestick farming was mainly employed in the grasslands and the open woodlands and that, if fire was applied in denser forest, is was opportunistic and targeted, eg, associated with water courses, track systems, specific food gathering sites or specific camping or gathering areas. Hateley justifiably berates modern day support for Curr's (1883) assertion that aborigines burnt the entire forest area on a five year cycle. "Almost every part of New Holland [Australia] was swept over by a fierce fire, on an average, once in every five years". In particular, he found no evidence to support this proposition in Victoria.

Von Guerard, Warrenheip Hills near Ballarat 1854

Conclusion

Many settlers continued the fire stick farming practice, initially for green pick and as settlement subsequently moved further into the forested landscape, others used fire for broad area land clearing. The early settlers also sowed crops and built houses and sheds. As before, the fires were let to run. Most went out. Fuel free gaps or rain finished them off. Some spread slowly overnight in the dry litter bed. Some smouldered for days. And so, the early years saw smoky skies as a common summer phenomenon. This summer pattern of smoked skies was to continue for up to 100 more years in many parts of Victoria.

Similar to aboriginal times, when the dry winds came, the smouldering flames perked up and ran with the wind. Unlike in aboriginal times, when these reinvigorated fires ran as infernos through the bush, refreshing its potential for future food supply, they now ran towards the vulnerable assets of the settlers - like crops and stock herds and homesteads, sheds and huts.

Technical Note: To the European, the bushfires initially seemed uncontrollable, unstoppable, and destructive. But the fires still behaved like the aboriginal fires did. They followed the same laws of nature – where there was flammable fuel on the ground and aerated elevated fuel above, the flame was tall; where there was no flammable fuel on the ground, the flame went out. Flame ran upslope faster than on flat ground. When the wind blew strongly, the flame moved faster. When the wind brought the smouldering logs and stumps to life, the reinvigorated flames ran until they hit a burnt patch or the wind changed direction or stopped or the rains came.

Chapter 2 Early settler phase 1845 – 1851

2.1 Chronology begins 1839 - 1850

1839

December Large fire in Wannon valley

"When I arrived through the thick forest-land from Portland to the edge of the Wannon country, … the whole of the Wannon had been swept by a bush fire in December, and there had been a heavy fall of rain in January (which has happened, less or more, for this last thirteen years), and the grasses were about four inches high, of that lovely dark green ; the sheep had no trouble to fill their bellies ; all was eatable ; nothing had trodden the grass before them. The fire had been so great that one could not get as much grass as would thatch our hut".

Letters from pioneers to Gov La Trobe John G Robertson of Wando Vale 1853

He arrived in Portland March 1840. He selected next door to the Henty run.

1845

City fire brigade

The first known fire brigade in Melbourne town was the volunteer Melbourne Fire Prevention Society established in 1845. Over a period of years a number of volunteer brigades were formed bearing the names of insurance companies and municipalities, and other institutions eg. Carlton Brewery, Fitzroy Temperance.

Up until 1890, town fires were fought by employees of various insurance companies. A fire mark, like the one below, was attached to a building in order to identify which insurance company they belonged too.

(Victoria State Library blog)

There was intense rivalry between these brigades. Buildings had wooden or metal plaques in the form of an insurance brigade coat of arms or firemark affixed to their exteriors denoting which insurance company had the building under its care. When the fire alarm sounded many companies would rush to the scene, the mark would be inspected, and only the brigade that owned the mark would fight the fire while the other companies would do their best to hinder the operation. By 1890 there were 56 such volunteer brigades in Melbourne (Wikipedia)

Example of a nineteenth century fire response by insurance company brigade

Argus Fri Jan 1887

About half-past 4 o'clock yesterday the Insurance Company's Fire Brigade was summoned by telephone to the Mercantile Bond, 148 Flinders St West, where it was stated a fire was burning. The Insurance Company's Brigade quickly responded. The firemen broke in. The members of the brigade with a strong force of water through a small hose quickly extinguished the flame.

1846

West Wimmera "For several years after 1846 all the country round here, then called the New Country, afterwards the West Wimmera, was covered with kangaroo grass – splendid summer feed for stock of all kinds. It was at its best during January, February and March, and remained good up to May, but it lost its colour after that, and gave place to a finer grass – herbs such as yams, etc.

The country was like this for some years after 1846, until destroyed by the indiscreet use of fire.

… provision was made for a place to fly to for safety in case of fire. This was done by burning the grass in patches when it was half green.

… Of course on such a day as the 6th of February, 1851, it was almost impossible to find a place of safety

We could never tell when a fire would swoop down on us and burn both fences and sheep. I have seen a fire coming out of the Mallee twenty miles [32km] wide, clearing all before it, but with the provision we used to make, we never had any serious loss

…We were in the habit of burning all rubbishy country in the autumn. I, myself, made a practice of setting aside all station work in March, and, taking five or six men and a supply of water, we burned the country into comparative safety".

J Hamilton Apsley

Hamilton, J.C. 1914, *Pioneering Days in Western Victoria*, Warrnambool Institute Press, Warrnambool.

Quoted by Hateley R F (2010) "The Victorian Bush: its original and natural condition" Polybractea Press, Melbourne Australia

1849

Otways

Argus 6 Feb 1849

The Superintendent

Grave Fears have been entertained for some days for the safety of his Honor the Superintendent, while on a journey to Portland, via Cape Otway, who was expected would have reached his destination upwards of a week ago. Happily, then they have been dispelled by intelligence from Portland announcing his Honour's safe arrival there. His detention being accounted for by his having been lost in the bush, and undergone considerable hardships before he succeeded in extricating himself.

A private letter received from Portland yesterday mentions that among the disasters that befell his Honour, was his being overtaken by bushfire, which raged so fiercely, that it was by taking refuge up to his neck in the creek his Honour was enabled to escape the rage of the devouring element. His Honour is due to arrive in Melbourne tomorrow evening, a return being anxiously looked for in regard to the recent golden discover.

Advice

Helpful warnings were given in the early press that indicated some did understand bushfires could be managed. They focused on protection against the flame that moved across the grassy fuel bed rather than the ember which jumped both short and long distances.

Argus 6 Feb 1849

Bush Fires —The horizon is beginning to be dimmed by the smoke from the burning bush. We cannot too strongly impress upon our country friends, the propriety of taking immediate measures for the safety of their crops and homesteads. By choosing a favourable day and clapping on all hands for an hour or two, and burning back from their fences, &c, much injury and loss may be avoided. Our long dry spring induced an unexampled growth of grass and this acted upon by the present heat, will give an unusual vigour and intensity to the bush fire which will be productive of serious consequences unless preventive measures be adopted in time.

2.2 1851 - Historical Context

In 1851, Victoria had a population of about 70,000 people, most concentrated in a handful of settlements, some 23,000 in Melbourne,
Melbourne then was a settlement of scattered timber buildings set amongst expansive paddocks grass and scattered trees. In summer the paddocks were usually bone dry, and grass height was low only if they were well grazed.
Smoky skies were commonplace in summer skies. Hot weather was commonplace in summer, usually followed by a cool change.

Victoria had six million sheep spread thinly across grassland and open forest and the wool trade was worth £1,000,000 annually. Melbourne had become a major centre of Australia's wool export trade.

1850	Aust sheep population 16M, (= 39 sheep per person)
1852	Vic 6.5 million, exporting 9,100 tonnes wool worth 1 M pd
1860	Aust sheep population 20M, exporting 26,700 tonnes wool worth 1 M pd
1892	Aust sheep population 106M, exporting 289,400 tonnes wool worth 1 M pd

Economic and climatic problems, culminating in the depression of the 1890s and the prolonged drought of 1895-1904, seriously affected wool production towards the end of the 19th century. Sheep numbers fell from 106 million in 1892 to 54 million in 1903 - a 49% fall.

Two significant events occurred in 1851 that would have profound effects on the prevalence and management of bushfires for the next century

The first was the discovery of gold in Bathurst, NSW in February. This news fell within an era of heightened world-wide interest by fortune seeking entrepreneurs generated by the Californian gold rush since 1848. People now flocked to Australia because the easy gold was expiring in California. The effect was immediate and took the Victorian leaders by surprise. The streets of Melbourne were all but deserted and farms literally emptied. One merchant wrote that when "news reached us of the discovery of gold in the Bathurst district. I cannot describe the effect it had upon the sober, plodding and industrious people of Melbourne. Our labourers left us by ship-loads".

The second was Victoria separating from NSW as a separate colony in July, which empowered Victoria to try to stem the tide. Governor La Trobe had already assembled a Gold Discovery Committee in June and offered a £200 reward to anyone who found payable amounts of gold within 200 miles of Melbourne. Response was immediate because gold had already been discovered in Victoria, but kept quiet. So in July, news broke of marketable gold fields in Clunes and Warrandyte and in the following month new finds were made at Castlemaine and Ballarat. People flocked back to Victoria, but it turned the economy into a shambles. People left jobs and farms to head for central Victoria. Melbourne remained a ghost town, with only the elderly, the sick, and women and children left to run the community. Even 80 per cent of the police force had resigned to go gold digging. Ships lay idle in the harbour. To raise money for supplies, owners put their properties on the market, but there was nobody around to buy real estate so prices dropped sharply. Wages tripled due to severe shortages in labour, and inflation set in. People who had made it big on the goldfields went on absurd spending sprees. Bread doubled in price, potatoes tripled and flour soared to £70 a ton. With staff, crops were neglected and farmers were on the verge of ruin. The government finally stabilised the situation when it promised to guard the gold

claims of those who chose to return home during planting and harvesting. The response was overwhelmingly positive and economic balance was restored.

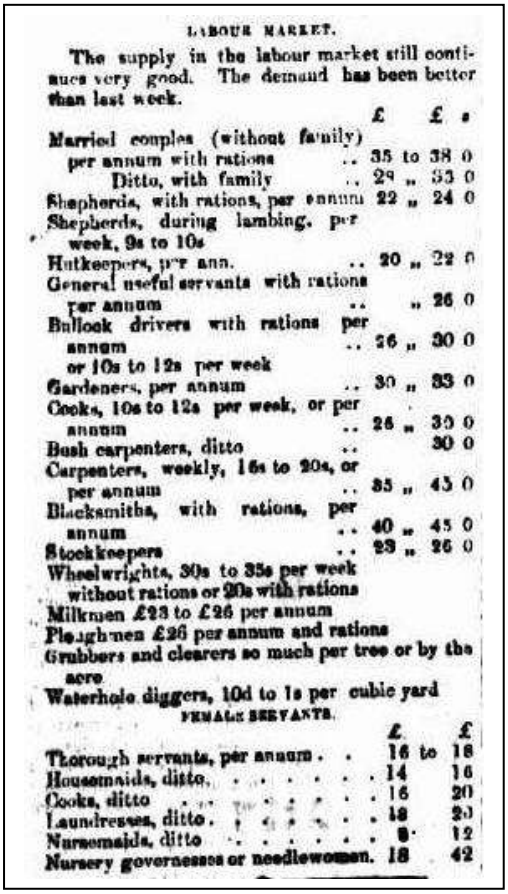
The discovery of gold led to a huge rate of influx of people to Victoria. In 1852, 75,000 people arrived in the colony and this, combined with a very high birth rate, led to rapid population growth. By 1861, the population of Victoria increased to 540,000.

Sources of above include:
Wikipedia
A History of the Port Phillip District: Victoria Before Separation By A. G. L. Shaw 1996 MUP
http://www.sbs.com.au/gold/story.php?storyid=29

This led to a massive increase in forest clearance for mining, building, firewood and new agricultural land. Tree clearance reduced the forest fire risk but expanded pasturage increased the grass fire risk. The growing rural population increased the risk of life and house loss in bushfires.

Value of the pound in the 1800's
http://guides.slv.vic.gov.au/whatitcost/earnings
Australian money before 1910 was British money = pound sterling.
Relative to the Australian dollar today, the value of the pound fluctuated up and down throughout the rest of the 19th century due to booms and depressions in the Australian economy. But to keep things simple, we can regard the value of one pound between 1850 and 1900 as approx $150 dollars now (in 2018).

The Argus June 23, 1851



LABOUR MARKET.

The supply in the labour market still continues very good. The demand has been better than last week.

	£	£ s
Married couples (without family) per annum with rations ..	35 to	38 0
Ditto, with family ..	29 „	33 0
Shepherds, with rations, per annum	22 „	24 0
Shepherds, during lambing, per week, 9s to 10s		
Hutkeepers, per ann. ..	20 „	22 0
General useful servants with rations per annum ..	„	26 0
Bullock drivers with rations per annum ..	26 „	30 0
or 10s to 12s per week		
Gardeners, per annum ..	30 „	33 0
Cooks, 10s to 12s per week, or per annum ..	26 „	30 0
Bush carpenters, ditto ..		30 0
Carpenters, weekly, 15s to 20s, or per annum ..	35 „	45 0
Blacksmiths, with rations, per annum ..	40 „	45 0
Stockkeepers ..	23 „	26 0
Wheelwrights, 30s to 35s per week without rations or 20s with rations		
Milkmen £23 to £26 per annum		
Ploughmen £26 per annum and rations		
Grubbers and clearers so much per tree or by the acre		
Waterhole diggers, 10d to 1s per cubic yard		

FEMALE SERVANTS.

	£	£
Thorough servants, per annum . .	16 to	18
Housemaids, ditto	14	16
Cooks, ditto	16	20
Laundresses, ditto	18	20
Nursemaids, ditto	8	12
Nursery governesses or needlewomen.	18	42

In 1851, annual wages of skilled people like carpenter or blacksmith were £25 – 40, or a short term daily rate of 10 shillings per day ($75 in today's).
As a rule of thumb, £50 per year was a very good wage.
This is approx $3,750 pa in today's money.
Ref: RBA calculator: £1 in 1901 was worth about $150 in 2017

The annual wage increased in the late 1800's.

For example,
In 1903

Average weekly earnings by trade	1903
Bread making	£ 2 2s 10d
Clothing	£ 1 2s 5d
Boot	£1 8s 3d
Furniture	£1 19s 6d
Engraving	49s 10d
Pottery	£1 16s 10d

In 1907, the basic wage was introduced at £2 2s per week = £100 per yr

2.3 Chronology continues - 1851 and Black Thursday

1851

Weather Bureau of Meteorology (BOM) records are not available

The 1850 winter and spring produced lush grass and settlers expected fires when it dried out. On Black Thursday, the whole state seemed to be alight. (Royal Commission, 1900)

Thursday (6 Feb) was one of the most oppressively hot days we have experienced for some years. In the early morning the atmosphere was perfectly scorching, and at

eleven o'clock the thermometer stood as high as 117° (= 47^0C) in the shade; at one o'clock it had had fallen to 109° (= 42.7C) and at four in the afternoon was up to 113 (= 45C) (from The Argus 8 Feb, 1851)

Official bushfire records

The Royal Commission in 1900 reported on Black Thursday fires. Presumably they had full access to all relevant government records, yet they did not quantify losses. "Population was sparse, agriculture was largely confined to Portland Bay and Geelong districts. Crown land was occupied by pastoralists, and understocked.

A report by Tainsh (1949) on Forests Commission files said warm weather set in during October 1850 and by year's end, the country was dry almost to whiteness. Some landowners took advantage of weather to get a good burn, and there were already fires roaming the country. During January, high temperatures and thirsty winds blew from inland. On Thursday 6 Feb, temp was 117 F in the shade at 11am Melbourne was filled with smoke during the day and the cool change came in at 9pm.

The toll included - Dandenong township was engulfed, Diamond Creek - Plenty River suffered, where a woman and 5 children were killed, Mt Macedon ranges were fully alight, Barrabool Hills were engulfed, Barwon Heads to Mt Gambier was alight, towns of Warrnambool, Apollo Bay and Portland were threatened, Mt Cole and Buninyong burnt, Seymour and Kilmore fires joined and burnt between Broken and Goulburn Rivers. Hundreds left homeless. Inquests were held in Melbourne and Geelong on the deaths of 10 people, but more were missed.

Nowadays, the authorities report Black Thursday as follows: deaths 15, area burnt 5 million ha, buildings lost 1300, stock losses 1 million (eg, VBRC 2010).

Reliability Based on the following references, and in particular, the sparseness of witnesses and sketchy reports, and the large unpopulated areas, the area burnt, house and stock losses can be regarded as speculative estimates, and the deaths as underestimates. For example, the 1 million stock losses seem to be a proportion of total Victorian sheep population of 6 million (1/6) loosely based on the estimate 5 million ha burnt (= approx 1/4.5 of Victoria's 22M ha). We have no evidence that 5 million ha burnt. If we encircle the dots of Figure 1 and deduct the evidence that a large part of the Western District escaped the fire (eg, between the Leigh and the Hopkins), the maximum area is 3.5 million ha. Considering this area included large areas of uninhabited forest (refer to map under 1868 / 69 listing), a more realistic figure may be a third to half of this area. I estimate 1.5Mha as a reasonable maximum.

Reported bushfire events

Analysis of bushfire reports by the newspapers began in earnest in 1851. Colourful accounts of rampages by bushfires were regular items in the summer press for many subsequent decades. There were reports of the fear and anxiety, of destruction and losses, of determined defences and of timely escapes, of deaths and close escapes as people dealt with the bushfire attack in their own way, well aware of pre-existing fuel free areas for shelter. There were many reports of saves by good luck, eg, the wind changed just in time.

Let's read them in this chapter and in the next. Our purpose is to analyse the response of settlers, insurers and the government then and compare it to today - how it has changed or not changed.

Black Thursday

The first reported bushfire catastrophe in Victoria was Thursday Feb 6, 1851 and became known as "Black Thursday". The media reports describe fires that happened in the days before Feb 6 and days following. On Thursday, the people of Melbourne felt the unbearable heat and wind and smelt the smoke and saw the smoke and haze, but were unaware of the extent of the area burnt or its destructiveness. This is how Melbourne came to know what happened.

The Argus received these stories early in February, and printed them on 7 Feb 1851, the day after what was to become memorable.

Argus Fri 7 Feb, 1851
A gentlemen resident in the Portland Bay District, thus writes to a friend in Melbourne
"The bush is on fire in all directions; the creeks and water holes in this district were never known by white men to be so low. If this weather continues the stock will die off fast. Mr Grey, late of the firm of Grey and Marr had his homestead burned to the ground, along with 400 sheep. Mr Neil Black has had 3500 sheep destroyed by fire, and now while I am writing, you cannot see 300 yards, so dense is the smoke. I am in constant dread of the destroying element reaching the houses. The station is literally surrounded by flames."

"Very great alarm was excited on Wednesday last by the immense surface of fire which came rolling down towards the farms around Belfast, and had not the wind providentially shifted, inevitable destruction must have fallen upon every farmer within ten miles of the township."

Argus Sat 8 Feb 1851
THE WEATHER. - Thursday was one of the most oppressively hot days we have experienced for some years. In the early morning the atmosphere was perfectly scorching, and at eleven o'clock the thermometer stood as high as 117° (= 47^0C) in the shade; at one o'clock it had had fallen to 109° (= 42.7C) and at four in the afternoon was up to 113 (= 45C)
The blasts of air were so impregnated with smoke and heat that the lungs seemed absolutely to collapse under their withering influence; the murkiness of the atmosphere was so great that the roads were actually bright by contrast. The usual unpleasantness of hot wind was considerably aggravated by the existence of extensive bush fires to the northward, said by some to have an extent of 40 or 50 miles. In the evening, after an hour's battle for the supremacy, the cool breeze from the sweet south came down, sweeping away the pestilential exhalation of the day, and bringing in its train a light and refreshing rain.

FATAL AND DESTRUCTIVE BUSH FIRE - Intelligence reached town yesterday morning of a most destructive bush fire that had been raging on the previous dav at the Plenty River. On the station formerly known as Anderson's Station, between the Plenty River and Diamond Creek, the destruction was very great, and it is stated that a poor woman, wife of a shepherd named McClelland, was, with five children, suffocated in a hut from the smoke of the fire which raged around them, and left no means of escape. Eight or ten farms in the neighbourhood have been entirely destroyed, stacks, buildings, fences, everything; whilst several men are missing, and fears are entertained that they have perished.

The reports continued the following Monday

Argus Mon 10 Jan 1851

In our Saturday's issue we briefly alluded to the extensive and destructive bush fires that prevailed throughout the country, more particularly on the Thursday preceding. Rumours had reached us of conflagrations on every side, but as we did not wish to appear alarmists, we refrained from noticing any but those that were well authenticated. Since then, however, we learn with regret that little only of the ill news had reached us, and that what we thought magnified, is unhappily very far from the fearful extent of the truth.

In addition to the mother and five children, there were more reports of deaths and rumours of deaths:

Argus Mon 10 Jan 1851
On the Plenty, more than a hundred families have been thrown by the devouring element houseless upon the world. The property of Mr Wills, so fatal has it been on Mr Wills' estate, that **only one of his tenants (Mr Johnston) by good fortune escaped**, and a vast amount of wheat estimated at 20,000 bushels has been burnt;

At Mr Hopper's, on the **Waurn Ponds, the** houses, barns, stacks, fences, and implements were all destroyed, **and three lives lost.**

In the Barabool Hills, … on Mrs Wilson's farm everything is destroyed, but the report of her death, prevalent yesterday, is in correct. She is living in the house of her neighbour, Mr Leigh, one of the few whose premises escaped destruction. Mrs Furlong was severely burnt, and her injuries may be fatal.

6 February 1851 10 people lost their lives along with extensive property and stock losses as fires were reported along the Moorabool Valley, Barrabool Hills and down to Barwon Heads. The unofficial maximum temperature that day was stated as 114^0F (= 45.6^0C).
(Reference: L. Smail Weather Wonders of Geelong, 1998).

Two coronial inquests were held over a weekend, one in Collingwood for the six deaths at the Plenty, and another in Geelong for three deaths in the Barrabool Hills.

Argus Mon 10 Jan 1851
An inquest was held on Saturday evening last, at the Travellers Rest Inn, Collingwood, before W. H. Wilmot, Esq. Coroner, upon the bodies of **Bridget McLelland**, and of John, James, Joseph, Mary Anne, and William McLelland, **her five children.** The jury returned a verdict that these persons were accidentally burnt by the extension of a bush fire; and they regret that they have no evidence of the origin of the bush fire".
The following Inquests were held before Foster Shaw, Esq, Coroner for Geelong, on the bodies of **three unfortunates** who fell victims to the flames on **the Barrabool Hills.** The jury returned a verdict of "Accidentally burned while endeavouring to escape the conflagration"

Labilliere (see below) mentions two deaths at Bacchus Marsh.

Known total deaths from these few references = 6+3+3+ 2 = 13 plus uncounted tenants on Mr Wills estate on the Plenty.

There were reports of mass destruction:

Argus Mon 10 Jan 1851
Messrs Grey and Marr, adjoining Kennedy Brothers have lost 3000 sheep by bush fires also Mr Ritchie, **near Mount Napier,** has got all his crop destroyed, - his paddock fence is likewise burned to the ground.

The Corio side of the Moorabool: Connor's farm, produce, and implements are utterly destroyed. On Robinson's farm four thousand bushels of wheat and one thousand bushels of oats, together with everything of value.

In the neighbourhood of **Western Port** it is reported that the only house left standing is the inn at Dandenong. The destruction in this quarter has been most distressing, since very many hard working and persevering settlers have been brought to the verge of ruin.

Messrs. Williamson and Blow of **Pentland Hills** have had their station completely destroyed, house, furniture, every stitch of clothing, except what was in actual use; library &c. &c. The loss in large items alone is estimated at £850, and worse again they fear the loss of two flocks of sheep into the bargain.

Argus 12 Feb 1851
I write in the midst of desolation, Thursday morning was ushered in with a fierce hot wind, which, as the day advanced, grew stronger and stronger. For three weeks bush fires have been raging to the westward and northward of **the Bush Inn (= Gisborne)**. About mid-day, the whole of Mount Macedon and the ranges were one sheet of flame, careering on at the speed of a race horse, carrying all before it as clean as a chimney newly swept. The destruction in the vicinity of the Bush Inn is appalling.

Argus 13 Feb 1851
At **Addis Bay**, (= grey river / Kennett river) Mr William Fisher, the most enterprising of the Cape Otway settlers, has had everything swept away; huts, timber, stores and all. His stock of timber was very large.

6 February 1851 James Egan of Daylesford lost all his sheep on Black Thursday, (Museum Victoria collections)

There were close shaves
'It was the local Aboriginal people who saved Captain Hepburn's family from the inferno descending upon them on Black Thursday by directing them to a safe spot near a creek.

Argus 10 Feb 1851
Mrs Murphy, living on the farm, had a narrow escape; she was obliged to fly with her two children, and take refuge in the river (Moorabool); and so close were the flames upon her that the hut was in a blaze before she left it. The poor woman had only been confined a fortnight. Mrs Mullins, living on a neighbouring farm, plunged into the creek with four of her children for safety.

Argus 10 Feb 1851
Otways: The station of Mrs Tate would have inevitably shared the same fate with the latter but the wind providentially happened to change, and the fire took a route by the coast, around which it swept with the fury of a demon devastating all before it.

Argus 13 Feb 1851
Otways: Those persons who left their huts for a few hours, found on their return all swept away. One sawyer named Joseph Hill, was in the utmost consternation for a long time respecting his wife and children, who, he imagined, had perished in his hut, but was relieved by finding that they had exercised an unusual foresight by getting to a safe distance.

Argus 10 Feb 1851
On the Plenty - a shepherd on Dr. Ronald's station saved his family, self, and sheep, by hastily getting onto some ground previously burnt.

There were unburnt areas

Argus 10 Feb 1851
The whole of the plains between the Hopkins and the Leigh have escaped: and our informant further adds that the country he has passed through is by no means in the condition that reports have reputed it to be; he states that he has seen the water holes much lower at this season of the year than they are at present.

It is reported that Belperond's is partially destroyed. Petavel's is safe.

On the Corio side of the Moorabool, the conflagration seized Mr Costigan's farm, swept over the heights, and passed through Mr McLean's paddock, without inflicting further injury than destroying the grass, and throwing out a black tongue that licked the little herbage visible.

The reported locations are shown as circles on this contemporary map.

Other reports of bushfires

The Argus Mon 28 April 1851
Domestic Intelligence from Goulburn Herald (NSW) ALARMING NEWS
A gentleman lately arrived from Maneroo (= Monaro tablelands) informs us, that a large bushfire is raging on the Gipps Land side of the Snowy river, evidently making its way towards the pastures of the Maneroo country.
Burnt leaves and pieces of bark have been picked up at a distance of thirty miles from the front line of the conflagration. The grass in this part of the country is very long and should the fire once take hold of it the most disastrous consequences must follow.

Other bushfire relevant events

There were examples of inconsideration and malice during the danger period.

Argus 10 Feb 1851
A settler of Woady Yallock (= Cressy) we are informed fired a part of his back run to drive the wild cattle down, so that he might yard them, and hence have arisen extensive conflagrations, which, however, have been confined to the Ranges.

Two men who were proceeding to Loutit Bay (= Lorne) on Thursday last, lighted a fire near to the station of the Messrs Zealby, which on being perceived by them, they went down to the men and cautioned them about it, when the fellows at once began to scatter the burning embers about in all directions, which communicating with the parched grass and brushwood, soon set the whole place in a blaze; with the rapidity of lightning the fire ran along, and in its progress burning hurdles, huts, house and everything valuable to the ground.

There were pleas for an inquiry into the causes of these fires, complete with offers of evidence, that fell on deaf ears:

Argus 12 Feb 1851
Surely, Sir, inquiry ought to be made as to the cause of these fires being lighted, it will not do for every man who has more grass on his run than he has stock to eat it, to put a fire stick in, merely because he may wish for something green for a lambing flock. As the writer of this is in possession of facts that such was the case, and is ready to come forward with evidence that part of the destruction in this neighbourhood (Macedon) was occasioned by a person doing as described, he calls on those, whose duty it may be, to cause a searching, enquiry into the matter.

There was a Fire Relief Fund
7 May 1851 Public meeting to protest about distribution of Fire Relief Fund.
It appears that approx £1600 had been subscribed to the Fire Relief Fund, and that a meeting in April had allocated approx half to the sufferers and the surplus (£727) to the Benevolent Asylum and the Hospital. The meeting passed four resolutions that together sought to allocate the entire amount to the sufferers.

The spirited meeting heard:

- That the sufferers were paid approx 1 /16th of their losses, which suggests an indicative total loss of £800 x 16 = £12,800. [If we estimate the average annual wage then at £25, the effective loss is 500 times average wages. If we regard average annual wage today as $50,000, the equivalent loss is $25M, OR if valued according to inflation, £12,800 x 150 = $1.7M]
- That life loss was not a valuation criterion (see Fawkner's comment)
- That most of the attendees at the "surplus" meeting were members of the hospital Board.

The Argus Wed 7 May 1851
PUBLIC MEETING. APPROPRIATION OF THE FIRE RELIEF FUND
Thomas McCombie. Esq., was called to the chair, and opened the business of the meeting by reading the following requisition:- "We, the undersigned subscribers to the fund for the Relief of the Sufferers by the Bush Fires of February last, wholly disapproving to the appropriation of the Fund to any other purpose whatever than that for which it was collected; invite our fellow colonists, but especially those who, like ourselves, have subscribed to the "Bush Fire Suffers Relief Fund," to meet us at the Mechanics' Institution, Melbourne, on Tuesday next, the 6th of May instant, at three P.M , to devise means for averting the misappropriation of the large sum of £727, to which the suffers (and there are but too many in exigence!) are rightfully entitled. We also request the attendance of the members of the

Committee who voted away the large proportion, namely, nearly half of the fund of which they were "trustees" on behalf of the Sufferers, appointed by us, and our fellow colonists who subscribed the same"

Mr Councillor GUTHRIDGE said he rose to move the first resolution:-
"That this meeting highly disapproves of the principle recognised and acted upon by the Central Relief Committee voting the money collected for the sufferers by the late fire, to the Hospital, Benevolent Asylum, and other charitable institutions."
He had stood alone in his opposition to the vote when made at the meeting. The committee had their instructions, and those instructions were sufficient, had they thought proper to carry them out. Again, it was urged that the amount given to the sufferers by the fire was sufficient, but he asked them whether twenty-pence in the pound (= $1/12^{th}$) was sufficient to cover the losses of the sufferers? (Applause, and in voice "It's a mockery."). The sufferers had been put off with some one-sixteenth of their loss; and, as for the case being fully met, he utterly denied it, and, to prove it, he would only instance the case of McClelland. This unfortunate man had lost his wife, his children, and his property, and what was the amount offered to him? Why he (the speaker) was ashamed to utter it in the presence of the Press, as it would go forth to the world, it would be a slur on the community - (loud cries of "on the Committee , on the Committee") - it was then, proposed to award McClelland £35, (loud hisses). He proposed that it should be £50, but the proposition was scouted, and it was ultimately settled, after much discussion, that he should get £40, but would anyone have grumbled if he had got £50? (A voice, "not one").
He had seen letters, and he had himself received letters from the people of Kilmore, stating that there was much wheat destroyed and that many had not seed to put in the ground; and yet in the face of all this, the money had been voted away. (Cries of Shame, shame.) Would the public of Melbourne come forward in such another case? he thought not, and they were therefore bound to make known to the world their opinion of the transaction.
Mr J.P. FAWKNER said a full share of the transaction must fairly be laid on his shoulders, as he was a member of the committee. A deal had been said as to the hardship of McClelland's case - did they propose to pay him for the loss of his wife and family? Was there any Englishman, Irishman, or Scotsman at that meeting who would propose to pay him for that loss? It was not proved that McClelland's loss was much; his sheep had been saved.
The resolution was put and carried unanimously.

Mr Robert CAMPBELL proposed the second resolution, namely :-
" That this meeting is of opinion, that the Central Committee of the Fire Relief Fund, have broken faith with their constituents, in appropriating the funds for any other purpose whatever, than that for which they were subscribed; and it is moreover, its opinion that no other instructions than the resolutions of the public meeting, appointing them to act, were requisite for their guidance in the matter."
The second resolution was then put and carried unanimously.

Alderman JOHNSTON moved the third resolution :-
"That the following gentleman be nominated a committee to carry out the intention of the subscribers, by distributing the remainder of the funds to the sufferers who have not yet been received, or who have been so only partially, namely, Messrs Grice, Say, Guthridge, Belcher, Bull, Cantlon, Hood, Duff, Pascoe, Bennett, Croad, and Kerr, with power to add to their number.
The way in which they voted away the funds entrusted to them, tended to destroy all confidence between the public and similar committees, and when a person might be asked in future to contribute towards any object, he would ask the question whether the money was ever likely to be applied to the purpose for which it was sub-
scribed. He did not think the money would do any good to the Hospital, as parties would very naturally say, when called upon for subscriptions, "Oh, is the Bush-fire money all gone?"
Mr KENTISH could tell them of one case in which the party was entirely burnt out, and to which the Relief Committee only gave £3 ; and was not this enough to excite their indignation. The gentlemen who gave away the money might be actuated by right feelings, but ho believed they had been misled by other parties; and however highly he might estimate them as individuals, he could not conceive a grosser act of misappropriation. Mr Fawkner had said he was here, and it put him in mind of the man who got drunk and then assigned as a reason that he was so alone, that the bottle came round so often. (Loud laughter and applause)
The fact was, that most of the gentlemen on the committee were on the Hospital Committee also; and they had passed a vote of thanks to themselves through the public. (Loud applause.)

Mr GUTHRIDGE would ask if Dr Bathe had been fairly dealt with? He had lost everything, and he was put off with £50 - a man who was a blessing to the neighbourhood in which he lived, and who gave his medical advice without charging for it. As to Kilmore, it was found that many had suffered who were not actually burnt out, the feed was so scarce since the fire, that nearly the whole of the working bullocks in that neighbourhood had died; and many had no seed to put in the ground.
The CHAIRMAN said that many had stated to him that Kilmore was in a dreadful state, most of the working bullocks having died.
The resolution was put and carried unanimously.

Mr W. K. BULL moved the fourth resolution:
'That this mooting call upon tho Secretary of the Committee of the Fire Relief Fund to furnish the Chairman of this meeting with all vouchers, memoranda, &c, connected with the collection mid distribution of the such fund."
The resolution was put and carried. A vote of thanks was given to the Chairman, the Chairman replied, and the meeting separated at a few minutes past five o'clock.

There was an eye witness account

Two decades later, in 1878, an eye witness account was published in England by Francis Peter Labilliere. Labilliere's father purchased rights to the Yaloak Vale property in 1839, 16km west of Bacchus Marsh in the Parwan valley of the Werribee River catchment. He, his father and their farm hands experienced the 1851 fires first hand.

Francis Peter Labilliere
http://gutenberg.net.au/ebooks13/1301821h.html vol 1
http://gutenberg.net.au/ebooks13/1301991h.html vol 2

The account reveals the weather, the fire's behaviour (the earliest description of both moving flame and ember attack that I have seen), two deaths, the destruction and the saves. The suddenness of the fire's appearance at the homestead is typical of embers igniting downwind of the distant upwind fire. The saving of the house and kitchen was made possible by the maintained low fuel load of their garden and the presence of several defenders, but was threatened by the closeness of the paling fence and the burning wood heap, both probably lit by ember ignitions. The saving of several hundred sheep was an example of applying astonishing resourcefulness and bushfire behaviour knowledge to create a fuel free safety area.

Thursday, February 6th, 1851, can never be forgotten by those who were then in Victoria. Every summer bush-fires were more or less common in the country; but never before or after was there such a day of universal fire in almost every part of Victoria. It had been preceded by an unusually long period of excessive heat, with strong hot winds from the north; and the pastures, which at the time of year are always dry, were thus rendered extremely inflammable. The result was that in all parts of the country, wherever it caught fire, by accident or otherwise, the flames swept everything before them. All attempts to stop them, by the ordinary means of beating them out with branches of trees, were fruitless.

The flames ran along the ground at an incredible speed, and, where the grass was long, in a perfect wall. As they advanced they were frequently preceded by various patches of fire, which were kindled by pieces of loose bark, blown by the gale from the gum-trees, often for a considerable distance—wide beaten roads and broad streams, which would have stopped most bush-fires, affording no check to this terrible one.

When the fire was first observed upon (my) father's station, all the men were sent to do what could be done to check it; but as soon as they got near the flames, they were obliged to fly from them, and, escaping back, concentrated their efforts on saving the house. As the fire came bounding up to it, father was about to mount his horse, and (me) the pony; but we had only time to turn both animals adrift and

rush in at the gate of the enclosure in which the kitchen stood. The horse was so badly burnt… but with care he ultimately recovered; the pony only had her flowing tail considerably singed.

The house and kitchen were built of brick, but roofed with wooden shingles. The former stood in a garden, of upwards of an acre, and the latter in an enclosure—both being surrounded with wooden paling, which, catching fire in many places, had to be broken down. A quantity of wood for fuel, piled close to the kitchen, was soon in flames, which threatened to catch the roof of the building, from whence they would certainly have spread to that of the house. By applying wet blankets, for several hours, to the side of the kitchen roof which was in danger, it was with difficulty prevented from igniting.

Before evening, three bridges, haystacks, crops, fences, huts, and the building in which a year's supplies for the station had just been laid in, were reduced to ashes.

At the station of (my) father, all but a very few of the sheep were saved, and so was the wool-shed—from which all the wool of the year's shearing had not been carted away. On the very morning of Black Thursday a flock of several hundred sheep had been sent off to a neighbour to whom they had been sold. When the fire came down, father despatched a trustworthy young man after them, who, riding at great speed, overtook them about five miles away, just as the fire was upon them. The shepherd, in great terror, was crying like a child. There being no time to lose, the young man dismounted, set fire to the grass in advance of the sheep, from which the flames ran with great velocity. He and the shepherd immediately put out a few yards of the grass—which was burning back against the high wind towards the sheep—and safely drove them in upon the burnt ground before the fire in the rear had time to come up.

At a neighbouring station, a large new wool-shed—in which was a carriage recently obtained from England—was burned, so were a horse and cart and a number of sheep; and, worst of all, a human life was lost. One small farmer in another part of the country, who was prosperous in the morning, had before night lost his crops, his habitation, and his wife.

On many stations the pastures were completely swept away, or the grass left was quite insufficient for the stock. The latter was the case at the station of (my) father, who had to send away several thousand sheep until the grass grew again. This did not take place for some time, as but little rain fell for two months after Black Thursday.

It was from the darkness of the day in Melbourne and Geelong, rather than from the charring effects of the fire, that the name was derived. In Melbourne the heat was excessive, and the atmosphere thick and smoky. It was known that great fires were raging in the country. Much uneasiness was felt lest one should break out in the city; for with the high, hot wind, it was impossible to say how far it might have carried destruction. Burnt leaves were falling everywhere—some being carried on board vessels many miles out at sea. The neighbouring colonies did not experience the horrors of Black Thursday.

Technical Note: The main tool of the settlers for dealing with the bushfire flame was learnt from the aborigines – beating with branches of green foliage. Gilmore (1934) recalled how local Aboriginal people would educate them in how to fight fire by: 'running for bushes, put them into the immigrants hands, and show how to beat back the flame as it licked up the grass.'
The technique of beating flames out using branches of trees works by suffocating a flame of oxygen with sudden application of a dense flattened mass, in this case a mass of foliage. It works to good effect when the flame is short and on the ground. Its suffocation effect may be counteracted by the rush of wind which tends to increase oxygen supply temporarily. It is ineffective against tall flame and loses all benefit if its foliage catches fire. The tool survived for more than a century into the 1960's by which time the beater was a manufactured solid handle with a mass of wide rubberised straps on the end. No doubt variations like wet hessian bags or blankets were also used through the years.

Observations so far:
We can deduce people believed bushfires were linked to heat - temperature in the shade. They knew the wind direction changed after a heat wave, but had no warning of when a strong north wind would develop or when a wind change would come.

We can deduce their understanding of threat management was unplanned, simple, direct and localised. They responded to bushfires when they occurred. Initially, they identified the bushfire threat as flame they had to deal with on their property or neighbourhood and they found tools and techniques to mitigate or eliminate them with teamwork and all hands on deck. Identification of embers as a threat developed gradually and patchily.

We can deduce their attitude was this: This bushfire is unexpected but it threatens our lives, assets and livelihood. We must therefore fight it. We will not run in fear. We expect no government assistance. We will use our own resources.

We can articulate their unstated goal was to save all people, all houses and all stock in their neighbourhood from the flame and the flying embers.

Their threat management process can be summarised as follows:
Identify threat, mitigate threat, prevent unwanted outcome, deliver wanted outcome
eg, spot fire on roof, keep roof wet to prevent ignition, save house.

We can list five general types of response by people and communities to bushfire attack in order of effectiveness on house survival, which happens to correspond with level of knowledge of bushfire behaviour and threat management:
1 Make no preparations, flee to save yourself; house survival relies on luck
2 Wait till bushfire happens and respond with suppression = fight with desperation [This assumes you can defend in safety, assumes you have suppression capability to prevent threats damaging to your house.]
3 Insure heavily and don't take precautions beyond insurer's demands
4 Prevent bushfire threats damaging your assets by prior preparations, and prepare for self defence
[This requires damaging threats are identified and mitigated, and prepares site for defence in safety]
5 Exclude bushfire flame threats from your neighbourhood and prepare to mitigate ember ignition threat and thereby prevent damage to neighbourhood assets
[This requires damaging threats are identified and mitigated, and preparation of neighbourhood for defence in safety]

People's response in those days can be characterised as number 2 on the above list and paraphrased under technical headings as follows:

Pre suppression Our tools are beaters, buckets and wet blankets,
Our resources are our own people
Before the fire comes, we keep tools in readiness,
We are alert for the sudden bushfire attack,
Our people know they have to respond quickly and they know what to do

Threat mitigation We try to keep the surrounds of the house weed free and tidy, but, if there was a bit too much tinder fuel when the fire was approaching, we burn around the house to get rid of it.

Suppression During the fire attack - we put out any flames on and near the house
This prevents the flame taking hold. And this saves our house and possessions

The following table summarises the range of typical preparation and responses by the 19th century land owner against bushfire attack when no fire authority existed.

Mitigate sources of threats	**Preparation of house & surrounds**	**Pre suppression**	**Suppression: Defence of house**	**Suppression: Spread of fire perimeter**	**Insure**
zero	zero	zero	flee	zero	zero
some	some	some	defend	some	some
full	full	full	return after attack	full	full

Threat = flame presence, flame height, flame spread, ignition of embers,
Source of threat = upwind running flame, upwind ember source area
House and site prep = create strategic fuel free areas which prevents ignition, manage fuel bed characteristics that affect flame height and fuel bed discontinuity which limits flame spread.
Pre suppression = prep for suppression = tools, equipment, water supply, procedures, skills
Suppression = extinguish fires on and near house, prevent spread of fire perimeter

We can deduce the ingredients for bushfire disasters

The ingredients for bushfire disasters in those days were (1) uncontrolled late spring and summer burn offs – burns to generate green pick, burns to clear scrub (settlers who cleared their land waited till their stacks were dry, and when weather gave them the hottest burn, they lit up, neighbours working together) (2) fire behaviour - when the flames died, they regarded the fire as extinguished (3) fire escapes into bush - if the fire escaped into the uninhabited bush, they had no concern (4) long smoulder times - the presence of many quietly running or smouldering fires in mild summer weather (5) absence of weather forecasts - the sudden onset strong hot dry winds converted them into multiple parallel running fire front infernos, (6) flame spread was unrestricted in continuous dry fuel beds (7) localised self defence - people defended the fire front that attacked their neighbourhood and let the others go – ie, nobody deployed resources to stop perimeter spread (8) perimeter spread was determined by Mother Nature - each fire front stopped when it ran into a zero fuel patch or heavy rain doused it.

The overriding concern of settlers for high quality feed overrode concern for spreading bushfires. Similar contemporary attitudes were described in NZ.

NZ Banks Peninsula fires 1863
It was common practice to carry out clearances or to induce nutritious new growth of grass by means of burn-offs. Since farmers saw their future in terms of pasture rather than native forest, the chance of a burn-off becoming a bush fire was not the most important consideration. Paul Star 2015
http://press-files.anu.edu.au/downloads/press/p319971/pdf/07_Star.pdf

Laissez-faire approach to bushfire protection

For the next century, bushfires continued each summer, as the hot dry winds that typically occur each week or fortnight fires up the mild running fires or smouldering fires. Every summer, these escaped inferno fires inflicted losses on the settlers and townsfolk, sometimes reported in the press, sometimes not. Let's walk through a few more decades and learn how the people and their government responded to the bushfire problem in Victoria.

In particular, we can contemplate why the right question was not asked and answered until the 1939 Royal Commission – **how can we reduce or eliminate the damage toll from the property, the neighbourhood, the state?**
This question has not been asked since.

The relevant term of reference in 1939 was: "The measures which are necessary … to protect life and private and public property in the event of bush fires burning in Victoria"]

This question leads to different answers from the usual terms of reference for a Royal Commissions – "what were the causes of the bushfire and how can we stop its spread?"

In the following Chapters, we ask at the end of each fire season:
How well do they identify the threats?
How well do they mitigate the threats?

For reference, the dangerous threats are:

- presence of uncontrolled fire on severe weather day
- attack on asset by running flame (along the ground)
- attack on asset by embers (aerially)

The range of threat mitigation options are:
Before attack:

- fuel management around house
- fuel management within and around town
- training, equipping suppression resources

During attack:

- extinguish flame, ember suppression
- control of perimeter spread
- capability of suppression vs scale of attack

Chapter 3 Settler phase continues - 1852 to 1900
Laissez-faire era - no direct government involvement

Chronology

There was little press coverage of bushfires in the early 1850's, but they no doubt occurred. To help understand the bushfire milieu over the next century, this paper focuses on the bushfire events in **a few areas** in Victoria, eg, Penshurst, representing the grassy western district squatting runs and Daylesford, representing the forested area which experienced partial tree clearing for mining, agriculture and townships. They will be supplemented with Google and Trove search records of relevance to understanding bushfire management attitudes and each will be integrated with the reports and actions by government authorities …

1853 / 54
Weather: No records

Official records: There were no media records of bushfires this year, but there were two known deaths due to bushfires, there were bushfires in the western district, and there was a painting of a bushfire in Cheltenham.

Reported bushfire events

Coronial Inquests 1853/54 29 Sept 1854 Office of Attorney General, Melbourne
Total deaths 820
Deaths by bushfire:
Location of inquest is not necessarily location of fire.

28 Dec 1853	Melb	John Collins	Accidental death, result of injuries received in a bush fire
21 Feb 1854	Melb	John Callaghan	Accidental death from injuries sustained by fire in the bush ... Deceased on the approach of the fire became stupefied

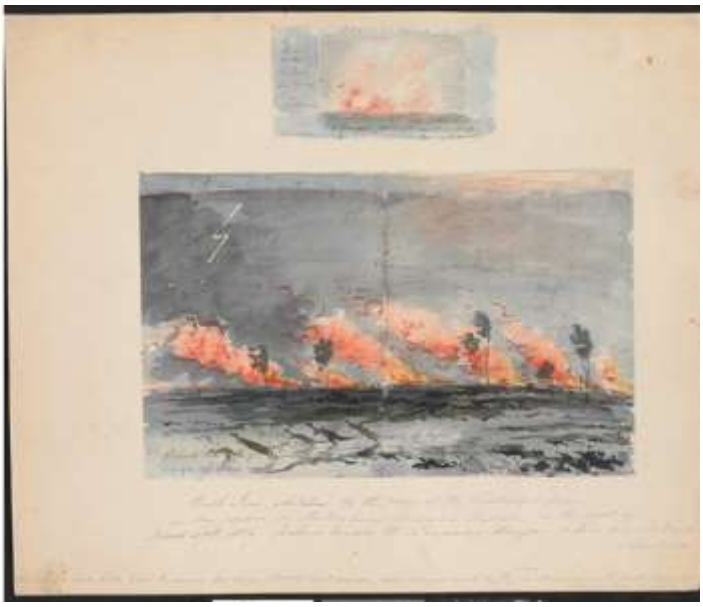
Other deaths by fire during bushfire season, some may be by bushfire

Dec 24, 1853	Kilmore	2 men	Accidental death, from injuries caused by fire
Jan 1 1854	Bendigo	1 woman	Accidental death, from injuries caused by fire
Feb 21	Melb	1 man	Accidental death, from injuries sustained by fire ... deceased was endeavouring to extinguish a fire in Melbourne
Mar 1 1854	East Brighton	1 woman	Accidental death, from injuries caused by fire

Penshurst report: Ephrain Nye, a shepherd living in a Patricks Day outstation hut just south of Mount Rouse, wrote in January 1854 that: the wildfires destroyed his slab hut but the family just managed to save themselves and their household effects. Ephrain observed: "the whole country before the fire had been covered by grass from one to three foot high. As this season is very dry and on this occasion the wind was very strong that the fire travelled faster than a man could run. The whole country was one vast sheet of flame and smoke and when the night came on it was the most terrible yet grandest sight".
He said the fires were generally the result of carelessness on the part of someone dropping a lighted match, or leaving the campfire unextinguished.

Moorabbin district William Strutt's watercolour is based on a bushfire in Cheltenham, Moorabbin district on 17 March 1854.

William illustrates the harsh Australian landscape with the striking colour of the flames and kangaroos fleeing in the background. He wrote on the border "sketched by the glare of the lightning and fires in my garden".



Other bushfire relevant events

Note how the newspaper, not a government authority, predicts a bad fire season, and warns about the inexperience of the new arrivals.

Argus 6 January 1854
BUSH-FIRES. ALMOST all experienced colonists agree in predicting very extensive and disastrous fires throughout the country districts during the present summer ; and, although we have given frequent warnings upon the subject, we so fully coincide with those who see the probability of serious injury, that we wish to urge the subject in the most energetic manner upon the attention of all, that every possible precaution may be taken to avert the danger, if possible, or, at all events, to mitigate its effects. Amongst the mass of population which has poured into the colony daring the last two years, there are tens of thousands who know very little of what a bush-fire in Australia is; or, how frightful a thing, under certain circumstances it may become. And as their comfort, their property, and even their lives are at stake, it will only be an act of kindness to apprise then of the danger upon the brink of which they may be slumbering. From the increase to our numbers, and the thicker settlement of the country, there is more danger of serious accident than ever was the case before. And those who recollect the terrors of the far famed "Black Thursday," and the misery and ruin which resulted from it, will have no inclination to witness such another conflagration.

Fire brigades in rural cities

As Victoria expanded and towns were established, volunteer country brigades were formed, the first being at Geelong in 1854, quickly followed by Castlemaine and Sandhurst (now Bendigo). By 1888, there were 100 volunteer brigades in Victoria (State library blog)

Legislation: **An Act to restrain the careless use of fire** 23rd Feb, 1854
1 Between 1 November and end of February, ignition of a fire within two yards of a crop of corn or hay or of any stubble field or carrying a flame within 10 yards of a stack of hay or corn carried a fine of up to 50 pounds and up to 6 months gaol.

2 Lawful ignition of any land (crown land between 2pm and 9pm and private land) required a clearing of 15 feet and giving neighbours 24 hours notice. If such a clearing was not made and fire destroyed a dividing fence, the igniter must replace the fence at his cost.
3 If a fire was lit in the open air and caused damage to another property because it was abandoned or not extinguished, the penalty was up to 50 pounds and up to 6 months gaol for each damaged property.
4 Any person can arrest and take the offender to police of JP. Resisting arrest carried a penalty up to 6 months.
This Act carried strong penalties, but some offences were restricted to corn and hay crops, but #3 seemed to apply to all runaway fires, and sounded very strong.

Observations
The fact that the shepherd saved family and furniture and personal effects but lost the hut suggests he did not build the hut in a fuel free refuge area, but made one by firing the ground or was near a patch of green grass as the attacking flame approached. Thus, his identified threat was the running flame. He chose to avoid suppression of the hut because it exceeded the capability his resources and instead chose to minimise losses by relocating valuable assets to a nearby refuge area. It raises the question he did not ask - why not build the hut within a maintained fuel free refuge area?

1854 / 55
Weather No records

Official bushfire records No records

Reported bushfire events

Argus 31 Jan 1855
Castlemaine area
The weather has continued fearfully hot here, and there has been a great bushfire blazing for these two days towards Fryer's Creek, where its effect is felt very much. We here today that a store of Messrs. Ford and Smith took fire last evening and was destroyed in a few minutes, the loss being estimated at £2100.

If the next fire averages 5 to 20 km wide and is 80 km long, its area is a very substantial 40,000 - 160,000 ha. Unfortunately, the location of the settlement is not identified, possible in the Geelong area.

The Argus Tues 6th February, 1855
GEELONG.
Melancholy accounts continue to reach town of the ravaging of the bushfires during the week before last Mr. P.McArthur has had nearly the whole of his run burnt; and all the buildings at his homestead, except a new stone dwelling house, have been consumed. Many of his neighbours are also left without a blade of grass, while others have lost huts, hurdles, sheep and homes. The fire which destroyed Mr McArthur's property is said to have run in a direct line, varying in width from five to twenty miles, over nearly fifty miles of country.

Other bushfire relevant events
As a public service, the Argus re runs the bushfire warning of the previous year (see above) with educational amplification.

The Argus Thurs 1 Feb 1855

BUSH FIRES.

RAPIDLY filling up as this colony is with people not much accustomed to the ordinary casualties of Australian life, it has often struck us that it would be an act of kindness to furnish, periodically, a few hints of the particular dangers which each season successively presents. The remarks published on a certain day may convince or sufficiently warn the colonists of that particular period, but before the next recurrence of the season thousands of new colonists may have been added to our numbers, thousands of others may so far have changed their pursuits as to have become liable to new and unconsidered risks, and great loss and affliction may befall unsuspecting people, whom a few words of timely warning would have saved from any such misfortune.

About this time last year, we called attention to the very great danger to which our country readers were exposed through the agency of bush-fires and, actuated by the considerations to which we have feared, we make no apology for the republication of the article at the present season. It is not often that we are guilty of the small vanity of quoting ourselves, and on the present occasion the object, which we have in view will induce the public fully to acquit us of any such offence. The article was as follows. In many respects it is not so accurately adapted to the circumstances of the present year, as of that for which it was expressly prepared, but we think it better to republish it just in the form in which it originally appeared : —

The Argus includes a reprint of 1853 / 54 (TEXT above)

Upon that frightful occasion (Black Thursday) the hot wind blew during the whole day with unexampled strength and intensity. The temperature, even when actually felt, appeared absolutely incredible. It struck one, when exposed to it, that no natural atmosphere could possibly be so hot. But, in fact, the original heat of the wind was greatly increased by passing over a vast extent of burning country and the air was, in reality, what it felt to be - a heat from a furnace. The whole country was overspread with a thick, lurid, mysterious smoke, which reached far out to sea, and in some localities produced, even early in the afternoon, an almost total darkness. The light ashes from the burning forest were actually deposited on the decks of vessels hundreds of miles from land. Millions of acres of the country were swept by the fire during that dreadful day ; thousands of sheep, huddled together, were smothered and burnt as they stood; crops, fences, paddocks stacks, out-buildings, huts and houses, for miles together, were involved in one common ruin, and many human beings were hemmed in and burnt to death. Scores of farmers and others were also lately left penniless; without homes, clothes, or food, and the whole colony teemed with particulars most affecting disaster.

It is to prevent a repetition of such sad scenes as these that we now bring the matter prominently forward. The calamity that has once happened has given us no immunity for the future. Precisely what took place on that awful day may take place again this week or next. All the necessary elements of disaster are ready at hand, and probably in greater profuse than they ever were found in before. Tuesday last would give our newly arrived friends a specimen of the sort of weather which we may occasionally expect during the next two months; and upon any such day the disasters of Black Thursday may be repeated.

Few people that have not had some actual experience in such matters can thoroughly understand what the bushfire of Australia is, and how very greatly it differs in intensity under different circumstances. When the country is open, the grass a little green, and the air calm, the bush-fire creeps along slowly and quietly, and may be kept under readily enough, when advancing towards valuable property; but in thick scrubs, or where the herbage is parched up, and the wind high and from the north, the fire spreads with fearful rapidity: it runs along the ground, licking up the grass almost as if it were a train of gunpowder, and no earthly power can stay its progress. Under some circumstances it will be arrested by a cattle track a few inches wide. Under other circumstances it will fly across a river. On Black Thursday it came down upon the wind, a perfect wall of fire blazing up to the tops of the trees, scorching and suffocating the very birds themselves. Burning bark and flaming twigs blew ahead, and wherever they alighted, new centre of flames burst out on all sides. And so rapid was the march of this fearful fire; so vast the strides with which he marched upon his victim, that the precautions ordinarily taken, even by the careful were, in most instances, utterly useless. A few furrows turned up around a homestead, or a little ring of ground carefully burnt for a few feet in width, were passed over as if they were not there at all, and the giant bounded upon his prey without deigning to notice any such puny distraction.

The means to be taken to obviate all such disasters are well enough known. Ground once burnt during tho summer can scarcely ever be burnt over again in the same season. The main thing is to take care that the charmed circle be made sufficiently wide; and that it be complete, so that the enemy cannot steal in at any point. All those who have stations, stock yards, or homesteads to protect, should see to this at once, and should take care that they individually are made secure, and are not in danger of being burnt out through the carelessness or ignorance of a neighbour. The burning should be done on a calm day, when the fire can tie kept under thorough control. If this be not taken care of, the very attempt to secure property will, very probably, lead to its destruction and innocent neighbours may be involved in a serious loss arising from such negligence.
All persons liable to any sudden misfortune of this sort are now, however, fairly warned: it rests with them to take all proper precautions, and to take them at once; and should they neglect the warning we have given, they will not deserve much sympathy if they come before the public a week or two hence, with a tale of ruin and disaster, petitioning for that assistance which, if possessed of ordinary prudence, they would never have required.

Without wishing to claim for the publication of the above article any credit to which it is not fairly entitled, we may remark, that throughout the very long and hot summer of 1853-4 no great bush-fire was reported as having occurred throughout Victoria. In Van Diemen's Land and in South Australia most destructive conflagrations took place; in the former particularly, involving a considerable sacrifice of human life. In this colony, in spite of the many circumstances conducive to such a catastrophe, we were spared from its infliction, and the summer passed over without any serious disaster.

Efforts are made, indeed, to prevent the original kindling of these fires, and stringent laws have been enacted for the punishment of any one who lights them. But in an extensive country like this, with the whole surface covered throughout the summer with a highly inflammable substance, these fires will occur in spite of all human efforts at prevention. The traveller will leave his camp-fire smouldering, and liable to be blown about by every gust; the bushman will drop the ashes out of his little black pipe; the aborigine will carry along with him his piece of burning bark; and it is ridiculous to suppose, that with all these provisions for bushfires, they can be done away with, or prevented from continuing regular periodical visitations. The best policy is to provide for any possible contingency, by the usual and established safeguards, and to fence each homestead in from the ravages of this destructive element, by a timely use of the self-same agency.

Observations

Reference to a large fire running uncontrolled for two days suggests a community-wide tolerance of the threat of unextinguished fires during summer months. The store taking fire suggests ignition by embers was not anticipated as a threat when they closed up shop that day.

The Argus article is remarkably prescient in basic understanding of bushfire behaviour of flame and embers, the "well enough known" technique of protecting property by using fire to remove fuel from a wide and completed "charmed circle" of protection ("ground once burnt before summer cannot be burnt again in the same season"), the requirement - moral and legal to prevent the fire's escape from your property, and recognition that despite strict laws, human-caused accidents will happen and bushfires will occur to threaten property. So be prepared by protecting your own property properly.

1855 / 56

Weather Commencement of BOM rainfall records for Melbourne: spring rain at or above average; December well above, Jan slightly below, Feb half, Mar above

Hottest days in Melbourne **DAYS > 35^0C** **5**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.0	5	43

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records: Nil

Reported bushfire events Nil

Other bushfire relevant events
Legislation 27 February 1856 The 1855 Act "**An Act to restrain the careless use of Fire**", was amended extending the burning restriction period from 1 November to end March.

Observations
The reader will find that a dry summer month has a proportionate correlation with bushfire seasonal severity. The drier the month, the drier successive months.

1856 / 57
Weather BOM rainfall records for Melbourne: Sep, Oct above average; Nov, December, Jan well below, Feb, Mar double.

Hottest days in Melbourne **DAYS > 35^{0}C 5**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.7	5	44

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire related records

Source = Journal of Australasia

OBSERVATIONS MADE AT THE GOVERNMENT OBSERVATORY.

FROM THE 25TH NOVEMBER TO THE 24TH DECEMBER (INCLUSIVE),
The weather during the past month was cool and pleasant. The sky was often nearly covered with clouds, and brisk southerly winds prevailed.
On 2nd of December the wind blew strongly from the N.N.E., veering to N.
and was slightly warm; the highest temperature at 4) p.m. being 82.8°F in the shade.
It blew strongly from the N.E. on the 5th, and on the 19th a north wind blew stiffly, when the temperature in the shade was 86° during the hottest part of the day.
The mean temperature was 61.6 ° F.
The total rainfall was 2.080 inches.
From the 7th to the 14tli of December it rained frequently; as much as 0.330 in. being collected on the 8th.
The highest temperature recorded was 86-6° in shade, and the lowest was 44.7°F showing a range of 41.9°.
A slight thunderstorm occurred on the 5th December, and hail was observed on the 30th of November.

FROM THE 25TH OF DECEMBER, 1856, TO THE 24TH JANUARY, 1857.
The mean temperature during the past month was 64.7°F being 3.1° higher than the mean temperature of the last month.
The highest temperature recorded in the shade was at 2 p.m. on the 12th, namely, 101.1°. In the new observatory the thermometer (uncorrected for index errors) stood at 101.6°.
The lowest temperature recorded was on the mornings of the 17th and the 18th, namely, 48° ; hence the maximum range during the past month is 53.1°.
The thermometer recorded a temperature, in the shade, at the period of maximum heat, of 81° on the 26th Dec., 92-6° on the 2nd of Jan., 90.8° on the 8th, 101.1° on the 12th, 79.7° on the 13th, 81.3° on the 15tb, and 84.5° on the 23rd.
Notwithstanding the high temperature given above, the month has been moderately cool and the sky generally partially covered with very fine cirrus and cirro Nimulus clouds, some of the latter being of extraordinary beauty.
On the 12tli it blew an undoubted " hot wind;" the barometer fell slowly, and at 2pun. smart squalls of wind came from the westward, and the thermometer sank rapidly—so rapidly that at 3 p.m. the dry bulb read 74* and the wet bulb 67.5.
The barometer continued to fall gently, and at 9 a.m. on the 15th it was observed to be 29.507 in; at 8 p.m. it had fallen to 29.330 in., and at 9 p.m to 29.270 in.; the barometer was then watched every few minutes until it commenced to rise.
At 10 p.m. the sky was clear overhead, but there were dark clouds in the S.W. and S. Lightning was observed in the S. of a peculiar character, somewhat obscure, often being rather a pale diffused glow of light than the vivid flash which is usually seen.

Subsequently, when the moon rose, a lunar rainbow was visible in the W. It was seen for a quarter of an hour, and was of great beauty and interest; the northern limb was first visible, being a diffused white light, and then, for nearly five minutes, the whole arch, consisting of a pale whitish light, was apparent.
About this time a squall of wind came from the westward, and rain fell in large drops, the lightning being still visible occasionally in the south. The barometer rose 0.010 in. in about twenty minutes, and again fell. It continued low during the night, and a strong wind blew, the maximum pressure per square foot being 9 lbs.
On the I6th the barometer rose slowly, and it blew strongly from the N.W.; the thermometer ranged from 59.9 to 52°, and at 3 p.m. a shower of hail fell. A loud peal of thunder was heard at noon. The wind was variable, and the pressure during its greatest force was 12 lbs. The storm was felt over a very large area.
Southerly winds prevailed during the month, and the weather was consequently moderately cool.
The rainfall has been slight - on the 29th of December 0.170 in. fell, and on the 31st 0.130 in. In January there was still less in proportion: 0,160 in. fell on the 19th; 0,210 in on the 16th, making a total for the month of only 0,670 in.
Very little rain has fallen, generally throughout the country, but the crops are said to be in good condition. Mining operations as well as agricultural will, however, suffer if the summer prove dry.
Bush fires have been rather frequent of late, which is due to the absence of rain.
Settlers cannot be too careful at this season, and under present circumstances, of fire; and all travellers ought to extinguish their camp fires before continuing then-journey.

FBOM THE 25TH OF JANUARY TO THE 24TH OF FEBRUARY (INCLUSIVE),
The past month has been unusually hot. On the 28th of January the highest temperature recorded was 93-9°; on the 29tli, 90-8°; on the 30th, 86.8°; and on the 31st, 82.0°. In February the highest temperatures were also much above the average. On the 3rd the thermometer in shade rose to 93.4°; 4th, 90; 7th, 17th, 97.9°; 20th, 85.5°; and on the 21st to 90.1°. The average of the lowest temperatures at night is 62° ; the minimum temperature on some occasions being 68.5°, 68.3°, 67-3°, 69.2°, 71.2°, &c.

The approximate mean temperature is 78°.
The wind was warm on the 28th of January; a "hot wind" on the 7th of Febuary; and a "hot wind" on the 16th. On the 7th and 16th the wind was very severe; on the former day it changed to S. about 2 p.m., and a very cool wind blew; but on the latter the wind continued all day, and it fell calm at night, and that, with a very high temperature, was oppressive in the extreme.
The barometer has been steady and moderately high during the month; it has ranged from 29.608 in. to 30.284 in.
The wind was easterly and south-easterly on several days, but southerly winds prevailed at p.m. On some days the wind blew with great force, as on the morning of the 7th, when a squall blew from the north with a pressure of 14f lbs. on the square foot. On other days the pressure was 1), 2|, 4|, 5)- lbs..
On the 4th February a solar halo of about 30° was observed; it continued sometime visible. The sky was partially covered with cirri at a great height.
Another solar halo of about 10° was observed on the 16th. Cirri partially covered the sky on that day also, but of a different character to those clouds noticed on the 4th.
The amount of rain collected is as follows:
On the 31st January, 0.860 in; on the 1st February, 0.100 in.; on the 5th, 0.030in.; on the 11th, 2.400 in.; on the 12th, 1.320 in.; on the 17th, 0.070in.; and on the 18th, 0.360 in. The total being 4.840 in.
The heavy rain on the 11th was sufficient to flood the streets; it fell with great rapidity between the hours of 8 and 10 a.m., and the street drains became so many creeks, only fordable on horseback.
A severe thunder storm occurred on the night of the 3lst January. Thunder and lightning were observed on the night of the 17th February; and lightning was observed on the night of the 22nd.
The warm weather has dried up the vegetation in many parts of the country, and bush fires consequently have continued to be frequent.

Reported bushfire events

Two weeks of bushfire activity - probably written by James Mouat.

The Argus Thurs 1 Jan 1857
THE LATE GREAT BUSH-FIRE
(FROM A CORRESPONDENT OF THE Bendigo Advertiser).
Background: G and J Mouat ran Yarraberb Estate in the Bridgewater area
The original Station of Yarraberb was taken up by Mr George Mouat (and licenced to his son James Mouat from 1846), and consisted of some 60,000 acres. James wrote the book "The Rise and Fall of the Australian Wool King" about his father. With two successive drought years in 1854 and 1855 and thanks to a lawsuit about a dividing fence in 1859 with Mr Govitt, holder of the Tandarra run next door to Auchmore Estate (20,000 ac) then leased to G and J Mouat, James's large fortune dwindled down till he was obliged to sell his station.
On Thursday, the 18th, a hutkeeper about noon, out of breath with running, appeared at Mr. Mouat's head station, imparting the intelligence that the Loddon Plains were on fire. The effect of such information on every one was alarming, as all felt the evil and danger to life and property-seeing the plains were, owing to the very wet winter, covered with an extraordinary quantity of grass, long, rank and dry as tinder. Much depends on promptitude of action. All hands on the place (fortunately numerous, gathering in the crops) were got together in a twinkling, and stowed away in the spring-cart, along with a large keg of water, and some bottles of grog to renovate muscular power exhausted in fighting the fire. Town fires are extinguished with floods of water — bush ones with blows from green branches; a supply of these was provided, and without them no good could be done on the plains, from which rolled upwards and onwards clouds of dense smoke. Away rattled the spring-cart with its cargo, the fire brigade, to the scene of the mighty conflagration, in that part of the plains termed, from its peculiar conformation, the Horseshoe Bend.

Fortunately, the wind from the south was cool, blowing steadily and not very strong, though now and again it put forth some puffs which sent the fire through and over the long, rank, dry grass to the northward in a flame, which shot up darting and crackling, forming a terrific living wall of fire, which spread in a short time over a vast breadth of land, effectually preventing the men from all attempts to beat it out in that direction, being compelled to confine their exertions to where the burning went on against the wind, succeeding, after labouring from mid-day till midnight, in rescuing one-half of the plain termed the Horseshoe Bend.

Then on the return home, all gazed in wonder on the strange, sublime scene. On, on away to the northward, over the vast plain, spread for miles and miles the devouring fire, like an uninterrupted racehorse flew, lighting up the earth and heavens with an ocean of the terrible element, o'er which rolled in fearful grandeur and majesty the clouds of dark wallowing smoke, giving to the mind the idea of the Judgment Day, the imposing brilliancy of the vast illumination far surpassing that of the largest cities when lighted up to celebrate the victories of war.

The vast forest intervening between the Bendigo and the plains, the belts and clumps of timber ignited and lighted up, the trunks of the trees standing out in bold relief, giving a Rembrandt picturesque sublimity to the imposing scene, which, in consequence of the level land, presented much of uniformity in the glowing twinkling red of the burning logs, modified by distance, and beheld for miles, contrasting with the stars studding the heaven, which appeared where the land was shorn of it's grass by the fire, after the cessation in a great degree of the dense rolling smoke.

On Friday, the 19th, a high wind from the north-west drove the fire with fearful rapidity over the plains towards the Murray, utterly consuming the grass on some stations. At midnight a turn of the wind suddenly brought the fire back on Mr. Mouat's station. One of the shepherds, whose hut was in the way of its return, tranquilly asleep, because of the men's exertions on the previous day, was roused by the blast and the roar of the fire, which he thought was thunder. Looking out, he was astounded on beholding the flames approaching with fearful velocity. In dismay he darted forth, yet with the presence of mind due towards his flock, already nearly surrounded with fire on all sides, and urged on by a sense of duty, courageously succeeded in driving it to the ground burnt on the previous day. The flames for a moment licked with a fiery tongue the entrance of the hut, scorching one end of a wooden stool, and yet the place did not take fire, for, as the shepherd describes it, "the flames just shot out a tongue through the door, and the next moment were away flaming, wallowing, and roaring o'er the plain." All that night the flames were so very bright that a newspaper might be read miles away from the fire's vicinity.

Next day again the men with green branches were employed keeping it away from the home station, and as the wind had turned again to the south, succeeded in saving as much grass as will sustain two flocks of sheep.

This fire, according to the report of the shepherds, originated on the place where some Germans were making hay, who, it is supposed, having completed their complement of it, went away and left a log burning. It's rather too much to come and take away loads of it, and then leave the country to be consumed by fire because of a little trouble in putting it out. This is sheer criminal neglect, and ought to be punished with rigour. But how can it be proved? and who did it? are questions which cannot be answered very satisfactorily. Yet every decent man who has taken a bit of hay from these plains is interested in establishing a satisfactory answer to these questions, as it may tend to their disadvantage in time to come.

Again, the fire in the forest, between this and Bendigo, flares up, and again men are out with the branches. This is Christmas, several days after the first fire; and if this very dry weather keeps on, it will smoulder and burn amidst the timber for weeks, till a hot high hurricane blows it up to do more devastation till every blade of grass is consumed. Then comes the time experienced after Black Thursday, when from sheer famine, bullocks, sheep, cattle, and horses perished in thousands.

Broadford and vicinity

The Argus Tues 20 Jan 1857
BUSH FIRES.-The mournful intelligence reached us early in the week that a bushfire had been raging in Broadford and its vicinity, bearing along with it destruction to the property of the farmers and

settlers in that neighbourhood. The fire started from the Sydney-road, no doubt from some camping ground. On Sunday and Monday last the hot winds were insufferable, and the bush must have been very ignitable. It is with great regret we have to record the loss, by Mr. Cochrane of a field of wheat and some oats. Mr. Dugald M'Pherson has been burnt out. Mr. McLeod and Mr. Purrier have also lost large portions of their crops. Miss Gavin, at Mount Piper, had her crops burnt, the last year's hay, oats, and wheat in stack, and much fencing. Others have been sufferers, but not to such an extent as the above. Mr. Andrew Beveridge, of Woodburn, has also been a sufferer; his wheat crop, stable, and out-houses have been destroyed by a bush-fire which started in that neighbourhood on Monday last.

Parties camping should be compelled to extinguish their fires during summer. We have no doubt this latter destruction arose from several camp fires, left by bullock drivers on the Kurkurruc Creek, which we saw burning on Saturday morning last.
Kilmore Examiner.

Bushfire between Mount Elephant and Timboon, March 1857 painted by Eugene Von Guerard

Other bushfire relevant events

Very helpful advice from John Fawkner

The Argus Mon 5 Jan 1857
BEWARE OF "BLACK THURSDAYS"
To the Editor of the Argus.
Sir - I would wish to call the attention of the farmers and pastoral settlers to the great 'dangers likely to ensue this summer from bush fires, The summer hitheito has been very wet, consequently in most places the grasses are redundant, and from my colonial experience I believe that we shall have some extraordinary hot days this month, and perhaps in February also; should a fire arise after some five or six scorching hot days, and a hot north, or fierce west, or south wind spring up, we may have a repetition of the "Black Thursday"

To new colonists I would advise – burn a space around your stock-yards, one or two rods wide; do it early in a calm morning, having your men armed with boughs at hand, to put it out when your end is accomplished. But before you burn give your neighbours due notice. The same precaution should be used by yourself and your next neighbour, at each of your fences, particularly where your fields have much straw or stubble. To persons having large paddocks and to the pastoral settlers, I would say - take your men, five or six provided with boughs, and burn with your neighbours along the line 'of your fences, and in large runs burn a slip across the centre of your run, say in the form of an X, north and south, east and west, or any other points that would divide your run into four equal parts, and burn the grass for a width of twenty to fifty, yards wide each way across the whole run if very thick forest, burn all around it. Let this be done early in the day, and when there is no wind.

And to those who see a bush fire come furiously upon their lands or stock-yards I would advise - collect as much help as you can, and burn a slip of the grass between your house and the fire. This you may control whilst it is narrow and kept so, putting out only the side next your house, &c, thus you may stop a fire that you could not check by attempting to arrest, in its furious course.
Care should be taken to rake up all rubbish or grass that is about the fences, the stock yard, or houses. Let this be carefully made into a wet dung-heap, or burnt off before the evil hour comes on. Then all effort may be useless. I am always ready to caution this public
J. P. FAWKNER;
2nd January, 1857.

1857 / 58

Weather BOM rainfall records for Melbourne: Spring at or well above average; Dec, Jan well below, Feb double, Mar and April well below

Dryness Index	Days >35^{0}C	Seasonal Severity Level
8.2	14	140

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

Wed 23 December was a hot day with strong northerly winds until 9.30 pm when a westerly change came, followed by overnight showers

The Argus Monday 28 December 1857
The heat during the day was intense. The violent hot wind which prevailed was made hotter by its passage through the burning woods, and smote upon the faces of the people with a most oppressive effect. This lasted until about half-past nine, when the wind suddenly changed to the west, and in the course of the night a few showers fell,

Several fires were burning over a large area of the new gold fields

The Argus Monday 28 December 1857
DAYLESFORD Bush-fires are now (Wednesday, 2 pm) raging around us, and much damage, we fear, will be done. The smoke is almost suffocating, and the heat intense. Some mischief has already been done,
CASTLEMAINE.- Never since the celebrated ' Black Thursday has such a mass of fire prevailed in this district as was observable on Wednesday (Wed 23 Dec). The sight from Mount Alexander … no less than twenty-one distinct fires, blazing at intervals in a semicircle, extending from Jim Crow through Newstead, Tarrengower, and on to the Mount, a distance of thirty or forty miles. To the inhabitants of the town it seemed, on Wednesday evening, as if themselves and their property were doomed to destruction by the belt of fire with which they were surrounded.

There was speculation about the cause of so many simultaneous fires

The Argus Monday 28 December 1857
Whether the occurrence of fire in so many places was the result of accidents or natural causes, we are unable to say. We have heard one cause assigned, which appears to possess some degree of probability- namely, that the bottom of an ordinary glass bottle may act as a focus, and concentrate such an amount of heat on small dry sticks as to ignite them, and thus originate a large conflagration. The fires appeared to be raging in the immediate neighbourhood of settled localities, where bottles most do congregate, and this may be thought to favour the theory.
It is also true, however, that it is in the neighbourhood of settlements that carelessness or ignorance on the part of an individual may produce the carne effect. As an instance, we may mention that some

children purposely set fire to some dry grass on Winter's Flat, for amusement, and had not some children of larger growth put a prompt stop to their mischievous pastime, Castlemaine itself might not have escaped without injury.

A three day heat wave occurred over 9, 10 and 11 January as a large fire ran through the area causing destruction

Bendigo Advertiser Saturday 16 January 1858
Bush fires have done considerable damage in the neighbourhood of Daylesford. On Saturday, Sunday, and Monday the heat was almost insufferable. On Monday, Mr. Wells, sawyer, of Daylesford, was compelled to leave his pit. The fire reached his sawn timber, which was rapidly consumed, as well as 3,000 shingles, which lay about a quarter of a mile from the pit. A large tract of country is completely charred by the fire. A few showers have for the present relieved us from a terrible fire. Mr. Egan has not suffered as reported.

Other bushfire relevant events

Legislation 4th June 1858 The 1856 Act was repealed and replaced with **An Act for preventing the careless use of fire**.
Restrictions on use of fire now applied at any time of the year. Pulse was added to corn and hay crops and stacks. If ignition occurred within 20 yards of crops and stacks and 3 yards of stubble and grassland and thereby damages another's property, or if the igniter left the fire before extinguished, the penalty was up to 100 pounds and six months gaol.
Citizen arrest powers remained.

Rabbits

In October 1859, twenty four wild rabbits were released by Thomas Austin for hunting purposes, on his property, Barwon Park, near Winchelsea, Victoria. Many other farms released their rabbits into the wild after Austin. Within ten years of their introduction rabbits had become so prevalent that two million could be shot or trapped annually without having any noticeable effect on the population. On 14th of January 1870 the Argus reported: William Robinson of Colac has destroyed hundreds of thousands and also filled up the wombat holes the rabbits have taken possession of. He also had his stone walls so constructed that a rabbit cannot find a hole to gain entrance. He also keeps a large pack of hounds. Other stations are not so careful. Men received 10 shillings per 100 rabbits with rations and ammunition provided. The number killed on one station in the Western District was 102,816 and the expense was £591 for three months.

The first Victorian law submitted to get rid of rabbits was introduced in 1869, but it didn't get the numbers in parliament to be passed.
In October 1878 the government empowered local bodies to charge an inspection fee at 2 pence per acre to see whether land was infested.
By 1881 rabbits had spread to the Mt Rouse Shire and the first mention of rabbits was made in the Council minutes. (**Mt Rouse Shire notes, Penshurst report**)

Observations

- Reference to a numerous fires running uncontrolled for two days suggests continued tolerance of the threat of unextinguished fires during summer months. The damage to his shingles suggests ignition by running flame was not anticipated as a threat.
- The force of the Act seemed to apply to only lawful fires in the vicinity of grassland and specified crops.
- The controlling of rabbits by government paid workers was soon to become a significant cause of bushfires and consequent destruction.

1858 / 59

Weather BOM rainfall records for Melbourne: Sep average, Oct well below, Nov average, Dec triple, Jan well above, Feb and Mar well below

Hottest days in Melbourne **DAYS > 35^{0}C 4**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
8.4	4	40

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

1859 / 60

Weather BOM rainfall records for Melbourne: Sep, Oct, Nov average, Dec well below, Jan average, Feb and Mar well below

Hottest days in Melbourne **DAYS > 35^{0}C 10**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
14.7	10	121

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

The Argus Fri 27 Jan 1860 THE RECENT BUSH FIRES
(FROM THE BALLARAT TIMES, JANUARY 26.)
A meeting of farmers took place yesterday at the One-Mile Hill, Glendaruel, for the purpose of inquiring into the cause of the late disastrous bush fires in that locality, and to devise means to relieve such persons as had suffered from them. The meeting was held on the farm of Mr. Dunstan, who is a heavy loser by the fire, and close to the spot where the fire appears to have raged with the greatest fury. A Committee was formed to go round and collect subscriptions, with power to apportion the money to such persons us they might think most in need.
An attempt was made to obtain some information as to the origin of the fire. Mr. Jackson, who resides in the vicinity of the spot where the fire commenced, stated that he had had a dispute with two men who had been reaping for him, and they had used abusive language. After some discussion, a resolution was passed that an information should be laid against the men, and it transpired that they had left the Belfast Hotel for Back Creek that very morning. Beyond the language alluded to, there was nothing to criminate the men, but we have since heard it stated that one of them was heard to say that he would burn down Mr. Jackson's place … though it must be confessed that they have been somewhat tardy, as the men suspected have already left the place.

The neighbourhood of One-Mile Hill, Coghills Creek, presents a very sombre appearance, the blackened fields showing the course taken by the late disastrous bush fire in that locality. The fire appears to have commenced about 12 o'clock on Sunday, and between that time and 4 o'clock it passed

over nearly three miles of ground, levelling everything before it. At One-Mile Hill it is said to have raged with extra violence, and a wall of fire, some 8 feet high, is said to have come over the hill in the direction of Coghills Creek. The fire appears to have stopped by the crossroad near Coghill's Creek,

Mr. Tinkler, a farmer, residing near One-Mile Hill had a very narrow escape. On the alarm being given, he commenced ploughing round his ground, but before he could get the furrows complete tho fire was down upon the land. Twice it leaped across the furrows and was extinguished, at one time being in close proximity to his stacks of wheat. By great exertions the fire was stopped at this point, and Mr. Tinkler escaped with a comparatively trifling loss.

Owing to the time at which the fire commenced, some time elapsed before assistance could be obtained, as the greater portion of the farmers were attending church.
The value of the property destroyed has not yet been very accurately ascertained, but it must amount to several thousand pounds.

Observations
Based on dryness of these summer months, a severe bushfire season is expected.
Perhaps the distinction between a burn off and a bushfire is blurred

1860/61

Weather BOM rainfall records for Melbourne: Sep, Oct, Nov average, Dec double, Jan average, Feb and Mar well above

Hottest days in Melbourne **DAYS > 35^{0}C** **3**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
3.4	3	23

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

Other bushfire relevant events
Daylesford volunteer fire brigade is formed

Museum Victoria collection
Daylesford lost its Freemasons Hotel to fire on 23 January 1861. The timber hotel took just 15 minutes to be destroyed. The community soon stirred into action. An American, J. H. Lerich, wrote to the newspaper suggesting a fire brigade be created. His call was taken up by the Police Magistrate and Gold Warden, Daly, and on 19 February 1861 the Daylesford Fire Brigade was formed. It initially had 29 volunteers, and one of Lerich's countrymen, Mr Henshaw, was elected Captain. (Museum Victoria collections) One of the Brigade's first major fires occurred at Coomoora on December 31, 1862.

Observations
The town leaders clearly saw that a local brigade would help with suppressing outbreaks of fire within the town, eg, in buildings or grassy areas, reasoning that quick access by nearby water cart allows suppression before the fire grows too large.

1861 / 62

Weather BOM rainfall records for Melbourne: Sep average, Oct well above, Nov, Dec average, Jan below, Feb and Mar well below.

Hottest days in Melbourne **DAYS > 35^{0}C 8**
Jan 14 1862 Highest recorded temp in Melbourne 111.2 F (= 44C) (as reported by Argus 25 January 1875)
BOM records report maxima above 43.5 in 1860 (43.9), 1862 (44), 1875 (43.5), 1876 (43.7), 1939 (45.6), 1968 (43.7), 2003 (44.1), 2009 (46.4), 2010 (43.6), 2014 (43.9)

Dryness Index	Days >35^{0}C	Seasonal Severity Level
14.6	8	97

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

Area estimate = 20 miles x (say) 3 miles wide = 32 x 5km = 160 sq km = 16,000 ha

The Star Ballarat, Tues 25 Feb 1862
Bullarook
The fire on the weekend spread with most extraordinary rapidity, and in its course swept onward towards Gordon, extending as far as the Moorabool on one side, a distance of some twenty miles, destroying about half a dozen huts in its passage. The Alliance Company, at Gordon had great difficulty in saving their plant from the devouring element; but, fortunately, they were assisted by several neighbours, and the wind changing at the time, they succeeded in changing the course of the fire, which swept onward with alarming rapidity. On Monday the change in the wind had dispelled any fears that were entertained of these extensive bush fires extending, and late last evening there was a slight prospect of rain.
In Monday's Star we stated some particulars respecting the bush fire at Bullarook that destroyed the mill of Messrs Graves and Fraser. We now learn that the mill was insured in the Melbourne Fire and Life Insurance Office for the sum of £1200. Several huts belonging to wood splitters and small cultivators have been however burned.
The timber saw mills of Mr James Goldsmith, at the Springs, were also completely burned down. The American Saw Mill, at Bullarook, was not injured, but a bridge leading thereto which cost £300, was burned down, as well as a large portion of a tramway.
At Stieglitz and Mount Egerton we hear that great damage was done, the crops of several farmers and their homesteads haying been destroyed. Messrs Biddle's mill, of Bullarook, had a very narrow escape, and it required the energetic action of some 50 persons to save it from destruction.
Our Brown Hill correspondent sends us the following:-"The bush fire yesterday must have made great havoc among the settlers, the particulars of the loss of one of these I may relate. A young man named Spilman, who was recently married, purchased a few acres of land to settle upon in the neighbourhood of the Springs. He built himself a comfortable house, laid in a few months supply of provisions, intending to leave his wife comfortable for a time, while he endeavoured to replenish his almost exhausted funds. He furnished the house, and finished the papering and tacking down of the carpet last Saturday night. He left his borne on Sunday morning with his wife to spend the day with his friends at Brown Hill, leaving through forgetfulness his purse on the table containing all the money he had, with his watch. When they returned borne in the evening all was destroyed. The dog was burned on the chain, and a lamb and a goat consumed in the stable. House, furniture, clothing, provisions, money, all had gone. His horse was loose in the bush, and may be for aught he knows burned also.

Penshurst report A £50 reward was offered for information about an arsonist operating just north of Mount Rouse around the Linlithgow Plains.

Observations

- The rapidity of the Bullarook fire's run and the destruction is caused suggests a hot windy weekend. Some mills were saved by determined self defence by the neighbours, but some burnt down, along with huts and homes of settlers.
- The unexpected speed of the fire's passage suggests attack by medium distance embers. This suggests the threat of ember attack was not identified. But the heavy damage around Bullarook and the Springs suggests the mother fire, the source of the embers, was rather close to the settlements.
- The saving of mills and mining plant suggests flames were low enough for beaters to handle or were spot fires stopped when small before they took hold. The threat from running flame was identified in some areas, and the chosen strategy of mitigating the threat was suppression by many beaters. The surrounds of the building were at low enough fuel load to make suppression happen in safety. Such surrounds management was probably accidental but may well have been planned in some cases.

1862 / 63

Weather BOM rainfall records for Melbourne: Sep well below, Oct below, Nov and Dec well below, Jan average and Feb above, Mar well above.

Hottest days in Melbourne **DAYS > 35^{0}C** **7**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
8.0	7	69

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

The Star Ballarat, Vic Monday 19 January 1863
Origin OF BUSH FIRES We have been informed of an instance in which an eye-witness assures us, that he saw a fire break out, which he is satisfied had a purely spontaneous origin. The fire took place on the Western plains, beyond Skipton, about noon: and our informant states that he was the only person present, that he did nothing to cause the fire, and that he saw the grass begin to smoke and then burst into flames. He took measures to save the bridge, which was endangered by the fire, and beyond the burning of the grass no damage was done, but the fire extended for a considerable distance.

Monday 2 February 1863 The Star (Ballarat)
Creswick Yesterday the weather was a "brickfielder," though not of the fiercest kind. The air was hot with the northern wind and an unclouded sun while a large bush-fire in the Creswick and Dead Horse ranges added to the heat, and helped to make the horizon in that direction dark with rolling vapours. The thermometer at 6 p.m. was 90 deg. in the shade, and 121 deg. in the sun.

Penshurst report Fires were burning all around Hamilton and Messers Twomey and Hutton experienced great loss around Mount Rouse.

Observations
These references indicate the continued tolerance of the threat of unextinguished fires in summer, and cast doubt on the effectiveness of the "careless fire" laws.

1863 / 64
Weather
BOM rainfall records for Melbourne: Spring well below average, Dec double, Jan Feb Mar average.

Hottest days in Melbourne **DAYS > 35^{0}C** **1**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
3.4	1	7

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records
Western District bushfires (McArthur et al 1982)
Reports of fires around Shelford and westward running over January and February,

Reported bushfire events

1864 / 65
Weather BOM rainfall records for Melbourne: Sept average, Oct well above, Nov well below, Dec average, Jan Feb Mar and April well below.

Hottest days in Melbourne **DAYS > 35^{0}C** **2**
Hottest day in Jan was on 4th 34.8 followed by 21.3, Feb 27 39.7 followed by 19.9, and Mar 4 35.7 followed by 20.8.

Dryness Index	Days >35^{0}C	Seasonal Severity Level
22.0	2	28

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Exceptionally DRY in Jan and Feb and Mar, Exceptionally FEW VERY HOT DAYS

Season summary:

Argus Sat 25 March 1865
Between the drought and the bushfires, the farmers have had rather a hard time of it lately. On Black Monday, the worst day for heat and smoke we have had since Black Thursday, in 1851, the destruction of property was very great.
Still the fires were rather late to do as much damage as they would have done earlier in the year, for the farmers had mostly time to secure their stacks and homesteads, partially by ploughing and burning round them, after the harvest had been got in.

Official bushfire records

Citizen sponsored relief appeals were organised to help the destitute. The fact that they asked Parliament to contribute suggests the government is not involved with bushfire protection or its consequences.

Reported bushfire events

February 27, 1865 "Black Monday" The day was hot with very strong N to NW winds, followed by a southerly change through Melbourne around 5pm. Many bushfires ran in different parts of Victoria, inflicting destruction. Areas hardest hit were Kyneton and Taradale, but destruction occurred in many places surrounding Ballarat, Clunes to Newstead to Castlemaine and Bendigo, also Mt Moriac.

No lives were reported lost, although reports suggest two possible deaths and a man with possibly fatal burns. Many settlements were ablaze where houses and buildings, harvested crops and fencing were destroyed. Total area burning simultaneously can be estimated as many tens of thousands of hectares. Total losses in Kyneton were estimated at £50,000.

According to Reserve Bank multiplier, losses in today's money = 50,000 x 150 = $7.5M.
Caution with comparisons: In those days, a very good wage was £50 per year, whereas today an equivalent very good wage is say $80,000. Therefore, relative to annual wage, the relative value of damage was $80M (= 50,000 / 50 x 80,000), or 1000 times a good annual average wage.

These two reports give an overview:

The Argus Tuesday 28 February 1865
Early in the evening, the reflection of a great conflagration was observed in the direction of Geelong; and accounts received in the course of the day show that there was quite a line of bush-fires between that town and Ballarat. Our telegrams state that the weather in the interior was far more severe than in Melbourne; that bush-fires were in unpleasant proximity to Ballarat, Sandhurst, Daylesford, and other towns; that forests were ablaze, and that homesteads had been destroyed. It is to be feared that within the next day or two we shall have to publish a long list of losses.

The Argus Saturday 25 March 1865
Monday, February 27, 1865 - hereafter to be styled "Black Monday"
The day had scarcely set in when began a fierce sirocco wind from the north-north-west, exceeding in its wild velocity and over- powering heat the experience of the last fourteen years. Awful bush-fires speedily commenced, and in Melbourne the heavy smoke filled the city like a thick fog. However, that in the shade in Melbourne the thermometer only stood at 98° 60' **(=37C).** Such weather could not last, and just before five p m. came the welcome relief of a sudden change of wind to the cool south and a slight fall of rain,
The large agriculturist district of Kyneton was perhaps the most heavily visited, and a list of (be homesteads, growing crops, stables. barns full of produce, and fencing destroyed filled nearly a column of this journal, and was then very far from complete. Accounts of nearly equal desolation reached us from Mount Moriac, Talbot, Newstead, and, indeed, nearly every part of the colony.
At Ballarat the heat reached 99°, and bush fires raged from Spring-hill and Learmonth to the border of Bullarook Forest.
From Geelong to Ballarat was nearly a line of fire, and numerous houses, fences, and crops were either burnt up or with difficulty saved.
In the country round Daylesford similar disasters occurred.
A striking picture of the train passing between Taradale and Elphinstone, the flames curling within a few yards of the carriages and destroying even the railway fence.
Mount Alexander itself presented a magnificent spectacle. The grass had been all consumed, and millions of burning trees and logs were seen over tho whole face of the hills.

Steps have been taken for the relief of tho sufferers. Parliament has been already asked for £60,000 to help the more completely destitute, and the colony is being canvassed for subscriptions in aid of the Kyneton farmers, who were the worst off of all. In each of tho more heavily-visited districts local efforts are being made for the relief of tho many who have been ruined.

The following interesting comparison with Black Thursday fires of 1851 can be interpreted as follows: that the Ballarat area fires have become more subdued due to continuous forest of 1851 being converted into mixed grass and forest and made discontinuous by mining activity, habitation, roading and agriculture.

The Argus Monday 6 March 1865
Several old colonists here aver that the heat of Monday was quite equal to that of ' Black Thursday," but the fact of so much ground around Ballarat being at present clear of timber prevented the fire from being felt so oppressively as on that historically disastrous day.

The following reports are more detailed. Unless otherwise acknowledged, they were assembled from local newspapers by The Australian News for Home Readers, published on Saturday 18 March 1865. Each source is referenced.

They give an insightful understanding of the impact of the bushfire problem at the time because they personalise the losses by reference to names and properties. They describe how and where losses occurred, and how losses were prevented by determined defence by property owners and neighbours. The toll of losses is highlighted in green.

The reports also show the self-reliance and resilience of these communities, who knew they were defending their property without government support and not expecting government support. Not only were the property owners determined to save their assets, but neighbours and members of local communities willingly volunteered to assist in sometimes dangerous situations, even with the most primitive tools and equipment. Their reaction is consistent with a belief that bushfires are an annoying but inevitable part of Victoria's countryside, we will tolerate them and it is our role to defend ourselves and our neighbours property when they attack us. The stories of defence by people are highlighted in blue.

The reports highlight a stark contrast between the fire lighters' carelessness and ignorance of consequence, whether they lit the fire a few days earlier without extinguishment or they lit the fire on the day, and the helplessness and vulnerability of the innocent neighbours who fought these runaway fires and sometimes suffered unrecoverable losses. The known or suspected causes are highlighted in red. The reports indicate the causes were various but were all man-made, and that some were traceable.

From the Australian News for Home Readers, published on Saturday 18 March 1865
ALARMING BUSH FIRES
The hot winds which prevailed in Melbourne, on 27th February, appear to have been prevalent throughout the colony, and bush fires, which proved more than usually destructive, seem also to have been of very general occurrence. We take the following particulars from our country contemporaries:

BALLARAT AREA

- Ballarat Star, Feb 28 and March 1

Bunker's Hill On Monday bush fires were raging fiercely in the parish of Cardigan, in almost every direction, and but for the praiseworthy and energetic assistance of a number of miners from Bunker's Hill, who worked hard until 10pm to extinguish the flames, the property of Mr Thomas Lloyd, and that of several other residents, would have been totally destroyed.

Burrumbeet Among the farms held under the Messrs Learmonth, much damage has been done by fire, but we had not received any particulars at a late hour last night. On Mr Robertson's run, Burnbank, there was also a great, and it is feared destructive, fire.

Learmonth On Sunday night two stacks of oats, on the farm occupied by Mrs Hynes, at Ercildoune, were discovered to be on fire. The stacks were situated fully a quarter of a mile from the road and every precaution as to ploughing around them for the purpose of protecting them from fire had been attended to.
There is every reason to suspect that the fire was the act of an incendiary. About one thousand bushels of grain were destroyed. The Learmonth police are in active search for information which will lead to the detection of the incendiary.
On Monday, a fire occurred on the run of the Messrs Learmonth. Several constables, who were in attendance at the Learmonth police court, when the fire broke forth, were sent out to the scene of conflagration. Particulars had not been received when the mail left Learmonth, but from the appearance of matters from the township, there is reason to fear that all the grass upon the run has been destroyed, and probably buildings as well.

Mount Bolton Mr Holgate, of Mount Bolton, has had the whole of his fences and grass (that is all that escaped a fire on Thursday last) completely destroyed.
A butcher named Smith, at Mount Bolton, had his place on fire and with difficulty saved his dwelling house alone. His outhouses were all consumed, and some pigs were actually roasted alive.

Clunes A fire lighted by Mr Ivey on Monday, at Glendonald, for the purpose of stubble burning, is said to have been the cause of two stacks of wheat, containing about 1300 bushels, belonging to Mr Charleson, being destroyed, besides a lot of his fencing as also the fences of Messrs Pearcy and Rickey.
Another farmer at Glendonald has had three stacks destroyed

Spring Hill A fire, which started in Crevena's paddock, at Spring Hill, on Monday, caused the destruction of about 40 chains of fencing belonging to Mr Coffey. The fire spread to Mr Trethowen's property, but was then stopped through the exertions of the neighbours.

Bullarook The fire in Bullarook Forest had by midnight on Sunday reached close to Messrs Clark's saw mills, and the firm immediately put on forty men to guard the premises from the incursions of the flames. Their efforts were attended with success.
Large fires are burning near Mount Prospect, near the Deep Creek; also in Bullarook. The stocks of grain and dwelling house of Mr Adam Broomfield, junior, at Bullarook, as also the stocks and dwelling of Mr John Bay, have been burned.

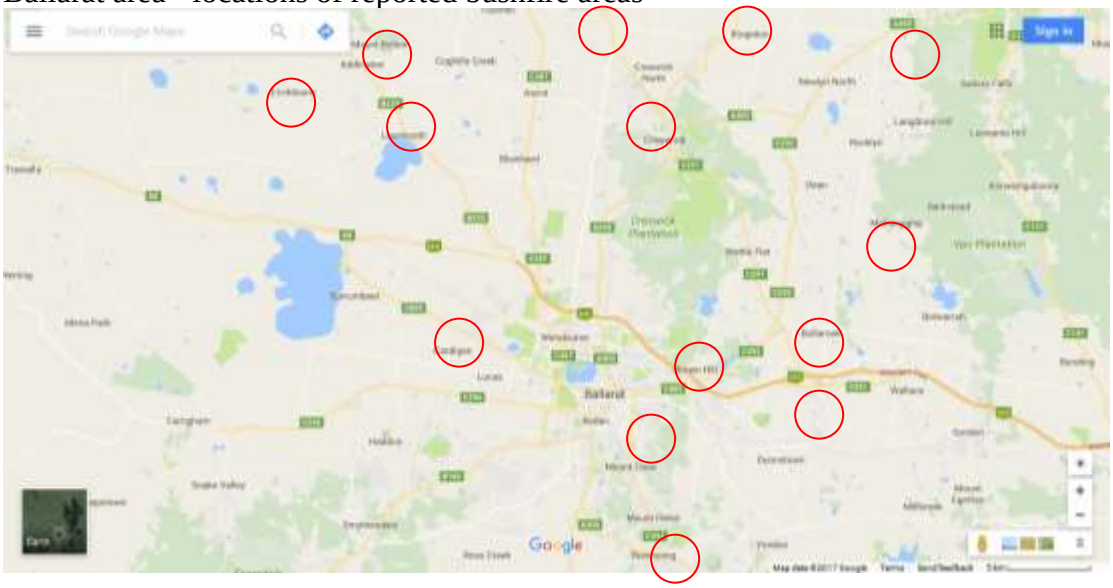
Buninyong The large building on the Buninyong road, known as the Grammar School, was nearly destroyed on Monday. It was only saved by the vigorous exertions of about forty men, who turned out from the neighbourhood, and beat down the flames, which were fast spreading over the grass close to the building. Many of the young trees which line the road in this part were also ignited and partially destroyed. The fire extended for some distance, along the ranges on both sides of the road, and no doubt, had it not been for the timely fall of rain in the evening, it would have caused a considerable amount of damage.
Other areas
Hundreds of acres on the ranges, between Ballarat and Buninyong, have been on fire during the day, and are still burning
A number of persons at Spring Gully have been burned out.
A farmer, named Flanagan, at Birch's Creek, has had a good deal of property destroyed.
Large fires are burning near Mount Prospect, near the Deep Creek;

There was a large fire at Scrub Hill.
Passengers by the night train from Melbourne that evening, reported to us that the bush was in flames from Warrenheip to Lal Lal; that a great many cattle had been destroyed, and many more, appalled by the flames, were running madly about in all directions,

A few days later, some more details were discovered about losses and causes.

The Argus Monday 6 March 1865
In with reference to tho bushfires of Monday (27th), Messrs. Learmouth have been heavy sufferers, estimating their loss at about a thousand head of sheep.
The house of Mr. Bankia, at Learmonth, was maliciously set fire to, but happily the conflagration was extinguished.
There are various accounts of the origin of tho fires in tho different localities where they occurred.
A warrant has been issued for the apprehension of two bullock-drivers, who are stated to have left a log burning on the Ercildoune run.
At Mount Bolton, a woman has been given into custody on the charge of having set fire to the grass.

Ballarat area - locations of reported bushfire areas



BENDIGO AREA

BENDIGO (= SANDHURST) - Bendigo Advertiser, Feb 28 and March 1.
Yesterday in Sandhurst was the hottest, the dustiest, the most miserable, and the most unbearable day we have had, not only this season, but for many seasons previous. Early in the day a fierce hot wind commenced to blow, driving an atmosphere like the blast from a furnace in the face of any one who had to go into the street. Between two and three o'clock the thermometer marked 105 degrees in the shade in Pall Mall, while about that time large bush fires were observed in nearly every direction around Sandhurst. About nine o'clock a perceptible change to a cooler atmosphere took place, and, after one or two threatening showers, the rain commenced to come down with considerable force until about eleven o'clock, when it ceased. Between twelve and one o'clock the gale seemed to be blowing its hardest. The gale did considerable damage amongst frail buildings.

On the arrival of the train, last night, from Melbourne, we were informed by a gentleman who was a passenger by the train that on both sides of the line, all the way from Woodend, the bush was blazing fiercely. On every side of Mount Macedon, the timber, large and small, was on fire, producing a spectacle of magnificence and terror. In the locality of Taradale, Elphinstone and Mount Alexander, the whole country appeared to be one mass of fire.

Mt ALEXANDER An informant, who arrived in Sandhurst yesterday from the neighbourhood of Mount Alexander, states that the fire first showed on the eastern side of tho mount, about eleven

o'clock in the day, and in a few hours had extended some eight or ten miles; no exertion which the settlers, who had farms in its truck, could make was sufficient to arrest its progress the flames, it in stated, flew along with as great velocity us a galloping horse.
We have been unable to ascertain tho exact losses sustained but it is stated that as many as twenty - homesteads, with crops, and everything they contained, have been totally destroyed, and their owners rendered homeless.
The homesteads of Mr Kelon and Mr McLennan were amongst the number. The large paddock of Mr Jamieson and the Mount Alexander paddock have had every blade of grass and stick of timber burned off.

EAST OF SANDHURST
Emu and Myrtle Creeks The large fire which was observed to the south of Sandhurst at night has burned a tract of country from eight to ten miles in extent, The greatest destruction appears to have been caused to the homesteads on the Emu and Myrtle Creeks, On the former, the large farm of Mr Michael Brennan has been consumed, with the exception of the house, which, by great exertion, was saved, All the crops, hay and corn, which had only just boon stacked, fell a prey to the flames, the loss being estimated at about £500, Mr Brennan's next neighbour, Mr Osborn, also had his stacked crops destroyed, On the farms of Mr Tobin and of Mr Howard, situated lower down the creek, tho fire was carried beyond the fences, despite the efforts of the people, who were trying to drive it back, and caused considerable destruction to the stacks.

The following communication, which we received last night from a resident at the Emu Creek, gives a painful history of the disasters there: — ' I hasten to inform you of a few particulars of the losses occasioned by one of the most extensive bush fires that has over happened in the district of Bendigo. As you are aware, we have been for some time surrounded with the fiery element, which has raged with fury, defying the joint efforts of the settlers to subdue it. It broke out yesterday with all the intensity and appearance of a burning fiery furnace, carrying consternation and ruin in its progress, and at night the sight was one terrible to behold, the trees, in burning masses, casting their lurid glare around, and then the loud thundering crash of their falling was enough to make a man tremble for his safety. The sight of the burning stacks of wheat, oats, hay, and dwellings of one's neighbours brought the tears from many an eye, knowing the sorrow and distress which invariably follows such unforeseen calamities ; and, sir, you may judge of my feelings, whilst I have been so signally preserved, to find my rich neighbours caring for the loss and ruin of those rendered houseless and helpless, by coming forward to suggest a meeting at the Emu Creek school house, to-morrow evening (Wednesday) to alleviate the distress of the unfortunate, and whilst my friend, Mr Brennan, though a sufferer to the extent of some £500, when asked, generously exclaimed, ' I am not stuck for a pound, but do all you can for Mr Osborne, and others that need it,' shows at once the manliness of character under such painful circumstances, and recommends self abnegation to others.'

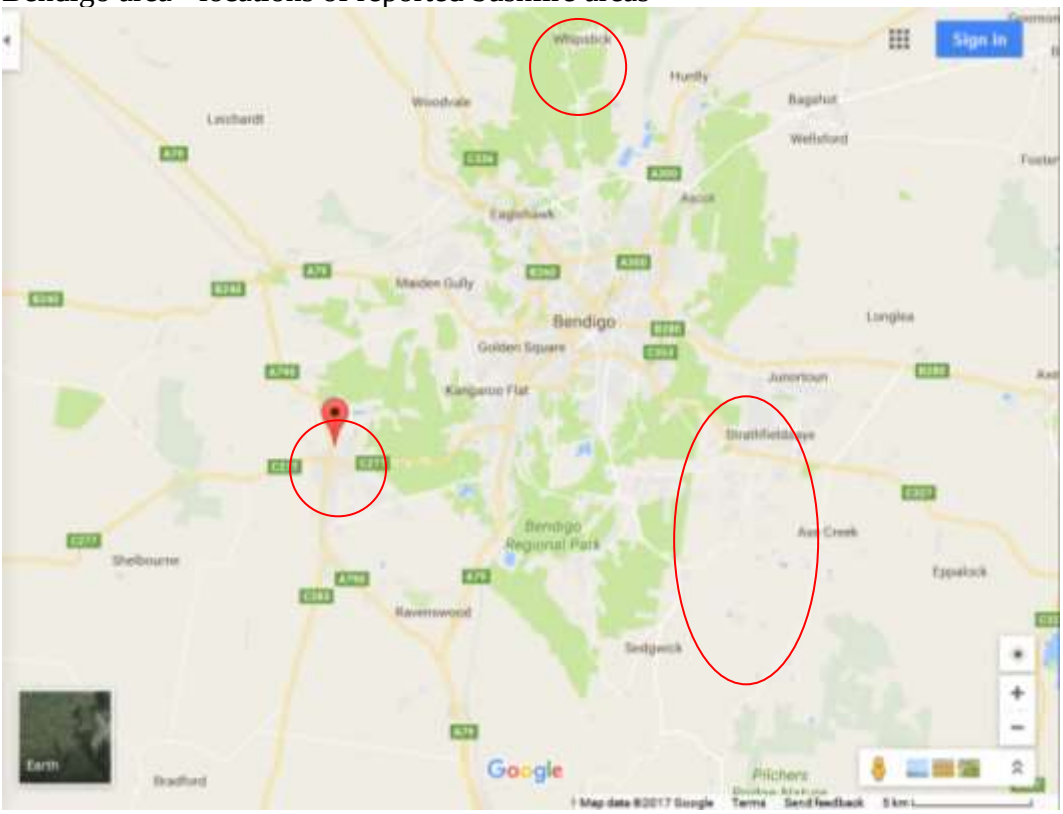
Sheepwash Creek At the Sheepwash, although the fire was burning with equal fierceness in the bush, it caused less destruction to the crops of the settlers. Messrs Goudge and Sibley's extensive premises, on the Sheepwash Creek, had a very narrow escape, the flames, in more than one instance, penetrating beyond the fences ; but, by the unceasing exertions of the men engaged in cutting away the burning timber, and the plentiful use of water, the place was saved.

WEST OF SANDHURST
Lockwood and Bullock Creek Although no authentic information of any destruction has been yet received, we believe that the homesteads and farms of several of the small settlers have suffered. The fire at one period of the evening of Monday was so close to the fence of the police paddock at Lockwood that the constable in charge got out the horses and made other preparations for removal. The property of Judge Skinner had a second narrow escape. The bush fire which occurred near Bullock Creek some few days previously, destroyed between two and three hundred acres of the grass in his Honour's paddock.

NORTH OF SANDHURST
Whipstick and Lower Huntly The fire travelled, we are informed, with great rapidity, but fortunately without meeting with anything more valuable than the bush timber.

Late last evening (28/2) we received information that the bush fires which had raged furiously on the previous day along the railway line, had, in most places, been extinguished by the smart shower of rain which fell.
On Mount Macedon two sawmill's have been destroyed.
At Harcourt the bush still continues to burn

Bendigo area - locations of reported bushfire areas



KYNETON – CASTLEMAINE

TARADALE and FARADAY Mt. Alexander Mail, February 28 and Mar 1
The fire seemed to have come from the direction of Mount Alexander, consuming everything in its course. No definite opinion is yet given as to the cause of the conflagration, but it has been suggested that it arose in consequence of some persons engaged in getting bark allowing their camp fire to spread while they were at work. It seems most likely that the fire commenced at or near Harcourt, and that the wind fanned its southern, progress.

TARADALE A gentleman who came up by the train informs us that, on either side of the railway from Taradale to Moonlight Flat and the mount, the whole country was in a complete blaze. Two miles in length of the railway fencing between Taradale and Elphinstone has been entirely consumed,
Speaking of bush fires in the neighbourhood of Taradale, a correspondent writes: — ' This (Monday) afternoon, the inhabitants of Taradale were terrified by the approach of fire towards the township. The fire-bell was rung, and the inhabitants turned out en masse. The mayor, Messrs Jansen, Graham, Wilson, and other of the principal men of the town directed tho efforts of the men in extinguishing tho fire.
It is asserted that Messrs Hull, Reynolds, and Gillespie have suffered severe losses, and that the estate of Frogrnore has been utmost wholly destroyed,
Our informant states that the farm of Mr Reynolds of Taradale together with valuable stacks of hay, have been reduced to ashes, and that Mr Urquhart's place narrowly escaped the power of the devastating element.

From another source, we learn that the farm of Mr McClellan, in the line of fire near the Junction, narrowly escaped destruction. As it was, two stacks of hay of two tons each were burned. At this place the fire was about one mile in width, and other large farms in the vicinity were placed in great jeopardy.
At Taradale considerable damage was done, notwithstanding the efforts of the townspeople. Among other casualties, it is mentioned that Mr Austin, solicitor, had the whole of his property consumed, but this statement is not yet confirmed.

FARADAY So far as we have been able to collect in formation, we believe that the farmers of Faraday have sustained the principal losses. Mr Dainty, dairyman, had the whole of his property consumed. A quantity of oats, wheat, hay and peas was destroyed, to the value of about £200. His house and furniture were entirely lost, together with tho stable, pigsties, outbuildings and fencing, to say nothing of the grass, which is so necessary for the carrying on of his business. Mr Dainty is a married man, with seven children, and he has been, stripped of everything he possesses, with the exception of his cows, which of course are now wandering at the mercy of neighbours and the pound keeper. He estimates his loss at about £500; and with the exception of a small underground dairy, he has no place to shelter his family, who have been deprived of all their bedding and clothing. Mr White also sustained severe loss. His paddocks and fencing were burned up, or down — whichever expression is most applicable. Twelve tons of hay were consumed, and a valuable horse, then standing in Mr Dainty's stable, was roasted with, saddle and bridle. He estimates his loss at £200. Mr Kellow, who seems to have been the greatest sufferer, had the whole of his property (valued at £600) consumed — crops, grass, fencing, carts, and, in fact, all the appliances of a well ordered farm, were obliterated in the general conflagration.
Mr Waite was also burned out of house and home, and his loss is stated as about £150. Mr McClellan sustained injury to the extent of £100, and Mr Kennedy lost all he possessed, which, we understand, implies a loss of £100. An equal amount of' property was consumed on the farm of Mr Ebbot and Mr Bogle, who had some valuable agricultural machines destroyed, together with a quantity of straw, cannot have come off under a penalty of less than £150. Mr Thomas has been among tho principal sufferers. His crops, house und vineyard were completely destroyed, and the value of the property is set down at over £200. Mr Joby's house hay and paddocks were also reduced to a mere mass of ruins, and in this case the loss is estimated at £150. Mr Bennett was burned out entirely, the value of his property consumed by the fire being reckoned at not less than £300.
The paddocks and hay stacks of Messrs Medcalf and Eastman were consumed, and they will suffer a loss of about £100 by the disaster. The paddocks and stockyards of Mr Patterson (mayor of Chewton) suffered damage to the extent of £100, and McClellan, senior, lost all his property to the value of £200. Mr Ellery suffered a heavy loss by the burning of his crops and fencing, but his house was fortunately saved through the exertions of his wife and daughter, the latter being repeatedly on fire in her exertions to stay the progress of the flames.

It is reported that two charcoal-burners lost their lives in an endeavour to escape from the flames; but this statement also has not been authenticated.

We have learned that a mounted trooper riding from Harcourt to Castlemaine had a narrow escape of his life. The fire had extended across the beaten track, and the horse shied and for some time refused to face the flames. The trooper at length rushed him through, and, in doing this, sacrificed a portion of his whiskers, his jumper being also scorched into inutility.

NEWSTEAD. M, A. Mail, February 28
Newstead was yesterday surrounded by bush fires and many of the inhabitants are apprehensive for the safely of the town. As a girl was washing in Marsdon's yard, sparks from a fire lighted outside flew onto a dry dung heap, the straw immediately ignited, and had it not been for tho strenuous exertions of a score of men, several of the houses would most probably have been consumed. The bush fire on the range near the Bridge Inn was, at three o'clock, towering yards high. Some horses, startled by the blaze and smoke, broke away, and the residents were in a state of excitement and dread

KYNETON Kyneton Observer, February 28 and Kyneton Guardian March 1
It will take some time to approximate the entire loss in the district, but about £50,000 is not believed to be an outside calculation of the damages committed by this dreadful fire

The manner in which the fire originated is, of course, not known, nor is it ever likely to be, as it has now been burning, though within a more confined area, for more than a week. Up to Saturday it had been principally confined to the grass lands, and it was not till yesterday it received such an impetus from additional fires, the extreme heat and strong wind. From an early hour yesterday morning the wind broke with extreme violence, and the heat — a hot wind blowing — became most intense. Many of the oldest residents in the district say that not even on the well-remembered ' Black Thursday' was the heat so intense as it was yesterday. We are glad to be able to state that, since the above was in type, a smart shower of rain has fallen, putting an end to further danger at present, but the fires are still burning in patches, especially amid the trees.

Carlsruhe Woodend Between Carlsruhe and Kyneton, towards the Bald Hill, a large fire has been raging for more than a week, and yesterday and Sunday it increased in intensity, sweeping away farms and homesteads in its relentless path. Yesterday, between ten and eleven o'clock, the fire swept across the paddock of Mr Argyle, and attacked the fences of Mr Halliday, whose farm is just verging on the township. Sweeping across the farm, the flames quickly caught the outhouses; the hay stack, a stack of straw, stables, and everything except the dwelling-house itself were soon enveloped in fire. The fire was seen from the township, and a large number of townspeople went across to render what assistance was in their power, and they succeeded in saving the dwelling house, which was literally the only thing upon the farm that was not destroyed. Four times the fire caught the dwelling house, but the number of those about succeeded in saving this from the pitiless tyrant. Mr Halliday, as is well known, has been bedridden for some time past, and it was with difficulty he could be persuaded to submit to removal, so utterly unconscious was he of his danger. We regret to learn that none of the property was insured, so that, although we are not yet informed of the extent of his loss, we know it must be very severe.
Sweeping along towards the pound, the fire next attacked the farm of Messrs Mills and McDonald. Here the fire caught about three o'clock, and swept everything before it with the force, of a whirlwind, bidding defiance to any steps to stay its progress. The dwelling, outhouses, barns, &c, two or three stacks of corn, and the entire produce, was completely burned down in on incredibly short space of time, effectually preventing any efforts to save a portion of the farm produce or furniture. The next place that caught was that of Mr Crawford, and the same fierce rapidity characterised the manner in which the fire destroyed his farm. Two stacks of corn, outhouses, fencing, and, in fact, everything, except the animals, were destroyed.
The next place to succumb was that of Mr Martin, popularly known as Rosemary Garden, and, without exception, this was — before destroyed by the fire — one of the finest gardens in this district. The buildings, outhouses, piggeries, &o., are all destroyed, together with a quantity of oats and other produce.
The farm of Mr G. Pell was the next to submit to the devouring element, and the same relentless fury which previously prevented anything being saved, also had effect here. Mr Pell's dwelling house, his barn, outhouses, two wagons, 4000 to 5000 bushels of grain, and tho entire crop of the season was destroyed
Mr Darby's place was on fire almost simultaneously, and everything on the farm of this gentleman was completely destroyed.
Mr Yeaman's place was also on fire, but we are not in a position to state the amount of destruction. The farms of Mr Gallagher and Mr Welsh; caught, and their houses, stacks of hay and straw were all destroyed.
We have since heard that, in addition to those mentioned above, Mr Kearny's place took fire, as also that of Mr O'Brien adjoining, and nearly everything on the two places was destroyed. Mr Kearny, who was confined to his bed, had to be carried out of his bed for fear the fire should catch it. A large stack of corn and other produce, be sides fencing, was destroyed on Mr Kearny's farm. Observer, February 28.

Mr Dryden and the Messrs Muntz are represented as being the principal sufferers at Newham and Woodend. The old mill of Mr Fitzsimmons, in the Devil's Hole, was said to be burnt down. Messrs Ross and Purton, and Mr Samuel Sims have principally suffered at tho Coliban, Mr Bower also losing some fencing. Messrs Rosa and Purton have had a total loss, except the dwelling house, but Mr Sims was insured for £150, but, of course, this is a mere trifle to his loss of crops, reaping machine, chaff-cutter, &c. Kyneton Guardian March 1

Redesdale and Barford The fire in Redesdale and Barford was a continuation of a long flame from Mount Alexander. There were apparently two lines of fire in tho shape of a V, which came down

Wedge Gaily from Darlington's on one side, and Brickloy's on the other, and formed in one at Tynan's farm, where the cowsheds, stockyards and a largo stack of oaten straw was burnt, but the house itself was saved. At William Miller, the slaughterman's, there is nothing left but the chimney of his house and the gallows upon which he hung the carcases of the bullocks. One of his losses is a spring cart he gave £26 for a fortnight ago. At Took's, a large quantity of oaten straw and a substantial new two-railed fence has been destroyed. Some oats in bags and the house were saved. At Laurence Connell's, everything, with the exception of one box, was burnt, including house and furniture, seeds, oats &c. Taylor saved his house by disconnecting his stockyards, and sacrificing his fences. Thomas Connell has lost everything, house, stacks, oats and crops. James Cochrane has had three miles of fencing burned, and unfortunately met with a severe accident himself. He was endeavouring to hunt some cattle out of a blazing paddock when he found himself surrounded by flames. He impelled his horse through, but it fell dead, and he had to disengage himself and run for a mile before he got shelter at the residence of Mr Wells, where he arrived dreadfully burnt about the face and chest. Dr. McMillan, who happened to be in the neighbourhood attending an accouchement case, attended on Mr Cochrane and dressed his burns, but we believe he is in a most dangerous condition. We understand the heat, and flames were so great in Mitchell's lane that, although Dr. McMillan was urgently wanted, he could not drive up for about two hours and a half, but remained at the mouth of the lane waiting a favourable opportunity.

At **Barfold** Mr Cochrane had two stacks of oats burnt. Ryan had his stack yard destroyed. M'Kinlay's house was roasted. It is a bluestone house, and there was a stack of forty tons of firewood in the rear, which would have effectually burned the house down had it been wooden. The hon. W. H. F. Mitchell's was saved by the exertions of his men, as was also Foster and Highmore's, through scorching round the premises, Holland and J. M. Watt are burned out — house and everything. Edward Martin has lost all but his house. Twyford was completely burned out. In fact nearly all the Barfold farmers have lost heavily, and nothing would have saved Mr Rogers and the Dickenses, on Soldiers' Flat, but for the timely change in the wind and the rain that fell after seven o'clock. Kyneton Guardian March 1

Tylden From Knight's, on **Spring Hill**, to the common schoolhouse in **Tylden** was one strip of flame. Ewing and Glenn's store was seriously threatened, but escaped. Richard Fleming's two farms, Wm. Pickering, George Watson (Drninsbang), T. M'Closkey, Adams, Scott and Goodfellow are the names of several of the parties who have lost heavily.

The type and costs of damage in the Kyneton area were subsequently published

The Argus Tuesday 11 April 1865
The Kyneton Observer says:-"The total claim from sufferers by the late bush-fires are now in, and represent a stated loss of £9,994 4s. 8d., made up as under:-Crops, £6,707 17s. 10d; fencing, £1,158 16s; buildings, £1,410 5s ; Furniture and clothes, £681.14s; stock, £181 8s. 6d; agricultural implements £951 9s. In the entire list not one of the sufferers appears to have been insured. The above, we may remark, does not represent anything like the total loss, as many have not sent in claims who have suffered, having received relief by private sources, and others not feeling justified in demanding relief.

DAYLESFORD — Daylesford Express, February 28
Bush fires were burning in various directions on Sunday evening, but the wind being moderate then no danger was apprehended from this source. **Nothing indicated the change that was about to follow.** Early yesterday a perfect gale set in from the north, and by midday had swelled almost into a hurricane. The wind came at times in gusts that swept all before it, while clouds of dust that nearly blinded those exposed to their influence, swept over the township, and drove every one to seek shelter.

At six p.m. the wind chopped round to the south, and the smoke became thicker than ever. In fact, so dense was the veil that objects a few hundred yards off were invisible, and the township seemed on fire. About eight p.m. the rain began to fall, though we fear from the reflection on the horizon that up to the time of our going to press the flames had not been extinguished.

The bush fires that had been smouldering previously burst out anew on every side.

The driver of the Ballarat stage reported that Ray's farmhouse, **at Mount Prospect**, was totally destroyed and Bloomfield's premises were burning when the coach passed. The fire seemed to be

coming from **Hepburn's Lagoon**. In the neighbourhood of Looby's Hotel also, the bush was burning fiercely. The owner of a team coming in from the Dry Diggings with a load of straw narrowly saved it and the horses by whipping them on, the road on each side being in a glow.

A tremendous fire was likewise observable somewhere in the vicinity of **Yandoit**, and must have done immense mischief. Living boughs and dead branches were snapped off the trees like twigs, and hurled a great distance before reaching the ground. Mackelroy's farm house, stacks, &c, were entirely consumed. Mr O'Connell, who drove from Castlemaine, yesterday, in a buggy with his wife and children, had great difficulty in getting in safely, both sides of the road between **Guildford** and Honey's store being on fire.

Mr Wm. Geo. Earl, the town clerk, left Malmsbury yesterday afternoon in a buggy and reported the bush, between **Splitter's Flat and the German Coffee House** to be in a blaze — a distance of four or five miles.

At six p.m, Mr Tredinnick, of the saw mills, arrived in post haste for the assistance of the fire brigade for the preservation of the plant. The forest in that direction was in a blaze, and the flames pouring upwards like a cataract towards tho property, With commendable alacrity the foreman got out the engine, and it was hurried as fast as four horses could drag it to the mills.

In the town ship, comparatively little damage was done, the chief injury that we heard of being the unroofing of Mr Daly's — the late warden's house — on Wombat Hill. Mr Bell, the solicitor, also had his dwelling endangered by the accidental lighting of the grass on his allotment; had had it not been for timely assistance of some persons by (= passers by), who extinguished the flames, it is probable that serious loss would have ensued.

TALBOT — Talbot Leader, February 28
About eight o'clock in the morning, the previous night having been very sultry, the wind commenced to blow from the north, and in the course of a few minutes its violence had increased to a hurricane. From half-past eight to four in the afternoon, the force of the wind was terrific. Immense clouds of dust swept through the streets obscuring everything. Bush fires burning all round the town,

About four o'clock in the afternoon some careless person — a Chinaman it is reported — set fire to the Mount Greenock Plains, and in the course of a few minutes the whole of the grass, for a considerable distance, was consumed. At one time, when the fire was spreading over the mount, the scene was magnificent. The fire ran with great speed through the long thick grass.
Many cottages erected at the edge of the plain would have been destroyed but for the exertions of a number of persons who left Talbot with a vow to render assistance. The fire was extinguished before it could reach the cottages. But for their exertions, the damage done by the fire would have been considerable.
As to the workings at the mount, the fire spread as far as the All Nations claim, when the miners turned out en masse, and stopped the progress of the flames in that direction.

About five o'clock the wind chopped round to the south, and rain set in with every prospect of a considerable fall during the night.

MOUNT MORlAC — Geelong Advertiser, February 28.
It appears that on Saturday a fire was kindled by some splitters on tho mount, and it is probable, therefore, that yesterday's disastrous conflagration was owing to the embers then left smouldering.

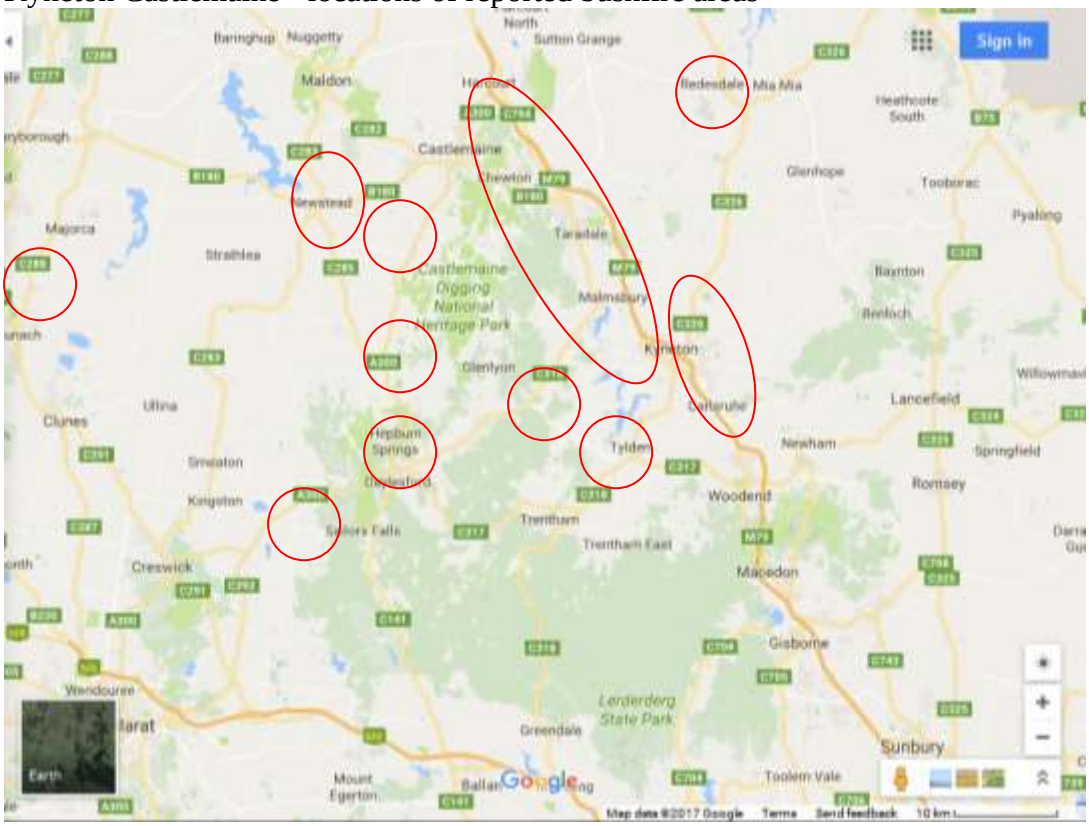
(Defenders came) forth armed with a sack, the bough of a tree, or anything that came first, in fact, to hand, and prevented the fire crossing the Mill road, in which case a large quantity of easily combustible property would have fallen a prey to the flames.

In front, on top of the mount, a portion of Mr Tindale's vineyard was on fire, but the vines, from the moisture in them, offered a check to the flames which were spreading over a field of long grass, and here and there portions of the vineyard fence might be seen burning.

Below the vine yard, at the foot of the mount, was Mr Riche's homestead, and as the wind was blowing fiercely in this direction, the whole of the buildings seemed inevitably doomed to destruction. Just as the fire approached the homestead, however, the wind suddenly veered round, and with the gust the fire swept round the corner of Riche's farm, leaving the homestead uninjured.
On it come, curling and crackling through the long stubble, towards the Mill road, igniting a large stack of straw, and coming right up to the woodwork of the small chapel used by the Bible Christians. From ten to twenty men here worked energetically to beat the fire down, and by dint of great energy the chapel was saved, but the smoke was so dense that the men were fairly prostrated by the suffocating vapour.

In the meantime the fire was rapidly rolling onward to the right in the direction of the Barrabools. [Note: this suggests the wind was from the SW at this stage].
A man named Mahoney had only threshed out his wheat on Saturday, and had some two or three hundred bushels on the ground, the whole of this and nearly the entire homestead were consumed in almost less time than it takes to write it. Mulligan's farm buildings fell next, the house escaping almost by a miracle. On it went till it reached the hollow in the Mill Road, where Reuben Clarke's house was situated, there was no time to remove anything, the dry weatherboards seemed to lick up the flames, till the whole was, in a minute or two, in a blaze. Far away to the right, as now and then the wind partially cleared the atmosphere of the dense smoke, bodies of fire were distinctly visible as of burning buildings or stacks.
A splitter saw, at some distance, his hut, in which he had left his wife and child, in flames, and he took the first horse he could get and rode to them through fire and smoke, so fierce and suffocating at times that it was dangerous to approach it.

Kyneton Castlemaine - locations of reported bushfire areas



March rainfall was well below average. Many of these fires continued to burn for days.

The Argus (Melbourne, Vic: 1848 - 1957) Monday 6 March 1865
Daylesford Sat 4 March Another large bush-fire is raging within about half a mile of the town.
Sandhurst, Sat 4 March The heat of the weather during the early part of to-day was very oppressive, but towards eight o'clock the wind commenced to blow from the south, giving some hope of a change in the weather. Fires are still raging around Bendigo, and even at the present time the prices of farm produce have increased. All that can be said is, that should we not get rain, and that speedily, our mining population, and consequently our businessmen, will be in a sorry plight.

Other bushfire relevant events

Legislation **Police Offences Statute 1865**
The provisions of the 1858 Careless use of fires Act were incorporated and upgraded into the Police Offences Statute 1865, at sections 21 and 22.
Section 21 of Police Offences Statute (1865) imposes a heavy penalty for igniting, using, failing to extinguish any inflammable material in the open air that injures or destroys the property of any other persons – a maximum penalty of £100, or six months imprisonment with or without hard labour.
Owners or occupiers can only light inflammable material in the open air if there is a fuel free radius of 15 ft and after giving neighbours 24 hours written notice.
If they light between 2 and 9pm, they must install plough furrows to a width of 3 feet and must neighbours 24 hours written notice.
Section 22 requires campers who light a camp fire to display the landowners name on their vehicle - under a penalty not exceeding £20

Observations
The accounts suggest people tolerated the unextinguished small fires during summer, but their development into infernos seemed to catch people by surprise.

They also indicate the only government involvement in bushfire protection was via the police. But their effectiveness was limited to a focus on the culprit and subsequent conviction, but this relied heavily on public evidence, which later Royal Commissions frustratingly claimed was rare.

Citizen sponsored relief appeals were organised to help the destitute. The fact that they asked Parliament to contribute suggests the government is not involved with bushfire protection or its consequences.

1865 / 66
Weather BOM rainfall records for Melbourne: Spring well below average, Dec, Jan, Feb below average, March average

Hottest days in Melbourne **DAYS > 35^{0}C** **11**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
12.0	11	125

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

Ballarat Star Mon 8 Jan 1966
THE FIRE ON MOUNT WARRENHEIP

Bush fires, the usual attendants on an Australian summer have for a few weeks been prevalent in the district around Ballarat, but, although several very extensive conflagrations have occurred in our immediate neighbourhood, up to the present time little or no damage has been caused to any description of private properly.

So far, therefore, there is reason for congratulation; but how long private property in some of the outlying districts will maintain its present comparative immunity, is a matter that time alone will show. Bush fires can generally be traced to carelessness, although the person or persons guilty thereof may remain unknown. It behoves those resident in the outlying districts where, in the event of one springing up, not only their own property but the property of others for miles round may be endangered - to be exceedingly careful in the use of fire during the summer months, and on the slightest intimation of its presence to use every endeavour to extinguish it.

Among the various fires which have of late seized upon the bush around Ballarat, that which recently broke out on Mount Warrenheip has been the most noteworthy and noticeable-the situation being such as to be within view of the whole of the town, and for miles around in every direction.

Several weeks ago a fire occurred on the mount, but with some exertion that was extinguished without doing further damage than burning the bush in the neighbourhood. Two persons were arrested by the police as the originators of it, in having carelessly left some burning wood in a paddock, which communicated to other loose timber, and thus caused the conflagration. The persons taken into custody - a woman and her husband, said to be long residents in the district -were discharged when the case came under the notice of the bench at the District Police Court, and their temporary incarceration was expected to have acted in some respect, as a caution to others in their use of fire for the future.

The effect however appears to have been doubtful, if the prosecution had any effect at all, for on Friday morning last a fire was again observed burning on the northern or Melbourne road side of the mount, facing Ballarat, and in several hours it spread with such rapidity to cover the whole face of the mount as seen from Ballarat with sheets of flame and smoke. Towards evening, and as the night approached, the flames brightened up with the light wind then prevailing, and the mount presented a most imposing sight.

An Australian Vesuvius or Etna it fairly seemed, rising with imposing grandeur amid the darkness of the surrounding forest, which seemed more sombre than usual on account of the ruddy blaze that enveloped tree and shrub from near the base to the very summit of the mount. Occasionally, as one of the old giants of the forest succumbed to the fury of the flames, and fell crashing down the slope, the surrounding places were lighted up anew with tho blazing mass, and the scattering flames of fire, swept by the wind among the thick undergrowth, served to kindle new mischief and to enlarge the scope of devastation.

Viewed from Ballarat the scene was imposing enough, but seen from the immediate vicinity of the fire itself, it was one of the very grandest description. The flames roared as they careered through the compact wood, and every now and then the ear was stunned by the falling of burning timbers in every direction. The fire, happily, was confined to the sides of the mount, and though, alter it had completely enveloped the side facing Ballarat, it subsequently towards evening extended round to the back, it was prevented spreading to the base through the exertions of a number of the small settlers, who turned out for the safety of their houses and property to arrest the progress of the flames.

When the fire first broke out about eight o'clock on Friday morning, it was said to be confined to a very small patch of ground, and could easily have been extinguished, but with unaccountable apathy the flames were allowed to spread, until, what with their own increasing strength aided by the light breeze blowing at the time, and the other circumstances favourable to the spread of fire, it had fairly covered the face of the mount. Rumour at first laid the mischief at the doors of the charcoal burners, who were carrying on operations there; but from all that we can learn the fire is not considered their doing, but is

rather the result of carelessness, although of what description of carelessness it is impossible at present to ascertain. A few of the surrounding residents appear to be of opinion that the grass was intentionally set fire to, now that the crops around the base of the mount are comparatively green, in order to prevent the possibility of fire when they are ripe, and the harvest in that locality had fairly set in. We are not in a position to give any opinion on the matter.

As the flames spread round the mount on Friday night, Mr Pedrana's hotel and outbuildings were in great danger, but with the exertions of a number of men, the flames were fortunately kept back, and confined to the mount itself. The top corner of the fence surrounding the extensive paddock in which the Warrenheip Distillery Company's buildings are situated, was also in danger, but by the exertions of a number of men from the distillery, the fire did not reach the fence; nor in its progress round did it afterwards reach the small settlements of a few acres each, which cover the base of the mount in that direction. The distillery itself was in no danger, the buildings being all of stone with slate roofs; more over, the timber was well cleared roundabout, and a plentiful supply of water was at hand.

Towards Saturday morning the fire somewhat abated, and though in one or two places it was deemed completely extinguished, a falling tree occasionally lighted the grass again, and caused it to smoulder during the whole of the day. On our visiting the place on Saturday the settlers did not seem to be apprehensive of much danger, and they were in readiness towards the back of the mount, should necessity occasion their interference, to set fire to the grass and undergrowth from their fences to prevent the **p**ossibility of the fire reaching their holdings.

Had the fire occurred in about a month hence, when the grass would have been in a dryer state, the flames would doubtless have spread beyond the power of the settlers to stay their progress, and have caused an almost incalculable amount of damage. As things have happened therefore, the farmers around the mount may consider themselves so far fortunate, and it is to be hoped that a regard for their mutual safety will lead them henceforth to be careful, to prevent a recurrence. When our reporter left the scene of the fire on Saturday evening it was confined to a tract on the buck of the mount, and a number of the settlers, who were then on the watch, were confident of being able to prevent it spreading much, if any, further.

Observations
The dryness of several successive months is a predictor of a severe bushfire season, but media reports are scarce.
The Ballarat report is of interest because it mentions the apparent futility of arrest and incarceration of a long time local for careless fire lighting as a local deterrent to other long time locals, because just three weeks later, local farmers allegedly lit up the bush to protect their ripening crops.
The fire's escape and the threat the hotel and distillery (saved by employees and volunteers) does not seem to concern the farmers. They stand ready to protect their properties by back firing from their fence line into the bush.

1866 / 67
Weather BOM rainfall records for Melbourne: Spring around average, Dec below, Jan average, Feb above, Mar about ½ average

Hottest days in Melbourne **DAYS > 35^{0}C** **10**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.5	10	88

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records
Reported bushfire events
Daylesford and Glenlyon areas

Argus Tuesday 15 January 1867
Daylesford has had its share of scorching winds. The Mercury mentions that on Sunday "the country round was in a blaze with bush-fires. One very large fire on the dividing range, nearly due south in particular attracted notice. There was another large one in the direction of Glenlyon. The heat, up to about five o'clock in the afternoon, was almost intolerable."

Argus Thurs 7 Feb 1867
Ballarat auction report
We base to report another glutted market, caused in a great measure by the disastrous bush fires in some parts of the Western District.

Penshurst report On the 3 February, 40 acres of wheat and most of Mr. Sharrock's station was burnt.

Argus Wed 13 February 1867
The country papers contain many accounts of losses in the agricultural and pastoral districts from bush fires. Two stacks of English grass hay were burned on Thursday night on the farm of Mr. J. J. Shammers, Newham, the loss being estimated £80. A farmer named Nulty, in Gipsy's Valley, Hamilton district, is stated to have had about thirty acres of wheat destroyed; and it is mentioned that two large bush fires have been burning near Dartmoor. A bush fire, which lately extended over tho run of the Messrs. Twomey in the same district, burned 5,000 acres of grass and eight or nine miles of fencing, causing damage to the amount of some £1,800. The Grassdale and Murndal stations also suffered severely. Mr. Coldham, of Grassdale, in addition to the loss of a wide extent of grass, having also forty acres of wheat burned.

Observations
The accounts suggest people tolerated the unextinguished small fires during summer,

1867 / 68
Weather BOM rainfall records for Melbourne: Sep and Oct above average, Nov well below, Dec well above, Jan average, Feb, Mar, Apr about ½ average
Well below danger dryness score by end of Dec - due to v dry Nov

Hottest days in Melbourne **DAYS > 35^{0}C** **9**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
6.4	9	83

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

Argus Saturday 29 February 1868
Bush fires, which, owing to the moisture and coolness of the season, have been very rare this summer, have during tho fine warm weather of the last few days been turning up in several parts of the country.

Around Daylesford, where scarcely any bush-fires had been observed before during the summer, the forest has within the last day or two been alight in various places.

Observation
The report occurs at the beginning of autumn burning off period

1868 / 69
Weather BOM rainfall records for Melbourne: Sep average, Oct half, Nov above, Dec half, Jan to April well below average,

Hottest days in Melbourne **DAYS > 35^{0}C** **9**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
7.7	9	88

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

1869 / 70
Weather BOM rainfall records for Melbourne: Sep below, Oct triple, Nov average, Dec half, Jan almost double, Feb and Mar almost zero, April double

Hottest days in Melbourne **DAYS > 35^{0}C** **15**

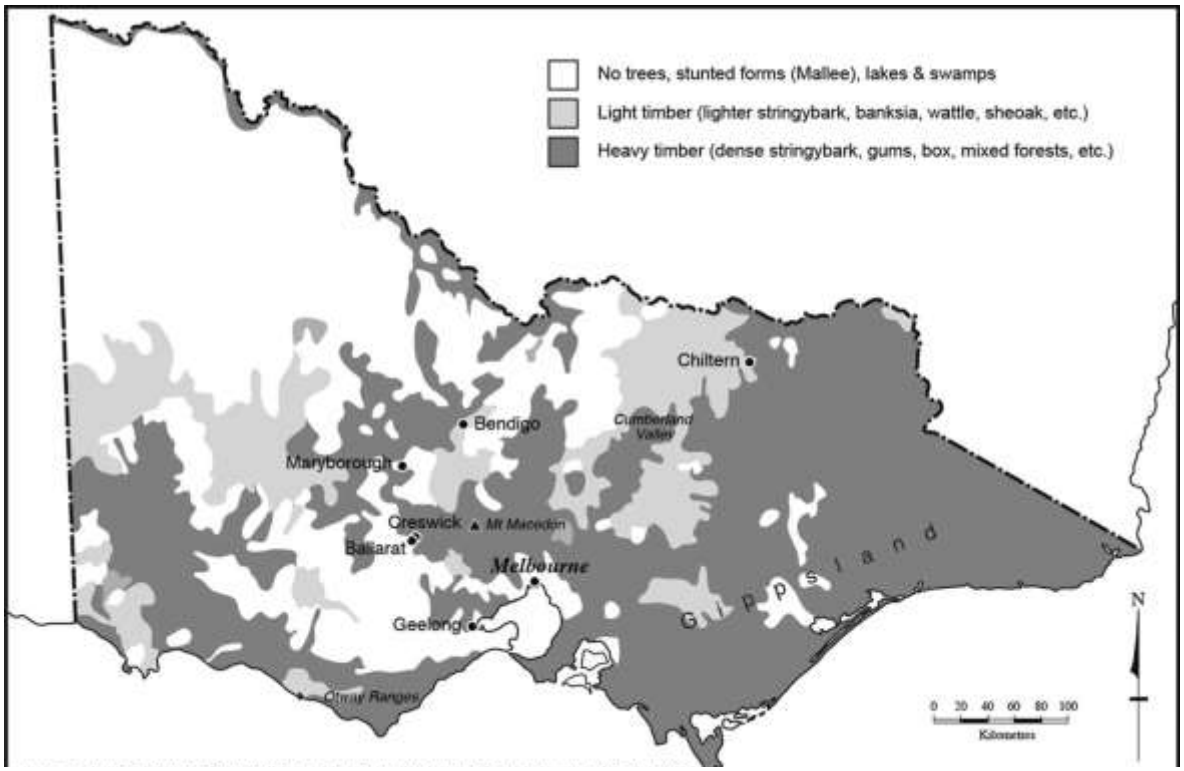
Dryness Index	Days >35^{0}C	Seasonal Severity Level
15.5	15	185

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

Observation
The lack of bushfire reports in these higher severity conditions is surprising



R. Brough Smyth, 'Map of the Distribution of Forest Trees in Victoria' (1869).

1870 / 71

Weather BOM rainfall records for Melbourne: Sep to Nov well above, Dec very low, Jan to Mar well above, Apr about ½ average

Hottest days in Melbourne **DAYS > 35^{0}C** **4**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
7.4	4	39

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

1871 / 72

Weather

BOM rainfall records for Melbourne: Sep and Oct around average, Nov well above, Dec well above, Jan X 2.5, Feb, Mar, Apr below

Hottest days in Melbourne **DAYS > 35^{0}C** **16**

The five day heat wave from 6 to 10 January 1872 was declared by the Government Astronomer (in the Argus 25 January 1875) as the highest in the State's short history, with average temperature for the 5 days of 80.9F (27.2C).

Dryness Index	Days >35^{0}C	Seasonal Severity Level
4.2	16	128

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

Argus Wednesday 10 January 1872
' Bushfires" states the Daylesford Mercury " are appearing in all directions, and should the present warm weather continue these conflagrations are likely to be very destructive. We do not remember to have seen the native grasses attain a more luxuriant growth,"

Bendigo Advertiser Tue 16 Jan 1872
GREAT BUSH FIRE NEAR MARONG
MARONG, 15th January.
The most extensive bush fire that has occurred in the memory of the oldest inhabitant of Marong has been raging in this district during the greater part of last week, nor is it yet entirely subdued. The starting point of the conflagration appears to have been somewhere near Myer's. Creek, as a farmer who resides in the neighbourhood states that the bush was burning there on the previous week, and conjectures that it had not been thoroughly extinguished on that occasion, but might have smouldered in some of the undergrowth' until it was fanned into a blaze by a puff of wind.
During the whole of Tuesday, Wednesday, and Thursday the fire raged with great virulence near, the Memsie line of reef, and advanced like some hungry monster, devouring all before it, and gaining fresh strength as it fed on the fuel that fed it in return-grass blazing, bushes crackling, and trees falling as though all the bushmen about Bendigo were engaged in dropping timber for a wager.
The miners working on the Memsie reef had to abandon their claims, the heat being so intense, and the fire flying about so much that it was expected the windlasses and ropes would have been burnt, besides which, strips of blazing bark were falling in all directions, plentiful as flakes in a snowstorm. These men and the neighbouring farmers formed themselves into a little army to oppose the onward march of the advancing foe, but ever and anon, as the enemy was repulsed in one place, would it still encroach in another so that all their efforts had to be ultimately devoted to prevent its spreading to the adjacent farms. This was providentially accomplished, although several families had to be removed, and some of them were very near losing their all.
Mr. M. Mawson, the storekeeper, was literally a modern Moses in the burning bush; and had great difficulty in saving his premises. His spring cart was got in readiness for instant departure; however, with the assistance of the miners, he was, I am happy to say, saved from this extremity.
The scene in the bush on Wednesday night was grand and awful, and would just have suited Rembrandt. During the day it had principally been confined to the east of Mr. Sterry's ground, but towards evening the wind sprung up, and carried it in a more northerly direction, bearing well down towards Mr. Landry's and Mr. Gooch's farms. (The former gentleman deemed it prudent to send his family to the town ship for safety.). Here, as night set in, a large body of men assembled, not only as lookers-on but with the kindly intention, of assisting any who might be in danger, and all ready like good fellows, to run a little risk themselves in order to save others, and well it was so, as, by adopting proper precautions, the fire was prevented from destroying several homesteads.
The poor wood-splitters will be great losers by this calamity, many hundreds of tons of their wood split and piled in the bush, all ready to be carted away, having been destroyed. Some of them were busy all day and night drawing the timber on to the line of reef where, owing to the traffic, the ground was more denuded of scrub and grass, and consequently regarded as being comparatively safe. By this means a deal of wood was saved that otherwise must have been burned, but notwithstanding, many hundreds of tons are turned into charcoal and ashes. Up to Saturday-night, the fire was still unquenched, and was heading towards Mr. Glover's and the police paddock fences.

Observations
The report suggests many fires had been lit in the Daylesford and Bendigo areas and have not yet been extinguished. The community tolerated them, but as the Marong

example suggests, they caused unwanted destruction and losses. Fortunately, the fire season was kept quiet by January rains.

1872/73

Weather

BOM rainfall records for Melbourne: Sep below average, Oct above average, Nov double, Dec above, Jan average, Feb well above, March and April average

Hottest days in Melbourne **DAYS > 35^{0}C** **7**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
3.6	7	53

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

1873 / 74

Weather

BOM rainfall records for Melbourne: Sep and Oct average, Nov below, Dec well above, Jan average, Feb well down, March triple

Hottest days in Melbourne **DAYS > 35^{0}C** **7**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
9.0	7	72

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Carver

December 1873 Matlock bushfire, 2 deaths, fires at Bullarook, Mt Wallace Sheoaks, Mt Macedon, Springfield

Reported bushfire events

Penshurst An arsonist was identified when Margaret Beavan, a former servant at Kolor was caught red handed lighting a fire in the Mount Rouse paddock tussocks not far from the Kolor homestead. She was committed for trial at the Belfast circuit court.

1 January 1874 Heathcote - Costerfield The McIvor Times and Rodney Advertiser reported a bushfire on the, and described smoke as being in all directions about the township in the edition of 5 February 1874.

Observations

The report of the arrest of an arsonist indicates community alertness and concern about the potential damage of bushfires.

1874 / 75

Weather

BOM rainfall records for Melbourne: Sep to Dec around average, Jan well down, Feb x 2.5, March well down, Apr x 2

Hottest days in Melbourne **DAYS > 35^{0}C 13**

The average temperature in the five days of the heat wave from 18 to 22 January 1875 was 86. 3deg (= 30C). It exceeded the previous record of 6 to 10 Jan 1872 by 6 deg. as the highest in the State's short history (the Argus 25 January 1875).

[Compare this to BOM records - 37.2 on 18/1, then 41.5, 43.5, 43.3, 38.7, and 25.7 on 23/1 with 4.3 mm rain]

Dryness Index	Days >35^{0}C	Seasonal Severity Level
8.3	13	131

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148

Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

21 January 1875 Heathcote - Costerfield The McIvor Times and Rodney Advertiser reported a bushfire during strong hot north wind on 21st Jan

Argus Monday 25 January 1875

The greater part of the bush fires which raged in the country districts during the week have been successfully got under, but the record remains of many deplorable losses

Huntley township was endangered, firewood contractor lost 350 tons burnt at **Marong**. Messrs Murphy and Seymour situated in the same locality were only saved from total destruction by the efforts of a large body of men who the scene. The police of Eaglehawk have made it their duty to keep a sharp look out in the bush for straggling travellers who are in the habit of lighting fires for the purposes of cooking, etc.

A fire running from **Kamarooka to Goornong** has escaped efforts of hundreds of people at Bagshot and Huntly.

Fires at **Wedderburn** causing destruction

Farmers burnt out in the **Anakies**, near Geelong, **Point Henry and Wallington, Lorne**,

At Lorne: A Mrs Cleeland saw that the grass near there ignited, as all her neighbours, who are chiefly wood cutters were absent in town, and her home appeared to be doomed Not a minute was lost and she rushed across to Mr Abercombie's school and gave the alarm, the worthy head teacher and his scholars hastened to the scene of the conflagration, and by their united exertions arrested the flame just as they wore about to seize upon Mrs Cleeland's stacks and saved the bridge which caught fire four or five times.

Steiglitz correspondent writes -'The bushfires during the week have destroyed property near **Sheoak**s to the extent of between £2,000 and £3,000 in value. The country for many square miles has been cleared of fencing and pasturage Mr Dawson lost his house, stack of hay, 50 sheep and all his fencing and pasturage. Twenty selectors at least are sufferers from the ravages of the fire.

The **Beaufort** correspondent of the Ballarat Star writes The bush fires that have been raging in this vicinity fortunately have been stopped this afternoon. We have been favoured with a slight shower, which no doubt will be the means of preventing any further extension of the fire.

During the past two or three days extensive bush fires have been burning in **Bullarook**. On Wednesday the fires spread around Ballan road, and several homes were burnt The Victoria mill and several houses were destroyed on Thursday. Mr Frazer's mill only escaped through the exertions of the workmen, aided by a number of men from Andersons mill. Several huts close to the null were burnt. The whole of Anderson Brothers employees have been occupied two or three days trying to prevent the destruction of their tramway, and hitherto with success

From the **Inglewood** Advertiser we learn that - " for several days an immense fire has been raging in the mallee to the east of the town, being between two and three mile:
in breadth and nearly five miles in length. The few men who were engaged in beating out the fire with bushes worked most manfully.

Mount Macedon has been covered with fire, and upon Wednesday and Thursday nights. The township of Woodend was never in the least danger. The whole of the timber on the north them side of the Mount is completely destroyed, nothing but a few blackened and mouldering stumps rein lining of what a few days ago was a magnificent forest. We regret to learn, however, that the state nursery under the control of Mr Ferguson, has suffered to a very serious extent,
Fires at **East Trentham** – we are surrounded by a blazing belt of forest and farms.
Fires at the Grampians.
Bush fires were burning from the **Promontory to Sale** and that the smoke was so thick that two ship lengths was as far as could be seen in any direction.

Reports a few days later show that the fires continued harassing the communities for some time. They suggest strong winds returned mid week.

Report from Rockhampton Bulletin Thu 4 Feb 1875
Bush Fires in Victoria From the Argus of Friday week (= Fri 29 Jan) we take the following particulars of extensive bush fires in the interior of the colony:

Our **Sandhurst** correspondent, writing on Thursday says:-" Bush fires are still raging all round the city, the nearest being one close to the Lockwood Road, which was yesterday afternoon travelling at a great pace towards the road, as if to cross it. Numbers of farmers turned out in case their services should be required, but up to the time of going to press no damage had been done.
The Bendigo Advertiser of Thursday says: "The close proximity of extensive bush fires is causing no little anxiety in the city. There are no fewer than seven large bush tires to be observed around Sandhurst, all nearly joining, and almost enclosing the district in a terrible circle of flame. From a traveller, who had come in from **Marong**, we learn that a very large and very serious bush fire (was raging out there. He states that Morrow's farm at Burnt Creek, and Densley's farm were both surrounded by raging fire, and that it seemed utterly hopeless to attempt to save them. At the Harvest Home the fire had advanced to within 100 yards, and all hope of saving the place had been given up. The fire was travelling at the rate of five miles an hour in the direction of Fletcher's Creek, and in its track many farms and homesteads lie, which, to all appearances, must succumb before the racing element. Our informant states that he had to keep his horse on the gallop for an hour at a time to clear the fire.
From another source we learn that a fierce bush fire is raging at a place called Burnt Gully, about three miles on this side of Duke's Flat, **near Marong**. At an early hour yesterday morning it was spreading rapidly, and a wood carter was obliged to travel several miles out of his way to escape it, returning the way he went being impossible. As there are a number of small farms in that direction, it is to be feared that much damage will be done. A great deal of fencing is already consumed, and the residents about there are in fear and trembling for the result.
Immense fires arc raging in the direction of the **Whipstick and Sandy Creek**. A correspondent at Huntly writes that Mr. Leane, a contractor for the Huntly Shire Council, has been burnt out, Several farmers have lost everything. The standing fencing in all directions has boon destroyed, and all endeavours to stop the flames or to save anything have been unsuccessful

Mount Macedon was on Wednesday night covered with fire from base to summit. The fire has been raging for two days, and was at its height on Wednesday evening, when the nine minutes past 11 passenger train passed. The wind was driving the terrible element at a great rate towards **Woodend**, which place appeared to be doomed to destruction.

From the Ballarat papers we learn that nearly a mile of telegraph poles has been burnt down between **Smythesdale and Linton**, though communication has been temporarily re-established, and that bush fires are still raging in the vicinity. A large amount of timber stacked by wood-cutters has been destroyed.
Destructive fires are raging round **Smythesdale** in every direction. Thomas Clarke, farmer, had his house partly burnt, and all in his paddock consumed. Wright, Derwent, and Jacks had one mile of fencing burnt at Mount Mercer. The fire commenced on Tuesday on Leigo's farm, and spread to Verdon's, Bingley's, Russell's, and others. At a low estimation the damage done amounts to £3000. Leigo is likely to be prosecuted.
At Staffordshire Beef, **Smythesdale**, some sparks from a bush fire close to the premises of Mr. Eymer, storekeeper set fire to the stables and other buildings at the rear of the store, burning down to the ground the stables, piggeries, and some other buildings. Twenty eight pigs and one sheep were burned to death, and a ton of hay, some salt, and other things were destroyed by the fire.

A disastrous fire raged all Tuesday and Wednesday in the **Beaufort district**, and created a great sensation amongst the residents, particularly amongst the townspeople there. On a small farm, near the town, 200 sheep were burnt to death, and a woman who was attempting to leave her house from the flames got severely burnt by her clothes catching fire.
Mr. John Wilson, of **Trawalla**, had about 300 sheep destroyed by a bush fire. The run of Messrs. G. and F. Beggs was fired in three places by sparks from the Ballarat engine. Camp hill, situated near the township, was all ablaze, and large numbers of farm hands and others greatly assisted to check the devastating element. **Mount Cole** presented a grand sight, the flames appearing from the distance to completely envelope it.

At **Ararat** the air is surcharged with smoke from bush fires. On Wednesday, at noon, in the shade, at the Survey Office, the thermometer registered 105°. On Thursday, the thermometer was 101°, and rose rapidly to 107°-in the afternoon. Bushfires were observed all round the horizon. A line of flame twenty miles long lit up the **Grampians**. Three selectors were burned out under Mount William. Peter De May, of Jalluka, lost his crop, his homestead, and everything. A man named Coad, on Blucher Plains, organised the neighbours, and kept watch all night, having several times to check the advance of the fire.

Observations
This season has a more or less average rainfall up to end of December, followed by a dry January when windy days converted the smouldering flames around settlements into damaging fires, all of which were extinguished during a very wet February. The settlements suffered great losses because of unextinguished fires, but were saved more losses by the luck of the rain.

1875 / 76
Weather
BOM rainfall records for Melbourne: Sep to Dec just above average, Jan down, Feb well down, March, Apr average

Hottest days in Melbourne **DAYS > 35^{0}C** **10**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
7.3	10	97

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events
1876 / 77
Weather
BOM rainfall records for Melbourne: Sep below, Oct average, Nov x 2, Dec below, Jan well down, Feb average, March and Apr x 2

Hottest days in Melbourne **DAYS > 35^{0}C** **6**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
14.0	6	72

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records
Foley, 1947
Jan 12 1877 Large areas burnt on Bellarine, SE of Sale and Kyneton, also fires at Mt Alexander, Maldon, Bullarook
Feb 8 to 14, 1877 Colac 12,000 ac, large fires at Linton, also between Warrnambool to Curdies R, and at Bet Bet where houses were lost. Rain on 14 Feb

Reported bushfire events
Daylesford, Kyneton, Bendigo, Ballarat

Hobart Mercury Tuesday 13 February 1877
Friday's Argus (9 February says):- " Yesterday the highest temperature in the shade was 99 deg (=37.2C) and in the sun 135 deg (=75 C). The extremely hazy state of the atmosphere for the past few days has been the subject of general remark. The cause is owing to the heavy fires in the coast ranges. The country papers indicate that the continued drought is causing serious anxiety. In the Daylesford district stock are reported as being fast reduced to living skeletons. In the neighbourhood of Kyneton, Sandhurst, Ballarat, Lancefield, and other towns, bushfires have been raging for several days, causing much loss and inconvenience."

Penshurst report Arsonists were operating south of Penshurst as reported from Koroit in February 1877. Three men Patrick Joyce, Alfred Warburton and Daniel Downey were arrested at Hawkesdale and charged with maliciously setting fire to the stations of Messers Sam Baird, Kangatong, Phipps Turnbull, Greenhills, Stewart Bros., Warrong and Patrick Murphy a selector. Remanded to the Belfast Police Court, the prisoner Downey was to have stood trial in Hamilton for horse theft but instead was detained by the Koroit police on a charge of incendiarism.

Observations
The community's tolerance of unextinguished fires lit by persons unknown around settlements during summer was responsible for "much loss and inconvenience". This contrasts the community's intolerance of "malicious" fire lighters.

1877 / 78
Weather
BOM rainfall records for Melbourne: Sep average, Oct to Dec well above average, Jan zero, Feb and Mar x2, Apr above

Hottest days in Melbourne **DAYS > 35^{0}C** **8**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
18.8	8	105

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

Argus Wed 9 Jan 1878
I learn that there is a large bushfire raging between Eaglehawk and Raywood, opposite Shingles Nerring Hotel. The fire, which commenced on Monday, is supposed to have originated through the use of firearms. The devouring element spread with great rapidity, and the neighbours had to turn out on masse to check the progress of the flames, and the surrounding farms were in great danger. The most strenuous efforts had to be made, but it was not for some time that the imminent danger that threatened the homesteads was averted.

Victorians read about how they dealt with bushfires in the Adelaide Hills. Included here for its descriptiveness and educational value.

Argus Tue 5 Feb 1878
FROM THE SOUTH AUSTRALIAN REGISTER, FEB. 2
The picturesque little township of Hahndorf has escaped the ravages of the fire which has been threatening it for the last three days, but many of the farmers and settlers who live on its outskirts have had losses which are more or less severe in the shape of miles of fencing, tons of timber and bark, besides feed, such as it was. Some of them say that every panel of fencing will cost 3s. to replace; and in one spot so rapid was the effect of the fire that 17 panels were swept away in less than five minutes.

The flames, when the fire reached its height on January 30, were often seen to catch the high grass and dry leaves, sometimes coming along in a wall many feet high, keeping all hands at the ready to meet it, as it frequently happened that a sudden eddy of wind caused by the intense heat sent sparks like rifle shots 20 or 30 yards ahead, igniting in fresh place where least expected. The hollow trees standing, red hot inside and out, acted like furnace chimneys, a strong draught through them carrying sparks and burning cinders high in the still air to fall yards away. In spite of the strenuous exertions of those who had banded them selves together to confine the fire within as narrow limits as possible the flames shot from tree to tree with fearful rapidity, until it seemed as if the destruction of Hahndorf were inevitable.

There had been no business transacted in the township since midday. The mill suspended operations, the farm labourers deserted their ordinary work in order to assist in boating down the fire, and even the school children exhibited their willingness to help by handing buckets of water to the firemen. All entered into the spirit of the work with such zest, however, that by the time the sun had set the ignited scrub was pretty well got under, and the flames began to rage less and less fiercely.

The danger to which the fire beaters exposed themselves was frequently exemplified by the narrow escapes for life which were witnessed. Several times had the beaters barely time to get beyond the reach of danger when some towering tree would give way at the bottom of the trunk, and topple to the ground with a thunder like crash, scattering its burning branches in every direction. Fortunately, however, no accidents occurred, though some of the men were unable to avoid getting their clothes burnt, whilst a few others had their eyes severely inflamed and their whiskers singed.

One little incident is worthy of being recorded, if only to illustrate the marvellous celerity with which the flames spread. A woman named Wiep, whose house is situated on the outskirts of the township, observed with considerable alarm that the fire was a few hundred yards distant from her property, towards which it was advancing in a long line. She rushed out of the house to ascertain the whereabouts of her children, and on her return a few moments afterwards the flames had nearly gained upon the premises, and a spark had been blown through an open window on to a tablecloth, which was in a

blaze. By means of the greatest efforts the flames were luckily extinguished, and the house saved from destruction.

Hahndorf is a plentifully populated township about a mile in length, composed of stone and wooden houses, many of them thatched, and dry as tinder. In common with most townships of the land in the hills it stands in the heart of the virgin forest, with here and there a clearing on its outskirts, but with tons upon tons of dead timber lying in some cases almost at the farmers doors, and more often, not 200 yards away, acres of dead leaves and dry rank grass lie on every side. It was only the extraordinary promptitude, courage, and endurance of the men who flocked to the scene to meet the common enemy that saved the place. The township looked quite deserted, even the children being out helping the beaters.

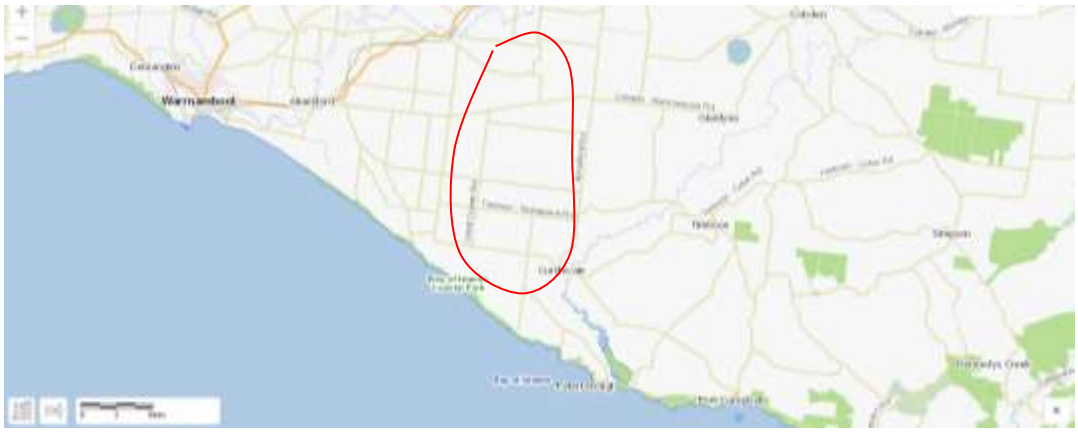
Bendigo Advertiser Tues 6 Feb, 1877
INGLEWOOD
The weather has again become very warm, and large bush fires are seen in all directions. On Saturday a large bush fire broke out in the scrub near the Caledonian Flat, and for several hours sent up black clouds of smoke, the largest that have been seen this season. The fire in its course destroyed a quantity of fencing belonging to Mr. C Isaac and some belonging to another farmer. The latter had a narrow escape of losing his house. Yesterday, at midday, a fire broke out in the scrub a short distance from the hospital fence, but was extinguished in about ten minutes by the officers of the institution and some convalescent patients. To-day the air is full of smoke from various fires, a monster fire near Bealiba which has been burning for three weeks, contributing the largest amount.

Hobart Mercury Tuesday 13 February 1877
THE WEATHER IN VICTORIA Friday's Argus says :- " The extremely hazy state of the atmosphere for the past few days has been the subject of general remark. The cause is owing to the heavy fires in the coast ranges. We learn from the Government astronomer that the highest temperature in the shade on Wednesday was 89deg., and in the sun 124 deg. The country papers indicate that the continued drought is causing serious anxiety. In the Daylesford district stock are reported as being fast reduced to living skeletons, and sheep are unsaleable at 1s. to 1s. 6d. per head. Residents at Lin ton are put to great straits through the difficulty in procuring water for either domestic purposes, or for drinking. As much as 12s. per load of 100 gallons has been given for water obtained from the Flag staff spring.
In the neighbourhood of Kyneton, Sandhurst, Ballarat, Lancefield, and other towns, bushfires have been raging for several days, causing much loss and inconvenience."

Geelong Advertiser Thursday 14 March, 1878
THE LATE FIRES IN NIRRANDA AND NULLAWARRE
There is another chapter of accidents from our Nirranda correspondent anent fires. He says:—"It would be useless plaguing you with details, but it will be quite sufficient to furnish you with a list of unfortunates whose homesteads were completely swept with a fire of immense magnitude last Monday afternoon and evening, in Nullawarre and Nirranda. It was not so bad during day-light, but from 6 p.m. until midnight a very strong north wind, drove a bush-fire before it with fearful velocity, which had an all consuming power—A. and J. Aberline, Jas. Burleigh, John Burleigh, Michael Bradley, Samuel Brown, C. Brooker, J. D. Burnie, Robert Crain, R. Carmody, James and William Francis, William Gavan, Thos. Frazer, George Henry, Owen Gibbons, Patrick Haydon, James M'Lure and sons, Bobert M'Ghie, J. M'Ginnis, Hickey Bros., Peter Matthieson, James Morgan, Wm. Nayler and sons, Wm. Pyke, Chas. Trew, Michael Toohey, George John Wilson, Edward White, Oliver Wallace. Only that Mr. Charles Bruford, head teacher of the Nullawarre State school, had his wits about him, and dismissed the children at noon, with strong injunctions to run home quickly, the consequences would have been fearful to contemplate, as from the severity of the fire in his locality, among the heavy forest country, most of the little ones, if they had even delayed an hour or so, would have surely perished. The school buildings were encircled with a complete zone of fire, and it was only by uninterrupted exertions, and copiously deluging the walls of the buildings with water, that the head teacher saved them. The new fence is much damaged, but this is nothing more than can be expected, considering the carelessness displayed by the Department in putting up an expensive fence under a lot of great trees.

Mr G. Henry, at the adjoining saw mills, lost nearly everything, and great sympathy is felt for that gentleman. Mr James Burleigh, who lost so much last year, endured a very heavy loss in log fencing again this year, as did also Mr Pyke. Messrs T. Wilson, James Thwaites, and P. Haydon were not so severely punished as others, but this was owing to the nature of their fences. Messrs Jas. Francis' and Cornelius Hickey's losses are considerable. The latter lost a splendid stack of grain, though great efforts were put forth to save it. Thousands of pounds would not meet the losses and destitution which have overtaken the poor people.

The whole country side now presents a very nearly similar aspect to that which it did previous to the operation of the Land Act Of 1865. Excepting the houses, although some of these were destroyed, all traces of human industry have been obliterated over an immense area in Laang, Tallangatta, Nullawarre, Nirranda, and Narrawaturk ; the roads and tracks hitherto in use are almost impassable with fallen timber and other debris. It seems as if an enormous black veil had been dropped over the landscape, before so cheerful: now nothing can be seen but forlorn mobs of cattle and horses wandering about everywhere in search of a mouthful, which it is nearly impossible to obtain without travelling great distances. Innumerable hosts of those birds of ill-omen, the black crows, cawing restlessly among the branches of the blasted eucalypti, eyeing hungrily dainty morsels of rabbits, hares, and the lesser marsupials lying half-roasted or expiring in agony. Occasionally a green lead is to be met with in riding through the bush, but the sight of so refreshing an oasis is very rare. Considerable anxiety was at one time felt as to the safety of Messrs Francis' and Brookers' families, approach to their dwellings being for some time impossible, but fortunately no loss of life occurred, though everything else was lost. Travelling through the bush since the late fire is frequently accomplished under considerable difficulty and danger; the falling of huge trees, crashing of branches, etc., tend to expedite the speed of the wayfarer every now and then. — Warrnambool Guardian.



Observations

This SA report identified several fuel type threats in good detail and described the flame and ember threats. It identified the vulnerability of the town's buildings. It described the self defensive attitude of the townsfolk and how vigorously they worked together to mitigate and defeat against the flame and ember threats, and the tools they used.

Fire behaviour During the day, fire ran rapidly and flames were tall and both moderated in evening

Fuel type threats Virgin forest was seen as a threat but not clearings, specific threats in the forest were dead leaves, rank grass, tons of dead wood on the ground.

Proximity of fuel threats to house Close or up to 200 m away

Flame threat Fire front was a line of flame, flame height up to a few feet,

Ember threat Sudden gust of wind threw sparks 30m ahead and they ignited as spot fires, burning hollows threw out sparks, embers jumped from tree to tree, defeating the beaters' efforts against the running flame on the ground

Vulnerability of buildings Thatch roof, timber walls, gaps in wall = ember entered open window igniting flammable fuel inside house,
Attitude to bushfire Belief that bushfire threat could be defeated. Their response: they dropped tools to defend the whole town promptly, with determination and for as long as it took to subdue the threat.
Suppression strategy They focused on suppressing the ground fires with beaters and the fires on or near buildings with buckets of water. They stopped the part of fire perimeter that threatened the town, leaving the rest to keep running.
Suppression resources Human = men women and children, equipment = beaters and buckets and water.
Dangers Falling trees, flame burns
Saves A mile of stone and wooden houses, many thatched and dry as tinder
Losses Stacked sawn timber and firewood, stacked bark, feed grass, miles of fencing at replacement cost of 3 shillings per panel.

The writer described the town's community response to a bushfire attack within a forested area. The report focus was on response, ie, suppression, to a surprise attack on an unprepared and unprotected town. The town will remain unprepared and unprotected until the following question is asked – how do we mitigate the flame and ember threat to properly protect the town?

1878/79

Weather

BOM rainfall records for Melbourne: Sep average, Oct to Dec well below average, Jan to April well below

Hottest days in Melbourne **DAYS > 35^{0}C** **14**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
17.7	14	181

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Foley, 1947
1878 / 79 (no date) Whole of South Gippsland on fire, no lives lost

Reported bushfire events

The Argus Tue 21 Jan 1879
MANSFIELD MONDAY
A large body police has just returned from a search for the Kellys. As usual, they have been unsuccessful. They report having passed through some hot scenes in the shape of bush fires, in some of which they are said to have singed their horses' legs. Not the slightest clue appears to have been obtained of the outlaws. The magistrates of the North-Eastern Bailiwick are talking about holding a conference relative to the unsatisfactory state of things regarding the non-capture of the outlaws

Argus Thu 30 Jan 1879
ECHUCA, WEDNESDAY

Passengers by the late train to night reported that a very large bush fire was raging between Ravenswood and Sandhurst and the whole stretch of country between the Big Hill Tunnel and Ravenswood was in flames The railway fences have been destroyed to a large extent.

6 Feb 1879 Irrewillipe / Barongarook area - Multiple deaths

Background: Using Melbourne weather as a reasonable indicator of Colac's, the maximum temperature at Melbourne on 4 Feb was 37.1C, on 5 Feb 38.9C, on 6 Feb 40C and on 7 Feb was 25C. Wind records are not available, but the temperature pattern suggests a typical summer heat spell, culminating with strong N – NW winds on the very hot 6 Feb, followed by an afternoon or evening cool change accompanied by a SW wind, which reduced maximum temperature on 7 Feb. Judging by the descriptions of the fire area on 7 Feb, the cool change brought no rain. Reports say some rain finally fell over the fire on 10 Feb. There was no rain in Melbourne till 11th Feb, when 19mm fell, and the previous rain was 19mm on 22 Jan. Based on the evidence given to the Coroner, the fire tragedy occurred during the arrival of the strong SW winds of the cool change, on afternoon of 6 Feb.

The large fires at Irrewillipe the previous week that burnt out several selectors were still burning when a fresh fire broke out on the Standley property at Irrewillipe on Feb 6. The possibility of the fresh fire being ignited by a medium distance ember from these fires cannot be ruled out, even though coroner or the locals did not appear to examine this possibility.

Argus Sat 8 Feb 1879
A terrible bushfire broke out yesterday (6 Feb) about eight miles south of Colac, and swept down with treat rapidity upon the township. A large number of small selectors inhabiting the borders of the forest have been burnt out, and the fire is still raging, after 21 hours of ineffectual attempts to subdue it.

Colac is now surrounded by thick smoke, and bush fires are visible in every direction.
All the country is on fire between Johnson's Coast Track Sawmills and the border of the Colac township common. The immense fires in the forest at Irrewillipe, which endangered Sir Samuel Wilson's Corangamite Station and burnt out several selectors last week, are still blazing, and any change of wind will infallibly bring them among the thickly selected land.

Great fires are burning in the forest near Murroon (near Deans Marsh), and all the way along the Loutitt Bay (= Lorne) track. It is now, at 1 o'clock p.m., quite dark in Colac by reason of the clouds of smoke in all directions.

Mr. Whitchell Standley, in whose paddock the fire is believed to have begun, had recently gone to live on a heavily timbered selection of 320 acres at Irrewillipe, about six miles from Colac, and had built a house about 300 yards from his fence.

His land adjoins a paddock belonging to Mr. Andrew Murray, of Woolwool, know as the fattening paddock, and it is not quite certain whether the fire broke out on the land of Mr. Standley or of Mr Murray.

The Turnbull family (consisting of father, mother, and five children) had only come out to live in the house on the preceding Tuesday, and Mr. Standley had been living in a tent in the paddock. Mr Standley was taking a bath in his house when he heard the alarm of fire, and he started at once with the Turnbulls to try and extinguish it. The first thing they did was to roll up the tent and place it and all movables in the house which did not appear to be in danger. While they were thus occupied a fresh body of fire swept down on them, completely hemming them in.

They started to run for the dam which is situated about 300 yards from the house. They had to go through burning grass and among blazing trees to get to the water, and as they neared it a tree fell and killed one of the children on the spot. Mr. Turnbull is so dangerously and dreadfully burnt that little hope of his recovery is entertained. He sustained a frightful scalp wound also from the tree that killed the child, a boy of 12 years. Mrs. Turnbull appears in her fright to have run the other way. The bodies when found were fearfully disfigured and charred. Mrs. Turnbull, the mother of the family was burnt to

death and another of her children with her. A third child was rescued alive, but died soon afterwards, and a fourth is severely burnt. The infant child was also found dead in the forest, making five persons killed in all, besides two who are not expected to recover, and two more whose injuries are severe. Mr. Standley was severely burnt, but it is hoped he will recover.

The fire seems to have broken out at 2 o'clock, and the sufferers were not found until 4.

Sadly, the surviving child died shortly after this funeral.

Camperdown Chronicle Tues 11 Feb 1879
The funeral of the Turnbull family, burnt to death at the late bush fires, was largely attended yesterday. The father died at two o'clock yesterday, and his death now makes the sixth out of a family of seven. The remaining child is still in a very low state. The fires are still raging and the damage being done is very considerable.

More coverage of the Irrewillipe fire

Argus Wed 12 Feb 1879
(From the Colac Herald, Feb. 11)
It is impossible to state precisely what the extent is of the property destroyed, but it is supposed to be about 1,500 acres, nearly all belonging to small holders. The particulars of each individual's loss are as follow:- Mr. Whitchell Standley, 300 acres, and 1½ miles of fencing; Messrs. Wray and Woods, 500 acres, and three miles of fencing; Mr. Patrick Danaher, 160 acres, and 1¼ miles of fencing; Mr. Simon Campbell, 250 acres, and one mile of fencing; Mr. A. Murray, 220 acres, two miles of fencing, and a large number of posts and rails which were lying on the land; Mr. Wm. Chapman, 30 acres, and little or no fencing. Messrs. Deans, Christie, and Stewart were slight sufferers, through the fire, and their fences were slightly damaged.

The fire originated in Mr. Whitchell Standley's paddock, where he had for some time past been burning rubbish. Very few people in the vicinity were aware that the Turnbull family or Mr. Whitchell Standley were living on the land, or it is quite possible that their lives might have been saved.

The fire was first observed by Mr. Billings and sons. Mr. Billings relates that on Thursday evening (= 6 Feb) he observed smoke arising from Mr. Whitchell Standley's land, and in company with his two sons he immediately visited the spot. When they arrived where the fire was there were only three acres of land burnt. They went within 50 yards of the house occupied by the Turnbulls and took it for granted that they (the Turnbulls) were absent and safe, as there was not a sign of my person being about. When the Billings saw that there was no one in sight, and thinking the Turnbulls were safe, they proceeded to the next house (King's) to give warning, as the fire was making that way. At this stage, Mr. Harlock, of Irrewillipe, arrived, and he also saw nothing of the Turnbull family or Mr. Whitchell Standley. Messrs. Harlock and Billings then went to the fire, and tried to save what they could.

The onlookers describe the fire as looking like a wall of flames 30ft high, sweeping a mile of country before it. It would have been impossible for anyone to have passed through it, as everything combustible was immediately swallowed up. The fire completely swept away all dry timber and killed many fine green trees 50 and 60 feet high. The conflagration travelled at the rate of eight miles an hour.

An extraordinary occurrence took place in connexion with it. When it was raging in Mr. Danaher's paddock, a lighted piece of bark was carried by a whirlwind a distance of a quarter of a mile into Mr. Simon Campbell's paddock. Mr. Campbell was present at the time and saw the lighted material set fire to his land, but all his efforts to impede its progress were totally useless.

The waterhole where Messrs. Standley and Turnbull sought refuge is a hole a few feet square, excavated in the bed of a small creek surrounded with high trees.
The tree that fell on Turnbull and son was a large one, 60ft. high and 3ft. in diameter.
We had almost forgotten to state that several head of cattle were also destroyed by the fire.

FRESH OUTBREAK OF THE FIRE

Yesterday (10 Feb) a fire again started at Christie's paddock, north of where it was previously raging. Mr. Simon Campbell and his son John were out at their paddock clearing off the burnt debris, when a messenger arrived at the scene who stated that Begley's house was on fire, Mr. John Campbell then gallantly obtained the horse and trap from his father and drove right through the raging flames and rescued Mrs. Joseph Prigg and five children from the house. Mrs. Prigg and the children suffered greatly, as did also his father, from the effects of the smoke.
Other persons then arrived on the scene, and owing to the strenuous exertions, the house occupied by Mrs.Prigg was saved from being burned.
The properties destroyed yesterday were those of Messrs. Kinane, (90 acres), Christie (300 acres), Prigg (100 acres), and Ballagh (the number of acres not known).
Fortunately, a copious downfall of rain set in, which will have the effect of bringing the fire into subjection

COLAC, TUESDAY.
The hot wind was yesterday evening broken up by a violent storm from the westward, which fortunately extinguished the bush fires, though not until they had come perilously near to the township.

A copy glass negative of a painting by J.A.Turner entitled: The homestead saved. Published [ca. 1880]. Study of a bushfire.

Bushfires in other areas

Argus Wed 12 Feb 1879
FIRE AT THE GRAMPIANS
The Ararat and Pleasant Creek Advertiser if the 11th inst gives the following particulars of a fire in the Grampians to the southwest –
"The fire is supposed to have originated on Mr John Robertson's run, where for days the scrub was burning.
Mr Patrick Blake was the first to suffer a severe loss, his grass, fences, and house being entirely consumed. From here the fire spread to Messrs Wardell s property, and their grass, fences, and woolshed were lost whilst their house was only saved with great difficulty and by the assistance of the neighbours. Thence the fire spread to Mr J Mclean s farm, and here 12 miles of fencing and about 1,800 acres of grass were destroyed. Howick lost his grass and fences, and only managed to save his hut. Hayes's paddock was next taken his grass, fences, and the whole of his sheep, numbering 150, being destroyed A selector named Lynch had his fences consumed, but, fortunately for him. his paddocks were very bare, and he managed to save his sheep. From Mr Maclean's farm he lire extended to the north, Mr Robson's selection and homestead and all that it contained being destroyed, and Sextons house, furniture, and fences followed. Mr Cashmore was the next to suffer. He had lately taken possession of his new home, the carpenters having only just left, and on the approach of danger strenuous efforts were made to save the place, but the trees were ignited all round, and bits of burning

bark and leaves were showered upon the house, and although it possessed an iron roof, it was observed to be on fire inside, and soon nothing was left standing.

Yesterday the fire was still burning at tho mountain paddock at Mount William Station. Several of the farmers named lost sheep, drays, buggies, and their farm implements In some instances this means ruin. The scene of the catastrophe is described as one of utter devastation. For miles across the plains there is not as much as a fly to be seen alive-nothing but the blackened ground and ruined homesteads, with here and there patches of sheep burned almost beyond recognition In other places, where the sheep had packed close together, and the fire had run under them, the backs were scarcely scorched, while underneath they were so fear fully burned that their bowels were protruding.

It is alleged that the scrub was fired intentionally, and if this proves to be true, such an act cannot be too strongly condemned, and it is to be hoped the perpetrator will speedily be brought to justice.

CAMPERDOWN, TUESDAY.
For the last two days an extensive fire has been raging on Mr Ware's property, Keayang, and the Ecklin Hills. A man named Henderson was assisting in keeping the fire under, and when riding under a tree a forked bough fell. Henderson had a most miraculous escape, as one end of the bough fell on the horse's head, splitting it clean open, and the other one on the rump. The horse was killed on the spot, whilst Henderson escaped with a slight injury to his leg.
Considerable damage has been done by the fire, and the injury to fences is something enormous. Mr. M'Kmnon's property was on fire for the fifth time today, and the fire spread to the Hon. John Cumming's adjoining station.
The public park, about a mile away, was also on fire, but it was soon stopped by willing hands.
The storm came on and prevented what would have been a serious conflagration.

BELFAST (= Port Fairy) TUESDAY
Ritchie's woolshed, on the Aringa run, and his slaughtering sheds were destroyed this afternoon by a bush fire, which on account of the tall grass was sweeping the country.
It also destroyed the old Aringa state school and a number of fences, and damaged the telegraph line considerably. The fire likewise swept along the adjoining runs.

Penshurst report On the 4th April the Hamilton Spectator reported that: a large fire could be seen burning in the direction of Penshurst. It continued to burn all through Saturday and Sunday, the dense black smoke rising into the air and the reflection at night being unusually brilliant. The principal sufferers were Mr. T. Twomey, Banemore and Mr Mathieson, Mt. Napier. It being stated that Mr. Twomey had not 500 acres of grass left on his extensive property. Banemore was a property in excess of 10,800 acres.
The Penshurst correspondent reported that: the fire had started on McCarthy's farm through a man burning a snake out of a log. The sheep wash, a large quality of stock and fencing were destroyed. The homestead and woolshed were only saved by great exertions, the woodheap at the house caught fire twice and the total loss is estimated at £4000.

Other bushfire relevant events

Coronial inquiry April 1879 Irrewillipe Fires -
We note the differing accounts of the splitter recorded by the newspaper and by the coroner.

THE FATAL BUSH FIRES AT IRREWILLIPE.
Argus Mon 21 Apr 1879 (Abridged from the Colac Reformer, April 19)
The adjourned inquiry into the origin of the bush fires which took place at Irrewillipe on Thursday, February 6, was resumed yesterday at the Colac Court House, before Mr. Heron, P.M.
Mr. Whitchell Standley, who was present, was unable to stand, the wounds in his legs being still open and unhealed. He was accommodated with a chair on the floor of the court, close to the clerk's desk.
James Whitchell Standley deposed. —I am a land owner, and now reside in Colac.
On the 6th of February I was living on some land I own at Irrewillipe. In the morning I was at the back of the house engaged in clearing a path that led across a creek to an old dam. The track was obstructed

by falling timber, which I was moving. I did not burn it. I left off work just before 2 o clock, and went into my tent to have a bath. There was then no smoke in my paddock, and there was no indication of fire. While I was in my bath, my man, Andrew Turnbull, came to me. He said, "There is smoke in the paddock," I said, "You must be mistaken." He said, "No, I am not, come and see. I dressed as quickly as possible, and went out. I saw a thin column of smoke in a south easterly direction from my house, near the eastern boundary. There was no other smoke. I had a good view, as the house and tent were on a terrace where I could see well.

The wind was blowing very faintly from the north-west or west by north, blowing directly away from me and from my house I saw the smoke hanging in the air and knew by that the wind was about to change. The wind had been strong but had lulled. We prepared for a change by taking down tents and removing furniture into the house. We were about 20 minutes or half an hour engaged in preparing. The thin column of smoke was among some thick scrub. We could not do any good there; we therefore applied ourselves to making the homestead secure in case the wind should change.

We tried to put in a little back fire near the house. There was very little to burn, and the wind was so light that the fire would not run. We lighted this fire about 20 minutes or half-past 2, after taking the tents down. It only burned slightly. We lighted this fire to burn any little stuff around the house in case the wind should change.

Just then the wind changed to the south west and it brought with it a large body of fire from the south west like a wave. That fire had no connexion with the one that we saw where the column of smoke was; of that I am positive. This fire enveloped us, we had no chance of escape. It burnt the house and everything.

This fire was to the west of my house a quarter of a mile. Andrew went a little way to get a nearer view, and returned to the house. The little boy Johnny Miller came running up and told his stepfather that the fire was coming in from the direction of Murray's. This was just before we left the house and while we were trying to put in the backfire.

This heavy body of fire that came up from the south west was that which destroyed the house and property, and obliged us to try and escape. We were forced to try to reach the waterhole, which was a quarter of a mile from the house. It caused the loss of the other lives and the injury to myself.

I am not able to give the distance between the thin column of smoke and the south-west fire. We had not been burning the bush for two months before the 6th of February.

Eight days before we burnt, after sundown, a few shavings and chips near the house which had been left by the carpenters. I helped Andrew Turnbull to burn these shavings and stood by till the fire was extinct. I was never cautioned as to burning in my paddock.

I burned around the house two months previously all the dead timber we had gathered together. We had burned down to the gateway then. We then burned in all about 20 acres, but we left some heaps of timber because they were near trees, and there was danger that the bark might catch. That fire extended only a few chains at the back of the house. There were saplings there which prevented our getting the timber together, and we put it off until we could cut them down in the winter.

I swear that we had no fires in the paddock, excepting those I have mentioned for two months before. From the position of the house I could see Mr. Murray's paddock, known as Number 18. There were trees between. I could have seen smoke. There was no smoke visible in that direction that morning. If there had been any fire there I should have seen the smoke. I could also have seen had there been any fire in Croagh's paddock or Lucas's that morning. I observed particular caution in cooking in the paddock. I had a sort of stove made to burn charcoal, so that I should not burn wood and light the grass. I have the stove somewhere.

Mr. George Woods called on the Wednesday week before the fire. He was talking to Turnbull between 5 and 6 o'clock. I heard him before I was up, and went out about 6 o'clock. That was the day after we had burned the shavings.
He said, "You have had a bit of a fire here."

I said, "Yes, we have been burning shavings and the debris round the house for security's sake. I thought it safe, and a good precaution." To this he assented. He did not caution me.

In his evidence he accuses Andrew of burning dead timber about a week before the fire. That is a tissue of falsehoods.

I did not light any fire in my paddock that morning, nor did I authorise or direct any fire to be lighted. The fire I saw was not in the centre of my paddock. The only fire lighted by me, or by my directions on the 6th of February, was the small fire lighted at the back of my house in the afternoon as a means of preservation after I saw the column of smoke.

Prior to our attempt to escape on February 6, I did not see anyone whatever, or hear any voices in the paddock.

Agnes Chapman deposed. On February 6 last I was living at Barongarook, next to Mr. Whitchell Standley's paddock. About 1 o'clock on February 6, I saw a fire in the gully in Mr. Standley's paddock.

Alexander Billings, splitter, deposed. —On February 6 last I was working with others for Mr. Andrew Murray. We first saw the fire in Mr. Standley's paddock between 1 and 2 o'clock. Tried to put it out and could not. When the fire came close to us we started a back fire to prevent it crossing the road. This was about 6 o'clock. We did not light any fire before then. It did not occur to us to light a back fire before.

The jury handed in the following verdict: We are unable to say how the fire originated."
The coroner then dismissed the jury.

Supreme Court case 15 July, 1879 Batchelor vs Smith
Accidental fire - Liability for its spread to neighbour's land.
[Batchelor v Smith [1879] VicLawRp 132; (1879) 5 VLR (L) 176 (15 July 1879)]
http://www.austlii.edu.au/au/cases/vic/VicLawRp/1879/132.html

Facts relied upon A fire started on the defendant's land (Smith). The defendant did not start the fire but took no steps to control it and it spread from the defendant's land. The plaintiff (Bachelor) sued relying on an early English case that said "The ancient law, or rather custom, of England appears to have been" that a person was liable for fire that spread from his property to another. The Defendant sought a ruling to the effect that he could not be liable as he was in no way connected with the start of the fire and was under no duty to extinguish it.

Ruling The English authority, relied on by the plaintiff, was limited to England – "There has been no such custom in Victoria".

"The question is whether the defendant, under these circumstances, is answerable for not having extinguished the fire; his liability depends on his duty; unless the law imposes on him the duty of extinguishing a fire under the circumstances suggested, it was not incumbent on him to do so.

It is the duty of any person who originates or brings any matter, animate or inanimate, attended with danger, on his ground, to keep it within due bounds; but there is no authority for the proposition for which the plaintiff contends, that, not having brought it, he must remove it. No duty is cast on the defendant; he does nothing; he remains passive. Had he interfered in any way, he might possibly have rendered himself liable" (Stawell CJ).

Outcome Court agreed with defendant's case (Smith)

Interpretation "An owner or occupier of land upon which a fire accidentally occurs, or upon which it comes without any act or fault of his, is not under any obligation to put it out, so as to be liable for injuries occasioned to neighbouring land by such fire spreading to it".

There is no duty on the defendant provided he remained passive. 'Had he interfered in any way, he might possibly have rendered himself liable'.

Summarised in Australian Bushfire Cases (CRC)

Observations

- The list of life loss and property loss this fire season is the direct outcome of the community's continued tolerance of unextinguished fires and freshly lighted fires during the summer months.
- The available record suggests the only government involvement is via police investigations about fire origin and coronial investigations.
- The media continues to play a useful role in describing fire behaviour observations and awareness of fire suppression options, albeit without verification by specialists.
- A speed of 8 miles an hour cannot refer to fire running across a forest floor. It is a feasible rate for the sudden appearance of a jumping spot fire at 8 miles distance from the main fire front. It is a feasible rate for a grass fire.

Ember threat identified

- The entry of embers from trees into Mr Cashmore's new house near Mt William
- The extraordinary event described in the Irrewillipe fire by Argus on 12 Feb was the 200m flight of a lighted fire brand from a tree and its ignition in a paddock as a spot fire that then escaped control.

The Argus claimed on Feb 12 that the fire began on Standley property, but the Coronial jury could not determine the origin. There were three possibilities – the Murray property, where 220 ac was burnt, where the splitter lit a back burn, the Standley property via an ember from a different fire front further away to the SW, a burn off on the Standley property. It could be resolved more accurately if a map of the property layout and fire direction was available.

Self defence technique The alacrity of setting a backfire for self protection around the house area ahead of an approaching fire is of interest. It is consistent with aboriginal practice and replicates the Laballiere farm hand who did so to save a flock of sheep. It indicates a strong contemporary understanding that a fuel free area is an effective refuge against the bushfire.
The requirement for a refuge to be fuel free was alluded to in the two sheep flock stories. The Lynch flock was saved because the paddock near Mt William was bare, compared to the packed flock in the paddock where the flame ran beneath their legs and cruelly injured their bellies.

The Supreme Court judgement confirmed that there was no law requiring a land owner to extinguish a fire on his land that was not caused by him. It confirmed that if the fire was caused by the property owner, he is liable if it escapes and causes damage. It suggested that if the owner acted upon a fire not caused by him on his property and it escaped and caused damage, he may be liable for damages.

1879 / 80

Weather

BOM rainfall records for Melbourne: Sep below average, Oct to Dec around average, Jan below, Feb average, Mar April above

Hottest days in Melbourne **DAYS > 35^{0}C 6**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.8	6	54

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

1880 / 81

Weather

BOM rainfall records for Melbourne: Sep x2, Oct to Dec well below average, Jan Feb well below, Mar above, Apr below

Hottest days in Melbourne **DAYS > 35^{0}C 13**
Eg, Dec 2 35.5, Dec 20 37.4C, Dec 26 39.1, Dec 30 39.9,
Jan 7 36.2, Jan 26 37.7C, Feb 16 37, Feb-28- Mar 1 35.1, 35C, Mar 7 35.8C

Dryness Index	Days >35^{0}C	Seasonal Severity Level
14.1	13	156

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

Argus Fri 31 Dec, 1880
MARYBOROUGH Thursday
A large bush fire was raging at 1 pm about a mile and a half from Avoca. It commenced in Mr Morrish's paddock, where it burned the grass and fencing. From thence it spread to Mr Buhlerta land and after wards to Kaye's, where strenuous exertions were being made to stay its further progress. The conflagration is regarded as a serious one and likely to menace Avoca.

Argus Sat 29 Jan 1881 Hamilton area
The fire reported to have taken place on **Strathkellar** on Wednesday would appear to have been of a much more serious nature than first supposed. It broke out on Messrs Chirnside's Mokanga Estate where some of their men were cutting firewood and in a very short time it was raging in Mr Bromell's paddocks and at express speed making for the home station which had a very narrow escape. Passing on to the east side of Hensley park where the grass was long and a very wind prevailing, it raced furiously on to the Skene estate. The wind blowing a gale from the north, the fire soon travelled right across Skene on to Strathkellar doing a vast amount of damage running without check to the railway line a distance of at least ten miles from where it first started.

Towards evening the wind changed and blew very fresh from the south which doubtless saved many an acre on the Hamilton side but caused the fire to break out again on Hensley park and though there were plenty of willing hands their efforts were of no avail till it came to a friendly creek.

It is not known whether any stock has been destroyed but Mr Robertson is minus two whole flocks of sheep-disappeared somewhere-and his horses are all over the country.

Besides miles of fencing he has lost some 7 000 or 8,000 acres of grass. Mr Bromell besides a considerable amount of fencing has lost 1 500 to 2 000 acres of grass Mr McKellar besides fencing lost a considerable quantity of grass. The Kanawalla run had a good scorching with the loss of the whole of the fencing between it and Skene also a portion of that next to Hensley park and they must have lost from 1000 to 1500 acres of grass.

Argus 14 Feb 1881
Bush-fires have been very prevalent throughout the district for the last three days, causing much damage to fencing and loss of grass. Mr J. S. Adams, of Balnarring, was nearly burnt out, but with assistance and by great exertions managed to save his house and outbuildings. All his paddocks were swept clean, and other places narrowly escaped. A change in the weather took place today, with a thunderstorm and heavy rain this evening.

Argus Wed 9 Mar 1881
Another disastrous bush fire occurred in the Penshurst district yesterday. Mr. Whitehead's St Patrick's Day station suffered most. Grass and fences were destroyed for an area of seven miles square Mr. Quinlan's place was also burnt. On Mr Charles Green's place only 200 acres of grass are left out of 2000. His woolshed is also burnt down. The loss to the sufferers is very severe.

Penshurst report Hamilton Spectator reported in March that a startling discovery in connection with hitherto unaccountable spread or outbreak of fires on properties at various places at almost the same time was made on Saturday at Penshurst. On the occasion of the furious bushfire raging there, while Mr Hutton and an army of beaters were at work extinguishing the fire on the boundary of their properties they were amazed observing a large hare dash out from the middle of a burning patch, cross the 3 chain road which had so far kept the fire in check, and with her coat all a flame enter the thick grass in the opposite paddock which started to burn furiously. The burning hare explains how the fire crossed the three chain road but not how the fires had started on various properties at the same time.

Surf Coast Shire March 1881 Bushfires 'raged' between Colac and Gerangamete and near Birregurra and the Otway Ranges

Other bushfire relevant events

Newspapers continue to be the sole voices of bushfire safety messages, appealing to common sense and care for community welfare

Colac Herald 11 Jan 1881
Now that the hot weather his set in, and the grass has become parched and dry, we would advise persons in the bush to be very careful of fire, and not to needlessly light the same. Many instances have been reported to us where great damage would probably have been done in consequence of the reckless use of fire, had it not been for the prompt assistance rendered by the adjoining selectors.

Fire is too carelessly used in the timbered country, many persons considering that bush fire is the cheapest way of destroying the dead timber on the ground. But whilst lighting fires they are too apt to forget the dangerous consequences that would ensue if the fire were to break away. Last week a fire occurred in the forest and burnt several thousands split stuff lying at the stumps belonging to splitters. The loss to these men is a very serious one, and persons should he careful when and where they light fires.

Observations
Familiar annual pattern of threat (unextinguished fires during summer), response (loyal, committed defence efforts by local neighbours) and suppression by rain continued.

1881 / 82
Weather
BOM rainfall records for Melbourne: Sep well below, Oct to Dec above average, Jan Feb Mar well below, Apr average

Hottest days in Melbourne **DAYS > 35^{0}C 16**
Wind data is unavailable for Melbourne weather, but highest temperatures occurred on Dec 28 35.7C, 18 - 19 Jan, 40C, 43.6C, 29 Jan, 40.7, and 26 Feb, 40.6C. Mar 7 to 11 – 34.1, 36.3, 36.1, 38.9, 37.7C. If high winds also occurred on these days, bushfires would be severe.

Dryness Index	Days >35^{0}C	Seasonal Severity Level
18.8	16	211

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events
Fires in February

The Australian sketcher with pen and pencil Saturday 11 February 1882
DISASTROUS BUSH FIRES
On Sunday, January 29, a day on which the temperature in Melbourne exceeded 105deg. in the shade, and a fierce hot wind was blowing, some very destructive fires swept some parts of the colony. We quote a few despatches showing the damage done and the alarm occasioned.

A telegram from **Lancefield**, dated January 30, reported:— One of the most disastrous bushfires that have happened in the Lancefield district since the memorable ' Black Monday,' some sixteen years ago, occurred yesterday, when the Dividing Range, for a distance of about 20 miles, was in flames. The fire, it seems, has been burning within a small compass for the last three weeks, but the violent north winds experienced yesterday caused it to spread beyond control, and it flew with almost lightning rapidity in a north-eastern direction towards Lancefield, consuming everything before it. Homesteads were devastated, and not a vestige of fencing is left along the course the fire pursued. The principal sufferers so far as can be ascertained at present are Messrs. Hunt, Phillips, M'Guigan, M'Garey, Hales, Cullen, Halfpenny, Beasley, Dwyer, and Jones. There are many other heavy losers, whose names have not yet been ascertained: In many instances, particularly those of Messrs. Hunt, M'Guigan, and Halfpenny, great difficulty was experienced in saving the dwelling houses. Mr. Beasley, of Dunsford's station, has had a number of sheep destroyed, but the extent of the loss cannot yet be ascertained. When the fire reached the Deep Creek, in Dunsford's station, a quarter of a mile from the township, the wind changed into the south, by which circumstance alone the township, and indeed the whole district to the south, was saved. The change, however, carried the fire back over the portions which had previously; escaped, and the damage done is calculated by thousands. Hundreds of men exerted themselves to the utmost, but their exertions were ineffectual to stay the progress of the fire, and instances are to hand of narrow escapes from destruction of human life. At night the scene, as witnessed from Lancefield, was one of terrific grandeur, the whole range being illuminated for a breadth of 20 miles, presenting the appearance of one fiery mass. Groups of the inhabitants occupied the streets almost all night watching

the spectacle/and the greatest sympathy is felt for the sufferers by the terrible disaster, the full extent of which will riot be known for some days.

On the same day it was reported from **Jamieson**: — For the last two days bushfires have been raging extensively on the mountains around the Jamieson township, and fears are entertained that unless a fall of rain takes place soon the various farms in the valleys will be destroyed. The fire is burning now fiercely for a distance of three miles on one side of the township.

A **Kyneton** despatch stated: — Bush fires were prevalent yesterday. Three properties were burnt out and -other damage was done.

At **Bullengarook,** Messrs. Thorburn Brothers' saw mill, with dwelling-house, black smith's shop, and other buildings, were destroyed. The inmates only escaped with difficulty. Three was a slight fall of rain at mid day to-day, and the air is now much cooler.

From **Daylesford** we were told a bush fire which had been burning lightly for some days to the north of Daylesford began to travel yesterday morning, and by night-time had reached from near **Dry Diggings to Coomoora**, a distance of some miles, clearing everything in its way. Several farmers had portions of their property burnt, and Mr. David Scott lost everything but his farm-house, the damage .done to his property being over £2,000. The total loss to the farmers and others can hardly be estimated at present, but it must reach several thousand pounds. Every effort was made to stay the flames, but owing to the heat of the weather it was not till night time, when a strong north wind that had been blowing veered round to the south, that the spread of fire to some extent ceased.

An **Echuca** telegram, dated the same day, said: — A terrible bush fire occurred at **Kanyapella** yesterday, the whole country side being one mass of flames. The following selectors were burnt out, and the fire was extending towards Tongala, it is feared that others will suffer: — Mr. Easton, fencing and grass destroyed; Mr. Eisele, fencing, stables, and grass destroyed; Mr. Graham, fencing and grass consumed ; Mr. McLeod, loss of fencing; Mr. Miller, all his grass and nearly all his fences burnt; Mr. Domaille, nearly all his grass and fencing burnt. Graham's and Domaille's houses were saved with difficulty, and all the inhabitants of the parish were working like Trojans to stay the progress of the wall of fire, which carried devastation through an immense tract of country. Accounts received to-day from the scene of the disaster state that the fire is now burning towards **Yambuna (Goulburn Valley),** that the timber is on fire, but that all the adults in the district have turned out and will be sufficient, it is believed, to save the farmhouses and fences from destruction.

Fires in March

Argus Mon 27 Mar 1882
BELFAST, Saturday
This district has again been visited by a destructive bush fire, which yesterday swept over many miles of country. A large number of selectors have been entirely ruined, and many others left with their land as bare of grass as a metalled road. All day a fierce hot wind was blowing, and nothing could be done to arrest the progress of the flames, which consumed everything in their course. The principal sufferers are Messrs. M'Kellar Bros, Youl, Ritchie, Crowe, Roberts, Quill, besides many smaller selectors.

CASTERTON, Saturday
Extensive bush fires have occurred in the Nareen district, between Coleraine and Harrow. Yesterday evening the woolshed at Mr. Quarterman's Steepbank Station was completely destroyed, with nearly all the fencing and grass on the station. Several smaller holders have also lost their grass. Slight rain set in this morning, and all farther danger is now over.

Other bushfire relevant events

March 27, 1882 Supreme Court delivered a ruling in an Appeal against a jury verdict in the County Court, Nagambie.
Firstly, a summary of the County Court hearing (in dark blue)

PARK, Plaintiff v SHEEAN, Defendant County Court, Nagambie

Summary In the county court case at Nagambie, the plaintiff (Park) stated that the defendant (Sheean) wrongfully lighted a fire in his land adjoining that of the plaintiff, and through the defendant's negligence the fire extended to the plaintiff's land, and burned down his fences, trees and grass. The jury found for the defendant.

Details In the court case at Nagambie, the evidence for the plaintiff was that:

- the fire was seen by several persons on the defendant's land, and making its way thence to the plaintiff's land, and
- that the wind was blowing from the defendant's land towards that of the plaintiff; that no notice had been given by the defendant to the plaintiff of his intention to burn anything on his land;
- that stumps or logs had been burning for some days in the defendant's stubble paddock, and part of the paddock had been ploughed round ;
- that one witness, after the event, had said to the defendant that it was a madman's act to commence burning off in hot weather like that, and without giving notice, and that the defendant answered, " I know it was a foolish act, and my fault to do so, but it is only a matter of some fencing burned down, and that can be easily put up."

At the close of the plaintiff's case, the judge refused an application for a non suit on the grounds that

- there was no evidence to connect the defendant with the damage caused by the fire, or of negligence on the part of the defendant, and
- that the damage was subsequently caused by the fire left burning on the plaintiff's land.

The evidence for the defendant was:

- that he ploughed round the stubble before setting fire to it;
- that the logs were thirteen chains away from the plaintiff's fence;
- that he went round the paddock on the morning of the day in question, and
- that there was no fire then from which the injuries could have originated;
- that he was away during the day, and, after the fire, could not trace it from the burnt stubble to the fence ;
- that he took every precaution, and
- that the fire which injured the plaintiff did not start from the defendant's paddock.

He did not deny the conversation above mentioned.

The judge told the jury

- that it was admitted by the defendant that he had been burning off for some days previously, and
- that there was strong evidence to go to them to show that the fire so lighted by the defendant had extended to the plaintiff's land;
- that the defendant stated that he had ploughed round the stubble, but the evidence showed that logs and standing trees were left burning while a stiff breeze was blowing in the direction of the plaintiff's paddock;
- that any person lighting a fire on his land was bound to use more than ordinary diligence, and to watch it carefully to prevent its extension to his neighbour's land
- that the tendency of the evidence was to show that the defendant had not used such care and watchfulness;
- that if a man lights a fire, and, through his neglect, it gets into his neighbour's land and does damage, he is responsible for the damage, the amount of which is entirely a question for the jury.

The jury found for the defendant.

Next, the judgement of the Supreme Court
SHEEAN, Appellant v PARK, Respondent
http://www.austlii.edu.au/au/cases/vic/VicLawRp/1882/53.html

This was an Appeal against this jury verdict in the County Court, Nagambie.

Summary

The facts The defendant lit a fire but took steps to control it by ploughing around the fire. The defendant argued that he took all reasonable care to contain it.

The ruling A person who brings fire onto his own land does so at his own risk, and even if he takes care to prevent it spreading he is liable for the damage it may cause. The question of his diligence does not need to be considered.

Details

Appellant's argument: The evidence of the defendant's negligence is overwhelming; the very fact of lighting the fire without having given notice to his neighbour, as required by "The Police Offences Statute 1865" (No. **265),** sec. 21, is sufficient.

Argument for the respondent: The ground of appeal is simply that the verdict was against evidence. There is evidence that the defendant did plough round his stubble, as required by that enactment, before setting fire to it. The question was one entirely for the jury; the learned judge summed up very fairly. In Black v. Permewan, the rule was laid down that the Court would not interfere on such ground, unless it could see that the verdict was undoubtedly wrong.

Judges determinations:

STAWELL CJ This is an appeal direct from the verdict of a jury. The action was brought to recover damages from the defendant for having set fire to some brushwood and timber on his own land, the fire having extended to the plaintiff's premises and caused him injury.

The appeal is really based on the direction of the judge. It has been decided, in several cases, that a person who brings a dangerous article or animal on his premises, does so at his own risk, where the dangerous character of it is so obvious that the law infers knowledge of it from its mere nature, without any evidence of "scienter". **Negligence is presumed, where injury occurs. So in the case of fire**. If a person choose to bring fire into an arid place, he does so at his own risk, and the question whether he was guilty or not guilty of negligence as to the fire spreading, does not arise,

In the present instance, the judge directed the jury to say whether the defendant, after he had lighted the fire, had used ordinary diligence to prevent it spreading.

But the question of his diligence did not require to be considered; if he brought the fire on his place, he did so at his own proper risk, and notwithstanding he used diligence to prevent it spreading he is answerable for the mischief that it caused. There was evidence that the fire extended from the defendant's land to that of the plaintiff; indeed he almost admitted it himself. As, from the direction of the judge, the jury might have misapprehended the question they had to try, the appeal will be allowed, and a rehearing ordered before a judge of this Court.

HIGINBOTHAM J. The case of Batchelor v. Smith, furnishes a good illustration of the liability of the defendant. In that case, the question was whether if, without any default of the defendant, a fire came on the defendant's land, and he did not put it out, and it spread to another person's land, was he answerable? There, the Court held he was not answerable. If a dangerous thing comes on a man's land, he incurs no liability in consequence of its going to that of another person.

But if a man lights a fire on his own land, he is answerable absolutely for what it may do, even though it spread to other persons' premises without any negligence of his, and although he might have used his best efforts, as the defendant appears to have done in this case, to prevent it spreading.

The direction of the judge in this case may have tended to embarrass the jury, and lead them to believe that it would be sufficient to relieve the defendant of liability, if he exercised all diligence in trying to prevent the spread of the fire.
But that is not so.
The whole of the evidence showed most clearly that this fire had been lighted by the defendant on his land; and that it spread to the land of the plaintiff.
The verdict was therefore contrary to the whole of the evidence, and cannot be allowed to stand.
Decision Appeal allowed. Case to be reheard.

Interpretation A person lighting a fire upon his own land does so at his own risk, and is liable for any damage caused by its spreading to his neighbour's land, independently of any question of further negligence on his, the defendant's part.

Observations
The late January fires correspond with a 40C day and were probably accompanied by strong N – NW winds.
The late March fires do not correspond with hot weather, being only 32 in Melbourne. However, strong winds were reported.

The Appeal Court confirmed the clear liability of the fire lighter for injury caused by the escape of that fire. **Negligence is presumed, where injury occurs. So also in the case of fire.**

1882 / 83
Weather
BOM rainfall records for Melbourne: Sep Oct below, Nov Dec above average, Jan Feb well below, Mar above, Apr below

Hottest days in Melbourne **DAYS > 35^{0}C** **10**
Eg, Dec 28 35.7C, heat wave in January, 14 to 16 - 38, 40.5, 40.4, Feb 15 to 16 35.1, 37.7, March 18 36.7C

Dryness Index	Days >35^{0}C	Seasonal Severity Level
9.8	10	106

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

The Argus Fri 19 Jan 1883
AVENEL, THURSDAY.
The excessively hot weather of the last few days has culminated in the most disastrous bush fire ever known in this district. Its effects have involved nearly all our old residents. More than 4,000 acres of grass and more than six miles of fencing have been destroyed. Amongst the greatest sufferers have been the Messrs. Esau and Richard Shelton, Mr. Lloyd Jones, and Mrs. Lewis. The destruction of the township was for some time imminent, and only averted by the most strenuous exertions. Hopes are entertained that the worst is over, but it would be premature to express more than hope, as a cordon of subdued but not extinguished fires still surrounds the township.

The Argus Sat 20 Jan 1883
BUSHIRES IN THE LANCEFIELD DISTRICT
The Lancefield Mercury writes -"Thus early in the season we have to chronicle the existence of numerous bush fires in the ranges to the north of Lancefield, the most disastrous was the one which originated near Jarrett's station, Baynton, and spread in the direction of Cobaw. The fire swept with devastating effects through the properties of Messrs Parsons and others in that vicinity and it was with difficulty that Mr Parsons dwelling house was saved, it being on fire several times whilst all the outbuildings were entirely consumed At the time when the wind changed m the evening, the fire was only about half a mile distant from the properties of Messrs Johnston, Little, Hampton and neighbours at Cobaw.
An eyewitness of the Cobaw fire tells in that it reminded him forcibly of the extensive **conflagration last year**. The smoke was rolling along in heavy volumes which almost blinded him, and trees were falling with tremendous crashes in all directions which together with the crackling of the fire combined to make a most awful and impressive scene. .Mr A Johnston of Lancefield who had occasion to go to Baynton on business, relates to us that he was riding one horse and leading another, and that passing through where the fire was burning he experienced great difficulty in proceeding.
We also hear of a bushfire at Mount William which unfortunately reached a growing crop belonging to Mr McLellan, and before it could be extinguished, some chains of fencing and several acres of crop were consumed.
In the intervening country between Mollisons Creek and Lancefield a gentleman informs us that he counted no less than ten distinct fires in different parts, some of which were raging fiercely.

The Argus Thu 25 Jan 1883
COLAC, WEDNESDAY,
One of the most disastrous fires which have occurred in this district took place on Tues day, at Messrs Robertson Bros estate, resulting in great loss of property. It appears that two men in the employ of the firm were engaged mustering sheep in a paddock, when they observed a large fire, which seemed to spring up directly in front of the flock they had gathered. The men at once endeavoured to subdue the flames, but it was soon apparent that unaided there was no possibility of their mastering the fire, which extended rapidly. Assistance was sought and promptly rendered by several gentlemen in the neighbourhood, while the station hands also rushed to the spot and strove to got the fire under About an hour after its out break the wall of fire presented an unbroken line 300 yards wide, and raging furiously from end to end of the enclosure. Despite the intense heat the men worked manfully, and after two hours incessant toil succeeded in extinguishing the flames. The fire destroyed about half a mile of fencing, a large quantity of grass and most of the trees in the pine plantation. The total loss is estimated at £1,000. The origin of the fire is not known.

The Argus Fri 26 Jan 1883
CLUNES
An extensive fire occurred on Monday last in the vicinity of Beckworth-court, the property of Mr, Robert Nichol, J. P. The fire commenced in the forenoon in a paddock immediately at the rear of Mr. Nichol's home station, destroying upwards of 300 acres of grass belonging to Mr, Nichol, and 300 more upon the adjoining property of Messrs, Gordon and Fraser. The fire extended in a directly northern course from Beckworth mount, entering Messrs. Gordon and Fraser's paddock, where it destroyed a considerable extent of substantial fencing, the value of which is estimated at over £150. At one time it was feared that the homestead and haystacks of Mr. Fraser would have been destroyed. The locale of the fire was fortunately only about a mile distant from the new reservoir of the Maryborough Water Trust, the men engaged upon which left work and rendered great assistance in preventing the further spread of the fire. As shots were heard in the vicinity just previous to the discovery of the fire, it is supposed that the fire was caused by a shooting party of trespassers on the land.

The Argus Tue 20 Mar 1883
INGLEWOOD, MONDAY.

The weather has been very hot during the last three days. Several bush fires have been burning. A light shower of rain fell this evening, and there are indications of a change.

KILMORE, MONDAY.
Several bush fires have been raging in this district during last week, and yesterday one broke out in the hospital paddock, doing considerable damage to fences and grass.

PORT ALBERT, MONDAY.
Bush fires raged in this district with considerable violence during the whole of yesterday afternoon. The excessively warm weather, with a stiff breeze from the northward for several hours, rendered the spread of the flames over dry scrub and parched grass land more than usually rapid, even at this dry season of the year. At Won Wron, about five miles from Yarram, a house was burned to the ground, notwithstanding the strenuous efforts of a number of residents in the vicinity to keep the fire clear of the building. The house and land had been sold a few weeks previously, the previous owner, Mr. David Williamson, having removed to Port Albert with his wife and family only a few days ago. At present the weather is cloudy, and becoming cooler, with the wind from the south, but unless a fall of rain occurs this evening, of which there is some prospect, it is feared that further damage will be caused by the fires, the grass being everywhere abundant.

ST. ARNAUD, MONDAY.
A bush fire occurred at Gre Gre yesterday afternoon. It was caused by a local farmer engaged in clearing operations, and destroyed several miles of selectors' fences and many hundred acres of grass.

Observations
Many of these fires can be regarded as unextinguished burn-offs running in mild dry weather conditions. Local communities have been protected by the luck of mild summer weather.

1883 / 84

Weather

BOM rainfall records for Melbourne: Sep below, Oct Nov above average, Dec below, Jan x 2, Feb average, Mar above, Apr below

Hottest days in Melbourne **DAYS > 35^{0}C 8**
Eg, Dec 29 37.3C, Jan 13 38.1, Jan 19 36.5, Feb 13 38.1C, Feb 21 36.9

Dryness Index	Days >35^{0}C	Seasonal Severity Level
4.3	8	65

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

Argus Thu 3 Jan 1884
BUSH FIRE AT ROCHESTER WEDNESDAY EVENING.
A very extensive bush fire broke out near here to-day, which was first observed by the inhabitants of the township noticing some dense volumes of smoke to the north-east of Rochester. It was found to be on property belonging to Mr Thos. Rooke, and situated contiguous to the Boxhall Hotel. The fire is supposed to have been caused by someone carelessly throwing away a lighted match.
A few willing hands from the immediate neighbourhood gathered, and others came from the township. The most danger of the fire spreading resulted from there being miles of brush fencing, which, with the dried rank grass that had grown up round it, gave the fire every advantage. In some parts for fully a quarter of a mile there was one vast column of flame.

A very large paddock of crop that had not been stripped was in great danger, as also was the hotel, state school, and other properties adjoining belonging to Messrs. Beardsley and M'Carry, and others. As it is, nearly 700 acres of grass land and some miles of fencing and dead timber have been reduced to ashes. I have just heard of another disastrous fire, which occurred on Saturday last at Bamawm, about six miles out, by which Mr Griffin lost a threshing-machine and a large quantity of farming and other utensils. All of these fires are believed to have resulted from the careless use of matches.

BENALLA, WEDNESDAY.
Extensive bush fires have been raging during the past few days in the vicinity of St. James's and Boweya, near Glenrowan. Several farmers have suffered considerable loss from the visitation. On Monday a fire broke out on the property of Messrs. Turnbull Brothers, of Emu Plains, some 1,500 acres of fine grass being consumed, together with a quantity of stabling. A large number of settlers turned out to do battle with the flames, and it was only by dint of superhuman efforts that the haystacks were saved. The fire is supposed to have originated through the carelessness of some fishing parties, and Messrs. Turnbull Brothers have, in consequence, prohibited persons from going upon their property without first obtaining their permission.
Several other landowners intend taking the same precautionary measures.

Argus Sat 19 Mar 1884
MANSFIELD, FRIDAY.
On Wednesday a fire broke out on Mr Brunsden s paddock, between Maindample and Doon, about 10 miles from Mansfield. A number of men employed at threshing machines in the neighbourhood left their work and assisted in extinguishing the flames, but not before 100 acres of grass and a quantity of fencing had been consumed
Another fire commenced near the township at about 5 o clock this afternoon. A number of men went to the spot to assist in extinguishing it. On arriving there they found a man named Wm Dovas, who was this morning fined 10 shillings by the local Bench for being drunk and disorderly. Appearances indicated that he had caused the fire by igniting the grass on the north side of the road, and had then dragged some burning rags across the road, setting fire to the other side. Constable Mooney at once proceeded to the place, arrested Dovas and brought him into the lock up. He will be brought before the police court in the morning The fire is raging with great fury on account of the height and dryness of the grass.

BENALLA, FRIDAY.
Yesterday afternoon on extensive bush fire broke out on the property of Mr Wm Newcomen, of Taminick Station, 10 miles from here The fire, when first discovered, was a quarter of a mile from the homestead, which, but for the strenuous exertions of the farmers, would have been destroyed. The woolshed also narrowly escaped. A thousand acres of grass were consumed, as well is a large quantity of fencing. Several of the neighbouring farmers were compelled to remove their sheep from the paddocks to save them. Great efforts were made to prevent the fire spreading to the adjoining farms, and with success but by the latest accounts the fire was raging in the hills in the neighbourhood. The fire is believed to have been caused by a mailman carelessly throwing away a lighted match.

Observations

Moderate weather (average rainfalls and moderate temperatures) in Melbourne indicated a mild fire season south of the divide

1884 / 85

Weather

BOM rainfall records for Melbourne: Sep well below, Oct to Dec above average, Jan well below, Feb – Apr above

Hottest days in Melbourne **DAYS > 35^0C** **3**
Eg, Jan 12 36.9, Feb 5 38.7C

Dryness Index	Days >35^{0}C	Seasonal Severity Level
6.6	3	28

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

Fires reported in January

Argus Sat 17 Jan 1885
DESTRUCTIVE BUSH FIRE NEAR MOUNT KORONG,
INGLEWOOD, Friday
A most destructive bush fire has been burning for some time in the vicinity of Mount Korong. It is stated to have arisen from a fire left by a picnic party during the Christmas holidays. It did not, however, do much damage, until within the last three or four days. On Wednesday and Thursday, which were very hot, scores of farmers and others were engaged in fighting the flames, but with little result, and a tract of country over five miles square has been devastated. It is feared that the great heat of today will send the flames still further abroad.
Among the greatest losers arc Messrs Mackin, Guilfoyle, and Ryan, each of whom loses from 1,000 to 1,200 acres of grass, and large quantities of fencing , while amongst the minor losers are Messrs Cushion, Dunlea, Addlem, McGregor, and others. Later news to-night states that the fire has broken away to the eastward, and crossed five or six selections, doing a vast amount of damage.

Fires reported in February

Evelyn Observer, and South and East Bourke Record Fri 6 Feb 1885
At the time of going to press bush fires are raging extensively along at Arthur's Creek and at Kinglake. At the latter place, one of the settlers, Mr Pierce Power, has had a large portion of his outbuildings burnt down, just managing to keep his homestead. On the Creek during the last 2 or 3 days upwards of 50 of the neighbouring settlers have been engaged night and day in endeavouring to beat back the flames, but hitherto with but little success, and it is feared that unless a change of weather soon takes place thousands of acres of grass and many homes will be destroyed. We understand the principal sufferers so far in that locality have been Messrs. Horn, Duncan, Smith, Muller, Mitten, Whelpton and Mrs. O'Dea.

Argus Thu 5 Feb 1885
DAYLESFORD, Wednesday. Information has just reached Daylesford that the fires in the forest, impelled by the strong hot wind blowing today, have assumed alarming dimensions. There has not been a bush fire of any magnitude in this forest for the last two years, and consequently there is on enormous quantity of dead timber, tree tops, and debris about for the fire to feed on.
One fire is raging around Mount Wilson, between Wheelers mill and Frenchman's Creek, and all the employees of the mills in the vicinity are out trying to stop the progress of the flames.
There is also a fire around Old Bullarto, and another on the north side of the railway line near the reservoir.
Another is raging on the Coliban near Lyon's tram way Great quantities of split timber are reported to have been destroyed by the fire.
The most serious damage so far, has, however, been caused by a fire between Musk Creek and Bullarto, which, this afternoon destroyed all the crop, outhouses and fences of a farmer named Mr. Ossop. A clean sweep was made of everything except the house, which was saved with great difficulty A fire which has been smouldering for several days near the Holcombe Station, Glenlyon, has burned alarming dimensions today, and the farmers in the neighbourhood are now engaged in battling with it.
Owing to a change in the wind, the town is now enveloped in dense smoke.

Argus Fri Feb 6 1885
Extensive bush fires in many parts of the colony are reported in the telegrams from the country published this morning Around **Woodend and Macedon** yesterday five large fires were raging and two or three residences including that occupied for the summer by His Excellency the Governor were endangered

At **Walhalla** the battery of the Fulton's Creek Gold mining Company, was burnt to the ground by bush fires. Some steam sawmills four miles from the township on the Matlock road, had been burnt down, the workmen narrowly escaping with their lives, and losing all their effects. The No 1 tramway of the Long Tunnel Company had also been destroyed for some distance and part of a viaduct.

Destructive fires were also reported from numerous other localities, but the change of weather which took place in the afternoon checked their progress. The weather yesterday morning was the hottest which has been experienced this season.

His Excellency the Governor's trip to the Upper Yarra district was brought to a close yesterday in consequence of the bush fire which has occurred at Mount Macedon, where Lady Loch and family are staying. A special train conveyed the Governor from Lillydale to Princes Bridge station yesterday morning, and at half past 1 o'clock he left Spencer Street for Mount Macedon. While sojourning in the Upper Yarra district His Excellency, with Lord Elphinstone and Mr. Froude, the historian, was the guest of Mr. H, de Castella, at St Hubert's vineyard. On Wednesday the party were driven through Healesville and Fernshaw to the Black Spur in a special coach, supplied by Messrs. Robertson and Wagner. Halts were made frequently to admire the beautiful scenery 'the "tallest trees in the world" were of course brought under the notice of the English visitors 'The party lunched under the shade of tree ferns, native beeches (mis-named myrtles), and lofty eucalypts, on the banks of Myrtle Creek, the stream overlooked by the Black Spur. On the return journey they called at Coranderrk, and saw an exhibition of boomerang throwing by the blacks.

The North Eastern Ensign Tue 10 Feb 1885
Friday last will be long remembered in **Benalla** history. The heat, was most oppressive, the severity of the weather being aggravated' by terrific wind storms which visited the district, completely enveloping the town in clouds of blinding dust.
To the eastward was still visible the dense smoke from the trees and dead timber which had been ignited by Thursday's fire. About 11 o'clock am the heavy clouds of smoke rising from the direction of Winton gave unmistakable signs of the fire having broken out in a fresh place.

The fire, which is supposed to have had origin through the agency of a spark blown across the Sydney Road from Ryan's into Moore's paddock, had spread on all sides. The thickly-grassed paddocks from the Sydney Road: on one- side to Gould's Lane on the other were devoured, by the greedy flames with awful rapidity, and a stronger gust of the, fitful wild blowing, the fire would be seen spreading with a velocity that could only be compared with a lighted powder train. When our reporter arrived, a host of beaters, mostly townspeople, including a number of the Fire Brigade were working.
Area burnt 2500 ac, some buildings lost

Observations

February was very dry, and the strong winds and high temperature of Feb 5 enlivened the numerous unextinguished fires around settlements into raging infernos, inflicting significant damage onto settlers' property.

1885 / 86

Weather

BOM rainfall records for Melbourne: Sep to Nov above average, Dec below, Jan x2, Feb Mar average, Apr down

Hottest days in Melbourne **DAYS > 35^{0}C 6**
Dec 8 35.1C, Jan 4 - 5 35, 37.7C, Feb 18 -19 37.5, 40.1C, Mar 4 36.7C,

Dryness Index	Days >35^{0}C	Seasonal Severity Level
4.6	6	50

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Using available BOM data, this fire season is at the milder end of the spectrum. Rainfall is above average in spring. There is 10 mm on Dec 23 and 14mm on Christmas Eve, heavy rain 100 mm over Jan 7 to 9, but dry for rest of Jan. Feb had rain on many days, but in the form of showers, usually < 5mm.

Official bushfire records
Reports describe bushfires in Otways and surrounds:

VBRC
4 January, 1886 Otway and Heytesbury fires raged for a week, incorporating Panmure, Colac, Camperdown 50 houses lost, damage at £15,000

Carver
6 Jan Otways, Lorne to Heytesbury

Tainsh
Jan 4 and 5 Otway Heytesbury forest raged for a week

Royal Commission 1900
5 Jan 1886 Otway and Heytesbury forest fire, Counties of Villiers, Heytesbury, Polwarth, extending from Panmure to Bass Strait.

Reported bushfire events
Contemporary press reports complement and flesh out these sketchy details.

Argus Fri 18 Dec 1885
BRIDGEWATER The first bush fire of the season occurred today on the Metusie Estate a well grassed paddock of 320 acres being burnt. The cause of the fire is unknown. The day was very hot the thermometer registering 99 in the shade. Yesterday it reached 103, when a thunderstorm took place, accompanied by 10 points of rain which slightly cooled the air.

Otway bushfires in January
Reconstruction of weather and fire directions based on media reports in the Otways fire area:
Mon 4th and Tues 5th January were hot dry days on. Wind was moderate on Monday, but a N - NW gale blew on Tues, followed by a SW change during late PM. Rain came in buckets by Wed morning.
It seems there were fires already burning along the forests SW to SE of Colac, but on Monday 4th, the fires enlivened and some spread northward towards Colac. There were also fires in the Stony Rises to Cobden to Heytesbury areas, which were also enlivened.
The N to NW gale on Tues pushed the fires to the south. The fires that threatened Apollo Bay and Lorne were probably spot fires. Lorne was saved by SW wind change mid PM. The same SW wind change pushed fire towards and beyond Camperdown and Cobden. By 5 am on Wed, heavy rain was falling across the Otways.

The following reports are included in detail to highlight the range of causes of fires, the defence response of people, the saves and the losses.
Highlighted in blue are the insightful connections between management of fuel load and saving houses. Also in blue are descriptions of self defence efforts by the community.
Highlighted in red are references to causes of the fires. In regard to the causes, there is some editorial requesting the government to copy South Australia Law and help the suffering people out. This is highlighted in red.

The Colac Herald Fri 8 Jan 1886
The excessively hot and oppressive weather experienced on Monday and Tuesday was the means of causing many serious conflagrations in the Otway Forest which stretched away for miles towards the coast. On Monday dense columns of smoke could be seen rising from the ranges to the south of Colac, but no great damage was then apprehended, as the fires appeared to be very distant and confined principally to an unsettled area. The flames, however, spread with alarming rapidity, the dry timber, grass, and undergrowth readily ignited, and as a fierce wind continued to blow all day on Tuesday the fires were driven onto the selectors' holdings a few miles south of Colac, devastating all before them.

When the messenger reached Colac, one fire was raging on Mr. G. H. Hills's property at Tarnalla, while another fire had swept over a portion of Mr. Andrew Murray's Larpent estate and entered Mertoun Park, the property of the Hon Wm. McCulloch. This was indeed serious news, and many of the townspeople left their work to render whatever assistance they could to check the flames. From Pirron Yalloak, Irrewillipe and Lorne the same sad intelligence as to the terrible destruction of property was received. Passengers by coach from Lorne to Birregurra experienced many narrow escapes, in consequence of the number of trees burning along the track, branches from which were falling at frequent intervals. Sparks were also flying in all directions and the passengers had their faces and clothes scorched and burned; and the boot of the coach at one time took fire, and the flames were with difficulty beaten out.

That night a delightful change in the weather took place, and shortly after four o'clock, the air became cooler and a gentle rain began to descend to the relief of many persons, which has continued ever since, The rain a most welcome, for it will be the means of effectually, extinguishing the burning logs and trees which in warm weather would smoulder for several days.

The whole of the forest country to the south of Colac appeared to be in flames, so dense was the smoke in that quarter. The heat of the day was so great that the work of beating out the fire was attended with a considerable amount of danger. The dead wood on the ground was so dry that it immediately became ignited, and as the trees caught fire the wind blew sparks far and wide. Several thousand acres of grass and many miles of fencing have been destroyed, while a number of persons have unfortunately had their homes burnt to the ground. In many instances people narrowly escaped with their lives, in consequence of having to pass through the fire to reach a place of safety.

Gelibrand – Barangarook How any of the fires originated we have been unable to ascertain, but the fiercest and most destructive fire was the one that swept the selectors' holdings from the Gellibrand River to Barongarook. This fire is reported to have come from the beech forest, some miles beyond the Gellibrand, and had been burning since Sunday last.
The heaviest sufferers by the fire are Messrs. Ball, Mrs. Bowen and Jos. Johnson, who have saved nothing from the flames.
Mrs. Ball, wife of Mr. Francis Ball, who resides near the Gellibrand River, was severely burned about the arms and face and was last evening conveyed into Colac and placed under the treatment of Dr Porter. In addition to the burns, Mrs Ball is suffering greatly from the effects of the dense smoke, which nearly suffocated
Mr. Ball had only just completed a commodious and substantial building at a cost of £500, with the view of accommodating visitors to the beech forest, and had stores on hand to the value of fully £100. The house caught fire from sparks which were blown on to the roof from blazing trees, and it was a matter of impossibility to save anything.

Mr. Clarkson's house, which is situated on the south bank of the Gellibrand River was in imminent danger of being consumed, and a quantity of furniture was removed from the building to what was considered a place of safety. However, the house was saved, but the furniture outside was totally destroyed.
Mrs. Francis Bowen, who resides a little further down the river, also had a very narrow escape. She saved herself and her children by taking their stand in a waterhole close to the house. When the fence enclosing the waterhole took fire, they were nearly scorched and had to remove to the garden. Mrs. Bowen is a widow with a large family, and her loss of house, furniture, and fencing is fully £500. The cattle grazing on the land have perished in the flame as escape for them was impossible. The wallabies and other 'native animals flocked into the selectors' houses, and were as tame as dogs. The people were nearly suffocated, the smoke was so dense, and night brought them a happy relief.
Mrs Joseph Johnson's family took refuge in their orchard for the night, but even there they passed a very uneasy time, the heat was so intense, the fruit being completely baked on the trees. Mr. Johnston was in Melbourne at the time, so the position of Mrs Johnston and her children was perilous in the extreme.
From the Gellibrand, the fire swept up the hill sides. The Gellibrand bridge on the Johanna Bay road was destroyed, it was also all the other bridges over the river in the neighbourhood of the fires.
Mr. McGee's sawmills, known as Gellibrand and Bartlett's, his third one, Drew's near Love's River, being saved. Mr McGee's loss cannot be less than £2000. The workmen only escaped with their lives by rushing into the water dam which supplies the engine. To all intents and purposes the mill may be said to be totally destroyed, and as this has taken place at the beginning of the sawing season, the loss to Mr. McGee is most serious, and may be almost said to be ruinous.
The fire rapidly advanced towards the selections in the parish of Barongarook, sweeping everything before it, burning fences and buildings and defying all human efforts to stem its progress. The smoke was blinding and suffocating, and many of those who worked at the fires are still suffering from the effects of the smoke and heat. Mr. Bowden's house also caught fire from the sparks which were blown about
In all directions and it was useless attempting to save anything. Mr. Bowden estimates the loss of his house and its contents at £120. Mr. Burgess, whose place is close by Mr. Bowden's, succeeded in saving his house from destruction, but only after very hard and constant work. A quantity of his fencing and grass was destroyed and Mr. Begley was also a sufferer in this respect. The adjoining holdings of Messrs. Harris and Troy also suffering severely, and Mr. Harris's house narrowly escaped total destruction. Twice did the fire take hold of it, but Mr. Harris, with the assistance of his active young sons, as quickly subdued the flames, and succeeded in saving his place. Some out buildings, fencing, etc., were, however, consumed. The flames spread over the holdings of Messrs. Whitchell, Cameron, Williams, Murray, Bryant, and Hancock, all of which suffered. The other persons who suffered seriously are Messrs. Ritchie Brothers, Harlock, Macafee, Silk Bros., Conway, and Hickford. The Messrs. Ritchie Brothers only saved their house by the timely assistance of their neighbours but the greatest portion of their fencing is destroyed. It is impossible to estimate the loss the fires have occasioned; but it will represent a very large sum, as they have spread over such a large extent of country.

Gerangamete The settlers in the Gerangamete district had also a scorching time of it on Tuesday. A large fire which sprang up near the Boundary Creek swept down the Barwon Valley, and threatened to destroy all the habitations that stood in its way. The dwellings of Messrs. Jas. Reid, W. Hastie and Laurie were totally consumed, it being impossible for them to save anything. These persons had as much as they could do to save themselves, without attempting to rescue any of their property from the devouring element. In Mr. Reid's house there was also £16. 12s. in money, which of course, was also lost.

Lorne This popular watering place had a narrow escape from destruction by the bushfires which were raging in that locality on Tuesday. The fires, which extended along the sea coast from Cape Otway to the east side of Loutit Bay, a distance of about 45 miles, commenced on Monday. On Tuesday morning the breeze increased to a perfect gale, and drove the fire with tremendous velocity over the Cape Otway ranges to the sea coast. The latter soon became enveloped in dense volumes of smoke, which presented a majestic and awe-inspiring sight. The captain of the steamer Casino, which arrived from Warrnambool at midday, stated that he passed through immense volumes of smoke, which extended for eight or nine miles out to sea, over which it hung like an immense pall.
At Lorne the sun at times was completely obscured. The fire leaped across the deep ravines characteristic of the Cape Otway ranges, the velocity of the gale carrying the burning embers to the

tops of the high trees, which soon became a mass of flames. In this way they rushed over Mount St. George, and approached so close to the township of Lorne that at one time it looked as if the place was doomed to destruction. The residents made every preparation to battle with the flames, when fortunately the wind changed to the south at three o'clock in the after noon, and all immediate danger was removed. Then a most curious phenomenon took place. The immense volumes of smoke which had for, fifteen hours been driven out to sea came rolling back on the township; which became so dark that the fowls went to roost at four o'clock, and the residents were compelled to light their lamps. The southerly breeze eventually cleared the air, and at six o'clock it was light again. During the night the fire continued to burn briskly, but no further danger to the township is anticipated. So far as can be learned the fire has extended fully five miles inland, and for nearly that several struggling selectors have been rendered homeless. The flames raged so furiously on the ranges along the main road from Birregurra to Lorne that the coaches running to the latter place could not pass through the burning timber without danger of the passengers being burnt alive, consequently they were taken back to Deans Marsh. Men are now engaged clearing the road, which is covered for some distance with burning trees.

Our correspondent at **Irrewillipe** writes: On Tuesday, we had a severe time of it in consequence of the number of severe bushfires which were raging all over the district. A fire came through Mr Rankins' land on Monday, and it was with considerable difficulty the house and out-buildings were saved, but the grass was all destroyed. The fire then made its way towards Mr. McCain's and was burning all night. On Tuesday morning, the wind rose to a gale and carried the fire with terrible force towards Mr Hamilton's block. Mr Hamilton lost a large lot of fencing, and it was only by great exertion that his buildings were saved.
By this time the fire had extended to the holding of Mr. Dunstan, who has lost both grass and fencing, as well is the outbuildings attached to his dwelling.
The fire then spread into the next property, but their dwellings were saved, as the land around them is pretty well cleared of dead and fallen timber.
From this point the wind carried the fire into Mr. Armstrong's Corangamite Estate, on which place about 200 acres of grass were burnt. Usually the station hands rendered the selectors every assistance in their power, but on this occasion no help was tendered them, otherwise the loss would not have been as great as it is.

Locations of destructive fires reported in media reports

Other going fires in the area

The Colac Herald Fri 8 Jan 1886
Cape Otway The following telegram was received on Tuesday from the manager of the telegraph station at Cape Otway:—A bush fire started at Cape Otway Station yesterday. A bush fire started at Cape Otway Station yesterday. A northerly gale sprung up at 7 p.m., and blew the fire on here. The buildings were saved by all hands fighting the fire. The fire is now travelling towards Apollo Bay. The north-easterly gale is still blowing. The danger is not yet over."
[This travel direction suggests the wind is from the SW]

Cobden The township of Cobden was hemmed in by bush fires, and one or two selectors' homesteads have been destroyed. At Lake Elingamite the fire traversed the selections of Messrs. A, Hamilton, Hickey, Hanlan and others, burning everything before it. Hundreds of acres of grass and miles of fencing have been burnt. Nearly the whole of the country between Cobden and Warrnambool has been swept by fires, and a great deal of damage has been wrought. The heat was so oppressive that men could hardly stand up against the flames.

Camperdown A wire from Camperdown states that Tuesday last rivalled Black Thursday in the intensity of the heat and the fierceness of the bush fires that were burning. The dryness of the weather resulted in several fires breaking out some days ago in the Heytesbury forest and the Stony Rises, where they found ample food in the density of the undergrowth. Under the combined influences of the excessive heat and a strong hot wind from the north, which amounted almost to a gale, some of these fires, apparently became joined. About two o'clock the wind veered round to the west and south west, and almost immediately the town was veiled in darkness for a time. The people were bewildered, and it was thought by many that the fires were in dangerous proximity to the town. Quite a panic was created by the arrival of a breathless messenger at the police station with the intelligence that the public Park was on fire. There was an immediate stampede for the place, but the report was found to be incorrect. Extensive fires are now raging almost all round the town, and as the wind is still high, grave fears are entertained as to the safety of the farmers in the vicinity. The country south of Lake Bullen Merrie is reported to be in a blaze, and fires are stated to be raging in the direction of the ranges. Another report is current to the effect that a fire is sweeping across the plains from the Hamilton side. There are also extensive fires in the Stony Rises. The thermometer today has registered in Camperdown from 102 to 105 degrees in the shade.

Fire at **Cororooke** On Tuesday morning a fire broke out on Messrs. Robertson Brothers' estate near Lake Colac, in the camp of some men who were clearing a drain. The fire spread into the Cororooke paddocks; and before it was extinguished about 200 acres of grass 150 acres belonging to Messrs. Robertson Brothers, and 50 of Mr. J. H. Connor's were burned. The fire was prevented from spreading owing to the efforts of the men being directed to driving the flames backs to the lake, otherwise the loss would have been greater.

Camperdown Chronicle Sat 9 Jan 1886
Heytesbury In many parts of the Heytesbury forest there has been an accumulation of undergrowth, as the past season or two was not favourable to a "good burn" being obtained. Previous to Tuesday small fires had been slumbering in the forest, and these were fanned into fierce flames by the wind which blew on that memorable morning like a blast from the mouth of a furnace. When the wind lulled at all, which was seldom, the fire-beaters were able to make some progress, but as long as the gale raged all efforts to stay the march of the flames were almost worse than useless, in the neighbourhood of trees.
The origin of some of the fires is not difficult to trace. In their desire to have a "good burn," some selectors had set fire to the scrub to clear it, and get rid at the same time of the vermin which infested it. Probably these fires could have been kept under control in ordinary weather; but the fierce hot wind scattered flames and ashes in all directions, and ended in laying waste the country. Could those people have foreseen the result, doubtless they would have taken more precautions for their own sake and that of their neighbours.

Scott's and Cowley's Creek district It was asserted from the first that the fires had been most severely felt in what is known as the Scott's and Cowley's Creek district. The homes have been literally hewn out of the dense timber, and the forest encircles the houses within a few chains at the most. The fires, once started, must have swept through the forest at a great rate of speed, and with the high wind that was blowing there was scarcely any obstacle to bar their progress.
The settlement about Scott's and Cowley's Creek dates some years back, as a rule, and the improvements thereabouts were something very considerable. Commodious dwellings and outhouses, substantial fences, and extensive crops, with splendid grass were the rule, and by no means the exception before Tuesday. Now the places on which these once stood are charred and blackened by the devastating fires. At the present moment the amount of the damage done can scarcely be estimated. It would be a moderate computation to estimate the amount of damage at something like £5000. Reckoning the value of the improvements in each case at £200, a very low estimate indeed, this amount

would be exceeded. The experiences of one farmer will doubtless be those of many others. He states that all his buildings are destroyed, one costing several hundred pounds, and all are uninsured.

Camperdown When the wind changed at 2 o'clock the smoke from the fires southwards suddenly enveloped the town.

Cobden One fire which is stated to have had its origin in the Struan paddock rapidly spread through the adjoining properties, and threatened the town on the north. The same fire also made progress in the direction of Mr. Smith's house, which was only saved from destruction by the exertions of the residents who had assembled in force.

A bit more detail came a few days later:

The Colac Herald Tue 12 Jan 1886
The Age of Saturday gives the following account of 'the ravages of the fire in the **Lorne district**:-
It was an extremely fortunate circumstance that the northerly gale which blew on Tuesday, and forced the fire over the Cape Otway ranges towards the township of Lorne, changed at three o'clock in the afternoon, for it drove the flames, which were close upon the houses, back again into the dense bush, and thus saved the pretty little township from utter destruction. At night the sight was truly terrible, yet picturesque. The hills which surround Loutit Bay were a mass of flames, and resembled an immense holocaust. At five o'clock on Wednesday morning the gathering clouds, driven up from the sea by the southerly breeze, broke, and a steady downpour of rain followed, which extended along the coast for fully 50 miles, and had the effect of quenching the fire, not, however, before it had completely destroyed thousands of pounds worth of the valuable blackwood timber which forms a large portion of the Cape Otway forest, together with many selections and a large number of stock, principally cattle.

Near the Erskine falls several selectors are burned out, after vainly endeavouring to do battle with the fire from which they were compelled to fly in order to save their lives.
On the east side of Loutit Bay, a number of selectors have been rendered homeless, with their wives and families, and they are undergoing great privations, many of them having only the clothes which they are wearing.
The fire destroyed a large number of telegraph poles, and the wire to Lorne, which passes through several precipitous gorges in the forest, has been interrupted. A number of men have been sent from Geelong to repair the line, but owing to the mountainous nature of the country the work is attended with great difficulty, and will not be completed for several days. The branch line to the Cape Otway lighthouse, which runs from Apollo Bay along the sea coast within a few miles of Lorne, has also been burned down in several places.
Tourists who have walked from Apollo Bay to Lorne, a distance of 30 miles, state that the country from the coast line inland for several miles presents a most desolate appearance. The whole country is burned, not a vestige of vegetation remaining

Irrewillipe By far the greatest sufferers by the Irrewillipe fire are the Messrs, Silk Brothers, sawmill proprietors. One of their mills situated beyond Tomahawk Creek in the parish of Carpendeit was totally destroyed, as well as their dwelling house with all its contents, business books, &c. To make matters worse both the Messrs. Silk were absent, in Melbourne at the time of the unfortunate occurrence, and they arrived where once stood their home on Tuesday evening only to find a blackened and charred mass of smouldering timber. Their loss they estimate at about £1000, but of this amount £300 is covered by insurance in the New Zealand Company
In addition to the loss of the mill and dwelling house, the Messrs. Silk Brothers blacksmith and wheelwright shops attached to their mills, as well as a large quantity of sawn timber were also destroyed by the fire. The firm however will be able-to execute all orders entrusted to them at their Tomahawk Creek mill in Irrewillipe.

Other bushfire relevant events

There were some strong editorial arguments directed to the government on behalf of the burn victims, mainly about compensation owed by the government because the fires were caused by government workers.

The Colac Herald Fri 8 Jan 1886

They may be pardoned if they not only feel, the loss bitterly but look about, and enquire if there be no remedy. How severely these losses have fallen on some may be judged, if we take Mr Ball's case as an example.

Mr Ball has lost a nine roomed house only lately built, And intended for visitors to the forest and to make things worse There had been £100 of house stores only lately received. It is vain to talk about the necessity of insurance in all such cases, for the delay and hindrance in the ease of those situated in the forest is very great, and as a consequence insurance is not effected at all.

But we do believe the Government ought to come forward and compensate in some slight degree the many sufferers who through no fault of their own are such terrible losers, for it seems little doubt that the fires first started on Crown lands.

We believe we are justified when we state that a similar disaster in our own in South Australia was relieved in the manner we are suggesting. If' anything be done, the Shire Council should be asked to take action, along with the settlers on the matter, and there would then be fair hope that some favourable result would spring out of the joint action of the two parties

The Colac Herald Tue 12 Jan 1886

The destruction of property is far greater than was at first supposed the sufferings of many selectors and their families are almost beyond belief. A very large number of families have been rendered homeless while others again have lost their fencing, and stock which is a serious to them.

The origin of the fire in these instances can, we believe, be clearly traced to the men employed by the Government on Crown lands for the destruction of rabbits; and in other instances to the selectors themselves, who were anxious to achieve a " good burn," and thus clear their holdings of a lot of waste timber which was lying about in all directions on the ground, besides destroying vermin. However, as one or two prosecutions are likely to be instituted we will say no more upon this subject at present.

A visit to a few of the scenes of the late disaster from our BARONGAROOK correspondent)

Let's steer across here and we shall be out of the first fire. The paddock we are now in belongs to the eldest son of G. C. Harris. He is a loser of a few tons of four feet wood, and a few chains of fencing. The house we are now coming to is Ballagh's on the summit of Simon's Hill. The fire has not reached him. In compliance with the Rabbit Act, he has hauled his fallen timber and cut and burnt his saplings. His adjoining neighbour, who was compelled to return from N.S.W, has mowed the ferns and burned the whole of the paddocks weeks ago, when the was no danger.

Now look round the paddock opposite Ballagh's house, with the rubbish it contains in the shape of fallen timber, bark, saplings, &c. What chance do you think Ballagh's and Basset's houses stood in case that paddock took fire last Tuesday? In all probability there would have been a repetition of the Turnbull catastrophe. One paddock allowed to remain in this state nullifies the efforts of a whole district in attempting to suppress the rabbit nuisance. The owner of it is a man of means - the possessor of houses and land.

What do I think was the cause of the fires?

Well, in the first place it is an undeniable fact that the men employed in laying poison on Crown lands have been for some weeks past engaged in setting fire to the scrub in all directions. It is such a well known fact that I don't think they will attempt to deny it. Again men whose holdings abut unto Crown lands on which nothing is done beyond poisoned grain being scattered. Smarting with the feeling of injustice of being summoned and fined for not having cleared their land of heavy logs, &c., knowing to do so would be in sheer want of time and money, have kept the inward vow made on leaving court, have cut down saplings, &c., waited for a thorough hot day, struck a match and let it rip regardless of the consequences.

Observations

The band of severe weather is very narrow this fire season. It strikes areas where numerous low intensity fires are placidly devouring local scrub, and turns them into fearsome infernos that are pushed by the gale winds into unprotected settlements and cause substantial damage.

The local media condemns the role of government workers in causing the fires. Note that it does not request government involvement in fire protection, but compensation for the damage the government caused.

1886 / 87

Weather

BOM rainfall records for Melbourne: Sep well below, Oct to Dec above average, Jan well below, Feb above, Mar down, April x 2

Hottest days in Melbourne **DAYS > 35^{0}C** **12**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.7	12	106

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

Argus Tue 11 Jan 1887
NUMURKAH, MONDAY.
A fire, said to have been caused by some sparks flying over the Murray from the Barooga fire, occurred on Saturday at Yarroweyah north, in the red gum swamps, along the river bank about five miles up the stream from Tocumwal It is now raging furiously amongst the long grass and reeds in the red gum swamp along the river Murray. A quantity of valuable timber belonging to the Yalca Sawmill Company has been destroyed, and great danger exists of the flames extending amongst the selectors in the locality. If this should happen the results would be most disastrous, as the grass on this side of the river is very long and dry, and many of the crops are still standing,
Some of the farmers in the locality are of opinion that the fire was caused by the carelessness of some fishermen who were camped on the river bank. The Numurkah police have been communicated with on the matter, and a strict inquiry will be made.

On Saturday last a fire occurred on the farm of Mr Wilson, of Yalca North, by which a threshing plant, belonging to Mr J Paterson, of Picola, was entirely destroyed. The machine was working at Mr Wilson's place, when the straw took fire, through one of the machine men having dropped a match or let fall a spark from his pipe. The place was immediately in a blaze, and in a very short time it was evident that nothing could be done to save the stacks or the machine. About 20 bags of wheat and five bags of barley were also consumed. The plant was valued at about £450.

APSLEY, JAN 10 The heat during tho past week has been unprecedented, ranging from 100 deg to 114 deg in the shade. Bushfires are raging round the district. There are no signs of rain. The crops are all ripe. The yields are very good in most instances.

Argus Wed 12 Jan 1887
PORTLAND, TUESDAY.
Tremendous bush fires are raging in the Heywood district, between Heywood and Mount Deception. A party passed to day through 12 miles of burning timber. A settler named Graves is reported to have lost £100 worth of wattles, and the surrounding farmers are cutting their crops as quickly as possible, as the fire is still travelling fast. Should the wind rise, serious destruction is feared.

Camperdown Chronicle Wednesday 9 March 1887
The recent bushfires and thunderstorm appear to have caused an immense amount of damage in the **Wombat State forest**. A report on the condition of the fore»t has been furnished to the Minister of Agriculture by the Inspector of Forests, who states that an immense amount of splendid timber has been destroyed by the storm. The Inspector never witnessed such destruction in any part of the forest as in **Daylesford**. Hundreds of trees had been uprooted and the fallen timber smothered the tracks. The severity of the storm appears to have been chiefly felt in the gullies and ravines, in several of which not a tree had been left standing upright.

A few days previous to the storm a severe bushfire swept over the area, and the two visitations have caused the Wombat forest to present a very desolate appearance.

Argus Thur 10 Mar 1887
FIRES IN THE HEYTESBURY FOREST, MEPUNGA EAST, TUESDAY.
A terrific bush fire broke out here yesterday, and travelling with astonishing rapidity through the forest caused an immense destruction of property. The day being very hot, with a strong north wind blowing, the flames spread in every direction, leaping from tree to tree, running along the grass, destroying fences, haystacks, and outbuildings Kangaroos, wallabies, and other animals fled before the flames, taking refuge about the selectors' houses, in gardens, or anywhere refuge could be found
Many of the selectors have suffered severely, miles of fencing having been completely destroyed and the whole of the paddocks cleared of every vestige of grass.
Mr Cumming's saw mill had a narrow escape, as it was, a stack of about 500 logs ready for sawing was entirely destroyed. His loss will be about £600 sterling In many cases the selectors barely saved their houses from destruction, and it was only by men, women, and children straining even nerve carrying water, etc, that they did so.
For miles around the country is blackened. Even while I write trees are falling and crashing in every direction, and the forest is still dense with smoke rising from the smouldering logs and trunks. Mr. R Milne estimates his loss at about £300, and many others will lose from £100 to £500 worth of property.
The Mepunga East state school was surrounded by the flames, but us there happened to be a space of cleared ground around the school it luckily escaped The fencing, however, was burnt. It will be difficult to estimate the extent or amount of damage done as 1 have just been told tho fire swept the country through Nullawarre and Nirranda, right down to the coast
A fire also broke out near Panmure, and surrounding Williams' sawmill completely destroyed it together with 1,000 logs, and £250 worth of sawn timber

Observations
The March fires occurred in rather mild temperatures, suggesting the winds were strong, and caused the burn-off fires to overrun their planned boundaries and keep going and growing through the settler areas and adjacent forests.

1887 / 88
Weather
BOM rainfall records for Melbourne: Sep to Dec above average, Jan above, Feb well below, Mar average, April below

Hottest days in Melbourne **DAYS > 35^{0}C** **4**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
7.2	4	38

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

Argus Tue 21 Feb 1888
A WOMAN BURNT TO DEATH PORT FAIRY, MONDAY.
A disastrous bush fire occurred yesterday at Yambuk, near Port Fairy, by which Johanna Gleeson, the wife of a well-to-do farmer, was burnt to death. The unfortunate woman was endeavouring to prevent the fire from reaching her homestead, when her clothes ignited, and she was speedily enveloped in flames. Medical aid was obtained, but without avail, and she died early this morning. The fire destroyed a large quantity of fencing and grass. Great indignation is felt through the district, as it is known that the fire was caused by persons out shooting, who carelessly threw away lighted matches after lighting their pipes. The police are taking steps to punish the offenders.

Argus Mon 9 Apr 1888
SERIOUS BUSH FIRE AT CRAIGIEBURN.
A correspondent writes as follows under date April 7
One of the largest bushfires known in this district since Black Thursday took place yesterday It broke out on Sir W. J Clarkes Bald hill property about noon, and, a north wind blowing fiercely continued its ravages until sundown. Happily no stock was lost nor were any homesteads burnt, so far as is known, many of the farmhouses being saved with the greatest difficulty. Sir W J Clarke lost over 1 000 acres of grass and a quantity of fencing.
Mr WH Williams had all his grass burnt, over 1 200 acres also his fencing. The fire was within a few feet of his haystack. His nephew also lost all his grass, and with difficulty saved his homestead.
The fire then crossed the Donnybrook lane, a chain wide, and burnt over 1,000 acres and a quantity of fencing belonging to Mr R. B Stevenson, Tulloch; also one half of the Mount Ridley back section. Happily at sundown a thunderstorm with rain took place, and prevented it spreading further. The neighbours mustered in large numbers, their principal object being to save the stock and houses, as the flames rose so high that to attempt to put out the fire from the grass would be useless. Much sympathy is felt for Mr Stevenson and the Messrs Williams, who are the principal sufferers

Penshurst report In late February wood carters were blamed for starting a fire that burnt out most of Banemore, twelve German farmers and parts of Gazette Station.

Observations

The April fire occurred on a day of average warmth, only 29C at Melbourne. The fires escaped control due to the strong winds. Strong winds grow the fire's perimeter faster than the defenders can extinguish it. This will always be the case in an unprepared landscape, simply because of logistics. Instead, the defenders turned their attention to most beneficial direction - protect the houses and stock.

1888 / 89

Weather

BOM rainfall records for Melbourne: Sep to Dec well below average, Jan above, Feb Mar well below, April above

Hottest days in Melbourne **DAYS > 35^{0}C 6**
Eg, Dec 26 35.7C, Jan 10 - 11 35, 34.1C, Jan 22 -23 35.2, 37.3C, Feb 13 35.5C, Mar 15 - 16 34.7, 35.5C,

Dryness Index	Days >35^{0}C	Seasonal Severity Level
8.4	6	61

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

Argus Fri 11 Jan 1889
CHARGE OF CAUSING A BUSH FIRE SANDHURST, THURSDAY.
At the City Court this morning Mr David Watson, dentist, and Mr David Kershaw were charged with having neglected to extinguish a fire lighted by them on Christmas Day Mr Watson and party had been fishing in the Campaspe River and after they left a bush fire broke out and consumed a quantity of grass. The fire was supposed to have spread from» Mr Watson's camp fire. For the defence it was shown that water was poured on the camp fire and when the party left it was believed to be out
Mr Watson was fined 40s (=£2) and £2 10s 6d costs Mr Kershaw was fined 2s 6d and 13s costs.

January 1889 - bushfires around Lorne for several days. The coach from Birregurra to Lorne passed through fires nearly all the way from Deans Marsh to Erskine House' (Surf Coast Shire)

Argus Thur 24 Jan 1889
AVOCA, WEDNESDAY.
A large bush fire broke out this evening, but its whereabouts is yet unknown.
The town is enveloped in smoke. The weather to day was oppressively hot, the thermometer registering 106deg. in the shade.
UPPER MACEDON, WEDNESDAY.
A large fire has broken out on both sides of Mount Torong, about two miles from the Upper Macedon township. No damage has been done so far. A strong north wind is blowing and it is intensely hot.
CAMPERDOWN, WEDNESDAY.
The heavy smoke seen south of Camperdown yesterday was caused by several comparatively small bush fires in the vicinity of Scott's Creek. The thermometer reached 104deg. in the shade again to-day, but there is a prospect of a change.
PORTLAND, WEDNESDAY.
A large number of bush fires are blazing in the vicinity of this town. Today the thermometer registered the highest point attained for a long time, reaching 102deg. in the shade between 1 and 2 o'clock, but a change of wind to the west so lowered the temperature that at 2 o'clock the glass had fallen to 80deg.

1889 / 90

Weather

BOM rainfall records for Melbourne: Sep to Dec around average, Jan to Mar well below, April just below

Hottest days in Melbourne **DAYS > 35^{0}C** **15**
Eg, Dec 26 37.7C, Jan 1 - 2 36.6, 36.7C, Jan 5 36.7C, Jan 9 36.7C, Jan 18 -21 35.1, 38.4, 37.5, 37.5C, Jan 25 – 27 38.6, 37.4, 38.4C, Feb 3 to 7 34.3, 37.6, 38.1, 39.7, 38.8C, Feb 26 35.1,

Dryness Index	Days >35^{0}C	Seasonal Severity Level
8.2	15	150

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

Argus Tue 31 Dec 1889
NUMURKAH, MONDÂY
On Saturday afternoon a fire started in Mr. G McCracken's paddock, **Tallygaroopna,** and very soon it spread over hundreds of acres. A crop 100 acres in extent, which was expected to yield five bags of wheat per acre, was destroyed. The fire crossed the road several times, and hundreds of people who congregated to fight the flames could do nothing to stop their progress. The fire went towards the Goulburn River, and is now burning in the vicinity of Lock Garry. A lot of fencing was destroyed, and tile farmhouses were saved with difficulty.

Surf Coast Shire January 1890 Forest between Deans Marsh and Lorne 'ablaze for two to three days'. The fire was reported as about half a mile in width

Argus Fri 17 Jan 1890
MANSFIELD, THURSDAY
Although the weather has been unusually hot and dry during the past month, and the grass everywhere luxurious and plentiful throughout the entire district, the total absence of bush fires has been most remarkable. This is doubtless in some measure due to the fact that the residents, knowing the great danger that existed from the accidental dropping of a match, or from ash blown from, the pipe of a careless smoker, have taken more than usual precautions against fire. In many cases caretakers have been placed in the various paddocks, and men employed to travel along the boundary fences night and day, with instructions to give an alarm on the first appearance of fire or of the presence of a stranger of suspicious appearance.

Notwithstanding these precautions, however, a fire broke out in the long grass at the back of Maindample yesterday afternoon, and in a few moments a vast wall of flame was being carried by a high west wind rapidly towards Mansfield. The kangaroo grass was in many places 2ft and 3ft. high, and as the travelling flame increased in width to over half a mile, carrying everything before it, the scene was very striking. 'The roar of the flames could be heard miles away, and the fire soaring through and above the tree tops, scattering flaming branches and leaves in all directions, gave the paddocks the appearance of being shelled from a distance.

Over 100 men were soon on the scene, but with the strong west wind blowing all attempts to subdue the fire were utterly useless, and the destruction of thousands of pounds worth of property seemed inevitable. All at once the wind changed suddenly, and blowing a gale from the south- east carried a stream of flame over Chator's paddock and the three chain Melbourne road, a distance of over half a mile into Adam's log fences. How the dwellings of the Chators escaped destruction seems a marvel. The grass was burnt to within a few yards of a weatherboard building, in which lay a bed ridden elderly woman, and at least five minutes elapsed alter the flames had passed over it before any attempt could be made to reach the dwelling through the fire and darkness and smoke. Soon after dark the wind subsided, and by this time there could not have been fewer than 150 workers on the scene, who succeeded in keeping the fire within bounds, and leading it away** to the ranges beyond the Black Swamp, where it is still burning. Messrs. Wimpenny, Green, and Chator are the greatest sufferers by the fire. The first named loses about 600 acres of grass and many miles of fencing, and Messrs. Chator and Green have had all their fences destroyed. Mr. Johnson, of Maindample, had two stacks of oats, the whole produce of this season's crop, entirely destroyed.

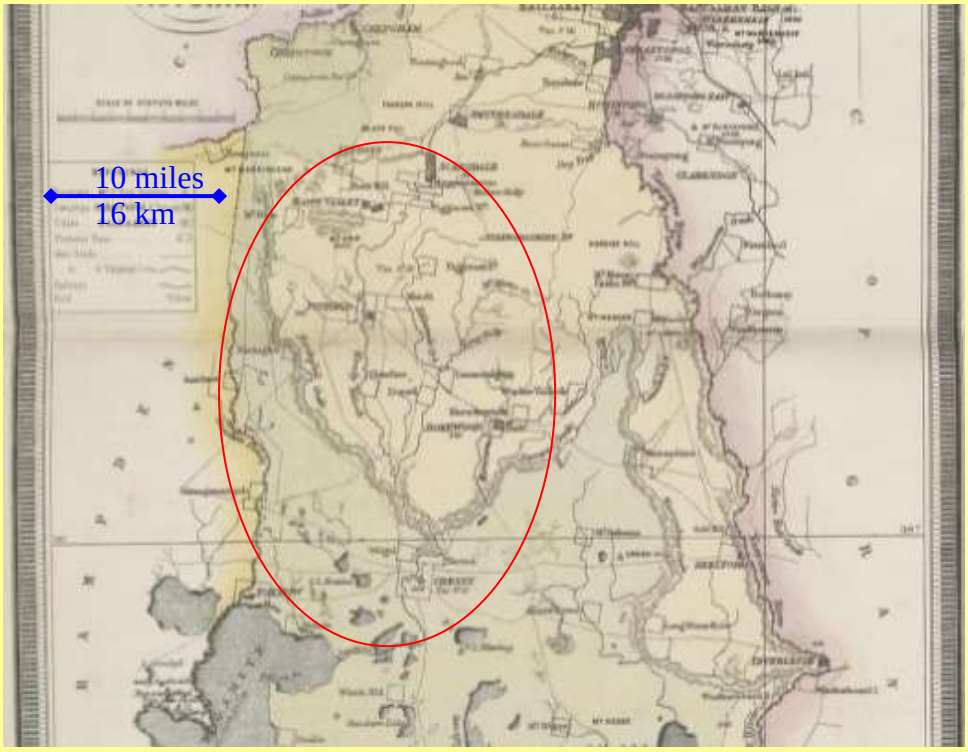
** This probably means they used firing along tracks to stop the run of part of the fire and let the rest keep going to the ranges beyond.

Surf Coast Shire February 7 1890 Extensive fires at Mount Duneed, and between Mortlake and Terang, and at Camperdown.

Argus Tue 17 Feb 1890
ENORMOUS DESTRUCTION OF PROPERTY.NEARLY 40,000 SHEEP BURNT.
BALLARAT. Monday
During Saturday and Sunday an extensive bush fire raged about Mount Mercer, and very great damage resulted. Spread over several properties

CAMPERDOWN, Monday
Serious ravages of fires on Saturday on stations beyond Lismore Strathvean and Glenfyne, are almost entirely burnt out, thousands of acres of grass are destroyed and it is estimated that 10,000 sheep have perished.

LISMORE Monday
On Saturday a traveller started a fire at Strathvean and another from Spring Hill
Skipton joined it, and burnt about 100 000 acres. viz, at Strathvean, 15,000 acres, at
Yarima, 5 000, the Meadows 7,000 , Glen fine, 12 000, Naringale, 8 000, Commeralghip 2 000,
Morey's, 15 000 Clarkes 7 000, Mount Bute, 40 000,
Thirty six thousand sheep were destroyed.
Some poor farmers lost everything but their houses.
The fire burnt from Lintons to Lake Corangamite then to Rokewood and to Happy Valley. The conflagration was 40 miles long and from 5 to 15 wide, the worst fire ever know in the district.



Approx area of 60km x 16 km = 100,000 ha

RUPANYUP, Monday
Saturday was, without exception, the worst day this season for heat and dust. The thermometer was over 100deg, whilst the wind was fiercely hot und swept up dense clouds of dust. A large fire broke out during the afternoon near Sawpit Swamp, and a large area of country was burnt.

STAWELL Monday
A very destructive bush fire broke out at Mount Dryden on Saturday fanned by a strong easterly hot wind and spread away to the Black Ranges.

DAYLESFORD, Monday
On Saturday and Sunday, bush fires sprang up in all directions and considerable damage was done at Mount Franklyn. Grave fears are entertained for the safety of the farmers at Porcupine Ridge, as the fire is travelling rapidly in that direction. Fires are raging in the forest about Leonard s Hill and Korweinguboora
On Saturday afternoon a file broke out close to the town, below Kidds Gully, and for some time Mi Stanbridge's property was in danger, but a large number of men turned out to combat the flames and their exertions, aided by a timely change of wind enabled them to get the fire under without damage except on the grass land.
Today being very calm, the have not made much progress, but should the wind again rise the consequences to some of the outlying farmers will be disastrous.

KANGAROO GROUNDS, Monday
On Saturday last the most destructive fire ever know n to have taken place m this district swept across the country from the back of Panton Hills to within a short distance of Kangaroo Grounds, in its progress doing a great deal of damage to a number of small holdings. A hot strong wind was blowing at the time and impelled the flames onwards at a terrible rate and the progress of the fire was only checked bv a change in the wind towards evening.
There were a number of volunteers at work, and their attention had to be led mainly towards saving buildings. The loss in fruit trees and fencing besides grass amounts to a large sum. Several orchards lost fruit trees in full bearing. Cracknell lost 200 fruit trees, losses about £200.
YEA Monday
Bushfires at Ghin Ghin.

Argus Fri 21 Feb 1890
CAMPERDOWN, Thursday.
The bush fire mentioned in The Argus of today as having started yesterday in Gillespie's forest paddock has been spreading rapidly all last night and today. Numbers of people in Cobrico have been burnt out, and the fire has now entered the parish of Naroghid, where it is likely to do considerable damage, as the land there is fairly well cleared, and most of the people are engaged in dairying pursuits, so that their grass is their all. One man lost 50 sheep by the fire last night and various other minor losses are reported to day.

This afternoon a fire was seen raging on Mr. Hope's Gnotuk Station, within three miles of Camperdown. A number of men soon mustered, and the flames were subdued with the loss of about 150 acres of grass and half a mile of fencing. Had it not been for the number of men at hand miles of good pasture land would have been devastated. The fire started from the Curdie's River railway line, at present being constructed by Messrs Buscombe, Chappel, and Bell. Some of their men were employed burning fire guards along the side of the line. Every care seems to have been taken, as men were following up the burning gang, and putting out everything left behind. Notwithstanding this precaution, however, a spark seems to have been carried many yards out into the paddock, and a fire resulted.

Other fires are burning fiercely in the forest. Today has been very hot, and tomorrow promises to be similar. All the stations are again well provided, and men are kept constantly on the watch, so that when a fire does spring up a good force is concentrated on it without loss of time.

The man Cuttmore, who was committed for trial at Colac last week for having caused the disastrous fire at the Warrions, admitted to the arresting constable that he was the individual who was sentenced to imprisonment for having wilfully set fire to Clark's crop at Camperdown some seven or eight years ago.

MACARTHUR, Thursday
During the last day or two a fire has been raging around Mount Eccles. While it was confined there but little damage was done, but this afternoon It crossed the road on to the properties of Messrs. Green, Savin, and Neville. The pasture and stubble land was overrun by the fire, and a considerable quantity of fencing was burnt. The fire was driven along by a strong wind, and it was with difficulty that its course was checked towards dusk.

Argus Thu 27 Feb, 1890
BYADUK, FEB 24
Yesterday morning a bush fire broke out in the vicinity of Condah Swamp, and raged fiercely throughout the day. The flames from burning trees were distinctly visible from here all last night. No report is yet to hand; but that considerable damage has been done is a certainty, as a strong breeze was blowing all through.

KILMORE, Wednesday.
Another serious bush fire broke out yesterday evening, about 5 o'clock, near the Kilmore diggings, adjacent to the fires which proved so destructive about a fortnight ago. The afternoon was moderately cool and calm, and farmers were quite unprepared for another outbreak, but from the surroundings it is very evident that the present fire is the work of an incendiary, as the bush was fired in two places some 300 yards distant from each other. Not much damage was done last night, but today the conflagration has assumed serious proportions, and it is difficult to form any opinion at the present juncture of the probable damage.

The fires were started in a paddock belonging to a farmer named Anstey, on the top of a ridge, and, fanned by a northerly breeze, burned away into the paddocks of Messrs. Cordell and George Robinson, where the beaters succeeded in temporarily checking its progress This morning, however, it was seen that strenuous efforts would have to be made to save the properties to the south. Several tracks were burnt, and the main fire, meeting these, was stopped in many places. Near the Goldie mine the fire swept down a ravine with terrific force, and, a strong breeze blowing at the time, burning pieces of bark and leaves were carried for a considerable distance, and started the fire in other places on the opposite side of the road.

When all the beaters were congregated near the Goldie mine it was discovered that the fire had crossed the main road, and was making considerable headway through Mr W. G Cramer's paddocks. No time was lost in rallying up the forces here, and, after some hard battling, the fire was got under at this point. In the west, however, it burned with amazing rapidity and fierceness, the grass lands and fences of Messrs. Chapman, Heffernan, and others, being laid waste. Much apprehension is felt should the fire cross the main road from Kilmore to Forbes, where the damage would be something enormous.

As it is, some thousands of acres have been destroyed, besides many miles of fencing. Altogether, the fires in the Kilmore district this season have been without a parallel.

MACARTHUR, Tuesday.
Outbreaks of fires in this neighbourhood are almost of daily occurrence. To the westward of the town a fire spread several times and swept over a few farms, burning a large amount of fencing, both log and post and rail. At one time the stack and homestead of Mr. John Gow were in great danger, having the fire on three sides
At one time it was within 10 yards of the stack. While one half of a party were fighting against the flames the other half were engaged in covering the stack and the exposed side of the house with wet blankets and corn sticks, and keeping them saturated with water. Fortunately, all the buildings and corn were saved. On an adjoining farm the owner got on top of the stack and kept the roof of it damp with water. The task was difficult, owing to the smoke. Parties are now watching the fire to prevent a fresh outbreak.

To the east of the town another fire appeared in a scrub yesterday afternoon, but fortunately it was confined to a limited area.
On the Horton Hills Station a fire broke out on the track of some sportsmen in the pursuit of kangaroos The fire is supposed to have originated from the paper used by some of the men instead of wads. The fire was not got into subjection until well on m the night. A few miles north of the town a fire has swept over some farms, destroying some fences and grass, but fortunately homesteads have escaped Log fences are still burning To the south of the town there is an abundance of long grass, and the inhabitants are in daily fear of a conflagration.

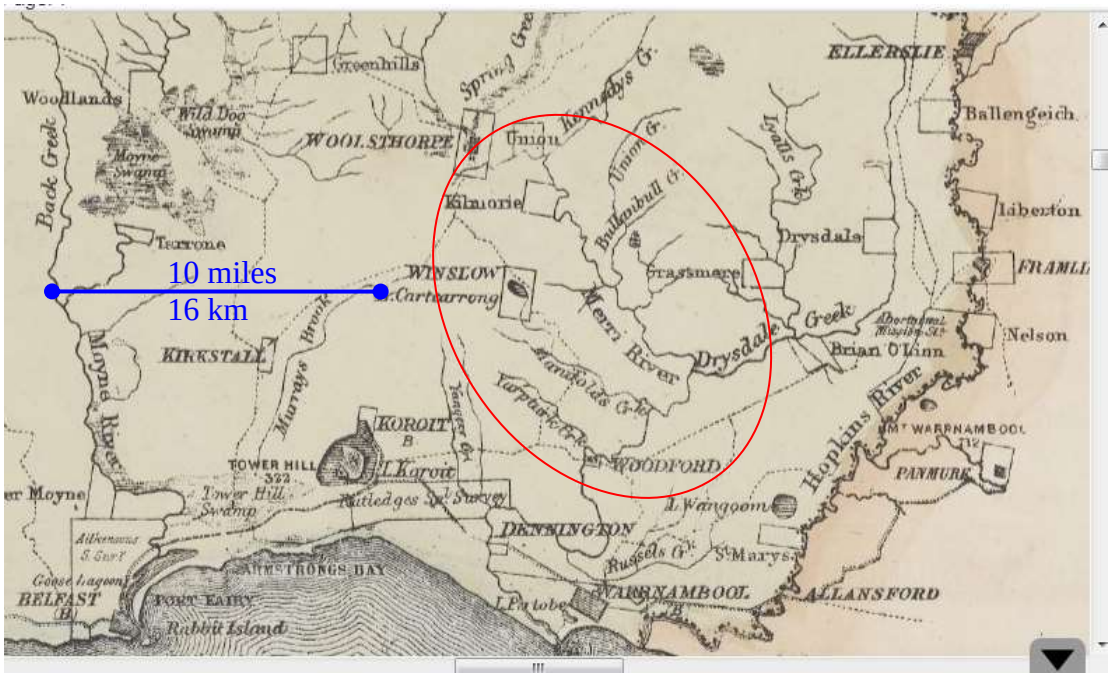
Wednesday A strong hot north wind has been blowing today. Extensive fires are raging at Inverary in the north, and in the south on the Dunmore and Woodlands stations. The run of Mr. Sam

Baulch's said to be ablaze. Towards evening the wind veered to the south, thereby checking the course of the fire.

Argus Thu 6 Mar 1890
WARRNAMBOOL, WEDNESDAY.
A large bush fire broke out today, and passed through the parishes of Grasmere, Mailor's Flat, and Winslow, covering from between **seven and eight miles** of country.
The fire commenced seven miles on the west of the Great North Road. A fierce north wind was blowing, and the day being extremely hot it travelled at an alarming pace, soon crossing a three-chain road, and making its way through a lot of heavily timbered bush country, in which there are few habitations. Hundreds of men turned out, and worked bravely, succeeding in arresting the progress of the flames before they bore down upon the townships of Woodford, Grasmere, Mailor's Flat, and Winslow, which were in imminent danger.

A thousand acres of grass and a number of haystacks were destroyed, the princlpal sufferers being Messrs. J. Kurnell, J. O'Brien, R. Bourke, D. Hogan, P. Hardy, John Paterson, H. Tate, John MacNamara, H. Watts, and H. Need. Mr. Hogan was a considerable sufferer in the recent fire, but had 100 acres of grass left which is not destroyed.

When the fire was at its worst the wind changed and rain fell, greatly aiding the almost exhausted beaters in their praiseworthy efforts to save property. A number of the men fainted from the extreme heat and exertion, but fortunately no more serious casualty is reported. Fences and trees are still burning, but no further danger is apprehended. One comforting circumstance in connection with the fire is that it passed over a large extent of rabbit infested country, killing the pest in droves.



Conservative fire area estimate = 15,000 ha
Source map F.E. Hiscocks & Co.'s Victorian Counties Atlas, 1874

March 17 1890 Fires between Aireys Inlet and Lorne and also at Anglesea. A large portion of the forest between Aireys Inlet and Lorne was consumed. . (Surf Coast Shire)

Other bushfire relevant events

Argus Fri 7 Mar 1890 The bushfire at Warrnambool – an appeal
TO THE EDITOR OF THE ARGUS.
Sir,-At a public meeting held here last evening, and presided over by the Mayor of Warrnambool, for the purpose of devising means of raising a fund to relieve some of the sufferers by the great bush fire which has swept over the parishes of Woolsthorpe, Meena, Yarpturk, and part of Purnim, completely consuming a number of houses stacks of grain and hay, cattle, sheep, pigs, and poultry, tenets; and implements, with furniture and clothing, causing a great amount of distress in the district affected.

It was resolved that the editors of the Melbourne morning papers should be asked to receive subscriptions, and hand the same over to the treasurers appointed at the meeting. As a guarantee that every care will be taken in investigating all claims that may be made on the fund, the mayor of Warrnambool and the president of the Shire of Warrnambool were appointed joint treasurers, and the town clerk and shire secretary joint secretaries.
I am, &c , JOSEPH MACK, Shire Secretary. Warrnambool, March 6

Penshurst report Around 1890 a new fire menace arrived with the coming of the railways. Steam trains were notorious for emitting sparks and starting fires. It did not take long for the first fire to break out. Starting at the railway pits on the east side of Mount Rouse the fire swept over the mount and up to the Kolor homestead - in all burning about 1500 acres.

Other relevant events

Railways stimulated changes in the Otways
The completion of railway lines to Forrest in 1890, and to Beech Forest by 1902, stimulated a major timber industry in the Otway Ranges. Dozens of bush sawmills were scattered through the forest, linked by timber tramways to roads or rail lines. The steep terrain, wet weather and thick forest meant that many mills formed small, isolated settlements. Henry's No. 1 Mill was typical of such places, established in 1904, deep in the watershed of the West Barwon River. It was connected by a timber tramline to the railhead at Forrest, ten kilometres to the north, but the mill's isolation meant that a permanent population of around 100 people lived on site. The mill settlement featured rough timber huts for single men and modest wooden houses for married men and their families, along with a boarding house, stables, post office, school and store. In 1927 the mill shed was destroyed by fire, resulting in the gradual abandonment of the site.

Legislation 1890 Fire Brigades Act
By 1888, there were 100 brigades in Victoria. In 1890, parliament passed the Fire Brigade Act and two new boards were formed: The Metropolitan Fire Brigades Board (MFBB) and the Country Fire Brigades Board (CFBB). The CFBB had power and responsibility of all fire brigades based more than 16km from Melbourne.

The MFB started in 1891 and used horses to pull the carts, hoses and reels and firemen (women were first inducted in 1988), throughout Melbourne. Street fire alarms were gradually placed on city and suburban street corners and a watch tower at Eastern Hill gave a 360 degree view over Melbourne.
Source History timeline CFA website and State library Victoria blog

10 July 1890 Careless fire provisions of the Police Offences Statute (1965) were transferred unchanged to Police Offences Act 1890.

Observations

This fire season has many hot days during three very dry summer months, and endured many bushfires, a large burnt area and much destruction.

The Mansfield community was proactively prepared for bushfire protection. It had organised volunteers for dealing with the two obvious threats – stop the fire starting and putting it out fast. Technically, they had addressed Prevention (= citizen patrols to prevent careless or malicious fires) and Suppression (rapid response to a fire call-out). We can assume they had also addressed essential elements of Presuppression (equipment readiness, briefing and readiness of people, communication methods, etc). Whether they had laid down fuel management areas (Mitigation) in strategic areas is not known, but hopefully they understood the lesson about the survival of the weatherboard house without suppression effort within a paddock of tall grass. It can only have occurred if there was sufficient fuel free gap to prevent damaging impact of flame and heat.

The core message for the reader is that devoting resources to Prevention and Suppression is not enough to prevent a bushfire escape on a dry windy day.

It may be a suitable plan for a fire in a town scenario, where the fire cannot run because the fuel bed is discontinuous and suppression resources are many and fast, but is unsuitable for a continuous fuel bed scenario. Different goals and plans are needed because the fire's perimeter expands faster than control line can be built, and meanwhile, the flame itself is a wind driven inferno that runs into town and settlements that may or may not be protected. In those days, settlement protection relied upon **Suppression** during the fire attack. The complementary alternative of **Mitigation** was neither contemplated nor applied by the town leaders, who assumed the role of town protectors. The reader can explore whether this complementary alternative is either contemplated or applied by today's fire agencies.

The Kilmore defenders fought fire with fire by laying back burns upwind of the tracks ("several tracks were burnt") ahead of the advancing fire, thereby stopping the running flame in many places. Remembering that these people were very part time volunteers, this indicates community knowledge of the tool of back firing was widespread and well practiced. Their use of the track system as a base for fire suppression indicates they understood the first principle of fire control, ie, aim to stop the fire at a nominated control line, and value of infrastructure (eg, tracks) already in place before the fire attacked. This report also identifies the problem of live embers jumping across their control lines and causing the fire to escape their control. This same problem bedevils bushfire fighters to this day.

The Macarthur report indicates organised suppression. Resources were divided between stopping the running flame before it reached the assets and protecting the assets (= house and stack) from sparks (embers). The use of wet blankets (presumably held up by corn sticks) to protect the house wall and flammable stacks showed how resourceful, self reliant and competent the community had become, remembering that there were neither fire brigades nor government assistance in those days.

A question for the reader is what works could have been done on site before the fire attack to ensure the house and stack were so well protected that a minimal suppression effort would have sufficed.

The Camperdown report highlights the unstated value of summer grass to the farmer – "their grass is their all". Unfortunately, Rascals like Cuttmore will always be with us.

1890 / 91

Weather

BOM rainfall records for Melbourne: Sep to Dec above average, Jan below, Feb Mar well below, Apr average

Hottest days in Melbourne **DAYS > 35^{0}C 8**
Eg, Jan 4 39.4C, Jan 8 35C, Feb 7 – 9 34.1, 36, 34.9, Jan 14 38.1, Mar 5-8 34.7, 37.3, 37.5, 33.7

Dryness Index	Days >35^{0}C	Seasonal Severity Level
10.4	8	87

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Carver
Feb 1891 Major fires in Dandenongs, Upper Yarra and Western District. One death at Ferntree Gully

Reported bushfire events

Argus Tue 6 Jan 1891
NAGAMBIE, MONDAY.
The bush fire which broke out near the town on Sunday raged fiercely, till early this morning. The rain, which is now-falling, has been the saving of many poor struggling farmers. It is impossible to estimate the damage done. Mr. H. Muller, of Wormangal, lost everything, and had a narrow escape of his life.

Argus Thu 22 Jan 1891
A destructive bush fire occurred on the Ravenswood Estate. A length of over two miles is said to have been traversed by the fire, which caused the loss of a lot of grass and fencing

Argus Wed 11 Feb 1891
SANDHURST, TUESDAY.
The bush fire which broke out in the **Whipstick scrub near Goornong** yesterday is still raging fiercely further north, and there seems to be little hope that the conflagration can be mastered, so that it must continue till it exhausts itself, or is checked by a fall of rain. The fire can safely be described as the most extensive and disastrous which has occurred on the plains north of Sandhurst since the country has been settled. Already upwards of 20 miles square of fire swept country exists, [= 25,000 ha] and visitors to the locality describe the scene as one of vast desolation. Hundreds of miles of fencing have been consumed, farmhouses and stacks have disappeared, thousands of acres of grass have been burned, and the stock ft all kinds have perished in the flames. It is estimated that £20,000 will not cover the loss, and immense amount of misery will ensue, and will render necessary a public appeal to the charitably disposed. So far the total loss by the fire cannot even be guessed at, as the flames are passing, swiftly on in the Egerton forest, menacing the holdings in the neighbourhood.

The fire broke out early yesterday morning in the Whipstick scrub, a few miles to the westward at the wayside township of Goornong, and, assisted by a north westerly wind, proceeded apace along by the main road from the Murray River towards Sandhurst. In this direction the fire burned down nearly to Huntly, or a distance of eight or nine miles, taking even thing before it save one or two holdings, which were saved with great difficulty. The wind then changed to the south, and the fire went away in the direction of the Egerton forest, which it is now devastating fences, firewood, standing timber, hay stacks, agricultural implements, live stock, and even farmhouses were utterly consumed. At Mr Heffernan's estate, near Goornong, a flock of 2,400 sheep were just removed in time, and the paddock immediately afterwards was a sheet of flame. The farmers have been working hard to restrain the fire, but with only a small measure of success.
The fire is supposed to have originated at the camp of the men employed in the Whipstick in the destruction of rabbits, but this is only a surmise.
Amongst the principal sufferers was Mr P O Donnell, who lost his house, fences sheds, stable buggv, and grain. Mr Stanlev has lost over four miles of fencing and his grass and Mi Heffernan is a sufferer in both respects to an even greater degree.
Mr A McDonald lost over a mile of fencing and his grass, but his house was saved by the expedient of making a fire to meet the on coming flames. Mr T M Gauchie lost everything on the land, including a large quantity of wheat, representing his harvest for the last two years. Amongst the other sufferers are Messrs Eastman, Knight, Blake, Maguire, Bailey, and W M Gauchie. A complete list of the losers is unobtainable, and so long as the fire continues the record of loss and ruin will be continual added to.
Whilst the farmers and police are fighting the flames other persons are doing equally good work in furnishing provisions, and in the latter category may be included the railway officials, school teachers, store keepers, etc.
As showing the rapidity with which the flames travelled, it is stated that one tract of eight miles in length was over run by the fire in three hours. In its wide spread effects this fire may be likened to the extensive conflagrations which occurred some few years again the Otway and Heytesbury forests, and since then in the country just to the north of Warrnambool.
One of the numerous other small fires in this district destroyed a stack of firewood near Barnedown, which contained some hundreds of tons, and was owned by Mr Leahy.

Argus Tue 10 Feb 1891
A FATALITY AT FERNTREE GULLY.
A bush fire broke out in a paddock near Ferntree Gully on Friday evening last which was attended with fatal results. The fire was first observed by the caretaker, James Risk, who at once endeavoured to extinguish it. He found that the flames were principally confined to a large gum tree. He had to obtain assistance in order to put out the fire, and while the party were engaged in extinguishing the flames, a very heavy limb of the tree gave way, and fell on Risk, crushing him to the ground. The party at once rescued him from his dangerous position, and it was found that he was fatally injured, the bough having almost crushed him to death. He only survived for a short time, and then expired in great agony. The deceased was only 30 years of age, and was much respected in the district. He leaves a widow and one child.

BALLARAT, MONDAY.
All around the district bush fires are raging, and the members of the fire brigades have been called out to Bullarook, where a large fire has been burning since the morning.

PORTLAND Monday
A disastrous bush fire broke out at Condah on Saturday about three miles from the township, in one of Mr M Donald s paddocks. It is supposed to have originated from a fire in a stump on the railway which was not thoroughly extinguished by the line repairers. About 3,000 acres of grass, besides a quantity of fencing, and £200 worth of wattle have been destroyed on Mr. A. McDonald's Elgine Estate, and about 4,000 acres of grass, a quantity of fencing, a stack of hay, two wagons, and a wattle plantation on the Condah Hills Station. Yesterday was unusually warm, with a strong north wind, and although about 60 men were engaged to stay the progress of the flames, a track of country five miles by three was completely swept, and the fire is still burning in the direction of Lake Condah.
This is the third successive year that Condah Hills Station has been burnt out.

In the vicinity of Heywood, also, numerous bush fires have been raging and Mr Duffet and the men employed on Oakbank were all yesterday and last night keeping the fire away from the property, which

fortunately they succeeded in doing. There were several fires in this locality but no damage is reported so far.

COLAC, MONDAY.
Extensive bush fires are raging to the south of the town. At Cororooke yesterday Mr. Bonney had two stacks of hay destroyed by fire, supposed to be the work of an incendiary.

GEELONG, MONDAY.
The atmosphere was oppressive, apparently caused by smoke from bush fires. The flooring of the bridge over the Barwon River, at South Geelong, caught fire three times this morning, but the fires were extinguished before they injured the planking to any extent.

LEARMONTH, MONDAY.
A fire, which proved very destructive, broke out on Mount Bolton today. Owing to the strong north wind that was blowing at the time the fire was not extinguished until some 800 acres of grass, owned by Mr. Williams, of Fern Hill; 1,000 acres of grass, a quantity of fencing, and three stacks of straw, owned by Mr. W. Vaughan; three stacks of hay, owned by a widow named McAlpine; and about 120 acres of grass, a quantity of fencing, 72 bags of barley, a shed, and some implements, owned by Mr. P. Donovan, of Learmonth, were destroyed.

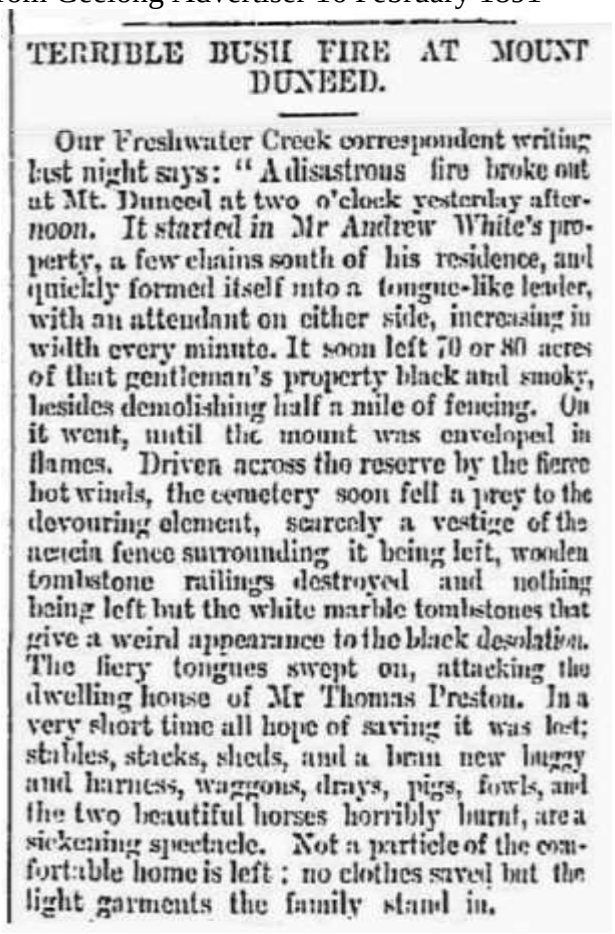
SANDHURST Monday
The bush fire reported from the Sandy Creek district yesterday broke out again today but was speedily mastered by the residents of the neighbourhood and the police
Shortly afterwards the fire again broke out again. In all some 600 acres of country were swept by the fire the chief portion of which is in the Wellsford state forest
Another fire occurred on Mr Andrew O'Keefe s Adelaide Vale Estate, on the Campaspe River, where a quantity of grass and firewood was destroyed.
A third and still more serious fire is now raging in the Whipstick scrub in the neighbourhood of Goornong. The fire broke out at about 11 o clock this morning and, assisted by a strong north westerly wind, travelled with exceptional velocity.
At about 9 o'clock tonight Constable Murray of Goornong, telegraphed for police assistance stating that several farms had been burnt, some completely.

Penshurst report In January a fire in J. Madigan's paddock was believed to have been deliberatively lit. Later Alex McDonald admitted setting the fire - he claimed to be drunk at the time.

Surf Coast Shire February 14 1891 Severe fires 'raged all over the colony', including Mount Duneed and Coast districts, and Birregurra and Winchelsea districts. The fires skirted the coast line between Jan Juc and Lorne. Jan Juc was just saved by a wind change.

Mt Duneed fire - other sources:
On 15 February 1891 a disastrous fire swept Mount Duneed causing damage to many properties. It started at the property of Andrew White, to the south of his house, then swept through the recreation reserve and the cemetery to the Preston home which was totally destroyed. The only possessions the Prestons were left with were the clothes on their backs. Nothing was insured except farm implements for £100. Thomas and Matilda's son Robert replaced everything and took over running the farm.

from Geelong Advertiser 16 February 1891



TERRIBLE BUSH FIRE AT MOUNT DUNEED.

Our Freshwater Creek correspondent writing last night says: "A disastrous fire broke out at Mt. Duneed at two o'clock yesterday afternoon. It started in Mr Andrew White's property, a few chains south of his residence, and quickly formed itself into a tongue-like leader, with an attendant on either side, increasing in width every minute. It soon left 70 or 80 acres of that gentleman's property black and smoky, besides demolishing half a mile of fencing. On it went, until the mount was enveloped in flames. Driven across the reserve by the fierce hot winds, the cemetery soon fell a prey to the devouring element, scarcely a vestige of the acacia fence surrounding it being left, wooden tombstone railings destroyed and nothing being left but the white marble tombstones that give a weird appearance to the black desolation. The fiery tongues swept on, attacking the dwelling house of Mr Thomas Preston. In a very short time all hope of saving it was lost; stables, stacks, sheds, and a brau new buggy and harness, waggons, drays, pigs, fowls, and the two beautiful horses horribly burnt, are a sickening spectacle. Not a particle of the comfortable home is left; no clothes saved but the light garments the family stand in.

Thomas Preston's farm was on the south side of Mount Duneed Road, between Torquay and Williams Roads

Observations

Another fire season of hot temperatures and dry summer months resulted in substantial bushfires.

Fire suppression by farmers / settlers was assisted by government employees, ie, police and where close enough, local fire brigade. Provisions were supplied by local businesses and public servants.

1891 / 92

Weather

BOM rainfall records for Melbourne: Sep to Dec around average, Jan to Mar well below, April x 2

Hottest days in Melbourne **DAYS > 35^{0}C 7**

Eg, Dec 22 38.4, Jan 18-23 34.2, 36.9, 34.4, 31.7, 37.5, 32.9,
Feb 7 35, Feb 22 35.8, Mar 7-8 37.7, 40

Dryness Index	Days >35^{0}C	Seasonal Severity Level
9.2	7	73

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

Argus Wed 23 Dec 1891
BENDIGO, TUESDAY.
An extensive bush fire is raging in the parish of Muskerry, about 14 miles to the eastward of Bendigo. It broke out early this morning, has traversed four or five miles of the Wellsford State Forest, and is still burning fiercely. The farm of Mr Maynard was only saved by strenuous exertions. The fire is now burning towards the Sugarloaf Ranges, where there is a fire break which was caused by a fire that broke out a few weeks ago.
The passengers by the incoming trains from the south tonight report that an extensive fire has occurred on the Ravenswood Run (Dr Atkinsons), where the hills are all ablaze, and many thousands of acres of grass have been destroyed

ST JAMES, north of Benalla, Tuesdav
Shortly after 1 o clock today a very serious fire occurred about seven miles from here, the origin of which cannot yet be traced. When first discovered it had made too much progress to be subdued. The neighbouring farmers and most of the townspeople went to assist in putting it out and **with the aid of ploughs and by burning the dry grass**, They succeeded in saving the crops, with the exception of Mr M Hargreaves, who lost £200 worth of crop. Over 1000 acres of grass have already been destroyed and the fences for four miles round have been burnt, the principal losers being Messrs Willis, Holmes, and Irvine. The damage at the lowest estimate is £3,000 Men will be working all night at the fire, and if a breeze springs up it is feared that nothing can save the surrounding crops. The smoke is so dense that a correct estimate of the damage cannot be arrived at. The weather is very oppressive, the thermometer being 103 deg in the shade.

Argus Wed 30 Dec 1891
BENDIGO, TUESDAY
The bush fire in the Wellsford State Forest caused the destruction of young trees on about 3,000 acres of ground. Mr J Burke, of Eppalock, lost 200 acres of good grass by fire. This is the third time this year that Mr Burke s pasturage has been fired.

KYABRAM, 'IUESDAY
A tremendous bushfire started in the Stanhope run, burning m an easterly direction
It has caused much loss in the parish of Girgarre, about 60,000 acres of grass and a large quantity of standing crops also miles of fencing being destroyed. The grass being very high the flames spread rapidly.

22 January 1892 Heathcote - Costerfield Fires which were *known* to have affected allotments in the area occurred on 22 January 1892 (*The McIvor Times and Rodney Advertiser*, 28 January)

Argus Tue 9 Feb 1892
CASTLEMAINE, MONDAY.
Bush fires continue at Sutton Grange and Mount Alexander, and a good deal of damage has been done.

EUROA, MONDAY

A large proportion of the grass around Euroa has been burnt to-day by bush fires. The whole of the Seven Creeks Estate, 6,000 acres the property of Mr. Robert Byrne, Melbourne has been swept clear. This estate was leased last week to Mr. William Smith, who had 10,000 sheep on the way to the estate. About 30 miles of grass has been destroyed. Another large fire is burning at Branjee, on the other side of Euroa, while the Strathbogie Ranges, round Violet Town are also ablaze. Great damage has been done to small landholders.

PENSHURST, MONDAY.
On Saturday an extensive bush fire occurred on the Cheviot Hills estate the property of Messrs J. A. and T. Hutton whereby some 2,000 acres of grass a large quantity of fencing and a number of valuable merino rams were destroyed. The fire was confined to the north-eastern portion of the run adjoining the township. During the day Mr John Hutton experienced a very narrow escape at one time being completely surrounded by the fire whilst engaged rounding up stock. The total destruction of Eden, the residence of Mr Thomas Hutton was also narrowly averted the fire in the paddock adjoining, which was covered with a heavy crop of thistles, raging violently.
Yesterday another large outbreak occurred on the adjoining Kolor Estate, and spread with great rapidity in a southerly and easterly direction, covering an area of some miles, and in its progress sweeping the Mount Rouse Park (Burnbrae) Estate the property of Mr. Gubbins and a number of smaller holdings in the neighbourhood of the township. It is feared that the loss of stock on the Kolor Estate will prove considerable. The fires were the most extensive that have occurred in this locality for many years past, and it is estimated that fully 10,000 acres of grass has been destroyed principally on the Kolor Station.
A fire also occurred on Langulac the property of Mr Edward Twomey, distant some
six miles from Penshurst, but no particulars are yet to hand concerning it. Its progress is believed to have been arrested before very much loss was sustained.

Penshurst report: Around 1888 most of the squatters around Penshurst joined the Sheep Owners Association based in Hamilton. The Association was embroiled in a battle with the shearers Union in the 1891 shearers' strike. While the above-mentioned fires cannot be directly attributed as 'payback' from shearers or sympathizers it is noted that one Union writer at the time wrote that: Pastoralism is despotism only tempered by Bryant and May. [Bryant and May were a well know brand of matches]

Argus Mon 15 Feb 1892
NUMURKAH, SATURDAV,
A destructive grass fire, involving the loss of several thousands of acres of grass and some miles of fencing broke out on Mr McDonald's Kotupna Station on Thursday
afternoon It is supposed to have been started by some children who were returning home from school and commenced playing with matches among the dry grass near the road. A fairly strong breeze was blowing at the time from the west, and the flames were carried on to the holdings of neighbouring selectors many of whom lost heavily.
Mr Ryan had everything but his house burned, and this was saved only by dint of hard work on the part of the owner and some men who were in his employ He lost a stack of hay his stack yards fences, and 500 acres of grass. Mr M Donald on whose run the fire started lost nearly 1 000 acres of grass
The fire was carried cast towards Kaarimba on Thursday night and it also spread in other directions burning logs and trees being left in its wake, thus increasing the danger of a further spread.

A curious phenomenon was observed while the fire was at its height. A streak of flame was seen to pass through a portion of grass country where the fire had not yet reached this was caused by a hare whose fur had become ignited dashing along setting fire to the dry grass through which it ran.

This morning, at the Numurkah Police Court, before Messrs Richards and Trengrove, JPs a labouring man named McCormick was fined £10, in default two months imprisonment, for having last week carelessly set fire to some grass in the paddock of a farmer named Rourke by whom he was employed harrowing tracks around a stubble paddock preparatory to commencing burning off operations. By this fire one farmer lost about £120 worth of grass, fencing, and timber, and several hundreds of acres of grass belonging to other farmers was also destroyed.

OMEO, SATURDAY.
Large bush fires are raging between here and the Upper Murray, and the grass on the Gibbo road is all burned. This is the principal stock route between Omeo and Wodonga, and the fire will be the means of completely blocking all travelling stock for months. About 5,000 sheep started from hero for Wodonga, but have bud to turn back. Serious losses in every direction are reported by the fire.

Argus Tue 8 Mar 1892
MACARTHUR, Monday.
A bush fire broke out at the Wilderness, about five miles from here, yesterday, burning some of Mr.Leslie Stodart's Ardowachie Estate and Mr. John Mahar's property, but it was checked by 9 o'clock last night. To-day it has made a fresh start, and is driven along by a strong north wind. The workers are heavily handicapped, owing to the nature of the country, which is of the roughest description naturally, to which is added the fact that there is such a quantity of dead timber. There are no crops in the immediate vicinity of the fire, which can only really damage fencing, but the utmost alarm is felt among the farmers at **Mount Eccles and Eumeralla Flats**, who are now threatened from a fresh quarter. They are in the line of fire, and hardly any of their grain is yet carted to market. The most strenuous efforts will be made to keep the fire north of the Portland road.
On Friday morning a log was found burning in one of the Glengleeson paddocks near the main road. There were traces of someone having camped there for the night, but there was a heavy dew, which saved the fire from igniting the long grass before it was discovered, and probably destroying thousands of acres of grass. The weather is distressingly hot, and good water is becoming a luxury. The drought favours rabbit poisoning, which is being vigorously attended to.

Observations
Successful fire suppression techniques include using ploughs and firing the grass.

1892/93
Weather
BOM rainfall records for Melbourne: Sep to Dec around average, Jan to Mar well below, April average

Hottest days in Melbourne **DAYS > 35^{0}C 8**
Eg, Jan 26 35.3, Feb 8-9 35.3, 39.5, Feb 25 35.3, Mar 2 40.8,

Dryness Index	Days >35^{0}C	Seasonal Severity Level
25.3	8	116

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

25 December 1892 Bushfire report today. The fire was thought to have been caused "by a spark from a log left burning" as a result of a fire the previous week, which may, in turn, have been started by "someone shooting and using paper wads or smoking out rabbits" (*The McIvor Times and Rodney Advertiser*, 29 December 1892).

Argus Mon 2 Jan 1893
SERPENTINE, SATURDAY.
A destructive fire is raging in the Salisbury West district. Grass crops and fences are all in a blaze. The fire is following the Loddon down from the Salisbury creamery, is going through the land of McGuffey, whose wheat crop is now burning, and is making for O'Meally's and Coutts. The wind is blowing strong from the south-east. At least 100 men are working strenuously to stop the progress of the flames. The crops are still in danger on both sides of the three chain telegraph road.

Argus Tue 10 Jan 1893
CASTLEMAINE, Monday.
A bush fire was raging yesterday in the ranges between Harcourt and Ravenswood, but rain set in last evening and aided materially in extinguishing the fire.

Argus Tue 17 Jan 1893
BENDIGO, Monday.
A fire, which assumed serious dimensions, broke out on Mr. Andrew O'Keefe's Adelaide Vale Estate yesterday afternoon. However, 200 men soon assembled (most of whom were returning to their homes after attending the Catholic Church at **Muskerry**, and by their united exertions the fire was mastered in four hours. About 40 acres of grass were destroyed, and many miles of grass land and stubble would have been swept by the fire had it not been for the fortunate presence of such an army of workers. The grass is very rank, and the likelihood of destructive fires this season is much dreaded. A swagman is suspected of having caused this conflagration. A relay of horsemen galloped from the Campaspe River bank to the scene of the outbreak, carrying green boughs for the fire-fighters, as there was nothing but dead wood in the paddock where the fire started.

Argus Tue 31 Jan 1893
BENALLA, Monday.
A disastrous bush fire broke out yesterday **at Stewarton** about 20 miles from Benalla, and several settlers suffered severely Mr T Heaney, on whoso property the fire commenced, lost 100 acres of grass and a quantity of fencing On the Emu Plains Station 1 000 acres of grass was destroyed and Messrs P Bowe, Maher J and P Cleary and a few others also suffered heavily. Suspicions of incendiarism are entertained and the black trackers today inspected the locality, but could find no clue. Further inquiries are being made by the police.

YARRAGON, Monday
A fire, supposed to have been caused by an incendiary was reported to the local police on Sunday morning. It occurred at half past 11 on Saturday night at the farm of Mr Edward Rodier. A shed containing about five tons of hay was totally destroyed. The black trackers were immediately sent for, and arrived this morning. Tracks were obtained from the road to the fire, and from the fire to a hut about a mile away. However the evidence as yet obtained is not sufficient to warrant an arrest but the police are still making inquiries. This is the second fire that has taken place on Mr Rodier's farm during the last month. A shed used as a dairy was destroyed in a similar manner.

Argus Sat 11 Feb 1893
FULL PARTICULARS OF THURSDAY'S FIRES
THE DEVASTATION IN THE DIAMOND CREEK DISTRICT.
GREAT DAMAGE IN THE UPPER YARRA SETTLEMENTS.
Many other districts reported upon

DAYLESFORD, FRIDAY.
The weather for the last few days has been very hot, and bush fires are springing up in nil directions, but so far, no damage to crops or dwellings is reported.

Argus Mon 27 Feb 1893
BENDIGO, SUNDAY.
A bushfire at Bissell's farm, Big Hill, today destroyed 100 acres of grass and some fencing.

CASTLEMAINE, SUNDAY.
The town was enveloped in smoke yesterday from bush fires iii the surrounding districts. Large' areas of grass lands have been burnt near Joyce's Creek, und flames from an extensive fire between Harcourt und Woodbrook wore easily discernible from Castlemaine last evening. Today smoke was still seen on the ranges, and it is reported that fires are still burning, although not so extensively as yesterday.

CAMPERDOWN, Saturday
A bush fire broke out at Naroghid today, destroying a quantity of grass and some fencing und burned about 500 acres. The heat was very intense, with a heavy dust storm.

HAMILTON, SUNDAY.
On Thursday afternoon a fire broke out on Cavendish-road, eight miles from Hamilton. It quickly spread onto Kanawalla, where its progress was stayed on Friday morning, All was considered safe, but yesterday morning it again broke out, and as the day was extremely hot, and a strong westerly wind was blowing, the flames soon rushed on from Kanawalla to Mount Bainbridge, thence to Hensley park, Strathkellar, Skene, and Warrayure, destroying thousands of acres of grass mid miles of fencing. A farmer named Filmer at Warrayure lost grass, fencing, hay stacks, in fact everything but his house. Another fire started on Brisbane Hill Estate, whence it rapidly spread to Cape Wrath, Harton Hills, Mount Napier, and Monivae. The fire came within a short distance of the town, filling the streets with dense smoke, and making the heat oppressive. Towards evening the wind veered round towards the south, cooling the atmosphere. Today a fire was burning in the direction of Mount Napier, and fears are entertained that it will spread to Buckley Swamp, where a large number of farmers are settled. The full extent of the damage is not known yet.

MACARTHUR, SUNDAY.
The heat yesterday and today has been most oppressive, the thermometer registering 130deg. in the sun. The country is parched, and heavy bush fires are burning on all sides. One broke out yesterday near Jeizt's farm, at Weerongoort, another on O'Halloran's farm, at Warrobkook. while a third is said to be burning on Breakfast Creek Estate. Owing to the gale that blew to-day, work was much hindered, as the fire rushed along. The wife of a well-known farmer at Mount Eccles, named Henry Broadwood, had a narrow escape from being burnt to death yesterday. She was standing before the fire, when her clothes ignited. Fortunately her son was at hand, and hearing her cries ran to the rescue and tore the clothes off her, but not before her arms from the shoulders to the hands and her side were badly burned, She has suffered from the shock.

Surf Coast Shire February 28 1893, bushfires 'raged with great fierceness' between Winchelsea and the Coast. Fire approached the Anglesea River and encroached on township allotments on the west side of the river. The forest in the vicinity of Jan Juc was 'a seething mass of flame'.

Argus Tue 14 Mar 1893
CRESWICK, MONDAY.
A large bush fire is burning in the neighbourhood of Russell's Dam, Wattle Flat. Immense bodies of smoke are ascending, and residents in the locality have to keep a constant lookout. This fire will, undoubtedly, cause a great amount of damage to the young timber in the forest.

Observations
This was another severe bushfire season
Note: Use of aboriginal trackers to determine cause of fires and to trace perpetrators.

1893/94

Weather

BOM rainfall records for Melbourne: Sep to Dec above average, Jan to Mar well below, April average

Hottest days in Melbourne **DAYS > 35^{0}C 7**
Eg, Dec 10 1893 37.7, Jan 2-3 34.7, 34.5, Jan 19 35,
Jan 21-22 39.1, 35.6, Feb 4-5 35.1, 35.6,

Dryness Index	Days >35^{0}C	Seasonal Severity Level
17.6	7	90

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

Argus Tue 9 Jan 1894
BENDIGO MONDAY EVENING.
A destructive bush fire has occurred at Axe Creek whereby about 1700 acres of grass and over three miles of fencing were destroyed on the properties of Mr O'Donoghue and Mr. J. G. Edwards. The damage would have been still more extensive had it not been for the energy displayed by a large number of firefighters, whose efforts were assisted by the fact that in two directions creeks cut off the progress of the flames.

Horsham Times Fri 26 Jan 1894
FIRE AT HOPETOUN
A tremendous bush fire has been raging a few miles east of Hopetoun since Saturday morning. It original started on a block belonging to Mr. Addinsall, and finished by covering the whole of his land. Owing to the weather being so intensely hot, the chance of putting the fire out was very remote; and although there were a large body of men working, not much progress was made. A wheat field belonging to the station was saved with difficulty. Fortunately no crops have been burnt, the fire being confined in the mallee and mallee rolled down for cultivation next year.

A telegram on Wednesday stated that the fire still continued, with at present poor prospects of being got under. The Big Hill country, the property of Mr. Lascelles, was then being burnt. Close upon **40,000 acres** have already been destroyed, and it is hard to anticipate where it will end, as it is still as fierce as ever. A large number of men are working desperately every night, and they have just managed to prevent the fire from getting into the Yarrick paddock. Had it done so it would have swept a still greater area than it has already devastated.

10 Feb 1894 Report of a bushfire - thought to have been caused by "... shooting with improper wads" (*The McIvor Times and Rodney Advertiser*, 22 February 1894).

Penshurst report: On Monday 13 February a fire broke out on a paddock on Banemore Estate. Luckily the weather was cool so the local farmers with beaters stopped it at the edge of Buckley Swamp. Six hundred acres were burnt.

Arsonist: The period from 1895 to 1900 was peaceful enough but the following six years were to prove very trying with the emergence of an arsonist possibly living in the

Penshurst township. The main target was the Kolor Estate owned by the Twomeys which was leased out to small dairy farmers. Did the arsonist have a set on the Twomeys, or the dairy farmers, or was it that the fires were just conveniently lit near the township?

Other bushfire relevant events

LETTERS TO THE EDITOR OF THE ARGUS.

BUSH FIRES AND PHOSPHORISED GRAIN.
Sir, The season for grass fires has come round, and with it I observe that the rabbit extermination department again give notice of their intention to have a simultaneous raid in the month of February, subject to prosecution for non compliance. As this means that all farmers, landowners, etc , are to buy phosphorised grain during that month, I beg again to call attention to the great danger of setting fire to the country through this course being adopted.
It is all very well to say that properly prepared phosphorised grain laid in ploughed furrows can do no harm. But that does not touch the evil. Small farmers will not, and, perhaps, cannot, prepare their land by ploughing and further will simply procure a quantity of phosphorus, mix the stuff themselves, and lay it in any gully, and so save themselves from a prosecution, but at the same time, start fires which in February may devastate a whole countryside.
For the last two or three years correspondence has taken place in the Argus on the subject and, notwithstanding the protests of the department that it is perfectly safe, there have been repented instances given by your correspondents of fires directly traceable to the use of phosphorised grain.
I write now in advance in the hope that some of your country correspondents may so further ventilate the subject that the Minister may be induced to postpone the order until the following month (March) when the evenings are cooler, the nights longer, and, therefore, not so much danger of fires spreading. Everyone is anxious to see the rabbits exterminated, but this can be done without the risk of burning homesteads and property
I am etc
Jan 28

SPARK ARRESTORS
Sir,-Whilst the Railway department is deciding upon the best spark arrester, we are likely to be burnt out. No less than five separate fires were started by two trains in this district in the space of three miles on Saturday last -Yours, etc MALMSBURY Feb. 10,

Observations
This was another severe bushfire season
Comments implicate government policies as causes of bushfires

1894 / 95
Weather
BOM rainfall records for Melbourne: Sep Oct above average, Nov below, Dec average, Jan average, Feb well below, Mar average , April below

Hottest days in Melbourne **DAYS > 35^{0}C 9**
Eg, Jan 24 37.2, Feb 4 37.1, Feb 11-17 36.1, 36.9, 38.1, 32.7 Mar 13 35

Dryness Index	Days >35^{0}C	Seasonal Severity Level
7.2	9	86

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Reported bushfire events

Argus Sat 1 Dec 1894
TYNTYNDER, in the Mallee Wednesday
Some 10 or 12 days ago the settlers here noticed a small bush fire in the direction of the Pianjil homestead but as it was 10 or 20 miles away, and did not seem to get nearer for three or four days not much notice was taken of it, as it was expected that the unemployed who had started it would be working to put it, out. On Sunday last however, the fire came nearer and nearer and many anxious glances were cast in the direction it was taking. On Monday morning it was seen that no further time was to be lost if any of the crops in the district were to be saved for the fire was fully 15 miles wide, and increasing in strength every hour.

As soon as the sun set the men, about fifty strong were divided into gangs and commenced the work of fighting the flames in real earnest. They worked almost without a moments break till day light on Tuesday, when it looked as if the worst was over. Unfortunately, however by 8 o clock a strong westerly wind broke out, and the fire started in several places again. The temperature was 106deg in the shade at 9 o'clock. It was quite impossible to continue the fight longer, so the men gave up and slept for a few hours so as to be able to renew the attack when night fell again.

At about 2 o clock in the afternoon the wind had increased to almost a gale and the smoke looked like a huge black wall extending right to the skies. The flames leaped up 30 ft or more above the tops of the trees. Cowper and Co 's crop was considered in great danger, and all hands were turned out, tired as they were, and worked like slaves. Several men narrowly escaped being burnt. They had to discard water bags, &.c , and run for their lives, but the crop was saved. With the strong wind the fire made rapid progress and by 8 o clock was six or seven miles further down.

The heat was so great that Kruger, with his wife and family, had lo jump into the dam near the house to save their lives. A break had been cleared around tin dwelling, but so fierce was the heat that some harness, clothes chests, implements, etc , which were out in the yard, caught fire and were burnt. The fowls perished with the heat also.
Great indignation is expressed with the authorities who are responsible for the unemployed burning off timber in this time of the year.

Argus Mon 11 Feb 1895
SPRINGHURST. Friday
A large bush fire occurred here yesterday on property belonging to Mr. Slaven, about a mile on the Chiltern side of the railway station. The whole of Mr. Slaven'a grass was consumed, and his homestead had a very narrow escape from being burnt. This is the second time this season Mr. Slaven has had his grass burnt, mid much sympathy is felt for him.

SUNBURY, SATURDAY.
Mr. Ayers, manager of Sir W. J. Clarke's Red Rock Station, observed in fire start on McKenzie's run, which is very thickly timbered. A number of men were quickly on the spot, but about 150 acres of grass was burnt before the fire was extinguished.

Argus Tue 26 Feb 1895
SOMERVILLE, Monday.
On Saturday morning a large fire started towards Langwarrin Estate, and swept through portion of Mr. J. Harris's property, now occupied by Mr. Hunt, through Mr. Grant's paddock where it severely damaged portion of the orchard and fences, thence on to Mr. James Unthank's property, where a large quantity of grass was destroyed. From here it ravelled in a southerly direction, burning several chains of fencing, and was approaching Saltman's Plains, which adjoin Westernport Bay, when a heavy shower of rain fell for about half an hour. This, with the exertions of the beaters, helped to extinguish the flames, or a considerable amount of damage would have been done. Mr Unthank's orchard and

house would have been completely demolished if the wind had changed in that direction whilst it was being kept in check at the back of his orchard.

Other bushfire relevant events

Argus calls for urgent reform of bushfire laws.

Argus Fri 1 Feb 1895
THE FARMERS AND BUSHFIRES
One effect of the recent hot weather has been to bring out suggestions from a number of country farmers that the South Australian Bush Fires Act should be at once adopted and enforced in this colony. This Act was passed by the South Australian Parliament in 1885, and consisted largely of a consolidation of previous enactments.
Section 4 provides that "no fire shall be lighted for the burning of scrub during the months of November, December, and January," under a penalty of £10 to £50.

In Victoria the only legislation dealing with the subject appears to be the Police Offences Act 1890. A bill to extend the law was introduced into the Legislative Assembly by Mr. Graham in June and read a first time, but the dissolution prevented it from being proceeded with. There is no chance of an amendment being made in the law until next winter at the earliest, and as farmers desire prompt action, the only way to proceed will be to enforce section 22 of the Police Offences Act 1890.

Observations

This was a huge mallee fire. If it ran for say 20 km and grew to say 25 km width, it was around 25,000 ha (assume triangular shape) when it hit their settlement. From the fire behaviour point of view, the flames on their properties were in accordance with the fuel bed characteristics and distribution on site. The width of the fire front is irrelevant.

The report describes how local settlers work all night to the point of exhaustion to protect their homes and assets. After a short rest, they started again, but this time the flames threatened their lives. They watched as the fire escaped down wind in the gale.

The Police Offences Act remains the relevant legislation for preventing fire ignitions, which the Argus believes is inadequate.

1895 / 96

Weather

BOM rainfall records for Melbourne: Sep to Nov well below, Dec average, Jan to April above

Hottest days in Melbourne **DAYS > 35^0C 12**
Eg, Dec 8 37.1, Dec 24 36.5, Jan 9-12 36.3, 34.9, 32.7, 40.4, Jan 20 35.5, Jan 23 42.2, Feb 17-18 39.3, 38.9, Feb 21 36, Mar 7 35

Dryness Index	Days >35^0C	Seasonal Severity Level
9.1	12	124

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Foley

Jan 6 to 10, 1896 Serious losses in Barnawartha, Chiltern, Rutherglen, Bright, Steiglitz, Egerton, Gordon, Charlton, Merino, McArthur, Heywood, Ferntree Gully, Foster. Stock, grass, timber, fencing and homesteads, no loss of life

Reported bushfire events

Wagga Wagga advertiser Tue 7 Jan 1896
BURNING OF A TOWNSHIP. STEIGLITZ, SUNDAY.
The greater part of the Albions township, including the whole of the United Alboins plant and housing, was destroyed by a bushfire which started between the township and the New Year mine this afternoon. Very great damage was done, Mr. Wright's house, with all its contents, Eustace's boarding house, and many other residences being completely destroyed. Of the United Albions property, only the stack is standing. Several hundreds of persons are now fighting to prevent a further extension of the fire.
Mr. Wright, father of the manager of the Albions, is injured, but not seriously.

Barrier Miner Tue 7 Jan 1896
MELBOURNE, Tuesday.
A bush fire at Steiglitz caught and destroyed the United Band and Albion's mining plant, which cost with its housing about £7000. The total loss is estimated at **£10,000.**

Great damage has been done by bush fires in Gippsland.

Sydney Morning Herald Mon 6 Jan 1896
BUSH FIRE AT MOUNT MACEDON Sunday
The weather today was extremely warm. At Macedon a strong north wind was blowing, with clouds of dust. A very large bush fire is burning all along the top of the mount, and great anxiety is felt for the safety of the houses of Sir George Verdon, Mr. Whitting, and many others in the vicinity, which are at present in great danger. A large number of men are working vigorously to keep the flames under.

Surf Coast Shire January 7 1896 Numerous bushfires adjacent to Lorne

Other bushfire relevant events

Example of prosecution under South Australian bushfire laws

South Australian Register Mon 3 Feb 1896
Angaston, SA Feb 1
At the Magistrates' Court, Angaston, on Friday, January 31, George Harris pleaded guilty to setting fire to the grass at Lindsay Bridge. Defendant, a drover, was camped with 1,500 sheep near Lindsay Bridge on Thursday night, and left his fire in violation of the Bush Fires Act on Friday morning, when a fierce north wind carried the fire into tho long grass adjoining, and it burnt a large area of paddocks before the neighbours could extinguish the flames. A careful drover generally makes a hole to light his fire in, and then in the morning the hole holds the water poured on to the fire to extinguish it. Harris said he poured water on the fire, but on a sloping surface the water runs off as fast as it is poured on.
Defendant was fined £2 and costs.

The Federation drought This year marks the beginning of the worst drought of eastern Australia, 1895-1903.

The drought that devastated eastern Australia from 1895-1903 (and even longer in some regions) "is the most widely recognised in Australia's European history, its importance even meriting three capitalised names – the Long Drought, the Great Drought and the Federation Drought.

One aspect that has generally not been recognised, however, is that the rainfall deficit and its accompanying heatwaves, dust storms and bushfires, together with their huge impacts on the environment and human activities, were the result of three closely following El Niño events. The first stage ran from 1895-98, with the summer of 1897-98 suffering some of the most extreme recorded weather in Australia – heatwaves, bushfires and dust storms in the south-east (New South Wales, Victoria, Tasmania and South Australia) and cyclones in Queensland. The El Niño then subsided and switched into a mild La Niña later in 1898 before another El Niño in 1899-1900. After a short break, there was a profound El Niño from 1901-03 which brought the most severe period of drought to many regions and is infamous for its dust storms".
http://climatehistory.com.au/wp-content/uploads/2009/12/Garden_Book_Chapter_2010.pdf
Chapter 13 The federation drought of **1895-1903** Don Garden

Observations
The apparently insignificant penalty imposed for an escaped camp fire can hardly be regarded as a serious influence on bushfire prevention.

1896 / 97
Weather
BOM rainfall records for Melbourne: Sep to Dec well below average, Jan Feb well above, Mar April below

Hottest days in Melbourne **DAYS > 35^{0}C 9**
Eg, Dec 5 35.1, Dec 22-23 35.7, 37.1, Dec 26-27 36.3, 35.1, Jan 7 39, Jan 30-31 36, 37.5, Feb 17-18 34.3, 35.3,

Dryness Index	Days >35^{0}C	Seasonal Severity Level
6.5	9	83

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records
Foley
3 Dec 1896 Neerim South, Longwarry, Frankston,
17 Dec 1896 disastrous fires at Creswick, Echuca and Hamilton
4 Jan 1897 great damage at Neerim, also at Korumburra, Somerville, Otways, Gisborne

Reported bushfire events

1897 / 98
Weather
BOM rainfall records for Melbourne: Sep average Oct Nov well below average, Dec average, Jan to April well below

Hottest days in Melbourne **DAYS > 35^{0}C 27**

Eg, Dec 1 38.8, Dec 16 41.7, Dec 22 35.6, Dec 27 40.1, Dec 29-31 38.7, 41.8, 36.9, Jan 7 38.7, Jan 11-12 42.9, 40.8, Jan 24 36.9,
Jan 28-Feb 4 38.1, 41.5, 39.1, 37.7, **37.6 (= Red Tuesday)**, 33.5, 38.3, 41.9, Feb 8 39.5, Feb 20 37.1, Feb 23-27 39.4, 36.7, 36.9, 35.8, 37.2, Mar 8-9 35.5, 33.3

Dryness Index	Days >35^{0}C	Seasonal Severity Level
20.2	27	364

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

This is the worst bushfire season weather in Victoria's history – based on maximum seasonal dryness and maximum number of very hot days (> 35^{0}C).

Official bushfire records

Background: There were serious fires across the whole State, but the worst were in south and west Gippsland, and these occurred on Red Tuesday. Up to the 1880's, forests still extended from Westernport to the lakes, and there were thriving sawmill settlements along Westernport. By 1897, settlers were attacking forests with axe and fire. After the 1897 / 98 fire season, the sawmill settlements along Westernport were destroyed.

The total losses have never been reported. For example, COAG and VBRC summarised the losses of the worst day – 1 February, 1898, known as "Red Tuesday" as follows, but this was only a part of the season's losses:
VBRC Deaths: 12 People rendered homeless: 2,500 Buildings: over 2,000, Area burnt: 260,000 hectares.
COAG February (Red Tuesday) 12 260 000 ha 2000 buildings South Gippsland

The 1900 Royal Commission summarised 1897 / 98 from the forest resource point of view as follows:
During the months of January and February, extensive tracts of country in central and west Gippsland - Thorpdale, Neerim, Poowong, Warragul, Strzelecki's were devastated. Next in rank was Otway forest, destroying valuable mountain ash, blackwood, beech and satin wood.
It reported that in west Gippsland, landowners lit brush and scrub to clear their land, it escaped to timber reserves, where it smouldered for 3 weeks and then broke out anew and ravaged settlements. Similarly in the Otways, land clearing fires escaped, destroying valuable timber and saplings.

Here is a summary of the collective evidence from government sources.

- The fires began in began Warragul / Traralgon on 31 Dec 1897
- Otway and Heytesbury areas burnt severely
- Jan-11 fires reported at Euroa, Macarthur, Wellington, Traralgon
- Jan-12 very heavy fires at Healesville, Narbethong, Marysville
- By 13 Jan, fires were reported over a wide area - Trentham, Avoca, Beaufort, Benalla, Blackwood, Kilmore, Colac, Woodend, Gisborne were all surrounded by miles of burning country. Fire ringed Yarram, Morwell, Thorpdale, and fires moved into the Strzelecki's Loch, and Bena.
- Jan 14 to Feb 13 calamitous fires in Gippsland, Neerim North and Thorpdale townships destroyed hundreds of settlers' homes burnt out

- Fires also occurred at Grampians, Yarra Glen, Ballan.

It is not a complete list of bushfires or their losses.

The Royal Commission did not give an estimate of total area burnt. The official figures (VBRC and COAG) quote a figure of 260,000ha for one day – Feb 1, Red Tuesday. The following map encircles locations mentioned by the Royal Commission and the press, which are the then settlement areas. As expected, large slabs of unoccupied areas have no reported fires. The South Gippsland areas reach 1M ha. A total burnt area of 1.5M ha would be a reasonable conservative estimate, which puts it on a par with 1939.

Reported bushfire events

Many of the above government reports seem to derive from the media. The brevity of the list brushes over the truly calamitous losses suffered by the community. The following newspaper reports are included to share a glimpse of their suffering, the extent of the bushfires, their response to the fire attacks (highlighted in blue), and the frustration of government relief schemes.

Some of the reports mention causes of the fires (highlighted in blue),, some suggest improvements to the laws. In all cases, the causes were man-made, and the consequences expose the weakness of the burning off laws that have persisted for the past 50 years.

Reports of fires in December

Argus Fri 3 Dec 1897
NEERIM SOUTH, Thursday
Yesterday the inhabitants of Neerim South were greatly alarmed on account of a bush fire coming within a few chains of the township. A strong hot wind was blowing all day, and greatly assisted the progress of the fire. Trees were burning all round the place, and sparks were being carried from these on to the roofs of the houses. Mr M'Ginn's store was in great danger, as twice the roof of his storeroom became ignited by sparks carried by the wind from the very tall trees surrounding the place. Mr. Lavell's, bootmaker, and Mr. H. Coe's, carrier, were also in danger. Men had to be placed on the roofs of the houses with buckets of water to extinguish the sparks as they fell. Many willing hands turned out but could do little in the face of the strong wind to stay the progress of the fire. Their attention was

turned mainly to the protection of property. Fortunately at half-past 8 p.m. the wind dropped and a nice shower of rain fell, which soon checked the fire.

Argus Tue 28 Dec 1897
KILMORE, Monday. .
The most disastrous bush fire that has been experienced in the district for many years broke out about 11 o clock on Sunday mornmg near the foot of the Black Range towards Mount William, on the property of Mi John McKenzie, of Braemore Estate.
It has not transpired how the fire occurred but fanned by a strong north wind it soon gained headway, despite the efforts of a number of willing helpers.
Early this morning, a strong north wind
Towards 7 pm, a southerly change.
Some **5,000 acres** of grass and crops
Damage amounts to some thousands of pounds.
Report of a dead woman, but not confirmed.

Argus Wed 29 Dec 1897
KILMORE Tuesday
Thousands of acres of land present nothing but a blackened charred mass.

Argus Thu 30 Dec 1897
YARRAM, Wednesday.
During the last two days the heat has been intense, Monday being a record for the district. Large bush fires are raging on the hills, and are doing considerable damage. A fire broke out at Won Wron, and has travelled over five miles, destroying fences and grass. Great damage has been done, and many farmers in that locality are busily employed in coping with the fire. Last night the town was enveloped in smoke, the heat being most oppressive. Water is running out, and a downpour is urgently needed. Mr. Bodman is actively engaged in guarding against the fire extending to his estate. Several horsemen had very narrow escapes whilst riding past the burning timber.

Reports of fires in January

Argus Wed 5 Jan 1898
OTWAYS
The mail coach running from Forrest to Apollo Bay had an exciting experience on Friday night. Bush fires were raging all through the Otway forest and the road from the commencement of the coach journev up to the top of Mount Sabine had to be cleared from fallen burning timber by a bushman, who rode on ahead of the coach with in axe. But after leaving Sabine the bush fire was found to have increased in fierceness. The air was thick with smoke and on either side the crackling of wood and the flash of flame indicated the presence of extensive fires near the track. There were eight passengers in the coach, two men, five ladies and a little girl.
Suddenly the driver cried "jump out quick, there's a tree falling" and an immense blazing trunk fell with a loud crash right across the track, half a dozen yards in front of the horses. It was impossible to go forward and risky to go back, but the latter course was wiser. The passengers were driven back two miles to the house of a settler, Mr Williams. The driver then saddled a pack horse and in order that he might gallop to Apollo Bay and Skenes Creek with the mails. This he was able to do by dodging the fire, although on the journey he had the mail bags alight four times and had to smother the fire as best he could.
The coach journey was resumed on Saturday morning. The fire had then burned itself into the heart of the forest, and though there were still smouldering trees across the track, which had to be cut through with the axe, the journey was accomplished without accident.

Argus Thur 13 Jan 1898
In our issue of yesterday we published reports from several towns in Gippsland of serious bush fires, and it will not be surprising to learn this morning that they extended in all directions and not only **destroyed many thousand acres of timber and grass**, but also demolished many farmers' houses.

YARRAM Wednesday 2pm
The whole population is working to stop the progress of the flames which are over a mile in width. **In the main street there are piles of furniture which have been removed from the houses**. The residents have been terrified. The town is enveloped in darkness, and the smoke is overpowering. Another fire is now advancing and if the wind does not change it will take the township from the northern end.
As fast as the fire is stopped in one direction it broke out in another, and **miles of country have been burnt out.**
A fire is now raging at the southern end of the township. Several dwellings are in danger. **The banks have been besieged with people depositing their valuables**
Women are crying loudly in the streets. Many of the fire fighters have been prostrated and horsemen are riding in every minute from outlying districts with news of further outbreaks

Later at 8.30 pm
When the wind suddenly changed to the south, the course of the fire altered, thus saving the town. The **grass on thousands of acres** of rich grazing lands has been consumed. As the sea of flame advanced, the flames mounting several feet high.
How the town escaped is a marvel. At one time it was literally surrounded by walls of flame. The residents worked nobly and it is due to them that the town escaped.
At Devon, the loss has been enormous.

WARRAGUL Wednesday
Township surrounded by a belt of raging fire, dense smoke

MOE Wednesday
The smoke from surrounding bushfires is so dense
The coach from Walhalla had to gallop with the flames coming under the horses legs
Farmers at Moondarra burnt out
Willow Grove completely encircled by flame

LEONGATHA Wednesday
Bushfires have been raging for a radius of 30 miles
Between here and Mirboo North numerous selections are ablaze
Koomyarra selectors suffering great loss
Some of the selectors near at hand have commenced to cart their furniture etc into the township for safety.
Damage will reach **many thousands of pounds**
Fires of a severe nature are reported from the Allambee district

KORRUMBURRA Wednesday
Fires raging in the vicinity of the township during the past two or three days.

MORWELL Wednesday
Great damage done at Darlimurla
McMillan's homestead on Hazlewood Park was saved. About 40 townspeople from Morwell left shops and rendered assistance. The thermometer registered 104 deg at half past 11, but a cool change came on during the afternoon.,

TRARALGON Wednesday
At 3 o'clock, the darkness became so deep that lamps had to be lighted.
The oldest residents say that Black Thursday 47 years ago was not so terrible
At Traralgon south, **large areas of grass destroyed**

STRATFORD Wednesday
Large farm at Inverbroom has been burnt out

PORT ALBERT Wednesday
The tussock morass having been fired by some person unknown,
Powder magazine surrounded by fire this morning
Fire confined to tea tree scrub, two or three residents threatened

WOODS POINT Wednesday
At half past 12, a light North West wind pushed smoke from surrounding bushfires into the gorge, enveloping the town in darkness.

MIRBOO NORTH Wednesday
The town is surrounded with bushfires and it is only due to the strenuous efforts of the residents that the township has been saved from entire destruction. They are the fiercest and most destructive ever experienced here. Several farmers have been burnt out. The township is now out of danger.

GRANTVILLE Wednesday
Numerous and destructive bushfires
One of these fires on Tuesday caused the total destruction of an old unoccupied hotel called the Victoria House near the queen's ferry

SALE Wedneday
A number of settlers on the east side of port road have been burnt out although their homesteads are saved

JEETHO Wednesday
Man missing
A 4 man survey team was surveying in fallen scrub one mile from Jeetho. Three went to look for water at 11 o'clock. Patrick Conley stayed because he was knocked up. In the meantime the scrub caught alight and in a few minutes the whole of the fallen scrub was one roaring fire. About 40 people are out in search. They found the end of the chain and the theodolite, but not Patrick.

LAKES ENTRANCE Wednesday
Bushfire is raging over 20 square miles immediately north of the township
A selector named Innes had his house and furniture completely destroyed
William Wilson on Jimmy's Point had four cows and two horses destroyed.

PACKENHAM Wednesday
Yesterday a large bushfire started at south Pakenham, supposedly from a spark from a passing engine as it was sweeping towards Beaconsfield.
Much damage

Other areas mentioned
Trentham, especially Lyonville area
Avoca Pyrenees fires heading toward selector holdings
Beaufort surrounded by smoke, buildings threatened
Fire at Raglan and Chute damaged properties
Benalla bushfires raging for some days past in mountainous country
Blackwood bushfires in every direction
Kilmore fires at Comet Creek and in Plenty Ranges still raging
Woodend fires burning all around
Gisborne 500 acres grass fire on Rosslyn Estate threatens township

Reports of fires in February Red Tuesday was 1 February

This painting by John Longstaff in 1898, depicts the Red Tuesday bushfires, 1 Feb 1898.

Argus Wed 2 Feb 1898

ARARAT, Tuesday.
The bush fire which has been burning for some time past in the Wannon Valley crossed the spur of the Grampians on Sunday and is now burning fiercely on this side of Mount William. A host of men are out fighting the flames, but as the fire has an advancing face of eight or nine miles in length, little cm be done to check its progress.

BENALLA, Monday
Three different fires at short intervals have broken out on the Emu Plains Estate, the property of Mr J A Wallace, MLC and in all, over 1,000 acres of grass and a quantity of fencing have been destroyed. Incendiarism is suspected and the police and trackers a few days ago visited the locality, but so far the result of their work has not been made public

BRANXHOLME Sunday
A serious fire has been raging since Friday, destroying many acres of grass and fencing and sleepers

BROADFORD Tuesday
A large number of fires have been burning in this district. At Strath Creek, fires have been burning for the last few days and large quantities of grass have been destroyed.

BENA Tuesday
Today the township has been enveloped by smoke from the fires all around, so dense at 3pm the lamps had to be lit.

BERWICK Monday
A fire supposed to have been caused through the carelessness of some bathers started on the banks of Cardinia Creek and raged furiously through a belt of scrub in the direction of Lower Beaconsfield. Today the wind is from the east. The thermometer registered 104 deg in the shade at 12 o'clock.

CAPE OTWAY
Great fires were burning around this district last month but none today.

COLERAINE Tuesday

Bushfires raging near Grassdale. Water is getting deplorably scarse, only 2 points registered for January.

FOSTER Monday
Fresh outbreaks at Toora, Fish Creek and north of Foster. A large number of these fires arise from wilful ignition.

GRANTVILLE Tuesday
During past few days, the bushfires broken out afresh, causing heavy loss throughout the district.

HORSHAM Monday
Bushfires are burning in the Grampians

LORNE Monday
Forest from Benwerrin to Mt Sabine is burning fiercely.

LILYDALE Tuesday
Bushfires are sweeping pasture land on every side, and numerous selectors have been rendered destitute.
Reports from Macclesfield state that the fires are the work of an incendiary desirous of clearing ground for new grass At Jones selection, the dwelling house was completely destroyed with its contents

MANSFIELD Monday
On Friday a fire started in the paddock of the Maindample Estate
At half past 8 pm yesterday another fire started on the Preston Estate with an extra strong SW wind. Luckily, it was brought to a standstill at the patch that was demolished in the fire on Wednesday.

Merino Monday
A fire broke out at Dwyers Creek at about 10 o'clock this morning. About midday, the wind changed. It was mastered before doing much further damage. Altogether, about 100 acres were burned.

RAYWOOD Tuesday
A large bush fire is raging in the whipstick

ROCHESTER Monday
Word was received here today of a bushfire at Corop, burning fiercely

SALE Tuesday
News has just been received of a big fire which is burning at Denison in the direction of Heyfield. 1000 acres

TRENTHAM Monday
Bushfires still burn round about.

THORPDALE Monday
The great bushfire at Childers is still raging
A very large fire is burning towards Allambie

WARNAMBOOL Tuesday
Fire on the Kangatong estate burnt **6000 acres in 2 hours**, sheep dead and dying

Argus Mon 7 Feb 1898
Korumburra Saturday
All through Friday night the people of Korumburra anxiously watched the progress of the fire which was approaching the town from the Jumbunna country.

Strzelecki Ranges
Out along McDonald's Track, through the Strzelecki Ranges, the fire has ceased its raging.

Right throughout tho length of the track from Adkins's homestead to Whitelaw's Junction, a broad black band, stretching far out on either side shown where the file passed, Whitened chimneys mark where fine homesteads stood, heaps of carcases show where the stock yards were located and everywhere the trees are either burned to ashes or are standing black against they sky or lying charred upon the ground. Nowhere may a blade of grass be seen.

Warragul Sunday
On the ranges at the back of Yarragon, the fire has been burning fiercely again.
The fire at south Warragul on Lardners Track has again been raging fiercely

Cranbourne Saturday
Damage occurred in fires at Lang Lang and Yallock Village settlement

KOROIT. Friday.
A bush fire which swept away **nearly 9,000 aces of grass**, started near Woolsthorpe about noon on Friday. The fire started between Woolsthorpe township and a creamery about seven miles north of Koroit and went westward through Mr W Lindsay's Station Quamby, then spread east and swept the property of 0'Keefe Bros., where it burned 2,000 acres of grass and 50 sheep. It then burned 150 acres on the property of Mr ThomasTobin. Shortly after 2 o'clock the wind changed to the south, and carried the fire across the Spring Creek through more of the Quamby Estate, where 4,000 acres and 150 sheep were burned afterwards spreading to Mr J Good's Estate Injemira, where 2,000 acres were destroyed. Six hundred acres at Green Hills the property of Mr T F Rutledge were swept clean. James Gardiner a labourer tied his horse to a fence whilst assisting to beat back the flames and the horse was so much burnt that it had to be destroyed. The fire went towards Woolsthorpe to the Grasmere road two chains wide and here an army of men assisting burnt the grass back to meet the fire, and its further progress was thus checked,

Drouin Saturday
80 – 100 miles of fencing destroyed in the Poowong East, Longwarry districts, and about half that disappeared in Neerim and Jindivick. Post and wire fences will be used universally adopted in lieu of post and rails. The new fences will **cost about £24 per mile,** most of the burnt grassland will need fresh seed.

Jeetho Friday
The fires are still raging near the township, All available men have been fighting the flames since Mondav. Mr Wilson's house was saved alter a great struggle. The residents are feeling more unsafe than ever, and it is only through sheer hard work that we have escaped so far in the town.

Kilmore Friday
Disastrous bush fires have been raging in the Plenty Mountains for some weeks past. Most severe damage in Hazel creek area where one of the weirs has almost been destroyed by fire.

Lilydale Saturday
A carrier contractor today lit a fire to boil the billy, the sparks from which ignited the long grass. About 50 men after a hard fight confined the flame to 4 acres. The carrier decamped but his name was subsequently ascertained by the police.

Other bushfire relevant events

Argus Mon 7 Feb 1898
GOVERNMENT ASSISTANCE
The Minister of Lands states that during last week the Government attended to a large number of individual cases of sufferers through the bush fires, and relieved their immediate hardships. Where distress is great he recommends local committees of three persons should gather information and present it to him.

Letters to editor of Argus were sighted demanding change of Act to allow burning off to start in Gippsland on 1st Feb.
Argument Settlers have to get a good burn and they will continue to flout the law and burn whenever they get a good burn.

Complaint about dispersing assistance

Argus Wed 23 Feb 1898
COMPLAINT ABOUT DISPERSING ASSISTANCE
When "The Argus" made its appeal to the open-handed public of Victoria to come to the assistance of the victims of the Gippsland bush fires an immediate response was urged, on the ground that he who gave quickly gave twice. It was felt that where people had lost everything the assistance must be prompt, or not at all: and on this ground—and on the ground that the money was a gift and not a loan—a sum of over £8,000 has been subscribed very short space of time.

Fully a month has passed since the bulk of the relief fund was got together. Yes, beyond seeing that no one was allowed to go without food or clothes (to which purely local committees gave their attention), the amount of relief so far rendered by the central committee in Melbourne has been infinitesimal. The result is that in those districts where disaster fell heaviest marked discontent prevails at the leaden-footed character of assistance rendered.

Of the difficulties which have stood in the way of the central committee, one of the most serious is the embarrassed position of some of the burnt-out settlers. Their farms, in many cases, practically belong to well-to-do mortgagees in the city, to banks, or other financial institutions, which are playing what, in the language of the turf, is called "a waiting game." They want the state or public charity to do for them what they should do for themselves. It is just possible that when a man's fences are put up, his land re-sown, and his building restored, the mortgagee will step in and relieve him of occupancy, so that if help be given at all provision must be made against such a contingency.

Local committees are very concerned at slowness of relief payments

Argus Wed 23 Feb 1898
Warrigul committee From this district claims amounting to nearly £10,000 have been sent in, and not a single penny has so far been paid over.
The bulk of the bigger applicants offer to repay what is given them, but in the case of the remainder the money must be regarded as a gift. The former are those who want grass-seed, fencing wire, and building material, and, having security to offer, can easily be dealt with by the Government, leaving the others to be covered by the more legitimate operation of the relief fund.
Ten tons of fodder, a fortnight's supply, was asked for by the local committee on the 12th inst., but up to Monday last no acknowledgment of the request had been received from Melbourne. What has become of the famishing cattle in the meantime can be guessed when it is stated that only yesterday a settler named Price reported to the shire secretary that five of his cows had just died of starvation.

Thorpdale local committee The Rev. Geo. Cox, who has been identified with the movement for succouring the distressed, and who is chairman of the Thorpdale local committee, called at "The Argus" office yesterday, and mentioned certain circumstances which show how dilatory and inefficient the central committee is. Two cases of hardship which called for prompt alleviation were particularised. The men were deserving, and they asked for help. And what did they receive? A type-written letter!
One man, who shall for the purposes of this article be called A.B., has a wife and six children, ranging from nine years to one year, and, owing to the loss of his home, the children have been distributed among three neighbours. **A.B. estimates his losses at £300**, including his house, barn, stable, and cowshed, two miles of fencing, five acres of hay, two acres of potatoes, two acres of maize, one acre of grass-seed, 1 acre of carrots, a quarter of an acre of onions, 130 acres of grass, and half an acre of orchard. Besides, 15 milking cows and 2 heifers were destroyed. His furniture, which included a sewing-machine and a chest of drawers, and all his bedding and clothing, were burnt. He was not insured, and, moreover, owes £350 to the Savings Bank Commissioners under the Credit Financier system. When his circumstances and the special claims he had were made known to the central committee he asked for present help, as well as a loan to enable him to re-sow and re-fence, but he was

informed in a type-written circular that his case could be dealt with most satisfactorily to him under the arrangements which the Government had made for advances, and the application had therefore been sent to the Lands department for consideration.
The department would, it was understood, communicate direct with the applicant. The Rev. Mr. Cox says that it will be observed that A.B. applied to the Mayor's committee for money and a loan to enable him to re-sow and re-fence.
The whole application was handed over to the Government, as if he asked merely for a loan to re-sow and re-fence, the request for monetary aid being altogether disregarded. The committee appointed at Thorpdale to advise the central committee was ignored, the application being passed on to the Government without the local committee being asked how the man stood. He was absolutely penniless, and had no means whereby to keep his land during the next eight months at least.

The next case, C.D. was treated in exactly the same way. This man was and is very deserving. He is married, but has no family, though his wife is in daily expectation of becoming a mother. He has lost a five-roomed house and dairy barn (30ft. x 20ft.), milking shed (six bails), stable, pigsty, calf-pens, 90 chains of fencing, one and a half acres of oats, two acres of maize, half an acre of potatoes, 80 acres of grass, all his furniture, a horse, eight cows (others missing), dairying utensils, and farm implements. **The total amount of his losses is £260**. He was not insured. He rents part of his holding, and owns the balance, but as the title is not in his name he cannot borrow on it.
As to the experiences of the local committee at Thorpdale, Mr. Cox says "On the 10th inst. I wrote to the central relief committee pointing out that the stock of flour was very low, and, as many deserving cases still required assistance in the matter of provisions, applying for two tons of flour, to be sent as early as possible. To this no reply was vouchsafed, and on Monday (14th) I again wrote, and once again on Wednesday (16th). The first intimation I had of either letter being received was a tele gram on Saturday, 19th, reading, 'Flour will be sent forthwith: delay arisen in supplying to central committee's order.' The flour had not arrived at Thorpdale on Monday (21st).

Further, on the 12th, I wrote stating that the local committee would be glad to know what its duties were, as people were coming with all kinds of inquiries, and in the absence of instructions the members of the local committee could give no information at all satisfactorily. To this the following, dated 18th, was received:-
"In reply to your letter of 12th inst., I have the honour to inform you that the applications for advances of grass seed and fencing wire have been transferred to the Lands department, who I understand will communicate direct with each applicant."
This, of course, gave but little idea of the local committee's duties, merely informing it upon the two specific points.

AT DROUIN, PROVISIONS BADLY WANTED.
A large quantity of provisions is wanted at Drouin, and bitter complaints are made at the way the settlement has been overlooked up to the present.

Insurance company battles

Argus Wed 23 Feb 1898
COMPLAINT AGAINST INSURANCE COMPANIES - A HARD CASE.
Some of the insurance companies who sustained losses in the bush fires acted in the most generous spirit towards their clients, by waiving every obstacle to payment and settling at once. Others, however, have not acted so handsomely, and there are several companies put forward by losers of which, perhaps, more will be heard. Appeals have been made to insurances companies on account of services rendered in saving their properties, but the response has been disappointing.

A particularly hard case forms a topic of conversation in the Drouin district. A settler, on seeing his home threatened, engaged a number of experienced axemen at work in a neighbouring sawmill to help him to save the property by cutting down the dry timber. He told them that he would pay them wages, as he was sure the insurance office would prefer that to losing the building. Having taken out all his furniture and belongings, he had no reason, personally, to be over anxious as to whether the house went or not. After a tough struggle the fire was beaten back, and the place saved, and in due time the company was asked to pay the wages of the men who saved it. This, however, they refused to do,

replying that **unless a man made "a reasonable endeavour to save his house, no insurance money would be paid at all.**"
"In future," wrote the indignant settler in reply, "I will let your property burn. Then you can pay the lot."
He has since paid the wages of the men himself.

Observations
The overwhelming community response of fight to save our houses and towns was consistently apparent across the state.
Suppression techniques included an active back burn in the Woolsthorpe area an army of men burnt the grass back from the road to meet the fire, and halted its progress, and extinguishing spot fires on a roof with buckets of water.
The storage of furniture in the main streets of Gippsland towns was a remarkable observation of desperation for greater safety within towns than at their homes.

1898 / 99
Weather
BOM rainfall records for Melbourne: Sep average, Oct to Dec well below average, Jan to April above

Hottest days in Melbourne **DAYS > 35^{0}C 17**
Eg, Dec 2 35.8, Dec 5 43, Dec 21-22 36.7, 38.5, Dec 29-31 40.3, 36.6, 39.2.
Jan 9 39.1, Feb 8-9 36.9, 37, Feb 12-14 37.7, 37.5, 38.7,
Mar 14-16 36.7, 36.7, 36.7

Dryness Index	Days >35^{0}C	Seasonal Severity Level
7.1	17	163

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

7 Dec 1898 Disastrous fires at Bruthen. Heavy losses at Benalla, Kilmore, Seymour, Steiglitz
10 Jan 1899 Disastrous fires in Broadford, Buninyong, Lancefield, Maldon, Kilmore Kyneton, Romsey, Seymour, Sunbury, Talbot, Yea, and Sale. Narrow escapes for many townships. (Foley, 1947)

Reported bushfire events

Argus Fri 6 Jan 1899
Stratford Wednesday
Reports shire engineer and wife were today caught in large fire under a gale near Briagalong, but escaped harm.

Murchison Thursday
900 acres of grass burnt at Molka yesterday

January 9, 1899 A fire burned from Franklinford to Glenlyon. (Museum Victoria collections)

Other bushfire relevant events

People are mis-using phosphorised poison

Argus Mon 16 Jan 899
To the editor
Inferior phosphorised wheat and pollard are blamed for causing bushfires.
If wheat and pollard are properly phosphorised there is no danger. The danger comes from farmers phosphorising their own wheat by using phosphorus melted in hot water instead of phosphorus being chemically dissolved.
Yours etc
Cuming Smith and Co P/L Melbourne Jan 13

Concern by Magistrate about illegal fire lighting in Gippsland

Argus Wed 12 Apr 1899
WARRAGUL Tuesday
Two bush fire cases were inquired into by Mr AC Cresswell PM. At the Warragul Police Court today.
Mr Creswell remarked that from the number of cases of this character that had been brought before him it appeared to him that all through Gippsland, the people either did not understand the law, or if they did, they ignored it altogether.
The penalty for neglect of these provisions was very severe indeed.
Either up to £**100** fine or sentence the offender to up to six month goal without the option of a fine.
In the cases under notice he would inflict a fine of **£2** only. He exercised that leniency in consideration of the fact that the defendants lighted the fires at a time of the year when there was not such danger of their spread as during the hotter weather.

1899 /1900

Weather

BOM rainfall records for Melbourne: Sep ½ average, Oct Nov average, Dec half average, Jan above, Feb very low, Mar to April double +

Hottest days in Melbourne **DAYS > 35^{0}C** **18**
Eg, Dec 7 39.5, Dec 17 35.1, Dec 22-23 39.4, 39.4, Dec 25 37.3 Jan 1-3 40.4, 40.7, 37.3, Jan 15-17 37.4, 40.4, 39.3, Jan 26 36, Jan 28 41.6, Feb 4 40, Feb 10, 36.1, Feb 26 39.2,

Dryness Index	Days >35^{0}C	Seasonal Severity Level
7.1	17	163

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Humid spring generated lush pastures, which dried out in mid December. The weather was sultry with occasional north winds but in the south, wind changes were frequent and weather was generally cool. **Compared to the previous summer of 97/98, when very hot and very windy, and dead grass over extensive areas, this was a mild summer.** **(**Royal Commission 1900)

Official bushfire records

VBRC
Dec 1899 Beechworth–Yackandandah, Broadford, Bairnsdale large area burnt, many buildings, many stock losses, damage **£**50,000
Jan 1900 Hamilton, Bealiba, Warrenbayne, Wangaratta, Euroa, Warrnambool 202,342 ha burnt, many buildings, 20000 stock, damage **£**100 - 200,000
Feb 1900 Meredith, Warrnambool, Pyrenees Range, Gippsland 3 deaths many buildings, many stock, damage **£**35000

Tainsh
1899/1900 Thousands of acres burnt in all parts of Victoria. 3 deaths in Gippsland, Losses Beechworth Yackandandah **£**50,000, Warrnambool **£**15,000, Tambo River **£**20000

Foley, 1947
9 to 28 Jan 1900 Fires at Casterton, Murchison, Coleraine, Hamilton, Koroit, Kilmore, Egerton, Geelong, Pakenham
6 Feb Warrnambool, Horsham, Kilmore, Rushworth, Yea
26 Feb to 1 Mar Severe fires in Gippsland

Royal Commission 1900 provides a comprehensive list
Summary **Three deaths in Gippsland,** area burnt well over **500,000 acres**, countless houses, stock and fences destroyed, damage well over **£200,000.**

Bush and Grass Fires, Summer of 1899 / 1900
The fires began near Beechworth in mid Dec, and continued till end of Feb. ***December, 1899.***
Beechworth-Yackandandah district: Estimated damage, £50,000. Live stock, homesteads, fencing, and grass destroyed.
Broadford district: Crops, grass, and fencing.
Bairnsdale district: Private grazing lands and forest reserves burnt.

January, 1900.
Hamilton district: Extensive grass fires, Portland road, Monivae, Violet Creek, Ardachy, Arrandoovong, Keet Bank, Bochara, Penshurst. Grass fires (one estate 1,000 acres burnt).
Bealiba district: 2,000 acres grass and fencing burnt.
Warrenbayne district, Delatite: Large areas of grass burnt.
Laceby and Greta-Wangaratta district : About 5,000 acres grass and fencing burnt.
Euroa district (Gooram): Grass fires ; two large bridges, and sixteen culverts destroyed.
Warrnambool district: "Greatest fires since Black Thursday." About **500,000 acres** of grass burnt; six woolsheds, many miles of fencing, 20,000 sheep, 300 cattle, and a number of horses destroyed. Damage variously estimated at from £100,000 to £200,000.

February, 1900
Meredith-Steiglitz district: Grass, timber, grain, straw, telegraph lines destroyed. At Elaine, grass, fencing, and hay destroyed.
Warrnambool district (Cooramook and Ballengeigh): Chiefly grazing land, 50 persons burnt out; grass, haystacks, vehicles, farm buildings, fencing, and some live stock burnt. Estimated area fire-swept, 50,000 acres and 100 miles of fencing.
Estimated damage about £15,000

Pyrenees Range-Avoca district: Dwellings, hay stacks, grass, fencing, and live stock burnt, and large areas of valuable timber in forest reserves damaged or destroyed.

Unidentified month

Plenty River district: Greatest fires since Black Thursday. Thousands of acres of grass, many miles of fencing, and homesteads burnt ; live stock destroyed.
Kilmore district: Many thousands of acres of grass and fencing burnt; cattle and sheep destroyed.
Gordon-Lal Lal district: Over 10,000 acres grass burnt, much fencing destroyed.

Unidentified months GIPPSLAND

Glenmaggie, Upper Maffra, and Briagolong districts : Three persons burnt to death; about **40 miles of country fire-swept**; live stock, homesteads, bridges and culverts destroyed ; fencing, haystacks, and grass burnt.
Fernbank district : Homesteads, live stock, fencing, crops, and grass burnt.
Foster district : Scrub and grass fires ; homesteads, grass and fencing burnt.
Carrajung district : Carrajung township almost destroyed ; fencing and grass burnt; culverts on shire roads destroyed.
Tambo River district : Homesteads, fencing, crop, stacks, grass burnt ; damages estimated at **£20,000**.
Stratford district : **Some thousands of acres of grass**, large quantities of fencing burnt ; cattle and sheep destroyed.

Reported bushfire events

The newspapers began their typical summer bushfire ritual in earnest on Boxing Day.

Argus Tue 26 Dec 1899
Beechworth Sunday
Fires were burning quietly in ranges near Woorgaree and Everton and the Woolshed.
But yesterday (22/12), a gale arose. The fire bell was rung and over 100 volunteers responded, including several of the local fire brigade.
Large area burnt, **3 deaths**, 30 homes, **damage £50,000**

Other areas burnt by large damaging fires in this report were:
Chiltern – Yackandandah
Heyfield
North Whittlesea
Heathcote Tooborac
Bairnsdale Forges Creek to Paynesville
Euroa Gooram
Tallarook
Kilmore East to Wandong

Note: Additional media reports are not sought because comprehensive official lists are available.

Penshurst report: the arson attack on Kolor continues
It was reported that extensive grass fires were burning in the first week of January 1900. The fires burnt a portion of Kolor, going through Langulac, Stonefield, and Greenhills and into Patrick's Day, also other properties have suffered severely as also several small holdings.
The January 6th fire was supposed to have started at a rabbiter's camp at Stonefield Station, but in light of later events (an arsonist in the district) the rabbiters may have been hard done by.
Two weeks later another fire started on Kolor burning south with parts of McNamara's, Minhamite House, Goodwood, Minjah, Yulong and 10,000 acres of grass on Quamby

blackened. Goodwood, Wurroit and Yulong were swept clean. The grass was very high and a large number of sheep were destroyed.

Sunday 28th January (Black Sunday)
Devon Park fire
The Argus reported that: a fire started on the Devon Park estate on Saturday afternoon. A willing number of volunteers turned out and by eleven o'clock that night the fire was subdued after it had burnt about 2000 acres of grass. Toward Sunday morning however, a high wind started up and although many men were watching the burning trees, the bark from the trees was carried away in the wind and started a fire in two places.
Aided by the wind the flames spread rapidly. At Devon Park 11,000 acres of grass was destroyed together with about 2000 sheep and a few head of cattle. Mr. Donald McPhee was burned out and also lost 1500 sheep. Mr. Woodhouse was completely burnt out; the woolshed was destroyed and all the famous woodhouse stud stock was burnt, with the exception of 20 stud rams. Six or seven thousand sheep are reported to have been burnt. Also the Gums Estate was burned out and Messrs Cameron, McLeod Brothers, Coulton and McKenna. The Bushy Creek Estate, Blackwood, Nareeb, and Hopkins Hill all suffered severely while many miles of fencing have been destroyed.

More details in this letter: The Argus reported on fires north of Koroit: On Sunday one of the largest bushfires ever known raged to the north of the town (Koroit). Dated today 29th, a letter from a station owner at Cheviot Hills (Hutton's) to Mr. W O'Brien auctioneer gives a graphic description of the conflagration.
Yesterday was a very sad day for a lot of people up near here (Penshurst) owing to a bushfire. It was a black Sunday and I have never seen the like. The fire started near Dunkeld about 10am yesterday and in three hours it was past Caramut (25 miles). The destruction is something terrible, Corea has been swept out, Woodhouse (S Ritchie executors) completely burnt, with the woolshed and a lot of sheep. The Gums (Mr. Ross) has not a blade of grass left, the woolshed is gone and all the other sheds and men's huts. Caramut Station (Mr. De Little) has all gone, also the woolshed stables, stacks and sheep. Lawrenny (Mr. J. N. McArthur) and the woolshed. Barwidgee (Mr. N. Thornley) and the woolshed. Blackwood Station (Mr. R. Ritchie). Half of Devon Park Station (executors of the late Mrs. S. Harding) and selectors' places were also destroyed. I cannot describe the destruction. Three men nearly lost their lives. Two of them had to leave their horses and get up a tree. The horses were burnt. The third man tried to save a house, the family having to get into a creek for safety. The fire went to Hexham and is still going.
In addition to the foregoing it is reported that the fire went over Union and Merang stations (Messrs Lindsay Brothers), Cooramook (Mr. B. Jones), Drysdale (Mr. J. B. Pearson). Messrs Baird and sons property. Mr. Begg's Bushy Park estate. Mr. Eddinton's Ballangeich Estate. Mr. Weatherly's Woolongoon Estate. Mr. Hassett's Springfield Estate and 20 small holdings of 500 acres and under. At an early hour this morning rain commenced to fall but the showers were light. Light showers continued to fall during the day.
The fire was 30 miles long and 25 miles wide. [= 180,000 ha]

A Further Report from Warrnambool: A vast stretch of country extending to about 40 miles in length and 15 miles wide [= 150,000 ha] was devastated in this fire. It was probably the worst fire then known in the Western District. From near Dunkeld to within 15 miles of Warrnambool was swept by fire and was now a scene of black desolation. Burnt grass, fences, woolsheds, outbuildings and the blackened carcasses of chiefly sheep show how fiercely the fire raged.
Penshurst was very lucky to escape this fire as it swept by just to the east of the township. It burnt straight through Purdeet and Caramut, burning down to Grassmere where it joined up with another fire that started at Ellerslie. Except for the cool Southerly change and light showers this massive fire would have burnt right to the coast.

In view of later events on Devon Park this fire would have to be suspicious. Things were so bad that the Lieutenant Governor Sir John Madden sent a telegram of sympathy to the rate payers in their recent severe trials by fire. The shire president Frank L. Ollie replied Penshurst Jan 31st: Many thanks for your kind expression of sympathy, fear losses will prove serious, full extent not known.

A further fire broke out on the Thursday afternoon 1st of Feb near the Kolor woolshed. The fire rapidly made its way northwards consuming about 5000 acres of grass on the Kolor estate and 200 acres of the Mt. Rouse Reserve. The fire was successfully checked at the Burn Brae boundary.
It was reported next day the Kolor fire had been subdued, 40 sheep and a considerable quantity of fencing had been destroyed but luckily no buildings. Great assistance was rendered by the town's people.

The 1900 Black Sunday fire was clearly a catastrophic fire and it was a miracle that no deaths were reported. The fire must have been moving very quickly if people on horseback could not escape as reported in the Argus. Climbing trees was a desperate measure but on that occasion worked as the grass fire rapidly swept through.

Other bushfire relevant events
18 July 1900 Royal Commission progress report
Its subject was **"Fire-protection in country districts: being a report on the measures necessary to prevent the careless use of fire, or the spread of bush or grass fires on public and private lands".**

"We, the members of the Royal Commission appointed to investigate the general question of forestry and forest control and management in Victoria, have the honour to present the following Progress Report"
It was the 11th progress report of the Royal Commission on State Forests and Timber Reserves. Presented to both houses of parliament at a total cost of £15 10s, and they did not hold back.

They declared that current legislation was "**meagre and inadequate**", that it was **out of date** - laws that were made for times when holdings were large, and settlement was sparse and in small areas are not suited to today where rural areas are dense with small agricultural holdings, and that it was **lagging well behind world best practice** - the "backwardness" in legislation of all Australian colonies except SA is in contrast to the stringent laws overseas countries. It bemoaned that when the Mallee fire legislation incorporated a lot of the SA legislation, they were not applied to the rest of Victoria.

They highlighted four common causes of bushfires:
1 Sparks from railway locomotives cause some fires.
Solution: Spark arresters and firebreaks along tracks should be compulsory, not optional

2 Phosphorised bait for rabbits - "the present crude method of preparing phosphorised bait adopted by many settlers is dangerous, has been the cause of fires in the hot season in the past".
Solution: Ban the use of lumpy phosphorus during the fire season.

3 Clearing land with fire "has been the cause of many disastrous fires in such districts as Gippsland and Cape Otway".
A good burn The common practice in scrub country is to fell the undergrowth close to the ground, leaving it where it falls until it is thoroughly dry, and when a hot windy day comes the dead litter is set on fire in a number of places. This is what is known as a "good burn," and obviously the drier and hotter the weather the better the burn. Selectors, are therefore burning in that part of the day when a fire is most likely to get beyond control.
Such a fire often runs into forested crown land "where it may burn unchecked for days, and, when a change of wind comes, be swept back to destroy strips of country previously untouched".
In 1898 in the Otway district, destructive fires, caused by selectors burning timber and scrub on their holdings, have spread to and raged for many days over extensive areas of valuable timber. This also occurred in southern and western Gippsland in 1898, where, after an interval of about three weeks, the fires smouldering on Crown lands broke out anew in the ravaged settlements, and caused further destruction of property.

They made two observations:
A Current legislation is strong, but wall of silence prevented prosecutions
"We have had before us several detective and police reports on the subject of some of the worst Gippsland fires in (1898).
"It was clear that scrub and grass had been set on fire in several cases without any notice being given to neighbouring occupiers of land, and without any precautions to prevent the fires spreading, but no reputable person was prepared to give evidence, or, indeed, to assist the police in any way"
"Despite the enormous destruction caused by the careless use of fire in the district, no evidence to secure any conviction could be obtained, and, therefore, no prosecution was attempted"
This was the attitude which they took up in dealing with the baffled police:
➔ "The burning of scrub was necessary, with or without precautions.
➔ Their neighbour was in fault today, but they might be in the same position tomorrow"
B To be effective, legal restrictions must apply to private and public lands

Solution: The clearing of land by means of fire during the summer months should be under strict control

4 Camp fires
"Drovers, hawkers, swagmen, and other travellers, on making a halt, frequently light their fire at a tree, large log, or stump". A fire in a hollow tree or stump may burn for days, and shower sparks when the wind rises.
The reckless way in which camp fires are kindled and left burning by some travellers in summer, not only on the public roads, but on private land, and in Crown reserves, is a grave source of danger to land owners, as well as to the property of the State.
Solution: camp fires must have a 10 feet cleared radius around a camp fire, to be extinguished before leaving.

Major recommendations:
➔ Create the Chief Police Commissioner be declared as Chief Fire Warden and all police and Crown Land Bailiffs be appointed as local Fire Wardens.

➔ It shall be the duty of such Chief Fire Warden and fire wardens to prevent, as far as possible, the commission of offences against the Act; to take prompt steps for the extinction of all forest, scrub, or grass fires; to bring offenders against the Act to justice; ·to conduct all necessary prosecutions, and generally to carry out and enforce the provisions of the Act.

➔ Camp fires Wardens to nominate camping places or in their absence, camp fires must have a 10 feet cleared radius around a camp fire, to be extinguished before leaving.

➔ On all land between 1 Nov to 31 Mar
Make and maintain an effective fire break of at least 10m width along private property and crown land boundaries and along railway lines.
Ban the following:

- Use of combustible wads in firearms
- Use explosives to blast trees
- Burning off to clear land unless a 10m firebreak exists around property boundary,
- Burning off unless approved by warden and neighbours
- Lighting up during a strong northerly or in the afternoon,
- Burning stubble or grass on Sunday
- Lighting tobacco within 20 ft of a flammable crop
- Dropping a lighted match or tobacco, etc,
- Preparing and using phosphorus only in accordance with government standards

➔ To specifically protect forests on public land, ban the following between 1 Nov to 31 March:

- All fires except camp fires with 10 m cleared radius
- Burning off on private property within 50 ft of public land

➔ When a dangerous fire breaks out, wardens are empowered to co-opt able bodied males to extinguish it. A refusal without justification is deemed as misdemeanour.
Half of payment for fire suppression, which includes payment of wardens and co-opted men, is to come from Treasury and half from local Council.

➔ The Act will apply to all of Victoria except the fire districts under the Fire Brigades Act 1890 that have not been alienated.

➔ The Commissioners stated their aim was to lessen the risk of such fires occurring, not to prevent all bushfires. They proposed to achieve this by means of better laws and better enforcement.

They asked: Can those people who are now grossly careless

- in the use of camp fires,
- in using matches for smoking,
- in setting fire to timber and scrub when clearing land,
- in employing phosphorus as bait for vermin,
- and in misusing fire or inflammable material in various other ways,

be compelled or induced to study their own and their neighbours' interests when the law requires them under severe penalties to do so, and thus prevent, as far as possible, the annual devastation of large tracts of country, the burning alive of sheep and cattle, and even at times the loss of human life?

"We believe that a great many of these fires are preventable without interfering to an undue extent with the reasonable requirements of settlers or travellers, and we therefore urge that this Report be taken into consideration without delay".

Contemporary bushfire laws
Section 22, of **Police Offences Act 1890** (formerly 1865) imposes a heavy penalty for igniting, using, failing to extinguish any inflammable material in the open air that injures or

destroys the property of any other persons – a maximum penalty of £100, or six months imprisonment with or without hard labour.
Owners or occupiers can only light inflammable material in the open air if there is a fuel free radius of 15 ft and after giving neighbours 24 hours written notice.
If they light between 2 and 9pm, they must install plough furrows to a width of 3 feet and must neighbours 24 hours written notice.
Section 23 requires campers who light a camp fire to display the landowners name on their vehicle - under a penalty not exceeding £20
Proviso is added that nothing in sections *22* or 23 shall replace the common law right of any person to sue for and recover compensation for any damage caused by the reckless or negligent use of fire.

Vermin Destruction Act 1890 allows owners to burn off between May and September without notice provided they have a 15 feet clearing around the burn area

Mallee Lands Act 1896 copied several useful sections of the South Australia Bushfires Act 1885

Observation
The Royal Commission report achieved the implicit aim of its title by accurately identifying common causes of fire ignitions in the colony, including the uncooperative attitudes of settlers, and making recommendations that would have reduced their occurrence and spread. Their plan for a paid co-opted fire suppression force would have assisted in reducing the spread of fires on private and public land.

As the Postscript indicates, the Government appeared unmoved to action. Bushfire laws remained unchanged, and when the Forest Act was drafted, fire restrictions were limited to the relatively small areas of Reserved Forest.

Interpretation: In those days, Reserved Forest proclamations aimed to secure future timber supplies, and the belief that fire damages trees was strong. The absence of fire restrictions in Protected Forest where most crown land grazing occurred may have been due to the fire stick farming practice of grazing interests for green pick, which may well have been tolerated by authorities as a fire prevention measure.

Postscript
The Forests Act in 1907 established a State Forests Department to manage State Forests which comprised Reserved Forest (= permanent forest and timber reserves) and Protected Forest (= unoccupied Crown Land). It included only two clauses about fire prevention and they applied only to Reserved Forest (RF). Laws covered fire occurrence on and near RF and fuel hazard near RF. Suppression of fires was performed on all crown land according to local resource capability, but was not included in legislation. They were a fraction of their wish list in 1900.

#34 Lighting or leaving an unauthorised fire within in Reserved Forest or within 100 yards of Reserved Forest between 1 Nov and 31 Mar is an offence. Penalty up to £5, and provision to seek compensation for damages.
#35 Forest officer can authorise removal of fuel hazard within 50 yards of Reserved Forest, or remove it and recover costs.

The terms of reference Royal Commission did not encourage a search for the true underlying causes of the bushfire menace.
It honed onto two parts of the picture - Prevent the careless use of fire and the spread of bushfires on all land.

The community tolerance of unrestricted burning off and the failure of the lighters to extinguish them meant long summer months of many smouldering fires around each settlement on both public and private land. Yet each 7 to 14 days in the typical summer presents this landscape with very strong hot dry winds that convert these numerous smokers into unstoppable infernos that run with the wind towards unprotected communities.

There are differences and similarities between then and now.
One difference is the strong enforcement and community acceptance of TFB days. In those days, the numerous smokers outweighed the accidental and intentional ignitions, and on TFB equivalent days, MANY fires ran as unstoppable infernos. Now, that ignitions on TFB days are accidental or intentional, the number of human caused ignitions has been dramatically reduced, and a FEW still run as unstoppable infernos. Thus the TFB concept has largely reduced the number of severe bushfires.
An unchanged similarity is that the unstoppable infernos run toward unprotected settlements and towns.
Another difference is that then, there was no fire authority to stop the expanding fire perimeter, but now there is.
Another difference is that then, there was no fire authority with a predominant goal of preventing life loss with no concern about house loss, but now there is.
Another difference is that in those days, when infernos ran towards unprotected settlements, people stayed in and fought ferociously to save their homes. Now, when infernos run towards unprotected settlements, authorities evacuate the residents but cannot provide defence, so their vacant homes are destroyed.

Today, we have the potential to eliminate the bushfire menace. There is only one hurdle to overcome. Fire authorities must adopt and enact one simple but achievable goal – prevent house loss.

If the aim of the Royal Commission had been to find ways to reduce or prevent damage to houses and settlements, they would have discovered that reducing the number of infernos and protecting the houses and settlements were more appropriate goals, and would have led to eradication of the bushfire menace.

Victoria will wait another 39 years for a Royal Commission to have that aim.

Chapter 4 Settler phase matures - 1901 to 1945
Increasing government involvement on Crown Land

1900 / 01

Weather

BOM rainfall records for Melbourne: Sep above average rainfall, Oct to Dec half, Jan well above, Feb very low, Mar and April well above

Hottest days in Melbourne **DAYS > 35^{0}C 13**
Dec 25-26 35.5, 38.7, Dec 30 40.4 Jan 19 36.7, Jan 25 35.7
Feb 7 43.1, Feb 18 35.9, Feb 22 35.7, Feb 24 – 25 35.3, 35.2, Mar 1-2 38.1, 39

Dryness Index	Days >35^{0}C	Seasonal Severity Level
7.8	13	128

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Tainsh (1949)
Major destruction of state forest and private properties and several lives lost

Foley (1947)
18 Dec 00 Disastrous fires in NE, Corowa, Wangaratta
31 Dec 00 Fierce fires in Castlemaine, Tatura, Tocumwal, Horsham
8 Jan 01 Benalla
10 Jan 01 Kilmore, Tocumwal
11 Jan 01 Nathalia
14 Jan 01 Numurkah, Cobram, Warrnambool
21 – 23 Jan 01 Benalla, Euroa, Ararat, Horsham, Mansfield, Murtoa, Penshurst, Seymour, Violet Town

Western District bushfires (McArthur et al 1982)
Feb 6 fires at Casterton, Murchison
Feb 12 disastrous fires at Wangaratta, and from Casterton eastwards. Great losses at many stations and 4 deaths at Birregurra.

Reported bushfire events

A sample of media coverage.
Based on these reports, area burnt would have exceeded several hundred thousand acres burnt, and caused at least 7 deaths and many thousands pounds damage.

Argus Sat 9 Feb 1901
A TERRIBIE FATALITY FOUR BOYS BURNT TO DEATH
BIRREGURRA, Friday.
Yesterday proved another Black Thursday in tho district surrounding Birregurra.
The express passing through here at 11 am. appears to have started a grass fire on this side of Warncoort, and, in spite of assistance that was readily at hand, the fire broke away, and destroyed thousands of acres of grass, miles of fencing, five homesteads, and resulted in the death of four lads, and numerous severe burning accidents to fire fighters.

Mr Anthoney, of Bushy Park, lost all the grass on the estate 800 sheep, and some cattle The fire then swept onto Yoemont, where Mr W Sherren lost all the grass, several miles of fencing, and some sheep. A lad named Kingwell was burnt very severely on Yoemont, Mr Sherren found the lad Every stitch of clothing had been burnt off him He was taken to Mr Sherren's house, where he died today. The homestead here looked for a long time as if nothing would save it, the fire raging "up to withm a few feet of the building.
The flames passed over the road on to Toorale, the property of the late Mr Talbot, and after burning all the grass and fencing licked up the homestead and wool sheds, containing presses &c, and all the buildings were burnt to the ground.

About half past 4 pm the fire crossed the breaks which had been burnt to protect Birregurra and carne raging down on the township at a terrific rate. As there was no one in the town but the women all the men having left in the morning and scattered over the district to try and save property - the situation for some time was alarming The fire came on, burning everything in its way. The residences of Mr T Howe and Mrs W Martin and also the large woolshed at Elimmook, were burnt down. Mr Howe was compelled to place his wife and family in the tank to save their lives.
The fire then passed over the back of the township, destroying the house of Mr J Berry, the children just escaping with their lives.
Passing on, it crossed the river into Studbrook, where a large amount of damage was done, the outhouses stables, and all the conveyances being burnt Mr Farrar, who had sent a horse and cart out loaded with men, had the misfortune to have both burnt in the fire. A limb of a burning tree fell on the horse, killing the poor beast. Mr Griffin also lost a valuable horse in the flames, and about a dozen horses belonging to the men who were fighting the fire were burnt severely.
A large number of the men were burnt, and many have been sent to the Colac Hospital.
Many narrow escapes were reported, but the most, terrible disaster of the fire was
not revealed until this morning Three boys were reported missing on Thursday night, and at 3 o'clock this (Friday) morning tho searchers came "upon the charred remains of the unfortunate children - two sons of Mr John McCallum, aged about 10 and 12 years, and one son of Mr J J McDonald, a boy about 12 years old. The sad occurrence has cast quite a gloom over the district much sympathy being expressed with the bereaved parents, and also for those who have met with accidents while attempting to save property.
It is reported from Barwon Downs that Hayden's large sawmills have been burnt to the ground, and that nothing has been saved but the horses.
It is difficult to get news now from Forrest and Lorne, as the wires are interrupted

A WOOD-SPLITERS FATE BURNED IN SAVING HIS BED
GEELONG Friday.
An extensive fire, which swept over the Anakies, causing great destuction of grass and fencing, was responsible for the death of a wood-splitter named William Northfold, 45 years of age, who died at 11 o clock today in the Geelong Hospital. The unfortunate man was burnt from head to foot whilst endeavouring to save his bedding from the flames which the change of wind drove down upon his camp shortly after 5 o clock in the evening. In spite of dreadful injuries, he walked four miles for assistance, and, after oil had been applied to his burns he was brought into the hospital, reaching that institution shortly before midnight. His case was pronounced hopeless, and he died as stated.

During Thursday night the flames at Anakies and Werribee were distinctly visible from Geelong.
Several haystacks were burnt on the properties which came in the track of the Anakie's fire, and the grass paddocks at Elcho, Narrada, and Marathon were devastated.
Reports of serious fires at Ocean Grove and Marcus Hill have come to hand, but no particulars are available with respect to the extent of the damage.
Mr J Wilson, jun, lost a good deal of grass and fencing at Bonnyville, and a large force of beaters worked till evening to keep the flames in check

Geelong Advertiser 11/2/1901
Fires swept across the country on February 7th. The Jan Juc outbreak caused damage to 650 acres of grass and a large quantity of fencing on William Ham's property. The neighbours had to work hard to save the sheds containing his farming implements. The fire broke out afresh the next morning and

cleared out 100 acres of grass in another paddock and came close to a house. Hundreds of sheep were saved through the foresight of two neighbours.

Argus Sat 9 Feb 1901
THE OUTBREAK AT HAMILTON
WIDESPREAD DESTRUCTION AN OLD SETTLER BURNT
HAMILTON, Friday.
Details connected with yesterday's fires are coming in one by one, and every additional report confirms the awful destruction caused by them. All along the railway line between Portland and Hamilton fires have been raging
The principal damage commences at Milltown, where Bannam's extensive sawmills were burned down, and many buildings in the township damaged.
At Myamyn one house was consumed, and others suffered more or less.
The fire which started at Tahara crossed over to Basset, and, racing before the strong wind in a south-westerly direction, on to Condah, where it first attacked the wood supply at the pumping station, thence sweeping on to the township. Billston's Hotel was first threatened, and only saved by great exertion.
The sleepers along the line between Condah and Branxholme were on fire in several places. When the train from Portland reached Branxholme about 5 p.m. it was reported that the bridge two miles and another four miles from that station towards Hamilton, were burned.
The whole country from Condah to near Hamilton is a wilderness.
An old man named Charles Anderson, while trying to bring a horse out of a burning stable, fell into the fire and perished.
Another fire broke out at Buckley Swamp, and did terrible damage.
At Muddy Creek a number of farmers lost their grass and fencing and some of their stock.
At Monivae the fire burned fiercely yesterday, and is still burning, destroying hundreds of sheep and a large area of grass and fencing. It will take a long time to ascertain all the damage done. Suffice to say that what was one of the finest districts a couple of days ago is now a wilderness and scene of desolation, and many once affluent settlers are now homeless and impoverished.

TERRIBLE OUTBREAK AT BRANXHOLME
A DOZEN HOMESTEADS DESTROYED.
ONE MORE DEATH
BRANXHOLME, Thursday.
The most disastrous fire ever known in this district broke out to-day. An exceptionally strong north wind prevailed in the morning, and the fire swept across from Ardachy Estate into Basset, which it completely devastated. It then traversed southwards, crossed the railway line, into South Branxholme. Here most serious damage to property was done, and one dreadful fatality occurred.

About midday the fire swept on to the northern part of the township, and took in its course residences and stables hay, stacks, sheds, and all descriptions were consumed on every farm house for miles.

Another fire broke across the southern end of the township. The whole of the township narrowly escaped destruction.
The wind, blowing with hurricane force, made it impossible to check the flames. The district for miles has been devastated, the loss of stock being exceptionally heavy.

Latest: Further losses are reported today from outlying farms, and miles of fencing and stock have been burnt and the Branxholme Cemetery fences and grave enclosures have been destroyed.
Only two fatalities reported as yet

Argus Sat 9 Feb 1901
KOROIT, Friday.
Five hundred fat wethers and 70 rams were destroyed by a bush fire at Tarrone on Thursday. A large amount of damage was done at Mr. Cruickshank's Terka Station, where the fire was burning all night.

MERINO, Friday.

A messenger reports that a large part of the Rifle Downs Station has been burnt. Myaring is reported all safe. No country of any consequence has been destroyed. The loss of fruit is enormous, and farmers' stacks have been injured with the heavy wind in all quarters.

PORT FAIRY, Thursday.
Today has been a day of great heat, owing to the bush fires burning to the north and west of the town. A thrashing machine, owned by Mr. H. Parkinson, of Koroit, was burned this morning on Mr. P. Farley's farm, Korongah. Mr. Farley also had a fine stack of ryegrass hay, two stacks of straw, and a shed, containing a reaper and binder, destroyed at the same time.
It is not known how the outbreak originated, as the men had finished work, and were at dinner when the stacks and machine were seen to be in flames. Fortunately, the grain which had just been thrashed was saved, it being stacked to windward of the machine.
The driver of the Portland mail had an exciting experience. He found the fires burning along both sides of the road after leaving Tyrendarra, but proceeded on his journey, when suddenly, as he was passing through some scrub which grew close up to the track, the flames swept into the undergrowth, and the coach was shut in by the fire. He had to whip up his horses to their best speed for some 250 yards before he got out of the dangerous locality, and the animals were then "dead beat" All the St. Helen's country, from Orford through to Tyrendarra, has been burned and the farmers have lost heavily in grass and fencing, but particulars as to the damage done are not yet obtainable. It is also reported that the Dunmore and Tarrone estates have been swept. Burned leaves and bark fell in the streets of Port Fairy this afternoon, having been carried 15 or 20 miles through the air. A cool change has now set in.

Argus Sat 9 Feb 1901
SERIOUS LOSSES NEAR HARROW
HARROW, Friday.
Great damage to property and severe losses in stock have been caused by the bush fires referred to yesterday at Moree, about 11 miles from here. Mrs. Penrose lost 750 sheep out of a thousand; Mr James Boland 750 bags of wheat, Mr Burgess a stack of hay, a chaff cutter and chaff house, Mr M Donnell a stack of hay, stables and out houses, Mr Martin everything including his dwelling house furniture stables and all buildings, the stock only being saved. Etc.

Argus Sat 9 Feb 1901
THE BERRINGA OUTBREAK |
BERRINGA, Friday.
A very large and destructive bush fire ravaged the Berringa district on Thursday, burning several homesteads and huts, and destroying a great quantity of props and firewood, estimated at £1,000 worth, stacked in the forest, besides shire bridges and many miles of fencing.
The fire started near Newtown, and swept through Italian Gully, Staffordshire Reef, and Berringa and at nightfall had reached Rokewood Junction, about 13 miles from its starting point. The dead tree tops left by wood cutters in the forest caused the fire to burn with great fierceness, so that fire-fighters could not get within yards of the flames. At one time the Jubilee mine was surrounded by fire, but the property was saved by the exertions of the miners and others. A lad named Hall while driving a butcher's cart over ground just swept by the fire was thrown out by his horse bolting, and he sustained concussion of the brain and several fractured ribs while the cart was broken to pieces. Fortunately the accident was noticed, or he might have been burnt to death, as trees were still blazing all around.
The chief sufferers by the fire were Messrs Alexander Armstrong, John Ward, Daniel M'Gregor, and Rosewarne, who lost their dwellings and contents, and several firewood contractors among the largest of whom are Messrs Blakely Bros, of Moonlight.
The wood stacks of the Birthday mine at Berringa became ignited, and it was only with great difficulty that they were saved from destruction. Had the fire gained a firm hold the whole of the magnificent plant might have been swept away.

Argus Sat 9 Feb 1901
AN ILL-STARRED PICNIC
MANY HOUSES BURNT
A CEMETERY DEVASTATED

YEA, Friday.
The most disastrous fire that has ever been experienced in this district occurred on Thursday. At about midday flames were noticed in a paddock at Homewood, some four miles west of the township, and fanned by a strong northerly wind they soon made rapid progress. The unfortunate part of the affair was that in nearly every instance there were but few workers on the spot all the residents being in Yea at a picnic held to celebrate the inauguration of the Commonwealth.

By half post 6 pm the fire had devastated thousands of acres of splendid grassland but worse was to follow, for about that hour a sudden change of wind to the south west brought the flames with amazing rapidity towards Yea.
The bells in the churches rang an alarm, and there was a general stampede of residents from the picnic ground to their homes, many of which were in great danger. The houses on the Whittlesea Road were assailed the flames being only beaten back within a few yards of the buildings.
Fanned by the wind nothing could check the course of the fire, which swept through the cemetery, destroying the outside fence, and in the enclosure many of the wooden fences around the graves were burnt to the ground. The caretaker's house was destroyed, and in the enclosure alone it will take some hundreds of pounds to repair the damage done.
The fire spread right across the creek, and the railway bridge over the Yea River was saved with difficulty.
For two hours a most anxious time was spent by the residents in saving the houses on the outskirts of the town from destruction. The smoke was dense and blinding.
The fire has now spread up the Limestone in the one direction, and to Murrindindi in another. It is impossible to tell with accuracy the amount of damage done, but the extent of the fire may be judged when from its point of starting, it has spread in a line some 15 miles, with a breadth of six to seven miles, and within that area practically every blade of grass besides miles of fencing have been destroyed. [Approx 25,000 ha]
Another large fire, which has been burning in the Strath Creek district, joined the local fire, and it is reported that Mr M Cunningham a house at Flowerdale has been destroyed.
Stock have been wandering at will on the roads, where their owners placed them for safety
Hundreds of men and boys turned out to fight the fire

Argus Sat 9 Feb 1901
THE WHITIFIELD ESTATE
WANGARATTA, Friday.
Serious losses throughout this district have to be added to those already reported from bush fires this week, several homesteads, thousands of acres of grass, and miles of fencing being destroyed. One originated four miles from Wangaratta yesterday afternoon in the parish of Laceby, and before 10 pm an area of two and a half miles by six was overrun by flames. A gale which lasted an hour, passed hereabout, and much anxiety was caused to several farmers, who saved their homesteads with difficulty. If the wind had continued an hour longer the fire would have come dangerously close to the outskirts of the town, but the flames were checked two miles away.
No accurate reports have yet been received from Greta and Moyhu, but the fire there was undoubtedly the largest for many years. The township of Moyhu was threatened last night, but the danger was averted after a hard struggle. This fire carne from Kilferra, 20 miles away, crossing through Hansen and Greta and hundreds of farmers and dairymen are affected. In the pariah of Myrrhee there has been great devastation, several settlers being completely ruined through the destruction of their homesteads and looses of stock and furniture.
The Whitfield Ranges were a mass of fire last night, and this afternoon word was received that the flames had reached the Whitfield Estate, recently purchased by the Government for closer settlement, and to be thrown open for selection next month. The fire is now burning there, and the Minister of Lands has been asked for instructions.

Argus Sat 9 Feb 1901
YIELIMA STATE FOREST.
NATHALIA, Friday.
A disastrous fire has been raging for the past three days through the Yielima state forest, almost due north of Nathalia. The fire seems to have broken out in the vicinity of Nicholas Bros ' sawmills, and, spreading in a south easterly direction, has wrought great havoc through the forest on to the bottled

land in the parish of Yielima, where, however, it was stopped last night on the boundary of Mr Stawell's property. There were a large number of stock grazing in the forest, but It cannot yet be ascertained whether any have been lost. Altogether an area comprising six thousand acres has been devastated, and, as the reserve is one of the few red gum forests left in Victoria, the destruction of young trees over these six thousand acres will be a great loss to the state. A small fire was also burning last night to the westward.

Argus Sat 9 Feb 1901
KYNETON, Friday
A fire, supposed to have been caused by rabbit trappers, occurred near the Upper Coliban reservoir works yesterday. A considerable area of grass and fencing was destroyed before it was got under control.

MANSFIELD, Friday
Eleven points of rain fell last night. Fires were raging round the shire at all points of the compass. The smoke is at present very dense in the town.

STAWELL, Friday
The temperature yesterday was 110 in the shade. Several bush fires broke out in the outlying districts, and a considerable amount of property was destroyed. Wal Wal narrowly escaped destruction, the fire burning all around it. The properties of Messrs. D. Williams, Dunster, Gready, Maher, and Ward were swept, outhouses farming implements, and haystacks being burnt,, and it was only by strenuous efforts that the homesteads were saved. Four miles of railway fencing was destroyed.
Fire also started in the Black Ranges at midday, and a house occupied by Mrs. Campbell, a nonogenerian, was burnt. Her son, a bee farmer, lost over 100 hives.
Fires were also burning at Joel Joel, Bald Hill, and at Morebrook Station, in the Grampians.

Argus Mon 25 Feb 1901
Ballarat Sunday
A volume of smoke rising steadily from the heavily-wooded slope of Mount Warrenheip at an early hour this afternoon indicated a bushfire such as recently devastated the neighbourhood of Mount Buninyong, a few miles further to the south.

CASTLEMAINE, Sunday.
A fire of considerable magnitude is raging on top of Mount Alexander. It started on Friday, but so far no damage has been done to settlers' properties.

CASTERTON, Friday.
There have been further large fires along the border country. Mr. Boyle's property at Lake Mundi has fared badly, but particulars of the losses are not to hand. There is also a very large fire in the vicinity of Ardno, and yesterday it was within a mile or two of Mr. Wedd's large orchard.

RELIEF FUND.
COLAC, Friday.
A largely attended meeting was held last evening to arrange for the inauguration of a fund for the relief of the sufferers by bush fires in the Colac district. Committees were formed, and over £40 was collected in the room

PITFIELD (south of Cape Clear) Saturday
At a public meeting held at Hollybush on Wednesday evening it was decided to form a committee to afford relief to tho settlers who were burnt out by the recent bush flres and £7/4/ was subscribed in the room.

Penshurst report Kolor arson continues. On Friday 18 January 1901 a fire started on the Kolor Estate, burning portions of the Kolor and Burnbrae estates, in addition to

McNamaras, Howards, Collins and Moores. The following Sunday another fire was started in the Moyne paddock at Cheviot Hills burning 700 acres.

1901 / 02

Weather

BOM rainfall records for Melbourne: Sep rain below average, Oct well above average rainfall, Nov to Feb, half, Mar well above, April very dry.

Hottest days in Melbourne **DAYS > 35^{0}C 8**
Dec 11 36.8, Dec 26 38.1 Dec 28 39.9, Jan 3 35.3, Jan 25 39.3, Jan 31 39.4 Feb 9 35.1, Mar 7 35.1

Dryness Index	Days >35^{0}C	Seasonal Severity Level
8.7	8	82

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Foley
31 Dec 01 Fires at Neerim North destroyed property and homes
January 02 Devastating fires at Kilmore, Broadford, Glenaroua, Lancefield, Lismore and Molesworth

Reported bushfire events

Penshurst report Kolor arson: On Friday 17 January 1902 another fire broke out on Kolor burning a strip a mile long. It stopped at J McNamara's property.

About a month later, a suspicious outbreak near Penshurst was reported. Since the recent deliberate attempts of an incendiary to destroy Devon Park by fire, a strict watch has been kept at night and day by the manager and employees of this and the adjourning estate Nurendoo. Despite this however fires broke out almost simultaneously on both places today the Devon Park fire appeared to have spread and as the day was hot and there was a strong choppy wind blowing, it is surmised that considerable loss has resulted. A few weeks later a fire on Gazette was just assuming a serious aspect when a wind change blew the fire back onto the burnt ground. About 200 acres was lost.

There would be a two year break - 1903 & 1904 were cooler, wetter years.

The Argus Thu 23 Jan 1902
BUSH, FIRES.
ARARAT, Tuesday.
A bushfire, the first of consequence this season in this neighbourhood, broke out on Sunday, in the direction of Glenthompson, and was carried by the high wind to the newly-settled country at Wickliffe road. Fallow land and swamps, however, intervened, and a number of men managed to check the flames at Ford's land. The principal sufferer was Mr. C. Ayrey, who lost several hundred acres of grass.

LANCEFIELD, Tuesday.
The bush fire which broke out at Glenhope on Friday continued to rage fiercely all Saturday, and spread over an area of 20 miles, embracing portions of Glenhope, Baynton, Emu Flat, and Nulla Nulla, destroying grass, fences, haystacks, outhouses, and, in one case at least, cattle.

At Green's on Saturday a mob of cattle were surrounded by the flames, and destroyed in sight of the fire-fighters, who were powerless to save the tortured beasts. On Sunday afternoon a successful fire-break was made adjoining P. Murphy's, and the fire is now under control. The damage is estimated at £10,000.

DOOKIE, Tuesday.
A narrow escape from a serious outbreak took place about a mile from the town on Sunday afternoon. A fire started in a paddock owned by Mr. James Maginnis J.P, but the townspeople and adjoining farmers were quickly on tho spot, and succeeded in subduing the flames after about 40 acres of grass were destroyed.

KILMORE, Tuesday.
The bush fire which broke out on Saturday last has destroyed 2,400 acres of Craigielea Estate, the property of Mr. William Macvean, 950 acres of Mr. Kenneth M'Queen's newly-acquired property, 450 acres of Mr. W. Knight's, and about 500 acres of others. Messrs. Macvean and M'Queen lost a number of sheep in the fire, and have been compelled to sell the remainder owing to their grass being burnt. The fire broke out again yesterday and this morning, and spread into new country, but showers this afternoon stopped its further progress. A number of trees and logs are still smouldering throughout the district which has been devastated.

The Advertiser (Adelaide) Mon 3 Feb 1902
DISASTROUS BUSH FIRES
A MAN KILLED.
Melbourne, February 2.
Bush fires have done extensive damage in the Lancefield district. Thousands of acres of grass were burned, haystacks consumed, and miles of fencing destroyed, despite the efforts of the people in all parts of the district, who joined in attempting to beat back the flames.
Homesteads were burnt at Ballan where the fires also raged. One settler lost 200 tons of grain and a threshing machine, purchased two years ago for £300.
During a bush fire at Reedy Creek yesterday a burning tree fell on a man named Kennedy and killed him.

The Argus Tues 4 Feb 1902
A fire on Banongill and Vite Vite started at 6 o'clock on Friday evening and burnt all night. Over 20,000 ac of grass, miles of fencing and stock were destroyed. A man was severely burnt.

McIvor Times and Rodney Advertiser (Heathcote), Thu 6 Feb 1902
THE BARFOLD OUTBREAK.
KYNETON, Monday 27th. Jan.
The bush fires which raged in the parishes of Emberton, Metcalfe, and Langley, in the Metcalfe shire, on Saturday, 25th January (says the "Argus"), were subdued by the exertions or the fire fighters, aided by the fact that the strong north-west wind which prevailed on Saturday dropped at night.
There were actually two outbreaks. The first started early on Saturday morning at the back of the property of Mr Perry, in the northern part of Emberton parish, and travelled south easterly, aided by the strong wind. The second started about midday, near the railway line, not far from East Metcalfe station. Both fires met in the afternoon and swept in a south-easterly direction through Metcalfe and Barfold to Langley and on Saturday evening, raged chiefly in the rangy country on Piper's Creek towards Baynton, where the fire burned itself out. The distance traversed was eight or nine miles from north to south and 3 to 4 miles in breadth, [= 10,000 ha] all occupied by farms or grazing properties.

From Argus correspondents
BUSH FIRE IN GLENAROUA DISTRICT
The bush fire reported on Saturday as having broken out at Glenaroua (Vic.) has assumed alarming proportions, and has been burning fiercely ever since, and in its effects has surpassed, the damage done on "Black Thursday." Many thousands of acres of grass land, together with houses, stables. barns, stacks, etc., have been swept away by the fire.

The timber aided the flames by carrying sparks for fully half a mile into new country, and the wind, veering round In all directions, defied the efforts of a numerous body of workers who frequently had to beat a hasty retreat to save their lives. So strong was the wind that burnt-out embers were driven into Kilmore, a distance of about 12 miles.
Added to the immense loss by the fire, a large quantity of stock are missing and those remaining, will have to be sacrificed, as there is not a blade of grass to be seen for an area estimated to cover about 15 square miles [= 40 sq km = 4,000 ha]. Nothing is definitely known as to the origin of the fire, but it is partly attributed to rabbit-trappers,

FIRE AT PUCKAPUNYAL.
SEYMOUR, Monday.
The fire in the PuckapunyaI district is still burning, and has done damage that at present cannot be estimated. Grass, fences, wattle bark, and numbers of sheep have been destroyed. On Friday the strong north wind which was blowing caused the fire to travel rapidly, and so far an area of over 12 miles long by five miles wide [= 16,000 ha] has been devastated.
The fire is still burning fiercely in the direction of High Camp Plain The farmers have lost all their grass, and to them the fire means ruin. Mr Gardiner had his homestead consumed, together with all outbuildings, and it is reported that Mr Geraghty's place has met a similar fate. Mr Heywood, president of the Seymour Agricultural Society, had lost 2,500 acres of grass, and is the greatest loser. Mr Haysey had a quantity of bark stripped ready to be removed, and this, with 500 acres of grass, has been consumed. At Cassidy's great difficulty was experienced in saving the house. The men at times fell from sheer exhaustion, and had to be assisted away.

1902 / 03
Weather
BOM rainfall records for Melbourne: Sep rain above average, Oct Nov well below average rainfall, Dec double, Jan Feb well below, April well above.

Hottest days in Melbourne **DAYS > 35^{0}C 9**
Dec 5 38.7, Jan 17 37.9, Jan 29 – Feb 35.5, 36.1, 40.5, 38.9, Feb 9 40.2, Mar 1-2 36.3, 37.7

Dryness Index	Days >35^{0}C	Seasonal Severity Level
7.4	9	87

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Foley (1947)
19 Nov 02 fires in Mallee supposedly caused by fire balls

Reported bushfire events

1903/ 04
Weather
BOM rainfall records for Melbourne: Sep to Nov rainfall well above average, Dec average, Jan Feb triple, Mar Apr half

Hottest days in Melbourne **DAYS > 35^{0}C 2**
Dec 26 35.3, Feb 18 35.9,

Dryness Index	Days >35^{0}C	Seasonal Severity Level
3.4	2	15

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Foley (1947)
19 Sep 03 fires in Gippsland (no details)

Reported bushfire events

1904/05
Weather
BOM rainfall records for Melbourne: Sep rain half average, Oct average, Nov half average rainfall, Dec almost zero, Jan Feb below, March half, April well above.

Hottest days in Melbourne **DAYS > 35^{0}C 14**
Dec 24 38.9, Dec 28 36.5, Dec 30 36.7, Jan 9 40.3, Jan 11 – 13 40.9, 42.5, 35.7, Jan 25 35.1, Jan 28 40.5 Feb 10-11 38.7, 38 Mar 18-19 35.1, 35.6

Dryness Index	Days >35^{0}C	Seasonal Severity Level
16.9	15	191

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records
COAG reference to major bushfire event in 1905 (no details)

Reported bushfire events
Carver
Serious fires occurred in forests in 1905 – no details given

Tanish
Late Spring? 1904 heavy timber losses (no details)

Foley (1947)
Dec 6 to 9 Bushfires raging near Mt Blackwood, Yeerung, Horsham, Gisborne, Portland, Thoona, Nagambie, Yarrawonga, Eddington
Dec 10, 15, 23 Bairnsdale, Tarnagulla, Tungamah
Dec 27 to 29 Fires in many places
Dec 31 04 to 5 Jan 05 Fires in many places
Jan-10 Clunes
Jan 11, 12 fires in many places
Jan-13 Macedon and many places
Jan-14 severe fires in many places
Jan-18 relights in previous fires
Jan-23 Morwell, Warrnambool

Feb-11	Morwell, Warrnambool
Feb-13	Macedon in flames, families burnt out at Mitcham
Feb-14	fires burning in many places
Mar-21	destruction at Elingamite, etc
Mar-22	fires in many places

Reported bushfire events

The Basin Fire Brigade History 2012 quotes "a priceless piece of early bushfire fire experience from the pages of Mrs Janet Dobson's diary".

December 31st 1904 "Very bad bushfire all over One Tree Hill, another up side of the Observatory [Burke's Look-out], all around Kerrs', Barnes and Mrs Davis nearly burnt out. Joe went over to help, they are burning a break between Baldwins and Kerrs. Weather fearfully hot."

January 1st 1905 "Fires still racing."

2nd January 1905 "It rained some nice showers today."

10th January 1905 "Weather very hot. There is a big fire all around J. Maguire's, A.E. Chandlers and E. Hansens and another up near Mr Farlands."

11th January 1905 "The heat almost unbearable. The fires are raging all day. The wind is blowing quite a gale. There is a big fire all around Hazel Dell and right to the top of the mount."

13th January 1905 "Joe went up to Dodds after dinner. The bushfire was all around the house. All their hay got burnt. Joe stopped to help them. It was nearly five when he got home. The fire travelled down to S.R. Matthews in the evening. There were about 20 men up there keeping the fire from the house. Some stayed all night, some of the sheds were burnt down. It is a dreadful fire, it is coming down toward Mr Jacksons now. Weather is very hot."

14th January 1905 "The bushfire was all around Mr Jacksons today. The Army boys were over helping him keep it back from the house and the barn. The fire was all around the house at Hazel Dell. They were nearly burnt out. All the Chandlers were up helping them. They had two of their bridges burnt and their fern gully was all burnt out. The fire went from there up to Dickensons. The same went over the mountains and burnt down Mrs Leak's and a Mr Fitzgeralds' house. It is still very hot."

January 16th 1905 "There was a cool change Saturday night (14th January) and on Sunday morning we had some welcome rain. It rained for two or three hours."

February 11th 1905 It has been dreadfully hot all day with a hot north wind blowing very hard and there are some dreadful bushfires about. There was a very big one at Mitcham this afternoon. It burnt down seven houses.

Penshurst report: ***Early January 1905*** was very hot with fierce fires burning at Mt. Napier and Byaduk. In the evening a wind change brought dense clouds of smoke into Penshurst. This was a foretaste of the fire troubles to come.

Monday 23 January. The Free Press reported that: a fire started on the Kolor Estate at midnight about 2 miles out. It broke out afresh this afternoon threatening the township. About 150 men turned out and assisted by a favourable wind they got the flames under control though the fire will still need careful watching. About 300 acres of grass was burnt.

Two day later another fire was started in a Kolor paddock close to the township. Incendiarism was suspected. This fire burnt most of the mount and Kolor plus 1300 acres of Gubbins, Burnbrae. W. Powling lost 500 acres and Howard, Kelly and McDonald suffered heavy losses. The Argus reported later: W.A. Kelly lost 600 acres of grass Howard Bros 60 acres of grass, D. Lane and J. McDonald a large quantity of grass. A pony valued at 40 which Mr Kelly was riding dropped dead from heat and exhaustion. Messrs J F Noonan, Drayton and Bowmans dairy farms were saved by a last minute wind change.

On ***Friday 27 January*** a fire broke out in the morning on Langulac, burning through Stonefield Estate and threatening the homestead. The fire headed for Moyne Falls - in all

burning 3000 acres. The Free Press reported: whether there is any real ground for it or not we cannot say: whether the recent fires on Kolor and other Estates are attributable to it is equally uncertain, but rumour has it that last weeks outbreaks were the result of the mad work of an incendiary.
A week later more grass fires broke out with the first starting at noon on Cheviot Hills. White's dairy farm was burnt out, Pollock's and Grayland's across the Stonefield Lane, lost 60 acres each. The second fire broke out at 4 pm near John Noonan's farm burning up to Kolor homestead before running into previously burnt ground. The third outbreak started at 7 pm again on Cheviot Hills. On the following Tuesday more fires started on the Warrnambool Rd. My grandfather Patrick Doherty and the Langulac station both suffered loss. To top it all off, on Saturday morning a fire broke out about 12 feet from the break that was burnt on the town side of Kolor. This fire burnt right through the Kolor homestead garden before running into burnt ground from the previous Thursday fire.
Another fire that this time couldn't be blamed on the arsonist was at Mr Johnstone's dairy farm. It was said to have been caused by a cow trampling on a box of wax matches. The main sufferers of all these fires were the small dairy farmers. As a consequence the milk supply to the Penshurst Butter Factory dropped so much, that workers hours had to be shortened.
At the end of February an employee of Mr John McDonald, Stonefield Lane made a discovery which confirms the belief that some of the fires had been deliberately lit. An incendiary device, made from common household ingredients contained in a glass bottle, was found hidden in long grass. These devices ignited when heated by the sun. The Argus report noted that this explained why many of the fires originated early in the morning or on cloudy days when the sun broke through the clouds. Following these fires the Penshurst Bushfire Brigade was formed. When it was finally confirmed that an arsonist was at work and had been for some years Frank Twomey of Kolor offered a reward of £100 to catch the culprit.

Surf Coast Shire ***January 1905***, extensive fires occurred throughout the Geelong area and between Jan Juc and Anglesea. Record temperatures of 107.8 – 110.5 in the shade

The Ballarat Star Feb 13 1905
Bushfires in the Geelong District burnt eleven thousand acres of grassland, spreading to Torquay.

Other bushfire relevant events
The only fire fighting tools available were rakes and hoes, heavy metal buckets, hemp in bags and branches broken off suitable gum trees to act as beaters. However, it is incredible how quickly the early pioneers learned to use back burning and other passive methods to achieve their objectives and their knowledge of fire behaviour in a variety of weather situations was remarkable. (The Basin Fire Brigade History 2012)

1905/06
Weather
BOM rainfall records for Melbourne: Sep Oct rain average, Nov half average rainfall, Dec well above, Jan Feb a quarter, March well above. April half
Hottest days in Melbourne **DAYS > 35^{0}C** **14**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
14.5	14	169

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC

Dec 1905 to Jan 1906 Dandenong Ranges 12 deaths

COAG reference to major bushfire event in 2006 (no details)

Foley

Jan 12, 13 Alexandra, Horsham, Kilmore and many other places

Jan-20 Fires at Clunes, etc

Jan 22-24 Fires at Chiltern, Dunolly, Bendigo, Benalla, Daylesford, etc, deaths 15, including 6 children

Jan-25 Fires at Mt Best and Mt Fatigue, and South Gippsland

Jan 26 to Mar 1 fearful fires in Gippsland burnt till rain on March 1

Reported bushfire events

GRASS FIRE CAUSED BY PHOSPHORUS.

Mount Gambier, January 23.

The necessity for care in mixing and distributing poisoned pollard for rabbits was demonstrated yesterday afternoon at Compton, where a grass fire originated from the phosphorous with which some pollard was mixed. Mr. Miller, an employee of Mr. Joachim Schmidt, was laying pollard in a paddock on the north side of the railway line, and about 2 o'clock he noticed a fire springing up in the long, dry grass. He made every attempt to extinguish it, but failed, and it was with, difficulty the neighbours succeeded in getting the fire under. They would probably not have succeeded had the wind not taken the fire to the railway line, the reserve along each ride of which has been burned out. This stopped the front of the fire, but the beaters had to work hard to check the flames on either side.

The pollard was placed in a narrow furrow made by a machine, and the grass fell back into the furrow after the pollard had been dropped. It would therefore seem necessary that a clean furrow should be made before laying the pollard.

The Advertiser (Adelaide) Thu 25 Jan 1906

TREMENDOUS BUSH FIRES.

AT LEAST FOURTEEN LIVES LOST IN VICTORIA,

AN APPALLING INCIDENT.

CHILDREN SUFFOCATED IN SIGHT OF THEIR MOTHER.

SEVERAL FAMILIES MISSING.

HUNDREDS OF SETTLERS HOMELESS.

Melbourne, January 24.

The death roll through the bush fires in Victoria is much longer than was anticipated. So widespread have been the ravage of the fires and so great the interruptions in the telegraph communications that it is difficult to get definite particulars.

At Mount Fatigue, where the greatest loss of life occurred, the fires swept across the country with appalling rapidity, annihilating farm houses, outbuildings, fences, stock, and crops, and in many cases cutting off all the avenues of escape for the unfortunate settlers. A search .party went out from Foster this morning, and drove« through miles of blackened and desolated country. Many settlers and their families who had succeeded in keeping roofs over their heads, were found to be totally blind from the effects of the smoke and the heat, women and children were found, to be in a very weak state.

A Dreadful Death.

A heartrending scene was met at **Woorara West, about nine miles from Foster,** where the first loss of life occurred. The corpse of an invalid, Mr. J. Williams, was lying in the centre of the road. Two settlers were attempting to carry the unfortunate man to a place of safety, when the fire came roaring down on them. They struggled on through the heat and smoke, but their difficulties were added to by Mr.Williams, who kicked and struggled. There was a desperate fight for the life of the invalid, but at

last the time came when they had to abandon him, and fight more strenuously still for their own lives. They managed to reach Mr. H. Berry's homestead, which was only a couple of chains away.

Fearful Experiences.
No living thing could stand the heat unprotected. Fowls, calves, and sheep withered up before the fiery blast, and dropped. dead, although untouched by the flames. At Mr. Berry's the two settlers found the four-roomed house packed with over 20 men, women, and children. All were scorched and in intense pain. With splendid fortitude they cheered each other, and eventually all immediate danger was passed. Help came from more fortunate neighbours, and everything possible was done to relieve their sufferings. When the search party reached a point 13 miles out from Foster they found all further progress blocked. Vehicular traffic was impossible, and in many places horsemen could not pass. Clearing gangs axe at work, and endeavours are being made to reach the settlers in isolated spots.

Five Children Suffocated.
A message from Toora states that a fire started there on Tuesday night to the west of the town. It swept round the Hoddle Range, devastated a stretch of timbered country, destroyed many homesteads, and burned the new Wesleyan Church and State school. The flames, sweeping up the road, overtook the six children of Mrs. Lonsdale, and surrounded and suffocated five of them before the mother's eyes. They were Olive, 13 years old, Daisy Harriet, 10, Francis Howard, 8, Iris, 5, Gertrude Rose, 4, and Claude Vincent, 3. On returning from school they were put on the road by their mother. Becoming bewildered by the blazing country around them and by the - thick smoke they rushed towards the fire and fell suffocated. One of the little ones, who was carrying the baby, accidentally tumbled upon her. The mother dragged the children back and managed to save the baby. The eldest girl, Ivy, who is 17 years old, was also saved by getting into the creek and remaining there. Francis Howard lingered for some time in great agony, but was so completely overcome that it was found impossible to save his life. Only five minutes previously Claude Vincent had clapped his hands and said, "What a pretty fire."

Brave School Teacher.
Great courage and resource were shown by the State school teacher, who placed 28 children under wet blankets and saved them all. Standing amid the suffocating smoke and flames, ne kept throwing water over them. To get water he had to rush through the flames. There were altogether 14 casualties.

Flames 100 Feet high.
East of the town another fire started and rushed, a great mass of flame 100 ft. high, to the back of **Welshpool,** and burned down the Agnes River State school. Mount Fatigue and Mount Best were a mass of flames. The bridge over the Agnes River caught fire, and is still burning. The flames swept through the carriage windows of the midday train to Melbourne.
Hundreds Homeless.
Two other bodies have been found, those of Robert Swan and Harry Crisp. Both were married men. Swan's wife was away dangerously ill in Foster. Several families, including one named Singleton, are missing. Hundreds of people are homeless **between Foster and Welshpool**. At Foster four houses were burned, and at Amey's Track several valuable horses were destroyed.

Buildings Burned.
The **Agnes River** State school, the homestead of Mr- Livingston. M.LA., the Mount Best State school and Mechanics Institute, besides the new Wesleyan Church, were all burned. At Wonga Wonga a new ball was burnt out. At Hoddle Range every settler was burnt out. Many are without clothing. The whole terrible work of destruction occurred within five hours.

The Lonsdale Children Buried.
The funeral took place this afternoon. The children were buried in one grave. Toora residents behaved magnificently in sending aid. They volunteered also to dig separate graves for the children.

The Death roll.
There is considerable uncertainty as to the total loss of life. It appears from various reports received that in addition to the Lonsdale children, three men, identified as Messrs. Swan, Crisp, and Ross, were also burned. Two other corpses await identification at Toora, and two at Foster, making, with the invalid, Williams, a total death roll of 14. It is feared that an extensive search will discover many more victims.

Shelter in a Dam.
The fires around **Daylesford** devastated an area extending a distance of eight miles to the north and north-east from Daylesford. Mr. W. Connell, who was carting wood along the Dry Diggings-road, had to drive his horse and dray into the Glenmona battery dam for safety. The flames ignited his vest, but he pulled it off and dropped it into the water. Mr. A. Rowland, seeing the approach of the fire, hastily jettisoned the load from his six-horse wagon and galloped through the flames without receiving much injury. Many of the farmers and their families are destitute.

Post script
A plaque at the top of Mount Best, 10 kilometres north of Foster.
Six Lonsdale children aged between three and 13 died in the fire, on January 23, 1906. Seven of the eight Lonsdale children had been fleeing up a country lane from their burning house, below Mount Best, when they were surrounded by fire and burnt to death. The youngest, Hazel, aged eight months, survived because she was shielded by the body of her 13-year-old sister, Olive, who died.
Four local men also died. One of them, Thomas Butler, 68, could be identified only by a pair of boots and walking stick.
There was much bravery. School teacher Harry Vale saved the lives of 22 children at Mount Best School by evacuating them from the school house and shielding them with water and blankets. The Age December 10, 2005

Kilmore free press Thursday 25 January 1906
Several lives lost in the bush fires in Daylesford district on Tuesday.

The West Australian Thursday 25 January 1906
APPALLING DAMAGE IN VICTORIA. NUMEROUS DISTRICTS SWEPT.
NINE PERSONS PERISH, SIX SCHOOL CHILDREN BURNED TO DEATH.
SCORES OF FAMILIES RENDERED HOMELESS. EXCITING EXPERIENCES.
FLAMES STILL SPREADING.
Melbourne, January 24.
In the Daylesford district a dozen houses were burned at Hepburn, and a similar number at Spring Creek. A change of wind yesterday afternoon placed the fire-fighters in imminent danger, as it gave a new direction to the flames, and the men were in danger of being surrounded by them. The fire traversed thickly-settled country, and scores of settlers were burned out. The State School at Hepburn was saved, although part of the fence surrounding it was burned. The building was last night occupied by homeless families.
At Glenlyon, in the same district, a settler named Eisse, dangerously ill, had to be carried from his house on a stretcher. His house was burned after he left it.

At Apollo Bay the forest is on fire and a bridge, 400ft. long, leading to the Sawmill Company's mill, has been burned, and several settlers have been rendered homeless.

At Carrum a farmer carried his two year-old child through half a mile of burning grass, and saved the little one, although both father and child were badly scorched.

At Walhalla a large stack of fire wood has been consumed, and the mines thereby suffer considerable loss. The huts of wood-splitters and their effects have all been burned.

The Seymour district appears to have been almost swept by fire. It leaped creeks, burned farms, demolished wood stacks and played havoc gene rally. By tonight it had traversed a distance of 12 miles, and was still raging.

Seymour also reports that a fire is burning in the Tallarook Mountains.

Colac also reports a serious fire, but no particulars are to hand.

The West Australian Friday 26 January 1906

PARTICULARS OF THE VICTORIAN DEVASTATION.
WHOLE DISTRICTS SWEPT. SENSATIONAL EXPERIENCES..
EXTENT OF CONFLAGRATIONS WORSE THAN IN 1898.
HOUSES, GRASS, AND CROPS BURNED.
FURTHER LOSS OF LIFE. SOME REMARKABLE ESCAPES.

Melbourne, January 25.

So far as actual damage to private property is concerned, the Daylesford district seems to have suffered most from the bushfires. The flames spread over thickly-settled country, and left blackened houses behind them. How the fire started is unknown, but what ever may have been the cause the effect is the same. Scattered villages were enveloped and ravaged, and ordinary precautions were useless. The fire was not the ordinary grass-fire. It was one in which a forest was burning. It was not one in which a sharp flame licked up the grass. It was one in which great beams of wood were being consumed. The fire was on Tuesday aided by a fierce hot wind, which dried up the natural moisture in the leaves of green trees. The consequence was that the trees caught fire more easily. There were two predisposing causes - hot winds and a hot sun. These acted together, and when the fierce fire came in there was but one effect possible.

To the north of Daylesford there is a large extent of Crown lands, clothed with a forest of saplings. All over that area are small blocks of land held by miners, fruit growers, wood carters and labourers. Along a well-metalled road were the buildings of two little towns - Spring Creek (three miles from Daylesford) and Hepburn (about a mile further on). The well-known Hepburn mineral springs in the neighbourhood, attract a number of tourists, and many boarding-houses. Prettily-situated in the bush growth, were erected to provide for the visitors. It was over this picturesque and thickly-settled district that the fire, driven by a fierce gale, burst with fearful suddenness on Tuesday, and left desolation in its wake. The wind carried it south towards Daylesford, Blowhole, Doctor's Creek.

Hepburn and Spring Creek

Before mid day Daylesford was enveloped in smoke, and flames were leaping over the gullies and up the sides of the ranges. Soon everyone in the town and the families around were speeding towards the doomed district, and the gallant lines of fire-fighters, hundreds strong, were straining every nerve to save homes and property. The rugged character of the country and the thick bush rendered the effort exceedingly difficult, and this difficulty was increased by the high velocity of the wind, the intense heat and the overpowering smoke.

Men groped blindly in twos and threes to wherever they could reach the flames. Soon after midday the wind began chopping to the north-west and west, and the fighters were in imminent danger. They had to run to avoid being surrounded by fire. The fire travelled with amazing speed, and green saplings burned to their topmost branches like tinder. The hillsides today bear witness to the power of the conflagration. A sheet of flame appears to have enveloped the whole vegetation and left a charred and black mass.

One volunteer graphically describes how he and two others rapidly ran along the edge of the low-grass flame with their bush-beaters and turned it into a clump of green blackberry bushes in one of the gullies, thinking that in this way the flame would be smothered. In an instant the blackberry patch crumpled up and disappeared in flying ashes.

About 3 o'clock the fire in rapid streaks and patches, often leaping over spaces of hundreds of feet, reached Hepburn and Spring Creek, and the destruction caused in a few moments, was heartrending. At Hepburn, F. Vanzetti lost a fine bakery, 25 bags of flour outbuildings, carts, a chaffcutter, machinery and 100 tons of wood. He and an employee had been engaged all the morning helping the neighbours to save their homes. They returned exhausted, and with only time to roll a safe out into the street. This with a chest of drawers, a washstand, and three bags of flour, is lying on the road way-ill that is left, as Mr. Vanzetti sadly says, of 18 years' savings.

There were surprisingsg escapes. The Mount Franklin Shire Hall was burned out, and the Racecourse Hotel only a few yards away was saved. The only person left in the hotel when the fire reached the outbuildings were Mrs. A. Menz, the landlady, and a servant girl Mrs. Menz seized her child, and both women fled up the road and the hotel was left to its fate. All the outbuildings were destroyed, and a few were burned within 6ft. of the back door. One window was cracked with the flames, and the billiard-room, floor was covered with the charred re mains of grass and straw swept in through the open doorway, yet the building remained intact. a sudden change of the wind having saved it. A group of

Chinese huts surrounding a Joss-house at one end of Hepburn was swept away, and the Joss-house was left standing.
At Spring Creek a melancholy gap has been left in a pretty group of cottages which lined both sides of the main road. Mr. Dominic Giovannoni an old resident, was burned to death in his cottage before he had time to escape. Mr. Tognini, who lived in the neighbourhood, also perished, but his death was due to shock. He as found lying dead in his house, which was uninjured. although some outbuildings were destroyed. "Bellinzona" a well-known boardinghouse, al most opposite Giovannoni's, kept by Misses Borsa (four sisters) who were born on the homestead, was lost with all it contained, except a piano. Miss C. Borsa, one of the sisters, says that someone had told them that a large cellar under the house was the best place to store what was most valuable. Into this she, her sisters, and their lodgers, and even some of their neighbours, hastily carried that they valued most. Today two friends were sifting the ashes in the bottom of the cellar, in a forlorn hope of recovering some of the lost home treasures. Cr. King (Mayor of Daylesford) and Cr. Wilkie (of the Mount Franklin Shire) sent out a van load of provisions and bedding to the sufferers. In another part of the district it is stated that one could carry away in a handcart all that was saved. The catalogue of the losses, if ever it be compiled, will be mournful reading.
Daylesford reports that a man named John Lafraconi (68) was received in the Daylesford Hospital on Tuesday in an unconscious condition and suffering from burns on the soles of his feet, shock and exposure. He died to day.
The latest accounts state that the fire is moving towards Fryerstown, 15 miles from Daylesford, and that the farmers are ploughing fire-breaks around their fields and stacks.

The fires of 1898 are not to be compared with those which have just passed through the district. The opinion is expressed that the outbreak was duo to the carelessness of persons who were burning off.

At Apollo Bay, Mr. M. Dally, a well known settler, had his house destroyed. The Sawmills Company had a trying time for an hour, and with the greatest difficulty they saved their plant. Several private owners and the Church of England Reformatory house had most of their grass burned.

The West Australian Monday 5 February 1906
The death-roll of the recent bush fires in Gippsland and Daylesford totals 15, including the six children of Frank Lonsdale. Altogether there were 10 deaths in Gippsland, and five at Daylesford.
The loss of homes was as follows - Around Foster. Toora, and Welshpool, 46; around Yarram, 18; at Daylesford, 24; at Fumina and Beech Forest. 7 each: at Apolla Bay, 4; at Jindivack, 3; at Wandin South, 3; at Gembrook, Ararat, and Lal Lal, 2 each; at Leongatha, 1. This makes a grand total of over one hundred.

Surf Coast Shire February 1906 Bushfires around Anglesea

Other bushfire relevant events

Penshurst report Despite the discovery of the incendiary device and the reward, the arsonist was back in 1906. The Free Press reported on 2nd February that: during the past 2 weeks several fires have started on different properties in the district, principally on Kolor and Langulac. On each they were quickly put out.
A fire on the following Tuesday burnt 75 acres in Graylands and Pollocks (Stonefield) paddocks. Reports are current that several lots of phosphorus have been found in the paddocks under cover, if so, last years arsonist is back at work.
Two weeks later Johan Gustav Kruger, Purdeet was hauled up before the Penshurst Police court for burning a fire break between his property and Twomey's Kolor on a hot day with a southerly wind blowing. He was fined £2.
Clearly the police and landholders, who had suffered so much, were now taking a zero tolerance policy. Mr. Kruger in trying to protect his property from the constant threat of fires from Kolor had made an error of judgment (given the weather conditions).

1906 / 07

Weather

BOM rainfall records for Melbourne: Sep to Nov above average rain Dec to Feb well below half, March April below average

Hottest days in Melbourne **DAYS > 35^{0}C 6**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
9.9	6	64

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Foley

Jan 8 to Feb 27 Fires in many places
Mar 1 Great fires at Goornong, Traralgon, Warragul
Mar 2 Moe, Wycheproof,
Mar 4 Some rain
Apr 5 Dandenong, Frankston, Gordon, Kilmore,
Apr 8 Drought finally broke

Reported bushfire events

Penshurst report In 1907 newspapers reported that fires broke out in late March and consumed large areas of grass - just when the district relaxed their guard and thought the fire threat was over.

1907/08

Weather

BOM rainfall records for Melbourne: Sep to Oct below half average rain, Nov average Dec well above, Jan Feb a third of average, March average April well below average

Hottest days in Melbourne **DAYS > 35^{0}C 19**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
10.2	19	204

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Foley

Dec 25 Beaumaris, Kyneton, Linton
Dec 26 Riddells Ck, Avoca, Ferntree Gully, Bruthen,
Dec 26 Heavy rain

Reported bushfire events

Surf Coast Shire January 1908, bushfires around Jan Juc, Modewarre and Anglesea. The fire caused 'wholesale destruction' at Anglesea, with seven houses destroyed.

1908/09

Weather

BOM rainfall records for Melbourne: Sep to Oct average rain, Nov & Dec a third of average, Jan above average, Feb to March below average

Hottest days in Melbourne **DAYS > 35^{0}C 6**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
8.2	6	60

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Foley

Jan 3-4 Fires at many places
Jan-17 Chiltern, Rainbow, Castlemaine

Reported bushfire events

Horsham times Friday 12 February 1909
Two large bush fires are raging In the Daylesford district, one near Specimen Hill and the other in the vicinity of Bullarto. It is feared that strong winds may arise and cause serious damage.

Other bushfire relevant events

BOM began in 1908. Forecasting began soon after.

1909/10

Weather

BOM rainfall records for Melbourne: Sep to Oct below average rain, Nov a quarter, Dec above average, Jan half, Feb a quarter, March average, April below half

Hottest days in Melbourne **DAYS > 35^{0}C 16**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
11.7	16	180

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Foley

Feb-24 Bunyip, Childers, Mildura, Toora
Feb-25 Lightning caused grass fires at Kerang
Feb-28 Toora, Wodonga

Reported bushfire events

Penshurst report On Thursday 27 January the Argus reported that: the first bush fires of the summer started a day or two ago on South Kolor. Fortunately, it was noticed before it obtained a hold, and a number of willing workers managed to extinguish it with the loss of between 300 and 400 acres.

1910/11

Weather

BOM rainfall records for Melbourne: Sep to Oct well above average rain, Nov average, Dec well above average, Jan below average, Feb to March well above. April half

Hottest days in Melbourne **DAYS > 35^{0}C 2**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
4.3	2	16

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Carver
Fires were infrequent

Reported bushfire events

1911/12

Weather

BOM rainfall records for Melbourne: Sep to Oct average rain, Nov half, Dec well above average, Jan to March below a third, April average

Hottest days in Melbourne **DAYS > 35^{0}C 11**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
11.0	11	121

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
Jan Willaura 15 buildings Main street of town

COAG reference to major bushfire event in 2012 (no details)

Carver
Fires were infrequent except for a large one at Murra Murra in Grampians,
Forest grazing was regarded as a major cause of forest fires. For this reason, some licences were not renewed, and stock was managed by agistment.

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
Feb 1	Melb	106	15	NW	5	Bad grass fires Ballarat and Casterton
Feb 2	Melb		17			Bairnsdale, Cressy, Heathcote, Mortlake, Outtrim, Portarlington, Bungaree, Wickliffe, Whittlesea

Western District bushfires (McArthur et al 1982)
Feb 1 large bushfires at Ballarat and Casterton
Feb 2 large fires at Cressy and Mortlake

Reported bushfire events

Penshurst report: 1912: On 7 February 1912 an arsonist started up again with a fire at Purdeet causing heavy losses to Mr. J. Cameron, J. Ross, J. Collins and C. and E. Milligan. A few days later fires broke out at Blackwood and the Gums. It was suspected that the fires were deliberatively lit as they started within a mile of each other. Messer's Ritchie and Ross offered a reward of £100 for information that would lead to the conviction of the person who set fire to their properties on February 1st and 4th .
Michael Kinneally was arrested on suspicion of having caused the fires; he was later released on bail. In a later hearing to determine whether he would be sent for trial by jury, the charge was dismissed due to the weakness of the police case. A month later Michael was again in trouble and was charged and fined with being drunk in a public place and using abusive language.

Box Hill Reporter Fri 9 Feb 1912
Big Fires at Emerald.
It is many years since such disastrous bush fires as those experienced last week have raged in the Emerald district. At Aura and Paradise the devastating flames have swept large areas of scrub, but possibly the most alarming outbreak occurred along the road from Paradise to Emerald, and on both sides of the railway the country was ablaze. Some of the homesteads were completely surrounded by the fires and the occupants experienced some rather unpleasant sensations, but the houses were saved from destruction by the strenuous labour of an heroic band of fire lighters.
Down Beaconsfield road, about a mile or so from Emerald township, another fierce blaze broke out on Saturday afternoon, and travelled in a south-westerly direction towards Mr D. P. Logg's sawmill, which was only saved by the hard and unceasing work of the mill hands.

Geelong Advertiser 17/02/1912
An extensive bush fire raged yesterday in the Anglesea Forest; at Jan Juc, and traversed a wide area of timbered scrubby country- At midday it bore down towards the coast before a strong northerly wind, and fringed the paddocks of Addiscot. The change of wind to the south drove the fire back on its course, and it had died away considerably in the afternoon. When the fire was at its height Cobb and Co.'s passenger coach from Anglesea to Geelong was endangered. The vehicle, drawn by five horses, was under the charge of Driver Petrasson, and carried five passengers. a northerly gust swept the fire practically around the coach, and there was no option but to take the team through the crackling grass tree stumps.

Surf Coast Shire
January 1912, extensive fire at Aireys Inlet. Two cottages destroyed
February 1912, bushfire in forest at Jan Juc

1912/13

Weather

BOM rainfall records for Melbourne: Sep average rain, Oct below Nov above, Dec well above average, Jan very little, Feb well below, March double, April below average

Hottest days in Melbourne **DAYS > 35^{0}C 9**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
11.5	9	101

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
January Chelsea 64 residences, 100 holiday homes

Tainsh 1949
71,000 ac total in Reserved Forest, plus Grampians 7000 ac,
20,000 ac in headwaters of Thompson, Avon, Macalister, Mitchell
Whittlesea ranges fire spread to Yan Yean catchment

Carver
71,000 ac total in Reserved Forest, plus Grampians 7000 ac, and 20,000 ac in headwaters of Thompson, Avon, Macalister, Mitchell and in Croajingalong
Disastrous fires in Briagolong district, Woolenook, Wilson's Prom, Strathbogie district, Wandong district and many other places.
Graziers were again blamed for most fires

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
Jan 13	Melb	101	20	NN W	5 Sale NW 8	Serious fires Gippsland, much damage, flames 1.5 miles wide, grass fires near Geelong
Feb 5						Argus: large areas devastated, homestead semi circled in flames

Reported bushfire events

Surf Coast Shire February 1913, bushfire between Anglesea and Jan Juc

Box Hill Reporter Fri 14 Feb 1913
Bush Fire at **Monbulk**
When we went to press last week everything was uncertain, roads were blocked, and the full details of the disaster were impossible, but we are now more sure of our ground, and it will be within the mark when we state that £1500 will be needed to place losers in a reasonable degree of comfort ignoring the

destruction of public buildings, which will cost another £1500, to replace, and much fencing and minor losses.

1913/14

Weather

BOM rainfall records for Melbourne: Sep to Jan below average rain (approx 2/3), Feb almost nil, March and April below average

Hottest days in Melbourne **DAYS > 35^{0}C** **17**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
15.0	17	208

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
Gippsland, Grampians, Otways 100,000 ha

Tainsh
20,000 ac in NE and Gippsland high country valuable timber

Carver
200,000 ac in grass and forest in NE district

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
Jan 9						Disastrous fires at Riddells Creek and Heathcote
Feb 16						Dromana to Cape Schanck
Feb 20						Serious fires Casterton, Mirrranatwa forest destroyed, fires at Bairnsdale, Hamilton, Frankston, Stawell, Meredith, Whittlesea
Mar 12						Large fires Gippsland, settlers in danger, flames 4 miles wide at Mirboo North, destruction at Trentham, hills ablaze around Healesville

Reported bushfire events

Argus Fri 9 Jan 1914
DAMAGE NEAR RIDDELL GOOD WORK BY FIRE FIGHTERS
RIDDELL, Thursday - Although a strong cool wind was blowing today, the most serious outbreak of fire for this season occurred. It began on the Gilligan property on the Melbourne road near Sunbury and quickly travelled northwards towards Gisborne.
At about 4 pm, the fire entered Red Rock property of Mr Alan Currie, and destroyed 600 ac of grass, but fortunately the sheep and cattle were removed.

As the fire approached the Gisborne Creek near Riddell it was met by numerous fighters.
In the evening the fire was overcome, after traversing a distance of five to six miles. Much damage must have been done

Penshurst report: Things were quiet during the 1913 fire season but in February 1914 a bushfire broke out at Tabor and swept through the properties of Messer's Grosser, Albert Burger and Mirtschin destroying 1500 acres of grass and a few miles of fencing. Mr P Archbold who was engaged in taking gravel out of a pit, had to gallop his horses out of the fire area in order to save them. The fire also went through the Gnadenthal cemetery destroying the railings around the graves. Over 150 firefighters turned out to extinguish the fire.
The rest of the war years and post war were quiet on the bushfire front which was a blessing, considering over 140 of the districts fit young men were in the army and any major bushfire could have had disastrous consequences as the only way grass fires were fought in those days was using a line of men with beaters working on the flanks and/or by back burning.

Ballarat Courier Wednesday 4 February 1914
DAYLESFORD. BUSHFIRE.
The brigade, the police, and a large number of private citizens fought a bushfire that started on Mr Frank's property at Mount Franklin on Monday. The flame spread into the property of Mr William Jayes and Messrs Roberts and son, a large area of grass and fencing being destroyed.

TIMBER COUNTRY ABLAZE.
SAWMILLS MENACED
YEA, Monday. - The fire which broke out on Newry Park Estate is still unabated.
It was rumoured this morning that Byrne's sawmills had been, destroyed, but this was found to be incorrect. Much of the tramline has been destroyed, and three bridges have been swept away. The owners believe that the mill will be saved. Work at the mills is suspended, many men having been thrown out of work.
A large gang of men is guarding the North Eastern Sawmills Company's tramway and breaks are being made to save the mill. The fire is still confined to the timber country, but is approaching the open country near Limestone and Cheviot, where great anxiety is felt by landowners. If the wind changes to the south it is feared that the flames will gain Killingworth Estate.
A fire which started at Flowerdale yes- terday has been stopped. The damage in this case was slight, only a little fencing being burnt. Rabbits are being burnt in thousands.

Argus Tuesday 17 February 1914
MILES OF FLAME.
HOMESTEADS ESCAPE.
TOORA, Monday. - Bush fires continued to rage throughout Saturday night and Sunday, but, owing to the thick haze of smoke and the danger of falling timber, no estimate of the damage can be accurately arrived at.

DYNAMITE SPREADS FLAMES.
WARRNAMBQOL Monday
Devastating,grass fire in the Cóoramook district. The outbreak occurred in the vicinity of the quarry, on the Hexham lane, and, travelling to a tent in which a quantity of dynamite was stored, an explosion occurred, blowing the tent to pieces, and greatly extending the fire.
Attempts were made to extinguish the fire but the flames quickly spread into adjoining properties. Fortunately the wind changed and the beaters succeeded in getting it under control. The Cooramook road, on one hand, and the Hexham lane, on the other, confined the fire, otherwise the whole district would have been swept. It is estimated that fully 4,000 acres of grass and several miles of fencing were destroyed.

TRARALGON, Monday

Bush fires have been raging in the hill country to the south of Traralgon during the last few days, and the district is enveloped in smoke. Yesterday serious damage was caused to grass and fencing in the Callignee district. Full particulars are not yet available, but it is known that the fire swept the properties of Messrs. Woolfe and Sons (500 acres), W. Pentland (320 acres), Berryman (159) acres), and Hepburn, and that probably much of the grass and fencing has been destroyed. Messrs. Woolfe and Sons had 1,400 sheep on their land, and they fear that they have perished.

KILMORE, Monday
A bush fire occurred at Kilmore East on Sunday afternoon, whereby about 2,000 acres of grass country and a large amount of fencing were destroyed. The fire, which is supposed to have been caused by a shooting party, started near the Dry Creek.

WALLABIES TAKE TO WATER.
FIRES NEAR SALE.
SALE, Monday. - The town for the last three days has been enveloped in smoke but there» have been no fires close to the town. The fires are at the foot of the hills on Government land to the west of Cowwarr and Toongabbie.
The smoke around Lake Wellington has been very dense, and it is reported that a large number of wallabies took refuge in the water near the banks of the
lake.

FIRES AT CAPE SCHANCK
MORNINGTON, Monday.
Yesterday the whole countryside was enveloped in smoke from large bush fires at Mount Martha. A wide area of scrub was devastated, but no other damage is reported. Around Cape Schanck fires were blazing fiercely on Saturday and Sunday; also in the vicinity of Red Hill. It is believed that these fires were not the result of accident, but were ignited to clear the country.

GRAMPIANS BURNING.
ARARAT, Monday. - Extensive bush fires have again occurred in this district. About a dozen different fires are burning on the Grampians between Lose's Gap and Mafeking, there being three on Mount William. The smoke was so dense on Saturday after- noon that the mount was obscured, but at night the blaze in Boundary Creek clearly illuminated it. The heat was intense, and two small mountain creeks temporarily ceased running. Fortunately the fires are confined to the forest, and unless strong westerly winds prevail they are not likely to reach the level country. On Saturday a fire occurred in the neighbourhood of Tatyoon, sweeping over some of Mr. Lewis's land, Mr. Hinchcliffe's, and part of Mr. Snow's Cariston Estate. About 1,500 acres of grass were swept over, and some fencing and about 30 sheep burned. Happily, the wind was light, and the fire was soon got in hand.

OUTBREAK NEAR ELTHAM.
A bush fire which travelled over an area of about 1,000 acres between Queenstown and the River Yarra, caused considerable damage. Fences and culverts were burnt. A four-roomed house belonging to Mr. Riley, of Watson's Creek, was destroyed. The fire is still burning back towards Christmas Hills and Yarra Glen.

GRAZING LAND DEVASTATED.
BENDIGO, Monday.
A report was received in Bendigo today that a fire at Kamarooka, about 20 miles from here, had destroyed 1,200 acres of grazing and timbered land, which had just been leased from the Crown by Mr. Andrew Grogan. This evening a smoky haze in the north indicated that the fire was still raging, but inquiries at Raywood and Prairie elicited that the outbreak had been extinguished, and that the smoke was caused by farmers burning off the stubble in their paddocks.

BUSH BRIGADES.
GORDON, Monday
Owing to the numerous outbreaks of bush fires in this district, it is intended to form a bushfire brigade.

SMOKE ENVELOPES TOWN.
WARRAGUL, Monday. - Warragul has been enveloped in a heavy smoke-haze for the past two days, caused mainly by bush fires to the eastward and westward of the town. So far no serious damage has

been done, and it is not anticipated that anything in the nature of a disastrous bush fire, such as devastated the country of which Warragul is the centre 13 years ago, [= 1901] can ever occur again. The dry timber standing on the forest lands was then so abundant that once the blaze secured a good hold it swept the whole countryside and caused enormous loss and suffering to hundreds of settlers. The land cleared by the fires was put under cultivation, and what was then regarded as a terrible affliction has proved a blessing in disguise. Smiling farms and prosperous homesteads now adorn the hills and vales which were then covered with heavy timber and almost impenetrable scrub, the home of the dingo and the kangaroo. The smoke now surrounding the town, reminding the residents of that disastrous time, is partly caused by the minor clearing operations still going on, including the charring of huge stumps left in the ground after the devastating bush fires had subsided.

WHITTLESEA, Monday
Further particulars arc to hand concerning the bushfire which was raging at Kinglake on Saturday and Sunday.

OTWAY FOREST FIRES.
COLAC, Monday
Fires are burning all through the Otway forest, and the settlers have bad an anxious time. The north wind on Saturday swept the fire right into Beech Forest township, but the residents turned out and prevented any serious damage being done. A few miles of the telephone line was destroyed, and the saw mills had a narrow escape.
At Gerangamete an extensive fire occurred, but was stopped at the railway, otherwise many houses would have gone.

BRIGADE'S GOOD WORK.
BEAUFORT, Monday
Between half past 2 and 3 o'clock this afternoon a bush fire broke out in the vicinity of Bald Hill and Sailor's Gully. The fire, which was distant about four miles from Beaufort, swept a considerable area and finally entered the timbered ranges between Beaufort and Sailor's Gully: The fire was fanned by a steady breeze from the north-east. The Beaufort fire-bell was rung, and the Bush Fire Brigade sent out a fire cart and a number of men, under the captain (Mr. John B. Cochran). The residents of Sailor's Gully and a fire cart from Trawalla also did good work. The fire, which originated near Dobies on Saturday and swept the country towards Challicum, was got under control on Sunday morning. Fire-carts from Buangor and the surrounding stations did effective work.

FLAMES BEATEN BACK.
BALLAN, Monday
For weeks past fires I have been burning in the forest to the north of Ballan. On Saturday word was received that assistance was required, as the fire was making rapid headway, and would soon roach the open country. A large contingent of men went from Ballan, and before evening the fire was under control.

OTHER OUTBREAKS.
BALLARAT, Monday
A grass fire occurred to-day behind Mount Buninyong, and swept over a fair tract of country before it was extinguished.

CASTERTON, Monday
Bush fires broke out on Saturday at Nine-Mile Creek, on the Mount Gambier road, but no great damage was done, owing to the timely arrival of residents. At Warnock the bush north of the homestead caught fire, but the flames are well under control. Some 500 acres of grass was burned and a little fencing
Country lying between Digby and Portland was on fire in a dozen places. No report of serious grass or other losses has reached here.

DROUIN, Monday
Bush fires have been raging throughout the district for the past few days. Not a great deal of damage baa been done, the principal losses being grass and fencing.

ROSEDALE, Monday
An extremely hot and trying day was experienced on Sunday. The town was enveloped in smoke from the surrounding fires, which was particularly unpleasant for the eyes.

ST. ARNAUD, Monday
A bush fire raged yesterday about three miles east of St. Arnaud. Fortunately it was confined to the Mallee tangle and scrub, which is very heavy in that locality. The flames at times shot twenty feet into the air. It is hoped that the fire will not break out afresh to-day, as it would reach the good grass country. ,

Ararat Advertiser Tuesday 24 February 1914
The great bushfire, which for nearly three weeks has been raging on the **Grampians,** has now practically burnt itself out. There are still about half a dozen widely scattered fires on the mountains, three being on the eastern side-at Boundary Creek, the Black Spur and near Mafeking-and the whole range on both sides has practically been swept over. Though the fire is the most extensive that has yet occurred on the Grampians, the destruction has been in the main confined to the forest country. .

1914/15

Weather

BOM rainfall records for Melbourne: Sep Oct well below average rain, Nov Dec average, Jan below, Feb March almost nil, April average

Hottest days in Melbourne **DAYS > 35^{0}C 8**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
10.4	8	87

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Tainsh
Spring 45,000 ac most in Pyrenees

Carver
45,000 ac badly burnt in NE, Gippsland, Pyrenees, Grampians

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
Jan 20						Mirrranatwa forest
Feb 15	Melb	103	10	N		Moe
Feb 16	Melb	88				fires around Port Phillip

Reported bushfire events

Ballarat Courier Monday 26 October 1914
DAYLESFORD, Sunday.
Saturday and to-day have been excessively hot for October hat a coal change set in to-night. Bushfires have started in the vicinity of Glenlyon.

Argus Friday 6 November 1914
FOREST ON FIRE
DAYLESFORD. Thursday.-
An extensive bushfire occurred south-west of Mr. T. Orr's property, Bullarto South, on Monday, and caused havoc right through the Wombat forest to Sawmill and State Quarry Creek. It is felt that the Government should cancel during the summer months the order that lath splitters must burn their refuse.

Ballarat Courier Tuesday 19 January 1915
DAYLESFORD Monday.
Several bushfires are raging in the hills

1915/16

Weather

BOM rainfall records for Melbourne: Sep Oct average rain, Nov Dec well below average (1/4), Jan double, Feb average, March half, April average

Hottest days in Melbourne **DAYS > 35^{0}C 9**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
9.2	9	94

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Carver
Total area of forest burnt = 23,000 ac, including Eldorado / Chiltern, 1800ac, Nowa Nowa 1900 ac, Trentham, young pole forest 15,000 ac and Neerim 11000 ac

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
Jan 10						Box Hill, Mornington, Rosedale, Rutherglen
Jan 17	Melb	68		NW	3	grass fires at Whittlesea, Greensborough, Kilmore, Bunyip, Wallan
Jan 22	Melb	95	20	N	3	grass fires in suburbs, esp, Doncaster, Kensington, Malvern, Northcote, Box Hill, Cheltenham
Jan 23	Melb	99	21	N	5	fire in Healesville hills

Reported bushfire events

1916/17

Weather

BOM rainfall records for Melbourne: Sep four times average rain, Oct to Dec well above average, Jan to April just below average

Hottest days in Melbourne **DAYS > 35^{0}C 4**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
4.2	4	32

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Carver
1200 ac patch burnt in forests

Reported bushfire events

Mount Alexander Mail Tue 23 Jan 1917
ELPHINSTONE OUTBREAK
200 ACRES OF GRASS BURNT
A fire broke out on the property of Mr R .H. Neville, at Tunnel Hill about 6 p.m on Saturday (writes our Elphinstone correspondent), and fanned by a strong south wind, soon swept through his and Cr. McMillan's paddocks, and after burning about 160 acres of land, was blocked at the Fryers channel near Mr J. Starr's residence by a large body of willing hands from Chewton, Faraday and Elphinstone. Mr Neville had hard work to save his sheep, as they were surrounded on three sides by the fire.
On Sunday, about 2.30 p.m., a whirlwind caused it to break out again, and a north wind drove it to the main road near the Tunnel, where another 30 acres or so were burnt, and only for the timely arrival of a large body of helpers, there is no telling where it would have stopped, or what damage would have resulted. Cr. McMillan lost a few tons of 5ft, firewood, besides his grass, and Mr Neville a few posts in his fence, in addition to his grass. The origin of the fire is a mystery, as usual, but the paper cigar is blamed for it.

1917/18

Weather

BOM rainfall records for Melbourne: Sep to Dec well above average, Jan average, Feb half, March double, April below average

Hottest days in Melbourne **DAYS > 35^{0}C 12**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
4.6	12	99

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Carver
43 outbreaks of fire in forest, less than 700 ac severely burnt, 980 ac of young pole forest burnt at Mt Cole

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
Feb 16						Clunes, Euroa, St Arnaud

Reported bushfire events

Maryborough and Dunolly Advertiser Wed 13 Feb 1918
HOSPITAL THREATENED.
An urgent appeal for assistance had come from Amherst, where a bush fire was raging, and, at the time of the call, was threatening the Amherst Hospital with destruction. The appeal did not fall on deaf ears, and in a short space of time four cars speeded to Amherst, containing some twenty stalwart volunteers. Those augmented the force of 200 strong, which had put in a strenuous time battling with the flames. The fire was gradually got under control, and when the local men returned there was little or no danger to be feared.
The fire occasioned severe loss to the hospital, as over 200 tons of firewood was destroyed. Other sufferers were Mr. P. Salmon, whose 65 acres of grass and timber were burnt off; and Mr. J. Henry, who suffered in a lesser but similar way.
The local men are loud in their praises of the work performed by the nurses and other women employed at the hospital in helping the fire beaters, and also of the pupils of the State school, who carried water and other drinks to those engaged in the strenuous work.

1918/19

Weather

BOM rainfall records for Melbourne: Sep above average rain, Oct average Nov a quarter, Dec just below average, Jan a quarter, Feb well above, March triple, April a quarter

Hottest days in Melbourne **DAYS > 35^{0}C** **10**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
9.1	10	104

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

Tainsh

Jan 18, 19	Many thousands of acres at Swan Hill, Castlemaine, Bendigo, Daylesford, Riddells Creek, Ararat, Beeac, Winchelsea, Flinders, Dandenongs, Maffra, Rosedale and Upper Murray
Jan 28	Mt Cole ablaze in treated forest
Feb 15, 16	Otways 3 deaths, 150 houses, hundreds homeless, farms, 7 sawmills, Large fires in NE and Mt Disappointment

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
Jan 5						Box Hill, Mornington, Rosedale, Rutherglen
Feb 9		99	37			grass fires at Whittlesea, Greensborough, Kilmore, Bunyip, Wallan

Feb 10		69		SSW	4	grass fires in suburbs, esp, Doncaster, Kensington, Malvern, Northcote, Box Hill, Cheltenham

Reported bushfire events

SA example included here because it describes back burning from a plough line

The Advertiser (Adelaide) 28 Dec 1917
A LÀRGE BUSH FIRE MUCH DAMAGE DONE.
Streaky Bay, December 24.
An extensive- bush fire- has been raging in the district up to within about 12 miles of the town for four days, doing much damage to property and burning thousands of acres of grass. On Saturday it was mastered by the beaters, assisted materially by a change in the wind, and now everything is safe. It started from Mr. Charles Schlink's homestead, at Stony Top, on Wednesday at mid-day, a spark from a copper apparently igniting the grass, and it quickly spread in a southerly direction until the whole of the country between there and Maryvale station was alight. An area 12 miles long lies blackened, and a circuit of 30 miles is necessary to encompass the extent of the fire. The flames swept across the Chandala-road into Mr. Seth Joy's farm, which it soon denuded of the whole of the standing crop, besides a number of wheat heaps that were ready for cleaning and bags that had already been cleaned, nothing being left. Mr. William Smart's farm was the next place in the line of fire, and the homestead was soon in jeopardy, but timely ploughing and burning back stayed the flames alongside the haystack, which received no damage, though the surrounding fences caught alight.

Argus Saturday 4 January 1919
DAYLESFORD, Friday
A bush fire broke out at the rear of Hepburn Springs on New Year's Day. Residents and visitors had hard work in subduing the flames. It was with great difficulty that "Lulworth," a boarding-house owned by Misses Kellaway, and two other dwellings, were saved. Fortunately, the wind changed, otherwise the fire would have extended to Dry Diggings. Several areas of bush land were burned.

Argus Tuesday 21 January 1919
Outbreak Near Daylesford
DAYLESFORD Monday
A fire which soon assumed serious dimension began in the forest close to Leonards Hill railway station on Saturday. Fanned by a strong NORTH WIND IT SWEPT THROUGH Mr Slattery's property destroying all his fencing and a quantity of timber
The efforts of a large number of volunteers failed to check the flames owing to the strength of the wind and the fire swept onto Mr Stanfield's property. His home was saved with the greatest difficulty but twenty four cords of wood and a lot of fencing were consumed. The fire travelled on to Kowengieburra….a large area of forest was swept by the fire.

The Australasian Sat 8 Feb 1919
BUSH AND GRASS FIRES.
Properties at Shirley suffered much damage on February 1 from the Mount Cole fire, and the beaters experienced difficulty in saving several homesteads. At night smart showers of rain fell and extinguished the remnants of the fire. Losses of grass and fencing were suffered by a number of farmers, and particularly by Mrs Liston, the Misses Jess, and Messrs Waldron Bros.

Bush fires in the Emerald district became most menacing on Sunday. Several dwellings had narrow escapes from destruction, those of Messrs Davey (Copplestone Orchard), Nobelius, and Scott (Barnshaw), and others being saved only by the strenuous efforts of local residents and week-end visitors.

It is reported that a serious fire broke out on French Island last week. Mr Shaw's shed and outbuildings were burnt.

Mr Peter Petersen, one of the leading farmers in the Cravenville district, reports heavy bush fires in the vicinity. The landowners caused a break of 50 miles to be burnt to cope with the fire advancing from the Tallangatta Valley. After finishing their arduous labours, they found that another fire was travelling from the direction of McMahon's Creek, Mitta Mitta. This necessitated another break of 20 miles. The men placed their horses in a place of presumed safety, but the five rushed on them.
Some stampeded, and a valuable brood mare, the property of Mr H Goodwin, was seriously burnt.

A fire broke out on Jan. 31 at Spring Creek, near Clear Springs Station, on the valuable property of Messrs H. G. Caldwell and George Bowran, sen. The fire burnt to within 100 yards of the homestead of the latter. Latest reports state that the fire has now been brought under control.

Although the recent bush fires in the Bright district have been partly subdued, the whole district is enveloped in dense smoke. At Tawonga the fires are still burning, and residents are daily engaged in keeping their homesteads protected.

A bush fire, which has been burning near Lyonville for a few days, broke away on January 31. and travelled with considerable rapidity towards Glenlyon. A large number of Glenlyon residents were fighting the fire, and with the assistance of Daylesford reinforcements kept the flames in the bounds of the State forest, where a considerable quantity of valuable timber has been destroyed. The face of the fire extends from the Trentham road on the east to Kangaroo Creek on the west, a distance of about six miles.

The Argus Tue 18 Feb 1919
OTWAY FOREST FIRE COUNTRYSIDE SWEPT
TOWNSHIP DESTROYED.
Great Loss and Suffering
(FROM OUR SPECIAL REPORTER)
COLAC, Monday
Not for over 20 years has a bush fire in Victoria caused such rain and devastation as that wrought by the terrific fire which swept far and wide on Saturday.
Hundreds of square miles have been swept.
Deaths of three men at Beech Forest, Gellibrand and Forrest.
Damage must run into six figures
Hundreds of homesteads have been swept away.
6 sawmills on the Gellibrand line alone
One fire started at Forrest, and spread along Gellibrand River towards Apollo Bay.
Another came up the Barwon to Barramunga.
Barwon Downs to Skenes Creek to Forrest has been swept. Losses at Barramunga, Big Hill, Mt Sabine, Weeaproinah, Three or four houses remain standing in Lavers Hill. A tremendous fire burning along the coast from Lorne was stopped on Sunday before it reached the Wye.

HOUSES DESTROYED AT ANGLESEA
GEELONG Monday
For the second time, Anglesea has been swept away by fire. For some time the forest in the vicinity has been ablaze, but the fierce north wind on Saturday carried the fire across the township, demolishing six residences.
The damage estimate is £4000

Surf Coast Shire February 1919, bushfire at Anglesea, with five houses destroyed. There were also extensive fires in the Otways, with 100 homesteads burnt and about 500 people left homeless. The Lorne saw mill was destroyed

The Argus Tue 18 Feb 1919
BUANGOR DISTRICT SUFFERS
Area of 30,000 Acres Devastated
BEAUFORT Monday
On Saturday the most destructive fire for 18 years.

Started by "the paper? train" near an old railway crossing at 11.30 pm on Beaufort side of Mt Mistake [unclear if this was 11.30 pm on Friday night, or meant to be 11.30 am on Saturday?]
Fanned by strong NE winds
Spread past Yalla y Poora station towards Tatyoon and Streatham. By midnight, the beaters had it under control and Sunday's rain made it safe.

CASTERTON DISTRICT
Long list of losses (in Merino / Henty area)
Casterton Monday
Saturday's grass fire consumed 14,000 acres, hundreds of sheep and much fencing
One property rented by a returned soldier had 10 stacks of unthreshed oats under threat. Men took the risk of starting a fire to set a break and saves several hundreds of pounds worth of property.
Rhodes brothers removed furniture and valuables from a fire safe house to an outhouse that was supposedly safe from the fire, but the house was saved and the out house burned down.
A youth was charged at Casterton this afternoon with lighting the fire and brought before the children's court. He admitted burning a rabbit out of a hole.

Other bushfire relevant events

The Argus Tue 18 Feb 1919
Greater precautions needed
Conservator of Forests, Mr McKay said nearly the whole of the fires caused by fires occurred this summer were the result of carelessness by smokers, or by people leaving camp fires unattended or attempting to burn off in hot windy weather. The State spends 1000 pounds a year protecting the forests from fire and this is about a fifth of what should be spent. Fire breaks extending for 350 miles have been made round the forests and between 70 and 80 officers including about 12 mounted men known as special fire guards are on duty during the hot months, but the laws should be made more stringent, and greater precautions should be taken.

1919/20
Weather

BOM rainfall records for Melbourne: Sep to Nov half average rainfall, Dec almost double, Jan below, Feb a third, March half, April average,

Hottest days in Melbourne **DAYS > 35^{0}C** **8**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
8.0	8	79

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1920) and Tainsh (1949)
Total area burnt 48,500 ha (120,000 ac), bulk in Grampians.
Nov 24 Victoria Valley, over 100,000 ac, losses in wattle bark, timber and seedling growth, damage £50,000. Wilfully caused.

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	

Nov 24 to Apr 13						120,000 ac of crown land burnt in Grampians and Otways
Feb 16	Hamilton	102	16	N - NW	4	Mt Buninyong, large fires at Yendon, Rokewood Dunkeld

Reported bushfire events

Penshurst report: On 11 February 1920 an extensive bushfire which started on Greenhills Estate, Minhamite burnt to within half a mile of the Hawkesdale township on the east side. It was finally quelled a mile south of Hawkesdale

Surf Coast Shire February 1920, bushfires around Anglesea (for several days), between Mount Moriac and Aireys Inlet, between Lorne and Anglesea, at Wensleydale and between Jan Juc and Anglesea

The Basin Fire Brigade History 2012 quotes a priceless piece of early bushfire fire experience from the pages of Mrs Janet Dobson's diary.

Thursday l9th Feb. 1920 "There is a large bushfire over near Dickson's [name for the area of Government Road hill & Toorak Avenue]. Some of the houses have been in danger and the neighbours beat it back. My two boys went over, so did Harry Chandler, Jack Wicks, and Mr Agar, Staff Captain Stevens (Salvation Army), and several others. If it is hot tomorrow it will spread up round the Mill. It looks very red tonight."

Friday 20th February 1920 "The fire is still spreading up in Mr McKenzie's property. It looks very beautiful this evening, up the side of the mountain."

Monday 23rd February 1920 "Today has been dreadfully hot. At dinner time, a big bushfire started up in Ferndale and came down toward Uncles' (Jack Wicks orchard). They went over and all Mr Griffiths men and Uncle Arthur (Harris) and Mr Agar and several others burnt a break along the Mill track. They carted all the mill wood out through Jack Wicks' paddock. They had to work very hard to keep it from Mr Grumonts house. The boys did not get home until 10.30pm. There was another big fire over in Goodwins paddock. It started from a burning stump left from last week's fire. It got very close to Mr Medways house. There were more than a dozen men keeping it back. It got into Maguire's cut scrub and it looked something grand at night. We could see our shadows, it was so light."

Other bushfire relevant events

First year of FCV.

FCV controls 16 million ac (= 6.4M ha) of Crown Land, according to Stretton's Royal Commission in 1939.

Observation

Until now there has been no physical measurement to gauge the impact of fires within a bushfire season. FCV has districts across Victoria and staff in each estimate area of crown land burnt. Initially there are difficulties of access, meaning area burnt will tend to be underestimated, eg, due to fires in inaccessible corners being overlooked, or fires that self extinguish before being omitted.

We can now use number of fires, area burnt and valuation of damage as basic indicators and deduce other damage as appropriate

Furthermore, private property has no known state-wide department to record area burnt or damage, so a nominal area of 10% of CL will be assumed as burnt unless otherwise noted.

Absence / dearth of media reports in previous years of hot dry summers may be explained by confusion / superimposition of the fires lit by locals as burn offs and bushfires, tolerance of escapes, a burn off that got away a bit and did a bit of damage is not really a bushfire.

1920/21
Weather
BOM rainfall records for Melbourne: Sep double average rain, Oct Nov well above average, Dec half average, Jan double, Feb to April half

Hottest days in Melbourne **DAYS > 35^{0}C** **12**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.8	12	107

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1921)
17,400 ha (43,000 ac) of crown land burnt

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
Jan 24, 25	Melb	107 104	32 19	N	5	8 properties swept at Kyneton, fires at many places, inc., Heyfield, Rosedale, Whittlesea, Glengarry forest at Orbost
Feb 11-13	Melb	98 83	22	S	2	Traralgon, Kilmore, 3 miles of fire at Toora but houses saved, Casterton, Sale, Longford

Reported bushfire events

1921/22
Weather
BOM rainfall records for Melbourne: Sep to October well above average rain, Nov Dec average, Jan half, Feb well above, March a fifth, April a half

Hottest days in Melbourne **DAYS > 35^{0}C** **8**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
6.2	8	73

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1922)
24,080 ha (59,500 ac) of crown land burnt, 114 fires reported on crown land (8 due to lightning, 75 unknown causes) royalty loss £20,000, total cost of fire protection £1145. 30% of known causes began on private property and ran into forest.

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
Jan-22	Melb	100	33	NNE then SSW	5 5	Colac grass fire 12,000 ac, Ouyen, Stawell, foreshore from Portsea to Dromana and Mt Martha
Feb 7 to 16	Melb worst					Rosebud to Rye, great fire at Yea, many other places
	Feb-11	101	26			
	Feb-12	103	23	N	5	
	Feb-13	103		NNE S	5 4	

Reported bushfire events

1922/23
Weather
BOM rainfall records for Melbourne: Sep Oct above average rain, Nov half, Dec average, Jan half, Feb a third, March and April almost nil.

Hottest days in Melbourne **DAYS > 35^{0}C** **7**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
11.7	7	79

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records
FCV (1923)
213,716 ha (529,000 ac) of crown land burnt, 265 fires reported on crown land (1 due to lightning, 221 unknown causes)
East Gippsland (most of County of Croajingalong), Upper Ovens 85,000 ac, County Delatite between NE railway and Mansfield 69,000 ac, Grampians 16,000 ac, Wombat, Dandenongs Otways, Rushworth, Tanjil, Upper Yarra

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
Jan-14	Melb	100	13			many fires extensive damage
Feb 5-6						fires raging at Myrtleford and Rutherglen, Daylesford,

Feb 22 - 25	Melb	106	21			Death of boy at Mansfield from burn injury, Penshurst 70,000 ac, severe fires many places incl Dandenong ranges and Lorne

Western District bushfires (McArthur et al 1982)
Jan 14 large fires at Horsham, Stawell and Skipton
Feb 23-23 Penshurst fire 28,000 ha,

Reported bushfire events
Penshurst report: The next major fire broke out on the 22 February 1923 at the Gazette Estate burning approximately 70,000 acres of grass and a small quantity of fencing. Primarily affected were Gazette Estate, Messrs W. Burger, W. Mibus, R. Linke, J. Rentsch, Banemore Estate and the Cheviot Hills Estate. Then fire had a front of two miles and once again the Penshurst township was enveloped in smoke.

Launceston Examiner Wed 28 Feb 1923
Devastating Bush Fire BONNIE DOON area
BOY DIES FROM BURNS.
MELBOURNE, Tuesday.
Reports from Mansfield state that a bush fire which broke out at Strathbogie during the week-end devastated the whole of the country in the parishes of Merton, Strathbogie, Ancona, Woodfield, Dry Creek, and Bonnie Doon.
Ten or 12 farmers have lost their houses and contents, as well as stock, fences, and grass. At one time the fire had a front age of 14 miles.
A boy, who was so severely burned, has died in hospital, and another lad is reported to be missing. The fire is still burning.
Later: The lad who was reported missing has been found, uninjured.

1923/24
Weather
BOM rainfall records for Melbourne: Sep to April above average rain, every month

Hottest days in Melbourne **DAYS > 35^{0}C** **2**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
3.1	2	15

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records
FCV (1924)
2,231 ha (5,512 ac) of crown land burnt, 34 fires reported on crown land due to lightning, 20 unknown causes). Of the 14 fires whose cause was known, 8 began on private property and ran into the forest.

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
Jan-16						Greta

Jan-17						large fire between Wallan and Lancefield
Feb-3	Avoca	82				2000 ac grass fire NW of Stawell, 80 ton of firewood, dray and harness, 100 men and fire brigade did magnificent work

Reported bushfire events

1924/25
Weather
BOM rainfall records for Melbourne: Sep to Jan well above average rain, Feb to April very low rain, below ¼.

Hottest days in Melbourne **DAYS > 35^{0}C** **3**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.1	3	26

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records
FCV (1925)
5,261 ha (13,000 ac) of crown land burnt, 80 fires reported on crown land
Mallacoota, Heywood, Beech Forest

Reported bushfire events

1925/26
Weather
BOM rainfall records for Melbourne: Sep just below average rain, Oct half Nov just below, almost zero rain, Jan well above, Feb almost zero rain, March well below, April below

Hottest days in Melbourne **DAYS > 35^{0}C** **12**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
18.6	12	157

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
Noojee, Kinglake, Warburton, Erica, Dandenong Ranges
Deaths: 60
People rendered homeless: 700
Buildings: 1,000
Area burnt: 400,000 hectares

From EMA data base Many major bushfires occurred between 26 January and 10 March 1926. A total of 60 people were killed, 700 injured, and 1000 buildings were destroyed.

FCV (1926)
394,300 ha (976,000 ac) of crown land burnt, 145,000 severe damage, 426 fires reported on crown land (8 due to lightning, 75 unknown causes)
99% in mountain forests, especially NE, Yarra Valley, Neerim, Erica.
Counties: Delatite, Bogong, Evelyn, Tambo, Croajingalong, Benambra, Anglesea
Grazing interests (grazing licences issued by Lands Department within Forests Commission lands) caused 37% of fires

Tainsh
January early Coastal fires at start of month, and extensive grass fires inland
Jan 28 Fire established in Dandenongs
Jan 29 30 mile front threatens King Valley, Fifteen Mile Creek and Rose River settlements
Weather cycled for three weeks on a 7-day cycle – cool wind change to hot northerlies on weekends to cool wind change.
The weekend of Feb 13 -14 generated the greatest calamities - death toll of 31.
North winds pushed fire from Yarra valley to Bunyip and Latrobe.
Noojee obliterated
478,000 ac reserved forest (145,000 severe damage), and 498,000 of crown land (62,000 severe damage).

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	

Jan-14	Melb	100	13			many fires extensive damage
Jan 26						Violet Town, thousands of acres grass, many sheep destroyed
Jan 27 to 31	Jan 27 Leongatha	92		N	strong	Healesville, worst week of fire since 1919, much damage Wonthaggi
	Jan-29	72	48			fires everywhere, large fire at Foster
	Jan-30	80				
	Jan-31	104	12			
Feb 1 to March 1						worst loss of life on record, worst fires since Jan Feb 1898, especially Noojee, Powelltown, Warburton, Gilderoy
						Warburton 31 dead, Noojee 4 dead, Erica 3 dead, damage estimated at 100,000 pd, Gilderoy, 12 deaths at sawmill, 2 survived Powelltown, several lives, houses and mills lost Pomborneit - Sherbrook pine forest, thousands of pounds damage Princetown, 600 sheep Casterton, 10,000 ac grass, 1000 sheep
Feb-17						Yallourn, damage 35,000 pounds damage, ignited new coal face
Feb-25	Melb	84	26			Daylesford , one of worst bushfires, 3 homes Kinglake, many buildings destroyed

Progressive area of crown land burnt – supplied to Foley by FCV.

Total crown land burnt	**976,000 ac**
Jan 26 to Feb 4	220,000
Feb 5 to 11	100,000
Feb 2 to 18	300,000
Feb 19 to 25	180,000
Feb 26 to Mar 11	100,000

Reported bushfire events

Sydney Morning Herald Sat 2 Jan 1926
TYNONG Threatened.
MELBOURNE, Friday.
Strenuous efforts are being made by a large band of firefighters in the Tynong district to save the township from destruction by a bush fire, which began about three miles from the railway station yesterday. The cause of the fire is a mystery, but it is thought that a camping party carelessly used a fire to smoke out rabbits.
Tynong is a small township on the main Gippsland line, 43 miles from Melbourne.

When the fire was noticed on Thursday, every effort was made to clear a fire break, but it was unsuccessful, and the lie rapidly burnt through the thickly wooded country.
Aided by a southerly wind. It spread rapidly until it reached the railway line, about a mile and a half from the Tynong station. This part had been cleared, and little damage was caused.
The country in which the fire is now burning is thickly wooded, hilly, and sparsely populated. Several homesteads were threatened, but, owing to precautions taken by fire fighters, were not reached by the fire. The thick undergrowth and the wind aided the flames. Early this morning the wind changed to tho north, and turned the fire back in its course, but another change in the wind fanned the flames , until to-night they were 30 feet high, and rapidly bearing down on Tynong.
Working all day, fire-fighters constructed a wide break nearly three quarters of a mile long, but it did not stop the flames. Trees on each side of the break were fired tonight.

Saturday 27 February 1926 **Argus**

FIRES ABATING.
FAMILY MISSING.
SEARCH AT SPRING HILL. SMALL TOWNSHIPS SAVED.

SPRING HILL, Friday A cool change from the south has subdued most fronts of the fire which threatened the township, and generally the fire is considered safe. Many men are still watching the edges of the outbreak, and a strong force from Kyneton is at hand in case of emergencies. Yesterday there were many narrow escapes, and in not a few cases homes, which it was believed it would be impossible to save, escaped destruction. Mr. Chalkers's home was in the path of the fire, and all the women, with others of the locality, were removed to safer positions. "Breaks" were ploughed round the houses and back-fired, and in spite of the fierceness of the approaching fire, these steps had the desired effect. One family of five members living in the heart of the bush, has not been heard of since the fire It was known that they were in great danger on Wednesday, and several attempts were made to get through to them, but the flames repeatedly drove the fighters back The whole place was surrounded by a wall of flame and, if the family was in the fire, they must have lost their lives. It is thought they may have escaped earlier, but their isolated position would delay news coming through
Towards Drummond, the side of the fire was serious yesterday, and it is reported that Mr. Graham's house was burnt, and many outbuildings of others. This was chiefly a grass fire but was very fierce. Strong forces from Kyneton were combating the flames near private property Mr. O'Brien's house is endangered to-day, and it is doubtful if it can be saved. The fire is about only one mile from the post office.

The Glenlyon section is under control. Daylesford sent out a strong force to keep it back The Little Hampton face endangering Trentham and Lyonville advanced steadily yesterday and was burning fiercely towards Lyonville, Bullarto, and the Little Hampton properties of Messrs Maxwell, Rotte Sourby, and Blackwell. An appeal from Trentham was quickly answered by 50 men, the Trentham Foundry Co. sending almost all its employees. Breaks were made along the Lyonville face, and the fire checked in that quarter The Little Hampton front, however, was burning through forest on a four mile front, about one mile from open country
A night attack was made here, and until the early hours of this morning volunteers strenuously made a break to protect the private holdings and set a back fire At one stage the approaching fire was only checked within a few chains. This division is now safe, and is gradually dying down under the cold south wind. Men are patrolling the line, and it is hoped that all danger is past.

GREENDALE, Friday The cool south wind last night forced the fire back upon burnt ground, and now, although in the dangerous Green Hills side of the Ballan road, the position is considered safe. Burning against a head wind, the fire did not progress very far yesterday, and a strong force of fighters was at hand to beat back the dangerous sections. It is confined to dirty scrubby country, the timber of which is useless. Strict watch is being kept along the front abutting on to grass lands, but ploughed breaks have been made in readiness to use for backfiring at the slightest danger. To-day there is little danger, and if the cool change holds, the fire will burn itself out shortly.

DAYLESFORD, Friday – Cooler weather conditions and the falling of the high wind have resulted in an abatement of the serious fires which have raged in the Glenlyon district since Wednesday. The latest reports show that three houses have been destroyed. The first was late on Thursday afternoon in the forest country between Glenlyon and Burke. It was a six-roomed house belonging to Mr. Duncan

Graham, who arrived in the district from England two years ago. With the help of his daughter and a neighbour Mr. Graham kept the fire from the house all through the morning by burning "breaks" and raking the debris clear, but a spark blew beneath the house and ignited it. Very little of the contents of any value were saved. The loss is estimated at £485, the place being insured for only £150.
Later in the evening a huge weatherboard house owned by Mrs Greenfield but unoccupied at the time, was destroyed. A smaller dwelling near by, owned and occupied by Mr. A. J. Spears, was burnt to the ground
An alarm was given this morning of an outbreak in the vicinity of Borland's, and carloads of firemen and volunteers were rushed to the scene. They succeeded in quelling the flames Another fire at the rear of the Glenlyon racecourse was also subdued. Several days will elapse before the danger is past owing to the great amount of burning timber, but as long as the weather remains cool and the wind in the present southerly direction the fire will be easily kept in check. Apart from the loss of fencing and pasture a great deal of valuable forest timber has been destroyed.

HEALESVILLE, Friday An inspection today showed a stretch of almost unbroken blackness of three or four miles in length down the Don Valley from Panton's Gap to the open forest below the O'Shannassy aqueduct. Connibere's property, however, which is chiefly cleared, had only been touched in outlying parts. Also small clearings in the midst of the valley had been merely skirted. On the other hand several buildings were now only ashes. These included Mr. Fleming's tweed mill and electric plant, but his house standing in a clearing of 10 acres, has escaped. Until the fires died out there was no possibility of the occupants getting away in any direction to find safety, as fires were blazing below and above them for hours.
The main fire entered the Don Valley from the Badger Valley on Wednesday evening by Panton's Gap, and ascended the western side of Mount Panton, which is now a scene of desolation. Panton's cottage was missed by about 20 yards owing to the cleared space around it. The fire also climbed on to the western side of Ben Cairn ridge, which is now black for almost the whole length of the Don Valley. Part of the ridge blazed up a second time, although fire had been over it from the Launching Place end 10 days previously. The Don Range side of the valley, except at Plummer's Hill, was only touched here and there, and Nyora was never in danger.
Woollen Mills Burnt
The fire passed on and burnt down the woollen mills factory, with its machinery and the electric light plant and sawmill. It next surrounded the boarding-house property, a quarter of a mile nearer Launching Place. All soon went. Beyond this point the fire was checked by the O'Shanassy aqueduct clearing.
"We and other residents of the Don Valley," Mr. Fleming said, "feel bitterly the apparent indifference of the police, the shire council, and any fire committee, if there is such in the Launching Place and Yarra Junction district, in not having made any attempt to come and see if we were dead or alive. We have not up to the present (Friday at noon) seen a person from Yarra Junction or anywhere else to make inquiries. During Wednesday night and until Thursday morning we were in despair of our lives and if we had had a little help we could have met the occasion and saved almost the whole of our property, whereas our loss is about £1,535, after deducting a small partial insurance on our building. However, our lives are saved, and we must get over our losses the best way we can."
A conservative estimate of other damage to property in the Don Valley is between £6,000 and £7,000. Mr. Saker lost his house a timber cutting mill saw bench and engine. Messrs. Cuff and Higgins each lost their homes which they value at between £400 and £500 each. Damage was also caused to the home of Mr Kemp and to a timber-cutting plant owned by Mr. O'Connor

LAUNCHING PLACE, Friday Fires are still burning on the outskirts of Launching Place, but the town is considered to be in no danger unless a north wind springs up. A close watch is being kept, and at the first sign of danger the residents are ready to fight the flames

MARYSVILLE, Friday Exhausted as they are, the fire-fighters in the Narbethong-Marysville sector were denied rest even after their strenuous labours of Thursday At the most they can have snatched during the last two days half a dozen hours of sleep. After an all-day battle with the flames at Lindt's Hermitage on the Black Spur on Thursday the members of the party hoped to obtain a brief respite and were returning to their homes when, about midnight the boiling cauldron of flames in the Acheron Valley surged up once more over the Marysville road just below Narbethong, which they had managed to save after a heartbreaking struggle on Thursday morning.
Just after midnight the fire was at its worst a little beyond Fisher's Creek, on the Marysville road, and a south wind which was rising steadily was carrying the flames northwards. A slight change in the

direction of the wind would have carried the flames right over Mount Strickland in the direction of Marysville, and the fire- fighters who were reinforced from Marysville by a band of residents and visitors, decided to head the flames off to the north, where they could do little harm to private property. A break was burned on the Narbethong road between Narbethong and St. Fillans, and the fire-fighters had the satisfaction of seeing the most dangerous sector of the fire diverted with a fair wind towards Malory's Creek and Archer's Lookout where if the present conditions continue, the fire is absolutely harmless so far as Marysville is concerned.
It was 5 o'clock in the morning, however, before the beaters were assured of the position and able to return to their homes, and not long after breakfast they were again called out. The fire had by this time reached a point about a mile to the west of St. Fillans, and it was considered advisable to burn a break of about a quarter of a mile in the bush above Mr. J. Miller's property at St. Fillans to meet the fire in the event of a sudden advance of the wind from the south-west or west. St. Fillans is still in telephonic communication with Marysville, although the lines between Narbethong and Healesville are down, and the tired fire-fighters were again called from their homes and were all day in the field burning and watching the break, either at St. Fillans or below Narbethong.

Dom Dom itself has been burnt bald. The right wing of the fire is now creeping down the Acheron Valley towards Mount Strickland, which is 4,000ft high. The people of Marysville are quite confident that no danger now threatens any of their beauty spots—none of which has so far been touched by the fire—but if necessary they are prepared to go out and burn a break behind Strickland in order to make assurance doubly sure. To-night clouds of smoke were rising from the fern-gully between Dom Dom and Strickland, but the fire was quiet and safe.
Last week a break was burned near the Cumberland, and some days before Marysville residents burnt a break under Mount Grant. These, with a break under Strickland and combined with the break across the Narbethong road and that behind St. Fillan's will, it is thought, keep any fire, however strongly the wind may carry out of Marysville.
A new fire has broken out in the Watts Valley, and its smoke arose in clouds beyond the Spur this evening, but owing to the lack of undergrowth it is not considered dangerous. The people both of Healesville and of Marysville were easy in their minds regarding the fires this evening.

WARBURTON, Friday Light showers have checked all fires in the district. The hills are clear of smoke and the weather will probably be fine for the week-end. Hermon's tram bridge was finished to-day, and the timber tram will be running on Monday. Relief works are proceeding steadily and there are no unemployed in the district. Temporary repairs have been effected to tram lines burnt by the fires, and most of the mills will be able to link up with Hermon's tram on Monday. Heavy orders have almost depleted existing stocks at the timber siding. Some of the skids piled up for months are now bare.

WODONGA Hearing at Corryong Court before Mr. Williams. Defendant charged with having lit it fire within 100 yards of State forest. Defendant pleaded not guilty. Evidence was given by the inspector, and two officials. The defence was a denial of the offence, supported by two witnesses. Defendant fined £20, with £5 damages and £13/10 costs.

LORD MAYOR'8 FUND.
Trades Hall made a suggestion to Sir Alexander Peacock (the State treasurer), that the Minister should subsidise a 1 for £1 subscribed bv the public for the bush fires relief fund. Sir Alexander Peacock said he was not prepared to accept the suggestion

Surf Coast Shire
February 1926, bushfires at Lorne, Eastern View, Aireys Inlet, near Jan Juc, around Wensleydale, on sections of the Great Ocean Road
March 1926, bushfire between the Otway Coal Mine and Bambra. Fires in the Otway Ranges endangered pine plantations at Anglesea.

The Basin Fire Brigade No loss of life was recorded in the Dandenong Ranges, but a fire raging from Monbulk to South Belgrave exacted a heavy toll in livestock, property and bush land. This event, and the move to form Fire Brigades in

surrounding areas of the Dandenongs, pushed the move toward an organised brigade in The Basin. This was formalised by a The Basin Bush Fire Brigade being formed in 1927 as a member of The Bush Fire Brigades Association of Victoria.

Some February fires were still burning in early March

Argus Wed 10 Mar 1926
MORE BUSH FIRES.
ALARM AT WARBURTON.
HOMES AND MILLS MENACED.
Good Work by Fire-fighters
WARBURTON, Tuesday -- As was expected the fires which were burning along the Donna Buang road on Monday night crossed the road early this morning at the turn-table at the old quarry, and several other places in the vicinity. Alarm bells were rung in Warburton, and a strong party headed by Constable Theobold and Bolton hurried out to fight the fire. By burning breaks the party was able to prevent the possibility of any serious danger at present to the Seventh day Adventists' settlement and houses along the O'Shanassy weir. Several Adventists rendered valuable assistance in keeping the fire within bounds.
About midday the wind changed to the south-west. As a result the fire was turned from the east side of the Donna Buang road toward several properties on the north side of the Yarra. These included the holdings of Mr Glassburrow and Mr Vickersgill, and the property at the Federal Timber Company. Strong forces of men gathered in this vicinity and although the fire was very fierce they succeeded in saving the mill. By strenuous efforts the fire fighters near the mill were able to extinguish flying sparks which alighted on the stacked timber. The fire did not quite reach the mill, but burning debris was carried right over to the other side of the river. This set the grass and shrubs alight and the fire then turned up Gilford's Hill, where it appeared to be burning on to ground that was swept a week or so ago. This section of the fire may turn up one gully which has so far remained undamaged. Otherwise it should speedily burn itself out, about two miles from the eastern extremity of the town, and there is no danger. In the valley at the Yarra extending from the western side of the Donna Buang road, where Cement Creek crosses to the river bank the trees are all alight. There should not, however, be any further extension in this direction. On the western side the position is very obscure, and much depends upon the wind.
A fire is burning slowly in Parbury's Gully. Should the present light wind continue this fire will make its way towards the west and join a fire from Cement Creek.
Although the hills at the back of the town are well alight, there is practically no danger to the town of Warburton as the most northern portion of the town situated at the top of Brisbane's Hill, is some distance from the scene of the fire. In addition there is a tract of country between.
The fire burnt along the O'Shanassy channel for eight miles. The three camps nearest to Warburton if the men engaged on work on the channel were destroyed. Tonight the flames are roaring through the treetops, and the sound of clashing timber can be heard in the town. A hundred men are watching the fire.

Trapped by Flames
Several men had narrow escapes. Two Albanians, whose names are not known were reported missing today. Headed by Constables Theobold and Bolton, a party hurried out to search for them. It was found that the men had been trapped by the flames and that they had taken refuge in the channel and had protected them selves with corrugated iron. The men threw water over each other. When the flames had passed they set out for the township. They were found by Mr John Storey and brought into Warburton where their injuries were attended to by Mrs Theobold, wife of the police constable. The men were found to be suffering in the eyes and head from the effects of the smoke and heat.
Mr Herbert Lowe, aged 53 years, of Wesburn, three miles from Warburton, an employee of the Melbourne and Metropolitan Board of Works, was sent to cut away a tree which had fallen across the O'Shanassy channel at East Warburton. As he did not return another employee was sent to search for him. Lowe was found lying unconscious on the ground, and it was evident that a branch from a burning tree had struck hint a severe blow. His scalp was torn, and very severe lacerations were inflicted upon his face. After treatment by Dr. James, of Warburton, the injured man was conveyed by ambulance to the Melbourne Hospital, where he was admitted suffering from head injuries.

DAMAGE AT DIXON'S CREEK.
Residents' Heavy Losses.

Considerable damage was caused by fire at Dixon's Creek on the night of February 24. At 11 o'clock there was no apparent danger, but at midnight the township was surrounded raining messmate bark was blown far ahead of' the fire, and some fragments travelled four miles. Endeavours were made to obtain assistance from Toolangi, but the road was blocked by fire.
Although the fire was under control by morning it broke out again two days later and threatened the whole of the valley, but it was stamped out by prompt assistance from Steels Creek and Yarra Glen.

GONG GONG RESERVOIR.
Home Saved After Hard Fight.
BALLARAT, Tuesday,
Another serious fire occurred today in the Gong Gong district. Tho outbreak occurred near Clark's Hill, and the strong north wind scattered blazing bark and bracken, causing the flames to break out in several places. A large number of fire-fighters assembled, but they were unable for some time to make any impression on the flames, which advanced rapidly in the direction of the Gong Gong reservoir.
The flames extended for about a mile and a half, while they spread across country for fully a mile.
No damage was done to the pine plantations on the Water Commission's reserves.

Damage at Wonthaggi
WONTHAGGI, Tuesday:
Bush fires have broken out afresh, all around the district today, mid within a quarter of a mile of the post office Wonthaggi.

Fresh Fires near Foster.
FOSTER, Tuesday.
Strong north winds caused fresh bush fires to-day. Fire-fighters have been out all the afternoon combating a fire at Foster North, which approached to within half a mile of the township. After hard fighting the home of Mr. W. Long, which was surrounded by fire was saved. While he was away fighting the fires at Long's, Mr. J. Duggan's hut
was burnt. Mr. AV White's property, which was swept by the bush fires last week, was again attacked, and all his remaining ' grass was consumed, leaving the
place bare. If the north wind continues the township will be again in considerable
danger.

Position at Healesville.
HEALESVILLE, Tuesday.
Light rain fell about half-past 10 o'clock this evening, and the wind, which had changed to the south, dropped. A fire is burning at the back of Mount St. Leonard, but there has been no call for volunteers today. The fire was plainly visible from the township. It is believed that fires are also burning near Marysville and the Murrindindi mill settlement; but only meagre reports were available this evening.

Other bushfire relevant events

Bushfire Brigades
Well before 1926, men on the land formed themselves into volunteer fire fighting groups to protect local homesteads, grass crops and other assets. The Forests Commission worked co-operatively the bushfire brigades adjacent to crown land. After 1926, a Forests Commission campaign encouraged many more to form, and in 1928, a Vic Bushfire Brigades Association formed, with the executive, office costs and some equipment funded by the Forests Commission. (Tainsh, 1949)

Coroner's Inquest

Argus Wed 10 Mar 1926
VICTIMS OF THE FIRES.
SUFFERING AND HEROISM.
SURVIVORS' STORIES
Graphic Evidence at Inquest
(BY OUR SPECIAL REPORTER)

Stories told at inquests held yesterday by the city coroner (Mr. D. Berriman) into the deaths of the bush fire victims in the Warburton and Powelltown districts told realistically of the suffering and heroism of the survivors.

The first inquiry was held in the Yarra Junction Shire Hall in the morning and concerned the deaths of 14 people at Worley's mill, Gilderoy, and two at Powelltown. Women in black wept silently throughout the hearing of the evidence and among the witnesses were Arthur Walker and Harry King the only two survivors of the mill party which sought safety on an old farm and was cut off by the flames. Both men, who have been in the Melbourne Hospital had their right arms in slings. Smoke from fires in the surrounding hills swirled through the hall during the hearing

In the afternoon the inquiry at Warburton related to six deaths at Big Pat's Creek including those of the five members of the Donald family. The alarm bell sounded twice **while the hearing was in progress and as witnesses gave their evidence they were released to join the volunteers fighting the fires round Warburton.**

All the deaths occurred on Sunday, February 14.
The victims at Powelltown and Gilderoy were: - Lindsay Douglas King aged 21 years, mill hand single; Leslie Carl Hay age 31 years, mill hand married five children; Sydney Johns aged 31 years mill hand, single; Herbert Johns aged l8 years; Richard Cyril Duncan aged two years and seven months; Ivy Jane Walker aged 29 years married; Edgar John Walker aged 31 years mill worker married two years; Bertie Walker aged four years; Kenneth Walker aged three years; Albert Lunson aged 22 years timber worker single; Valentine Walsh age 27 years timber worker single; Lawrence Roberts aged 28 years mill hand single; Joseph Charles Ross Johnstone aged 34 years engine-driver married one child; Albert Ernest Sandham aged 26 years mill hand single; Walter Ernest Charles Bull aged 39 years telegraphist married; William Anson aged 67 years labourer single.

The coroner was assisted by Sub-inspector Gardner. Mr Maurice Blackburn appeared for the relatives of the deceased, and for the Victorian branch of the Australian
Timber Workers' Union.

Origin of Fire
Senior detective A. T. McKerrall said that his inquiries showed that the fire had begun on Mount Donna Buang about **January 3**, and had burnt slowly in the hills till **February 14 when it had been fanned into activity** by the north wind and had leapt through the bush. Carl Thomas labourer Powelltown gave similar evidence.

Morning hearing
Arthur Mark Rowe, winch driver, Yarra Junction, said:- My wife was keeping a boarding house for the employees of the mill. At **half past 10 o'clock** in the morning I noticed a fire burning near Saxton's mill, about **a mile and a half away**. An **hour later** burning sticks and bark came overhead and **set the hill on the west side alight**. By **a quarter to 2 o 'clock** the fire had almost reached the mill. My son Clarence and I started to make a fire break about 10ft wide at the back of the house. I called on the others, to help me, but they were all running about excitedly. The fire came up to our break and stopped but it worked round and caught another house close by, which set our house on fire. Men, women, and children made for the horse trough, and buried their luggage. I went to get a tin of water so that we could have a drink when the fire had passed over. I called to the others, "The water is all gone! Get down to the creek'! That is our only chance." They left the horse trough and started for the creek. I was some distance behind when I noticed most of the party leaving the creek. My wife, Mrs Duncan, and Clarence stayed with me and I called to the others," For God's sake don't go up there, or you are caught!" Lindsay King shouted, "Come on. It is all right. We can get through." They kept going and that was the last time that I saw any of them alive except Arthur Walker and Harry King. I know that they could not get through the fire and shortly afterwards it crossed the tramline behind them, so that they could not get back.
We crouched in the creek and the fire swept over us at a terrific pace. The heat was unbearable. Later, I came out of the creek, and met Walker and Harry King coming towards me. King was on his hands and knees. Walker was stumbling and fell into the creek. I carried King to the creek, and poured water over them both. They were badly burned. Walking along the tramline I found the bodies of the remainder of the party. I counted 13 bodies. When it came dusk, we all left the creek and went to the top of the hill, where we remained all night.

Lillian Rowe, wife of the previous witness, said that Mrs Duncan and she would have perished in the creek had not her husband kept throwing water over them. On their way to Saxton's mill the following morning, they were blocked at one point by a large burning tree which had fallen across the track. Exhausted and hungry, they were compelled to scrape away the sand with their hands to make a hole large enough to crawl under the tree. King and Walker, who were smoke blind and badly burned, had then to be dragged through this hole.
Elizabeth Duncan, married woman, said: My son, Richard Duncan aged two years and seven months, was burnt to death in the fire. I had been assisting Mrs **Rowe** in conducting the boarding house, and had only been at Gilderoy for a week. When we were in the creek, Mr Len King took my boy and tried to make to safety at the old farm with him but was compelled to turn back. He then left my boy with the remainder of the party, and that was the last time I saw him alive.

Main Party Cut Off
Arthur George Walker, sawmill hand said: While the others stayed in the creek, the main party tried to reach some cleared land up the hill. We had gone about half-way when the fire leapt up in front of us. We turned and rushed back towards the creek, but when we reached the log yard we saw that the fire was already over the creek. We were cut off and could neither advance nor retreat. Lindsay King took Mrs Walker and tried to force his way through the flames with her. They got half way and had to come back. I then attempted to reach safety with Mrs Walker but was also forced back. I could then see that there was no chance of saving anyone so I ran through the log yard, through the mill, which was on fire, and into the creek. Harry King had gone this way some minutes before. We dropped into the creek, and stayed there for three hours.

Recovery of Bodies
Mounted constable F.R.H. Raper, stationed at Yarra Junction, said that while conveying the body of Ernest Bull to Yarra Junction he heard of the disaster at Gilderoy. He left Bull's body at Saxton's house and went to the mill which he found had been totally destroyed. He described the finding of the bodies. In one place seven bodies were huddled together, three being those of children.
Charles Reuben Lewis, mill hand, said that he left the mill at noon on Saturday and returned on the Monday morning from Yarra Junction. He described the finding of the bodies and how he had been able to identify them by articles of their property.
John Henry Hudson, labourer, Yarra Junction, described the finding of a body burned beyond recognition. Lying beside it was an imitation pin made of cardboard in the form of a Union Jack, and with the name on it in ink "Joseph Johnstone." Johnstone had worn this pin ever since witness had known him.

Death of Ernest Bull
A statement made by Arthur Bryant butcher, Powelltown, to Detective McKerrall was read. In this he said: About 6 o'clock on the Sunday night I went to Morris's slaughter yard in Powelltown to kill a beast and some sheep for the following day. Alexander Sparks and Ernest Bull were with me. Bush fires were in the hills on every side, and the smoke was very thick. Bull returned to Powelltown. I released the cattle and sheep and we then lit two small fires as a break against the main fire which was closing in on all sides. We tried to cross the gully but the scrub was so thick that we could not get through. As we ran back towards the pigsty Bull cried, "I am done," and fell on his knees. I said, "Come on; we will be burnt to death," and Sparks and I helped him to the pigsty. The fire became too hot and we moved into the sty among the pigs. But then the sty caught fire and we were forced out of it, and Bull threw himself in the ground and exclaimed," I am done."
He kept catching his throat and asked us to cut his throat. He then lay still and did not speak. I examined him, feeling heart and pulse, and he appeared to be dead. The sty was then burning fiercely, and we were compelled to run through the flames to the railway line to save our own lives. That night we returned to the spot with others and found Bull's charred body near the pigsty.

Fatal Refusal to Leave
Charles Henry King, a line-repairer, Powelltown, said: About a quarter to 4 o'clock on the Sunday afternoon accompanied by Carl Thomas, I went to No 13 mill, as the fires were raging there. William Anson was sitting at his hut door, and the fire was burning fiercely on the hill opposite the hut. I said to him, "You had better pack up, Bill and come with us." He replied, "No, Charlie; I have a little patch on the top of the hill and if the mill catches fire I am going up there." I tried in every way to induce him to leave the hut but he refused to do so. Fires broke out round his hut and I tried to put them out but it was no use. The heat became so intense that we had to run away or we would have been burned. Eventually

we reached Cumming's house, which is two miles distant. On the Tuesday I was one of a search party which recovered Anson's body. It was laying three chains from his hut in the direction of the cleared patch which he had indicated.

Coroner's Praise
The coroner found that the deaths of the 16 people had been caused through burns accidentally received in a bush fire. "I desire ," he added, " to bear testimony in such words as I can to the wonderful courage shown by the women and the men who met this holocaust on the fateful Sunday afternoon. It moves one deeply, even to think of it. They showed the courage that we expect from the sons and daughters of our race but they showed it in a marvellous way." The coroner spoke of the excellent work performed by the people of Yarra Junction in helping to bring out the bodies of the dead and in succouring the homeless. The police had given of their time and energies to the full extent- first, he was sure, as men, and second as servants of the Government. He knew, perhaps better than most, how ungrudgingly they bad gone without food and without sleep. He acknowledged also the assistance which he had received from senior detective McKerrall, by the fine manner in which he had prepared a difficult brief,

Afternoon hearing
BIG PAT'S CREEK.
Fate of Donald Family.
At Warburton in the afternoon the court conducted an inquiry into the deaths in the fire at Big Pat's Creek, where the whole of the Donald family lost their lives. The victims at Big Pat's Creek were Thomas Donald aged 40 years, mill hand; Mabel Donald his wife aged 28 years; and Jack aged eight years; William aged six years; Leslie aged four years (their three children) and Allan Hume aged 23 years, mill hand, single.
Constable A.C.S. Theobold, stationed at Warburton said: - At half past 2 o'clock on the morning of February 15 I organised a search party to look for the Donald family. We went to Grant's timber mills, Big Pat's Creek, about eight miles from Warburton. We found the mill and all the huts and houses surrounding it burnt to the ground. We began a thorough search, continuing it until half-past 2 o'clock in the afternoon when Mr. H. G. Tadman, the manager of the mill, discovered the five bodies about two miles from the mill, lying, burnt and unrecognisable in the bush. It seemed that they had left their home when they saw the fire coming and had made for Big Pat's Creek for safety, but when they got within three miles of the creek they were trapped by the fire and burned to death. Henry George Tadman, sawmill manager, Big Pat's Creek, gave similar evidence.

Caught by Falling Tree.
John Henry Hume, labourer, Big Pat's Creek, said: My son, Allan Hume, left home about 1 o'clock on the Sunday afternoon to get his things from a hut at Ezard's No. 3 mill before the fire reached them. On the Monday morning I met Mr Charles Herman at the store, and told him where my son had gone. He said, "There is a suitcase and billy burnt on the No. 3 track. Would they be his?" With my son Ronald I went to this spot at once and, on finding the articles, recognised them as my son's property. We went on to the No. 3 mill, which we found burnt to the ground. We searched for a sign of my son but without avail. On our way back we were crossing a log on the tram track. We found my son lying face downward under a tree which had fallen across the track. After sending a message for help we waited with the body until Constable Bolton arrived.
Constable A. W. Bolton stationed at Warburton, gave evidence of the recovery of the body of Allan Hume, and its removal to Warburton.
In returning a verdict of accidental death from bush fire, the coroner again praised the work of the police and townspeople and the courage of those who fought the fires.

Court Case

Argus Wed 10 Mar 1926
FIRES LIT WITHOUT NOTICE.
Three Men Fined.
WONTHAGGI, Tuesday.—In the Wonthaggi Police Court today R. Trew and H. Mackay were each charged with having lit a fire in the bush at Woolamai and with having left the fire before it was extinguished. Trew said that he had made the fire to meet a fire, and Mackay stated that he had lit a fire to burn poisoned rabbits, and that the fire had a break around it and did not spread. Each defendant was fined £10 on each charge, with costs.

Mr Gleeson was chanted with having lit a fire, at Woolamai on February 20. His defence was that he made the fire to burn a break to protect his property from the only possible ingress of any fire through scrub, which was a danger to him and to the Woolamai school. Gleeson was fined £10, with 4/ costs. For the prosecution, it was stated in each case that there was no notice of intention to light the fire.

1926/27
Weather
BOM rainfall records for Melbourne: Sep to December about half average rain, Jan and Feb a third, March well below, April very low rain, ¼.

Hottest days in Melbourne **DAYS > 35^{0}C** **10**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
11.7	10	113

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records
FCV (1927)
52,520 ha (130,530 ac) of crown land burnt, 3,700 ac severe damage, 173 fires reported on crown land

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
Dec 11						Lakes Entrance, crops of beans and fencing
Jan 26						Mansfield at Martins Gap, '000s ac of grass, many stock

Reported bushfire events

The Argus Thu 30 Aug 1928
COLAC Three deaths
In a disastrous fire which swept over the Stonyford district near Camperdown, on February 11 1927, Leslie Speed and two of his children John Douglas Speed and Thomas Archibald Speed lost their lives.

See court case below.

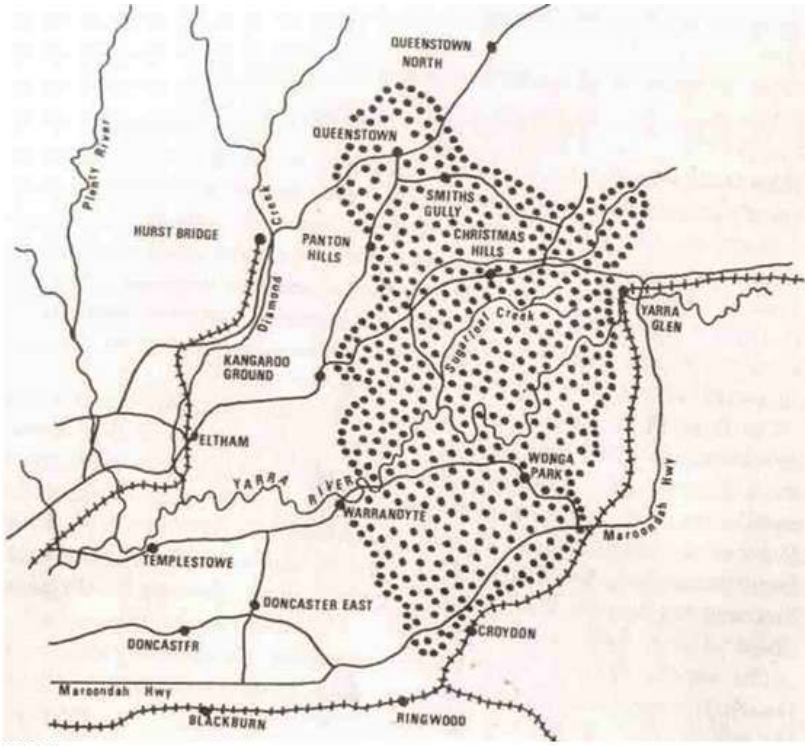
The Argus Thu 30 Aug 1928
In a disastrous fire which swept over the Stonyford district near Camperdown, on February 11 1927, Leslie Speed and two of his children John Douglas Speed and Thomas Archibald Speed lost their lives.

Mrs Mary Ellen Speed brought an action against the Victorian Railways Commissioners in which she claimed £5 000 damages, She made two further claims of £500 each in respect of the two children.
The action came before Judge Macindoe and a jury at Camperdown some weeks ago, when a jury found in favour of the plaintiff and awarded substantial damages.
The jury found that proper precautions had not been taken to ensure that embers or live cinders did not escape from an engine attached to a train running from Colac to Camperdown and that the slides equipment (arrestor) was defective and allowed embers and live cinders to escape on to adjoining land.
.

Judgement could not be entered until Judge could hear argument on the findings of the jury. He heard argument in the County Court today.

Judge determined there was no evidence that the fire had been caused by the cinders from the engine and found for the defendant.

Warrandyte
http://warrandyteheritage.yolasite.com/natural-disasters.php



1927

Kangaroo Ground CFA confirms bushfires in 1927
"Throughout its history, Kangaroo Ground Fire Brigade members have been a part of a number of major incidents, including the February 1893 bushfires, the 1927 fires which burnt from Queenstown to Croydon, Black Friday, the 1962 Christmas Hills-North Warrandyte fires, North Eltham fires, Ash Wednesday and Black Saturday."
Note: I cannot find a corroborating reference to confirm the date of this fire, ie, early 1927 or late 1927, ie, in 1926/27 or 1927/28. Presumed 26/27.
The area burnt is approx 20,000ha

1927/28

Weather

BOM rainfall records for Melbourne: Sep Oct average rain, Nov Dec half, Jan to March double, April very low rain, 1/3.

Hottest days in Melbourne **DAYS > 35^{0}C** **17**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
4.7	17	142

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1928)
18,400 ha (45,570 ac) of crown land burnt, 8,366 ac severe, 123 fires reported on crown land
Mallacoota 11,282 ac, Delatite 5,311 ac, Beechworth 8,000 ac

Reported bushfire events

Argus Thurs 9 Feb 1928
EXTENSIVE BUSH FIRE.
Timber Country Swept.
VIOLET TOWN Wednesday
The bushfire in the Marraweeney district has extended in a serious manner and large areas of timber country have been devastated. One house and contents have been destroyed. Scores of men are doing their best

Other bushfire relevant events

1928/29
Weather
BOM rainfall records for Melbourne: Sep half average rain, Oct a bit below average, Nov half, Dec a third, Jan 2/3, Feb to Apr well above average rain.

Hottest days in Melbourne **DAYS > 35^{0}C 9**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
7.4	9	87

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1929)
72,838 ha (180,293 ac) of crown land burnt, 7,700 ac severe, > 100 fires reported on crown land
East Gippsland - Bairnsdale to Cann River, 156,000 ac

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
Jan 15 - 17	Melb 15	93	37			Myrniong, 2 mile front spread 8 miles, thousands pounds damage, large losses
	17	87	32	nw		Yallourn, fierce bush fires, whole of old cut burst into flame Orbost major blaze, 7 homes lost Sale 300 sheep

						Between Alexandra and Eildon 40,000 ac, 1200 sheep
Jan 15 - 17	Melb 15	93	37		5	
Jan 30	Wang	70				Moyhu, reeked havoc

Reported bushfire events

Sydney Morning Herald Wed Jan 30 1929
BUSHFIRE.
Damage in Northern Victoria.
TERROR-STRICKEN PEOPLE.
MELBOURNE, Tuesday.
A sudden devastating bushfire broke out at Laceby, near Wangaratta, this morning, and soon attained a front of five miles. In high dry grass, the flames were 40 feet high in the grass paddocks on the Greta road, and beaters could not get near the fire, but the fire was stopped on the Mundara estate, after having burnt 400 acres of grass and fencing on the estate.
The fire assumed very menacing proportions as it approached Moyhu. The wind blew steadily at half a gale, with sudden bursts of hurricane fury. In one of these the flames leapt at the Moyhu Hall an old wooden structure-the market yards, and two butter factories, and for a few minutes residents were terror stricken. It seemed that the whole town was about to go up in the blaze.
Meanwhile the fire had travelled on, and it did untold havoc. Telephone lines between Moyhu and Myrrhee were down, and for a time each settlement fought a lone hand, settlers relieving one another ns best they could.
By evening the wind had died down, and it was then that fresh men arriving on the scene, got the fire under control.

Argus Sat 9 Feb 1929
SERIOUS BUSH FIRE.
KERRIE AND CHEROKEE THREATENED.
Breaks Save Macedon Ranges
Only the prompt burning of breaks by nearly 300 fire-fighters, including 150 from the Melbourne Bush Fire Brigade, prevented a fire which started near Kerrie on Wednesday from causing widespread devastation in the -Macedon Ranges yesterday.
The fire is said to have been lit by an unknown person in Mr. Ingleton's property, at about 11 o'clock on Wednesday morning. Since then it has swept an area of about seven square miles near Mounts Charley and Eliza. About 4 o'clock this morning a strong northerly wind drove the flames towards the Macedon Ranges, and by 3 o'clock in the afternoon the townships of Kerrie and Cherokee were in danger. The flames approached within three-quarters of a mile of Cherokee township, and only a fortunate changing in the direction of the wind from north to south-west saved the township.
Around Kerrie the flames blazed fiercely in the gullies. The house of Messrs. T. Greenwood, Sanderson, J. Irwin and Wright, on Mount Charley, were all threatened, but were saved by the strenuous efforts of firefighters, from Melbourne, Romsey, Monegeetta, Lancefield, Hesket, Riddell, and Woodend. Said a woman at Mr. Irwin's homestead. "We thought that the house was certain to be destroyed, but the firefighters worked splendidly. The corduroy road to Mount Charley caught fire, but they tore, up the timber and stamped out the flames. Then they worked feverishly on burning breaks along the length of the Mount Charley road, and finally a change of wind drove the flames back on the burnt area.
It is generally felt among residents that the Macedon Ranges would have been swept if breaks aggregating 12 miles in length had not been burned early in the day.
On the Kerrie road the homesteads of Messrs. S. Frost, S. Valantie, C. Halsall, J. Grady, and Mrs. Hakin were in serious danger throughout the day. Car-loads of fire-fighters rushed through blazing bush tracks in many places, and falling trees were a constant peril. In several cases it was necessary to hack a way through. When the fire swept down on Mrs. Eakin's bouse, Mr. Hallsall fought, single-handed for nearly half an hour. He kept the fire in check until the arrival of a detachment, of fire-fighters placed the house out of danger. Mrs. N. Rankin, who is aged 74-years, carried buckets of milk

and cakes to the fire-fighters over a distance of more than a mile with unflagging courage throughout the day.
At a late hour last night the valley between Mount Eliza and Mount Charley was an inferno of flame, but as this is uninhabited timber country, there is at present no danger. In the event of a north wind springing up to-day, however, Riddell, and the lower portions of the Macedon district, will be in danger. Much fencing has been destroyed, but all the houses threatened were saved.

1929/30
Weather
BOM rainfall records for Melbourne: Sep a bit below average rain, Oct to Dec a bit above, Jan almost nil, Feb average March ¼, April a bit below

Hottest days in Melbourne **DAYS > 35^{0}C** **14**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
18.7	14	184

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1930)
30,200 ha (74,800 ac) of crown land burnt, 4220 ac severe damage, 146 fires reported on crown land
Whittlesea area mentioned

Reported bushfire events

Argus Thurs 9 Jan 1930
FOREST BUSH FIRE.
Detective Making Inquiries.
STAWELL Wednesday
The bush fire at Mt Dryden during the holidays was more serious than at first thought About 3,000 acres of grass and timber land were swept, including five acres of pine plantation, destroying 500 young plants. The district forester is convinced that the fire was begun deliberately. He sought the assistance of a senior detective

Argus Wed 15 Jan 1930
BENDIGO between Huntly and Kamarooka
WINCHELSEA stubble and wheat crop
ROSEDALE House at Holey Plains saved by Rosedale bushfire brigade

Camperdown Chronicle Sat 8 Feb 1930
BUSH FIRE.
2000 TONS OF WOOD BURNT.
A fire; started in the bush country south of Ayres Ford on; Sunday last, and went through a good deal of timber land on the west side of the road. The fire began in the bush south of Mr Ken MacDonald's block.
The fire wood contractors for both Glenormiston and Trufood factories had hundreds of tons stacked and ready for delivery. Glenormiston lost 800 T (but insured) and Trufood lost 700 tons (but insured) and 700 T owned by contractors was lost.

Other bushfire relevant events

Barrier Miner (Broken Hill) Wed 8 Jan 1930
BUSH FIRES IN VICTORIA
MANY FIRES LAST YEAR DUE TO CARELESSNESS
Melbourne, Wednesday.
According to a report issued by the Forests Commission, bush fires in Victoria during the past five years have caused four million pounds worth of damage. Many outbreaks were due to careless tourists, campers and sportsmen.

Note: over this period, which included the 1925/26 bushfires, some 570,000ha was severely burnt, suggesting 8 pounds per ha average loss.

Forests Commission strategy explained by Chairman AV Galbraith

Argus Wed 15 Jan 1930
The mountain type forest is most valuable, with **one acre producing £300 to two or three times that**, and fire can destroy it in 5 minutes.
The careless weekend allotment holder burning off his rubbish before returning to the city is a menace to the forests. But the greatest menace of all is the selfish grazier wilfully set the mountains ablaze to provide grass for his cattle. There were graziers who assist the department, but many were enemies to the community and did their work with little fear of detection.
Hostility to fire prevention remains strong in the eastern part of Gippsland where people who own or lease land for grazing have a long tradition of burning for grass growth.

1930/31

Weather

BOM rainfall records for Melbourne: Sep half average rain, Oct Nov average, Dec double average, Jan Feb about 2/3, Mar double, April a bit above average

Hottest days in Melbourne **DAYS > 35^{0}C** **7**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.5	7	62

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1931)
6,496 ha (16,242 ac) of crown land burnt, 1185 ac severe damage, 77 fires reported on crown land
Anglesea, Stawell, Scarsdale, Heywood.

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
Feb-13	Melb	93		N	6	Wonthaggi, Kooweerup, Foster, Haunted Hills at Yallourn, Trafalgar
Feb-18		99	23	N	5	Gembrook, Beech Forest, much damage

Feb-25						Lake Corangamite - Hawkes Nest
Feb-26						Lidcourt
Feb-27						Anglesea in forest
March 11, 12	Ballarat	83 89	26 15	N - NW	4	Creswick, Casterton, Gong Gong 100 ac rough forest (Ballarat)

Reported bushfire events

Surf Coast Shire February 1931, bushfire commenced near the pine plantation at Anglesea and swept through the bush between Anglesea, Bellbrae and Torquay. Extensive fire between Wensleydale and Bambra.

Other bushfire relevant events

Works in the *Herald* 1931 CJ Dennis

THE BUSH FIRE

Every advocate of inflation, whether straightforward or camouflaged, is insistent in the assertion that his particular scheme can be controlled and limited. A similar claim might be made in regard to controlling a raging bush fire, once it has taken hold.

THE AIM

Let's have a tiny little bush fire.
It's a cold, cold night tonight.
We are sick of this long session
Of the darkness of depression.
And a fire would make things bright.

Just a teeny, weeny little bushfire;
It's easily controlled.
We can sit around and watch it;
If it spreads we'll simply scotch it.
But we must keep out the cold.

Oh, let's have the smallest little bush fire;
It's a fair thing in this storm.
There are plenty here to fight it,
So just strike a match and light it. . . .
Ah! Now we'll all get warm.

THE AFTERMATH

Hey! Watch there! The blooming thing is spreading!
Don't let it catch those trees!
Now that clump of scrub has caught it!
Well who ever would have thought it?
There's a change, too, in the breeze.

It was only just a tiny little bushfire,
But it's leaping, roaring now
And we can't hope to defeat it,
Better grab your traps and beat it
For we must get out somehow.

It was only just a harmless little bushfire
But, gosh! How it did burn!

Now the old homestead is blazing.
Well it's certainly amazing;
But a man must live and learn.

"Den"
Herald, 11 February 1931, p6
http://www.middlemiss.org/lit/authors/denniscj/index.html

1931/32
Weather
BOM rainfall records for Melbourne: Sep average rain, Oct a third, Nov well above average, Dec a quarter, Jan almost nil, Feb above average, Mar April double,

Hottest days in Melbourne **DAYS > 35^{0}C** **6**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
20.8	6	82

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC Widespread including Gippsland, 9 deaths

www.emknowledge.org.au
On Friday 4 February 1932, fires swept across the mountains and timber settlements from Warburton through to North Gippsland. The small town of Gilderoy between Yarra Junction and Powelltown was completely destroyed and there were big losses in the timber industry. One person died near Powelltown.
After a long fight to save Noojee, the township survived because of a change in wind direction. At Erica in North Gippsland, six people died.
Two firefighters were killed near Warragul. Eventually heavy rain put out most of the fires.

FCV (1932)
204,000 ha (510,895 ac) of crown land burnt, 96,000 ac severe damage, 307 fires reported on crown land
Mountain forest areas of central Vic, and stringybark forests of western district.
Counties: Tanjil, Evelyn, Karkarooc, Borung, Dundas, Normanby,
Damage £40,000, cost of suppression £2,044
22 lookout towers in operation, aircraft used again for recce

Foley Estimated private property burnt > 20,000 ha

Date	Station	Temp	RH	Wind	Beaufort scale	
Jan-11	Ararat	83	42	NW	4	Beaufort 20 ac grass and timber
Jan-12	Ararat	78		SW	5	Swan Hill, Enfield forest, Lorne
Jan-13		68	41	SW	4	Wedderburn grassy forest, hundreds of valuable trees killed in recent fires
Jan-14		77	37			Grampians, Belgrave, large fire Blackwood Ranges fire travelled 8500 ac in 11 days, Forest fire near Bairnsdale burning several days, grew today
Jan-22						Trafalgar, fierce fire burnt for several days
Jan-28						Rubicon, forest fire threatening mills, large fire at Pheasant Creek
Jan 29-31						Kiewa valley, Euroa, Traralgon Dunkeld, Daylesford, Beechworth, 1000 ac
Feb-03						Bright in Black Range
Feb-04	Melb	93	18	N	4	Declared by FCV as blow up day
Feb-05	Melb Sale	87 84	- 27 %	WSW	4	9 dead as fires wiped out Gilderoy and several mills 6 dead in Erica bushfire 2 dead at Warragul when trapped by wall of flame, 1 survived

Reported bushfire events

Surf Coast Shire February 1932, fires burned steadily for several weeks around Lorne and also threatened Aireys Inlet.

1932/33
Weather
BOM rainfall records for Melbourne: Sep half average rain, Oct double, Nov 1/4, Dec double average, Jan average Feb almost nil, Mar below, April a quarter of average

Hottest days in Melbourne **DAYS > 35^{0}C 3**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
13.4	3	35

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1933)
85,000 ha (213,031 ac) of crown land burnt, 9,151 ac severe damage, 173 fires reported on crown land
73,000 ac in NE – Upper Murray, Mitta, Ovens, King

Foley Estimated private property burnt > 100,000 ha

Date	Station	Temp	RH	Wind	Beaufort scale	
Jan-02						Euroa 300 - 400 ac scrub
Jan-03						Peterborough, Mortlake 2000 ac
Jan-11						Omeo
Feb-13						Cobaw Ranges
Feb-16						Yackandandah, ten day bushfire burnt 1/4 mile per day on 20 mile front on 18th and headed SW on 40 mile front on 19th
Feb-20				SW	strong	Mortlake 15,000 ac
Feb-27	Hamilton	99	12	NW	5	Elmhurst, thousands of acres, Moolort near Maryborough 10000 ac Seymour 14 mls east swept 8 miles from Yea, 7000 ac, grass
Mar-01						Glen Wills threatened
Mar-12						8 sq miles at Gisborne in grass and some timber [18,000 ha]
Apr-11						Gunyah 1 dead, 4 houses

Reported bushfire events

Surf Coast Shire November 1932, bushfire between Anglesea and Torquay
February 1933 fire north of the Bellbrae – Anglesea Road near Bellbrae.

Other bushfire relevant events

Bushfire Brigades Act
In 1933, the Bushfire Brigades Act formalised a management committee (comprising Forests Commission, Country Fire Brigades Board and Bushfire Brigades) registered Brigades and delegated legal powers for fire fighting. (Tainsh, 1949)

1933/34
Weather
BOM rainfall records for Melbourne: Sep Oct half average rain, Nov average, Dec double average, Jan just below average, Feb about half, Mar almost nil April almost triple average

Hottest days in Melbourne **DAYS > 35^{0}C** **15**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
7.3	15	145

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1934)
73,200 ha (183,720 ac) of crown land burnt, 20,485 ac severe damage, 204 fires reported on crown land
2,500 ac patch burning Note: First record of control burning on public land for protection reasons

Foley Estimated private property burnt > 10,000 ha

Date	Station	Temp	RH	Wind	Beaufort scale	
Oct-23	Yallourn	96	13	NW	7	Erica surrounded by fire, many mills threatened, Large fires Donna Buang and East Warburton, Anglesea bush burning for 2 days, swept towards town but wind changed in time
	Melb	96	29	N	6	
Nov-2						Ben Nevis fierce fire
						Anglesea - bushfires on 22 and 23 Oct, bush very dry, 200 ac pine plantation burnt on 23/10, wind never exceeded force 6
Feb-9	Melb	102	25% at 9am			Gellibrand River to Beech Forest to Apollo Bay, most disastrous fire for several years, 12 houses,

						Hepburn Springs great destruction, Ferny Creek, great destruction

Reported bushfire events

The Mail Adelaide Saturday 10 February 1934
The damage caused by bushfires at Daylesford willow plantation is a serious blow to the Victorian cricket bat industry, which in the past few years has achieved considerably success. The damage today is estimated at more than £1,000. Hundreds of trees in the plantation were destroyed or severely damaged.

Argus Saturday 10 February 1934
FIRE-FIGHTERS INJURED
SURROUNDED BY FLAMES
DESTRUCTION NEAR DAYLESFORD
HEPBURN SPRINGS Friday
The most disastrous file in the Shepherd's Flat (Daylesford) district for many years caused great destruction to-day. Fanned by a raging north wind, the fire raced through Shepherd's Flat to Basalt, and then to Kooroocheang, Eganstown. Fire bells at Daylesford and Hepburn Springs rang and motor-cars, motor buses, and trucks transported more than 300 men to the fire within half an hour. Owing to the velocity of the wind, the burning of breaks was impossible. New fires caused by flying sparks often broke out a quarter of a mile ahead of the fire fighters. They decided to concentrate on saving homes. Although his house was saved, Mr. Robertson lost 170 acres of grass, 150 tons of hay, and all his outbuildings, including a chaff house, which contained engines and a chaffcutter; piggeries; and part of a fine apple orchard. Of Mr. Guasconi's property only the house was saved. Mrs. M. Muschialli, whose house was saved after it had caught fire half a dozen times, lost nearly everything else, including 50 tons of hay, sheds, stock, and a motor-cycle and sidecar. The Jim Crow Creek saved the homes of Mrs. E. Tinetti and Mr. Liversidge.
The Shepherd's Flat school and the schoolmaster's house occupied by Mr. and Mrs. L. E. Sandey and their children, were saved after a desperate fight, all sheds and outbuildings being destroyed. Mrs. Sandey drove the children to safety in a motor car. The visibility was bad, however, and when the road was reached the car collided with a horse and jinker driven by Mr. H. Herman. The horse was severely injured and had to be destroyed. The occupants of the jinker and the car were not injured.
Mrs. Kirkham's cottage and the Shepherd's Flat Post-office were saved with difficulty. Heavy loss was suffered by Mr. J. Crockett, brother of the cricket umpire, sheds, including one that contained willow for cricket bats, were destroyed, and only 10 of 500 beehives were saved. Mr. Crockett estimates the damage at more than £1,000. Mr. A. Muller lost grass and fencing, and Mrs. Colmo and Messrs. Thomas Henderson and Gabriel Henderson lost all but their homes. The fire passed to the properties of Messrs. Rodoni and Mead in the direction of Basalt and Lithia Gully.
Owing to the strong and constantly changing wind, several fire-fighters had narrow escapes. A party led by Mr. L. Muschialli had to pass through 100 yards of flames. Employees of the Bobbie Burns goldmine were compelled to take refuge In the Jim Crow Creek, while the fire roared over them. Mr. William Taggart broke a shoulder when he was struck by a branch which fell from a tree, and Mr. J. Muschialli was severely burned on the head and back. Mr. Muschialli was taken to the Daylesford Hospital.
By 5 o'clock the wind had dropped, and the fire was under control. Parties of men were left at danger points in case the wind should change. Later, however, fire broke out again in Lithia Gully and raced toward Mount Franklin, threatening the properties of Messrs. Powell brothers and W. Manning. The scene this evening is one of complete desolation. Telegraph poles are burning all along the roads.

1934/35
Weather
BOM rainfall records for Melbourne: Sep just under average rain, Oct to Jan between triple and double average, Feb well above, Mar just below, April almost triple average

Hottest days in Melbourne **DAYS > 35^{0}C 2**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
2.8	2	14

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1935)
4,500 ha (11,300 ac) of crown land burnt, 712 ac severe damage, 56 fires reported on crown land
Anglesea, Stawell, Scarsdale, Heywood.
6,200 ac patch burning

Reported bushfire events

1935/36
Weather
BOM rainfall records for Melbourne: Sep to Nov around average rain, Dec Jan 2/3, Feb Mar around 1/3, April almost double average

Hottest days in Melbourne **DAYS > 35^{0}C 3**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
9.2	3	31

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1936)
42,000 ha (105,951 ac) of crown land burnt, 11,931 ac severe damage, 180 fires reported on crown land
10,000 ac patch burning

Foley Estimated private property burnt > 50,000 ha

Date	Station	Temp	RH	Wind	Beaufort scale	
Jan-20						Kyneton 6000 ac
Feb-26	Camper-down	97				Lismore and Camperdown, large areas burnt, hundreds of sheep and cattle, damage at Camperdown 50,000 pounds
Mar-09	Portland	92	19	N-NW	5	Portland on 4 mile front, thousands pounds damage to fences, haystacks etc

Apr-01	Sale	91	18% at 9am	NW SW	6 5	Fires everywhere, worst in Dandenong Ranges, Gippsland and Western district, Gunyah wiped out, thousands of acres of grazing country and forest plantations

Reported bushfire events

Surf Coast Shire April 1936, fires in Geelong and neighbouring districts. A fire with a seven mile fire front threatened the township of Anglesea, with neighbouring pine plantations damaged. Also fires in Otways.

1936/37
Weather
BOM rainfall records for Melbourne: Sep half average rain, Oct Nov average, Dec double average, Jan Feb about 2/3, Mar double, April a bit above average

Hottest days in Melbourne **DAYS > 35^{0}C 2**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.0	2	17

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1937)
7,540 ha (18,861 ac) of crown land burnt, 1,311 ac severe damage, 83 fires reported on crown land
30,000 ac patch burning

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
Nov-29		72	26% at 9am			Brodribb to Club Terrace

Reported bushfire events

1937/38
Weather
BOM rainfall records for Melbourne: Sep just below average rain, Oct X 2.5 average rain, Nov almost nil, Dec Jan about 2/3, Feb average, Mar April around half.

Hottest days in Melbourne **DAYS > 35^{0}C 11**

Dryness Index	Days >35^{0}C	Seasonal Severity Level

8.6	11	112

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1938)
37,030 ha (92,584 ac) of crown land burnt, 8,430 ac severe damage, 291 fires reported on crown land
32,350 ac patch burning

Foley Estimated private property burnt > 20,000 ha

Date	Station	Temp	RH	Wind	Beaufort scale	
Nov-28		98				Macedon district, much damage
Jan-10						Kilmore, 80 sheep
Jan-19	Melb	95	18	N		Upwey, 2 homes
Jan-22						Koorongvale
Jan-25						Cobden, 3 homesteads
Feb-03	Melb	103	17	NW	3	Lang Lang, 3 mile front
Mar-30						Euroa
Mar-31	Melb	83	22	N	5, gusts to 57mph	Wandin North, houses and pine plantation
Apr-03	Beech worth	77	33			Yackandandah 3000 ac
Apr-05	B/w	86	24			Walwa, thousands ac grazing land

Reported bushfire events

The West Australian Tuesday 30 November 1937
Eight fires have broken out since Friday in Wombat Forest, which extends from Woodend to Daylesford and includes the Black Forest, and three in private property adjoining, according to information received by the Fire Control Officer of the Forests Commission (Mr. M. Carver).
It is suspected that the 11 fires were caused by burning off, and the outbreaks will be investigated by police and officers of the Forests Commission.
The lighting of fires within half a mile of a State forest is prohibited, and offenders are liable to a penalty of £100 or 12 months' imprisonment. The Commission will ask the Chief Commissioner of Police (Mr. A. Duncan) to assign a detective to investigate the cause of the fire which has been burning at Mount Macedon since Friday.

Surf Coast Shire November 1937, bushfire threatened settlement at Eastern View and swept towards Fairhaven.
February 1938, bushfire along the west side of Anglesea river threatened the township of Anglesea. Also fires towards Aireys Inlet, at Big Hill, Benwerrin and Pennyroyal.

1938/39
Weather

BOM rainfall records for Melbourne: Sep a third average rain, Oct Nov half average, Dec ¼, Jan almost nil, Feb X 4, Mar half, April double average

Hottest days in Melbourne **DAYS > 35^{0}C 12**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
15.4	12	148

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
8/01/1939 Narbethong 2 deaths
13/01/1939 Southern Victoria: "Black Friday" 71deaths 1.5M ha burnt, 1300 buildings [COAG says 650 houses], 69 sawmills
Large areas of the north-east and Gippsland, the Otway and Grampian Ranges and the towns of Rubicon, Woods Point, Warrandyte, Noojee, Omeo, Mansfield, Dromana, Yarra Glen, Warburton, Erica

FCV (1939)
1,348,000 ha (3,370,870 ac) of crown land burnt, 869,000 ac (=347,000 ha) severe damage, 479 fires reported on crown land, of the 73 fires with known origin, 63 (23%) were caused by grazing interests, and 71 (27%) were caused by "settlers, landowners, farmers"

Year	No of fires	No < 4 ha (%)	No > 400 ha (%)
1938/39	479	75	179

68,000 patch burning

Total area burnt = "over 4 million" ac crown land and PP (> 1.6M ha). Therefore, estimated private property burnt > 300,000 ha

Approx 10,000 ac of pine plantation was destroyed, most young. But they sold 1M s ft (= 3000 cu m) of fire killed mature pine at the stump between 4s and 7s per 100 s ft. Using 5s per 100 s ft = £1/4 x 1,000,000 /100 = £2,500 per M s ft
[£2,500 = $211,500 in today's money, divide by 3000 cu m = $70 per cu m in today's money].

Hardwood log volume killed = 2,070M super feet (= 0.6M cu m), but 916M s ft (= 0.3M cu m) can be salvaged within 2 years. Using the same royalty as pine (£2,500 per M s ft), this is a total salvage royalty value of = £2M. [In today's money this is approx $170 M].
To fund the salvage operation, the Government agreed to pay some £0.6M, on the promise that just under £0.5M would be repaid by the sawmillers.
Thus, in today's money, the 1939 fires killed some $350 Million of state-owned assets, of which they can salvage only half.

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
Sep26	Kyneton	73		N	5	Mt Macedon, fire swept into pine plantations, Bealiba 100 ac forest
Oct 4	Melb	79		N	4	Erica, Gisborne, Kalorama, Currajong, Beauport
Oct 6		69				Walwa, thousands ac forest
Oct 7-8		83 69		N	4	Noojee destroyed railway trestle bridge £1500, Erica,Mt Cole, Sth Lyndhurst
Oct-17	B'rat	81	16	NNW	7	Ballarat to Daylesford, thousands acres forest, Gisborne 40 sq mls forest and farm
Dec-11	Melb	70	31			Plenty Ranges, 200 ac forest
Dec-16		94	10			Gisborne, thousands ac scrub and forest
Dec-19	B dale	84				Brookside
Dec-22	B dale	81				Bairnsdale 1000ac, Eganstown, pine plntn
Dec-30	Yallourn	76				Valencia Creek country, Bacchus Marsh wheat crop
Jan-01		99.8	11	N	light	
2-Jan		79				
Jan-03	Melb	86	40			Woodend Kiewa
Jan-04						
Jan-05						
Jan-06		75				
Jan-07		81				

Jan-08	Melb	100.6	33			Dromana 44 houses, £40,000 Erica 12 dead, timber mills burnt, many houses, Yallourn ringed with fire, Toombelup forest, timber mill and house,
9-Jan		76				
Jan-10		112.5	9	NNE	4, gusts up to 40 mph	Croydon Nth, 4 houses, orchards, Toolangi, Healesville, 10 sq mls, 17 houses, Narbethong gutted except pub, 7 dead, Black Spur to Buxton ablaze
11-Jan		92				
12-Jan		78				
13-Jan		114	8	N	4, gusts to 46 mph	
						Ballarat, 7 houses, Wangaratta, Toombelups, famous Cambatong forest, Lorne 14 houses, Noojee gutted except for pub, Wilsons Prom - neck to lighthouse, Woods Point demolished in 3/4 hour, Warburton to Woods Point every sawmill, 6 men killed at Matlock mills
14-Jan						Omeo, destroyed, hosp, 4 shops hotel, 27 houses
30-Jan		97	10	n	strong, gusts to 42 mph, change at 7pm	Selby, Otway Forrest Lorne,

FCV said "blow up" days were Jan 8, 10, 13

Foley

Worst damage Up to 13 Jan	Houses, etc	Damage £
Rubicon	100	25000
Woods Point	143	37500
Warrandyte	100	25000
Noojee	45	21030
Omeo	40	20000
Mansfield	100	9835
Dromana	43	10750
Lorne	20	12355
Yarra Glen	32	8000
Warburton	20	5000
Erica	16	18670
	659	193140

Outline of 1939 fires in Eastern Victoria in green

http://mapshare.maps.vic.gov.au/MapShareVic

Outline of 1939 Otway fires in green

http://mapshare.maps.vic.gov.au/MapShareVic

Reported bushfire events

Some of the fires before Black Friday, Jan 13 1939

News Adelaide Tuesday 18 October 1938
Forest Fires Sweep -Victorian Ranges

MELBOURNE, Tuesday.
In one of the worst bushfires for many years round the Ballarat and Daylesford districts, thousands of acres of forest country were destroyed by fires which burned throughout yesterday and last night, before a change of wind early today eased the situation.
One home was lost in the fire at Spargo Creek which was the centre of the most serious outbreak but the danger is now past. The plains were today covered in a thick pall of smoke for 20 miles round the district between Ballarat, Spargo Creek, and Daylesford, and miles of blackened forest country could be seen from the roads leading through these districts where the fire raced through the thick forests. At Spargo Creek and Korweinguboora the flames raced along the side of the road yesterday, and at midnight the area was surrounded on three sides by big fires. The forest was a raging area of flames in all directions. Driven by a strong wind, the flames raced through gullies and climbed high into the ranges. The fire at Spargo Creek raced within 100 yards of the pbst office and hotel, which are on cleared grounds. At Korweinguboora there are miles of blackened trees heading to the hills, but now there is no danger. The weatherboard home of Mr. William Usher, who had been prospecting for three years at Spargo Creek, was burned to the ground, and all his belongings were lost. All the other fires which raged yesterday are now under control, and the cool change is expected to end the danger.
A new fire broke out in the Pyrenees, near Avoca, early today, but it is burning in scrub away from houses.
Half a dozen fires are burning south of Trentham and are being carefully watched by Forestry Commission men who got the worst of them under control today, with little damage to property.

Surf Coast Shire December 1938, fire burning for several days around Eastern View threatened several cottages and the golf course.

The Kalgoorlie Miner Thursday 12 January 1939
18 PERISH IN VICTORIAN BUSHFIRES
TOLL OF DEATH AND DESTRUCTION TOWNSHIPS STILL THREATENED BY FLAMES
Melbourne. Jan. 11.
Eighteen persons burnt to death last night brought the death roll in the Victorian bush fires to 20. Grave fears are held for the safety of at least 18 others. In the Rubicon forest, near Alexandra, the bodies of 11 men were discovered after the fires had destroyed four mills in the forest. On Acheron Way, near Narbethong, seven bodies, including those of a woman and a child, were found burnt to death. Eighteen men are still missing in the Rubicon forest. An unconfirmed report received by the police states that four men left Healesville by car last night for Black's Spur and have not been heard of since.

A huge wall of flame, a mile wide, which swept at 50 miles an hour through the Rubicon forest last night, carried all before it and trapped even experienced bushmen when they were within half a minute of safety. Reinforcements from Alexandra and Thornton would have been futile, even if messages for help had reached those towns. Throwing flames a mile ahead, the fire encircled four mills. The bodies of 11 men were re covered, but seven could not be identified. Rescuers today found the bodies of Baden Johnston, Alfred J Nearson and Hedley John West, Forests Commission employees, and a man believed to be Sam Murdoch. West was in charge of a gang of fighters working near Niagaroon. He had been 13 years in the service of the commission. One hundred fire fighters were out all night attempting to stop the Buxton outbreak. They found both the Feiglan's Mills completely destroyed and had to fight for their own lives. Two saved themselves only by throwing themselves on a cricket pitch in an open space and covering themselves with earth. They struggled into Buxton today, severely burnt from feet to waist. Another 17 men who reached the settlement were suffering terribly from severe burns. No medical aid was available to them as Buxton is cut off from Healesville and Maryville.

A tremendous fire in the Kiewa Valley has almost encircled Mt. Bogong, the highest point in the Victorian Alps, and 6000 cattle on the Bogong High Plains may be trapped if the fire spreads on to the Alpine plateau. Cattlemen fear that there will be little hope in this event of driving the cattle off.

At Daylesford five houses and 400 acres of forest were burnt out before the flames began to eat back towards Blackwood, where there is some of the most valuable timber in the country. Forest officers and volunteers were rushed to the small town which is in the path of the fire.

The forest in the Powelltown basin was completely destroyed and residents had a shocking night, completely encircled by fire, before relief came with the morning.

More than 20 people spent last night in the Tyers River, sheltering from the furious blaze which compelled seven women, 17 children and 44 men to race for their lives from Ingram's mill, where they had been fighting for days. There are eight desperate men who have remained at the mill in the hope of saving the plant and buildings from destruction.

The position is growing worse and a sudden change of wind will force them to flee. Walhalla Hospital was evacuated early to-day; and every available man in town ' fought strenuously to check the fire which was bearing down on it. Melbourne people have responded magnificently to appeals for clothing, bedding and food for hundreds of country people who have lost their homes, and more volunteers than could be coped with have offered to help in the fire fighting. The State Relief Committee and Red Cross Society are co-operating in the organisation of one of the biggest relief movements in the history of the State and have been inundated with offers of assistance from firms and private people.

Imprisoned in a high wall of flame all day today, residents of Toolangi had a nightmare experience. Frantically they fought as the ring of fire crept closer. Two houses were devoured by the flames. Towards nightfall the fires burnt themselves out. Before 6 a.m. residents woke to the crackling roar of the approaching fires and hurried preparations were made to defend the township of 150 persons.

Women and children were evacuated to Healesville and shortly afterwards Toolangi was cut off from the outside world by impenetrable barriers of fire. Leading the fight were the forest workers who narrowly escaped death when their leaders, Messrs. Dennby and Barling, lost their lives on Sunday. They have been fighting fires now for 10 days. Their experience and energy, supported by untiring efforts of 50 men, saved the town from destruction. Mrs. A. Eddie, postmistress at West Healesville, stayed at the switchboard putting through telephone calls from terrified residents for help until the flames were sweeping round the walls. Mr. and Mrs. Eddie ran to their car and, with their son Alex (8), their daughter Beatrice, and Lindsay Exton (10), they drove through tine flames to the main road. Their car caught fire once. Later Mr. Eddie returned and was astounded to find the post office building intact. Hazel Glen, a large guest house with accommodation for 60, was destroyed in a few minutes by a fierce fire which swept along the Myers Greek road, north of Healesville. The proprietors, Mr. and Mrs. Elliott and a woman' guest, Miss Olive Foster, were trapped in the blazing grounds for three-quarters of an hour before firefighters reached them.
Twenty houses have been burnt at West Healesville. Mt. Riddell, east of the township, - is a roaring inferno and cannot be approached. Flames are sweeping over Mt. Juliet and Mt. Dom Dom, on the north-east, having already passed across the back of Maroondah Dam through the watershed and across the Buxton road. The town is literally ringed with fire.

Fierce fires which surround Erica are worse even than the great bushfires of 1926. Tonight the township was threatened by a fire, which raced up to within 200 yards of the main street. Women and children were evacuated after a day of terror.

Northern Star – Lismore Thursday 12 January 1939
18 PERISH IN VICTORIAN BUSHFIRES
LOSS OF LIFE AND PROPERTY EXCEEDS 1851 DESTRUCTION
MELBOURNE, Wednesday.
TRAPPED by bushfires, 18 people perished in Victoria today. The death toll has now reached 20 since the fires commenced. At least 10 others are missing. Today was the blackest day in the tragic history of Victorian bushfire terrors, eclipsing the terrible "Black Thursday" of 1851, and the disastrous fires of 1926, 1928 and 1932.
Damage almost beyond assessment has been done. Thousands of square miles of valuable timber country have been burnt out, farm lands have been ravaged and dozens of homes destroyed. A large section of the State is now a blackened ruin and smoke from the advancing flames shrouds the entire State.
Seven people met terrible deaths when two cars in which they were making a dash for safety through the blazing bush at Narbethong were overwhelmed by flames. Eleven men perished in a holocaust in the Rubicon forest, near Alexandria. The fire which claimed the lives of seven Narbethong victims

almost accounted for two other men from Feiglan's mills who, shockingly burned about the lower parts of their bodies, reached Buxton to-day after a nightmare journey through the fire-swept forest.

The Narbethong tragedy was discovered by firefighters who were searching the ruined area for people who had been reported missing. They found the burnt out cars close together on a track leading from the Buxton-Maryvale road to Feiglan's mills. Nearby were five bodies, those of three men, a woman and a child. In the ruined cars were the charred bodies of two more men. The victims were :— Kenneth Kerslake (35), of Niagaroon, a timber worker, Eileen Kerslake (35), his wife, Ruth Kerslake, his little daughter, Frank Edwards, Mrs. Kerslake's brother. Chris Soldaris, a Greek mill hand. Antonio Igoshus, a Greek mill hand, and Peter Igoshus, his brother.

Met By Wall of Flame

The Kerslake's and Edwards were making a dash to Narbethong. On the way they picked up the Greeks who had been sheltering in a river. Not long afterwards, a wall of flame met the two cars as the fire which had raced through the Acheron district with incredible speed, overtook them. Five of the victims, including the child, made a run for it, but dropped in their tracks as the scorching blast struck them. A similar fate overtook the two men who had remained in the cars. It was an irony of fate that, had the Greeks remained in the river, they would still be alive, for seven other men, employees of the same mill, were found safe after the fire had passed.

Eleven men lost their lives in the Rubicon forest, near Alexandria. They were :— Baden Johnston (30), a millworker. Alfred Neason (35), a millworker, Hedley John West (40), of Healesville, forestry foreman, Leonard Sims, Geoffrey Wyatt, James Cain, D. Argent, A. Paine, P. Le Brun, Joseph Pherry, and P. Murdoch. The men apparently lost their lives after an ineffectual effort to save the Rubicon and Pearce mills from destruction. As the fire advanced, they were obliged to run for their lives. Johnston, Neason, Murdoch and West apparently tried to reach Thornton, but they died on the track through the forest. Their bodies, burnt almost beyond recognition, were found this morning. The other bodies were found not far from the mills. Two bodies were huddled in a small clearing. Smouldering coats covered their faces, but the heat had killed them.

Workers shelter in dam

In another part of this area 25 timber workers saved their lives by standing in a dam for many hours, dipping their heads beneath the surface periodically to save their faces from the heat.

Covered With Sawdust

Two men stated that, after trying with out success to save the mills, they ran to the only cleared patch, the cricket pitch, where they lay down and covered themselves with sawdust from the mills. Scorched, and suffering agony to the limit of endurance, they remained there until the fire had passed. The sawdust had been charred and their bodies from their feet to their waists were badly burned.

The Rubicon forest is ablaze from end to end and terrified setters are sheltering wherever possible. Three timber mills were destroyed with great rapidity by the flames last night and a number of homes owned by timber workers disappeared.

Went To Save Dog

About seven people were in the Rubicon danger area yesterday when a telephone message warning them to leave immediately. One party of men who had been making a road to Rubicon power station ran down the track, but five men waited while one of them went to the rescue of his dog. The remaining men were not seen again. The others reached a clearing which they had prepared earlier in case of an emergency. Rubicon residents succeeded in setting through to Alexandra, although, for many miles, they had to drive through terrible fires.

Searchers to-day found Messrs. S. Stanfield, J. Fish and K. A. Kirkpatrick, employees of the mill at Powelltown, sheltering in a deep cutting with fire all around them.

The Powelltown valley was a sea of flame and hundreds of acres of valuable timber country have been destroyed. Anxiety expressed yesterday about the safety of men, women and children at the Ada River mill was allayed to-day when they were brought safely to the township.

Noojee, the scene of the disastrous fires in 1926, is again menaced. The flames are creeping slowly towards the town through the heavily timbered country.

Huge trees in the Loch valley have crashed to the ground and there appears to be no hope of combating the flames at this juncture.

Plantation Threatened

The State pine plantation is threatened with destruction and a large batch of forestry workers has been rushed to the scene. They were fighting fierce flames this afternoon

People were forced to spend the night in a deep cutting near the Tyers River, while a large number of men, women and children raced for their lives before the flames at Ingram's hill. It was here that a fight had been waged for days without the slightest hope of quelling the fires. Displaying the greatest of pluck, eight men have remained behind at the mill battling to the end to save the homes of the workers. From the fierceness or the flames tonight, they have no chance, but are working almost at the point of exhaustion. Only heavy rain can save them. Seven women, 17 children and 44 men who took refuge in Ingrams' mills last night, set out on a timber train for Erica when the position became critical to-day. They were unable to proceed far at the timber tracks on which the trains travel had been burnt through. Motor trucks from Erica took them to safety.

Residents on the fringe the Toombullup forest completed a fire break, 25 miles long, in four days, to protect the townships of Myrrhee and Whitlands.
The fire at Blackwood destroyed thousands of acres of forest and five houses.

The outskirts of Walhalla were swept by fire this morning when a house in the southern end of the town was destroyed. The hospital and many homes were evacuated. Volunteers were called to fight the blaze, which was within half a mile of the main street. Blankets, mattresses and food were sent by motor trucks to-day to Erica. Marysville and Warburton. At least a dozen other centres are threatened by fires.

Thousands of cattle are endangered in the Kiewa Valley, which is ablaze

Five homes near Daylesford and four homes at the Black Forest were destroyed today.

First aid men on motor cycles are going to affected areas to attend to burns suffered by fire fighters.
The Governor has donated £100 to the Lord Mayor's bush fire appeal fund.

Some of the reports about Black Friday, 13 January

Argus Mon 16 Jan 1939
38 MORE DIE IN BUSH FIRES
VICTORIA'S WORST TRAGEDY
16 DEAD AT ONE MILL
DRAMATIC STORIES OF HEROISM
TREMENDOUS PROPERTY LOSS
BY OUR SPECIAL REPORTERS
The most disastrous fires ever known in Australia have claimed 38 more victims in various parts of Victoria. This brings the total death roll so far to 70 men, women, and children. Hundreds of homes sawmills, thousands of acres of valuable forest country, and many famous tourist resorts have been completely devastated. Survivors from the burnt-out areas tell amazing stories of their escapes from the inferno and the heroism of rescue parties.
In addition to the appalling death-roll, hundreds of casualties are reported, chiefly from burns and blindness. Searchers found 16 bodies which had been incinerated in two mills in the Matlock forest, between Warburton and Wood's Point. Fifteen men lost their lives at one mill, where there was only one survivor. Twenty three of the 24 men at another mill escaped by taking shelter in a brick house. The whole forest from outside Warburton through to Wood's Point was completely burnt out by the fires. Every sawmill in the area was razed. Never before has a fire of such magnitude and devastation been known in Victoria.
Eight persons, including two women and three children, were killed in a fire at Tanjil Bren, 40 miles from Moe. Another man is reported missing.

When they were trapped between barriers of fire in the forest near their motor-car while fleeing from Hall's Gap to Stawell, five members of a Nhill family holidaying in the Grampians were burned, one fatally. Another man, a farmer, was burned to death at Moyston. Many others escaped from Hall's Gap in cars before the flames swept through.
Marysville police found the body of an unknown who, who had perished in the fire,
on the Acheron Way.
Two men were burned to death in the Buckland Valley, where a township was almost wiped out.

Six members of a family at Jumbuk were seriously burned and 11 persons narrowly escaped death by suffocation when they were trapped in a well in which they had taken refuge.
Wilson's Promontory has been completely devastated by fires, which swept the country from the neck to the lighthouse. All animals in the game reserve were killed.
Many settlers in the Thougla Valley are still in serious danger, threatened by a fire which passed over Mount Elliott.
Refugees from Noojee are living in a canvas town at Warragul Showgrounds. Many others are in the military camp at Seymour. Noojee having been devastated by two severe fires in 13 years, the question is being discussed whether it should be abandoned.
Lorne is safe, and the damage is not nearly so extensive as was feared.
Fires in the Jumbuk, Jeerelang North, Yinnar, Hazelwood, Gormandale, and Balook districts are now regarded as being confined to comparatively safe areas. Walhalla is safe.
Police are investigating a report that three separate outbreaks of fire within a small area in the Sherbrooke Forest on Saturday were deliberately caused by an incendiarist. There are also suspicions about five other separate fires.

Welcome rain which was falling in many districts late last night has helped to ease the tension. A cool, cloudy day is expected to-day. However, a heavy general rain, sufficient to extinguish the fires completely, is unlikely.

Disastrous fires swept through the Omeo district on Friday and Saturday. The body of a stockman was found at Cobungra station. Another man was badly burned and is in Bairnsdale Hospital. Nearly all homes in the Cobungra district were destroyed.
Seven sawmills and several houses were destroyed in extensive fires in the richly timbered Otway forests, a new fire area.
After being checked by a trainload of volunteers from Seymour, Benalla, and other towns, fire broke out again a mile from Cudgewa, but was checked last night by a drop in the wind and rain.
Thousands of cattle and sheep have been burnt in many parts of the State, but 7,000 cattle on the Bogong High Plains are safe.
All danger at Warburton and East Warburton has now passed, although fires have left a trail of desolation throughout the district.
A baby was born while the flames were raging around Omeo.
Two famous skiing resorts, Hotham Heights Chalet and St. Bernard Hospice, were swept on Friday. The manager of the Hotham Chalet, his wife, and young child took refuge in a well.
Fierce fires are also raging in New South Wales, which is in the grip of a severe heat wave. Already 77 deaths have been reported, chiefly from the heat, but also many from the fires.
The worst bush fire ever experienced in the Canberra district destroyed thousands of acres of valuable timber, and volunteers were called by radio because it was feared buildings on the outskirts of the capital would be destroyed. At one stage the evacuation of Government House was considered. The Prime Minister (Mr. Lyons) has announced that the Commonwealth Government will make a special grant for the relief of fire sufferers.

The response by the public to the appeal for help for bush fire sufferers is the finest ever known in Victoria. "The Argus" fund increased by £4,089 in the week-end, and now stands at £22,094. Lord Stradbroke, who was Governor of Victoria during the fires of 1926, has sent £100 from London.

THIS IS NOOJEE TO-DAY When the fire swept through the town everything was destroyed and only the hotel and a railway house remain standing. This is the second time Noojee has suffered destruction by fire.
FOUR OF A FAMILY OF SIX, all of whom are inmates of St. Hilary's Hospital at Morwell, suffering from severe burns. The car in which the family was racing through the flames at Jeeralang overturned on a bend in the road when the driver was blinded by smoke. The six occupants were thrown into burning scrub and were taken to hospital by the driver of a truck who was following them. Shown above are Mr. William Bennett and Bill (left), aged seven years, Daphne (aged 12 years), and Jim (three years).
FIFTEEN PEOPLE WERE BURNED TO DEATH when fire destroyed Fitzpatrick's mill at Matlock. The bodies of 10 of those who lost their lives were found behind the sawdust heap in the background.

Friday, January 13 - Seven houses were destroyed at North Lorne and there were fires at Moggs Creek and between Aireys Inlet and Anglesea.
https://torquayhistory.com/torquay-fires/

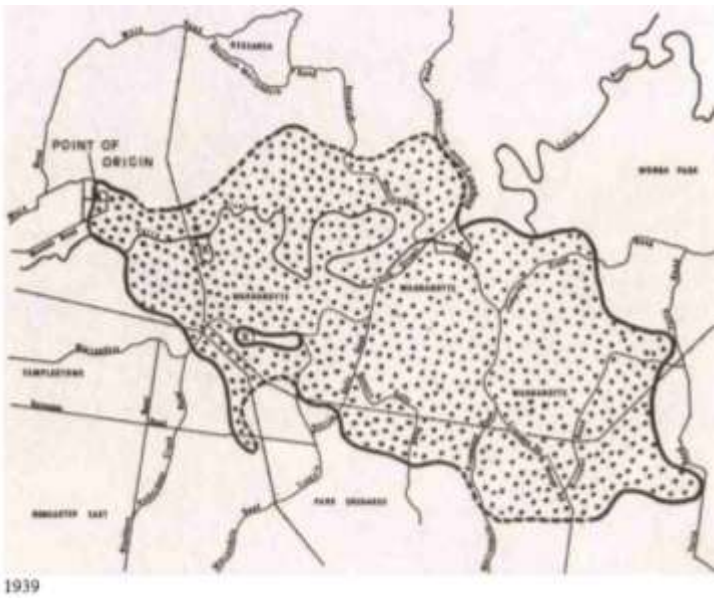
Surf Coast Shire Lorne was threatened and sixteen houses were destroyed. Hundreds of people sought the safety of the beach. Also fires between Aireys Inlet and Anglesea and extensive grass fire at Moggs Creek.

Penshurst report Friday 13 January will go down in the records as one of the blackest days in the history of Victoria as a large portion of the State was burnt by disastrous fire. There had been a relative period of calm in the Penshurst area since the last major fire in 1923. At 10.00 am the temperature was 98 Fahrenheit (37° Celsius), at 11.00 am it was 103° (40° Celsius) and still rising when the call came for volunteers for a fire that was raging at Buckleys Swamp. The local brigade truck headed for Banemore but was diverted to another fire on Mr O. Mirtschin's property where the sheds were already alight and the flames had reached the back of the house. The men saved the house but everything else was burnt.
The fire then threatened Penshurst. The local volunteers who had been out near Gazette now had their own homes threatened and in isolated groups had a nightmare journey back toward Penshurst through the gale that was blowing smoke, ash and burning cinders. Visibility was reduced to only a few feet.
The fire was eventually stopped by the splendid firebreaks on Cheviot Hills - despite jumping across the break in several places. Meanwhile the main fire had escaped from Buckley Swamp and swept over Banemore destroying the homestead and woolshed.
Penshurst was enveloped in clouds of smoke for the greater part of the day. The maximum temperature of 115o Fahrenheit (45° Celsius) was a record for the town. A strong wind drove the fire southward and in the early evening it was reported to be approaching Hawkesdale.

The fire had originated at the Murroa homestead from the kitchen's ash heap, racing into Buckley Swamp. In that area the damage was dreadful, home after home was destroyed, sheep and cattle were burnt in their hundreds and the area was left a mass of ruins. The Buckley Swamp hall and school were destroyed.

A few months later, eight local farmers who were burnt out by the fire sued Mrs Annie Robertson, owner of Murroa for damages of £10,000. The case was based on Mrs Robertson's negligence in that her agents or servants put hot coals on the ash heap thus starting the fire. Mrs. Robertson claimed in her defence that the fire had started somewhere else. The case was lost.

Warrandyte attack
http://warrandyteheritage.yolasite.com/natural-disasters.php



1939

This report about Warrandyte refers to Fri 13 Jan.

The Age : Jan 14, 1939 Browse this newspaper » Browse all newspapers »

Fifty Homes Destroyed

From Our Special Reporter

A grass fire which originated at Hurst-bridge was picked up by the fiery northerly wind yesterday morning, swept through Eltham, and descended in a wave of flame and smoke on Warrandyte. In a few minutes the outskirts of the town were destroyed. The main business block escaped, but more than fifty dwellings were destroyed. South Warrandyte, two miles away, was overlooked, and the fire then advanced on Croydon, where it later burnt itself out.

The fire came suddenly, and the four victims father and four other children, ran for their lives. caught by the flames and perished.

The father later found their bodies. A party fire until to-morrow.

FIFTEEN MEN MISSING

Wind Reports for Erica

Anxiety at Kongwak

Some of the fires after Black Friday

The Argus Tues 14 Feb 1939
FORESTS ABLAZE IN MANY AREAS
HEAT AND WIND REVIVE OUTBREAKS
TOWNSHIPS THREATENED
The bush fire terror was reawakened in Victoria yesterday, when soaring temperatures and a fierce northerly wind revived fires which had been smouldering for more than a month, and in other areas fanned new fires which roared through tinder-dry forests.
Last night fires were burning over hundreds of square miles of scrub and forest country, and several homes were destroyed. The flames were roaring through the Black Forest, Otways, Tallarook Ranges, and Gippsland areas. Outbreaks were reported near Marysville and the Acheron Way, and the township of Beech Forest was in danger.
The places where fires were raging were Ashbourne and Bullengarook (Black Forest), Beech Forest, Hordernvale, and Wyelangta (Otways), Tallarook and Strath Creek (Tallarook Ranges), Athlone, Poowong North, and Drouin (Gippsland), and the Marysville and Acheron Way areas.
Timber mills which escaped the devastating blazes of last month were threatened.

Alarm bells rang at Woodend and Broadford to call out volunteers to cope with fierce outbreaks in two areas. An urgent call for volunteers was made at Gisborne last night in an attempt to save homes at Bullengarook, where a fierce blaze is out of control in the mountains and is within a mile of the town.

If the north wind continues to-day it is thought that the post-office and 40 scattered homes in the district probably will be destroyed.
The township of Ashbourne, six miles from Woodend, was almost destroyed yesterday in a fierce fire which raged through the Black Forest to within a few feet of Anderson's sawmill, near East Trentham. Timber, tracks, and equipment valued at £600 were destroyed. Farmers suffered heavy losses of grass land and fencing. Several homes in the area narrowly escaped destruction.
Ashbourne Danger
Blazing fiercely on a six-mile front, fires swept round the township of Ashbourne, near Woodend, yesterday, threatening a number of homes, and burning to within a few feet of the buildings of Anderson's mill, East Trentham. The fires, which have been burning for about a fortnight, broke out afresh when fanned by the strong northerly wind. For a time it appeared that the fire would be swept down upon the Ashbourne Post office, and calls for help were sent to Woodend and Macedon,
Heavy timber in the Black Forest became an inferno, but toward evening the wind dropped, and residents who had planned to leave their homes decided to stay for the night. Forest officers, however, warned them that north winds as forecast by the Weather Bureau to-day would make the position extremely dangerous in this area.
The fire burnt round the post-office and threatened the homes of Messrs. Singe, Sharp and Newall, and Whitaker. The position became so desperate later in the afternoon that Mr. G. R. Nicholas, of Macedon, sent a large motor-truck and a number of men to take the furniture from the home of Mr. J. Birrane, which was in the path of the fire.
At Anderson's mill the men saved the buildings after a desperate fight, but about five miles of timber tracks, including eight bridges, were destroyed. The damage is estimated at £600.
In the hope of checking the fire before it springs up afresh to-day, hundreds of gallons of water were carted out to Ashbourne last night in motor-trucks and in trailers towed by motor-cars. More than 100 men spent most of the night spraying burning logs and trees.

40 HOMES IN DANGER
Ranges Ablaze
As a fierce blaze was out of control in the thickly timbered ranges a mile from the township of Bullengarook an urgent appeal for volunteers was made at Gisborne last night. With continued north winds to-day it is feared that 40 homes will be destroyed. About 50 fire-fighters were forced back three miles yesterday by the fire as it moved toward Bullengarook. Men were powerless against the fierce onrush of flame and smoke. Arrangements were being made last night for residents to evacuate their homes, and with a lull in the wind, every available man was working desperately to burn breaks and clear the scrub near dwellings. If there is a northerly to-day, however, there will be practically no hope of confining the blaze to safer areas.

Tallarooks Aflame
The Tallarook Ranges, east of Broadford, were reported to be ablaze yesterday afternoon. The fire, fanned by a hot breeze, swept 15 miles through rugged mountain country and densely covered slopes of bracken at a speed of more than 10 miles an hour. Whirlwinds carried sparks for miles, causing new outbreaks in many areas.
The fire threatened valuable station properties and came to within a short distance of the townships of Tyaak and Strath Creek. On the Broadford side of the ranges the home of Mr. A. Smith and several huts were destroyed. The fire burned along a heavily timbered mountain ridge to Strath Creek, where it came out into open country.
More than 100 volunteers from Broadford, Yea, Strath Creek, Trawool, and Seymour were then able to get it under control. Residents of Strath Creek were standing by late last night with the fire only two miles from the township. The danger is expected to be particularly great to-day in the Kerriesdale area. Last night the fire was a mile from Tyaak. If the wind freshens seven houses in the area will be in danger.
Fire raged through heavily timbered ranges and bracken-covered slopes. Whirlwinds carried sparks from the main fires and started new outbreaks as far as six miles away. The forecast for to-day is for continued northerly winds inland, and the Weather Bureau issued bush fire warnings again. In the south, particularly near the coast, cooler southerly and south-easterly winds are likely, but there is no prospect of rain.

Near Marysville Sixty volunteers fought yesterday to check two fires near Marysville.
The town was in no danger last night from a fire in the Cumberland Valley, 10 miles from Marysville. Twenty men kept a strict patrol on the fire front. Another blaze, eight miles from the town and beyond

Barton's mill, was kept in check by 50 men. A fire was reported last night in the devastated area near the Acheron Way, where a mountain side behind Cement Creek was in flames.

Beech Forest Danger
Sawmills are in danger and the township of Beech Forest is threatened by a huge fire which, after smouldering in the Otway Ranges for more than a month, was whipped into life yesterday by the rising wind. The most serious of many outbreaks in the district is travelling in a south-easterly direction from the Red Water River, at Hordern Vale. It is almost certain to destroy the Forests Commission's pine plantation which is in the track of the flames. From the Beech Forest township great billows of smoke are spreading over the pine-covered ridges, and a red glow through the smoky haze is causing anxiety among residents. The town was reported last night to be in great danger. At Weeaproinah the fire burned fiercely over its old course and swept through timbered country owned by Marchbanks mill, which was burnt some weeks ago.
Strenuous efforts by fire-fighters saved the homes of Mrs. C. Leslie and Messrs. J. Knox, A. Sprague, R. O'Brien, and E. Walton.
At Banool another fierce fire is raging in timbered country, burning through sections of the State forest which had not been touched by earlier fires.
Fires are burning also at Wyelangta and Hordernvale. It was stated last night that Borsch and Homer's sawmill, near Hordernvale, which narrowly escaped destruction in the last fires, was again in danger. Men were standing by the mill in an attempt to keep the flames in check.

Losses of Timber
Bush fires which had been smouldering for four days near Drouin were revived on the hottest day since "Black Friday." Urgent calls were made from Athlone, where the fire was raging on a five-mile front.

North Poowong was threatened also, and a large quantity of mining timber was burnt near Drouin, where the fire brigade worked desperately all yesterday afternoon burning breaks to protect property. The position will be serious if north winds are experienced to-day.

The township of Ensay North was threatened late yesterday by a fierce fire raging on a wide front, which bogan in dense forest country between Reedy Flat and Watts' Creek. An unoccupied house was burnt near Reedy Creek.

A small fire which broke out at Pigtail Hill, on the Ringwood road, near Warrandyte, destroyed a house owned by Miss Brand.

Other bushfire relevant events

Royal Commissioner aggressively sought the truth despite, upsetting the government along the way.

The Argus Fri 10 Feb 1939
'HANDPICKED' WITNESSES
Judge Protests
MARYSVILLE Thursday
Judge Stretton the Royal Commissioner inquiring into the bush fires caused a stir today when he protested strongly to the representative of the Forests Commission against what he termed hand-picked witnesses. On the way to Marvsville this morning Judge Stretton travelled over the Blacks Spur which has been transformed from a famous beauty spot into a desolate fire scarred landscape.
John Leslie Powell Gill forestry foreman was being examined by Mr A O Lawrence for the Forests Commission. Gill said that he had seen a fire get away into the bush from an open sawdust heap at a mill.
Judge Stretton- The other day we had a witness of much longer experience in the commission's service who said that he had never seen a fire get awav from a sawdust heap. This evidence today, confirms what I thought at the time. It is not much good bringing in these hand picked witnesses. The way this is being conducted in absurd with everyone patting the other on the back. We are no way near the truth.
Mr Lawrence -Your Honour we are definitely offering you the most reliable men we can offer I am prepared to call any officer your Honour would like to hear

Judge Stretton-I think it is a solemn farce to go on day after day like this. Some witnesses have departed from previous statements All sorts of things are happening. I am not however referring particularly to the present witness.

The Argus Fri 10 Feb 1939
MINISTER'S VIEW
The Minister for Lands and Forests (Mr. Lind) may volunteer to give evidence before the Royal Commission. Although Ministers of the Crown have been subpoenaed by interested parties to give evidence before other commissions and boards of inquiry, there is no known precedent for a Minister volunteering to give evidence at an inquiry ordered by the Ministry of which he was a member.
Mr. Lind was opposed to the appointment of the Royal Commission, and declared that an inquiry was not needed to determine the causes of the fires. He defended graziers and settlers against allegations that they were responsible for lighting some of the fires. If he appears before the commission as a witness, he probably will give evidence in defence of graziers and settlers.

Argus Wed 15 Feb 1939
IMPUTATION DENIED
ALEXANDRA Tuesday
Refuting imputations that the Forests Commission had ' hand picked' its witnesses, Mr A O Lawrence invited Judge Stretton, Royal Commissioner on Bush Fires today to reconsider his attitude of last week. Judge Stretton declined to reconsider his attitude and also said that he would not submit to an ' Interrogatory by the Forests Commission.
Immediately the Royal Commission resumed this morning Mr Lawrence said -
The Forests Commission has instructed me to inform your Honour that it is gravely exercised by your remarks at Marysville and Healesville on Thursday and Friday concerning hand picked witnesses and the alleged collusion of certain bodies and allegations which conveyed the inferences that the Forests Commission was one of these bodies. My commission has instructed me to refute in the clearest terms both imputations. Witnesses have been presented before you having regard to their official responsibility and knowledge of districts and with no other intent. We are prepared to submit every officer who was concerned directly or indirectly in any of these fires and who is able to assist your Honour in any way. As to the allegation of collusion the Forests Commission is at a total loss to understand how any such thought could have been formed.
Collusion Denied
Judge Stretton-You yourself Mr Lawrence have coined that rather sinister word collusion.
Mr Lawrence-The Forests Commission has reviewed the evidence given so far and respectfully submits that there is not a scintilla of evidence to support the imputation. The commission cannot believe that evidence which happens to be favourable to it could merely by reason of that fact be regarded as collusion. My commission desires me to affirm to you that in no way directly or indirectly is it associated with any other
body or person for mutual support or for any other purpose concerning this inquiry. It would be grateful if you would accept its public assurance on this matter and respectfully invites you to reconsider your attitude. Failing your desire to do so would your Honour be pleased to indicate in precise terms the evidence of conduct on which those remarks were based.
Judge Stretton -I shall note your statement Mr Lawrence
Later Judge Stretton said that Mr Lawrence's statement contained an interrogatory. I am not to be interrogated by any party appearing before this Royal Commission. Judge Stretton added ' It is a most unusual thing to do and I will not submit to it. You wish me to particularise regarding the evidence on which I made my statement last week. That of course I will not do. I would suggest to anybody experienced in listening to evidence and weighing it that the evidence on which I made the statement is quite apparent.

Both the Royal Commission and the Coroner's Inquest were conducted while the fires were raging around their country locations.

Argus Wed 15 Feb 1939
ORIGIN OF FIRES SUSPICIONS OF CORONER

Although he agreed with forestry officers that fires which had caused great loss of life over a wide section of Victoria last month had been deliberately lit, the coroner (Mr Tingate, P.M.) said that it was impossible for him to say with any certainty how they originated.
Mr Tingate conducted several inquests yesterday. He recorded on open finding after an inquest into the deaths of eight persons who perished in the Toolangi-Acheron Way fires on January 8 and January 10.
The victims were -
CHARLES ISAAC DEMBY, aged 55 years forest overseer of Toolangi.
JOHN HARTLEY BARLING, aged 31 years forester, of Walhalla street,
Pascoe Vale South
KENNETH KERSLAKE, aged 35 years, timber splitter of Narbethong.
EILEEN KERSLAKE, his wife.
RUTH KERSLAKE, aged 5 years, their daughter.
FRANK EDWARDS, aged 23 years, timber worker, of Narbethong.
CHRISTOPHER SOLDARIS, Greek, mill hand, of Narbethong.
PETER IGOSHUS, Greek, mill hand of Narbethong.

Senior-detective C. E. North of Melbourne said that fires at Kinglake had spread to Toolangi, Healesville, Narbethong, Taggerty, the Acheron Way, Rubicon, Wood's Point, and Matlock, causing many deaths over a wide area.
Reginald Edward Torbett, chief forest officer, of Middle Brighton, said that he had inspected the Mount Slide-Christmas Hills-Kinglake area on December 27, and had seen no trace of fires. On January 1 a fire came from the direction of Kinglake, and burnt toward Toolangi, mainly on private property.
Sub-inspector F. Kierce (assisting the coroner) -Did you later speak to Demby regarding the origin of the fire?--Yes. He said that in his opinion it had been deliberately lit on private property near Kinglake. The same fire caused the deaths of Demby and Barling.
Mr. W. H. Tredinnick (for the Timber Workers' Union and people who died in the Matlock and Rubicon fires). -And you believe that the fire was deliberately lit? --Yes I do.
It could have been lit to clear thick scrub near No. 3 Mountain Creek to make travelling easier, or it may have been done to promote new green growth?--That is so.
It would have minimised also the fire risk to properties in the neighbourhood after it had burned through?--Yes
Saw Fire Near Farm
Mr. Leo Gamble, farmer, of Kinglake said that he saw a fire burning at about 11 a.m. on January 1. It was about two miles from his farm and travelling toward Kinglake. The fire appeared to be near McMahon's property.
Mr. C. Stafford (for the Forests Commission).--It was a day of light wind, and generally good for burning off? It would have been reasonably safe?--I could not answer that.
James Peter McMahon, farmer, of Kinglake East, said that he was employed on his father's farm. He had burnt off scrub in the north-east corner of the property about October 22. It had burnt back about 10 to 30 yards over a distance of half a mile.
Sub-inspector Kierce.--Is it not a fact that it actually burnt right through to No. 3 Creek?--I could not say. I did not go down to the creek to see. There was another fire on November 20, but it had no connection with the first one. I should say that both fires were out when the big fire came on New Year's Day.
Mr. Tredinnick.--When did you first see that fire?--At 9 a.m. on January 1. It was barely large enough to attract attention. There was not much wind.
Senior-detective North said that he had followed the fire back from Healesville to No. 3 Creek. He traced an old burn from McMahon's property to No. 2 Creek, and also a second fire which joined it and led to No. 3 Creek.
Mr. Tredinnick.--In your opinion those fires at Kinglake led right to Matlock, causing all those deaths?--Yes.
Do you agree that the fires were deliberately lit?--No From my inquiries I cannot see how anyone could have benefited from setting fire to the scrub at Kinglake.
Detective North said that he had found an old gum tree near the creek burnt up the middle. He believed it had been lit by an earlier fire, and had given rise to the second fire.

Death at Strathewen

A fire which came from Kinglake resulted in the death of Albert Dudley Pentreath, journalist, of Strathewen, on January 13. After the inquest Mr Tingate recorded an open finding, saying that he could not determine with certainty how the fire originated.
Frederick Henry Pearce, linesman, of Black Rock, said that he saw Pentreath enter his house at Strathewen when it was blazing fiercely. He dashed in and grabbed Pentreath by the arm, calling to him to come out. Pentreath did not say a word but, struck him on the chin. He was stunned, and did not see Pentreath alive again. His body was found later in the ruins of his home. Earlier in the day Pentreath had been attempting to retrieve property from his home.
First-constable David Brough, of Whittlesea, said that the fire at Strathewen came from the direction of Kinglake.

Warrandyte Fire
Mr Tingate said that although the evidence did not enable him to determine the origin of the fire which swept across to Warrandyte on January 13 and destroyed many homes and killed one man, the circumstances were very suspicious.
He recorded an open finding into the death of Frederick Topping, aged about 75 years, pensioner, of Ringwood road Warrandyte, who perished when his home was destroyed in the fires.
First constable Herbert Birthisel, of Warrandyte, said that the fire came from the direction of Eltham, driven by a strong south-west wind on a frontage of two miles.
Mr. Richard Jones, labourer, of Eltham, said that on January 12 Mr. Clarence Hurst, poultry farmer, told him that he intended to burn on the following day a heap of about 170 dead fowls which had been killed by the hot weather. At 10.15 a.m. on the following day he could smell feathers burning. About an hour later he saw black smoke in the direction of Mr. Hurst's property. He ran up and saw a fire burning the end of Hurst's fowl sheds near New street. The fire later spread across the road.
Clarence Aldous Hurst, poultry farmer, of New Street, Eltham South, said that he had been ordered by the health officer to burn the fowls. After pouring on five or six gallons of sump oil he set fire to the heap at 6.30 a.m. on January 13, and watched it burn. Later he extinguished the fire with about six buckets of water. He was sure that it was completely extinguished before he left the house. He was of the opinion that the fire had started in a brush fence outside the boundary of his own property.

Bushfire Related Events

Royal Commission report was delivered in May 1939.

16 May, 1939
REPORT OF THE ROYAL COMMISSION TO INQUIRE INTO
The Causes of and Measures Taken to Prevent the Bush Fires of January, 1939, and to Protect Life and Property
AND
The Measures to be Taken to Prevent Bush Fires in Victoria and to Protect Life and Property in the Event of Future Bush Fires

Commissioner Stretton found Victoria was unprepared for this disaster. His recommendations are guided by

- his belief that it is "foolishness" by the authorities to await him discover the "facile wisdom" of this finding **after** the event
- the "one fundamental policy of fire prevention and of protection against fire" that applies on public land and private property – "each person has "the paramount duty to safeguard the property and rights of others".
- "According to the forestry authorities of the world, the first consideration of the forester is or ought to be, the prevention and suppression of fire. Prevention in the absolute degree being impossible, quick suppression is the imperative first step"
- Search for the truth. "The truth was hard to find. Accordingly, your Commissioner sometimes sought it (as he was entitled to do) in places other than the witness box. Much of the evidence was coloured by self interest. Much of it was quite false. Little of it was wholly truthful.

Causes of failure to prevent outbreak and spread

"It must be stated as an objective fact that the Forests Commission has failed in its policy of fire prevention and suppression".

Prevent outbreak

- Anarchic use of fire by forest fringe settlers and forest users – esp, settlers, miners and graziers. The percentage of fires caused by them far exceeds that of any other class. Their firing is generally deliberate. All other firing is, generally, due to carelessness.
- Weak laws to prevent above
- Negligible policing of above due to few staff and non co-operation by locals

Prevent Spread

- No works were done to prevent spread

"Practically no measures of prevention were taken by the Forests Commission or any other Department (MMBW, Lands) in the vast areas of protected forests".

- MMBW's zero prevention policy encouraged spread of fire and caused damage to property.
- Lands Department had no fire policy interest at all.
- FCV had weak prevention policy and under-resourced suppression policy - the right intentions but severely hamstrung by lack of and insecurity of government funding.

Measures needed to prevent outbreak and spread

- Implement prevention AND suppression together

- Departments to have autonomous policies of prevention and suppression
- Bushfire brigades and Country fire brigades to empowered to prevent and suppress, to work together, to extend operational boundaries.
- Establish Statewide fire authority and local fire authorities, empowered to oversee prevention and suppression and to clear land of hazards and reclaim costs.

- Prevent spread by prevention

Departments must hazard-reduce margins, even up to 1/2 mile wide if required, or have land cleared by state authority and reimburse costs.

- Discourage spread by suing the negligent
- Compensation for damage by spread of fire – but only if a fire on a hazardous block spread to a "clean" property

Specifics:

Prevent fire outbreaks

- Clarify / strengthen fire laws and educate public
- Facilitate Prosecutions – eg, use the doctrine of recent possession, useful where eye witness is rare.
- Acute Danger Period: State Fire Authority be empowered to proclaim that such a period. During its currency, there should be a "black-out" in all zones and all milling operations should cease.
- Prohibited period by zones Impose a blackout of all fires under heavy penalty.
- Permitted period Burning off approval is required
- Promote autumn burning over spring burns – to reduce risk of escape

Prevent spread by suppression

- Empower brigades to enter upon private land in time of emergency and undertake preventive measures, eg, "burning off" or "burning back".
- Secure extra experienced fire fighters during Acute Danger Period: All mill employees who enrol as volunteers for fire duty TO report immediately to the district forest officer for prevention, protection, and suppression duties. They should be paid their ordinary wage by the Government while thus engaged and should enjoy the benefit of workers compensation. Being skilled bush men, pay them for fire duties.

Specific extra measures for FCV
- Prevent outbreaks: Greater control over graziers
- Prevent spread More control burns
  Compartmentalise forest to restrain fire spread
- Prevent damage Make mills secure or consider removing them from forest
- Suppression Rapid suppression to become a policy where prevention is difficult
- Adopt long term fire planning
- Secure Treasury funding independent of Minister

Post script:

1 Tainsh

After the 1939 fires, FCV policy underwent a complete overhaul. Any fire however small or remote, must be suppressed ASAP. This needed better access and detection and communications and modern suppression equipment. FCV believed the greatest danger to forests came from private property.

2 Adj. Prof. James McLennan

https://theconversation.com/70-years-before-black-saturday-the-birth-of-the-victorian-cfa-was-a-sad-tale-of-politics-as-usual-111080

"In the wake of Black Friday, Premier Albert Dunstan's Country Party government established a Royal Commission, chaired by Leonard Stretton, to investigate the bushfires. His report was tabled in state parliament on June 28, 1939 – less than six months after the fires – and it continues to earn praise as a model of comprehensiveness and clarity.

One of its recommendations was to establish an authority with overall responsibility for bushfire management in Victoria. It's widely believed that this recommendation led directly to the formation of CFA. In truth it did not – the CFA was not established until December 1944.

You might ask why it took so long to implement such a clear recommendation. The answer is a sad indictment of the Victorian politics of the day, which also has parallels with government reactions to today's environmental issues.

Stretton's report was attacked savagely in the Victorian Parliament. Deputy Premier and Minister for Forests Alfred Lind – whose department was criticised strongly in the report – led the charge. None of the report's recommendations were acted upon. The Labour opposition was incensed at the lack of action and moved a motion of no confidence in the government, which was defeated on party lines. And that, it seemed, was the end of the matter.

But it wasn't, because the environment itself intervened, ." courtesy of the summer of 1943-44 …

1939/40

Weather

BOM rainfall records for Melbourne: Sep Oct average rain, Nov double average, Dec 1/4, Jan average, Feb 1/4, Mar 1/3, April well above average

Hottest days in Melbourne **DAYS > 35^0C** **16**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
10.5	16	174

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1940)
44,400 ha (111,023 ac) of crown land burnt, 15,101 ac severe damage, 144 fires reported on crown land
Major fires Chiltern to Tallangatta, several large fires occurred in fire killed areas, due to ground littered with bark and branches.
38,800 ac patch burning

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
3-Jan	B dale	105				Ararat
4-Jan		105	17% at 9am	NW	4	Colquhoun to Lakes Entrance
5-Jan		100	20% at 9am	N	5	Nungurner 1000 ac, damage £1500, Wodonga grass fires
Jan-21	Wang					Myrtleford , thousands ac crops and grass
14-Feb	Melb	100	10			
15-Feb		100	16% at 9am	NNW	4	Bolga 150 sheep, Tallangatta 30 ml front, Myrtleford thousands ac, hundreds sheep, Whorouly 800 ac, 700 sheep
16-Feb		75				Tanjil Bren new house, 31 huts, 14 cars,
22-Feb						Yackandandah much damage
3-Mar						Lancefield 1000 ac, Heyfield
13-Mar		101	11	NNW	20mph / gusts 43 mph	Torquay, 1 dead , 90 houses, large area, £100,000 Mortlake, Dunkeld, Camperdown - 7 homesteads, 70,000 sheep, damage £200,000 Seville and Woori Yallock, 18 houses, Tanjil Bren sawmills
14-Mar	Yallourn	101				
30-Mar						Mt Evelyn, Euroa and Violet Town Glenmore,

Reported bushfire events

Western District bushfires (McArthur et al 1982)
Mar 30 heavy losses Bacchus Marsh

Surf Coast Report March 1940, fires in southern parts of the State, including Torquay where one life was lost. 86 houses and various buildings destroyed. Heavy loss of stock and grass.

The Argus, 14/3/1940
Half the Torquay township was burned out by a fire that started at Moriac. Fire-fighters, residents and men of the 2nd Cavalry Division fought the blaze. However the Torquay blaze killed one man, destroyed 57 houses, 2 stores, a bake house, the public hall and a Sunday School.

Great Ocean Road, before and after https://torquayhistory.com/torquay-fires/

1940/41
Weather
BOM rainfall records for Melbourne: Sep well above average rain, Oct 1/3, Nov 2/3, Dec average, Jan triple, Feb about half, Mar April average

Hottest days in Melbourne **DAYS > 35^0C** **9**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.7	9	80

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1941)
8,800 ha (22,027 ac) of crown land burnt, 7,000 ac severe damage, 143 fires reported on crown land
Major fires Scarsdale, Tanjil
49,500 ac patch burning

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
27 Dec	Kilmore	99	15	NNE	4	Pyalong 10,000 ac. 3 homesteads, 8 mile front bush and grass
						Yarrawonga, Lancefield, Mitcham, Doncaster, Hurstbridge
5 Jan		100	20% at 9am	N	5	Avoca, thousands ac bush and grass

Reported bushfire events

Barrier Miner Broken Hill Thursday 16 January 1941
BUSHFIRE NEAR DAYLESFORD
DAYLESFORD, Wednesday
More than 100 men fought a bush fire which broke out near the cemetery road, about two miles from Daylesford. Three houses were threatened, and at one time it was thought the fire would sweep through the Daylesford Cemetery. Flames reached within a few yards of Mr. W. Prentice's home. Furniture was stacked on the roadway when it seemed impossible to save the building, but the fighters diverted the fire. It jumped the roadway and burnt to within a few hundred yards of Mr. A. Kirby's haystacks and barn. Mr. Morley's home was also threatened.

1941/42
Weather

BOM rainfall records for Melbourne: Sep well above average rain, Oct Nov 2/3 average, Dec almost double average, Jan just below, Feb Mar well above, April around average

Hottest days in Melbourne **DAYS > 35^{0}C 16**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
4.7	16	134

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1942)
59,800 ha (149,500 ac) of crown land burnt, 17,580 ac severe damage, 222 fires reported on crown land
50,000 ac patch burning

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
4-Jan	Melb	101	15	N	17, gusts 42, SW change 3.30 pm	Bealiba, Ballarat, Daylesford, Willaura, Corryong
7-Jan	Lismore	97	11	N	7	Penshurst, 10,000ac, Bolac, Westmere, Tatyoon, Timboon,
24-Jan	Rowsley					Rowsley, 1 dead, thousands ac, 1 house
2-Mar	Melb	101	15	N		
3-Mar	Melb	102	13	N	mod, gusts to 40 mph	Hedley, 1 dead, Yarram 19 houses
4-Mar	Melb	104.8	18	N	mod, gusts to 40 mph	Foster, 1 dead, several houses, large areas Hamilton 3000ac, 100 sheep Kiewa, Cobden, Port Campbell, Otway Ranges

CFA web site
1942 3-4 March Hamilton, South Gippsland – Yarram, burning on a 60 mile front) Toll 1 person, more than 20 houses, 100 sheep, 2 farms

Reported bushfire events

Penshurst report: On the 8th January 1942 when a fire broke out between the Blackwood and Woodhouse Estates. The fire burnt through portions of both properties before sweeping through Messers P. Fry's and Colin Cameron's. The houses were saved by back burning. The Penshurst, Yulecart, Dundas and Tarrington bushfire brigades assisted by beaters from surrounding stations and from Barwidgee eventually checked the fire near the Caramut Road. Ten thousand acres of grass was burnt.

1942/43
Weather
BOM rainfall records for Melbourne: Sep Oct average rain, Nov well above average, Dec half average, Jan above, Feb just below, Mar 1/4, April average
Well below danger dryness score by end of December,

Hottest days in Melbourne **DAYS > 35^0C** **11**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
6.1	11	100

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1943)
19,950 ha (44,892 ac) of crown land burnt, 126 reported fires, 55% of known fires originate on private property
Major fires Heywood, Heytesbury
106,000 ac patch burning

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
12-Jan						Elmore 1000ac
27-Jan						St Arnaud 300ac, 70 sheds
29-31 Jan	B rat	101	12 21	N-NW	5	large area Ballarat, 900 sheep, many other areas: Portland, Bendigo, Cobden, Mornington Peninsula
17-Feb						Riddell

1943/44
Weather
BOM rainfall records for Melbourne: Sep average rain, Oct a third of average, Nov above, Dec ¼ average, Jan 1/3, Feb almost nil, Mar just below, April well above average

Hottest days in Melbourne **DAYS > 35^{0}C** **10**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
13.8	10	119

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
22/12/1943 to 15 Feb 44
Central and western districts, Morwell, Yallourn
Deaths: 51 (including 10 at Wangaratta on 22 December)
Livestock: 10,000
Buildings: more than 500 (as well as an open-cut mine)
Area burnt: more than 1 million hectares of grassland and 160,000 hectares of forest

CFA web site
1944 14 January -14 February Central & western districts, Morwell, Yallourn
Damage toll 32 people 700 houses Huge livestock losses

FCV (1944)
157,000 ha (390,000 ac) of crown land burnt, 286 reported fires. Of 230 known origin, 43 originated on private property
All districts
20,000 ac patch burning
Major forest fires > 1000 ha Cabbage Tree to Bemm 19,000 ha, Orbost 25,900, Cobbannah 24,300, Traralgon 40,400, Yarram 7,700, Boolarra 4,800, Binginwarri 4,700, Wooragee (Chiltern) 8,900, Glenlyon 1,200, Tylden 2,400
Major grass fires > 4000 ha Skipton, Lake Bolac, Dunkeld

Foley
Destruction widespread, 49 dead, > 500 houses, 250,000 sheep, damage £1M.
Foley records fire outbreaks from Dec 22 until April 8
FCV said blow up days were Dec 23, Jan 14, 21, Feb 7, 14
Fires were reported most days and from all parts of Victoria. The days of major losses are listed

Date	Station	Temp	RH	Wind	Beaufort scale	
22-Dec	Wang	94	19	NE	4	Wangaratta area - 10 dead as fire swept from Bowser to Tarrawingee, thousands ac grass £30,000 damage Nagambie, thousands ac
31-Dec						Lethbridge large area
2-Jan						Myrniong 20 houses, Stonehaven 1500ac, 400 sheep, Mt Eliza
8-Jan	Clunes	97	13	N	5	Clunes 21 houses and hospital, town hit by 5 mile front, Wangaratta 30,000ac, 16 - 20 houses, Everton hotel,
9-Jan	Wang	100	38	N SE	9 10	Everton 9 houses, Beechworth forest, Warrnambool, 1 house, Sutton Grange Tarrawingee, total damage since Dec 22 = £13,000
14-Jan	Melb	103	9	N	26mph / 54	19 dead, > 500 houses, damage £1M Major losses at: Beaumaris 100 Hamilton 50 Tarrington 26 Dunkeld 36 Gisborne 20 Skipton 40 Winchelsea Birregurra 40 Daylesford 20

						Woodend 11
21-Jan		104	13			Sale 4000 sheep
22-Jan		104	18	NN W	20 mph / 49	20 houses
Feb 14	Yallourn	98	10	NW	5	13 dead, total now 49 200 houses, Morwell 80 Traralgon 40
Mar 28-30						4 houses, 800 sheep

Reported bushfire events

Romsey website

22 December 1943

The first major fire of the 1943/44 season occurred near Wangaratta, killing ten people and burning hundreds of hectares of grassland.

14 January - 14 February 1944

Fires in the Western Districts destroyed over 500 houses and caused huge losses in the pastoral industry. Four or more grass fires near Hamilton, Dunkeld, Skipton and Lake Bolac burnt approximately 440,000 hectares in eight hours.

Records indicate that between fifteen and twenty people died as a result of these fires. The total area covered by grass fires that season was estimated to be in the order of 1 million hectares.

One of the many bushfires of 1944 occurred on the outskirts of Melbourne at bayside Beaumaris. It burnt an area of 280 ha, directly threatening 118 houses, of which 58 were destroyed and 8 were damaged.

Beaumaris fire 1944 14 January Strong Northerly, 38 to 40C, 7 – 9% RH. Fire spread 4.5km in 2 hrs. This included an ember jump of 1to 1.5km across the golf courses.

1945 map 2018 aerial

Source Barrow, G.J. (1945). A survey of houses affected in the Beaumaris fire, January 14, 1944. Journal of the Council for Scientific and Industrial Research [now CSIRO] 18, 27-37.

Western District bushfires (Source McArthur et al 1982)
Three large fires began at Skipton, Lake Bolac and Dunkeld. After the SW wind change, most of these fires joined and burnt out 440,000 ha, damage estimated then at £1.5M.
Lismore weather on 14 Jan [40C, 4% RH, Wind NW at Force 7] was slightly less severe than on 12 Feb.
15 people died within 25 km radius of Berrybank

Hepburn Shire Municipal Fire Plan January 1944 Bushfire
Glenlyon / Yandoit / Porcupine Ridge 27 houses destroyed

Penshurst report: The first fire of the 1944 season started on the Blackwood Estate on the last day of January. Quick action by the district brigades put it out after it had burnt 300 acres. Worse was to follow two weeks later when the most destructive fires to hit the district began on the 15th January at 9.10 am at Glencain, south Hamilton. With a howling wind swinging from north to west and back again the fire spread quickly. This fire was brought under control, but by now fires had broken out all around Hamilton. One fire swept through Tarrington destroying fifteen homes, the Post Office, Church Hall and a Store. Mrs. Ida Menzel died in this fire. The fire then burnt through Yatchaw, Mr. O. Gellert lost his house and the 1943 wool clip. William Matuschka lost a house and a new car. Wilfred Matuschka lost a house and Mrs. F. Mirtschin lost her Tabor dwelling.
Fire then swept through Croxton East and the Blackwood Estate where it was stopped near the homestead. Once again Penshurst was lucky to be spared as the fire passed only a mile to the north of the township, which was covered by a thick pall of smoke.
Thousands of sheep perished while fencing, woolsheds, power and telephone poles were destroyed. Penshurst was without power or telephone facilities for some time. The bushfire brigade members worked non stop all through Friday night and Saturday with water trucks running continuously.

Another fire that broke out in the scrub near Mount Abrupt raced into Dunkeld destroying approximately 35 homes and businesses. The fire took the life of Mrs Agnes Godfrey, who collapsed while saving her house and died six days later. This fire burnt passed Glenthompson toward Wickliffe. The Argus newspaper described the Hamilton fires as catastrophic. Over 100 houses were destroyed in the district fires. In the Dunkeld area alone 30,000 acres were burnt out with the loss of 20,000 sheep as well as thousands of cattle and other stock.
In the Western District as a whole some 300,000 acres were burnt that January weekend.
Records indicate that between fifteen and twenty people died as a result of these fires.
A notable feature of the1944 newspaper reports were the descriptions of the valiant efforts of womenfolk, who battled these fires at a time when many of the districts men were away serving in World War 2.

Surf Coast Shire January 1944 saw Geelong ringed by fires in Moriac, Modewarre, Bellbrae and Mount Duneed to the edge of Torquay

The Argus Jan 17 1944
In January, heavy property and stock loss resulted from a fire that swept the Mt Duneed district that had its origins near Waurn Ponds. Destroyed were 14 homesteads, 2 cottages, the State School and St. Wilfred's Church of England. One man died.

The West Australian Monday 17 January 1944
VICTORIAN BUSHFIRES NINETEEN PERSONS DEAD

Damage Set at £1,000,000
MELBOURNE, Jan 16
The death roll as a result of Friday's disastrous bushfires had increased tonight to 19. Of more than 70 persons known to have been ad mitted to hospitals about 25 were discharged today. In addition to Mrs Sarah Lugg (72), of Woodend, Frank White (35), contractor, of Birregurra, Keith Kneeshaw (33). farmer, of Wilgul, near Cressy, William Preston (69), of Mt Duneed, near Geelong, Mrs J. T. Moore (58) of Berrybank, in the Lismore district, Colin Max Dunne (41), grandson of Mrs Moore. whose deaths in bushfires were re ported yesterday, the following have died in fires or later in hospitals as a result of burns: Alan Doherty (47) and his son. Edward Doherty (17), of Lismore, who died in Camperdown Hospital on Saturday night; Harold Jolly (23), of Linton; Harolic Irons (32), single, of Beeac (died in Colac hospital on Saturday); Ernest Lindorff (26), single, of Werneth: Ronald Ellis (25), farmer, of Hannibadar; Terence O'Loughlln (71). married, of Rokewood; Mrs Ida Maria Menzel (60), of Carrington: John Mills (2), of Lismore; Miss Mary O'Shea (70), of Barfold (died in Kyneton Hospital yesterday); Norman Howell (27), of Werneth; an unidentified man at Derrinallum: Duncan Graham (80), of Glenlyon, in a Daylesford fire. As far as could be ascertained late tonight more than 700 houses were destroyed in addition to several hundreds of outbuildings. Losses also included three churches St Wilfred's C of E at Waurn Ponds and Catholic churches at Kyneton, State schools at Waurn Ponds and a post office at Tarrington. The value of the damage to property will not be known for several days but it is expected to exceed £1,000,000. The most serious damage was done in the Lismore and Cressy districts. A police report says that 150 houses and buildings in the Lismore district and 100 in the Cressy area have been destroyed or damaged. Other localities and the number of houses destroyed are Rokewood (60), Winchelsea and Birregurra (50), Dunkeld (35), Gisborne (26), Skip ton (40), Waurn Ponds (23). Hamilton (45), Beaumaris (64). Daylesford (20), Tarrington (16), Kyneton (11), Clyde (10), Spring Hill (6), Pascoe Vale (6), Oakleigh Clayton (6), Tylden (3), Penshurst (4) and Wattle Glen (3).

Greater Disaster than in 1939
The tremendous area laid waste, the number of homes wiped out and the staggering number of dead and dying stock made Friday's fires a disaster of greater magnitude than even the disastrous 1939 bushfires. Thousands of sheep, cattle and horses which survived the fires are wandering helplessly over thousands of acres of blackened land without fodder. The State Agricultural Department has arranged to send emergency supplies to prevent loss of stock through starvation. It is estimated that at least 250.000 sheep were destroyed in the Western District alone. Many thousands of others which were injured were shot. Fears are being expressed that the carcasses may foul the countryside. Alan Doherty and his son were trapped while driving in a car to a section of his property to burn a firebreak. With a change of wind flames raced toward the car, which caught fire and Doherty and his son were severely burnt. It was more than three hours before help arrived to take them to hospital. Mrs Doherty, who had remained in the house, saved it with a hose and buckets of water.

RAAF Men Assist
All available members of the RAAF throughout the State assisted the civil firefighters to check the disastrous bushfires, the Minister for Air (Mr Drakeford) said today. RAAF pilots had been instructed to report fires seen while on training flights and commanding officers had power to give ground assistance at their discretion. Expressing deep concern at the loss of lives, homes and valuable stock, crops and pastures in the bushfires, the Minister for War Organisation of Industry (Mr Dedman) said today that applications for permits to rebuild dwellings destroyed would be sympathetically and expeditiously handled by his department, each case being treated upon its merits.

Fallout from these bushfires
Adj. Prof James McLennan
https://theconversation.com/70-years-before-black-saturday-the-birth-of-the-victorian-cfa-was-a-sad-tale-of-politics-as-usual-111080

"The summer of 1943-44 followed a severe drought in Victoria. The fire season began with a grass fire on December 23, 1943, in which ten members of the Wangaratta volunteer fire brigade died. In January 1944, raging grass fires claimed more than 20 lives and destroyed many homes across several regions of Victoria. In

February, a fire near Morwell in Gippsland spread to the Yallourn open-cut coalmine; the nearby power station was threatened and there were blackouts across the state.

All told, there were 51 bushfire deaths that fateful summer, leading to public outcry over the lack of action just a few years before. Dunstan and Lind decided there was no alternative but to ask Stretton to chair a second Royal Commission, this one inquiring into the circumstances of the Yallourn fire. The resulting report made several pointed references to the previous, ignored, Royal Commission findings.
Times had changed, and World War 2 was at its peak. War-related manpower needs meant that there were fewer volunteer firefighters available, and power outages were seen as interfering with war-related industrial output. The government came under intense pressure to mitigate future bushfire danger by establishing an agency with legislated statewide responsibility for fire management.

After protracted negotiations with competing interest groups – notably the Country Fire Brigades Board and the Bush Fire Brigades Association – Stretton's recommendation was finally realised when a bill to establish the CFA was passed on December 6, 1944. The board of the new authority met for the first time on January 3, 1945."

1944/45
Weather
BOM rainfall records for Melbourne: Sep 2/3 average rain, Oct just below, Nov half average, Dec Jan above average, Feb about 2/3, Mar April 1/3 average

Hottest days in Melbourne **DAYS > 35^{0}C** **5**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
6.5	5	46

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1945)
13,500 ha (33,700 ac) of crown land burnt, 150 fires reported on crown land
Major fire in Wombat forest
87,400 ac patch burning

Foley

Date	Station	Temp	RH	Wind	Beaufort scale	
16-Dec						Ballarat 10,000 ac
29-Dec	Geelong	98	38	W	5	Anglesea 1,000ac,

Reported bushfire events

Other bushfire relevant events

Country Fire Authority formed
In 1944, the Country Fire Authority was established by Act of Parliament. It is a recommendation of Stretton's Royal Commission. CFA was now to be responsible for protection from fire for all country areas except for crown land. Responsibility for some 768 Bushfire Brigades with 35,000 volunteer members and £100,000 of equipment, was transferred from oversight of Forests Commission to CFA, and renamed as rural brigades. It already controlled many urban brigades. (Tainsh, 1949)

Observation
For the next four decades, FCV is responsible for 7M ha of crown land and it is paranoid about bushfire damaging its valuable timber.
CFA and its volunteers take charge of fire protection on private property.
But the farmers remained unconcerned if their fires run into the bush – it cleans it up and makes green grass pickings for their stock.

We can recall that the 1939 fire season started off like any other – smoky skies because there were no weather forecasts and people lit up what they wanted to.

We recall that Stretton identified core causes of 1939 catastrophe as follows:
1 Fires are lit during summer. No rules … well there are, but nobody obeys them and neighbours say nothing.
2 Tolerance of burn offs done at any time and burn offs not confined and not extinguished.
A summer day can see hundreds of fires already lit. Nobody has put them out. When the bad weather comes, multiple fires flare up in strong wind and keep running.
When fires threaten a settlement, they fight fiercely to defend their houses
All hands are on deck to save houses. Community self-defence. The people in the know see the fire coming and burn around their houses to clear the fuel. Some of these fires get away. All fires keep going and getting bigger. They stop when the wind stops or rain comes.
3 No one is designated to stop the perimeter spread on private property
4 Running inferno flames are unstoppable

Stretton addressed #1 with total prohibition periods and #2 and #3 with a new state-wide body, and finally, the CFA, launched in 1945.
#4 was not addressed then and remains unaddressed, even now (2021).

Chapter 5 Government involvement becomes state-wide after 1945

1945/46

Weather

BOM rainfall records for Melbourne: Sep Oct half average rain, Nov average, Dec less than half, Jan above average, Feb triple, Mar April average

Hottest days in Melbourne **DAYS > 35^{0}C 11**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.6	11	97

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1946)
33,360 ha (83,439 ac) of crown land burnt, 133 reported fires, 33% of known origin began on private property
47,900 ac patch burning

Reported bushfire events

1946/47

Weather

BOM rainfall records for Melbourne: Sep above average rain, Oct Nov 2/3 average, Dec above average, Jan 1/3, Feb about 2/3, Mar triple, April well average

Hottest days in Melbourne **DAYS > 35^{0}C 12**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
8.0	12	119

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1947)
20,000 ha (50,363 ac) of crown land burnt, 103 fires reported on crown land
Major fires at Anglesea 12,000 ha, Wyperfield
46,490 ac patch burning

Reported bushfire events

Surf Coast Shire January 1947, wide spread fires at Anglesea. Fire leapt the Anglesea River and threatened to destroy the township. The fire raced through the centre of town and destroyed two homes, several buildings and a number of boats. Anglesea Fire Brigade building was set on fire three times. The main street was

'strewn with fallen power and telephone lines'. A good water supply was critical to saving the town.

Other bushfire relevant events

Argus Mon Feb 3 1947
ACUTE BUSHFIRE RISK TODAY
The Country Fire Authority has again issued its ban on the lighting of any fire in the open and the use of any gas producer within the State.
Disobedience carries a penalty of a £200 fine, or two years' imprisonment, or both.

Acute bushfire risk is the fore-runner of Total Fire Ban Days

1947/48
Weather
BOM rainfall records for Melbourne: Sep average rain, Oct double, Nov average, Dec well above average, Jan about 2/3, Feb average, Mar almost nil, April well above average

Hottest days in Melbourne **DAYS > 35^{0}C** **10**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
7.2	10	95

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1948)
28,300 ha (70,700 ac) of crown land burnt, 171 fires reported on crown land
56,380 ac patch burning
Major fires at Gellibrand, Heywood, Toolangi, Warburton

Reported bushfire events

1948/49
Weather
BOM rainfall records for Melbourne: Sep just below average rain, Oct well above, Nov to Jan 2/3 average, Feb above, Mar x 2.5, April half average

Hottest days in Melbourne **DAYS > 35^{0}C** **10**

Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.5	10	88

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1949)
10,000 ha (25,058 ac) of crown land burnt, 148 fires reported on crown land
46,000 ac patch burning

Major forest fires > 1000 ha Upper Murray, Upper Ovens, Briagalong

Reported bushfire events

1949/50
Weather
BOM rainfall records for Melbourne: Sep 2/3 average rain, Oct Nov double, Dec half, Jan a quarter, Feb double, Mar well above, April just below average

Hottest days in Melbourne **DAYS > 35^0C** **4**

Dryness Index	Days >35^0C	Seasonal Severity Level
8.8	4	41

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1950)
9,600 ha (24,126 ac) of crown land burnt, 124 fires reported on crown land
37,000 ac patch burning

Reported bushfire events

1950 / 51
Weather

Dryness Index	Days >35^0C	Seasonal Severity Level
7.7	18	177

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1950)
97,960 ha (244,921 ac) of crown land burnt, 274 fires reported on crown land
Half area burnt was major fires in Kennedy's Creek (112,000 ac), Western Div (139,000 ac), Howqua River, Wilson's Prom 36,450 ha
73,000 ac patch burning

Major forest fires > 1000 ha Kennedy Creek 45,300, Wilson's Prom 36,450

Major grass fires > 4000 ha Chiltern, Benalla
Estimated area burnt private property > 15,000 ha

Reported bushfire events

The Argus Thurs 18 Jan 1951
WATCH OUT TODAY FOR BUSH FIRES
Rising temperatures should heighten the bush fire' danger today, fire authorities said last night.
Several fires occurred yesterday:
Near Moormbool, 400 acres of grass and seven chains of fencing were burnt. Brigades from Costerfield, Heathcote, and Mitchelltown fought the blaze.
Naval ratings and brigades from surrounding districts fought a blaze which burnt 40 acres of scrub near Flinders Naval Depot,
A grass fire at Cobden had spread almost to the residential area before it was extinguished. A few hours later another grass fire broke out on the opposite side of the township, but was soon brought under control.
About 33 tons of grass hay, valued at £100, a hayshed, and farm implements were destroyed in a fire on the property of Mr. E. Mahon at Warrenheip.
A fire broke out on the property of Mr. H. R. Larcombe, of Moriac, in the Geelong district, and burned about, 15 acres of grass and stubble. It also entered the property of Mr. J. Murray and swept through nine acres of meadow hay.

The Argus Tues 30 Jan 1951
WIND FANS NEW FLARE-UP IN OTWAYS
ANOTHER day of acute bushfire danger threatens Victoria today.
Freshening winds which rose in the Otway Ranges late last night fanned the fires which had been raging there since Sunday, making them worse than ever.
A late report from country fire officials said the "Otway fires were getting out of control."
All were burning fiercely, and they seemed likely to go through the ranges to the sea.
Residents in front of the main fire burning east from Kennedy's Creek on an eight mile front, have been warned to leave their homes. Forestry Commission fire officials said that today would "most certainly be the gravest fire menace day this summer."
The Otway fires yesterday burnt between 20,000 and 30,000 acres. They left a trail of blackened, but uninhabited, forest.
A cool change, which reached the Otways about 5 p.m. yesterday, abated the fires temporarily. However, it reduced the temperature only slightly, and an hour and a half later the wind again rose higher.
The fire at Kennedy's Creek jumped a large break and surrounded the main waterline from the Western district. This hampered fighters trying to get water.

At least ten major bushfires and dozens of smaller grassfires broke out in Victoria yesterday. Most were under control last night. Property losses were remarkably small, and no stock was destroyed.
Still in danger
Apart from the outbreaks in the Otway Ranges the day's worst outbreak was a grass fire near Bulla. It burned about 400 acres of grass and at one stage threatened Mr. E. A. Underwood's Warlaby Park stud farm at Oaklands Junction.
Other fires reported were:
Belgrave: Intermittent grass and scrub fires from midnight yesterday kept the brigade and local firefighters busy. No property was damaged.
Briagalong: A small outbreak near Briagalong, in East Gippsland, between the Dargo and Mitchell Rivers. Under control.
Piggoreet, west of Ballarat: About 200 acres of grass and scrub were burnt on Mr. David Clarke's property. The fire broke out at midday, but was under control in less than three hours.
Cockatoo: A large fire, which threatened several houses, is still burning in a gully north of the township.
Poowong, in South-east Gippsland: Rural fire brigades suppressed several small fires, mostly in scrub country.

Selby, Tecoma, Upwey: Minor outbreaks on private property, and in the scrub.
Wood's Point: Small fire between the Goulburn River and Gaffney's Creek.

The Argus Thurs 1 Feb 1951
50,000 ALERT FOR FIRES TODAY
A PROSPECT of rising northerly winds today confronts Victoria with as serious a bushfire crisis as it has ever known. Fifty thousand fire-fighters are standing by throughout the State to deal with the emergency.
For the third time this week a state of "acute fire danger" has been proclaimed today. Mr. E. Torbet, chief fire officer of the Forests Commission, said that yesterday's fires were controlled largely because the northerly winds had dropped.
In the Western district and Gippsland yesterday local brigades fought scores of fires, and many of the smaller ones were quickly subdued.
Late last night new fires broke out as the wind freshened. Timboon township, which had been almost surrounded on Tuesday night, was reported safe yesterday, and local brigades were confident.
However, a large scrub fire that was smouldering between South and North Timboon could be blown for miles by a northerly. Mr C. B. Nicholls, fire control officer at Timboon, said. Further serious outbreaks near Naringal and Heytesbury, in the Otway Ranges, were averted by cloudy and almost windless conditions.
Cockatoo, in the Dandenong Ranges, was reported to be safe so long as a fire in a gully east of the town was not fanned by northerlies.
Poowong, in South Gippsland scene of serious fires earlier this week, was safe yesterday, though fires were still burning five miles from the town.
New fire-danger points reported yesterday and last night were: Tambo Crossing, Gippsland: Fire burning in densely timbered country, but under control.
Mt. Boiler: Fire burning through dense bush on the mountainside. It will become dangerous if northerly winds freshen.
Broadford: Sheep and fencing destroyed, but outbreak quelled.
George's River (near Lorne): , Hundreds of acres of scrubland burned near the Great Ocean Road. Fire still burning, but under control, last night.
Yuulong: 5.000 acres burned, but fire nearly out last night.
Port Campbell: Every available man from the township was out last night fighting a fire that threatened Forests Commission's pine forests. Valuable stands of timber will be lost ii the fire jumps the Gellibrand River.

The Argus Fri 2 Feb 1951
HERE'S HOW A TOWN WAS SAVED
By BILL PATEY
Wood's Point, Thursday
BUSHFIRES raging on the northern fringe of the township 'fizzled out' in towering columns of steam, when a cloudburst broke over the district at 4.15 p.m. today.
Fanned by 40-mile-an hour northerlies, one front of the fire swept to within a mile of the Al Consolidated goldmine. A six-mile stretch of Sapling Creek Gully, between the mine and Wood's Point, became a roaring inferno.
Tonight, the bush fire revived slightly, but the wind, now coming from the south-west, began sweeping the struggling flames to the north-east - into unmapped mountain country where they could do no harm.

Sydney Morning Herald Friday 2 February 1951
5,000 Victorians
Fight Bushfires
MELBOURNE, Thursday
5,000 fire fighters were battling late to-night against one of the biggest bushfires for many years in the Daylesford district, 80 miles north-west of Melbourne. Three townships - Daylesford, Sailor's Falls, and Eganstown are threatened by the blaze, which covers 10 square miles.
The police ordered residents of Sailor's Falls to evacuate their homes, which are in the path of the fire. So far one house has been destroyed.

Elsewhere the bushfire danger has lessened because of a cool change, but big forces of fire- fighters are standing by.

Adelaide Advertiser Friday 2 February 1951
Towns Menaced by Bushfires in Victoria
MELBOURNE. Feb. 1.
At Daylesford, 80 miles From Melbourne, tonight, 5.000 firefighters are fighting against Victoria's biggest bushfire since 1944. Three townships— Daylesford, Sailors Falls and Eganstown— are threatened by the fire and police have ordered residents of Sailors Falls to evacuate then homes. One house has been destroyed by fire which has jumped the Melbourne - Daylesford high way. Volunteers have come from distances up to 50 miles to help fight the fires which now cover an area of 10 square miles.
Thirteen people, mostly women and children, saved themselves from being burnt to death by taking shelter in a potato patch when the fire swept through Korweinguboora, near Daylesford, this afternoon.

Argus Friday 2 February 1951
Only one bad fire still burns
The cool change that relieved heat-stricken Victoria yesterday swept eastwards last night on a front that extended from Melbourne to Mildura.
In its wake only one serious bushfire still raged—one near Daylesford.
The weather is expected to be warm again at the weekend, when S.W. to S.E. breezes will have blown away the scattered thunder storms.
Today it will be fine in Melbourne, with mild to warm temperatures and cool southerly breezes.
Yesterday's change reached Melbourne 85 minutes after the temperature had reached a maxi-mum of 100.8 at 12.20 p.m.
The morning's gusty northerly, however, had given metropolitan brigades one of their busiest days of this summer, for they answered more than 60 calls, mostly to grass and rubbish fires.
The strong south-westerly wind which brought the change drove bay fishing boats to shelter and ended a week of record catches.

Mallee heat
For the third consecutive day, Waitchie, in the Mallee, was the hottest place in Victoria—with a maximum temperature of 108.
Dust storms that preceded the change made conditions un- pleasant in Bendigo, Swan Hill, and Ouyen.
Mr. C. A. Daw, chief officer of the Country Fire Authority, said last night that before the change the bush-fire situation had been "grim."

Cloudburst
The cool change made a spectacular "save" at Wood's Point, when bush fires raging north of the township "fizzled out" in towering columns of steam when a cloud burst at 4.15 p.m., and an inch of rain fell in less than 10 minutes.
All other serious fires and most minor ones were under control last night.
An airliner crew reported the Daylesford fire, which began yesterday morning on private property at Rocklyn.

Wed February 14 1951 Bushfire at Wilsons Prom

The Year the Prom Burned Keith Banks
www.lighthouses.org.au/lights/bulletin/0102/Bulletin%20Feb%2001.htm

Wednesday February 14 1951
Fred Banks and Freda Banks were my parents
My father was the Head keeper at the time that the lighthouse suffered its greatest loss when a bush fire that had been burning for three weeks in the 49,000 ha Wilsons Promontory National Park. When the fire swept down on the station and its occupants without warning. Destroying three houses a rocket

shed the wireless building with all its records Bendix radio's {a total of three} navigational flags telescopes {one six feet long on a tripod} plus hand held telescopes and binoculars maps etc complete disaster for the main communication station for Eastern Victoria and Tasmania in 1951 with a call sign of 3GL 3GR {Cliffy Island} 3GS {Deal Island} and 7DO {Swan Island} but let us go back.

My name is Keith Banks I had just returned to the Prom from the trawlers working out of Eden some three months before owing to my father being in ill health. Reg Hodges had just taken the 6am weather report sent it out and returned to his house at the end of his shift. The weather reported clear sky calm sea slight wind 3 knots cloudless sky visibility good a perfect day.

The Wilsons Promontory Light station is devastated after the 1951 Fire.
[Photograph: The Melbourne Argus]

At 6:10 am he banged on the door to say that the station was alight, the fire had travelled a mile and a half down Mt Boulder in ten minutes, you could not see 6ft in front of you for smoke.
At first there was some panic for the women and children, but we managed to get some sort of control at trying to save what we could with buckets of water and only tank water. The women were marvellous filling the buckets for the men but they couldn't keep up as the tanks were only gravity fed so the fire got right on top of everyone the smoke just choked us.
At the height of the fire we had three houses a kerosene shed with paints thinners oils etc a rocket shed with fog rockets going everywhere the wireless building lost all this in such a small area, coal used for the house fires burning and everyone crying and worried.
I am as sure I sit here that ever person on that station prayed and thought of taking the easy way out and jumping the 320ft into the sea rather than burn.
I have been in bush fires up here where I live over the years but never like that day at the Prom. When we knew it was hopeless my father gathered everyone between our house and the tower the only place that didn't burn, maybe because it's all granite. By this time you got a feeling that the worst was over and we started to work our way around to the machine shed as some one said that it hadn't been touched.
What happened gave us a heck of a shock. We knew that the station like Gabo Island had Naval personnel there during what we did not know was that when the war finished tossed pretty well everything except files etc over the edge, What we did not know that it also included live ammunition. So as we were heading for the machine shed live 303 bullets that must have been in the crevices started going off people were literary crawling with this pinging going on over head.
During the time we were in the machine shed my father suffered a heart attack only slight we later found out but terrible at the time because I knew he was not well.
At 8:25am it started to rain only for about 5 minutes but enough to dampen the ground and quell the fire I cannot explain it others have tried some say because of the heat I do not know but I will swear on the good book as others would also do that it was and is true.
At 8:40 the smoke had cleared and all was over.
At 8:50 the weather forecast was Clear Skies No Wind Good Visibility and a Cloudless Sky.

Details of the Damage to the Wilsons Promontory Lightstation After the 1951 Fire.
[Photograph: The Melbourne Argus]

The Argus newspaper had a plane fly over taking pictures one of which I have in my keeping, getting rather old and used now, and one the Argus sent us.
My father became very ill and retired soon after. He died in August 1951. My mother and I thought that the fire killed him but the doctor said that while the drama of the fire didn't help. The main reason was an enlarged heart caused by being gassed in the first war.
That was how the Prom burned in 1951.

Other bushfire relevant events

1951/52
Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
6.9	6	57

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
1 January 1952 – 1 March 1952
Central and southern districts, including Benalla area
Deaths: 10
Livestock: 7,500
Area burnt: 1.5 million acres (does this include crown land? – probably yes)

COAG
1952 February Several deaths 100 000 ha burnt in Benalla area

Esplin 2003 Inquiry
5 Feb 1952 Benalla area, several people dead, 100,000 ha

FCV (1952)
412,400 ha (1,031,000 ac) of crown land burnt, 282 fires reported on crown land
64,700 ac patch burning
One third of area burnt was major fires in Bemm River, Deddick River and Wentworth River, also Upper Murray (163,000 ac) – fires came from NSW.

Major forest fires > 1000 ha Cabbage Tree 29,650, Snowy R (west) 80,400, Cobberas 4,000+34,093, Wentworth Dargo 45,600, Nicholson R 3,000, Wonnangatta 1,175 ha,

Major grass fires > 4000 ha Bacchus Marsh 40,000 ac, Toolern Vale 1 death, 50,0000 ac, Benalla 29 houses
Add in media reports, total > 150,000 ha

Reported bushfire events

Media say 12 deaths,
>100 homes lost Barnawatha = 2, surrounds = scores (say >50), Feb 6 > 20, Feb 14 Benalla > 40
Barnawatha area burnt 40,000 ha
Benalla area burnt 64,000 ha

The Sydney Morning Herald Fri 1 Feb 1952
Three More Dead, Many Missing In New Bushfire Devastation

Three people have died, scores more are missing, and hundreds are homeless in new disastrous bushfires in north-eastern Victoria.
Barnawartha, a small town of 132 houses and about 400 people, 16 miles south of Albury, was devastated yesterday. The fire swept through the township in half an hour, razing 12 houses, two stores, a bank, and two churches.
BROKE LEG, PERISHED
MELBOURNE,
Thursday.-The three dead in the bushfires near Albury to-day are:
Jim Long, 60, of Chiltern Fire Brigade, who perished fighting the fire on Barnawartha racecourse; John Anderson, a boy, of Barnawartha, who was caught by the flames and died from burns, An unidentified man who died fighting fires at Howlong, l8 miles from Albury. He broke a leg when he fell from a truck and the flames engulfed him before rescuers could go to his aid.
EVACUATION
The evacuation of Barnawartha was ordered when flames swept down on it from two directions. The people fled in every type of vehicle available. A crowd of children and invalids sheltered at the railway station. Some were overcome by the heat. The fires extend from Barnawartha, on the Hume Highway, to Wodonga on the border, and east to Yackandandah and Tallangatta. [= 40,000 ha]
The areas between were blazing infernos as the flames were swept along at great speed before a 40 mile-an-hour wind. Several people were taken from Barnawartha to Wangaratta Hospital and treated for burns. Hundreds of valuable beef cattle have been lost in the fires. Farmers had no time to move their stock before fleeing for their lives.

When Barnawartha was threatened frantic appeals for help were sent out by telephone. These were relayed by radio and soon help arrived from surrounding districts.
To-night Wodonga resembled the receiving station for a bombed city. First-aid posts had been set up in the streets, which were jammed with blackened fire-fighters.
The shire hall had been turned into a welfare centre. Refugees from scores of burnt-out homes were streaming into the town from a 40-mile radius seeking shelter.
The fires swept first on Barnawartha and then moved along the Hume Highway towards Wodonga. The flames swept across the main Melbourne-Albury railway line and burnt bridges. Passengers from Melbourne to Sydney had to detrain at Wangaratta. They went by bus to Albury.
Another arm of the fire extended towards Tallangatta and Yackandandah narrowly missing the Bonegilla migrant camp.
Yackandandah, a few miles south of Albury, was saved by firefighters after a four hour struggle,
RIVER REFUGE
Residents sprayed their homes while firefighters fought the flames only a few yards away.
As the fires approached Wodonga residents tried frantically to make breaks round their homes or to remove valuables to safety. Many people sought safety near the Murray River. Women hustled their children to safe places. However, the town was saved, although some outlying homes and buildings were destroyed. Residents of Barnawartha were staggered by the speed with which disaster struck the township. It was all ever in half an hour, they said.
ESCAPE IN DAM
Mr. and Mrs. J. Clarke, who live on the outskirts of the town, jumped into their dam for safety as the fire descended on their home and razed it. Firefighters had to retreat on the run. The fire danger is expected to continue tomorrow and all towns in north-eastern Victoria have been advised to organise squads of firefighters to stand by.

State Grant of £20,000
The Premier, Mr. McGirr, announced last night that the State Government would grant £20,000 for bushfire relief. He said he was pleased that the Federal Government would also grant £20,000.

Argus Wed 6 Feb 1952
BUSH FIRES RAGING FAR AND WIDE ACROSS STATE
A WOMAN was burned to death, dozens of people severely burned, and at least 20 homes destroyed in bush fires which ravaged five great areas of Victoria yesterday.
The destruction and misery was the most terrible since the fateful year 1939. Victoria will be mild to warm today, but the weather bureau warns that tomorrow will be a "scorcher" and may be the State's "blackest day yet."
This was yesterday's toll:
Lurg: Five homes, Presbyterian church, and State school destroyed, unknown number burned.
Macedon: Three homes destroyed, four firemen burned.
Moyhu: Church, and two homes destroyed.
Nullawill: Three burned.
Toolern Vale: One dead, 10 homes destroyed, two firemen burned.

Woman killed saving sheep
The dead woman is Mrs. Lena Blanche Wilson, of Black Hill Rd., Toolern Vale, 30 miles north of Melbourne. She died in a tragic race to save her husband's sheep. She became stuck in a barbed wire fence, and within seconds the bush fire passed over her. The Toolern Vale fire swept to Bacchus Marsh, spraying sparks on a R.A.A.F. bomb dump two miles from the town.

Fires are still raging out of control at Winton, 127 miles from Melbourne, in the Macedon-Riddell district, and 10 miles north of Wangaratta in the north-east.
The 30-home settlement of Bullengarook, near Gisborne, is threatened today if the wind comes from the south or south-west.
Refugees are appearing on the north-eastern highways as they flee the fires.
A fire at Barnawartha again cut the main Melbourne - Sydney rail line and passengers were carried to Albury in special buses from Wangaratta. Engineers hope to re-open the line for today's traffic.

Bacchus Marsh
From BOB GRANT
The ruins of 10 homes are scattered among the smoking hills around Toolern Vale and Bacchus Marsh. A dramatic wind change saved both these towns at midday, yesterday, but it trapped hundreds of fire-fighters. Two men are in hospital, badly burned. They slipped and were caught in a fence while 40-mile-an-hour flames roared over them.
The wind-whipped flames chased more than a thousand fire-fighters over a 20 mile square [= 9,000 ha] expanse of grassland and hills.
Dozens of men have not yet reported back from the fire-blackened gorges between Gisborne and Bacchus Marsh. A wall of flame licked to within 400 yards of Bacchus Marsh's thickly populated residential area before the north wind swung violently to the south. The fire weaved fantastic shaped black rings around more than 30 homes at Toolern Vale, Bonny Vale, Coimadai, and Melton. Families crouched inside the houses in terror.
At one farmhouse near Darley, a farmer locked his family inside when fire burnt down the outbuildings. Fire fighters battered the door down, and forced the family to evacuate on a tractor. The house is still standing.
Fifteen men were trapped among seven blazing haystacks at Mr. G. Kerr's
home, in the Lerderderg gorge. They dashed through flames and dived into the Lerderderg Creek.
Sparks threatened to explode hundreds of bombs at a R.A.A.F. ammunition store in the Pentland Hills, two miles west of Bacchus Marsh.
A hundred R.A.A.F. men were rushed from Tottenham to check the threat. Fire-fighters within a half-mile area were warned of the danger.

Macedon
From RON TESTRO
The whole of the Mt. Macedon Black Forest area will be in danger today if the wind comes from the south, as forecast by the Weather Bureau.
Three houses were burnt and much stock destroyed in the fire which spread rapidly
through Lower Macedon yesterday afternoon.
The Macedon fire came within two miles of Gisborne.
Earlier the town was menaced by a fire on the Bacchus Marsh side. This fire last night was threatening Bullengarook, a settlement of 30 houses.

Nullawil
From GEORGE TILLEY
A mother and her two children ran from the safety of their home to reach a dam during a fire in the Central Mallee today. They were trapped in flames before reaching the dam, while the house remained untouched. The woman. Mrs. C. Townrow, of Nullawil, saw flames rushing toward the house. She grabbed the children, but as she ran toward the dam the grass, 2ft. high, burst into flames around them. All three were seriously burned. They were admitted to Wycheproof Hospital, where their condition tonight was reported to be satisfactory.

Canberra fire report inserted for interest. Stromlo burnt again in 2003

Argus Wed 6 Feb 1952
Fire destroys priceless Stromlo equipment
Canberra, Tues.
Bushfires today did £100,000 worth of damage at Mount Stromlo Solar Observatory and put the observatory out of action as a major research station for at least two years.
Observatory employees, led by the Commonwealth Astronomer, Professor R. Woolley, saved more than £1 million worth of telescopes and other equipment and all buildings except the workshop. The workshop was the best equipped observatory laboratory in the world.
A lightning flash from a thunderstorm set the pine forests to the west ablaze about mid-morning. Between 50 and 60 women and children were evacuated and the 35 men there, stayed to fight for the priceless installations. Mrs. Woolley and three women employees stayed with the men. One of the women, Clare Beach, 21, had her hair singed while beating out flames.
The water supply failed when the fire cut the power supply to the blazing pine-clad mountain. At one stage the firefighters were ringed by fire and completely cut off for nearly two hours.

Pine needles, blown from the fires, caught piles of firewood which set the workshop ablaze. Within a short time the valuable machinery was a twisted mass of metal. A container of oxy-acetylene gas burst with a loud explosion in the heat and fed the flames.
Meanwhile 1,500 fire-fighters, including hundreds of volunteers called by Canberra radio stations had raced out to the scene of the fires. One of the beaters was Mr. W. S. Kent Hughes, Minister for the Interior, who left a Cabinet meeting to help beat out flames.

Benalla Ensign Thurs 7 Feb 1952
The fire started when an old model car caught fire near Ryan and McNulty's sawmill. The flames jumped the road and within an hour burnt on a 6 mile front.

The Canberra Times Thu 7 Feb 1952
Another Fire Death In Victoria
MELBOURNE, Wednesday
The Victorian bushfire death toll rose to four today when a man who was severely burned yesterday died in hospital.
Incredible destruction wrought by the fires is being revealed as the wind-fanned flames sweep across the State. The bushfires are described as the worst since 1939.
The man who died today was Reg Kemp, who was severely burned at Macedon yesterday. The disastrous fire in the Black Forest area yesterday claimed its second victim today when Reginald Kemp died in Woodend Hospital. Kemp was manager of Mr. O. J. Syme's property at Macedon. Kemp and two other men were seriously burned when a fire swept through the property yesterday. One of the other men, Ken Wishart, also of Macedon, is critically ill in hospital.
The other fatalities this week were :
Jim Long, 75, of Chiltern; a young man named Clark, of Springhurst; and Mrs. Lena Wilson, who was burned to death yesterday at Toolern Vale.

Cairns Post Fri 8 Feb 1952
MELBOURNE, Feb. 7
Four more people injured in Victorian bush fires have died, bringing the season's death roll to 10.
Marjorie, aged 4, and Gloria, aged two daughters of Mr. and Mrs. Clive Townrow, of Nullawall, near Wycheproof, died a few hours before their mother, a Canadian war bride, gave birth to a still-born baby boy in the same hospital.
Mrs. Townrow and her two daughters were burned by a bush fire near their home when trying to reach safety in a dam on Tuesday. Mr. Townrow was admitted to Hospital when he collapsed after learning of his children's deaths this morning.
The other deaths were Edwin Girdle (75) of Greta South and Michael Tanner of Upper Lurg, who were severely burned fighting fires at Wangaratta on Tuesday.
Several other victims of the fire are still on the danger list.
There were no serious outbreaks today, but thousands of fire fighters stood by in case smouldering areas flared up again.

Benalla Ensign Thurs 14 Feb 1952
DAMAGE ESTIMATED AT ONE MILLION POUNDS
240 Square Miles Devastated by Worst Bushfire in Living Memory
[say 24 x 10 ml = 40 x 16 km = 64,000 ha]
Two lives were lost, nearly forty homes completely wiped out, hundreds of sheds destroyed and thousands of sheep and cattle perished in last week's bushfire which started two miles from Benalla and swept through the districts of Lurg, Greta, Hansonville and Moyhu. We can only hope the loss of life and property will not be repeated. When the fire was stopped at the Myrrhee-Greta South boundary, close to Mr. E. Hancock's property at 5 p.m., it turned in and went through Hansonville and on to Moyhu, where it was stopped later that night.
Over the road stood the house of Mr. Stan Barber, which was threatened with destruction several times, but the Barber family, including the women folk, and several fire fighters, managed to quell the flames.

The bare paddock in front of the house was a major factor in temporarily breaking the face of the fire as It, was approaching the house,
Second Fire in Four Years
Mr. Jim Coleman, who was burnt out four years ago, had more luck on Tuesday, when his home was saved. He lost a shed and about 70 sheep. The 68-year-old' farmer smilingly referred to his losses.
Farmer's Burns Prove Fatal
With a 40-mile-oad-hour gale and a high wind, paddocks were aflame almost a mile ahead of the main fire. It had reached such intensity and was completely out of control that many along the path of the blaze feared there was no escape from death. The flames where particularly fierce where Mr. Mick Tanner was severely burnt, which brought about his death later in the week.
They attacked the flames gamely and were successful in saving the house. Mick moved most of his own sheep to safety, when he went back to save a hay stack and was caught in the approaching flames. A neighbour cut the fences where the sheep were sheltering, and as they moved out, most of them were mopped up by the passing inferno. Out of 1800 sheep and 135 cattle, 1500 sheep and 120 head or cattle were destroyed.
BREAKS SAVE
Appreciation was expressed for the great work of Forests Commission men and others, for burning breaks on both sides of the Myrrhee road that saved that district.

Observation: Burning practices by East Gippsland grazing licencees (licences issued by the Lands Department) were an ongoing problem for the Forests Commission when their fires ran into valuable timber country.

1952/53

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
4.2	6	48

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1953)
8,600 ha of crown land burnt, 122 fires reported on crown land
138,000 ac patch burning
Major forest fires > 1000 ha Upper Murray 4,000 ha, Upper Ovens 500, Stawell, 1200, Rainbow 000 ha

Reported bushfire events

1953/54

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
7.4	9	87

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1954)
52,400 ha of crown land burnt, 275 fires reported on crown land
229,000 ac patch burning
Major forest fires > 1000 ha Cann River and Orbost 40,000 ha

Reported bushfire events

The Argus Tue 29 Dec 1953
Don't leave farm homes vacant, says chief
In Victoria yesterday, all bush fires were well under control although some could still be dangerous. A big grass fire which had been burning in the Benalla district since Saturday was only "smouldering" in the Strathbogie Ranges, near Euroa, last night.
The Country Fire Authority, said last night this fire had given the authority one of the "greatest headaches of the year." "But a number of tanker trucks which have been on the job since its outbreak have brought it under control," he said,
Mr. Larkin warned people in the dry areas of the risks of leaving their homes unattended. Someone should guard property at all times, he said. With the fire threat imminent today, fire patrol officers will be on the watch for infringements of the C.F.A. Act

Yarra Ranges report Fires in Ferntree Gully National Park, Upper Ferntree Gully & One Tree Hill

1954/55

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.2	6	52

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1955)
30,480 ha of crown land burnt, 200 fires reported on crown land
197,000 ac patch burning
Major forest fires > 1000 ha Casterton 8000 ha, Cann 4000, Heywood 4000 ha

Western District bushfires (McArthur et al 1982)
1954/55 Jan 2 – 3, Casterton and Coleraine, 40,000 ha burnt, 1 death, damage $400,000

Reported bushfire events

At least 15 homes mentioned

The Argus Mon 3 Jan 1955
BUSHFIRES RAGE IN VICTORIA

POLICE SEND SOS
After a day of searing heat which reached 110 degrees at Mildura and Warrnambool and 105 degrees in Melbourne, at least six fires were out of control in Victoria last night. Worst was at Casterton, where police declared a state of emergency.
A cool change late last night dropped temperatures, but near gale force winds were whipping fires to fresh intensity.
In South Australia the Governor and members of his household escaped when his summer residence was destroyed, covering themselves with wet towels and blankets as they ran the gauntlet of the flames

Casterton
Police said at least two homes had been burned, and losses of livestock, crops, and property were heavy. The fire could move towards Hamilton and Coleraine, they said.
At Great Western, near Stawell, the Church of England Sunday school, an outbuilding at Seppelt's winery, a haystack, and 300 acres of grass were burned before 200 men brought the fire under control.
The other main fires late last night were at Wedderburn, Mornington Peninsula, Bruthen, Kaniva, and the Otway Ranges.
Melbourne's 105 degrees was its hottest day since 1953.

Nearly 200 grass fires in the metropolitan area yesterday gave fire brigades their busiest day for two years. Attracted by smoke visible for more than 15 miles, holiday makers around **Frankston** became volunteer firemen to boost the fire-fighting force to nearly 1,000 people. Teaming with firemen from six brigades, they helped fight a spectacular blaze in the State Forestry Commission's £200,000 pine plantation. Without rain, it is expected the fire will burn for two or three days. Searing wind Fanned by a searing north-westerly which reached 80 m.p.h., the flames raced through 30ft. high pines and thick undergrowth across the 2,000-acre plantation. Firemen and volunteers loaded aboard radio-equipped trucks were rushed through the fire breaks, only to see the flames jump the 20-yard gaps. Working in terrific temperatures they managed to restrict the fire to a narrow front and direct it towards light scrub, where it was controlled.

Shacks go
Householders around **Emerald** Country Club helped fight a blaze that spread
around the hills along Monbulk rd., where three weekend shacks were destroyed.

Argus Mon 3 Jan 1955
WORST FIRES 10 YEARS
RAGING IN VICTORIA
MELBOURNE, January 2.—Thirteen homes were lost in bush fires in Victoria today, and to-night towns in the State's for west were battling their worst fires since 1944.
Fire fighters made amazing saves of a town, and hundreds of homes in grass, scrub, and bush fires, which blazed across the southern half of Victoria to-day. Police at Balmoral, 220 miles east of Melbourne, declared a state of 'fire emergency' late to-night. A flash message at 10 p.m. from police headquarters in Melbourne, said that fires also threatened the rich towns of Coleraine and Casterton, within a 20 mile radius of Balmoral.

The Far West township of Dergholm, near Casterton, escaped a disaster, when it was evacuated, and then saved by fire-fighters checking the inferno-like glaze 100 yards from the town. As the fire roared on to Dergholm, 242 miles west of Melbourne, it destroyed four houses. Dramatic scenes occurred in the township as women and children were hastily evacuated in cars on fire fighters' orders. Then volunteers who had come from Merino, Coleraine, and Casterton, set about saving Dergholm's two churches, memorial hall, school, and hotel and store.

Few districts in the southern part of Victoria were spared in the chain of fires which were as distant as Merino, 217 miles west of Melbourne and Bairnsdale, 176 miles east of Melbourne.
Smoke from the fires drifted out into Bass Strait to-night and airline passengers reported a fiery red glow over the water.
A scrub blaze burned down a Sunday school, and damaged the cellars of a winery at Great Western, 137 miles north-west of Melbourne, to-day.
The fire blazed through thousands of acres of sheep country, and stock losses are expected to be heavy.

Tarrnlea, near Casterton and Merino, was the next township to suffer, and a home was burnt out.
The fire which travelled at speeds of up to 50 miles an hour, is estimated to have burned out 14,000 acres of grasslands and scrub country.
At Balmoral, another two homes were lost when 1400 acres of scrub country were burned out by fire.
At Emerald, 30 miles east of Melbourne, men from 11 brigades battled forest fires, and many suffered cuts and burns.

Bushfire related events

The CSIRO re-released its research into the causes of house loss in the 1944 bushfires. They stressed the need to prevent embers from gaining access under the house into the house via openings and roof and, and listed protective works. They also stressed the need to keep flames well away from walls.
This was the first scientific study into the cause of house loss in bushfires.

PROTECT YOUR HOME AGAINST BUSH FIRES

Letters received by the Building Research Liaison Service have asked what special precautions can be taken to protect a house against bush fires.

A study by the Division of Forest Products, C.S.I.R.O., of the houses destroyed in the disastrous Beaumaris (an outer beach suburb of Melbourne) fire in January 1944, revealed that the greatest hazard to guard against is the entrance of sparks and flying embers through openings, such as eaves, ventilators, open windows, and the space under the house. Where this occurred, the fire started inside the house, which was speedily destroyed, regardless of the material of its external walls. Brick and stone houses fared no better than timber houses.

The problem facing the home builder is to protect himself against this hazard, while still retaining the living comfort derived from adequate ventilation, and while still providing access under the house for regular inspection against termite attack.

The following represent the modifications to normal building practice which are recommended in order to reconcile these apparently conflicting requirements:

Timber houses, and, in fact, all houses supported on stumps, should be close-boarded below floor level. Adequate under-floor ventilation should be provided by woven wire vents, and an access door should be provided.

All wall ventilators should be of the woven wire type or they should be covered by a fine wire mesh. Large ventilators in gable ends should be eliminated and replaced by a number of scattered small ventilators with fine mesh openings.

Eaves may be open for maximum ventilation, but the openings should be covered with ¼ in. wire netting.

Badly fitting Marseilles pattern tiles should be avoided. Close fitting sheet roofing is preferable, and the joints should be sealed.

The spaces under corrugations of sheet roofing at eaves, ridges, hips, and valleys should be covered with fine mesh wire netting.

Fly wire protection should be given to all doors and window openings.

In addition to the above, the following rather obvious precautions must be taken: Keep trees and shrubs clear of the walls, and stacks of fuel well clear of the building or stored in properly constructed sheds.

Consideration should also be given to the use of a non-combustible material, such as bricks (where available), concrete blocks, or earth wall construction for the walls. The last-mentioned material has long been used successfully for houses and farm buildings in many country areas, and where the right type of soil is readily accessible, and self-help labour is available, it can be a very economical form of construction.

PROTECT YOUR HOME AGAINST BUSH FIRES, (1955) Australian Forestry, 19:1, 60-60, DOI: 10.1080/00049158.1955.10675826

1955/56

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
12.3	7	80

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1956)
7,120 ha of crown land burnt, 153 fires reported on crown land
51,000 ac patch burning
Major forest fires > 1000 ha Briagalong 2,500 ha

Reported bushfire events

1956/57

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
16.4	7	88

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1957)
46,100 ha of crown land burnt, 308 fires reported on crown land
60,000 ac patch burning
Major forest fires > 1000 ha Black Range 20,200 ha
Major grass fires > 4000 ha Brimpaen 24,000 ha, 1 building

Reported bushfire events

1 death and 6 homes – Eltham and Bacchus Marsh

Canberra Times Fri 1 Mar 1957
6 HOMES BURN
MAN DIES IN BUSH FIRES
MELBOURNE, Thursday
A man was burnt to death in his car, four fire-fighters received serious burns, and a church, six homes, and thousands of acres of rich grazing and timber lands were destroyed to-day, in Victoria's worst bush fire day this summer. Strong northerly winds, scorching over the State, fanned huge fires, as weary fire - fighters battled in near - century temperatures.
A fire in the State's No. 2 open-cut brown coal mine at Bacchus Marsh burnt fiercely all day, and was still out of control to-night,

A crippled 50-year-old man was incinerated when his car stalled in the middle of a raging bush fire in the Diamond Creek-Greensborough area, about 13 miles from Melbourne, late this afternoon. He was George Lawrey, of Larchill Crescent, Plenty, who had left his father's farm to escape the approaching fire. The fire, which burnt through seven miles of grass and timber, also destroyed a church, six homes and nine cars.
The church destroyed was St. Katherine's Church at St. Helena – an historic landmark in the district,
Four fire-fighters were burnt while fighting a grass fire in the Bacchus Marsh district.
Late to-night both the Diamond Creek - Greensborough and the Bacchus Marsh grass fires were under control, but were still burning.
The fire, believed to have started by power lines brought down by the high wind, raced through grasslands, as 400 men vainly tried to control the outbreak.
Some cattle and poultry were also lost in the blaze, which burnt right up to the door of the Sutherland, home.
Thousands of pounds worth of damage has been caused by a fire which is still burning in an open cut brown-coal mine at Bacchus Marsh. A grass fire which roared towards a second open-cut mine nearby, was stopped only 50 yds. away. The burning mine is the Star Colliery. The fire has set the coal alight, and destroyed much valuable equipment and buildings.

1957/58

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
10.2	10	107

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1958)
87,400 ha of crown land burnt, 434 fires reported on crown land
111,000 ac patch burning
Major forest fires > 1000 ha Little Desert and Sunset, 4,400 ha

Reported bushfire events

Surf Coast Shire 5 September 1957, fires at Anglesea and Aireys Inlet with 2,428 hectares burnt

1958/59

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
9.9	11	117

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1959)
100,400 ha of crown land burnt, 267 fires reported on crown land

41,000 ac patch burning

Major forest fires > 1000 ha Mt Cann 45,493, Snowy R (east) 15,350

Major grass fires > 4000 ha Yarck 8,000 ha

Reported bushfire events

Yarra Ranges report Fires in Ferntree Gully National Park & Sassafras.

1959/60

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
6.3	8	73

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1960)
491,700 ha of crown land burnt, 684 fires reported on crown land
39,000 ac patch burning

Major forest fires > 1000 ha Mt William 28,460, Big Desert 442,868

Major grass fires > 4000 ha Morwell area

Reported bushfire events

Surf Coast Shire January 1960, fire at Moggs Creek, about 800 hectares burnt.

Yarra Ranges report Fires at The Basin, Sassafras and Olinda, Belgrave and Selby.

1960/61

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
6.4	16	148

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1961)
57,960 ha of crown land burnt, 342 fires reported on crown land

27,000 ac patch burning

Major forest fires > 1000 ha Jamieson 3,600, Lake Tarli Karng 3,850, Cromwells Knob 5,200

Reported bushfire events

Surf Coast Shire
In 1961, 500 acres and 300 sheep were lost at Modewarre in a deliberately lit fire.
February 1961, fires near Erskine Falls and in Queens Park area, Lorne.
April 1961, fires at Big Hill and later at Bellbrae, with 40 acres burnt.

1961/62

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
8.8	9	92

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

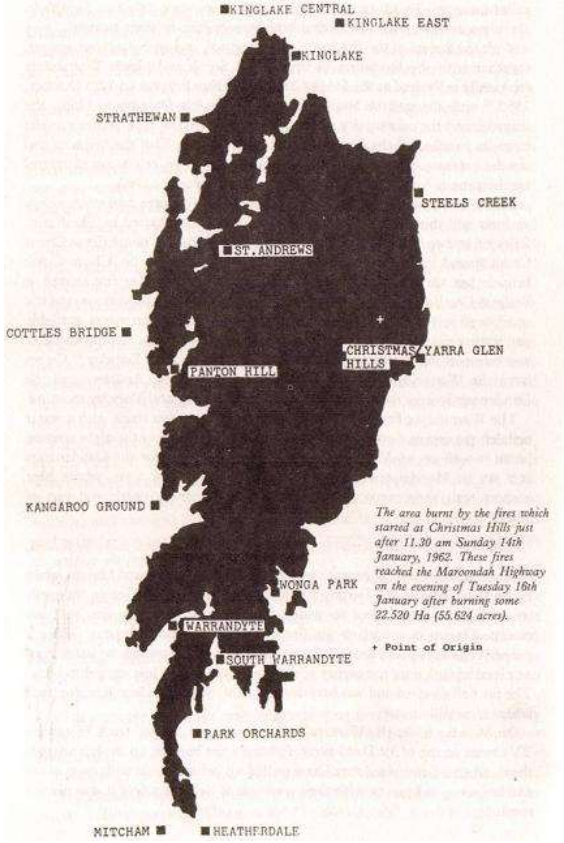
VBRC
14/01/1962 The Basin, Christmas Hills, Kinglake, St Andrews, Hurstbridge, Warrandyte, Mitcham Damage toll 32 deaths, 454 buildings
Jan and Feb Southern district *(Where is southern district?)*
Damage toll 1 death, 150 buildings
People rendered homeless: 2,500
Total toll = 33 deaths, 600 buildings

FCV (1961)
66,960 ha of crown land burnt, 476 fires reported on crown land
68,000 ac patch burning

Major forest fires > 1000 ha Dandenongs 1,725, Toolangi 3,800, Mt Toolbewong 4,400, Wombat parish 5,600, Wilson's Prom 20,400

http://mapshare.maps.vic.gov.au/MapShareVic

Warrandyte fire 1962 approx 22,000 ha AND Dandenongs fire, green line ~5,000 ha



Warrandyte Heritage website http://mapshare.maps.vic.gov.au/MapShareVic

http://warrandyteheritage.yolasite.com/natural-disasters.php

Reported bushfire events

Cheney Aust For 1976

Jan 1962 Dandenongs 5000 ha fire destroyed 454 houses and 8 deaths, damage $4.8M

The Age 15 January 1962

40 Sq. Miles Swept

A FIRE which started in the woodshed of an elderly bachelor has swept through more than 40 square miles of timber and bushlands in the Healesville district.

Six houses, a timber mill and a rural fire-fighting truck have been lost in the blaze.

Late last night the fire was still out of control on the rugged slopes of Mt. Riddell and Mt. Post-Be-Wong.

About 60 acres of the Cobb and MacKenzie sanctuary were scorched when the fire spread from Healesville west about 3.30 p.m.

All birds and animals were saved, as firefighters spread water around enclosures and compounds.

Officials released about 30 red kangaroos threatened by the inferno.

Volunteers placed hessen on any exit hole, which led to the low fork of a tree, refusing to budge.

Five mated to within five feet of an ominous looking a fire and saved homer birds.

Fire destroyed horses and destroyed fences and timber on the site of the [illegible] R.A.C.V. [illegible]

The portion of sanctuary open to the public was not affected, the fire passing it to the south.

The sanctuary director [illegible] W. Chandler said 1000 people had left in an orderly line and without panic when the alarm was given.

Scores of homes were threatened during the day as the firefighters fought the blaze to within feet of the buildings.

In some cases, the firefighters had to leave to help protect their own homes.

Healesville Mayor, which has now broken into a series of fires, started on Ocean Creek Road, about 2½ miles from the Healesville township.

It is believed to have started in the woodshed of 82-year-old deaf bachelor, Joel Jordan.

Mr. Jordan was sitting on his front verandah chatting [illegible] when he noticed that flames were threatening his home.

Whilst neighbors rushed to him, he ran inside, salvaged his pipe possessions—a unicorn—and fled to safety.

Raging out of control, the fire quickly spread, another two houses and then destroyed sheds, 2,000 of logs and three houses on the property of the Australian Mining Company.

Mr. Mr. Blackmore, whose wife gave the original alarm, [illegible] Point Hamer took [illegible] his home, after they had spread to his front shrub. He lost a hay shed and 2000 bales of hay.

A fire-fighting tanker was damaged after the petrol vaporised and attempts to start it failed.

Senior constable, who directed police operations, assessed all operations in one manner: "It was a miracle that many homes were not burned and lives lost."

Police ordered the evacuation of children from several guest houses.

These included The Pines holiday home, Le Chateau—a children's guest house at Badger's Creek — Williams's guest house and Lowe's riding school.

At the height of the morning's blaze, flames jumped up to a quarter-mile in the air.

Twenty Scouts, camping off the Upper Creek Road, Healesville, only had time to grab a few belongings before the fire swept through and destroyed their tents and equipment.

Several tried to escape by jumping into an [illegible] from Maroondah Reservoir but the current was too strong.

Most were later given a lift to safety in a passing truck. Others travelled with the Scout master in his car and one fled out of the area on a bicycle.

Dandenongs Outbreak

First news of the Dandenong outbreak came at 6.30 p.m. yesterday when smoke billowed from the side of a hill above The Basin.

In less than half-an-hour the fire, believed started from a backyard incinerator, was eating its way through its first hill.

With a series of gigantic leaps and bounds it spread to newer [illegible] throughout the Dandenongs.

One family on the Dandenong The Basin road stayed to fight the fire and won.

Mr. and Mrs. Bill Allen, their four children, and Mr. Allen's parents, were forced [illegible] to fire-damaged [illegible] on roof and throwing buckets of water on the [illegible] [illegible] underground, an hour after the fire had swept them by.

Mr. Allen said: "For a few seconds it looked as though we had done the wrong thing staying behind.

"The fire came like an express train and got within a few yards of the house.

"For a while everything seemed to go wrong when the hose got on fire and a hole burst in it.

"But water still trickled from it and Mrs. Allen mounted outbreaks, while the others threw buckets of water on the flames.

"Then it went past and we [illegible] a big sigh of relief.

"We don't want to go through the again, the heat was so intense around the house," he added.

Others had no chance to save a thing.

Mr. and Mrs. B. Bicknell, of Mines Road, Ferny Creek, were not so lucky.

They had no idea of the pending disaster until the house behind them started to crackle.

Mrs. Bicknell said: "It was something terrible; we moment the house was standing, the next moment it was crumpling unbelievably before our eyes."

Forty-five of 60 blue-eyed white Persian and [illegible] cats [illegible] by Mrs. Bicknell were lost in the blaze.

Yarra Glen

Two rabbit hunters, smoking a forest fresh a burrow, are believed to have started a bush fire which burnt out 30 square miles of hills near Yarra Glen yesterday.

Late last night, a new mill, two holiday houses, several outbuildings, miles of fences, and [illegible] were, and about 30 square miles of grass, scrub and timber-land had been razed by the fires.

The fire began early in the morning in the back of Balmoy's Park, a property owned by local grazier Ted Smith, at Christmas Hills.

Within an hour it had travelled several miles up the valley and into the surrounding hills.

The fire headed away from Balmoy's Park surrounding several houses along the old Christmas Hills Road.

The Age 16 January

Danger If Heat, Winds Rise

All fires in the Dandenong Ranges are under control or checked, but after a 48-hour battle, Victoria faces new threats today from century temperatures and freshening winds. More than a dozen serious bush fires were still burning early this morning in various parts of the State.

Building flames shrouded from The Basin to One Tree Hill, Several Gordon at The Basin was evacuated.

Fire fighters were battling desperately to prevent the blaze. They were helped by a south-east wind.

Five officials said a worsening could have Fern Tree Gully in a critical situation.

Gamble Pays Off

A [illegible] dozen [illegible] gambled with the safety of Kalorama by lighting a back fire.

The back fire met [illegible] flames sweeping towards Gordon Avenue, Kalorama on the edge of Jasper Road, Kalorama.

A sudden change of wind between the two fires [illegible] on towards [illegible] and put a 500-yard area of thickened timber and grass in advance of the bush blaze.

Senior Forester A. E. Westood said: "It was a gamble which paid off. If the Jasper Road flames had gone the [illegible]

Some would have been the township."

Other major fires in the State are:—

- HEALESVILLE: Seven [illegible] outbreaks [illegible] surrounded the township at midnight. Fire officials fear the blaze may sweep across the mountains to Warburton.
- BURNTHEDGE: Boundary [illegible] were out of control last night to [illegible] fire burning from Harrington on [illegible] was [illegible] 2½ miles [illegible] destroyed.
- YALLOURN: One of two [illegible] fires, one S.E.C. land was out of control at midnight. It is a blaze on a [illegible] land near [illegible] three miles of the open-cut mine.

16 Houses Gone

Hundreds of Mt. Dandenong residents were given five-minute evacuation notice late in the afternoon as the raging [illegible] fire [illegible] on the path of destruction.

The fire cut a six-mile path across Mt. Dandenong as [illegible] changes in winds forced the flames.

At least 16 houses were destroyed on the hillside.

Fire fighters were helped at Kalorama and One Tree Ways, where most of the houses were lost.

One fire fighter at Fern Tree Ways said: "We were waiting for the flames to break out when suddenly we were surrounded by the fire.

"Flames were leaping 400 feet into the air. There was nothing we could do but run for our lives."

Experts [illegible] the fire was travelling at about 400 feet a minute through [illegible] timber before One Tree Ways.

Dispatch [illegible] of flame raced across [illegible] and through [illegible].

Householders, storekeepers and holiday makers were given five minutes to evacuate as Fern Tree Ways after fire fighters had abandoned [illegible] attempts to save a row of [illegible] below the [illegible] ridge.

In Other Pages

NEWS:

[illegible]

FEATURES:

Bulldozer Man Saves Town

[illegible] Australian [illegible] saved the township of North Yallourn from destruction by repeatedly driving a bulldozer into advancing line of fire.

The fire edged in on [illegible] Road and [illegible] threatening to wipe 30 yards of the township with [illegible] S.E.C. opinion [illegible] not [illegible] before it was [illegible] back.

A fire-line [illegible]

The Age 17 January

Herald Sun Jan 12, 2017
Suburbs in peril as deadly bushfires shocked Melbourne in 1962
Jamie Duncan, Herald Sun
January 12, 2017 11:08am

IN THE early 1960s, sprawling Melbourne's suburban frontier spread towards the Dandenongs as families set out to carve out a new life in the post-war boom.
But 55 years ago this week, the worst bushfires Victoria had seen since the Black Friday disaster in 1939 tore into some of those burgeoning suburbs, killing 32 people and destroying 450 homes.
Over three days, those ferocious blazes swept over the foothills, into Dandenongs and across the Yarra Valley.
A ring of fires stretched from the Kinglake and St Andrews across to Healesville and around to The Basin, but others raged near Daylesford and Wye River. Lightning started some of the fires. Arsonists started others.

Geoff Bull's Walkley Award winning picture of firefighters against the backdrop of an advancing fire at Panton Hill.

One of the most destructive fires burned across the Yarra Valley into the suburbs as far as Mitcham.
That fire began at Christmas Hills, near Eltham, on Sunday, January 14, 1962, and initially burned northwest towards Panton Hill on a southerly breeze.
The immensity of the danger volunteers faced was captured by Sun News-Pictorial photographer Geoff Bull at Panton Hill.
Bull won a Walkley Award for best news picture with his image of dozens of men, armed with hessian sacks and hand tools, standing in a clearing at Panton Hill, near Hurstbridge, as the fire crowned in the treetops nearby.
A separate fire began in the Dandenongs and raced from The Basin up the steep slope of Mount Dandenong.

A group of men armed with buckets and knapsack pumps try to save Hillside Farm at The The Basin.

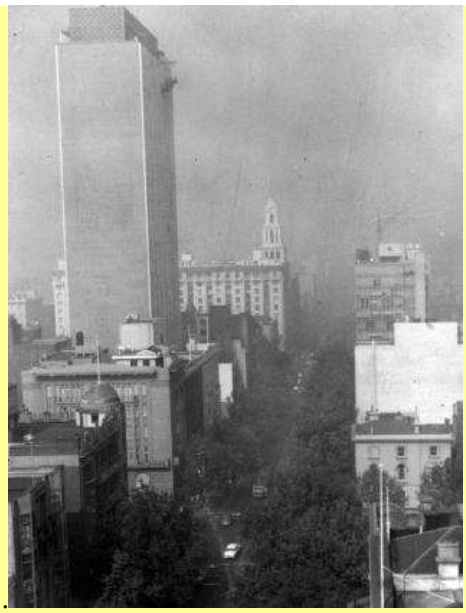
Fighting the flames on the outskirts of Smiths Gully.

By the Monday morning, the fire was within metres of the transmission towers at the summit of Mount Dandenong, threatening TV broadcasts for a time, and destroying dozens of houses in Olinda and Kalorama on its way towards Lilydale and Mount Evelyn.
The fires caused an eerie red glow in the night sky and a glow of another kind in lounge rooms all over Melbourne, as viewers watched footage of the fires on television.
This was something new for Victorians who were accustomed to bushfires.
Television came to Melbourne a little more than five years earlier.
For the first time, grainy black and white footage from the fire zones near the city were broadcast for all to see.
The weather worsened the crisis.
The temperature, already in the mid-30s on Monday, soared to around 40C on Tuesday with hot, dry north-westerly winds.

Anxious Olinda residents watch the approach of the bushfire

Flames devour a home at Smith's Gully, near St Andrews.

Filling a knapsack spray on the Mt Dandenong fire front

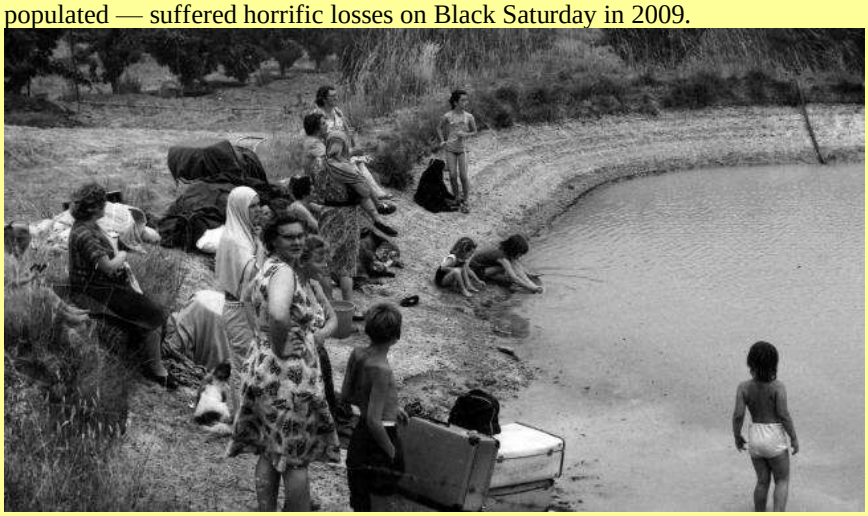


A smoke pall hangs heavily over the city — a grim remind of the raging Dandenongs bushfire.

A painting and a chair are saved from the ruin of Cherry Farm at Kalorama.

The Christmas Hills/Panton Hill fire had burned into Hurstbridge and St Andrews.
It turned, and raced south across the Yarra Valley, through Warrandyte and Wonga Park, and into the burgeoning suburb of Mitcham.
It jumped both the Maroondah Highway and Canterbury Road and got within 19km of the CBD.
By Wednesday, the Sun's front page illustrated the shock Melburnians felt. It's headline simply read: "It leaps into suburbs".
It was only another weather change in the weather that stopped the fires, as cooler conditions and solid rain quelled the flames.
The worst-hit areas included Warrandyte, Hurstbridge and Panton Hill, Olinda, The Basin, Mount Evelyn and Eltham. Homes were also lost in Mitcham, Lilydale, Ringwood, Ferntree Gully, Belgrave and Boronia.
Much of the Dandenongs between The Basin and Mount Evelyn was blacked out.
Bushfires had happened before in these areas, but the game had changed by 1962.
Many of those areas were former farming districts and towns that were becoming suburbs as post-war prosperity and immigration created a huge demand for suburban blocks further from the CBD.
Large blocks still accommodated a canopy of eucalyptus trees and there was still plenty of scrub around as suburbs developed.

The Dandenongs have since been hit hard by bushfires, most notably on Ash Wednesday in 1983, while St Andrews, Kinglake, Hurstbridge and many areas just beyond Eltham — by then more densely populated — suffered horrific losses on Black Saturday in 2009.



Mothers and their children waiting grimly at a dam at Five Ways Crossroads, Warrandyte South

Comments
Robert Jan 12, 2017
I was a volunteer who fought those fires near Diamond Creek and it was hard to believe how they could ever be controlled given the shocking lack of the most basic equipment available. If you had a knapsack spray you were one of the elite. I rode to the fires in the back of a sand truck equipped with a hessian bag that was then dumped into a 44 gallon drum of water and along with dozens of others then sent out to try and stop a crown fire travelling at enormous speed. I joined the CFA as a volunteer in 1967 and it was like going into a different world. We had good equipment then and it has continued to improve from that time. Victoria is very lucky to have such an excellent volunteer organisation to protect most of the State. I hope that continues to be the case but that depends on having a State Government that is committed to backing the volunteers and not stabbing them in the back when commanded to by Marshall and his thuggish mates in the UFU.

Paul Jan 12, 2017
I remember being at the new Calder Raceway. We looked over to the Dandenongs unusually clear on a hot summers day. Then we saw it. An orange stripe running up the mountain. The Dandenongs were ablaze. People from all over volunteered to fight the fires and a chap I met later in life said how he and a group of others were put in a truck and taken to a paddock and given beaters. "If a fire comes beat it out." He got the feeling they were taken out of the way so they would feel useful yet not get into danger.

Yarra Ranges report Wednesday 17 January 1962
Serious fires throughout the Dandenong Ranges and the Upper Yarra Valley. Fires at The basin, Ferny Creek, Ferntree Gully, Sassafras, Olinda, Montrose, Kilsyth & Upwey.
The Upper Yarra Valley recorded 4 fatalities, all from the Ockwell Family when the fire which started in Healesville reached the Dalry valley in Launching Place.
Homes were lost in Woori Yallock, and Don Valley.
The townships of Launching Place and Yarra Junction were threatened by the fire.

Hepburn Shire Municipal Fire Management Plan 1962 There was a major fire that went through the west of Daylesford

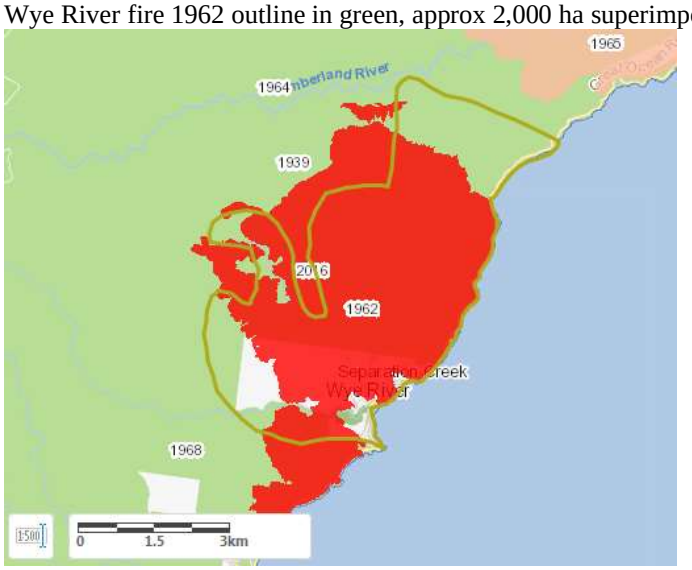
Canberra Times Saturday 20 January 1962
Good Rain, With Cool Change, Sweeps Fire Area In Victoria
MELBOURNE, Friday

An unexpected cool change early lo-day brought good rains to many areas devastated by bushfires this week.
Last night the Melbourne Weather Bureau had predicted hot conditions today before the arrival of a cool change and to-day had been declared a day of acute fire danger.
A top temperature of 97 had been forecast for Melbourne. The Bureau said to-day that a secondary depression had developed right over Melbourne in the night. This development could not be foreseen yesterday when the forecast for to-day was being prepared. The Bureau expects mild weather, with a few showers, at least until Sunday, giving firefighters an excellent opportunity to mop up.
To-day fire fighters in the Dandenong's pulled down trees still smouldering and removed smoking stumps. Many worked in raincoats and trudged through mud as they went about their tasks. Falls were light in the city but more than half an inch fell in most bushfire areas east of Melbourne.
The Bushfire Relief Committee today made arrangements for swift help for bushfire victims. It authorised municipal officers in fire-damaged areas to give immediate financial help in urgent cases.
Gifts to the appeal by the Lord Mayor of Melbourne for bushfire victims already are near £40,000.
The Minister for Transport, Sir Arthur Warner, said to day that a temporary bridge would be erected near Tarrawarra to enable train services to be maintained with Healesville. Fires on Tuesday destroyed the wooden railway bridge 'at Tarrawarra.
The line is expected to be open in about six weeks. Until then buses will operate between Lilydale and Healesville for train passengers. Earlier the Railways Com missioners expressed doubt about restoring the line to Healesville. This statement brought a storm of protests from that town.

Criticism
The Chief Officer of the Country Fire Authority, Mr. A. W. Larkins, said to-day that criticism or the way the Dandenongs fire had been handled were not justified. He said the men never lacked equipment. The army was not-called in until Tuesday deliberately because the C.F.A. wanted to bold the army men in reserve for an emergency. That emergency came on Tuesday and the army had prevented the fire from sweeping up the Yarra Valley to Warburton. Mr. Larkins said one of the lessons he had learned was that the system of recruiting fresh volunteers needed organising.
He also said municipalities would have to clear up around townships. Once a fire started it was too late.
Victorian police eon firmed last night that 376 homes were destroyed in the recent bushfires and that the count might go as high as 545. The official count was: Olinda 46, Wye River 11, Daylesford 7, Boronia 10, Belgrave 10, Ferntree Cully 2, Eltham 35, Yarra Junction 2, Yarra Glen 18. Ringwood 1, Mount Evelyn 50, Mitcham 4, Lilydale 6, Warrandyte 111, Healesville 16, Hurstbridge 47.

16 January: Otways (2,024 ha) Source Colac Otway Fire Management Plan Version 11 September 2012-2015

Wye River fire 1962 outline in green, approx 2,000 ha superimposed onto red December 2015 fire



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

NW of Lorne 1962 Approx 2,000 ha

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

1962/63

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.9	7	63

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1963)
31,000 ha of crown land burnt, 343 fires reported on crown land
Yarram 8000 ha, Heywood 5,200, Orbost 3,600 ha
Fuel Reduction Burn (FRB) 145,000 ac

Reported bushfire events

1963/64

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
20.6	8	108

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1964)
116,500 ha of crown land burnt, 355 fires reported on crown land
Large fire Mallacoota

FRB 95,000 ac

Major forest fires > 1000 ha Bennison Plains 76,950, Jamieson 4,570

Major grass fires > 4000 ha Broadford - Strath Creek 90 sq km = 9000ha

Reported bushfire events

1964/65

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
18.2	8	104

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC and CFA web site
17 January Longwood Deaths: 7 (all in one family) 6 houses
15 February – 13 March Gippsland Deaths: 3 more than 60 homes and shops Livestock: more than 4,000 Area burnt: 750,000 acres of forest, 40,000 acres of grassland

Emknowledge
A major grass fire near Longwood, in Northern Victoria, burnt six houses and 100,000 acres. Seven people from one family died when their vehicle crashed into a tree in thick smoke while they were undertaking a late evacuation.
7 deaths, 6 houses

FCV (1965)
322,200 ha of crown land burnt, 306 fires reported on crown land
Large fires Forrest, Macalister, Briagolong, Omeo
FRB 190,000 ac

Major forest fires > 1000 ha Tambo gorge 60,700, Briagalong 304,000, Barwon Downs 5,000, Kingower (St Arnaud) 12,000 ha on crown land

Major grass fires > 4000 ha Longwood 24,000ha, 7 dead, 6 houses, 30,000 stock, Inglewood / Kingower 8,300 ha on PP, 1 dead, 1 house
Gippsland 16,000 ha, 59 houses + stock

Reported bushfire events

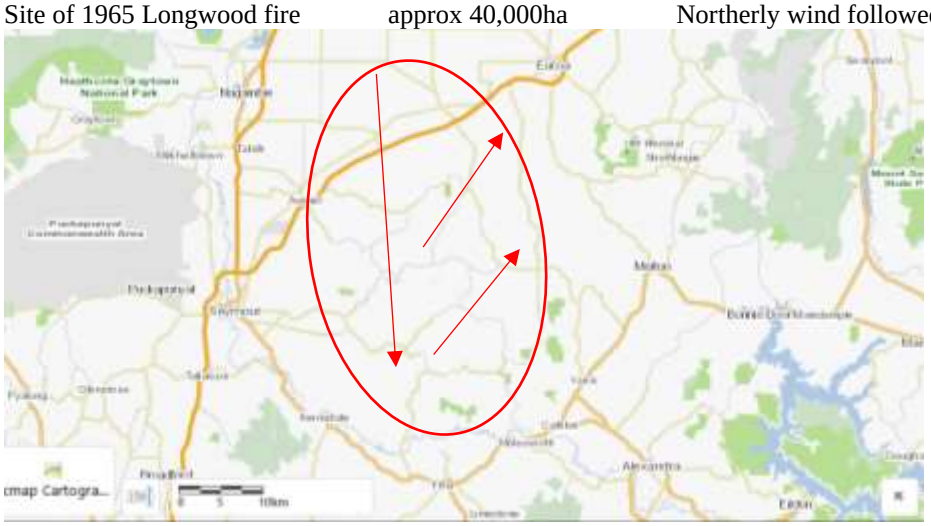
1964/65 Cheney Aust For 1976
Jan 17 Longwood fire total area burnt 40,000 ha over two days (32,000 ha in first 7 hours), 7 deaths, damage $1.6M

Feb 22 – 28 57,000 ha Omeo
Feb 22 – 28 Briagolong, Glenmaggie and Omeo fires escaped on Mar 3 and severe weather on that day plus Mar 6 grew them to 304,000 ha.

Shepparton News 18 January 1965
Longwood fire
7 lives lost
12 homes
27 out buildings, wool sheds, garages, incalculable machinery
39 haysheds, 2,000 tonnes of hay
38,977 acres pasture burnt = 16,200ha
44,353 head of stock lost
57,000 sheep to be fed
560 cattle to feed
15,000 sheep to be agisted
32 Shire bridges damaged

Granite News 23 Feb 2009
Some Recollections of Fires in the Highlands Area
Peg Lade
In January 1965, the huge Longwood fire (which killed 5 children and 2 adults trying to flee in a car), burnt through Tarcombe and Bungle Boori to Fernside and Granite Hills. Again, the S wind sent it back across the unburnt part of Bungle Boori and Mt Helen at Habbies Howe.
http://highlands.org.au/tgn/2009/GraniteNews_2009_02_23.pdf

Site of 1965 Longwood fire approx 40,000ha Northerly wind followed by SW change



Canberra Times Tues 18 Jan 1965
2,000 still fight death blaze
MELBOURNE, Monday. — The bushfire at **Longwood** in which nine people died was still burning today, but was under control.
The tragic story of seven deaths in one family was revealed today. The seven — two women and five children — were in one of three family cars fleeing from the fire to-
wards Longwood. They were about 100yds from Woorak, their farm-house home, when the car crashed into a tree. They were enveloped by flames and burnt to death.
The dead are Daisy Emily Oxenbury, about 70, of Longwood, her daughter-in-law Dorothy June Oxenbury, 36, and her three children, Lawrence 12, Peter 4, and Elizabeth, 15 months and the two children of Mr. and Mrs. Frank Oxenbury, nine year-old Kaye and Stephen, 8.

Cool weather and light rain today brought relief to the 2,000 fire fighters. Farmhouses, barns, and miles of fencing were destroyed and thousands of sheep and cattle were killed in the blaze, which swept through about 100,000 acres.
Soldiers from Puckapunyal and police spent today walking through charred blackened paddocks shooting maimed sheep and cattle. Bulldozers dug trenches to bury the stock.
Late this afternoon. C.I.B. detectives began inquiries at Miepoll about 15 miles to the north, where the fire is believed to have started.

Kingower / Inglewood fire
In the Kingower ranges fire near Bendigo on Sunday a 70-year-old man died while trying to fight the flames.
The finding of the body of firefighter Alan James James McKean today brought to nine the number of bushfire victims (They mean 2 here and 7 at Longford). After a day-long search by hundreds of fire-fighters in thick bush country in the Arnold district, the body of a missing fire-fighter, Alan James McKean, 30, a eucalyptus factory worker, of Verdon Street, Inglewood, was found this evening.
McKean went to fight the disastrous bushfire in the Kingower Ranges as a reserve member of the Inglewood Urban Fire Brigade on Sunday afternoon. About 4 p.m. he was seen disappearing beyond a pall of smoke and fire near a forest road where a fire break had been burned. The fire completely enveloped the area and he was reported missing.
About 50,000 acres were ravaged by the fire. Forests Commission fire fighters were tonight still battling to control the blaze at Birboo.

1965 21 February: Otways (12,000 ha). Source Colac Otway Fire Management Plan Version 11 September 2012-2015

The Age 23 Feb 1965
Gippsland Forest Fires Burn Out of Control
T'HREE forest fires which sprang into life at the week end "were still burning over 130,000 acres late last night.
Two were burning steadily out of control in inaccessible mountain country in Gippsland. Mr. Gill said the smallest of the fires burning out of control over 1500 acres 12 miles east of **Omeo** would be the greatest danger. This one could be headline news by the week end," Mr. Gill said. The fire, started last Tuesday by a lightning strike, flared up on Saturday, climbing 3000 feet to a ridge on one side of a Gorge. Yesterday an attempt was made to stop it on a front along the river but the fire jumped the river and raced 3000 feet to the top of the ridge on the opposite side. Late last night, Mr. Gill said, the first was increasing steadily in trackless, precipitous and waterless country near the **head of the Tambo River**. Thirty-five men and two bulldozers were attempting to contain the fire by driving a break along the top of the ridge, but the blaze was expanding much faster than it could be controlled.

The third, although still burning over some 8000 acres in the **Otway Ranges between Lome and Wye River**, was described by Forests Commission duty officer (Mr. J. Gill) as "three-quarters under control." Seven hundred acres near the Cumberland River were being back-burned from the Great Ocean Road, and more than eight bulldozers and 10 tankers were standing by last night. "Provided we control this one by the week end it will be all right, Mr. Gill said.

Grazing fires were burning in State forests country, and apart from some rough grazing country at Treasure's, near Omeo, no farm land was threatened, Mr. Gill said.
Three scrub-country fires near Cann River were brought under control by commission fire fighters late yesterday. Another three at Club Terrace, Genoa and Combienbar were also controlled.

Police said yesterday they believed a spark from a water pump engine over a well on a property at Haddon started the bushfire which on Sunday destroyed 6000 acres of farmland and two houses.
Constable F. Sharp, of night an earlier report that the fire started after a petrol engine explosion was incorrect. The fire, brought under control late Sunday also destroyed around 250 sheep and more than 20 haysheds as it swept from Haddon toward Napoleons

Canberra Times Thurs 4 Mar 1965

Bushfires rage in Victoria, Three dead
MELBOURNE, Wednesday.—Three people died today in a bushfire which raged through North Eltham, about 15 miles from Melbourne. The victims were three men. A fourth man is feared to be dead.
The three victims of the North Eltham fire were trapped by flames in a valley. Their bodies were found only a few yards apart. They were named by police tonight as Mr. George Crowe, 78, of North Eltham, William John Ewers, 64, and John Laurence Coleman, 31, both of Eltham. The other two have not been identified. They are believed to be a man aged about 40 and an 18-year-old youth.
At least 12 homes were destroyed by the fire, the worst in Victoria since 1962, when eight lives were lost and hundreds of homes burnt down at Warrandyte.
At one time the township of Eltham was threatened, but a cool change swept in from the south and held it back. the. wall of flames.
A trickle of water
Residents ran into the streets as the flame raced towards their houses. Others frantically dug firebreaks around their homes. Mrs. Sue McCourt wept when firemen arrived while as she was vainly trying to slop the flames with a trickle of water from the garden hose. Fire fighters were severely hampered by lack of water and narrow roads. The blaze, which began in above century heat, turned toward Wattle Glen, where two houses were gutted. Then the flames raced towards Hurstbridge to the north. Firemen battling desperately controlled the fire late this afternoon.

Five forest fires were still burning in Victoria tonight. Three of them, in the
Buckland Valley, in the north-east of the State, have damaged 17,000 acres of timber country.
Near Omeo, north-east of Dargo, in the Gippsland area, more than 10,000 acres has been burnt by a fire which has been burning for a week.
At Forest, in the south west, a fire has been burning for 12 days.

21 February - 13 March 1965 Source Romsey website
Fires in Gippsland burnt for 17 days, covering 300,000 hectares of forest and 15,000 hectares of grassland. Over 60 buildings and 4,000 stock were destroyed.

Surf Coast Shire March 1965, over 8,000 acres burnt and one house and several buildings destroyed at Big Hill –Eastern View (Near Lorne)

1965/66

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.8	12	107

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1966)
28,400 ha of crown land burnt, 358 fires reported on crown land
FRB 464,000 ac

Reported bushfire events

Surf Coast Shire March 1966, bushfire destroyed 14 houses at Anglesea, with property damage of $100,000.

1966 A bushfire at Anglesea, fanned by 40 mph winds destroyed 14 houses, damaged several others and burnt out 1,000 acres of bushland. Two hundred fire-fighters saved the main town area. *https://torquayhistory.com/torquay-fires/*

1966/67

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
16.3	10	126

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1967)
15,400 ha of crown land burnt, 287 fires reported on crown land
Large fires at Anglesea and Lal Lal
FRB 423,000 ac

Major grass fires > 4000 ha Lal Lal 8,600 ha, 5 houses, 12,000 sheep

ICA Catastrophe Data Included for comparison purposes
Hobart Bushfires 7 Feb 1967
An event which became known as the Black Tuesday bushfires. Reported at the time as the most deadly bushfires that Tasmania has ever experienced, leaving 62 people dead, 900 injured and over seven thousand homeless. 110 separate fire fronts burnt through some 2,640 square kilometres (652,000 acres) of land in Southern Tasmania within the space of five hours. Fires raged from near Hamilton and Bothwell to the D'Entrecasteaux Channel as well as Snug. There was extensive damage to agricultural property along the Channel, the Derwent Valley and the Huon Valley. Fires also destroyed forest, public infrastructure and properties around Mount Wellington and many small towns along the Derwent estuary and east of Hobart. The worst of the fires was the Hobart Fire, which encroached upon the city of Hobart. In total, the fires claimed 62 lives in a single day. Property loss was also extensive with 1293 homes and over 1700 other buildings destroyed. The fires destroyed 80 bridges, 4800 sections of power lines, 1500 motor vehicles and over 100 other structures. It was estimated that at least 62,000 farm animals were killed. The resulting insurance payout was the then largest in Australian history.
$40M in 1967 $2.16B in 2017

Reported bushfire events

Surf Coast Shire 23 November 1966, fire in the Wormbete area, with estimated 32,000 acres burnt.

23 November: Otways - Modewarre, Wurdale, Anglesea (15,000 ha).
Source Colac Otway Fire Management Plan Version 11 September 2012-2015,

February 7, 1967 Mornington Peninsula Shire
Red Hill One of the biggest fires the Peninsula has experienced. The fire started around Shergold's Lane, Dromana and swept up across Arthur's Seat Rd, through Red Hill and back on the wind change all the way to the Bittern-Dromana Rd. One fatality was recorded.

The fire of 1967 burnt with the wind change all the way through to the east to Eaton's Cutting McRae / Arthur's Seat Town Protection Plan 2010 Morn Pen Council

Arthurs Seat fire deduced area no fire map found yet

1967/68

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
14.2	19	228

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
19 February 1968 Dandenong Ranges, The Basin, Upwey Deaths: nil
People rendered homeless: 200 Buildings: 64 Area burnt: 1,920 hectares

COAG
1968 February 1920 ha 64 homes and other buildings
Dandenong Ranges, The Basin, Upwey

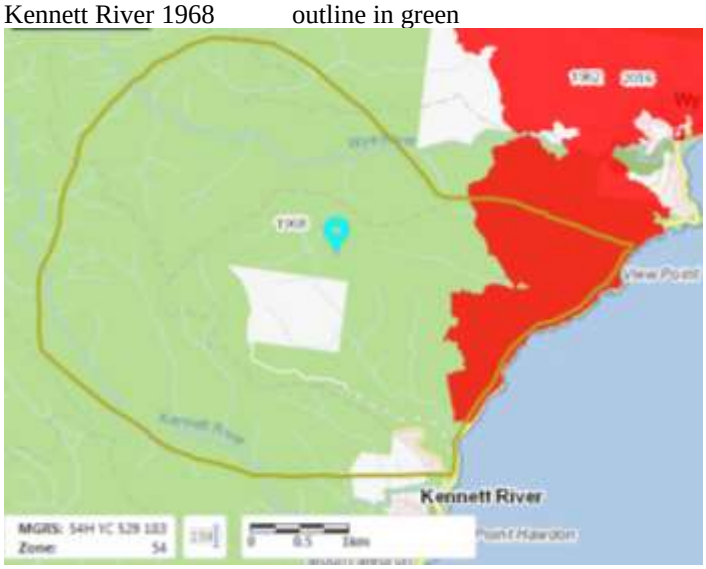
CFA web site
1968 19 February The Basin, Upwey 64 houses

FCV (1968)
218,800 ha of crown land burnt, 522 fires reported on crown land
Large fires at Barongarook, Anglesea, Lorne, Myrtleford
FRB 153,000 ac

Major forest fires > 1000 ha Cann River 8,000+ 13,000+, Orbost 23,000+5,000+7,000+8,000+5,000+, Nowa 8,000+3,000+, Neerim 5,000+, Myrtleford 20,000

Major grass fires > 4000 ha Rosewhite 20,000 ha + 1500 stock, Winton 7,000 ha +1 house+300 stock

Kennett River 1968 outline in green



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

1968 Colac Gellibrand road, 10 miles south of Colac, Barangarook threatened (810 ha) (11 Jan) also a fire on north side of Lorne (1215 ha) (6 Feb).
Source Colac Otway Fire Management Plan Version 11 September 2012-2015,

19 February 1968 Source Romsey website
A fire in the Dandenong Ranges burnt 1,920 hectares and destroyed 53 houses and over 10 other buildings. Areas affected include The Basin and Upwey.

Surf Coast Shire February 1968, large fire in the Lorne area occupied 27 brigades for four days. Over 5,000 acres burnt and several buildings.

1968 Fire at Mudgegonga-Dederang burnt out 33,000 hectares some of which was in the same vicinity as the Black Saturday fire. 17 property owners who suffered as a result of the bushfire sued the State Electricity Commission.
http://nlgsolicitors.com.au/bushfire/

1968/69

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
7.2	10	96

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
8–9 January 1969 Lara, Daylesford, Bulgana, Yea, Darraweit, Kangaroo Flat, Korongvale Deaths: 23 People rendered homeless: 800 Buildings: 251 Livestock: more than 12,000 Area burnt: 250,000 hectares

COAG and CFA website
January 280 fires broke out, affecting Lara, Daylesford, Bulgana, Yea, Darraweit, Kangaroo Flat, Korongvale
Damage toll 22 deaths 250 000 ha 230 homes, 21 schools/church/hall, >12 000 stock

FCV (1969)
28,600 ha of crown land burnt, 251 fires reported on crown land
Large fires at Taggerty – Black Range, Daylesford, Stawell-Grampians, Beechworth Gellibrand districts
FRB 302,000 ac

Major forest fires > 1000 ha Lara 14,500, Mt Franklin 23,570, St Arnaud 7,300, Alexandra 42,500, Maldon 12,000
NOTE - a lot of these areas include private property

Major grass fires > 4000 ha Lara 12,000 ha, 19 dead, 47 houses, 4000 stock,
Teesdale 5,600 ha 9 houses, 20,000 stock,
Yea Flowerdale 85,000ha, 7 dead 22 houses,
Darraweit Guim 6,000ha, 1 dead, 12 houses, 5,000 stock,
Truganina 12,000 28 houses Mt Cameron
Daylesford 40,000ha, 1 dead, 29 houses, 30,000 stock,
Bulgana 8,000 ha, Tatyoon 5,000 ha 20,000 stock,
Maldon 12,000 ha, 2 houses, 1,500 stock
Bonang 16,000 ha 3 houses 20,000 stock,
This adds up to 28 dead

FCV Annual Report 1968/69
Seasonal Conditions.
Above average rainfall during winter, spring and early summer delayed the start of the fire season, except in Eastern Victoria, where the 1967-68 drought extended until December. This mild early summer weather was replaced by the sudden development of severe fire conditions on 8th January which resulted in the occurrence of serious fires in many parts of the State.
A general break in the weather occurred in February and the lifting of the prohibited period in mid-March terminated what had been a short but severe fire season.

Origins and Incidence of Fires.
Commission personnel attended 391 fires, of which 50 were outside and 341 inside the fire protected area. Of the latter, 90 originated in and were confined to private property, 29 originated in private property and burned into State forest, 219 originated in State forest and 3 in National Parks.
The total area of State forest burned was 71,608 acres of which 48 per cent. was classified as non-commercial forest. The burned area included 148 acres of sugar gum plantation, 95 acres of P. radiata plantation and 447 acres of National Parks.
No fires were recorded as having been caused by grazing interests.
Serious forest fires occurred in the Niagaroon, Daylesford, Stawell, Beechworth and

Gellibrand Districts
The Commission gave substantial assistance to the Country Fire Authority at fires which occurred at Lara, Bannockburn**, Borung** and Maldon on 8th January.
A feature of the forest fires was that, with the exception of the two in the Grampians, all commenced in grass country and spread into the State forest on wide fronts under the influence of the extreme conditions prevailing on 8th January.
Undoubtedly the most serious threat to forest interests was raised by the fire which spread from the vicinity of Yea into the forest on the northern end of the Black Range near Taggerty. Under tornadic conditions, the fire on the Black Range showered spot fires onto the western flanks of the valuable Mountain ash regrowth forests of the Royston-Rubicon valleys 10 to 14 miles away and resulted in six spot fires which required immediate control.

Following this mass spotting another fire occurred at Mt. Duffy in the Big River Basin, 25 miles distant and a resident at Woods Point, 40 miles distant, reported that a charred piece of bark, too hot to handle had landed there. These occurrences illustrated the tremendous potential which fires in native hardwoods have to spread long distances by spotting, and emphasize the difficulty in controlling fires in Victorian forests under extreme meteorological conditions.

ICA Catastrophe Data
On 8 January 1969, 230 fires, burnt more than 324,000 hectares. Twenty-one of these fires were highly destructive with the worst occurring on the urban fringe of Melbourne.
A fire at Anakie near the Geelong-Ballan Road which had been extinguished the previous day flared up again and moved quickly towards Lara where it destroyed a 90 year old gothic church and 40 houses.
The worst death toll occurred when a fast-moving grass fire approached the four-lane Melbourne-Geelong Expressway at Lara. Seventeen people died when they left their cars and, in the dense smoke, tried to outrun the fire. Six people who sheltered in their cars survived.
The fire burnt to the edge of suburban Melbourne affecting Altona, Diamond Valley and Kangaroo Ground. In total 23 people died, 100 were injured, and 230 homes and 21 buildings were destroyed.
$7.8M in 1969 $477M in 2017

Reported bushfire events

8 January 1969 Borung fire 120,000 acres. = 50,000ha
Source Walmer Fire Brigade by Deanna Neville Published on Nov 29, 2011
Deanna mentions Borung fire was 120,000 acres. FCV Annual Report mentions they helped CFA at Borung. Borung is near Wedderburn.
No public map is readily available for verification. As of 2018, fires earlier than 1970 have been removed from DELWP's public mapping site.

8 Jan 1969 Baringhup fire
Walmer Fire Brigade CFA
Walmer Fire Brigade by Deanna Neville Published on Nov 29, 2011

Devastating fire

The Walmer Brigade was devastated by the disastrous fire on the 8th January 1969 when half of the Brigade area was blackened. The fire started at Baringhup at 12 noon and was contained at South Ravenswood at 10pm, burning 60,000 acres (24,000 hectares).

R.O. Norman Winn said that while the fire was not the biggest in the state that day, it had been one of the hottest:

9am temp. was 85 deg F., Hum. 17%, 40MPH wind NW
Heavy with dust.
Noon temp was 98 deg F., hum 8%, wind 60MPH (100kph).
3pm temp was 108 deg F., hum 5%, wind 60-80MPH.

There were limited fire trucks available to attend the fire due to other major fires in the state – Lara, Campbell Town 90,000 acres; Borung 120,000 acres.

The outstanding effort by members of the Brigade and landowners on the southern perimeter of the fire at Walmer, who, using private equipment, took a stand and created fire breaks and saved a much greater catastrophe.

Two brigade members lost their homes.

A survey of the Walmer Brigade area immediately after the fire indicated there were 40 landowners and their families plus six households at McKenzies Hill.

All were members of the Brigade.

8 January 1969 Source Romsey website
280 fires broke out on the 8th of January 1969. Of these, 12 grass fires reached major proportions and burnt 250,000 hectares. Areas seriously affected included Lara, Daylesford, Dulgana, Yea, Darraweit, Kangaroo Flat and Korongvale. Twenty-three people died, including 17 motorists at Lara, trapped on the Geelong to Melbourne freeway. The fires also destroyed 230 houses, 21 other buildings and more than 12,000 stock.

8 Jan 1969 Cheney Aust For 1976
strong W winds and S change
Grass of S and W Vic 230 fires burnt 267,000 ha killed 23 people, 181 fires < 4 ha, 18 were > 400 ha, eg, 90,000 in Alexandra Yea, 41,000 ha near Daylesford
Of the 23 fatalities, 17 occurred on Geelong Rd.
Losses 230 houses, 34 major buildings, 77,000 sheep, 900 cattle, 10,000 km fencing
Estimated damage $11-15 M

Geelong City Council website A fire that started on the fringe of the You Yangs impacted the areas of Lara and Little River killed 18 individuals including 17 motorists on the Princes Highway (now the Princes Freeway). 43 homes in Lara were destroyed; 424 hectares of crop were destroyed along with 18,000 hectares of farmland and 6,000 head of sheep.

Canberra Times Thursday 9 January 1969
A day of century heat, 13 KILLED IN 60mph winds—and carelessness

MELBOURNE, Wednesday.
Thirteen people have died and at least 110 houses have been burnt in bushfires sweeping through Victoria.
Hospitals in Geelong and Melbourne have admitted 27 persons with injuries and eight of them are listed as serious or critical. Hundreds more were treated for burns at city and district hospitals. At the township of Lara, 36 miles south-west of Melbourne, 10 persons have died and at least 41 houses have been burnt.
Six of the victims, including two children, died in three cars when 40-foot flames jumped the Melbourne-Geelong highway.
Seventy-six major fires and countless small outbreaks — the worst fires in Victoria for 25 years — struck as the State was having its hottest day this summer with above century heat and wind gusts of nearly 60 miles an hour.
The chief officer of the Country Fire Authority, Mr A. G. Pitfield, said late to- night the situation was still extremely dangerous with several big fires still out of control.
He said the fires should never have happened and blamed careless persons who failed to clear and burn-off their properties for 99 per cent of the outbreaks.
The State Government has declared Lara a disaster area and relief workers were on their way tonight.
The six persons who died near their cars are believed to have alighted and to have tried to run from the flames.
A fireman died of a heart attack fighting a fire near Bendigo, **another was killed near Ararat** when a fire tanker crashed and the remains of an elderly man were found in his house in Molesworthy.

Church gutted
At Lara dozens of families were evacuated from the path of the fire and hundreds were left homeless.
An elderly woman was burnt to death in her house in Forest Road, Lara, while fire fighters fought desperately with beaters and knapsack sprays to save her. The flames jumped the road and gutted the 103-year-old State school directly opposite. Two more women perished near the main gate at Avalon aerodrome and near the Corio overpass. Flames completely gutted the Lara Holy Trinity Church of England while the Vicar, the Rev Fred Dearnaley, watched helplessly. "There just wasn't any water", Mr Dearnaley said. "I got my wife and five children out fast, and then tried to stem the fire with a hand bucket. But it was hopeless. "There was going to be a marriage here on Saturday, but I guess they'll have to find some where else".
Police and Country Fire Authority firefighters set up an emergency radio headquarters at the Lara infant welfare centre.
"The strong westerly winds have hampered us all day", Inspector F. C. Beattie, the co-ordinating officer, said. "There have been a lot of casualties suffering burns and heat exhaustion".
A thick yellow smoke haze hung over the You Yangs all day. Police evacuated the iny hamlet of Little River (population about 300), shortly before noon. Mr Gerald Shaw, 40, the last to leave, said, "The western side of the district was almost an entire sheet of flame when I saw it, and anything could happen." It's the most frightening thing I've ever seen".
At Werribee Hospital, near Lara weary firefighters lined the corridors until late tonight waiting for treatment. Matron M. Gleeson said that more than 100 people had been treated at the hospital.
Mercy dash fails
Earlier a doctor had at- tempted a mercy dash to the city with a critically burnt boy.
"The doctor got as far as Laverton when flames forced his car to return", Matron Gleeson said. "We knew that time was important and that the boy needed urgent treatment but the doctor could not get through". The boy was later taken to Royal Children's Hospital. Melbourne, where he died tonight.
Little heaps of furniture stacked outside rows of suburban homes, ambulances and police cars carrying the dead and injured, the burnt out hulks of homes and cars, and groups of terrified women and children. The scene was reproduced often along the road between Lara and Altona. Outside one house a lone woman stood armed with a hose and a bucket. Ashes rained on the area like snowflakes. All the neighbouring houses were deserted. Exhausted police and firemen were ordered into the area to evacuate the population. Several chemical plants were in danger. Had they exploded everything within a five-mile radius would have been levelled.
Factories escape
At one stage the chemical plants were completely surrounded by fire, and firemen fought literally for their lives to protect them. Eventually the fire passed leaving the factories intact, but scorching everything around them.
More than half the little Scottish settlement of Darraweit Guim, 36 miles north of Melbourne, was burnt to the ground. The Mechanics Hall, the Catholic Church, and seven houses were in ruins.

Darraweit Guim was completely cut off and the fire loomed over the hills and raced towards Wallan on the Hume Highway. The Wallan postmaster, Mr C. K. Rowland, said, "I was speaking to the postmistress over there, Mrs Turner. She said the fire was at her fence — then she was cut off". (Mrs Turner's house was saved).
Inspector M. Fisher, of Brunswick Police gathered Wallan residents at the local hotel for an evacuation, but the fire was stopped at the highway. "I don't know how they did it", he said. "But it's a mercy".
About thirty houses and a public hall were destroyed by fire in the township of Diamond Creek. The group officer of the Diamond Creek Fire Brigade, Mr Tom Harrington, said tonight that he thought it was a "miracle" that no-one lost their lives in the fires. A relief centre for the homeless was set up by the Diamond Valley Shire Council. Mr Harrington said that the first fire call in the town was received at 10.45 am. "Within 20 minutes there were five more fires and it seemed like the whole town was alight", he said. "It was a chaotic day. All our best plans for fighting the fires became disorganised. "As 60-mile-an-hour winds swept fires through different parts of the town many fire fighters were unable to get from one fire to another.
13 DEAD IN VICTORIAN FIRES
Late tonight about 110 houses had been destroyed, with three big fires out of control. These were at Daylesford, 55 miles north-west of Melbourne where a fire which moved from nearby Ballarat during the day, at Yea about 65 miles from Melbourne where a big fire on a 30-mile front, was roaring through thick forest country and at Flowerdale, about 15 miles south of Yea. Police late tonight released the names of the people who died in the fire. They were:
Joan Mary Chesterfield, 42, of Huntingdale. Roger Julian Chesterfield, 9, of Huntingdale. Adelaide Patterson, 41, of Glenroy. George Daw, 57, of Williamstown. Maia Daw, 53, of Williamstown. James Henry Davis, 40, of Glen Waverley. Shirley Davis, 38, of Glen Waverley. Karen Davis, 11 of Glen Waverley. Mark Davis, 2, of Glen Waverley. Kenneth James Clark, 27, volunteer fireman, of Ararat.
Police have not yet identified a 90-year-old man whose remains were found in his house and a woman whose body was found in the ruins of a house in Lara.
Lyle Jackson, 52, collapsed and died while fighting a fire near his home at Kangaroo Flat near Bendigo.

The Acting Prime Minister, Mr McEwen, said in Canberra yesterday the Commonwealth was ready to assist the Victorian Government on a dollar-for-dollar basis for the relief of personal hard- ship and distress suffered by people in the bushfires. Mr McEwen said the de- fence forces were also pre- pared to give authorities who have control of the fire fighting operations the most assistance that is possible. "I was most distressed to hear of the shocking bush fires which have today occurred in Victoria", he said.

Bushfires in Our History
1969 - Lara Fire
http://www.blacksaturdaymuseum.com/LaraFire.htm

8 January 1969 - Fast Moving Grass Fire

23 people died which included 17 motorists who were trapped on the Geelong to Melbourne freeway at Lara Victoria. 280 fires broke out on this day in 1969.
12 grass fires burnt 250,000 hectares.

Areas seriously affected included Lara, Daylesford, Dulgana, Yea, Darraweit, Kangaroo Flat and Korongvale. including The fires also destroyed 230 houses, 21 other buildings and more than 12,000 stock.

Footscray footballer Gary Dempsey almost lost his life in the Lara fires spending seven weeks in hospital. 20 years old Dempsey had only played two seasons with Footscray, he was told he would never play football again. He came back to take his total to 329 games with the Bulldogs and North Melbourne, winning the Brownlow Medal in 1975.

The grassfire was fanned by strong winds which generated a fire ball around 4 meters high the motorists were caught by a wind change.

Freelance TV News cameraman Barry Thomas who captured the scene on 16mm film shortly after the fire front went through, said a number of people who died left their cars and tried to out run the fire, he also noted at the time the trees on the roadside suffered very little damage.

CFA Lara Facebook
On the day that Lara burnt in 1969 the fire started 9.15am near Carrs Road and Bacchus Marsh Road. By 9.55am it had crossed Windemere Road and travelled down Kees Road very quickly reaching 6 Ways. At 10am, just 45 minutes after it started, it crossed the railway line and by 10.20am it had crossed the Princes Highway. By then 17 people were dead and 40+ homes, Lara Lake Primary School, the Anglican Church in Flinders Road, the Petrol Station, the railway infrastructure plus much more were all destroyed or burning. That all happened in 1 hour and 15 minutes!!!!!. The residents were all in shock, and the township of Lara was almost wiped off the map.

These 2 maps are hand drawn maps from the original brigade report into the fires in 8/1/1969, the cars are on the Princes Highway

Hepburn Shire Municipal Fire Management Plan 8 January 1969
Cambelltown – Daylesford 2564 ha, many houses, sheds and stock lost

Granite News 23 Feb 2009
Some Recollections of Fires in the Highlands Area
Peg Lade
9th January 1969 – another shocking day – screaming wind and high temps – a fire started near Ghin Ghin, another at Junction Hill, W of Yea. This burnt to Alexandra on NW wind, with shocking losses of stock and property. The S change brought it to the top of the Switzerland Range at 4 pm where the Army was mobilized with a bulldozed break and many troops.
http://highlands.org.au/tgn/2009/GraniteNews_2009_02_23.pdf

Surf Coast Shire 18 January 1969, fires burnt over 2,000 hectares at both Bellbrae and Gnarwarre. Multiple fires in southern and central Victoria.

1969 Warrandyte fire

1969 - area of Warrandyte destroyed by bushfires *(Source: CFA website)*

http://warrandyteheritage.yolasite.com/natural-disasters.php

1969/70

Weather

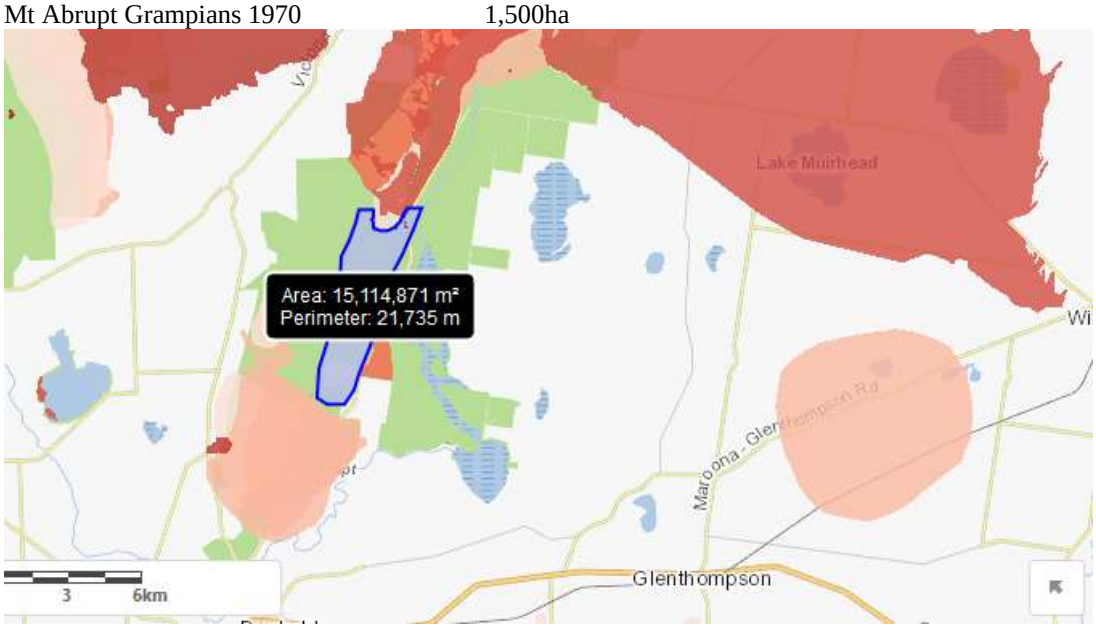
Dryness Index	Days >35^{0}C	Seasonal Severity Level
6.9	2	19

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1970)
5,028 ha of crown land burnt, 180 fires reported on crown land
FRB 174,000 ac

Mt Abrupt Grampians 1970 1,500ha

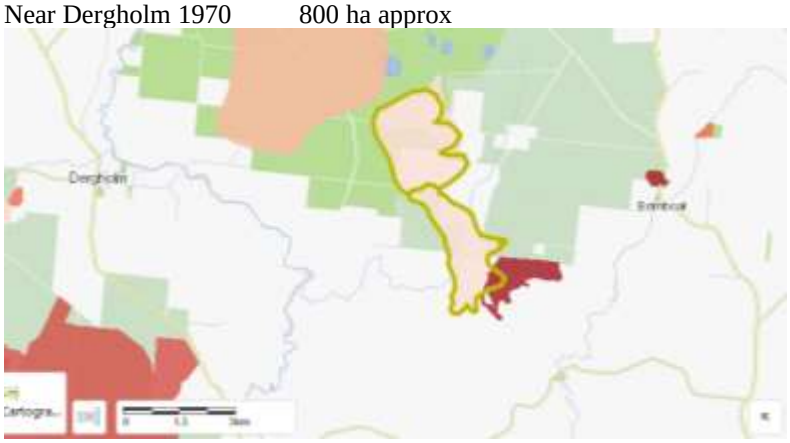


http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Lower Glenelg National Park 1970 NE of Nelson 1,000ha approx

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Near Dergholm 1970 800 ha approx



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Reported bushfire events

1970/71

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
3.6	8	61

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

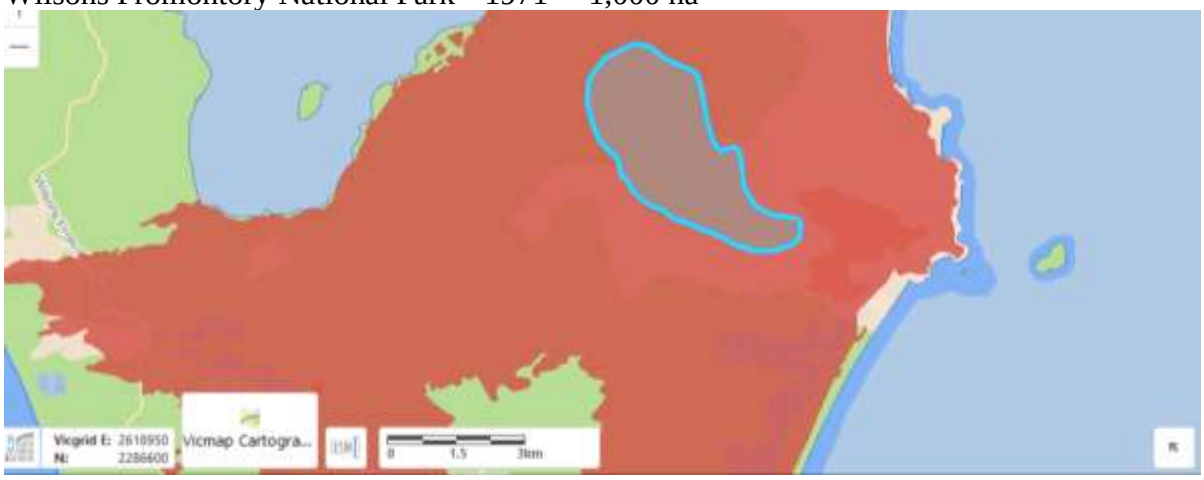
Official bushfire records

FCV (1971)
4,700 ha of crown land burnt, 321 fires reported on crown land
Large fires at Wilsons Prom 320 ha
FRB 496,000 ac

Talbot fire 1971 560ha

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Wilsons Promontory National Park 1971 1,000 ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

This part of the Prom underwent a succession of bushfires during the 70's – 1971, 1973, 1974 and 1976. Then nothing till 2009.

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

Yarra Ranges report Fires broke out in The Basin & Sassafras

1971/72

Weather

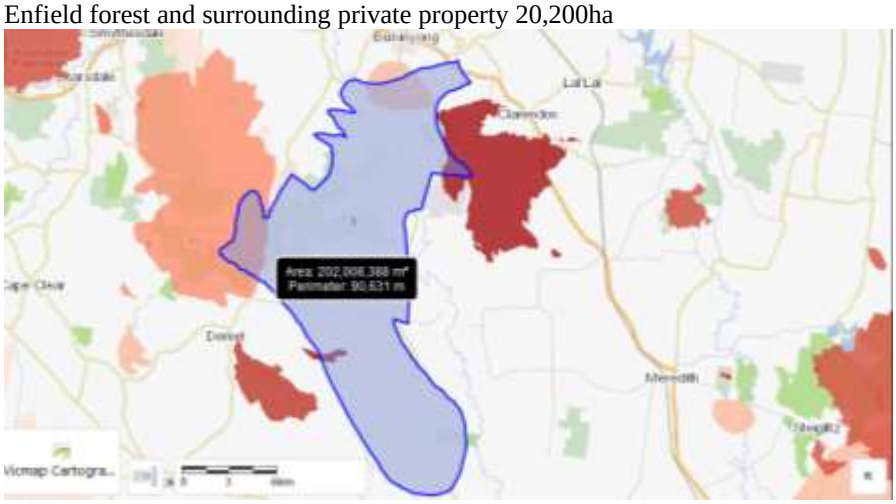
Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.2	1	9

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1972)
17,080 ha of crown land burnt, 228 fires reported on crown land 10% (= 23) of these began on private property
Large fire at Wilsons Prom 320 ha
FRB 834,000 ac

Enfield forest and surrounding private property 20,200ha



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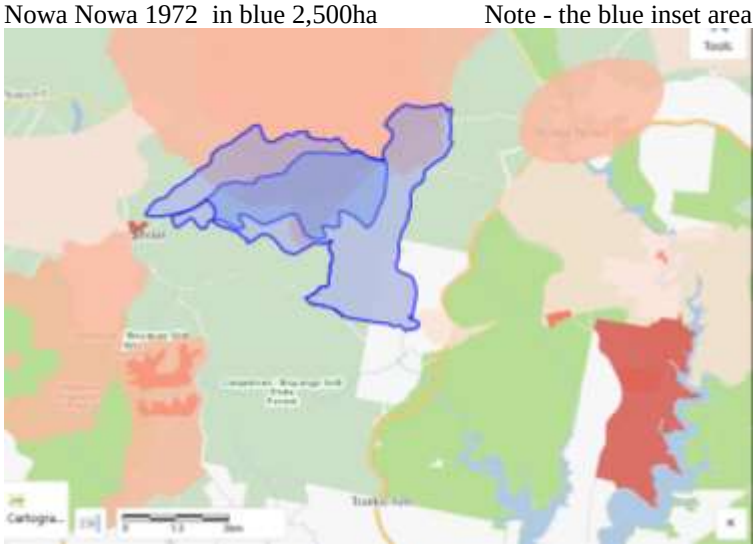
Nowa Nowa 1972 in blue 2,500ha Note - the blue inset area was recorded as burnt in 1973



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Gellibrand Lower in blue 560ha, Devondale /Mt Acland in blue 1800ha

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

1972/73

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
14.3	14	171

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

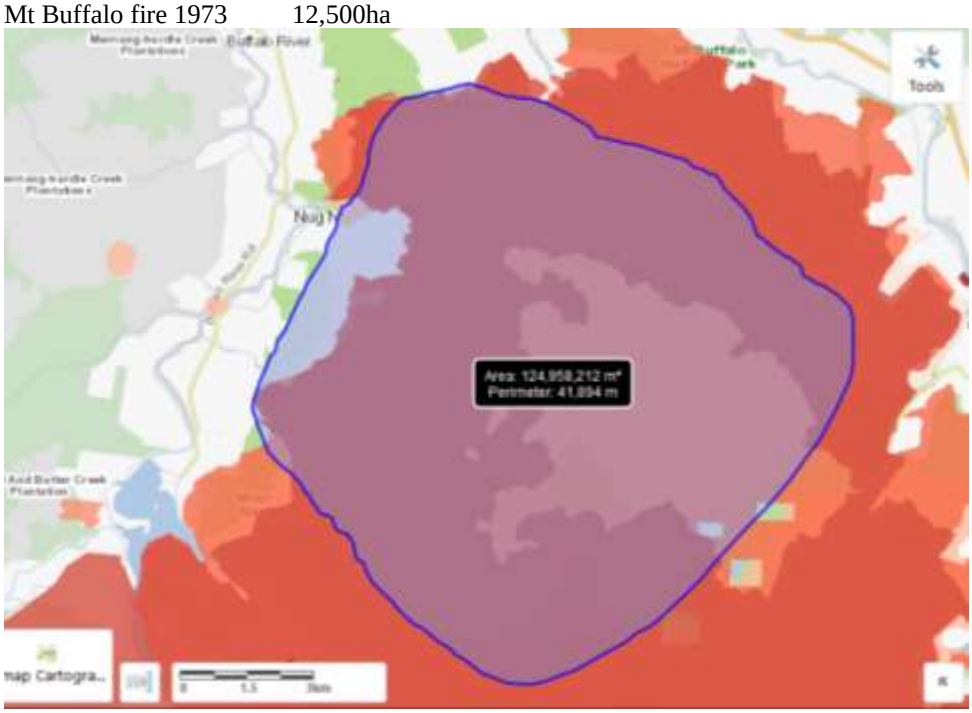
VBRC
December 1972 Mt Buffalo Deaths: nil Area burnt: 12,140 hectares

FCV (1973)
90,400 ha of crown land burnt, 411 fires reported on crown land 3% (= 14) of these began on private property
Large fires at Mt Buffalo, Wentworth River, Cann River and Mansfield
FRB 90,000 ac

Major forest fires > 1000 ha Mt Buffalo,12,500, Wentworth - Dargo 6,000

Major grass fires > 4000 ha Pyalong 9,600 ha

Mt Buffalo fire 1973 12,500ha



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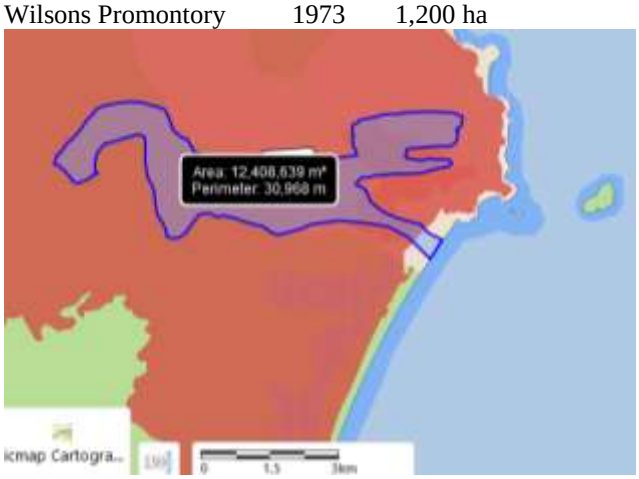
Wilsons Promontory 1973 1,200 ha



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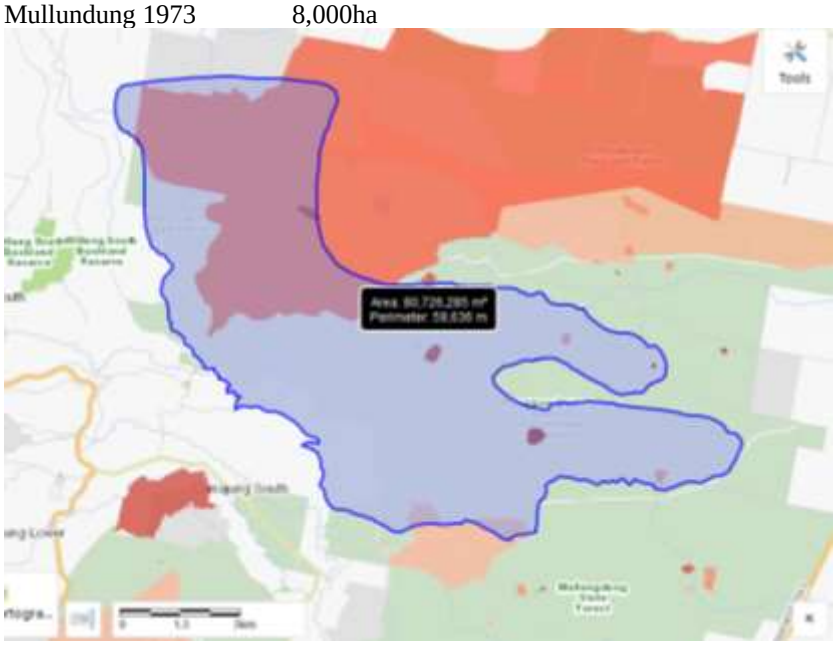
Mullundung 1973 8,000ha



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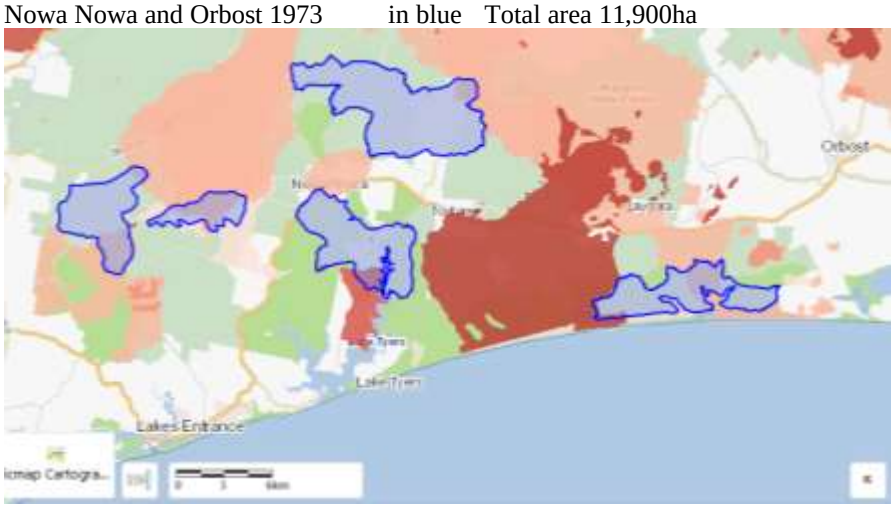
Nowa Nowa and Orbost 1973 in blue Total area 11,900ha



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Mallacoota 1973 5,200ha

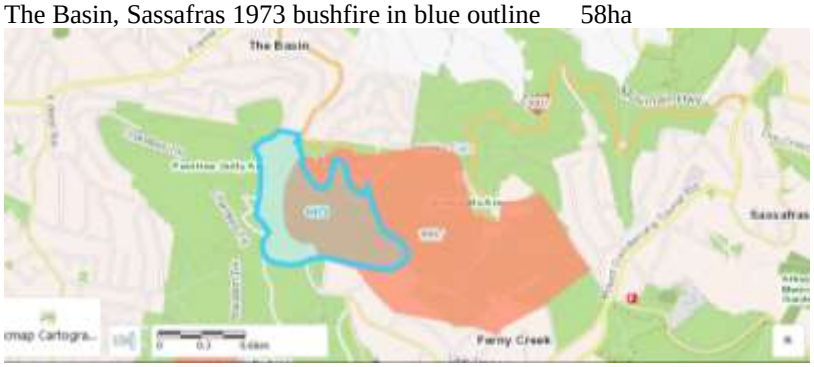
http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

14 December 1972 Source Romsey website
A fire at Mount Buffalo burnt for 12 days, covering an area of approximately 12,140 hectares. This area included 7,400 hectares of State forest and 4,520 hectares of National Park.

Yarra Ranges report Fires in the Ferntree Gully National Park at Lysterfield, also at The Basin, Sassafras, Upper Ferntree Gully, Upwey & Ferny Creek.

The Basin, Sassafras 1973 bushfire in blue outline 58ha



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Lysterfield 1973 in blue 1,280ha

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

19 – 21 January, 1973 The 1973 Bush Fires in Lysterfield and Rowville
Notes taken from article by Bryan Power First published in the March 2003 edition of the Rowville-Lysterfield Community News
The most spectacular fire to hit our district occurred on Friday, 19 January 1973, when a series of deliberately lit fires burnt out more than 5,000 acres. I shall recount the story of that day from the reports in the Melbourne dailies: The Herald, The Sun and The Age.
Friday, 19 January 1973 was a brute of a day with the temperature climbing towards 39 degrees by early afternoon and a strong wind blowing from the north. The day had been declared a total fire ban day – the 13th of the summer – and the whole of the state was tinder dry and ready to burn.
The late edition of the Herald report stated that police had closed off Kelletts Road in an attempt to trap at least three firebugs seen lighting fires in grass and scrub along Kelletts Road. A CFA spokesman was quoted as saying that four fires had been deliberately lit. The Forest Commission said that the fire was burning at the eastern edge of Churchill National Park.
Fire-fighters had put out two deliberately lit fires in Kelletts Road by 2.20 pm. Each had burnt about 50 acres. Meanwhile about 200 fire fighters were battling a blaze which had burnt through more than 200 acres of bushland near Logan Park Road.
Saturday, 20 January 1973. The Sun report said that the fire had raged all day but that firemen were holding it during the night. Lysterfield residents were not expected to be evacuated. The fire had been controlled from the Lysterfield tip on its northern point. To the east it had reached Sugar Loaf Hill and to the west it extended from the Lysterfield Reservoir to the Albion Reid Quarries. On the south side it almost reached Heatherton Road where thoroughbred horses valued at $100,000 were evacuated from the Logan Park Agistment Lodge.
The Sun reported: "The fire was out of control all yesterday afternoon as about 200 units from as far away as Warburton battled it." Another 200 privately owned vehicles including cement trucks loaded with water were brought into the fight. The Sun.
The Sun report continued to say that another fire, also believed to have been deliberately lit, was brought under control last night but not before it had burnt out hundreds of acres in Churchill National Park. "More than 13 CFA units and many police and volunteers fought for hours to save a line of houses in Bergins Road."
The Age's Saturday report stated, "Five fires started by arsonists turned the lower reaches of the Dandenongs into an inferno yesterday. In the worst outbreak of bushfires this summer the fires swept through 5000 acres of bush and residential land at Lysterfield, destroying one home and threatening 40 others. Police said an arsonist could have been responsible for a sixth fire which swept through 500 acres in the Churchill National Park. 2000 firefighters were still battling early this morning to bring the fires under control.
Police said 75% of the Lysterfield catchment area had been destroyed by the blaze."
The Age report went on to tell of the police search for two carloads of youths who they suspected of lighting the fires. Police were looking for a green Simca and a red Mazda.
The Age report continued to tell of anxious hours in Rowville. "Police evacuated four houses near Heany Park … but one man wasn't leaving. 'I've seen worse fires than this in this country,' shouted Albert Golding, 75, as he hosed down the walls of his house. 'I've been here all my life. I've got a horse and all my stock here,' he shouted.
The men left Mr Golding to fight for his house. By ten o'clock last night it was still safe."
The Sun reported on the destruction of a weatherboard house owned by Mr Fred Williams in Major Crescent. Fortunately 95 year old Mr Williams. was away at the time but his neighbours Mrs Marlene Reilly and Mrs Rose Fuller helped save his new brick home which was only feet away from the old house.
"The two women, with hose and bucket and some help from the Scoresby volunteer fire fighters, stopped the fire spreading to adjoining properties."

1973 Fire at Arthurs Seat Unable to find location yet
Arthurs Seat is a hill and locality on the Mornington Peninsula, within the Shire of Mornington. The vegetation consists of dry open forest of mixed eucalypt species, which was extensively burnt during a *bushfire* in *1973* and again in 1997. Wikipedia

We have battled fires on Arthur's Seat no less than eleven times since 1950
Dromana Fire Brigade website

Significant fires have occurred on Arthur's seat in 1939, 1967, 1973, 1997, 2004 and 2007
McRae / Arthur's Seat Town Protection Plan 2010 Morn Pen Council

1973/74

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.6	3	27

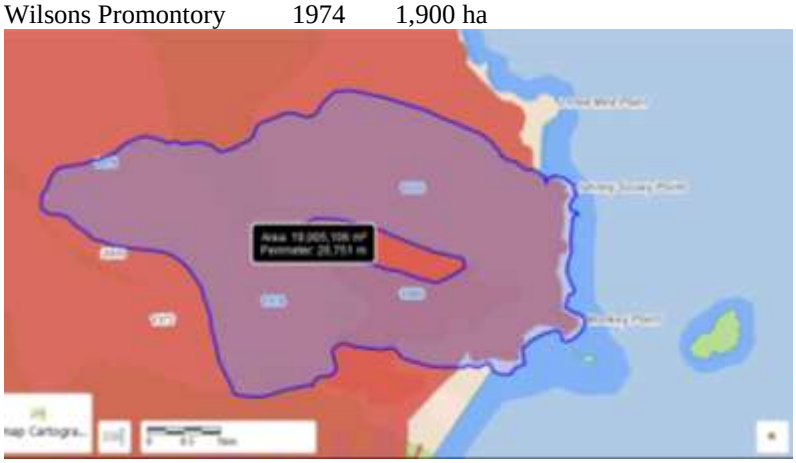
Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1974)
18,000 ha of crown land burnt, 137 fires reported on crown land. 10% (= 14) of these began on private property
FRB 90,000 ac

Major forest fires > 1000 ha
Major grass fires > 4000 ha

Wilsons Promontory 1974 1,900 ha



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Reported bushfire events

Yarra Ranges report Fires in Fern Tree Gully National Park.

1974/75

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
13.1	6	70

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1975)
95,000 ha of crown land burnt, 283 fires reported on crown land. 13% (= 36) of these began on private property
Large fires at Mildura 93,800 ha
FRB 165,000 ha

Major forest fires > 1000 ha Mildura district Gnarr-Mopoke 64,800,+ Hattah 8,100++
Major grass fires > 4000 ha

Reported bushfire events

1975/76

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
7.8	5	48

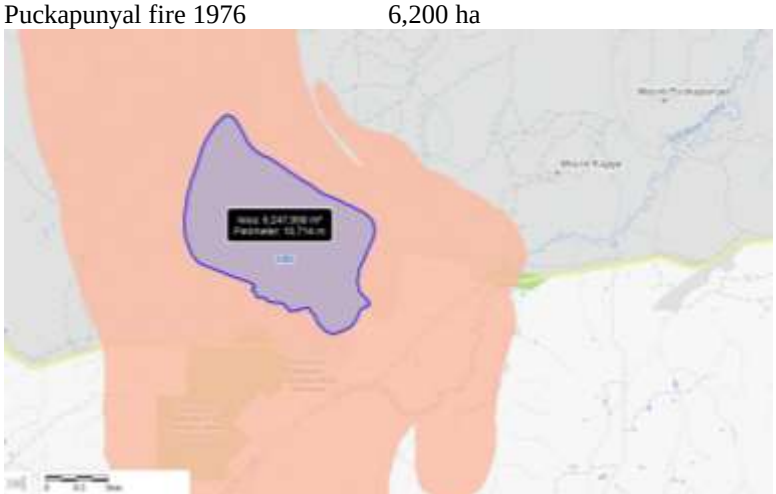
Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

FCV (1976)
53,300 ha of crown land burnt, 253 fires reported on crown land. 12% (= 30) of these began on private property
Large fires at Mildura 35,000 ha
FRB 204,000 ha

Major forest fires > 1000 ha Mildura 36,450+4,000, Dimboola 4,000
Major grass fires > 4000 ha

Puckapunyal fire 1976 6,200 ha



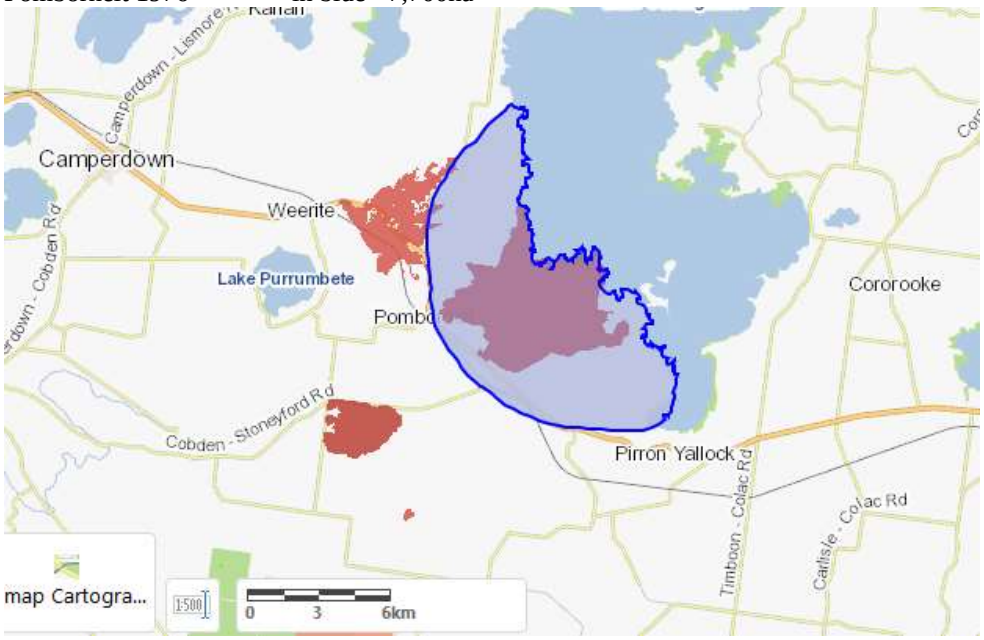
http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Wilsons Promontory 1976 2,500 ha

Wilsons Promontory 1976 400 ha

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Pomborneit 1976 in blue 7,700ha



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Reported bushfire events

1976/77

Weather

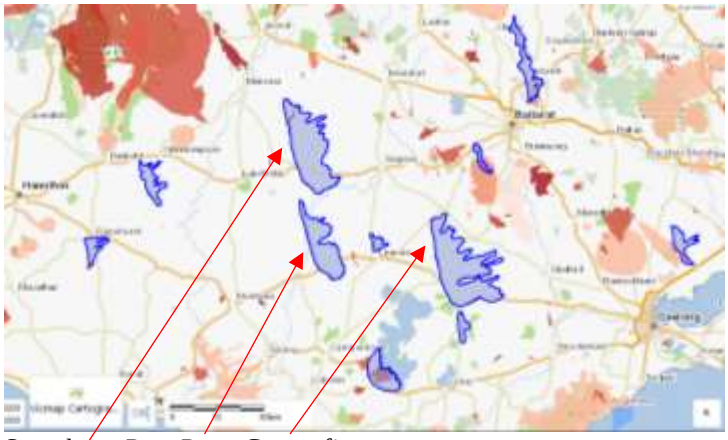
Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.3	6	52

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
12 February 1977 (Black Saturday) Deaths: 8 People rendered homeless: 350
Buildings: 456 Fencing: 10,000 kilometres Livestock: 250,000 sheep; 4,500 cattle
Area burnt: > 135,000 ha
Penshurst, Tatyoon, Streatham, Creswick, Pura Pura, Werneth, Cressy, Rokewood, Beeac, Mingay, Lismore, Little River

Western District fires 1977 in blue



Streatham, Pura Pura, Cressy fires
http://mapshare.maps.vic.gov.au/MapShareVic/index.html

CFA Website
12 February 1977 Toll 4 people, 108 houses/shops, more than 236,000 livestock

FCV (1977)
135,000 ha of crown land burnt, 219 fires reported on crown land. 0% (= 1) of these began on private property
Large fires at Mallee and Creswick
FRB 188,000 ha

Major forest fires > 1000 ha Mildura Sunset 40,000+40,000+12,000, Little Desert 11,000+15,000+5,000, Smythsdale 2,000, Trentham 1,675, Glengower Creswick 8,000

Major grass fires > 4000 ha Heywood 7,300, Pura Pura 19,400, Streatham 28,900, Cressy 42,000 [=100,000 on PP]
Cressy Rokewood 44 houses 96,000 stock,
Streatham town damaged,
Pura Pura 8,000 ha, 1 dead, 11 houses 37,000 stock

ICA Catastrophe Data
On 12 February 1977, Streatham was partially destroyed by bushfires which spread across western Victoria to the South Australian border. The post office, community hall, and shops were destroyed in the blaze. The fires killed four people and a further seven are believed to have suffered heart attacks. Other areas that felt the effects of the fire included Penshurst, Tatyoon, Creswick, Pura Pura, Cressy, Beeac, Lismore

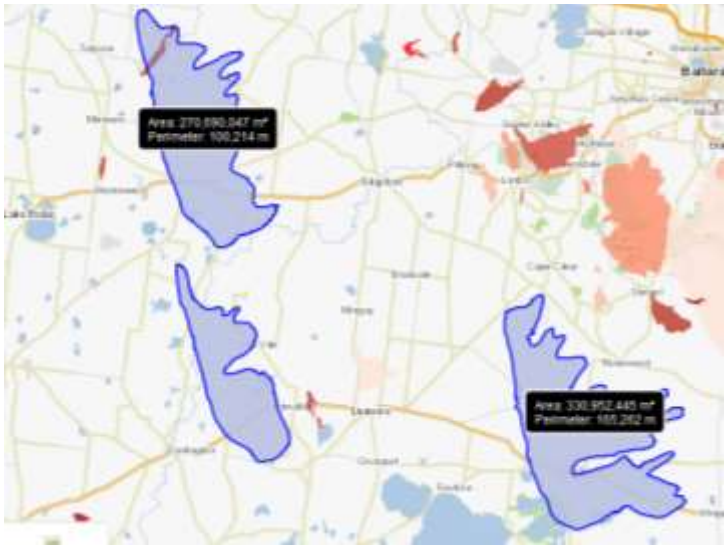
and Little River. In total, the fires burnt 116 houses, 340 buildings, 103,000 hectares, and close to 200,000 livestock.
$12M in 1977 $106M in 2017

Reported bushfire events

On 8 Feb, a large no of fires started by power line failures. Wind speed was huge - 70 – 80 kph Western District bushfires (McArthur et al 1982)

12 February 1977 Emknowledge
Streatham was partially destroyed by bushfires. The post office, community hall, and shops were destroyed in the blaze. The fires killed four people and a further seven are believed to have suffered heart attacks.
Other areas that felt the effects of the fire included Penshurst, Tatyoon, Creswick, Pura Pura, Cressy, Beeac, Lismore and Little River.
In total, the fires burnt 116 houses, 340 buildings, 103,000 hectares, and close to 200,000 livestock. The Insurance Council of Australia estimated the 1977 damage at $9 million, with the 2011 estimated normalised cost of $101 million.

12 Feb 11 fires burnt gross area 110,000 ha. Most damage caused by three fires which began at Tatyoon, Pura Pura and Wallinduc. Damage $20M 116 houses lost, + 339 buildings, 195,000 sheep, 3365 cattle, fencing 4,143 km deaths not mentioned Western District bushfires (McArthur et al 1982)



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Most fires were caused by power line failures. Wind was 50 – 55 kph before the wind change
69 fires were reported throughout Victoria on 12 Feb, only 7 burnt > 1000 ha and only 3 burnt > 10,000

Excerpt from "Grassfires" Phil Cheney and Andrew Sullivan, 1997 page 90

Western District of Victoria, 12 February 1977

On this day some 70 fires started throughout Victoria. Although most were controlled to less than 1000 ha, 11 major fires burnt 105 000 ha. Only three of these burnt more than 10 000 ha each. Nine of the 11 major fires were started by sparks from power lines. The largest, the Wallinduc–Cressy fire (Fig. 8.3), burnt 39 200 ha and resulted in the death of three people and the destruction of 39 houses and other buildings.

Conditions during this fire were such that grasses were fully cured and had been for some days. The fire started at 1.32 p.m. and for much of the afternoon a north-north-westerly wind blew up to a maximum speed of 50–55 km/h, producing a maximum GFDI of 90 (temperature 36°C, relative humidity 22%). Sustained rates of spread in the order of 17 km/h were recorded for extended periods (up to 30 minutes), with a mean spread rate of 16 km/h over two and a half hours. Three hours after ignition the fire had travelled about 34 km and burnt some 16 700 ha. Then a south-westerly cold front passed through the area, with wind speeds of around 40 km/h. The entire eastern flank took off, initially at 13 km/h, and over the next two and a half hours burnt a further 22 300 ha before the fire became controllable and was extinguished.

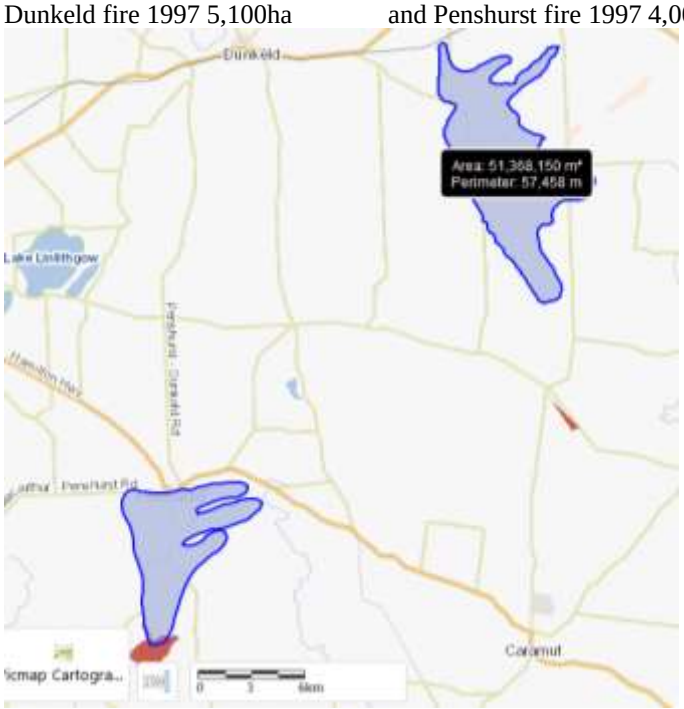
Another of the day's fires, the Tatyoon–Streatham fire (Fig. 8.4), started 14 minutes before the Wallinduc–Cressy fire and 70 km to the north-west. It sustained a maximum rate of spread of 19 km/h over 30 minutes, but had a slightly lower mean rate of spread (12 km/h) than the Wallinduc–Cressy fire and burnt a total of 20 100 ha. One man was killed, 38 houses were destroyed and the small township of Streatham was severely damaged when 22 structures were burnt.

These two fires show the importance of effective suppression on the eastern flank. Both fires had burnt about the same area (15 000–16 000 ha) prior to the wind change. On the Tatyoon–Streatham fire, firefighters were able to control 22.5 km along the eastern flank before the wind change and thus limit the area burnt after the change to only 5000 ha. In contrast, fire suppression on the eastern flank of the Wallinduc–Cressy fire before the wind change was hindered by rough stony country near the origin and by the fact that local firefighters did not receive support from additional brigades from the north and west (who were already engaged on fires to the west which had started earlier). Firefighters were able to control only 1.5 km of the eastern flank, and as a result more than 22 300 ha burnt after the wind change.

Figure 8.3 Spread pattern of the Wallinduc–Cressy fire. Source: McArthur et al. (1982).

On the 12th February, 1977, approximately 10,000 acres were burned out in one of the Brigades worst fires in 30 years. Penshurst Fire Brigade website

Dunkeld fire 1997 5,100ha and Penshurst fire 1997 4,000+ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

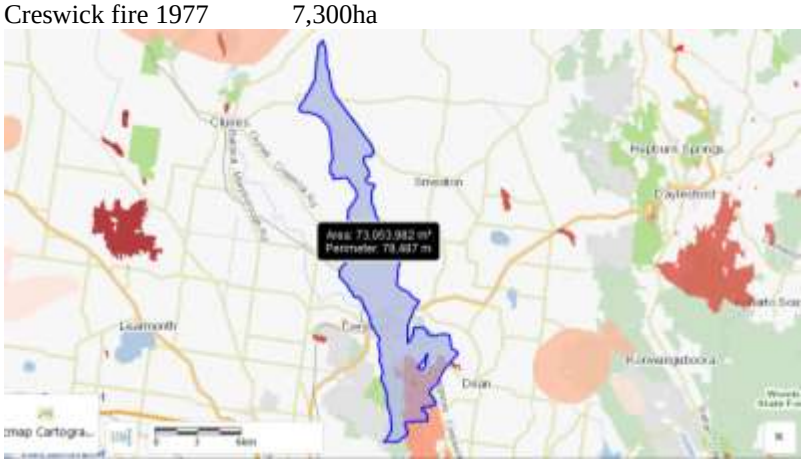
12 February 1977 Geelong City Council Fire Management Plan
This fire started approximately 6.5 kilometres east of Balliang. During the first hour the fire travelled 10.5 kilometres. Some 2 hours after the fire started it was on the outskirts of the Little River Township. The area burnt was approximately 2,500 hectares.

Little River fire 1977 4,100ha

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

12 February 1977 Creswick 5,300ha (1,670ha forest and 270ha pines) 47 buildings destroyed. Hepburn Shire Municipal Fire Management Plan

Creswick fire 1977 7,300ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Observation The Seasonal Severity Level of 1976 / 77 was low but it produced a high damage toll. Almost all the damage toll was caused on one day. Daily weather determines the bushfire intensity on that day.
Seasonal severity cannot predict daily weather. Higher seasonal severity indicates the potential for more severe weather days, and lower seasonal severity for fewer severe weather days.
Thus, 1976/77 had low Seasonal Severity Level. It had few very hot days. One of those had very severe weather whose winds exposed faults in power line condition, maintenance and fire prevention deficiencies, namely failure to prevent spread of fire from ignition source into surrounding bone dry grass paddocks.

1977/78

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
6.8	5	47

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
15 January 1978 Bairnsdale Deaths: 2 People rendered homeless: 80
Buildings: 36 Livestock: 6,500

FCV (1978)
68,690 ha of crown land burnt, 548 fires reported on crown land. 19% (= 104) of these began on private property
Large fires at Bright, Myrtleford, Heyfield, Maffra
FRB 164,000 ha

Major forest fires > 1000 ha Kiewa Valley 8,500, Khancoban 4,100
Major grass fires > 4000 ha Hillside 9,500 ha, 2 fire fighters dead, 1 house, 6,600 stock

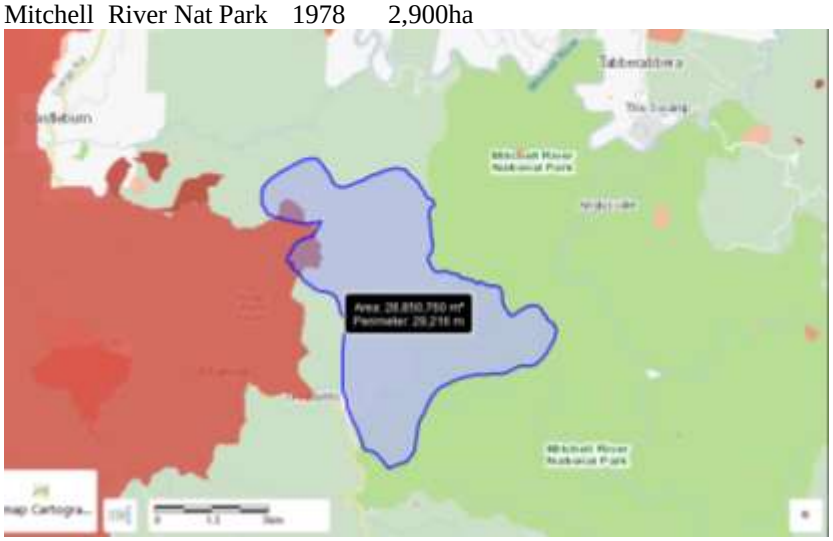
Bairnsdale fire 8,200ha

http://mapshare.maps.vic.gov.au/MapShareVic/index.html
Bairnsdale fire 15 January, Fire began on Princess Highway when wheel fell off trailer and axel scraped along road verge, generating sparks that caused spot fires on very hot day, strong north windy (Author)

Fires in central Gippsland 1978 Toongabbie 1,600ha, Stratford 550ha

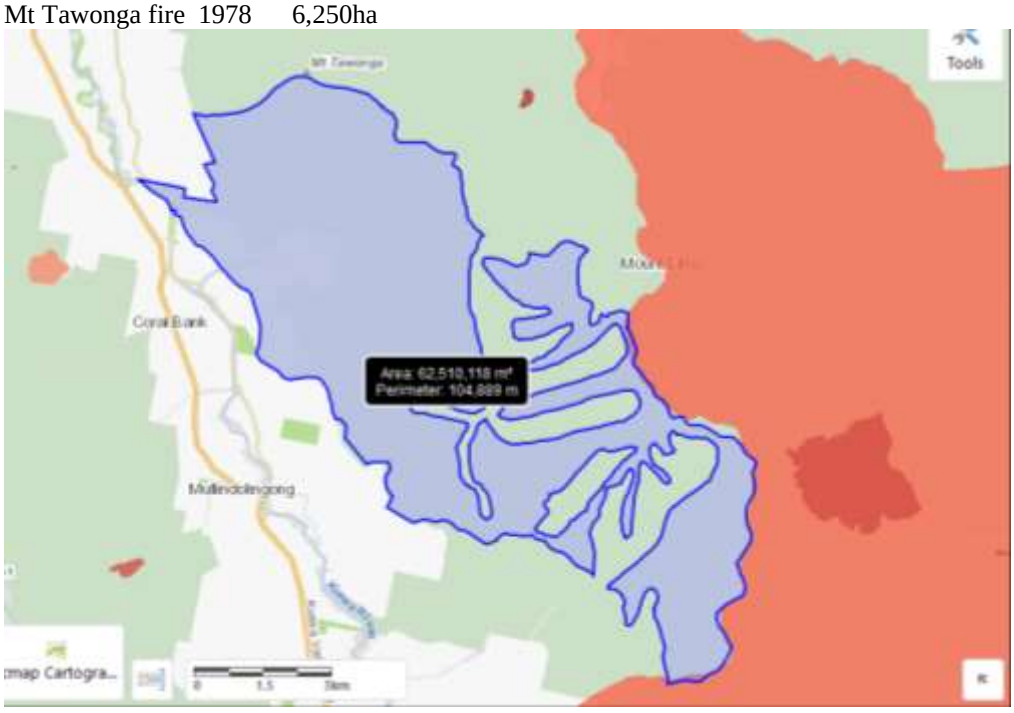
http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Mitchell River Nat Park 1978 2,900ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Mt Tawonga fire 1978 6,250ha



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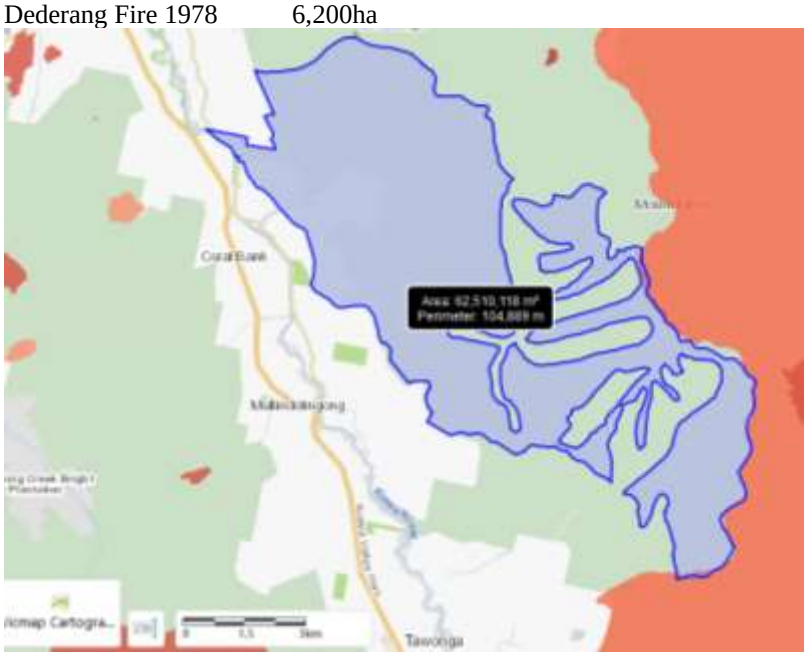
Dederang Fire 1978 6,200ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

Bushfire related events

Nevin Lenne Gross have represented local property owners in three major bushfires; the 1968 Mudgegonga-Dederang bushfire, the 1978 Dederang bushfire and the 2009 Black Saturday bushfire. Some clients had their properties burnt out in all three fires.
The Mudgegonga-Dederang bushfire in 1968 was the first case ever run against the State Electricity Commission in Victoria. Nevin Lenne Gross represented 17 property owners who suffered as a result of the bushfire, which burnt out 33,000 hectares some of which was in the same vicinity as the Black Saturday fire.
Nevin Lenne Gross represented 12 farmers in the 1978 Dederang fire against the State Electricity Commission. The matter was settled in 1983.
http://nlgsolicitors.com.au/bushfire/

1978/79

Weather

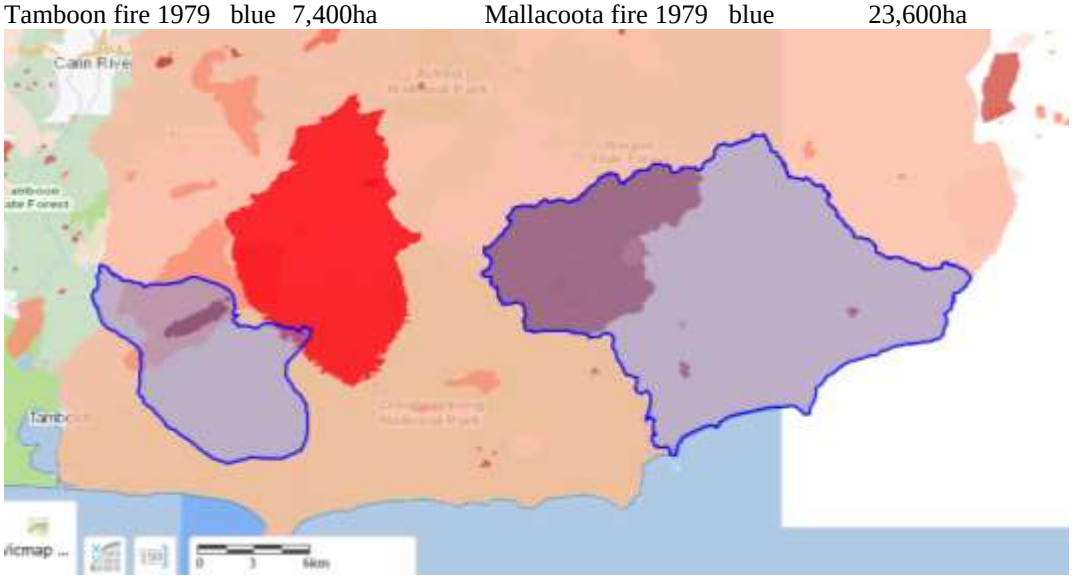
Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.0	6	51

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

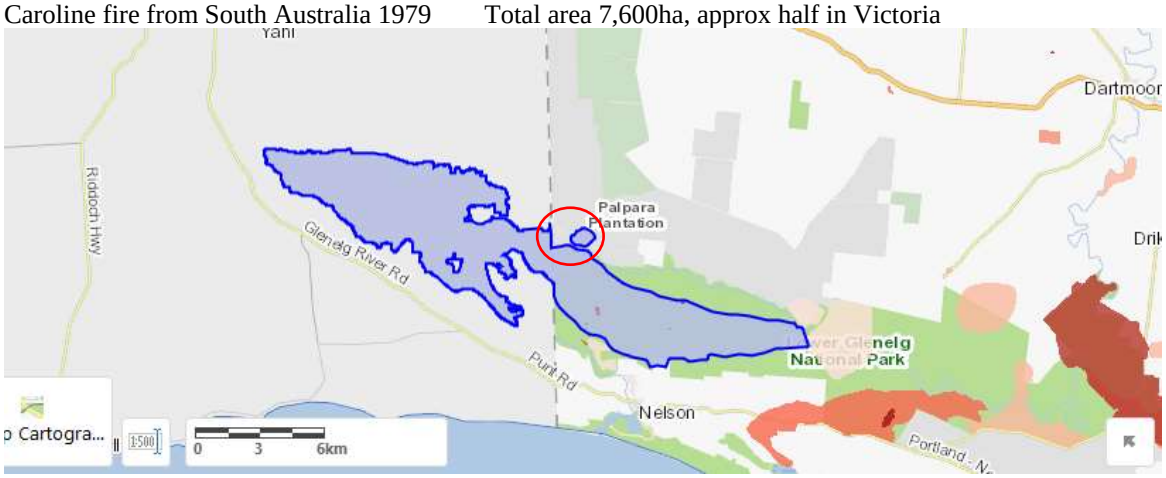
FCV (1979)
41,065 ha of crown land burnt, 273 fires reported on crown land. 8% (= 21) of these began on private property
Large fires at
FRB 99,000 ha
Major forest fires > 1000 ha Mallacoota 23,100 + 6,800

Tamboon fire 1979 blue 7,400ha Mallacoota fire 1979 blue 23,600ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Caroline fire from South Australia 1979 Total area 7,600ha, approx half in Victoria



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Comment See the straight line of the fire perimeter along the border, circled in red above ?
The pine plantations are coloured grey and the border has a 50m wide mown fire break to protect them from such a fire attack. The Victorians knew the fire was coming and planned a hot backburn along the border inside South Australia to prevent it running into the plantation. They had to calculate when and where to light up and how deeply. They lit up and held a kilometre before the main fire arrived and they managed to stop the running flame and the spot fires from a corner of the plantation. The fire front was 3 km wide, so the other 2 km of the front just kept going.

See the spot fire within the red circle?
It is approx 1 km from the border and came from the main fire. Unfortunately it grew to 66ha, which is approx the area of the corner saved by the backburn.

Reported bushfire events

1979/80

Weather

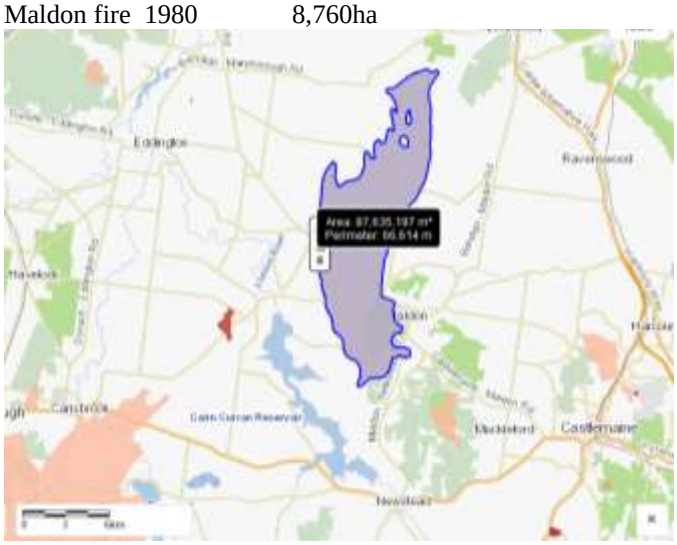
Dryness Index	Days >35^{0}C	Seasonal Severity Level
10.9	8	88

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

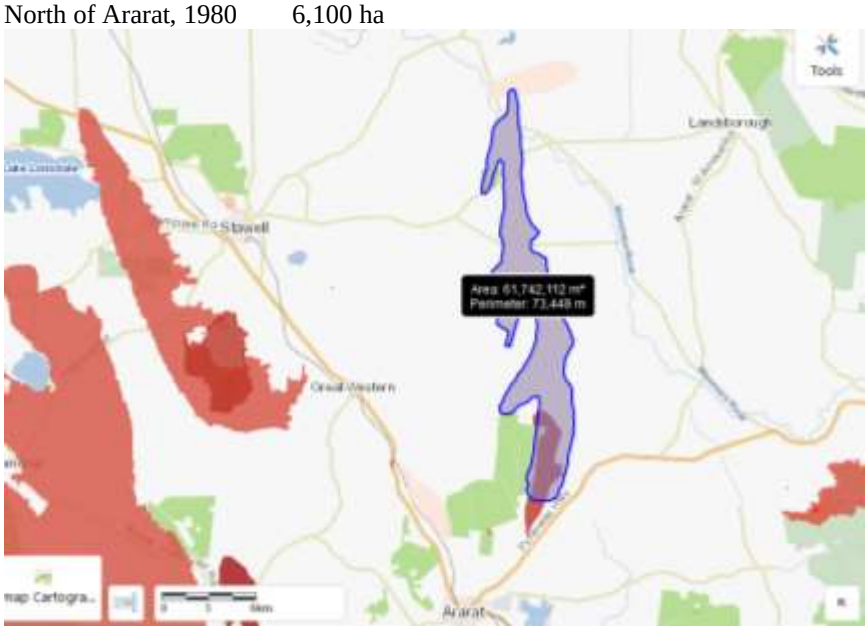
FCV (1980)
29,458 ha of crown land burnt, 543 fires reported on crown land. 10% (= 54) of these began on private property
Large fires at
FRB 345,000 ha
Major forest fires > 1000 ha Corryong 7,000 ha
Major grass fires > 4000 ha Maldon 8,000 ha, 3 houses, 6,500 stock

Maldon fire 1980 8,760ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

North of Ararat, 1980 6,100 ha



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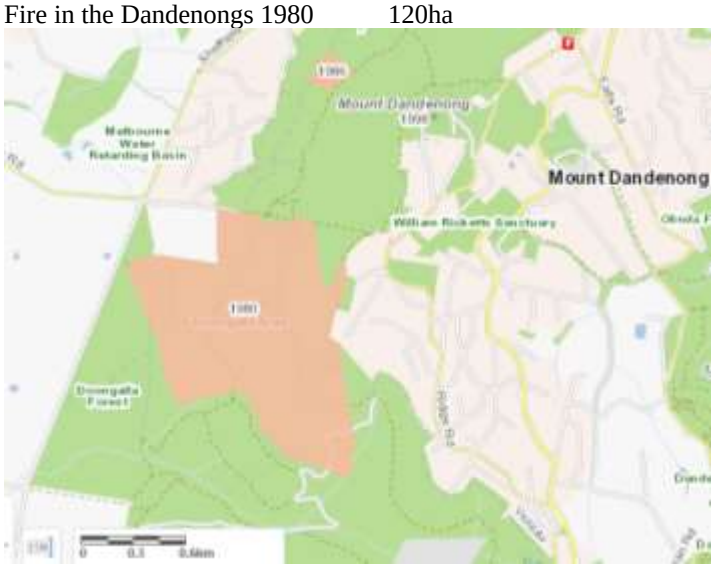
Fire in the Dandenongs 1980 120ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

Barkstead 1980

At 2pm on 18 Jan 1980, faulty exhaust on a log skidder caused a fire in logging slash within Wombat Forest. Weather was 28C, 33% RH, wind from WNW at 20kph, FDI 16. It spread mostly up slope at average 0.8 to 0.9 kph spreading to a 1km front until it ran into a one year old x 400m wide control burn, whereupon the flame stopped without need of suppression. Three spot fires jumped across the barrier, but most were captured within it. The fire area was approx 450ha.

Rawson, R., Billing, P., Rees, B. (1985) Effectiveness of fuel reduction burning -10 case studies Research Report No. 25

https://www.ffm.vic.gov.au/__data/assets/pdf_file/0018/21168/Report-25-Effectiveness-of-Fuel-Reduction-Burning-10-Case-Studies.pdf

Walmer Fire Brigade CFA
Walmer Fire Brigade by Deanna Neville Published on Nov 29, 2011

1980

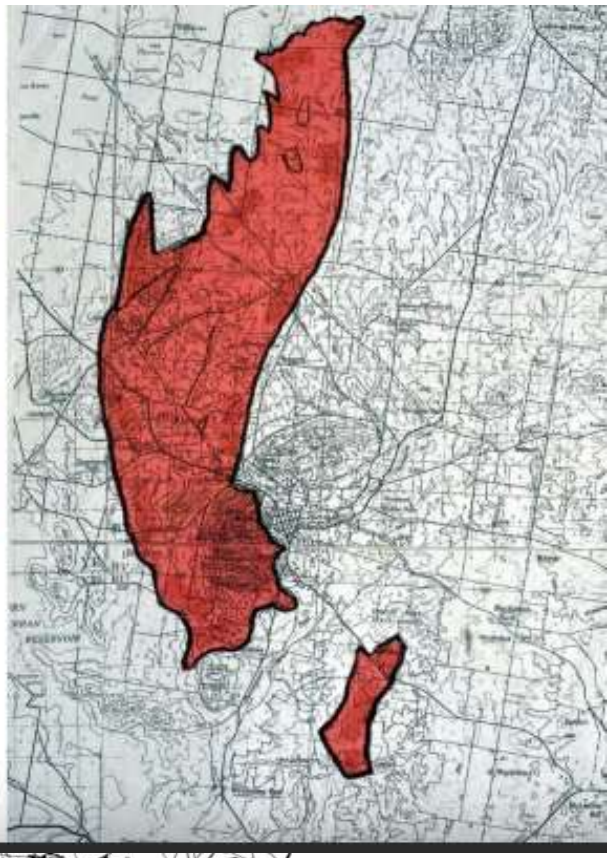
Maldon fire

24 Dec - The Walmer Brigade played a huge part in combating and controlling a major fire at Maldon.

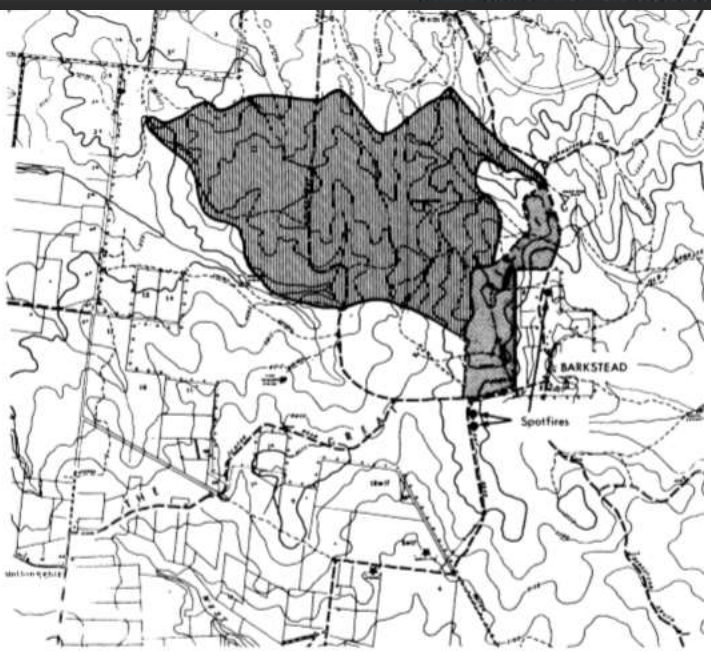
The fire burnt from Baringhup to Mt. Tarrangower then spotted to the Gower School site at Muckleford. As a strong southerly wind change arrived in the area, a stirling effort by Brigade members stopped the fire in thick bush at the Gower School site as it headed toward the Muckleford Valley.

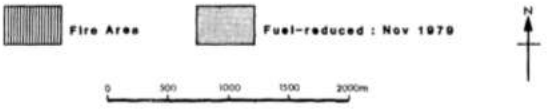
The Bedford Tanker proved its worth at the Maldon Fire. Driven by very competent drivers, it manoeuvred where many CFA Units would not go.

After forcing a track through heavy undergrowth to the front of the fire with the fire truck, the Walmer crew rested after extinguishing the fire. As one member sat exhausted on the ground, his mate said "Don't move!" A large brown snake had taken refuge between his feet.



the Maldon fire map





Surf Coast Shire March 1980, fire within two kilometres of Anglesea township, with about 400 hectares burnt. Source of fire was smouldering peat moss from fire several weeks earlier.

1980/81

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.8	22	197

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

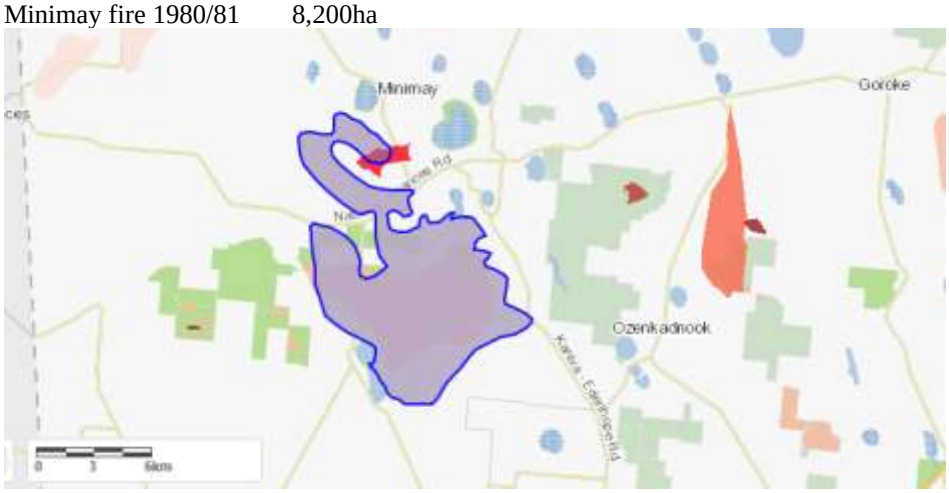
VBRC and COAG
28 December 1980 – 6 January 1981 Sunset Country and Big Desert
Deaths: nil Area burnt: 119,000 hectares

FCV (1981)
434,580 ha of crown land burnt, 628 fires reported on crown land. 9% (= 54) of these began on private property
Large fires at Big Desert, Sunset, East Gippsland
FRB 477,000 ha

Major forest fires > 1000 ha Mildura Sunset 137,700+10,500, Big Desert 142,000+8,000, Maffra 12,100. Swifts Creek 9,500, Orbost 32,700, Nowa Nowa Tara Range 28,000+ Colquhoun 6,600, Cann River 27,400, Castlemaine 4,400

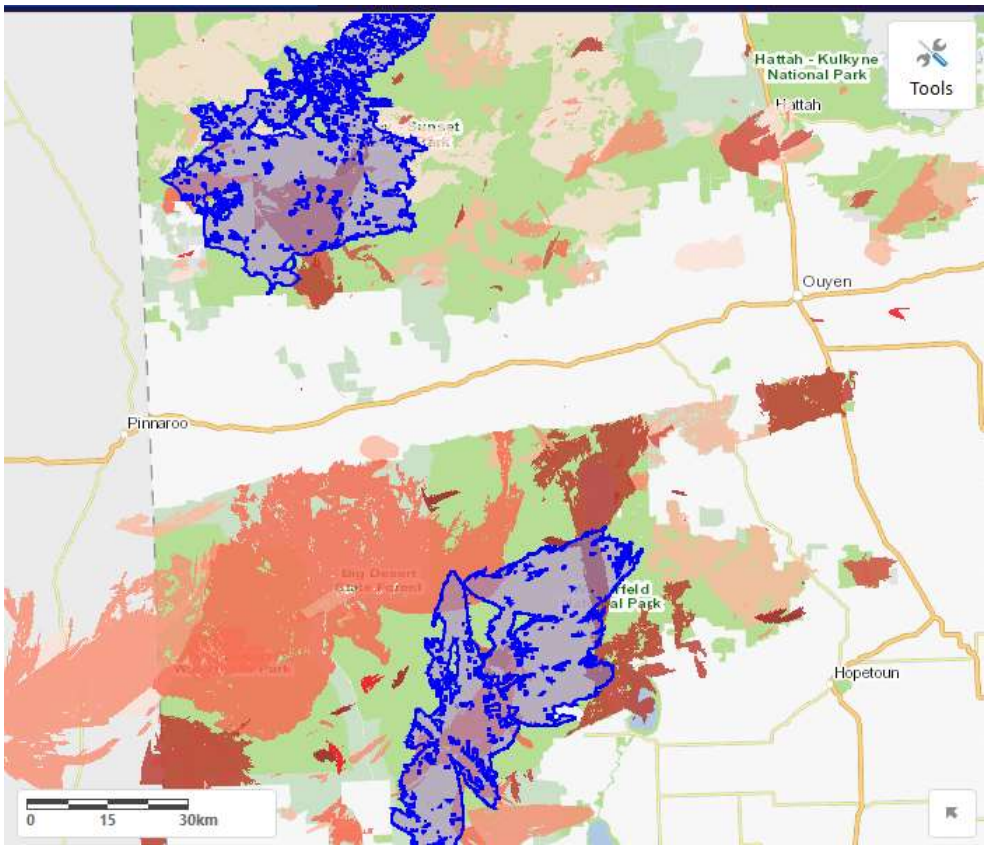
Major grass fires > 4000 ha

Minimay fire 1980/81 8,200ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Sunset Country fire 1981 approx 105,000+ha is shown in blue
and Big Desert fire 1981 approx 130,000+ha is shown in blue



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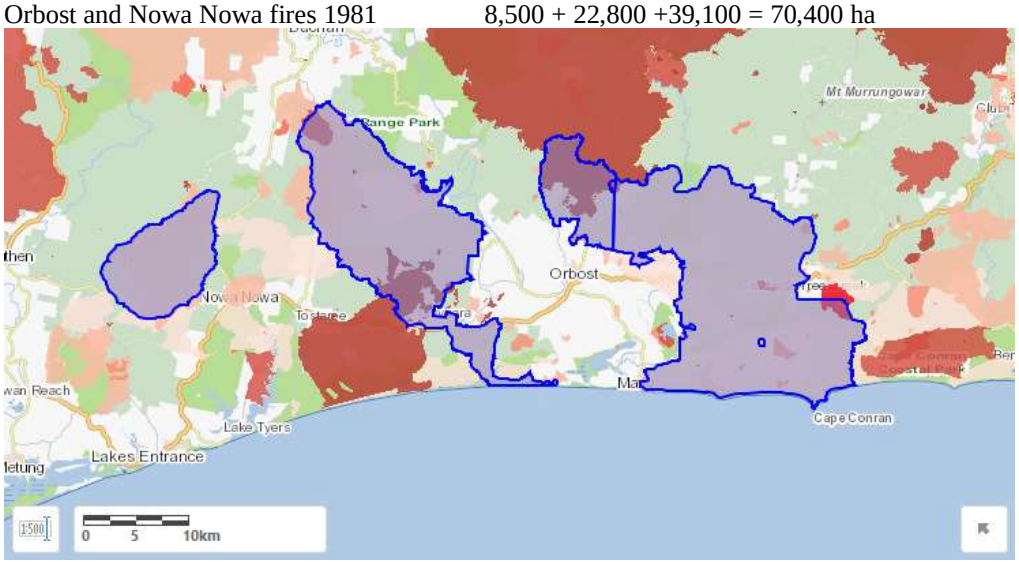
Orbost and Nowa Nowa fires 1981 8,500 + 22,800 +39,100 = 70,400 ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

Surf Coast Shire October 1981 Fairhaven evacuated due to fire. Three houses were lost and others damaged. The fire was started by a controlled burn.

28 December 1980 – 6 January 1981 Source: Romsey website
A fire started from a lightning strike on December 28, 1980 and continued to burn through until 6 January 1981. The fire burnt 119,000 hectares in the Sunset Country and the Big Desert.

Observation This year was very High Seasonal Severity Level. The huge number of very hot days was tempered with reliable monthly rainfalls. The fires burnt a large area but little damage to private property was reported. The fires ignited in forested public land and stayed within it.

1981/82

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
10.7	14	153

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

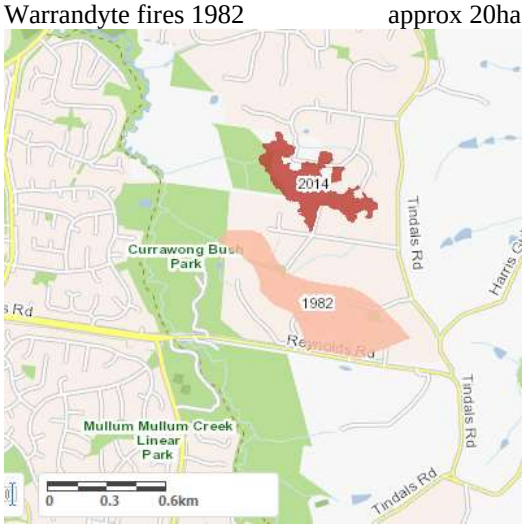
Official bushfire records

FCV (1982)
19,990 ha of crown land burnt, 352 fires reported on crown land. 8% (= 29) of these began on private property
FRB 167,000 ha

Major forest fires > 1000 ha Maryborough 4,400
St Arnaud, 1982 3,400ha

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Warrandyte fires 1982 approx 20ha total Both fires emerged from forest reserves



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

Anglesea 200 holiday-makers fled as fire burned out 44 sites at the Anglesea camping ground destroying 20 caravans, 22 tents, two cars and six trailers.
https://torquayhistory.com/torquay-fires/

1982/83

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
16.1	15	188

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
8–9 January 1983 Greendale Deaths: 2 Forest Commission employees
31 January – 12 February 1983 Cann River Deaths: nil 120,000 hectares
1 February 1983 Mt Macedon Deaths: nil Buildings: 50 houses
Area burnt: 6,100 hectares (including 1,864 hectares of state forest)
16–18 February 1983 (Ash Wednesday) Monivae, Branxholme, Cockatoo, East Trentham, Mt Macedon, Otway Range, Belgrave Heights, Warburton, Cudgee, Upper Beaconsfield, Framingham Deaths: 47 People rendered homeless: 9,000
Buildings: 2,500 Livestock: 32,750 (including 18,000 sheep and 7,000 cattle)
Fencing: 5,900 km Area burnt: 210,000 ha Estimated damage: $190M
4–12 March 1983 Cann River Deaths: nil Area burnt: 140,000 hectares

FCV (1983)
360,430 ha of crown land burnt, 634 fires reported on crown land. 7% (= 42) of these began on private property.
Total area burnt 426,000 ha (PL + PP)

Large fires at …
FRB 62,000 ha

Major forest fires > 1000 ha Cann River 127,000+126,000, Bruthen-Mt Elizabeth 33,300, Greendale 15,900, Woodend 6,100, East Trentham 24,500, Otways 4,200 + 1,400, Warburton 44,000, Cockatoo 1,800, Belgrave 8,500, Victoria Valley 6,400, Glenmaggie 12,800, Annuello 10,000, Wyperfield NP 17,800, Mt Disappointment 20,900

Fire suppression expenditure this year $16.2M, compared to $6.09 in 1980/81 and $4.17M in 1981/82

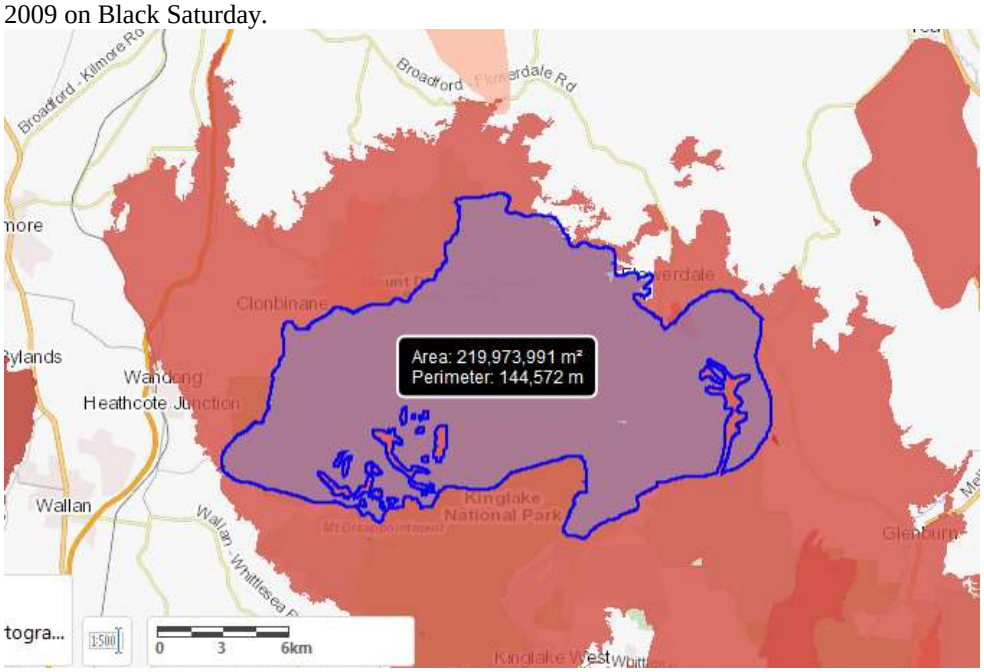
ICA Catastrophe Data

The Victorian and South Australian bushfire season started in November 1982 with 854 bushfires affecting Ballan, Mount Macedon (on 1 February), Cann River and Mount Donna Buang. On early Ash Wednesday morning there were 104 fires already burning in Victoria. Most were controlled or contained, but after 2pm the situation exploded. The fires formed several complexes.

1. Western district near Warrnambool. In total nine people died, 50,000 hectares were burnt, 157 houses destroyed and 19,300 head of livestock were lost.
2. East Trentham– Macedon fire complex. Seven people died, 20,000 hectares were burnt, 200 homes destroyed in Macedon, 150 on Mount Macedon, 50 in Bullengarook and 20 in Woodend.
3. Otways complex. Three people were killed and 578 houses and other buildings were lost.
4. Upper Beaconsfield – Cockatoo complex. In total, 27 people died, 100 were injured and 535 houses and buildings were destroyed.
5. Warburton complex. Thirty houses were destroyed.
6. South Australia - In total 28 people died, including three CFS volunteer fire fighters. More than 1500 people were injured, 383 homes and 200 other buildings destroyed and 160,000 hectares were burnt.

Vic 176M I 1983	$1.76B in 2017
SA	$0.58B in 2017

Mt Disappointment November 1982 22,000ha This bushfire area was burnt over in 2009 on Black Saturday.



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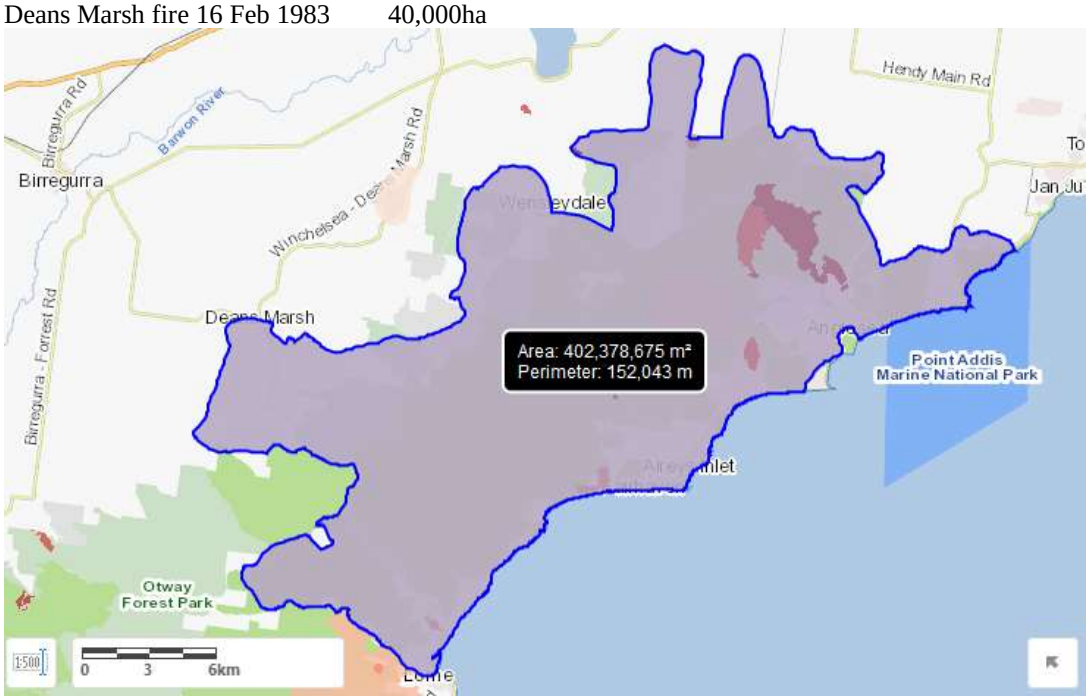
Deans Marsh fire 16 Feb 1983 40,000ha



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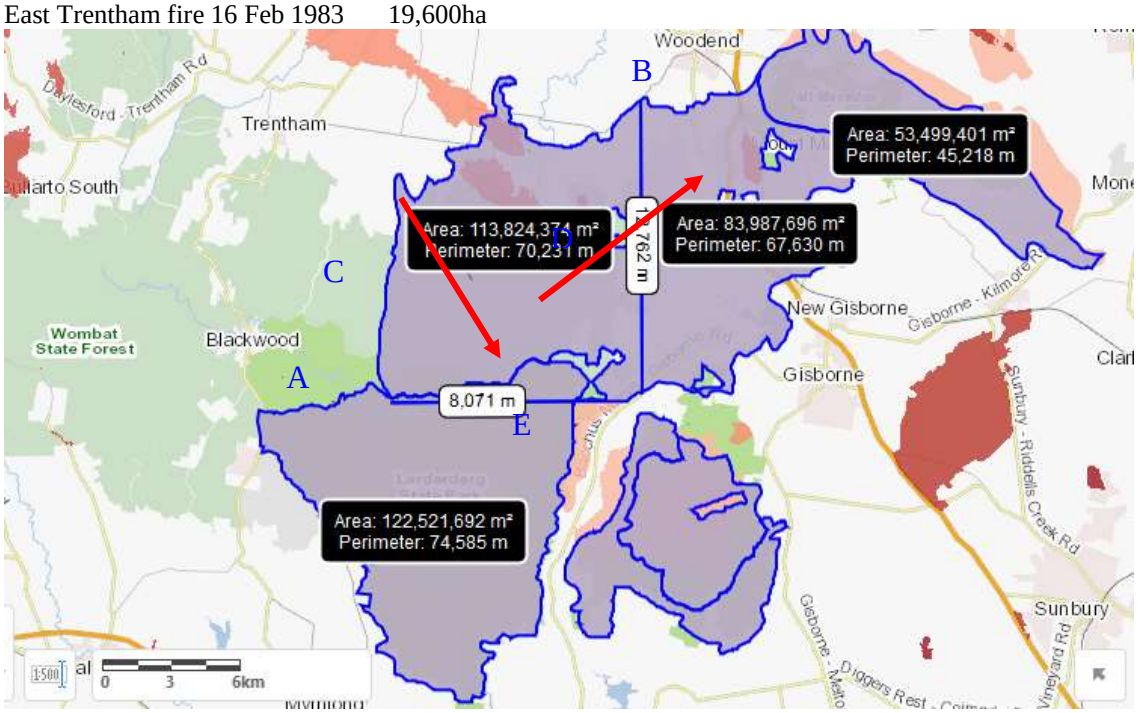
East Trentham fire 16 Feb 1983 19,600ha



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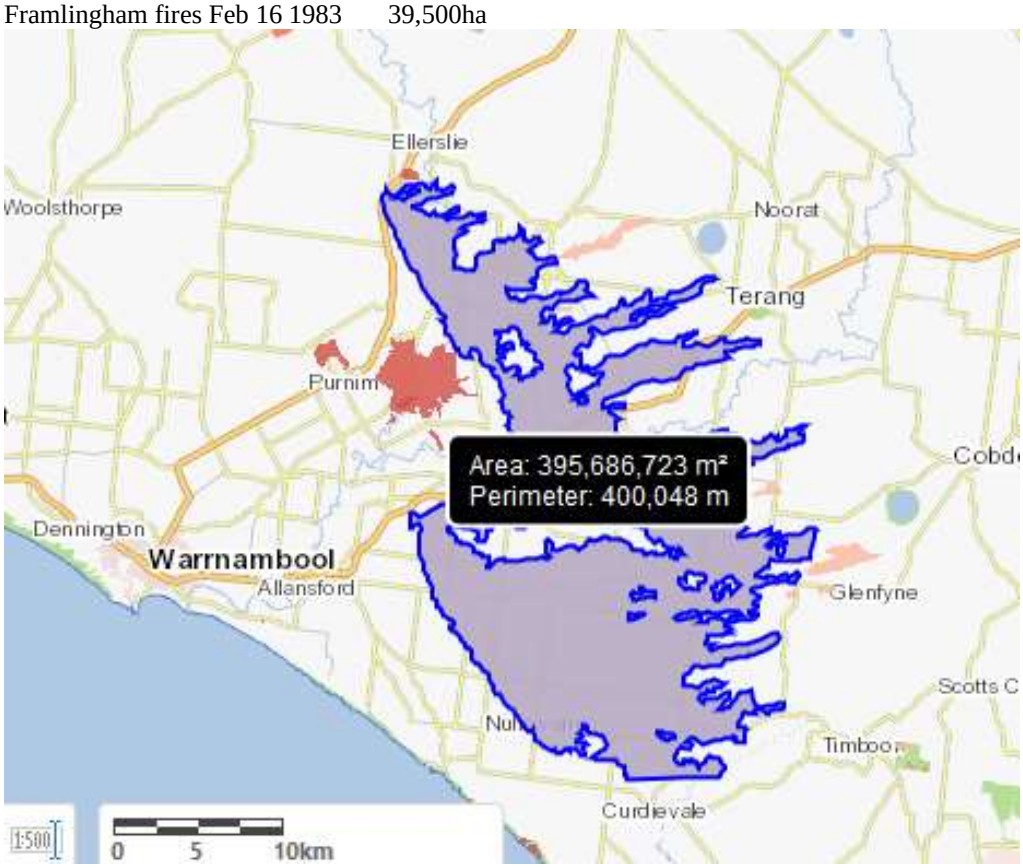
The Ash Wednesday bushfire ran into two recently burnt areas and held its area to 19,600ha.
Area A was burnt in January 1983. Area B was burnt on 1 Feb 1983.
Fire C started late morning on 16 Feb 1983 and stopped at fire A, throwing spot fires into area E and beyond. The ferocious SW wind change at 8.30pm pushed fire C into Area D and stopped at fire B.

Framlingham fires Feb 16 1983 39,500ha



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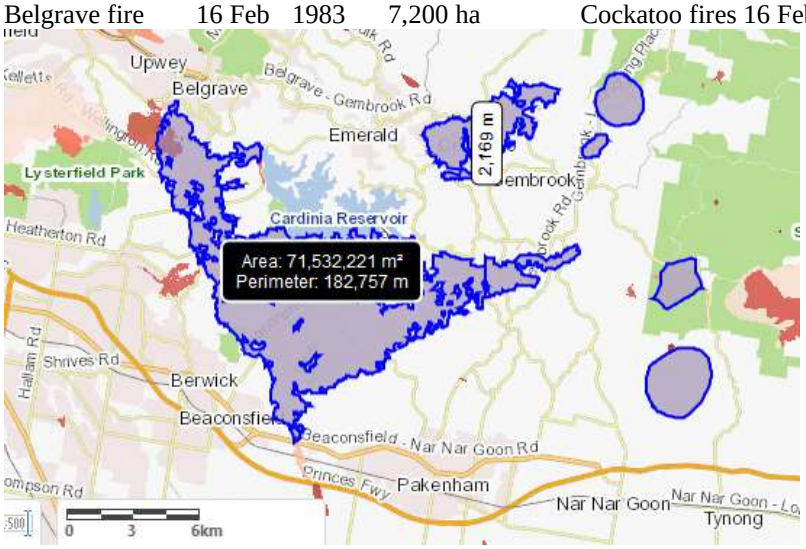
Belgrave fire 16 Feb 1983 7,200 ha Cockatoo fires 16 Feb 1983 10,700ha



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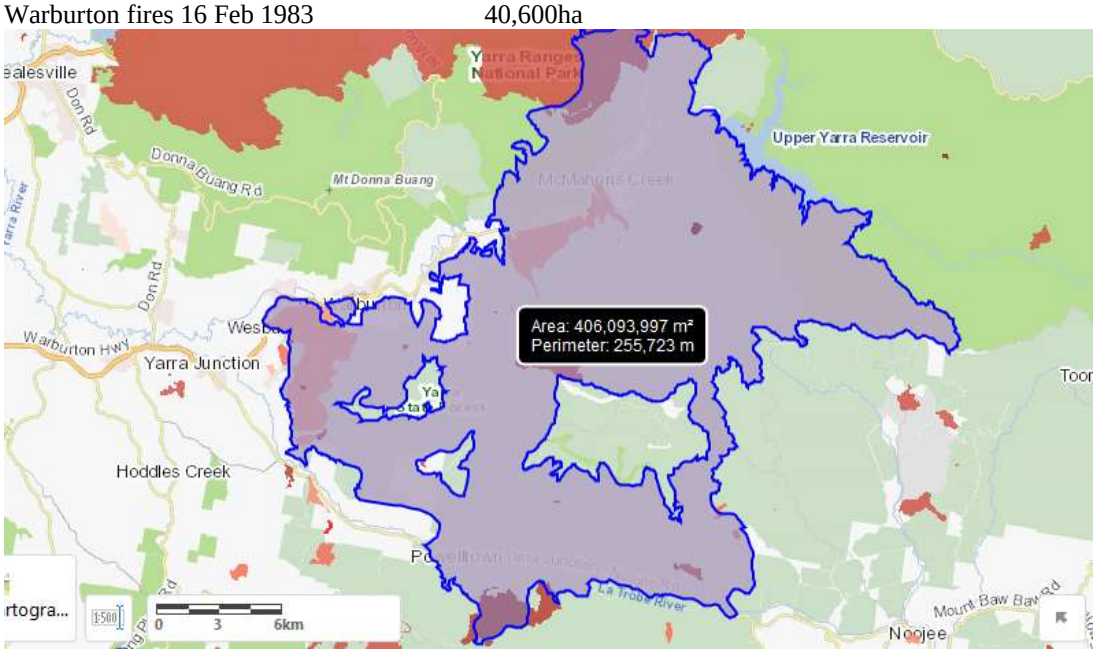
Warburton fires 16 Feb 1983 40,600ha



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FCV Annual Report

Major outbreaks of fire occurred from November to March inclusive with the most disastrous fires occurring on Ash Wednesday. The principal losses and damage caused by all fires, with 1938-39 data shown in brackets, included:

- 360 430 hectares of State forest burnt (1 348 000);
- 49 persons killed (71);
- 5 sawmills destroyed (69);
- 2 145 homes destroyed (many hundreds); and
- a considerable number of township facilities burnt, many farm buildings destroyed and livestock killed, and large quantities of fodder, fencing and other equipment destroyed.

Additional fire damage included:

- 74 725 hectares of national park;
- 158 hectares of protected public land;
- 16 303 hectares of other public land, including land managed by the MMBW;
- 2 558 hectares of State pine plantations; and
- 251 hectares of private pine plantations.

During November the worst fires occurred in Heyfield (12 800 hectares), Nowa Nowa (3 400 hectares), Mildura (10 000 hectares), Bruthen and Nowa Nowa (33 270 hectares), Broadford and Toolangi (20 950 hectares) and Bright (675 hectares) forest districts.

In December, extensive fires occurred in Dimboola forest district; one fire burnt 1 470 hectares of national park and another burnt 17 800 hectares, which included 2 200 hectares of State forest and 15 450 hectares of the Wyperfeld National Park.

In January, one disastrous fire occurred in the Daylesford and Trentham forest districts which burnt 15 940 hectares, including 13 720 hectares of State forest. In this fire, two Commission employees from the Daylesford forest district, Mr Des Collins and Mr Allan Lynch, lost their lives and 11 homes were destroyed. On 31 January, a fire started in the Cann River forest district and over the ensuing 10 days burnt 127 200 hectares, including 94 500 hectares of State forest.

On 1 February a fire occurred at Mt Macedon and burnt 6 100 hectares, including 1 864 hectares of State forest, and destroyed 50 homes.

On Ash Wednesday severe fire weather conditions developed. During the day Melbourne experienced a maximum temperature of 43 degrees centigrade, a minimum relative humidity of five per cent and maximum wind gusts (from the north-north west) of 70 kilometres per hour. In the evening the wind shifted and strengthened, gusting up to 100 kilometres per hour for about two hours. Sixteen major fires started progressively during the afternoon and early evening in southern and central areas of the State; ten of these developed into major fires. Forty-seven persons died and about 2 080 homes were destroyed. Seven fires were wholly or partly within the fire protected area; the areas burnt totalled 122 032 hectares, including 85 262 hectares of State forest, 238 hectares of national park and 1 932 hectares of MMBW land. A brief summary of each of the latter seven fires is:

- East Trentham/Macedon fire burnt 24 500 hectares; seven persons died; 528 homes, four sawmills, 1 286 hectares of pine plantation and 51 hectares of pine seed orchard were destroyed.
- Deans Marsh/Lorne/Anglesea fire burnt 41 200 hectares; three persons died; 798 homes, 774 hectares of State pine plantation, 199 hectares of private plantation and one sawmill were destroyed.
- Belgrave South/Upper Beaconsfield fire burnt 8 500 hectares; 21 persons died and 230 homes were destroyed.
- Moonlight Head (Otways) fire burnt 1 440 hectares; one house, 40 hectares of private pine plantation and 238 hectares of national park were destroyed.
- Baw Baw fire burnt 59 hectares of State forest.
- Warburton fire burnt 44 500 hectares and 23 homes; 11 765 hectares of mountain ash forest were destroyed.
- Cockatoo fire burnt 1 833 hectares; six persons died and 336 homes were destroyed.

On 17 February, a fire started in Myrtleford forest district near the western edge of Mt Buffalo and burnt an area of 688 hectares, including 613 hectares of national park. During the last week of February, about 50 fires resulting from lightning strikes occurred throughout the State. The largest fire was in Stawell forest district and burnt 3 280 hectares including 2 960 hectares of State forest. Some 45 lightning strikes occurred during the first week of March but the resultant fires were quickly suppressed and did not reach major size.

On 4 March, during extreme fire weather conditions, a fire started near the southern edge of the earlier Cann River fire and spread towards the coast and Mallacoota Inlet during the ensuing week; the area burnt totalled 126 100 hectares, which included 71 150 hectares of State forest and 53 100 hectares of national park. Property damage was relatively minor. On 10 and 11 March a fire burnt 1 900 hectares of national park between Seacombe and Loch Sport, south of Lake Victoria.

On 22 April, during a warm and windy autumn period, a fire in the southern Grampians burnt 6 400 hectares, of which 5 700 hectares were State forest.

Reported bushfire events

Yarra Ranges report The largest of the Ash Wednesday Fires occurred in the Warburton - Reefton areas of Upper Yarra with 30 homes destroyed. 60,000 hectares of catchment and state forest were destroyed. The fire started on Mount Little Joe and burnt to Powelltown, Reefton and towards Marysville.

Torquay With Barrabool Shire being declared a drought area the previous September, the area was vulnerable to the wrong set of circumstances. On 16th February, Ash Wednesday, the coastal area of the Barrabool Shire was devastated. A fire which started near Deans Marsh, fanned by a strong northerly wind swept down the coast towards Lorne then Anglesea. Aireys Inlet was destroyed. Houses were destroyed at Anglesea but the flames stopped short of Torquay. Two lives were lost

and 723 houses, one church, the historic Bark Hut at Aireys Inlet and three bridges were destroyed. *https://torquayhistory.com/torquay-fires/*

Surf Coast Shire One of the worst emergencies was the Otways (Ash Wednesday) fire that started at Deans Marsh on 16 February 1983 at approximately 3:00 pm. The fire burnt 41,000 hectares, 729 houses (69 in the Shire of Winchelsea), 53 other buildings, 2,624 sheep, 159 cattle, with three lives lost.

Other bushfire relevant events

Miller Review

LIST OF FIRE AREAS	FATALITIES	AREA	HOUSES	+	OTHER BUILDINGS	SHEEP	CATTLE	FODDER	FENCING
1. Cudgee/ Ballangeich	9	50,000 ha	157		715	11,500	7,800	1,000,000 bales	7,000 km
2. East Trentham /Mount Macedon	7	29,500 ha	628			3,631	149	10,350 bales	50 km+
3. Otway Ranges	3	41,000 ha	729		53	2,624	159	25,000 bales	1,000 km
4. Belgrave Heights/ Beaconsfield Upper	21	9,200 ha		238		526	452	-	650 km
5. Cockatoo	6	1,800 ha		307		N.A.	N.A.	N.A.	N.A.
6. Monivae	Nil	3,181 ha	3		Numerous	1,469	203	N.A.	209 km
7. Branxholme	1	200 ha	1		9	Nil	Nil	900 bales	20 km
8. Warburton	Nil	40,000 ha	27 (incl. 14 holiday homes)		30	Nil	Nil	300 bales	10 km (approx)
TOTALS:	47	174,881 ha	1,545	545	807	19,750	8,763	1,036,550 bales	8,939 km+

SOURCE: COUNTRY FIRE AUTHORITY, VICTORIA, The Major Fires Originating 16th February, 1983, December, 1983, pp. 14, 25, 28, 30, 33, 35, 37 and 38.

Note 1: Unfortunately, the CFA count in the Belgrave/ Beaconsfield, Cockatoo area has not distinguished houses from buildings. Based on the proportion in the Otways, a similar rural residential situation, the house percentage is estimated at 10% of 545 = 54. Therefore total house loss is estimated as 1545+545 = 2090 – 54 = 2036.

Note 2: My study uses house loss as its indicator of damage, not "building" loss. The reader can compare the VBRC use of building totals with the Miller Review's use of house totals to understand that building loss is an unreliable indicator of house loss.

Notes from the Miller Review

Maintain operational coherency under all fire-fighting conditions

On 1 February, under Total Fire Ban conditions, the fire which occurred caused destruction and damage on a considerable scale. Some details are:

5,500 hectares of bush and grassland burnt out, 24 dwellings destroyed, 30 head of cattle killed, one CFA tanker was badly damaged.

Combat resources deployed on 1 February, 1983, included some 335 men, 83 mechanical units, three fixed wing aircraft and two helicopters. Fire combat operations extended over 5 days.

It was possible for this response to be carried out in an organised and orderly manner. There were no significant problems of command, control or co-ordination. In other words, a coherent operational response was achieved.

In the case of Ash Wednesday, reports clearly indicate that, in many areas of the State, operational coherency was lost, or in some cases never achieved at all. These reports show that loss of operational coherency resulted from some or all of the following factors:
. The extraordinary weather conditions.
. The dynamic behaviour of the fires, which raised the need for many units to resort to self-protection; for instance, fires spotted behind deployment positions and placed units in serious danger.
. In some cases, units were literally over-run and overwhelmed by the fire conditions and, even had they been given substantial reinforcements, could not have held fire lines.
. Congestion of communications complicated operational response.
. Acquisition of situation reports concerning the positions of fire fronts and their direction of movement was very difficult, due to the general conditions, even though aircraft were employed in some instances.
. Because of the generally severe and complex conditions, problems arose in the deployment and utilisation of reinforcement units.
. Shortcomings in information management systems further complicated operational activity.

Thus, in future developments, high priority should be given to measures which may help **to maintain operational coherency under all fire-fighting conditions**. Such measures night start with a careful and detailed review of all the components which comprise operational response and consequently, identification of those areas in which enhanced capability could be achieved. in this way, overall combat effectiveness and operational coherency might be improved and therefore be more capable of coping with the extreme circumstances which are encountered from time to time.

Supreme Commander
Submissions to the Committee, that there should be a Supreme Commander', are not appropriate. In this connection, it is worth recording that, even under the powerful provisions of defence legislation and discipline, the major aspects of a military Supreme Commander's role are essentially concerned with the **co-ordination** of his various force elements, **not their detailed command**.

Standards of mitigation and preparedness
Current standards of mitigation and preparedness in Victoria are too low
Some suggested reasons for this were as follows:
. There is distinct apathy among certain sections of the community towards the bushfire problem.
. The fact that legal action may be taken against major offenders, leading to widespread compensation encourages apathy in individuals and within the community generally.
. A hand-out approach to disaster victims by governments also encourages an apathetic attitude.

. Insufficient incentives are offered to property owners to take out insurance.
. Not enough funds are available to ensure effective mitigation
. There is inadequate fire mapping.
. The most appropriate measures were not always implemented because of the influence of groups advocating preservation of the environment.

To offset these and other deficiencies, the following measures were proposed:
. Land-use regulations and controls should be used, where necessary, to reduce the bushfire hazard.
. Land 'buy-back' policies should be implemented to ensure the provision of buffer zones and similar mitigation measures.
. There should be a review of the legal aspects which currently apply to fire mitigation.
. Fire-prone areas should be legally designated and required to have certain facilities such as assured water supplies, underground power lines, home shelter protection, home fire-fighting equipment, a local warden system, safe access / egress roads and designated safe areas.
. There should be restrictions on living in forest and other vulnerable areas, and fire-resistant building materials should be used. If necessary, there should be Government regulation in these matters.

Organisational responsibilities in regard to mitigation and preparedness were reviewed in considerable detail by the Committee. From this a general theme emerged that stronger action was needed on an organisational basis. For example:
The CFA needs stronger powers to enforce the reduction of fire hazards.
. The definition of fire hazards in the CFA Act needs amending, so that an individual's home/ property surrounds can be designated as a hazard to himself.
. The CFA should have a Fire Prevention Department and trained Fire Prevention Officers should be made available to cover regions or groups of municipalities.
. Vegetation control policies should be established by the Ministry of Planning, the CFA and the FCV.
. Local authorities must heed the advice of Regional and Local Advisory Committees concerning fire hazard control and take action accordingly; if necessary, local authorities should be placed under stronger mandatory requirements.
. Some municipal fire prevention plans are below the required standard because of inappropriate proper officers
. Proper officers should be replaced by full-time Fire Prevention Officers, with independent powers.
If this cannot be done, and the current system of proper officers is retained, the incumbents must be properly trained in fire prevention measures.
. Responsibility for roadside fire prevention measures must be clearly defined, and implemented accordingly.
. Local government legislation should be amended so that conservation interests cannot overbear sensible fire prevention and protection measures.

Individual Responsibilities
121. It was strongly represented to the Committee that **individual responsibility** was a vital factor in bushfire situations and that, even if future technology significantly improved bushfire counter-measures, the importance of individual responsibility would still apply.

122. It was also put to the Committee that many homes and properties could have been saved during 1982/83 if individual owners had been better informed in safety and survival measures.
In this connection it was suggested that some form of training might be considered for persons in fire-prone areas, so that they could be thoroughly versed in all aspects of mitigation, home fire-fighting and personal survival.

Homes as bushfire shelters
In some cases, people who used their own homes as shelters also survived; though others who did likewise perished. On this point, it should be noted that views differ on the issue of whether to evacuate or stay with one's house and fight the fire. Various studies on this issue are still in hand. However, general indications are that people who understand what to do and have made adequate preparations, and, most importantly, have an adequate water supply, stand a good chance of surviving and saving their homes. On the other hand, people who take to their cars may face very high risks where conditions of thick smoke and high radiant heat levels apply, especially on crowded escape routes.
. Some improvised forms of shelter, used by individuals who understood fire behaviour and fire-resistant materials, were also successfully used.

161. In addition, following the Ash Wednesday fires, proposals were put to the Committee concerning various designs of shelter. Broadly speaking, these fell into the two categories of:
. Underground bunker-type shelters
. Shelters which utilised water tanks and their contents.
The essential feature of both these types of shelter is that they provide protection from high levels of heat radiation and, by being on home or property sites, permit firefighting action once personal danger has passed. The Committee was represented at tests of one particular type of family-size shelter and considers, on the evidence available, it offers good protection from bushfire. The estimated cost of such a shelter in December, 1983, was approximately $2,500.

Special Measures in Fire-Prone Areas
123. An important aspect of mitigation and preparedness covered by the Committee concerned the special circumstances which apply to recognised fire-prone areas.
Here, much of the information available underlined the basic conflict between a fire-prone, volatile environment and population encroachment.
The point was repeatedly made to the Committee that if people choose to 'live in the bush' they must accept the fire danger which this may involve. Moreover, they must be prepared to support and participate in mitigation and preparedness measures which are designed to protect themselves and their community. It was widely felt that, in relation to the 1982/83 fires, many semi-rural communities had failed to recognise both the dangers and responsibilities involved.
124. However, given that communities already exist in fire-prone areas, and are likely to do so in the future, certain special measures to improve counter-disaster effectiveness were suggested to the Committee. They included:
. Main access/egress roads should be cleared of all trees; and the trees replaced by fire-resistant shrubs.
. Cleared safe areas must be maintained.
. More effective measures are required to

. ensure that power supply systems cannot cause fires, including the installation of underground supply lines.
. Special attention should be paid to fire-prone areas by local government authorities, such as provision of fire breaks, home protection measures and evacuation arrangements.
. Housing features in fire-prone areas should include:
- houses built at ground level, on a slab;
- eaves protected with fibro/asbestos;
- windows protected from cracking and from flying debris;
- properties having water storage and their own
- pumps and generators (water should be sprayed over the house) ;
- houses possessing a cellar with an unobstructed exterior exit;
- houses possessing a readily available oxygen supply, preferably in the cellar;
- housing insulation to be non-flammable;
- spouting to be covered as part of its design;
- sprinklers having underground pipes, because hoses melt.
. **Fire-resistant housing should be encouraged** by the provision of plans at reduced price, rebate on insurance, and similar incentives.

Consideration should be given to the introduction of a system for categorising fire-prone areas.

Insurance Aspects

125. The Committee's attention was drawn to certain insurance aspects which are seen as inter-related with mitigation and preparedness. The main ones were:
The State Government should introduce a standard insurance scheme for homes and properties; at present insured property owners carry much of the burden caused by property owners who do not insure.
. The State Government should not encourage the hand-out mentality; it should stop compensating those who do not take sensible precautions to insure and otherwise protect their property.
. Those who insure are heavily penalised by the inclusion of fire brigade charges; this should be changed so that fire protection costs are shared by all house/property owners.
. **The insurance industry is concerned, for obvious reasons, in mitigation and reduction of risk levels.**

Evacuation

Fundamentally, evacuation (as distinct from localised movement to shelters and/or safe havens) under severe bushfire conditions is not really a desirable option. Limitations of visibility due to heavy smoke, exposure to high levels of heat radiation, traffic congestion and the additional difficulties during darkness, all indicate the hazardous nature of such evacuation and the extremely high risks which are involved.
. In principle, therefore**, evacuation is better seen as a measure of last resort**. Thus, in terms of developing counter-disaster effectiveness, consideration should be focussed on those awareness and preparedness measures which assist persons to defend their own lives, homes and properties, thereby a viable option to evacuation.
. Another option, in appropriate circumstances, is that early evacuation might be seen as a measure of first preference.

The Inquiry was concerned with operational response of fire suppression agencies, specifically command, control and coordination.

It concluded:
** As with the vast majority of counter-disaster operations, certain shortcomings were revealed. This occurred in the general areas of:
. operational coherency
. fire-fighting capability
. equipment
. compatibility of CFA and FCV operations and
. training.
** These shortcomings must be addressed to rectify current operational deficiencies and to deal with the developing threat
The real question is whether our fire-fighting response capability is keeping pace with three aspects of contemporary fire threat:
(a) The periodic peaks of extreme fire severity in Victoria.
(b) The arsonist problem.
(c) The nature and development of semi-rural areas.
** The foregoing comments and proposals indicate that there are aspects of fire-fighting capability which require continuous surveillance and review. Within reasonable financial limits, therefore, Government-sponsored action should be taken to **enhance fire-fighting capability within a co-ordinated program**.

Observation: The Miller Review contained many practical and astute observations. It quoted Noble's book about the 1939 fires:
"Nothing can be done to alter the periodical occurrence of these natural forces. Only the most rigorous policy of fire suppression can give any hope of preventing outbreaks such as this book describes. But we must never forget that a forest fire which burns in heavy fuel on a hot, windy day can release so much energy when it is in full flight that it cannot be stopped."

Unfortunately, the quote reinforces the government's bushfire policy narrative that suppression is the best possible defence against a "natural disaster" like a bushfire.
We know that when FDI exceeds windy 30, a few fires will escape the control of fire fighters despite their best efforts.
Even one escaped inferno can cause a lot of damage.
The escaped inferno flames run with the wind towards properties, settlements and towns.
The entrenched bushfire policy narrative, then and now, is that the army of well trained and equipped fire fighters will protect people from bushfires when they occur. All people need to do is obey them because they are the experts. Leave when they recommend evacuations. Return when they say it is safe. If your house is burnt down, they will support you to be resilient. This is your future in rural Victoria.
We need a new policy narrative that recognises bushfires as avoidable disasters, not natural disasters and that the house toll is unacceptable because Plan A suppression has limited capability to defend, and when it fails, there is no Plan B protection in place.

The missing component is clear strong objectives from government. Strong objectives that people agree with will make a coherent strong policy narrative.

I propose the following objectives – zero (or towards zero) life loss and zero (or towards zero) house loss – to achieve the end goal of eliminating the bushfire menace neighbourhood by neighbourhood and eventually eliminating the bushfire menace in Victoria.

I suggest these objectives and this end goal encapsulate what people want from the government they elected and what they expect from the fire levy they pay – to prevent injury, death and loss of house, possessions, lifestyle and employment if threatened by bushfire attack.

The policy narrative combines applied bushfire behaviour knowledge with threat mitigation to convert the runaway inferno and associated embers into a controllable nuisance that can be suppressed in safety within the capability of either fire fighters or residents. It recognises that the capability of fire fighters is ineffective against the inferno flame. It recognises that fire fighter capability is only effective when the flame is reduced or eliminated in areas prepared before the flame or ember attack occurs. It supplements the current Plan A response (suppression) with a fallback Plan B response when the bushfire attack exceeds Plan A capability.

There will be two specialist bushfire agencies – one for perimeter control and one for asset protection (properties, settlements and towns)

The perimeter controllers contain and blackout the perimeter. It is a long duration task, befitting full time fire fighters.
The asset protectors are the local brigades and the local residents. They prepare the towns and settlements with mitigations and infrastructure and train and coordinate the resident defenders each year before the fire season and suppress when the bushfire attacks. They can be part time, but are paid market rates for these works.

The asset protectors bushfire-protect the properties, towns and settlements
Bushfire-protected properties, settlements and towns stop the running flame by keeping it low and at distance, meaning properties are only at risk from embers.
The protected properties, settlements and towns are a safe working place for fire fighters and residents.
The house is a safe place for a family to shelter within.
Fire fighters and residents are empowered to defend against ember attack and to suppress consequent spot fires when small.
Fire fighters and residents are empowered to identify flame height in ember source areas and aim to progressively eliminate ember supply from those areas.

Note 1 Payment of fire fighters will be at market rates to transparently reveal the true cost of bushfire suppression and prevention by government. This means reduction in costs and budget can be monitored as the bushfire threat is gradually eliminated.

Note 2 Performance criteria will include

- No of properties, settlements and towns bushfire-protected
- Bushfire Damage
- True costs of bushfires

1983/84

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
7.8	3	30

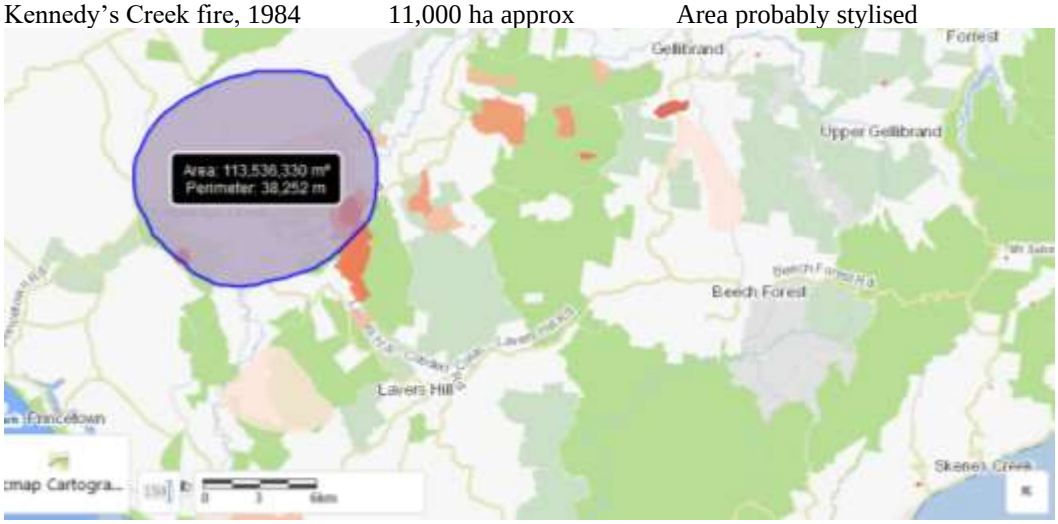
Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

14,975 ha of crown land burnt, 164 fires reported on crown land. 6% (= 9) of these began on private property
Large fires at Heywood, Otways, Geelong, You Yangs
FRB 370,000 ha

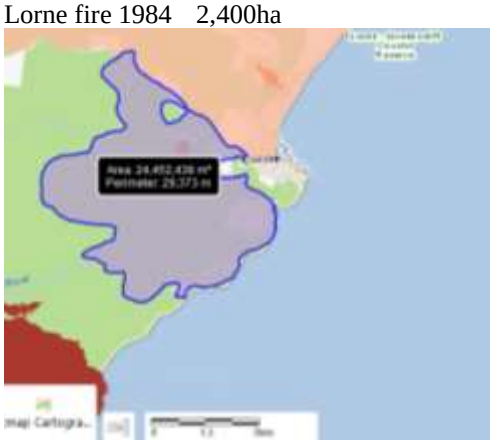
Major forest fires > 1000 ha Mt Eccles 4,000, Little Desert 1,500, Halls Gap 2,000, Lorne 2,300

Kennedy's Creek fire, 1984 11,000 ha approx Area probably stylised



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Lorne fire 1984 2,400ha



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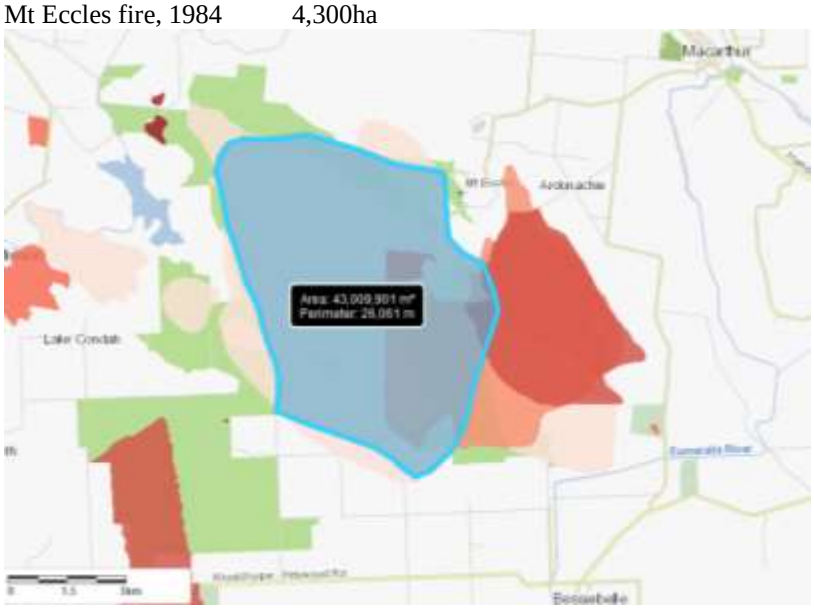
Mt Eccles fire, 1984 4,300ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

The elimination of the Forests Commission by the government ended the political independence of public land management and of forestry and its inseparable companion – forest bushfire protection. Successive governments amalgamate them into combinations of mega departments, each with different names. It leads to a persistent demise in influence of both forestry and forest fire protection within a government where image and good publicity attracts funding.

One casualty is data collection and reporting. The Forests Commission was self-sufficient for 5/8 of its funding, and collected a comprehensive data set of great value to professional forestry and forest protection professionals. It also reported good and bad outcomes. Poor outcomes were acknowledged and a plan of remedial action was described. The new mega departments separate forestry from fire protection and require them to compete for government funding against other more politically popular branches. Gradually annual reports become less factual and more image conscious and self-promoting. Poor outcomes are glossed over or not mentioned, meaning they are not acknowledged and there is no remedial plan. Bushfire protection reporting becomes more minimalist, sometimes reporting only the few indicators that Treasury and Parliament's finance committee require, indicators that are of no value to the bushfire professional wanting to monitor the damage toll. Professional staff will keep the detailed fire protection reporting going in annual reports for the next decade or so, but thereafter, facts and figures will have to be discovered indirectly in technical reports and inquiries. We now leave the era of enlightened bushfire protection where fact and scientific analysis and cost control were valued and enter the dark age of bushfire protection by publicity and image, where politicians throw good money after bad in desperation to ward off public criticism after successive disastrous damage tolls.

For example:
Forests Commission managed public land and kept number of fires and area burnt figures for public land separate from private property. There were three categories for number of fires – no of fires on PL, number of fires attended on PL, and total no of fires attended, meaning on PL and PP. Hereafter, the meaning of number of fires is not usually defined, making accurate comparisons impossible and at best approximations. Forests Commission also kept area burnt figures separate for PL, for PL and private property within the marginal mile and for private

property burnt when a fire ran from PP to PL or from PL to PP. From here on, the area burnt figure in annual reports or media releases is typically not defined, making accurate comparisons impossible and at best approximations.

CFA bushfire records were spare and generalised until the early 1990's, eg, they reported fire attendances by location, but no details about the fire. This suited the volunteer culture – no time to spend on details. The only performance indicator valued within CFA is time of arrival of first tanker after fire report. Computerisation during the 1990's encouraged more data to be reported, eg, bushfire or house fire, and if a bushfire, give its relative fire size – small, medium or large. CFA annual reports to this day list details of a few major bushfires only, rarely more than 10 of a total of the 4000 bushfires regularly attended each year.
The concepts that (1) progress is made when performance is measured and that (2) what gets measured gets done has eluded bushfire protection on private property since the formation of the CFA and has been watered down on public land since the elimination of the Forests Commission. This is why Victoria still has a bushfire problem. The government has not required them to deliver goals that benefit the people (eg, zero damage toll in severe bushfire seasons) nor to report progress towards these goals.

Performance theory distinguishes inputs (budget and resources) from outputs from outcomes from goals. It measures each quantitatively and ensures that inputs generate outputs that produce outcomes that are steps towards the goal. When politicians throw mega millions at the bushfire problem after a disaster to buy more tankers and water bombers, they do not realise the money and the equipment are both inputs, and that both are ineffective against the runaway inferno fire, meaning the investment is wasted if the goal is to protect people and property from bushfire damage. If their goal is to gain public praise for the appearance of decisive action, and they achieve the outcome of a TV appearance, they have achieved their goal.

Shoddy organisations are often labelled with the criticism that their management spends all its time **putting out spot fires** rather than having a long term goal and vision that geberates crisis-free management. Each year, Victoria's fire agencies focus on **putting out bushfires as they arise**. They see their role as bushfire suppression agencies. By contrast, they practice prevention strategies that facilitate their response at building fires and also prevent fire outbreaks. The prevention mindset has not yet migrated to bushfire management. A mindset of eliminating the bushfire menace remains remote, perhaps because they think it is not achievable.

1984/85

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
14.9	4	49

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
14 January – 15 February 1985 Including Maryborough, Avoca, Little River, Wilsons Promontory Deaths: 5 People rendered homeless: 600 Buildings: 680 Livestock: 46,000 Area burnt: 50,800 hectares

COAG and CFA website
1985 January 3 deaths 50 800 ha burnt 182 homes, 400 farms, 46 000 stock Avoca–Maryborough, Little River, Springfield, Melton

DMBCL (1985) = Department that Manages Bushfire on Crown Land

231,900 ha of crown land burnt, 372 fires reported on crown land. 40% (= 150) of these began on private property
FRB 106,000 ha

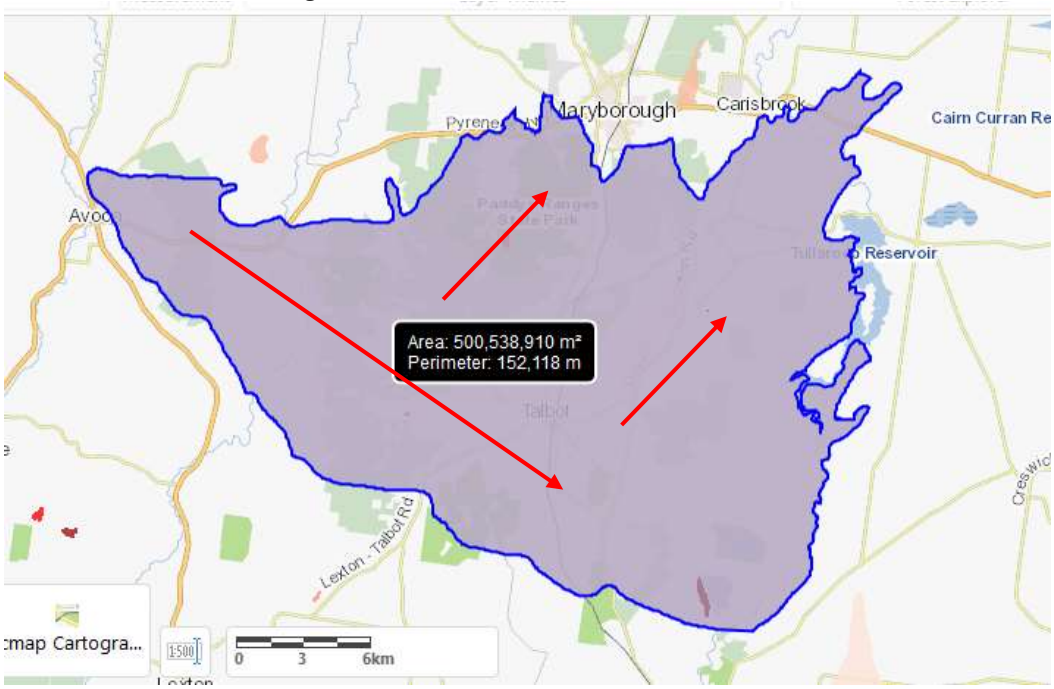
Major forest fires > 1000 ha Big Desert 7,000 +3,000+25,000, Wyperfield 1,500+18,000, Sunset 23,000+29,000, Hatta 3,000, Casterton 8,500, Avoca 17,500+*33,200 on PP*, Cann River1,300, Bright 5,000, Beechworth 1,800, Mt Buffalo 53,000, Mansfield-Mt Useful 18,500+, Mt Stirling 2,400, Tallangatta 9,000, Licola 2,200, Straughton Vale 9,600 PP?, Chapple Vale 1,700

Major grass fires > 4000 ha 33,000 at Avoca ++

ICA Catastrophe Data
On 14 January 1985 a significant number of bushfires started in Victoria predominantly from lightning strikes. A major fire in Central Victoria burnt 50,800 hectares of land, including 17,600 hectares of Crown Land. Three people died and over 180 houses, 500 farms and 46,000 livestock were destroyed as a result of the fire. Areas affected included Avoca, Maryborough, and Little River. A large number of fires also started in the Victorian alpine areas, the largest at Mt Buffalo burning 51,400 hectares. Overall, 111 fires started on public land on and it took two weeks to bring the fires under control.

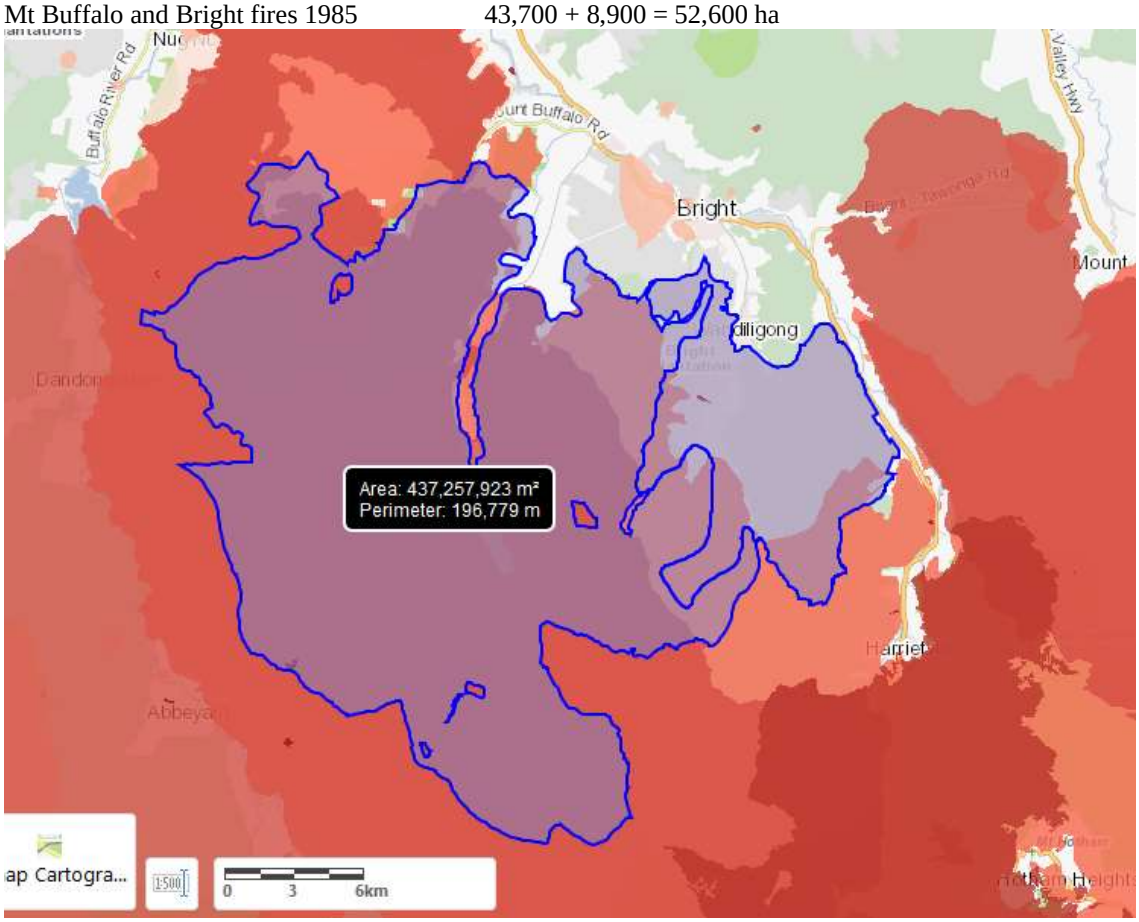
$105M in 1985 $845M in 2017

Avoca Maryborough fire 1985 50,500ha Arrows show initial fire run is towards SE, then towards NE after wind change



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Mt Buffalo and Bright fires 1985 43,700 + 8,900 = 52,600 ha

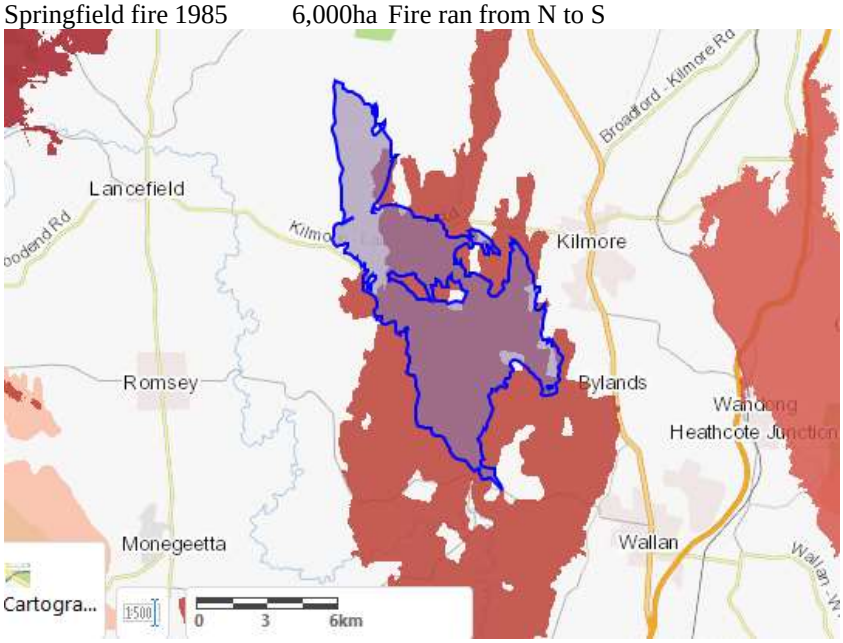


http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Anakie fire, 1985 20,000ha Little River fire 9.300ha, 2 people died

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Springfield fire 1985 6,000ha Fire ran from N to S



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Melton fire 1985 2.300ha

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

Commentary describes public land area statements, not private property:
https://www.ffm.vic.gov.au/history-and-incidents/past-bushfires
1985: 14 January
A total of 111 fires started on this day, many due to lightning, and took two weeks to bring under control.
Areas affected including Avoca, Maryborough and Little River. Fires also affected the alpine area, with the largest, at Mt Buffalo, burning 51,400 hectares
A major fire in Central Victoria burned 50,800 hectares, including 17,600 hectares of crown land. Three people died and more than 180 houses, 500 farms and 46,000 stock were destroyed.

Geelong City Council 14 January 1985 Maryborough, Avoca and Little River hit by fires that destroyed 180 houses, 500 farms and 46,000 stock. 3 people died.

The fire that impacted Little River decimated the You Yangs, with 90% of the park burnt out in 1 hour. The fire was contained just south of the Princes Highway (now the Princes Freeway) and destroyed 4,500 stock, 275 kilometres of fencing, 50+ farm buildings including 5 farm houses. A total of 10,000 hectares were blackened. Two people lost their lives.

1985/86

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
8.8	6	61

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

DMBCL (1986)
14,500 ha of crown land burnt, 397 fires reported on crown land. 4% (= 14) of these began on private property
FRB 96,000 ha

Major forest fires > 1000 ha Heywood 1,000, Mildura-Sunset 6,200

Reported bushfire events

1986/87

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
4.9	7	59

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

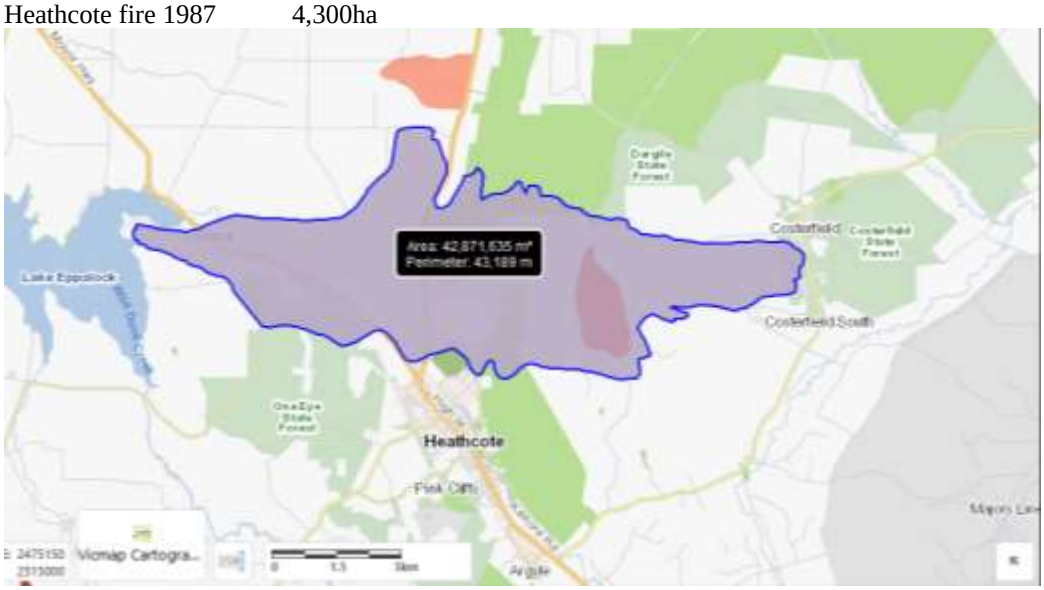
Official bushfire records

DMBCL (1987)
17,800 ha of crown land burnt, 374 fires reported on crown land. 11% (= 40) of these began on private property
FRB 210,000 ha

Major forest fires > 1000 ha Big desert 3,200 + 3,100, Orbost 1000, Rushworth 1,300

Major grass fires > 4000 ha

Heathcote fire 1987 4,300ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

1987/88

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
6.6	10	93

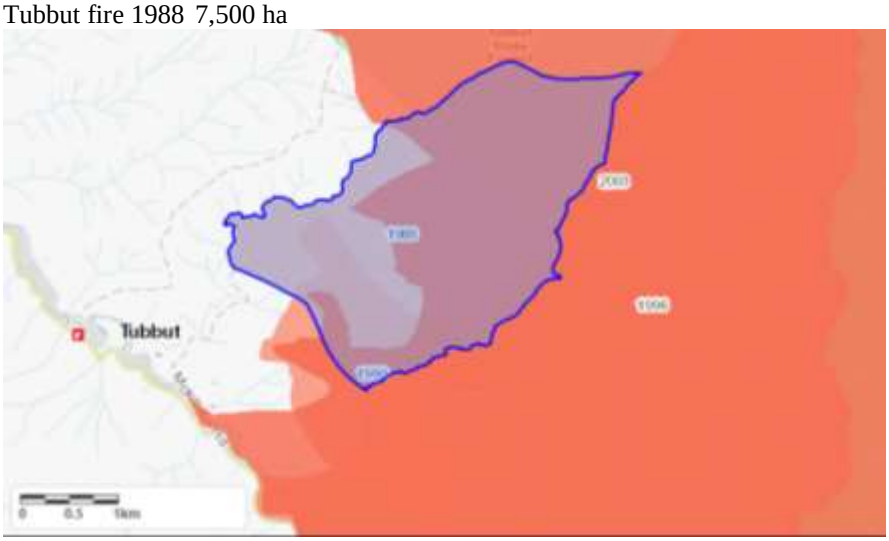
Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

DMBCL (1988)
29,600 ha of crown land burnt, 640 fires reported on crown land. 5% (= 33) of these began on private property
FRB 200,000 ha

Major forest fires > 1000 ha Large fires at Tubbut 9,000, Sunset Desert 9,000

Tubbut fire 1988 7,500 ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

Canberra Times Mon 11 Jan 1988
Firefighters battle five bushfires in Victoria
MELBOURNE:
Victorian firefighters were battling five major bushfires yesterday, while a number of fires in South Australia also blazed out of control.
As another 60 spot fires caused by lightning strikes broke out across Victoria, a total of 600 firefighters, 20 aircraft, 30 bulldozers and 100 water tankers were being used to combat the worst of the outbreaks. A spokesman for the state's Conservation,
Forest and Lands Department said the five major fires were out of control but would be contained by late yesterday if there was no change in the weather.
Yesterday morning six bulldozers were preparing to dig a break around the major fire in the ranges in an effort to halt its progress. In Victoria, the largest fire causing most concern was at Morkala, south-west of Mildura in the state's north. More then 100 firefighters using five bulldozers and 10 tankers were trying to combat the 12,000ha fire, the department's spokesman said.

1988/89

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
4.4	8	65

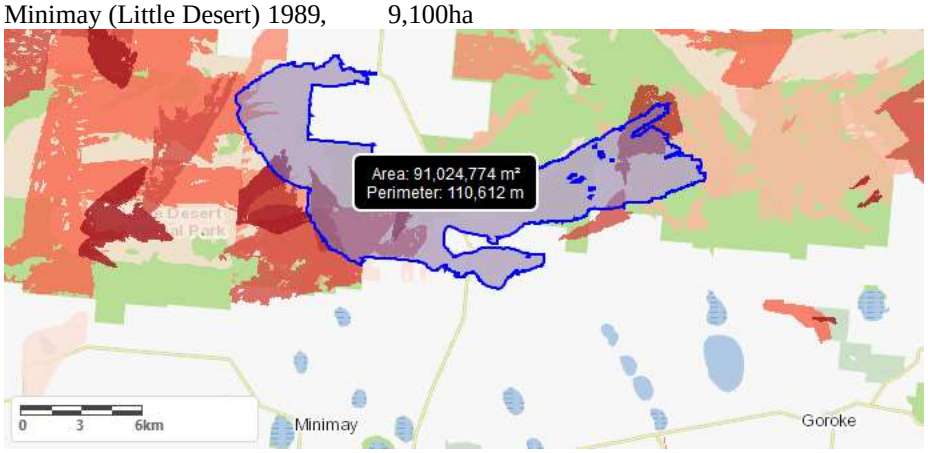
Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

DMBCL (1989)
24,400 ha of crown land burnt, 375 fires reported on crown land. 7% (= 24) of these began on private property
FRB 34,000 ha

Major forest fires > 1000 ha Minimay 9,300, Hattah 4,500, Murrayville 3,500, Orbost 5,700, Warby Ranges 1,100
Major grass fires > 4000 ha

Minimay (Little Desert) 1989, 9,100ha



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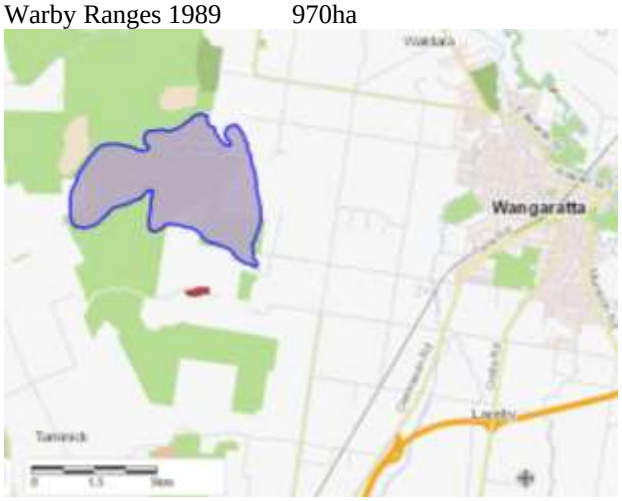
Warby Ranges 1989 970ha



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Reported bushfire events

1989/90

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
18	7	91

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

DMBCL(1990)
11,100 ha of crown land burnt, 409 fires reported on crown land. 8% (= 33) of these began on private property
Large fires at … Cobberas 300,
FRB 105,000 ha

Major forest fires > 1000 ha Casterton 1,300, Ulupna 1,600

Major grass fires > 4000 ha 10,000 on PP + where?

Reported bushfire events

1990/91

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
13.7	10	119

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
27 December 1990 – 10 January 1991 Strathbogie Ranges Deaths: 1
People rendered homeless: 30 Buildings: 166 Livestock: 13,500

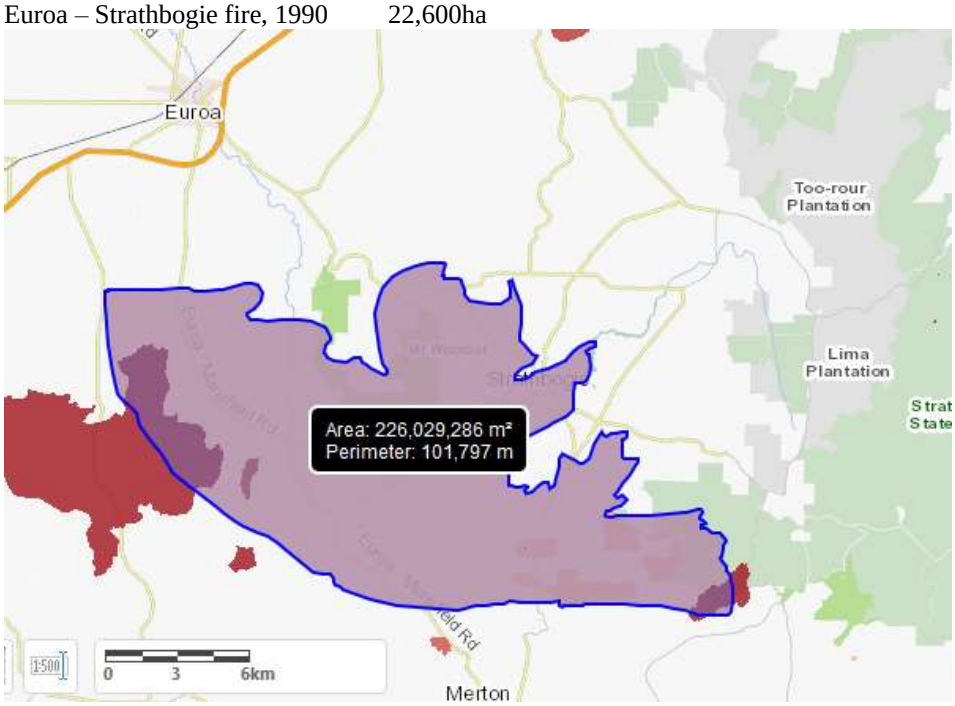
COAG and CFA website
1990 December 1 death 17 homes Strathbogie >12 000 stock

DMBCL (1991)
27,550 ha of crown land burnt, 632 fires reported on crown land. 7% (= 41) of these began on private property
Large fires at Strathbogie 20,000, Portland 13,000, Warburton 1,200, Little Desert 900, Jilpanger 870
FRB 205,000 ha

Major forest fires > 1000 ha Warburton 1,000, Strathbogie 2,300+18,000 PP, Portland-Tremaine Swamp 13,000

Major grass fires > 4000 ha Euroa - Strathbogie 18,000

Euroa – Strathbogie fire, 1990 22,600ha



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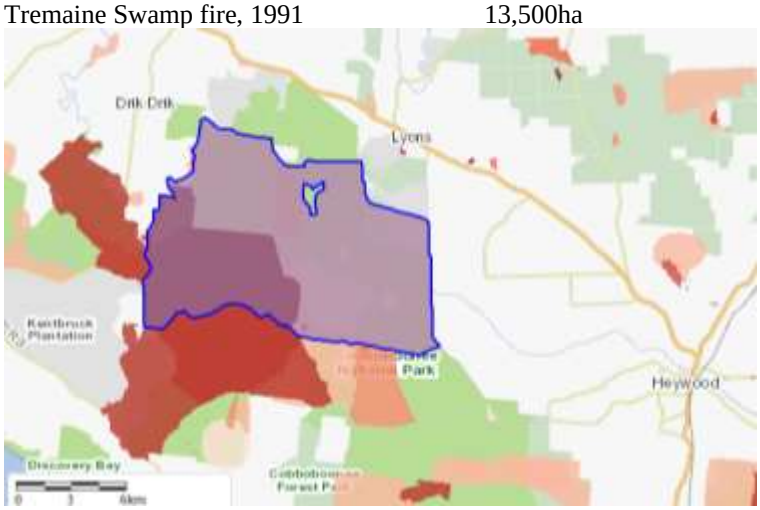
Tremaine Swamp fire, 1991 13,500ha



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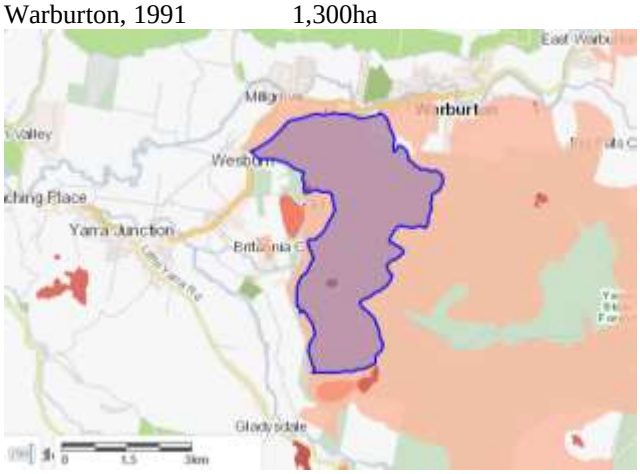
Warburton, 1991 1,300ha



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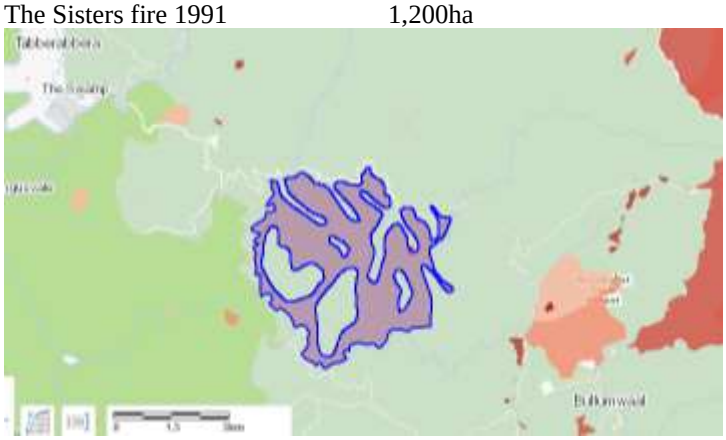
The Sisters fire 1991 1,200ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

Yarra Ranges report date? Mt Little Joe A fire was deliberately lit in Hooks Road, Millgrove. One home and several outbuildings were burnt. Mount Little Joe was burnt out, with the fire threatening homes in Warburton, Wesburn, Millgrove and Gladysdale.

1991/92

Weather

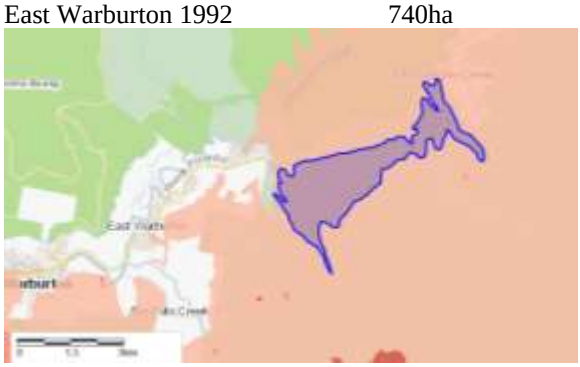
Dryness Index	Days >35^{0}C	Seasonal Severity Level
6.1	4	36

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

DMBCL (1992)
13.500 ha of crown land burnt, 447 fires reported on crown land.
Large fires at Big Desert 7,000, Yarram-Mullendung 1,000, Bairnsdale- Glen Valley 800, Portland 470
FRB 145,000 ha

East Warburton 1992 740ha



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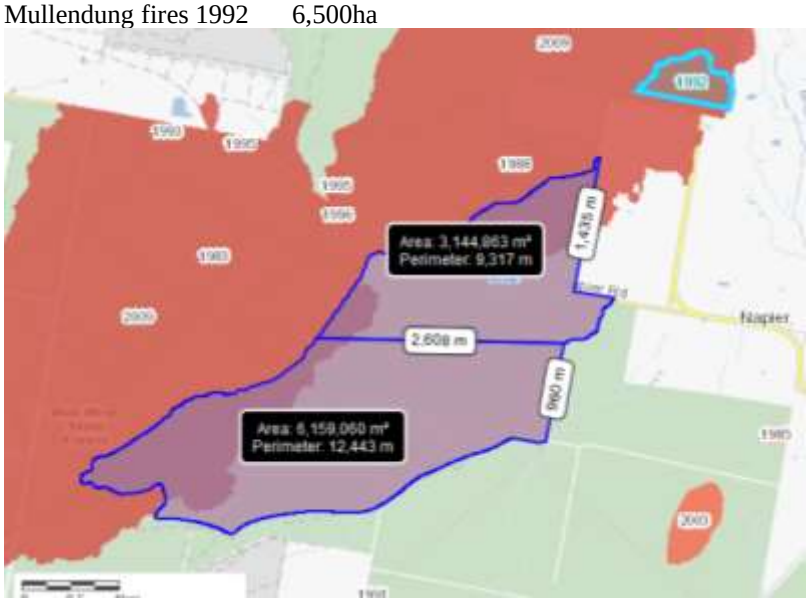
Mullendung fires 1992 6,500ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

1992/93

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
3.3	9	67

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

DMBCL(1993)
4,615 ha of crown land burnt, source VNPA
~ 600 fires reported on crown land.
FRB 100,000 ha

Reported bushfire events

1993/94

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
4.7	4	33

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

DMBCL (1994)
16,000 ha of crown land burnt, source VNPA
~ 250 fires reported on crown land.
FRB 168,000 ha

Reported bushfire events

1994/95

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
8.5	12	122

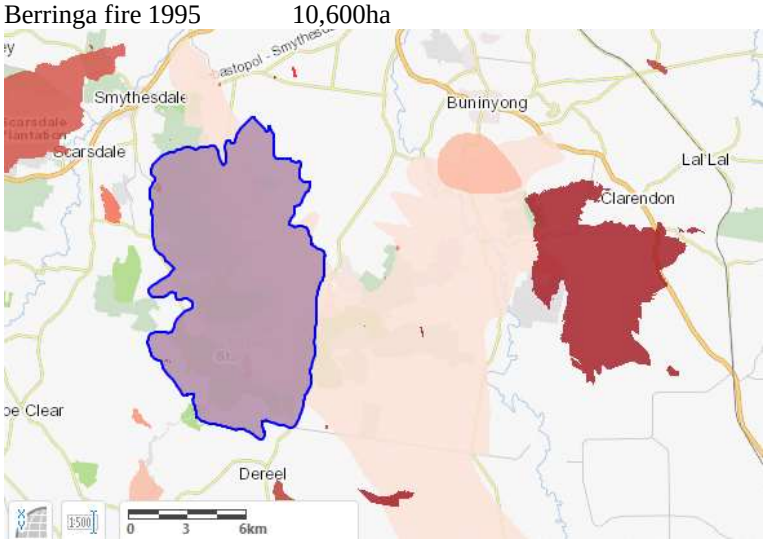
Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
23 February 1995 Berringa Deaths: nil Area burnt: 10,000 hectares (mostly forest)

DMBCL (1995)
19,000 ha of crown land burnt, source VNPA
~ 380 fires reported on crown land.
Large fires at Berringa
FRB 141,000 ha

Berringa fire 1995 10,600ha

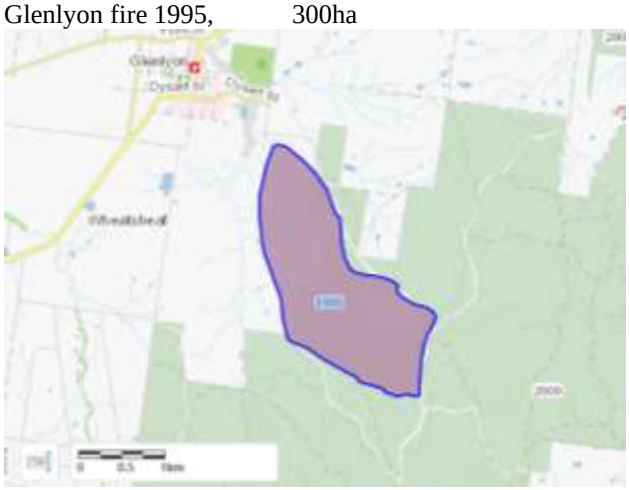


http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Moggs Creek escape fire 1995, 710ha

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Glenlyon fire 1995, 300ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

Surf Coast Shire In November 1994, a fuel reduction burn adjacent to Moggs escaped which resulted in 200 hectares of bush being burned, with one house destroyed and 25 damaged.

1995/96

Weather

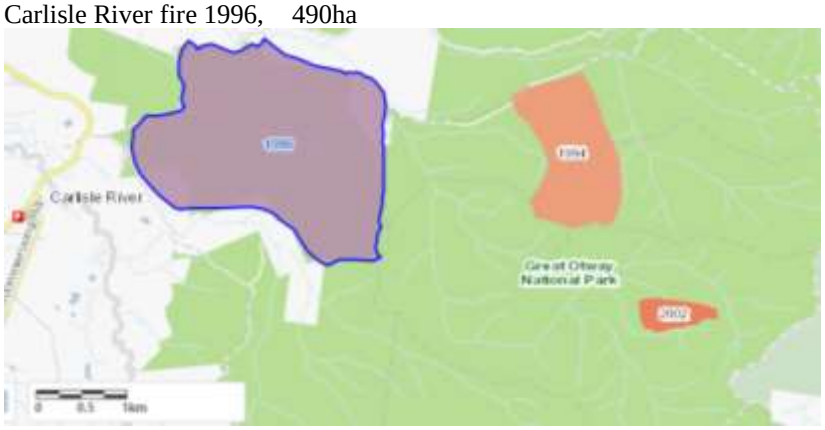
Dryness Index	Days >35^{0}C	Seasonal Severity Level
4.2	2	16

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

DMBCL (1996)
12,880 ha of crown land burnt, source VNPA
~ 800 fires reported on crown land.
FRB 102,000 ha

Carlisle River fire 1996, 490ha



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Reported bushfire events

1996/97

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
17.9	13	169

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
19–21 January 1997 Dandenong Ranges, Creswick, Heathcote, Teddywaddy, Goughs Bay Deaths: 3 People rendered homeless: 150
Buildings: 43 and 1 CFA fire truck Area burnt: 4,150 hectares

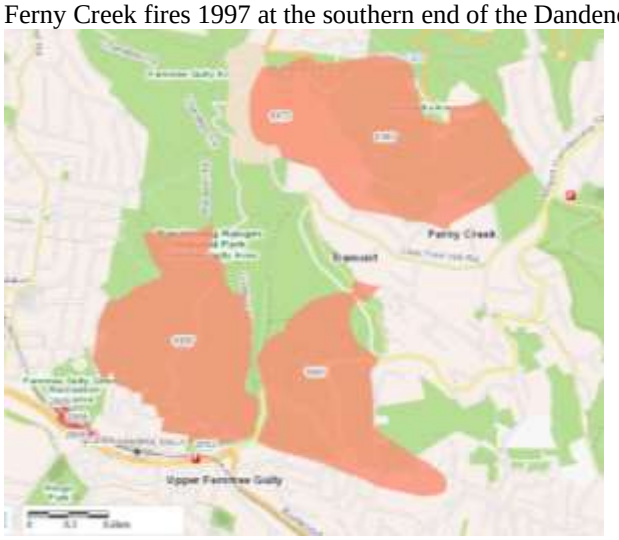
16 February 1997 Winton, Romsey Deaths: nil Livestock: 200 sheep
Area burnt: 800 hectares

DMBCL (1997)
25,600 ha of crown land burnt, source VNPA
~137 fires reported on crown land.
FRB 90,000 ha

DELWP website
1997: 21 January Five major fires broke out, including fires in the Dandenong Ranges that took three lives, destroyed 41 houses and burned 400 hectares.
Other areas affected included Arthurs Seat, Eildon State Park, Gippsland and Creswick.

ICA Catastrophe Data
On 19 January 1997, temperatures soared above 40 °C and northerly winds gusting at 70 km per hour contributed to two damaging bushfires near Melbourne. The fires in Mt Eliza burnt two homes and evacuations were required at Mt Martha, Arthur's Seat and the Mornington Peninsula. Approximately 250 bushfires burnt areas of Victoria on 21 January, a 41.2 °C day. The worst affected areas were Ferny Creek, Upwey and Kalorama in the Dandenong Ranges where it took 1500 firefighters and six water-bombing aircraft to control the 3700 ha forest blaze. In addition to the two houses at Mt Eliza, 41 houses were destroyed and 45 damaged in the Dandenongs. Three people died at Ferny Creek and approximately 40 were injured throughout the State
$10M in 1997 $45.3M in 2017

Ferny Creek fires 1997 at the southern end of the Dandenongs. The deadly work of fire bug killed 3.



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

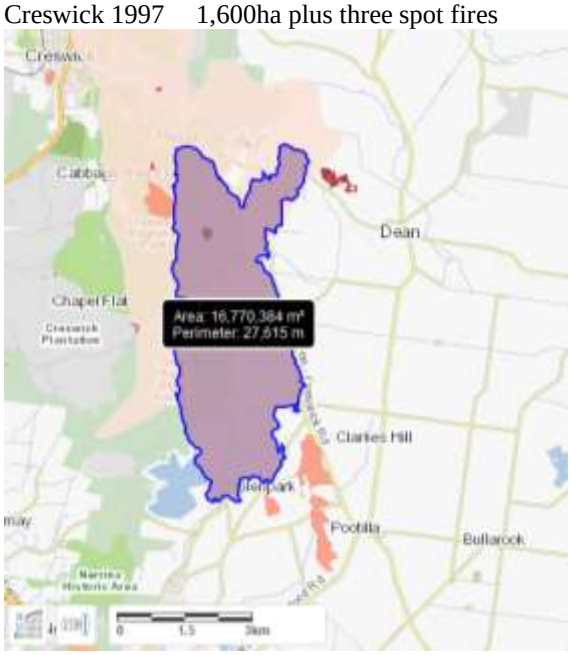
Kalorama fires 1997 Map shows evidence of more roadside fire bug activity at the northern end of the Dandenongs

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Sadly, DELWP's mapping system changed recently and dumbed down the records by deleting many ignition points and expanding other areas. We cannot be certain what areas were burnt by bushfire here in 1997 and 1998.

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Creswick 1997 1,600ha plus three spot fires



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

http://www.australianweathernews.com/news/news.htm

Monday 20 January 1997 Many places in Victoria, Tasmania and southern SA reported top temperatures 10 degrees or more above average today. In Victoria, the top report was 42 degrees shared by Warracknabeal, Port Fairy, Avalon, Geelong Airport and Heywood. Greatest departures from normal were +20 at Cape Nelson and +19 at Cape Otway and Portland Airport. Melbourne City reported 41.2, 15 above average, and the hottest day since 3/3/93.
At mid afternoon, two major fires were burning at Campbellfield, north of melbourne, and Langwarren near Frankston, and almost 50 grassfires had been reported.

Tuesday 21 January 1997 18.40 Twenty-eight houses have already been destroyed in a major bushfire burning out of control in the Dandenong Mountains 50km east of Melbourne. Most have been lost in the Ferny Creek - Tremont area, where 700 firefighters are trying to contain the fire in the face of strong northerly winds and temperatures in the high 30s. Two South Australian water bomber aircraft have joined the fight. At least 7 major fires were reported burning in the Dandenongs earlier this afternoon with all major roads blocked. Fires at Mt Dandenong and Kalorama are now under control. Upwey and Belgrave were the current trouble spots a short time ago. Elsewhere in Victoria, fires were reported at Lake Eildon, Arthur's Seat on the Mornington Peninsula, Gellibrand in the Otway Ranges, Creswick near Ballarat, and Seaspray in Gippsland where houses and campers have been evacuated. (ABC)
Temperatures across Victoria and Tasmania reached the high 30s this afternoon, with reports of N to NW winds of 25 to 35 kts widespread. Top maxima to 15.00 in Victoria were 41 at Avalon, and 40 at Geelong Airport and Laverton, both west of Melbourne. Melbourne City's top temp was 39.7 at 15.50 EDST. In Tasmania, temperatures were highest on the east and southeast coasts, reaching 39 at Orford, and 38 at Swansea, St Helens, Hobart City and Hobart Airport. Many locations in both states reported maxima 10 degrees or more above average, the greatest departures being +17 at Orford (39) Tas, +16 at Wilsons Promintory (36) and Cape Otway (37) in Vic, and +16 at Hobart City and Airport (38).
One factor perhaps ameliorating today's fire situation has been relatively high humidity, with dew points typically from 5 to 15 degrees in Victoria and 10 to 15 in Tasmania's east. At 15.00, a cold front was passing through Hobart and approaching Geelong, with temperatures 100km behind the change as low as 15 to 18. Southeastern South Australia, where temperatures above 40 were common yesterday reported temperatures in the mid to high teens today as a rainband moved across the region giving widespread falls of 15 to 30mm between 0900 and 1800.
22 January 1997 12.05 A band of heavy rain has been moving through southeast SA, western Victoria and Tasmania during the past 24 hours bringing widespread falls of 20 to 50mm, and helping

firefighters to control blazes in Victoria. A fire is still burning near Upper Ferntree Gully in the Dandenongs east of Melbourne, but is under control. It was in this area yesterday that 40 homes were destroyed - 30 at Ferny Creek and 12 in Upwey - and two lives lost at Ferny Creek. Altogether, 1500 firefighters fought 85 fires across Victoria yesterday, and there were 700 evacuations in the Dandenongs, Arthurs Seat and Moorabbin (ABC)

23 January 1997 19.10 It's been officially confirmed that three people died in Tuesday's fires in the Dandenongs. Thirty-three houses were destroyed. Authorities believe the most damaging fires were deliberately lit. (ABC)

Mornington Peninsular Shire records

1997 (January 20) Mt Martha Park

The fire started at Churchill and Park Rds, Mount Martha. Sixty-one fire-fighting units and 336 fire-fighters battled the fire over two days. Between 20 and 40 ha Mt Martha Public Park were destroyed in the blaze.

Mornington Peninsular Shire

1997 (January 21)

Arthur's Seat

Four hundred people fought the deliberately lit fire that burnt 160 ha of bushland. Houses along Purves Rd, Seahaze St, Nestle Court and Towerhill, Gully and McLear Rds were all at risk during the blaze and home-owners were evacuated

1997 Arthurs Seat a fire started at bottom and reached the top in 7 minutes and spread rapidly to the south McRae / Arthur's Seat Town Protection Plan 2010 Morn Pen Shire

Arthurs Seat fire 1997 114ha

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

1997/98

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
13.6	11	130

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

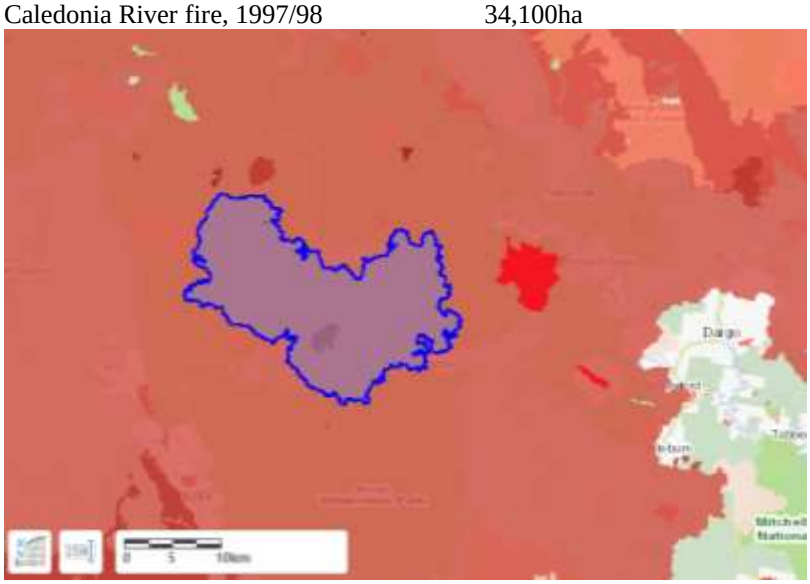
Official bushfire records

VBRC
31 December 1997 – 12 January 1998 Caledonia River area of Alpine National Park, Carey River State Forest Deaths: nil Area burnt: 32,000 hectares
1 February 1998 Western District where? Deaths: nil Buildings: 60 Livestock: some losses Area burnt: more than 1,600 hectares
22 March 1998 Trentham Deaths: nil Buildings: 60 Area burnt: 3,500 hectares

DMBCL (1998)
55,500 ha of crown land burnt, source VNPA
? fires reported on crown land.
FRB 40,000 ha

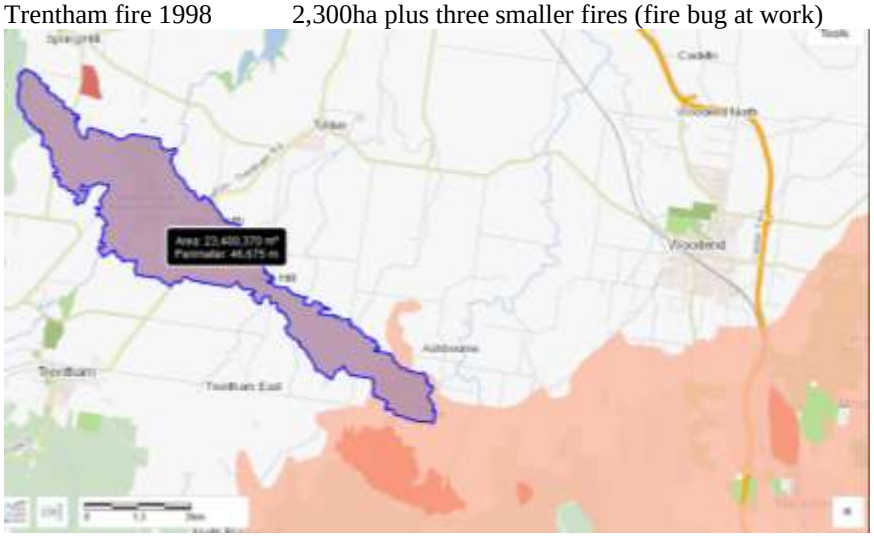
DELWP website
1998: 9 January
A fire reported on New Year's Eve, 1997, burned 32,000 hectares in 10 days. Of this area, 22,000 hectares was in the Alpine National Park and 10,000 hectares was in the Carey River State Forest.
The suspected cause was a campfire.

Caledonia River fire, 1997/98 34,100ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Trentham fire 1998 2,300ha plus three smaller fires (fire bug at work)



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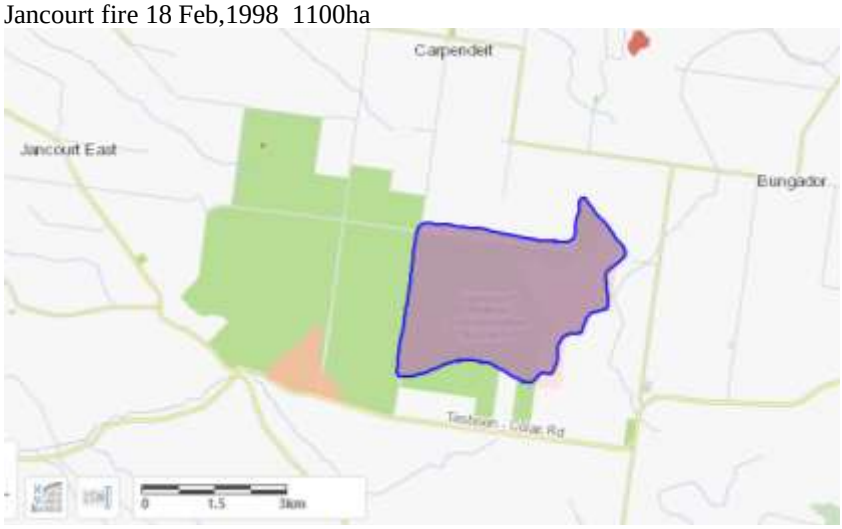
Jancourt fire 18 Feb,1998 1100ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

http://www.australianweathernews.com/news/news.htm

1 Jan 1998 A blaze which started from a campfire on New Years Eve rapidly escalated during the afternoon. By the end of the day, it had burnt 3000ha of Alpine National Park north of Licola. Arson was believed responsible for grassfires which threatened houses in Melbourne's northwest, burning out 100ha near Westmeadows. Meanwhile, isolated thunderstorms across eastern Victoria and NSW during the late afternoon and evening contributed to firefighters' worries.

2 Jan 1998 In eastern **Victoria,** the fire which began north of Licola in east Gippsland on New Years Eve burnt through 6,000ha of the Alpine National Park in the Caledonia River area, and is moving into inaccessible country. Firefighters are describing it as the worst in Victoria in a decade, with strong, hot winds and rugged terrain hampering operations. Up to 600 firefighters, 11 fixed wing aircraft and 5 helicopters attended the fire today, and areas north of Licola are being evacuated. . Another Gippsland fire has burnt through 200ha south of Cann River in the Croajingalong National Park.

3 Jan 1998 The fire in the Alpine National Park in East Gippsland had burned out an estimated 30,000 ha, and, although about 400 firefighters were clearing lines which will ultimately contain the fire, it was regarded as virtually uncontrollable due to the remote and rugged country in which it is burning. It is regarded by fire authorities as the largest fire in Victoria since 1985. Also in East Gippsland, a fire in the Croajingalong National Park, has burned 3,000 ha, and others are burning near

Cann River and Orbost. More than 30 fires were burning during the day in Gippsland and eastern Victoria. At Mount Napier, near Portland in the state's west, a fresh fire during the day burned 100 ha before being brought under control.

4 Jan 1998 A fire, believed to have been deliberately lit, killed stock, threatened houses and burnt out 50ha of land near Puckapunyal about 100km north of Melbourne.

5 Jan 1998 There are still 91 fires active in Victoria today, of which 85 are said to be under control. The largest, in the Alpine National Park in East Gippsland, jumped a river and moved eastwards overnight. Around 500 firefighters continue to prepare control lines around approximately 50% of the fire's 110km perimeter. Estimates of the area already burnt varied between 30,000 and 40,000 ha, or 300 to 400 square kilometres. A large US water-bombing aircraft reaching the fire zone this afternoon, capable of dropping 9,000 litres per drop, 3 times the capacity of aircraft currently being used. Southeast, the Croajingalong NP fire near Cann River is under control, having burned through 3,700 hectares. During the day, four smaller fires broke out near Toolangi, Horsham, in the Otways and in the Buckland Valley near Ovens.

7 Jan 1998 The fire in Victoria's Alpine National Park jumped control lines on a 3km front on its northeastern edge overnight, crossing the Moroka River near Mount Dawson. However, light rain through the day helped slow the spread of the fire, but at the same time thwarted attempts to accurately map the fire using infrared scanners in aircraft. Intensive water bombing continued during the day in an attempt to prevent spotfires spreading from the blaze.

14 Jan 1998 A fire at Wandong, about 40km north of Melbourne, burnt through over 700ha of grassland and pine plantation, and threatened homes in Wandong and nearby farms and towns. 250 firefighters attended the blaze which was brought under control late evening. Earlier in the afternoon, a fire at Ceres, about 10km west of Geelong, destroyed one home and burnt out 200 ha of grassland. Strong northwesterlies pushed inland heat to all parts of the Victorian coast. Normally cool Wilsons Promontory scored a top temperature of 33C, 13 above normal, whilst Lakes Entrance with 39C was 16 above and many coastal locations on the west coast had maxima in the mid thirties, 12 or so above average.

2 Feb, 1998 Lightning strikes overnight were held responsible for most of 94 reported bushfires during the day. One, near Berringa south of Ballarat, destroyed sheds and farm buildings, killed livestock and burnt out 100ha. Another, at Huntly near Bendigo, burnt out 130ha of grass and forest land. Twelve fires were burning along the Great Ocean Road, and others in the Otways. The biggest burnt out about 100 hectares near Anglesea. In eastern Victoria, Bairnsdale, Orbost and Lakes Entrance had a maximum temperature of 40C, 14 to 16 above average.

5 Feb, 1998 A large grass fire at Avenel north of Melbourne burnt out about 100 hectares and threatened houses during the day. The Country Fire Authority believes the fire was started when a magpie flew into power lines on the Seymour to Mangalore Road and burst into flames. This follows a similar situation with the fires near Kingston, Tas, on 17 January, except they were caused by a duck

18 Feb, 1998 A large fire near Colac, about 70km WSW of Geelong, threatened houses and burnt out over 460 hectares after breaking out in the Jancourt Flora and Fauna Reserve around midday. Unconfirmed reports said that one house had been destroyed. Another fire burnt out 10 hectares of forest in the Paddy Ranges near Maryborough, south of Bendigo.

25 Feb, 1998 Bushfire at Macedon, 60km NW of Melbourne, today. Over 200ha of pine plantation were burnt to within half a kilometre north of the town, which was under threat from potential wind direction changes during the afternoon. Over 300 firefighters and 50 tankers attended the blaze.

1998/99

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
6.3	13	119

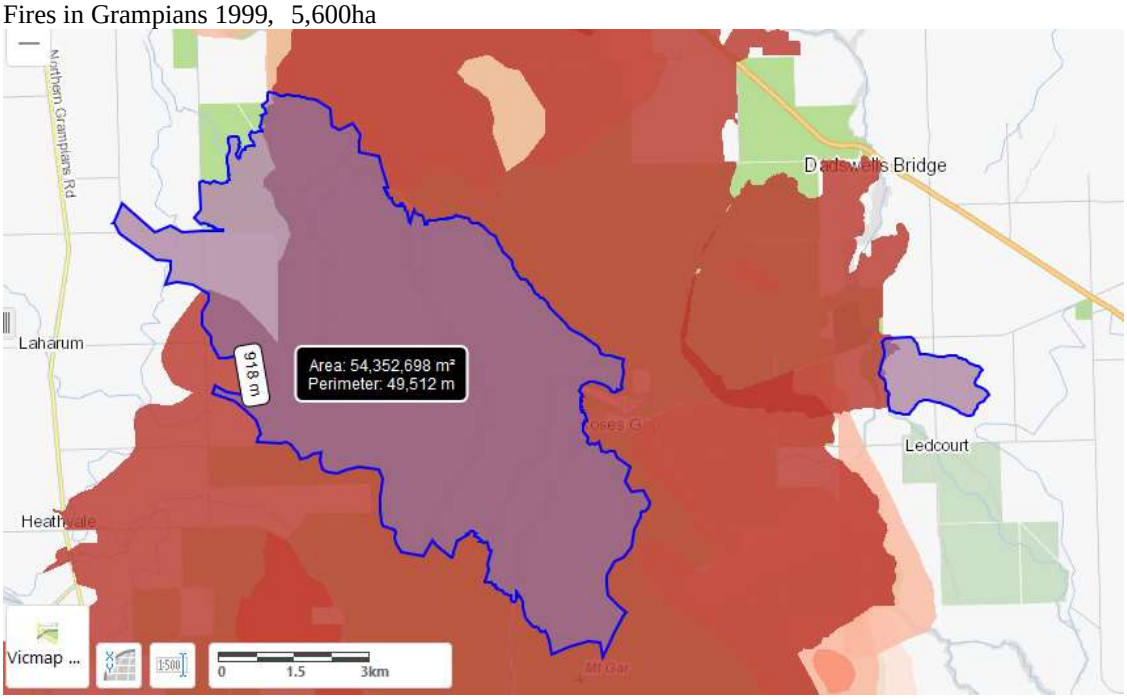
Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC and COAG
2 December 1998 Linton Deaths: 5 (CFA firefighters) Area burnt: 780 hectares
5–9 January 1999 Grampians Deaths: nil Area burnt: 7,000 hectares

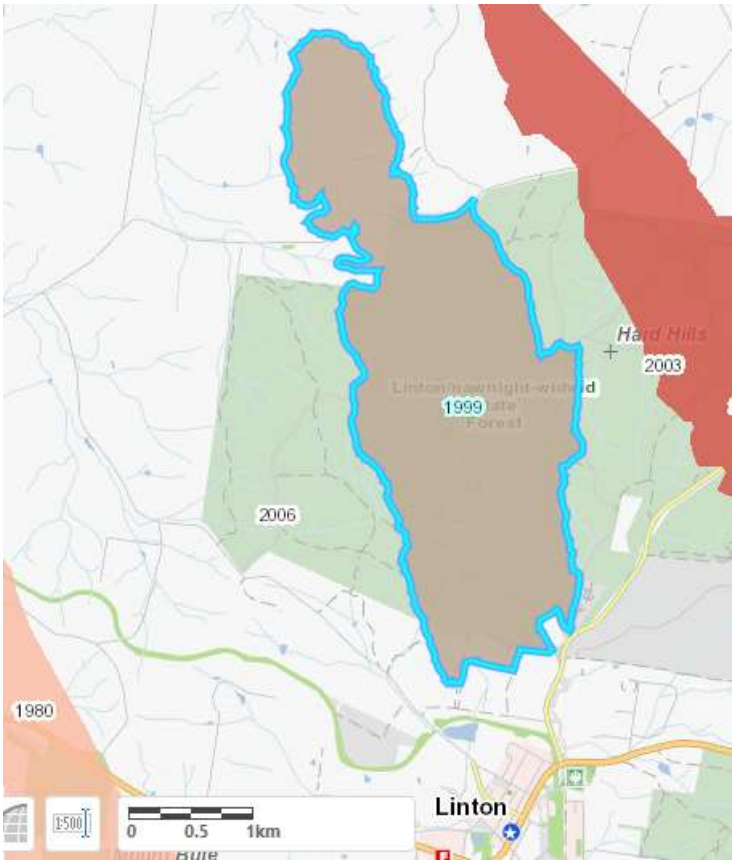
DMBCL (1999)
48,240 ha of crown land burnt, ? fires reported on crown land.
Large fires at
FRB 104,000 ha

Fires in Grampians 1999, 5,600ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Linton fire Dec 1999 660ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

Coroner's Report January 2002

The Linton fire was first detected by a member of the Snake Valley CFA rural fire brigade at about 1300 hours on Wednesday 2 December 1998. The fire started on private property in long-unburnt open eucalypt forest and burnt into State forest. The fire was driven by strong, hot, dry northerly winds and progressed at an average speed of about 1.1 km/h, until it reached the grassland and forest remnants around the town of Linton at about 1800 hours. the fire travelled a distance of about 5 km in a SSE direction, and was generally less than 1.5 km wide and burnt an area of 660 ha, about 80% of which was in State Forest. A strong south-westerly wind change hit the area at about 2045 hours, but by this time most of the eastern flank had been contained only 400 m on this flank remained unsecured. this unsecured section was driven a distance of about 250 m after the wind change until it hit an area which had been fuel reduced two years previously. the fire effectively stopped at this boundary, and ground suppression was very straight forward. However, in this run of 250 m, two CFA fire tankers were entrapped. Five firefighters lost their lives and one firefighter was injured during the course of the fire and another ten were seriously threatened. One firefighter's ute, one CFA tanker, two small dwellings and a number of outhouses and sheds were destroyed, and significant damage was caused to two other CFA tankers.

Contributions:

Mr Peter Neyland contributed to the fire (landowner)

The State of Victoria by its agent the Department of Natural Resources and Environment contributed to the deaths.
The Country Fire Authority contributed to the deaths.
Mr. Simon Scharf, Country Fire Authority Fire Officer and Strike Team Leader, Geelong Strike Team, contributed to the deaths.

Recommendations
The Victorian Fire Services consider introducing the additional function of 'Safety' to the other four 'functional areas' of the Incident Control System of AIIMS

A 'Safety Officer' at a wildfire should have the limited ability to effect an operational decision and only where that decision is reasonably likely to put the lives of firefighters at immediate unnecessary and unjustified risk. During the management of an incident, if the 'Principal Safety Officer' raises a safety issue with the Incident Controller that requires modification to the system of work on the fire-ground (or elsewhere) and the Controller decides not to follow the advice the issue and reasons for decision should be documented in the log.

Report of the Investigation and Inquests into a Wildfire and the Deaths of Five Firefighters at Linton on 2 December 1998 Victorian Coroner January 2002

http://www.australianweathernews.com/news/news.htm
11 December, 1998 Temperatures from 12 to 20 degrees above normal covered most of Victoria and Tasmania, and the southern half of South Australia today, with December maximum temperature records falling in all three states. An absence of strong winds restricted bushfire development, though about 60 small fires burned across Victoria. The largest, consumed 450 hectares of grassland near Dergholm, about 70km NE of Mount Gambier, SA. Nearby Hamilton Airport recorded the only strong winds reported during the day with gusts to 85km/h around 4.45pm. The heatwave also crippled water supplies in the town of Churchill in the Latrobe Valley east of Melbourne.

Observation
The Linton deaths were a tragic coincidence of CFA volunteer crews, inexperienced in forest fires, being in the wrong place at the wrong time, precisely when a strong wind change they had not been warned of enlivened a quiet section of the fire edge.
The Coroner's investigation and consequent findings of fault led fire agencies towards a more cautious response. This was reinforced by addition of safety officers within the fire suppression organisation. The trauma of being accused of wrong doing inevitably led fire control teams towards less aggressive forest fire suppression.
Meanwhile, the innate aversion by CFA fire fighters to dry fire fighting in forest fires who were versed in wet fire fighting increased to antagonism. I was engaged in "minimum skills" training of volunteers at this time, and witnessed these emotions. The common view of volunteers of "wait for the fire to come out of the forest into the paddocks where they would catch it" remained entrenched, despite the training programs that emphasised forest fire fighting skills.
The outcome of the caution and the aversion was that fires grew larger. This partly explains the epic fire areas and consequent high damage tolls of the following decades.

1999/2000

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
6	12	108

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
18–21 January 2000 Portland region Deaths: nil Area burnt: 1,700 hectares
10 February 2000 North-western Victoria Deaths: nil Buildings: 5
Area burnt: 115 hectares

DMBCL (2000)
17,700 ha of crown land burnt, source VNPA
? fires reported on crown land.
Large fires at
FRB 105,000 ha

Reported bushfire events

2000/01

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
13.5	16	189

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
28 November – 20 December 2000 Dadswells Bridge and surrounds, Horsham, Stawell, Barratt (??) region Deaths: nil Buildings: 6 Livestock: 8,000 (mainly sheep) Fencing: 500 kilometres Area burnt: 29,000 hectares

CFA website
18 December Dadswells Bridge 1 house damaged 14,500 hectares of crop and pasture 8000 livestock (mainly sheep) 500km of fencing

DMBCL (2001)
9,000 ha of crown land burnt, source VNPA
? fires reported on crown land.
Large fires at
FRB 66,000 ha

Dadswell Bridge fire, 2000 14,000ha approx location (map not found yet)

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

In 2000 a fire started on the south side of the Western Highway, near Mount Drummond Road, travelling 40km north east destroying 14,500 hectares of mainly pasture. CFA Dadswell Bridge Community Information Guide

2001/02

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.5	9	79

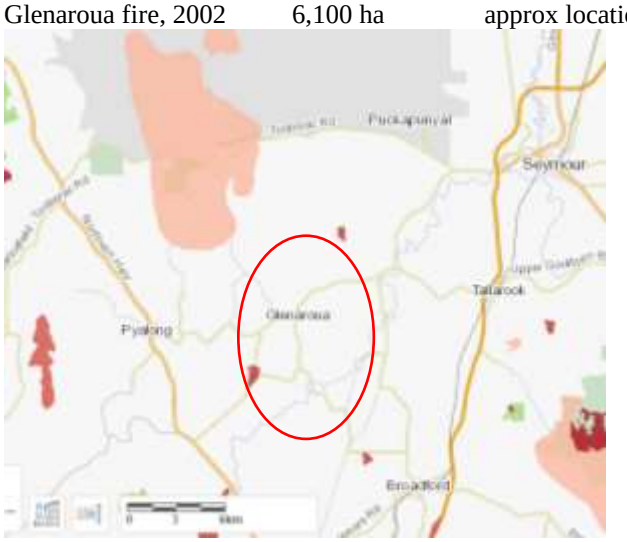
Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
March 2002 Glenaroua Deaths: nil Buildings: 1 house Area burnt: 6,100 hectares of grass and scrub

DMBCL (2002)
42,490 ha of crown land burnt, ? fires reported on crown land.
Large fires at
FRB 81,000 ha

Glenaroua fire, 2002 6,100 ha approx location and size (no map found yet)



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

Yarra Ranges report 2001 16 August 2001.
A burning off operation in Yarra Junction beside the Council depot burnt out 10 hectares when it was fanned out of control by strong northerly winds.

2002/03

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
6.9	11	140

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
17–31 December 2002 Big Desert Deaths: nil Buildings: 1 abandoned house Area burnt: 181,400 hectares
8 January – 7 March 2003 North-eastern Victoria, Gippsland Deaths: 1
Buildings: 41 houses Fencing: 3,000 kilometres Livestock: 110,000?
Area burnt: 1.3 million hectares

COAG
2002 December 181 400 ha 1 abandoned house Big Desert
2003 January–March 1 death indirectly 1 100 000 ha 41 houses 9000 livestock Over 80 fires started by lightning—north-east Victoria, Gippsland

CFA website
8 January-19 March North East and Gippsland fires 71 days duration
41 houses 3 bridges 213 other structures 10,000 livestock 1.2 million hectares
9-Mar Wandong 8 ha
19-Mar Gembrook 650 ha

7-Apr Newham 600 ha

DMBCL (2003)
1,200,000 ha of crown land burnt, source VNPA
? fires reported on crown land.
FRB 49,000 ha

DELWP website
2002: December, Big Desert Fire
Lightning in the North West caused two fires on 17 December – one in the Big Desert Wilderness Park and another in the adjoining Wyperfield National Park. Fanned by dry fuel and poor weather, these fires joined to eventually burn 181,400 hectares.
An abandoned house was destroyed, as well as 400 hectares of private property. The fire was declared safe on 31 December after 25 millimetres of rain fell in the area.

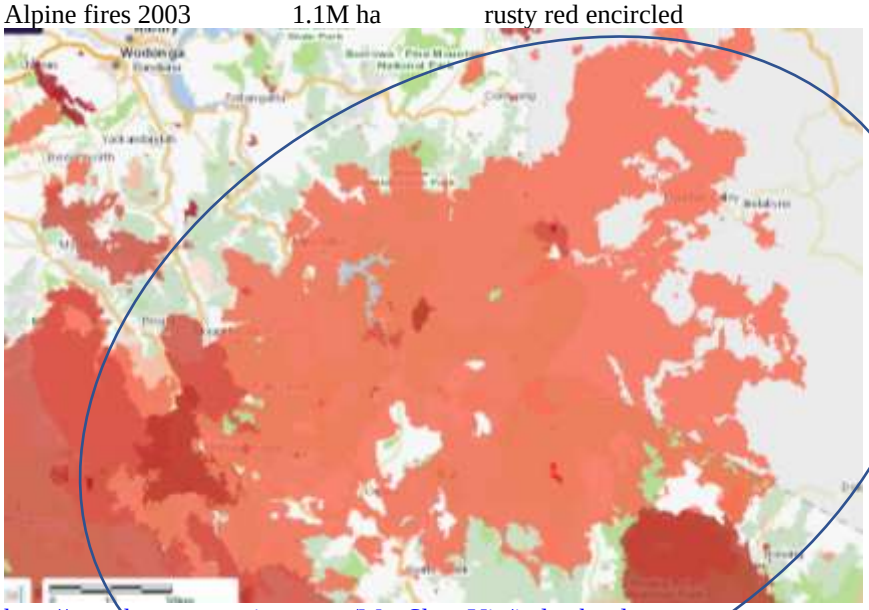
2003: Eastern Victorian (Alpine) Fires
Eighty-seven fires were started by lightning in the north-east of Victoria on 8 January. Eight of these were unable to be contained and joined to form the largest fire in Victoria since the 1939 Black Friday bushfires.
Burning for 59 days before being contained, the Alpine fires burned more than 1.3 million hectares, 41 homes and more than 9,000 livestock, with thousands of kilometres of fencing also destroyed.
Areas affected included Mt Buffalo, Bright, Dinner Plain, Benambra and Omeo.

ICA Disaster Data
The Alpine bushfires started on 8 January 2003, a day of Total Fire Ban. Lightning ignited 87 fires in the North-East and East Gippsland regions. Eight of these fires were unable to be contained; they joined together to form the largest fire in Victoria since the Black Friday fires in 1939. More than 40 fires were also started in New South Wales and Australia Capital Territory. The majority of the area burnt in Victoria was public land, 1.19 million hectares of parks and forests, including 60 per cent of the Alpine National Park and 81 per cent of the Mt Buffalo National Park. Fire fighting efforts were made difficult in hard to access, remote forest terrain. Approximately 90,000 hectares of private land was burnt. The fires burnt nearly 800,000 hectares in New South Wales and Australia Capital Territory, bringing the total of land affected throughout the Australian Alps to approximately 2 million hectares. The immediate effects of the fires included reduced water quality and quantity, loss of vegetation and habitats, destruction of commercial timber infrastructure, damage to recreation and tourism infrastructure assets and destruction of cultural sites and farms adjacent to public land. A Ministerial Taskforce, appointed by the Victorian Premier, announced a funding package of $70.6 million for recovery works on public land associated with natural and cultural assets and support for agricultural private landowners affected by the fires. This was the biggest bushfire recovery effort ever undertaken in Victoria at the time.
$12M in 2003 $31.4M in 2017

ICA Catastrophe Data Included for comparison purposes
Canberra fires 2003, 18 Jan
On 18 January, two fire fronts combined to create a 25 km fire front and wind gusts of up to 65 km per hour propelled the fire towards Canberra. The Chief Minister

declared a state of emergency at 2.45 pm and the firestorm hit the outer streets of Duffy at approximately 3 pm, and soon reached the suburbs of Rivett, Chapman, Kambah, Higgins, Hawker and Cook.
Four people were killed by the fires, more than 435 people were injured and there were 5000 evacuations. Approximately 160,000 hectares were burnt which equated to almost 70 per cent of the ACT's pasture, forests and nature parks including Namadgi National Park, Tidbinbilla Nature Reserve and all government pine forest west of the Murrumbidgee River Stromlo pine plantation. There were approximately 488 houses destroyed and many more were damaged.
The Chief Minister and Cabinet Inquiry into the Operational Response to the January 2003 bushfires made 61 recommendations.
$350M in 2003 $839M in 2017

Alpine fires 2003 1.1M ha rusty red encircled



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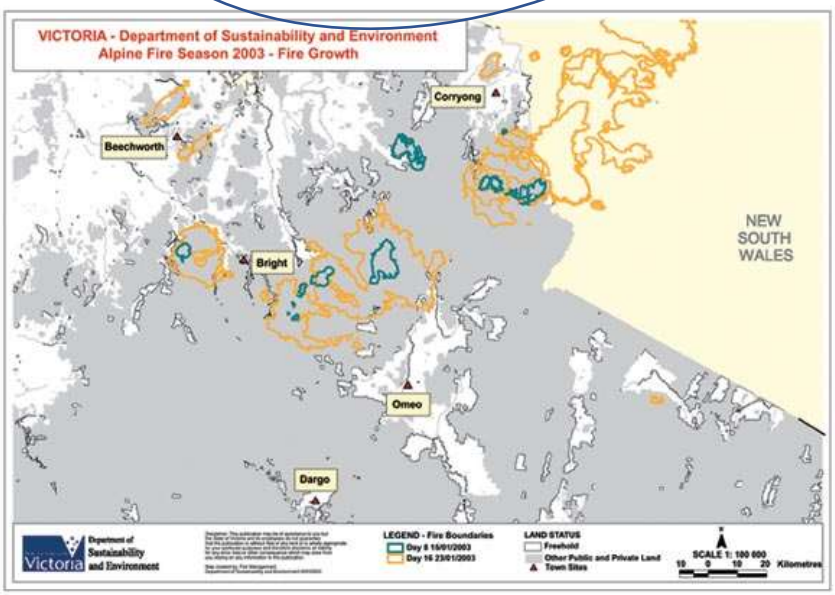
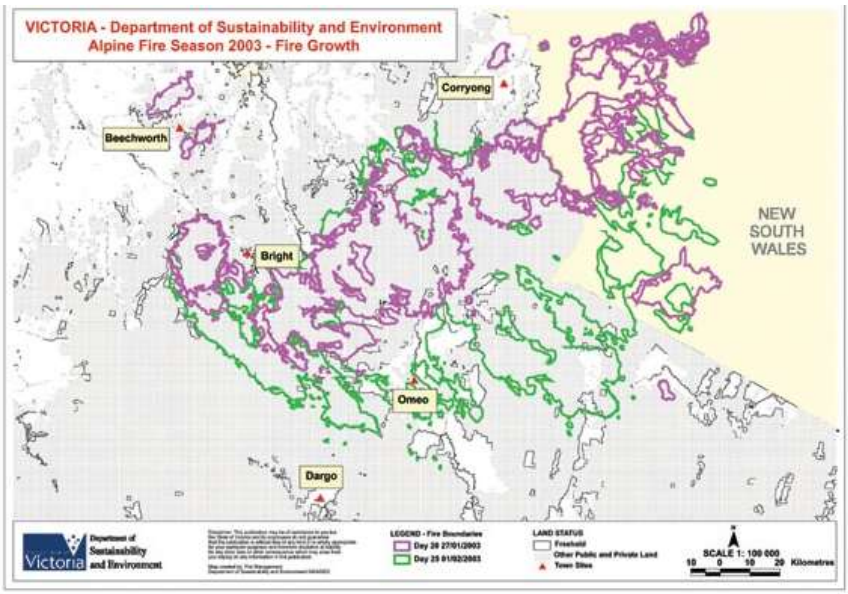
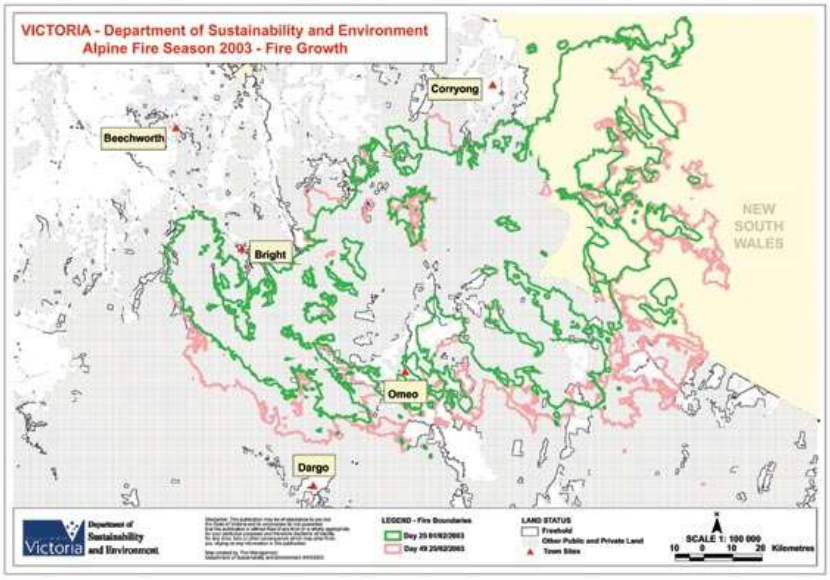
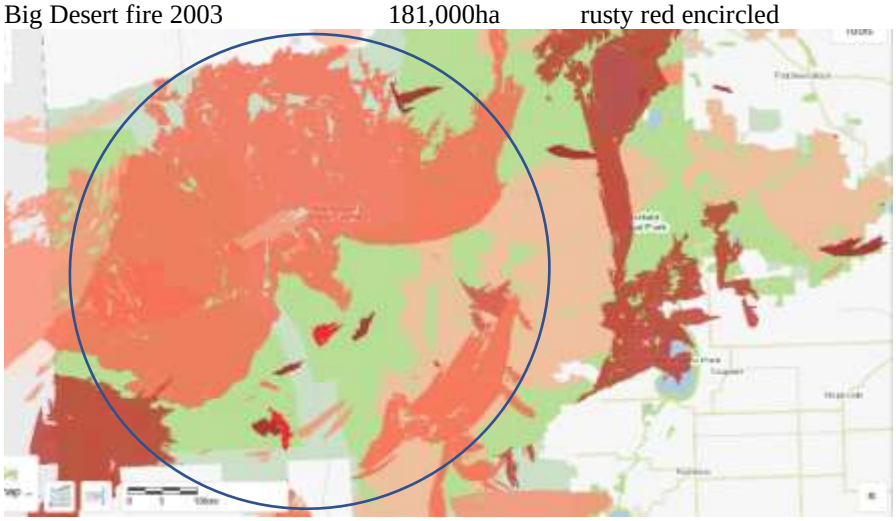
Growth and amalgamation of initial lightning fires on Days 8, 16, 20, 25, 49





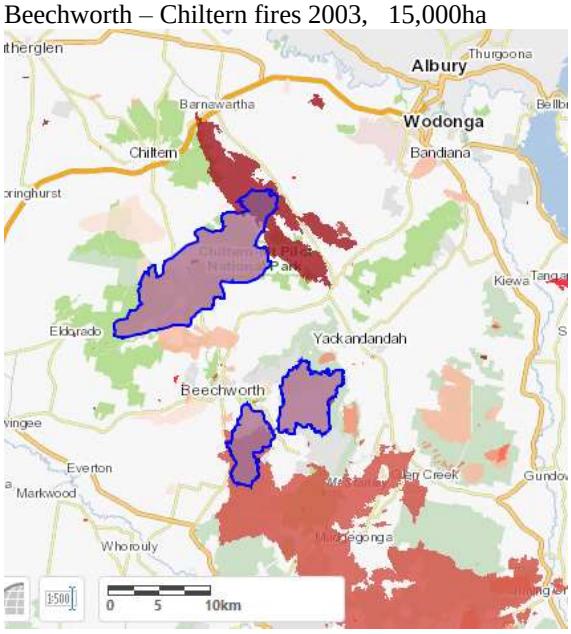


Big Desert fire 2003 181,000ha rusty red encircled



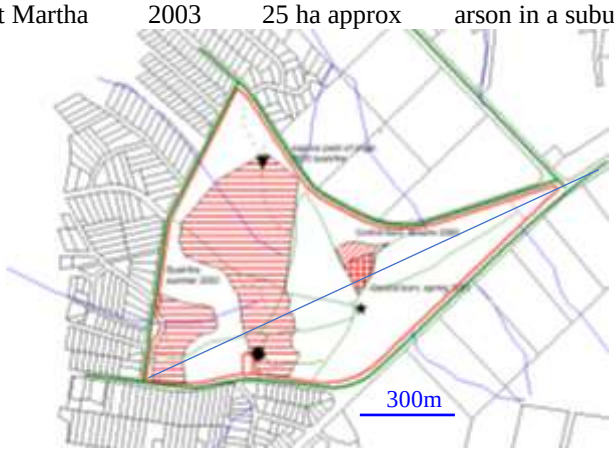
http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Beechworth – Chiltern fires 2003, 15,000ha Cobaw fire 2003 600ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Mt Martha 2003 25 ha approx arson in a suburban native forest park



Reported bushfire events

9 September 2002. Wesburn Forest Yarra Ranges report
Following a week of record temperatures reaching 28.5 degrees, which were the warmest early spring days since records began in 1856, sixty hectares of forest was burnt between Old Warburton Road and Edwardstown Road, Wesburn. One hundred and fifty firefighters and 21 fire trucks attended the fire before rain doused the flames mid morning. Over 100 fires were reported across the State.

DSE annual report 2005/06
The 2003 alpine fires burnt 1.19 million hectares of public land and 90,000 hectares of private land. It was the largest fire since Black Friday on 13 January 1939 when almost two million hectares were burnt.
About 60 per cent of the Alpine National Park and 81 per cent of the Mt Buffalo National Park were burnt during the fires.
The government allocated $70.6 million for a bushfire recovery program for the environment and agriculture. It focused on four areas:
1. Asset repair or replacement in parks, forests and alpine resorts ($24.9 million).
2. Protection and restoration of water catchments and water supply ($23.9 million).

3. Restoration of ecological and cultural heritage values ($13.2 million).
4. Providing practical assistance for affected farm enterprises ($8.6 million).

2003 (Victoria): Report of the Inquiry into the 2002–2003 Victorian Bushfires. B. Esplin et al.
Overnight on 7 and 8 January, a dry storm ignited over 80 fires in the North East and Gippsland. Location of, and response to, so many fires was a complex task, but by the second day 40 fires were contained or under control. By 14 January, however, a small number of fires, mostly in steep inaccessible forest continued to burn. There have been criticisms of the initial response to the fire suppression effort and these are explored in detail in Chapter 17.
Towards the end of January, deteriorating fire weather saw the fires begin to join up and the area affected by the fires increase exponentially. January 25 and 30 were days of extreme weather, producing intense and erratic fire behaviour and spread. During February the weather was milder, reducing fire activity and enabling gradual control of the fires.
On March 7 the fires were declared officially contained.
The North East and Gippsland fires burnt 1.12 million hectares of land, including over 108,000 hectares of private land. No lives were lost as a direct result of these fires. The next largest fire over the 2002-2003 fire season, burnt approximately 181,400 hectares in the Big Desert in the State's North West during December 2002.

State of forests 2008
2002 / 03 fires
Eighty-seven fires were started by lightning in the north east of Victoria on 7 and 8 January 2003. Eight of these fires were unable to be contained and joined together to form what was then the largest fire in Victoria since the 1939 'Black Friday' bushfires. Burning for 59 days before being contained, the fires burnt over 1.1 million hectares, including 507,000 hectares of State forest, 470,000 hectares of national parks, and 90,000 hectares of freehold land.
The cost of fighting the bushfires has been estimated at $115 million, while an additional $86 million was spent on post-fire recovery operations. The fires saw unprecedented levels of cooperation between government agencies, rural fire services, private companies, local government, and interstate and overseas-based fire personnel.
The 2003 fires clearly demonstrated the long-lasting and widespread environmental, economic, cultural and social impacts that can result from a failure to control wildfires. The rebuilding of local communities and the recovery of natural resources was a major task. The Government of Victoria allocated $70.6 million for a bushfire recovery programme for the environment and agriculture.

The Age 30 July 2003 — 10:00am
Angry Bracks slams bushfire comments
A Channel Nine reporter's claim that a Victorian Government department lied about the extent of last summer's bushfires in the state's north-east was outrageous and insulting, an angry Premier Steve Bracks said yesterday.
Mr Bracks said the claims, put to a federal parliamentary inquiry into the bushfires by television journalist Charles Slade on Monday, were a "kick in the teeth" to all the people involved in fighting the blazes.
Slade said the Department of Sustainability and Environment had "spin doctors" exaggerating the seriousness of the fires in an attempt to win more funding at the expense of Parks Victoria and the Country Fire Authority.
He alleged initial bushfire outbreaks were allowed to act as a natural backburn to reduce fuel loads in national parks, which had been neglected for years.
But, as the fires got out of control, the truth was covered up and the department embarked on a "heroic" campaign to "save a town a day", he told the inquiry.
As part of this, Bureau of Meteorology weather reports had been doctored to engineer a sense of crisis and support alarmist information in the department's media releases, Slade said.
This forced media outlets, including Channel Nine, to file "beat-ups" that did not reflect the real situation, he said.
Mr Bracks said he did not know why Slade had made the allegations, but was sure the journalist was wrong on every count.

"I think that all the volunteers who fought the fires, for those department people who were booked out of their jobs to fight the fires, for the communities... they would say these are the biggest fires they have seen in their lifetimes," he said.
"I think this is impugning the integrity of the weather forecasters, impugning the Bureau of Meteorology and impugning people in the CFA and DSE."
Mr Bracks said Slade's accusations would not harm the Government's relationship with the Nine Network.
Channel Nine management did not return calls from The Age yesterday.
Bureau of Meteorology deputy director (services) Kevin O'Loughlin said he was extremely surprised by the claims that weather forecasts had been doctored.
Mr O'Loughlin said the bureau operated under an act of Federal Parliament and that it always sought to provide the best possible information.
He said Slade's claims could be based on a misunderstanding of the alpine region's "highly variable" weather environment.
The bureau would be happy to provide any information to the inquiry if required, he said.
The DSE had called Mr Slade's claims "absolute nonsense".
Opposition Leader Robert Doyle accused Mr Bracks of attacking Slade personally over his submission to the federal inquiry. "I thought it was pretty demeaning of the Premier, in response to evidence given before a parliamentary committee, to simply attack the witness rather than deal with the issue," Mr Doyle said.

2003 'A Nation Charred: Inquiry into the Recent Australian Bushfires', House of Representatives Select Committee on the Recent Australian Bushfires. G. Nairn, Chair.

Given the devastation of the Summer 2003 wildfires in New South Wales, Victoria and the Australian Capital Territory, it is regrettable that we did not hear from the agencies with responsibilities for land management, fire prevention and fire suppression in those states and territory. Their respective political leaderships chose not to contribute to the inquiry, claiming a lack of resources.
It was noted however, by Committee members and witnesses to the inquiry, that resources were available from many of those agencies to attend and take notes at much of the public hearings.
One can only hope that those notes accurately captured and recorded the anger, frustration and sense of betrayal felt by so many people in affected communities.
And of course, if those very same notes are not considered and acted upon by the policy makers and decision takers of the various non-participating state agencies, that would indeed be the greatest tragedy of all.
The devastation to property, wildlife and ecology that occurred over such a large part of our country in the Summer of 2003 can only be described as a national disaster.

Recommendation 4 The Committee recommends that the Commonwealth seeks to ensure that the ***Council of Australian Governments*** resolve when *asset protection zones* will be located on private land and when on public land and gain assurances that adequate maintenance of zones will be enforced.
Recommendation 5 The Committee recommends that the Bushfire Cooperative Research Centre determine a minimum national standard, taking into account topography and vegetation type, for adequate access to all public lands including wilderness areas of national parks for the purpose of effective fire prevention and suppression.
Recommendation 6 The Committee recommends that the Commonwealth seeks to ensure that the Council of Australian Governments implements to a minimum national standard adequate access to all public lands including wilderness areas of national parks.

Observation: This is the first season of the era of timid forest fire fighting since the Linton Inquiry in 2002. To their credit, the forest fire fighters contained almost all the 80-odd lightning fires during the first two weeks or so of mild weather, but they left the most inaccessible fires run unchallenged. It is a concern they did not hit them all hard with extra resources, building tracks and burning out to tracks with extra urgency in those mild two weeks because they knew that severe weather would arrive soon, and their escape would require an even greater effort and expense. It would never be

admitted, but it can be argued that there was an element of "let the fires run out to a track" to simulate a natural part of a National Park or forest ecological cycle, in an era where control burning on public land is becoming increasingly more regulated. If so, it is a high-risk strategy in December and January, low risk in March and April. The apparent disregard of public money spent on firefighting is concerning, but understandable if this is their unspoken strategy. The Victorian Government refused to participate in the Federal Government inquiry into bushfires. There is an element of truth in experienced journalist Slade's evidence to the inquiry - fire protection by government spin doctors to manipulate an unquestioning media, ever grateful to have their stories already prepared.

2003/04

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
8.9	9	93

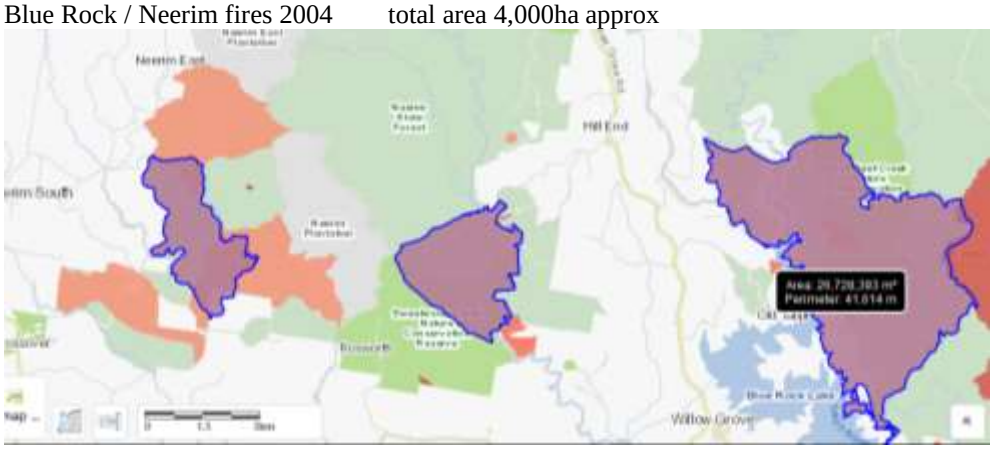
Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

DMBCL (2004)
22,000 ha of crown land burnt, source VNPA
? fires reported on crown land.
FRB 90,000 ha

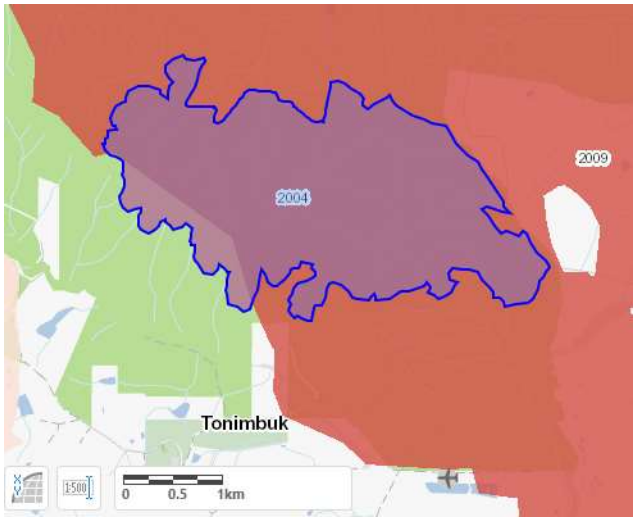
CFA web site
14 April 2003 Tonimbuk 1000ha, Blue Rock 2400ha

Blue Rock / Neerim fires 2004 total area 4,000ha approx



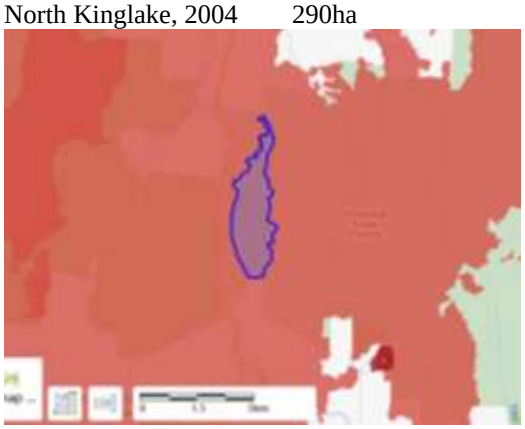
http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Tonimbuk fire 2004 710ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

North Kinglake, 2004 290ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

2004/05

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
7	8	76

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

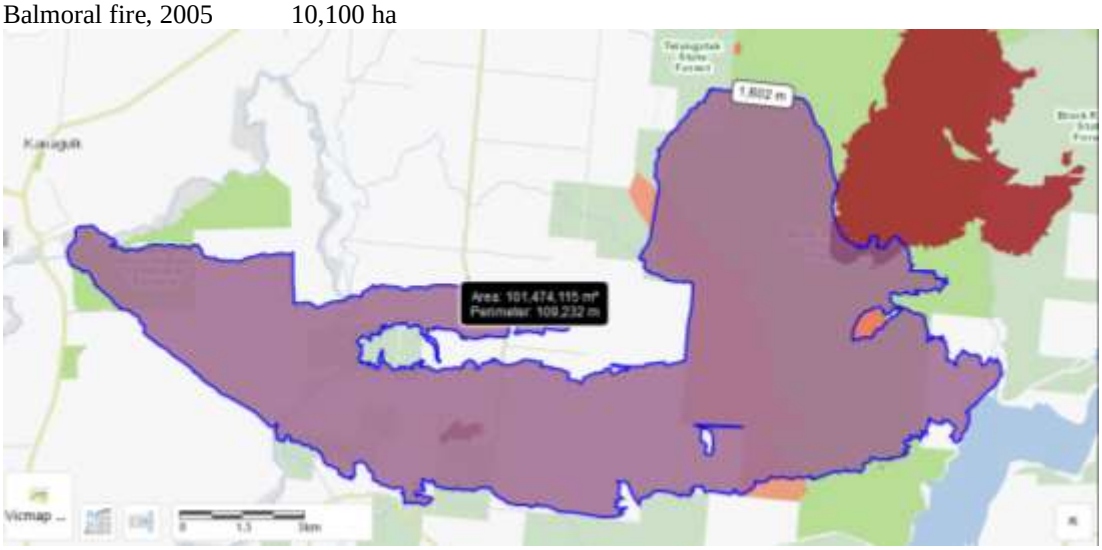
VBRC
April 2005 Wilsons Promontory Deaths: nil Area burnt: more than 6,000 hectares

DMBCL (2005)
33,000 ha of crown land burnt, source VNPA
? fires reported on crown land.
FRB 127,000 ha

CFA annual report
21 August 2004 Grass & Scrub Marlo 11 trucks 800ha
24 December 2004 Grass & Scrub Mead 8 trucks 450ha
3 January 2005 Wildfire Wedderburn Junction 6 trucks 180ha
11 January 2005 Grass & Scrub Carranballac-Vite Vite 124 1,904ha
11 January 2005 Grass & Scrub Balmoral (Fulhams Reserve) 105 10,068ha
19 January 2005 Grass & Scrub Torquay 24 7ha
19 January 2005 Grass & Scrub Taggerty 23 50ha
14 March 2005 Grass & Scrub Mooroopna 20 28ha
1 April 2005 Grass & Scrub Cranbourne (Botanical Gardens) 55 20ha
1 April 2005 Grass & Scrub Wilsons Promontory 30 6,900ha
8 April 2005 Grass & Scrub Digby 15 340ha
9 April 2005 Grass & Scrub Dunmore 33 1700ha

16,879 ha

Balmoral fire, 2005 10,100 ha



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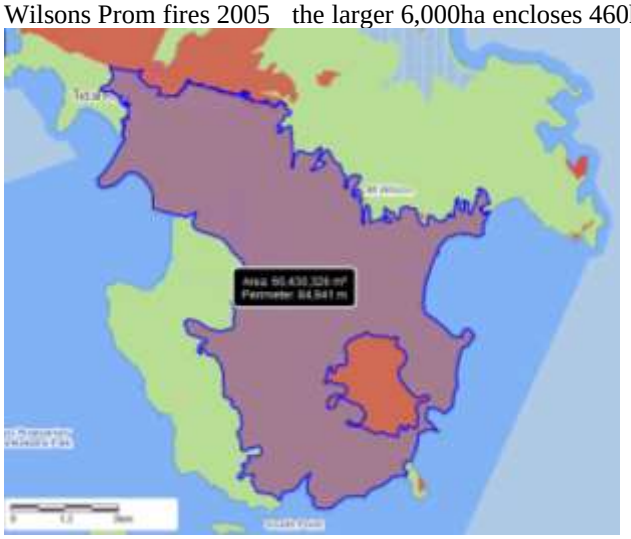
Wilsons Prom fires 2005 the larger 6,000ha encloses 460ha also burnt in 2005



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

2005/06

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
4.9	13	110

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
31 December 2005 – 31 January 2006 Ararat, Baw Baw Shire, Glenelg Shire, Golden Plains Shire, Greater Geelong, Horsham, Latrobe, Moorabool Shire, Moyne Shire, Murrindindi Shire, Northern Grampians Shire, South Gippsland Shire, Southern Grampians Shire
Deaths: 4 Buildings: 416 Fencing: 2,654 kilometres Livestock: 64,265
Area burnt: 160,000 hectares

CFA website
19 January Grampians
Toll 2 people 41 houses 9 houses damaged 231 other buildings
65,598 animals and livestock Fencing: 1,973km 116,380 hectares burnt

CFA annual report
29/12/2005 Grass Stradbroke 30 trucks 400ha
31/12/2005 Grass Deep Lead/Stawell 125 trucks 7,523ha
19/01/2006 Grass Moondarra 100 15,113ha
19/01/2006 Grass Yallakar State Forrest 5 4,172ha
21/01/2006 Grass Anakie/Brisbane Ranges 60 7,264ha
21/01/2006 Grass Tyrendarra 40 1,294ha
22/01/2006 Grass Mt Lubra/Grampians 90 130,000ha
22/01/2006 Grass Melba Complex/Kinglake 50 1,600ha
22/01/2006 Grass Melba Complex/Yea 25 5,000ha
12/02/2006 Grass Killingworth 64 750ha
09/03/2006 Grass Chewton Bushland 48 200ha
12/03/2006 Grass Snake Valley 119 3,100ha
11/04/2006 Grass Lexton 23 500ha
228,900 ha

DMBCL (2006)
108,400 ha of crown land burnt, source VNPA
? fires reported on crown land.
FRB 49,000 ha

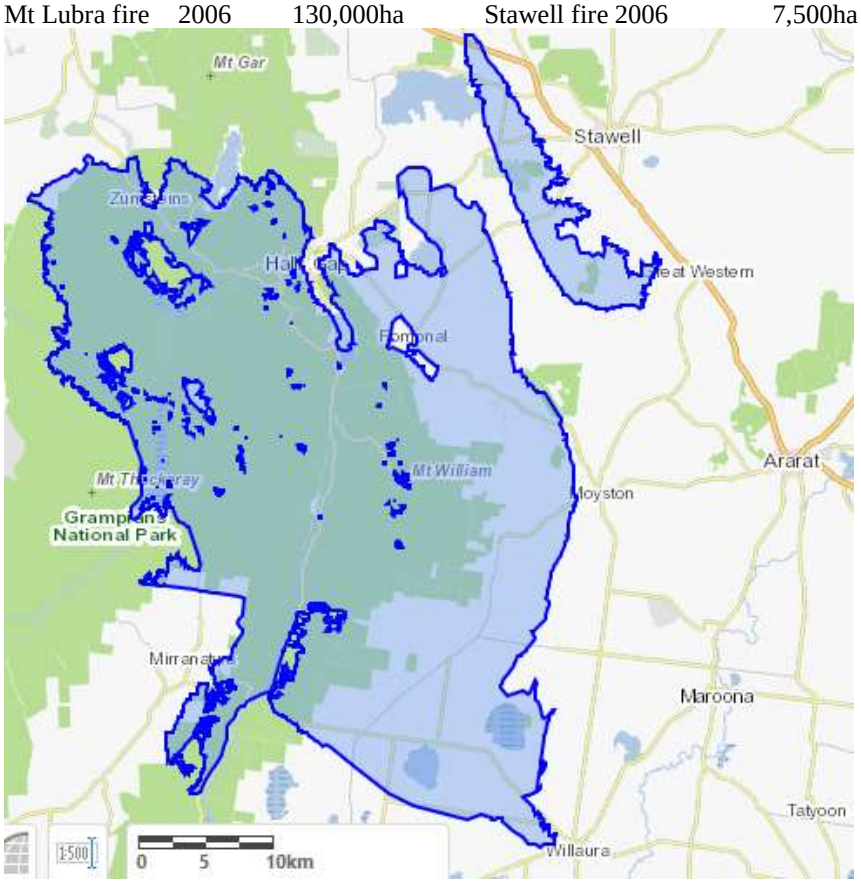
DSE annual report
It was a big fire season with the department attending 739 fires.
These fires burnt a total of 188,824 hectares of which 108,400 ha was public land.

2005 - 2006 DELWP website
More than 500 fires broke out across the state between New Year's Eve and the end of January 2006. The fires with greatest impact on the Victorian community occurred in the Stawell (Deep Lead), Yea, Moondarra, Grampians, Kinglake and Anakie areas.
There were four fatalities in these fires.
Fifty-seven houses were destroyed and 359 farm buildings lost. Stock losses totalled more than 64,000.
The fires burned about 160,000 hectares. About 60 per cent of the area was public land and 40 per cent private property.

Seven major fires occurred during 2005–06:
* The Deep Lead fire, 13 kilometres north-west of Stawell, started on 31 December and burnt 7,523 hectares.
* The Moondarra fire, north of the Latrobe Valley, started on 19 January and burnt a total of 15,200 hectares. The fire was contained on 1 February 2006
* The Mt Lubra fire in the Grampians commenced on 20 January and burnt a total 130,000 hectares, of which approximately 45,500 hectares was private land. The fire was finally contained on 2 February. The fire led to the tragic loss of two people. The
* Century Track fire near Anakie started on 21 January and burnt 6,700 hectares. The fire was contained on 26 January. This fire burnt several houses.
* The Kinglake/Burgan Track fire, north of Kinglake, was first reported on 22 January; it burnt a total area of about 1,700 hectares and was contained on 27 January 2006.
* The Riley Road fire, near Snake Valley, was first reported on 12 March and burnt a total area of about 3,200 hectares. The area burnt includes significant areas of private property, six houses and nearly 1,000 hectares of private pine plantation.
* The Granite Creek fire, north of Orbost, was first reported 12 March and burnt 950 hectares of state forest.

ICA Catastrophe Data
In late January 2006 a large bushfire destroyed 15,000 hectares north eastern part of Victoria. An adault and child were found dead in a burnt out vehicle near the town of Moysten. A Rural firefighter was also killed when heis fire truck rolled over whilst fighting the Highlands fire near Yea. Approx. 12 homes were destroyed. Started by a lightning strike in January 2006 near The Grampians in Australia. The fire began late on 19 January 2006. By the time it was extinguished it had burned for approximately two weeks and covered approximately 130,000 hectares of land. The fire spread rapidly in a southerly direction towards Dunkeld, south of Grampians National Park. The fire front reached the outskirts of Willaura (south-west of Ararat), before a strong but dry wind change took the fire back in the opposite direction. Winds of up to 120 km/h sent the fire northward extremely quickly, impacting a number of small communities along the eastern side of The Grampians, including Mafeking, Moyston, Barton, Jallukar and Pomonal. A man and his son died between Moyston and Pomonal when they were caught up in the fire. The fire was eventually controlled approximately two weeks later, having burned nearly 47% of the Grampians National Park, as well as a significant amount of private property, a total of 184,000 hectares. Approximately 25 homes were destroyed, mostly to the west of Moyston and around Pomonal. Over 50 sheds and outbuildings, 1500 kilometres of fencing, as well as 62,000 head of sheep and 500 head of cattle were lost to the blaze
$22.4M in 2006 $33.6M in 2017

Mt Lubra fire 2006 130,000ha Stawell fire 2006 7,500ha



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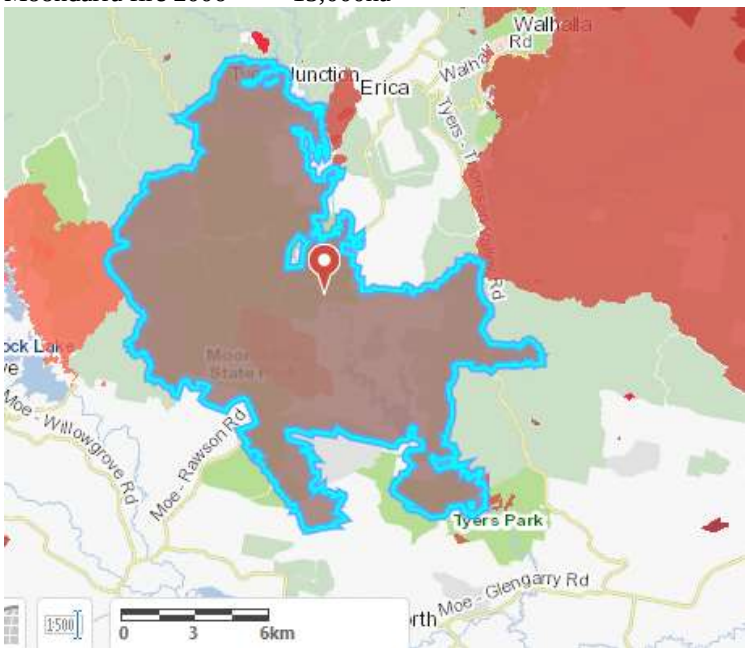
Moondarra fire 2006 15,000ha



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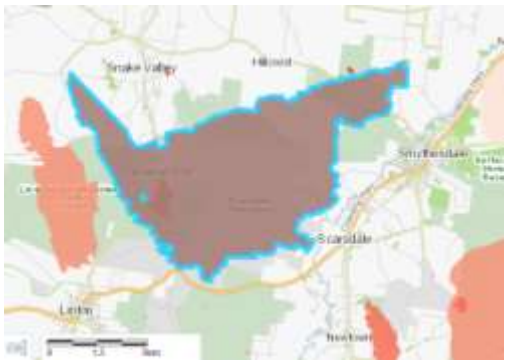
Anakie fire 2006 6,700ha

Snake Valley 2006 3,200ha



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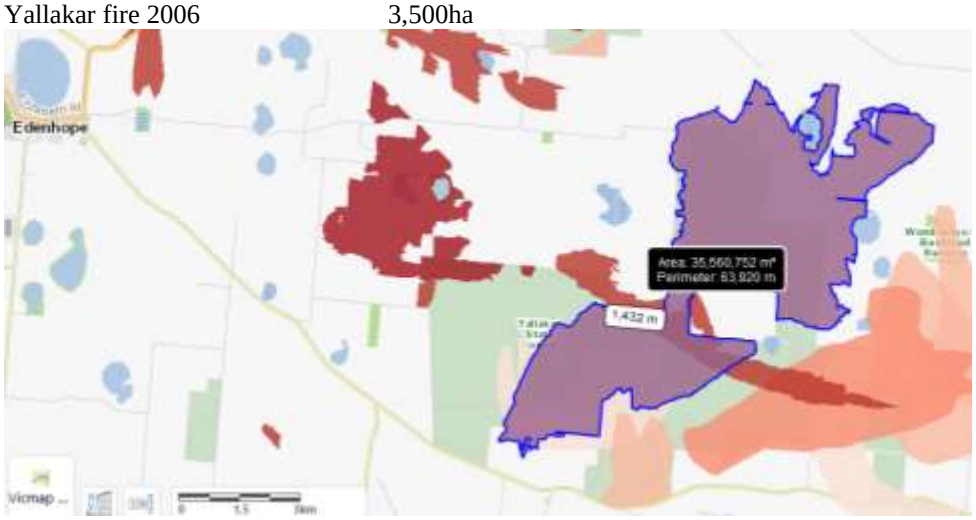
Yallakar fire 2006 3,500ha



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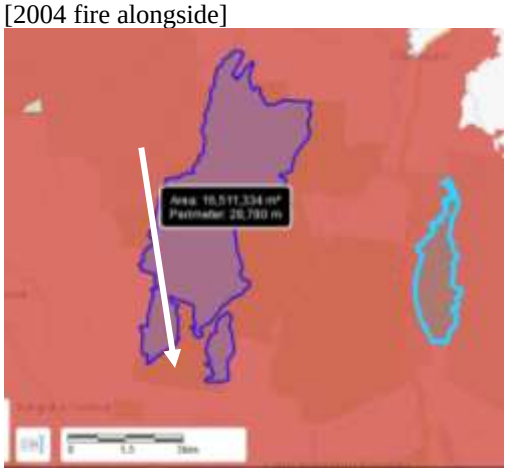
Kinglake fires 2006 1,650ha
[2004 fire alongside]



Tarnagulla fire 2006 1,400ha
Clearly started in a tiny reserve

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

This 2006 Kinglake fire prevented the passage of the 2009 Black Saturday fire. White arrow is the approx direction of view in following photo:

Figure 6. Kinglake North burnt 7 February 2009. The centre green canopy corresponds to a 2006 wildfire and demonstrates the effect of reduced fuels even under the extreme conditions of the recent fire. The forest on the far left and right of the earlier burn shows crown scorch or the effects of a full crown fire (M.F. Ryan April 2009).

Michael Ryan & Brian Turner (2009) Victorian fires: The Royal Commission and the future, Australian Forestry, 72:3, 113-116, DOI: 10.1080/23256087.2009.12002202

Reported bushfire events

State of Forests report 2008 DEPI

Area of native forest burnt by planned and unplanned fires, 2001-02 to 2005-06

Source: Department of Sustainability and Environment

Fire type	Area burnt (hectares)				
	2001-02	2002-03	2003-04	2004-05	2005-06
Unplanned	38,000	1,141,000	12,000	19,000	104,000
Planned	53,000	30,000	101,000	97,000	52,000
Total	91,000	1,171,000	113,000	116,000	156,000

Notes: Includes public land tenures only. Planned fires include ecological burning.

Note: These figures differ considerably from figures already reported by the same Department.

2006 Report from the Ministerial Taskforce on bushfire recovery, Victorian Gov.

Across Victoria more than 500 fires broke out in January 2006 (including New Year's Eve). The fires with greatest impact on the Victorian community occurred in the Stawell (Deep Lead), Yea, Moondarra, Grampians, Kinglake and Anakie areas. These fires burnt around 160,000 hectares, of which approximately 60% was public land and 40% private property. Fifty seven houses were destroyed and 359 farm buildings lost, including 39 woolsheds and 22 haysheds. Stock losses totalled more than 64,000, including 63,243 sheep, 557 cattle and over 2,500 commercial beehives.

Task force allocated $10.5M for recovery and rehab.

Debrief Outcomes Significant Victorian Fires 17 December 2005 - January 2006
Ross Smith 12 July 2006 NSW Rural Fire Service with CFA and DSE
In the period between 15 and 30 January 2006 rural fire agencies recorded 1067 vegetation fires (CFA 879, DSE 188). CFA also recorded 2514 other incidents.
Twelve fires, listed in Table 1, developed into significant proportions requiring a coordinated response by the joint fire agencies and emergency response, coordination and recovery bodies.

Table 1 Major fires December 2005 - January 2006

Date	Fire	Cause	Area (ha.)
21/12/05	Griffin Track	lightning	2
27/12/05	Rocky Den	lightning	4
31/12/05	Deep Lead	lightning	7 5
19/01/06	Seninis Track	deliberate	15 2
19/01/06	Troeth Road	lightning	1 2
19/01/06	Brands Track	lightning	1 4
19/01/06	Yallakar Sth	lightning	4 1
20/01/06	Century Track	lightning	6 7
20/01/06	Mt Lubra	lightning	130 2
22/01/06	Burgan Track (Kinglake/Glenburn)	lightning	1 6
22/01/06	Granite Hills	lightning	8
22/01/06	Melba Control (Yea/Glenburn)	lightning	5 4

During the peak periods of activity, more than 6 000 people were engaged in suppression and support activities each day. Interstate assistance for suppression purposes included more than 650 firefighters from New South Wales (NSW) and Tasmania (Tas).

20 January 2006 Geelong City Council
Anakie (Brisbane Ranges) hit by fire that encompasses 6,708 hectares and destroys 35 buildings including 3 houses and 3 woolsheds.

Barwon Region Fire Plan Anakie, Brisbane Ranges 6798 ha 5 houses

2006/07

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
12.9	15	174

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

VBRC
1 December 2006 – 7 February 2007 Alpine Shire, Benalla, Indigo Shire, Mansfield Shire, Corangamite Shire, Golden Plains Shire, Baw Baw Shire, East Gippsland, Latrobe, Wellington Shire, Moyne Shire, Wangaratta
Deaths: 1 Buildings: 51 houses Livestock: 1,741
Area burnt: more than 1.2 million hectares

CFA website
December-February 2007 Great Divide Complex 33 houses 13 houses damaged 255 other buildings 1334 animals and livestock Fencing: 1,357km 1,154,828 hectares

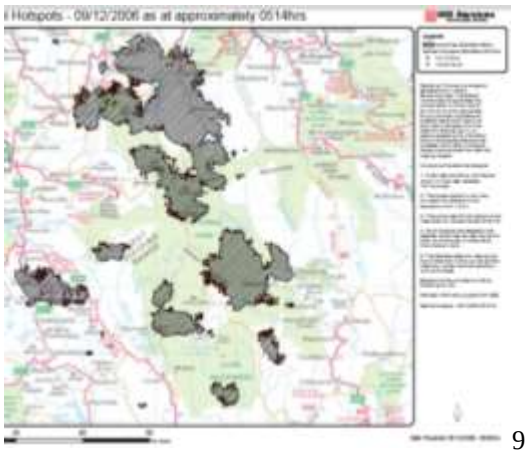
CFA annual report – major fires
12/10/2006 Other Morwell (Open Cut Mine) 59 trucks $30,000,000
20/11/2006 Grass Little Desert National Park, Goroke 35 trucks 10,790 ha
21/11/2006 Grass Charlton / Wooroonook 23 700 ha

21/11/2006 Grass Waubra 62 800 ha
22/11/2006 Grass Dergholm 74 13,261 ha
1/12/2006 70 lightning fires 1 day:
1/12/2006 Grass Alpine National Park North 199 370,600 ha
1/12/2006 Grass Alpine National Park South 92 677,638 ha
10/12/2006 Grass Stoneyford 49 3,300 ha
10/12/2006 Grass Bright / Mount Beauty / Pyramid Hill 34 33,590 ha
14/12/2006 Grass Coopers Creek 50 40,000 ha
3/01/2007 Grass Boulder Creek Tk, Club Terrace 17 2,040 ha
4/01/2007 Grass Port Fairy / Yambuk 41 1,230 ha
10/01/2007 Grass Purnim / Framlingham 71 1,672 ha
11/01/2007 Grass Tatong 70 33,000 ha

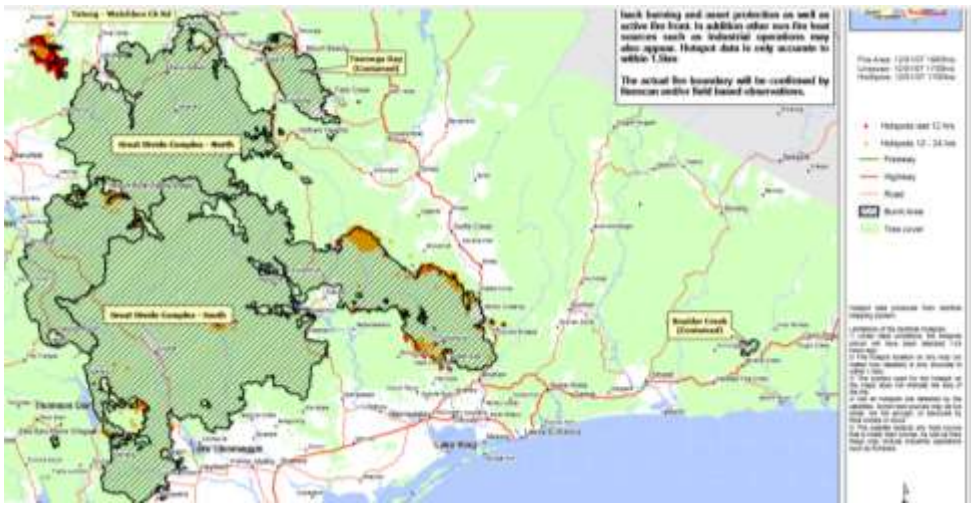
1,153,949 ha

DMBCL (2007)
1,200,000 ha of crown land burnt, source VNPA
? fires reported on crown land.
FRB 134,000 ha

DSE annual report 2006/07
The 2007 Ministerial Taskforce Report on Bushfire Recovery outlined a $138 million response and recovery package. The recovery package included funding of $31.06 million for fire recovery, with $12.4 million for restoring visitor services (including the reopening of key tracks and visitor sites by Easter 2007); $10.59 million for restoring and protecting fragile ecosystems and species and catchment and river health; and $5.8 million to support the recovery of forest values.
The Great Divide Fires extended over 1.048 million hectares, mostly on public land. … many of which were already dealing with the worst drought in Victoria's recorded history. … the fire was contained in 69 days with minimal loss of human life and property.
Other significant fires during the season were Tawonga Gap (burnt 33,600 hectares), Tatong (31,800 hectares), the Berook East fire in the Murray-Sunset National Park (23,200 hectares), the Brooks Track and Tallageira fires mostly in the Little Desert (18,800 hectares), Casterton Complex (12,500 hectares), Hermit Mountain (2,600 hectares), Boulder Creek (2,000 hectares), and Framlingham (1,700 hectares).
…the Victorian Government amended the allocation order so that VicForests could salvage burnt timber from the 55,000 hectares of fire affected forest considered available and suitable for timber harvesting.



9 December 2006 (Maps below have similar scales)



12 Jan 2007

23 Jan 2007

Situation at 18 Jan 07

Location of major fires, 2007

Figure 6. Overview of 2006/07 Fire Season Significant Incidents
1. Smith, R. 2007, 'Key Issues Identified in Victoris 2006/07 from Operational Reviews of Major Fires', DSE, July 2007

Mt Martha 2007

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

State of forests 2013

In 2006/07, the 'Great Divide North' and 'Great Divide South' bushfires burnt more than 1.2 million hectares, almost entirely in public forests. These fires ignited from multiple lightning strikes in remote areas in the Victorian Alps on 1 December 2006. These fires took over three months to control, with suppression crews hampered by difficult access, high temperatures and lack of rainfall.

The Age December 22, 2006
Bushfire damages tourist railway
Renee Switzer
One of eight bridges that form part of a tourist railway near Walhalla has been destroyed by bushfires, as crews battle this afternoon to protect the seven remaining.
Yesterday crews managed to save six of the bridges, today saving the most substantial bridge on the line after aircraft, including an air crane known as Malcolm, dumped water on the blaze.

But the Department of Sustainability and Environment (DSE) confirmed today that one bridge was burnt by the main fire in the area while the air crane was on the ground re-fuelling.
The popular tourist icon, which attracts around 30,000 people each year, is made up of eight bridges and 4.5 kilometres of track between Thomson and Walhalla.

The proprietor of Walhalla's Star Hotel, Michael Leaney, said he believed it was bridge number seven that had been lost, situated in a gully approximately two kilometres from the town. Mr Leaney said the timber bridge cost about $500,000.
"Where are we going to get half-a-million bucks from?" he said. "Every government department is going on holidays now and so for two weeks there will be no decisions made, no money handed out, nothing and so we can't even start work on repairs."
The Walhalla Goldfields Railway is the reconstruction of the most spectacular section of the original Moe-Walhalla railway which operated from 1910 until 1944.
Opened in 2002 and installed by volunteers, it is considered a significant contributor to the area's economy.
Walhalla residents remain on high alert today for ember attacks and have been urged to activate their fire plans.
Walhalla Road - the main road into the town - remains closed to all non-emergency traffic.

Sawmill Settlement threat
The DSE and CFA have warned residents in Sawmill Settlement, in the Mansfield region, that the fire currently approaching the outskirts of the area is posing an immediate threat to life and property.
The fire is now approaching the outskirts of Sawmill Settlement, having breached Doughty Road.
"Due to intense fire behaviour, it may not be safe for DSE and CFA crews to remain in the Sawmill Settlement area for asset protection," the CFA warns on its website.

What happened at the A1 Mine town?
For days, the media reported bulldozers cleared the outskirts of the town in readiness but they found only one resident willing to remain. The moving flame was stopped at a good distance from the town, so the only threat was ember attack and unattended spot fires.
On the day of the attack, only one man stayed to defend a well-protected town from spot fires. The fire brigades refused to defend.
He saved a few houses from small spot fires. He said he never felt threatened by the embers. More locals staying would have saved more houses. He was praised as a hero by them.

The urgent threat message below shows that the suppression mentality of the fire brigade does not include spot fire defence in a town protected from the running flame, and yet, ember attack is the largest cause of house loss in a severe bushfire.
The example also shows then CFA policy advice about staying or going and what to do and watch out for if staying.
The last-minute defensive works around the town raises another question.

Q Why weren't these towns already protected by their existing fire plans?
Answer Town fire plans are ineffective.

Urgent Threat Message issued to Gaffney's Creek and A1 Mine Settlement
5:00am 15/12/2006
DSE and CFA advise residents in the **Gaffney's Creek and A1 Mine Settlement** areas that there is considerable fire activity, with spotting from embers occurring.
Residents are advised to activate their fire plans immediately.
Those residents in this area should expect smoke and burning embers to reach their property, and are advised to patrol their houses to find and put out and burning embers that may be landing.
As the front of the fire approaches, it will become unsafe to be either on foot or in a car as the heat radiating from the fire will be intense.
Residents should avoid being exposed to radiant heat at all costs, and should make use of structures like their homes to shelter as the fire front passes.
After the fire front has passed, residents should immediately begin to patrol their house looking for embers or areas that are burning, and extinguish them as best they can.

As the wind change gets closer the wind will become more unpredictable, and may gust strongly. All residents should take extreme care that they are not exposed to radiant heat at this time, and that a sudden change in wind speed or direction does not catch them in the open.
Residents should continue to defend their homes from embers, and ensure that they are wearing the correct clothing. Residents should wear long-sleeved shirts, long pants, sturdy boots, and a broad brimmed hat. On no account should synthetic material be worn. Residents should expect that embers from this fire may continue to arrive for several hours, and should not lessen their work to protect their homes.
Residents should continue to patrol their homes and check rook spaces, under-floor spaces, and areas where leaves commonly gather to ensure that nothing is burning.
Returning residents should patrol their homes and check roof spaces, under-floor spaces, and areas where leaves commonly gather to ensure nothing is burning.

Observation Media quoted Incident Controller at Bairnsdale Dennis Matthews on 15 December, 2009:
The Darling Cynthia Fire has continued to expand overnight on all edges. The fire keeps moving even in the reasonably milder conditions over the past couple of days.
All fire crews will be working to protect assets over the coming days.

This suggests their strategy was to focus on protecting towns when threatened, rather than attacking the source. If this is their strategy, when are they actually going to stop the fires?
Such a strategy certainly explains why they have not yet been controlled. It certainly explains why they have been allowed to grow so large. Is this why the 2003 fires grew so large also?

I hope I am wrong, but the government seems to be allowing its fire fighters to deliver a NEW STRATEGY for fighting fires in our remote forests and national parks early in the fire season.
Let the fires run and wait for them at the edges and at the townships.
Our experienced firefighting forefathers will be rolling in their graves.

At first gasp, it seems a dangerous and reckless strategy, and also very expensive and irresponsible.
But then again, it is probably a good thing for the national park, because these are naturally caused fires just doing their thing, obeying the natural laws of bushfire behaviour.

Let's examine some of the consequences.
A major problem with this let-burn strategy is its timing – it is better suited to April (end of the fire season), rather than December in a drought year. These fires will soon become so large that they will burn out of the national park into timber assets, water catchments and people's properties on such a large scale that will overwhelm our fire fighters resources. Victoria has become a laughing stock because we cannot manage our own problems without external help, especially more so because they are of our own making.
Is this what voters really want?

Surely, the government must realise that they have a duty of care and that a fire emerging from public land exposes them to legal action from victims.

Surely, the government must realise that this fire will cost millions of dollars of public money that cannot be now used on productive investment elsewhere in the economy. Remember, the 2003 fires cost over $100M.

Anyway, the whole sorry saga supports my thesis that current government policies are not providing adequate protection to our people, and that they need to change to policies of self protection, employing the breakthrough knowledge and skills like Red Eagle has developed.

2007/08

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
7.3	14	135

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Official bushfire records

CFA Annual Report

8 Nov	Wathe F&F Res	5000	
20 Nov	Cann River	?	1 death
10-Jan	Allstree (Portland)	88	
	Morrisons	534	

DMBCL (2008)
32,360 ha of crown land burnt, source VNPA
? fires reported on crown land.
Large fires at
FRB 156,000 ha

DSE annual report
Bushfires in Victoria on public land by the Department of Sustainability and Environment revealed that the 2007–08 fires burnt 32,368 hectares, or 18.7% of the long-term average of 173,152 hectares

Reported bushfire events

Bushfire related matters

18 February, 2008 ABC
Ash Wednesday 25 years on: how it changed us
By Dominic Brine (radio) Jarrod Watt (online)
http://www.abc.net.au/local/stories/2008/02/16/2164493.htm

Today, Don Kelly is the general manager for Victoria's Country Fire Authority for the Wimmera and Midlands districts. In 1983, he was a young volunteer at the Mount Macedon CFA.
"[On this day] we were out putting out a fire which had occurred two weeks beforehand.. the remnants had flared up on Ash Wednesday. Six o'clock in the morning we're out on the other side of Mount Macedon, putting that out... the fire two weeks before Ash Wednesday had started with a local water trust putting in a bore - because we were in drought conditions - and an angle grinder had started a

fire... that had been burning on and off for two weeks, and had burned out a number of houses. Little did we know, though, that when Ash Wednesday came along, that fire would ultimately put out the main fire, because the fire of Ash Wednesday burnt into it."

Lesson for the reader A fuel-free burnt area stopped a running inferno.

"We knew that if the weather conditions as forecast came true it was going to be a very bad fire day, and that proved to be true. All day we'd been out putting out small fires... but in the afternoon when a fire started at East Trentham, we knew that when the wind changed there would be a very, very significant fire, and that came through to Macedon and Mount Macedon in the evening, and we just kept putting fires out.

"There were people in their houses wanting us to stop everywhere, but of course we only had a limited number of fire trucks, and we weren't able to stop, and it wasn't until the next morning when we drove back through the township of Macedon and Mount Macedon we saw the absolute devastation in those communities."

Lesson for the reader The fire brigade (= wet fire fighting) cannot protect properties during a running inferno. Not enough trucks

The images of the devastation of Macedon carry with them an inherent message for Don which informs the ethos of modern firefighting.

"It just shows the power of a bushfire and man's... inability to put it out physically when the conditions are right and the fire's really burning. What we must focus on is people being able to prepare for themselves and empowering them to make good decisions."

Lesson for the reader Wet fire fighting cannot extinguish running inferno

Lesson for the reader Prepare for what? Good decisions – what does this mean?

"Today we have full competencies and standards in training, improved protective clothing and trucks and those sorts of things... however I don't think that's the major change that's occurred since 1983. The tragedy of 1983 was 47 lives lost in Victoria. Seven of those were in Macedon.

"The change in attitude is we can't do it by ourselves as a firefighting service. The whole community must share the responsibility of making sure they, themselves and their properties are safe," he says. "Really, in 1983 it was about the fire service coming and putting the fire out for you, then we'd go home as soon as it was over. I think 1983 really was the watershed and the change in attitude, after we realised that by ourselves, we just could not make the difference."

Lesson for the reader Community must share responsibility to make properties and lives safe

It was not just a change in the way we thought about firefighting that Ash Wednesday spurred; it also provided a terrible lesson in the realities for people who moved away from built up areas into the bush.

"In 1983 most of the fires occurred where there were a lot of people living in the bush, whether it was the Otways, in the Macedon Ranges or the Dandenongs, and I think people did not appreciate... the potential risk they were going into, having moved into those communities.

People not aware of bushfire danger amongst the trees

"The fundamental change has been trying to make those people appreciate the fire danger they're living in, but also empowering them to make decisions for themselves, both in the protection of their lives and their properties; the information which we now give to people, both pre-fire, and during fire... enables them to make decisions on their safety in partnership with the fire authority."

CFA now gives info to make right decisions about their safety

Today the CFA works within communities to educated and prepare people via the Community Fireguard program, but could the deaths and destruction we saw on Ash Wednesday happen again?

"Well, yes it could. If you look at the last three or four years, we've had major fires in the north east, we've had fires in the Grampians, and last year we had Gippsland the north east. Most of those were not in heavily populated areas. Most people living in the interface areas, like the Otways and Macedon Ranges, the Wombat Forest, living in amongst the trees - unless those people prepare for themselves and their properties - lots of other things have improved, such as helicopters, fire trucks and our working relationship with the DSE... the potential still is there for major loss of life and property if people don't prepare for themselves."

Don's message People must prepare themselves and their properties or risk death and damage.

Lesson for the reader Don't people pay taxes for the government to do this?

2008/09

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
27.9	11	165

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Rainfall – actual vs average

Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
58	66	60.3	59.1	46.8	48	50.1	57.3
12	14.2	54.2	76.8	< 5	< 5	47.6	39.2

Indicators of summer heat

No of very hot days > 35C	No. of single very hot days	2 or more very hot days in a row	No. of heat waves	Average duration of heat waves	Total Fire Ban Days
11	5	6	2	3	16

TFB Days for Central District
12-Jan, 13-Jan, 14-Jan, 20-Jan, 22-Jan, 28-Jan, 29-Jan, 30-Jan, 31-Jan
6-Feb, 7-Feb, 8-Feb, 23-Feb, 27-Feb
2-Mar, 3-Mar

Official bushfire records

Records are very confusing. The focus of attention was Black Saturday, 7 February, but many other major fires occurred between October and March. There was a seasonal damage toll and a Black Saturday damage toll.

VBRC

"Two firefighters did die in February 2009. One firefighter died on 7 February when he left his crew to help a relative, and an interstate firefighter died on 17 February after being struck by a falling tree"

Table 1. Summary of 2009 Major Bushfires

Location	Time Reported	CFA Commitment			Damage Assessment			Comments
		Brigades	Personnel	Appliances	Fatalaties	Area (ha)	Structures	
Delburn and Churchill	Delburn 3.59pm 28 January Churchill 2.30pm 7 February	320	2,405	229	11	6,440 24,500	30 247	Resource statistics include both fires
Branxholme	2.00pm 29 January	30	200	45	0	40	0	Bluegum plantations and grass fire
Bunyip State Park	DSE – 5.21pm 4 February CFA – 11.04am 6 February	155	1,681	166	0	26,300	76	Notification times differ as fire originated on Public land and CFA involvement was requested later.
Kilmore and Murrundindi	Kilmore – 11.49am 7 February Murrundindi – 2.57pm 7 February	607	6,507	521	159	125,068 132,973	1,639	Resource and damage statistics include both fires
Vectis (Horsham)	12.26pm 7 February	53	538	46	0	2,200	13	
Coleraine	12.36pm 7 February	44	274	54	0	775	1	
Weerite	1.17pm 7 February	48	423	45	0	1,300	0	
Redesdale	3.11pm 7 February	71	860	81	0	9,500	12	
Harkaway	3.32pm 7 February	39	470	53	0	180	3	
Upper Ferntree Gully	3.42pm 7 February	12	168	21	0	3.8	1	
Maiden Gully / Eaglehawk	4.34pm 7 February	69	593	73	1	330	58	
Lynbrook / Narre Warren	4.48pm 7 February	34	321	41	0	11.5	6	
Beechworth	6.08pm 7 February	137	1,353	107	2	32,300	29	
Wilson's Promontory	CFA – 12.44pm 13 February	70	423	37	0	50,00	0	CFA assistance to DSE
Muskvale / Daylesford	3.00pm 23 February	202	1,671	177	0	2,650	0	Asset protection strategies were implemented for underground water/gas pipeline
Upwey	2.28pm 23 February	109	1,038	119	0	350	0	
Totals			**18,925**	**1,815**	**173**	**414,921**	**2,115**	

Victorian Emergency Management Strategic Action Plan Update #1 2016-2019
173 lives lost, 414 reported injured, estimated 11,800 livestock lost, over 3,000 properties and structures destroyed, 61 businesses destroyed, 430,000 hectares burnt and $600 million forest assets lost, at an estimated economic cost of $4 billion.

CFA website

30 Oct.	Ouyen	10,000 ha	
22-Jan	Drummond	300 ha	
28-Jan	Delburn - joined up with bunyip fire		
29-Jan	Branxholme		40 ha
4 Feb.	Bunyip - figures included in 7 Feb		
7-Feb	Many		414900 ha
13 Feb.	Wilsons Prom	5000	
23-Feb	Daylesford	2650	
	Upwey	350	
			433,240 ha

CFA Annual Report adds:

29-Jan	Branxholme Hamilton	603 ha	

Feb 2009	Black Saturday Fires		
28 January	Delburn - joined up with bunyip fire	44 houses	6,534 hectares
29 January	Branxholme	40 hectares	
4-6 February	Bunyip State Park	31 houses	26,200 hectares
7 February	Black Saturday	Churchill, Kilmore and Murrundindi, Vectis (Horsham), Coleraine, Weerite, Redesdale, Harkaway, Upper Ferntree Gully, Maiden Gully / Eaglehawk, Lynbrook / Narre Warren, Beechworth.	

173 people dead 2056 houses 239,637 hectares

DMBCL (2009)
310,000 ha of crown land burnt,
? fires reported on crown land.
Large fires at
FRB 151,000 ha

2009: 7 February, Black Saturday DSE
The Black Saturday bushfires were the worst in Australia's history, killing 173 people. Almost 80 communities were directly affected and entire towns were left unrecognisable. The fires burned more than 2,000 properties and 61 businesses. Almost 430,000 hectares of land were directly affected, including 70 national parks and reserves and more than 3,550 agricultural facilities.

DSE annual report 2008 / 09
Throughout last season 825 bushfires occurred across Victoria burning approximately 437,000 hectares of land. Loss of life and property was worse than that suffered by Victorians during Ash Wednesday in 1982.
Throughout the season, 825 bushfires occurred across Victoria. The area burnt was approximately 437,000 hectares, which is two and a half times the 30 year average. The number of fires peaked at 169 on 9 February 2009 with 90 fires still burning in mid-March.

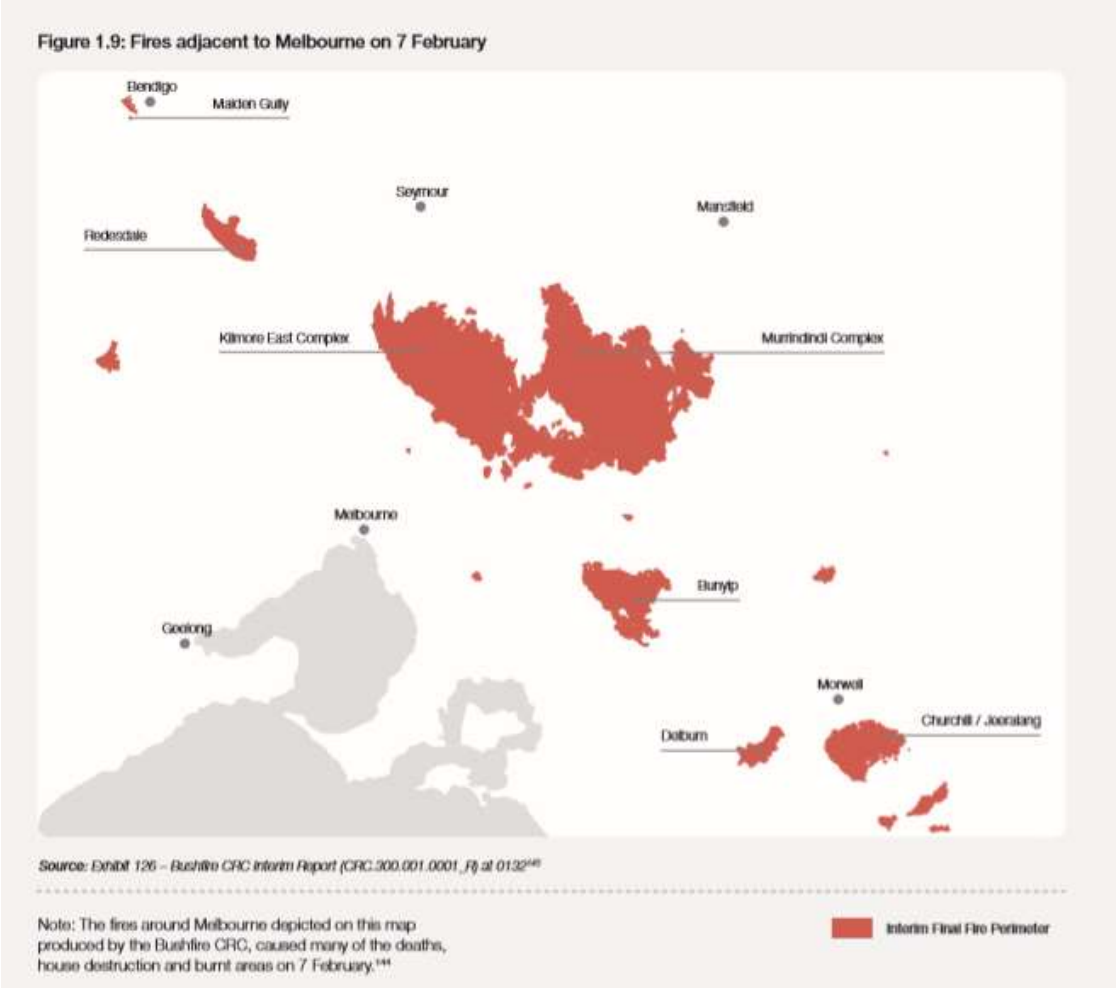
The increase in revenue from government is due, for the most part, to fire-related funding in the form of Treasurers Advances of $112.0 million and the Natural Disaster Relief Fund $220.0 million. This funding incurred corresponding expenditure which gave a net result from transactions on these fund sources of nil.
The total monetary cost to DSE for the (fire) response was $332.0 million

Additional DSE records:

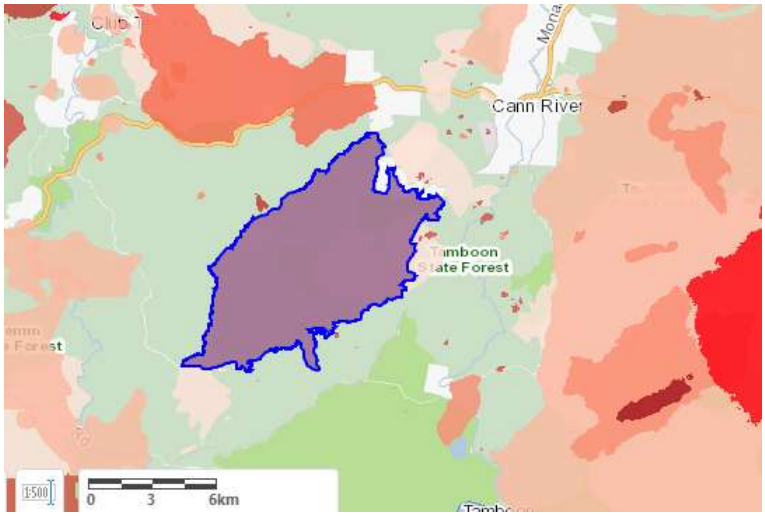
Origin		Final Area
6 Feb	Dargo	13,640 ha
11-Feb	Wilson's Prom	11,000 ha
23-Feb	South Daylesford	2,000 ha

ICA Catastrophe Data
The Black Saturday fires started on 7 February 2009. Approximately 400 fires were recorded across Victoria affecting 78 communities. A total of 173 people died in the fires and 2029 houses were lost. The most significant fire was the Kinglake Fire Complex, named following the merge of the Kilmore East and Murrindindi fires on 8 February. This forest crown fire swept through state forest and national parks with flames more than 30 metres high. The extreme temperatures and wind created convection clouds above the flames that further fuelled the fire and propelled embers far beyond the fire front. Other major fires were at Bunyip, Horsham, Churchill, Redesdale, Narre Warren, Upper Ferntree Gully, Bendigo and Beechworth. People living in these communities were severely affected by the fires, experiencing extensive loss of life and property damage. A total of 2,029 residential properties were lost. A Royal Commission ran for most of 2010 to determine the causes and to set in place recommendations to help prevent future fires.
$1B in 2009 / $1.7B in 2017

Map from VBRC Report

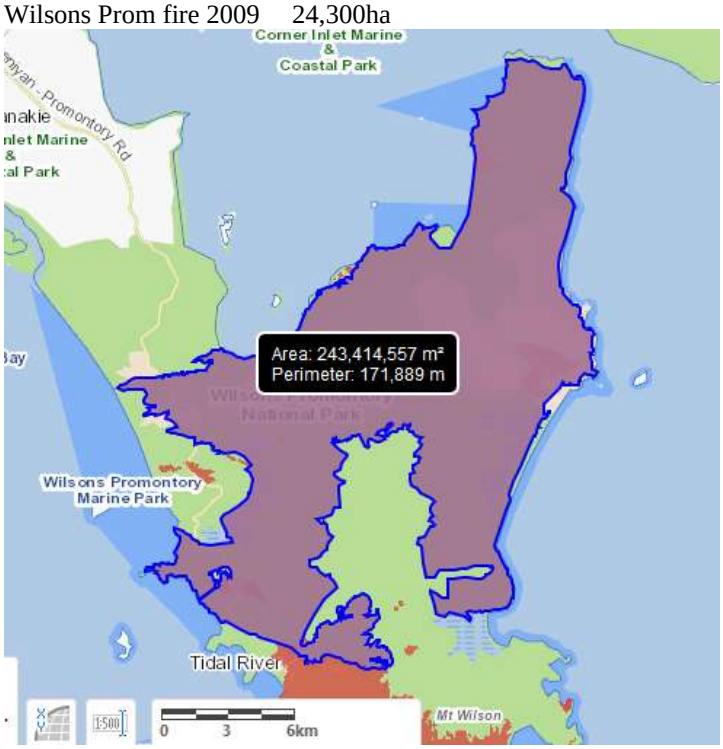


Cann River fire 2009 6.700ha



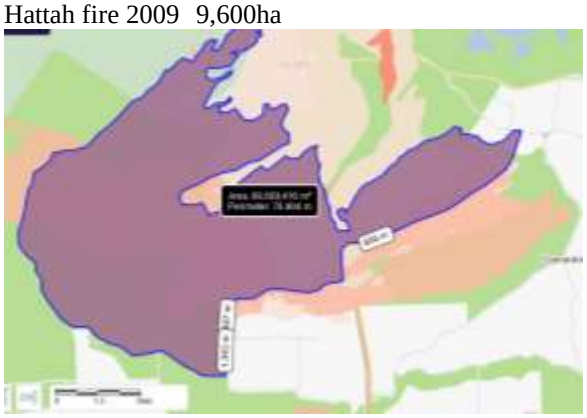
http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Wilsons Prom fire 2009 24,300ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Hattah fire 2009 9,600ha



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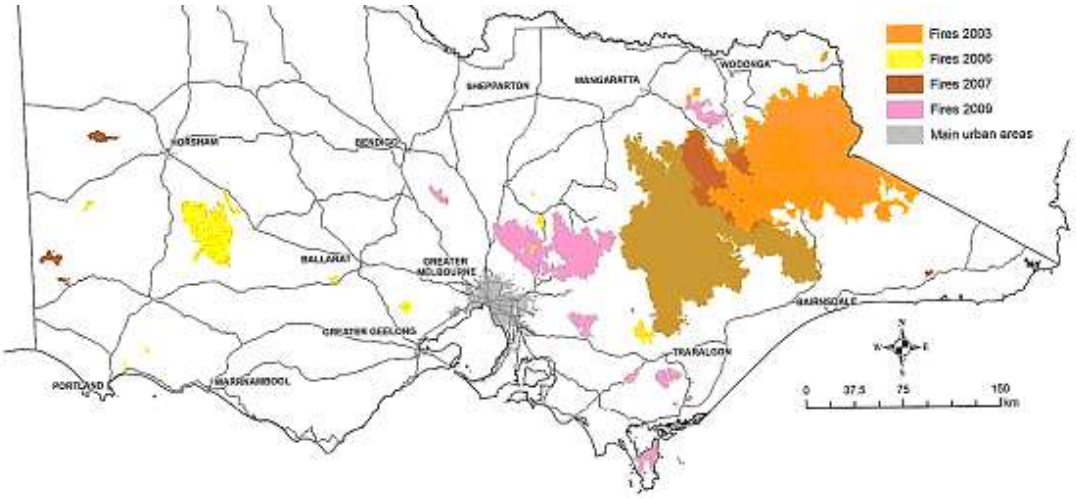


Figure 2. Areas burnt in 2003, 2006–2007 and 2009 fires in Eastern Victoria (Source A. Haywood, DSE)

Reported bushfire events

VBRC

2010 (Victoria): Victorian Bushfires Royal Commission Final Report. B. Teague et al.

"The Commission was asked to inquire into and report on the causes and circumstances of the fires that burned in January–February 2009, the preparation and planning before the fires, all aspects of the response to the fires, measures taken in relation to utilities, and any other matters it considered appropriate. The letters patent directed the Commission to make such recommendations as it thought fit on preparation and planning for further fire threats and risks, land-use planning and management, fireproofing of structures, emergency response, communication, training, infrastructure and overall resourcing".

Commissioners saw their role as reducing risk of a future tragedy.

"The Commission conducted an extensive investigation into the causes of, the preparation for, the response to and the impact of the fires that burned throughout Victoria in late January and February 2009. As Commissioners, we concentrated on gaining an understanding of precisely what took place and how the risks of such a tragedy recurring might be reduced.

Note: Unlike Stretton's Royal Commission, this VBRC was not required to find causes of the house loss and death tolls. The most direct statement it made about the cause of the tolls was this: "The Commission is of the view that the wind change was a major cause of the deaths that resulted from the 7 February bushfires. Improving community awareness of the potentially deadly impact of a wind change in a fire is a crucial task for government agencies." Clearly, a wind change per se is not the cause of deaths.

"The recommendations we make give priority to protecting human life, and they are designed to reflect the shared responsibility that governments, fire agencies, communities and individuals have for minimising the prospect of a tragedy of this scale ever happening again."

"The Commission conducted an extensive investigation into the causes of, the preparation for, the response to and the impact of the fires that burned throughout Victoria in late January and February 2009."

Responding to bushfire

The response to the fires on 7 February was characterised by many people trying their best in extraordinarily difficult circumstances. There were many examples of people who met the challenge admirably. Nevertheless, some poor decisions were made by people in positions of responsibility and by individuals seeking to protect their own safety.

"The Commission found that the leaders were wanting. Mr Rees (CFA Chief) and Mr Waller (Chief) ought to have done more in relation to warnings, supporting incident management

teams and state wide planning. The Commission considers that Ms Nixon's (Police Commissioner) approach to emergency coordination was inadequate".

Reducing the number of fires

Nine of the 15 fires the Commission examined were started as a direct or indirect result of human activity; five were associated with the failure of electricity assets, and the causes of four were thought to be suspicious.

The Commission considers that now is the time to start replacing the ageing electricity infrastructure and to make major changes to its operation and management. The seriousness of the risk and the need to protect human life are imperatives Victorians cannot ignore. The number of fire starts involving electricity assets remains unacceptably high—at more than 200 a year.

Reducing the damage caused by fire

Recognising that it is not possible to stop all fires, the Commission considered ways of reducing the loss of life and damage caused when fire does occur by reducing exposure to fire, helping to make homes more defendable, reducing the intensity and spread of fire, and helping people recover from the impact of fire.

Planning and building

The Commission therefore proposes that the Victoria Planning Provisions relating to bushfire and the CFA guidelines for assessing permit applications in areas of high bushfire risk be amended in order to give priority to protecting human life and to ensure that development does not occur in areas in which either the bushfire risk or the environmental cost of making people safe is too high. It also recommends that bushfire risk be accounted for in the application of controls on clearing native vegetation and that the construction of houses be restricted on high-risk blocks that are too small to enable a defendable space to be created and maintained.

In relation to building standards, the Commission concludes that construction standards for bushfire-prone areas do not adequately cover all the important components of bushfire risk. It recommends improving standards and clarifying objectives to redress these deficiencies. Further, building regulations do not adequately cover the construction of non-residential buildings used by vulnerable groups—for example, schools, hospitals, child care centres and aged care facilities—in bushfire-prone areas. The building regulations need to contain specific standards for the construction of such buildings.

the State should develop and implement a voluntary retreat and resettlement strategy—including non-compulsory land acquisition—for existing developments in areas at unacceptably high bushfire risk.

The Commission puts forward a range of proposals aimed at facilitating continued maintenance of standards—including amending the Sale of Land Act 1962 to require that vendor statements include information that will help potential buyers understand the bushfire risk of a property before they finalise the purchase.

Land and fuel management

The Commission proposes that the State make a commitment to fund a long-term program of prescribed burning, with an annual rolling target of a minimum of 5 per cent of public land each year, and that the State be held accountable for meeting this target.

Immediate appointment of a full-time Fire Commissioner. The Fire Commissioner would be an independent statutory appointment and the senior professional fire officer in Victoria. The position would not entail governance or management responsibility for the three fire agencies (the CFA, DSE and the Metropolitan Fire and Emergency Services Board). The Chief Officers of the agencies would, however, be directed by the Fire Commissioner on operational matters in preparation for and on extreme and code red days and for level 3 fires. The Fire Commissioner would be responsible for the following:

- the control of level 3 fires—standing delegations for level 3 fires would rest with the Chief Officers of the CFA, DSE and the MFB, who would also retain operational control over level 1 and 2 fires
- leading a program of reform to expand operational capability, interoperability and the resilience of Victoria's fire services.

The Commission also looked at the funding of fire services. The Commission proposes that Victoria also move to replace the Fire Services Levy with a property-based levy.

"The Commission conducted an extensive investigation into the causes of, the preparation for, the response to and the impact of the fires that burned throughout Victoria in late January and February 2009."
Note: The Royal Commission was not required to find causes of the house loss and death tolls. The most direct statement it made about the cause of the tolls was this:
"The Commission is of the view that the wind change was a major cause of the deaths that resulted from the 7 February bushfires. Improving community awareness of the potentially deadly impact of a wind change in a fire is a crucial task for government agencies."

Evidence to VBRC:
Fire fighters stopped almost all fires
Despite very severe conditions, only a few got away. Unfortunately, they inflicted most of the damage toll when they struck unprotected settlements.

Fogarty On Black Sat, DSE reported 24 fires on public land,
16 were stopped before 3 ha.
8 grew to > 3ha
4 were stopped before 140 ha
4 grew to > 1000 ha

Clow deduced these CFA fire numbers on Black Saturday on private property
199 fires reported
185 were stopped
14 became major fires.

CFA Annual Report (for comparison)

7 February 2009

Out of the 1,386 incidents to which CFA was dispatched on 7 February, nine became significant fires. The location of some incidents, influenced by the extreme conditions of the day, meant that 44 other incidents had significant potential to impact on communities.

Such fires occurred at Upper Ferntree Gully, Harkaway and Lynbrook in highly populated areas. The timely and efficient response of CFA brigades ensured that many fires were contained in the early stages of their development, which

Bushfire related matters

Fire season prediction six months ahead has no more status than a wild guess. Perhaps fire agencies wheel it out for publicity or self-promotion rather than accuracy. Compare the prediction with next season's severity.

State faces 'worst-ever' fire season
By Peter Ker
Sydney Morning Herald 29 July 2009
VICTORIA faces a fire season of unprecedented danger, with the state's fire officials expecting conditions to be worse than last summer when more than 170 lives were lost to bushfires.
Less than six months after the Black Saturday disaster, a leaked Department of Sustainability and Environment report warns the next fire season could start as early as November and that fires will burn with greater intensity this summer.

The report, written by department fire management officer Paul Brockhoff, says the bush has dried out to such an extent that official methods for predicting fire behaviour will be less accurate, and will tend to underestimate the threat.
Singling out Melbourne and its hinterlands as being among the state's driest areas, Mr Brockhoff used impassioned language to illustrate the extreme danger posed by the coming summer.
''The prospect we are looking at is not just another above-average fire season with above-normal losses or risks to life and property,'' he said.
''The genuine prospect of a season with the greatest potential loss to life and property is now in sight, and as climate indicators strengthen, this looks to be an increasing likelihood.''
The report, written on July 10, has not been officially released by the department, but it is believed to have been discussed at a meeting of top fire officials yesterday.
Central to the warnings are Victoria's continuing drought and a forecast El Nino weather pattern, which is expected to bring even drier conditions to south-eastern Australia.
The first half of the year was the driest on record for Melbourne and nearby areas, which include the Central Highlands that were badly burned in February's fires.
''This area is also the area where the highest exposure to life and property exist, and it also includes the remaining water catchment areas that did not burn last year,'' Mr Brockhoff's report said.
''The absence of natural barriers to fire (such as moist gullies, waterways, soaks) will increase the chances of fires becoming large.
''That the terrain has not saturated over winter will mean our current models will under-predict fire behaviour.''
Even if rainfall were above average in coming months, the report says Victorians would still go into summer with the ''worst-case climate outlook'' for fire ignition, spread and difficulty of suppression.
The department's chief fire officer, Ewan Waller, confirmed the report's veracity and said fire authorities were communicating with threatened communities well in advance of the fire season.
Mr Waller said further analysis of the risk would be conducted before summer, but he conceded there was ''strong potential'' for another bad season. ''As fire managers, we must prepare for a worst-case fire season,'' he said.
''The science tells us that we are facing a very serious threat this summer; we are planning accordingly and ask that the community do the same.''

The Country Fire Authority has started a countdown campaign warning Victorians the fire season is only 90 days away.
The royal commission into February's bushfires is scheduled to deliver its interim report to the Brumby Government by August 17.

Observations:
Causes of fires on a Black Saturday weather day are either accidents or deliberates
The fire starts when wind is fierce
It becomes a running inferno instantly where fuel bed on ground is continuous
Fire fighters arrive ASAP, but cannot get close
Most are unstoppable when they get away
Leap frog spot fires convert the bushfire attack into multiple spot fires.
Spot fires run towards a town
Fire fighters try to defend, but they have no pre-prepared infrastructure in place to make defence safe or effective.
Fire fighters evacuate the town
Huge house losses occur when houses are not defended
Spot fires keep running downwind towards another town. They stop when weather moderates or rain comes

VBRC

- They did not look for fault amongst the authorities for 173 deaths and 2000 destroyed homes in one afternoon.

- Yet they virtually blamed the people for living in the bush, and for dying because they made mistakes during self defence of their homes.
- Their strongest admonishment for the authority leaders was about their behaviour on Black Saturday – "they could have done better"
- Yet we all know that their shambolic crisis management is a symptom of poor preparation for crisis management.
- Despite this, the night before Black Saturday, the Premier under advisement deluded himself and Victoria with these cleverly crafted words – our fire services have never been better prepared.
- He was technically correct because he did not say what they were prepared for.
- However, behaviour of fire service leaders and fire fighters on the day was irrelevant to the massive life loss and house loss that they witnessed. That was caused by another policy failure not identified or rectified by VBRC.
- VBRC did not identify the true fault of the authority leaders - failing to prepare Victoria to prevent an historically common event on severe weather days - multiple life loss and house ignitions from multiple fires on a severe weather day.
- Furthermore, VBRC did not identify or even examine why authority leaders failed to prevent multiple house ignitions and thereby uncover the simple policy adjustment required for rectification.
- Authority leaders were and still are driven by the objective of stopping bushfire spread by their only tool – the Plan A suppression model. Under this objective, house loss is expected collateral damage, and perhaps because it can be readily explained away as Mother Nature's fury, there is no incentive or public outcry to change the objective.
- Neither authorities nor VBRC acknowledge that the suppression model's capability against multiple fires on a severe weather day is relatively useless, and house destruction occurs **because** they do not institute a back-up Plan B that protects houses,
- How can a Plan B become policy? By government adopting the strong objective of zero house loss.
- House survival is critical because if you save the house, you save the life.

- Government and VBRC were in shock - the high death toll must not happen again.
- They recommended more tankers and resources for fire fighters, not understanding they were never in short supply.
- They encouraged a re-look at evacuation policies – to save lives. This has since been interpreted as institutionalised evacuations from towns deemed to be under threat. Houses are now undefended against massive ember attack. The worst example is Wye River / Separation Creek in 2015/16.
- Reassurances ring hollow – you can rebuild a house but not a life.
- They forget that house loss = major life disruption

Omissions

1 This constant remains – running infernos cannot be stopped with fire suppression

Government solution is madness - pour money into improving fire suppression capability

2 Towns are still not actively protected from running inferno attack by FLAME
Some towns are accidentally protected – fully or part - from running inferno attack

How do we know this?
Since 2009, CFA has declared hundreds of towns and settlements at extreme fire danger and recommends evacuation **to safe towns**.
So Why don't they make all towns safe???
How? – take away the fuel and the flame drops down dead all by itself. They all know this.

3 Towns are not actively protected from running inferno attack by EMBERS
Inferno attack is a mass ember dump. = multiple simultaneous ignitions eg, Marysville 2009, Kinglake 2009

No lessons have been learnt from Canberra 2003, when six fully crewed tankers assigned to protect the town watched in frozen shock as 100+ houses burnt simultaneously in a suburb they evacuated almost all people from, a residential area that was safe to stay in.
Clue – the people who stayed, instinctively put out a dozen or so tiny spot fires in their yard with wet mop and a garden hose and saved their house
In each evacuated property, the spot fires grew and soon ignited the house.
A strike team of 5 tankers is usually sent to a house fire – how many tankers are needed for 100 simultaneous house ignitions?
There were only six - less the one that was burnt by an ember through an open window
How many residents are needed to put out a dozen small spot fires on their own property?

If authorities don't understand fire behaviour, they see the flames, they say get out, go

If authorities understand bushfire behaviour, they will know the residential area is safe from the running flame, and that the approaching inferno will throw a mass of embers onto a few hundred houses, and that only 10 or so embers will ignite on each property into small spot fires.

What is the best action for the good of the community?
Explain to people what to expect and teach them about ember ignition and spot fires, and how to arm themselves for the attack, ie, use the public as a resource to extinguish spot fires when small
OR
Evacuate everybody, endure their broken hearts after house loss and praise their resilience.

It is long past time for policy reform:
NEW GOAL = Maximise welfare of community = save life, save house, resume normal life next day without disruption
Vs
Current goal Save life by evacuation – leaves houses vacant and undefended, houses destroyed, lives massively disrupted for next 2 to 5 years, if not longer.

2009/10

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
6.2	9	73

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Estimate of damage toll
40,000+ha Nil? houses, sheds, stock

Official bushfire records

We are well into the era of non-information from Government
Facts from government sources are scarce this year
It is no longer important for government to advise the public of the distinction between public land vs private land burnt areas

CFA Annual Report

10-Nov	Pt Nepean	15ha	escaped burn off
	Gipps	1000ha	escaped burn off
20-Nov	Dorodong	40ha	
	Cobbobanee NP	180ha	
17-Dec	Cann River	6700ha	
31 Dec.	Mount Clear	31ha	
4 Jan.	Chesney Vale	800ha	
22-Jan	Grampians near Dadswells**	11,000ha	
31-Jan	Emerald	5ha	
		19771ha	

DMBCL (2010)
37,200 ha of crown land burnt, source VNPA
? fires reported on crown land.
FRB 120,000 ha

DSE Annual Report
Early in the season, there was a slightly above average number of forest fires. This was due to lower than average rainfall for the year, longer term dryness from previous seasons and bursts of heat in September, November and December. Significant rain in late November and December saw a return to average forest fire behaviour.

The largest fire of the season was near Cann River in East Gippsland, which began on 16 December and burnt more than 6,000 hectares before it was eventually declared safe at the end of February. It threatened the township of Cann River ** and did significant damage to regenerating commercial forests.

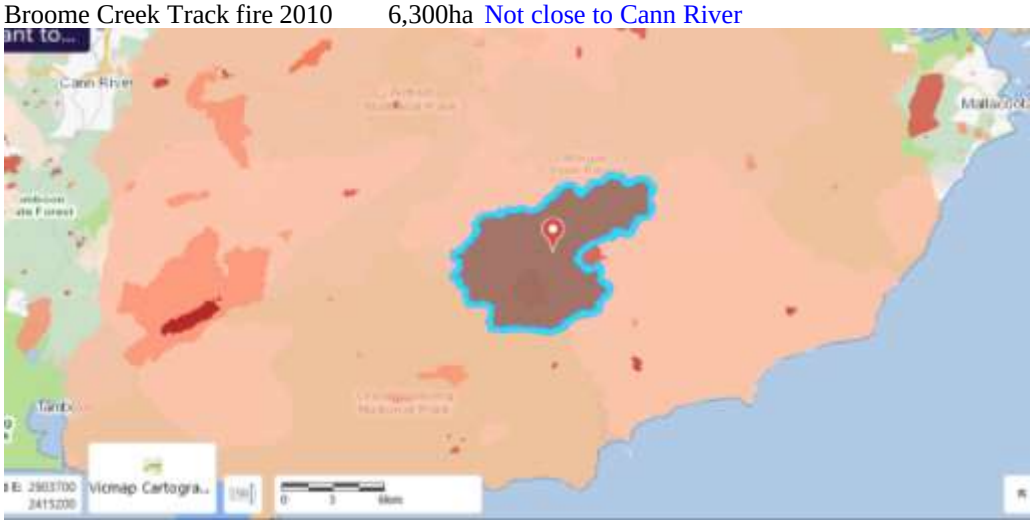
** Comment:
The author of DSE report was mixed up:

The "Cann River" fire is no threat to Cann River
The location of the Dadswell Bridge fire (11,000 ha) is not recorded. We know about 1,700ha of it.

Roses Gap Road fire in the Grampians 2010 1,700ha

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Broome Creek Track fire 2010 6,300ha Not close to Cann River



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

2010/11

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
2.9	3	21

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Estimate of damage toll
15,000+ha 2 houses, several sheds, ? stock

Official bushfire records

CFA Annual Report
Major bushfire incidents

21 Oct.	Cranbourne	25 ha
23 Nov.	Jeparit	40 ha
5 Dec.	Norong	120 ha
16 Dec.	Reedy Darn	600 ha
17-Dec	Lascelles	800 ha
30 Dec.	Ouyen	160 ha
31 Dec.	Boolite	100 ha
1 Feb.	Tostaree	11365 ha
	Hunterston	350 ha
		13,560 ha

DMBCL (2011)
14,000 ha of crown land burnt, source VNPA
? fires reported on crown land.
FRB 189,000 ha

DSE Annual Report
The 2010–11 fire season had the lowest bushfire activity in more than 30 years, due to record summer rainfall.
There were 152 fires during 2010–11, burning 14,031 hectares of public land. The average fire season sees 662 fires, burning 184,347 hectares.
The Tostaree fire in East Gippsland on 1 February 2011 was the most significant fire of the season. The fire developed rapidly and burned a total of 11,365 hectares; it destroyed two houses and resulted in the closure of the Princes Highway and power outages to the east of the state.

Reported bushfire events

Review of the Tostaree Fire
Emergency Services Commissioner, 25 July 2011

Weather
On 31 January 2011, the Bureau of Meteorology issued the following weather prediction for East Gippsland for 1 February 2011:
Maximum temperatures around 41 degrees, relative humidity down to 12% and winds averaging 40 km/hr are expected.
The forecast [Forest] Fire Danger Index for East Gippsland was 50
A day of Total Fire Ban was declared for East Gippsland for 1 February 2011

Note: Weather during the fire's SE fire run was not in the Report.

Sequence of events:

1.04 pm

The fire tower at Mt Nowa Nowa reported a smoke sighting near the Princes Highway at Tostaree.

Resources from Nowa Nowa consisted of four slip-on units, one mid-range tanker, one heavy tanker, a first attack bulldozer (D4), and 16 personnel. These resources were dispatched and arrived at the fire at about 1.15 pm. Another Nowa Nowa slip-on unit returning from park inspections was near the fire and arrived within five minutes of the fire being reported.

Fire situation reports confirm that the first priority was a 'direct attack in the paddock, [and an] attempt to halt the spread in open country'. Once the fire entered the forested area, the priority became the protection of life and property.

1.15 pm

On arrival, the DSE operations officer estimated the fire to be 1-2 hectares in size, burning intensely in thick dry grass about 200 metres from a forested area south of the paddock. He deployed resources to the flanks of the fire, as conditions were considered too volatile for a direct attack on the head of the fire.

The tanker and forward command vehicle from Newmerella and a tanker from Wairewa arrived at the scene between 1.20 and 1.30 pm.

The first attack was made in the private paddock with crews attacking the fire flank burning towards the Princes Highway and to the south-west

1.30

After a discussion with the DSE operations officer, the CFA Newmerella captain assumed the role of Incident Controller as the fire was located on privately owned land. The DSE operations officer then resumed the role of managing the DSE crews.

The Incident Controller had by then determined that the fire 'was gone' and made a request for further resources

Two helicopters, a fixed-wing aircraft, aerial bombers and an air attack supervisor were dispatched, with the first aircraft arriving at the scene at around 1.35 pm.

The Wairewa and Newmerella CFA tankers were initially deployed to the private paddock and shortly after redirected to the Jonsons Road area north of the highway for asset protection. CFA tankers from Orbost and Toorloo arrived a short time later and joined the Wairewa and Newmerella tankers.

DSE crews moved south to concentrate on the forested area where fire had crossed Lower Tostaree Road and was in the bush.
At about 1.30 pm a DSE slip-on unit was sent to Mystery Lakes where two properties were at risk. Residents were preparing to defend their properties.

On the SW flank - the fire crossed Lower Tostaree Road and was in the bush.
On the NE flank - the fire spread rapidly towards the Princes Highway, albeit against the prevailing wind. Its movement was attributed to the local topography and gully winds.
Note Princess Highway is +/- parallel to flank fire, perpendicular to wind

At 2.04 pm
The fire was now estimated to be 25 hectares in size with reported flame heights of 20 metres.
DSE crews attempted to hold it in a gully along the Lower Tostaree Road while CFA crews worked in the Jonsons Road area north of the highway.
Air support was concentrated in the Jonsons Road area.

Aircraft observers reported that the fire was spotting and had passed the Mystery Lakes area and was spreading rapidly towards the coast.
Between 2.30 and 3.00 pm, DSE resources were consolidated and relocated to Wombat Creek, where property owners were preparing to defend their properties

3 pm
The fire damaged eight or nine poles that carried the 66-kilovolt power lines that service the area east of Nowa Nowa. This caused approximately 4,500 customers around Orbost, Cann River and Mallacoota to lose power.
Note: It is incredulous that power poles are so poorly protected.

Additional DSE slip-on units arrived from Bairnsdale and were initially tasked to Jonsons Road, but by 4.00 pm they had joined the other DSE crews at Wombat Creek. Later in the afternoon strike teams were being formed and sectors organised.
Note: We are not told how many troops and other resources were on site today. We know about the 4 CFA trucks and a few slip-ons from DSE, grossly inadequate for 30km of active perimeter.

4.10 pm
The fire, which was about 2 kilometres across, reached the coast at around 4.10 pm.
Length to breadth – 5:1
Approx ROS = 10 km in 3 hours = 3 kph
Note: This rate of spread is misleading. It measures the time the first leading spot fire hit the beach. The head fire of the original line of flame travelled up to 1 kph through the forest, slow in comparison to leap frog spot fires.

Yellow arrow is NW wind. Yellow circle shows ignition point of leading spot fire

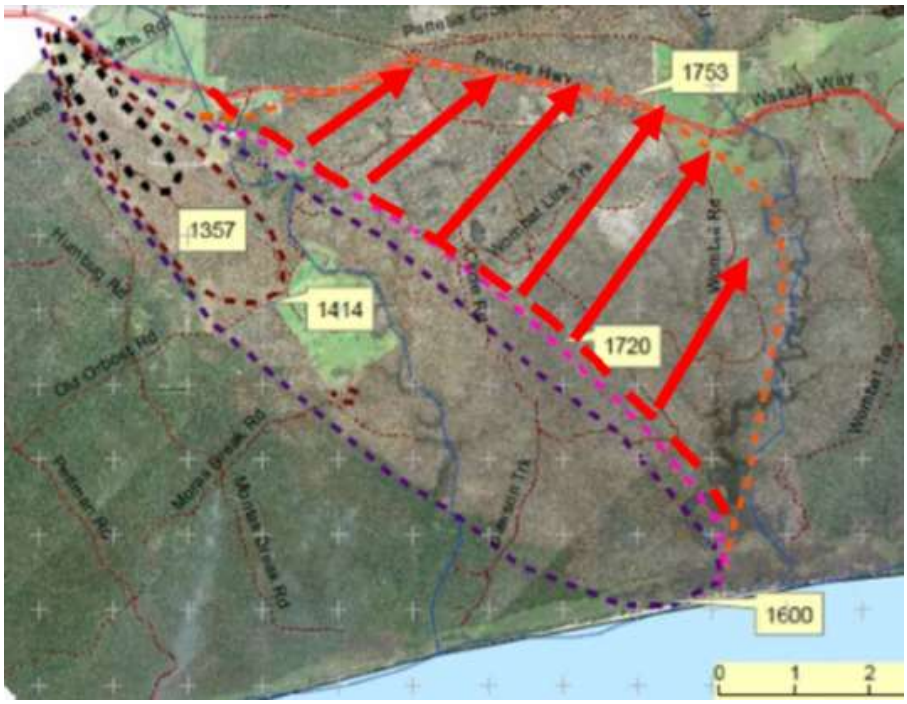
5.20 pm

A south-westerly wind change arrived at about 5.20 pm as predicted by the BoM, with wind gusts up to 70 kilometres an hour. Fire crews had been forewarned and were prepared for the change.

Yellow arrow is SW wind

The eastern flank of the fire became a large fire front (7 kilometres across) and developed a large smoke plume. The extreme conditions drove the fire quickly inland, burning into the crowns of trees and spotting up to 10 kilometres ahead. It is estimated that the forward rate of spread after the change was 6-8 kilometres an hour, twice that of the south-easterly run of the fire.

Note: This rate of spread statement is misleading. It is not the spread rate of a line of flame through the forest. It measures the spread rate of leading spot fires. In a multiple spot fire scenario like this, there is no single flame front. There are scores of spot fires running in tandem with the wind.



After the fire front passed, crews focussed on protecting private property. Joint action by DSE and CFA crews and local residents successfully defended private assets. This included the use of privately-owned earth-moving equipment.

Two houses and a number of outbuildings in the Wombat Creek area were destroyed. One of the houses was derelict and the other was a weekend residence unoccupied at the time.

After 7 pm
Weather conditions became more moderate later in the evening.
This allowed ground crews to place mineral earth control lines around the most important sections of the fire perimeter. There was no further significant fire spread that night.

2 February
During the morning, DSE crews worked on securing the western flank of the fire south of the highway. CFA crews worked on spot fires in the Wombat Creek and Simpsons Creek areas.
By mid-afternoon fire crews had commenced back-burning along Old Tostaree Road in a southerly direction towards Lake Tyers House Road.
Throughout the day back-burning continued along the south-west flank of the fire down Pettman Road to the coast.
By 9.00 pm electricity had been restored for about 2,000 customers, leaving around 1,800 still without power.

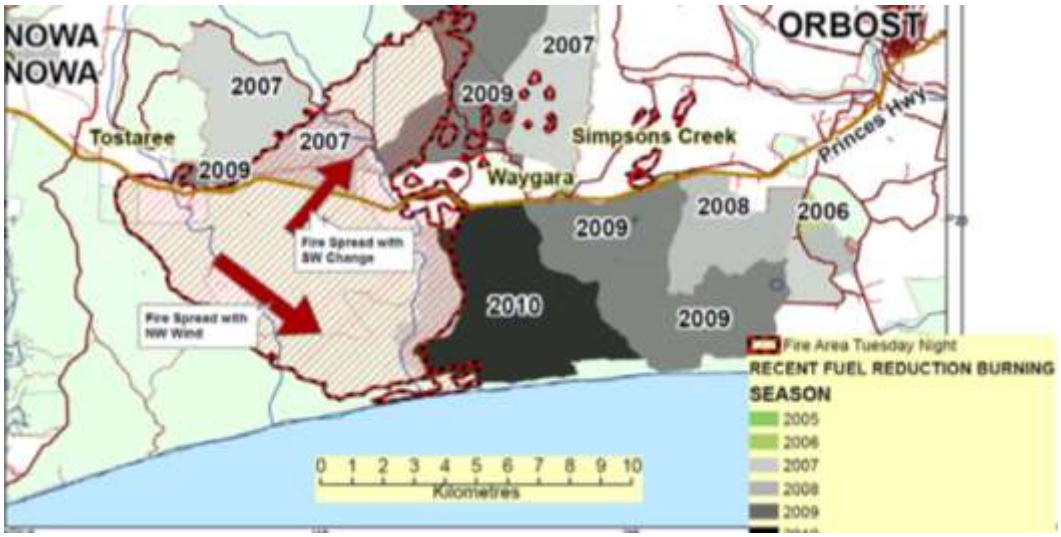
3 February
The focus on 3 February was the continued fire activity on the fire's north-west flank.
Pettman Road backburn to the coast was completed during morning.
The remaining areas of unburnt forest were burned during the day.
Strategic back-burning helped secure the fire. The remaining edges were tracked and crews continued to mop up.
Power was fully re-instated today.

4 to 22 February
The perimeter of the fire was contained at 3.00 pm.

The focus for the remaining days was on blacking out hot spots and undertaking environmental assessments, removing dangerous trees and re-opening tracks
Rain during the following two weeks helped suppress the fire but hampered controlled burning activities.
The fire was declared safe on 22 February

The Review found that the level of community preparedness in the Tostaree area was commensurate with a self-reliant, experienced rural population living in a fire-prone area.

Fuel management
An area of continued concern for the community and many fire brigades is the management of vegetation on public land, roadsides and service easements, particularly in locations where vegetation is dense. Vegetation management is currently undertaken by a number of organisations and agencies independently of each other, resulting in variable levels of fire hazard.
Although significant fuel-reduction burning has occurred in the Tostaree area, the community is not fully aware of its scope and does not believe that it has been given the opportunity to contribute to the planning process. The feedback may also reflect the fact that local input was neither sought nor acted upon. This reinforces the importance of engaging with the community and ensuring mechanisms to enable credible, local input in planning for bushfires. Such an approach also provides a way to increase community awareness.
Public land
The Tostaree area has been subject to a comprehensive fuel-reduction program, with 11 fuel-reduction burns occurring between Tostaree, Orbost and the coast since 2007. The review has not assessed the strategic value or effectiveness of fuel reduction burns. However, a prescribed burn carried out in 2010 south of Waygara and the Princes Highway appears to have reduced the forward rate of spread of the Tostaree fire



Roadsides
The review heard that fire brigades and the community generally believe that vegetation on roadsides, particularly the Princes Highway, is a high risk that is not being managed appropriately.
Powerlines
The process of clearing vegetation under and around power lines is constrained by legislation. However, a risk-based approach that included consideration of the consequences of power loss would benefit this process. In areas of high bushfire risk the assessment of vegetation under power lines should also include the impact of fire on electrical assets. The current regulations in relation to the removal of vegetation near power lines mainly relate to the risk

of bushfire ignition from power lines rather than the potential impact of fire on electricity infrastructure.

Summary

The management of vegetation on roadsides, public land and service easements is a major concern to the community and many fire brigades. Vegetation management is currently managed independently by various organisations and lacks a rigorous, risk-based approach.

Observations:

Capability of suppression as a protection tool expires in severe bushfires

This Report is included in fair detail because it is a very good account about the inability of fire fighters to suppress a runaway fire during a classic severe NW / SW wind-driven bushfire until the weather moderates. First attack was rapid and first responders arrived within a few minutes of ignition, but they could not stop the fire spreading in the grass or stop its flank crossing a wide road running parallel (Princess Highway). This coastal bush was reasonably well-roaded, but they could not get access to the fire perimeter through the forest between the trees and across the gullies.

The same runaway inferno scenario can happen in any residential estate within a forest or mixed forest-grassland environment. Here at Tostaree, we can note where the fire fighters were deployed on this fire. They deployed aircraft and CFA troops around Jonson Tk which is near origin, while the leading fire front was 10km away. DSE troops were deployed around Wombat Creek while the leading fire front was several kilometres away stopped at the beach, but soon to be hit by a SW wind change that would throw embers into their midst. No firefighters or water bombing aircraft were on or near the spreading edge.

Alternative bushfire protection tool

Another observation can be made about another method of bushfire protection – fuel hazard management. This fire ran hard as an inferno for at least six hours through unmanaged forest. However, its run was stopped without fire fighters by the beach, in the Waygara paddocks and in the control burn of the previous year, 2010. This means a runaway inferno can be stopped or weakened by a no-fuel or a low-fuel barrier. In regard to the low-fuel barriers, either continuous flame ran through though them [the four year old control burn (2007) and the two year old burn (2009)] or numerous spot fires ran through these areas, but we can safely deduce that their lower fuel hazard kept flame intensity much lower than in unburnt forest.

Lessons about bushfire protection for houses in a forested environment:

- The first lesson is that houses within such areas would be cooked by the inferno flames unless fuel load was managed beforehand to weaken it with low flame areas and no flame areas.
- The second lesson is that the fire fighters cannot stop the inferno's advance.
- The third lesson is that fire fighters can only protect assets in a safe workplace.

Suppression Strategy

Strangely, suppression strategy was not addressed by the Report, probably because it was missing from the EMC control strategies. But I now will.

The control team knew the fire would stop at the beach and at 2010 burn area. They knew the SW change would arrive soon after 5pm. They knew the 7 km NE flank would become a 7km front. This means the priority flank for suppression before the wind change is the NE flank. Why? To reduce the length of the new front to less than 7km. But there were no troops or aircraft deployed along NE flank.

The fire edge was inaccessible within forest but there were several forest tracks to be back-burned from and they had 4 hours to light up and 7 km or so, and with more resources on board, to black out a good part of the 7 km.
Then there was the very wide Princess Highway that could have been a fall-back control line for the leap frog spot fires. Part or all of its southern side was recently fuel reduced. Troops could have been deployed along it to do preparation works. None were deployed. Any spot fire flame will stop at the road and only a few spot fires will get across. Could they have stopped spot fires north of Princess Hwy? Yes – with enough with troops and aircraft. These were either not provided or deployed elsewhere.
Thus, failures in basic best-practice forest suppression strategies let this inferno run out of control until the weather moderated.

By comparison, the Review analysed the firefighting effort against the ESC control strategies:

The control strategies developed for an incident should be commensurate with the control priorities which are: • protection and preservation of life is paramount • issuing of community information and community warnings • protection of critical infrastructure and community assets • protection of residential property • protection of assets supporting individual livelihoods and economic production • protection of environmental and conservation values.

These strategies do not mention spread of the perimeter. This means they are deficient in requiring best-practice suppression strategies to stop fire spread during the run and to stop spot fire spread ahead of mother flame.

Summary;
The Review was primarily concerned with melding the cultures of two fire agencies which they call interoperability.
Its control strategies aim to protect property by suppression forces when a settlement is under attack, but they assume they are a safe workplaces. The Tostaree perimeter was clearly an unsafe work place, even the Princess Highway. Their strategies have no reference to making the residential area or the control line a safe work place.
The Review presented some useful recommendations about vegetation management and we can only hope they will be adopted.
Finally, the Review inadvertently presents evidence that demonstrates the limited capability of fire suppression as a tool to protect properties during a severe bushfire attack, and evidence that indicates the benefit of zero fuel barriers (the beach) and managed fuel bed areas (Waygara grassland and 2010 control burn) in stopping the spread of a severe bushfire without the need for firefighting resources.

2011/12

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
5.1	5	43

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Estimate of damage toll
8,000ha burnt – public and private land nil houses, nil sheds, nil stock

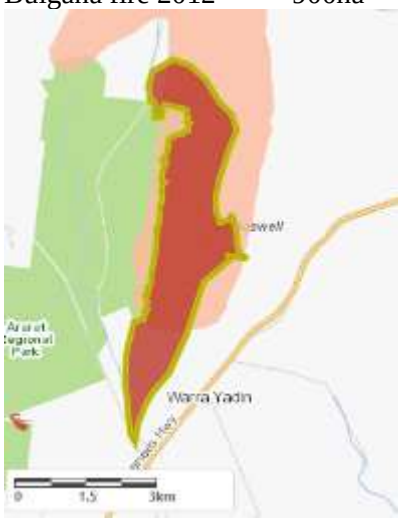
Official bushfire records

CFA Annual Report
Major bushfire incidents

4-Jan	Grass & Scrub Fire	Dorodong	11 trucks	113ha
5-Jan	Grass & Scrub Fire	Logan	12 trucks	100ha
13-Jan	Grass & Scrub Fire	Corop	29	195ha
14-Jan	Grass & Scrub Fire	Toolleen	31	198ha, disused farm sheds and some fencing destroyed
25-Jan	Grass & Scrub Fire	Lyndhurst	37	75ha
1-Feb	Grass & Scrub Fire	Edenhope	29	472ha
11-Feb	Grass & Scrub Fire	Redesdale	25	190ha
22-Feb	Grass & Scrub Fire	Mortlake	16	319ha.
23-Feb	Grass & Scrub Fire	Echuca	20	130ha. Disruption to rail services.
25-Feb	Grass & Scrub Fire	Bulgana	104	1000ha.
				3022ha

DMBCL (2012)
4,900 ha of crown land burnt, source VNPA
? fires reported on crown land.
FRB 197,000 ha

Bulgana fire 2012 900ha overlain onto 1980 fire 2015



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

2012/13

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
14.6	17	206

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Rainfall – actual vs average

Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
58	66	60.3	59.1	46.8	48	50.1	57.3
39.2	29.2	37.2	30	7.6	66.4	41.4	28

Indicators of summer heat for Melbourne

No of very hot days > 35C	No. of single very hot days	2 or more very hot days in a row	No. of heat waves	Average duration of heat waves	Total Fire Ban Days Central District
17	8	9	3	3	7

TFB Days for Central District
4-Jan 11-Jan, 17-Jan, 25-Jan,
6-Feb, 7-Feb,
27-Mar,

Estimate of damage toll
200,000+ha burnt – public and private land 5 deaths, 46 houses, numerous sheds, 2400 stock

Official bushfire records

CFA Annual Report

Deaths in the line of duty
The destructive force of bushfires and structure fires was felt acutely by fire agencies, with the deaths of four firefighters, two of whom were volunteers. CFA was impacted by the deaths of Gisborne 2nd Lieutenant Peter Harry and Firefighter Peter Cramer from Tyers brigade. Mr Harry died while attending a house fire in Gisborne, and Mr Cramer died on active duty as an employee of the Department of Sustainability and Environment (now the Department of Environment and Primary Industries (DEPI)) while deployed to Tasmania. DEPI firefighters Steven Kadar and Katie Peters died on the fireground at Harrietville. We appreciate the dedicated service given by these four firefighters to their communities and their sacrifice will never be forgotten.

Major Incidents

9 Dec.	Whiteheads Ck	620 ha
27 Dec.	Cope Cope	550
4-Jan	Kentbruck	7050
8-Jan	Carngham	1300
	Goroke	920
17-Jan	Aberfeldie	85,193

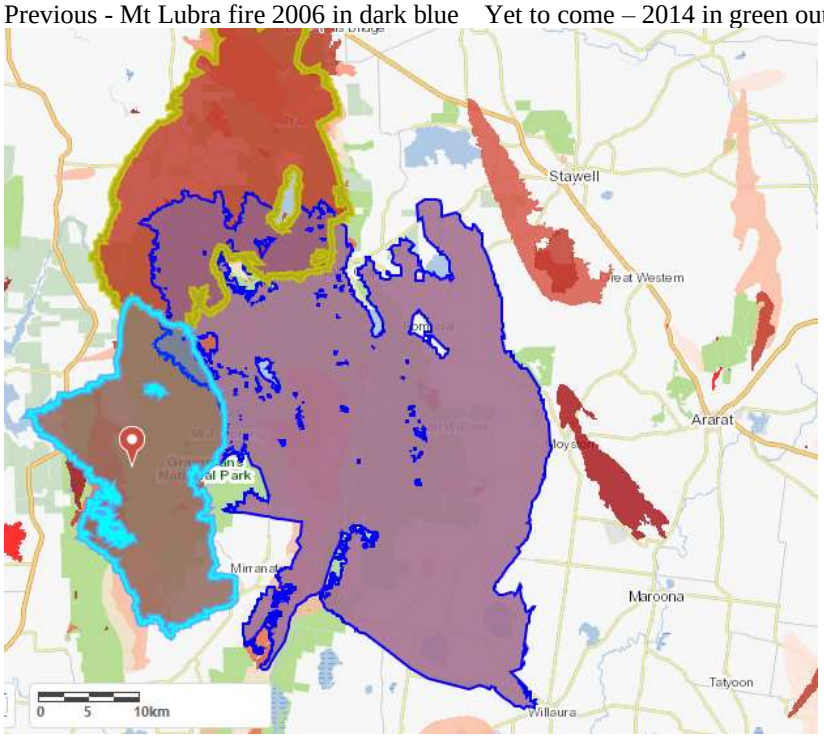
18-Jan	Harrietville	36,347
27 Jan.	Violet Town	1,285
14 Feb.	Victoria Valley	35,875
18 Feb.	Donnybrook	2040
26 Mar.	Hallston	562
27-Mar	Dereel	1300
	Derrinallum	264

DMBCL (2013)
201,630 ha of crown land burnt, , source VNPA
? fires reported on crown land.
FRB 255,000 ha

DEPI Annual Report
"The department's firefighters responded to 866 fires during the 2012–13 fire season, impacting 201,630 hectares. This is significantly more than the 30-year average of 638 fires per season".

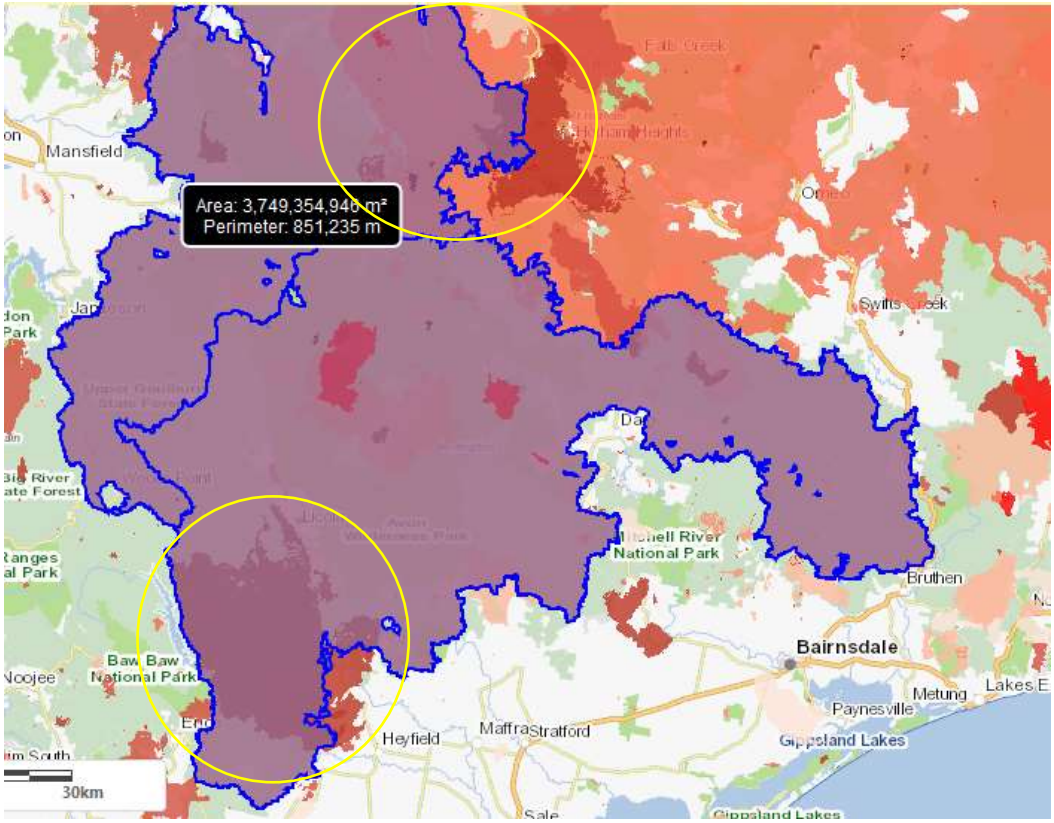
Fire Management Report 2012/13 DEPI
DEPI personnel attended 866 fires (a total area of 201,630 hectares) including six major bushfires that required attention over several weeks before being controlled. Total budget allocated to DEPI in the Victorian Budget for 2012-13 was $353.2 million for "Effective management of fire". This represented an increase on the 2011-12 budget as a result of additional investment in expanding the planned burning program.

Grampians – Victoria Valley Complex 2013 in light blue 35,800ha
Previous - Mt Lubra fire 2006 in dark blue Yet to come – 2014 in green outline



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Aberfeldie fire 2013, 85,000ha and Harrietville fire 36,000ha, both rusty brown shade circled in red and overlaid onto 2007 fires



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

Emergency Services Commissioner
Post Season Operations Review Fire Danger Period 2012/13

Victoria experienced a significant fire season in 2012/13; in part due to above average temperatures, dry fuel loads and increased potential for fire activity. While predicted to be an "average" season, it was obvious by November that grass and bush across Victoria were at risk of fire. This changed in January 2013 with heatwave type conditions resulting in the whole of the state experiencing very dry conditions and all grass and bushland ready for fires to be intense.

These conditions resulted in fires which were intense, fast moving, and ran through the night. Total Fire Bans were declared in all or parts of the state on 16 days between 1 December 2012 and 31 March 2013. Initial attack was a key factor to success and included the extensive use of firefighting aircraft to support ground crews who performed exceptionally well. Firefighters from the Department of Environment and Primary Industries (DEPI) (formerly the Department of Sustainability and Environment), and Metropolitan Fire Brigade (MFB) responded to more than 4,400 bush and grass fires between December and March. Of these 24 were classified as significant including those at Chepstowe, Aberfeldy, Harrietville, Donnybrook, Dereel and in the Grampians. A summary of these fires is listed and spatially shown in the following pages.

Tragically, this season bought home how dangerous the fire ground can be with a community member and four firefighters losing their lives in the line of duty. Between December and mid-March more than 190,000 hectares of public and private land was burnt and 46 houses destroyed.

Table 2 - Summary of Significant Bush and Grassfires for 2012/13

	December 2012	January 2013	February 2013	March 2014	Totals
Significant bushfires	2	6	9	7	24

Name	Region	Start	End	Duration	Size (Ha)
Little Desert – Lillimur Track	Grampians	20 Nov 12	21 Nov 12	1 day	265
Casterton-B Line Track	Barwon SW	20 Nov 12	23 Nov 12	3 days	4334
Whiteheads Creek - Homewood Rd	Hume	8 Dec 12	12 Dec 12	4 days	620
Cope Cope - Cope Cope Rd	Grampians	27 Dec 12	28 Dec 12	1 day	550
Kentbruck – Portland Nelson Rd	Barwon SW	4 Jan 13	11 Jan 13	8 days	12055
Chepstowe – Pittong Rd	Grampians	8 Jan 13	9 Jan 13	1 day	1297
Goroke – R Mitchell Rd	Wimmera	8 Jan 13	11 Jan 13	4 days	920
Aberfeldy – Donnellys	Gippsland	17 Jan 13	28 Feb 13	43 days	86840
Harrietville – Alpine Fires	Hume	21 Jan 13	27 Feb 13	39 days	22000 (Nth) 14347 (Sth) = 36347
Violet Town – Harry's Creek Rd (Boho)	Hume	21 Jan 13	30 Jan 13	9 days	1285
Ournie - River Road (Ournie NSW)	Hume (in NSW)	5 Feb 13	6 Feb 13	1 day	694
Grampians – Victoria Valley Complex	Barwon SW	14 Feb 13	27 Feb 13	13 days	35875
Little Desert - McDonalds Highway	Grampians	14 Feb 13	17 Feb 13	3 days	848
Little Desert - East West Track 2	Grampians	14 Feb 13	17 Feb 13	3 days	565
Dargo – Matheson Track	Gippsland	15 Feb 13	25 Feb 13	10 days	1111
Catherine Station Razor Track	Hume	15 Feb 13	24 Feb 13	9 days	1800
Mt No 3 – Tomahawk	Hume	16 Feb 13	28 Feb 13	12 days	2010
Kalkallo - Donnybrook Rd	Nth + West Metro	18 Feb 13	19 Feb 13	1 day	2040
East Caledonia-Howitt Track	Gippsland	22 Feb 13	28 Feb 13	6 days	626
Cashmore – Oakleys Rd	Barwon SW	12 Mar 13	13 Mar 13	1 day	120
Lake Mundi – Aberfoyle Swamp	Barwon SW	2 Mar 13	3 Mar 13	1 day	75
Trawool – Goulburn Valley Highway	Hume	6 Mar 13	11 Mar 13	6 days	16
Hallston - Forresters Road	Gippsland	26 Mar 13	29 Mar 13	4 days	562
Piggoreet - Linton Road	Grampians	27 Mar 13	27 Mar 13	1 day	50
Dereel – Ferrers Road	Barwon SW	27 Mar 13	29 Mar 13	3 days	1200
Derrinallum – Hamilton Hwy	Barwon SW	27 Mar 13	30 Mar 13	4 days	275

CFA Media 11 Apr 2013
Firefighters fought almost 4400 bush and grass fires during the most active fire season Victoria has faced in four years, Fire Services Commissioner Craig Lapsley said.
Tragically, a community member and four firefighters lost their lives, and 46 houses were destroyed during the 2012/13 bushfire season.
More than 190,000 hectares of public and private land was burnt between December and March, with livestock losses of around approximately 2400, as well as 1315 kilometres of fencing.

2013 DEPI website
Victoria experienced a significant fire season in 2012–2013. Between December and mid-March more than 190,000 hectares of public and private land were burned between December and mid-March. A community member and four firefighters lost their lives, and 46 houses were destroyed.
Major fires included the Aberfeldy-Donnellys Creek, Harrietville, Chepstowe, and Grampians fires.
The Aberfeldy-Donnellys Creek fire was active for approximately six weeks, burning 86,000 hectares.
The Harrietville fire ran for 55 days and burned 37,000 hectares.

The Age April 11, 2013
THE WORST FIRES OF THE SUMMER
January 4: Kentbruck fire. No houses lost. 6000 hectares. Started in timber plantation, possibly by lightning.
January 8: Chepstowe-Carngham fire. Nine houses lost. 1300 hectares. Believed to have been deliberately lit.
January 17: Aberfeldy fire. 21 houses lost. 85,000 hectares. Stan Hayhurst, 84, died in his car trying to flee his holiday house as fire raged through Seaton. Man allegedly started the fire accidentally at his rural property in Aberfeldy.
January 21: Harrietville fire. No houses lost. 36,000 hectares. Two firefighters killed when a tree landed on their vehicle on February 13 on Pheasants Creek Track in Selwyn. Katie Peters, 19, from Tallandoon and 29-year-old Steven Kadar, from Corryong, died. Started by lightning.

January 27: Boho fire. No houses lost. 800 hectares, one man received bad burns to his legs. Fire started by faulty fridge in caravan.
February 14: Grampians fire. No houses lost, but sheds, livestock and fences lost. 35,000 hectares. One firefighter injured. Fire started by lightning.
February 18: Donnybrook fire. One house, several sheds lost. 1900 hectares. Geelong man has been charged with one count of recklessly cause a bushfire.
March 28: Dereel fire. 16 houses and 18 outbuildings lost. 1300 hectares. Four firefighters injured. Believed to have been deliberately lit.

Note: These fires began or escaped or defied control in mild to moderate weather conditions. This fact is of such great concern because it is barely two years since the Royal Commission investigated everything and reportedly put things in the right direction. Many are now are documented in considerable detail to highlight that fundamental problems remain unaddressed - the fires escape control and the running infernos run towards unprotected towns. The fire agencies still focus on stopping their spread but still neglect to protect the settlements from damage beforehand.

8 January 2013 Carngham fire

CFA media 10/1/13
Carghnam bushfire
Fire starts: 8/1/20013 3.30 pm
The fire, that is thought to have been started by a spark from a farmer's vehicle on Tuesday afternoon (8 January) near the Chepstowe-Pittong Road,
The fire was contained at about 9pm on Tuesday and a mineral break was established around 10km of the 19km fire perimeter.
Damage
A 1,300 hectare fire at Chepstowe, west of Ballarat near Snake Valley, on Tuesday destroyed nine houses including the historic Carngham Station, a grandiose two-storey homestead.
The fire … also killed an estimated 600-1,000 livestock and destroyed 12 cars and machinery.
Resources
No lives were lost and numerous houses and a pine plantation were saved by 360 CFA personnel, 42 DSE personnel and 10 private plantation firefighters, supported by six aircraft and three dozers.
Community
Almost 400 residents from the nearby farming community of Carngham were evacuated, as were occupants of Burrumbeet Caravan Park and campers on the southern side of the lake at Burrumbeet.

Weather during the bushfire attack
Observations on 08/01/2013 from Westmere BOM
Peak FDI was 13 [Use 25C, 50% RH, average wind 45 kph from SSW]

	Temp	RH		Speed	Gusts
08/06:00pm	15.2	85	SSW	35	46
08/05:00pm	22.2	57	WSW	39	56
08/04:00pm	23.9	51	SSW	43	56
08/03:00pm	28.3	21	WSW	33	54

3AW 8 January, 2013
Carngham Station lost
Live-in gardener at Carngham Station told Justin Smith how he watched on as flames engulfed the former horse-breeding station.
"(The CFA) were standing there with me when we spotted the very start of the fire in the corner of the roof of the house," he said.
Mr Bolton said his house, which is also on the property, was lucky to be spared by the blaze.

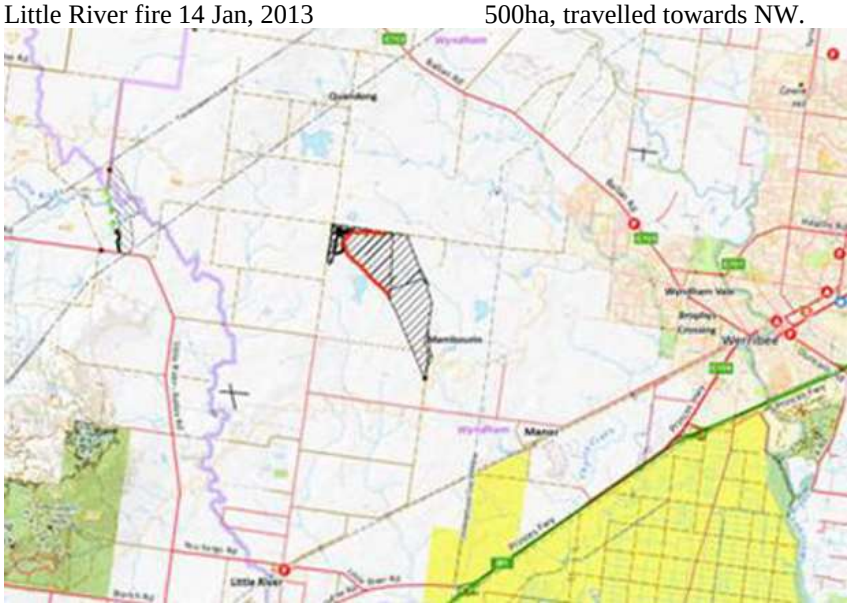
Carngham Station grounds keeper Ron Bolton surveys the damage to the once proud 120-year-old homestead Picture: Nicole Garmston *Source:* Herald Sun January 10, 2013

14 January, 2013, Little River

The Age 14 Jan 2013, 8:22pm
Fast-moving blaze in Little River contained
Fire fighters have contained a fast-moving grassfire in Little River, south-west of Melbourne.
The Country Fire Authority (CFA) says the blaze was contained just after 7:30pm.
About 30 fire trucks were on the ground while another four water bombing aircraft were also being used to fight the blaze, including the Elvis waterbomber.
The blaze has burnt about 500 hectares of farmland and scrub.
The fire began at Bulban road just after 3:30pm and was fast-moving in a north-westerly direction.
CFA operations officer David Harris says the fire caused difficulties for firefighters due to the rocky terrain.
"It's generally sort of broad acre grazing land down there," he said.

"So while the trucks are trying to get access to the paddocks with all those areas with the volcanic plains, the stones do make it difficult to drive close to the fire's edge and suppress it, which has meant the fire has got away a little bit."
It is unclear how the fire started.

Little River fire 14 Jan, 2013 500ha, travelled towards NW.

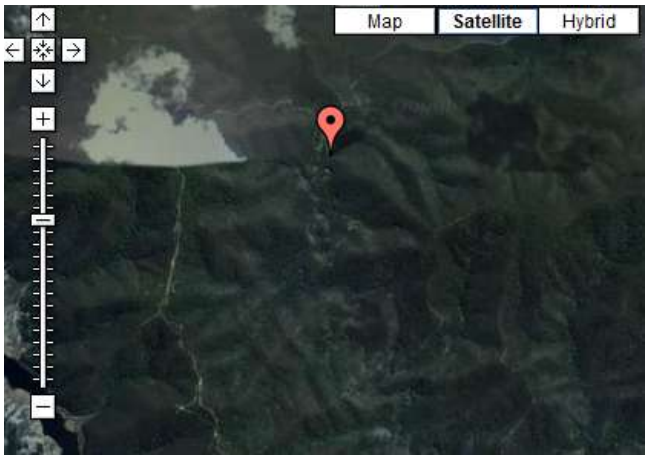


17 January, Aberfeldie

Observations
Weather when bushfire started in afternoon of 17/1 was FDI 20
[35C, 23% RH, average wind 5 kph]
Wind became northerly and speed was rose to 10 kph at 9pm on 17/1. Wind set in from NNW at 20kph at 11pm, remaining so until southerly change at 10am on 18/1
Weather overnight when fire spread about 50 km was FDI 30
[30C, 15% RH, average wind 20 kph from NNW]
Note how exceptionally dry the air was overnight, dew point down to 0.2^0C when RH was 15%

Observations on 17/1to 18/1/2013, Mt Moornapa Automatic Weather STATION

	Temp	RH	WIND	Speed	Gusts
18/11:00am	26.9	28	S	15	22
18/09:57am	31.1	19	S	13	24
18/09:00am	34.0	15	NNW	15	32
18/06:00am	29.9	15	NNW	17	30
18/03:00am	28.8	18	NNW	22	35
18/12:00am	27.5	23	NNW	22	33
17/09:00pm	28.0	29	NNE	9	20
17/06:00pm	30.6	30	E	4	9
17/03:00pm	34.5	23	S	6	9



Effective: 17/01/13 9:26 PM
ABERFELDY – DONNELYS DONNELY CREEK
Incident Information:
There is a large, fast moving bushfire in the DONNELY CREEK area.
It is currently travelling in a South Easterly Direction direction.
This fire is expected to impact Coongulla, Cowwarr, Glenmaggie, Heyfield, Licola, Seaton, Toongabbie between the hours of 6:00 AM - 10:00 AM tomorrow morning.

- This bushfire is approximately 1000 hectares in size and is out of control.
- A wind change is expected anytime in the next 5 hours, which may cause the fire to change direction towards the Licola Road.
- We are anticipating that the Licola Road will be impacted by this fire in the early hours of tomorrow (Friday) morning. Residents of Licola and surrounds should consider leaving the area as soon as possible as the road is likely to be closed.
- Spot fires and ash may be falling ahead of the fire front a may impact communities including Coongulla, Cowwarr, Glenmaggie, Heyfield, Licola, Seaton, Toongabbie. Residents of these areas should monitor conditions and decide what action they will take if the fire situation changes.

Emergency Warning Effective: 18/01/13 9:25 AM
GLENMAGGIE - SEATON
There is a large, fast moving bushfire in the Glenmaggie area.
It is travelling in a south east direction towards Heyfield.
This fire is expected to impact Lake Glenmaggie, Cowwarr, Dawson, Glenmaggie, Heyfield, Seaton, Toongabbie NOW
This bushfire is out of control, currently creating spot-fires ahead.
A wind change is expected anytime in the next 2 hours, which may cause the fire to change direction towards the north east.

The Age January 18, 2013
Man's body found in burnt-out car
The residents are still stranded in the town but a CFA spokeswoman said the fire was now moving slowly towards the area.
Mr Lapsley said there was still no escape for the residents, with Licola having its only road in and out of the community cut off by the fire. He said there was a dirt track that headed north towards Mount Hotham, but that was not an option for escape.
"It's too late to move now and to move north would be too difficult with the type of road and terrain it would be," Mr Lapsley said.
"It's a sensible decision for those 10 to stay at Licola and stay with the CFA trucks."
Mr Lapsley expected the fire to burn for about two weeks as it charges further into deep bushland.
"The fire is looking to be a campaign fire, There is no doubt about that," he said.
"We are moving into some remote and in particular deep-seated bush environments, which are difficult for anyone to get into.

"We can't get ground crews in, so it will be use of aircraft and trying to pick up on old wood tracks that were used in the logging days."
Mr Lapsley said he was surprised at how quickly the fire had grown. On Thursday night emergency services expected the blaze to burn 4000 hectares but by 6am on Friday the fire had grown to 12,000 hectares and more than 40,000 hectares by 3pm.
"It's been burning very much like a grass fire in forest conditions," he said.
"That is the elevated fuels that have regrown since the 2006 bushfires are light in structure, very dry due to the conditions we have had and have burnt more like a grass fire than a traditional forest fire, which has seen fire move very fast through the area."
Mr Lapsley said five homes had been lost: four holiday houses and one permanent residence.

Latrobe Valley Express Friday, Jan. 18, 2013
FIRE EMERGENCY: 'Waiting for the onslaught'
By Adrian Lowe and Tom Arup

Bushfire burning out of control in the Donnelly Creek area between Aberfeldy and Walhalla, north of Erica yesterday. Photo: COUNTRY FIRE AUTHORITY

Residents in Gippsland towns affected by a large and out-of-control bushfires this morning say homes have been destroyed, as nearby communities face more direct threats.
The Country Fire Authority is battling the fire, which, just before 10am on Friday, was larger than 25,000 hectares. It is directly threatening several towns.
Fire authorities are warning that the hamlet of Licola, at the edge of the Alpine National Park, is now isolated by fires. The road into the town is closed and a wind change is expected to push the massive blaze in the town's direction later on Friday.
Licola residents were told at 6.30am on Friday it was too late to leave. Earlier, 61 children and 15 adults were evacuated overnight from the Licola Wilderness Village campsite.
Other communities under direct threat from the blaze include Seaton, Dawson, Heyfield, Licola and Lake Glenmaggie, all to the south of Licola. Towns also face the prospect of spot fires occurring, where embers jump from the main fire and spark new blazes.
At 9.34am, the CFA issued an alert for the Glenmaggie area, warning the fire was travelling in south-east direction towards the timber-cutting town of Heyfield.
At 10.10am, the CFA issued another emergency warning for the Coongulla area on the eastern shore of Lake Glenmaggie. The alert says ''the wind change is now moving the fire in a north easterly direction.''
Mary Winter, from the Licola General Store, said fire was yet to reach the town and residents were putting fire plans in place with the town cut off.
''We are just bunkering down, waiting for the onslaught,'' she said.
Adam Wake, camp operations manager at the Licola Wilderness Village, told the ABC there were about 20 people left in the town.

Residents say the fire has come within 500 meters of the caravan park at Lake Glenmaggie. At least four homes have been destroyed in the Glenmaggie area.
Water bombing-operations have now begun, with 13 helicopters fighting the fire including ''Elvis''.
''We are hearing news that the fire has left the forest and has started to impact on homes in Seaton in particular,'' a CFA spokesman said earlier on Friday. ''Homes are under threat.''
Alison Acres, from the Timberline general store in Heyfield, said three people came in to the store on Friday morning saying they had lost their homes.
''It's pretty dark here, it's pretty scary actually,'' she told radio station 3AW. ''We've had alerts going since 2.30 this morning because we've been under ember attack, with fires striking up all around.
''We have a little glimpse of light [from the sun rising] Traralgon way, and a little glimpse of light to our right but we're under a very, very black Doomsday cloud at the moment.
''We've got a lot of ash and leaves and debris falling from the sky.''
She said there were reports of properties destroyed and the closest fire to Heyfield had struck about 2.5kms from the town.
''We've had locals coming in saying they've lost their houses already. I've had three in the past 40 minutes come in and say they've lost their homes [in Seaton, a town of 215], so it's pretty scary,'' she said.
Ms Acres said she had not left because the store was supplying fuel for the CFA trucks.
Jeremiah, at the Commercial Hotel in Heyfield, said it was known that houses had gone in Seaton.
''We're running around like flies here. We've got a lot of people come in from Heyfield, Seaton and Coongulla - they've just been removed from the area,'' he told 3AW.
''We know that some houses have gone in Seaton; the people that have come in here have got out before the fires.''
Residents are advised to be vigilant, the CFA spokesman said, because the fire was ''very active'' and was spotting unpredictably.
''It is causing all sorts of problems at the moment,'' he said.
Residents in Maffra, Sale, Rosedale, Stratford and between Cowwarr and Briagolong have been told not to phone triple-0 unless they can see flames. Smoke and ash is visible in the area.
The fire began in the eastern part of the Baw Baw National Park. Overnight it grew from a smaller 950 hectare fire to now well over 20,000 hectares.
Bureau of Meteorology senior forecaster James Taylor said hot weather overnight combined with gale force winds forecast to hit the region on Friday morning were concerning.
A total fire ban has been declared for the West and South Gippsland, north east, northern country and East Gippsland districts for Friday.

Effective: 18/01/13 6:33 PM **GLENMAGGIE - SEATON**
There is a large, slow moving bushfire in the Glenmaggie area.
It is travelling in a North East direction.
This fire is expected to impact Dawson, Glenmaggie, Heyfield, Seaton anytime within the next 2 hours.
This bushfire is approximately 48000 hectares in size and is being controlled.

The Age January 19, 2013
Man dies, homes lost as blaze sweeps through Gippsland

Latrobe Valley Express Monday January 21, 2013
On high alert
By Melody Song

FOR the Piper family from Toongabbie, the last three days have been emotional.

Speaking to The Express just 30 minutes after returning home yesterday after evacuating their property in the early hours of Friday morning, Donna Piper said they were still ready to leave should the fires again approach their rural home.

"There is no damage to our property, but it came really close; it was just about five minutes away," Ms Piper said.

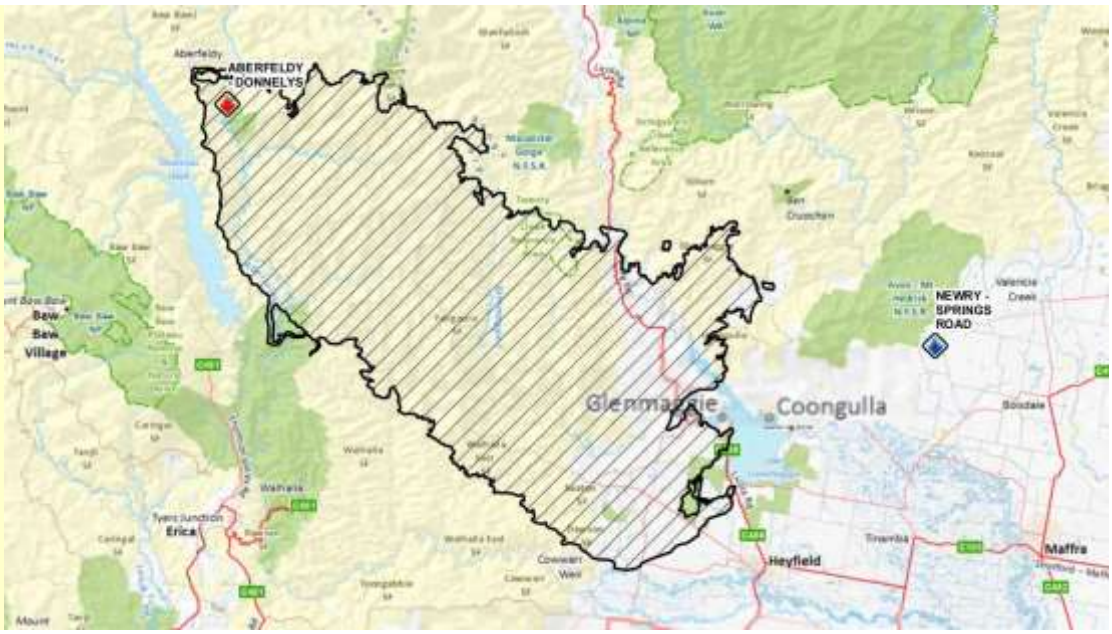
"We've kept our stuff packed in our horse float at a friend's place if we have to get out again; you just never know.

Ms Piper said since they arrived home, they had heard several aircraft flying overhead.

"I'm a bit emotional; while we didn't lose our home, our friends in Seaton did, and we can still see the black smoke in the distance," she said.

Ms Piper described feeling on edge while keeping up to date with the news on the fire.

"It's been a reality check; I found myself thinking what is really important when it's crunch time," she said.
Ms Piper, her husband and their twin 20-month old daughters left their property in the hills to go to a relative's house in Traralgon.
She said the emergency warnings which came through had been extremely helpful.
More than 57,000 hectares has been burnt in the fire, which began on Thursday Jan 17.



Herald Sun January 24, 2013 5:41PM
Gippsland bushfire crisis worsens as northerly winds strengthen
Angus Thompson, Aleks Devic
Meanwhile, emergency authorities have warned a wind change could mean the southern edge of the Aberfeldy-Donnellys fire will breach control lines tomorrow.
Authorities say that north-northwest winds are expected to increase to up to 25km/h from 10pm tonight.
From midnight, winds speeds are expected to climb to 35km an hour and continuously overnight to 6am.
After this, constant 55km/h north-north west winds are predicted until a south-west change about 3pm tomorrow.
The worst of the Gippsland fires were to hit at 5am tomorrow but DSE incident controller Dennis Matthews said it could kick off any time from 11pm tonight.
"It's not the forecast we want but we can't pick the forecast. We will have a difficult situation to deal with through the night," he said.
"It's more than a sleeping giant, it's become active."
Throughout the night strong winds of up to 55km/h are set to wreak havoc across Gippsland.
Meanwhile the monster Gippsland fire, which began in Aberfeldy a week ago, has burnt more than 65,000ha, while the Harrietville fire has burnt more than 1300ha.
Victorians are bracing for a another day of extreme fire danger
Mr Lapsley said conditions could come close to those experienced on Black Saturday, but should not reach the same scale.
"On Black Saturday it was what we'd now categorise as a Code Red day. So out of 10 you would say it's a six or a seven out of 10 compared to what was Black Saturday," he said.
Temperatures are forecast to soar to 36C in Melbourne today, 40C in Mildura, and 37C in Horsham.
A southwest wind will push northeast at 5am tomorrow, giving firefighters the massive task of keeping people informed while they sleep and getting them out of their homes should the fire start ripping through communities.

Incident controller Dennis Matthews said water-bombing from the air would not be possible until daylight.
"We are dealing with a fire that is growing really quick and has some edge on it," Mr Matthews said. "We need the community to be ready."
He said the concern was the wind change that would deliver 50-80km/h gusts and it would travel up into the crowns of trees.
Mr Matthews said there was no need for people to evacuate yet.
While there is no interstate help to assist with any emergency, there are 70 dozers, 12 aircraft and several hundred firefighters ready to battle the fire.

Effective: 13/02/13 11:23 AM
ABERFELDY - DONNELLYS
Incident Information:

- This message applies to the town of Licola and areas of Glenfalloch, Wollangarra and Glencairn.
- This fire has burnt through approximately 83,035 hectares.

Posted by CFA Media Fri 15 Feb 2013
Gippsland Fire Update - 15 February
Alpine South
Aberfeldy – Donnellys Fire
Recent mild weather is helping fire suppression activities and any more rain will ease conditions further.
The Aberfeldy fire has burned through 84,100 hectares and has a perimeter of almost 400 kilometres.
Firefighters have constructed control lines on over 300 kilometres of that perimeter by hand, with machinery and from the air.
Today there are 295 personnel working on the fire, supported by 11 tankers, 87 slip-on units (4WD vehicles), 14 dozers and seven aircraft.
The principle aim of crews remains to complete secure control lines and burning operations around the Licola Valley to protect private property there.
Further control lines are being constructed near the junction of Hickeys Creek Track and the southern end of Mt Margaret Track to protect the Avon Wilderness.
Backburning operations in the area will continue when weather conditions allow.
Most of the remaining fireground is quiet, with crews continuing to patrol and monitor, black out and mop up the fire area.
The Heyfield-Licola Road remains closed to the north at the junction with Kellehers Road, only allowing essential and emergency services vehicles to pass. The Jamieson-Licola Road is closed to the south at Jamieson, allowing residents access only. Local road users in the area should proceed with caution and watch out for firefighting vehicles, personnel and machinery.
The Thomson Dam Access Road remains closed at the southern end of the Thomson Dam, north of Erica.

Posted by CFA Media Wed 20 Feb 2013
Gippsland fire update

Aberfeldy – Donnellys Fire
The Aberfeldy-Donnellys fire has burnt through approximately 84,860 hectares and has a 388 km perimeter.
The fire has now been burning for 33 days. DSE, CFA, Parks Victoria and NSW Rural Fire Service personnel continue to work to control this fire.
Two small fires in the Thomson Catchment area, five kilometres south west of Matlock, were started by lightning over the weekend. One of these fires has been contained. The second fire has burnt 60 hectares. Ground crews and aircraft are working to contain this fire.
Crews are continuing to build control lines, patrol and black out. Fire suppression works are being focused around Licola, Mt Useful and Glenfalloch.

Dargo Matheson Fire
This fire was started by a lightning strike on Friday and is currently being controlled. It is in very steep and heavily fuelled forest nine km north of Dargo.
This fire has burned 864 hectares. Ground crews, bulldozers, and aircraft continue to work in this area.
The fire is currently burning in a north/north-easterly direction and is posing no threat to communities

Ensay North – Upper Little River Road
Lightning strikes earlier in the week started four small fires in the area to the north of Ensay. Crews are working to contain these small fires.
Most areas in Gippsland are not affected by these fires, which are mainly burning in remote parts of the region. The region is open for business as usual, with plenty of beautiful places to visit.

Posted by CFA Media Thu 28 Feb 2013
Last two bushfires contained
Crews have today contained the last two bushfires burning in Gippsland.
The largest fire burning in the east of the state, the Aberfeldy-Donnellys Creek fire was contained this afternoon at about 4:30pm, and the smaller, East Caledonia-Howitt Track fire was contained earlier in the day.
Fire Services Commissioner Craig Lapsley said there are currently no going bushfires in Victoria.
"It has been an arduous 43 days for the crews and incident management team working around the clock on the Aberfeldy fire in extremely remote and rugged terrain.
"The fire has burnt over 85,000 hectares making it the biggest fire in the state this season.
"There has been about 70 mm of rain in the past 48 hours near Licola which has really helped reduce fire behaviour, but the hard work from crews is what really made a difference to this fire.
"Over 300km of control line has been built to limit the spread of the fire– that's the equivalent of the length of the Hume Highway from Melbourne to Albury."
"The hard work of DSE, Parks Victoria and CFA crews over the past few months cannot be underestimated. Thousands of hours of work have been put in to protect people, properties and communities. And for that I would like to say thank you.
"The hard work isn't over yet as we move into recovery mode and crews from NSW and New Zealand will stay around and help with that.

21 January 2013 Feathertop Fire

Border Mail Jan. 22, 2013,
Lightning starts valley fires Save
By NIGEL MCNAY and MATT CRAM
12.01am
Fire began: 21/1/2013
A Department of Sustainability and Environment spokesman said the fire started about 2.45pm and was brought under control by 8pm. The fire, in steep country covered by tall trees, burnt about two hectares
A SUDDEN storm heading up the Ovens Valley caused a fire in steep country at Harrietville yesterday that fire crews were able to contain by last night. The fire was started by lightning from a thunderstorm that dumped 16.5 millimetres of rain in one site. The fire, in steep country covered by tall trees, burnt about two hectares.
The spokesman said the area had been blacked out by the big fires of 2003 and 2006, "but there was still a lot to burn in there".

Anger mountain fire was allowed to flare
By ASHLEY ARGOON 6.30 pm
HIKERS and campers were evacuated and the Great Alpine Road was closed at Harrietville as an out-of-control bushfire burned across Mount Feathertop last night.
About 850 hectares of dense, steep bushland has been burnt.
Freeburgh resident Ron Kool was critical of the response by fire crews.
"I knew if they hadn't got on top of it first thing this morning with the wind that we're having, it would explode," he said.

Mr Kool said the helicopters had arrived in the area about 11am.
"They knew where it was, knew what the weather was going to be like today, why weren't they here straight away?
"If the wind picks up tomorrow, I'll be grabbing my insurance policy, my dog and my missus."
A Harrietville resident, who did not want to be named, said he had driven to Mount Hotham for work early yesterday because the fire appeared under control.
By the afternoon, he left work.
"Why weren't the helicopters here at daylight if there was a risk of it flaring up?" he said.
"I'm disappointed they weren't on to this in the morning."DSE incident controller Tony Lovick said high wind had blown embers over the containment line.
"The fire is in steep, thickly forested country that has no vehicle access and was beyond the capacity of crews and aircraft," he said.
"Our key focus is to contain this fire and ensure people and communities are protected."

Posted by CFA Media Wed 23 Jan 2013
Harrietville - solid progress made
Firefighters have made solid progress on control lines east of the Harrietville township, taking advantage of more stable weather conditions on the fire ground.
Harrietville – Feathertop Fire Incident Controller, Tony Lovick, said the completion of the control line works is a key focus prior to worsening weather conditions Thursday and Friday.
"Today we have experienced quieter fire behaviour particularly in areas which were burnt in 2003 and 2007," Mr Lovick said.
"The key focus for us continues to be asset protection works and planning for Harrietville, Hotham Heights and Falls Creek.
"We are making use of control lines which were used in the 2003 and 2007 fires, with a team of dozers working to strengthen the lines.
"Aircraft, including the Skycrane from NSW, have been used successfully today on asset protection works near the origin of the fire, and for other high valued infrastructure including communications towers within the fire ground."
About 100 firefighters were deployed to the fire today, including incident management personnel at Ovens. Five dozers and five aircraft, including water-bombing helicopters, are also supporting on-ground crews.
Mr Lovick said the fire, which is burning in steep, dense forest, was estimated to be about 900 hectares in size.
He said predicted stronger winds Thursday and Friday, particularly in elevated areas, would increase fire behaviour on the fire ground.
He said that no property damage had been reported, and that a flight over the fire ground this morning had confirmed that a number of historic huts in the surrounding area had not been impacted at this stage.

Media releases are parroted in the media

Herald Sun January 24, 2013 5:41PM
Gippsland bushfire crisis worsens as northerly winds strengthen
Angus Thompson, Aleks Devic
A LARGE bushfire in Victoria's high country is expected to hit Harrietville and Hotham Heights within the next 24 hours.
In the high country fire authorities have warned residents who do not plan to stay and defend their homes that they should evacuate the area by 6pm.
The out-of-control bushfire, which is travelling in a south-easterly direction, has burnt out 1700ha of Victoria's alpine region since a lightning strike sparked the blaze on Monday.
Stable wind and easing temperatures across the Harrietville township allowed emergency services to make solid progress on control lines to the east of the blaze.
Harrietville Feathertop fire incident controller Tony Lovick said the chance to prep the control line would prove key before fire threats increased today and tomorrow.
"Today we have experienced quieter fire behaviour, particularly in areas which were burnt in 2003 and 2007," Mr Lovick said.

"The key focus for us continues to be asset protection works and planning for Harrietville, Hotham Heights and Falls Creek.
"We are making use of control lines which were used in the 2003 and 2007 fires, with a team of dozers working to strengthen the lines.
"Aircraft, including the Skycrane from NSW, have been used successfully today on asset protection works near the origin of the fire, and for other high valued infrastructure including communications towers within the fire ground."
More than 100 firefighters - flanked by five bulldozers and five aircrafts including water-bombing helicopters - were deployed to the fire zone yesterday, bolstering crews already on the ground.
There has been no impact to properties yet but the fire continues to burn through steep and dense bushland, making it difficult to access.
Mr Lovick said no property damage had been reported, and that a flight over the fire ground yesterday confirmed that several historic huts in the surrounding area were yet to be impacted by the fire which has already roared through more than 900ha.
A national park is closed east of Harrietville, west of the Kiewa River West Branch, and to the northwest of Mount Feathertop. Surrounding areas of State Forest are also closed.

Border Mail Jan. 24, 2013 12.01am
D-Day: Feathertop fire bears down
By TAMMY MILLS
TODAY is D-Day for a fierce bushfire on Mount Feathertop as it bears down on properties near Harrietville.
Firefighters say it is vital that they hold the fire today before the prospect of cooler weather at the weekend could ease the pressure.
Several bulldozers were busy yesterday building fire breaks as five planes fought the flames.
A lightning strike started the fire on Monday afternoon at Smoko, about eight kilometres north of Harrietville on the Great Alpine Road.
Department of Sustainability and Environment officers contained, but did not control, the fire on Monday night.
DSE agency commander Ken Firns said a crew was building a fire break by hand in the isolated and almost inaccessible terrain on Tuesday afternoon when wind blew sparks over containment lines.
It has since burned 1300 hectares and watch and act messages are in place for Harrietville, Falls Creek and Hotham Heights.
Bureau of Meteorology predictions of a northerly winds of up to 35km/h this morning and a 37-degree temperature today has left many uneasy.
"Tomorrow is the big day," Mr Firns said.
There was some relief for the 90-plus firefighters yesterday when the south-east to south-west wind died down.
Mr Firns said it helped the fire was mostly on land burned before, reducing fuel.
"The fire has been kinder to us than expected," he said.
He said no towns or properties were under threat last night.
"The most likely places today are Mount Hotham or Dinner Plain but we don't believe there's imminent threat," he said.

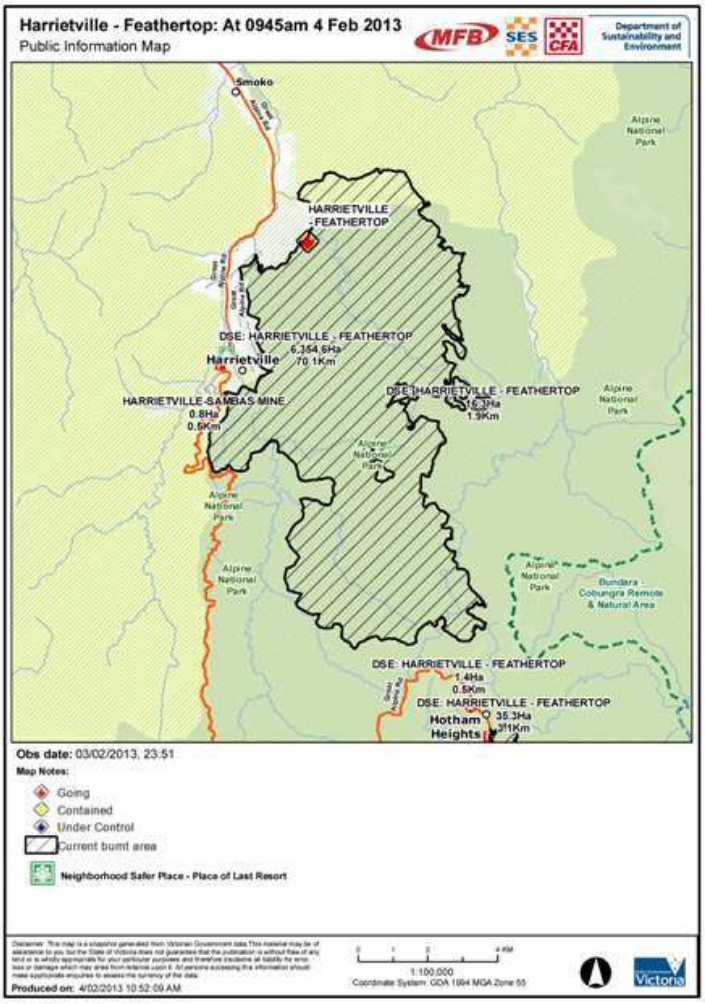
Posted by CFA Media Sat 26 Jan 2013
Harrietville threat eases
Weather conditions on the Harrietville-Feathertop fire ground have continued to moderate overnight and this morning, with the threat level for Harrietville reduced.
Incident Controller, Tony Lovick, said as a result of the reduced threat,
"We are very aware that it has been a long and at times frustrating week for the residents of Harrietville as we waited for the fire to play its hand," he said.
"The fire is still burning within close proximity to the township, however, the fire ground conditions have abated to the degree that we do not anticipate any significant fire behaviour in and around Harrietville at the present time.
"It's important that residents continue to monitor conditions and be in a position to respond if the situation changes.
"There is a lot of work being undertaken in and around Harrietville, with back-burning operations commencing last night to further consolidate control lines."

Mr Lovick said the fire, which was started by lightning on Monday, is burning in steep, rugged terrain, and has burnt about 3500 hectares.
"While we have done some great work on control lines, asset protection and planning in and around a number of communities, there is still a lot of work to be done to contain the fire.
"Significant progress has been made on constructing additional control lines and backup control lines between the Ovens and West Kiewa Valleys to the north and north-east of the fire, and near the Great Alpine Road to the south-west of the fire.
"With much of the fire edge inaccessible, rappel fire fighters are being used effectively to directly attack strategic parts of the fire with the support of aircraft."
Mr Lovick said planners were monitoring weather conditions today with the potential for rainfall and lightning on the fire ground over the weekend.
About 200 fire fighters are deployed to the fire today, including incident management personnel at Ovens.

Posted by CFA Media Sun 3 Feb 2013
Major back burning at Harrietville
Fire fighters are preparing to ignite a 300 hectare back burn near Harrietville tonight to provide greater protection for the township.
Harrietville-Feathertop Fire Incident Controller, Tony Long, said crews will monitor weather conditions today prior to making a decision to ignite the planned area.
"Back burning is planned in the Harrietville area and along the Great Alpine Road," he said.
"The burn area is located between Old Coach Road and the East Ovens River, south of the township, and is likely to be ignited by hand tonight when conditions are favourable."
Communities around Bright, Harrietville and Mt Hotham are advised that increased smoke is likely to be visible over the next few days while the burning is completed and patrolled.
"The Harrietville back burn is a key strategy to secure this section of the fire edge.
"Both DSE and CFA crews will undertake the burn with residents in the immediate area being notified of the works.
"Back burning is undertaken to assist in the control the fire by removing fuel between the main fire and the control line. It also assists to reduce the likelihood of fire spotting."
The Harrietville-Feathertop fire was started by lightning on Monday, January 21 and has now burnt more than 6100 hectares of the Alpine National Park.

Effective: 07/02/13 2:50 PM
HARRIETVILLE - FEATHERTOP
Incident Information:
There is a large, fast moving bushfire in the Hotham Heights, Dinner Plain area.
- This bushfire is approximately 10,000 hectares in size and is out of control, currently creating spot-fires ahead.
- The area of the Great Alpine Road, Dargo High Plains Road, including Hotham Heights, Dinner Plain, the Wongungarra River north of Dargo is unsafe to enter and you should leave that area immediately .

Community Newsletter No. 7 Thursday 14 February 2013 (8.00am)
Harrietville-Alpine South Fire
Latest Information
Unfavourable weather including 3 – 30mm of rain and lightning strikes in the area has created dangerous conditions for firefighters with backburning efforts halted until conditions permit.
Aircraft surveillance of potential ignition points from lightning strikes will continue throughout today.
The Harrietville-Alpine South fire is approximately 11,830 hectares, and is not yet under control.
Combined, the Harrietville-Alpine South and Harrietville-Alpine North fires are 30,100 hectares



Border mail 14/2/13
2:15PM UPDATE:
The Department of Sustainability and Environment (DSE) have named 19-year-old Katie Peters, from Tallandoon, as one of the two front-line firefighters who died yesterday battling the Harrietville fire.

The DSE are still contacting relatives of a 29-year-old man from Corryong, the firefighter who died alongside Ms Peters.
It's understood the accident occurred in a remote front of the fire when the pair's emergency vehicle was struck by a falling tree.
Katie Peters leaves behind a partner and five siblings.
This afternoon her family released a statement saying Ms Peters was a "happy, caring and genuine" young woman with a love for animals.

"Katie will always be held in the hearts of those who knew her," they said.
"We thank everyone for their heartfelt wishes and messages of condolences, but ask that our privacy be respected during this difficult time."
Katie Peters had been with DSE for two seasons as a Project Fire Fighter, joining DSE as her first paid job after taking a year off after Year 12 to travel overseas.
In a statement released by DSE, they said the Mitta Valley farm girl was always prepared to have a go and was the first one to put her hand up to drive a tanker or use the chainsaw.
"She made time for everyone - she loved working with her colleagues and was incredibly down-to earth."
As part of a feature on female fire-fighters recently, Katie spoke of how much she enjoyed the previous season, with one of the highlights attending a bushfire in remote terrain at King's Spur, south east of Dartmouth Dam.
DSE Chief Fire Officer Alan Goodwin said the loss of Ms Peters and her colleague was a tragedy.
"This is devastating news and the loss of staff is a tragedy under any circumstances. Even one death is not acceptable. I would like to personally extend my sympathies and DSE's sympathies to their families and friends.' Mr Goodwin said
"Our continuing focus is on the safety and wellbeing of our staff, our agency partners – CFA, Parks Victoria and DPI - and interstate and international colleagues (NSW and NZ) who are assisting us to fight fires across the state.'
Support is being offered to his DSE colleagues and senior DSE staff are in Harrietville to provide support and counselling for the crews.
THE incident was witnessed by the son of Towong Council deputy mayor David Wortmann.
"My 19-year-old son was in the crew," Mr Wortmann told ABC Radio on Wednesday.
"The vehicle in front of my son, a tree fell on it and the two firefighters were killed."
He said the girl, a university student, was from an outstanding family.
"I just felt so sorry for him and his crew to have witnessed and experienced such a tragedy," he said.
Police say the pair were struck by the falling tree around 3.35pm (AEDT) and it took until after 8pm to reach them because of the fire and hazardous conditions.
Today, flags will be flown at half-mast on Victorian government buildings.
Premier Ted Baillieu says the flags will be lowered as a mark of respect for the pair.
"The tragic loss of these two firefighters will affect all those who have been fighting these fires and protecting Victorian communities," he said.
"My thoughts and the thoughts of all Victorians are with their families and loved ones at this time."
Australian Workers Union Victorian secretary Cesar Melhem yesterday said DSE firefighters were "unsung heroes".
He said there was little recognition of their work as what they did behind fire lines was rarely seen.
"They work in the most horrific conditions imaginable," he said.
"They work away from the big centres, out in the bush, and with very little recognition for their heroic contribution to this state," he said.
"They have died heroes, which will be small comfort to those who grieve for them."
The member for Indi, Sophie Mirabella, last night said she was deeply saddened by the devastating news of the firefighters' death.
"This is shattering for their family, friends and the community," Mrs Mirabella said.
"Our prayers and thoughts are with them."
DSE and CFA firefighters had been making the most of mild weather conditions, working around the clock to control hotspots and build containment lines.
They have faced a continual challenge to get into isolated areas where the fire is burning.
Earlier yesterday, Ovens incident controller Tony Long said crews had had to trek for more than two hours to get to areas to build control lines.
"Where crews can't walk into the affected areas, we use rappel crews to go down from a hovering helicopter, carrying their gear, to put out hot spots," he said.
The Harrietville fire has burnt 27,000 hectares since it was started by lightning on January 21.
Mr Long said it would burn until the Alpine region received rain.
The deaths come a month after Peter Cramer, a DSE firefighter and CFA volunteer from Tyers in Gippsland, died working on bushfires in Tasmania.
Mr Cramer, 61, died on January 13 at Taranna, east of Hobart. He was scouting for possible containment lines on the southern boundary of the fire near Forcett.

Posted by CFA Media Fri 15 Feb 2013
Gippsland Fire Update - 15 February
Harrietville
This fire is now 12,130 hectares, with a perimeter of 228 kilometres. The fire has not spread much overnight, but there will be increased smoke visible from communities today as backburning operations progress.
There are around 240 fire fighting personnel, 14 tankers, 54 slip on units, 64 vehicles and 27 dozers and graders working on this fire today. Around 50 firefighters will be arriving from NSW on Saturday to assist our crews.
Backburning will be progressed over the next two days in the Wongungarra River area if weather conditions remain suitable. Increased smoke will be generated from these burns.

Posted by CFA Media Wed 20 Feb 2013
Gippsland fire update 20 Feb
Harrietville
There was little fire activity overnight on the Harrietville – Alpine South Fire, with rain falling across parts of the fireground. This fire has burned 31,357 hectares of public and private land.
Firefighters from New South Wales are assisting Victorian Emergency services on this firefighting effort.
Residents and visitors are asked to take care while traveling in the area due to increased firefighting vehicles travelling on local roads.
The Great Alpine Road remains closed from Dinner Plain through to Harrietville. The Dargo High Plains is closed from Upper Dargo Road through to the Great Alpine Road.

Posted by CFA Media Thu 28 Feb 2013
Last two bushfires contained
Crews have today contained the last two bushfires burning in Gippsland.
Crews yesterday contained the Harrietville Alpine North and South fires and the Grampians fires.
The Harrietville fire covered an area of about 36,000 hectares and the Grampians fire just over 35,000 hectares.
'Contained' means that the spread of the fire has been halted, but it may still be burning within the perimeter.

27 January Boho

EMC said this fire started 21 Jan Yet it was first reported on 27/1

Accessed google 8.20 pm 27/1/13

10KM South of Violet Town - Watch And Act - CFA Mobile

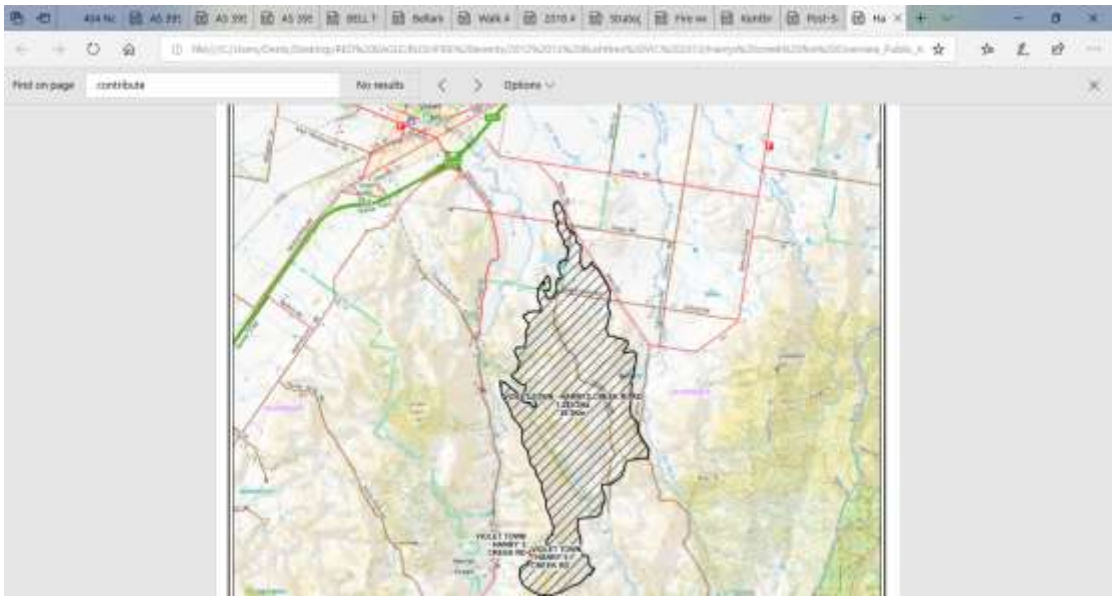
5 hours ago – This *fire* is expected to impact *Harrys Creek* between the hours of 3:30 PM - 9:30 PM. This bushfire is approximately 35 hectares in size and is **...**

Herald Sun January 27, 2013 7:32PM
Fire threatens town in Victoria's northeast
Alex White
RESIDENTS of a tiny town in north eastern Victoria have been urged to leave as an out-of-control blaze threatens it.
The CFA has issued an emergency alert for the town of Boho, near Benalla, telling residents if they plan to leave, or do not have a survival plan, they should go now.
The large, fast-moving blaze earlier burned a 60-year-old man after breaking out 10km south of Violet Town, near Euroa. He was left with 18 per cent burns to his legs.
The blaze has doubled in size to 750 hectares and is burning in a north easterly direction toward the town of Boho, near Benalla.

More than 200 firefighters and waterbombing aircraft are trying to bring the inferno under control.
CFA spokesman Gerard Scholten said the fire had "taken a turn for the worst".
"We now have an imminent threat to lives and property in the Boho area," Mr Scholten said.
"We are seeing spot fires up to 1km ahead of the fire front and it is burning toward the Hume Hwy.

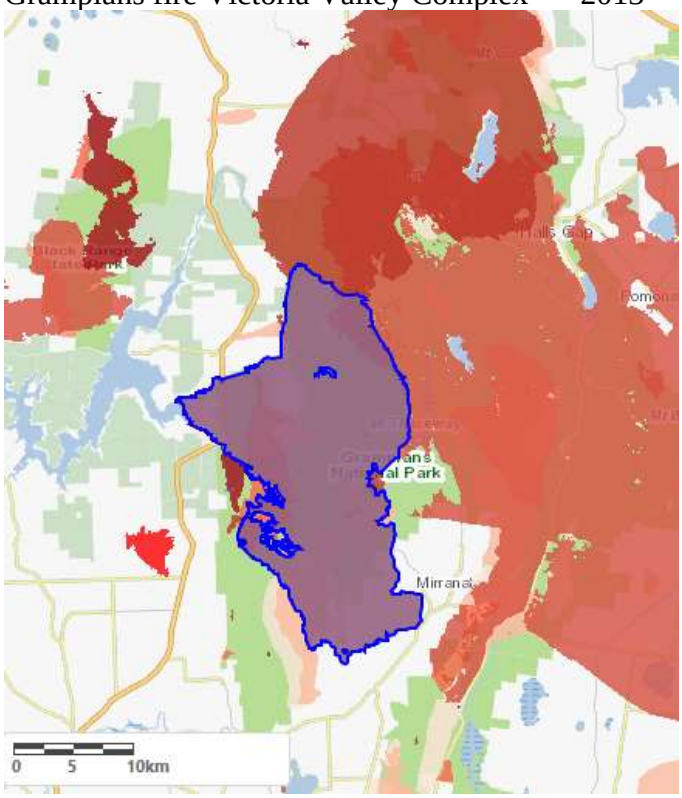
The Age January 27, 2013 - 7:47PM
Fire bears down on Boho
Fran Cusworth
More than 40 CFA tankers and five aircraft are fighting the blaze.
The CFA advises Boho residents that if they plan to leave, or do not have a survival plan, they should go now.
The fire began in grasslands on a private property and had moved to inaccessible forest, making containment difficult, he said.
"We've got winds up to 10-15 knots, and forests in north-east Victoria are so dry they're ready to burn."

Herald Sun January 28, 2013 8:39AM
Fire threatens northeast Victorian town of Boho
Jessica Evans, AAP
A LARGE, out-of-control bushfire continues to threaten homes on the outskirts of the central Victorian community of Violet Town.
The 2000ha blaze is burning within 10km of the town, threatening homes at Boho, on the town's southern outskirts.
No property has been lost.
Four waterbombing aircraft, 52 fire trucks and 250 firefighters are at the scene.
Graham McCartney from the Incident Control Centre in Shepparton said it would take some time to bring the fire under control.
"The problem we've got for us is that it's in an area that is extremely difficult for our fire crews to get their vehicles into," he told 3AW.
"It's very hilly, rugged terrain so it's extremely difficult and we anticipate it will be some time before we are able to bring the fire under control."
It is believed the fire was sparked by a faulty fridge in a caravan 10km south of Violet Town.
A 60-year-old man was burned on the legs as he fought the grassfire that initiated the bigger blaze yesterday afternoon.
He suffered burns to around 18 per cent of his body and was treated at the scene.



February 14, 2013 Grampians

Grampians fire Victoria Valley Complex 2013 54,600ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Posted by CFA Media Wed 20 Feb 2013
Grampians Complex fire
There is a large bushfire burning in the Grampians National Park.
This fire is made up of a number of fires started by lightning which have joined together. The size of the fire is now around 14,000 hectares.
Extreme south-easterly winds overnight have pushed the fire over the Victoria Range. The active fire edge is now on the western side of the Victoria Range.
The fire has taken a run to the north overnight and reached the Billywings Plantation area. Planned burning completed last autumn is expected to assist with controlling the spread of fire to the west.
Currently the fire has not reached privately property and is still burning within the Grampians National Park.
The eastern part of burnt area in private land in the Victoria Valley has been quiet. This area is being managed by local CFA crews.
DSE crews will today burn out sections of the park to containment lines. This will generate significant smoke which may be visible by communities in the Victoria Valley and west of the Victoria Range.
To the south east of the Victoria Valley Complex there is a small fire in the Serra Range called the Cassidy Gap fire. This fire is approximately 10 hectares in size and is located in difficult terrain. Firefighters are walking in to attend to this fire each day, and it is also being attacked by water-bombing aircraft.

The Age February 21, 2013 - 7:48AM
Bushfire threatens farming communities
Jared Lynch
An out of control bushfire in Victoria's west is expected to swing to the south, threatening farming communities.
The fire started by lightning last Thursday and has been creating spot fires one kilometre ahead of it.

Firefighters are building containment lines across the southern flank of the blaze, which has burnt about 25,000 hectares in the Grampians National Park.
A northerly wind change, coupled with 33-degree heat, expected on Thursday is expected to fan the inferno towards the farming communities of Woohlpooer, Glenisla and Mooralla, which are all located along the Henty Highway, south-west of the Grampians.
Incident controller Paul Bates, based in Horsham, said firefighters had to "fallback" over Wednesday night after a south-easterly wind increased to between 20 and 30 km/h. He said the higher winds pushed the fire across heath and swamp land, across the Henty Highway towards Rocklands Reservoir.
"We had to fall back and do mainly asset protection with a number of vehicles at people's homes," Mr Bates said. "They were all well prepared." Mr Bates said a wind change was expected to swing the blaze into private property, most of which is open farmland.
A State Bushfire Control Centre spokesman said the blaze was expected to hit Woohlpooer, Glenisla and Mooralla any time on Thursday, but hoped the containment lines would limit its impact.
The Country Fire Authority has advised residents to enact their fire plans or leave their homes if are not comfortable defending them.
The control centre spokesman said about 250 firefighters with 80 tankers, 20 bulldozers and 15 air water bombers were battling the fire. He said erratic winds had been challenging.
"The lower winds have been southerly, while the upper winds have been northerly, so you have this big mixing bowl," the spokesman said.
"What is happening is the fire goes up a ridge line then turns around."

Emergency Services Advice Effective: 27/02/13 4:41 PM
GRAMPIANS-VICTORIA VALLEY COMPLEX
Cherrypool, Glenisla, Victoria Valley, Bornes Hill
Incident Information:
There is a large, 35,875ha bushfire in the south west of the Grampians National Park.
The bushfire is now contained.

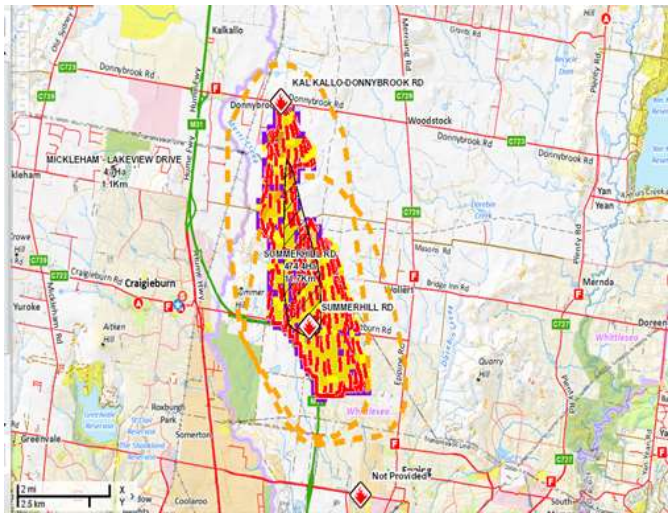
Donnybrook Epping fire 18/2/2013

Weather
Fire starts: 18/2/2013 1-1.30 pm
Peak FDI 50 [35C 18% 35 kph]
Observed maximum grassfire spread rate = 8 – 10 kph

Observations for Melbourne Airport BOM

	Temp	RH	Wind	Speed	gusts
18/06:00pm	34.7	17	N	26	39
18/05:00pm	35.7	16	N	22	44
18/04:00pm	35.5	17	N	24	30
18/03:00pm	34.9	18	N	32	43
18/02:00pm	35.3	18	N	35	48
18/01:16pm	34.8	19	NNW	32	50

FDI = approx 40 – 45
Grassfire spread rate = 8 – 10 kph



Whittlesea Leader, February 18, 2013 6:56PM
Residents flee as grass fire closes in on Melbourne's northern suburbs
Cheryl Balfour and Allan Valente
ONE home has been destroyed and another damaged in out-of-control grass fires in Melbourne's northern suburbs.
Emergency warnings are in place for Epping and Campbellfield on both sides of the busy Hume Freeway, around 20km north of city.
A CFA spokeswoman said a large fire was affecting different areas.
"One house has been destroyed and one has been damaged in the Donnybrook-Kalkallo fire," the spokeswoman said.
A watch and act alert is in place for residents in parts of Epping, Lalor and Thomastown.
Victoria's Fire Services Commissioner Craig Lapsley said an undetermined number of homes are believed to have been lost.
Epping North residents started to flee their homes earlier this afternoon, seeking refuge in shopping centres and community hubs, as a fast-moving grass fire closed in.
Fire crews earlier stopped the grass fire on its western front at Somerton and are now concentrating on the eastern flank, which has grown to more than 1900ha.
Some 450 firefighters in 90 strike teams are battling the fire with six helicopters and five planes water-bombing it.

More than 100 CFA and MFB fire vehicles and 11 aircraft are also on scene.
A CFA spokeswoman said it was a large fire that was affecting different areas.
Mr Lapsley said roads were jammed with cars as fires burned on both sides of the Hume Fwy.
"Roads are gridlocked out in that area," he said. "People are either trying to get out or get home."

Herald Sun February 18
A new fire battle on Melbourne's Northern outskirts
State Control Centre spokesman Kevin Monk said the Donnybrook fire had "really taken off" this afternoon and continued to threaten life and property.
"It's really of concern to us because it has the chance to run into some housing on the east of Craigieburn and the Hume Fwy," he said.
"At about 1.30pm it's just done a major run and burnt through about 200ha, which shows show serious the conditions are with strong winds and hot and dry conditions."
Epping resident Cara Horner said she had already decided to evacuate long before the CFA text message to "seek shelter'' at 3.48pm.
"The biggest thing in all of this is how slow the CFA has been in telling our community about the danger,'' Ms Horner said.
"I called my daughter's child care centre and they hadn't heard from the CFA. When I spoke to them, they were pretty shocked that they hadn't heard from anybody.
"I was very worried about my daughter and went to pick her up as soon as I heard something was happening.
"I'm lucky because I work from home – I feel for parents who work in the city and can't get there quickly.''

The Age February 18, 2013 - 7:30PM
Fire threatens properties across state
Carolyn Webb
305 reading now
Homes and lives in the Donnybrook area north of Melbourne are under threat from fast-moving grass fires.
Firefighters in more than 100 fire trucks from across Melbourne are battling an out of control fire threatening lives and houses at Epping.
There are unconfirmed reports of houses being destroyed in a fire that has burnt out 1600ha and clogged traffic in Melbourne's north.
The Hume Freeway is closed and smoke can be seen from miles away as more than 450 firefighters from 100 crews battle to stop the grassfire reaching built up areas at Campbellfield and Epping.
There are reports on radio and social media of people evacuating houses and factories, some residents heading for Epping Plaza shopping centre.
The CFA has warned the danger could continue for hours. There are unconfirmed reports from television helicopter crews that at least one home has been lost at Donnybrook.
The blaze, which started after 1pm, is heading towards homes and factories and has caused the Hume Freeway to be blocked in both directions at peak hour.
A Country Fire Authority spokeswoman said more than 450 firefighters from the CFA and Metropolitan Fire Brigade were on scene, with more to come.
Nine aircraft, including water bombers, were also tackling the 1600ha blaze, which has swept south, aided by gusty northerly winds, from Donnybrook Road, Wollert, and is now burning along Cooper Street, Epping, from Epping Plaza to Freight Street.
The spokeswoman said there were no confirmed reports of property damage and no official evacuations although businesses or individuals could choose to evacuate or remain.

ABC 774 Updated 20 minutes ago (it is now 8.24 pm, 18/2/13)
One home has been destroyed and another has been damaged as a 1,600 hectare grass fire burns in Melbourne's outer-north.
An emergency warning is active for the fast-moving fire in the Epping and Campbellfield area.
Three fire fighters have been assessed for smoke inhalation as the fire moves in a southerly direction, closing the Hume Highway and affecting areas in Craigieburn, Wollert and Epping.

The CFA says one house and several sheds have been destroyed and another home damaged.
The Northern Hospital at Epping evacuated a childcare centre on its grounds and shoppers at the Epping Plaza were asked to stay indoors.
Roads in the area are heavily congested and incident controller John Deering is urging residents to stay indoors.
"We think that the fire is not spreading anymore, although we're in the position because there is **31 kilometres of fire edge** [that] we've still got a lot of work to do before we can say this fire is contained," he said.
Some 450 firefighters in 90 strike teams are battling the fire with six helicopters and five planes water-bombing it.
More than 100 CFA and MFB fire vehicles and 11 aircraft are also on scene.

Effective: 18/02/13 8:37 PM
KALKALLO - DONNYBROOK RD
Incident Information:
There is a large, slow moving grassfire in the Epping area.
It is travelling in a southerly direction.
This fire may impact Campbellfield between the hours of 10:00 PM - 11:00 PM.
This grassfire is approximately 1900 hectares in size and is being controlled.

An adjoining property belonging to the Molinos, flanked by hedges. Picture: Carmelo Bazzano (Herald Sun)

Looking northwards towards origin.

Whittlesea Leader CFA, February 20, 2013 9:45PM
Residents in public meeting about bushfire survival after Donnybrook blaze came to Epping
Cheryl Balfour
About 300 residents attended the meeting, held at Epping Memorial Hall tonight included representatives from the CFA, MFB, police, Whittlesea Council and State Government

A man was arrested last night over the fire, which destroyed property as it burnt through 2040ha on Melbourne's northern fringe.
Detectives from Whittlesea CIU interviewed the 48-year-old Geelong man over allegations of recklessly causing a bushfire under the CFA Act.

Dereel 27 / 3 / 2013

Weather
Peak FDI 55 [Use 33C, 17%, 40 kph]

Latest Weather Observations for Sheoaks Automatic Weather Station

	Temp	RH	Wind	Speed	gusts
27/05:00pm	30.9	23	WNW	28	46
27/04:00pm	33.4	17	NNW	20	35
27/03:00pm	33.4	19	NNW	30	46
27/02:00pm	32.9	17	NNW	41	65
27/01:00pm	33.1	16	NNW	39	70
27/11:30am	30.3	19	N	30	52

Emergency Warning Effective: 27/03/13 4:38 PM
Incident Information:
There is a medium, fast moving grassfire 30km Southeast of Linton in the DEREEL - Ferrers Road area.
It is travelling in a Southerly direction towards Corindhap and Barunah Plains North.
This fire is expected to impact the Dereel/Corindhap area between the hours of 4:30 PM - 5:30 PM.

Emergency Warning Effective: 27/03/13 7:35 PM
Incident Information:
There is a large, fast moving bushfire in the DEREEL area.
It is travelling in a southeasterly direction.
This fire is expected to impact between Wurook Rd and Gumley Rd & north of Rokewood Shelford Rd.
This bushfire is approximately 1230 hectares in size and is out of control, currently creating spot-fires approximately 2-3km ahead.
A wind change is expected anytime in the next 4 hours, which may cause the fire to change direction towards Mt Mercer..
The active fire edge has crossed Moffats Rd heading towards Ferrers Rd.

Posted by CFA Media Wed 27 Mar 2013
Firefighters injured in Dereel fire
Four firefighters were injured in a fire which started at Dereel **this morning,** Wednesday 27 March.
CFA Chief Officer, Euan Ferguson, said the firefighters suffered varying injuries and were treated at hospital.
"Fortunately none of these injuries were life-threatening and we expect the firefighters to be released from hospital this evening," Mr Ferguson said.
The volunteer members were injured during the firefight at Dereel, south of Ballarat, when the vehicle they were travelling in collided with a tree in thick smoke. As a result, the truck became immobilised and the fire burnt around the vehicle.
"The firefighters enacted full crew protection and took shelter in their vehicle following correct procedures as per their training," Mr Ferguson said.
"The crew should be commended for their actions and quick-thinking under such difficult circumstances."
Mr Ferguson said the incident would be investigated as per usual practice.
More than 70 crews continue to work to control the fire at Dereel which has now burnt more than 1300 hectares.

The Age March 27, 2013 - 7:55PM
Arson fear as fire destroys homes
Caroline Zielinski and Carolyn Webb
165 reading now

Police suspect the fire that has been raging near Dereel for most of Wednesday and has resulted in the destruction of at least six homes may have been deliberately lit.
A Country Fire Authority spokeswoman confirmed three warnings have been issued, and that the fire was now covering 1300 hectares.
Four firefighters were injured during Wednesday's raging fire when their truck caught fire after hitting a tree.
CFA chief officer, Euan Ferguson, said the volunteers could not see properly due to the thick smoke, but thought quickly to save their lives.
"Fortunately, none of these injuries were life-threatening, and we expect the firefighters to be released from hospital this evening," Mr Ferguson said.
Earlier, up 40 houses were under threat from the fast-moving bushfire west of Melbourne.
More than 70 firefighting trucks and three aircraft are battling the blaze in the rural area of Dereel, 80 kilometres north-west of Geelong.
Temperatures in the mid-30s and a strong winds are fuelling the 200-hectare blaze.
Helicopter pilot Ross Barker from Channel Nine told 3AW news he could see "multiple properties" on fire after a recent wind change.
Kylie Walton, from the Wurrook Merino stud near Rokewood, said the Dereel fire burnt part of her 2800-hectare sheep farm and came within 500 metres of her house on Wurrook Road.
She said she had been scared and the sky had been full of smoke and helicopters all afternoon.
Her husband, Paul, had spent the afternoon battling the flames and moving stock but they were in constant phone contact.
Initially the blaze was moving south, from Dereel towards Rokewood and Corindhap, coming across her farm, but at 4.30pm, CFA firefighters told her the fire had changed direction and was moving north-east, away from her farm.
"I think it's changed direction a couple of times," Mrs Walton said.
"At this stage we've been told we're safe and it's headed away from us towards Mount Mercer."
Mrs Walton said text messages from friends early in the afternoon had said two houses had been burnt and 12 were in danger.
"No one seems to be totally sure at the moment what has been burnt," she said.
"At the back of our property is Enfield state forest, with a lot of forest and scrub.
"If the wind changes now and goes towards Ballarat it's going to hit that forest big time.
"They're just frantically trying to get it out," she said of the firefighters.
CFA incident controller Alistair Drayton told 3AW that conditions were difficult for ground crews but they were doing their best.

Fire at Officer
Meanwhile in another blaze south-east of Melbourne, the CFA has issued an emergency warning of a fast moving 90-hectare out-of-control grassfire moving south towards Dalmore East,
Officer, Officer South, Rythdale and Cardinia.
The CFA says the fire at Officer is threatening a major electricity connection between Melbourne and the Latrobe Valley.
The CFA website said the fire "has just crossed Lecky Road and is heading in a southerly direction towards Cardinia".
"Fire crews are currently working the head of the fire just south of Lecky Road."

Fire at Derrinallum
For another fire at the Hamilton Highway at Derrinallum in Victoria's north-west, the CFA issued a ''watch and act'' warning, saying a fast-moving grassfire was travelling in a north-easterly direction.
"This fire was reaching Gnarpurt and Lismore from 4pm to 5pm. It is 141 hectares in size and being controlled", but creating spot fires up to two kilometres ahead.
"A wind change is expected any time in the next hour, which may cause the fire to change direction towards Lismore," the CFA said.

The Age 27/3
State Bushfire Control Centre spokesman Tony Bearzatto said the fire started about 11am on Wednesday in the Ferrers Road area of Dereel.
The CFA believes the fire is believed to have started on a roadside outside Dereel and arson squad detectives are on their way to the scene.

Herald Sun March 27, 2013
At least one home was lost and several structures gutted in the most devastating inferno, at Dereel, about 80km northwest of Geelong, **after a blaze ignited at 11.34am** and grew from 150ha to 1230ha in a few hours.
More than a dozen private properties were threatened by the fire front as it swept across the 700-strong township, attracting a CFA strike team of more than 35 fire trucks and two aircraft.
At least four firefighters and one resident were injured, with paramedics reportedly treating more sufferers on the ground

ABC Updated March 28, 2013, 7:51 pm
16 homes confirmed lost in Dereel fire

Victoria's Country Fire Authority (CFA) has confirmed 16 houses and 18 sheds were lost in yesterday's fire at Dereel, south of Ballarat.
The blaze was contained overnight after burning through 1,300 hectares.
Fire crews are continuing to assess the extent of the damage and police are investigating the cause of the fire.

Observation
This fact that these fires began or escaped or defied control in mild to moderate weather conditions is of great concern to me and the people of Victoria. Why? Because people are led to believe they are being protected. After all, they pay the fire levy to fund the fire agencies to protect them against bushfires, and the fire agencies protect them by providing the best fire suppression service.

This system works so well when summer weather is mild and moderate, and we get small slow spreading fires. Since 2000 or so, fires have been getting larger and running longer. Some saw million ha fires as an aberration in 2002/3 and 2006/7 and the Black Saturday toll as a generational tragedy. I saw them as a symptom of suppression system failure. The Royal Commission sought no accountability for the unacceptable death and damage toll amidst suppression system chaos. The government invested even more money in the suppression system that had just failed organisationally and had just failed to prevent death and house loss. Three quiet fire seasons and then this year. Again, fires escape control in mild weather. These fires consistently avoided control at windy FDI's of 20 or 30. They consistently ran and grew huge, causing property loss, injury and deaths and a huge drain on the public purse. The fire agency reliance on fire suppression as its Plan A tool to protect the state is no longer tenable. Plan A suppression has very limited capability, and a Plan

B is desperately needed to protect our property. Why protect property? Save the house and you save the life and the house.

If bushfires escape control in moderate weather and cause moderate damage, catastrophic damage during Black Saturday weather can only be stopped by determined application of a Plan B defence, ie, bushfire-protect all our towns and settlements before each fire season. There was no discussion of this during the VBRC despite my cogent submissions and there is still no appetite by suppression-driven fire agencies to implement it.

The unstated fact is that property in Victoria's rural and semi-rural population cannot be protected by its fire agencies in severe bushfire weather. Individuals will not be pleased to find out that none of their fire levy tax is invested in protecting their property and that they will have to adopt the self-defence approach of our pre-1945 pioneers or take their chance with Lady Luck each year, hoping that a bushfire will not occur in their area on a severe day.

2013/14

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
10.3	14	151

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

14 to 17 January 2014 was a 4-day heatwave > 40C

Estimate of damage toll
450,000+ha burnt – public and private land, 80 houses, numerous sheds, 21,000 stock

Official bushfire records

CFA Annual Report

28-Dec	Tolleen	1,050 ha
14-Jan	Dromana	9
	Kangaroo Ground	13
	Wyperfeld	56,543
	Big Desert	29896
15-Jan	Grampians Nth	55,100
16-Jan	Goongerah	165,806
	Glenaladale	6,727
17-Jan	Epping	multiple along Hume
5-Feb	Stonyford	571
7-Feb	Morwell	2,788
9-Feb	Gisborne Riddells Ck	2,800
	Jack River	2,894
	Warrandyte	15
	Mickelham Kilmore	22,877

Wunghnu Numurkah	9,283	
Hazelwood mine	3,300	
Emu	276	
		359,948

DMBCL (2014)
400,000 ha of crown land burnt, estimate
? fires reported on crown land.
FRB 82,000 ha

DEPI Annual Report
Over the 2013-14 summer period, DEPI attended more than 800 fires, well above the 30-year average. The department attended fires in the Grampians and Loddon Mallee early in the season and later at Melbourne's fringe and in East Gippsland

Fuel management report 2013/14
DEPI personnel attended 818 fires across 414,043 hectares, including six major fires that required attention over several weeks before being contained.
These impacts included one bushfire related death, as the result of the bushfire in the Wartook Valley, as well as the loss of 80 houses, including 61 primary places of residence. Around 21,000 livestock were killed and almost 3,000km of fencing was destroyed.

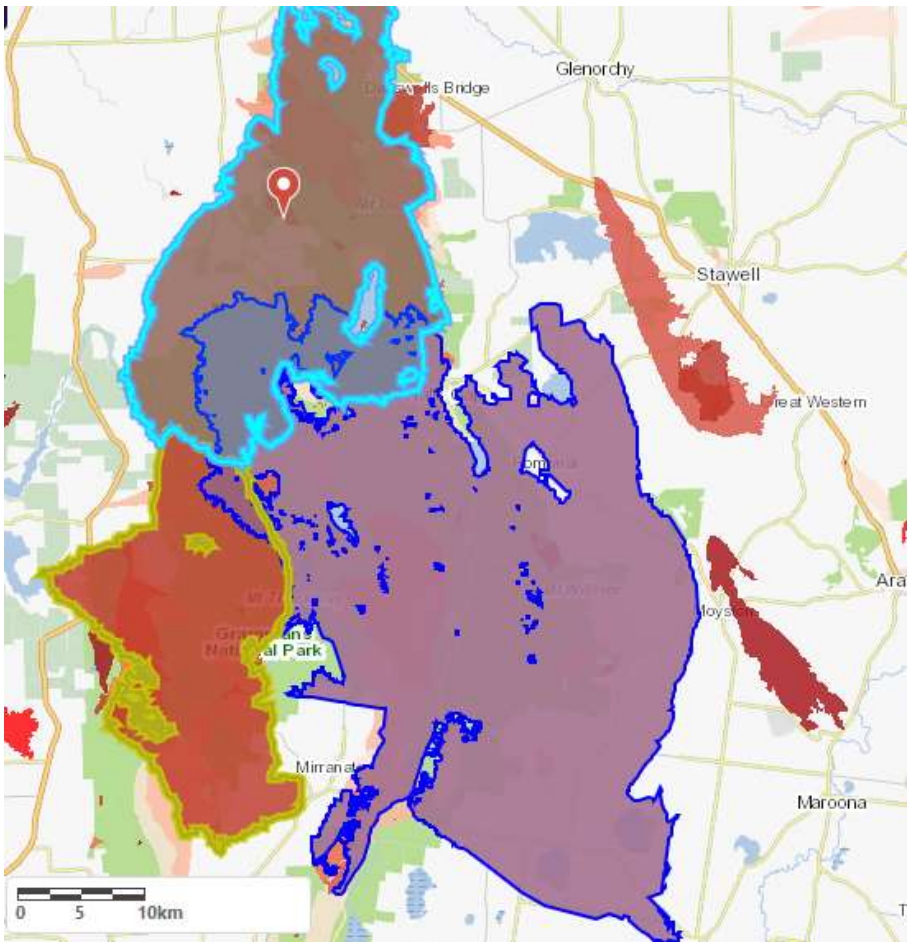
ICA Catastrophe Dataset

15 Jan 14 Grampians
This event was not declared as a catastrophe event for insurance purposes. 7,000 head of livestock were reported lost during the event, along with up to 30 structures (unknown type).
The ICA loss estimate for this undeclared event is $18.5 million.

7 Feb 14 Nth and East Vic
This event was not declared a catastrophe event for insurance purposes. Individual fires throughout the north and east of Victoria are believed to have caused the loss of livestock, fencing, farm equipment and up to 28 structures (unknown type).
The ICA loss estimate for this undeclared event is $11.1 million.

Grampians North fire, 2014 in light blue outline Grampians 54,600ha

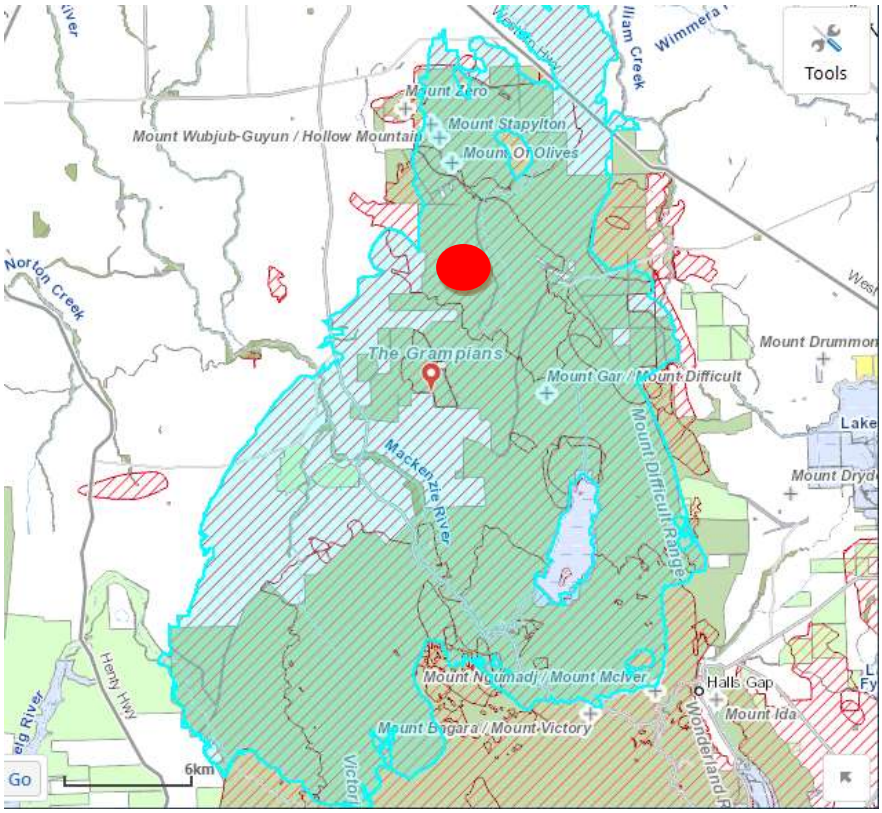
Previous Victoria Valley Complex 2013 in green outline 35,800ha, Mt Lubra fire 2006 in dark blue



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

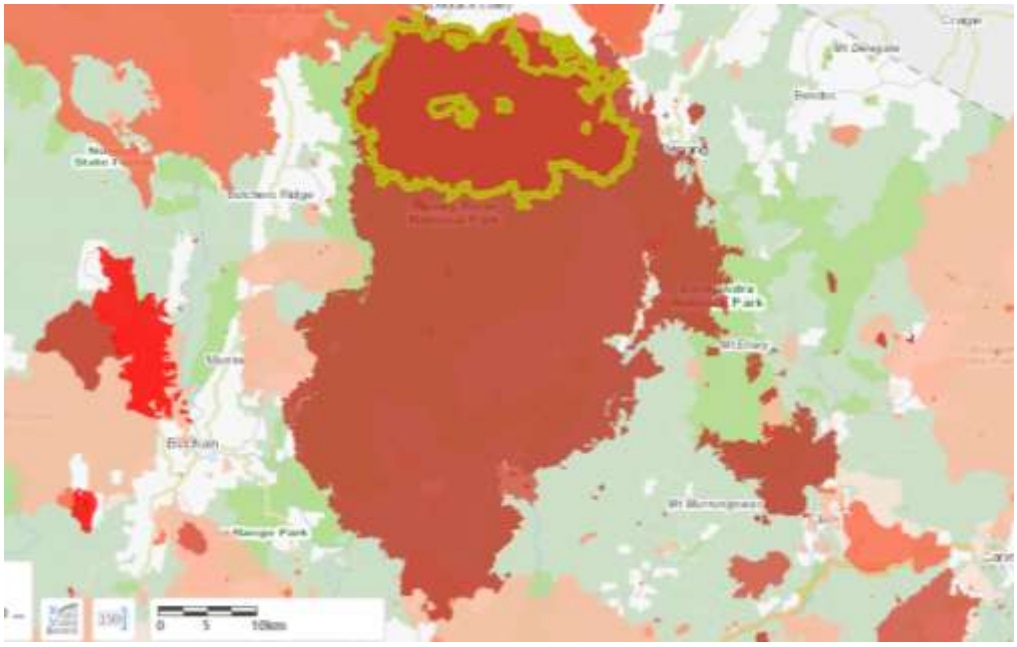
Observation: So there it is. Almost the entire Grampians National Park burnt over in an 8 year period. Inability to prevent flame spread has converted the former multiple age class vegetation, young to old, now reduced to three young age classes. This is poor biodiversity management.

North Grampians bushfire 54,500 ha Red dot is Origin



Link explains development of Wartook fire – it went where the wind pushed it.
http://www.redeagle.com.au/wp-content/uploads/2021/04/The-2014-Grampians-bushfire-was-neither-mysterious-nor-unusual-but-was-preventable.pdf

East Gippsland fires 2014 in rusty red Goongerah-Deddick, Club Terrace, Buchan 165,000ha +
Green outline = 2003 Deddick fires



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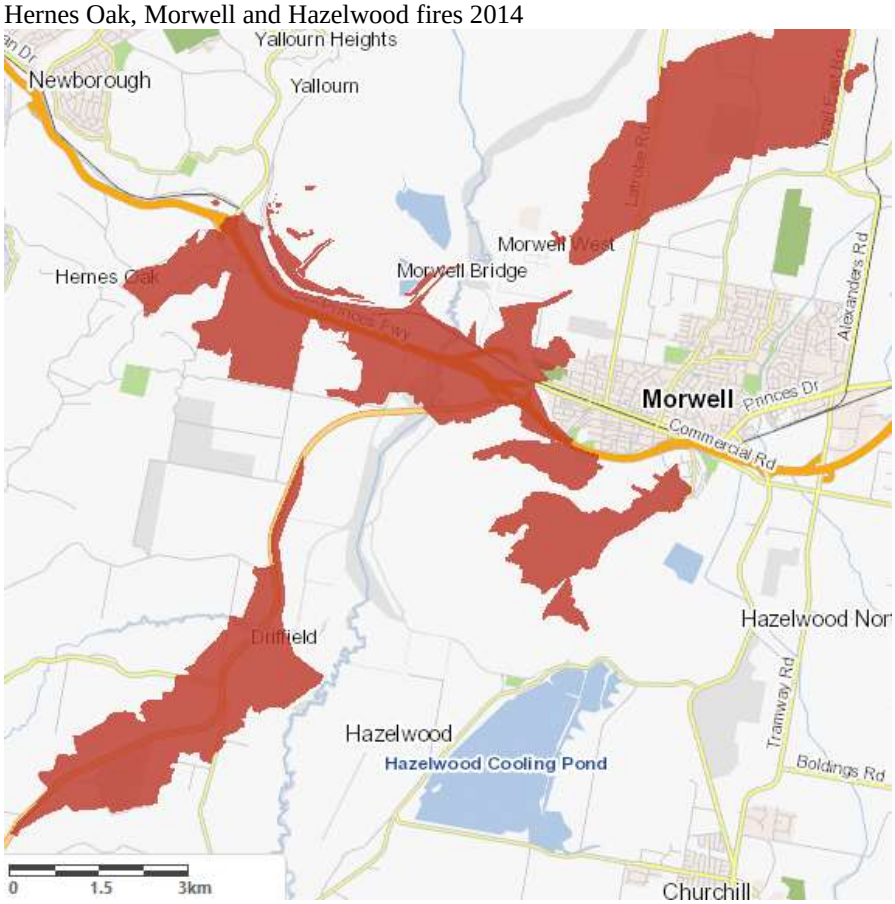
Hernes Oak, Morwell and Hazelwood fires 2014



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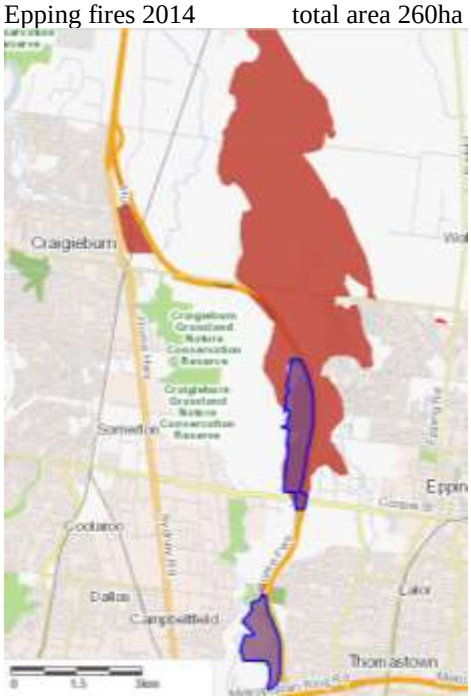
Epping fires 2014 total area 260ha overlaid onto larger 2013 Donnybrook fire



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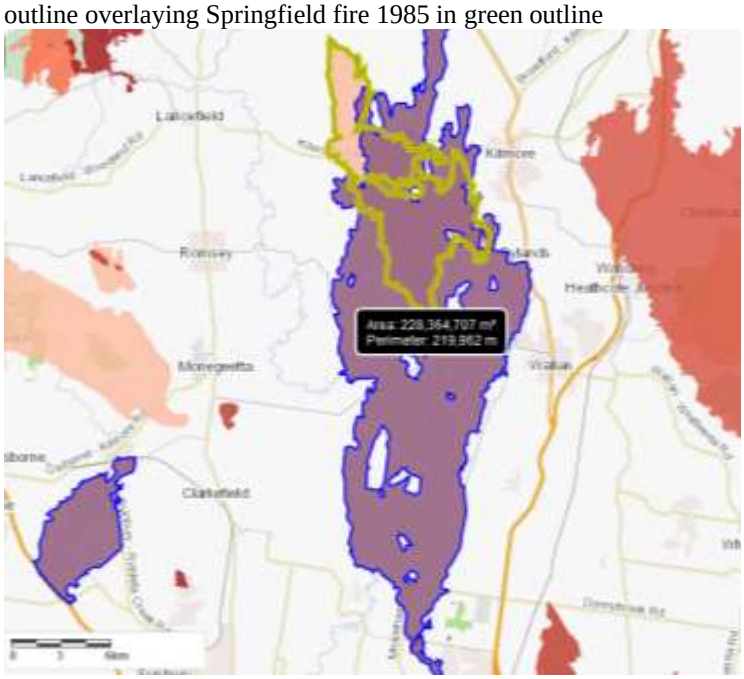
Gisborne Riddells Creek fire 2014 2,560ha and Mickleham Kilmore fire 2014 22,800ha in dark blue outline overlaying Springfield fire 1985 in green outline



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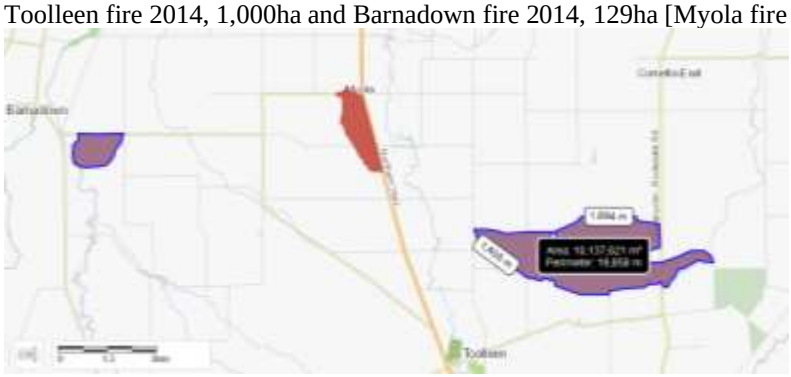
Toolleen fire 2014, 1,000ha and Barnadown fire 2014, 129ha [Myola fire 2012, brown, 180ha]



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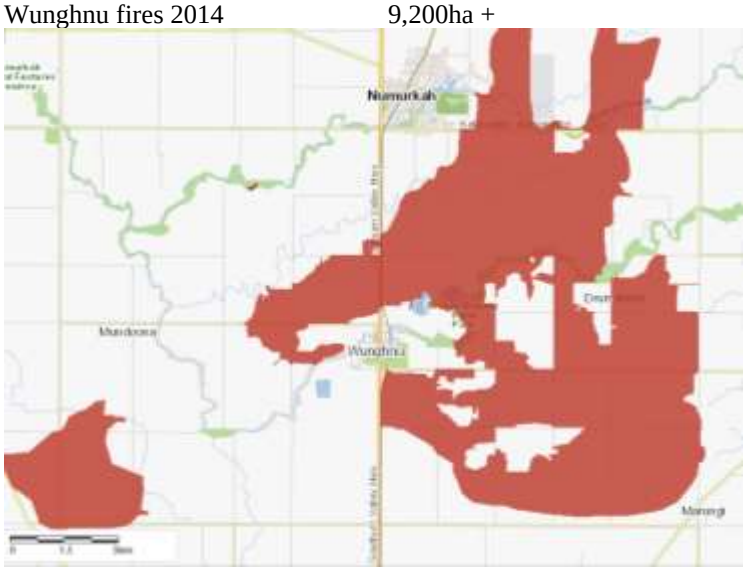
Wunghnu fires 2014 9,200ha +



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Reported bushfire events
January 2014

Grampians fire

Sunday Herald Sun January 18, 2014
In the Grampians, four houses were confirmed destroyed on Saturday - two near Dadswells Bridge and two in Brimpaen - along with a number of sheds and power poles. About 7500 sheep were also caught up in the inferno.

The Age January 19, 2014
The bushfire, which destroyed about 10 homes and burnt 52,000 hectares, remains out-of-control.

Stawell Times News 21/1/14
Current losses in the area include:
* Approximately 90 structures including **27 houses** and outbuildings and 63 sheds;
* 3000 sheep (950 sheep missing);
* 6 pieces of farm machinery;
* 203 kilometres of fencing;
* 2 hay sheds;
* 1 woolshed;
* 109 hectares of Olive trees.

Herald Sun January 15, 2014
Dry lightning sparks 256 fires in Victoria amid heatwave
Angus Thompson, James Dowling, Michelle Ainsworth, AAP

CREWS have worked throughout the night extinguishing hundreds of fires in the driest parts of Victoria sparked by dry lightning from electrical storms.
CFA state duty officer Scott Purdy said crews responded to 256 fires between 5pm and 12am.
The Mallee and Wimmera received the most strikes as electrical storms hit the region and continued to other parts of the state including the central Victorian towns of Castlemaine, Daylesford, Woodend, Macedon, and metropolitan Melbourne.
CFA spokesman Mick Harris said there were 22 fires still listed as ongoing, 15 controlled and three contained.
Victorians are set to live through the hottest temperatures on record as the mercury will sit above 40 degrees for 4 days in a row.
Most of the fires are in the Mallee and no properties are under threat.
Mr Harris said the worst fire was a 6,500 hectare blaze at Lake Albacutya between Horsham and Ouyen, which was burning mainly in national park land.
Waterbombing helicopters are monitoring the Mallee and central Victoria to identify strikes before conditions worsen later in the week.
The CFA fears more dry lightning, which means lightning with not enough rain to combat its effect, will hit the state today.
The CFA battled several grass fires yesterday, with the most serious at Kangaroo Ground which is now under control.
There is a total fire ban across the state.
POLICE PROBE ARSON AS HOUSES SAVED
Waterbombing helicopters and dozens of fire trucks contained the blaze at Kangaroo Ground, north of Melbourne, which was believed to have been started by a bonfire.
At Kangaroo Ground an army of 31 fire trucks and three waterbombing aircraft battled to control a bushfire on difficult terrain as the inferno spread in several directions.
Police are also investigating whether a fire bug was responsible for another fire at Little River.

Residents whose homes came within metres of the raging Little River grassfire said fire bugs had been a constant concern in the area.
A cluster of households in Little River, 51km southwest of Melbourne, were told to evacuate as several fire crews aided by waterbombing aircraft battled to control the fast-moving inferno.
At Little River Stephen Baines said he returned home from work to find fire trucks screaming down the road and his neighbours being evacuated as firefighters tried to halt the flames at Bulban Rd.
"It was bloody scary," Mr Baines said.
He said the community suspected arson with the fire occurring exactly a year after grass fires in the same area which police believe were sparked by fire bugs.
"Mate this one was deliberately lit, just like the last one.
"We're all keeping an eye out," he said.
Victoria Police arson chemists have been at the scene trying to determine whether or not the blaze was suspicious.

HISTORIC HOME DAMAGED BY FIRE

Heronswood historic homestead was engulfed by flames yesterday afternoon after a grassfire spread through the Mornington Peninsula suburb of Dromana.
The CFA said the home's freestanding cafe had been destroyed in the blaze, but the main house which dates back to 1864, suffered only minor damage.
CFA incident controller David Gibbs said the property's heritage farm and gardens were unlikely to have been damaged by fire.
Flames first reached the property and popular tourist attraction at around 5.45pm, but a water bomber soon put out the blaze.
Visitors to the house who were on site at the time were not injured by the fire, but the nearby freeway was closed.

Mornington Peninsula Leader January 15, 2014
Fire destroys Heronswood café, but staff spirit is still strong
Nicole Precel and Sharon Green,

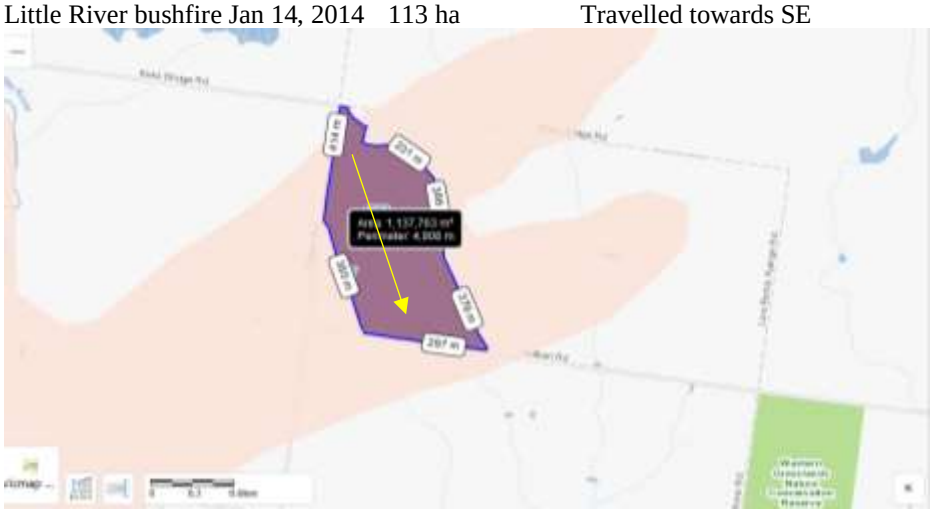
THE thatched roof building that went up in flames at Heronswood House last night was not just a building - it was built by the staff who run it.
But the group has vowed their spirit will not falter.
"We're pretty devastated, there's a lot of emotion in that building," said The Diggers Club chief executive of Horticulture and Operations Tim Sansom.
"A lot of it was built by our staff back in 1996, it was all hands on deck."
About 5.45pm the thatched roof caught fire, and razed the Fork to Fork restaurant and administration building.
A grassfire that started near the Mornington Peninsula Freeway in McCrae spread east and embers that landed on the thatched roof set it alight.
Ron Peters, a resident from Howitt St, which was affected by the fire, said he saw the fire start about 5.30pm.
"We saw the fire in the gully next to the freeway. By the time we got to the house and set up (water) hoses it was upon us," he said.
"It all happened very quickly."

Heronswood founder and executive chairman Clive Blazey said the thatch, made of 3000 bundles of reeds from Tootgarook swamp, was put together by Mr Blazey, Heronswood staff and a New Zealand thatcher.
"We had non-flammable chemicals sprayed on the thatch and an irrigation system attached to the roofing. But the fire spread so quickly it was too hot for anybody to get close enough to the building to turn on the sprinklers."
"The intensity of the fire was horrific."
The main house, which dates back to 1864 did not suffer any damage, with the fire under control about 10pm.
The gardens were not affected by the fire, besides a partial scorching of a Moreton Bay Fig tree and surrounding garden cafe, neither were the dispatch, historic house, mail or website, which are run from another site on Boundary Rd in Dromana.

Mr Blazey said the property was insured but he suspected there was more than $500,000 worth of damage.
But some things are irreplaceable.
Mr Sansom said there were 25,000 slide images from the history of The Diggers photography that burned with the building.

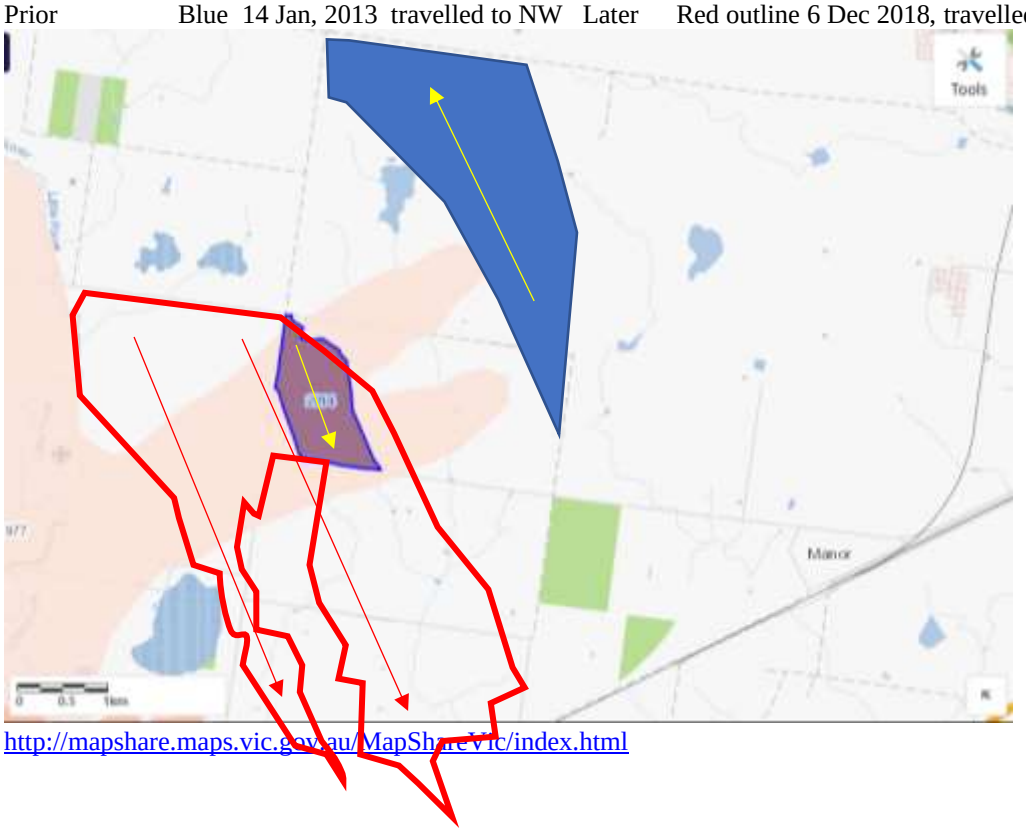
The Fork to Fork restaurant at Heronswood, which was destroyed in a fire last night. Picture: Jason Sammon
"We've lost that and that's irreplaceable," Mr Sansom said. "Clive and Penny started (The Diggers Club) in 1978, that's 35 years worth of slides, we'll never get them back."

Little River bushfire Jan 14, 2014 113 ha Travelled towards SE



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Mauve Jan 14, 2014 (as shown above) Popular firebug area?
Prior Blue 14 Jan, 2013 travelled to NW Later Red outline 6 Dec 2018, travelled to SE



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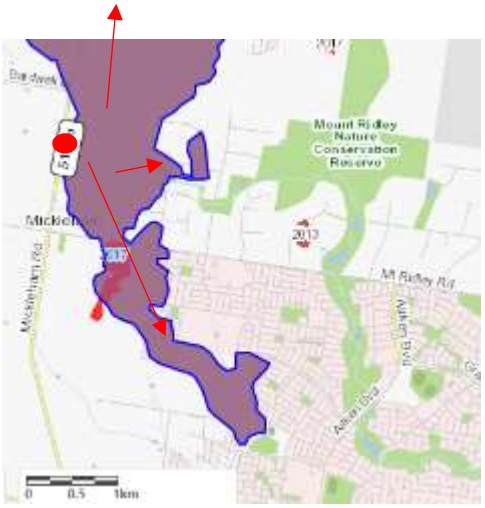
CFA News Media 11.39 AM 15 January, 2014
Little River fire threatened houses
By: Duncan Russell
A grass fire, which started at about 11.45am yesterday (14 January 2014), threatened properties in the Little River area between Geelong and Werribee.
Twenty-seven vehicles attended the fire, which was around Bulban Road. About 100 hectares were burnt. Strike Teams ST1570, ST0702, ST1401 & ST1402 attended.
Knowing the shortage of water points in the area bulk tankers were called for from the shire and Anakie bulk water tanker. Aircraft also attended with Helitack 347 (Coulson C-FIRX) hitting the edges of the fire in the rocky paddocks.
An Emergency Warning was issued, and at the height of the fire an Emergency Alert (text and voice messages) was also sent to a small group of residents under direct threat of the fire.
The Emergency Warning was downgraded to a Watch and Act message at 1:40pm and crews did well to bring the fire under control by around 1:50pm. No properties were impacted.
District Mechanical Officers also attended to replace several tyres damaged by the sharp rocks and high temperatures affecting cooling systems.
The cause of the fire is being investigated.

9 February, 2014

Mickleham fire
The Mickleham fire started when the strong dry NW wind pushed a tree onto powerlines (red dot) at approx midday. It initially ran toward the houses in the SE, then a wind change with higher moisture content arrived and swung the fire around. By 12.30pm wind was from WSW, by 1pm SW, by 2pm SSW and by 2.30pm from

the South, where it remained for the next few days. The eastern flank of the fire headed East to NE for two hours and then headed North for the next few days.



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

The fire flank north of Ridley Road headed west then northward, parallel to Mickleham Rd and soon crossing it.
Could the fire have been held in the Mickleham paddocks?
Yes. If the timing of the change was known and if there were enough trucks and helitankers on site on the eastern flank between 12.30 and 1.30pm, and if there was a good network of fuel free barriers with tracks to prevent spread of running flame.

Herald Sun 9 / 2 / 2014
Steven Carman had turned off Donnybrook Road and was heading down Mickleham Road when he saw a branch of the tree fall on to the powerline just after midday.
"All of a sudden I saw the tree snap, hit the powerline and the powerline fell onto the grass and it just went boom," Mr Carman said.
"I could believe we were watching it (the tree) fall and just bang the powerline comes down."
"We would have been 20 metres away when it fell and it just sparked."

Steven Carman says he saw this huge tree fall and spark a grassfire near Mickleham Road. *Source:* HeraldSun

Gisborne fires

The Gisborne fire ignitions were reported at four or five sites, if interpretation of this map is accurate. The multiple sites by roadsides indicates deliberate lights, ie, arson. No such reports were seen in the media

Based on time of the notice and the limited spread to SE, it originated just before the wind change at 12.30pm, from whence it spread NE towards Riddells Creek, through grassy hobby farms.

09/02/14 12:44 PM This is an **Emergency Warning** issued by Country Fire Authority for Gisborne South.
There is a fast moving, out of control grassfire travelling in a south easterly direction from Dalrymple Road towards South Gisborne.

Herald Sun 9 Feb 2014 Credit: Simon O'Dwyer
Caption is wrong. This fire is heading NE towards Riddells Creek. The picture looks south from Riddells Creek towards the long northern flank heading from Gisborne South. Yellow arrow shows direction of head fire Flames were in grassland, rising up to 2m tall.

Herald Sun 9/2/14
About 220 firefighters, more than 40 firefighting vehicles plus three water bombing aircraft worked on the Gisborne fire.

A grassfire burns close to a deer farm in Gisborne. Picture: Jay Town

Warrandyte fire

Warrandyte fire 9 Feb, 2014 15 ha Yellow arrows indicate NW wind and SW change
Note the nearby fire that also began in a bush patch in 1982. Both fires ran upslope into residential area

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Warrandyte fires
FSC Annual Report 2013 – 2014 p 11
A RAPID ONSET FIRE ON MELBOURNE'S FRINGE (9 Feb)
At 11am the Forest Fire Danger Index spiked at 120 ahead of the south westerly change. A maximum temperature of 40 degrees, relative humidity of 7 per cent and north westerly wind of 50kph gusting to 80kph preceded the change.
The cause … a branch falling on nearby high voltage power lines and igniting bush in the power line easement.
Shortly after midday, a fire was reported at Flannery Court, Warrandyte.
Arriving within five minutes of the initial alarm, the Warrandyte CFA Captain identified houses under immediate threat as the fire had already moved from the nearby bush. The first of the three houses destroyed by the fire was already in flames by the time additional firefighting resources arrived.
At 12.38pm, a predicted wind change impacted on the fire, immediately spreading it in an easterly and uphill direction. Two more houses were destroyed shortly after.
An incident objective of stopping the fire at Tindals Road was implemented early.
The first of two water bombing helicopters arrived 45 minutes after the fire started
Approximately 150 fire-fighters, 20 fire trucks and two aircraft were involved.

"It was a very significant achievement for crews to contain Sunday's Warrandyte fire to about 10 hectares, and limit the damage to four properties, especially given the conditions we were facing of winds of up to 90kph when the change came through.
CFA Operations Manager

Herald sun 11 Feb, 2014
THE FIRE TOLL AT 4PM
* At least 34 homes destroyed across Victoria, 20 more being assessed
* 18 fires still listed as going, Kilmore-Wallan, Morwell and East Gippsland the largest
* Five firefighters hurt, including one seriously
* 12 fires believed deliberately lit
* 170,000ha burnt, including 13,000ha in the Wallan region
* This fire season 350,000ha have been burnt across the state, comparable to 1985 fires in central Victoria and the 1977 fires
* 2500 firefighters and 13 aircraft battling blazes

1.47PM: THE CFA has now confirmed 34 properties have been lost to fires since Saturday.
Most were taken in the Kilmore and Wallan blaze, which firefighters are still battling.
Homes have been lost in:
2 Glenaladale
1 Walpa
7 Kilmore
1 Beveridge
4 Mickleham
3 Warrandyte
2 Wunghnu
1 Yarram
2 Gisborne
6 Cabanandra
3 Martins Creek
2 Goongerah
The CFA has been unable to assess the full extent of damage in Wallan but initial reports suggest significant property loss.

12.56PM: FIRE Commissioner Craig Lapsley said unless Victoria gets inches of rain in the next few days the fire threat will remain.
"It could last all February and I think we'll reach into March," Mr Lapsley told 3AW.
Bureau of Meteorology forecaster Keris Arndt said a small amount of rain was forecast for the Kilmore area Thursday afternoon.
He said the weather conditions will favour firefighters, with temperatures in the low 30s and lighter winds.
"We are out of that 40C+ degree weather and most of the state should be sub 30C or low 30s for the next few days," he said.
"The wind will be nowhere near as strong as it has been.
"There is a cyclone system in WA and it will work its way over here but it has a long way to travel and a lot could happen."
He said the Wimmera could expect heavy rainfall but much less in Kilmore and the other major fire zone near Morwell.
Temperatures in Kilmore should hover around 21C today before spiking to 35C tomorrow and dropping back to 30C on Thursday.
The CFA has two emergency warnings, 14 watch and act and 21 advice messages current.
About 2500 firefighters are battling 19 fires still burning out-of-control.
Overnight 12 strike teams fought the Mickleham/Kilmore fires but despite the best efforts that blaze destroyed seven homes overnight.
The roaring grass fire has taken 21 homes since it started on Sunday when a tree branch fall on a power line.
It is 23,600 hectares and has a front that stretches about 50km.

Since the start of the fire season 350,000 hectares have been burnt since and in the past 24 hours there have been 94 emergency warnings and 79 watch and act messages.

The Age 11/2/14
The number of Victorian homes destroyed by fire during the past week could rise to more than 50, authorities say.
On Tuesday afternoon, Police Chief Commissioner Ken Lay confirmed 34 residential properties had been destroyed since Friday. Police are still investigating the possible loss of another 20 homes and this number is expected to rise further over the coming days.
Firefighters continue to battle 18 active fires across the state, including key blazes around Melbourne's outskirts, the Latrobe Valley and East Gippsland.

Gippsland

Meanwhile, firefighters are preparing to fight two fast-burning fires in the Gippsland region, which are expected to merge late on Tuesday.
Deputy state controller Peter Rau said two of three fires burning in the area – one at the Goongerah-Deddick track and the other at the Buchanan-Jacksons Crossing – "looked likely to join".
He said firefighters would be putting all of their resources into fighting what looked to be a "long-duration incident".
"This is providing significant concern, and communities out there are seeing a lot of smoke in the area," he said.
"Structures are in place to inform the community, but there will certainly be some health concerns in relation to where this will end up."

Mickleham, Wallan and Kilmore

As of 3pm on Tuesday there were no longer any current emergency warnings across Victoria.
An earlier emergency warning for the communities of Bylands, Kilmore, Kilmore East and Willowmavin regarding the 16,000 hectare, out-control Mickleham blaze burning north of Melbourne was downgraded just before 3pm, to a watch and act alert.
Hundreds of houses have been damaged or affected by the Kilmore fire with at least 12 houses destroyed, according to the CFA.
The CFA has warned that it could take up to seven weeks for the danger from the fire to pass completely.

Herald Sun 9 February 2014
Homes lost as fires reach urban fringe
By Caroyln Webb, Darren Gray and Nick Toscano
Up to 12 homes were destroyed and thousands of firefighters battled more than 150 bushfires across the state on Sunday amid nightmarish weather conditions, the worst since Black Saturday.
Thousands of people were evacuated from their homes amid strong winds and temperatures in the high 30s as fast-moving blazes reached suburban Melbourne. Gale-force winds also fed fast-moving fires in many rural areas, including East Gippsland, the Latrobe Valley and Shepparton.

COMMENT A simple policy change would change this narrative to this preferred statement: "Thousands of people defended their homes amid strong winds and temperatures in the high 30s as fast-moving blazes reached suburban Melbourne".
What policy change? The Governments objective becomes zero-house loss, and to achieve it, towns and settlements are protected before the fire season with fuel free barriers to the running flame, and the volunteer fire fighters combine with residents to defend against ember attack.

Surf Coast Shire March 2014, Gnarwarre grassfire, burnt approximately 110 hectares

Other government reports

Emergency Management Vic
Post season operations review 2013 14

Tragically, this season again bought home how dangerous bushfire can be with a community member losing their life near Halls Gap. Between December and April more than 463,000 hectares of public and private land was burnt and a total of 80 residences destroyed. Livestock losses exceeded 21,000 head, almost 3,000 kilometres of fencing was destroyed, more than 8,000 tonnes of hay and grain storage and in excess of 22,000 hectares of pasture, crop and plantation were affected by fire. In excess of 300,000 hectares of public land (mainly bush and forests in the Mallee and East Gippsland) were consumed throughout the Fire Danger Period

Damage toll

Primary residence destroyed	61	
Total residence destroyed	80	
Fencing	2,992 km	$12.07M
Horticulture	720 ha	$7.08M
Hay & Stored Grain	8,289 tonne	$1.35M
Pastures, Crop & Plantation	22,632 ha	$10.93M
Livestock	21,664	$2.84M
Farm Infrastructure		$1.46M

Why are house not valued? Estimated value 80 x $0.3M = $24M

In January 2014 Victoria and much of southern Australia, experienced very hot and dry conditions resulting in 13 days of declared heatwave.

A band of lightning which crossed most of the state in mid January started a significant number of fires including those which became campaign fires in the Mallee and East Gippsland some of which burnt for 70 days

Victorian Government comments to Productivity Commission

Across the summer months, Victoria experienced record breaking extended periods of heat and significant fires in January and February 2014 placing enormous strain on the emergency management system. Nineteen days had Extreme and Severe Fire Danger ratings and 16 days of Total Fire Ban were declared. From 14 to 17 January, Victoria experienced a significant heatwave which resulted in an estimated 167 deaths more than expected for this time of year.
On 17 January, Victoria's first 'recommendation to evacuate' in response to a significant fire threat was issued to Halls Gap and nearby communities.
The Hazelwood Open Cut Mine fire started that day and ran for 45 days challenging more than 7000 individual firefighters and the community.
Victoria had more than 4600 grass and bushfires over the 2013-14 fire season, 78 of which were considered significant. The largest fire covered 165 806 hectares in East Gippsland and burned for 70 days.

Report on Government Services 2015, Chapter 9, Volume D, Fire and ambulance services
https://www.pc.gov.au/research/ongoing/report-on-government-services/2015/emergency-management/fire-and-ambulance-services

2014/15

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
6.2	8	73

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Estimated damage (probably an underestimate)
50,000+ha burnt - public plus private land, 7 houses, 90 farms damaged, 7,000 stock

Official bushfire records

EMV Year in Review, 2014-15
In mid-December 2014, lightning ignited more than 350 fires in the north east of Victoria, including at Creighton's Creek near Euroa, Lake Rowan – Warbys near Wangaratta, Stewarton near Benalla and in central Victoria at Pastoria East. Combined, the fires burnt through almost 15,000 hectares.
Across 2-3 January 2015, Victoria experienced severe to extreme fire danger, with high temperatures, damaging winds, severe thunderstorms and significant fires in the west at Moyston, Edenhope, in the Little Desert and at Hastings. More than 26,000 hectares was burnt.
Fortunately, there were no deaths as a result of these fires; however, some firefighters suffered minor injuries and farmers and agricultural businesses incurred extensive loss and damage to property, livestock and land. Victoria was also grateful for the assistance of 220 personnel from New South Wales during this period.
In the Hume, Moyston, Hastings and Edenhope fires, more than 8500 sheep and cattle suffered, and damage occurred to up to 1000 kilometres of fencing, thousands of hectares of pastoral land, crops and up to 500 ton of hay. There were seven houses destroyed, more than 270 properties damaged and sheds and out-buildings were burnt.

CFA Annual Report 2015

15. Dec	West Wodonga	800 ha	
16. Dec	Lake Rowan	5,743	5750 wikipedia
	Longwood East / Creightons Ck	5,085	5500 wiki
	Pastoria	800	
	Stewarton	2,000	3500 wiki
18. Dec	Mia Mia	300	
2. Jan	Moyston	4,900	4400 wiki
3. Jan	Hastings	133	
	Edenhope	1,740	
	Brimpaen	4,500	
7. Jan	Kyneton	250	
	Little Desert	6,000	
			26,251 ha

DMBCL (2015)
50,000 ha of crown land burnt, estimate
? fires reported on crown land.
FRB 234,000 ha

DELWP Annual Report 2015

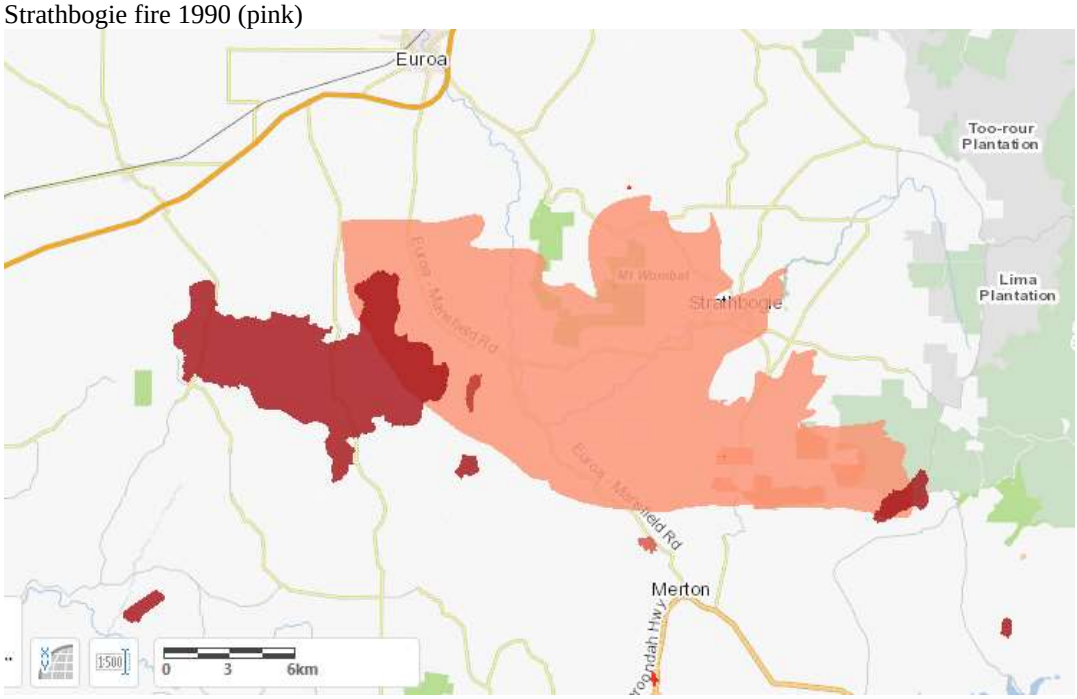
During the 2014-15 summer season, the department attended 1,149 fires on public and private land, impacting 57,250 hectares. Weather conditions leading in to the summer season concerned fire agencies with the real possibility of major campaign fires before Christmas. Lightning during December 2014 and January 2015 caused many fires, including several large fires in the Wimmera, Mallee and Hume regions. A number of grass fires occurred close to the southern Melbourne metropolitan area. Through aggressive first attack,

The objective indicator for *Fires controlled at first attack to suppress fires before they become established, minimising impact* has improved from 74 to 83 per cent over the 2013-14 to 2014-15 period. The objective indicator for *Fires controlled at less than five hectares, to suppress fires before they become established, minimising impact* has improved from 79.5 to 87 per cent over 2013-14 to 2014-15. Performance in this area is subject to the conditions in the annual fire season and can fluctuate. The *Area of public land treated through planned burning* increased from around 82,000 to 234,614 hectares over 2013- 14 to 2014-15, against a target of 275,000 hectares in both years. The department took every opportunity to conduct

The *Area of public land prepared for planned burning* in 2014-15 of 507,773 hectares was over 185 per cent of the planned burn target (275,000 hectares). The relatively high level of preparation and planning in 2014–15 provided the department with multiple options for planned burning implementation, as weather conditions allowed, to facilitate better achievement against our planned burn target.

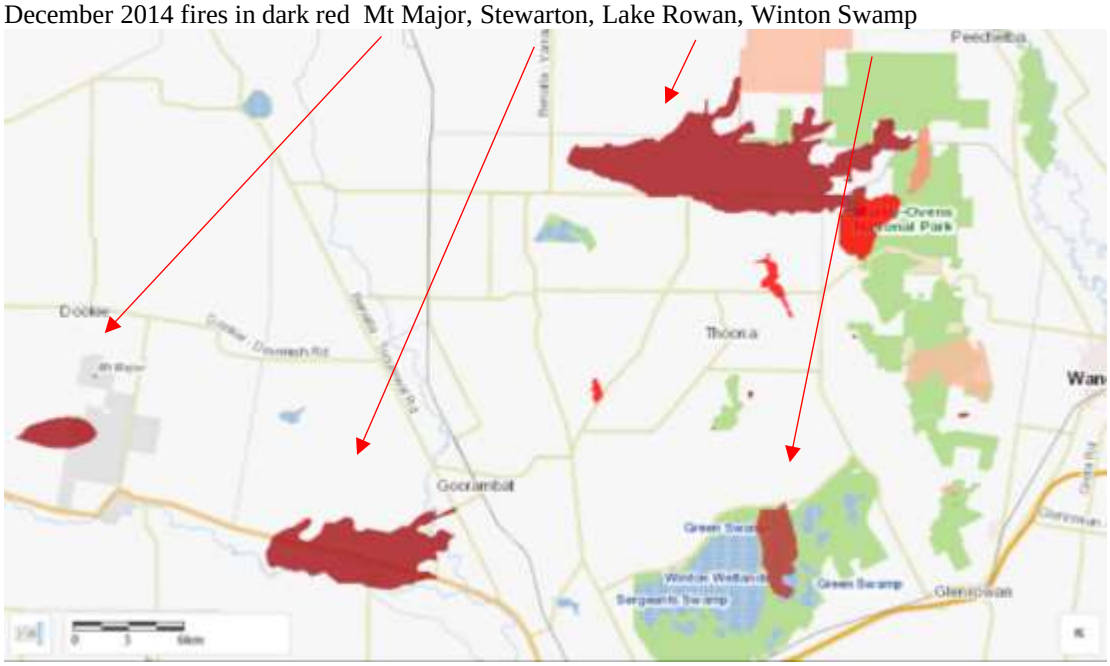
Note –Information in three Annual Reports to Parliament is required for a partially reasonable picture of impact of bushfires – damage, location or size of fires suppressed. Accurate information about true costs of bushfire suppression and prevention are impossible to find.

Creightons Creek fire Dec 2014 5,520ha and Ancona fire Feb 2015, 280ha overlaid onto Strathbogie fire 1990 (pink)



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

December 2014 fires in dark red Mt Major, Stewarton, Lake Rowan, Winton Swamp

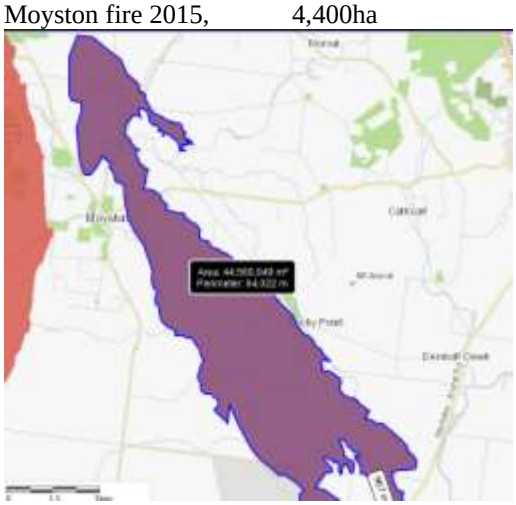


http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Brimpaen fire 2015 4,100ha

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Moyston fire 2015, 4,400ha

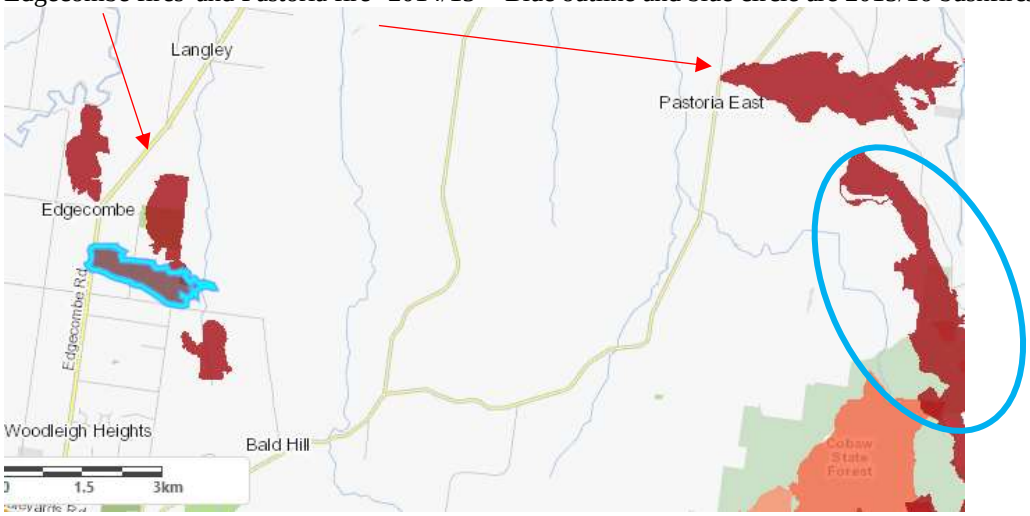


http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Hastings fire 2015 120ha

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Edgecombe fires and Pastoria fire 2014/15 Blue outline and blue circle are 2015/16 bushfires



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Reported bushfire events

Herald Sun December 17, 2014 8:57PM
CFA puts towns in Victoria on high alert as grassfires continue to burn
Samantha Landy, Tom Minear, Matt Stewart, AAP
FOUR homes have been destroyed in out-of-control bushfires that have ravaged Victoria's north east.
Three properties have been burnt to the ground in the Longwood-Creightons Creek fire, while another home was also lost in the Lake Rowan blaze near Wangaratta.
The owners of a home destroyed in Gooram, near Creightons Creek, had reported each other missing during the fire as they were separated but both were later found safe.
Residents are being evacuated and schools shut down as four out-of-control bushfires have burned more than 15000ha across the state.
The biggest blaze in Longwood, near Euroa.
Police evacuated about 120 people in Longwood East as a 6500ha fire threatened homes.

Bushfires burned through David Hayes property Lyndsey Park at Creighton's Creek near Euroa. Picture: Jason Edwards

Bushfires burned through David Hayes property, where 60 racehorses were released so they could flee the flames. Picture: Jason Edwards

A 3500ha fire in Stewarton, east of Shepparton, saw three schools closed in the area with a total 47 students sent home.

A 5200ha fire is burning at Lake Rowan, north west of Wangaratta, and a 120ha fire continues to burn on the border of NSW, just 6km west of the Wodonga West township.

ABC Updated 18 Dec 2014,
Victorian fires: Homes destroyed by Creightons Creek, Lake Rowan fires
By Kathy Lord
Firefighters are hoping to contain several bushfires burning in north-east Victoria, with weather conditions predicted to deteriorate on Thursday.
Police have told residents in Creightons Creek to prepare to evacuate.
Four homes have been destroyed by fires that burned across central and north-eastern Victoria, CFA officials say.
Three of them were lost in the Longwood-Creightons Creek fire which burned 6,500 hectares.
One of the homes that was burnt to the ground was at Gooram East and earlier there were concerns about the welfare of two people who had left the home ahead of the fires, but they have now been accounted for.
Police doorknocked residents of Creightons Creek and advised them to evacuate when the fire became "quite active" but it is understood many remained in their homes as the fire threat eased.
"That evacuation is a precautionary attempt to make sure that as the fire moves around later today that people are not caught flat-footed," Emergency Services Commissioner Craig Lapsley said.
Victorian fires
Longwood, south of Euroa, 6,500 in size
Lake Rowan, near Wangaratta, 6,800 hectares in size
Stewarton, north of Benalla, 3,500 hectares in size
West Wodonga, six kilometres from homes, 120 hectares in size
The Longwood fire is one of four causing problems for firefighters and emergency officials across Victoria after lightning on Monday sparked 350 fires.
"That's a good result by firefighters to work hard over the last 24 hours to bring most of those fires to a safe state," Mr Lapsley said.
About 1,400 firefighters are working on the ground from agencies including the Country Fire Authority, the Department of Environment and Primary Industries, the Metropolitan Fire Brigade and Parks Victoria.

A cool change on Tuesday caused fire behaviour to become erratic and sparked a number of emergency warning messages.
A home was destroyed in the Lake Rowan fire close to Wangaratta.
There is a watch and act message for that fire which has grown to 6,800 hectares.
A 3,500-hectare fire was also burning at Stewarton, north of Benalla, but that fire is now under control.
The fourth fire, at West Wodonga, is only 120 hectares in size but is only six kilometres from houses.

Herald Sun January 03, 2015 8:27PM
Mornington Peninsula residents remain on high alert, 4700 hectares burnt in Moyston
Elissa Doherty, Kathryn Powley

HASTINGS FIRE
MORNINGTON Peninsula residents packed their cars and hosed down houses as a fast moving bushfire raced towards homes fanned by a wind change.
Hastings, Crib Point and Bittern homeowners are on edge due to unpredictable weather conditions and strong wind gusts.
Firefighters brought a bushfire in the Warrangine Park area under control after a wind change caused the blaze to change direction towards houses south of Reid Pde in Hastings.

Hastings residents hosed down houses and properties beneath a grey sky thick with smoke and ash as the fire came close to homes in the Warranqite Crescent area.
Flying embers sparked small fires in a backyard in Reid Pde which neighbours doused with garden hoses.
Leanne Emanuel said her partner Luke Wells and father Lawrence Emanuel and dampened flames from the afternoon flare-up next to her grandparents home of 30-plus years
The elderly couple did not want to leave though.
"As soon as we heard Pop wasn't leaving the house I said 'if I've got to drag him out I will," she said.
The fast-moving grassfire that struck Hastings last night is under control after burning **more than 120ha.**
But firefighters are still extinguishing embers and burning trees in the Warringine Park area and will continue their work this morning.
The Hastings fire was under control by about 8pm after a cool change brought rain, and temperatures fell more than 10C.
CFA state duty officer Peter Lucas said firefighters battled through a "horror night" on Friday.
Residents stood in front lawns watching helicopters buzzing overhead.
Many had cars packed with possessions ready to evacuate if necessary.
The bushfire ripped through the Mornington Peninsula from about 3.30pm, putting dense residential, rural and touristic spots in Hastings, Crib Point and Bittern in direct threat.
Within about two hours of igniting, a wind change fanned the fast-moving flames from south to east.

MOYSTON FIRES
FIREFIGHTERS have fought through scorching temperatures, damaging wind gusts, and thunderstorms to protect communities west of Ararat from what could have been a deadly day.
The 4700ha grassfire that engulfed the area of Moyston had subsided on Saturday night on the back of needed rains.

A home destroyed in Moyston. Picture: David Caird

Devastated farmer David Coad and sister Linda survey the damage - he will lose half of his 3000 sheep. Picture: David Caird

It is believed the fire destroyed at least three homes and thousands of hectares of farming land, and killed at least 2000 livestock.
The ferocious blaze became the focus of more than 250 firefighters, 80 fire trucks and 10 aircraft soon after it sparked before noon on Friday.
A gas scare gun is believed to have caused the fire, used by farmers on vineyards to frighten away birds.

Firefighters battle a grassfire that flared up near Moyston after strong winds. Picture: David Caird

Fanned by strong winds, the fire transformed the Moyston township into a charcoaled wasteland within hours.

Horsham deputy incident controller Graham Parkes said the peak fire danger struck about 4pm on Saturday.

But light rain — only about 4mm — had proven invaluable, he said.

Hastings fire

The major fire in Hastings on Saturday 3 January 2015

A shot of the Hastings Fire scene from Saturday 3 January taken by local pilot Ellie Tesselaar.

From Hastings Brigade web site

Large January Scrub Fire

At 2:11pm on January 3, Hastings Fire Brigade was paged to a grass fire behind K and K Steel on Frankston-Flinders Road in Hastings; with Tyabb, Somerville, Moorooduc and Bittern also paged in support. From a crew already located at the fire station, the Tanker was quickly dispatched to the scene of the call with the Pumper following shortly afterwards. On arrival crews found several burning piles of rubbish and wood with fire rapidly spreading, driven by strong northerly winds. The fire quickly entered a timber yard located to the south near Reid Parade and Frankston-Flinders Road and took hold amongst all the wood, creating a challenging inferno.

The fire was held at the timber yard before embers flew across the road and landed in bushland at Warringine Park igniting a new blaze that again rapidly headed south driven by strong winds of up to 90 km per hour. Tankers reached Seaglades Lane in Bittern as the fire emerged from the scrub land and began to menace housing. Multiple spot fires began, some quite close to properties but were rapidly extinguished by the crews that were protecting them. A new defensive line was drawn up at Woolleys Road in order to try and halt the spread of the fire before it was able to threaten housing in Crib Point.

At 8pm that night the fire was declared under control with it largely having been extinguished. However the work did not stop there, throughout the night and into the evening of the 4th of January more crews were rotating in to continue blacking out and keeping a watch on it, to ensure the fire would not reignite.

Author interpretation after site inspection:

Dotted line = fire perimeter at 5pm, before wind change, solid line = area burnt after wind change

Patchily burnt south of red line

Update 6/1/14 CFA website
Edenhope 1600 ha JOHNSONS TRK
Updated: Tue 06 Jan 08:56 PM
Started: Sat 03 Jan 01:51 PM

Little Desert 13.4 KM SSW OF DIMBOOLA WALLABY TRK
Updated: Tue 06 Jan 05:34 PM
Started: Sat 03 Jan 02:59 PM
Description: Bushfire
Size: 1100.00 HA.

LITTLE DESERT - LILLIMUR TRK
Updated: Tue 06 Jan 01:02 PM
Started: Sat 03 Jan 07:11 PM
Description: Bushfire
Size: 505.00 HA.

Black Range, Grampians ROCKLANDS - REES RD
Updated: Tue 06 Jan 04:46 PM
Started: Sat 03 Jan 03:08 PM
Description: Bushfire
Size: 1600.00 HA.

2015/16

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
11	9	99

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Estimated damage
27,000ha burnt - public plus private land, 145 houses, 70 sheds, 4500 livestock

Official bushfire records

CFA Annual Report 2016
Major Fires

5-Oct	Wensleydale	10 ha	
6-Oct	Lancefield	3055	3300 Wiki
12-Oct	Tallarook	557	
7-Nov	Strathdownie	10	
17-Nov	Devon North	50	
19-Dec	Wandin	10	
	Scotsburn	4570	
	Epping	163	
	Barnawartha	6708	7000 wiki
	Jamieson Tk	2520	
25-Dec	Sunbury	10	
18-Jan	Crib Point		90 wiki
19-Jan	Edgecombe	100	
13-Feb	Dereel	150	
23-Feb	Mt Bolton	1202	
	Somerville	3	
			19172ha

DMBCL (2016)
15,000 ha of crown land burnt, estimate
? fires reported on crown land.
FRB 198,000 ha
DELWP attended 1148 fires

DELWP Annual Report mentions only two bushfire events.

"On 19 December 2015, two bushfires were ignited by lightning strikes in Victoria's Barwon Otway area. Between 19 December 2015 and 21 January 2016, the bushfire that became known as the Wye River–Jamieson Track fire burned 2,500 ha in the Otway Ranges in the Lorne-Wye River region. By the end of 25 December, the fire had destroyed 116 structures– 95 in Wye River and 21 in Separation Creek and damaged many others. The Wye River–Jamieson Track fire continued to burn for 34 days until it was contained on 21 January 2016".

"On 30 September 2015, DELWP conducted a planned burn at Lancefield-Cobaw Croziers Track in the Macedon Ranges – a standard practice in DELWP's Bushfire Fuel Management Program. Three days later, the burn breached containment lines and burned for a further 10 days. The fire was contained on 13 October 2015 after burning more than 3,000 hectares, destroying a number of dwellings, sheds, and many kilometres of fencing. In response to the fire, the Victorian Government announced an independent investigation to be led by Mr Murray Carter"

Comment: Whereas the victims and onlookers saw these events as preventable DELWP-caused disasters, DELWP promoted its response to the disasters as positive initiatives. They have found the perfect Pollyanna response to disasters of their own making:
Pollyanna now says, I know the waste paper bin was lit by a match you had, but I can't be mad at you because you were so helpful and enthusiastic when removing all those nasty burnt things.

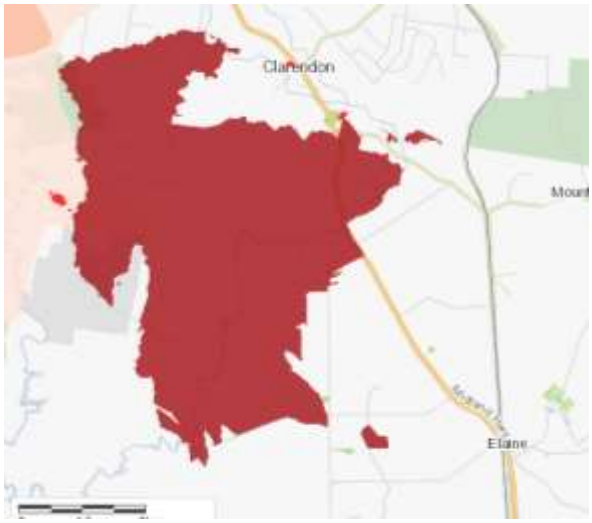
ICA Catastrophe Data
1
A four day stretch of high temperatures across Victoria has led to 300 bushfires in a short period of time. Loss to fencing and outbuildings has been widespread, however as at 20th December 2015 only 3 homes have been lost at a fire to the south of Ballarat (Scotsburn). This event was not declared as a catastrophe for insurance purposes. This insured loss estimate is based on market submissions to ICA from greater than 50% of market, modelled to estimate the industry loss estimate.
$5M

2
116 homes were destroyed on Xmas day in a fire that impacted the communities of Wye River and Separation Creek along the Great Ocean Rd in Victoria. The ICA declared Catastrophe Event 158 on the 26th of December.
A number of community forums were held by insurers to assist local residents with navigating any issues throughout the event. At the 12 month anniversary for the event approximately 91% of claims were closed. The site of this fire presented a number of key challenges for residents and their insurers. In the first instance, the terrain was very steep, access limited and the distance to waste stations considerable. The estimated cost for removal of debris at each site was (due to these factors) considerable (average $55,000), with some sites requiring clearance by hand with workers on safety lines. The VIC government quickly recognised the challenge this issue presented and the potential impacts for residents whose underinsurance situation would be exacerbated. The VIC government and insurance industry executed a clean-up and cost sharing arrangement, limiting the impact on residents and getting the works completed in the safest and quickest timeframe possible. A total of 8 disputed claims were referred to the Ombudsman, equating to 1.5% of claims. Community forums for policyholders with the ICA were held on 21/1/16 (Melbourne), 31/1/16 (Wye River) and again on 15/2/16 (Wye River). The ICA maintained a permanent presence in the impacted area from 2/1/16 - 16/1/16.

* Insured Loss Value, $109.8M (77% Domestic, 23% Commercial).
* Lodged Claims, 527

- 235 Residential Building Claims
- 177 Contents Claims
- 16 Domestic Motor Claims
- 12 Domestic Other
- 65 Commercial Property Claims
- 8 Commercial Motor Claims
- 10 Business Interruption Claims
- 4 Commercial Other

Scotsburn fire Dec 2015 4570 ha



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Jamieson Track fire Dec 2015 2520ha

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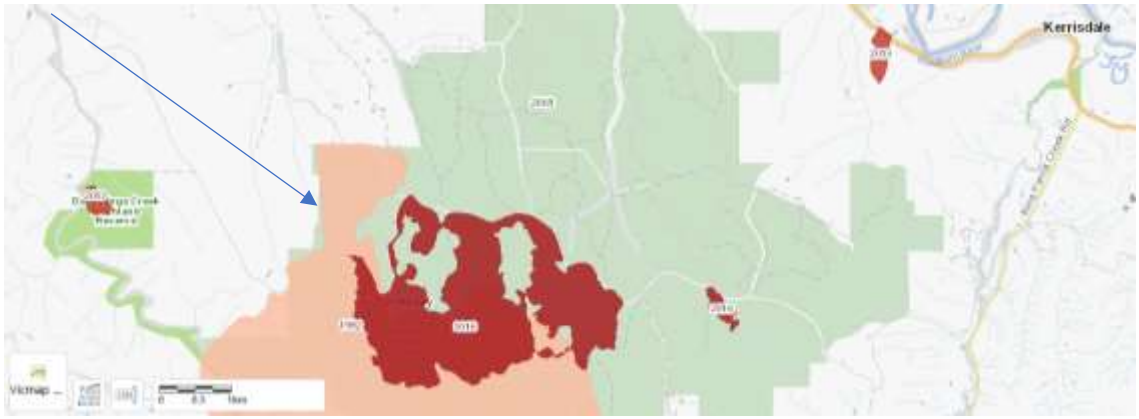
Tallarook fire 6 – 9 October 2015 562ha



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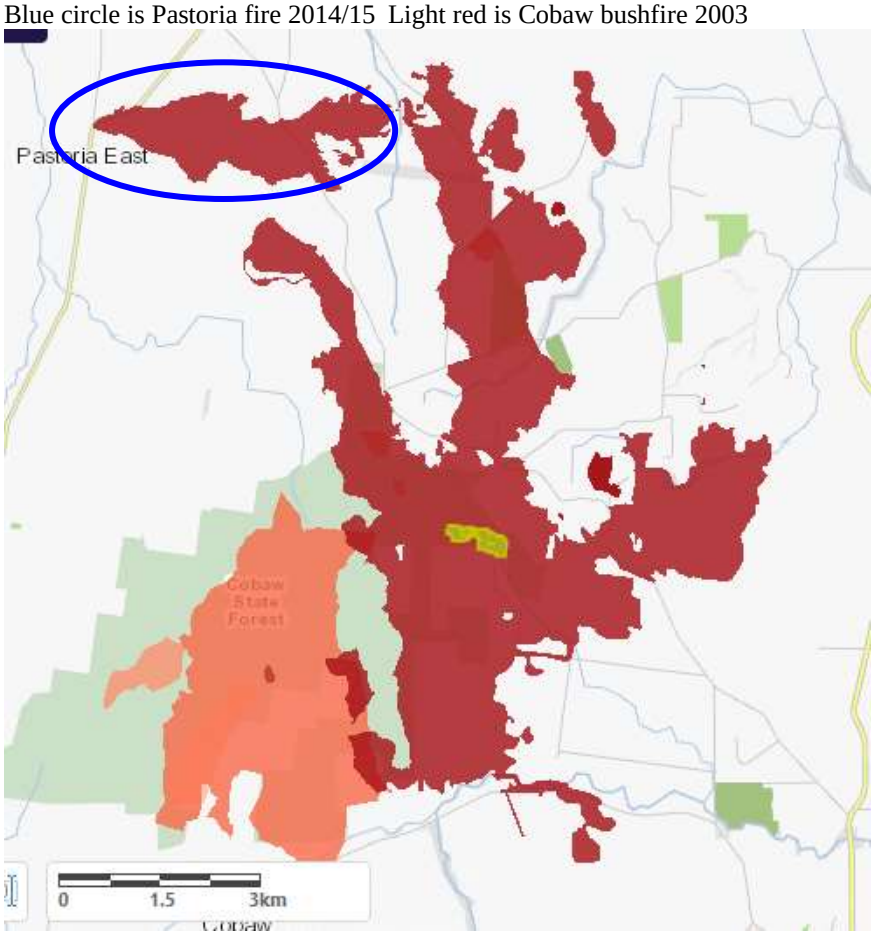
Lancefield fire 6 – 10 Oct 2015 3,000ha
Blue circle is Pastoria fire 2014/15 Light red is Cobaw bushfire 2003



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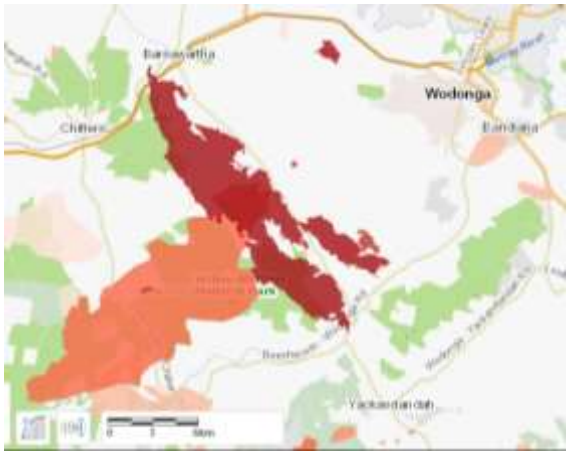
Barnawartha fire Dec 2015 6708ha



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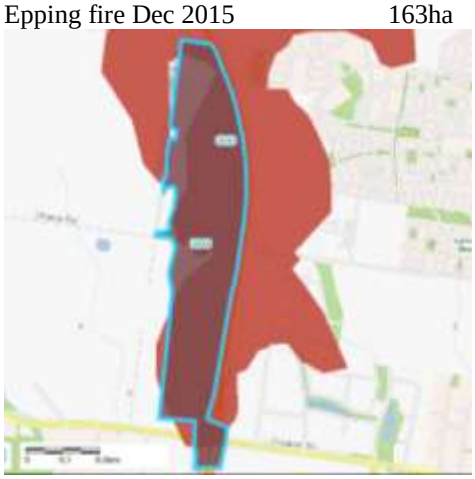
Epping fire Dec 2015 163ha overlaid onto Donnybrook fire 2013



http://mapshare.maps.vic.gov.au/MapShareVic/index.html

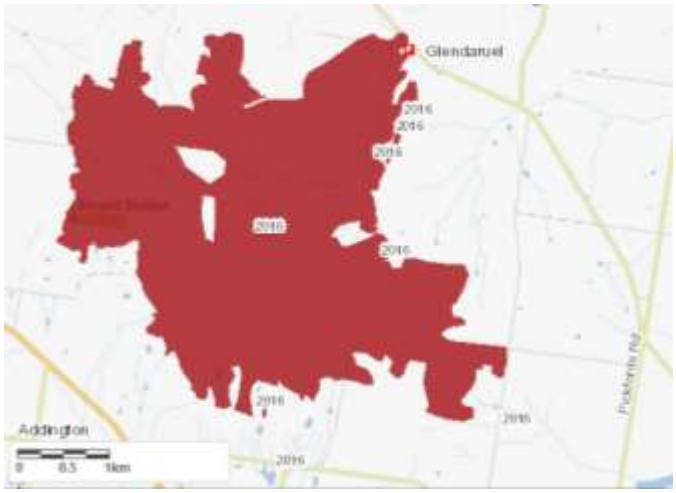
Crib Point fire Jan 2016

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Dereel fire Feb 2016

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Mt Bolton fire Feb 2016 1200ha



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Reported bushfire events

Tallarook fire

Fairfax Media (The Age) October 7, 2015 - 4:01PM
Melbourne Express bushfire updates: Wednesday, October 7, 2015
Patrick Hatch
This is a live blog bringing you the latest news as bushfires rage across Victoria. Get in touch via email or tweet me at @pwhatch.

11:15am: At the **Mt Hickey Road fire, at Tallarook,** the fire is affecting the townships of **Trawool, Granite and Kerrisdale** and those in the area are advised to leave now.
The fire began yesterday and a large bushfire in the **Tallarook Range, near to Broadford.**
"Unpredictable weather conditions have caused the fire behaviour to become erratic and firefighters are continuing their efforts in difficult terrain," the CFA says.
"Wind gusts are causing the fire to burn in several directions, and there has been significant spotting activity.

The Age October 8, 2015 - 10:12AM
Victorian bushfires 2015: Firefighters battling Lancefield and Tallarook blazes race to make most of mild conditions
Marissa Calligeros
There are two larges fires burning in central Victoria – one north of Lancefield and another at Tallarook near Seymour.
Firefighters are confident they will be able to take advantage of the cooler conditions on Thursday to contain the Lancefield blaze.
A reprieve from the hot, gusty weather on Wednesday night gave firefighters an opportunity to attack the blaze, although the fire had split into a number of different fronts.
The weather bureau is forecasting another mild day in the region, with south-easterly winds reaching only 15km/h.
A team of 200 firefighters, backed by at least five water-bombing helicopters and 80 trucks and bulldozers, are again at the Lancefield forefront.

Meanwhile, 100 firefighters are battling the flames at Tallarook. A watch and act alert for the towns of Trawool, Granite and Kerrisdale, near the Tallarook blaze, has been downgraded to an advice.

Community meetings will be held at the Lancefield Mechanic Institute on Thursday at 11am and 8pm.
Meanwhile, residents are fuming that the government-controlled burn-off went ahead last week, despite the forecast for high fire-danger weather conditions.
Murray Carter, director of Western Australia's Office of Bushfire Risk Management, will lead an external review of the decision to conduct the burn-off.
The burn-off was conducted by the Department of Environment, Land, Water and Planning last Wednesday. It jumped containment lines during the AFL grand final on Saturday afternoon.
Mr Carter has been appointed to examine all aspects of the burn-off, including its timing, communication with the community and how it got out of control.
He is expected to present his findings to the government in three weeks.

We share your anger, Andrews tells owners of homes imperilled by bushfire following planned burn
By Richard Willingham, Liam Mannix, Patrick Hatch
The Age Updated 8 October 2015 — 9:10pm first published at 5:21pm

Fire crews had made significant gains at the 500-hectare fire in Tallarook on Thursday, with the fire now burning within containment lines, the CFA said.

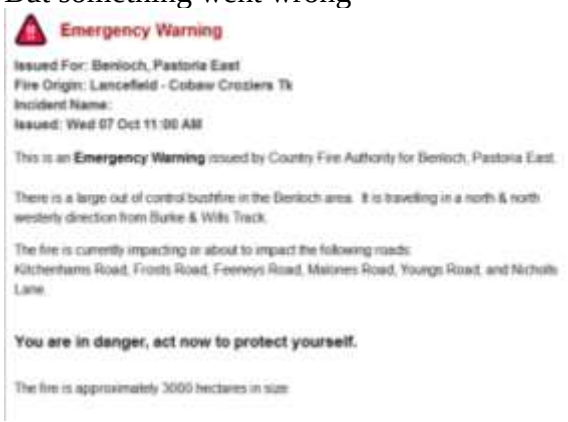
The Age 9 October 2015
Victorian bushfires 2015: Homes lost as blaze rages near Benloch
Marissa Calligeros
More than 100 firefighters have gained the upper hand at Tallarook, where a fire is now burning within containment lines.

The Age October 10, 2015
Victorian bushfires 2015: Lancefield fire timeline
Rachel Wells
SAT 10 Oct
The State Control Centre spokeswoman said firefighters had constructed a control line outside the Lancefield fire to stop it from spreading.
"Overnight the conditions were perfect for the crews to keep working ...with back-burning operations ...getting rid of the remaining vegetation and fuel," she said.
She said 400 personnel, 67 trucks, eight helicopters and several bulldozes and excavators were deployed on the Lancefield fire. There were 100 personnel, six helicopters and 43 trucks at the Tallarook fire.

Lancefield fire escape

September 2015 Approved planned burn Lancefield approx 260ha

But something went wrong



Emergency Warning

Issued For: Benloch, Pastoria East
Fire Origin: Lancefield - Cobaw Croziers Tk
Incident Name:
Issued: Wed 07 Oct 11:00 AM

This is an **Emergency Warning** issued by Country Fire Authority for Benloch, Pastoria East.

There is a large out of control bushfire in the Benloch area. It is travelling in a north & north westerly direction from Burke & Wills Track.

The fire is currently impacting or about to impact the following roads: Kitchenhams Road, Frosts Road, Feeneys Road, Maloneys Road, Youngs Road, and Nicholls Lane.

You are in danger, act now to protect yourself.

The fire is approximately 3000 hectares in size

Red Eagle's interpretation of fire behaviour

(1) What weather occurred at the fire on 6th October?

The Weather Bureau's Kilmore Gap is some 20 km east of the fire area, so its weather will be similar to Lancefield, and probably experienced at Lancefield approx 30 minutes ahead.

Estimated Lancefield time	Kilmore Gap Time	Temp C	RH %	Wind speed at tree tops Kph	Wind direction	Fire Danger Index (FDI)
11.30 am	12 pm	27	11	40	N	50
12.30 pm	1	29	14	55	NW	70
1.30	2	30	14	45	NW	55
2.30	3	30	13	45	NW	55
3.09	3.39	30	16	35	W	45
3.30	4	28	13	35	W	45
5.10	5.40	21	47	22	S	< 10
5.30	6	17	65	28	SSE	< 10
6.30	7	14	80	32	S	< 10
7.30	8	14	80	35	SSW	< 10
8 - 11	8.30 – 11.30	12 - 10	66 – 75	25 - 35	SSW	< 10

The weather remains mild and at low fire danger for the following few days, eg, mid afternoon on 7 October is Temp 13C, RH 55%, wind 32 kph from S and FDI < 10.

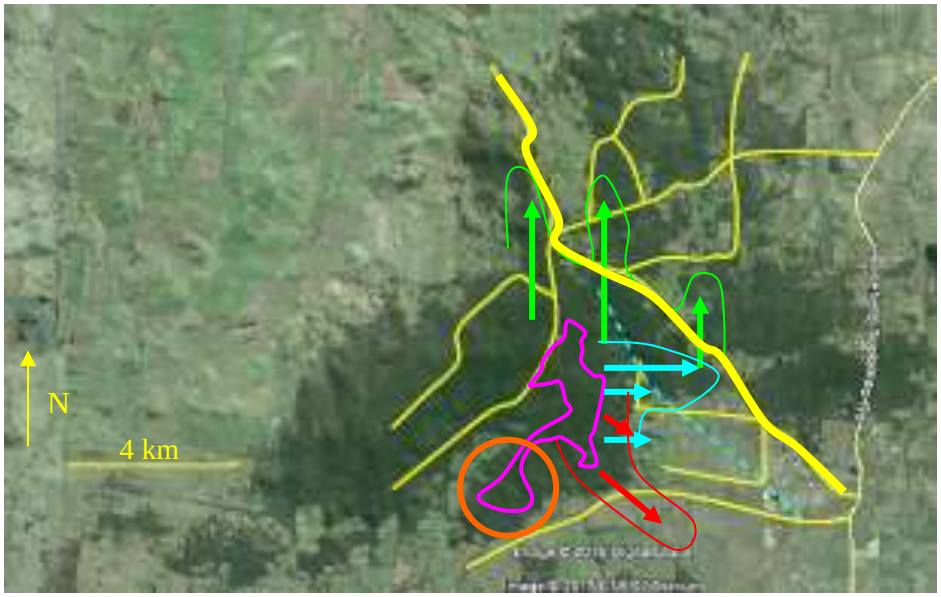
(2) How and when does the fire respond?

There are three deduced escape runs from the burn area. The analysis distinguishes the run of flame fronts from the throw of embers that generate spot fire runs:

Around midday First flame fronts escape under NW wind and by 3pm, has run approx 3 km to the East South East through paddocks. Wind probably pushes spot fires from northern part of eastern flank into private property forest.

Approx 3 pm Wind change to westerly pushes embers from eastern flank further into private property forest. The spot fire flame fronts stop at forest edge, 1.5 km away from burn area. The wind possibly also pushes embers further east into state forest and across creek. Leading spot fires are probably just west of Bourke and Wills Track by 5 pm, a distance of 3 – 4 km from the burn area. I expect the 4 km distance between burn area and Bourke and Wills Track to be scattered spot fires of variable size.

Approx 5 – 5.30 Wind change to southerly means the 4 km of scattered spot fires now becomes of 4 km width of scattered fire fronts, running north in tandem The initial wind is only 20+ kph at tree tops, and the air's humidity is very high, but this helps push the flame and embers slowly northward. Wind speed picks up after 6.30 pm. I expect that a number of spot fire fronts were slowly running to the north at this stage and that all stopped dead at the Bourke and Wills Track. The wind was strong enough to throw some embers across it into the Benloch area. The first CFA warning about embers into the Benloch area was not until 7 pm. Each spot fire front is narrow and is moving northward at snail's pace. No flame front could possibly have crossed Feeney's Lane and Kitchenhams Rd. The high humidity, low temp and cool wind makes the fine fuels rather moist.



This is a map of probable fire extremity at 8pm on 6th October. The area within the boundary lines is partially burnt by many spot fire runs. The arrows represent spot fire runs. Pink outlines the control burn area, less the orange circled area which was probably not burnt. Thickened yellow road is Bourke and Wills Track, which is a 7 – 8 wide bitumen road with another few metres of fuel free shoulders.
Red arrows and red extremity show flame spread between 12 and 3pm.
Blue arrows and blue extremity show flame spread between 3 and 5pm

Green arrows and green extremity show flame spread between 5 and 8pm

The Age October 7, 2015
Victorian bushfires 2015: Lancefield fire timeline
Rachel Wells
Bushfires 2015: 'There will be an investigation'
Lancefield community informed an investigation into the fire will be conducted and answers will be received regarding questions to the planned burning.
Residents in central Victoria are angry that a controlled burn that was started in the Cobaw State Forest a week ago has twice broken containment lines, threatening hundreds of properties and destroying one home.
This is how events unfolded.
Tuesday, September 29: The Bureau of Meteorology forecasts temperatures in the 30s over the long weekend for Victoria.
Wednesday, September 30: Residents receive notification via text message about a planned controlled burn by the Department of Environment, Land, Water and Planning in the Cobaw State Forest. The planned burn is lit about midday near the intersection of Croziers Track and M&M Track, 10 kilometres north-west of Lancefield.
Thursday, October 1: Fire officers from the DELWP monitor the controlled burn. Nearby residents report seeing small amounts of smoke.
Friday, October 2: The controlled burn remains within containment lines and is monitored by officers from the DELWP.
Saturday, October 3:
1pm: Residents notice increasing amounts of smoke as the temperature climbs above 25 degrees. Manned vehicles from the DELWP remain in the area.
4.35pm: Resident Peter Carbonell notices flames at the back of his property about 500 metres from the Cobaw State Forest and calls triple zero.
5pm: Up to six CFA fire trucks and several DELWP vehicles battle to contain the blaze threatening Mr Carbonell's property. The Country Fire Authority confirms the controlled burn has broken containment lines.
10.30pm: CFA units leave Mr Carbonell's property. The fire is considered safe.
Sunday, October 4: DELWP officers continue to monitor the burn.
Monday, October 5: Temperatures in the area top 30 degrees.
Tuesday, October 6:
2pm: An emergency warning is issued after the fire breaks containment lines for a second time, this time at Three Chain Road and races towards Lancefield.
4pm: A south-westerly wind change pushes the fire in a north-easterly direction towards Benloch and Nulla Vale.
A house on Three Chain Road near Lancefield is destroyed overnight.
Wednesday, October 7: More than 200 homes remain under threat as the 3000-hectare blaze enters its second day. At 12.30pm the CFA issues an emergency warning to residents of Benloch to take shelter.

Herald Sun October 07, 2015 4:59PM
CFA crews battle bushfire north of Lancefield, central Victoria
Andrea Hamblin, Monique Hore and Andrew Jefferson

The Lancefield-Cobaw fire continues to move north and an emergency warning was issued at 12.19pm for Benloch, Pastoria East, Pastoria, Nulla Vale, Baynton and Emu Flat.
It is believed four buildings have been destroyed while a further 10 are under immediate threat in Benloch, about 80km north of Melbourne.
The blaze is growing as spot fires are fanned by fierce winds heading north.
The bushfire is travelling northwest from the Burke and Wills Track and Kitchenhams Rd.
Firefighters continue to protect houses from "ember attacks".
The *Herald Sun* is aware of at least one man who is refusing to leave his house on Feeneys Lane.
David Pryse called his wife Robyn this morning to report that he was safe and being helped by CFA crews.
A bucket helicopter was directed to Feeneys Lane shortly before 11.45am and strike teams are on the scene.

It comes as Emergency Management Commissioner Craig Lapsley said people whose property has been damaged in the Lancefield bushfire will be compensated after a planned burn leapt out of control in extreme weather conditions.
Strong, unpredictable winds are making conditions difficult for firefighters.
It was hoped a temperature drop would bring relief but "erratic" winds have made conditions difficult for firefighters who are now battling multiple fire heads.
There are 200 properties in the fire danger zone, the CFA said.
A home and a number of sheds in Cobaw were destroyed yesterday and about 300 other homes were threatened as 200 fires raged across Victoria.
There are 20 fires still active across the state, the CFA said today.
Greg Murphy from the Cobaw fire incident control centre said no further homes had been lost overnight but the number may rise.
Deputy incident controller Lee Gleeson says more than 200 firefighters worked at Lancefield overnight, but there could be more than 400 on the scene today.
"Unfortunately, we're expecting strong winds all day again, 40km/h to 60km/h winds from the south and the southeast all day," Mr Gleeson said.
Mr Murphy said: "It won't be an easy day but by no means will it be as difficult as yesterday was. We'll have a better chance today of getting on top of these conditions."
An elderly man from Benloch who was reported missing has been located at his home.
The Department of Environment, Land, Water and Planning was criticised for setting a planned burn in the Cobaw State Forest last week, which jumped containment lines on the weekend before becoming out of control yesterday.
DELWP chief fire officer Alan Goodwin says there will be an independent inquiry into the fires.
Mr Goodwin has faced hundreds of angry locals at a community meeting in Lancefield who are demanding to know why the department went ahead with planned burns despite forecasted sweltering temperatures.
"If we lit these fires we'd go to jail," one man yelled.
Residents shed tears and many struggles to hold back their anger, often interrupting officials.
Mr Goodwin agreed there needed to be an investigation into how the fire broke containment lines and into the response which followed.
"It's not good enough," he said.
"We're getting some outside experts to run or lead an investigation...to look at what happened."
Locals claimed that there were a lack of resources directed to the fire when it first became out of control on Saturday.
Environment Minister Lisa Neville said weather conditions were not originally predicted to be as hot and windy when the burn started.
"There's always an investigation where a planned burn does break the lines, we have less than two per cent of our burns do that," she told 3AW today.
Mr Lapsley yesterday said bushfire was "very difficult" to control, especially in the heat and strong winds.
A specialised firefighting helicopter was deployed from Sydney to help battle the blaze.
Residents criticised the decision to start the burn last Wednesday.
Federal Environment Minister Greg Hunt wrote to Premier Daniel Andrews demanding an explanation.
"There could not have been clearer warnings of high winds and hot weather,'' Mr Hunt told the *Herald Sun*.
"Controlled burning is an essential part of protecting our landscape, but the rules are very simple: burn when it's cool; don't burn when it's hot and dry," he said.

The fire near Three Chains Road near Lancefield. Picture: Jason Edwards

Residents yesterday help defend Steve (blue shirt) and Susie Kosa's property on the Burke and Wills Track near Lancefield. Picture: Jason Edwards

Edgar's Mission Farm Sanctuary in Lancefield was thankful for a narrow escape after a wind change about 5pm turned the flames away from the not-for-profit animal shelter.
"These animals have already cheated death once so I wasn't going to allow anything to happen to them," founder Pam Aherne said.

Firefighters also brought under control a separate 30ha fire that had threatened homes at Calder Park and closed the Calder Freeway's westbound lanes.
Authorities were investigating whether the blaze was suspicious.
A separate grassfire at Tyabb, which threatened a steel factory, was deemed suspicious.
Mr Lapsley warned that Victoria was not forecast to receive any significant rain this month.
"This is the drying period that sets up the summer," he said.
"We have not experienced these types of temperatures or wind speeds in the first week of October in the history of Victoria, so it has taken us to a new space."
Mr Andrews urged Victorians to prepare for a "dangerous summer", saying the fire season was "absolutely on us".
"You've got to get your fire plan in order — and you need to do it right now. There's no time to waste — this cannot be put off under December."

Herald Sun October 7, 2015 5:07pm
Compensation for owners of razed homes after planned burn leapt out of control
Tom Minear,
PEOPLE whose property has been damaged in the Lancefield bushfire will be compensated after a planned burn leapt out of control in extreme weather conditions.
Emergency Management Commissioner Craig Lapsley said authorities would work to "ensure people are compensated and it's done in a way that includes and understands the concerns of the community".
"The community is asking a lot of questions and rightly so," Mr Lapsley said.
He said discussions had already started with one land owner whose fence was damaged over the weekend and that authorities would work with other residents in the coming days.
The 3000ha Lancefield blaze continues to burn and has destroyed at least four houses, many sheds and significant stretches of fencing.
Mr Lapsley said an independent review would be carried out as residents "demanded answers" after the planned burn was started last Wednesday.
Road closures are expected to remain in place in the area as two fire trucks were hit by falling trees. One truck suffered significant damage but no firefighters were injured.
"That tells you how risky and how dangerous these fire grounds can be," Mr Lapsley said.
"Police won't reopen the roads until they're assessed."
He said winds of up to 60km/h had continued to fan the Lancefield fire and a 600ha bushfire in Tallarook.
Mr Lapsley warned Victorians to do their fire prevention work immediately as a horror fire season loomed.
He said this month would be one of the "driest periods on record" and more strong winds and hot days spelled danger for Victoria.
"We will see more fires in the landscape in October than we've probably ever experienced in Victorian history," Mr Lapsley said.
"Many people may not have done their fire prevention work ... It's time to take action."
"We have a significant dry period with us and it's not going away. There is no rain."
He said there were no more "significant" planned burns organised but suggested there may be a strategic need for more burn-offs to protect communities.
More CFA volunteers are due to start work soon and Mr Lapsley said Victoria's firefighting resources were strong.
"The issue we'll have is about fatigue," Mr Lapsley said.
"A long, dry hot summer that starts in October and has got the potential to go all the way through to March is something we'll probably all be sick of in only a matter of weeks."
Coalition upper house leader and Shadow Minister for Health Mary Wooldridge said the investigation into the Lancefield planned burn should consider whether last Friday's public holiday meant the capacity of firefighting forces was reduced.
"Daniel Andrews must tell Victorians whether his public holiday reduced staffing resources and hampered their ability to manage planned burns," Ms Wooldridge said.

"If we have a government more focused on gifting days off than protecting communities from bushfires that would be a dangerous breach of community trust."

The Age Updated 8 October 2015 — 9:10pm first published at 5:21pm

We share your anger, Andrews tells owners of homes imperilled by bushfire following planned burn

By Richard Willingham, Liam Mannix, Patrick Hatch

Firefighters hope to take advantage of forecast mild conditions on Friday to tame the planned burn that became a raging fire, destroying at least two homes and seven sheds in Central Victoria.

On a visit to the bushfire-ravaged town of Lancefield on Thursday, a frustrated Premier Daniel Andrews said locals had a right to feel angry.

Authorities had hoped to contain the 4000-hectare blaze north of Melbourne on Thursday, but difficult terrain has hampered efforts.

The CFA is now hopeful of containing the fire on Friday before a northerly wind change and possible thunderstorms on Saturday.

"The fire is burning slowly, it's really just the rocky and steep terrain that's stopping us getting in there and finishing the job off," CFA spokesman James Todd said.

Mr Todd said forecast temperatures in the mid-20s and light winds on Friday offered a window of opportunity to get the fire under control before the weekend.

Mr Andrews left Parliament early on Thursday to visit the bushfire-stricken town with a message for furious locals: "You have a right to be [angry], and we're pretty angry too".

Hundreds of people do not yet know if their houses have survived the blaze that swept north through the small town of Lancefield, as CFA and police roadblocks remain in place.

Illustration: Ron Tandberg

Some residents have been allowed to return to their homes within the fire-affected area and safety teams are assessing the area so more can do the same.

The Premier met CFA volunteers and locals affected by the blaze, before being drawn into a conversation with a young local woman who, close to tears, told him of her fears of bushfire in a town where mobile phone reception is patchy at best.

"You should have been here yesterday, people were pretty angry," she said.

"I cannot explain to you why what happened, happened. But that's why we're having the review. Strength to you. It cannot be easy," Mr Andrews replied.

One man believed he had suffered almost $100,000 dollars in property damage from the fire, caused by a backburn that quickly got out of control in boiling and blustery conditions.

He is already planning a class action against the government.

In Melbourne the government moved to hose down allegations that the planned burn was inadequately staffed due to the inaugural grand final eve public holiday and poor management.

Department of Environment, Land, Water & Planning chief fire officer Alan Goodwin said the Cobaw forest burn off's escape was regrettable. He denied emphatically the operation had been understaffed and ignorant of pending heatwave conditions.

"Going into a public holiday and a long weekend has no impact on the way we resource our burns anywhere in the state," Mr Goodwin said.

"It is certainly regrettable, our staff are stressed about this, it is important to support them."

The state government has appointed the director of Western Australia's Office of Bushfire Risk Management Murray Carter to lead an inquiry into how a planned burn got out of control.
In Lancefield locals spoke openly about their frustration. One woman spoke with a police officer about the penalties for speeding past a roadblock outside her house and whether police would actually pursue her, appearing to genuinely contemplate the possibility.
Many locals spoke of phone and electricity lines cut, and mobile phones with no coverage. Some, seemingly at random, received emergency alert text messages, while others did not.
Ken Wright called on police to focus less on roadblocks and more on arresting the "moron" at the department who controlled the backburn.
"Heads should roll," he said.
At the historic Mechanics Institute in Lancefield 200 locals gathered to receive updates on the fire situation and vent their fury at government and emergency services representatives.
The real venom of the meeting was reserved for a representative from the agency that conducted the burn off.
"We saw the smoke for five days," Steve Brain, who lives on Three Chain Road, told the meeting. "And on the day that was vital they did not have helicopters up in their before it started. We've had this before and it's been covered up."
Several other community members told *The Age* their homes and properties had been affected by backburns gone wrong in years prior.
Fire crews had made significant gains at the 500-hectare fire in Tallarook on Thursday, with the fire now burning within containment lines, the CFA said.

The Age Updated 20 November 2015 — 12:02am, first published 19 November 2015 — 5:02pm
Independent report condemns Environment Department's handling of Lancefield planned burn
By Darren Gray

A botched fuel reduction burn near Lancefield which destroyed homes was under-staffed, inadequately planned and risks like "heavy" fuel loads in the area were not properly recognised, a damning independent report on the blaze has found.
The burn – which escaped Environment Department fire crews twice – became an out of control bushfire that destroyed four houses, sheds, farm equipment and fences. It also burnt out bushland and farmland, and infuriated and devastated locals.

The report also revealed that there was no accredited burn officer-in-charge present on the day of the government's controversial Grand Final Eve public holiday, two days after the burn was lit.

The report said sound management and control of the burn, and good decision-making was impeded "by inadequate planning, risk assessment and earlier decisions such as the lack of continuity of burn OICs (officer-in-charge) across the days of ignition including Friday, October 2, when no accredited burn OIC was present. There was a lack of adequate resourcing throughout the operation," the report, led by West Australian bushfire expert Murray Carter, found.
"From the first ignition, resources were insufficient to manage the burn and to maintain burn security when additional pressures such as escapes occurred," it said, of a burn lit two months before the start of summer.
The planned burn was lit on Wednesday, September 30, two days before the government's inaugural AFL grand final eve public holiday. It first breached containment lines on grand final day, and then again on the following Tuesday under fierce conditions.
Asked whether the grand final eve holiday, or grand final day contributed to a lack of staff on the fire, Environment Minister Lisa Neville said: "No. Absolutely not. Staffing levels are based on risk assessment, they're done at an operational level. And if the fire had been assessed as higher risk ... more staffing would have been available."
But asked whether the burn should have been lit in the first place, she said: "It probably should not have been lit, given the broader circumstances."
The secretary of the Environment Department, Adam Fennessy, apologised repeatedly and profusely to Lancefield locals at a packed community meeting held to discuss the report. The burn was planned, conducted and patrolled by staff from his department.
"I am very sorry, I am deeply sorry for the distress this fire has caused you. And the disruption and the enormous impacts it's had on your lives. When this planned burn escaped containment lines it

threatened you, it threatened your properties and threatened you as a community – and we let you down," he said.
It was just one of a number of times Mr Fennessy said sorry to locals over the fire.
"I want to start the rebuilding of trust process by apologising," he said early in his address.
"I am here today to say sorry to you and your community."
Ms Neville also said: "What's occurred in Lancefield was unacceptable and the department will now work hard to ensure it has better systems and processes in place to help rebuild community trust in planned burning."

The report, which was released less than seven weeks after the houses were destroyed, also found:

- Communication by the department with the local community was inadequate at all stages of the burn, "including planning, implementation and after the escape".
- Many staff did not have sufficient awareness of the risks posed by heavy fuel loads inside the burn area.
- "A failure of decision-making" in not significantly ramping up resources after the burn first escaped on grand final day.
- Greater thought should be given to using aircraft to conduct burn security surveillance.
- Decision-makers failed by not "significantly elevating" resource levels in anticipation of adverse fire weather forecast for October 6.

The report made 22 recommendations to improve the department's planned burning program including; a call for greater recognition of "drought factors" when conducting burns, the department should consider planned burning just one of many options for managing bushfire fuels, and, that a burn scheduled for lighting should have a current and useful risk assessment. All 22 recommendations have been accepted by the department.

Also on Thursday the state government confirmed it would drop a key recommendation from the Bushfires Royal Commission, that planned burning be done on 5 per cent of public land per year to reduce bushfire risk. The government confirmed it would move away from the hectare-based target, which roughly equates to about 385,000 hectares a year, from 2016-17. The government move was widely expected. The 5 per cent of public land target will be replaced by a "risk reduction target", a strategy recommended by the state's Inspector-General for Emergency Management.

Scotsburn fire

ABC on line Updated yesterday 19 / 12 / 2015 at 3:58pm
Victorian bushfires: Fire crews battle to get blazes under control in hot, windy conditions

Photo: Flames burning behind a petrol station at Epping. (ABC News: Stephanie Anderson)

A number of fires continue to burn in hot, windy conditions in Victoria, but all of the emergency warnings have been downgraded, CFA officials say.
An emergency warning for a grassfire near Wonthaggi, in South Gippsland has been downgraded to a watch and act message after crews stopped the spread of the fire in the Tank Hill area of Wonthaggi.
Crews have also managed to contain a fire at Rodgers Road at Wandin North and Wandin East.
Police have arrested a 34-year-old man of no fixed address over a suspicious fire that burned around midday at Epping.
That fire has now been contained.
A new watch and act message has been issued for a fire at Scotsburn, Clarendon, Durham Lead and Garibaldi, south of Ballarat.
A small scrub and grassfire is travelling in a southerly direction from Finns R**oa**d Scotsburn.
Another grassfire is burning in the vicinity of South Morang, north of Melbourne near Old Plenty Road.
The fires are burning in hot, dry conditions with a total fire ban in place across the state this weekend.
Temperatures have reached 42.6 degrees Celsius at Mildura and 42C at Longerenong, Mortlake, Avalon and Geelong.

The Age December 20, 2015 - 8:29AM
Victorian fires: Homes lost at Scotsburn after fires tear through Victoria

Up to 10 houses may have been lost at Scotsburn, near Ballarat, as raging fires continue to move across the state with "wind and fire activity" increasing in the early hours of Sunday morning.
The full extent of the damage of fires that tore through Victoria on Saturday, claiming several homes, is starting to emerge.
Homes, sheds and fences sit in a twisted mess at Scotsburn, surrounded by blackened earth, where a grassfire burnt through 3000 hectares.
Incident controller Graham Lay said crews managed the fire well overnight, despite a couple of breakout blazes, including one in a pine plantation.
"We did pretty well," said Lay, "We've got 75 per cent of the fire within control lines, but we're far from out of the woods."
Lay said that 14 buildings have been razed so far, but it is not yet known how many are homes and how many are sheds. An asset assessment team are confirming the losses on the fire ground right now.
The fire, which is now around 3000 hectares, took its initial run on a northerly wind on Saturday, but zig-zagged on frequent wind changes. Lay said the biggest remaining areas of concern were "pressure points" in Grenville, and in particular south of Scotsburn.
Teams there are working hard to stop the fire moving any farther south. Should it break containment lines there, the expected cool change on Sunday early afternoon would push the front to the east, towards the township of Elaine.
"Wind and fire activity increased in the early hours of Sunday, the fire has crossed Sands Road and is moving in the direction of the township of Grenville and Mt Mercer.
"There are additional crews coming into strengthen the firefight and daylight will allow the return of aircraft."
Eleven aircrafts responded, that included 50 trucks and a water-bombing helicopter. The cause of the fire is still being investigated by the police and CFA."

Earlier in the day, firefighters from three Country Fire Authority trucks survived two separate "burnovers" near Scotsburn. The officers were forced to retreat to their trucks as they became trapped by a fast-moving section of fire.
The firefighters turned on their trucks' sprinkler systems and pulled down their protective heat shutters.
"They enacted their safety procedures that they're trained for. They had a successful outcome and they went straight back out on the fire ground," a CFA spokeswoman said.
Hundreds of firefighters were on the ground during the day, while more more than 50 aircraft – including Firebirds and Helitacks – attacked the blazes from above.

He said on Saturday firefighters attended 380 incidents that included 100 grassfires in Victoria. "100 calls were made to the SES for assistance," he said.

At least one fire was allegedly deliberately lit, with a 34-year-old homeless man charged with reckless conduct endangering life, reckless conduct endangering serious injury and committing an indictable offence while on bail in relation to a fire at Epping on Melbourne's northern outskirts.
He was remanded to face Melbourne Magistrates Court on Sunday.

Herald Sun December 21, 2015 9:21am
Victorian bushfires: Evacuations as threat to families continues
Andrew Jefferson, Kara Irving, Anthony Galloway, Ashley Argoon and AAP

UPDATE: CONDITIONS across fire-ravaged Victoria have eased overnight after 12 homes were lost in a bushfire near Ballarat.
Authorities have downgraded emergency warnings and residents have been allowed back into Scotsburn, 17km from Ballarat, to assess the damage caused by a 4600ha fire that surprised crews with its speed and ferocity.
The CFA now considers the Scotsburn fire under control while fast-moving fires in the state's northeast are burning within containment lines.

The stress shows on locals gathered at Buninyong relief centre. Picture: Andrew Henshaw

Meanwhile, authorities are investigating whether a farmer slashing on a total fire ban day caused the bushfire at Scotsburn that also destroyed 30 sheds.
More than 50 fire trucks and crews faced another day of hot and humid conditions yesterday to prevent the 4600ha fire from threatening more properties.
Sovereign Hill's Narmbool farm at Elaine was badly damaged after fire tore through the 2000ha property on Saturday afternoon.
Sovereign Hill chief executive Jeremy Johnson said the fire had destroyed much of the property's fencing and pasture but the historic main building was unharmed.
An unknown number of the 7000 head of sheep on the property are believed to have been killed.

Trevor and Donna Hart inspect the damage to their property in Clarendon, near Scotsburn. Picture: Jake Nowakowski

There were also miraculous tales of survival.
Two Clarendon men dodged the devastating Scotsburn bushfire after jumping in a dam and hiding under a canoe while flames roared overhead.
Another resident was lucky to be alive after being woken from his couch minutes before fire destroyed his home.
Cattle farmer Shaun Mahar survived with only the clothes on his back after fire destroyed his Scotsburn home.
Mr Mahar whisked his wife and young children to safety before a sudden wind change saw fire tear through their home.
"We thought we were safe, then it bloody ripped back this way," Mr Mahar said.

George Woodruff, 88, lost his shed when fire swept through his property near Scotsburn.
Shane and Vicki Donovan's home was burnt to the ground.
"We grabbed what we could, put it in the car and fled," Mr Donovan told Sky News.
"The roof was caved in. You could see the chimney from the inside."
Ennis and Carli Cehic were set to tie the knot at a Scotsburn homestead when the fires interrupted their dream wedding.
"I walked out to greet everyone and as I was walking towards the ceremony, people started running," Mr Cehic said.
"And then I looked to the right and there was a massive bushfire."
The pair eventually said "I do" at a nearby pub, donating their wedding food to local firefighters.
Premier Daniel Andrews yesterday said there had been about 380 incidents reported over the past 24 hours including 100 grass fires and about 300 calls to the SES for assistance.
There is no total fire ban today, but very high fire danger in the North East and North Central districts.
Victoria's four day heatwave ended as temperatures plummeted from 37.2C to 20.8C within a few hours yesterday.
Despite public warnings, police had two call outs to children locked in cars.
Paramedics treated 25 people for heat related incidents.
Ambulance Victoria spokesman John Mullen said there were 15 call outs to patients suffering cardiac arrest, 96 suffering breathing difficulties, 12 heart complaints, and 105 chest complaints which may have attributed to the hot weather.
The temperature is expected to start climbing again on Christmas Eve with a top of 33C forecast for Melbourne.

Emergency warnings in Barnawartha, Indigo Upper, Indigo Valley, Levena and Levena West have been downgraded to watch and act after a cool change brought 20mm of rain to the 8800ha fire zone.

During the emergency, 60 people were evacuated from their homes as the erratic fire jumped containment lines at Leneva, south of Wodonga.
The CFA's James Todd said the fires, centred around Barnawartha, will hopefully be under control by the end of today.
"What we've got is fairly stable weather patterns for the rest of the week," Mr Todd said.
"We'll have cooler weather and more light breezes, with a lot less chance of fires starting from natural events."
There are no confirmed reports of property damage in the Barnawartha fires but residents have taken to social media to post pictures of the fire coming close to their homes.

1.50pm - Accused firebug remanded in custody
A HOMELESS man accused of igniting a fire in Epping that spread through grasslands threatening lives and property has been remanded in jail.
Police believe Glen Boland set off the fire after flicking a cigarette from his camp site near where he has been living on Melbourne's northern outskirts.
Melbourne Magistrates' Court heard Mr Boland, 34, who represented himself and is already on bail for an indictable matter , argue he did not light the fire and in fact tried to put it out.
"I would really appreciate a night at home to get some rest," was Mr Boland's opening to his application for bail.
"I told police I did not start the fire.
"I ran around and tried to put it out."
Police officer Sen Constable Leigh Cole said that on Saturday,
December 19, a total fire ban had been declared across Victoria.
Sen Constable Cole said at 10.15am a grass fire started in an area five metres from where Mr Boland had set up camp.
He testified the fire spread quickly causing the closure of major arterials , evacuations of businesses and caused damage to fence lines.
Arson chemists found cigarette butts at the scene near where Mr Boland's camp was set up , he said. - **Anthony Dowsley**

ABC on line 21/12/2015
Victorian bushfires: Emergency warnings downgraded after 13 homes lost in weekend blazes

Scotsburn fire under control, 12 homes, 30 sheds lost
The Scotsburn blaze near Ballarat burnt through 4,000 hectares over the weekend, destroying 12 homes, before it was contained about 9:30pm on Sunday.
Incident controller Jon Rofe told residents at a community meeting in Buninyong that a significant firefighting team remain on the ground, as crews assess damage to roads and trees.
The meeting also heard that the Midland Highway, closed during the fires, had been re-opened but other road closures would remain in place.
Mr Rofe said people with homes in affected areas would be taken out by bus on "guided tours" with trained firefighters to check their properties.
"This may be a difficult, traumatic situation for you," he said.
Mr Rofe said police had ruled out suspicions that the fire had been deliberately lit, after interviewing a 47-year-old Scotsburn man about how it started.
Emergency Management Commissioner Mr Lapsley said a firefighter was injured on Saturday, and livestock was lost to the blaze.
"A thousand sheep have been lost, five horses from a horse stud in the area, so that has significant impacts, let alone we haven't counted the amount of fences and so on, so a bigger bill, no doubt, but no loss of life," he said.
Scotsburn resident Shane Donovan went home last night to find that his home had been destroyed.

"The neighbour's house was fine, and as we drove down the hill we saw that the road was scorched and when I drove up the drive, I saw that the garage was gone, the roof was caved in," he said.
"Then we drove down towards the house and just saw that the roof was caved in and you could see the chimney from the outside."
He said he evacuated on Saturday after he saw on the CFA app that there was a fire in the area.

"We looked outside and saw the smoke and I had a friend, and I phoned him up - he's CFA - and I said what's this fire at Scotsburn, and he said 'it's a cracker, get out' so we grabbed what we could put it in the car, and fled," Mr Donovan said.

Ballarat Courier December 9 2016
'I just wanted to die': man responsible for Scotsburn fire speaks out
Brendan Wrigley
December 19 last year was a scorcher by any measure.
Temperatures which exceeded 40 degrees coupled with howling winds to provide the perfect cocktail for fire amid the dry farmland south-east of Ballarat.
Scotsburn resident Roger Skimming had been eyeing off the long grass along his fence line for days, and armed with a new tractor and slasher, the 47-year-old cut the overgrown turf in his elderly neighbour's paddock.
After heading back to his house, Mr Skimming returned to move the tractor as the heat continued unabated. It was then the power take-off drive on the slasher snapped, causing a spark which would go on to burn more than 4600 hectares and destroy 12 homes.
"It was the quickest thing I've ever seen," Mr Skimming said of the rapidly growing blaze. "On that day, once the fire had started, I just wanted to die on the spot."
The fire quickly raced away and spread to the surrounding communities of Clarendon, Durham Lead and Elaine before night's end. Mr Skimming called his closest neighbour to warn him of the oncoming danger, before frantically dialing 000.
As hundreds of people evacuated the region, Mr Skimming was unable to leave. With no means of communication, he was left to dwell on the events of that afternoon as the fire continued to rage.
"I never slept for weeks afterwards, but that night I was putting little spot fires out next door, in the backyard," Mr Skimming said. "(I was) just completely physically and mentally wrecked."
In the days that followed, police would call regularly to ensure none of the numerous death threats directed at Mr Skimming had been carried out.
As the dust began to settle on the fire ground and the community efforts to rally around those affected began, rumours around the culprit of the fire ran rife. "I've never denied it," Mr Skimming said, determined to set the record straight. "I correct people when I hear a different story."
The Scotsburn local was charged in June on summons with causing fire during a period of extreme weather conditions and failure to carry prescribed fire suppression equipment, before pleading guilty in October and receiving a $1550 fine with $79.50 costs.
Surprisingly, it was Mr Skimming's failure to carry a fire extinguisher which generated the penalty.
While operating farm machinery on a total fire ban day is discouraged by the Country Fire Authority, it is allowed if the work is deemed essential.
While the punishment might seem insignificant in comparison to the sizable losses of the fire, the emotional toll on Mr Skimming has been enormous.
Weekly meetings with a psychologist have become one of the few regularities in a year which has seen the breakdown of a marriage and the loss of regular work. After a year of living just metres from the site of the start of the fire, the welder has decided to sell his property and start afresh with just his caravan and ute.
"The last 12 months have been the most difficult part of my life," Mr Skimming said. "There's nothing I can do to change what's happened and all along I've felt like I wanted to be punished in some way. "The only thing I could say is sorry… There's no excuses, there's nothing but sorry."
As another fire season approaches, the land which surrounds Mr Skimming's property could not contrast more with this time in 2015. Ground to one side boasts knee-high grass which is yet to dry out, while blackened trees have sprung back to life with intense colour on the other.
"It's a horrible thing to have happened, but I hope that this will save more lives later on," Mr Skimming said about speaking out about the fire.

Barnawartha fire

Emergency Warning: Levena, Levena West

Fire Origin: Indigo Valley
Incident Name: BARNAWARTHA - CHILTERN CONTROL
Issued: 20/12/15 5:54 PM
This is an Emergency Warning issued by Country Fire Authority for Leneva, Leneva West, Huon Creek Road and Castle Creek Road.
There is a fast moving, out of control bushfire travelling in a easterly direction from Indigo Valley towards the Beechworth Wodonga Road.
Spotfires and Ember Attacks are starting up to 2 km ahead of the main.
Extreme fire weather means that the forward spread of the fire cannot not be controlled. A wind change is also forecast that may see the fire spread in a Northeasterly direction. If your plan is to leave your property now is the time to do it.

Herald Sun 20 Dec 2016
Melbourne heatwave: Hot weather hits Victoria
Editor on duty: Staff reporters

1.15pm A FAST-moving out-of-control grassfire is moving towards the Indigo Valley.
An emergency warning has been issued by the CFA for for Barnawartha, Indigo Upper and Indigo Valley.
The fire, which began about midday in Barnawartha, is traveling in a south-easterly direction towards Indigo Valley.
Spot-fires and ember attacks could be up to 4.3km ahead of the main fire, emergency services have warned.
A total of 26 crews are fighting the fire and there has been a request for air support.
Residents have been told it is too late to leave and to act now to protect themselves by taking shelter indoors.
Crews have been sent to help protect houses and commercial buildings in the area.
Indigo Valley Rd is closed. **- Anthony Galloway**

Updated 1 min to midnight
HEAVY rain is helping firefighters battle a bushfire in Victoria's northeast tonight.
The enormous 10,500ha fire almost doubled in size in the space of two hours after it jumped containment lines at Leneva, south of Wodonga.
Bureau of Metereology senior forecaster Richard Carlyon said thunderstorms were bringing much needed rain to the area.
"Thunderstorms are a mixed blessing because of the rain but they have also brought some strong winds to the region," he said.
The highest rainfall in the state was recorded in Wangaratta at 28mm, just 56km west of the fire zones.

ABC on line 21/12/2015
Victorian bushfires: Emergency warnings downgraded after 13 homes lost in weekend blazes
Firefighters across Victoria are using cooler conditions to consolidate containment lines around a number of blazes that erupted across the state over the weekend destroying 13 homes.
The biggest fire, in Barnawartha, burnt about 9,000 hectares, destroying three properties, including one home.
The Country Fire Authority said the fire is being contained and no communities are under threat at this stage.
The CFA's James Todd said overnight rain helped crews control the blaze, which stretched around 50 kilometres in length.
"With heavy rainfall overnight that Barnawartha fire has now been contained and has been stopped at the Beechworth-Wodonga Road," he said.
"There's been a lot of rainfall on that fire ground ... there's still a Watch and Act out for that fire in that area, but we're confident with the milder conditions today, we should be able to mop that up hopefully later today."

Victorian Emergency Management Commissioner Craig Lapsley praised firefighters from across the state for their work over the weekend on the "very intense, fast-moving fire".
After the cool change, fire ratings were downgraded across the state, with temperatures in the 20s, however Mr Lapsley said conditions would worsen again by the end of the week.
"The winds will be up a little bit this afternoon, the key issue is that it will progressively get hotter over the next few days and build to Friday, Friday will be the hottest day, also a windy day ... and that's Christmas Day," he said.
"So we are sort of focusing now towards Christmas Day being the hottest day of the week and between now and then, we want to make sure any fire, any lightning strike that is hitting the bush we get on top of."

Emergency 'brings out humanity'
Ruth Beecham evacuated her home in Yackandandah after it came under ember attack.
She said she had to leave her two horses and three alpacas at the property.
"It was the most extraordinary feeling of guilt and helplessness and I don't know what else ... luckily one of our neighbours, who's brave, stayed and he actually then told us what had gone on," she said.
"He kindly went up to see whether my animals were OK, because that's the horror - even though we opened all the internal gates, a grassfire on hooves, is just like a nightmare."
She said the sense of community at the relief centre was difficult to describe and praised the efforts of volunteers.
She said the conditions during the fire reminded her of Black Saturday.
"It was just incredible and incredibly unsettling, so those fire guys to actually be amongst that, or to even face that, is just so profound, I'm just so grateful, we can never repay them," she said.

Photo: The Barnawartha fire was about 50km in length, the CFA said. (ABC News: Emma Younger)

Jamieson Track fire

The Age December 25, 2015 - 7:11PM
Bushfires Victoria: Evacuation order given for Lorne
Liam Mannix, Chloe Booker, Ben Preiss, Sebastian Vasta

If you are in LORNE, ALLENVALE, KENNETT RIVER or GREY RIVER you are recommended to evacuate immediately.
A bushfire is burning into **Separation Creek** and **Wye Valley**, with house losses expected. A wind change is expected at 7pm which will push the fire toward **Lorne**.

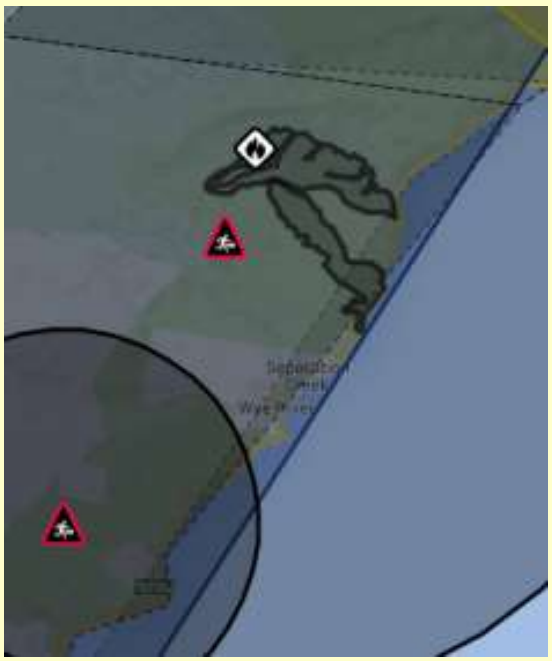
Today's events:

1:39pm: **This is the latest advice on the Wye River bushfire from the CFA**
There is a quickly moving bushfire in the Wye River, Separation Creek area.
This fire is out of control and is expected to impact anytime within the next two hours.
Evacuation Information:
If you are located in Wye River, Separation Creek, it is strongly recommended that you evacuate and seek shelter at 34 Costin Street Apollo Bay, Apollo Bay leisure Centre.
After 25/12/15 1:00 PM it may be too late to leave, take shelter when the fire arrives - protect yourself from the fire's heat.

1:40pm: **The CFA has just issued this update at 1.36pm, recommending people EVACUATE WYE RIVER**
Recommendation to Evacuate
Wye River, Separation Creek
Effective: 25/12/15 1:36 PM
Expires: 25/12/15 2:30 PM
There is a quickly moving bushfire in the Wye River, Separation Creek area.
This fire is out of control and is expected to impact anytime within the next two hours.

1:56pm: The CFA has just issued an updated warning on the **Wye River and Separation Creek bushfire**, here it is. **You are recommended to evacuate**.
Recommendation to Evacuate
Wye River, Separation Creek
Effective: 25/12/15 1:52 PM
Expires: 25/12/15 2:30 PM
There is a quick moving bushfire in the Wye River, Separation Creek area.
This fire is out of control and Why river and Separation Creek are about to be impacted by this fire

1:59pm: This is a map of the **Wye River and Kennett River** blazes. The CFA has issued evacuation warnings for both.
The fire is burning in an easterly direction toward the town of Wye River.



3:38pm: **Fire has now reached the outskirts of the small southern community of Wye River. People in Wye River are warned it is too late to leave, and they should shelter inside.**
"The situation is not fantastic," Emergency Management Victoria spokesman John Schobler just told the ABC.
"This fire has been burning for area for a week, it has breached containment lines today. It has pretty much more than doubled in size.

3:53pm: Age Editor in chief Andrew Holden was among those who evacuated Wye River for Apollo Bay at about 12.30pm after receiving an alert from the emergency services app.
At that time firefighters had already warned campers in nearby parks and were heading towards the township, he said.
"The fire was visible over the hillside, there was only a faint smell of smoke in the village at that point," he said. "That's when the majority of people were being shifted out, I would have thought the village would have been basically evacuated by 1pm."

3:58pm: Here's the CFA's map of the Separation Creek fire. You can see it has now been altered to show that the fire has now entered the northern outskirts of the town. Wye River, which is larger, is the next town along the fire's southerly path.
The CFA advises that it is too late to leave Separation Creek, and affected residents should take cover inside.

5:22pm: The CFA has now issued an evacuation alert for Lorne. Fire sirens in the town have been sounded. Here is the warning:
There is a fast moving bushfire in the LORNE, ALLENDALE, NORTH LORNE AND CUMBERLAND RIVER area.
This fire is not yet under control and is expected to impact anytime within the next four hours.

5:59pm: Meanwhile here's the current fire map for Separation Creek and Wye River. It appears the fire has now reached the outskirts of Wye River.
State Control Centre spokesperson John Schauble said they believed houses had been lost in both Wye River and Separation Creek.
"We just don't know how many at this stage," he said.
"But I think you can assume that there has been property lost because the fire has burnt into the townships."
Mr Schauble said almost all of Why Rivers 80 permanent residents and about 350 holidaymakers had evacuated the town.
About 138 vehicles and 19 aircraft, including two large tankers, are working battle the 1,400-hectare blaze.

6:36pm: The CFA has confirmed at least two homes have been lost in the Wye River and Separation Creek area, reports Chloe Booker.

7:43pm: The CFA has just issued a fresh emergency warning for **Wye River** and **Separation Creek**. If you have not evacuated and remain in these towns, **it is no longer safe to evacuate and you must take shelter**.
Here is the warning: This is an Emergency Warning issued by Country Fire Authority for Wye River, Separation Creek.
There is a fast moving, out of control bushfire travelling in a southerly direction towards Wye River

and Separartion Creek.
You are in danger, act now to protect yourself.
It is too late to leave. The safest option is to take shelter indoors immediately.

7:46pm: John Schauble from the State Control Centre told ABC Radio that the wind change this evening is expected to push the fire back towards Lorne.
"Lorne will see some significant amount of smoke and ash blowing towards the town, people need to not be there when the change comes through. Just stay put...we asking people to not move [into Lorne from the city] and stay where they are."
The fire is now 1700 hectares in size, Mr Schauble said. "The front of the fire has pushed through Separation Creek into Wye River and beyond."
At least two properties have been lost in Wye River but Mr Schauble said "I imagine that will increase as the night goes on and we get better intelligence".
7:51pm: CFA captain Roy Moriarty said they still weren't sure how many houses had been lost in the fire that continues to burn through Separation Creek and Wye River, reports Chloe Booker.
"We've lost homes, but it's probably not as bad as what it could have been and what we thought it would be," he said.

Fire size reported at 7.34pm 25 Dec 2015

Jamieson Track fire growth from 19 Dec to its escape on 25 Dec 2015

Red Eagle's critical assessment of the ability of this fire control team to suppress a small lightning fire, measured against best practice forest fire suppression.
Based on http://www.redeagle.com.au/wp-content/uploads/2016/08/The-Jamieson-Track-bushfire-and-its-escape-into-Wye-River-and-Separation-Creek-townships.pdf

Day 1, 19 Dec 1 minute to midnight summary of fire status: GOING
At midnight, fire still uncontained. Perimeter length unknown, control line constructed was unknown.
Presumed fire area is 1 ha, perimeter 400m, but nobody had assessed perimeter yet.
Objective is to contain perimeter by midday Day 2. (They misunderstand the meaning of "contain" the fire. Their Plan really means to contain the fire's spread ASAP and to "control" it by blacking it out.)
To achieve objective with first attack crew unable to work in the dark, there is still hope, but pressure is now on them or on the changeover shift to track the fire at first light, say 5am, before the forecast wind change arrives.

What happened on Day 1

Lightning fire reported at 4.10pm today in National Park on crest of long spur half way along an old fire track from Wye Rd to Jamieson River. Post-fire site inspection reveals fire origin was 20-minute walk along this track from Wye Rd.
Dozer and first attack crew reached fire origin around 9pm, at dusk, five hours after detection.
First attack crew did not work on line after dark for safety reasons. No extra resources were ordered.
Dozer worked till midnight with fire fighters watching on. First attack crew monitored fire overnight from the track safe in their vehicles.
Today's performance rating against Best Practice forest fire suppression: 0 / 10
Unacceptable delay in fire fighter arrival at fire edge, no effective control line work done overnight by fire fighters, no assessment of actual fire perimeter so that resources can be matched to expected workload and thereby achieve the fire control plan.

Day 2, 20 Dec 1 minute to midnight summary of fire status: GOING
Fire still uncontained. Area now 86ha, perimeter length 6.6km, total control line constructed = 2km.
Objective is to contain perimeter by 10pm Day 3.
Again, they misunderstood the meaning of "contain" the fire. Their Plan really means to contain the fire's spread ASAP and to "control" it by 10pm Day 3 by blacking it out. They did not realise that most of fire edge was already contained by wet line. [Explanation: By definition, the moisture content differential of a wet line is as effective as a dozer track, but if access is limited, some dozer work may be required. Even though fire control plan says build 6 km of control line, most is wet line and only 1km of dozer line construction is required on this fire.]
This control objective is achievable in mild weather
What happened on Day 2:
7.22am Belated crew changeover time. No reports of work on line prior to this. Fire area unchanged, still believed to be 1ha, but this was an assumption because nobody had yet assessed its size.
After crew changeover, fire area at 9am was assessed at 20 ha, perimeter 2.1km, dozers began constructing control line along western edge down to Jamieson River, only 11 fire fighters deployed, no extra resources were ordered yet a vigorous wind change was forecast for this morning, and the unstated fall-back control line on eastern edge was wet line, a deep sheltered gully.
Westerly wind change arrived around 8.30am but wind speed remained moderate.
By 9am, fire control plan #3 was direct attack – build 2km of control line with earth track by 10 pm Day 2.
No extra resources were ordered
At 12.30 pm vigorous cold front arrived, winds remained westerly. Fire escaped by ember throw to the east from hot spots along crest of spur across wet line. Gross fire area grew to 63ha by 1.30pm, but large areas within it did not ignite because they were "wet" fuels, ie, higher moisture content fuels in gullies or on sheltered slopes.
At 12.37pm, fire control plan #4 was direct attack – build 4km of control line with dozer, contain by 10 pm Day 2.
Still no extra resources were ordered.
Rain fell after 3pm, grounding aircraft.
Today's performance rating against Best Practice forest fire suppression: 4 / 10
Control line along western edge and part of southern edge was good, but they should have brought in many more resources to (1) stop fire spread at 20ha and (2) stop spot fire spread on east side of wet line when cold front arrived. Recognition of the following strategic viewpoint went missing after fire's escape - fire edge of escaped fire was contained by track on western edge, wet line along Jamieson Creek to the north, two wet lines (= tributary gullies) to the south. Jamieson Track was fall back control line. To contain fire, 1.5 km of control line was needed along southern edge. By evening, 0.5 km of this track was completed. This should have informed them there was only 1 km to be constructed.

Day 3, 21 Dec 1 minute to midnight summary of fire status: GOING
Fire area 92 ha, perimeter 8km, total control line constructed = 2km.
New plan is to contain perimeter by 10pm Day 6. Again, they misunderstand the meaning of "contain" the fire. Their Plan really means to "control" the fire by 10pm Day 6.
To contain the fire today, they had only to build 1km of dozer line along the southern fire perimeter. This was not done. The rest of the perimeter was temporarily well contained (in this mild weather) by wet line and built tracks.

What happened on Day 3:

Resource allocations remained unacceptably low to achieve the objective - only 14 fire fighters deployed. No new control line was built on Day 3

Fire control plan changed four times on Day 3.

- Initially, fire control plan #5 was direct attack - build 6km of line, contain by 10 pm Day 3.
- 11.03am fire control plan #6 was direct attack - build 5km of line, contain by 10 pm Day 4.
- 3.26pm fire control plan #7 was direct attack - build 7km of line, contain by 10 pm Day 6.
- 8.31pm fire control plan #8 was direct attack - build 6km of line, contain by 10 pm Day 6.

Post-fire Reports from witnesses described a marathon two-day argument between fire ground leadership, Colac HQ and Melbourne HQ, including Minister. Subject of argument – Melbourne HQ reluctance to approve backburn. New Fire Controller was appointed at Colac HQ.

During afternoon, Colac HQ reported the fire area had expanded by almost 16ha and a new spot fire escaped. Both expansions were dismissed by a later line scan. Was it a genuine mistake or a hoax to encourage a pro back burning decision?

Performance rating against Best Practice forest fire suppression: 0 / 10

It is incomprehensible that they ignored the importance of the 1km edge that should have been built today. It is incomprehensible that they wanted to backburn rather than confine fire area to small size in expected weather conditions. It is incomprehensible that the fire control plan changed so many times, and for no apparent reason.

Day 4, 22 Dec 1 minute to midnight summary of fire status: GOING, they said, but technically it was CONTAINED by Jamieson Track and the Jamieson River wet line

Fire area 180 ha, perimeter 11.5km.

New plan is to contain fire by 6pm Day 8. Again, they misunderstand the meaning of "contain" the fire. Their Plan really means to control the fire by 6pm Day 8.

They have begun the backburn strategy.

What happened on Day 4:

Resources 80 fire fighters were deployed in early morning to Jamieson Track specifically for back burning. They had to await approval from Melbourne HQ, which occurred around 1pm.

Meanwhile, between 9 and 10am, a 50m wide fire tongue escaped from the southern edge of the fire where the 1 km control line should have been built yesterday. It ran almost up to Jamieson Track and stopped. No suppression action was taken to prevent lateral expansion of its east and west flanks, so that by 1pm, it had spread 0.5km along the Jamieson Track fall back line.

At 2.26pm, fire control plan #9 was all about back burning - build 6km of control line by burning out, contain by 10 pm Day 8. The Sit Rep note included this reference to wet lines.

"Burning operations approved and about to commence. Resource levels increased to facilitate burning operations including aircraft to assist with suppression as required. Reliance on wet fuels and Jamieson Creek to the north due to terrain and difficult access issues"

Their naïve aim was to prevent spread of original fire with a burnt-out area. They did not realise that the backburn area became the new fire edge.

Performance rating against Best Practice forest fire suppression: 0 / 10

The backburn strategy was the wrong choice for this fire. Their intention was to stop the spread of the original fire with a new burnt-out area, but they should have continued their direct attack works. Instead, they chose a higher cost, higher risk strategy for no good reason, although it did resolve an argument.

Day 5 and 6, 23 and 24 Dec 1 minute to midnight summary of fire status: GOING, they said, but technically it was CONTAINED by Jamieson Track and the Jamieson River wet line

At midnight on Day 6, fire area 271 ha, perimeter 14km.

Plan was to contain fire by 6pm on Day 8. Again, they misunderstand the meaning of "contain" the fire. Their Plan really means to control the fire by 6pm Day 8.

What happened on Days 5 and 6:

Back burning and blacking out continued.

They believed their task (repeated by IGEM) was to prevent the original fire escaping with the burnt-out area, the implication being the back burn was not an escape risk.

But they had a bet each way. They dealt with the town protection issue by planning town evacuations to protect the people, but there were no defence plans to protect the houses after evacuation.

Performance rating against Best Practice forest fire suppression: 0 / 10

There was no serious planning and preparations to prevent breaching of the Jamieson Track control line. Over the following weeks, the IGEM and EMC and Ministers would have us believe that the

backburn's job was to prevent the original fire escaping, and that the back burn itself could not escape. It is incomprehensible if the local control team also believed this.

For example, the IGEM supported the Day 4 back burn decision saying the 1000 hotspots in the original fire area were an escape danger. Now on the eve of Day 7, the original fire was bereft of hot spots and there were many thousands of hotspots 300 m deep along all four kilometres of Jamieson Track, and there had been no serious planning to prevent an escape or prepare for consequences of an escape.

Day 7, 25 Dec 1 minute to midnight summary of fire status: GOING

At midnight on Day 7, fire area 1,750 ha, perimeter indeterminate.

What happened on Day 7

(1) Escape from Jamieson Track control line

Best Practice standards required identification and preparation of most likely and most risky escape sites and appropriate deployment of resources to detect and rapidly suppress spot fire ignitions. Such an analysis, preparations and deployment were not done.

Resources allocated were well below the level required by Best Practice forest fire suppression standards.

The first control line breach was reported at around 11am within 100m of Track. Theoretically, there were sufficient resources to stop its spread, but their influence was strangely helpless. A fire escaped to the coast.

At 11.29am and thereafter, fire control plan #10 was all about asset protection – ***"aircraft focused on asset protection in Separation Creek and Wye River"***

After this announcement, the control team made scant further reference to this control line other than a spot over at 2pm on the western end of the backburn area and abandonment of the line at 2pm.

But this was only part of the story.

In the half hour before 2pm a Northerly blew embers from the western end of the backburn area 1 km southward, deep into the National Park along Wye Road, NW of the towns.

At 2pm, the NW wind resumed and blew embers from these spot fires toward the towns.

By 2.30pm, the entire western half of the backburn line was fully ablaze, having already sent embers and spot fires across the control line and toward the forest NW of the towns before 2pm.

(2) Defence of towns

Evacuation order was issued at 11.50am by Colac HQ.

Aircraft was the only resource for town-defence referred to in the 11.29am Sit Rep and thereafter. One 1 strike team of 5 tankers was also ordered at 11.29am by the Colac Controller but its purpose is unclear because it was inadequate for defence of some 300 vacated houses. It may have been to help with evacuations.

There is evidence of ten or more helitaks and fixed wings bombing the town before the ember attack began around 3pm in Separation Creek and in Wye River after 4pm. No evidence is available of their numbers after the spot fire attack finished, after 6pm or so.

Initially, some of the tankers tried to save houses and extinguish spot fires in the towns, but the local commander or captain declared the towns unsafe (probably around 3 pm when embers began raining) and fire fighters were withdrawn to protect the town's four major premises, lifesaving club, CFA station, Big 4 camping ground and pub for the next several hours until daylight, the period during which over 100 houses were destroyed by moderate ember attack and scattered spot fires less than half a metre tall.

By late afternoon, on Day 7, reports suggest another 4 strike teams arrived at the town, but they too watched the houses burn from their assigned posts.

Performance rating against Best Practice forest fire suppression: 0 / 10 **on both counts:**

* Resourcing the Jamieson Track control line was grossly inadequate and just when the western half of the backburn line was becoming active, the whole line was abandoned. This western half was the major source of embers that destroyed the towns.

* Resourcing the towns' defence was grossly inadequate. Evacuating the town's residents from an ember attack, when their property maintenance ensured most embers could not ignite, removed potential self-defenders and was premature and ill considered, particularly when there was no plan to send in the 100 or so tankers needed to defend 300 vacant houses during and after ember attack.

The suppression response to this forest bushfire by a local government control team under the direct influence of Melbourne HQ has been presented here in some detail because it is a symptom of the dangerous and destructive direction that the

government's interpretation of the Royal Commission's findings has spawned. It shows how the government's suppression response was so poor, it caused the destruction of two towns. Even worse, it describes how the government's response was approved by the IGEM. It highlights that whereas the government apologised profusely when the Lancefield control burn escaped and promised compensation, the Jamieson Track control burn that was lit by government and escaped government control, the government intends not to apologised nor offer compensation.

Crib Point fire

The Age January 18, 2016 - 7:31PM
Victoria Bushfires: Two homes lost in Crib Point as firefighters continue to battle blaze
Liam Mannix
Two homes have been lost in a bushfire at Crib Point, south of Melbourne, before the CFA were able to bring the fire under control about 7pm. Earlier emergency warnings for the blaze have now been downgraded to watch and acts.
8:03pm: The CFA has just sent out an update downgrading the number of houses lost from two to one. The other one is seriously damaged, but not lost. Several sheds and outbuildings have also been lost.

7:53pm: Jesse Marlow, flying high in the sky over the firefield, just filed these photos for us. We're lucky the Crib Point refinery has been unused for several years, otherwise we might have had an explosive situation on our hands.

This photo is my favourite. You can clearly see the path of the fire - first south, toward the left of the photo and the town, then after the wind change quickly north, where it burnt a copse of houses. The smoke streams strongly to the right of the picture, showing the strong winds pushing the blaze north.

Dereel fire

Herald Sun February 13, 2016 4:33pm
Victorian bushfires: Fast-moving grass fire threatens Dereel near Ballarat
Mark Buttler
FIREFIGHTERS have issued a watch-and-act message for residents near an out-of-control grass fire burning south of Ballarat.
The blaze, described as fast-moving is in the area near Tippetts Rd in Dereel.
The CFA this afternoon issued a watch and act message for the fire.
Water-bombing aircraft have been moved into the area to help ground crews.
More than 20 fire vehicles were at the scene this afternoon, where the temperature has topped 30C and a north-westerly wind is blowing.
The Country Fire Authority said the blaze was not yet under control.

Mt Bolton Fire
23/2/16
1300 ha, 2 or 3 houses FDI 65 38C, 16-17%, 40 kph

Herald Sun 23 Feb 2016
Firefighters battle blazes as Victoria swelters in 40C heat
Rebekah Cavanagh, Christopher Gillett and Andrea Hamblin

TWO homes have been lost, another severely damaged and a large section of railway line destroyed following yet another horror fire day yesterday.
Firefighters worked through the night to contain a fire near the farming communities of Mt Bolton and Addington outside of Ballarat, where 1300ha has burnt.
With more than 140 homes lost this fire season, the State Control Centre this morning confirmed two homes — one an unoccupied farm house — was destroyed, while another was extensively damaged. At least six sheds were also razed.
One of the homes belonged to Lynette and Noel Frunks, who have been left devastated as the fire also ripped through their poultry farm, killing hundreds of chooks.
The Frunks have run Mount Bolton Homestead and Poultry Stud, nestled deep in the forest on Eastern Peake Rd, for 2.5 years.
"Everything has burnt to the ground," Mr Frunks told the *Herald Sun*.

"We have nothing but the clothes on our backs."
The Frunks packed their dogs and cat in the car and evacuated just minutes before the fire came through yesterday afternoon.
"We could see the smoke and by the time I had the dogs in the car the flames were coming over the hill," Mr Frunks said.
They are today desperately seeking homes for up to 400 chicklings who survived the fire.
"I haven't had time to think of our loss. The priority at the moment is to try and save as many of these young chicks as possible," he said.
Mr Frunks will be at the property today for anyone who wishes to collect some, and urged interested parties to contact him on the poultry farm's Facebook page.

Observation

Quotes from DELWP Annual Report 2015/16

"During 2015-16, we delivered a number of key initiatives and projects for Victorian communities. In particular, we:
• Responded to the independent Lancefield - Cobaw fire investigation by making significant changes to how the department operates across the state to improve delivery of the planned burning program
• Issued the first approvals** for rebuilding after the Wye River–Jamieson Track fire within six months of the fires"

** The latter statement is dishonesty disguised as spin. The building approval applied to a planning permit that predated the fire.

DELWP introduced two changes to bushfire management this year.

A "In March 2016, DELWP introduced a new organisational structure and Community Charter in response to several drivers including the government's public sector reform agenda to improve regional service delivery, recommendations of the Inspector-General for Emergency Management (IGEM) and the independent investigation into the Lancefield - Cobaw fire.

The new Forest, Fire and Regions (FFR) Group brings forest, fire and emergency management together and creates a clear line of accountability for bushfire prevention, preparedness and response. The FFR Group is adopting a place-based approach to service delivery across the state.

The Forest, Fire and Regions Group provides end-to-end management of forests, fire and other emergencies including policy and on-ground operational delivery, under a single Deputy Secretary. The new structure provides a single line of responsibility for bushfire management, including planned burning, from local to state levels under the Chief Fire Officer, who reports directly to the Secretary. The new structure aligns with the recommendations of the independent investigation into the Lancefield - Cobaw fire and recognises that bushfire is DELWP's most significant risk to manage".

B DELWP adopted "a new departmental objective indicator in 2016-17: Area treated through planned burning and other treatments to maintain statewide bushfire risk at or below 70 per cent. This replaces DELWP's former hectare-based fuel reduction target, however DELWP will continue to monitor the area of public

land treated to reduce fuel load, including planned burns, mechanical and chemical treatments, and roadside vegetation management."

Bushfire risk is not evenly distributed across the state. For the purpose of measuring bushfire risk, Victoria is divided into seven bushfire risk landscapes. The amount of bushfire risk in a landscape is related to where communities and assets are located, the size of those communities, the types and arrangements of vegetation and the topography. Not all communities at highest risk from bushfires are located next to forests. Bushfire risk in Victoria exceeded 90 per cent in 2002. After the millennium drought and campaign fires between 2002 and 2009 (the 1.5 million ha Alpine fires in 2002-2003, the 1.0 million ha Great Divide fires in 2006-07 and the 500,000 ha 2009 Black Saturday fires) bushfire risk fell to below 60 per cent in 2010. With vegetation recovery increasing fuel loads, bushfire risk in Victoria has risen to 65 per cent and is projected to exceed 70 per cent by 2020 without effective intervention".

Comment This concept of risk is based on the theory that the greater the area burnt by any means at any location – unplanned bushfire or planned burn – the lower is the state-wide bushfire risk. Thus, a large fire in the Mallee has a vicarious influence on reducing bushfire risk for several years afterwards in all parts of the State. It is a wonderful Disney-like concept that proves the Government has finally dismissed the need for evidence-based policy and dismissed all known bushfire behaviour science as irrelevant to bushfire risk.

2016/17

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
7	10	95

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.

Estimated damage
16,000ha burnt - public plus private land, 2 houses, several sheds,

Official bushfire records

CFA Annual Report 2016 /17

25/12/2016	Watchem	583 hectares	burnt/1 day
25/12/2016	Woomelang	1,816 hectares	burnt/1 day
07/01/2017	Bangerang	200 hectares	burnt/1 day
One abandoned home and several sheds lost			
28/01/2017	Heathcote	10 hectares	burnt/2 days
One home, eight cars and several sheds lost			
04/02/2017	Diggers Rest	111 hectares burnt/1 day	

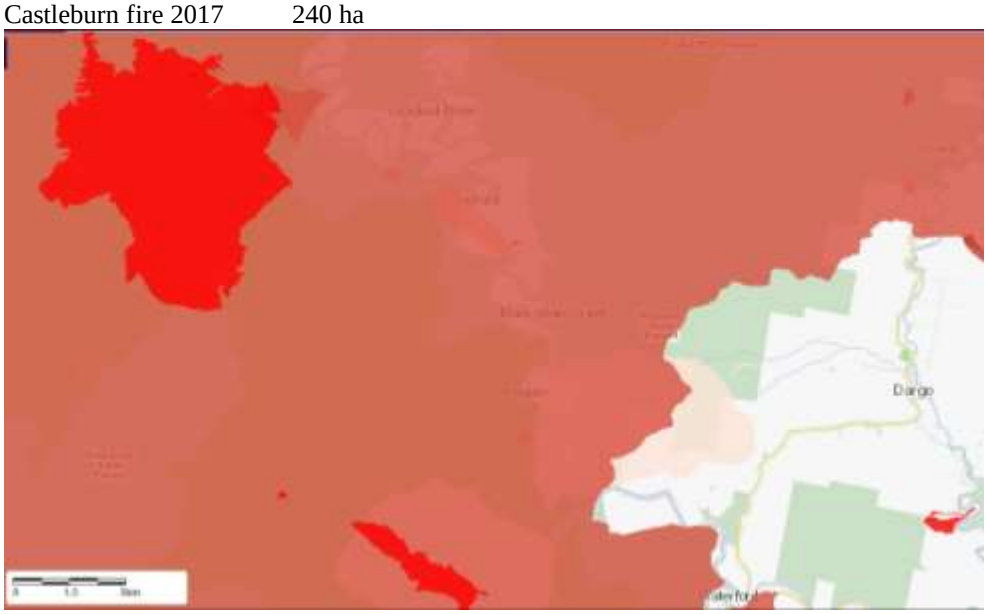
Organ Pipes National Park evacuated No property losses
12/03/2017 Crooked River - Wonnangatta Road 3,066 hectares burnt/12 days – Started by lightning

DMBCL (2017)
? ha of crown land burnt,
? fires reported on crown land.
FRB 113,000 ha

DELWP Annual Report
As at 30 June 2017, DELWP and its partners had treated 125,052 hectares with fuel reduction activities. The area treated included 113,501 hectares of planned burning and 11,551 hectares of mechanical treatment.

Fuel Management Report 2016 17
During the 2016–17 fire season, we responded to 1,015 fires that burnt 13,530 hectares.
Although Victoria had a relatively quiet fire season
Lightning started the only fire of significance on public land for the season on 12 March 2017 in remote bushland in the Macalister fire district in Gippsland. The Crooked River – Wonnangatta Rd fire affected 3,066 ha and took 12 days to suppress.
In 2016–17, we controlled 93% of bushfires to under 5 ha and contained 87% of fires by 8 am the following day. Both these achievements exceeded our key performance indicators.

Crooked River - Wonnangatta Road fire 27 March, 2017 3,066 ha
Castleburn fire 2017 240 ha

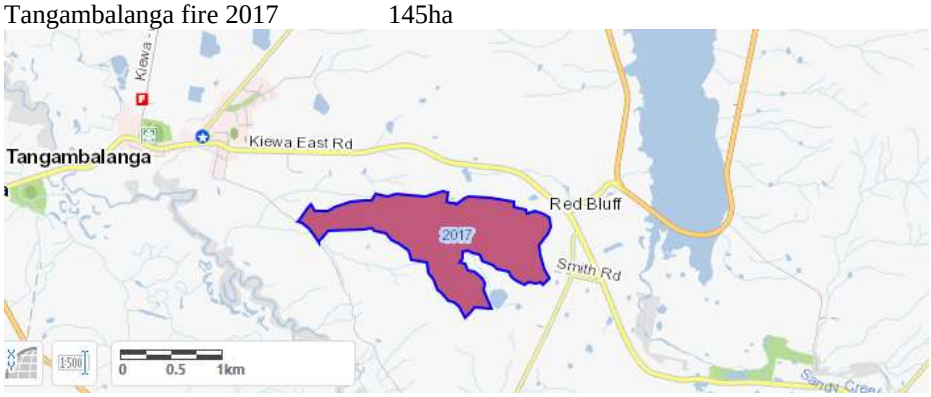


http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Cabbage Tree Creek fire 2017 718ha

http://mapshare.maps.vic.gov.au/MapShareVic/index.html

Tangambalanga fire 2017 145ha



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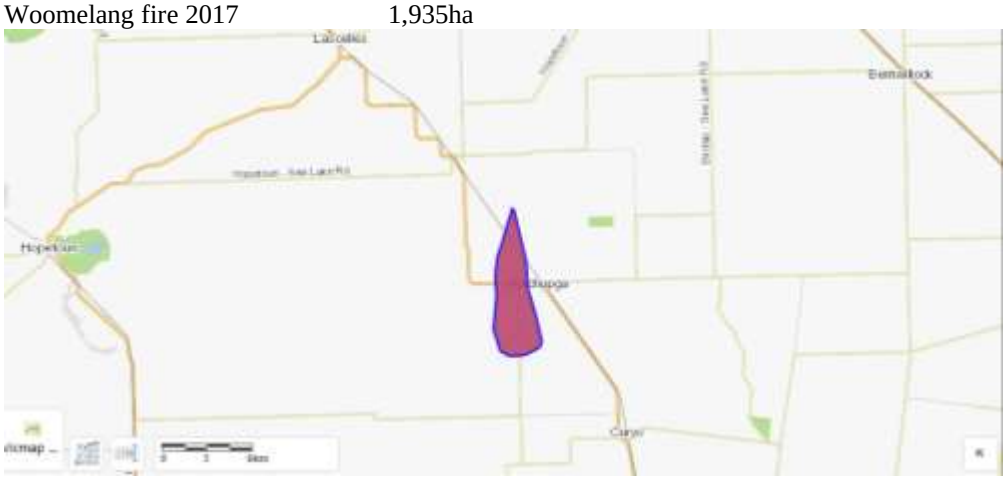
Woomelang fire 2017 1,935ha



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Bushfire related matters

Observations: There is a serious dispute between CFA volunteerism and paid unionised fire fighters. It is complicated by political involvement, with Labour leadership supporting the Union and Liberal / National members supporting the CFA volunteers.
The Victorian Labour government has determined to create a new Fire and Rescue Service for paid fire fighters and retain the CFA as a volunteer-only organisation.

Here is a useful background article:
The Victorian firefighter dispute comes to a resolution, but for how long? (theconversation.com)

2017/18

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
13.4	10	118

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.
Note: Dryness Index is high because of very dry Feb to April.
2/3 average rainfall Sept to Nov, well above average rainfall in Dec and Jan, virtually zero rain in Feb, ½ in March, ¼ in April

For reference, there were 4 Statewide Total Fire Ban Days and 3 specifically for Central District, meaning a total of 7 TFB days for Central District.
Weather records indicate there were 8 wind change days, ie, day 0 > 35C, next day < 25C.

Estimated damage
82,000ha burnt - public plus private land, 26 houses, 66 sheds, 3000+ livestock

CFA Annual Report
Major fires

26/11/2017	Cann River	9,746 hectares, 25-day duration
06/01/2018	Carrum Downs	1–2 hectares, in densely populated area
18/01/2018	Dreeite	426 hectares, unoccupied houses and sheds lost.
19/01/2018	Big Desert	5,596 hectares
28/02/2018	Myrrhee	677 hectares, 13-day duration
17/03/2018	South-West	Total size: 16,828 hectares

Garvoc, Gazette, Terang, Camperdown, Cobrico (Peat), Lake Elingamite (Peat)
Cause: Trees over powerlines
Losses: 26 houses, 66 outbuildings, thousands of livestock.
Secondary impact: two major peat fires and air quality issues

DMBCL (2018)
? ha of crown land burnt,
? fires reported on crown land.
FRB 66,034 ha

DELWP Fuel Management Report 2017 18
In the 2017-18 season, we attended 1,603 bushfires on about 64,000 ha of public and private land.
The season began very early in September with an 8,000ha fire at Timbarra, Gippsland.
Three large fires in March, driven by strong winds, burnt grazing land and destroyed 26 structures, 10,000 tonnes of hay and over 2,000 km of fencing. About 3,000 animals – mainly sheep and dairy cattle – died.
The three largest bushfires all occurred in Gippsland, and drought conditions in East Gippsland caused much-higher-than-normal risk of bushfires spreading. The fires were at:

- Tamboritha – Dingo Hill Track (10,839 ha)
- Cann River – Mueller's Track (9,747 ha)
- Timbarra – Sunny Point (8,120 ha).

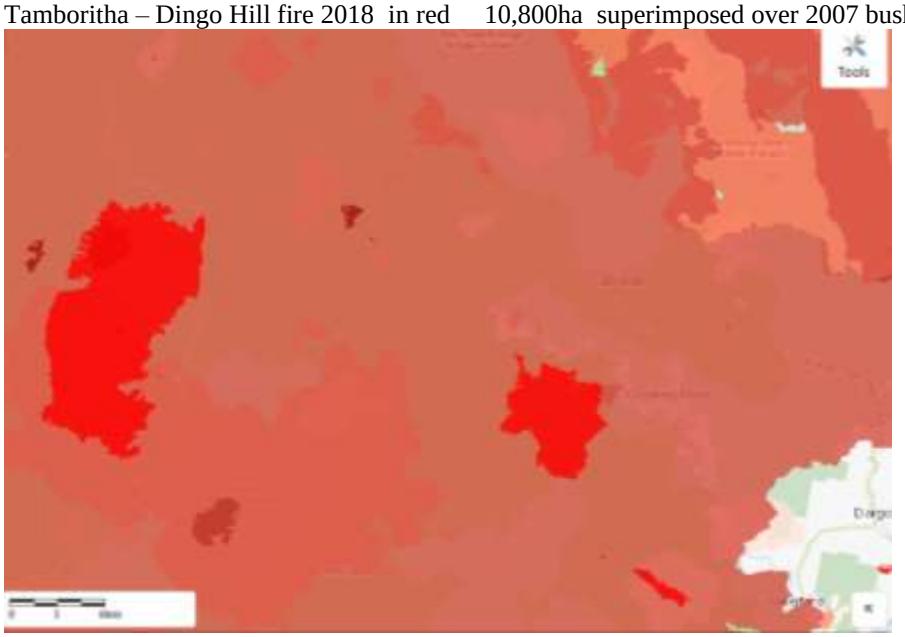
The Tamboritha fire was started by an escaped campfire, but it was managed within an area planned for burning during autumn, and a good result was achieved.

ICA Catastrophe Dataset
Bushfires in NSW and VIC caused approx 125 structure losses (NSW 100, VIC 27). Damage to residential properties was focussed in the NSW town of Tathra. The industry was quick to deploy teams, who engaged directly with victims at an insurance hub established near the government recovery centre. Approximately 90% of claims for this event are closed, 18% faster than in similar historical events. Underinsurance has been an issue for properties that were a total physical loss, resulting in a higher rate of cash settlement (insufficient funds to rebuild). A NSW government scheme to support the removal of debris from properties was not adopted by the majority of industry as in other states. Insurers elected to organise clean up operations with their own resources.
Estimated Value $82,489,235

Lodged Claims 1,039, comprising
* 364 Residential Building Claims,
* 320 Contents Claims,
* 49 Domestic Motor Claims,
* 18 Domestic Other
* 220 Commercial Property Claims
* 24 Commercial Motor Claims
* 26 Business Interruption Claims
* 11 Commercial Other

21% of claims are from Victoria, the remainder are from New South Wales.
23% of the loss value is from Victoria, the remainder from New South Wales
17 to 19 March 2018 $82.49M

Tamboritha – Dingo Hill fire 2018 in red 10,800ha superimposed over 2007 bushfire



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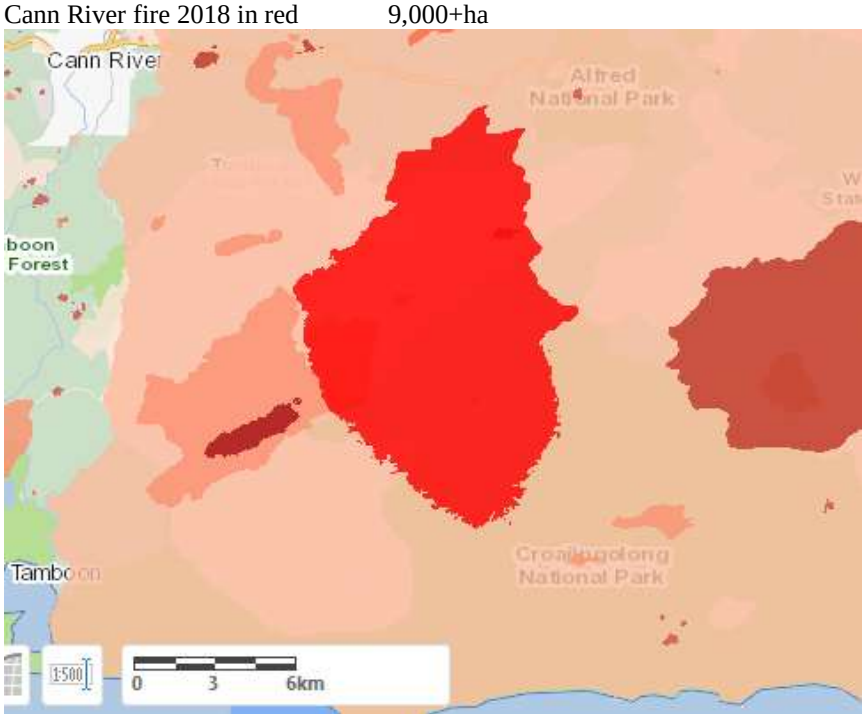
Cann River fire 2018 in red 9,000+ha



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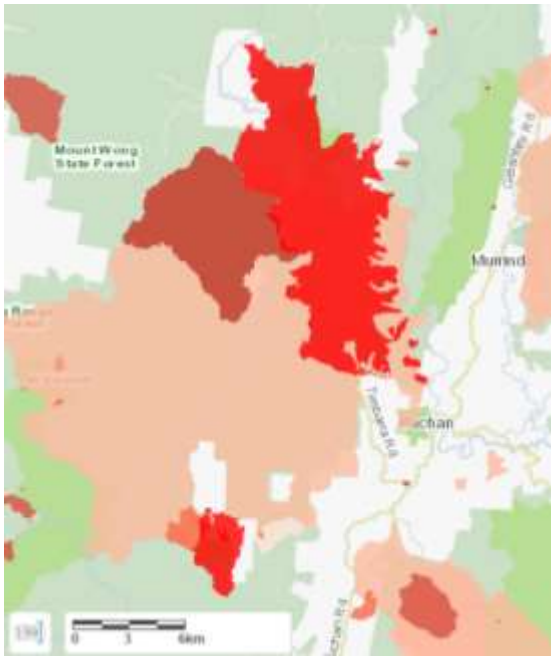
Timbarra fires 2018 in red



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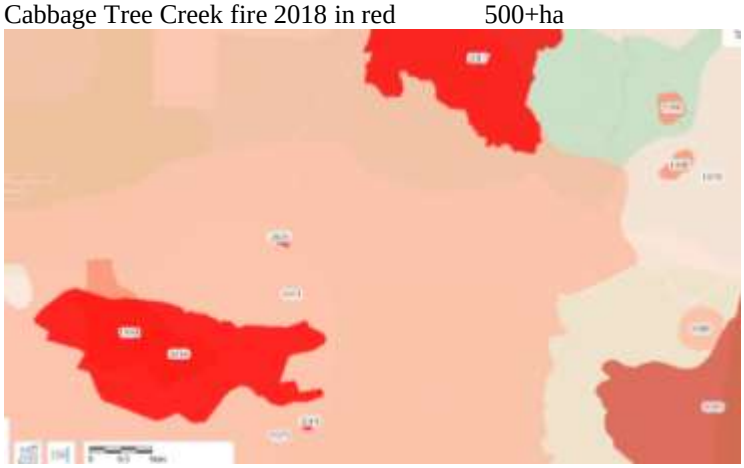
Cabbage Tree Creek fire 2018 in red 500+ha



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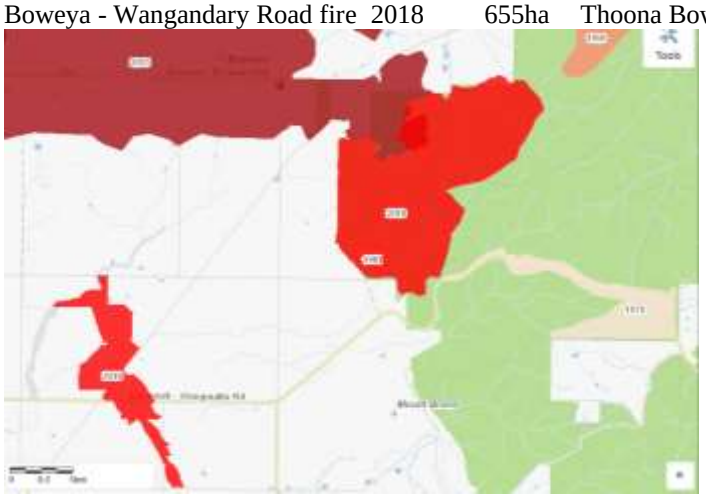
Warby Ranges
Boweya - Wangandary Road fire 2018 655ha Thoona Boweya road fire 169ha



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Myrrhee fire 2018 670ha

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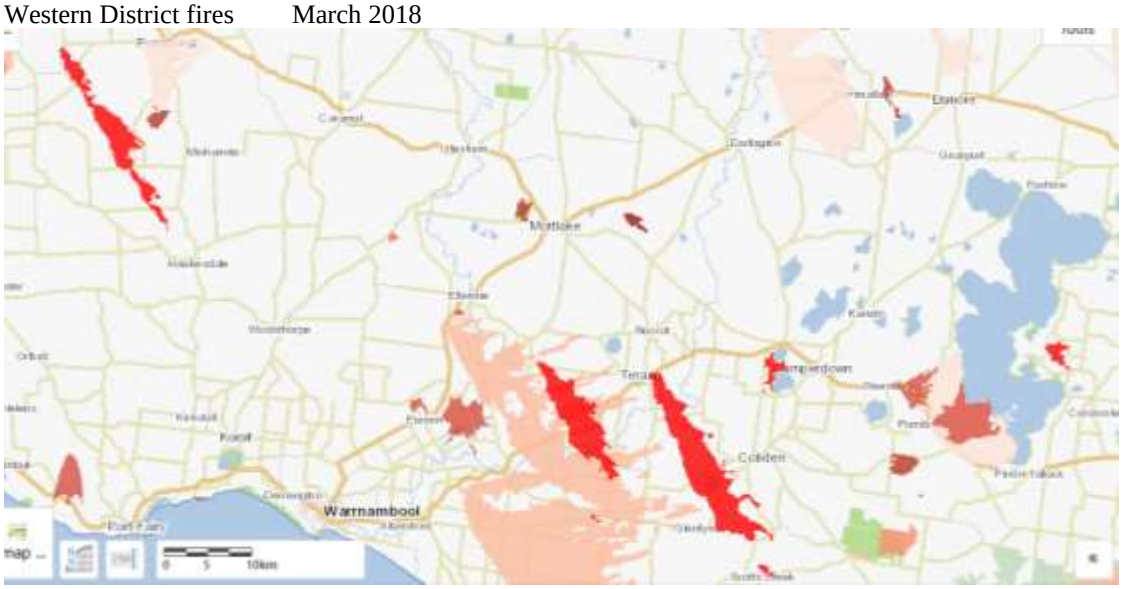
Western District fires March 2018



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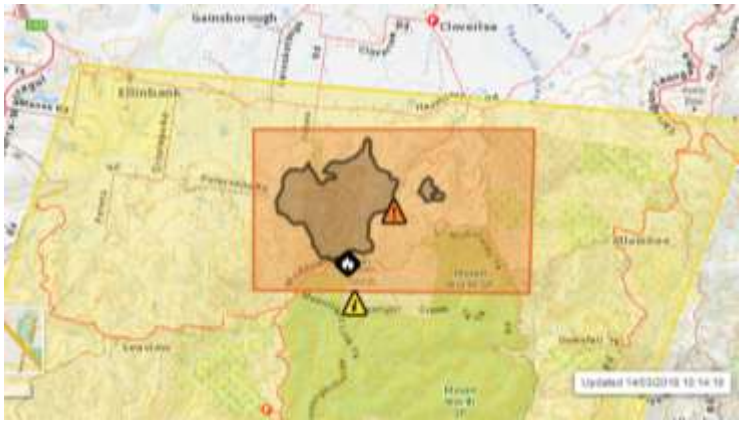
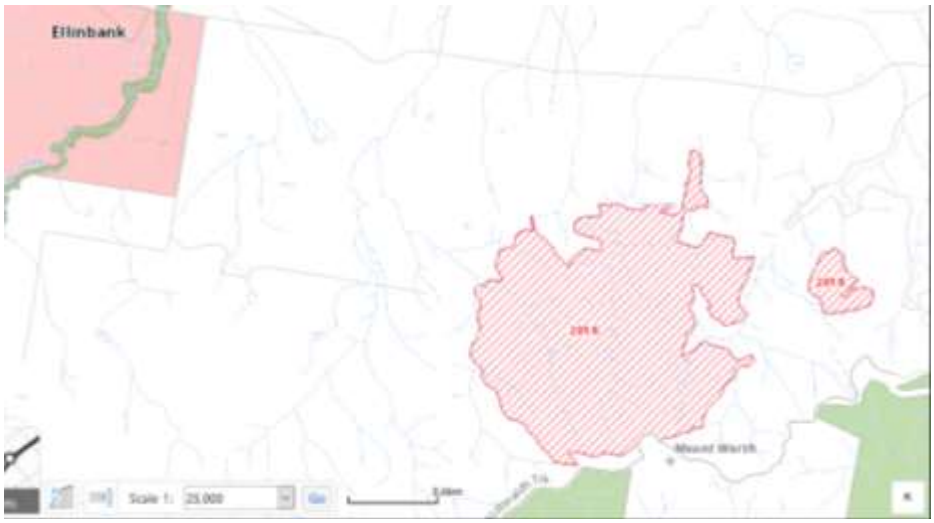
14 March 2018 Seaview 230 ha





https://maps2.biodiversity.vic.gov.au/Html5viewer/index.html?viewer=NatureKit

Dry bush and wind hampering firefighters at out-of-control Seaview blaze
ABC Gippsland By Nicole Asher Posted Mon 12 Mar at 11:24am

Fire crews battling an out-of-control bushfire burning at Seaview, south-east of Melbourne, hope mild conditions today will help them get the upper hand on the blaze.
The fire in hilly terrain on McDonald's Track started on Saturday in one of the timber plantations owned by forestry corporation, Hancock Victorian Plantation (HVP), burning through 230 hectares.

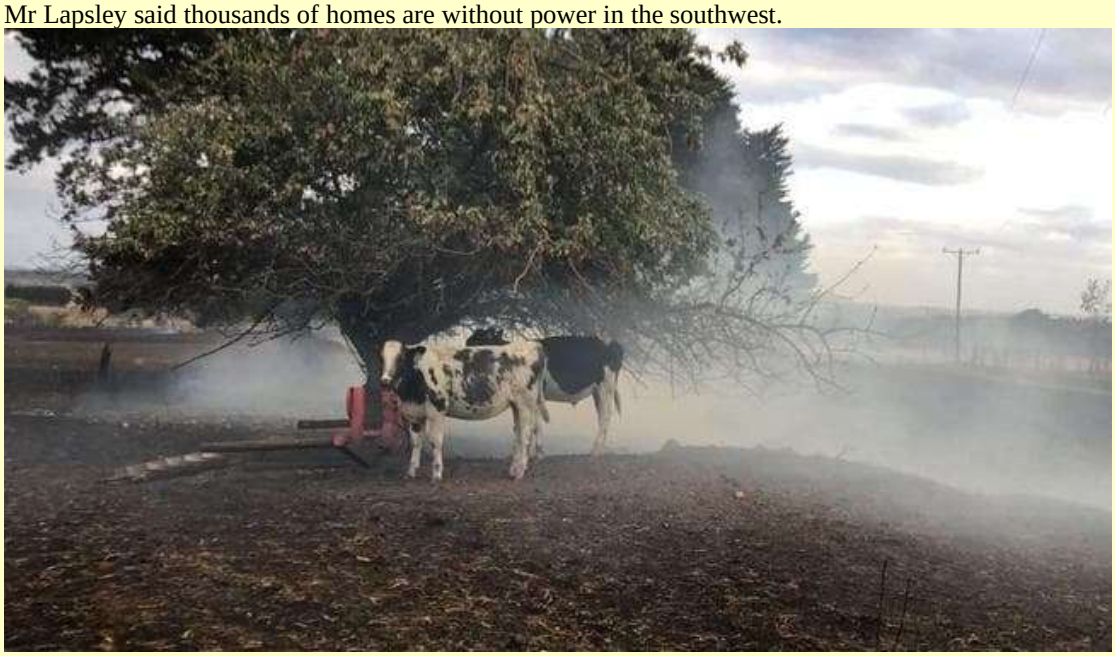
Warragul and Drouin Gazette 13 March 2018
An out of control bushfire at Seaview has burnt through hundreds of hectares at the base of Mt Worth National Park. The fire started on Saturday night in Daffs Track and police believe it was deliberately lit.

The fire front of the Seaview fire captured from Ellinbank on Saturday night.

Reported bushfire events

Wikipedia March 2018
On 19 March windy and dry conditions across Victoria led to over 160 grassfires and bushfires.[18] A fire near Terang reached over 6,700 hectares (17,000 acres), one in Gnotuk-Camperdown approximately 200 hectares (490 acres), and in Garvoc approximately 4,000 hectares (9,900 acres). There were at least 18 houses lost in the fires.[18] The Terang fire was declared under control on 20 March.
Source Vic Emergency. Government of Victoria. 19, 20 March 2018

Herald Sun 18 Mar 1.04 pm
Victorian homes lost as wind change puts towns in fire danger
Aneeka Simonis, Andrea Hamblin and Dan Fogarty,
SEVERAL houses have been lost in major blazes in the state's southwest with the towns of Camperdown, Cobden and Timboon under fire threat.
Winds are pushing the fires in a south easterly direction, but a strong westerly wind change is expected to impact the blazes soon.
There are fears two fires will join and become one large one.
Already four properties have been lost from the fire which originated in Terang, but authorities fear there will be many more.
"At this stage we know there have been buildings impacted," Emergency Management Commissioner Craig Lapsley said.
"We know it will grow in numbers.
"There has definitely been impacts on houses, on sheds, on agricultural equipment."
There are no reports of deaths or serious injuries.
Paramedics assessed about 12 people at relief centres for minor injuries including cuts, abrasions, sprains and mild asthma.
None required transport to hospital.
Mr Lapsley said thousands of homes are without power in the southwest.



Cows in a burnt out paddock in the Camperdown area.

Authorities have issued urgent warnings with residents in Hawkesdale told to evacuate and head to a basketball stadium in Warrnambool.
There are a number of emergency warnings in place for towns including Cobden, Timboon and Camperdown.
Residents in those communities are told it is too late to leave.

There is a separate emergency warning for Carlisle River, Chapple Vale, Cooriemungle, Irrewillipe, Kennedys Creek, Scotts Creek, Simpson, Waarre.
"Simpson, Kennedys Creek, Carlisle River, Cooriemungle and surrounding communities could be impacted anytime within the next 2 hours," the warning says.
"Leaving now is the safest option, before conditions become too dangerous."
Residents in Buckley Swamp, Byaduk, Gazette, Gerrigerrup, Mount Napier, Penshurst, Tabor, Yatchaw are also told leaving now is the safest option.

The fires began last night and are causing significant challenges for fire crews.
"In western Victoria significant fires all started after dark and therefore has been a very difficult night for crews on the ground to endeavour to pull those fires up," CFA deputy officer Gary Cook said.
"Those fire are still running, they are still running under significant wind."
Mr Laspley warned the fire danger will continue throughout the day," he said.
"We will see potentially more fire in the landscape today.
"The wind will be very strong all morning and reaching into the afternoon.
"Victorians need to be very careful this Sunday."
A CFA spokesperson said last night Hawkesdale is "extremely dry" and is being lashed with "extreme winds".
"If you are located in Hawkesdale, it is strongly recommended that you evacuate now and seek shelter at The Arc Gymnasium Stadium located on the Caramut Road in Warrnambool," read a CFA warning.
Authorities have grave fears multiple fires could come together, creating an enormous front about 45kms north east of Warrnambool.
Homes are under serious threat, with residents fleeing the quick-spreading fires affecting up to 20 towns.
A spokesman for the Camperdown Golf Club said he had received reports that the club was "up in flames".

Warrnambool Standard March 18 2018 - 6:41PM
Firefighters say south-west fires among the largest
Everard Himmelreich
CFA south-west assistant chief officer Rohan Luke, left, speaks to the media prior to a community meeting at Cobden on the weekend's bushfires.
The weekend's bushfires across the south-west were some of the largest that many experienced south-west firefighters have seen.
Country Fire Authority south-west assistant chief officer Rohan Luke said the fires that ignited about 9pm on Saturday during winds of about 90 kilometres an hour were also some of the most difficult for firefighters to fight.
"You are chasing fires in the dark in extreme weather," Mr Luke said.
He said there had been significant progress made in combating the fires on Sunday and all were being kept within their containment lines at about 5.30pm.
He said the strong winds that blew throughout Sunday were expected to abate on Sunday evening.
Mr Rohan said the damage toll was at least 18 homes, about 14,000 hectares, more than 40 sheds and significant losses of livestock and fences.
The Terang fire was estimated to have burnt 6700 hectares, the Garvoc fire 3765ha, the Gazette fire 2964ha and the Camperdown fires 311ha.
The CFA is investigating whether a number of fires linked up to create the Terang fire that threatened Cobden from the west.
Mr Luke said the CFA had received multiple calls at different locations throughout the Terang fire area before its entire area was later mapped.
He said the Terang fire raced along a 20 kilometre south-west path from Terang to near Glenfyne, west of Cobden.
Mr Luke said the fires were not being treated as suspicious.

New Daily 19 March 2018
In south-west Victoria inquiries are also underway into the cause of the fires that destroyed 18 homes and many farms.

Meanwhile, a bushfire alert has eased in south-west Victoria where residents face a new threat – asbestos.
The fire-ravaged region is littered with dead livestock, fallen trees and powerlines, and on Tuesday came warnings of another hazard.
"The chances that asbestos-containing material will be found in many of the fire-affected buildings are high," WorkSafe spokesman Michael Coffey said.
At least 18 homes, 42 dairy and machinery sheds and hundreds of livestock have been destroyed, but the tally could rise as people re-enter devastated areas.
While recovery efforts get under way, almost 200 firefighters continue to scour 15,000 hectares of burnt land to suppress embers amid fears of flare-ups.
Five alerts remain in place, including for the main farming communities of Terang, Cobden, Penshurst and Camperdown, where fires are contained.
https://thenewdaily.com.au/news/state/nsw/2018/03/19/properties-destroyed-fires-rage-nsw-victoria/

Observation: The dearth of official government data about bushfires continues.
Why?
Agencies report only the criteria requested by Treasury in Budget Papers #3, which is overseen by Parliament's Expenditure Review Committee.
The oversight / coordination body Emergency Services Victoria has no reporting requirements.
For private property, CFA has no reporting requirements for its annual expenditure of over $600M.
For public land, DELWP reports on its two targets - % of fires that exceed 5 ha and % of fires stopped at first attack. DELWP's Annual Reports proudly claim how well it meets the targets, around 80%, but it is a meaningless boast. The fires that cause damage problems and high suppression costs are the ones that get away. A smarter Treasury should assess them on the percentage of large fires, eg, % > 1,000ha.
An even smarter Treasury would issue performance criteria that measures damage toll and its progressive reduction.

2018/19

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
22.9	14	197

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.
Note: Dryness Index is very high because of very dry Sept – Oct and Jan to April.
1/6 average rainfall Sept to Nov, well above average rainfall in Nov Dec and virtually zero rain in Jan to April

For reference, there were 5 Statewide Total Fire Ban Days and none specifically for Central District, meaning a total of 5 TFB days for Central District.
Weather records indicate there were 4 wind change days, ie, day 0 > 35C, next day < 25C.

Estimated damage
218,000 ha Public Land burnt - plus approx 30,000 ha private land, 31? houses, 90? sheds, 2000+ livestock, $22 million damage to pine plantations, $20+M damage claims Bunyip fire, substantial part of western catchment of Thompson Reservoir, a major water supply for Melbourne.

CFA
Annual Report Statement from Chief:
Some of our major fires included:
Thompson Dam (6,411 hectares),
Walhalla (8755 hectares; two houses and two outbuildings lost),
Wilsons Promontory (burnt for 29 days),
Dargo (three main fires burned 113,858 hectares)

Other Major Incidents:
07/12/2018 Little River 1,270 hectares Losses: 38 properties
04/01/2019 Rosedale 12,148 hectares $22 million damage to plantations
16/01/2019 Nunnett/Timbarra River Complex 22,705 hectares
30/01/2019 Walhalla 8,755 hectares Losses: 2 houses, 2 outbuildings.
01/02/2019 Grantville 267 hectares
02/02/2019 Hepburn – Mannings Road 28 hectares
01/03/2019 North-east lightning fires
01/03/2019 Bunyip State Park (Gembrook – Helmet Track) 15,596 hectares

Losses: 29 houses 67 outbuildings
02/03/2019 Yinnar South 1,913 hectares Losses: 2 houses, 3 outbuildings
03/03/2019 Cambarville Road 2,629 hectares
29/03/2019 Mt Mercer 1,547 hectares Losses: 2,369 sheep
29/03/2019 Bunkers Hill Losses: 1 house and 16 outbuildings, 2 houses damaged

DELWP
Annual Report
2038 fires attended 218,000 ha burnt, 15 fires > 1,000 ha
Expenditure on Bushfire Prevention and Suppression $568M compared to FFM Budget $400M
Note: The higher than budgeted output cost predominately relates to Treasurer's Advances approved for fire suppression and additional aviation resources for Forest Fire Management Victoria.

FFM fuel management Report 2018 / 19
Forest Fire Management is a Branch of DELWP
The first bushfires occurred at Cape Conran in East Gippsland in September 2018, and the season extended through to April 2019, with the devastating fires in the Bunyip State Park.

The Insurance Council of Australia advises:
Bunyip Bushfire
Initial report
The Bunyip bushfires in eastern Victoria Insurance losses from the fires have reached $20 million from 365 claims
https://www.insurancenews.com.au/daily/victoria-bushfires-push-summer-catastrophe-bill-past-2-2-billion

Updated
Declared a Catastrophe CAT192
$35M from 519 claims
Victorian authorities confirmed 29 houses and 67 structures were destroyed in a bushfire that was sparked by lightning strikes in the Bunyip State Park in eastern Victoria.
Domestic claims 142 building, 147 contents, 32 vehicle
Commercial 90 property, 39 vehicle, other 68, crop 1

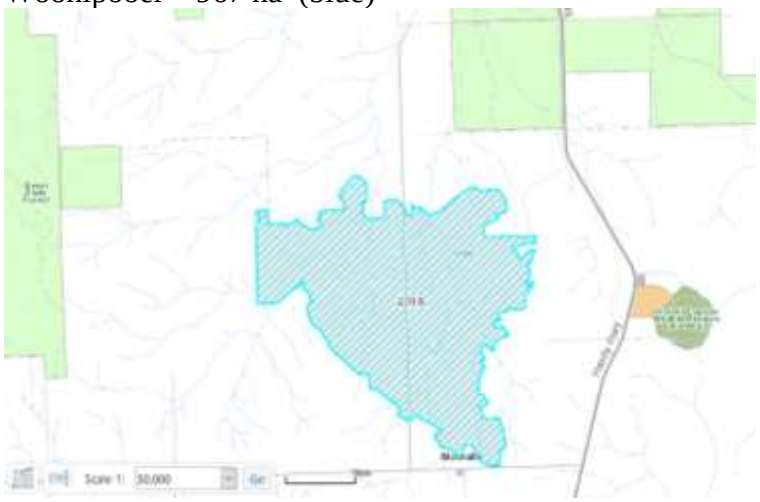
Bunker Hill bushfire Ballarat
A grassfire destroyed 3 homes west of Ballarat near Bunker Hill
$750,000
Domestic claims 3 building, 3 contents, 5 vehicle

DELWP bushfire maps 2018 / 2019

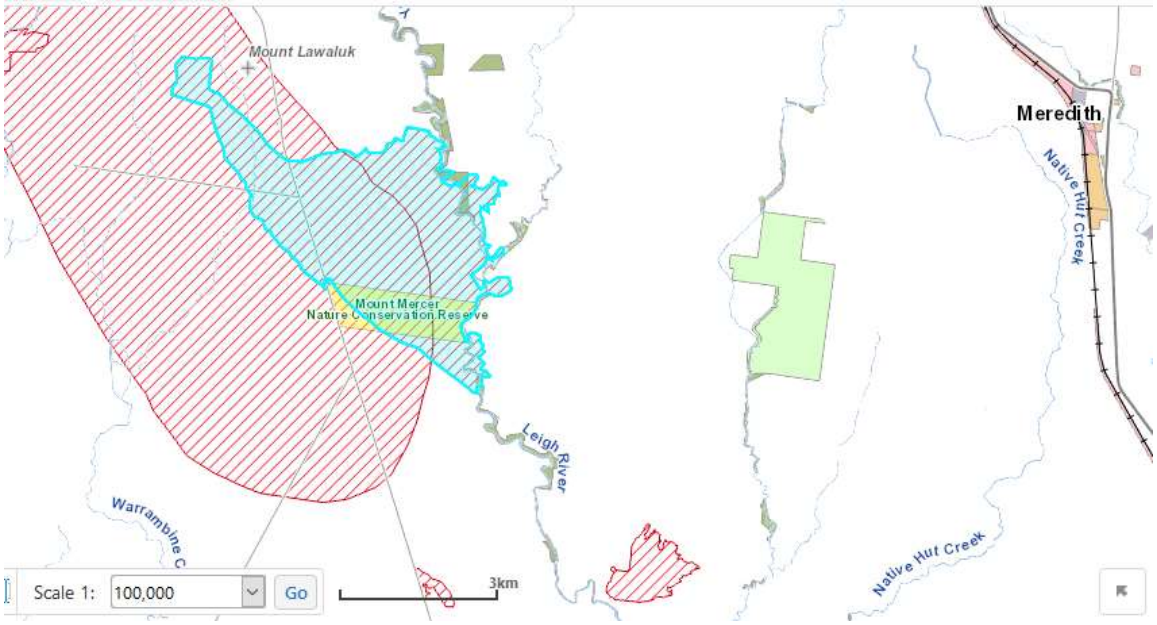
Hepburn 23ha (blue)

Bunker Hill fire Approx 100 ha

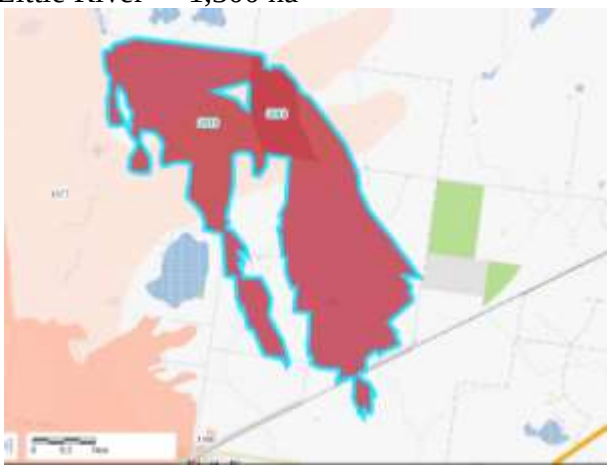
Woohlpooer 967 ha (blue)



Mt Mercer 1573 ha (blue)

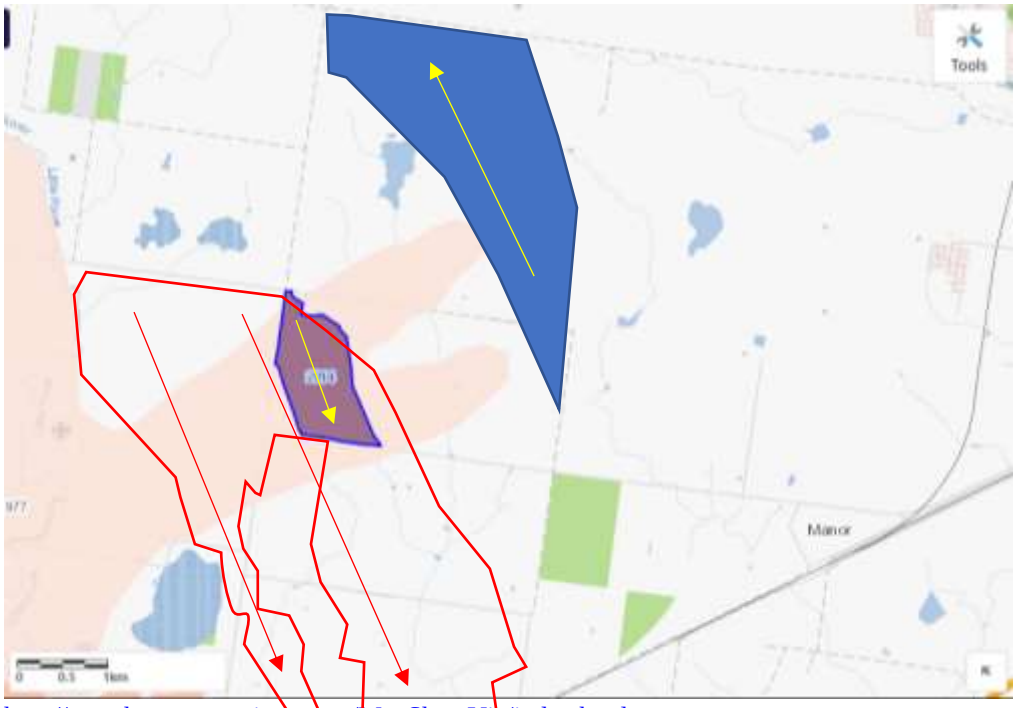


Little River 1,300 ha



Recent fires started in nearby paddocks suggests local foul play
Red outline = 6 Dec 2018, Mauve = Jan 14, 2014, Blue =14 Jan, 2013

Little River fire: Residents urged to evacuate
Tamsin Rose and Peta Fuller **Herald Sun December 7, 2018**
Firefighters are battling an out-of-control grassfire near Melbourne and are urging people to leave now - or it may be too late. Emergency services have cautioned residents in Mambourin and Manor that it may now be too late to leave.
Firefighters are battling an out-of-control grassfire at Little River, between Lara and Werribee. Aerial units have been called in to tackle the blaze, which is travelling southeast.
About 40 tankers are on the scene and a helicopter and multiple planes had been called in to assist.
Crews were called to the fire that started in a paddock near Kirks Bridge Rd about 11.45 on Friday morning. An emergency warning was put in place about noon.

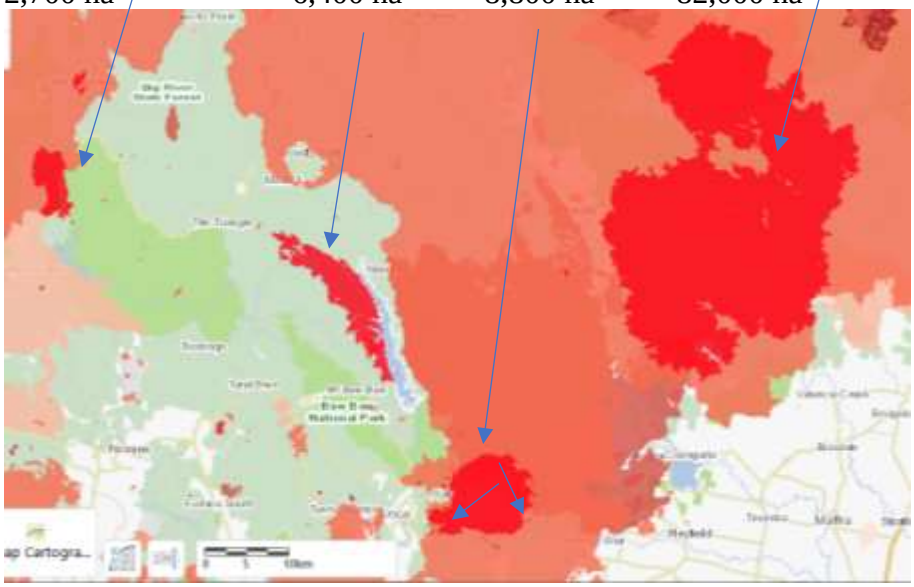


http://mapshare.maps.vic.gov.au/MapShareVic/index.html

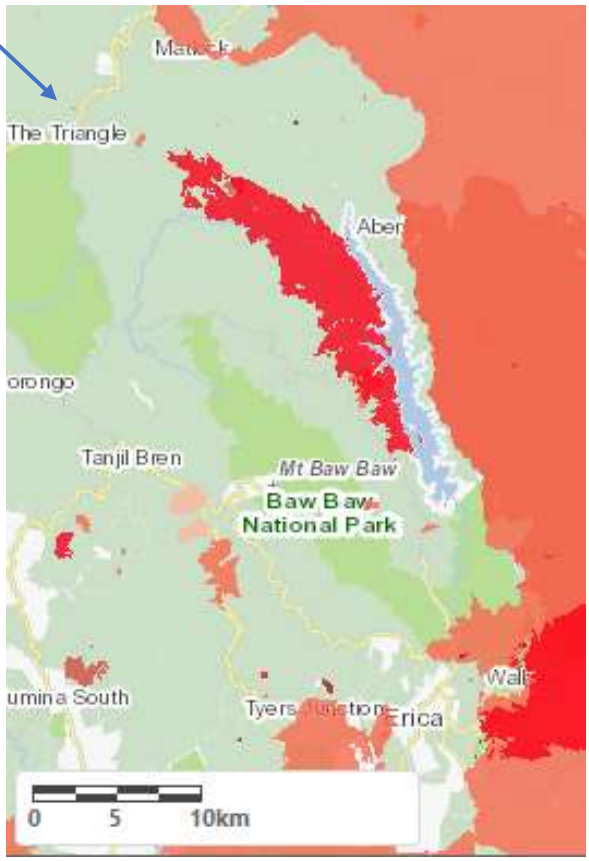
Comment
This fire began in a similar area to the ones in 2013 and 2014. It is the work of an arsonist who has not yet been caught. His persistence suggests he may have a vendetta against someone in the path of the

fire. We must stop him because he is dangerous. He knows how to pick the day and the wind direction. This time he has caused significant damage.
The maximum Fire Danger Index today was 80. It was a windy FDI 80, meaning the perimeter will expand quickly and will almost certainly escape from fire fighters.

Cambarville 2,700 ha Thompson 6,400 ha Walhalla 8,800 ha Mt Margaret 82,000 ha

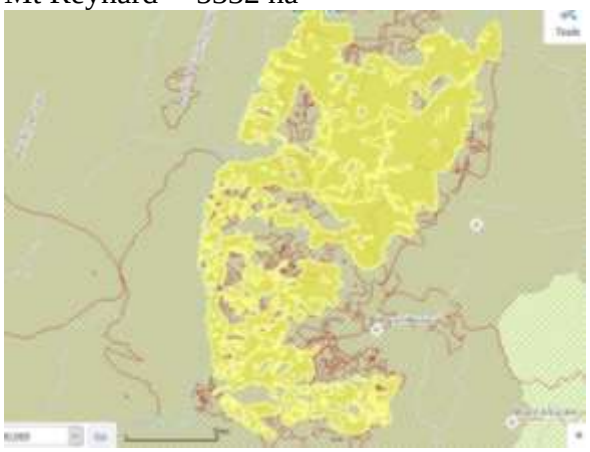


Thompson Reservoir fire 6,400 ha
30 January Final



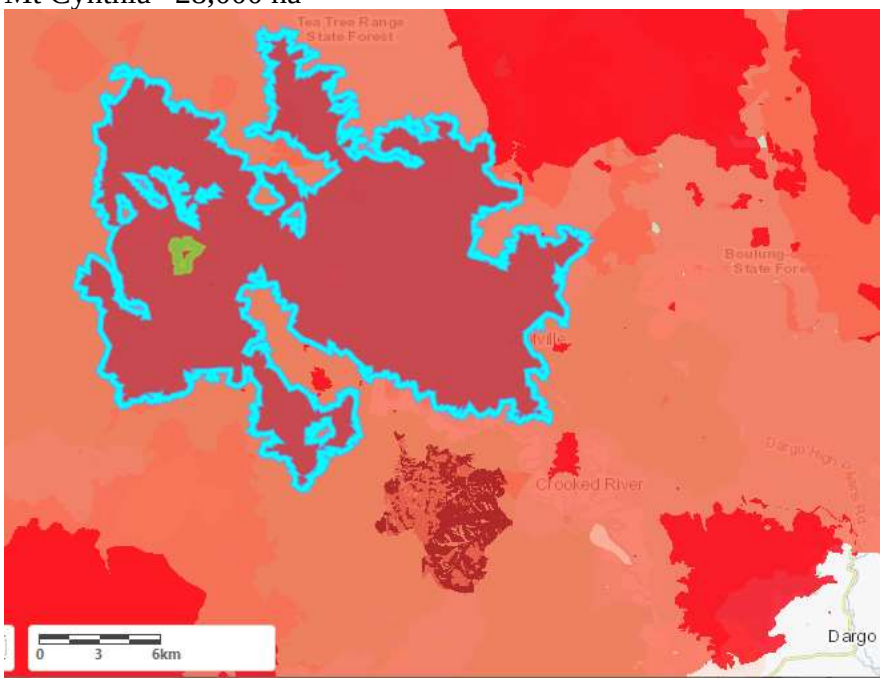
Thompson Reservoir fire began on 26 Jan and ran for weeks

Mt Reynard 5332 ha



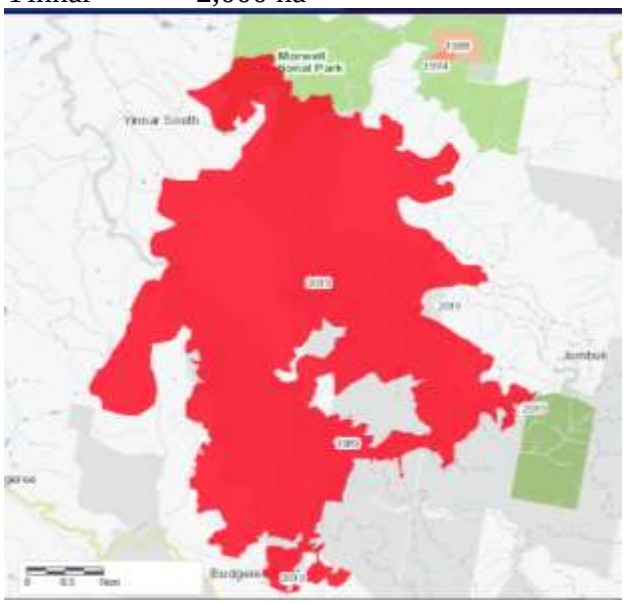
Dargo High Plains 14,000 ha

Mt Cynthia 28,000 ha

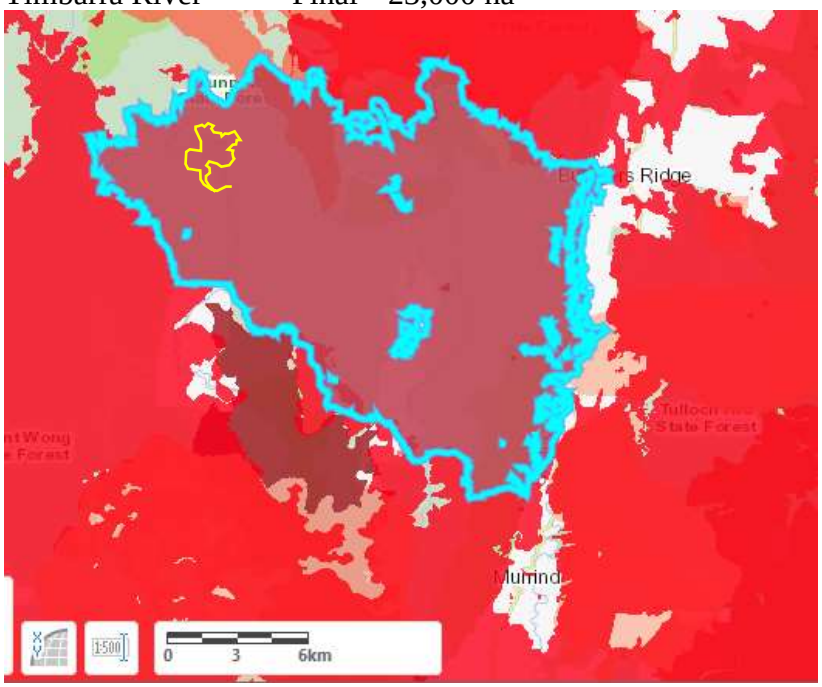


Wilson's Promontory 300 ha

Yinnar 2,000 ha

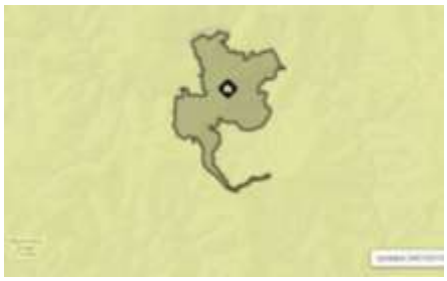


Timbarra River Final 23,000 ha



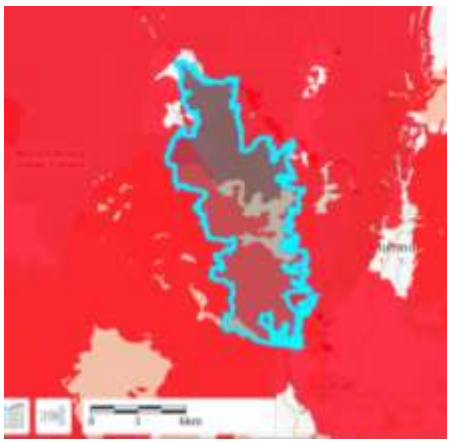
Timbarra fire began as a tiny lightning strike spot fire. It was not stopped when small so it grew.

See below: They put a tail on it but it developed a sting. The tail was their planned control line, being widened with a backburn, prior to infill burn out with aerial incendiaries. Weather intervened with low pressure and light winds, which encouraged uplift spotting aloft into upper winds, and downwind spot fires beat their plan. Subsequent strong winds then took charge.

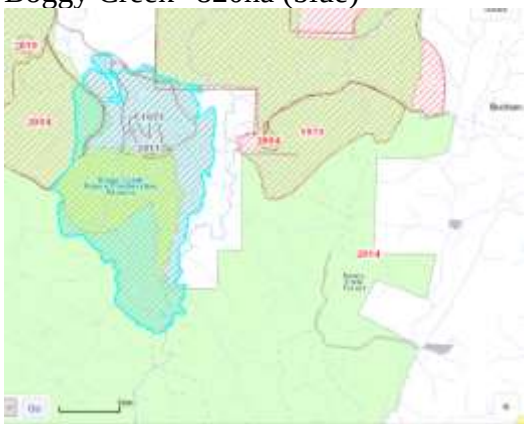


Yellow arrows = spotting jumps control line

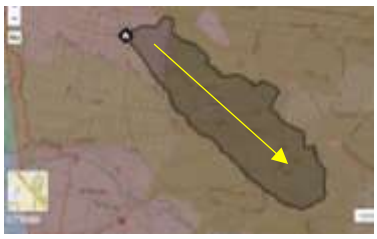
Mt Victoria 8058 ha (blue)



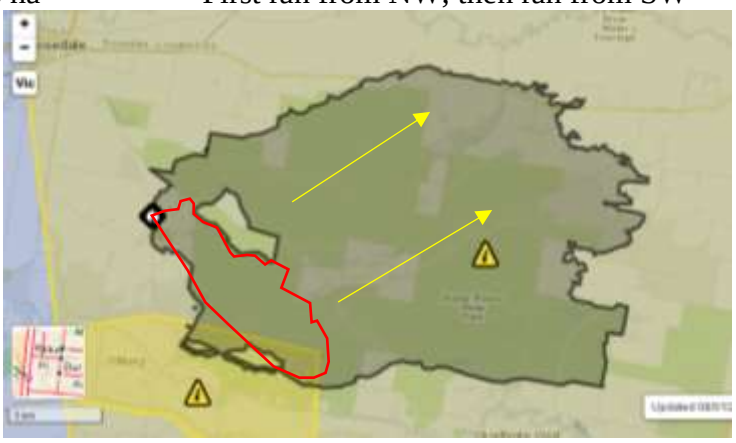
Boggy Creek 820ha (blue) 15/1 Benloch approx 50 ha



Holey Plains fire 12,148 ha First ran from NW, then ran from SW



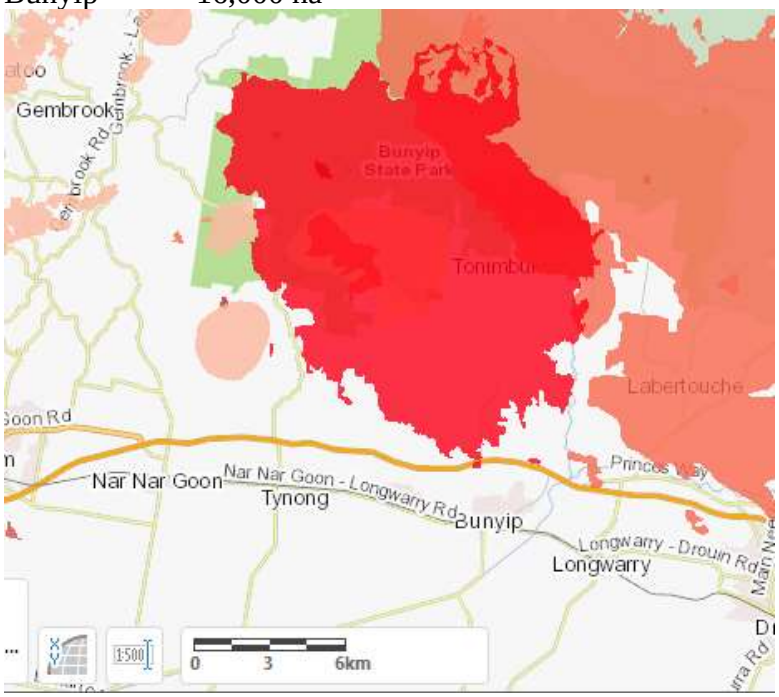
10 pm on 4 Jan 2019 1,200ha



8 Jan 2019 12,000ha

4/1/2019 = TFB day, strong NW wind, then SW change

Bunyip 16,000 ha



Read this link to find out where these lightning fires started and spread:
The early spread of the Bunyip fire

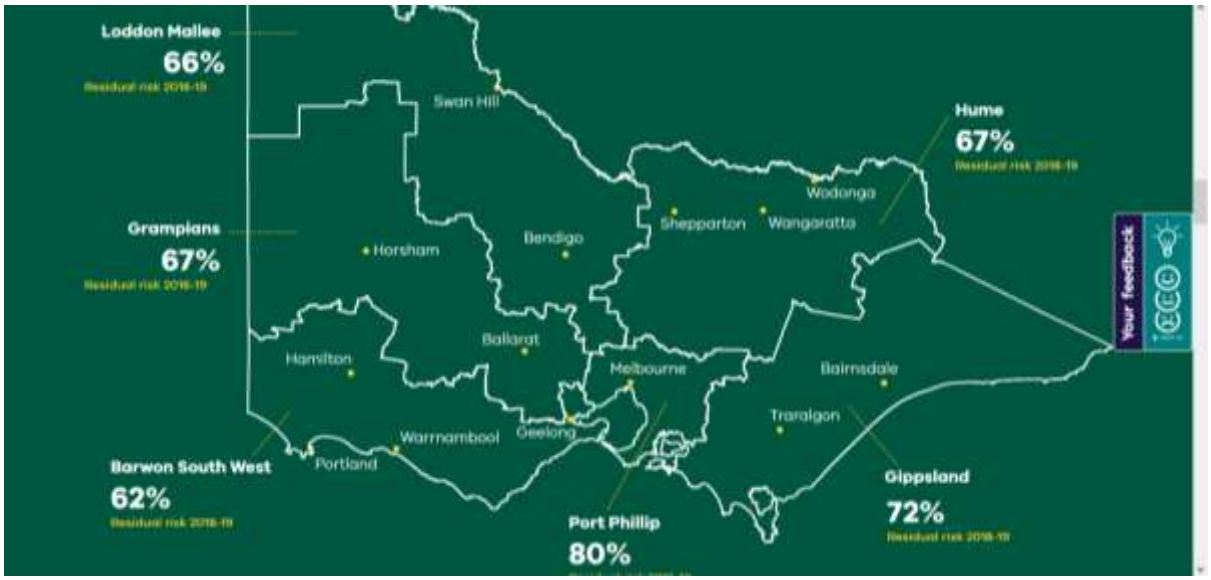
Observation:
Statewide residual risk level
Forest Fire Management Victoria (FFMVic) seeks to maintain bushfire risk below a statewide target of 70%. This was achieved in 2018–19, and the current bushfire risk is 69%.
What does risk level mean?

- Risk level = 100%, when zero fuel reduction works are done by mowing or control burns or bushfires over the previous few years, the house loss estimate in severe bushfire attack (via the computer program) = **HL**
- If risk level = 69%, some fuel reduction works have been done by mowing or control burns or bushfires over the previous few years, predicted house loss = **69% of HL.**

[Example from Barwon Otway Strategic Bushfire Management Plan (2014)
Without fuel management works, computer-estimated house loss at **Lorne** during severe bushfire attack = 850 houses.
With 5,000 ha burnt by bushfire or control burn on public land (equiv to 2013 level) anywhere within the 1 M ha (approx) Barwon Otway Region, computer-estimated house loss at Lorne during severe bushfire attack = 400 houses.

Unfortunately, this performance indicator lacks logical and scientific credibility, so is quite meaningless. Nevertheless, we will monitor it each year.

This year's values are shown on this map, eg, East Gipps is 72%.



2019/20

Weather

Dryness Index	Days >35^{0}C	Seasonal Severity Level
12.5	10	115

Seasonal Severity Levels Below average < 75, High 115 to 148, Highest >148
Dryness Index 11 means rainfall is half of average monthly from Sept to April. If > 11, rainfall is less.
Note: Dryness Index is high because of half average rainfall Sept to Oct, and virtually nothing in December

For reference, there were 5 Statewide Total Fire Ban Days and 2 specifically for Central District, meaning a total of 7 TFB days for Central District.
Weather records indicate there were 4 wind change days, ie, day 0 > 35C, next day < 25C.

Estimated damage
Five deaths, 1.5M ha burnt, including 16,000 ha private land, 400+ houses, 600 sheds, 10,000+ livestock, 831 ha of timber plantation.
An estimate that **bushfire smoke** was associated with **120 deaths**, 331 hospitalisations for cardiovascular problems, 585 hospitalisations for respiratory problems and 401 emergency department presentations for asthma.

CFA
Annual Report Statement from Chief
More than 1.5 million hectares were burned by more than 3,500 fires.
Five people tragically died and more than 400 residential structures and over 600 non-residential structures were damaged or destroyed by fire.

On 21 November a Code Red fire danger rating was declared for the Mallee and Northern Country and there was a statewide Total Fire Ban (TFB). Lightning storms caused more than 50 fires on 22 November. Local CFA crews worked closely with Forest Fire Management Victoria (FFMVic) crews. The majority of fires were contained within a day and no homes or lives were lost. Three large fires remained out of control

On 29 December the Talmalmo fire from NSW entered Victoria northwest of Corryong and became known as the Upper Murray Walwa Fire.

On 30 December, the state had extreme fire danger ratings in seven out of nine districts and a statewide TFB. The fires in East Gippsland and the Upper Murray Walwa fire, plus a new fire from the previous day in Cann River, burned extensively during the day and overnight, driven by hot temperatures, high winds and extremely flammable fuels. Many communities and townships were threatened and impacted including Sarsfield, Buchan, Mallacoota and Corryong.
The size of the combined fires grew by about 200,000 hectares overnight with many fires merging.
Also on 30 December, a fire started which burned into Budj Bim National Park near Bessiebelle. It threatened World Heritage-listed Aboriginal cultural sites but was contained in 17 days.

Major incidents

21/11/2019	Strathallan – Burgoine Road 3 days duration	
22/11/2019	Snowy Complex Cann River – Banana Tk fire and W Tree – Yalmy fire. 97 days duration.	662,500 hectares.
22/11/2019	Tambo Complex Ensay – Ferny Creek fire, Marthavale – Barmouth Spur fire and Gelantipy - Never Never Creek fire. 89 days duration.	324,739 hectares.
20/12/2019	Lexton – Ben Major 10 days duration.	2,792 hectares.
20/12/2019	Taplan – Settlement 22 days duration.	
25/12/2019	Crawford River – Boulevard	2,958 hectares.
29/12/2019	Upper Murray Walwa	200,442 hectares.
30/12/2019	Budj Bim 10 days duration.	6,369 hectares.
30/12/2019	Plenty Gorge 11 days duration.	
31/12/2019	Cobungra – Dinner Plain Tk	10,758 hectares.
31/12/2019	Abbeyard – Yarrabula South	151,221 hectares.
31/12/2019	Hotham Heights – Blue Bag Range	35,700 hectares.
31/12/2019	Shannonvale – McNamara Hut	44,308 hectares.
01/01/2020	Buenba – Pheasant Creek Tk	90,003 hectares.

DELWP

Annual Report

1161 fires attended by all fire fighters, 1.51M ha burnt

767 fires attended on public land where 1.35M ha burnt, meaning 16,000 ha private property burnt

Suppression expenditure for public land = $728M compared to FFM Budget $400M

Note: The higher than budgeted output cost predominately relates to a Treasurer's Advance approved for 2019-20 Bushfire Response and Recovery initiative

- Over the 2019-20 bushfire season, DELWP and partner agencies responded to 1,161 fires across 1.51 million hectares, largely concentrated in the eastern part of the state
- FFMVic crews responded to 767 fires impacting 1.51 Million ha of public and private land during the 2019-20 season.
- Between November 2019 and February 2020, more than 1.5 million hectares of land was burnt, which included 1.35 million hectares of public land
- For 98 days, DELWP and partner agencies worked to manage more than 1,161 fires that had been burning across the state since 21 November 2019.

Fires were unprecedented and unlike any fires previously experienced**. Responding to these fires tested the experience, endurance and resolve of all firefighters, staff and volunteers who worked tirelessly to keep communities safe. The extreme climactic conditions** led to the development of several campaign fires in the Hume and Gippsland regions, centred around the Snowy and Tambo districts, including the Snowy Complex Fire, which was finally contained after 98 days.

Despite the prolonged extreme weather conditions ** and multiple campaign fires in 2019-20, 95 per cent of bushfires were contained at first attack. This demonstrates the increasing effectiveness of rapid first attack operations and early detection of fires.

** Note how the spin is alarmingly distant from the fact.
Compare it to the fact: There were 5 TFB days, In E Gipps and NE 21/11, 20/12, 30/12, 4/1 and 10/1 but most weather over the Nov, Dec, Jan was mild, particularly the one long month between 21/11 and 20/12 when the fire was allowed to grow too large.

Between November 2019 and February 2020, more than 1.5 million hectares of land was burnt, which included 1.35 million hectares of public land. Five people perished, 313 primary residences and 145 non-primary residences were destroyed or damaged. Commercial properties and other buildings were also destroyed along with community infrastructure, cultural heritage sites and environmental assets. Farms and other agricultural enterprises, pasture, stock, fencing and equipment were also lost to the flames. Many regional small businesses, including hundreds not directly affected by the fires themselves, were, and continue to be, impacted by the events of the season. The bushfires significantly impacted several threatened species and their unique habitats. Approximately 242 species, 20 fauna and 222 flora, had half (or more) of their habitat destroyed by the fires. Nearly 80 per cent of the remaining Warm Temperate Rainforest in Victoria and more than 80 per cent of Victoria's Gallery Rainforest and Banksia woodland was burnt.

Unfortunately, five deaths tragically occurred during the 2019-20 bushfire season. DELWP contractor David Moresi was killed on 30 November 2019 near Gelantipy. DELWP firefighter Mat Kavanagh died in a vehicle accident near Alexandra on 3 January 2020 and Parks Victoria employee Bill Slade was killed while firefighting near Omeo on 11 January 2020. Two other Victorians, Mick Roberts of Buchan, and Fred Becker of Maramingo Creek, near Genoa, also perished as a direct result of the fires

Other sources - Knowledge Hub
Fortunately, we can find a more comprehensive summary on Knowledge Hub

https://knowledge.aidr.org.au/resources/black-summer-bushfires-vic-2019-20/

Victoria's (VIC) bushfire season started in earnest on 21 November when a total fire ban was declared for the entire state
Storm activity increased during the day. The storms also caused power outages, with a peak of approximately 130,000 households without power.
One hundred and fifty fires started in Victoria that day. By day's end, around 60 fires remained active, including a large fire in the state's north near Shepparton, three large fires in East Gippsland, and a fastmoving grass fire at Mount Glasgow, north of Ballarat.
By 25 November, two of the East Gippsland fires, near Bruthen and Gelantipy, had grown to 1,750 ha and 600 ha respectively, while in the north-east of the state, a 300 ha fire was burning in the Mount Bogong area.
On 20 December, another total fire ban was declared for Victoria. One hundred and ten new fires broke out that day; a fire near Marthavale grew rapidly, endangering the communities of Tambo Crossing, Ensay and others. The Great Alpine Road was closed between Ensay and Bruthen and by next morning, the fire had caused power and mobile phone outages north of Ensay and from Bruthen to Omeo. Over the following days, several smaller fires began to combine, creating large fires that threatened several communities and critical infrastructure.

Due to predictions of worsening fire conditions, VIC authorities broadcast warnings to residents and visitors to leave high risk areas in a 15,000 square kilometre area stretching from Bairnsdale to Cann River and the New South Wales (NSW) border. More than 60,000 people are estimated to have evacuated the East Gippsland and Hume regions as a result.
On 30 December, another state-wide total fire ban was declared as multiple new fires started from dry lightning in the Grampians, Hume and Gippsland regions. Three fires in East Gippsland with a combined area of more than 130,000 ha remained active; a Forest Fire Management Victoria (FFMV) contractor died in a vehicle rollover.
Early in the morning on New Year's Eve, the Banana Track fire reached the coastal town of Mallacoota in the state's far east. Several thousand people were isolated in the town and more than 60 homes were destroyed. Escape routes were cut off and an estimated 4,000 people gathered on the town's foreshore, protected by the local Country Fire Authority (CFA) brigade, three CFA strike teams, FFMV firefighters and VIC Police personnel.
A fire approached the coastal town of Lakes Entrance.
By the end of December, fires had burnt 400,000 ha across the state, more than 230,000 ha in East Gippsland, and many communities remained isolated, without power or telecommunications.

On 1 January 2020 there were unconfirmed reports of property and infrastructure losses in several communities, including Mallacoota, Genoa, Reedy Flat, Buchan, Bruthen, Sarsfield, and Gelantipy. The Princes Highway east of Bairnsdale was closed in several places, isolating many communities.
On the evening of 2 January an estimated 50 fires were still burning in the state,
On 3 January, nearly 2,000 people were evacuated from Mallacoota by air and sea, part of the largest-ever maritime evacuation of Australian citizens following a natural disaster. Evacuations were carried out by the Australian Defence Force (ADF) supported by international defence partners and other agencies. A FFMV firefighter died in a two-vehicle collision.
On 11 January, a FFMV firefighter was killed by a falling tree.
On 14 January, VIC recorded the worst air quality in the world as smoke from the East Gippsland fires spread and authorities warned vulnerable groups to stay indoors.
Operations to return residents to Mallacoota commenced on 19 January, with eight air missions flown that day.
Widespread rain fell in VIC on 20 and 22 January, bushfires had burnt more than 1.5 million ha, mainly in the state's east and north-east. Fire-affected areas in Gippsland received between 20 millimetres (mm) and 60 mm of rain, and up to 40 mm was recorded in the state's north-east. Firefighters were withdrawn from some areas due to fears strong winds and flash flooding could topple trees, create landslides and block roads in areas damaged by fire.

On 4 February, the Princes Highway was re-opened from Orbost to the NSW border.
The Mallacoota-Genoa Road was re-opened and Mallacoota reconnected to the main power grid on 8 February.
By mid-February, the Snowy Complex fire in the far east of the state was the only major fire still burning. That fire, which had burned 663,000 ha, was declared contained on 27 February.

A preliminary evaluation of the health burden of the VIC bushfires estimated that **bushfire smoke** was associated with **120 excess deaths**, 331 hospitalisations for cardiovascular problems, 585 hospitalisations for respiratory problems and 401 emergency department presentations for asthma.

FFM fuel management Report 2019 / 20
Forest Fire Management is a Branch of DELWP

The 2019–20 Victorian bushfires were some of the most significant on record. With over 1.5 million ha burnt across public and private land, the impacts were significant: over 450 houses, 10,000 plus livestock, 831 ha of timber plantation, countless hectares of critical habitats, native timber assets and water catchments and tragically five lives.

Statewide risk level

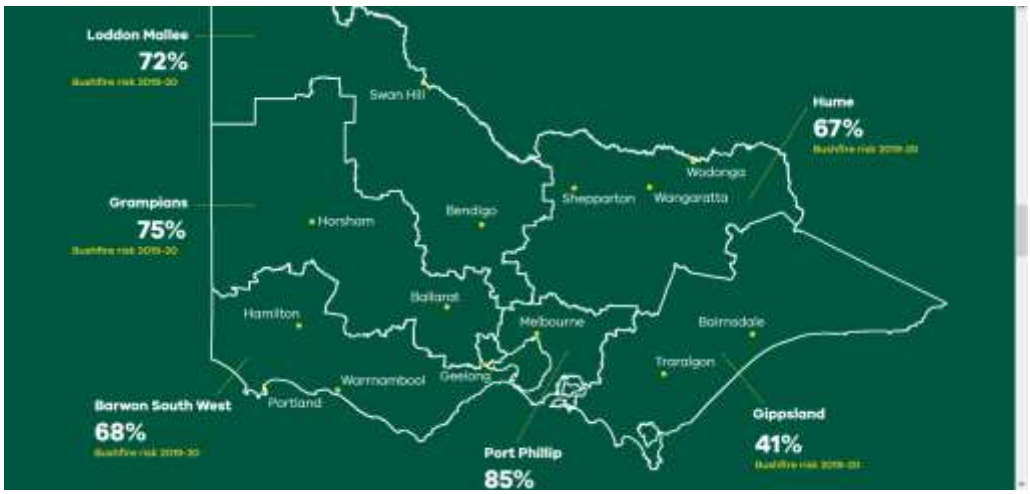
At the end of 2019–20, statewide bushfire risk was 64 per cent**. This is below the statewide target** of 70 per cent and 5 percentage points less than last year, largely associated with the effects of bushfires.

Bushfire risk is calculated as the percentage of bushfire risk 'left over' after fuel in forests has been reduced, either through fuel management activities or bushfire. The fuel management program takes us some way to managing bushfire risk, and we also manage bushfire risk through other prevention, preparedness and response activities.

While the 2019–20 bushfires significantly contributed to the reduction in the state's bushfire risk levels, over the past decade the majority of risk reduction has been achieved through planned burning, even when considering the influence of major bushfires.

On average, from July 2009 to June 2020, planned burning accounted for two-thirds (66%) of the total risk reduction, compared to one-third (34%) by bushfires. This is despite bushfires burning an additional 900,000 ha compared to planned burning: that is, 2.5 million ha was burnt by bushfires, compared to 1.6 million ha by planned burning. This is because we use the best-available science and data to target areas for planned burning (such as close to high-value assets) to maximise risk reduction, whereas bushfires burn locations randomly.

Furthermore, the bushfires directly impacted 130,000 ha of 230,000 ha scheduled to be treated by planned burning during 2019–20, Despite the challenging season, FFMVic treated over 37,000 ha of land using planned burning and over 17,000 ha using mechanical fuel treatments. While the planned burning program we delivered was less than planned, the 17,000 ha of mechanical fuel treatments represents about a 50 per cent increase from 2018–19.



risk level chart last year

** The cynical may see this as a wonderful risk measure for authorities with no serious desire to protect the public from bushfires. Bushfires are indeed a blessing for their performance targets. And, the longer they run, the greater the blessing.
Thanks to the bushfires, Gippsland's risk level has plummeted from 72% to 41%, NE is unchanged, but other areas have risen a bit. Overall, the State risk is 5% lower.
The implication is that the State is now safer as we enter the next fire season, ie, 5% less houses will now burn down.

The questions to ask are these:
Does a lower risk level really make the State safer?
Did Gippsland's risk level of 72% last fire season help reduce its house loss toll during last season's bushfires?
Let's see – what did the authorities tell parliament about the toll?

- CFA said 5 deaths and "more than 400 residential structures and over 600 non-residential structures were damaged or destroyed by fire"
- DELWP said -"Five people perished, 313 primary residences and 145 non-primary residences were destroyed or damaged".
- FFM said 5 deaths and "over 450 houses"

Sad that the toll is not clearly defined by the fire authorities.
Very sad, very unaccountable.
But the authorities do not need to provide an answer, because DELWP has met Treasury's 70% risk level target with flying colours and CFA does not have a specified Treasury target. The only losers are the burnt-out victims, the local economies, the insurers, the people whose insurance premiums will rise, and the diversion of hundreds of Millions of public monies from productive purposes like health, roads and education.
It is very sad that these people have no Parliament representative to champion their desire for a safe bushfire-protected life, when the fire authorities failed to provide it last year.
** It is even sadder that Treasury and other authorities accept this meaningless and scientifically devoid indicator as a performance measure.

The Insurance Council of Australia advises:
https://www.insurancebusinessmag.com/au/news/breaking-news/revealed-insurance-bill-for-201920-summer-catastrophes-223760.aspx
According to ICA, the estimated insurance losses from the 2019 / 2020 bushfire season amounted to $2.32 billion, with 81% of the blow dealt to NSW. The natural disaster saw 38,181 claims lodged.

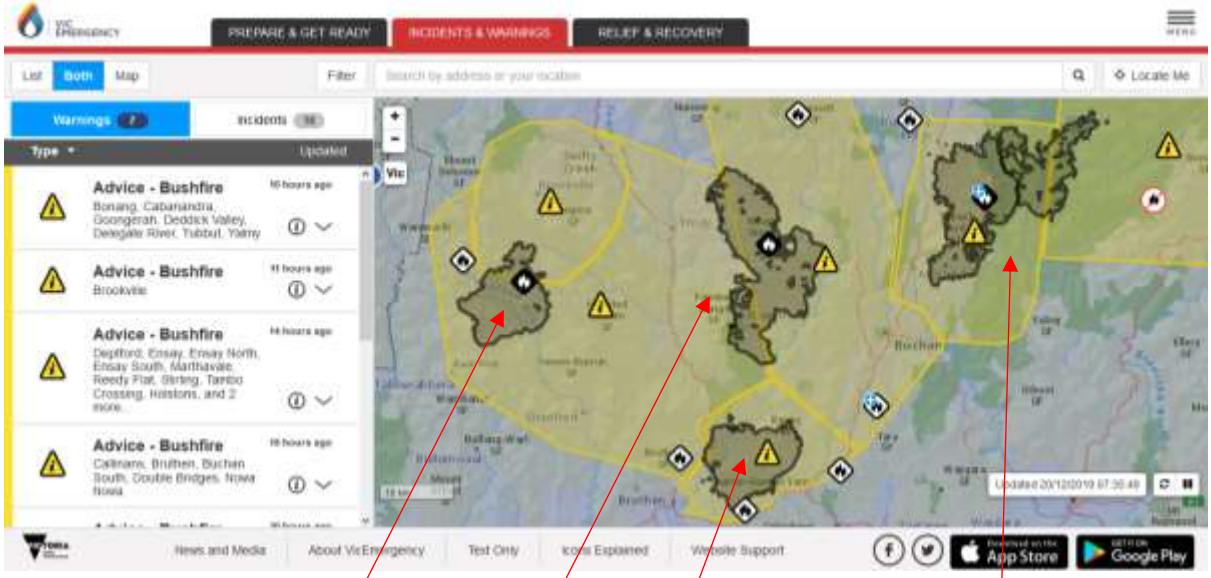
https://knowledge.aidr.org.au/resources/black-summer-bushfires-vic-2019-20/

As of 28 May 2020, the Insurance Council of Australia estimated that the VIC bushfires generated approximately 3,050 insurance claims with estimated insured losses of approximately $18.6 million.

DELWP bushfire maps 2019 / 2020

East Gippsland Fires

Look where they started:
Only 4 lightning fires got away in late November.
One was contained near Bruthen, another developed a month later and ran past Mallacoota. So, only four did all the damage.



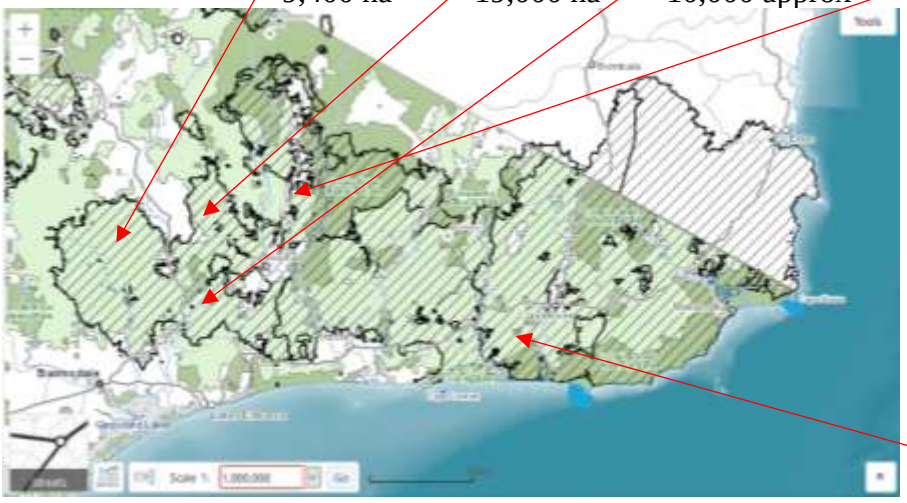
20 Dec AM

Barmouth spur 9,400 ha

Ensay 19,000 ha

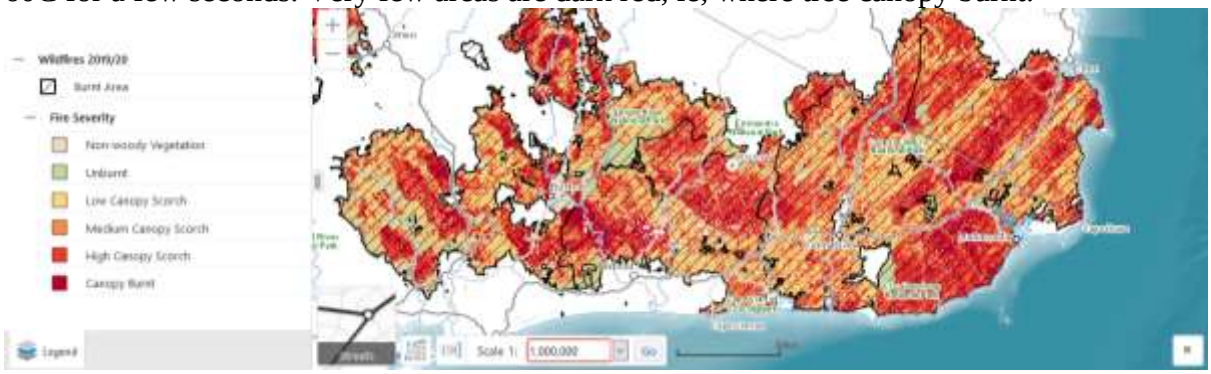
Bruthen 10,000 approx

Snowy River N P 19,600 ha

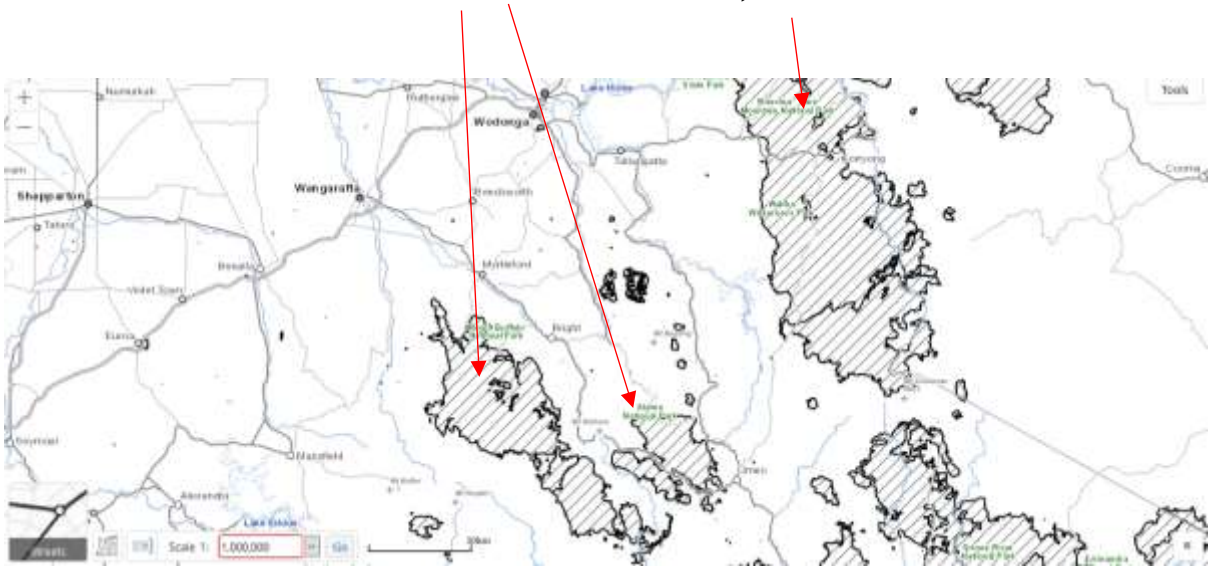


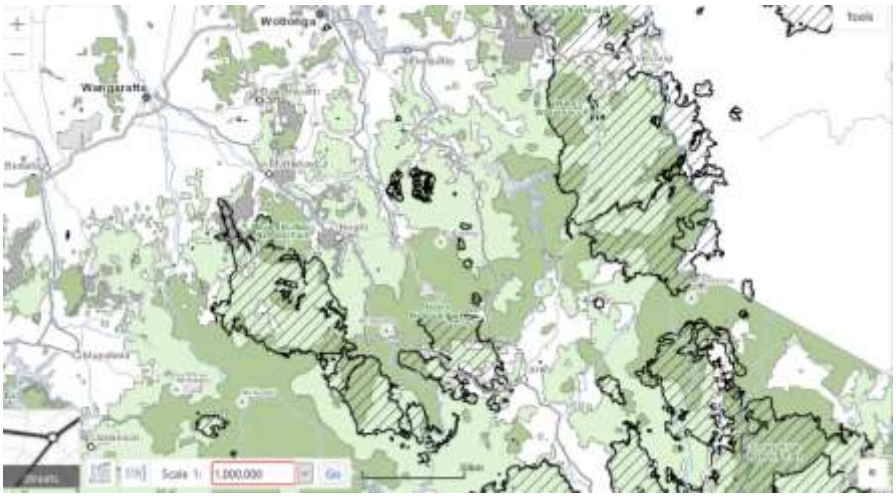
31 Dec, Mallacoota

The orange and red areas are canopy scorch, ie, the flame below is hot enough to kill the tree foliage, but not tall enough to burn the leaves. Leaf cells die when exposed to 60C for a few seconds. Very few areas are dark red, ie, where tree canopy burnt.



North East Victoria fires Most started in the Victoria, one entered from NSW





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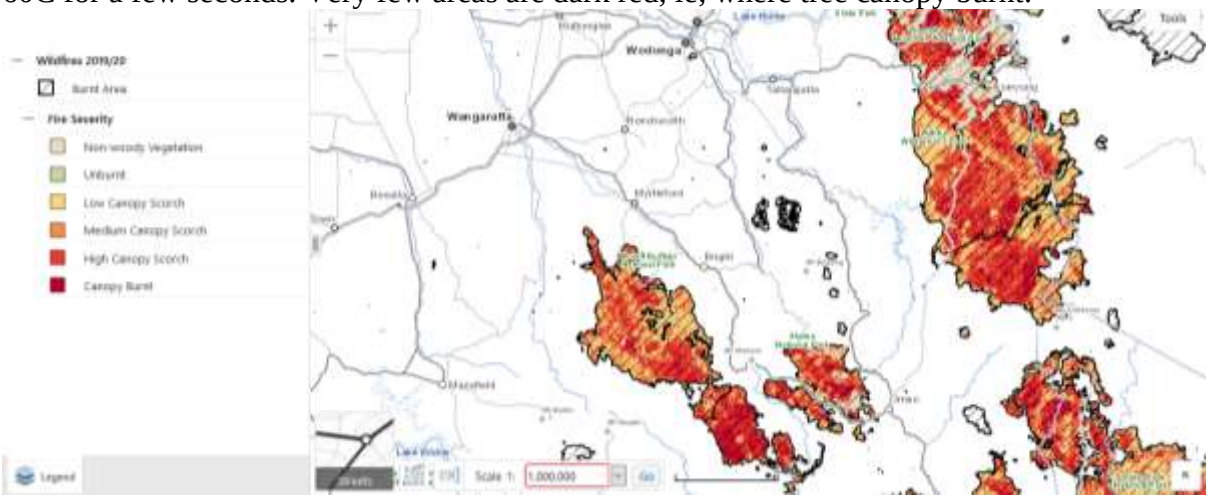
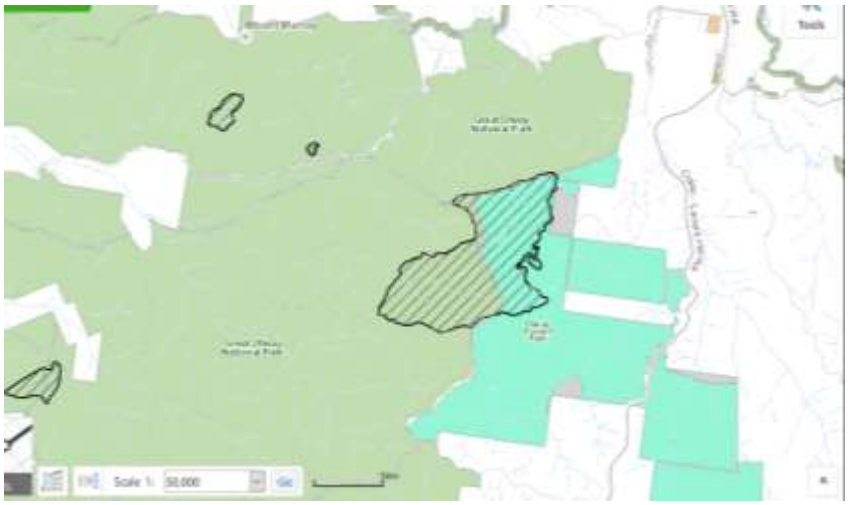


Some fires in Western Victoria and Otways, details unknown



Additional bushfire details about the East Gippsland bushfires.

I sent the following documents to the Victorian and Federal Government Inquiries:

I had been tracking the bushfires descending southward through NSW, following the drying sun's transit across the Latitudes. I was appalled to see the desperately dangerous situation that Victorian authorities had let happen. I dashed this note off on 29 December.
Meanwhile, what is going on in Victoria? 29 Dec 2019

I then followed the development of the fire that claimed Mallacoota and posed this obvious question about de facto negligence.
Why was Mallacoota not bushfire-protected? 31 December 2019

I then retraced the origins of the East Gippsland fires and the authorities' inexplicable inability to contain them during long runs of mild weather.
How, Why and Where the East Gippsland fires started and spread 5 Jan 2020

I obtained more information about the very preventable fire tragedy at Mallacoota.
Mallacoota Unprepared 1 Feb 2020
Mallacoota Unprepared – supplementary evidence 4 Feb 2020

I prepared this document for the bushfire inquiries. I stress the need for authorities to re-apply the core principles of the Stretton Royal Commission in 1939, rather than their apparent policy of "let the fires run".
The Changing Status of Bushfire Management in Victoria 24 April 2020

The following link is the combined collection of all these papers onto one document. It is in fact my submission to the Victorian bushfire inquiry.
Submission to IGEM Inquiry into fires in Eastern Victoria 3 May 2020

These papers expose preventable flaws and espouse proven bushfire management principles, but sadly, they had no impact on the whitewash outcomes of the bushfire inquiries. It is clearly more important for governments to close the bad chapter, pay

out compensation and move on with more of the same, hoping for a better run next time.

People need to realise they are still on their own during a severe bushfire attack, just as our pioneers were, and must learn to self-defend professionally.

Our hope is that one day, the authorities will adopt a Zero life loss / Zero house loss policy and bushfire-protect whole neighbourhoods from bushfires to achieve this goal, finally protecting their people from their annual bushfire anxiety. Simple to implement, but their will is low and their high budget fire suppression empires will evaporate.

Other Government Reports

Inquiry by IGEM into the 2019–20 Victorian Fire Season. October 2020

Press release

On 14 January 2020 the government announced an independent inquiry into the 2019-2020 Victorian fire season would be conducted by the Inspector-General for Emergency Management. Through this Inquiry, IGEM is examining Victoria's preparedness for the fire season, response to fires in large parts of Victoria's North East, Gippsland, and Alpine regions, and will review relief and recovery efforts.

The government will provide an additional $2.55 million to the IGEM to undertake the inquiry, which will consider the following matters:

➔ Effectiveness of emergency management command and control and Victoria's operational response

➔ etc etc

Commentary: It no longer seems to matter to Government that this inquiry is acting beyond the powers of the IGEM as listed under S64 of Emergency Management Act. Maybe there is other enabling legislation.
Under the Act, the Minister can ask the IGEM to inquire on any matter relating to the function of the IGEM.
The primary objective of the IGEM is to provide Assurance to the government and to foster continuous improvement. The primary function of the IGEM is to "develop and maintain a monitoring and assurance framework for emergency management". The IGEM website shows that the Framework is still very much under discussion.

The Terms of Reference (TOR) say:
The Fire Season Inquiry is being conducted over two phases, each guided by the Terms of Reference and matters for consideration.
But there are actually no TOR as such, just matters for consideration:

- Effectiveness of emergency management command and control and accountability arrangements in Victoria.
- Effectiveness of Victoria's operational response to the 2019-20 fire season.
- Review of the effectiveness of the …

Etc etc

We can observe the list of matters for consideration are not components of the Framework. Eg, effectiveness of emergency management command and control and Victoria's operational response, is not a component of the Framework.

Thus, the Government has announced "an independent Inquiry" while the fires are still running and has asked Tony Pierce, a senior government bureaucrat whose day job is IGEM, to lead an Inquiry that is outside the powers of the IGEM office, as an independent investigator. In practice, bending the legalities probably doesn't matter, as long as we get a good outcome. Sadly, we do not.

Tony duly tried to integrate the "independent" investigation with the limitation of the scope of the IGEM's authority. Hence, he wrote: This Inquiry is about learning, not blame.
Again, the government escapes accountability, as it did in the 2009 Royal Commission and 2015 Wye River fire Inquiry.
True to form, the government accepted all of Tony's recommendations, but they were all airy-fairy mumbo-jumbo words with no substance, deadlines or accountabilities.

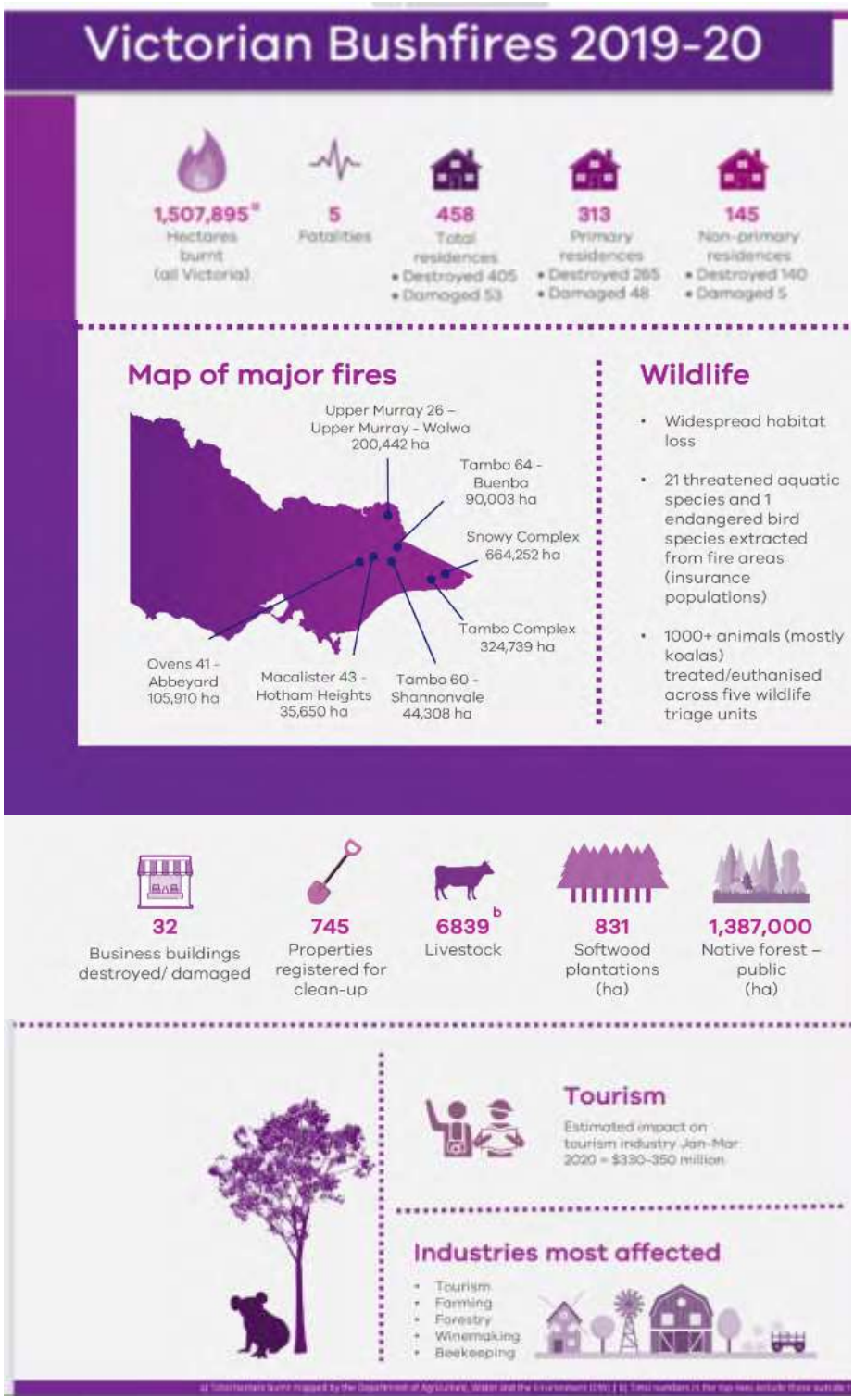
1 He summarised the scale of the disaster:
Between November 2019 and February 2020, more than 1.5 million hectares of Victoria was seared by fire.
Five people died, some 313 primary residences and 145 non-primary residences were destroyed or damaged, commercial properties and other buildings were also destroyed along with community infrastructure, cultural heritage sites and environmental assets.
Farms and other agricultural enterprises, pasture, stock, fencing and equipment were lost to the flames. Many regional small businesses, including hundreds not directly affected by the fires themselves, were – and continue to be – impacted by the events of the season.
Tourism was among the most affected industries at the height of the holiday peak and in the long tail afterwards. Agriculture, logistics and small businesses were also affected.
The huge environmental impact in terms of flora, fauna and waterways is still being assessed, interpreted and experienced.
Almost every significant fire in Victoria during the 2019–20 season was as a result of lightning strike.

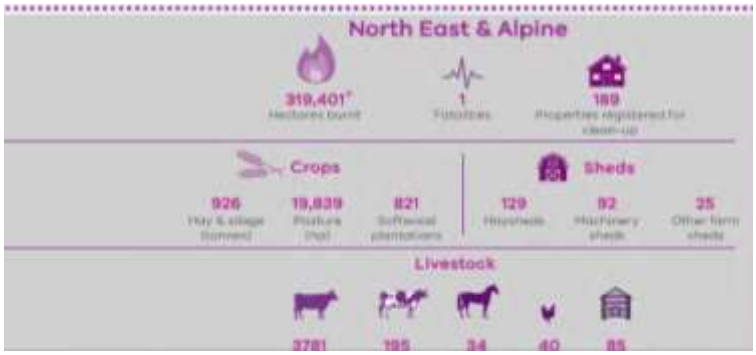
All of this took place in the context of a catastrophic Australian fire season that in total claimed 33 lives, destroyed more than 3000 residences and blackened over 10 million hectares. Victoria's bushfire summer was bad, yet we were certainly not alone.

In 2020, Victorians ought not be surprised by bushfire. It is a constant in our landscape. Yet every time a major bushfire event occurs, it seems that many in the community are caught unawares as if by something new and unprecedented.

This Inquiry is about learning, not blame. It is fixed in the need to carefully examine what happened in Victoria before, during and after the 2019–20 fires. It is driven by the desire to learn from that experience and ensure that continuous improvement within the emergency management sector flows from and builds upon those learnings.
It is evident to the Inquiry that there are opportunities for improvement in the way that the Victorian community, together with the emergency management sector, prepare for and respond to bushfire.

The specific outputs of this Inquiry are expressed in three ways: observations, findings and recommendations.
It is equally apparent that the many organisations and personnel who responded to the 2019–20 bushfires did so with dedication, skill, agility and sometimes bravery, across a vast area and over a prolonged period.
Despite these efforts Victorians must again mourn deaths from bushfire.


Victorian Bushfires 2019-20
1,507,895[a]
Hectares burnt (all Victoria)
5
Fatalities
458
Total residences
• Destroyed 405
• Damaged 53
313
Primary residences
• Destroyed 265
• Damaged 48
145
Non-primary residences
• Destroyed 140
• Damaged 5
Map of major fires
Upper Murray 26 – Upper Murray - Walwa 200,442 ha
Tambo 64 - Buenba 90,003 ha
Snowy Complex 664,252 ha
Tambo Complex 324,739 ha
Ovens 41 - Abbeyard 105,910 ha
Macalister 43 - Hotham Heights 35,650 ha
Tambo 60 - Shannonvale 44,308 ha
Wildlife
• Widespread habitat loss
• 21 threatened aquatic species and 1 endangered bird species extracted from fire areas (insurance populations)
• 1000+ animals (mostly koalas) treated/euthanised across five wildlife triage units
32
Business buildings destroyed/ damaged
745
Properties registered for clean-up
6839[b]
Livestock
831
Softwood plantations (ha)
1,387,000
Native forest – public (ha)
Tourism
Estimated impact on tourism industry Jan-Mar 2020 = $330-350 million
Industries most affected
• Tourism
• Farming
• Forestry
• Winemaking
• Beekeeping



2 He found areas with opportunities for improvement

I am satisfied that the evidence available to the Inquiry was sufficient to enable the identification of those areas of preparedness and response in greatest need of improvement. The sector's response to the 2019–20 Victorian bushfires again showed the state is well positioned in many regards.
However, operational governance, consultation and clear accountability are considered areas where opportunities for improvement exist. It is important that the sector retains a sound knowledge of its 'first principles' in incident management and ensures that it applies its standing arrangements to operational governance before implementing new or flexibly tailored models of command, control and coordination.

3 He listed findings and observations as a basis for recommendations

If we ignore the differences between a finding and an observation and their numbering systems, we can deduce where there were underlying problems.

Residual risk target on public land
Perhaps this target is a poor performance indicator.
Finding 4.15 Forest Fire Management Victoria has achieved its residual risk target of 70 per cent for three consecutive years resulting in bushfire risk reduction on public land that aligns with the objectives set in the statewide fuel management program.

Observation 4.5 Despite the achievement of the residual risk target on public land for three years, there is a high level of dissatisfaction in some parts of the emergency management sector and the community in relation to fuel management. The establishment of a schedule to regularly review the residual risk target and the land to which it applies would support greater understanding of fuel management and the effect it has on bushfire risk across the state.

Observation 8.1 Victoria needs to determine the level of preparedness it wants in place to reduce future risks. In doing so, consideration needs to be given to the predicted outcomes of climate change on weather patterns, increasing severity of events and the increasing likelihood of concurrent events occurring within Victoria, as well as nationally and internationally

Operational governance, consultation and clear accountability

Perhaps the command structure broke down

Finding 7.3 During the 2019–20 Victorian fire season the regional tier of control was underutilised due to a lack of role clarity and breaks in the line of control.

Finding 7.4 There was an inconsistency in the way incident management practices were applied between shift and rotations throughout the 2019–20 Victorian fire season. This led to difficulties in confirming incident objectives and priorities, and inconsistencies in the application of procedures.

Observation 7.2 There were multiple additional and parallel committees and structures established throughout the 2019–20 Victorian fire season to support the protracted and expansive event and fire impact.

Observation 7.3 There were occasions where the line of control was broken through tactical decision-making occurring at the state level and poorly timed consultation and communication of these decisions. Strong agency command arrangements and inter-agency relationships across the tiers minimised potential negative outcomes associated with these decisions.

Finding 7.10 Sector personnel and community members had to contend with different maps, terminology and communication platforms in New South Wales and Victoria.

Observation 7.10 The effectiveness of aerial firefighting resources and the deployment system in Victorian environments has not been extensively evaluated. A greater understanding of how aerial assets can support suppression efforts – including first attack – would allow Victoria to make more informed requests for aerial firefighting assets and ensure any assets provided are used to their greatest effect.

Preparedness and response

Perhaps we are running out of fire fighters

Finding 3.4 The number of career firefighters has increased over the last three years while the number of volunteer firefighters has steadily decreased.

Finding 3.5 The number of Level 3 Incident Controllers was below the target number in 2017–18 and 2018–19.

Observation 4.3 The timber industry provides an important support capacity to fire management in Victorian forests with a skill set, knowledge base and operational experience in forest landscapes. The cessation of native forest harvesting by 2030 poses challenges for the fuel management program and bushfire response capacity across the state.

Finding 7.5 The events of the 2019–20 fire season placed significant strain on the existing capacity and capability of the sector which had implications for the management of fatigue and the occupational health and safety of personnel both on the frontline response and in the control centres.

Finding 7.6 The existing capacity (including surge capacity) across the Victorian emergency sector was challenged by the extended duration and severity of the 2019–20 fire season.

Funding arrangements

Perhaps Treasury is concerned with the burgeoning cost of bushfires, and will one day say - Enough of this money wasting, get your act together, get meaningful performance targets and protect the state from bushfires within your own budgets.

Finding 3.8 The Victorian emergency management sector relies heavily on grant-based programs and funding for mitigation and preparedness initiatives as there is limited strategic and long-term investment to prevent, minimise and prepare for emergencies and their consequences.

Finding 3.9 Treasurer's Advances are an appropriate supplementary mechanism to fund suppression activities in short-term emergencies. However, it is unclear how suitable Treasurer's Advances are in supporting the Victorian emergency management sector to resource emergencies that are longer in duration.

Observation 3.9 The current funding arrangements to support the broader requirements of bushfire response and relief are not supplemented through Treasurer's Advances and rely on a reimbursement process that can be delayed. In a protracted event such as the 2019–20 Victorian fire season, the funding arrangements and cost-sharing expectations can cause a strain on councils and departments.

Finding 3.10 Councils have roles before, during and after bushfires that exceed the resources and funding received through emergency management programs, grants or rate-payer levies.

4 He made IGEM recommendations that are beyond his IGEM powers, but they are either toothless or simply restate current annual processes. Eg,

Recommendation 12 The Inspector-General for Emergency Management recommends that Emergency Management Victoria – in collaboration with the emergency management sector …
a) review, update and confirm arrangements for all tiers of control, including the flexible application of areas of operations, with a particular focus on the triggers for activation, integration with other tiers of control and clearly defined roles and responsibilities
b) exercise these arrangements to ensure they are appropriate and familiar during emergencies.

No wonder the government accepts all the recommendations. Sadly, it is a game for them, but property destruction is a travesty of justice for the burnt-out people. It says to me that people are being doubly fooled by the charade of empty but expensive inquiries that make no improvements in their safety and security and by failure to assign accountability for bushfire damage that emanates from government land.

5 However, the report does contain glimpses of common sense

Item 1

Simply building a vast bushfire response capability marshalling more aircraft, personnel, trucks and equipment is on balance no more useful than it is affordable. What is required is something more sophisticated: an adaptive and innovative approach that takes the best from a range of approaches, synthesising them to a point where the optimal human and environmental outcomes are pursued.

Item 2

FINDING 6.1 Over the 2019–20 fire season Forest Fire Management Victoria exceeded its fire containment target for first attack and fire spread.

Consider this evidence of fire escapes on severe weather days, and reflect on the fact that the fires that escape control are the real problem.

Table 18. Number of fire ignitions recorded on days of high fire activity in 2019-20 and number and % of fires contained within first attack criteria.

DAYS	TOTAL IGNITIONS	SAFE – OVERRUN	CONTAINED FIRST ATTACK		NOT CONTAINED FIRST ATTACK	
	#	#	#	%	#	%
5 and 6 November	36		36	100%		
21 and 22 November	69	17	33	63%	19	37%
20 and 21 December	43		24	56%	19	44%
30 and 31 December	92	23	57	83%	12	17%

Note: First attack considers fires contained under five ha or within the first 24 hours of ignition being recorded as a proxy for containment by 8 am.

IGEM Commentary

DELWP did meet its 80 per cent first attack suppression target. However, noting the exceptionally large land area burnt in the 2019–20 season and the dissatisfaction among some community members in relation to first attack – calling the first attack efforts 'successful' – may leave several stakeholders and communities understandably confused. While DELWP met its target, there is scope to consider whether the current seasonal, statewide first attack suppression target is still appropriate.

BUT – this IGEM thought bubble did not engender a recommendation.
So status quo continues.

Observations:
2019 / 20 has been named as Australia's Black Summer. Populists blame climate change and demand reduction in emissions. I choose to identify the real causes of ignition and spread, and manage their eradication.

I followed the course of several bushfires as locations of fresh bushfire outbreaks followed the sun's southerly progression from July to December, from Queensland all the way though NSW and into Victoria. The common feature of each is that they were not fresh outbreaks. They had been running quietly for several weeks within the bush, and when the hot windy weather came with the sun, they grew large and well beyond control of the land manager, and then escaped as infernos onto private land, well beyond control of rural and urban fire fighters.
I rationalise that the "let it burn" approach of public land managers derives from their attitude that a lightning fire is Mother Nature's tool, and public land is now Mother Nature's playground where we let natural processes happen without the interference of humans.

This mindset, if accurate, contrasts my forestry background in public land management that lightning fires have to be hit fast and hard to keep them small – WHY? To minimise cost of suppression, to prevent damage to nearby commercial tree growing stock and to prevent escapes onto private property and subsequent compensation payments.

I can identify the seeds of this change of approach in the Victorian megafires of 2003 and thereafter. I now have to accept it is entrenched. The public land manager, now DELWP, has softened the bushfire response from "fast, determined and thorough" to

"Reduce impact of major bushfires and other emergencies on people, property and the environment".

I advised the IGEM inquiry about interference by a National Park manager in the Snowy Ranges fire that prevented the Fire Controller's strategy of containment.
"The let-it-burn response to the fire outbreaks caused some fires to cause massive damage. This is the wrong strategy in drought spring
There is also evidence that best practice suppression on the Waratah Flat fire was thwarted by orders presumably from the idealogical land manager via the fire controller not to let dozers build breaks through the bush and not to back burn in the National Park.
This poor strategy allowed the fire to grow and grow and grow in the mild weather and then one day, with full foreseeable knowledge of the land manager and the controller, the severe weather sprang up and the monitored fire became the inferno fire that tore through the neighbours' properties and beyond.
This passes all the criteria for negligence."

I was not asked by the IGEM to explain this claim. But I can add this now. I am told by reliable sources that two or three attempts were made by on ground suppression crews to stop its E / NE spread with backburning from the appropriate existing tracks. One by one, each attempt was stopped because the Park's person did not want more fire in the area. It is ironic because letting the fire run is allowing more fire into the area.
Inexorably, the SE edge of this fire grew steadily to 50 km, and the strong NW winds on 30 December had the potential of creating a 50 km front were it not for the steep gorge system. As it happened, the fire escaped in only half a dozen locations, but there was no preparation or resourcing for this eventuality. These spot fires ran unhindered and eventually joined up. Too late now. Too big to stop. Too bad. Real bad.

2020 / 21 was a very quiet bushfire season.
The people of Victoria are grateful to Mother Nature, because the fire authorities are still trying to deal with the inferno beast they will never control at its fiercest, and still failing to learn how to apply basic bushfire behaviour science and threat management principles to weaken the beast and protect people and their assets from its weapons.