



Municipal Fire Management Plan

2017-2020



VERSION 2

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Forward

The Swan Hill Rural City Council Fire Management Plan (MFMP) has been compiled after extensive collaboration and discussion between Council, Government Agencies and Authorities and volunteer CFA members. The co-operation displayed between all agencies and organisations has ensured effective planning has been used throughout the development of this MFMP. Members of the public have been afforded the opportunity to provide input into the Plan via community engagement meetings.

The Safety of residents and visitors is a priority for the Swan Hill Rural City Council, and this first version of the MFMP focuses on bushfire risk. Future versions of the MFMP will include information on prevention and management of structural fires, and on safe handling of hazardous materials. This MFMP is a living document that will continually be reviewed to ensure it addresses all risks within a changing society.

The Swan Hill Rural City Council acknowledges and thanks all those who have contributed to the development of this plan and those who have committed their time and expertise, as members of the MFMP Committee.

Councillor Les McPhee
Municipal Fire Management Planning Committee

Authorisation

This Municipal Fire Management Plan has been prepared by the Swan Hill Rural City Council Municipal Fire Management Planning Committee after community consultation was completed in June 2012. The Plan has been considered by all parties identified within the Plan as reflecting the intent of their organization with regard to fire management planning and committing to work together to deliver the actions identified in the Plan.

This Plan was endorsed through a formal motion by the Swan Hill Rural City Council MFMP Committee at their meeting on 21 June 2012.

Signed: _____ Date: _____:
John Katis
Mayor
Swan Hill Rural City Council

Signed: _____ Date: _____:
Chair
Swan Hill Rural City Council
Municipal Fire Management Planning Committee

This Plan is endorsed by the Swan Hill Rural City Council Municipal Emergency Management Planning Committee.

Signed: _____ Date: _____:
Chair
Municipal Emergency Management Planning Committee
Swan Hill Rural City Council

Version Control

Revision Number	Date of Issue	Author	Brief Description of Change
1	15/05/12	Swan Hill Rural City Council Municipal Fire Management Planning Committee	Draft 1 documentation for Comment
2	June 2017	Swan Hill Rural City Council Municipal Fire Management Planning Committee	Minor review, updating acronyms etc.

Table 1: Version Control

Acronyms used in this plan

Acronyms	Details
CFA	Country Fire Authority
DELWP	Department of Environment, Land, Water & Planning
DEECD	Department of Education and Early Childhood Development
EM	Emergency Management
EMMV	Emergency Management Manual Victoria
EMP	Emergency Management Plan
EVC	Ecological Vegetation Classes
FDI	Fire Danger Index
HAZMAT	Hazardous Materials
IAP2	International Association for Public Participation
IFMP	Integrated Fire Management Planning
LMR	Loddon Mallee Region
MEMPC	Municipal Emergency Management Planning Committee
MEMP	Municipal Emergency Management Plan
MERI	Monitoring, Evaluation, Reporting, Improvement
MFMP	Municipal Fire Management Planning Committee
MFMP	Municipal Fire Management Plan
MFPP	Municipal Fire Prevention Plan
NSP	Neighbourhood Safer Place
PPRR	Prevention, Preparedness, Response, Recovery
PV	Parks Victoria
RSFMP	Regional Strategic Fire Management Planning Committee
SES	State Emergency Service
CIG	Community Information Guide
VFF	Victorian Farmers Federation
VFRR	Victorian Fire Risk Register

Table 2: Acronyms

1. Introduction

This Swan Hill Rural City Council Municipal Fire Management Plan, (MFMP - *the Plan*), was prepared by the Swan Hill Rural City Council Municipal Fire Management Planning Committee (MFMPCC) in line with Part 6A of the Emergency Management Manual of Victoria (EMMV) and the State Fire Management Planning Committee's guidelines for integrated fire management planning.

This MFMP is task focused and encompasses:

- The risks and vulnerabilities identified to be managed across the Municipal footprint;
- Reduction of the likelihood and consequence of fire hazards within local communities in the municipality;
- Management of local priorities relating to protection of communities and physical, environmental, economic and social assets;
- Development and implementation of works programs for the management of fires, including hazard removal and fuel management;
- Community engagement activities;
- Encouragement of shared responsibility by the community;
- Consideration of planning across Municipal boundaries.

1.1 The Integrated Fire Management Planning Framework

In response to the challenges that have emerged in fire management over the last decade, the Victorian Government established an Integrated Fire Management Planning (IFMP) Framework for Victoria. The IFMP framework operates under existing fire and Emergency Management legislation. As part of implementing the IFMP framework, Council's MFMPCC was required to prepare a three year Municipal Fire Management Plan (MFMP). IFMP has adopted a planning process that is consistent with International Standard for Risk Management ISO 31000.

Stage of the IFMP planning cycle	Relevant aspect of the AS/NZS ISO 31000:2009 Risk Management – Principles & Guidelines
Engagement Plan	Communicate & Consult
Environmental Scan	Establish the context
Risk Assessment > Analyse	Identify the risk > Analyse the risk > Evaluate the risk
Decide > Publish	Determine and document treatment options
Deliver	Treat the risk
Monitor & Improve	Monitor and review.

Table 3: IFMP Alignment with AS/NZS ISO 31000:2009

1.2 Authority for Plan

The Swan Hill Rural City Council has a legislative responsibility under section 21(4) of the *Emergency Management Act 1986* to prepare and maintain a Municipal Emergency Management Plan (MEMP), and under the *CFA Act 1958*, to develop and implement a Municipal Fire Prevention Plan (MFPP). The MFMP will replace the requirement for the MFPP. This MFMP is a sub plan of the MEMP and is prepared by the Municipal Fire Management Planning Committee.

The final Plan as adopted by Council will be deemed to meet the requirements for a MFPP under Section 55A (1) of the *CFA Act (1958)*, provided it contains provisions as set out in Section 55A (2) of the *CFA Act (1958)*.

1.3 Plan Endorsement and Adoption

The Swan Hill Rural City Council is the custodian of the Municipal Fire Management Plan (MFMP) pursuant to current legislative arrangements. The Municipal Fire Management Planning Committee (MFMP) has drafted a MFMP and has sought endorsement of the Draft Plan from the Municipal Emergency Management Planning Committee (MEMPC) and, where appropriate, non-committee members with responsibilities and accountabilities under the Plan.

After appropriate stakeholder and community consultation and engagement, including perusal by the Loddon Mallee Regional Strategic Fire Management Planning Committee (LMRSFMPC), the Plan has been endorsed through a formal motion by the Swan Hill Rural City Council MFMP. Following this process, the MFMP has recommended the MFMP to the MEMPC for endorsement. The Plan was endorsed by the MEMPC, and the Plan was sent to the Loddon Mallee RSMFPC for comment, prior to recommendation by Council for consideration and adoption.

1.4 Period of Plan

Municipal Fire Management Plans have a three year planning cycle, the Plan will be endorsed for a period of 3 years commencing from the date of Council adoption of the Plan – September 2012 to September 2015.

1.5 Plan Review & Updates

The Swan Hill Rural City Council MFMP will be reviewed and amended:

1. As required in association with the MEMPC
2. Following significant incidents or change in risk exposure if required
3. As directed by the State or Regional Fire Management Planning Committees; and/or
4. As required by legislation.

When a review is undertaken and amendments are made to the Plan, the amended plan is 'endorsed by the MFMP and adopted by the MEMPC. Further details with regard to the ongoing monitoring and improvement processes are outlined in Part 6 of this Plan.

1.6 Plan Audit

This Municipal Fire Management Plan will be audited under Section 55B of the *CFA Act (1958)*.

This MFMP must incorporate the provisions of Section 55A (2) of the *CFA Act (1958)* relating to fire risks and their treatment and will be determined to meet the requirements for a Municipal Fire Prevention Plan (MFPP) under Section 55A (1) of the *CFA Act (1958)*.

Current arrangements for audit under the *Municipal Emergency Management Act (1986)* do not include audit to MEMPC sub plans. Audit arrangements for emergency management are currently under review by Victoria's Emergency Services Commissioner.

1.7 Planning Process

The Integrated Fire Management Planning framework enhances existing approaches to fire management planning and includes the following elements:

- Integration of plans and processes
- Consistency at State, Regional, Municipal and local levels
- Coordination of stakeholders and planning processes
- High levels of community and stakeholder engagement
- Performance management
- Monitoring and continuous improvement
- Supportive planning structure and environment
- Consistent identification and assessment of risk.

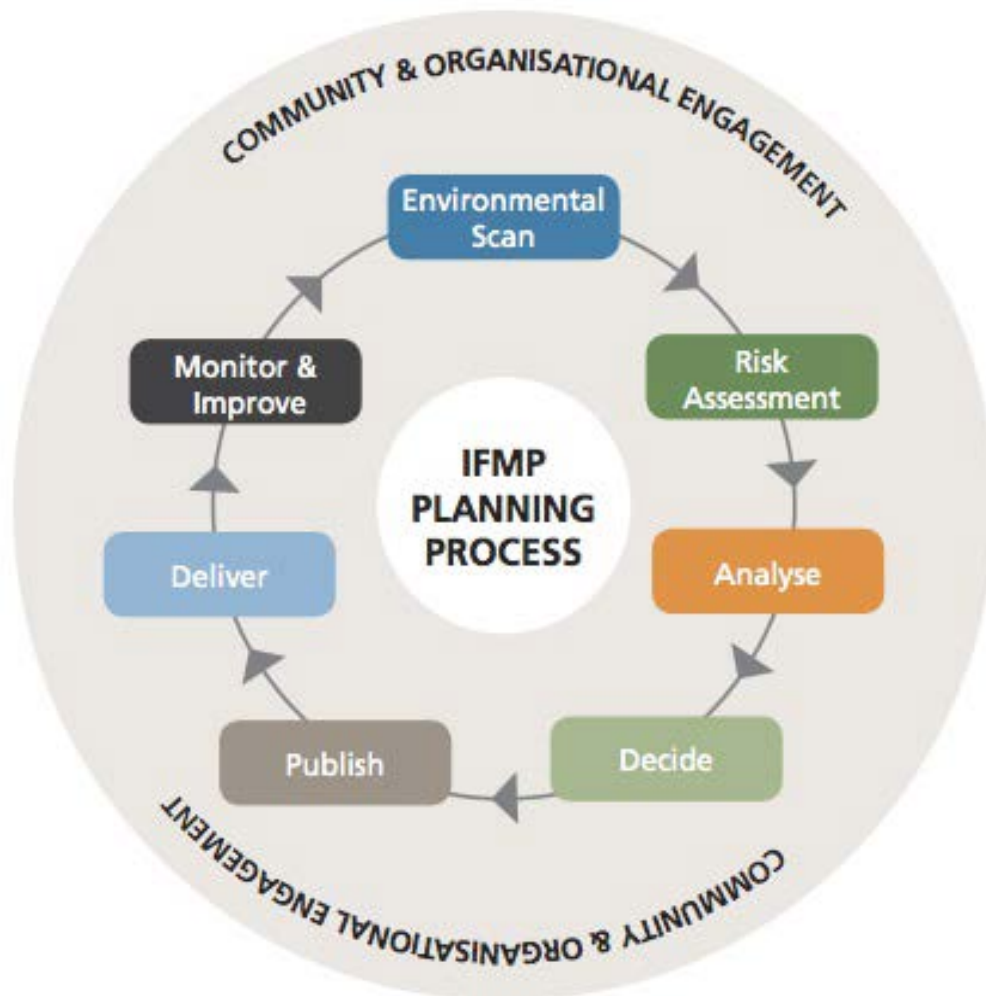


Figure 1: IFMP Planning Cycle
Source: 2010 Integrated Fire Management Planning Guide

1.8 Committee Membership

Membership of the Swan Hill Rural City Council Municipal Fire Management Planning Committee is made up of core Committee members and associate members. Core Members of the Swan Hill Rural City Council Municipal Fire Management Planning Committee (MFMP), as appointed by the MEMPC, comprises of representatives from the following key agencies and organisations:

- Swan Hill Rural City Council
- Country Fire Authority
- Department Environment Water Land Planning
- Parks Victoria
- Victoria Police

Associate members of the Swan Hill Rural City Council Municipal Fire Management Planning Committee (MFMP), as appointed by the MEMPC, comprises of representatives from the following key agencies and organisations:

- Lower Murray Water
- Goulburn Murray Water
- Department of Health & Human Services
- Grampians Wimmera Mallee Water
- Powercor
- SP Ausnet
- Vic Roads
- Department of Education and Early Childhood Development (DEECD)

The Municipal Fire Management Planning Committee (MFMP) has prepared a Municipal Fire Management Plan to provide for the safety and welfare of the community.

1.9 Community & Organisational Engagement Process

Community and organisational engagement formed an important part of development of this Municipal Fire Management Plan.

The Committee in its planning stages developed in conjunction with its Project Management Plan document a stakeholder and Community Engagement Plan. This planning allowed the Committee to make appropriate and informed decisions on how the Plan would be developed in conjunction with all stakeholders including the general public.

Community and organisational engagement is required during all seven stages of the IFMP planning cycle. The aim is for the community and management organisations to participate together in the development, delivery and monitoring of this Fire Management Plan.

2. Engagement & Communications

2.1 IAP2 / Community Engagement Principles

Community and organisational participation plays an important part in the development of this MFMP. To support this, the MFMPC has adopted the International Association for Public Participation (IAP2) Framework. The IAP2 framework has guided the engagement decisions by the Committee in development of this Fire Management Plan and makes clear the engagement commitment by the MFMPC.

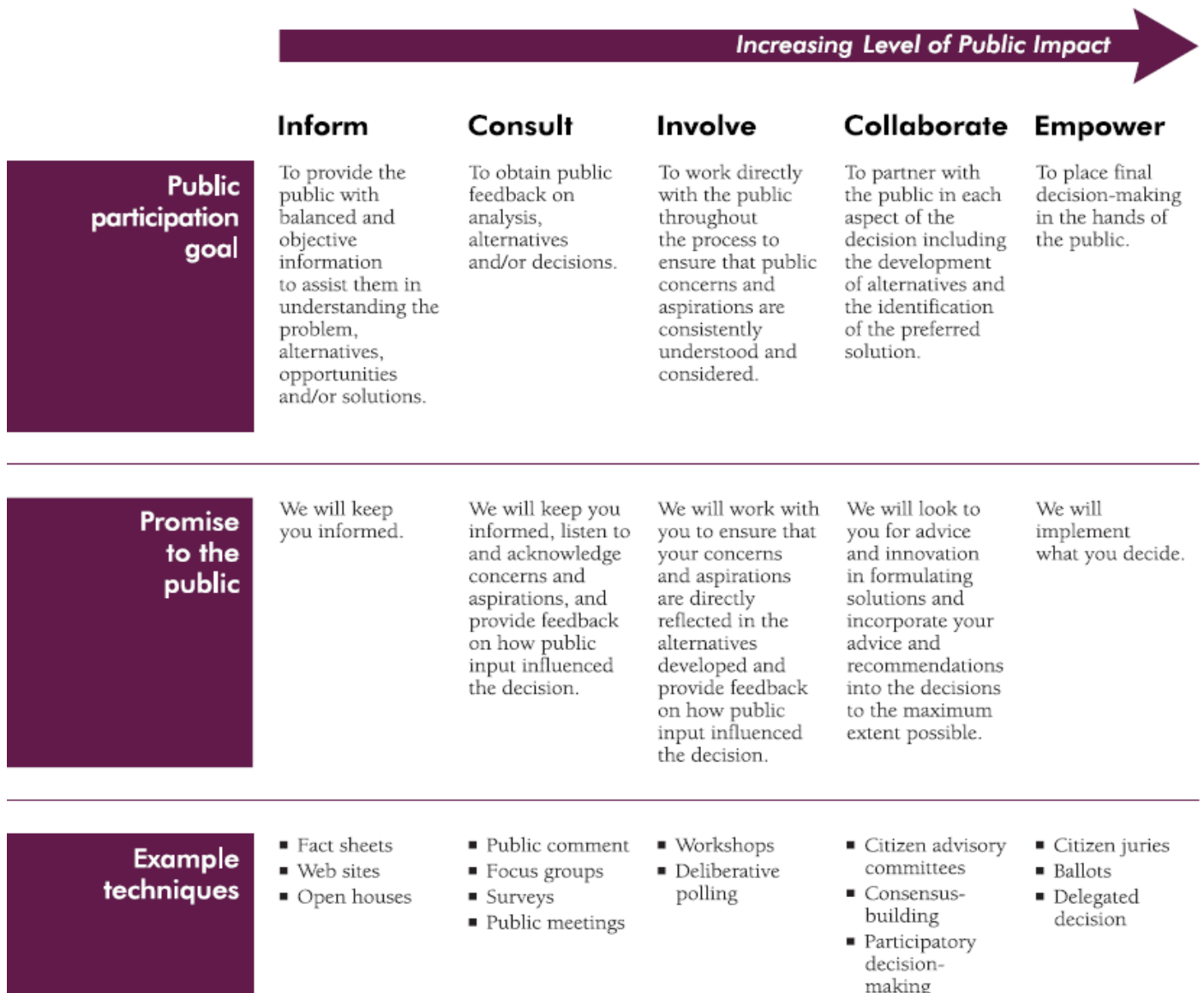


Figure 2: IAP2 Framework
 Source: International Association for Public Participation: www.iap2.org

2.2 IFMP Engagement Process

As part of the Project Management Plan a Stakeholder and Community Engagement Plan was developed to detail the Committee’s thoughts and process the Committee would go through and the objectives of community engagement in the development of this Fire Management Plan.

The Engagement Plan included:

- Engagement/Communication Objectives
- Negotiable/Not Negotiable elements of community engagement
- Stakeholder Matrix and Engagement Approach
- Engagement Action Plan

Engagement/Communication objectives:

- To gain local intelligence (risks and concerns) from the community
- To develop ownership and allow buy-in from the community
- For the community to gain an understanding of fire management
- To clarify roles and responsibilities of agencies
- To identify critical infrastructure
- To identify valuable community assets
- To enhance cross border cooperation/issues/relationships
- Conduit to the community
- Utilisation of the integrated process
- For agencies to fulfill their obligations
- To educate the community in fire planning
- To build confidence in fire management
- Realistic expectations

The following table identifies the aspects of the Plan which the community was able to make comment on which was determined by the Committee.

Negotiable	Not Negotiable
Identified risks and procedures	October 2012 due date for the final plan
Crucial community assets	Legal requirements for the plan
Education / feedback options	Code Red / TFB day rules
Objectives of the Plan	School bus routes
	Committee membership
	Legislative restrictions on agencies

Table 4: Negotiable and Not Negotiable

2.3 Stakeholder Analysis

Stakeholder engagement and participation is an essential element of fire management planning. The MFMP identified a list of stakeholders that needed to be engaged when developing this Fire Management Plan, their relationship to fire management and intended engagement approach.

Stakeholder	Interest in Fire Management Plan	Engagement Approach
Emergency services		
CFA – Organisation/volunteers	Response Agency EM	Collaborate
Police	Response Agency EM	Collaborate
SES	Response Agency EM	Consult
VicRoads	Engagement	Involve
MEMP	EMP	Collaborate
Regional – LMRSFMP	Regional Perspective	Collaborate
DELWP/PV	Response Agency EM	Collaborate
Local Government		
Swan Hill Rural City Council	Response/Recovery Agency EM	Collaborate
Community Groups/ Organisations		
General Community	Awareness	Consult
Indigenous Groups	Vulnerable Assets	Involve (Heritage & Cultural sites)
Service Clubs	Awareness	Consult
Progress Associations/Township Committees	Awareness	Consult
Churches	Awareness	Consult
Childcare Agencies	Asset and vulnerability	Involve
Education Facilities/Schools	Awareness	Consult
VFF	Awareness	Consult
Swan Hill Summer Fruits Development Association	Awareness	Consult
Swan Hill Region Wine Grape Growers Association	Awareness	Consult
Field and Game	Awareness	Consult
Medical services		
Hospitals	Response and Recovery	Involve
Aged Care	Asset and vulnerability	Involve
Ambulance	Vulnerability	Involve
Red Cross	Vulnerability	Collaborate
Industry/Employers/Business		
Tourism Operators	Awareness	Consult
Media	Public News Story	Inform

Table 5: Stakeholder Analysis

2.4 Engagement Plan

The Engagement Action Plan detailed the engagement process the Committee had gone through in each phase of the IFMP cycle to prepare this Plan. The Plan covers stakeholders and the engagement method required to gather and feedback relevant information on the Fire Management Plan. Refer to the Engagement Plan in Appendix D.

The table below details the community engagement tasks and activities that were held back in 2012 in the municipality to allow community members and organisations the opportunity to provide feedback on the draft MFMP.

Community Engagement Activities	Place
Public meetings	Swan Hill Robinvale
Mail out of information on sessions	Sent to all township Committees and CFA Brigades
MFMP available on Council website for perusal and feedback	Website
Advertising in local newspapers of session times and feedback opportunities	Swan Hill Guardian Robinvale Sentinel
Media releases	Distributed to local media
Distribution of Draft plans to Community Planning Groups in the Shire	Throughout the Shire

Table 6: Community Engagement Activities

2.5 Outcomes

While the MFMP undertook various communication activities including media releases, advertising and radio interviews in an effort to engage the community on the Draft Plan, attendances at the community consultation meetings for the draft MFMP were low.

Due to the small amount of community feedback, the Committee has made the assumption that the community accepts what the Committee has decided in relation to the Plan. Therefore only minor changes were made to the final plan. The Committee has perceived the low attendance at the community meetings to reflect the low bushfire risk environment that surrounds the Municipality.

The Committee made a small number of changes to the final plan, specifically in the Environmental Scan section of the Plan to provide the community with a greater picture of the Municipalities environment. These additions have not changed the context or desired outcomes of the Plan.

3. Environmental Scan

3.1 Summary

The Environmental Scan was developed to ascertain the social, economic, built, cultural and natural environments of the municipality. The scan has looked at the demographic make-up of the municipality as well as identifying the most important built, cultural and natural assets that would be impacted in the event of a fire in the municipality.

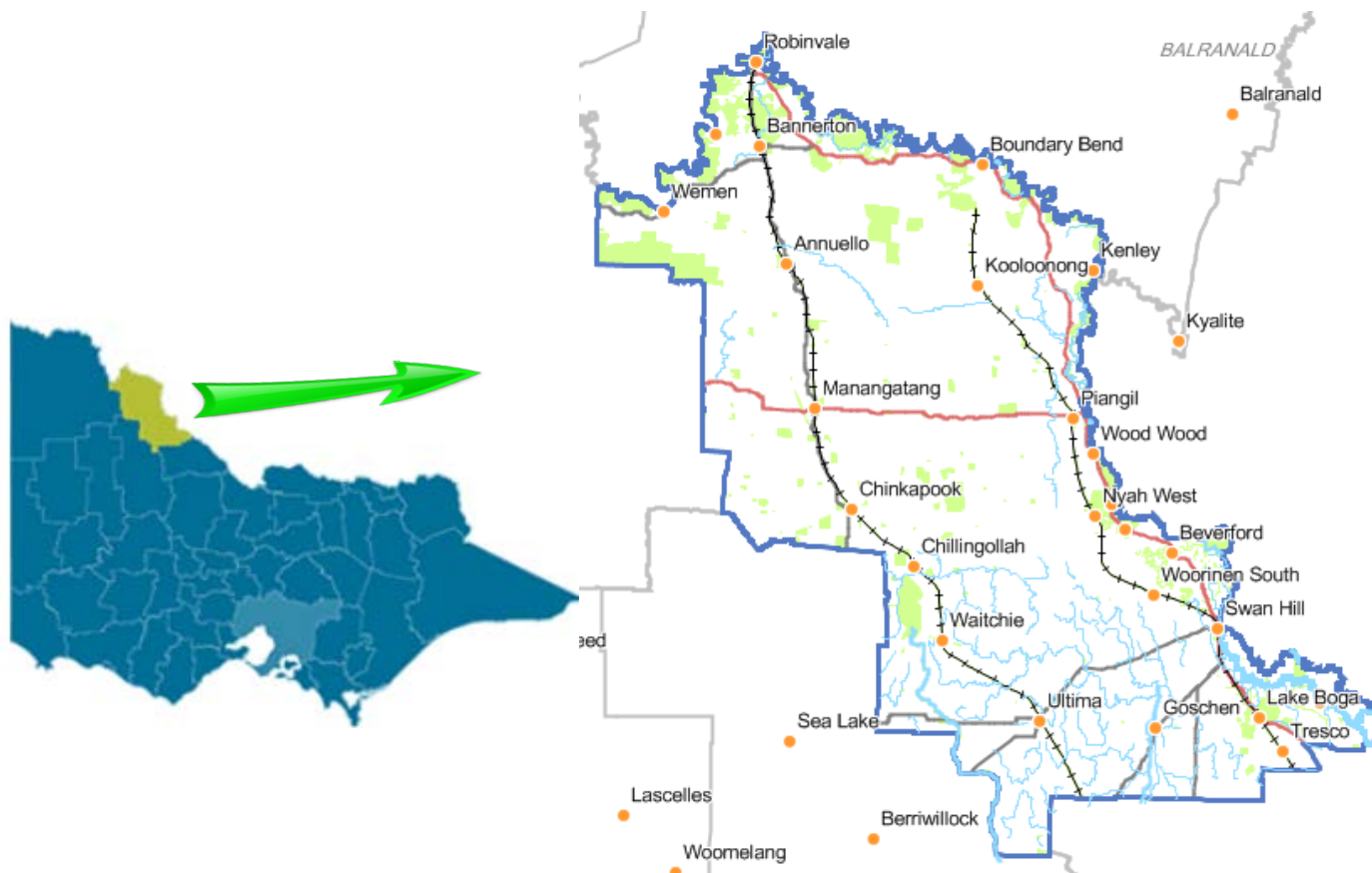


Figure 3: Map of Victoria
Source: <http://planning-schemes.delwp.vic.gov.au/schemes/swanhill/maps>

3.2 Municipal Summary

(*) The Swan Hill Rural City Council is located 344 kilometers North West of Melbourne and covers an area of 6,116km². The Rural City’s total population is approximately 20,409. The municipality is characterised by a number of small towns dispersed throughout the area.

The municipality consists primarily of flat agricultural land plus a combination of river flats, open woodland areas, sand dunes, gypsum flats, rolling plains, mallee vegetation and mallee heath. Altitude in the area does not exceed 200metres. Swan Hill is the major population centre and is located on the Murray River at the Southern end of the municipality.

Industry in the municipality revolves largely around primary production. Types of primary production includes wool, wheat and other cereal crops, viticulture, horticulture, citrus fruit, pastoral, wineries, and vegetable growing. Tourism is also a major generator of income, particularly in the major population centers and along the Murray River.

(**) The Mallee weather district is hot and dry. Swan Hill, which is central and typical of the weather district, has its hottest month as January with a mean maximum temperature of 31.4C and mean minimum temperature of 15.4C. The decile 9 maximum temperature is 38.3C and the highest ever temperature recorded is 46.9c on February 7th 2009. The mean average annual rainfall for Swan Hill is 348.8mm with the highest record of 736mm. recorded in 1973 to the lowest of 140mm, recorded in 1982. February is the average driest month with an average of 21.7mm of rain.

Westerly and southerly is the dominant wind direction with the average wind speed in spring the highest. Milder south easterly patters become more common in summer and autumn. Weather patterns associated with the passage of fronts in summer may generate high speed north westerly winds with an abrupt south westerly change.

(*) 2015 ABS

(**) *Loddon Mallee Regional Strategic Fire Management Plan, 2011-2021*

The main arterial roads within the municipality are as follows:

- The Murray Valley Highway, which runs North and South on the Eastern half of the municipality. It is the major link between Robinvale and Swan Hill.
- The Mallee Highway crosses the municipality from East to West from Piangil towards Ouyen. It is part of a direct link between Adelaide and the Eastern half of New South Wales.
- The Sea Lake – Swan Hill Road crosses the Southern part of the municipality from Swan Hill to the Municipal boundary (approximately 20 kms East of Sea Lake).
- The Robinvale – Sea Lake Road enters from the South (near the township of Chinkapook) and proceeds North to Robinvale.
- The Hattah – Robinvale Road crosses the Northern part of the municipality from Lake Powell (Murray Valley Highway) to Hattah (Calder Highway).

The only rail freight station is Swan Hill. The line provides a direct link to Melbourne via Bendigo. The other main rail line is between Robinvale and Melbourne via Bendigo. It closely follows the Robinvale – Sea Lake Road and links a number of small towns. At the present time this line is only used to ferry grain from the silos it services.

Large sections of Annuello, Boundary Bend and Wemen are being purchased by large scale Agricultural Investment organisations, investing mainly in olives and almonds crops. There are vast areas of monoculture development, i.e. thousands of acres planted in single crops. Population in the area is decreasing due to the agricultural changes with a subsequent loss of available firefighting brigade members. There is also large itinerant population in the area.

Aged buildings across the municipality in the area also pose a high fire risk.

Lack of water pressure is also a serious concern for fire fighters in the Robinvale Irrigation District. The high pressure system may have pressures which are too high for CFA Equipment. There are 15 fire hydrants installed in the high pressure system (used for flushing). However, each property is connected with a pressure sustaining valve which provides 35m head at the outlet. 20+ private fire services have been connected (which connect downstream of metered outlets) which would have an operating pressure of 35m. Pressure in the retic varies from about 75 to 40 metres depending on demand.

Swan Hill is protected by natural fire breaks consisting of the river and horticultural areas. The risk from the spread of fire is low and fires started along the river front are restricted from spreading by Railway Reserve, Murray Valley Highway and Irrigation Channels. These breaks are maintained by VicTrack, VicRoads, Council and Goulburn Murray Water.

The Swan Hill Landfill, 4km West of Swan Hill does create a risk. It has a buffer zone consisting of the Sea Lake Road on the South, Blackwire Road to the North, Blackwire Reserve on the East and dryland farming to the West.

Within the Rural City are bulk Fertiliser Depots, Fuel and Chemical Distribution Centres and an Abattoir.

3.3 Demographics

Swan Hill is the major population centre and is located on the Murray River at the Southern end of the municipality. The municipality is characterised by a number of small towns dispersed throughout the area.

The Rural City's total population is approximately 20,409 (*).

Estimated Resident Population (**)	%
Persons – 0 to 14	20.1
Persons – 15 to 24	12.7
Persons – 25 to 34	12.3
Persons – 35 to 44	11.3
Persons – 45 to 54	12.5
Persons – 55 to 64	12.6
Persons - 65 to 74	9.8
Persons – 75 to 84	6.2
Persons – 85 years +	2.6

(*) 2015 Census
(**) 2015 Australian Bureau of Statistics

Table 7: Population

The population of Robinvale is culturally diverse with 47 different nationalities residing in the community, creating difficulties with communication. Population increases with seasonal demands. There is a lack of accommodation in both Robinvale and Wemen leading to overcrowding, substandard accommodation and a lack of on farm accommodation for itinerant workers creating a major problem in the town.

3.4 Geographic Characteristics

The municipality consists primarily of flat agricultural land plus a combination of river flats, open woodland areas, sand dunes, gypsum flats, rolling plains, mallee vegetation and mallee heath. Altitude in the area does not exceed 200 metres.

Broad scale agricultural use has changed the landscape significantly affecting the fuel load distribution and biodiversity values. The municipality has a long fire season, where its grassland fire danger index of greater than 25, accounts for nearly 150 days of the year and the Forest FDI of greater than 25, occurs on nearly 80 days per year. The higher than average likelihood for grass and forest fires reflects this long length of fire season. Fuel hazard levels though are generally low, with 88.8% rated Low or Moderate. Historical ignition levels are low.

Endangered and Vulnerable EVC remnants of native vegetation on roadsides are particularly vulnerable to roadside fire management activities. Average levels of fire sensitive Aboriginal artifacts are associated with riverine and lake systems. Non-aboriginal cultural heritage registrations are the second lowest in the Region.

3.5 Fire History

The fire history of the Swan Hill Rural City Council area is largely focused around land use and farming practices, and varies from year to year due to climate and fuel loads. The Council area is predominantly flat dry land farming, with irrigation and forest areas adjoining the Murray River and small scattered nature reserves throughout the area.

Most fires occur in farming land late spring to early summer during harvest. Extensive cereal grain cropping covers majority of the area with fuel loads light to good during October to December then changes to sparse from February. Grass curing levels are generally at 100% from mid-November to April.

Changes in farming practices have seen many dry land farms moving towards more intensive minimum tillage farming practices. As a result there is an increased continuity in fuel with fewer fire breaks on private land and less fallow ground. Fires will develop rapidly and cover large areas in unchecked. We can expect fires to have fast rates of spread in grassland, and crowning activity in bushland.

Incident Numbers for Swan Hill Rural City Council are as follows:

	Structure Fire	Bushfire	Non Structure Fire	Rescue / Search / Medical Assistance	Hazmat	False Alarm	Other
2008	69	55	31	13	8	29	37
2009	81	29	44	3	7	17	47
2010	47	27	19	10	9	41	33
2011	43	36	21	18	4	64	31
2012	41	42	56	18	6	57	35
2013	38	43	43	9	4	40	41
2014	29	40	52	27	4	46	45
2015	32	43	51	17	3	62	45
2016	35	28	38	21	3	41	40
2017	11	17	20	3	2	19	23

Table 8: Incident Numbers - Swan Hill Rural City Council

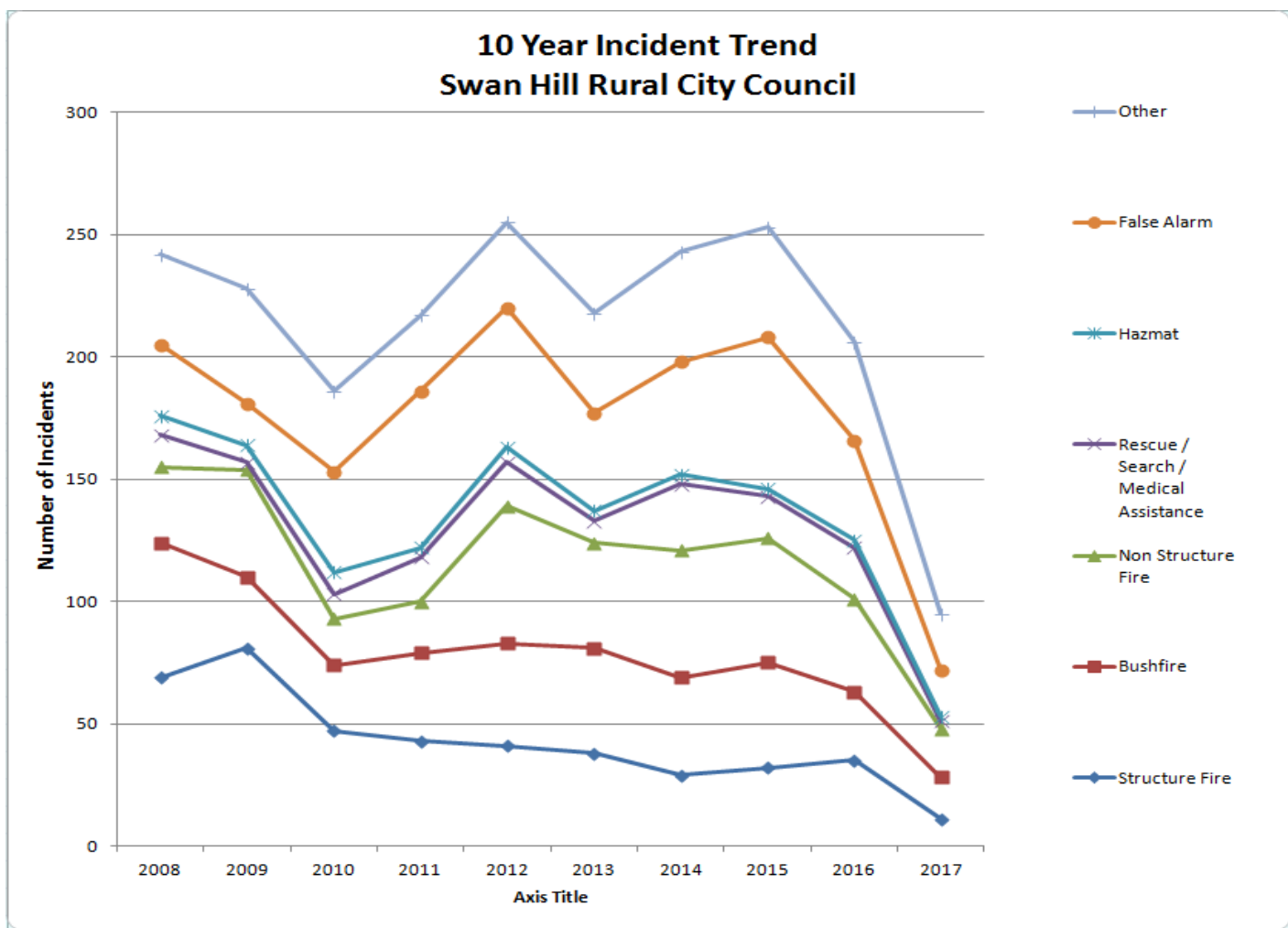


Figure 4: Incidents Trend – Swan Hill Rural City Council

3.6 Bushfire Landscapes

The risk of bushfire is present in all areas of the municipality and is one of the hardest risks to manage due to the mixture of public land parks, reserves and tourist attractions, extensive areas of State Forest, privately owned bushland, open farmlands and small rural residential settlements. Urban or residential areas in bushland are especially at risk.

The municipality comprises mostly of the following landscapes (see table below) which when combined with weather conditions of the day, will determine how fires behave.

Landscape	Fuel Hazard Level	Topography	Primary Driver	Spotting / Ember Potential
Mallee Forest	Moderate to extreme	Flat	Wind/fuel/plume	Moderate/high
Grass, crop and stubble	Low to Moderate	Flat to undulating	Wind	Low
Riverine Forest	High to extreme	Flat	Fuel	Low
Urban	Low to high	Flat to undulating	Wind / fuel	Low

Table 9: Bushfire Landscapes – Swan Hill Rural City Council
Source: Loddon Mallee Regional Strategic Fire Management Plan, 2011-2021

Fire regimes have an influence on the floristic composition and structure of vegetation. The presence, absence or frequency of wildfire and fuel reduction burning can also affect habitat and the faunal elements associated with it.

The way in which we respond to and prepare for fire can also have an effect on many significant environmental assets within the municipality.

The Loddon Mallee Region contains many sites of ecological significance. These significant sites may be home to individual species of flora and fauna or may be entire vegetation communities. Many of these species or vegetation communities may be listed under various acts of state and federal legislation or are protected by local planning provisions.

Those on roadsides are particularly vulnerable to roadside fire management activities. Much of the vulnerable vegetation is made up of native grassland ecosystem.

It is imperative that planning and implementation of fire prevention works (including grading, slashing, vegetation removal and fuel reduction burning) takes into account the potential impacts on native flora and fauna.

In developing the Loddon Mallee Regional Strategic Fire Management Plan, an assessment was undertaken to identify the ranking of each municipality against certain likelihood, vulnerability, and consequence criteria. The table below highlights the rankings for the Swan Hill Rural City Council, in relation to the other municipalities in the Loddon Mallee Region.

Category	Ranking (out of 10 Municipalities)	Description
Likelihood of grass fire	Third (3 rd)	Based on the history of ignition, number of days of Grass Fire Danger Rating greater than Very High, and the percentage of fuel hazard that is High, Very High or Extreme in the municipality
Likelihood of forest fire	Third (3 rd)	Based on the history of ignition, number of days of Forest Fire Danger Rating greater than Very High, and the percentage of fuel hazard that is High, Very High or Extreme in the municipality
Human vulnerability	Fifth (5 th)	Based on the barriers to capability building and levels of social connectedness across the prevention, preparedness, response and recovery spectrum
Human settlement exposure	Ninth (9 th)	The extent and number of human settlements and places that house vulnerable community members rated Extreme or Very High that have been identified by the Victorian Fire Risk Register assessment process
Business and asset exposure	Eighth (8 th)	The extent of business and infrastructure assets rated Extreme or Very High that have been identified by the Victorian Fire Risk Register assessment process
Biodiversity risk	Fifth (5 th)	The extent of endangered and vulnerable Ecological Vegetation Classes in the municipality identified in the Office of the Emergency Services Commissioner's Consequence of Loss project
Aboriginal heritage risk	Sixth (6 th)	The extent of fire sensitive aboriginal sites in the municipality identified in the Office of the Emergency Services Commissioner's Consequence of Loss project
Non-aboriginal heritage risk	Eighth (8 th)	The extent of listed on the Victorian Heritage Register in the municipality identified in the Office of the Emergency Services Commissioner's Consequence of Loss project

Table 10: Bushfire Likelihood, Vulnerability & Consequence Rankings – Swan Hill Rural City Council
Source: Loddon Mallee Regional Strategic Fire Management Plan, 2011-2021

3.7 Fire Hazard Areas

To support bushfire planning the Regional Fire Management Planning Committee has prepared scenario maps that display bushfire intensity for the municipality. Scenarios assist Committees and community members to plan around and for the same events. Maps based on probable fire behavior and the associated fire intensity has been prepared for days of **Severe, Extreme or Code Red** fire danger days. The maps measure the predicted head fire intensity and is measured in Kilowatts/linear metre, the same as the bar heater that may be found in a family home. These scenarios are modeled only and provide benchmarks around which strategies and actions can be built.

The MFMPC has used the fire intensity maps as one of the key tools in the identification of risk, a basis for the risk analysis and determining appropriate treatments. The maps allowed the Committee to understand the maximum potential fire intensity if a fire was to occur under optimal conditions. The MFMPC was then able to make appropriate decisions based on these maps, their local knowledge of the landscape and their understanding of fire behavior.

3.8 Assumptions & Implications about the future

When developing this plan the MFMPC has not only looked at past history but had to make assumptions about future trends that are likely to occur within the municipality and the implications to fire management from this.

The following table details assumptions and implications identified by the MFMPC which need to be considered, in the future.

Assumptions about the future	Implications for Fire Manage
POPULATION	
Is concentrating in the larger centers, locations and corridors of the municipality.	Longer response times for rural area fires/ likely to be serviced from urban are.
Population is declining in rural towns, and growing in Swan Hill.	Reduction in volunteer numbers in rural areas.
There are a number of small communities with scattered families in (Annuello, Kooloonong, Waitchie)	
The transient population of agricultural workers is significant and is expected to increase.	Fire awareness activities with these populations should be focused on.
Indigenous population is high in the municipality particularly around Robinvale.	Opportunity for cultural fire partnerships. Issues of overcrowding and cultural fires occurring in Robinvale.
There are 47 different languages spoken in the Robinvale area.	Language and cultural issues around education. Fear of authorities.
AGE	
Population of those over 65 is 15.5% and expected to increase.	Lack of active volunteers for fire duty due to age, however there are opportunities to assist in recovery programs. Increased risk of fatalities in structural fires.
The number of school age children < 14 is 20.5%.	Those under 14 may not be able to make appropriate decisions in relation to actions to avoid a fire. Increased risk of fatalities in structural fires.
DISADVANTAGE	
There is a concentration of disadvantage/ advantage in the municipality.	<i>Those vulnerable communities are unlikely to have fire plans. Increased organisation support is required for recovery.</i>
CULTURAL & LANGUAGE	
Key languages spoken in the municipality are English, Italian, Greek, Tongan, and Vietnamese.	<i>Written information may need to be multi-lingual. Written information may not be suitable for fire safety messages in some cultures. Need to work more closely with CALD communities to identify most appropriate and effective communication methods.</i>
47 languages spoken in Robinvale.	
The level of low English proficiency is at 2.1% for the municipality	<i>Verbal communication may require interpreters for these people.</i>
The municipality has a high level of transient and agricultural visa workers.	<i>Need to work with worker suppliers in fire education.</i>
There are a significant number of illegal immigrants working in horticultural blocks (Robinvale, Wemen, and Boundary Bend).	<i>Increased need for greater involvement and coordination across agencies to address issues.</i>

Table 11: Assumptions & Implications for Fire Management

4. Municipal Fire Management Objectives

4.1 Alignment to Regional Objectives

The MFMP provides input into, and is developed with reference and alignment to the Loddon Mallee Regional Strategic Fire Management Plan. The MFMP is principally a Plan that coordinates and aligns the fire management activities in a manner that is consistent with the Regional Plan. Of particular relevance to this Plan, the MFMP is aligned with the Regional Strategic Fire Management Planning Committees strategies and objectives with an integrated agency approach to Fire Management across the Region.

Regional Fire Management Plan Objectives	Swan Hill Rural City Council Municipal Fire Management Plan Outcomes
Healthier Environment	<ul style="list-style-type: none"> The preservation of life To maintain healthy and sustainable environment
Safer Communities	<ul style="list-style-type: none"> A better prepared community for the threat of fire A safer community for all residents
Prosperous economy	<ul style="list-style-type: none"> The protection of community assets To maintain health and sustainable environment
Cohesive fire management system	<ul style="list-style-type: none"> The Plan to identify and fulfill all legislative requirements A robust partnership between Community, Council, and Emergency Services.
Positive response from the fire management community	<ul style="list-style-type: none"> There is a confidence in the Plan by all agencies and the community
Healthier Environment	<ul style="list-style-type: none"> The preservation of life To maintain healthy and sustainable environment

Table 12: Alignment to Regional Objectives
Source: Loddon Mallee Regional Strategic Fire Management Plan 2011 - 2021

4.2 Objectives & Outcomes Proposed

Vision: Our vision is to work cooperatively to fulfil agencies obligations in managing the risk of fire within the Swan Hill Rural City Council municipality to provide a safer community for all.

The Committee, through this plan, intends to achieve the following outcomes:

- The preservation of life
- Vulnerability within the local environment is better understood by the community and Emergency Services.
- A robust partnership between Community, Council and Emergency Services
- There is confidence in the Plan by agencies and the community
- The protection of all cultural and natural values/assets
- The protection of all community assets (built)
- The Plan to identify and fulfil all legislative requirements
- The mitigation of risk to all life, property, cultural and environmental assets
- A safer community for all residents
- To maintain healthy and sustainable environments
- A better prepared community for the threat of fire

4.3 Strategic Directions

The MFMPC have developed, through a comprehensive list, the following key strategies:

1. Development of risk treatments for the preservation of life and protection of all assets including built, cultural and environmental
 - Agency and community participation in community initiatives
 - Identification of vulnerable/ at risk community members
 - Utilising tools, data and information to develop plans
 - Undertake annual program of fire prevention activities
2. Shared responsibility through the integration of agencies and the community
 - Community and agency collaboration to maximise existing partnership arrangements
 - Community and agency understand and manage the risks of fire through participation and education programs
 - Develop fire plans in partnership addressing community and agency needs
3. Support and use all existing legislative tools
 - Ensure that the Plan meets and complies with all legislative requirements.

4.4 Links to other Business Programs

Important linkages to other key agencies plans and strategies include:

- DELWP Fire Operations Plan 2016/17– 2018/19
- DELWP Fire Protection Plan
- CFA operational and brigade plans
- Powercor Bushfire Mitigation Strategy
- SP Ausnet Bushfire Mitigation Plan and Vegetation Management Plan
- VicRoads Roadside Fire Management Plan
- Neighbouring Shire Fire Management Plans
- The State Fire Management Strategy (2009)
- Community Information Guide
- Municipal Emergency Management Plan
- V-Line Fire Management Strategy

5. Fire Management Risk Strategy

5.1 Risk Assessment Methodologies

Risk is generally described as the combination of the likelihood of an event occurring and consequence should it happen. $\text{Likelihood} \times \text{Consequence} = \text{Risk}$

In fire management planning the Crichton Risk pyramid helps people to understand the idea of fire risk in greater detail.

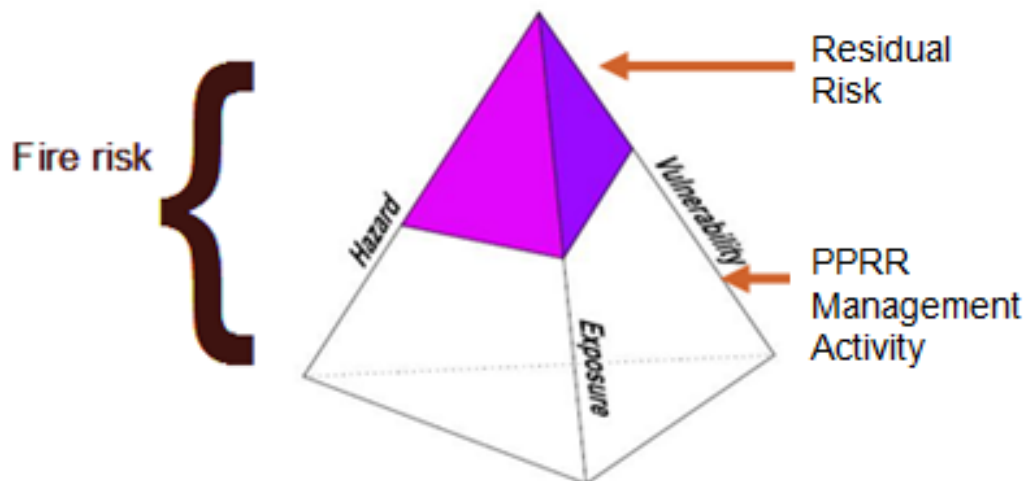


Figure 5: Risk Pyramid

In this version we identify the relationship between the amount of risk generated by the hazard * exposure* vulnerability relationship and the values (people, property, infrastructure, social and economic, biodiversity, the economy and heritage) of a location.

Typically fire management activities (sometimes categorised as prevention, preparedness, response and recovery (PPRR) activities) are applied across the pyramid to effectively.

- Reduce the incidence and severity of the hazard,
- Reduce the exposure of assets and values to the hazard and
- Build the resilience (reduce vulnerability) of the assets and values within society.

This Plan has considered the following risk statements:

- The risk of a bush fire igniting spreading and impacting upon assets and values.
- The risk that the management (PPRR) of fire, is in line with level of exposure and vulnerability of assets and values.
- The risk of a structural fire igniting spreading and impacting upon assets and values.
- The risk of a hazardous materials incident occurring, catching fire, spreading and impacting upon assets and values.

With the development of appropriate tools the Committee will have the opportunity to further consider risk statements associated with structures and hazardous material fires.

To undertake this assessment the Committee has undertaken a risk analysis process where it has:

- Identified the characteristics, values and directions of the municipality;
- Established the 3 fire intensity scenarios for the municipality on days of severe, extreme and code red fire danger ratings;
- Identified the primary risks to life, property, the environment, the economy and social values and their contributors;
- Reviewed these risks in line with state-wide likelihood and consequence tables Appendix F and prepared a risk register which:
 - i. identified the current fire management strategies and treatments that are in place
 - ii. considered the adequacy of those strategies and treatments for each scenario
 - iii. identified alternate strategies or treatments where treatments are identified as inadequate
 - iv. reviewed the risk level to establish the perceived effectiveness of the alternate strategies or treatments
 - v. agreed on process to establish improved fire management

To support this approach GIS mapping techniques have been developed. Mapping of fire hazards, history, treatments, assets, demographics and zoning information has been an important tool used in the risk management process.

As such, all participating agencies will be encouraged to supply further information or data for any identified treatments which can be placed in a GIS mapping format to be built up over time. The MFMP Committee will update annually with joint custodianship between Council, DELWP, and CFA.

5.2 Physical, Geographical & System Risks

The MFMPC developed a list of Risk Categories they felt needed to be addressed as part of this plan. These risk categories are detailed in the table below. Under each risk category the MFMPC attributed risk contributors that made up the risk. Risk contributors were developed using the VFRR, as a basis for key, social, built and environmental assets within the municipality. The Committee then identified further risk contributors based on their knowledge and understanding of fire risks within the municipality.

The Committee has considered the broad range of risks that may occur, and have undertaken specific analysis for bushfire on days of severe, extreme or code red bushfire danger rating. The analysis has considered the effectiveness of the current treatments that are in place. It is important to note that the measures used in the level of consequence is undertaken in a Statewide context Appendix F. The consequence of even a single fatality is significant to the family, community and emergency services, but combined with likelihood of its occurrence in the Shire means that many ratings are rated as low against the state based table. Whilst most bushfires occur on days at lower Fire Danger ratings they are generally manageable and rarely create significant damage to life, property or natural /cultural values.

The table below details the Risk Categories the Committee has developed as part of their Plan. Under each category were applicable Risk Contributors that have been grouped together for this table. The table outlines the results of the risk assessments for the grouped risk contributors. For more specific details, please refer to the Risk Register in Appendix A.

Risk ID	Risk Category	Risk Contributor	Risk Assessment Result
R01	Loss of human life	Townships in municipality	Low
R02	Loss of or damage to property	Schools Hospitals Aged Care Facilities	Moderate Low Low
R03	Loss of or damage to transport infrastructure	Airfields Rail Lines	Low Moderate
R04	Loss of or damage to communications infrastructure	Communication Towers	Moderate
R05	Loss of or damage to electricity infrastructure and supply	Transmission Lines Power Poles Sub Stations	Moderate Low Low
R06	Loss of or damage to significant flora and fauna	Fauna species on public land Fauna species on private land Flora species on public land Flora species on private land Flora and fauna on roadsides	Low Moderate Moderate Moderate Moderate
R07	Lack of awareness or understanding of fire risks and associated responsibilities	Various camping across municipality Culturally and linguistically diverse communities Transient workers	Low Low Low
R08	Lack of suitable access egress from areas of high fire danger	Forests throughout municipality	Low
R09	Loss of significant cultural, social and natural assets	Museums Burial Sites	Low Low
R10	Loss or damage to water infrastructure	Pump Stations Water Treatment Plants	Low Low
R11	Loss of agricultural and horticultural infrastructure, productivity and viability	Silos Almond/Olive Plantations Broad acre / cropping	Low Low Low
R12	Tourism	Caravan Parks throughout municipality	Low
R13	Risk of structural fire occurring to industrial/commercial and residential property	Interface Living Township Living Industry and State Infrastructure Business and Community Activity Centres Farming and Rural Living	Moderate Moderate Low Low Low
R14	Risk of hazmat incident occurring which causes impact to business/industry and community	Interface Living Township Living Industry and State Infrastructure Business and Community Activity Centres Transport Farming and Rural Living	Low Low Low Low Low Low
R15	Loss of life or impact upon prevalent vulnerable groups	Over 65 – Urban and Rural Under 14 – Urban and Rural Intellectually handicapped	Low Low Low

Table 13: Risk Register Summary

Risk Assessments completed were low in most risk categories, however, the Risk Category “Loss or Damage to significant Flora and Fauna” had risk assessments of Moderate due to the consequence of the threatened Flora and Fauna being destroyed.

A number of other risk contributors including some schools, communications towers and electricity transmission lines had a risk assessment of “moderate”. The likelihood was considered low, however the consequence if the asset was damaged was considered to be quite high in the State Consequence Table, resulting in a moderate risk assessment.

Initial risk assessments were conducted on Structural and Hazmat incidents based on the CFA Precincts. Interface and Township Living assessments returned a Moderate risk based on our understanding at the moment.

Due to Low Risk Assessments in most risk categories the MFMP determined that they would develop further proposed treatments if they felt there was a gap in the treatments already in place or where they saw a need for further treatments. In most cases, the MFMP was comfortable with the acceptable level of risk within most risk contributors detailed.

5.3 Treatments & Actions

Many organizations undertake activities in the municipality to treat the fire related risks to keep them at a low level. These actions may reduce the size of a fire event or stop it occurring, reduce the exposure of places and things that are important or that we value, or build the resilience of people, assets and values should a fire occur.

No single action or treatment will effectively manage the fire risk and each relies on the other to reduce the real risk to that is acceptable by the community. In Swan Hill Rural City Council the Fire Services, Community, Land Managers, Support Agencies of Government all work together to achieve this. Generally these activities are considered to be Preparedness, Prevention, Response or Recovery based.

A key activity undertaken by the Committee was the risk management process using Integrated Fire Management Planning risk management tools and hazard mapping to review, develop and manage effective risk treatments. Through this process a number of opportunities have been identified and proposed for further exploration to determine their feasibility, composition, and demonstrable benefits in the treatment of identified risks.

Further treatments were proposed during the risk process where the Committee identified gaps or where there was an identified need. All treatments and programs form the works program as part of this MFMP. During the implementation of the plan, monitoring and improvement of treatments will be a key deliverable in achieving our objectives.

5.4 Cross Boundary Arrangements

In the completion of the Plan, stakeholders were made aware of the cross state and boundary issues and how they can affect the delivery of actions and strategies.

The Swan Hill Rural City Council MFMP seeks to ensure risk environments that cross municipal and regional boundaries are treated in a seamless manner with regard to risk assessments and treatments. In part, this is achieved through a collaborative approach and the use of consistent processes and tools.

The municipality is bounded by the Mildura Rural City Council, Buloke Shire, Gannawarra Shire, Wakool Shire and Balranald Shire.

Clear linkages to existing organisational cross boundary agreements and Memorandums of Understanding between agencies dealing with PPRR activities and resource allocation arrangements are vital.

To ensure that shared risks are appropriately addressed, MFMP's will be considered by the Loddon Mallee Regional SFMP to make sure that they address risks shared across municipal and agency boundaries in a consistent and seamless manner.

It is also recognised that agencies and municipalities have existing planning relationships across multiple boundaries and that these planning arrangements need to be considered when developing future plans.

5.5 Planning Support Activities

The following arrangements and procedures are in place that supports the Municipal Fire Management process by addressing risks that have been identified within the Plan.

5.5.1 Community Information Guide

Swan Hill being a low risk area for bushfire risk is in the process of identifying towns that require a Community Information Guide.

5.5.2 Neighbourhood Safer Place – Place of Last Resort (NSP)

The declared sites are:

- The Robinvale Recreation Reserve – Robin Street/Latje Road Robinvale
- Swan Hill Showgrounds – McCallum/High/Pritchard Streets Swan Hill.

Both sites are appropriately sign posted and maps indicating the location of the sites are attached to this Plan as Appendix C. A copy of the Plan is available on Council's website.

6. Improvement & Plan Reporting & Review Process

The Plan is to be reviewed every three years. The Plan will be continually reviewed and updated by the Municipal Fire Management Committee.

6.1 MERI – Monitoring, Evaluation, Reporting & Improvement

The integrated fire management planning process is a continuous cycle of analysis, review and improvement, which operates within a complex and challenging environment.

Within this complex environment there are limited and competing resources to achieve the desired outcome of acceptable levels of residual risk to the community. Therefore, fundamental to its success is the establishment and preservation of healthy stakeholder partnerships that allow for continued transparent and robust dialogue in the interest of achieving the Plan’s objectives in the long-term. It is the role of the MFMP to spearhead relationship management for this purpose.

In addition to monitoring the ‘health’ of the process, implementation of the plan itself must be monitored and reported upon to enable continuous improvement. The table below summarises the proposed implementation, reporting and review activities.

Frequency	Task / Action	Responsible Party
Ongoing	Implement treatments, as per agreed Work Plan	All treatment owners
	Explore opportunities when identified for new or enhanced treatments with relevant stakeholders, and agree course of action	MFMP
Biannually (every 6 months)	Report to MFMP on the progress of treatment implementation, including an evaluation of treatment appropriateness, impact, effectiveness, efficiency, and legacy	All treatment owners
Annually (every 12 months)	Conduct strategic review of risks and associated treatment program, asking: <ul style="list-style-type: none"> • Are the identified risks still valid? • Do their pre-treatment and residual risk ratings still hold true? • Are there new risks that need to be added to the register and managed? • Do the treatments currently in place adequately address the identified risks? • Are there any new or enhanced treatments required? 	MFMP
	Review and update Plan content and mapping to ensure validity. Update Risk Register & Work Plan to reflect treatment status, as reported by treatment owner.	MFMP
	On the collective effectiveness of treatments in the management of risks and progress towards the achievement of objectives	MFMP
Triennially (Every 3 years)	Conduct end-to-end review of Plan, with particular focus on the environment scan and objectives	MFMP

Table 14: MERI

7. Appendices

Appendix	Title
7.1	Victorian Fire Risk Register (Swan Hill Municipality)
7.1.1	<ul style="list-style-type: none">• Treatment Overview
7.2	Neighbourhood Safer Places (NSP)
7.3	Engagement and Communications Plan
7.4	Maps
7.4.1	<ul style="list-style-type: none">• Treatment Maps
7.4.2	<ul style="list-style-type: none">• Fuel Load and VFRR
7.4.3	<ul style="list-style-type: none">• Swan Hill Rural City Council IFMP Map
7.4.4	<ul style="list-style-type: none">• Swan Hill Rural City Council Map
7.5	Likelihood and Consequence Table

HUMAN SETTLEMENT											
Asset Name	Risk Rating	Location	Hazard	Threat Rating	Susceptibility	Consequence Rating	Do ignitions occur frequently?	Expected to spread and reach assets?	Likelihood Rating	Treatments Identified	Notes
Wemen	High	Wemen	Semi-arid woodlands (shrubby) : >0-5 Degrees	Medium	Moderate	Moderate	No	Yes	Likely	101	
North of Happy Valley RD	Extreme	Happy Valley	Semi-arid woodlands (shrubby) : 5-10 Degrees	High	High	Catastrophic	No	Yes	Likely	207	Itinerat workers
South of Happy Valley RD	Very High	Happy Valley	Semi-arid woodlands (shrubby) : >0-5 Degrees	Medium	High	Major	No	Yes	Likely	205	
Robinvale Weir	Very High	Robinvale	Forested wetland : 5-10 Degrees	High	Moderate	Major	No	Yes	Likely	101	Vegetation: River Redgum
Tol Tol	Low	Tol Tol	Grassland : >0-5 Degrees	Medium	Moderate	Moderate	No	No	Unlikely	205	Itinerat workers
Boundary Bend	High	Boundary Bend	Semi-arid woodlands (shrubby) : 5-10 Degrees	High	Low	Moderate	No	Yes	Likely	101	Vegetation: River RedgumItinerat workers
Kenley	Low	Kenley	Grassland : >0-5 Degrees	Medium	Moderate	Moderate	No	No	Unlikely	800	Orchards between grassland and KenleyConcerned about isolation of community
Piangil	High	Piangil	Grassland : >0-5 Degrees	High	Low	Moderate	No	Yes	Likely	101,425	
Manangatang	Very High	Manangatang	Grassland : >0-5 Degrees	High	Moderate	Major	No	Yes	Likely	101,425	Mallee Scrub on north end of community
Chinkapook	Very High	Chinkapook	Arid shrublands (chenopod) : >0-5 Degrees	Medium	High	Major	No	Yes	Likely	800	
Wood Wood	High	Wood Wood	Semi-arid woodlands (shrubby) : >0-5 Degrees	Medium	Moderate	Moderate	No	Yes	Likely	205,223	Redgum Orchards between grassland and Wood Wood
Nyah	Very High	Nyah	Grassland : >0-5 Degrees	High	Moderate	Major	No	Yes	Likely	203	
Nyah West	Very High	Nyah West	Grassland : >0-5 Degrees	High	Moderate	Major	No	Yes	Likely	203,207,413	
Woorinen South	High	Woorinen South	Semi-arid woodlands (shrubby) : >0-5 Degrees	Medium	Moderate	Moderate	No	Yes	Likely	101,203	
Ultima	High	Ultima	Grassland : >0-5 Degrees	Medium	Moderate	Moderate	No	Yes	Likely	425	(blank)
Tower Hill Estate	Medium	Swan Hill	Grassland : >0-5 Degrees	Medium	Low	Minor	No	Yes	Likely	207	
Manangatang P12	High	4015 Mallee HWY Manangatang	Arid shrublands (chenopod) : >0-5 Degrees	Medium	Moderate	Moderate	No	Yes	Likely	212,409,433	EDU_prisec_56014
Manangatang Hospital	High	37-39 Pioneer ST Manangatang	Grassland : >0-5 Degrees	Medium	Moderate	Moderate	No	Yes	Likely	212,409,433	HLTH_HOSP Robinvale District Health Services
Manangatang Community & Childcare Centre	Very High	Wattle ST Manangatang	Grassland : >0-5 Degrees	High	Moderate	Major	No	Yes	Likely	212,409	EDU_childreansservices_58198
Woorinen South Kindergarten	High	McCalman ST Woorinen South	Semi-arid woodlands (shrubby) : >0-5 Degrees	Medium	Moderate	Moderate	No	Yes	Likely	212,409	EDU_childreansservices_61135 Committee of Management
Woorinen District PS	Medium	Palmer ST Woorinen South	Semi-arid woodlands (shrubby) : >0-5 Degrees	Low	Moderate	Minor	No	Yes	Likely	212,409,433	EDU_primary_56694
Ultima PS	High	Cameron ST Ultima	Grassland : >0-5 Degrees	Medium	Moderate	Moderate	No	Yes	Likely	212,409,433	EDU_primary_56607 South West wind change
Alcheringa Aged Care Hostel	High	2-14 Boree DR Swan Hill	Grassland : >0-5 Degrees	Medium	Moderate	Moderate	No	Yes	Likely	212,409,433	HLTH_AC HLTH_RV Approx 160 beds plus a village with up to 30 units
Pental Island Caravan Park	High	519 Pental Island RD Pental Island	Grassland : >0-5 Degrees	Medium	Moderate	Moderate	No	Yes	Likely	212,409,433	REC_CP Egress is an issue
Lake Boga	Medium	Lake Boga	Grassland : >0-5 Degrees	Medium	Low	Minor	No	Yes	Likely	205	
Jacaranda Lodge	High	Monash AVE Nyah West	Grassland : >0-5 Degrees	Medium	Moderate	Moderate	No	Yes	Likely	205,212,222	HLTH_AC HLTH_NH
Chisolm Reserve Swan Hill	Extreme	Sea Lake Swan Hill RD Swan Hill	Grassland : >0-5 Degrees	High	High	Catastrophic	No	Yes	Likely	800	TRSM_MISC Unaware of plans Speedway and motorsports venue Various events up to 10,000 people
Robinvale Weir Caravan Park	Very High	Weir RD Robinvale	Forested wetland : >0-5 Degrees	High	Moderate	Major	No	Yes	Likely	800	REC_CP
Murray Valley Aboriginal Kindergarten	Low	1 Old ST	Forested wetland : >0-5 Degrees	Medium	Moderate	Moderate	No	No	Unlikely	(blank)	EDU_childreansservices_58199
Robinvale Preschool Centre	Low	3 McCartney CRT	Forested wetland : >0-5 Degrees	Medium	Moderate	Moderate	No	No	Unlikely	(blank)	EDU_childreansservices_58903
Robinvale Aboriginal Child Care	Low	87 Latje RD	Freshwater wetland : >0-5 Degrees	Low	Moderate	Minor	No	No	Unlikely	(blank)	EDU_childreansservices_60951
Robinvale OSHC	Low	13 Watkins ST	Forested wetland : >0-5 Degrees	Medium	Moderate	Moderate	No	No	Unlikely	(blank)	EDU_childreansservices_59424
St Mary's School	Low	12 Watkin ST	Freshwater wetland : >0-5 Degrees	Low	Moderate	Minor	No	No	Unlikely	(blank)	EDU_prisec_54652
Robinvale P-12 College	Low	George ST	Freshwater wetland : >0-5 Degrees	Low	Moderate	Minor	No	No	Unlikely	(blank)	EDU_prisec_56404
Robinvale P-12 College	Low	Latje RD	Forested wetland : >0-5 Degrees	Medium	Moderate	Moderate	No	No	Unlikely	(blank)	EDU_prisec_56403
Nyah West and District Kindergarten	Very High	Lloyd ST	Grassland : >0-5 Degrees	High	Moderate	Major	No	Yes	Likely	(blank)	EDU_childreansservices_58200
Nyah District PS	Very High	53-59 Monash AVE	Grassland : >0-5 Degrees	High	Moderate	Major	No	Yes	Likely	(blank)	EDU_primary_55937
1st Nyah West and Guide Hall	Very High	2 Monash AVE Nyah West	Grassland : >0-5 Degrees	High	Moderate	Major	No	Yes	Likely	(blank)	REC_Sct REC_Guides
Kulki Kulki Camp Site	Very High	Murray Valley HWY Wood Wood	Semi-arid woodlands (grassy) : >0-5 Degrees	Medium	High	Major	No	Yes	Likely	(blank)	REC_Sct Unawareofplan
Wood Wood Caravan Park	High	Murray Valley HWY	Semi-arid woodlands (grassy) : >0-5 Degrees	Medium	Moderate	Moderate	No	Yes	Likely	(blank)	REC_CP Redgum Orchards between grassland
Murray River Bush Camping Sites	Extreme	Murray River	Forested wetland : >0-5 Degrees	High	High	Catastrophic	Yes	Yes	Almost certain	(blank)	Public land along river front and not designated camping sites
ECONOMIC											
KGTS-RCTS 220KV Transmission Line	High	Swan Hill Rural City	(blank)			Moderate	No	Yes	Likely	427	SP Ausnet
Mallee HWY	Medium	Swan Hill Rural City	(blank)			Minor	No	Yes	Likely	800	
Murray Valley HWY	Medium	Swan Hill Rural City	(blank)			Minor	No	Yes	Likely	800	
Piangil Rail Line	(blank)	Swan Hill Rural City	(blank)			(blank)	(blank)	(blank)	(blank)	800	
Robinvale Rail Line	(blank)	Swan Hill Rural City	Smoke Impact			(blank)	(blank)	(blank)	(blank)	800	
Robinvale - Boundary Bend 66KV Sub-transmission	Medium	Swan Hill Rural City	(blank)			Minor	No	Yes	Likely	108,219,401	Powercor
Red Cliffs - Robinvale 66KV Sub-transmission	Medium	Swan Hill Rural City	Smoke Impact			Minor	No	Yes	Likely	108,219,401	Powercor
Robinvale - Wemen 66KV Sub-transmission	Medium	Swan Hill Rural City	(blank)			Minor	No	Yes	Likely	108,219,401	Powercor
Kerang Swan Hill 66KV Sub-transmission Line	High	Swan Hill Rural City	(blank)			Moderate	No	Yes	Likely	108,219,401	Powercor
Kerang -Swan Hill 66KV Sub-transmission Line	High	Swan Hill Rural City	(blank)			Moderate	No	Yes	Likely	108,219,401	Powercor
Six Mile Hill Communications Tower	Medium	Swan Hill	Smoke Impact + Direct Flame (Grassland)			Minor	No	Yes	Likely	214,308	Emergency Services Communications
Goschen Communications Tower	Medium	Goschen	Smoke Impact + Direct Flame (Grassland)			Minor	No	Yes	Likely	800	Emergency Services Communications
Wemen WPS	High	Liparoo	Ember attack + Smoke Impact + Direct Flame (Bushfire)			Moderate	No	Yes	Likely	214,308	GWM Water Supply to Ouyen
Piangil WPS	High	Piangil	Smoke Impact + Direct Flame (Grassland)			Moderate	No	Yes	Likely	214,308	GWM Water Supplies Manangatang
Manangatang WPS	Medium	Manangatang	Smoke Impact + Direct Flame (Grassland)			Minor	No	Yes	Likely	101,214	GWM Water
Pental Island WPS	High	Pental Island	Smoke Impact + Direct Flame (Grassland)			Moderate	No	Yes	Likely	214,308	GWM Water
Robinvale 80 Ski Race	Medium	Robinvale	Smoke Impact			Minor	No	Yes	Likely	111,112,212,307,409	Fire impacts viewing locations
Swan Hill Airfield R	Medium	Back Boga Rd Swan Hill	Smoke Impact + Direct Flame (Grassland)			Minor	No	Yes	Likely	207,216	Sheds and navigation aids
Swan Hill Zone Substation	High	Swan Hill	Smoke Impact + Direct Flame (Grassland)			Moderate	No	Yes	Likely	108,214,219,401	Powercor
Goschen Tower	Very High	Donald Swan Hill RD	Smoke Impact + Direct Flame (Grassland)			Major	No	Yes	Likely	214	Tower major link in communications across Australia
Pental Island Filtration	High	Pental Island RD	Smoke Impact + Direct Flame (Grassland)			Moderate	No	Yes	Likely	214	GWM Water
Chinkapook Urban PS	Medium	Springfield RD Chickapook	Ember attack + Smoke Impact + Direct Flame (Bushfire)			Minor	No	Yes	Likely	214	GWM Water amongst a reserve full of trees
Eureka NMPL PS	High	Robinvale Sealake RD	Ember attack + Smoke Impact + Direct Flame (Bushfire)			Moderate	No	Yes	Likely	214	GWM Water grassland around it
Piangil Tank NMPL	High	Mallee HWY Piangil	Smoke Impact + Direct Flame (Grassland)			Moderate	No	Yes	Likely	214	GWM Water
Nyah WPS	High	Murray Valley HWY	Ember attack + Smoke Impact + Direct Flame (Bushfire)			Moderate	No	Yes	Likely	214	GWM Water
Pira Tank NMPL	Medium	Chillingollah RD Pira	Smoke Impact + Direct Flame (Grassland)			Minor	No	Yes	Likely	214	GWM Water
Robinvale Communications Tower	Medium	Robinvale Sea Lake RD Robinvale	Ember attack + Smoke Impact + Direct Flame (Bushfire)			Minor	No	Yes	Likely	(blank)	(blank)
3SH Radio Tower	Medium	Murray Valley HWY	Smoke Impact + Direct Flame (Grassland)			Minor	No	Yes	Likely	(blank)	Emergency services broadcast
Swan Hill Aerodrome Automatic Weather Station	High	(blank)	Smoke Impact + Direct Flame (Grassland)			Moderate	No	Yes	Likely	212	BOM_AWS

VFRR-B Treatment Overview

2016 Version 1



TREATMENT NAME	TREATMENT DEFINITION	RESPONSIBLE AGENCY	TREATMENT NUMBER
COMMUNITY EDUCATION (100 SERIES)			
Community Education/Engagement	Bushfire education, engagement and training programs targeted at numerous community groups including school children, elderly, employees, and businesses.		
		CFA	100
		LGA	101
		DET	102
		Utility	103
		MFB	121
Agricultural Management	Agriculture bushfire management and safety issues for landowners/managers to assist in the preparation of property fire management plans.		
		CFA	104
		DELWP; PV	105
Community Fire Guard	A CFA key engagement strategy, community development program to help reduce the loss of lives and homes in bushfires.		
		CFA	106
Fire Ready Victoria	Assists in perception and understanding bushfire risk.		
		CFA	107
Public Awareness	Fire information through notice boards, brochures, signage etc to raise awareness of fire risk.		
		Utility	108
		CFA	109
		LGA	110
		Other	120
		MFB	122
		DELWP; PV	124
Tourism Fire Awareness	Community education and information for tourists about Bushfire risk in the area.		
		CFA	111
		DELWP; PV	112
		LGA	113
		Tourism Victoria	117
Multicultural/ Special Needs Engagement	Translations of campaigns to suite all multicultural and special needs persons.		
		LGA	115
		CFA	116
		MFB	123
HAZARD REDUCTION (200 SERIES)			
Burn Program	Removal of selected vegetation in large patches.		
		LGA	201
		CFA	202
		Utility	233
		DELWP; PV	231
Crown and Freehold Land Fuel Reduction	Reducing fuel loads on crown land and freehold land.		
		DELWP; PV	203
		Utility	234
Fuel Hazard Management	Modification of vegetation: Altering vegetation structure and/or separation distance between asset and fuel load.		
		Other	205
		Utility	206
		LGA	207
		CFA	208
		DELWP; PV	232
Routine Maintenance of Rail Line	Removal of vegetation on and around rail lines to ensure protection of assets, minimise ignition potential, and ensure adequate access and egress.		
		Utility	209
		DOT	210
		CFA	211
Routine Asset Site Maintenance	Ongoing mowing/ slashing/ spraying of sites to reduce fuel loads for protection of assets or adjoining properties.		
		Other	212
		DET	213
		Utility	214
		DELWP; PV	215
		LGA	216
Asset Protection Zones	Buffer zone between bushfire hazard and the asset.		
		DELWP; PV	227
Fire Management Zones	To provide areas of sufficient width to reduce the spread of bushfire.		
		DELWP; PV	217
		Other	228
		LGA	229
Powerline Clearance	Vegetation management around powerlines.		
		LGA	218
		Utility	219
		Telstra	221
Roadside Vegetation Management	Removal of vegetation along roadsides.		
		LGA	222
		VicRoads	223
		DELWP; PV	224
		Other	225
		Private	226
IGNITION MANAGEMENT (300 SERIES)			
Operations Restrictions	Operation of machinery restricted on elevated fire weather days.		
		HVP Plantations	300
		Utility	310
Patrol/ Inspection	Inspections of assets to ensure compliance with regulations and safety requirements and to assess for fire hazards.		
		LGA	303
		CFA	304
		DELWP; PV	305
		MFB	306
		Victoria Police	309

Pre Summer Inspections	Inspections of land holders according to Bushfire risk over the summer season including exit routes, locks, gates etc.		
		Utility	308
PREPAREDNESS (400 SERIES)			
Hazard Identification	Preparedness including risk ratings, inspections, maintenance and response arrangements.		
		Utility	401
Fire Protection Plan	Fire Protection Plans are prepared to ensure that proper and sufficient works for Bushfire prevention and suppression activities are taking place.		
		Other	400
		CFA	402
		DHHS	426
		Utility	427
		HVP Plantations	437
		DELWP; PV	444
Fire Plug and Hydrant Installation and Maintenance	Works carried out to ensure that the system will operate correctly when required to do so.		
		LGA	404
Emergency Water Supply	Emergency water supply and maintenance for fire fighting purposes, including water catchments and policy.		
		Government Agencies	405
		DELWP; PV	411
		LGA	412
		Utility	430
		Other	440
Emergency Management Plan (Site)	Established framework for the effective handling of emergencies and/ or disaster.		
		Utility	406
		DET	407
		CFA	408
		Other	409
		LGA	410
		DELWP; PV	442
Fire Access Roads and Tracks	Establishment of constructed and maintained roads, bridges and tracks to allow safe passage for firefighting vehicles.		
		LGA	413
		CFA	414
		DELWP; PV	416
		Utility	445
Traffic Diversion Plans	Establishment of an appropriate traffic flow, through traffic management in the community and appropriate access and egress for property and business owners.		
		Victoria Police	417
		VicRoads	418
		LGA	419
Township Protection Plans	Planned response (for both emergency services and the community) to a bushfire within close proximity to a township, which has the potential to impact on the local community.		
		CFA	420
Fire Operations Plan	Proposed fire prevention activities.		
		DELWP; PV	423
		Utility	446
Public Land Management Plans	Each year a statewide program of activities is planned, completed and evaluated to continue progress towards achieving natural values objectives.		
		DELWP; PV	424
		LGA	441
Community Activities/Planning	Local based planning/community groups who repair and manage natural resources for the event of a bushfire.		
		DET	421
		LGA	422
		Community Groups	425
		CFA	433
Event Management Plan	Emergency management planning of events that occur in the Fire Danger Period (FDP).		
		LGA	432
Fire Refuge	A declared fire refuge for the use as a last resort under direct fire attack.		
		Other	435
		LGA	436
Bushfire and Emergency Self Assessment	Develop a more detailed understanding of the bushfire risk to your school.		
		DET	438
PROPERTY PLANNING (500 SERIES)			
Wildfire Management Overlay	Planning referral for new subdivisions, buildings and works that increase population. Applies conditions for access, Water Supply, Buildings/ Works and Vegetation Management.		
		LGA	500
		Utility	502
Agreements	Acts and agreements for Rural Residential Areas.		
		LGA	501
OTHER (700 SERIES)			
Asset Specific Treatments	Municipal or Asset Specific Plan (details can be found in the VFRR Document)		
		All Agencies	700
TO BE IDENTIFIED (800 SERIES)			
To be identified	Treatments to be identified		
			800

This treatment list has been created from the input of mitigation works identified through the 'Implementation Stage'. The list has been modified to capture all works the Risk Intelligence Team are currently aware of. If you have any comments or feedback, please contact us via riskintelligence@cfa.vic.gov.au

NEIGHBOURHOOD SAFER PLANS

Robinvale Recreation Reserve Robin Street/Latje Road Robinvale



Swan Hill Showgrounds and Recreation Reserve – McCallum Street/High Street/Pritchard Street Swan Hill



Project Management Plan

Delivery of Swan Hill Municipal Fire Management Plan

October 2011

Revision No: 1.0

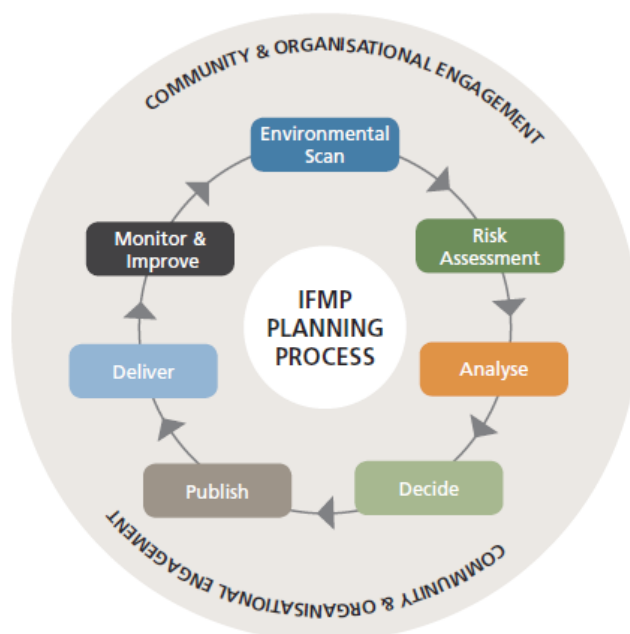


Figure 2 – The Seven Stage Planning Process

DOCUMENT AUTHORISATION

Document Title	Delivery of {insert name of municipality} MFMP		
Client	Swanhill MFMPC		
Document Reference	Delivery of MFMP Project Outline.doc		
Revision Status	Revision	Date	Reason
	0.9	05/10/2011	Initial draft
	0.92	19/9/2011	Update after feedback
	0.1	20/9/2011	Update after feedback
Print Date	23 October, 2017		

Document Review and Approval

	Name	Signature	Date
Prepared by			
Reviewed by			
Authorised by			

Distribution List

Name	Title

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1 INTRODUCTION

The Integrated Fire Management Planning Framework (IFMP) operates under existing fire and emergency management legislation and is gradually being introduced across Victoria. IFMP aims to achieve a consistent and effective means for fire management planning within Victoria through a commitment to cooperation, including information sharing and the building of collective knowledge. All 10 Councils in the Loddon-Mallee Region (LMR) have the requirement of delivering draft Municipal Fire Management Plan's (MFMP's) by March 31 2012.

The 'IFMP Project' has allocated resources assist Municipalities across Victoria to effectively deliver the MFMP's that are aligned with the IFMP framework. The Loddon-Mallee Region (LMR) IFMP team are working in partnership with each of the LMR Municipalities to assist in the delivery of the MFMP's and build sustainable capabilities within each LGA.

1.1 Purpose of Document

The purpose of this Document is to provide a project scope with a sample work breakdown structure to the delivery of the MFMP's for the Loddon-Mallee Region. If used by the fire management practitioners in the Loddon-Mallee region the primary use is to better facilitate a common base that can be modified as required to suit the local conditions for each council.

1.2 Scope of Document

This document is to be used as a guide only.

This document:

- Defines the main project deliverables;
- Lists suggested output documents that should be developed during the planning cycle.
- Provides a sample Work Breakdown Structure.
- Provides stakeholder matrix.
- Provides community engagement action plan.

This document does not:

- Explain in any depth the IFMP planning process. This can be found in a number of IFMP documents. The *IFMP Planning Guide* details the planning process and contains references to other resource documents.
- Exert authority above any legislation or instructions in the Emergency Management Manual Victoria.

2 REFERENCE DOCUMENTS

This section lists the applicable controlled project documents that are known at the time of writing of this plan.

2.1 General Documents

Title/Reference	Description	Version	Date
IFMP Planning guide	IFMP guide to assist and support fire management planning committees with the development, implementation and monitoring of Fire Management Plans using best practice principles.	1	2009 (?)
Loddon Mallee Regional Strategic Fire Management Plan	Plan to: Facilitate municipal fire management planning by providing guidance on the Loddon-Mallee risk environment and potential risk treatments which might be jointly applied to manage it; and, To support fire management planning and its implementation by encouraging and coordinating stakeholder engagement at municipal and regional levels, by providing access to relevant research, development and data, and by supporting access to relevant research, development and data, and by supporting continuous improvement through performance measurement and feedback.	Release Version 1	August 2011
Emergency Management Manual Victoria Part 6A	Guidelines issued to municipal emergency management planning committees by the Co-ordinator in chief of Emergency Management, who is the Minister for Police and Emergency Services.	Published under provisions of the <i>Emergency Management Act</i> 1986	?
MFMP Delivery Project Plan	Project plan approved by State Committee to enable project support to MFMP Committee		

2.2 Relevant Standards

Title/Reference	Description	Version
ISO31000	Standards relating to risk management with the purpose to provide principles and generic guidelines on risk management	200x

3 PROJECT DELIVERABLES

3.1 Municipal Fire Management Plan

The key deliverable for each municipality within the Loddon-Mallee region is the major milestone of a draft **Fire Management Plan** suitable for public comment by **March 31, 2011**.

3.2 Project Document Outcomes

In developing the Fire Management Plan and undertaking the risk management process, a number of key documents need to be developed to assist in identifying the hazards and associated risks within the community.

Documents that should be produced as part of this process are:

Project Management Documentation:

- Project Management Plan (includes schedules and WBS)
- Stakeholder Engagement Strategy (includes community engagement)

Project Output Documentation

- Environmental scan
- Risk register
- Risk Treatment plan

3.3 Project Milestones

Type	Task	Date
Project Deliverable	Project Management Plan	25 Oct 2011
Project Deliverable	Stakeholder Engagement Strategy	11 th Nov 2011
Project Deliverable	Environmental Scan	16 th Nov 2011
Project Deliverable	Visioning	2 Dec 2011
Project Deliverable	Agree Risk treatments	17 Feb 2012
Project Milestone	Finalise Draft Plan	23 March 2012
Major Milestone	MFMPCC endorse draft plan for community consultation	23 March 2012
Project Milestone	Community Consultation for Draft Plan	June 2012 (28 Days)
Major Milestone	MFMPCC endorsement of Plan	tba
Major Milestone	MEMPC endorsement of Plan	tba
Project Milestone	RSFMPC Comment on Plan	tba
Major Milestone	Adoption of Plan By Council	tba

4 Project Management Plan

4.1 PMP

The Project Management Plan is a definitive document ensuring the full scope and controls of the project are in place at commencement of the project. It details the major tasks or stages of the process of delivering the Municipal Fire Management Plans which should incorporate most stages of the planning cycle proffered in the IFMP Planning Guide. It defines key stages, work breakdown structure, constraints, resources and other controls required for the project.

The PMP may be a short document of perhaps three – six pages (or more), but should not be skipped during the formative stages of the project. The work breakdown discussed in the PMP will be reflected in greater detail as a Work Breakdown Structure (WBS) in the projects schedule, which could be shown in a tabular format or via a Gantt chart that could be generated via a package such as MS Project.

4.2 Engagement Planning

A stakeholder and community engagement plan is a key project document that should be considered at the outset of the Fire Management Planning Cycle. The outcomes of engagement will provide key inputs into all seven stages of the IFMP planning cycle.

Engagement/Communication objectives:

- Local intelligence (risks and concerns)
- Develop ownership
- Allow buy-in
- Understanding fire management
- Future land use
- Clarify roles and responsibilities
- Identification of critical infrastructure
- Identifying valuable community assets
- Cross border cooperation/issues/relationships
- Conduit to the community
- Integrated process
- Agency obligations

- Education in fire planning
- Build confidence in fire management
- Realistic expectations

1. Determine Negotiable and non negotiable elements

2. Complete attached Stakeholder matrix

3. Determine engagement approach using IAP2 Framework for stakeholders using IAP2 Spectrum

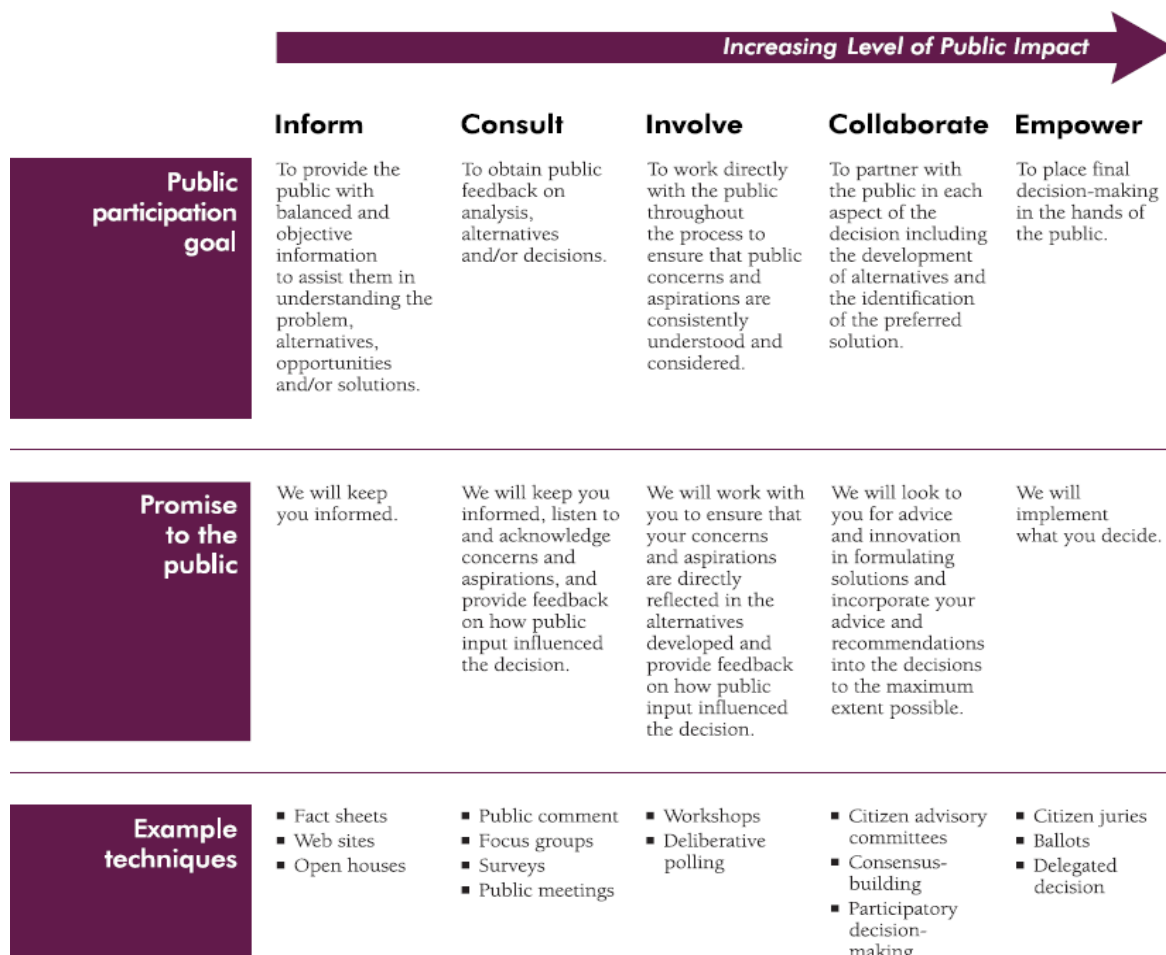
4. Complete Engagement Action Plan

Engagement

Negotiable	Not Negotiable
<ul style="list-style-type: none"> • Identified risks and procedures • Crucial community assets • Education/feedback options • Objectives of the plan 	<ul style="list-style-type: none"> • 31 March 2012 due date for the draft plan • Legal requirements for the plan • Catastrophic/TFB day rules • School bus routes • Committee membership • Legislative restrictions on agencies • End date for IFMP

The International Association of Public Participation Framework (IAP2) has been adopted by the MFMPCC to guide the engagement of stakeholders in fire management planning.

The process involves analysing the stakeholders to determine their level of participation in developing the Municipal Fire management Plan (MFMP).



5 Appendices

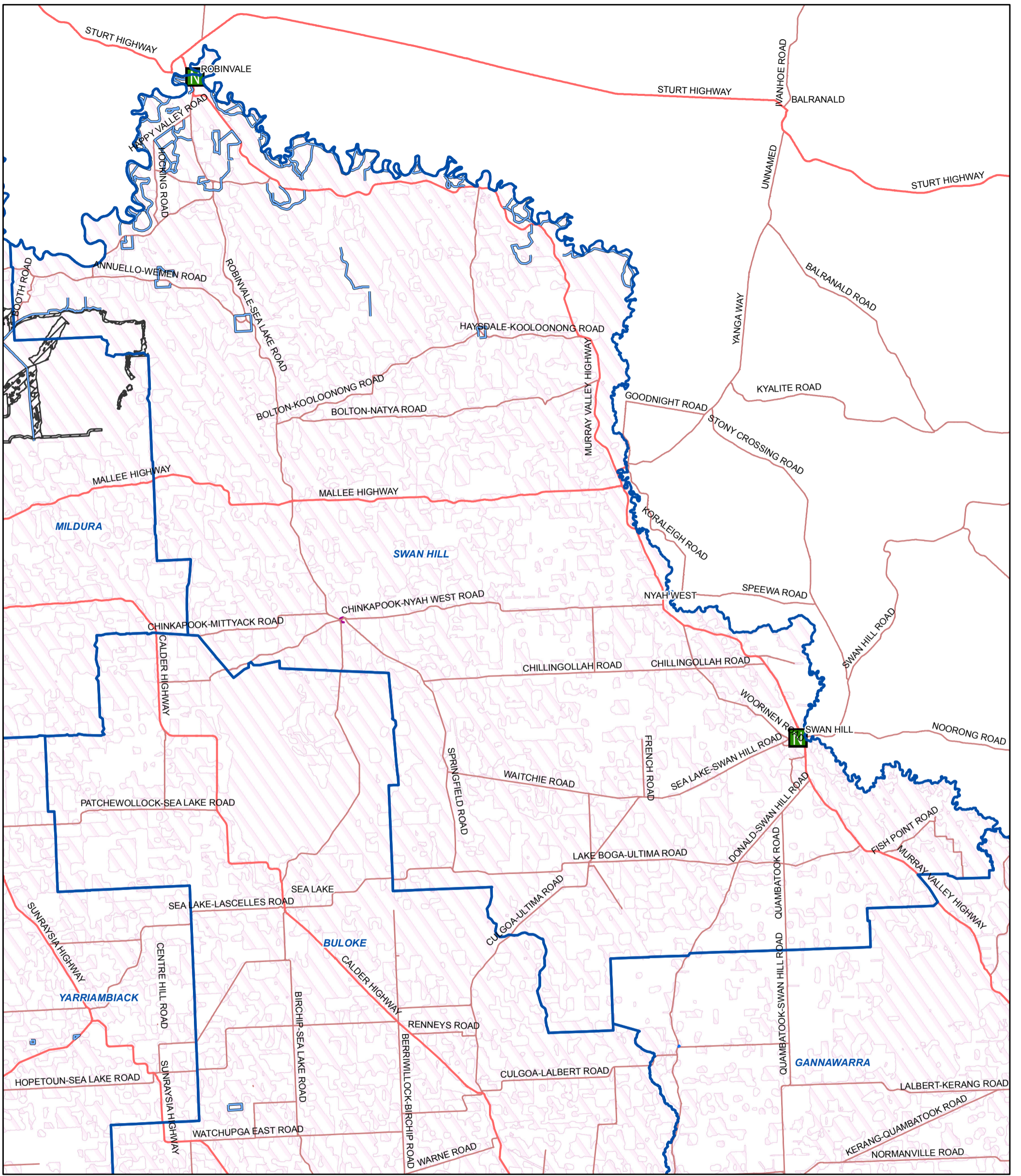
5.1 Appendix 1 – Stakeholder Matrix

Stakeholder	Interest in Fire Management Plan	Influence (H, M or L)	Engagement Approach
Emergency services <ul style="list-style-type: none"> CFA – Organisation/volunteers <ul style="list-style-type: none"> Police SES Vicroads MEMP Regional - LMRSFMP 	Response Agency EM Response Agency EM Response Agency EM Engagement EMP EMP	H H H M H H	Collaborate Collaborate Collaborate Consult/Collaborate Consult/Collaborate Consult/Collaborate
Local Government-Swan Hill	Response Agency EM	H	Collaborate
Community Groups/ Organisations <ul style="list-style-type: none"> General Community Indigenous Groups Service Clubs Progress Associations/Township Committees Churches Childcare Agencies Education Facilities/schools VFF Swan Hill Summer Fruits Development Assoc. Swan Hill Region Wine Grape Growers Assoc. Field & Game 	Awareness Awareness Awareness Awareness Awareness Awareness Awareness Awareness Awareness	L L L L L L L L L	Consult(?) Inform/Consult (Heritage & Cultural sites) Inform Inform Inform Inform Inform Inform
Medical services <ul style="list-style-type: none"> Hospitals Aged Care Ambulance Red Cross 	Response & Recovery Awareness Awareness Engagement	M L L M	Consult Inform Inform Collaborate
Industry/Employers/Business <ul style="list-style-type: none"> Tourism Operators Media 	Awareness Awareness Continuous Engagement	L L M	Consult Inform Inform

Stakeholder	Interest in Fire management Plan	Influence (H,M or L)	Engagement Approach
Utilities <ul style="list-style-type: none"> Water Authorities Powercor/SP Ausnet 	Engagement Engagement	M M	Inform/Consult Consult/Collaborate
Adjoining Municipalities <ul style="list-style-type: none"> NSW - Wakool Shire State of NSW - RFS Buloke Shire Gannawarra Shire Mildura Rural City Council 	Engagement Engagement Engagement Engagement	M M	Consult Inform
Government Departments <ul style="list-style-type: none"> DSE EPA RDV DHS Parks Victoria VLine BOM CMA 	EMP Awareness Awareness Recovery Response Agency EM Engagement Information Awareness	H L L H H H L L	Collaborate/Consult Inform Inform Collaborate Collaborate Collaborate Information flow Consult

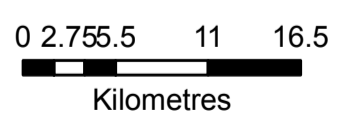
5.2 Appendix 2 – MFMP Community Engagement Action Plan

Planning Cycle	Phase activity	Stakeholder	Engagement approach	Engagement tool	Who responsible	When	Completed
Pre Planning	Finalisation of Project Plan for the MFMPC	All	Inform	Media Release		Oct 2011	
Environmental Scan	Where at with MFMPC	All	Inform	Media Release, incl Community newsletters, , CP Groups newsletter and social media. Information to applicable committees		After Nov MFMPC meeting	
		Community	Involve	Fire Ready Meetings(?)		Oct-Dec 2011	
Risk Assessment	Where at with MFMPC (to be confirmed)	All	Inform	Media Release, incl Community newsletters, flood recovery newsletter, CP Groups newsletter and social media plus applicable committees		Dec 2011	
		Draft letter to key stakeholders	Consult	Letter to Stakeholders	CE Workgroup	Dec 16	
Analyse	Where at with MFMPC (to be confirmed)	All	Inform	Media Release, incl Community newsletters, flood recovery newsletter, CP Groups newsletter and social media plus applicable committees		Jan 2012	
Decide	Draft of MFMP developed	All	Consult/Involve/ Collaborate	Community consultation (methods to be determined)		June 2012	
		All	Inform	Media Release, incl Community newsletters, flood recovery newsletter, CP Groups newsletter and social media			
Publish	Release of final MFMP	All	Inform	Media Release, incl Community newsletters, flood recovery newsletter, CP Groups newsletter and social media Distribution of MFMP by hardcopy, hyperlink, cd etc		June 2012(?)	
Deliver							
Monitor & Improve							



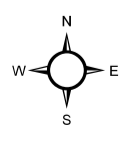
TREATMENTS MAP

IFMP



Legend

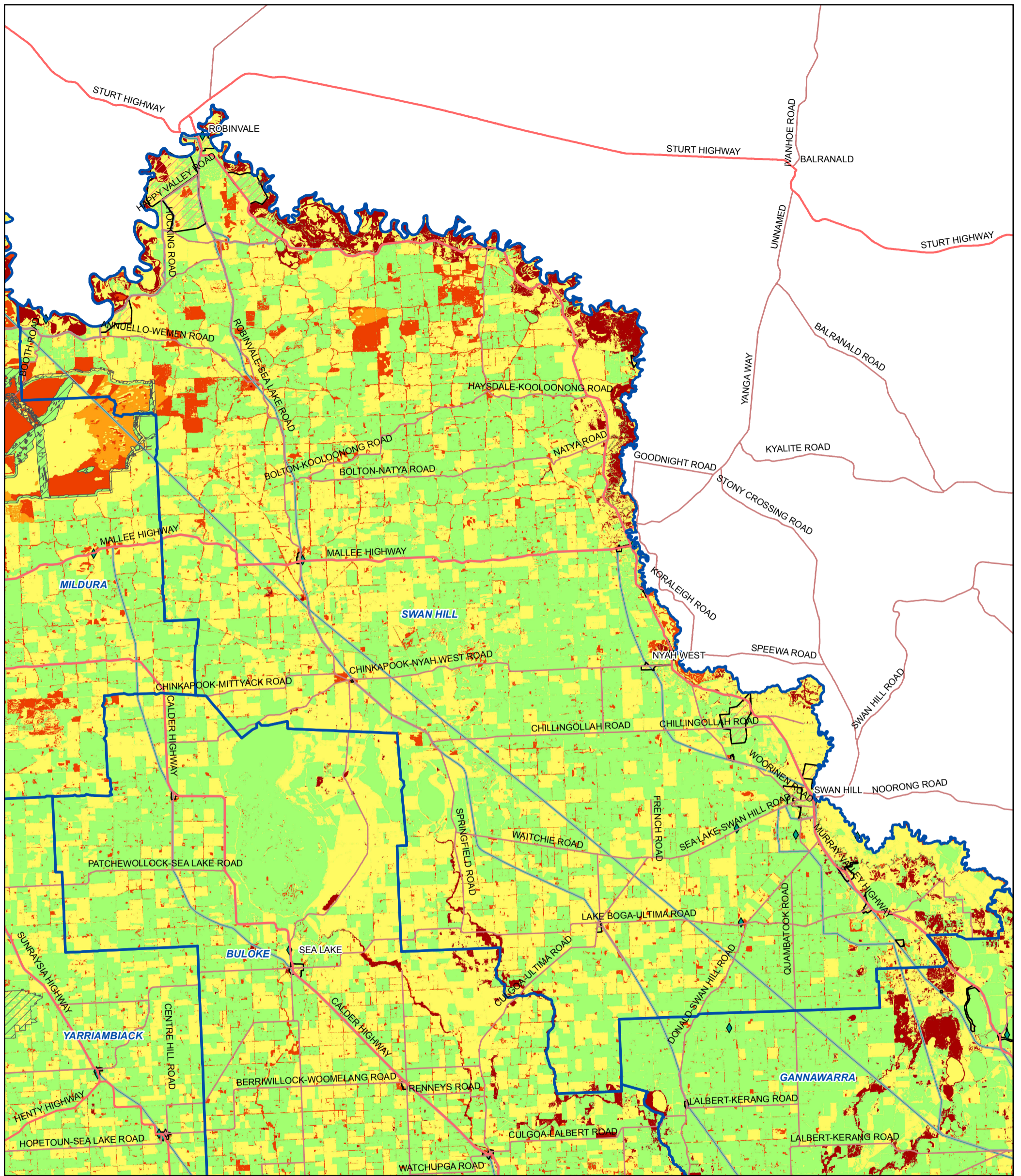
- Locality Labels
- Local Government Areas
- Neighbourhood Safer Places
- DSE Slashing
- DSE Slashing
- Council Slashing/Spraying
- Council Slashing/Spraying
- Prescribed Burns Last 5 Years
- Bushfire Management Overlay
- Roads**
- CLASS_CODE**
- Freeway
- Highway
- Main Road
- DSE Proposed Burns 2012 - 2014



Map Created on: 18/04/12
 Author: Loddon Mallee Integrated Fire Management Planning Committee

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Map Grid of Australia 1994 (MGA94)
 Universal Transverse Mercator (UTM) Projection
 Geocentric Datum of Australia (GDA)



2011 FUEL LOAD & VFRR

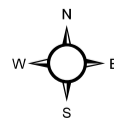
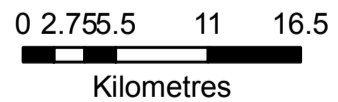
IFMP

Legend

- Local Government Areas
- Fires in the Last 10 Years
- Roads**
- CLASS_CODE**
- Freeway
- Highway
- Main Road

- VFRR Economic Areas (Points)
- VFRR Economic Areas (Polygons)
- VFRR Human Settlement Areas (Points)
- VFRR Human Settlement Areas (Polygons)
- VFRR Economic Areas (Lines)
- VFRR Human Settlement Areas (Lines)

- Fuel Load 2011**
- Extreme
- High
- Low
- Moderate
- Very High

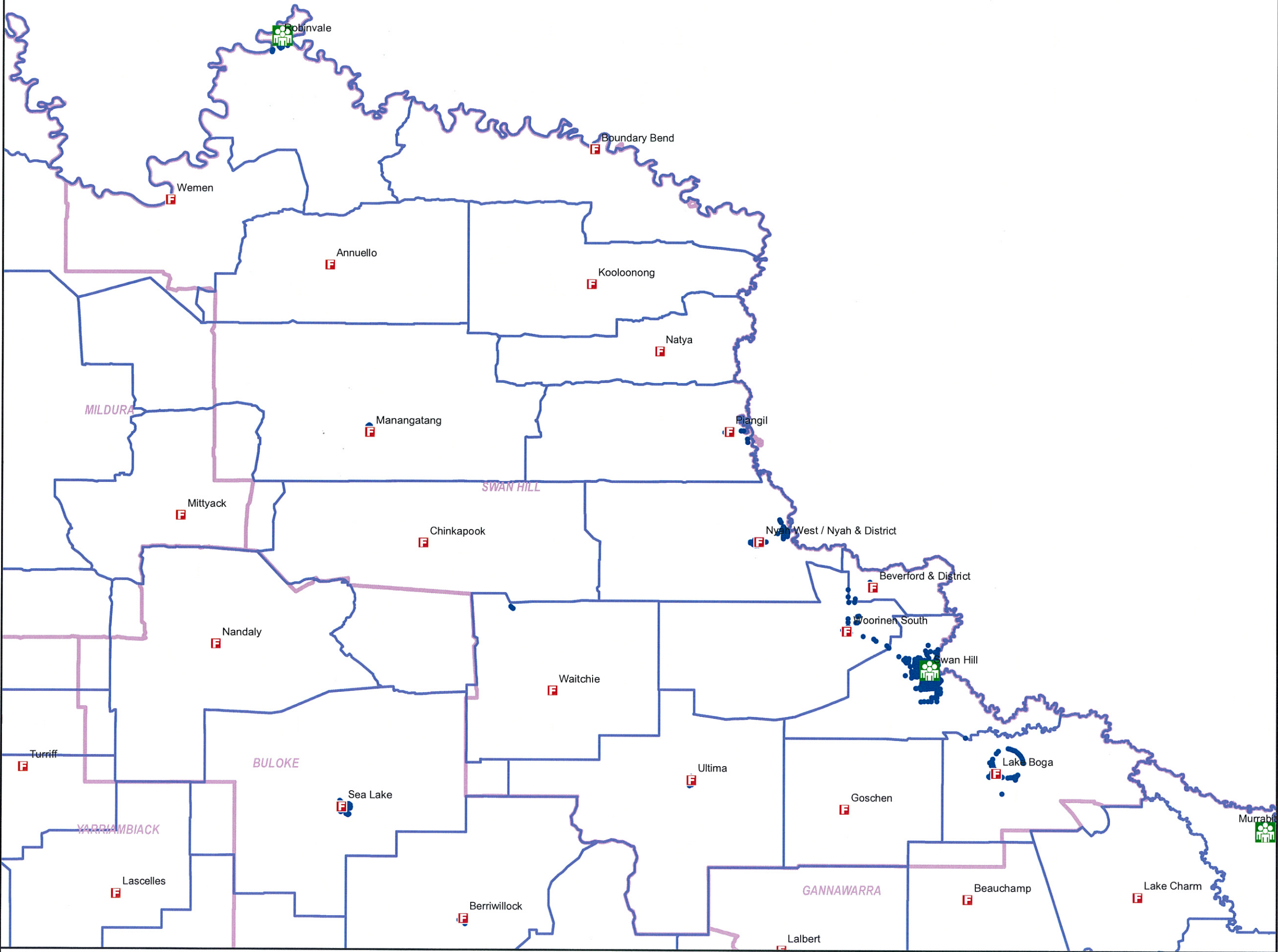


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Map Grid of Australia 1994 (MGA94)
 Universal Transverse Mercator (UTM) Projection
 Geocentric Datum of Australia (GDA)

Swan Hill Rural City Council IFMP Map



- Legend**
- Neighbourhood Safer Places
 - CFA Fire Station
 - Forest Industry Brigade Fire Station
 - Lower Murray Water - Hydrants
 - CFA Brigade Response Boundaries
 - Grampians Wimmera Mallee - Hydrants
 - LGA Boundaries (VM Admin)

Explanation:

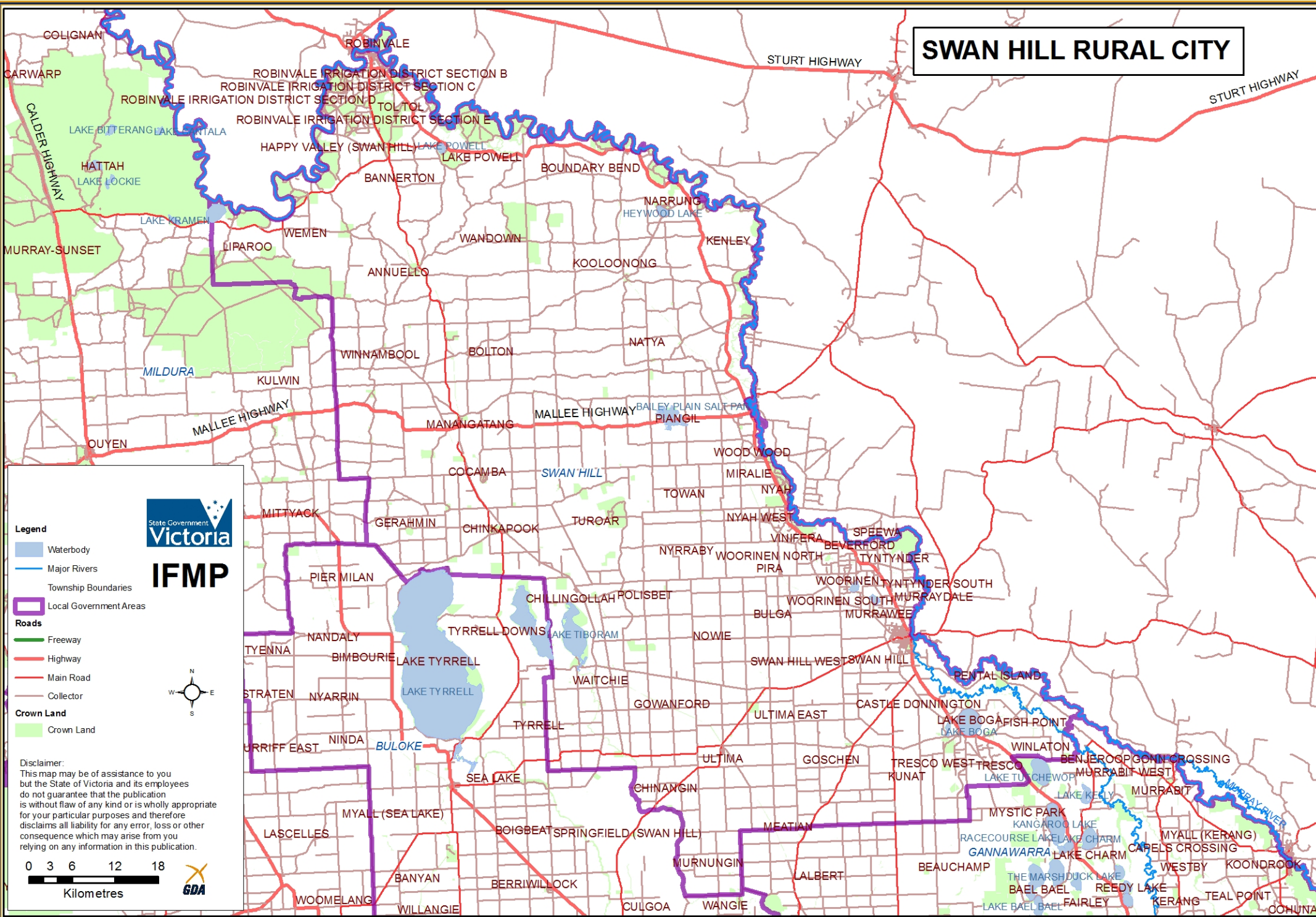


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0 1 2 4 6 8
Kilometers

This map has been produced in the Loddon Mallee Region
Date Prepared: 7 May 2012

SWAN HILL RURAL CITY

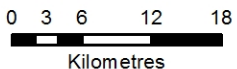


Legend

- Waterbody
- Major Rivers
- Township Boundaries
- Local Government Areas
- Roads**
- Freeway
- Highway
- Main Road
- Collector
- Crown Land**
- Crown Land



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Likelihood Table				
LEVEL	DESCRIPTOR	GENERIC DESCRIPTION	STATE DESCRIPTION	Spread
A	ALMOST CERTAIN	IS EXPECTED TO OCCUR IN MOST CIRCUMSTANCES	CLOSE TO 100%-ANNUALLY	Always
B	LIKELY	WILL PROBABLY OCCUR IN MOST CIRCUMSTANCES	33% (ONCE IN EVERY 3 YEARS)	1 in 3 occasions
C	POSSIBLE	MIGHT OCCUR AT SOME TIME	10% (ONCE IN EVERY 10 YEARS)	1 in 10 occasions
D	UNLIKELY	COULD OCCUR AT SOME TIME	3% (ONCE IN EVERY 30 YEARS)	hardly ever
E	RARE	MAY OCCUR IN EXCEPTIONAL CIRCUMSTANCES ONLY	1% (ONCE IN EVERY 100 YEARS)	Rarely

STATE BUSHFIRE CONSEQUENCE TABLE							
GENERIC DESCRIPTOR	STATE DESCRIPTOR BUSHFIRE	People - bushfire	Infra-structure - bushfire	Public Admin - Bushfire	Environment - bushfire	Economy - Bushfire	Social Setting
CATASTROPHIC	National (Catastrophic)	50+ lives lost. Hundreds injured. 1000+ houses destroyed. 2000+ people displaced. 30,000 + 10,000 livestock lost.	Loss of critical infrastructure and/or services for 24-48 hours to the Melbourne metropolitan area.	Significant statewide outrage. Royal Commission or other similar inquiry leading to changes in policy and practice.	Permanent total loss of one or more ecosystems or critical habitat elements. Loss of nationally significant cultural assets.	\$1B or 30% of State revenue	Severe disruption to community wellbeing over the whole area or a large part of it for a period of many years
MAJOR	State (Major)	10 fatalities as a direct result of the bushfire event. 300+ houses destroyed. 500+ people displaced. 30,000 - 10,000 livestock lost. Significant loss of breeding stock.	Loss of critical infrastructure and/or services for up to 8-16 hours to the Melbourne metropolitan area. Loss of services to a major regional city/several suburbs for up to 1 week.	Significant regional and local outrage, with some occurring at state level. Parliamentary or other inquiry leading to change in practice.	Permanent partial loss of one or more ecosystems or critical habitat elements. Extinction of a species or significantly increase the likelihood of extinction to almost certain that intervention such as captive breeding programs are required. Loss of state significant cultural assets.	Damage costs including legal actions and/or industry impacts (tourism, business, wine and grape etc) to the value of more than \$300M.	Severe disruption to community wellbeing over a wide area or for more than 24 months.
MODERATE	Regional (Serious)	5 fatalities as a direct result of the bushfire event. Large number of people affected by smoke. 100+ houses lost. 200+ people displaced. 3000 - 10000 livestock lost.	Loss of critical infrastructure and/or services for up to 2-5 hours to the Melbourne metropolitan area. Loss of services to a major regional city/several suburbs for 3-4 days.	Some outrage at local and regional level.	Long term disturbance to one or more ecosystems or critical habitat elements. National response and/or support for animal welfare. Loss of a regionally significant cultural asset such as Phillip Island penguins, Healesville Sanctuary, Puffing Billy.	Damage costs including legal actions and/or industry impacts (tourism, business etc) to the value of more than \$100M.	Major disruption to community wellbeing over a moderate to large area* or for a period of months.
MINOR	Municipal (Significant)	Single fatality and/or multiple serious injuries requiring hospitalisation as a direct result of the bushfire event. Up to 30 houses lost. 50+ people displaced. 3,000 + 1,000 livestock lost.	Loss of critical infrastructure and/or services for up to 1 hour to the Melbourne metropolitan area. Loss of services to a major regional city for 1 day. Loss of services to local community for a week.	Local outrage and concern.	Temporary disturbance to one or more ecosystems or critical habitat elements. Local response and/or support for animal welfare.	Damage costs including legal actions and/or industry impacts (tourism, business etc) to the value of more than \$30M.	Localised disruption to community wellbeing over a small area or for a period of weeks.
LOCAL	Community (Important)	Serious injury and disability, upto 50 people displaced, upto 2000 livestock lost	Loss of services to regional town for a day. Loss of services to local community of upto a week	Local concern	Temporary disturbance to local habitat. Local response and/or support for animal welfare.	Damage costs including legal actions and/or industry impacts (tourism, business etc) to the value of less than \$30M.	Localised disruption to community wellbeing over a small area or for a period of up to one week.

LIKELIHOOD		CONSEQUENCE				
		COMMUNITY IMPORTANT	MUNICIPAL SIGNIFICANT	REGIONAL SERIOUS	STATE MAJOR	NATIONAL CATASTROPHIC
A	ALMOST CERTAIN	MODERATE	MODERATE	HIGH	EXTREME	EXTREME
B	LIKELY	LOW	MODERATE	HIGH	HIGH	EXTREME
C	POSSIBLE	LOW	LOW	MODERATE	HIGH	HIGH
D	UNLIKELY	LOW	LOW	MODERATE	MODERATE	HIGH
E	RARE	LOW	LOW	LOW	MODERATE	MODERATE