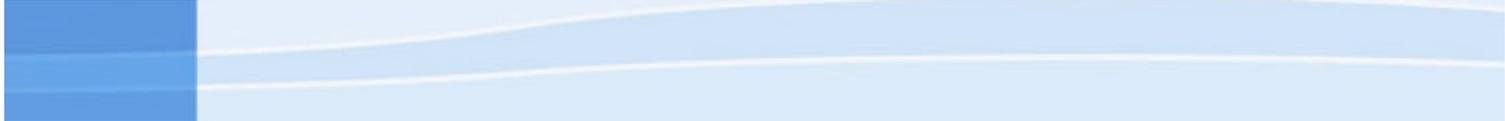


Five Mile Creek Waterway Action Plan

January 2004



NORTH CENTRAL
Catchment Management Authority



Five Mile Creek Waterway Action Plan

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Front cover photos: left: Freshwater Ecology Field Day Five Mile Creek, middle: Revegetation, right: Five Mile Creek

Back cover photo: Slaty Creek

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1 Introduction

The Five Mile Creek catchment is located within the Campaspe River basin and supports a unique diversity of wildlife and vegetation types. The catchment community is made up of many enthusiastic landholders, community groups and government agencies that have long supported a coordinated approach towards protecting and restoring the health of the catchment.

The North Central Catchment Management Authority (NCCMA) was established on 1 July 1997 and is the strategic body that coordinates natural resource management in the North Central region of Victoria. The NCCMA performs this function in partnership with the community, State government agencies, water authorities, local government and others. It does so on behalf of the Victorian Government.

The primary goal of the NCCMA is to ensure the protection and restoration of land and water resources, the sustainable development of natural resources-based industries and the conservation of our natural and cultural heritage. Therefore, the NCCMA has led the development of the Five Mile Creek Waterway Action Plan (the Plan) with the cooperation, advice and support of the catchment community.

1.1 Purpose

The purpose of the Plan is, in conjunction with catchment stakeholders, to:

- describe the current environmental condition of the catchment
- identify community attitudes regarding the values of the waterways and the threatening processes impacting on them
- identify community attitudes toward potential waterway management activities
- ensure all key stakeholders have the opportunity to contribute to the development of the Plan
- consider the priorities outlined in relevant strategies and plans
- identify and prioritise actions to be implemented over the next five years to protect and restore the health of the waterways

1.2 Scope of the Plan

The Plan addresses the following aspects of catchment health:

- improvements to water quality and waterway health
- protection and enhancement of remnant vegetation that forms potential habitat linkages throughout the landscape
- identification and protection of threatened flora, fauna and vegetation communities
- increased community awareness about catchment health

The Plan primarily identifies the priority on-ground activities to be implemented by the NCCMA in partnership with other stakeholders. It also highlights the actions to be undertaken by other organisations with the support of the NCCMA.

1.3 Development of the Plan

Fundamental to the acceptance of the Plan as a strategic planning document with achievable outcomes was the involvement of all stakeholders in the development of the Plan from the beginning.

The following timeline outlines the development of the Plan to date:

December 2001	NCCMA produced a background document outlining the current condition of the major waterways in the Five Mile Creek catchment and distributed it to the Woodend/Five Mile Landcare Group where it was well received.
March 2002	A widely advertised public meeting was held at Woodend to identify the key values and threats of the five major waterways of the catchment. A range of management activities were raised and a common vision was developed for the catchment (see Appendix 1).
April/May 2002	Issues raised at the community meeting were followed up with the respective government agencies and water authorities.

1 Introduction

Between June 2002 and February 2003, the progress of the Plan was put on hold as the NCCMA project manager was required to work on other regional planning documents. A Freshwater Ecology Field Day was held along Five Mile Creek to maintain NCCMA involvement with the catchment community and increase awareness of river health.



Photo: Angela Gladman, NCCMA

Phil Pappas explains the importance of macroinvertebrates to the ecology of Five Mile Creek



Photo: Angela Gladman, NCCMA

Steve Saddler and Phil Pappas demonstrate the electrofishing technique

March/April 2003 Stakeholders were contacted to re-commence the development of the Plan.

January 2004 Waterway Action Plan released.

2 Five Mile Creek catchment

The Five Mile Creek catchment is located within the Campaspe River basin in central Victoria (see Figure 1). The Five Mile Creek catchment covers a total area of approximately 8500ha and includes the northern slopes of the Mt Macedon Range, Hanging Rock to the northeast and extends to the confluence of Five Mile Creek and the Campaspe River near Carlsruhe. The catchment is approximately 12km wide from east to west and extends about 7km from north to south. Woodend is the major township. Mean annual rainfall is more than 700mm per year.

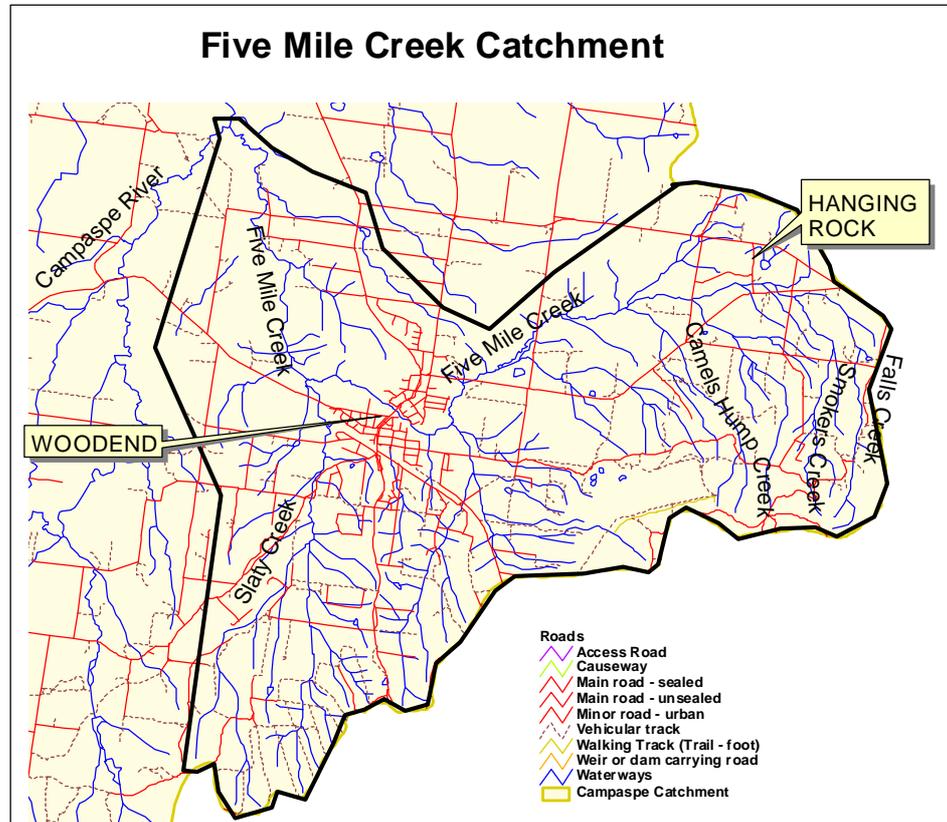


Figure 1 The Five Mile Creek catchment

2.1 History/heritage

Before European settlement, the Wurundjeri Aboriginal people lived in the Mount Macedon district. The Macedon Ranges formed part of the estate of the Gunung-willam-balluk clan (Parks Victoria, 2001).

Because food supplies were uncertain and the climate too harsh for much of the year, Aboriginal occupation of the deeply forested Macedon Ranges was occasional. There have been accounts that the Wurundjeri people used The Camels Hump in pursuit of Bogong Moths (Parks Victoria, 2001).

The first settler to establish a station north of the ranges in the Five Mile Creek area was Charles Ebdon in 1838. Several more pastoralists established sheep and cattle stations in the surrounding area shortly after. Woodend was settled at the crossing place over the Five Mile Creek and was initially known as Five Mile Creek. The stream gained its name from the fact that it was about five miles along the track to Melbourne from Charles Ebdon's Carlsruhe Station. The area provided plentiful water and feed supply for stock. Chinese market gardens on the banks of the Five Mile Creek provided fresh vegetables. The single span bluestone bridge that was erected over the creek in 1862 still exists today (Barned, 1983).

The number of settlers attracted to this region exploded after the discovery of gold. Woodend became an important stopover for diggers heading for the goldfields. Extensive areas of forest and woodland

2 Five Mile Creek catchment

were cleared which provided new industries such as timber milling, stock raising and mixed farming (Barned, 1983).

In the 1860s, Mr. Adams developed Hanging Rock as a pleasure resort including the placement of a weir across Five Mile Creek to make a lake several acres in extent on which rowing boats were available. Swans and other water birds were imported to “complete” the scene (Barned, 1983).

Heritage Victoria has listed eight historical sites on the Victorian Heritage Inventory, including Winnick Farm Homestead and Donalds Road Bridge Ruin. The Woodend Court House and former Wills House are listed on the Victorian Heritage Register (Heritage Victoria, 2003).

2.2 Topography

The topography of the catchment is dominated by the Mt Macedon Range, which forms part of the Great Dividing Range. Mt Macedon consists of Devonian acid volcanic rocks (Lorimer & Schoknecht, 1987). The Camels Hump is the highest point at 1008m above sea level. The tributaries that descend the northern slopes enter an open basalt plain with isolated volcanic cones, such as Hanging Rock (813m). The soils of the plain are poorly structured and prone to compaction and waterlogging (Lorimer & Schoknecht, 1987). Low rolling sedimentary hills extend to the west of the Range, including the Woodend township. The confluence of Five Mile Creek and the Campaspe River occurs on an undulating basalt plain associated with the Campaspe River valley.



View looking north towards Hanging Rock from the Camels Hump in the Macedon Regional Park

2.3 Waterways

Five Mile Creek is the catchment’s major waterway (see Figure 1). Five Mile Creek is formed from the confluence of Falls Creek and Smokers Creek about 1km southeast of Hanging Rock. It generally flows in a westerly direction, through the Woodend township before entering the Campaspe River. Two other major tributaries enter Five Mile Creek: Camels Hump Creek upstream of Woodend and Slaty Creek downstream of Woodend.

2.4 Native flora & fauna

The Five Mile Creek catchment supports a range of threatened flora, fauna and vegetation communities. Of particular note is the Black Gum, of which the only known occurrence in Victoria is at Woodend. Black Gum is considered an endangered species in Victoria (NRE, 1997). Other threatened flora include Yarra Gum (rare) and Tall Wallaby Grass (poorly known).

Four threatened fauna have been recorded within the Five Mile Creek catchment: Mountain Galaxias (poorly known), Great Egret (endangered), Blue-billed Duck (vulnerable) and Brush-tailed Phascogale (vulnerable).

Although a number of parks and reserves protect the native vegetation throughout the catchment, many pockets of remnant vegetation are scattered across the open hills and plains. These remaining vegetation communities are considered threatened. These include:

- Herb-rich Foothill Forest (vulnerable)
- Valley Grassy Forest (vulnerable)
- Swampy Riparian Woodland (endangered)
- Sedgy Riparian Woodland (least concern)
- Plains Grassy Woodland (endangered)

2 Five Mile Creek catchment

In recent years, the NCCMA has undertaken a number of riparian revegetation projects along the waterways around Woodend. These include:

Slaty Creek - NCCMA undertook a project with private landholders on Ashbourne Road to revegetate approximately 2ha of frontage along Slaty Creek. Exotic woody weeds were controlled, then followed by planting in spring 2000 using indigenous riparian species including 1600 Black Gum seedlings.



Photo: Angela Gladman, NCCMA

Proud landowners beside revegetated Slaty Creek



Photo: Angela Gladman, NCCMA

Five Mile Creek revegetation (3 years old)

Five Mile Creek - NCCMA undertook a project along Five Mile Creek adjacent to the Woodend Racecourse (land managed by Macedon Ranges Shire). Exotic woody weeds were controlled and the area (approx. 0.5ha) was planted in spring 2000 with indigenous riparian species including 1700 Black Gum seedlings. In 2002/03, site maintenance was undertaken by the Woodend/Five Mile Creek Landcare Group.

Five Mile Creek - NCCMA undertook a project along Five Mile Creek in a residential area and adjacent public land in Woodend. Control of exotic woody weeds beneath the existing Black Gum overstorey was followed by planting in spring 2000 using indigenous understorey species.

Appropriate species for the Black Gum community were selected after consultation with NRE Flora & Fauna.



Photo: NCCMA

Enhancing the understorey along Five Mile Creek (public land)

2.5 Landuse

The Five Mile Creek catchment supports agriculture, forested and recreational public land, rural and urban living. This varies as follows:

- Volcanic rocks of Mt Macedon
 - A significant proportion is Macedon Regional Park
- Northern and western basalt plain
 - Grazing on deeper red soils and some cropping
 - Unprotected remnant vegetation on lower slopes
 - Hanging Rock and Racecourse Reserve
- Sedimentary Hills
 - Rural and urban living
 - Grazing and hobby farming

3 Vision

On Thursday 21 March 2002, the NCCMA held a community meeting at Woodend to discuss the development of a strategic plan to improve the health of the Five Mile Creek catchment.

The meeting was attended by 17 representatives from a range of community groups, government organizations and local landholders. These included Woodend/Five Mile Landcare Group, Lions Club, Woodend Alive, Macedon Ranges Shire and Calder Waste Management Group. Apologies were received from VicRoads, Western Water and three community members.

The following information was gathered:

- a list of stakeholders with an interest in the catchment
- the values currently attached to the waterways
- management activities that would improve waterway health

This information is included in a meeting summary in Appendix 1.

The evening concluded with the collation of all ideas raised throughout the meeting and produced the following vision for the Five Mile Creek catchment.

VISION FOR THE FIVE MILE CREEK CATCHMENT

The creeks will contain high quality water suitable for both our needs and the needs of the environment.

We will acknowledge and protect the ecological diversity, both within and along our creeks – turning rare and endangered species into flourishing populations.

The creeks will meander throughout the landscape forming a natural web of life linking the catchment.

The creeks will encourage recreational pursuits (particularly near Woodend) and provide opportunities to educate, inform and delight both the local and broader communities.

We will recognise and protect both European and Indigenous heritage, ensuring that the creeks' links with the past are retained.

We will take pride in the creeks as they evolve into living streams.

The creeks will belong to the community and the community will belong to the creeks.

With respect to the actions raised and prioritised at the community meeting in March 2002, most of the actions were related to council planning (e.g. town planning, stormwater & recreation issues) and Western Water's role in septic audits and wastewater reuse. These actions/issues were referred to the appropriate authority for follow-up.

The NCCMA-related items included the following points that do not require specific action:

Fish barrier removal – Although no native migratory fish have been recorded in Five Mile Creek, the Redundant Weir Review (NCCMA, 2002) identified no barriers for upstream fish migration.

Stream condition survey/audit – Five Mile Creek is one of 52 waterways in the North Central region surveyed as part of the Victoria-wide Index of Stream Condition (ISC). This information can be provided as part of the education material in the brochure and at education activities.

Erosion control – The research undertaken for the Campaspe Nutrient Action Plan (Sinclair Knight Merz, 2002) identified no significant bank erosion threat along Five Mile Creek.

3 Vision

Professional on-ground working team specific to the Five Mile Creek catchment – This recommendation is currently unable to be resourced.

Increased access to funding – Macedon/Mt Alexander Shire Landcare Coordinator Dean Bridgfoot is assisting the Landcare group source funding options.

4 Priority works program

Using all currently available information, a priority works program has been developed to guide the waterway management activities of the NCCMA in the Five Mile Creek catchment over the following five years.

The following tables are based on financial years and subject to change pending funding availability.

Year One (2003/2004)

Activity	Outcome	Responsibility
Maintenance of weed regrowth at fire break. Plant out area with indigenous grasses.	Establishment of fire break while retaining native grass cover	NCCMA
Conduct two river health education events	Increased community awareness of river health	NCCMA
Assist with development of landholder pamphlet and information kit (targeted at landholders between Hanging Rock and Woodend)	Encourage interest in protection and enhancement of Five Mile Creek	Woodend/Five Mile Landcare Group & NCCMA
Support the development of a landscape plan along Five Mile Creek within Woodend	Coordination of community ideas, council planning and enhancement of Five Mile Creek	Woodend Alive & Macedon Ranges Shire Council & Woodend/Five Mile Landcare Group & NCCMA
Investigate revegetation of Calder Highway crossing of Five Mile Creek	Ensure Five Mile Creek is revegetated for river health benefits	Vicroads & Woodend/Five Mile Landcare Group & NCCMA
Provide fencing assistance to landholders through the buffer strip program (pending assessment)	Protection of waterways through the establishment of nutrient buffers	NCCMA & landholders
Provide technical assistance to Envirofund bids if required	Provide expert knowledge on waterway management	NCCMA
Maintain working relationships with other agencies	Open communication and coordination of activities with respect to waterways	NCCMA (Local Government Liaison Officer) & Macedon Ranges Shire Council & Western Water

Year Two (2004/2005)

Activity	Outcome	Responsibility
Revegetation of Ashbourne Reserve	Enhancement of the Black Box woodland	NCCMA & Friends of Ashbourne Reserve
Conduct two river health education events	Increased community awareness of river health	NCCMA
Support the development of a landscape plan along Five Mile Creek within Woodend	Coordination of community ideas, council planning and enhancement of Five Mile Creek	Woodend Alive & Macedon Ranges Shire Council & Woodend/Five Mile Landcare Group & NCCMA
Provide fencing assistance to landholders through the buffer strip program (pending assessment)	Protection of waterways through the establishment of nutrient buffers	NCCMA & landholders
Provide technical assistance to Envirofund bids if required	Provide expert knowledge on waterway management	NCCMA
Maintain working relationships with other agencies	Open communication and coordination of activities with respect to waterways	NCCMA (Local Government Liaison Officer) & Macedon Ranges Shire Council & Western Water

4 Priority works program

Year Three (2005/2006)

Activity	Outcome	Responsibility
Conduct two river health education events	Increased community awareness of river health	NCCMA
Provide fencing assistance to landholders through the buffer strip program (pending assessment)	Protection of waterways through the establishment of nutrient buffers	NCCMA & landholders
Provide technical assistance to Envirofund bids if required	Provide expert knowledge on waterway management	NCCMA
Maintain working relationships with other agencies	Open communication and coordination of activities with respect to waterways	NCCMA (Local Government Liaison Officer) & Macedon Ranges Shire Council & Western Water

Year Four (2006/2007)

Activity	Outcome	Responsibility
Conduct two river health education events	Increased community awareness of river health	NCCMA
Provide fencing assistance to landholders through the buffer strip program (pending assessment)	Protection of waterways through the establishment of nutrient buffers	NCCMA & landholders
Provide technical assistance to Envirofund bids if required	Provide expert knowledge on waterway management	NCCMA
Maintain working relationships with other agencies	Open communication and coordination of activities with respect to waterways	NCCMA (Local Government Liaison Officer) & Macedon Ranges Shire Council & Western Water

Year Five (2007/2008)

Activity	Outcome	Responsibility
Conduct two river health education events	Increased community awareness of river health	NCCMA
Provide fencing assistance to landholders through the buffer strip program (pending assessment)	Protection of waterways through the establishment of nutrient buffers	NCCMA & landholders
Provide technical assistance to Envirofund bids if required	Provide expert knowledge on waterway management	NCCMA
Maintain working relationships with other agencies	Open communication and coordination of activities with respect to waterways	NCCMA (Local Government Liaison Officer) & Macedon Ranges Shire Council & Western Water

5 Discussion

The Five Mile Creek Waterway Action Plan has been developed over a period of almost two years. It is based on the values the Woodend community attach to their local waterways, which they feel should be protected from a range of threats. A long list of activities to reduce these threats were identified at the community meeting held in early 2002. Although some of these activities did not require specific action, most of them were incorporated into a five year priority works plan. The NCCMA will be involved to varying degrees in the implementation of these activities. For example, the NCCMA will be directly involved in the provision of technical advice and organising river health education events. However, the development of a landscape plan along Five Mile Creek within Woodend and maintaining working relationships with other agencies is a cooperative effort.

Implementation of the outlined works program is dependent on funding availability. Continued community support for waterways activities in the Five Mile Creek catchment is therefore imperative for the ongoing improvement to catchment health.

6 References

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Appendix 1: Meeting summary

On Thursday 21 March 2002, the North Central Catchment Management Authority held a community meeting at Woodend to discuss the development of a Waterway Action Plan for the Five Mile Creek catchment. The Plan will identify priority actions to be carried out over the next five years. It will detail responsibilities, key outcomes and the resources required to improve the health of the major waterways, including Five Mile, Falls, Smokers, Camels Hump and Slaty Creeks.

The meeting was well attended by 17 representatives from a range community groups, government organizations and local landholders. These included Woodend/Five Mile Landcare Group, Lions Club, Woodend Alive, Macedon Shire Ranges and Calder Waste Management Group. Apologies were received from VicRoads, Western Water and three community members.

Greg Peters, NCCMA Waterways Manager and Angela Gladman, NCCMA Riverine Officer (Project Manager) led the night's discussion that encouraged everyone's opinions and valued the diversity of ideas put forward.

The following information was gathered regarding the stakeholders with an interest in the catchment, the values currently attached to the waterways and management activities that would improve the creeks of the Five Mile Creek catchment.

Who are the groups who have a real interest in the waterways of the Five Mile Creek catchment?

• Woodend Landcare	• Coliban Water	• Developers
• Macedon Shire	• Landowners fronting creeks	• NCCMA
• Local & non-local schools	• Sporting groups	• Environment Victoria
• Woodend Alive	• Farmers	• VicRoads
• Woodend Rotary	• Business groups	• DNRE
• Colour Spectacular	• Heritage society	• Trust for Nature
• Macedon Ranges Residents Association	• Friends of Hanging Rock	• Goulburn-Murray Water
• Western Water	• National Trust	• Scouts, Guides, etc
• Business & Tourism Association	• Passive recreation groups (e.g. anglers, walkers, birdwatchers)	• Tree Project group (Melbourne-based)
• Greening Australia		

What do we value about the creeks now? What are its best (most important) features?

• Habitat	• Ecological diversity	• Tourism
• Heritage	• Open space	• Drainage
• Water quality	• Education	• Water to downstream
• Scenic landscape	• Walking track	• Different type of habitat to surrounding landscape
• Rare & endangered species	• Stock watering & domestic supply	• Water supply to Adelaide
• Recreation (particularly near town)	• Water flow / volume	• Remnant vegetation
• Water for fire fighting	• Pride in the creek	• Indigenous / cultural heritage

Appendix 1: Meeting summary

What changes / management activities would improve the creeks of the Five Mile Creek catchment?

1. Coordinated and committed approach
2. Building community support and ownership
3. Weed management and indigenous revegetation
4. Stream condition survey
5. Audit septic / sewerage systems
6. Professional on-ground working team specific to the Five Mile Creek catchment
7. Attitudinal change from drains to living streams
8. More streamside reserves
9. Controlling storm water
10. Erosion control
11. Management development on the floodplain
12. Community education
13. Monitor water quality
14. Stock access restrictions
15. Phase out septics and seek alternatives
16. Undertake stream audits
17. Increased access to funding
18. Community recreation opportunities
19. Fish barrier removal
20. Storm water filtration of litter
21. Reducing surcharging of sewer pits in floodplain
22. Planning controls for water quality and vegetation management
23. Encouraging the involvement of children of all ages
24. Minimise and educate on chemical use
25. Investigate reusing wastewater

After further discussion about the listed management activities, they were further ranked according to their importance. Some overlap between activities was noted and many activities follow directly on from each other.

In general, point 1. 'coordinated and committed approach', was seen as the key to improve the catchment's waterways. Points 2. to 6. followed closely behind, which overlap with several other points on the list, e.g. actions relating to management of storm water, sewerage and community education were mentioned several times.

All the information gathered will guide the development of the Waterway Action Plan over the coming months. Follow up discussions will be held with the various groups and organizations to investigate issues raised at the community meeting.

The evening concluded with the collation of all ideas raised throughout the evening to produce a common vision for the creeks of the Five Mile Creek catchment. This vision will be shared with the community via a range of media, such as local newspapers, newsletters, schools, organizations, etc.

The NCCMA wishes to thank everyone who attended the meeting for your supportive comments and valuable local information. We look forward to your further involvement in improving the waterways of our catchment.