

Victorian Rural Drainage Strategy



Aboriginal acknowledgement

The Victorian Government proudly acknowledges Victoria's Aboriginal community and their rich culture, and pays respect to their Elders past and present.

We acknowledge Aboriginal people as Australia's first peoples and as the Traditional Owners and custodians of the land and water on which we rely. We recognise and value the ongoing contribution of Aboriginal people and communities to Victorian life, and how this enriches us. We embrace the spirit of reconciliation, working towards equality of outcomes and ensuring an equal voice for Aboriginal Victorians.

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Minister's foreword

I am pleased to release the Victorian Rural Drainage Strategy. This strategy delivers on the Victorian Government's commitment in *Water for Victoria* to develop a dryland rural drainage strategy through an open and consultative process.

In developing this strategy, we have worked with landholders, councils, catchment management authorities and other government agencies to understand their issues and find a way forward that manages the unique and complex drainage arrangements around the state. This strategy shows that landholders will be supported to manage dryland rural drainage where the existing arrangements are not working. It builds on the \$222 million investment in waterway health to support and promote environmental and cultural values.

The Victorian Rural Drainage Strategy provides a way forward to improve dryland rural drainage management in dryland areas by:

1. Supporting landholders to make choices about how they want to manage dryland rural drainage
2. Clarifying the roles, responsibilities and obligations for landholders and agencies in dryland rural drainage
3. Rebuilding the capability for agencies and landholders to manage dryland rural drainage to support agricultural productivity in their local regions
4. Simplifying the environmental and cultural approvals processes to help landholders manage dryland rural drainage, while providing the additional benefits of protecting and improving environmental and cultural values
5. Promoting opportunities for landholders and Traditional Owners to collaborate in the ways they manage dryland rural drainage
6. Considering opportunities to protect and enhance waterways that were previously affected by drainage to support environmental and cultural values.

I would like to thank the Reference Group and everyone who has contributed to the development of contemporary arrangements for dryland rural drainage – particularly the stakeholders and community members who met with the Department of Environment, Land, Water and Planning to clarify the issues and opportunities they wanted addressed in a statewide dryland rural drainage strategy.

I encourage you to consider the choices available to you to manage dryland rural drainage and to get involved in a pilot project, where it relates to your local area, to help deliver the future arrangements for dryland rural drainage across the state.

A handwritten signature in blue ink, appearing to read 'Lisa Neville', written in a cursive style.

Hon Lisa Neville
Minister for Water

Executive summary

In 2016, the Victorian Government identified degraded rural drainage systems in dryland agricultural regions as a key issue requiring investigation and review. After a two-year consultation and review process, a comprehensive new approach for the remediation and future management of dryland rural drainage systems has been detailed in this final report of the Victorian Rural Drainage Strategy.

The Victorian Rural Drainage Strategy sets out new rules, protocols and support mechanisms to enable landholders and government agencies to overcome past barriers to the repair and management of degraded rural drainage systems. Under the new approach, landholders will be empowered and supported to make choices about how they want to manage dryland rural drainage through a series of actions and policies that will:

- Clarify the roles, responsibilities and obligations for landholders and government agencies to manage dryland rural drainage
- Rebuild the capability of landholders and government agencies to manage dryland rural drainage to support agricultural productivity
- Simplify previously complex and confusing regulations and approval processes, and in doing so clarify obligations on landholders to protect and enhance their local environment and to respect the cultural values of Aboriginal Victorians when conducting future drainage works
- Manage priority waterways affected by rural drainage to provide cultural and environmental benefits.

Government agencies will work together to support landholders who choose to manage dryland rural drainage. The Victorian Rural Drainage Strategy acknowledges the challenges faced in the past by landholders, councils, catchment management authorities and other government agencies seeking to manage the unique and complex arrangements

for rural drainage. The strategy provides clear directions and processes for management of rural drainage at the local level, with defined roles for landholders and government agencies – including those such as VicRoads and VicTrack where their infrastructure intersects or interacts with rural drainage.

Under the new arrangements, catchment management authorities will have a key role to help landholders who are looking for administrative support to develop Dryland Rural Drainage Management Plans. These written agreements will consider legal requirements including environmental and cultural approvals needed to support the ongoing management and maintenance of rural drainage systems. Once agreements are in place, landholders will be able to pay for the assistance of councils to support the ongoing administration of the agreements.

In areas of the state where catchment management authorities have been involved in providing drainage services or can support the responsible stakeholders to address specific local issues, 11 pilot studies have been launched to investigate future management arrangements (Figure 1). Some of the pilot projects are aimed primarily at increasing the capability of landholders and other stakeholders to manage dryland rural drainage; other projects have a primary focus on restoring environmental and Aboriginal cultural values. The lessons learned from all the projects will be shared and used to update guidance provided to all parties with an interest in rural drainage.

Landholders and government agencies with an interest in rural drainage will be guided principally by a drainage resource kit. The kit will help to build the capability of landholders to make choices about how they manage dryland rural drainage and give government agencies the tools to support their choices. The kit will include:

- An overview of the ways landholders can manage rural drainage and the support available to them
- A technical tool to help landholders consider the likely costs and benefits of investing in improved rural drainage
- Information about landholders' obligations to obtain approvals for drainage works
- Guidance on the development of a Dryland Rural Drainage Management Plan that will help simplify the approvals process
- Guidance for landholders seeking the best value for money from drainage works, while also seeking to minimise the possible impacts of drainage works
- Options for dispute resolution.

The strategy includes comprehensive provisions designed to protect and improve environmental values. Where approval processes are simplified, this will be done in ways that protect environmental values of waterways. Similarly, the strategy outlines the obligations for landholders and agencies to consider the environmental impacts of rural drainage. And the strategy makes it clear where it is unlikely that approval for works may be granted, or where extra information is likely to be required before approval is granted to undertake drainage works.

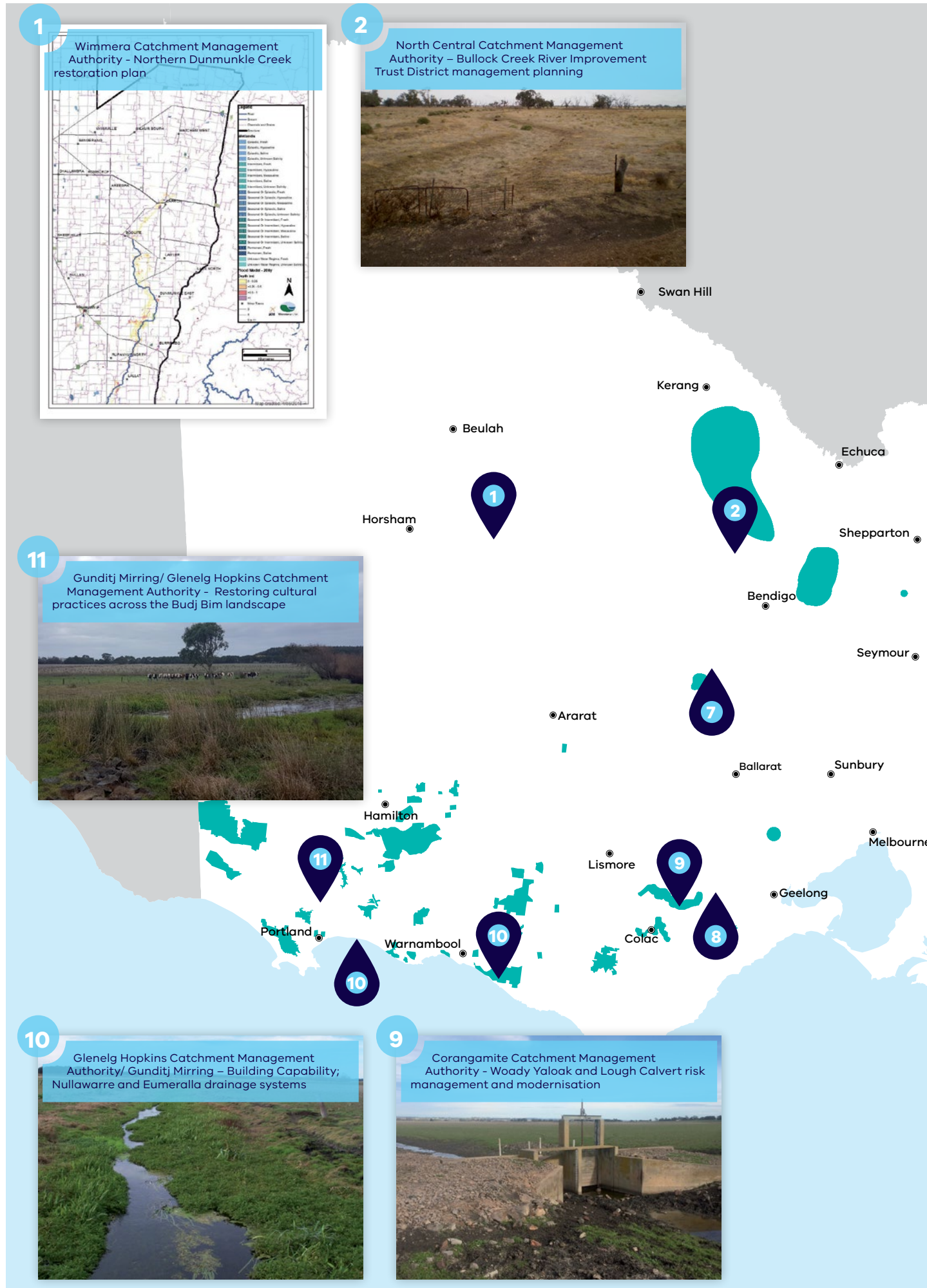
Implementing contemporary arrangements for rural drainage also means looking for opportunities to improve the management of priority waterways most affected by rural drainage, particularly where drainage services are no longer required by landholders.

The strategy recognises the values Traditional Owners and Aboriginal Victorians place on their traditional lands and waters, and the effects of drainage on these values. Building on previous successes, the strategy supports opportunities for landholders and agencies to collaborate with Traditional Owners to manage rural drainage. It outlines arrangements to give due consideration to Aboriginal cultural heritage in the context of rural drainage, recognising the value of wetlands in supporting Aboriginal values that previously existed.

In the words of traditional owner Possum Clark-Ugle, "Before Europeans arrived, southwest Victoria was the 'Kakadu' of the south, with thousands of wetlands supporting a rich variety of animals, birds and plants that our ancestors used in a sustainable and respectful way"

The strategy sets out how the contemporary arrangements for dryland rural drainage will be implemented, and identifies on-the-ground changes that will be used to measure the success of its delivery.

Figure 1 Regional projects to deliver strategy outcomes



3

Goulburn Broken Catchment Management Authority – Upper Mid Broken Creek drainage management and environmental improvements



4

North East Catchment Management Authority – moving to contemporary drainage in the North East Region



5

West Gippsland Catchment Management Authority – Kilmany Park – Transition to contemporary drainage arrangements



6

West Gippsland Catchment Management Authority – Moe River Flats – Transition to contemporary drainage arrangements



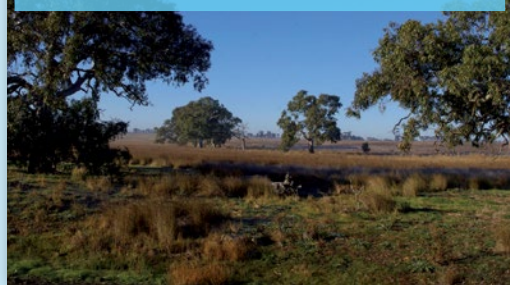
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Eastern Maar/ Corangamite Catchment Management Authority – Voluntary Cultural Heritage Management Plan Pilot in the Woody Yalook and Lough Calvert



7

Dja Dja Wurrung/ North Central Catchment Management Authority/ Trust for Nature – Putting the swamp back into Long Swamp



Legend

Historical large scale drainage systems

1

Introduction

Vision

Landholders are empowered to work together and will be supported to improve their management of dryland rural drainage.



In 2016, as part of a broad plan to manage the state's water resources, the Victorian Government identified degraded rural drainage systems in dryland agricultural regions as a key issue requiring investigation and resolution. This strategy, the result of a two-year consultation and review process, sets out in detail a comprehensive new plan – the Victorian Rural Drainage Strategy – for the remediation and future management of rural drainage systems.

The review found that existing processes and systems governing the management dryland rural drainage – like many parts of the system itself – were not working. Landholders and other stakeholders had become frustrated and stymied by an excessively complex and difficult system of approvals for rural drainage works, resulting in neglect and gradual degradation of drainage infrastructure. At the same time, damage to environmental and cultural values caused by the establishment of rural drainage over many decades remained unchecked.

A primary aim of this Victorian Rural Drainage Strategy is to introduce more clarity and simplicity to previously complex and confusing regulations and approval processes, and ambiguous delineation of roles and responsibilities. In doing so, the strategy empowers landholders to make more individual choices about how to manage dryland rural drainage, and provides them with practical support and guidance on how to navigate the system. Importantly, it also reinforces and clarifies obligations on landholders to protect and nurture their local environment and to respect the cultural values of Aboriginal Victorians when conducting future drainage works.

The Government does not suggest it will be an easy fix; management of dryland rural drainage is an inherently complex and difficult undertaking – particularly in areas where drainage systems cross private property boundaries and intersect with public infrastructure such as roads. In time, the new systems and processes proposed will lead to significantly better outcomes not only for individual landholders, but for agricultural productivity generally and for the health and sustainability of the natural environment.

The strategy reflects the collective input of numerous stakeholders – landholders, regional councils, Traditional Owners, catchment management authorities and many other interested agencies and parties – who contributed their time and expertise in a statewide consultation process.

This first chapter of the report provides background and policy context on the arrangements for dryland rural drainage in Victoria, and reasons why change is needed. It also defines key terms used in the report – including dryland rural drainage – and outlines the vision of the new strategy and some of its major aims.

1.1 Drivers for change

During the extended dry period of the Millennium Drought (1997–2009), most larger-scale dryland rural drainage systems in Victoria fell into disrepair – partly because farmers had little need at the time for drainage. Restoring the functionality of rural drains after the extraordinary wet years of 2010–2012 has proved extremely difficult – in part because of major legislative revisions made before the drought years that brought significant changes in arrangements for environmental and cultural approvals in rural areas. Changes to the *Victorian Water Act 1989*, *Local Government Act 1989* and the *Catchment and Land Protection Act 1994*, along with the establishment of the Commonwealth's *Environment Protection and Biodiversity Conversation Act 1999*, all affected the approvals process for repairing and upgrading dryland rural drainage. In the years after the drought broke, when the need for drainage services increased, landholders and agencies were left confused about roles and responsibilities for managing rural drainage and the required environmental and cultural approvals.

This strategy addresses the confusion and frustration of landholders and government agencies by clarifying roles and responsibilities for dryland rural drainage across the state. It also makes valuable new information available to landholders about the costs and benefits of managing rural drainage in the modern era, when they already must frequently adapt to new technologies, changing cost structures and global market forces. Climate change and climate variability will also increasingly affect investment in and management of rural drainage into the future. The tools and information provided through this strategy will help landholders factor these variables into their decisions.

As landholders increasingly make individual decisions about where and how they invest in drainage, opportunities to invest collectively on a large scale will inevitably become more limited. Hence, it is likely there will be a move away from major drainage systems towards agreements between smaller groups of landholders, and towards individuals managing their own works. Under the new arrangements, landholders will be given guidance on how to establish agreements between smaller groups to support their agricultural productivity. This will include information about their obligations for managing dryland rural drainage, the rules for managing the movement of drainage water across property boundaries, and where they can get support to manage disputes with neighbours.

The strategy recognises the sometimes competing demands of landholders and agencies. For example, the role of councils to provide support for agricultural productivity may be in conflict with their provision of urban stormwater services or road management and maintenance. To deal with such conflicts, the strategy establishes shared working arrangements with clear accountabilities. It emphasises the opportunities for government agencies, such as councils and catchment management authorities, to work together to support landholders in the choices they make about their future drainage needs.

The strategy recognises that the historical construction of dryland rural drainage in Victoria has damaged some culturally significant sites for Traditional Owners, and reduced the environmental values of some wetlands and waterways. Similarly, the interception of groundwater from shallow or perched water tables by diversion drains may have reduced groundwater recharge and altered the water balance for aquifers used for domestic and

stock licensed water supplies. Since the 1970s, we have acquired a greater understanding of the potentially harmful impacts of rural drainage. Partly as a result of this increased knowledge, there has been little expansion of large-scale rural drainage systems in Victoria, and a shift away from significant government investment in such infrastructure.

The strategy not only recognises the historical loss of environmental and cultural values associated with dryland rural drainage, but actively promotes the restoration of wetlands and the improvement of flows to provide environmental and cultural benefits. It supports the adoption of rural drainage management practices that minimise or avoid environmental or cultural impacts, and it proposes a simplified approach to supporting that adoption in ways that are applied consistently across the state while also providing greater awareness for landholders about their obligations to protect environmental and cultural values.

1.2 Strategy outcomes

The strategy relies on the achievement of a number of key objectives and outcomes that will be critical to its overall success. Table 7.1 (page 71) outlines the on-the-ground changes expected to be made by meeting these strategy outcomes.

1. Landholders understand the various ways they can manage dryland rural drainage (Chapter 4).
2. Cultural values, environmental values and water resources are protected (Chapters 5 and 6).
3. Revised arrangements for former drainage areas involving priority waterways result in cultural and environmental values being restored (Chapters 5 and 6).
4. Relevant government agencies have clear roles and responsibilities, and are aware of opportunities to work in partnerships to support landholders managing dryland rural drainage (Chapter 3).
5. Government agencies work together with landholders to rebuild capability and support ongoing arrangements for dryland rural drainage management (Chapter 4).

What do we mean by government agencies in this strategy?

For the purposes of the strategy, the term 'government agencies' refers to government organisations with roles relating to dryland rural drainage. They include councils and catchment management authorities, the Department of Environment, Land, Water and Planning, and the Department of Economic Development, Jobs, Transport and Resources. The term can also include VicRoads and VicTrack.

1.3 Dryland rural drainage in Victoria

This strategy focuses on the maintenance of on-farm drains in dryland agricultural areas, the movement of drainage water across property boundaries, and the outfall from drainage systems into waterways.

Drainage of rural land in Victoria began in the mid-1800s. It expanded significantly at the start of the 20th century, and again after World War II. Historically, formal drainage systems were established to bring into agricultural production soils that were previously unable to be farmed or grazed because they were waterlogged or under water for some or all of the year.

About 130 dryland rural drainage areas in Victoria were set up, draining approximately 1.5 million hectares of agricultural land and servicing about 5000 landholders. There are about 20 large-scale systems.

Drainage systems and works vary markedly in complexity and size, and between different parts of the state. In Gippsland, for example, large wetlands on terraced floodplains, with fast flowing rivers above and below them, were typically drained by trenches dug through the wetland. In Corangamite, most wetlands occur on the volcanic plain in craters and where lava flows have interrupted drainage patterns. Drainage systems there typically provide through flow from one wetland to the next. In the Wimmera, by contrast, the aim of drains is to provide ephemeral rainfall runoff through "very flat country with less waterways, creeks or rivers and just a series of retreating ancient coastlines with very flat country in between" (as one Wimmera landholder described it in a submission to the draft strategy). In northern Victoria, on the Riverine Plains, the drainage was built to direct flows through a complex web of natural drainage courses and artificial drainage structures across a wide front, and over vast distances.



This strategy seeks to resolve complex historical arrangements around dryland rural drainage, and makes provision for what support landholders need for future (and most likely smaller-scale) drainage works. It also provides government agencies with the support they need to assist landholders in managing dryland rural drainage.

The strategy sets out how landholders can be provided with greater certainty about how to meet their existing obligations. It also provides pathways for landholders who choose to improve their management of drainage water and drainage systems.

The strategy also supports people and organisations who may want to consider alternative land uses for drainage areas where landholders no longer need drainage services. Similarly, where drainage services are still required, it supports landholders to think differently about the scale over which those services are needed.

Given the diversity and complexity of dryland rural drainage, and the very sophisticated and targeted policy responses required, the strategy does not include consideration of other rural water issues such as general waterlogging or irrigation drainage; rural water corporations can help with these matters. Catchment management authorities can provide advice to landholders on salinity, or on flooding that involves potential risk to life and safety.

1.4 Policy context

This strategy interacts with a range of other Victorian Government strategies and policies as well as arrangements at the regional and local level. The government's *Water for Victoria* plan¹, released in October 2016, is a key driver for this strategy. It outlines the plan for managing water resources for Victoria and promotes the involvement of Traditional Owners and Aboriginal Victorians in water management and planning, and in identifying opportunities for shared benefits.

The Victorian Rural Drainage strategy also aligns with state policies set out in the *Victorian Floodplain Management Strategy* and the *Victorian Waterway Management Strategy*. This strategy does not duplicate these policies, but it does reference their relevant actions in the context of dryland rural drainage.

The management of dryland rural drainage has links to the statewide planning framework, Victoria's road management arrangements and the government's climate change framework (Section 5.5). *Water for Victoria* also committed to investing in climate science and to continuing to invest in research and partnerships. The climate change framework recognises the importance of providing this information in a way that meets the needs of all stakeholders.

What is dryland rural drainage?

For the purposes of this strategy, dryland rural drainage is defined as infrastructure and functions related to the collection, and timely removal, of excess water generated by high rainfall to support agriculture production. It involves enhancing the hydraulic capacity of drainage lines and soils to ensure water will flow off (or through) and away from land, to support increased agricultural production in dryland areas.

2

Draft Victorian Rural Drainage Strategy



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November 28, 2017

Development of the strategy





Chapter guide

This chapter sets out how the Victorian Rural Drainage Strategy was developed. It recognises the significant contributions and efforts of all stakeholders in shaping the future arrangements for dryland rural drainage.

2.1 Overview

In its 2016 *Water for Victoria* plan, the government committed to developing a dryland rural drainage strategy through an open and consultative process. This strategy was developed in four phases. Stakeholders had the opportunity to have their say about the proposed arrangements for dryland rural drainage during each phase (See Figure 2.1). The strategy also draws and builds on the wide-ranging consultation carried out for the Environment and Natural Resource Committee Inquiry into Rural Drainage in Victoria, including one-on-one discussions with landholders and other stakeholders, including the general community.

The draft Victorian Rural Drainage Strategy (draft strategy) was released on 25 October 2017. All Victorians were given the opportunity to learn about and contribute to the proposed new arrangements for dryland rural drainage through Engage Victoria, the Victorian Government's online consultation platform.

Landholders and other stakeholders (including local communities) with a direct interest in the development of the strategy were individually targeted with invitations to attend consultation workshops held at various locations across Victoria. They were also invited to provide written submissions, or to have direct discussions with the project team. Social media and print media also promoted opportunities for members of the broader community to have their say.

Across Victoria, 160 people attended nine consultation workshops, with both individuals and organisations with an interest in dryland rural drainage well represented. Landholders were the largest group of attendees, followed by councils and catchment management authorities. Environment groups and other government agencies were also represented (See Figure 2.2).

People in the south-west of Victoria showed the greatest interest in the workshops. Given the level of interest there, and at the request of the community, a second meeting was held in Edenhope to ensure that everyone had adequate opportunity to have their say.

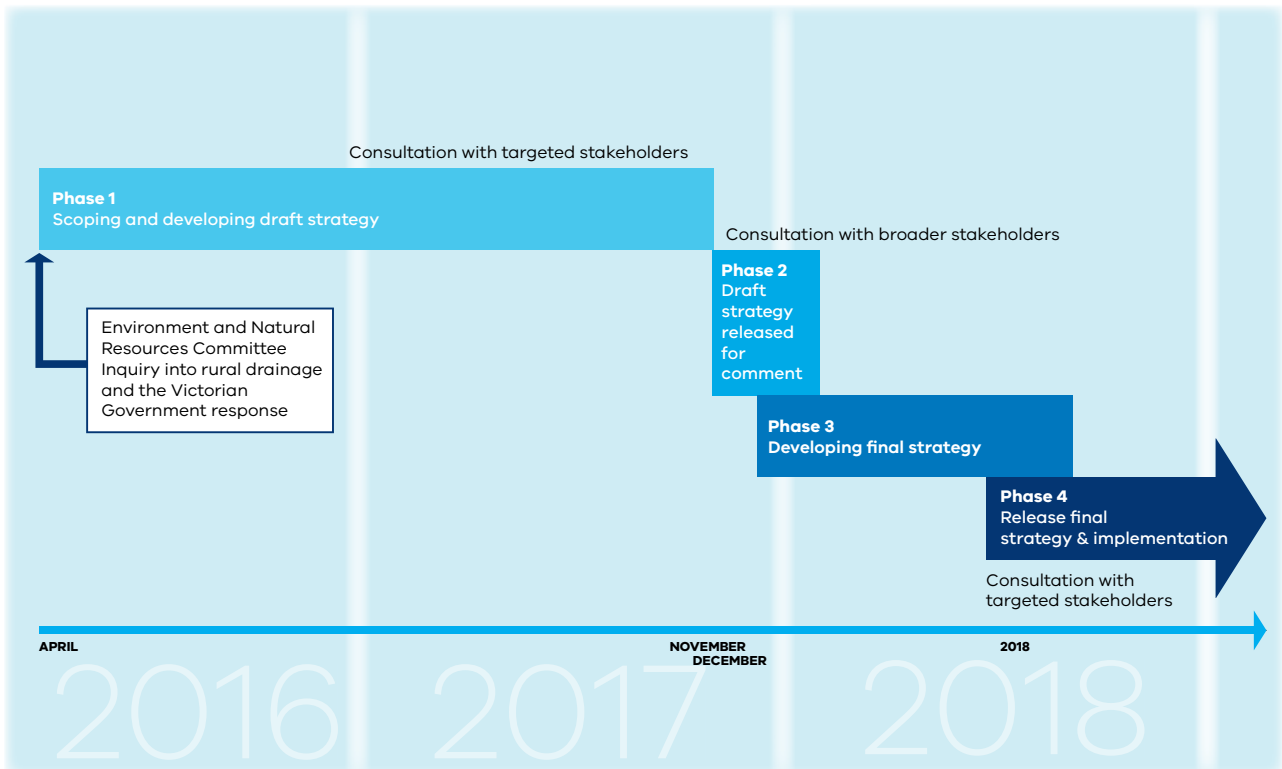


Figure 2.1 Four phases of the Victorian Rural Drainage Strategy development

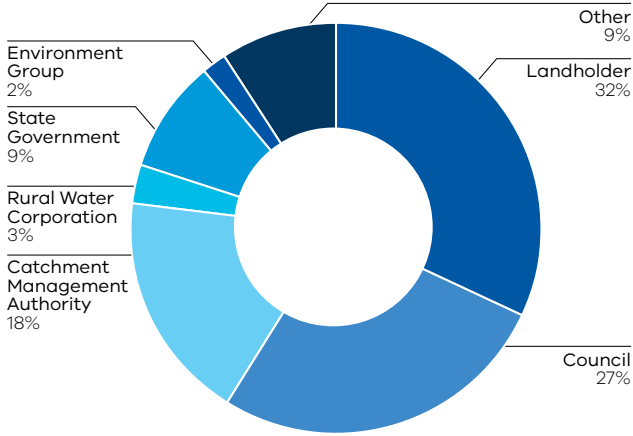


Figure 2.2 Workshop attendees by interest group

A total of 1229 people visited the online engagement platform during the eight-week consultation period. Forty-nine written submissions, capturing comments on all aspects of the draft strategy, were received. Figure 2.3 shows the percentage of submissions contributed by different stakeholder groups.

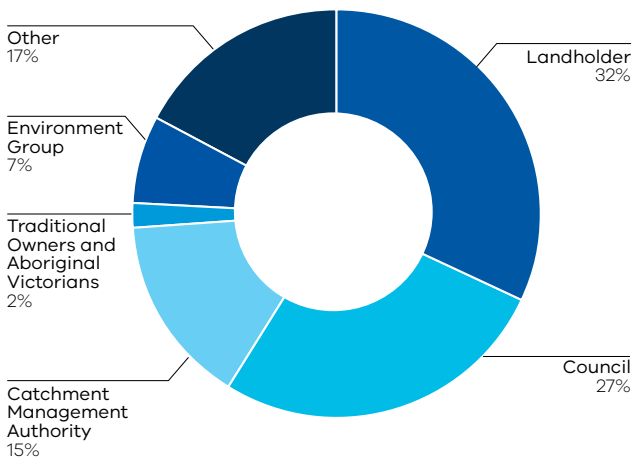


Figure 2.3 Breakdown of submitters

A feedback report summarised the outcomes of the consultation on the draft strategy. It captured a range of views and suggestions on the key aspects of the strategy. These included:

- Suggestions for improving the vision statement.
- Requests that the strategy acknowledge the differences in drainage issues across the state. Examples included the impacts of drainage on water quality in the Gippsland Lakes, the unique landscape in the Wimmera and development upstream of the Moe River Flats drainage area..
- Support for agricultural productivity and streamlining environmental approvals, but not at the expense of the environment.
- Requests for greater clarity over roles and responsibilities of various stakeholders, and suggestions on what these could be.
- Requests for greater clarity on how compliance and enforcement and dispute resolution will be considered.

The feedback report included a commitment to consider 16 strategic approaches and actions in response to what we heard, and documents our responses to each. The feedback report is available on the Department of Environment, Land, Water and Planning's website. The results of these considerations are reflected in this final strategy.



2.2 Contributors

Many different stakeholders have shaped the development of this strategy (Figure 2.4).

Farmers and directly-affected landholders

One-on-one engagement with farmers and other directly-affected landholders greatly informed our understanding of the challenges facing individuals. Their insights helped to shape the policies and actions in the strategy. The Victorian Farmers Federation provided additional landholder perspectives and offered further insights through its contribution to an Interdepartmental Reference Group (Reference Group) that guided the strategy's development.

Government agencies and other bodies

Government agencies including councils, catchment management authorities and various departments, along with other bodies including the Victorian Catchment Management Council and the Municipal Association of Victoria, were engaged through the Reference Group, which considered feedback from the community, and informed the government's final policy directions (Table 2.1).

Government agencies and other bodies were invited to participate in an Implementation Working Group (Working Group).

The Working Group included representatives from the Victorian Farmers Federation, the Victorian Catchment Management Council, the Municipal Association of Victoria, the Federation of Victorian Traditional Owner Corporations, the Murray Lower Darling Rivers Indigenous Nations, councils and catchment management authorities. Councils were well spoken for, with representatives from Campaspe Shire, Golden Plains Shire, Gannawarra Shire Council, Colac-Otway Shire, Baw Baw Shire, East Gippsland Shire and Hepburn Shire providing advice and expertise to test the practicality of proposed policies in this strategy.

There were also targeted briefings and workshops attended by bodies including Environment Victoria, the Victorian Environmental Water Holder, VicRoads, VicTrack, the Municipal Association of Victoria, the Victorian Farmers Federation, catchment management authorities and councils.



Traditional Owners and Aboriginal Victorians

Traditional Owners and Aboriginal Victorians, including their peak bodies, supported the development of this strategy. The consideration of Aboriginal values in the strategy is not intended to speak for all Traditional Owners and Aboriginal Victorians, but rather to give a broad overview of shared concerns and values to shape the directions of this strategy.

Broader community, including environment groups and industry groups

This strategy built on community input provided to the Environment and Natural Resource Committee Inquiry into dryland rural drainage by inviting the broader community to attend workshops and contribute to the strategy through the online consultation platform.

Table 2.1 Members of the Interdepartmental Reference Group

- Independent Chair – Peta Maddy
- Interim Chair – Tamara Boyd (22 May – 21 July 2017)
- Department of Environment, Land, Water and Planning
- Municipal Association of Victoria
- Baw Baw Shire Council
- Moyne Shire Council
- West Gippsland Catchment Management Authority
- Glenelg Hopkins Catchment Management Authority
- Victorian Farmers Federation
- Victorian Catchment Management Council
- Department of Economic Development, Jobs, Transport and Resources
- Melbourne Water

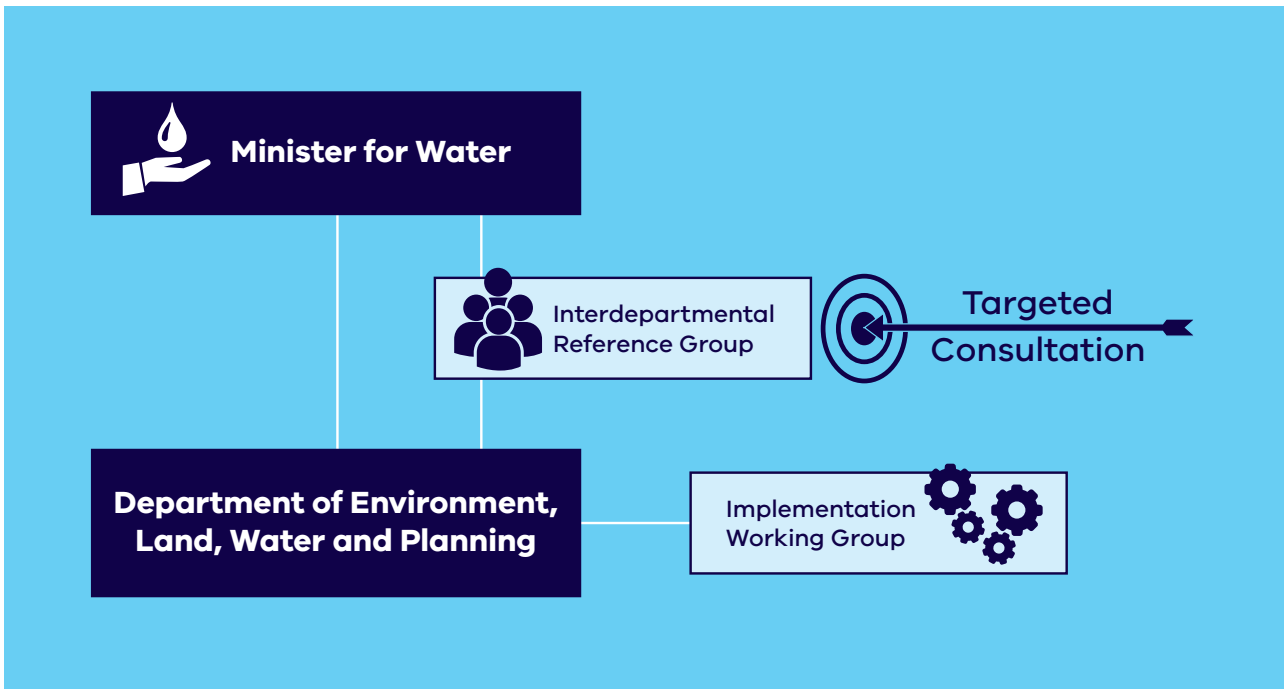


Figure 2.4 Governance structure for the Victorian Rural Drainage Strategy

3

Roles and responsibilities for dryland rural drainage in Victoria





Chapter guide

This chapter sets out and clarifies roles and responsibilities for the future management of dryland rural drainage in Victoria. In doing so, it aims to reduce confusion and increase certainty for landholders and the various agencies and other stakeholders involved.



3.1 Clarifying roles and responsibilities

Government agencies with direct responsibilities relating to dryland rural drainage works and measures include:

- **Councils**
- **Catchment management authorities**
- **Department of Environment, Land, Water and Planning**
- **Melbourne Water.**

Some agencies in certain circumstances have an indirect role in supporting dryland rural drainage, particularly where their roles interact and intersect with dryland rural drainage works and measures. These include:

- **Rural water corporations**
- **Department of Economic Development, Jobs, Transport and Resources**
- **VicRoads and VicTrack.**

Registered Aboriginal Parties, Traditional Owners and Aboriginal Victorians also have an important role to perform in the management of dryland rural drainage.

Government agencies will work together to support landholders who choose to manage dryland rural drainage. The strategy and its arrangements recognise that the management of rural drainage is most appropriate at the local level with clearly defined roles (Table 3.1). The roles for each of these agencies and landholders have been clarified to align with their legislative responsibilities and relevant skills and expertise. The roles for government agencies and landholders with direct responsibilities are:

Landholders – Manage private dryland rural drainage and develop drainage management plans.

Councils – Provide the first point of contact for landholders, process applications for planning permits, manage compliance with permits, and provide administrative support, where appropriate, to drainage committees with formal management arrangements.

Catchment management authorities – Support landholders to develop dryland rural drainage management plans, process applications for works on waterways, and manage compliance with permits for works.

Department of Environment, Land, Water and Planning – Act as the lead agency in reviewing and implementing the Victorian Rural Drainage Strategy and in funding pilot projects. Also take a lead role in simplifying environmental approvals, processing applications for Crown land consents, and discharging its statutory role in applying the Native Vegetation Removal Regulations.

Melbourne Water – Support landholders to develop and implement dryland rural drainage management plans within its waterway management district, process applications for works on waterways permits and manage compliance with those permits. Continue to implement and review drainage management arrangements in areas where Melbourne Water provides an increased level of service, to ensure the arrangements remain relevant.

All agencies and landholders will continue to be responsible for the management of drainage assets vested in them, and for the management of any of their assets that interact with dryland rural drainage systems, unless the process enabled through this strategy requires new arrangements that are agreed among the relevant stakeholders.

An overview of these roles and responsibilities is provided below in Table 3.1. Detail about how these roles will be supported is reflected throughout the rest of this strategy.

Table 3.1 Overview of the roles and responsibilities for dryland rural drainage

Stakeholder	Clarified roles
Landholders	<ul style="list-style-type: none"> • Manage private dryland rural drainage and develop dryland rural drainage management plans. • Fund ongoing management and maintenance of drainage systems and infrastructure. • Determine management arrangements for their specific drainage systems (including developing dryland rural drainage management plans where appropriate). • Identify other landholders willing to participate in agreements to manage dryland rural drainage systems (where appropriate).
Councils	<ul style="list-style-type: none"> • Provide first point of contact for landholders with dryland rural drainage inquiries, including providing tools and information to landholders so they can understand their options for managing drainage (Section 4.1). • On request, convene meetings of affected landholders, with support from all relevant agencies, to determine the landholders' willingness to prepare a dryland rural drainage management plan and enter into formal drainage arrangements. • Provide administrative support to landholders with formal drainage arrangements, including facilitating meetings, commissioning works (if requested to do so) and the collection and acquittal of funds where appropriate. An example of this would be the collection of administrative fees to develop dryland rural drainage management plans and ongoing operational fees. • Manage dryland rural drainage assets vested in them. • Manage the interaction between their assets and dryland rural drainage – in particular, drainage through road culverts and/or beside road reserves (table drains). • Consider planning permit applications and ensure compliance with permit approvals. This will include considering applications supported by the relevant components of dryland rural drainage management plans. Approval will be considered where plans meet approved objectives and standards for planning permit applications. • Work with government agencies such as catchment management authorities and the Department of Environment, Land, Water and Planning to help landholders who cannot reach agreement (Section 4.1.5).
Catchment management authorities	<ul style="list-style-type: none"> • Support landholders to develop dryland rural drainage management plans where landholders are prepared to pay for the service (Section 4.1.4). • Identify opportunities to improve drainage management for environmental and cultural benefit. • Lead pilot studies in partnership with other government agencies (Figure 1). • Attend meetings. • Manage dryland rural drainage assets vested in them. • Consider arrangements for unmanaged infrastructure on waterways where ownership is unknown (Section 4.2.1). • Consider permit applications for works on waterways and ensure compliance with approvals for such permits, while providing technical approval for relevant components of drainage management plans where plans meet approved objectives and standards. • Work with government agencies such as the Department of Environment, Land, Water and Planning and councils to help landholders who cannot reach agreement (Section 4.1.5).

Table continued next page ►

Table 3.1 Overview of the roles and responsibilities for dryland rural drainage continued

Stakeholder	Clarified roles
Department of Environment, Land Water and Planning	<ul style="list-style-type: none"> • Prepare tools and templates to support landholders (Section 4.1). • Build capability for agencies and landholders in dryland rural drainage to deliver the outcomes for the strategy (Chapter 7). • Attend meetings. • Report on the delivery of the strategy (including information on actively managed systems), and review and support adaptive management to deliver the outcomes in this strategy. • Provide funding for pilot studies. • Simplify the approvals process for works to establish or maintain dryland rural drainage. • Consider applications for dryland rural drainage (where the department is the relevant referral authority – i.e. for Crown Land Consent and Native Vegetation Removal Regulation). • Work with government agencies such as catchment management authorities and councils to help landholders who cannot reach agreement (Section 4.1.5).
Melbourne Water	<ul style="list-style-type: none"> • Provide regional drainage services within its waterway management district. • Develop and implement plans related to dryland rural drainage. • Share with catchment management authorities the lessons it has learned in its role in helping to manage the Koo Wee Rup and Longwarry drainage area (Section 4.3).
Rural water corporations	<ul style="list-style-type: none"> • Regulate the take and use of water. • Manage infrastructure and drainage associated with irrigation in regulated districts. • Continue to provide drainage services, mostly in northern Victoria, where dryland rural drainage infrastructure drains into irrigation district infrastructure, or where dryland rural drainage has been established in or near an irrigation area, and existing arrangements are in place for landholders to pay for these services (Section 4.5).
VicRoads and Victrack	<ul style="list-style-type: none"> • Manage infrastructure that interacts with dryland rural drainage (except where the infrastructure is licensed to third parties).
Registered Aboriginal Parties	<ul style="list-style-type: none"> • Provide cultural heritage approvals and manage compliance with those approvals (with the support of compliance officers). • Clarify expectations about how agencies and landholders need to consider cultural heritage in drainage management (Section 6.2).
Traditional Owners and Aboriginal Victorians	<ul style="list-style-type: none"> • Partner with catchment management authorities, where appropriate, to identify opportunities to improve drainage management for cultural benefit (Section 6.3).

Policy 3a

Shared arrangements for managing dryland rural drainage in Victoria

The arrangements for managing dryland rural drainage outlined in Table 3.1 of the Victorian Rural Drainage Strategy will apply throughout Victoria.

Lead responsibility – Partnerships between all agencies and landholders with responsibility for dryland rural drainage



4

Managing dryland rural drainage





Chapter guide

This chapter sets out and clarifies the various pathways that landholders can choose to improve their management of dryland rural drainage, and outlines what type of information and support will be available to them to help make informed choices. It also explains how drainage services can be improved where landholders agree to pay for those improvements. It recognises that different landholders require different levels of support, and describes the role of agencies in supporting individual landholders, as well as groups of landholders.

4.1 Where drainage services are managed by landholders

This strategy seeks to enable and support landholders to make their own choices about how to manage dryland rural drainage. For some landholders, this could involve changing nothing; where they are satisfied with their existing drainage arrangements and are meeting their relevant obligations, they can continue with the current arrangements.

Others who want to improve the management of their drainage will need to make informed decisions about whether to proceed – and how to go about it. Will they seek to do it alone, or by collective agreement with neighbours? Will they need administrative support from agencies? Moreover, will the potential benefits of investing in management of dryland rural drainage outweigh the costs?

In some cases, dryland rural drainage can enhance productivity by reducing the extent, severity and duration of inundation or waterlogging after rainfall. However, returns from investing in dryland rural drainage vary greatly, depending on a range of factors such as climate, topography, soil and the type of agricultural enterprise.

Landholders will be supported and assisted to make choices by the development of a drainage resource kit, providing essential guidance and information to inform their decision making. The kit will include a tool to help landholders consider the likely costs and benefits of investing in improved dryland rural drainage, and will detail the various pathways available to achieve their aims.²

The strategy sets out four main pathways for landholders who wish to improve their drainage arrangements (Figure 4.1). Where dryland rural drainage is confined to one property, it can continue to be managed by a single landholder. Where dryland rural drainage crosses property boundaries, and where landholders can agree to manage their drains collectively, they can do so through:

- Non-written agreements;
- Written agreements; or
- Written agreements with administrative support from government agencies

Action 4a

Develop a drainage resource kit to support landholders to make choices about how they manage dryland rural drainage

The Department of Environment, Land, Water and Planning, working with key stakeholders, will develop a drainage resource kit to provide landholders with the information they require to manage their dryland rural drainage under the arrangements described in this strategy. The drainage resource kit will continue to be developed and refined based on learning from pilot projects. It will include:

- An overview of the ways landholders can manage dryland rural drainage and the support available to them
- A technical tool to help landholders consider the likely costs and benefits of investing in improved dryland rural drainage
- Information about landholders' obligations to obtain approvals for drainage works
- Guidance for landholders seeking the best value for money from drainage works, while also seeking to minimise the possible impacts of drainage works
- Information about the legal arrangements for establishing drainage committees and the options for governance structures
- Options for dispute resolution.

Lead responsibility – Department of Environment, Land, Water and Planning

Policy 4a

Provide tools and information to landholders so they can understand their options for managing dryland rural drainage

A drainage resource kit will be available to support landholders to manage their dryland rural drainage under contemporary arrangements. The resource kit and other information will be provided by councils where appropriate.

Lead responsibility – Councils

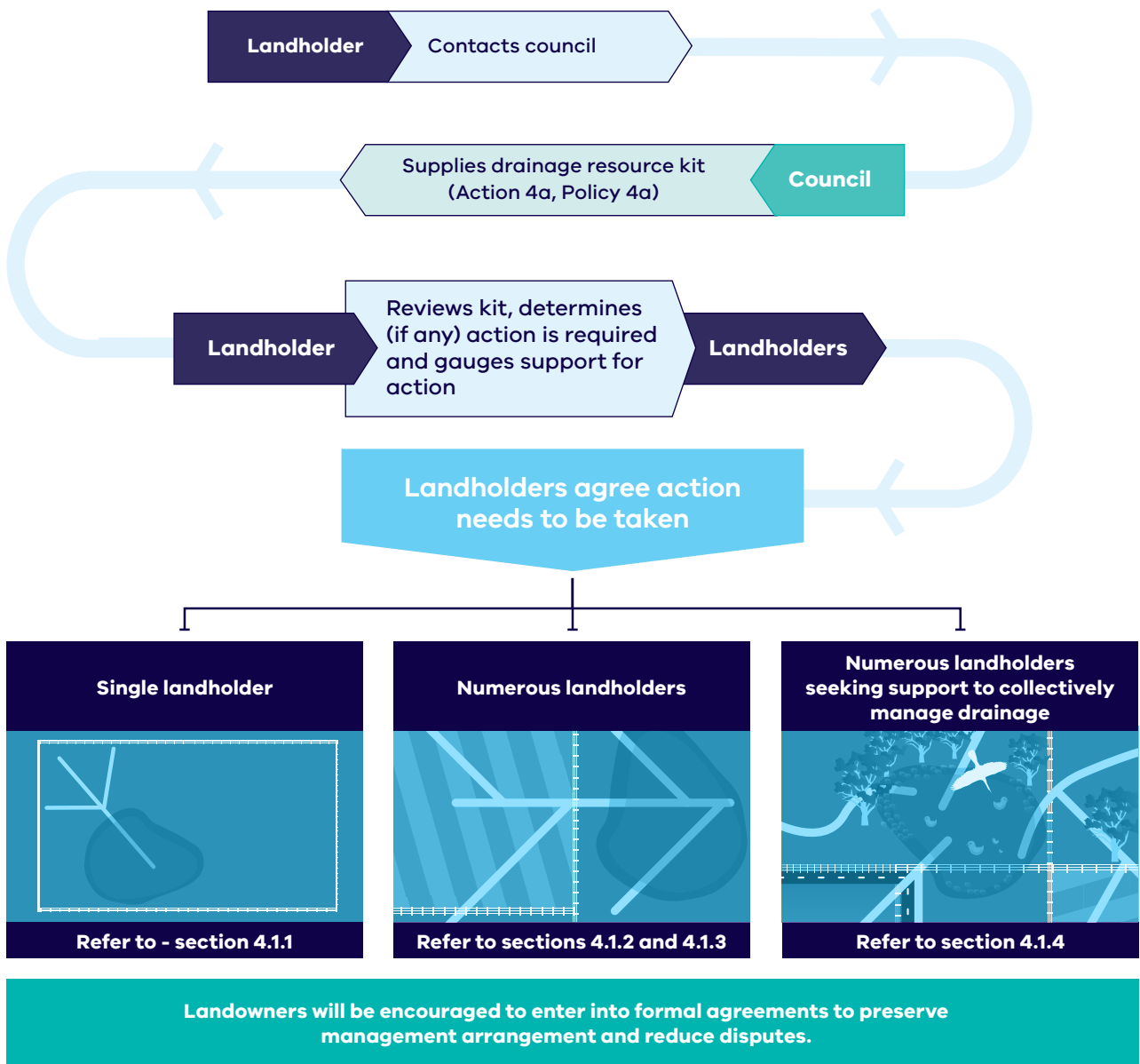


Figure 4.1 Agencies will work with landholders to manage rural drainage

4.1.1 Individually managed rural drains

In some cases, dryland rural drainage is confined to one property and can be managed by a single landholder. The resource kit will help those landholders to understand their obligations and the approvals processes for drainage works. They will continue to be able to get advice from relevant agencies about their options for managing the impacts of dryland rural drainage.

Individual properties often drain into roadside table drains or culverts. Where the capacity of the drain or culvert is inadequate to avoid waterlogging or inundation of the property, the landholder can work directly with the responsible road authority (either a council, VicRoads or in some cases the Department of Environment, Land, Water and Planning) to negotiate a resolution. These matters generally do not involve other agencies unless there is other infrastructure involved, such as rail infrastructure, or there are other regulatory requirements, such as the need for a Works on Waterways permit.

Authorities in charge of roads, rail and other public infrastructure will resolve drainage issues affecting their infrastructure in line with their obligations in the relevant legislation, such as the *Roads Management Act 2004*. These agencies regularly undertake this role on a priority basis. For example, in response to the jump in drainage enquiries following extensive regional flooding in its jurisdiction, Campaspe Shire Council prepared a drainage policy to prioritise drainage repairs and maintenance.³

Policy 4b

Agencies with responsibilities for public infrastructure will continue to manage their interactions with individuals' drainage works

Where a property's drainage interacts with a piece of public infrastructure such as a road culvert or table drain, the relevant agency will continue to resolve issues through its existing prioritisation processes.

Lead responsibility – Councils, VicRoads, VicTrack, Department of Environment, Land, Water and Planning

4.1.2 Drainage managed collectively through amicable agreements

In most cases, neighbours need to collaborate to agree on a combined approach to managing dryland rural drainage. This happens where drainage either crosses property boundaries or affects neighbours.

Where dryland rural drainage involves more than one property, the landholders who benefit from that drainage system need to come together to agree on arrangements for managing drainage, and develop a set of rules for coordinating their maintenance efforts. Where only a small number of landholders are involved and the system is relatively simple, landholders might choose to agree informally through neighbourly cooperation. In effect, the system would be managed through a series of amicable agreements.

The Victorian Rural Drainage Strategy enables these informal arrangements to continue. Landholder groups will be able to contact councils and obtain the resource kit (Policy 4a), which includes information on obligations related to the approvals necessary for works.

While the strategy acknowledges that non-written amicable agreements can work for some landholders, the drainage resource kit will also encourage landholders to consider formal written agreements to support ongoing arrangements. Formalised written agreements will provide landholders with the option of accessing administrative support from government agencies, which will not be available for landholders managing their drainage through amicable agreements.

Non-written agreements can break down when neighbours change their land uses, or when properties change hands. Formal written agreements are more likely to survive changes in land use and property ownership, where these written agreements are registered on land titles.

Policy 4c

Landholders can continue to manage drainage through amicable agreements

Landholders can continue to use non-written agreements to manage and maintain shared dryland rural drainage systems, but the information in the drainage resource kit (see Policy 4a), will encourage landholders to consider formal written agreements to support all parties if circumstances change (Policy 4d).

Lead responsibility – Landholders

4.1.3 Drainage managed collectively through written agreements

There is scope to achieve collective management of drainage through written agreements by establishing a community drainage scheme under Part 12 of the *Water Act 1989*. The powers and functions of a committee under this part of the Act include constructing works, seeking access over land owned by a participating landholder, negotiating the variation or revocation of the agreement on behalf of the committee and enabling community agreements to be registered under the *Transfer of Land Act 1985* (see *Water Act 1989*, Sections 244(3) and 245(3)). The access arrangements and provisions relating to community drainage systems in Part 12 of the *Water Act 1989* enable local landholders and groups of landholders to carry out works and manage local systems.

Section 173 of the *Planning and Environment Act 1987* also provides provisions for recording agreements on the title of land so that the owner's obligations under an agreement bind future owners and occupiers of the land. A Section 173 agreement can also be enforced in the same way as a permit condition or planning scheme. The purpose of such an agreement is to make it easier to achieve planning objectives for an area or particular parcel of land than is possible when relying on other statutory mechanisms. Landholders can explore how the use of Section 173 agreements can support attaching written agreements for rural drainage on the title of land. However, these sorts of agreements can only be negotiated with the support of a "responsible authority", which typically is the relevant council.

Landholders working with each other to manage dryland rural drainage might choose to bolster their existing arrangements, and formalise them, through written agreements that are capable of being registered on title. If they choose to do so, one key task for the drainage management committee would be to determine, and record in an agreement, how they will collect revenue and how they will acquit funds.

Ideally, agreements between landholders should be recorded on land titles and managed through a formal entity. As a legal entity, a formalised community drainage committee can enter contracts in its own name, borrow money, buy equipment, take out insurance, and manage risks.

Policy 4d

Landholders can continue to manage drainage systems through written agreements

Landholders can enter into written agreements to manage and maintain dryland rural drainage systems. Written agreements make it easier for those landholders who already have amicable arrangements for dryland rural drainage management to work together and safeguard the arrangements for the future.

Lead responsibility – Landholders



4.1.4 Drainage managed collectively through written agreements with administrative support from government agencies

Landholders whose drainage systems have fallen into disrepair, or who have become involved in intractable disputes, may choose to seek support to establish collective management arrangements.

Currently, each individual landholder in a drainage system must separately gain the approvals necessary to remove native vegetation, remove silt or modify channels that cross property boundaries. This has proved to be a stumbling block for the collective management of dryland rural drainage. While it is important that these activities are regulated to minimise or avoid environmental and cultural impacts, this can be done more efficiently on a broader scale (involving many properties) than at the individual property level.

To simplify the approvals process, landholders who choose to manage drainage collectively will have the option to prepare a dryland rural drainage management plan that sets out how the environmental and cultural impacts of drainage will be managed (Section 5.3.2). It will also set out the management and maintenance arrangements for drainage works. Under the arrangements in this strategy, catchment management authorities will facilitate the development of these plans and provide guidance about the information required to manage the environmental and cultural impacts of rural drainage.

The need to collect revenue and acquit funds can also prove to be a stumbling block for collective management. Some landholders seeking to improve their management of rural drainage through formal written agreements may need administrative assistance to collect funds on their behalf. Where a group of landholders have formalised their arrangements and established a community drainage scheme under Part 12 of the *Water Act 1989*, councils could, at the request of and on behalf of the committee, collect levies from participating

landholders. The *Water Act 1989* also includes provisions to allow councils to perform the functions of the committee outside their municipal boundaries. The *Local Government Act 1989* also provides the ability to declare a special rate or charge to meet costs where there is a special benefit. Arrangements under which councils can collect funds already operate in some parts of Victoria. The *Local Government Act 1989* (Section 163), where it relates to the performance of a function or the exercise of a power of the Council, can apply to declare a special rate or charge if the Council considers that the performance of the function or the exercise of the power is or will be of special benefit to the people required to pay the special rate or charge. Importantly, it can be difficult to arrange a special rate and charge where landholders do not agree.

While there are examples of drainage management arrangements working effectively, there are also instances where landholders have been unable to agree on the costs and benefits of collectively managing their drainage. Often they have had difficulty agreeing on an appropriate and affordable level of drainage service. The new drainage resource kit discussed in Action 4a and Policy 4a is designed to help landholders jointly work through their options for drainage management, and to choose whether or not they want a drainage service.

Under this strategy, government agencies with responsibilities for dryland rural drainage will work together to ensure that landholders are clear about their options to manage drainage.

Landholders choosing to manage drainage collectively will be supported where those who benefit from drainage services are prepared to pay for those services. Landholders who agree to pay for drainage services may not all get the same level of service; a landholder at the end of a system, for example, may receive a greater direct benefit than those upstream. The strategy seeks to engender equity by ensuring that the distribution of costs is proportional to the distribution of benefits.

Pilot study: **Moe River Flats – Transition to contemporary drainage arrangements**

The Moe River Flats have been highly productive dairy country since the 1890s when the 18km-long Moe Drain was dug by hand to empty the Moe Swamp. The main drain is fed by a series of lateral drains, which reduce waterlogging and inundation on the adjoining land. Contour drains also help to transfer run-off from the surrounding hills around and through the drained land to the main drain.

From the 1890s until 1997, landholders on the Moe River Flats contributed to the cost of a coordinated drainage management program. The Narracan Shire provided support from 1918 until 1994, when it was merged with Baw Baw Shire. In 1997, Baw Baw Shire introduced a special charge for the drainage area, which ended in 1999.

For more than 100 years there was a partnership approach to collecting funds from landholders and doing works. That partnership broke down during the Millennium Drought, when drainage needs were subdued and there was a lack of clarity about ongoing roles and responsibilities after council amalgamations and the formation of catchment management authorities. The challenge today, some 20 years after the last rates were collected, is to develop a coordinated drainage maintenance regime that will deliver on the policies in this strategy and deliver greater productivity for the landholders on the Moe River Flats.

Landholders providing feedback on the draft strategy sought clarity about the distribution of costs to landholders upstream of the Moe River Flats Drainage area, where urban drainage systems empty into rural drains. The Baw Baw Shire Council is continuing to do works that support the management of the urban drainage from Trafalgar, where it flows into the rural drains on the Moe River Flats. This strategy does not require changes to these arrangements, but provides an opportunity to review these arrangements where landholders see merit in doing so.

By contrast, for the town of Warragul, the council has undertaken works to ensure that new residential subdivisions do not increase flows downstream of the subdivision. Consequently, there is no need for the people of Warragul to bear any costs of managing the Moe River Flats Drainage area.

Based on management arrangements outlined in this strategy, the pilot project is building capacity, improving relationships and defining roles and responsibilities for landholders and agencies within the drainage system. Where landholders are willing to work together, taking ongoing responsibility for the management of their system, they will be supported in developing drainage management plans for priority drainage infrastructure. Those plans will ensure that works are carried out in a coordinated manner at least cost for the landholders whose properties are protected by the drains. The aim is to improve agricultural productivity while managing the potential for negative impacts from drainage maintenance and drainage disposal.

The project is being delivered by a partnership between the Moe River Flats Drainage Committee, landholders, Baw Baw Shire and the West Gippsland Catchment Management Authority. The drainage management plans will identify the works required for each priority drain to bring the drain to an acceptable level of service, the long-term maintenance requirements to keep the drain operating at that service level, the beneficiaries of the drainage works, and the roles and responsibilities of landholders and agencies. The plans will also include landholder agreements where required, and they will identify all approval requirements and the processes involved in satisfying them. The outcomes, and the lessons learned from this project, will show how the management framework outlined in this strategy can be used to foster partnerships and develop drainage management plans for complex systems.



Policy 4e**Landholders can choose to prepare dryland rural drainage management plans**

Landholders will be responsible for preparing dryland rural drainage management plans with the support of catchment management authorities.

In developing dryland rural drainage management plans, landholders will consider how costs will be distributed to those who benefit from the drainage system – that is, those landholders whose land is inundated or waterlogged less often than it would be without dryland rural drainage.

Lead responsibility – Landholders

Policy 4g**Supporting landholders to prepare dryland rural drainage management plans**

Catchment management authorities will facilitate discussions and provide guidance to landholders who seek support in developing dryland rural drainage management plans.

Lead responsibility – Catchment management authorities

Policy 4f**Principles for supporting landholders to manage dryland rural drainage**

Formal drainage committees may receive administrative support and guidance from agencies if:

1. The need to manage the drainage system has the support of landholders who benefit from the drainage system – that is, those landholders whose land is inundated or waterlogged less often than it would be without dryland rural drainage
2. The landholders benefiting from the drainage system agree to pay for the maintenance and administrative costs of the system
3. The benefiting landholders are willing to participate in a formally constituted local drainage management committee
4. The formally constituted drainage committee holds appropriate insurance.

Lead responsibility – Landholders

4.1.5 When landholders cannot reach agreement

A range of options are available to landholders and agencies to manage disputes around dryland rural drainage (Table 4.1). Landholders are encouraged to establish written agreements with their neighbours to commit all parties to the management framework, works program and funding arrangements for their drainage systems. Having these agreements in place can prevent disputes. And if disputes occur, these agreements can provide a framework to resolve them.

Landholders who continue to use amicable agreements to work with their neighbours to manage shared dryland rural drainage systems do not have the same level of protection. In these instances, if a dispute cannot be resolved through discussions between the landholders themselves, they should approach the Dispute Settlement Centre of Victoria, which offers a free mediation service involving an accredited and impartial mediator.⁴

As with disputes between neighbours, if a landholder has a drainage dispute with a government agency over unauthorised works or permits, they should attempt to resolve the issue with that agency in the first instance. If this process fails, they can take their complaint to the Victorian Ombudsman's Office.

If all else fails and agreement cannot be reached through mediation, there is scope for some disputes over rural drainage to be resolved through the Victorian Civil and Administrative Tribunal. However, this strategy aims to provide landholders with different pathways to help them reach agreement among themselves.

Dryland rural drainage issues are often complex, and many of the potential solutions are too expensive to justify in terms of the likely rates of return from the improvements in agricultural productivity associated with drainage management. It is possible, therefore, that some drainage systems, either in whole or in part, no longer lend themselves to collective management. Even when there are feasible options for affordable improvements to drainage services, it is also possible that not all landholders will be immediately willing to become involved in collective management.

In some communities the potential benefits of improved drainage management may be significant enough to warrant landholders seeking extra support from agencies to try to reach a written agreement. In these cases, it may be possible to use partnership arrangements in the local area to try to work through issues, engage with communities, and provide guidance back to the landholders about negotiating strategies – including their best alternatives in the absence of a negotiated agreement.

Ultimately, however, it is up to the landholders to determine what is possible. If it is not possible to develop formal written agreements about collective management of dryland rural drainage, the existing arrangements will continue.

Action 4b

Information on options available for dispute resolution

The drainage resource kit will include information for landholders on the options available to them to manage dispute resolution in a range of circumstances.

Lead responsibility – Landholders

Table 4.1 Options for managing disputes under a range of circumstances

Type of dispute		Options to resolve	Considerations
Change of flow across boundaries due to drainage	← Increasing difficulty	Direct contact between parties	First step before involving agencies. If a dryland rural drainage management plan or agreement is in place, it can be used to prevent change of flow disputes occurring, or the dispute resolution mechanisms within the agreement can be used to resolve the dispute
		Dispute Resolution Centre of Victoria	Free arbitration service if agreement cannot be reached or there is no written agreement. Results of arbitration are not legally binding
		Victorian Civil and Administrative Tribunal	Applies where the change of flow is unreasonable and causes damage. Hearing or arbitration, results are enforced, costs involved
		Victorian Magistrates Court (civil jurisdiction)	High level costs and potential damage to relationships. Use as a last resort
Failure to do maintenance	← Increasing difficulty	Direct contact between parties	First step before involving agencies. If a dryland rural drainage management plan or agreement is in place, it can be used to prevent drainage disputes occurring or the dispute resolution mechanisms within the agreement can be used to resolve the dispute
		Dispute Resolution Centre of Victoria	Free arbitration service if agreement cannot be reached or there is no dryland rural drainage management plan. Results of arbitration are not legally binding
		Victorian Civil and Administrative Tribunal	Hearing or arbitration, results are enforced, costs involved
Unauthorised works and permitting	← Increasing difficulty	Raise with relevant authority: catchment management authority, councils, individuals, VicRoads, VicTrack, Melbourne Water	Ensure that all parties understand their obligations
		Victorian Ombudsman's Office	Can consider decisions on permitting by government agencies
		Victorian Civil and Administrative Tribunal	Hearing or arbitration, results are enforced, costs involved
		Victorian Magistrates Court	High level costs and potential damage to relationships. Considered a last resort

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Table 4.1 continued...

Type of dispute		Options to resolve	Considerations
Contractor disputes	← Increasing difficulty	Contract management	Having binding contracts and clear expectations prior to undertaking works can prevent future disputes
		Consumer Affairs	Can provide advice to landholders on how to resolve disputes or manage mediation
		Professional organisations like Engineers Australia	Can support mediation for disputes involving Engineers Australia members
		Victorian Civil and Administrative Tribunal	Hearing or arbitration, results are enforced, costs involved
Minority of landholders unwilling to participate in formal drainage management	← increasing difficulty	Community engagement	Landholders work with or negotiate with neighbours over the need/value of drainage, or manage their system in a way that reduces the impact or cost
		Drainage Management Plan	Requires significant support from community and backing from a catchment management authority
		Existing forums or fit-for-purpose forums with relevant government agencies, such as integrated water management forums	<p>Local arrangements vary. Landholders and government agencies will need to consider the most appropriate forum for the local context. It is expected that the majority of landholders will be on board before works proceed. If landholders do not agree to undertake drainage works, representatives may provide guidance on possible next steps. For example:</p> <ul style="list-style-type: none"> • Landholders within a viable, stand-alone part of the drainage system may form a smaller collective to meet their individual needs • Agreements may be made with landholders to access land for works funded by landholders that do agree • Guidance may be provided about negotiating strategies. <p>In rare circumstances, additional legislative tools may be recommended. However, it should be noted that these are increasingly costly, require significant effort and input from the local community, depend on overwhelming community support, and agreement from the council and still with no guarantee that they will get up. Additional legislative tools may include:</p> <ul style="list-style-type: none"> • Water management scheme S 215 – <i>Water Act 1989</i>; • Drainage course declaration – S 218(a) of the <i>Water Act 1989</i> (where works may be required to provide an additional service). • Special rate or charge S 163 <i>Local Government Act 1989</i> (where the dispute relates to not everyone agreeing to pay).

4.2 Where catchment management authorities have been involved in dryland rural drainage services

There are several drainage areas that were previously managed by catchment management authorities. The Government is investing in pilot studies across the state in several of these areas. These studies aim to:

- Build capability of agencies and landholders to manage dryland rural drainage
- Promote understanding of where landholders benefit from these services.

Six of these pilot studies are across drainage areas that had some previous involvement from catchment management authorities (Figure 4.2).

Some of these drainage areas involve large-scale projects, varying in complexity and involving multiple landholders and agencies.

Works to upgrade drainage infrastructure will be considered in situations where landholders or organisations are prepared to take on ongoing management responsibility. Some catchment management authorities have been vested with the responsibility for bridges or culverts on public or private roads. Ideally, the relevant road authority should manage bridges and culverts on public roads in the long term. In such cases it will be up to the relevant catchment management authority to work with the road authority on deciding whether to take on the drainage infrastructure where it interacts with their assets, including roads.

Similarly, individual landholders should manage structures on private roads. Where drainage assets provide benefits to an individual landholder, transferring ownership to that individual would increase the incentive for the asset to be maintained at a standard that is fit for purpose. The pilot project in the Woody Yaloak/ Lough Calvert will examine what these arrangements might look like in this modern structure.

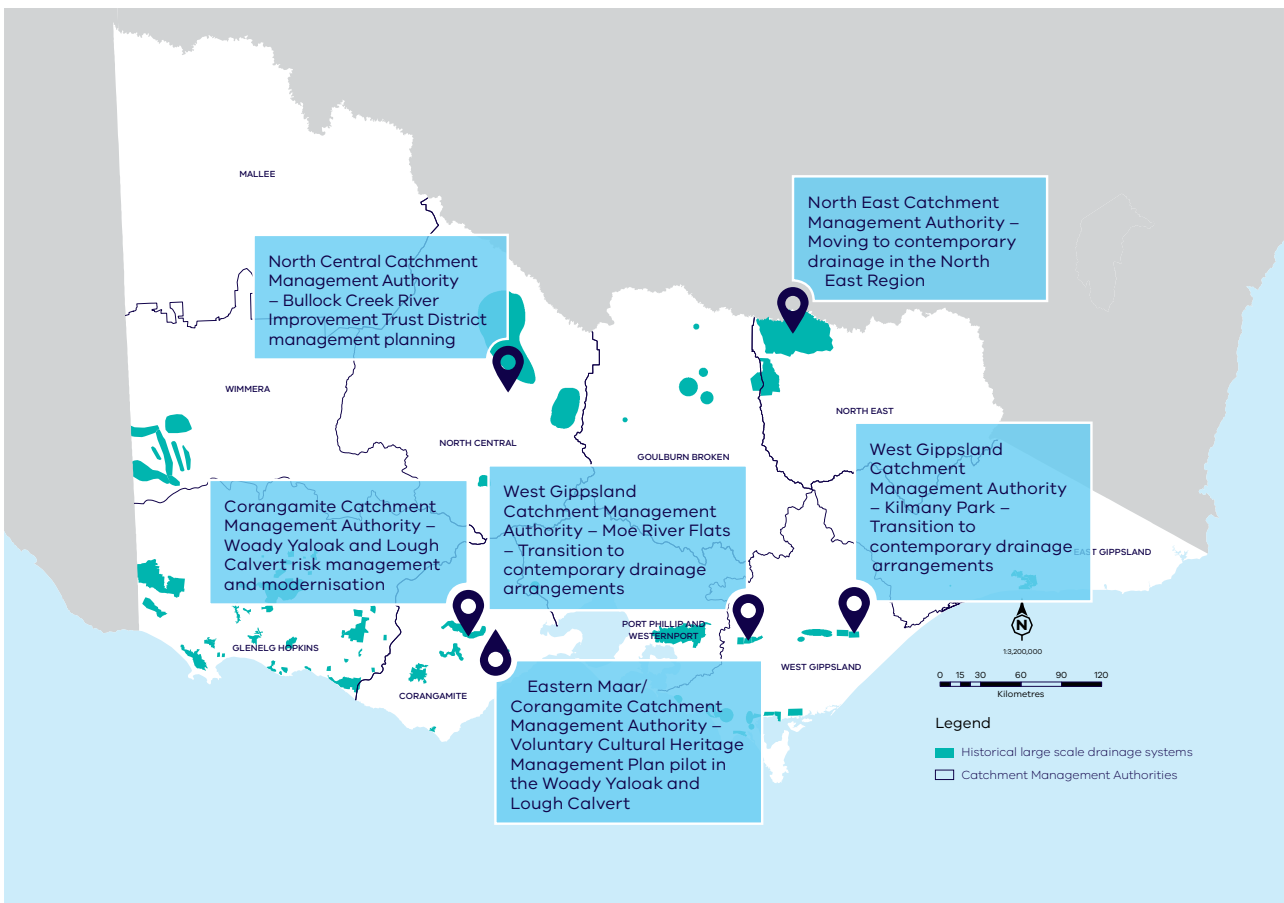


Figure 4.2 Pilot projects to manage drainage services with previous involvement of catchment management authorities

Pilot study: Woody Yaloak and Lough Calvert risk management and modernisation

The Corangamite Catchment Management Authority was given management responsibility for the Woody Yaloak Diversion Scheme and the Lough Calvert Drainage Scheme by Ministerial Order in 1999. The Victorian Government provides the authority with an annual stipend, which it uses to carry out priority maintenance and to operate the system when necessary.

Various components (including open earthen channels, concrete control structures, pipelines, access tracks, fencing, bridges, culverts, syphons, subways, weirs and levee banks) are at, or near, the end of their economic and operational life, with the majority being over 50 years old. An asset condition assessment was undertaken in 2015 and identified areas for repair or upgrade necessary to meet acceptable operational, public safety requirements. While both schemes were still capable of being operated, they needed significant maintenance to remain viable into the future and ensure they are compliant with current operational, public safety regulations.

To ensure the ongoing viability of this infrastructure, options for its ongoing management, maintenance and ownership are being explored. These will include managing the system to protect significant environmental assets in the region, and landholders choosing to take on ongoing management and maintenance of infrastructure where it continues to provide a drainage service.



Speirs regulator before (top) and after (bottom)

Pilot studies will consider pathways to manage some of the more complex drainage systems across the state. For example, Black Dog Creek in north-east Victoria involves a complex network of drains into and out of waterways over a vast, flat landscape. Many landholders in those areas are unaware that their properties are in effect drained by that system. Consequently, there is little prospect for collective action in managing it. Under the pilot, the North East Catchment Management Authority will work with

those landholders who are willing to take on ongoing management of parts of the system (See pilot study below). Working with them will also help to increase community understanding of how any works they carry out in the drained area may affect neighbouring landholders, and will build broader capability for regional stakeholders to meet their obligations under the revised management arrangements for dryland rural drainage.

Pilot Study: **Moving to contemporary arrangements for dryland rural drainage in north-east Victoria**

Victoria's north-east region has a long history of drainage dating back to the 1890s. Key dryland rural drainage in the region lies within the Boorhaman, Gooramadda, Carlyle, Greta and Laceby areas, mostly within the Rural City of Wangaratta and the Indigo Shire Council. Mostly these were former swamps drained for agricultural production. Grazing and cropping continues on these naturally very flat areas, which are intermingled with remnant wetlands and old trees scattered across the landscape.

One of the earliest and biggest drainage operations in the region commenced in the early 1890s with the then Oxley Shire applying to have 1160 acres of the Greta Swamp, near Wangaratta, reclaimed. The land was later subdivided and sold, and works funded by landholders continued into the early 1900s to further drain the area for agricultural productivity. Landholders also constructed drains to access water.

The other significant dryland rural drainage area and works in the region, which commenced in the 1950s following a petition from ratepayers and shire councillors, is generally known now as the Black Dog Creek District. It includes the Gooramadda and Carlyle drainage areas. This district remained an actively managed drainage district until the mid-1980s, when institutional changes – notably the amalgamation of councils and formation of catchment management authorities – led to a lack of clarity about ongoing responsibility for dryland rural drainage.

The North East Catchment Management Authority is leading a dryland rural drainage pilot study to consider new arrangements for the five rural drainage areas in its region. It will work in partnership with key stakeholders on the pilot study for the region to:

- Identify the current beneficiaries of known drainage assets
- Confirm and raise awareness of roles and responsibilities for drainage management for all stakeholders
- Prepare dryland rural drainage management plans for priority areas, where the beneficiaries are willing to be responsible for the ongoing management and maintenance of the system, in line with the principles for supporting landholders to manage dryland rural drainage outlined in this strategy (Policy 4f).



Some dryland rural drainage systems must cope with inundation caused by flooding. In these situations, landholders interact with several agencies whose interests are broader than the provision of drainage services. The Moe River Flats Drainage Area is an example of how the interaction with flooding can be managed (See Pilot study on Moe River flats on page 31). Apart from problems presented by widespread flooding, long periods of low flow can result in the closure of estuary entrances. The Victorian Waterway Management Strategy explains the ecological benefits of estuaries and sets out the principles and processes under which artificial estuary entrance openings will occur in the future.

Action 4c

Establish contemporary arrangements for systems previously managed by catchment management authorities

By the end of 2020, catchment management authorities will finalise the pilot studies to investigate future management arrangements for the seven drainage areas where they have been involved in providing drainage services.

Lead responsibility – Catchment management authorities

4.2.1 Arrangements for unmanaged drainage infrastructure on waterways

Some infrastructure associated with dryland rural drainage systems has unclear ownership arrangements, due to historical records about assets, maintenance and ownership being lost. Consequently, the liability arrangements are also unclear. With no clear design standards for these assets or infrastructure, it is difficult to know whether this infrastructure is fit-for-purpose.

Policy 11.6 in the Victorian Waterway Management Strategy states that waterway managers will assess and identify priority drainage structures for removal in the relevant regional waterway strategy. In assessing if an instream structure should be removed, the level of service it provides must be considered as well as the environmental, cultural, social and economic risks and benefits it poses. The level of health and safety risk to the public must also be considered.

Policy 4h

Managing existing drainage infrastructure on waterways where ownership is unknown

Where ownership of drainage infrastructure on waterways is unknown, catchment management authorities will assess and identify priority drainage structures for removal in the relevant regional waterway strategy.

Lead – Catchment management authorities



Case study: **The Koo Wee Rup and Longwarry flood protection district**

The Koo Wee Rup and Longwarry flood protection district covers approximately 330 square kilometres south-east of Melbourne.

The region is a former wetland that was drained in the late 1800s for agriculture. It is now Australia's largest asparagus growing district. Beef farming and potato growing are the other major agricultural activities. Much of the district also provides habitat for threatened flora, fauna and ecological communities, and it supports Aboriginal cultural heritage values. Five species and one ecological community likely to be found within the district are protected under the *Environment Protection and Biodiversity Conservation Act 1999*: the helmeted honeyeater, the southern brown bandicoot, the growling grass frog, the Australian grayling, dwarf galaxias and the subtropical and temperate coastal saltmarsh.

Melbourne Water owns and is responsible for drains in the Koo Wee Rup and Longwarry flood protection district and carries out annual maintenance activities, guided by the advice of the Koo Wee Rup–Longwarry Flood Protection District Advisory Committee. In Melbourne, Melbourne Water funds works for general drainage maintenance, in catchments above 60 hectares, through its waterways and drainage charges. In this district, however, Melbourne Water charges a special 'precept rate' to fund the increased level of service across the Koo Wee Rup and Longwarry flood protection district.

Melbourne Water sought an exemption under the *Environment Protection and Biodiversity Conservation Act 1999* to proceed with annual routine works without the need to seek further approval.

In accordance with the *Environment Protection and Biodiversity Conservation Act 1999*, Melbourne Water is required to demonstrate that its actions will not:

- Lead to the long-term decrease in the size of a population
- Reduce the area of occupancy of the species
- Fragment the existing population into two or more populations
- Disrupt the breeding cycle of the population
- Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.

To ensure that species listed under the *Environment Protection and Biodiversity Conservation Act 1999* are protected, while enabling necessary flood protection maintenance works to proceed, Melbourne Water developed controls and protection measures for use in known sensitive areas. (Koo Wee Rup and Longwarry Flood Protection District EPBC Act Factsheet). As a result of these controls and protection measures, approval was granted for 'the maintenance of existing utility assets within the identified asset maintenance zones'.

Melbourne Water is still required to comply with State and Commonwealth legislation to protect environmental values and to demonstrate that its actions are undertaken in a way that minimises impacts. This can include staging works to avoid affecting critical life history stages (such as breeding), leaving one side of a channel vegetated while clearing the other, leaving some vegetation within the channel that will not significantly impede flood conveyance, or thinning rather than completely removing vegetation.

By working closely with the community and regulating agencies, Melbourne Water now has a Cultural Heritage Management Plan and a maintenance regime that meets its obligations under environmental and cultural heritage protection legislation while providing an appropriate level of services to its customers.

4.3 Where Melbourne Water is involved in dryland rural drainage services

Melbourne Water is the regional drainage and floodplain management authority for the Port Phillip and Westernport regions, and it funds works through its waterways and drainage charges. Melbourne Water charges a special 'precept rate' to fund the increased level of service across the Koo Wee Rup and Longwarry flood protection district. The Victorian Rural Drainage Strategy does not require changes to those arrangements

Melbourne Water's efforts in improving the management of the Koo Wee Rup and Longwarry flood protection district demonstrate that drainage management and maintenance can be undertaken in environmentally and culturally sensitive ways. The lessons from this case study will assist in guiding the catchment management authorities outside of Melbourne Water's region to support landholders who choose to prepare dryland rural drainage management plans (Policy 4i).

Policy 4i

Managing waterways and drainage in Melbourne

This strategy does not alter the waterways and drainage management arrangements in Melbourne. Where landholders receive increased levels of service for drainage arrangements they will continue to pay for those services.

In managing the Koo Wee Rup and Longwarry Flood Protection areas, Melbourne Water, in partnership with landholders and other agencies, will continue to implement and review its dryland rural drainage management to ensure it remains robust.

Melbourne Water will share with catchment management authorities the lessons it has learned in its role in helping to manage the Koo Wee Rup and Longwarry Drainage area. This will help the catchment management authorities to tailor dryland rural drainage management plans to meet the needs of landholders within their regions.

Lead – Melbourne Water

4.4 Where councils are involved in dryland rural drainage services

During the Millennium Drought, there was a decline in the effective functioning of drainage systems. That decline coincided with changes in institutional arrangements, including the amalgamation of councils and formation of catchment management authorities. After the drought, when the need for drainage services increased, there was a lack of clarity for landholders and government agencies about where responsibilities lay. Previous sections of this report have outlined the ongoing role for catchment management authorities; this section describes the ongoing role for councils in supporting landholders who choose to improve their management of dryland rural drainage systems.

In cases where councils are already supporting drainage management committees, those arrangements are supported by this strategy, subject to:

- The committees, landholders and government agencies being satisfied with the existing arrangements
- The relevant obligations being met.

Through community workshops on the draft strategy, we heard that in cases where landholders are receiving support from councils (typically, administrative support) they preferred that the support continues. In two drainage areas of Victoria that have previously had a lack of clarity around changes to institutional arrangements – the Strathdownie drainage areas in the Glenelg Shire and the Yatchaw system in Southern Grampians Shire – the local councils have provided continuous services to landholders. Landholders in these areas are satisfied with the service they have continued to receive from councils (See Case Study – Strathdownie drainage area).

Councils are also providing administrative services to other drainage areas in Colac Otway Shire, Moyne Shire and South Gippsland Shire. This strategy enables those councils to continue to support their communities, and the lessons from their experiences will help guide the move to the contemporary arrangements set out in this strategy to other parts of the state.

Case study: **Glenelg Shire supporting dryland rural drainage at Strathdownie**

While management arrangements broke down for many drainage areas following legislative and institutional changes in the 1990s, a number of systems have continued to operate under their historical arrangements. Where these agreements are working, and the landholders and agencies are meeting their obligations, these arrangements will continue under this strategy.

Strathdownie Drainage Trust was established in 1960 under the *River Improvement Act* (1958) in the then Shire of Glenelg in south-west Victoria. There are more than 150 landholders in the scheme, which covers approximately 20,000 hectares.

Unlike most river improvement and drainage trusts, the Strathdownie Drainage Trust water management district was not taken over by a catchment management authority in the 1990s. The system continues to be managed primarily by landholder committee, with support from their local council. Committee representatives meet annually with Glenelg Shire representatives and develop an annual management plan, which is funded by a special rate collected by Glenelg Shire based on capital improved value of each property in the drainage area. Any disputes are managed formally through committee processes.

Discussions with landholders on the draft strategy, and public submissions from landholders to the Parliamentary Inquiry into dryland rural drainage, strongly supported maintaining the current arrangements and promoting the role of councils to continue. This is an example for landholders of how the arrangements for dryland rural drainage work, and how under this strategy these arrangements can continue, where obligations continue to be met.



Unfortunately, the past lack of clarity around roles and responsibilities for dryland rural drainage has meant that where councils may want to provide drainage services, their skills and knowledge may have diminished over time. The strategy addresses this by providing tools and information that will improve capability. To demonstrate how this will work, this strategy includes a commitment for

catchment management authorities to establish, with responsible government agencies and landholders, future arrangements for two drainage areas (Figure 4.3) (See Pilot Study – Nullawarre and Eumeralla Drainage Areas). The *Local Government Act 1989* and the *Water Act 1989* enable councils to undertake the roles prescribed for them in this strategy.

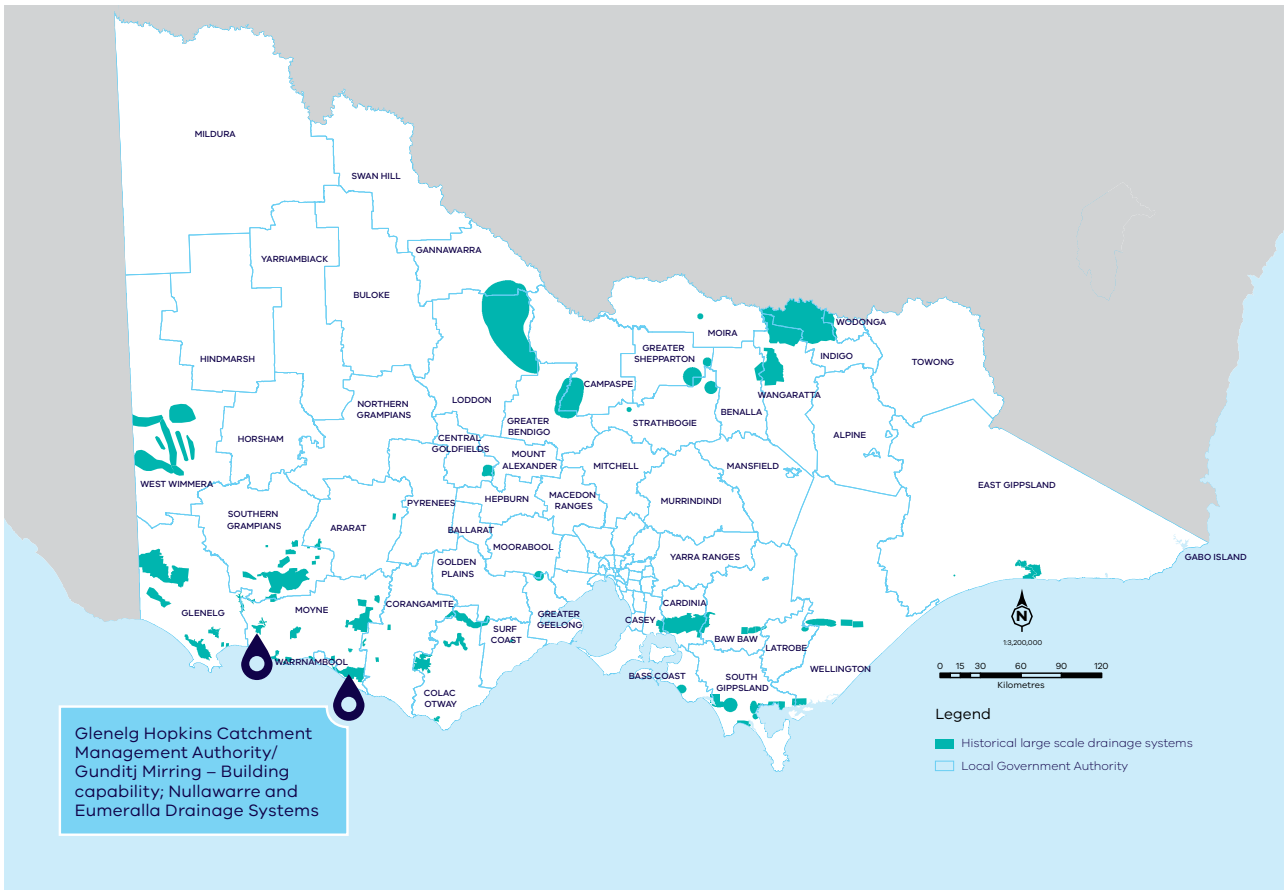


Figure 4.3 Pilot projects to demonstrate how the new arrangements will work where councils have been involved in providing drainage services

Pilot study: **Building capability: Nullawarre and Eumeralla drainage systems**

While the Glenelg Hopkins Region Catchment Management Authority is not responsible for the management of any rural drainage systems, it is a significant feature of the of landscape in rural western Victoria. There are about 40 identified drainage areas covering approximately 196,000 hectares. The Nullawarre and Eumeralla drainage areas direct excess water away from regionally significant dairying and grazing areas and support improved farm productivity through reduced waterlogging. Some landholders have expressed a desire to undertake works to improve the function of the drains, and there is an opportunity to undertake community surveys to understand the level of support for this.

The focus of this pilot study is on facilitating the resumption of active drainage works in the Nullawarre and Eumeralla drainage areas by addressing the key constraints that caused them to lapse in the past. This will help test the effectiveness of the policy settings in this strategy in overcoming constraints on the reinvigoration of dormant schemes where the demand for drainage services still exists.

Glenelg Hopkins Catchment Management Authority will lead the project in partnership with Moyne Shire Council, Warrambol City Council and Traditional Owners. The Pilot study will identify management arrangements that protect significant environmental and cultural values, satisfy regulatory requirements and improve agricultural productivity.

The pilot study aims to deliver the following key measures to form a foundation for the ongoing effective management of the drainage schemes:

- A survey of landholders and community consultation to determine the level of support for coordinated and effective management of the drainage schemes. This will frame the likely ongoing management arrangements.
- Inundation mapping of the schemes to understand their 'normal' inundation regimes.
- Models of ongoing maintenance works to assist landholders in making informed decisions about drainage management options, their costs and the economic benefits of undertaking works.
- Drainage management plans that detail appropriate ongoing maintenance works while protecting significant environmental and cultural values. The drainage management plans will aim to satisfy the process for gaining approvals to undertake works.



Action 4d

Establish contemporary drainage management arrangements for the Nullawarre and Eumeralla drainage areas with administrative support from government agencies

Councils, catchment management authorities and the Department of Environment, Land, Water and Planning will work together with landholders to investigate future management arrangements for the Nullawarre and Eumeralla drainage areas.

The Glenelg Hopkins Catchment Management Authority will lead the pilot study to determine options for landholders and councils to manage the Nullawarre and Eumeralla drainage areas.

For these two pilot projects, councils will provide ongoing administrative support to landholders where they chose to continue to want drainage services in these systems and where the contemporary arrangements outlined in this strategy are met.

Lead responsibility – Catchment management authority



4.4.1 Interactions between dryland rural drainage and other drainage infrastructure

Except for drains that are privately owned, the responsibility for maintaining drainage infrastructure remains with the authority with which it is currently vested (Policy 4j).

Drains on private land are likely to be owned either by:

- The landholder; or
- The people who obtained consent for the drains to be constructed on neighbouring land – if this was done under and in accordance with Part II of the *Drainage of Land Act 1975* (or its predecessors of 1890 and 1958), or the *Water Act 1958*.

Where a council or a catchment management authority has previously provided administrative support, appointed a drainage management committee, or levied a rate on behalf of a drainage management committee, it does not necessarily follow that any of the infrastructure is vested in that council or catchment management authority.

Other than limiting any potential liabilities associated with their infrastructure, there should be no obligation on any government agency to manage existing dryland rural drainage or to provide drainage services. Support should only be provided for both existing and new drainage where the benefitting landholders agree to the principles for supporting landholders to manage dryland rural drainage outlined in this strategy (Policy 4f).

Policy 4j

Managing existing drainage infrastructure vested in agencies

The responsibility for managing drainage infrastructure and associated infrastructure such as table drains, culverts, bridges and water-regulating structures remains with the government agency that was vested with it. Those government agencies will continue to be responsible for managing any risks associated with that infrastructure in line with their procedures or policies.

Ongoing support for drainage services will only be provided where landholders agree to the principles for supporting landholders to manage dryland rural drainage outlined in this strategy (Policy 4f).

Lead responsibility – Councils and catchment management authorities



4.5 Where rural water corporations are involved in dryland rural drainage services

Under the *Water Act 1989*, rural water corporations are responsible for providing appropriate drainage management services where they relate to the delivery of irrigation water, and they are also able to charge for the provision of those drainage services.

Victoria's rural water corporations typically rate their irrigation district customers for irrigation drainage services as well as irrigation water delivery services. Since sustainable irrigation depends on irrigation drainage, rural water corporations offer their customers both services.

In irrigation drainage, the regulatory framework guides landholder's private investment and behaviour to use water efficiently on-farm to minimise third party impacts.

Rural drainage services may have physical similarities to irrigation drainage services, but they differ in their economic nature. These landholders pay their rural water corporation for the drainage services they receive as part of the cost of operating in an irrigated system. Rural water corporations continued to provide drainage services during the Millennium Drought, and there are a number of lessons that can be shared in the dryland rural drainage context. In northern Victoria, landholders and agencies are already considering how these lessons apply to dryland rural drainage.

Mostly in northern Victoria, dryland rural drainage infrastructure may drain into irrigation infrastructure, or may be established in or near an irrigation area. In these areas, landholders may pay an additional fee for rural water corporations to continue to provide drainage services.

The main role for rural water corporations outside irrigation districts is to regulate the take and use of water, including groundwater. This role may interact with dryland rural drainage where landholders choose to undertake works to capture water and use that water for stock and domestic or commercial purposes.

Policy 4k

Managing dryland rural drainage where it interacts with irrigation drainage services and the take and use of water

Rural water corporations will regulate the take and use of water. They will manage infrastructure and drainage associated with irrigation in regulated districts.

In areas where dryland rural drainage infrastructure drains into irrigation district infrastructure, or where dryland rural drainage has been established in or near an irrigation area, and existing arrangements are in place for landholders pay for these services, rural water corporations will continue to provide drainage services.

Lead responsibility – Rural water corporations

5

Improvements for the environment





Chapter guide

This chapter recognises the environmental importance of waterways, and describes how dryland rural drainage should be managed in ways that support environmental values. It outlines the existing obligations for both landholders and agencies to consider the environmental impacts of dryland rural drainage, and how the approvals processes will be simplified while continuing to protect and improve environmental values. The chapter also describes situations where it is unlikely that approval for works may be granted or where extra information will be required before approval is granted to undertake drainage works. It also sets out how opportunities to improve the management of waterways affected by dryland rural drainage can be realised, particularly where drainage services are no longer required by landholders.

5.1 Introduction

Waterways are important natural assets supporting diverse populations of animals and plants – some of which are now rare, endangered or threatened. Healthy waterways also provide broader community values, such as supporting the health and well-being of the public by providing drinking water and a variety of opportunities for recreation, as well as a vital resource for farming and industry.

What are waterways?

Waterways are defined as rivers and streams, their associated estuaries and floodplains (including floodplain wetlands) and non-riverine wetlands (*Victorian Waterway Management Strategy*).

5.2 The environmental impacts of dryland rural drainage

Dryland rural drainage has clearly increased agricultural productivity in Victoria – but it has also reduced Victoria’s wetland area by 28 per cent, and the runoff from dryland rural drainage affects water quality in receiving waters. Wetlands in south-west Victoria have been particularly affected; in the Glenelg Hopkins Catchment Management Authority region, for example, 75 per cent of shallow freshwater wetlands have been lost due to drainage.

A statewide assessment of Victoria’s 600 high value wetlands concluded that 56 per cent of them were in excellent or good condition, while the other 44 per cent were in moderate, poor, or very poor condition⁵. The report stated that ‘even though high value wetlands have a high profile for protection and management’, many wetlands were ‘still subject to threatening processes which are likely to have been exacerbated by drought’.

5.3 Simplifying environmental approvals

This strategy retains the existing statutory requirements to consider the effects of dryland rural drainage on the environment. In this context it is important to note that a permit is generally required from the local council for earthworks that relate to the management of dryland rural drainage unless controls say otherwise. There are some exceptions that the relevant council can guide landholders through. Approval to undertake works on a waterway is also required from catchment management authorities. There are some exceptions, including where a drain is not identified as a designated waterway. The role of Department of Environment, Land, Water and Planning is also retained as a referral agency to provide advice on planning permit applications that involve the removal of native vegetation (Figure 5.1).

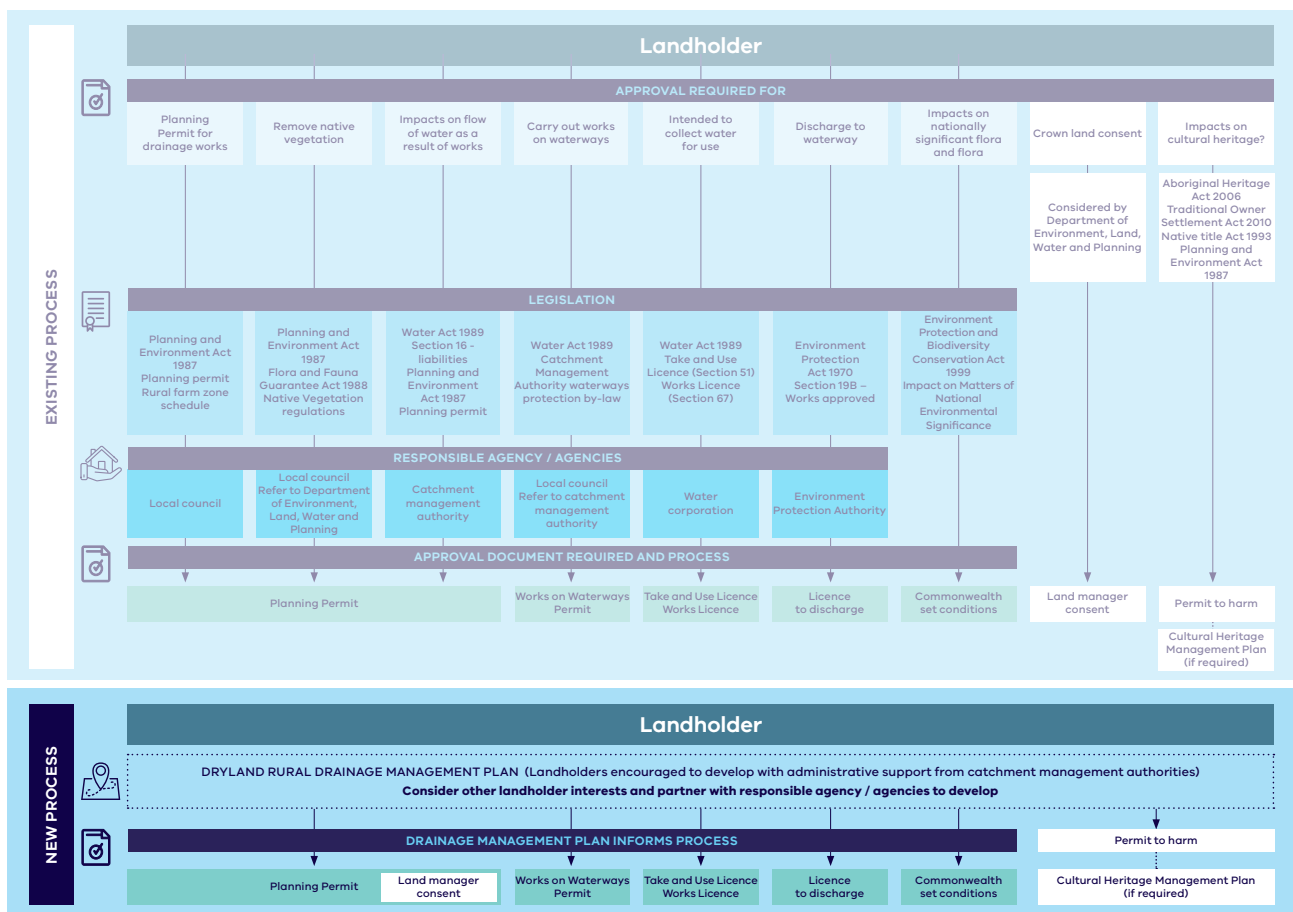


Figure 5.1 Approvals required and existing responsible statutory authority

At the national level, there has been an independent review of the real and perceived barriers for farmers navigating the requirements of the *Environment Protection and Biodiversity Conservation Act 1999*. The review acknowledges that farmers may not understand their obligations under the Act, and that it is likely that approvals were not sought in the past where they should have been. The review considers ways to improve the regulatory and non-regulatory requirements under the Act while maintaining environmental standards.⁶

The state and federal requirements are complex (Figure 5.1) and can be confusing. It is possible, therefore, that many Victorian landholders have been unclear on their obligations to obtain environmental approvals to undertake drainage works, and that they may not have sought approvals in the past in instances where they should have. In clarifying landholder obligations, it is important to know where they can find the relevant information needed to show that the works they are proposing will be undertaken in an environmentally sensitive way, or where approvals are not required.

5.3.1 Providing better information to landholders about approvals

Since the 1970s there has been very little expansion of large-scale dryland rural drainage in Victoria. Many priority agricultural areas have already been developed, and were assessed under a different environmental standard in decades past. However, there is now a greater community expectation for provision of a higher level of protection for the environment. In practice this means approvals for new dryland rural drainage works in some areas may not be granted – or, if they are granted, approvals could come with conditions designed to minimise environmental impacts.

Landholders will benefit from the provision of clearer and more comprehensive information about where approvals may not be granted for environmental and other reasons, and where a greater level of investment in environmental considerations is required. This will minimise the potential frustration and costs to landholders of pursuing unrealistic or unaffordable drainage proposals.

Approvals for both new and existing drainage works are required if landholders are planning drainage works that may potentially affect⁷ :

- Aboriginal heritage sites (including intangible Aboriginal heritage)
- Crown land
- Rare and threatened flora, fauna and vegetation communities (including all Matters of Natural Environmental Significance)
- Native vegetation, including native vegetation in waterways
- Adjacent landholders or land as a result of changes in water flows across property boundaries, and potentially across catchment boundaries
- Waterways on which works are carried out
- Other water users associated with taking and using water related to drainage works (Section 67 works licence and Section 51 take-and-use licence under the *Water Act 1989*).

As the existing approvals provisions remain important to manage the potential impacts of drainage works, there is no change to the statutory approvals required for drainage works under this strategy. However, it is recognised that landholders need to have confidence that they will be supported within a regulatory framework that can be applied consistently across the state. It therefore provides clarity about landholders' obligations when seeking to undertake drainage works.



Landholders and drainage committees should expect that:

- Drainage works must be carried out in line with existing obligations pertaining to the environmental and cultural impacts of those works
- Draining natural wetlands (such as swamp or marsh) to establish new drainage areas will generally not be supported now that we have a greater understanding of the value of these environmentally sensitive areas.

Extra effort may be required to demonstrate that works will be undertaken in an environmentally sensitive way where drainage works could affect:

- Ramsar wetlands
- Flagship waterway sites
- Wetlands and waterways by:
 - changes in watering regimes
 - impact on ecological values (this would also apply to a cumulative effect on ecological values), including:
 - > native vegetation (trees, shrubs and grasses)
 - > aquatic and or terrestrial fauna
 - > aquatic and or terrestrial habitat
 - > water quality and or quantity.

Where a greater level of effort is required to consider applications for environmental approvals, approvals may still be granted. But more detailed investigation may be necessary to ensure potential impacts from drainage works have been considered, avoided or minimised.

Action 5a

Provide increased clarity for landholders about approvals

The drainage resource kit will include information that provides increased clarity about where works are unlikely to be approved or where a greater level of investment in environmental considerations is required for dryland rural drainage works that could have significant environmental impacts.

This action will improve clarity and consistency about where and how approvals for drainage works are considered across the state. It will also provide clarity about the enforcement provisions that are designed to regulate landholders' compliance with these existing obligations.

Lead – Department of Environment, Land, Water and Planning

5.3.2 Preparing dryland rural drainage management plans

Dryland rural drainage management plans will provide an opportunity to streamline the approvals process. Catchment management authorities will work with landholders and agencies to guide the development of dryland rural drainage management plans, putting into practice the experience of Melbourne Water, and working with landholders and agencies in the Koo Wee Rup/ Longwarry Flood Protection District (Section 4.3). The plans should reduce the costs and administrative burden currently involved in gaining approvals.

Dryland rural drainage management plans should be fit for purpose. The level of complexity will depend on a risk-based assessment of the environmental impacts associated with operating and maintaining the drainage. For example, for small drainage systems with low levels of risk, the plans will be relatively informal. For large drainage areas with high levels of risk, the plans would need to address comprehensively the operation and maintenance regime, the regulatory requirements, and the processes for minimising the social, economic and environmental impacts of dryland rural drainage.

Dryland rural drainage management plans will need to provide details to landholders and the community about how the system is managed and how drainage charges are applied. Multi-year works plans would have a clear schedule of the type, scale and timing of works to be undertaken. Once landholders agree, dryland rural drainage management plans will be considered by the relevant regulatory body (such as a council, catchment management authority or the Department of Environment, Land, Water and Planning). This will streamline the process to seek approval for drainage works, while also providing confidence to decision makers that works will be completed in a sensitive manner, meeting environmental obligations.

The intention is for dryland rural drainage management plans to outline the management, operation and maintenance schedule for each system for a period of up to 15 years, thus avoiding the need to get approvals every time work is carried out (Policy 4g).

Action 5b

Provide guidance on the preparation of dryland rural drainage management plans

The Department of Environment, Land, Water and Planning will work with key stakeholders, including councils, Traditional Owners and Aboriginal Victorians and catchment management authorities to develop guidance on how to prepare dryland rural drainage management plans. The guidance will include:

- Indications of where information may be required to demonstrate that the drainage works meet approved objectives and standards
- Information on how the plan is capable of being registered on title
- Lessons from Melbourne Water to help the catchment management authorities to tailor dryland rural drainage management plans to meet the needs of landholders within their regions (Policy 4i).

How and when landholders will be supported to consider the cost distribution will be based on who benefits from the management plans – essentially, those whose properties are inundated or waterlogged less often than they would have been without dryland rural drainage.

Once the planned maintenance activities detailed in the plan have been approved by each of the relevant regulatory bodies, planned maintenance will be allowed without the need for further approvals for a period of up to 15 years (provided it is carried out in line with the conditions of those approvals – which could include a requirement to adhere to the dryland rural drainage management plan), at which time the approvals will be reviewed and then renewed with or without changed conditions.

Lead – Department of Environment, Land, Water and Planning

5.4 Considering the water quality impacts of dryland rural drainage

The draft State Environment Protection Policies for water provide a regulatory framework to protect waterway values through the management of water quality threats. These policies are established under the *Environment Protection Act 1970*. They place obligations on those carrying out specific activities that may affect water quality.

Environment protection policies place a priority on avoiding waste. Where that is not achievable, they focus on reusing, recycling, treating, containing and, if necessary, disposing of waste. They include requirements to minimise the runoff of pollutants such as sediment, nutrients, salt, biocides, pathogens and litter to surface waters from agricultural activities.

In 2018, communities had an opportunity, through a formal consultation process, to comment on proposed amendments to the *State Environment Protection Policies* for water. Feedback from that consultation supported the intent to retain obligations on landholders to minimise their impact on the environment.

The preparation of dryland rural drainage management plans, guided by the regulatory framework, should seek to avoid, or at least minimise, the impact of dryland rural drainage on receiving waterways.

The proposed overhaul and repeal of the *Environment Protection Act 1970* will provide a new framework for the protection of human health and the environment from pollution and waste. Environmental quality standards will remain a core element under this framework, setting community goals for the environmental outcomes that are sought to be protected and achieved.

Policy 5a

Considering the water quality impacts of dryland rural drainage

Dryland rural drainage management plans will avoid, or at least minimise the impact of rural drainage on receiving waterways.

Lead – Landholders

5.5 Guidance for landholders to adapt to climate change

Australia’s climate is highly variable. Within this variability, records show that catchments have become drier and temperatures have increased. The Millennium Drought brought a seasonal shift in rainfall, with proportionally less rain in the cooler months. This trend has continued in many parts of Victoria since the end of the drought. Many catchments in Victoria have recorded streamflow reductions of 50 per cent or more over the past 20 years (since the beginning of the Millennium Drought in 1997) (Figure 5.2). Given the changes experienced in Victoria’s climate and streamflow, the climate of recent decades is considered a more reliable guide to the future than the full historical record.⁸

Climate models also indicate that the intensity of extreme rainfall events may increase.

As the climate changes, many wetlands are expected to dry more frequently and for longer durations. The remaining more permanent wetlands will become vital to the survival of many species, acting as refuges in dry years.

Although climate change may result in an increase in the intensity of extreme rainfall events, in large rural catchments the drier conditions may dominate and reduce the demand on drainage assets. Research conducted through the Victorian Water and Climate Initiative will help to increase understanding of the implications of climate change on water systems, including dryland rural drainage.

Before making long-term investments, landholders considering new drainage works, or significant upgrades to existing infrastructure, are encouraged to consider the potential impacts of climate change on the need for drainage in the future.

Landholders must make their own decisions about whether to invest in improving the management of their drainage. However, the range of information on climate change is vast, and many landholders are unsure about how to access the best information, or how to use it when they are making investment decisions.

The Department of Environment, Land, Water and Planning has developed a tool to assist landholders in understanding the benefits and costs of dryland rural drainage (Section 4.1). It provides specific guidance on climate change, so landholders can assess how the benefits and costs of improving their drainage management may change under low, medium and high climate-change scenarios.

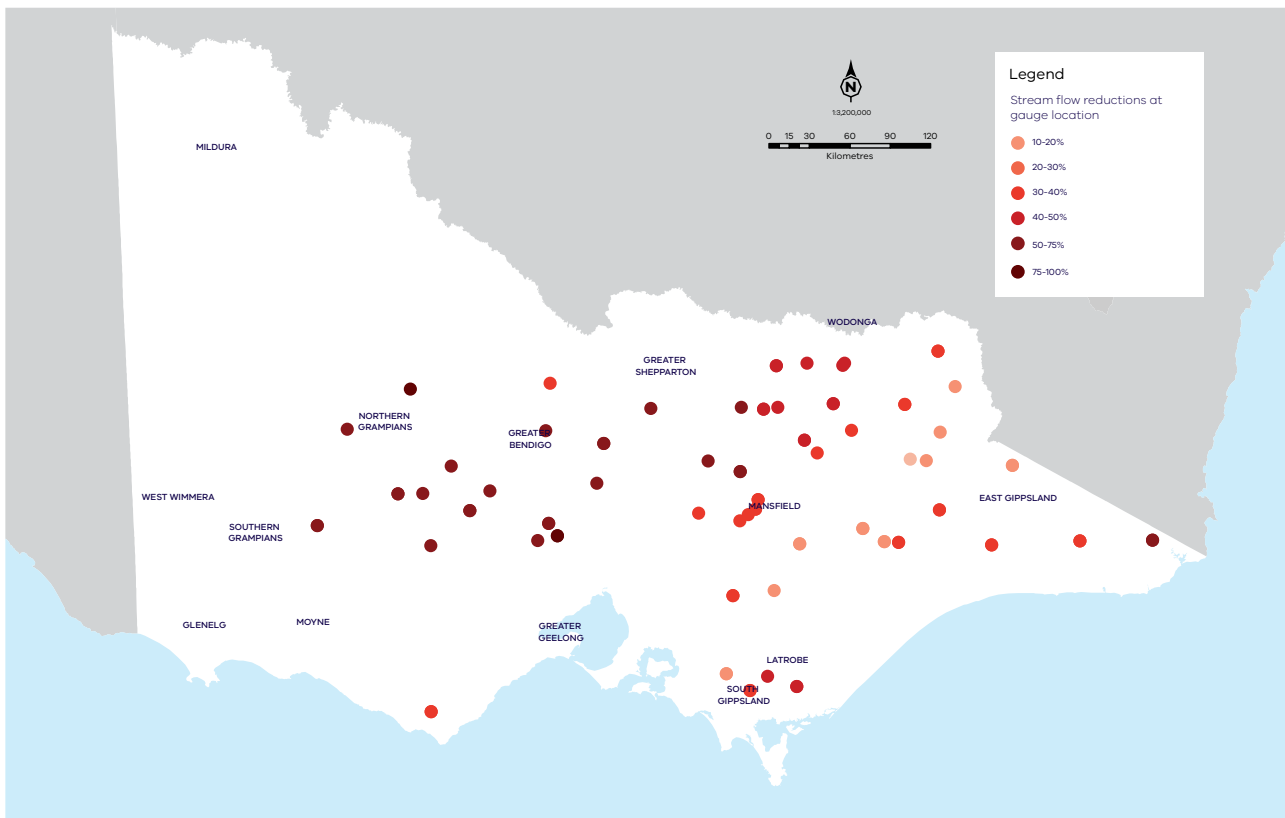


Figure 5.2. Streamflow reductions across gauged streams in Victoria since 1997⁹

Under the *Climate Change Act 2017*, the Victorian Government is required to develop Adaptation Action Plans for key sectors vulnerable to climate change impacts every five years from 2021. Water and primary production have been identified as two key sectors requiring plans.¹⁰

An Adaptation Action Plan is a systems-based approach that must include:

- A statement of the roles and responsibilities across the system
- An assessment of the extent to which existing policies of the Government address the statement of priorities of a climate change strategy
- A list of actions to address any shortcomings identified in the gap analysis.

The Department of Environment, Land, Water and Planning and Agriculture Victoria are developing pilot Adaptation Action Plans for water and primary production respectively. These pilots will also inform the development of guidelines for preparation of the next round of plans required in 2021.

Lessons learned from using the tool for decision making about the costs and benefits of dryland rural drainage may inform the gap analysis and actions for future Adaptation Action Plans.

Policy 5b

Considering climate change and climate variability in drainage management

As part of the drainage resource kit, councils will provide landholders with guidance materials to help them take account of climate change and climate variability when making decisions on investment in drainage management (Policy 4a).

Where landholders ask catchment management authorities to provide them with support in developing dryland rural drainage management plans (Policy 4g), the catchment management authorities will encourage landholders to consider up-to-date climate change information before committing to significant investment in improving management of dryland rural drainage.

Lead – Landholders

5.6 The potential for environmental restoration

The *Victorian Waterway Management Strategy*¹¹ provides the overarching policy for the management of Victoria's waterways. The Victorian Rural Drainage Strategy does not seek to duplicate these directions; rather, it aims to clarify how dryland rural drainage management and drainage infrastructure will be considered in this context.

Wetland management in Victoria is based on an integrated approach across the international, national, state and regional levels. Wetlands of international importance listed under the Ramsar Convention are protected under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. This legislation recognises the importance of protecting places and species of national environmental significance, including threatened ecological communities and Ramsar listed sites.

At the regional level, catchment management authorities oversee programs to maintain and improve the values of rivers, estuaries and wetlands on a priority basis through their statutory regional waterway strategies. Priority waterways attract more investment for protection and restoration, and have been identified across Victoria by each catchment management authority, in consultation with local communities and Traditional Owners.

5.6.1 Environmental restoration of drainage areas

Where opportunities exist for environmental benefit, drainage areas may be considered for priority works and measures to maintain or improve the condition of waterways.

The priority waterways framework needs to be updated to enable catchment management authorities to consider restoration of previously modified drainage areas. Currently, environmental restoration is considered only in priority reaches. Landholders are increasingly recognising the value of waterways, and are investing in riparian management, such as fencing off waterways, and in some cases, particularly in northern Victoria, they have started seeking opportunities to restore wetlands.

Action 5c

Update the guidelines for developing regional waterway management strategies to include previously modified drainage areas in the priority-setting framework.

The guidelines for developing regional waterway management strategies will be updated to include previously modified drainage areas in the priority-setting framework so that the restoration works that enhance or maintain values can be considered in these areas when investment decisions are being made.

Lead – Department of Environment, Land, Water and Planning

This presents a great opportunity, as almost 70 per cent of Victoria's wetlands, representing 35 per cent of the total wetland area, are on private land. The way landholders manage land adjacent to wetlands is often critical to their long-term health.

Catchment management authorities undertake priority waterway management activities set out in their regional waterway strategies. Activities include offering incentives to landholders on private land to protect and improve wetlands. An example of this is Wetland Tender¹², a market-based instrument used to assess and compare bids from landholders for works that aim to improve the condition of wetlands on private land. Waterway incentive programs are tailored to specific regional objectives. For example, the Glenelg Hopkins and Wimmera catchment management authorities have focused on programs that protect and improve critically endangered wetlands, while Corangamite Catchment Management Authority has focused on protecting and improving saltmarshes.

The *Victorian Waterway Management Strategy* emphasises that individual landholders, community groups, not-for-profit organisations and for-profit organisations can make significant contributions to maintaining and improving the condition of wetlands on private land. Nature Glenelg Trust and Field and Game Australia provide outstanding examples of what can be achieved in this way.

Where landholders decide that drainage is redundant or that they are no longer prepared to pay for drainage services, they may decide to reinstate wetlands. The existing incentive programs run by organisations such as catchment management authorities, Trust for Nature and the Department of Environment, Land, Water and Planning can support this reinstatement. Existing projects have highlighted how restoration works can strengthen partnerships between landholders, agencies and community volunteers, and achieve environmental benefits. For example, the restoration works at Brady Swamp in the south-west of the state now permanently protect the reinstated hydrology of important floodplains and wetlands, and have improved flows to the upper Wannon River. The works support threatened species such as the western swamp crayfish and the little galaxias freshwater fish, both of which are reliant on the reinstated wetland floodplain habitat for breeding success. Key pilot projects identified in this strategy will build on these existing examples to consider environmental benefits (Pilot Study –Northern Dunmunkle Creek, for example, focuses on improving watering regimes).

Policy 5c

Identify priority areas for environmental restoration of waterways

In line with the *Victorian Waterway Management Strategy*, regional waterway strategies will identify actions to mitigate the impacts of existing drainage on waterways where it is feasible and cost-effective, where it has community support and where it does not affect other stakeholders.

Catchment management authorities, in partnership with key stakeholders including Traditional Owners, will consider a combination of incentives, education, awareness and partnerships with the private sector to encourage environmental restoration.

Lead – Catchment management authorities

Pilot study: **Northern Dunmunkle Creek Restoration Plan – Improving watering regimes**

Dunmunkle Creek is a distributary of the Wimmera River (which means it flows away from the river). Recent changes to the way water is delivered from the Wimmera River system provide opportunities for improving farm productivity and environmental outcomes.

The Dunmunkle Creek was heavily modified in the 1880s and early 1900s to deliver stock and domestic water supplies from the Wimmera River. This involved turning much of the creek into channels, and bypassing some of its natural route to improve the efficiency of water delivery northwards. However, the Wimmera Mallee pipeline, which was completed in 2010, means the creek is no longer used for water supply, and many of the bypass channels have been decommissioned.

North of Boolite, because of agricultural land modifications, the creek no longer has a defined flow path. Parts of the creek's natural flow path there have been cropped, and the riparian zone has almost been eliminated. Much of that farmland is now subject to inundation and waterlogging in wet periods.

This project will investigate opportunities to undertake works to direct water from the end of the defined Dunmunkle Creek across land to link with appropriate landscapes, such as priority wetlands, in the surrounding area. Landholders, government agencies and Traditional Owners will be invited to consider options to return water to support cultural and environmental values. This will also assist with the drainage of agricultural land, allowing it to remain in production in wetter periods.



Creek Channel North within the pilot project area – Wimmera CMA

6

Supporting collaboration with Aboriginal Victorians





Chapter guide

This chapter recognises the values that Traditional Owners and Aboriginal Victorians place on their traditional lands and waters, and it discusses the effects of dryland drainage on these values. Building on previous successes, the chapter supports opportunities for landholders and agencies to collaborate with Traditional Owners to manage dryland rural drainage.

The chapter was shaped by a discussion paper developed by the Federation of Victorian Traditional Owner Corporations and further shaped through on-Country discussions with Traditional Owners. It outlines arrangements to give due consideration to Aboriginal cultural heritage in the context of dryland rural drainage, and proposes ways for existing rural drainage to be managed in environmentally and culturally sensitive ways. It concludes by considering opportunities to involve Traditional Owners and Aboriginal Victorians directly in the ongoing management of dryland rural drainage.

6.1 Introduction

The approach used to consult with Traditional Owners in developing this chapter was devised by Victorian Traditional Owners who have rights and interests in dryland rural drainage on their Country (Figure 6.1).

Based on principles of co-design, and through a tender process, the Department of Environment, Land, Water and Planning procured the services of the Federation of Victorian Traditional Owner Corporations to prepare a discussion paper that identified the priorities for considering Aboriginal cultural values in contemporary arrangements for dryland rural drainage. These priorities focus on:

- Working with landholders to avoid impacts of drainage on Aboriginal cultural heritage
- Involving Traditional Owners and Aboriginal Victorians in restoration works.

Who are Traditional Owners and Aboriginal Victorians?

Aboriginal Victorians

An Aboriginal Victorian is a person of Aboriginal descent who identifies as Aboriginal and is accepted as such by the Victorian Aboriginal community in which he or she lives.

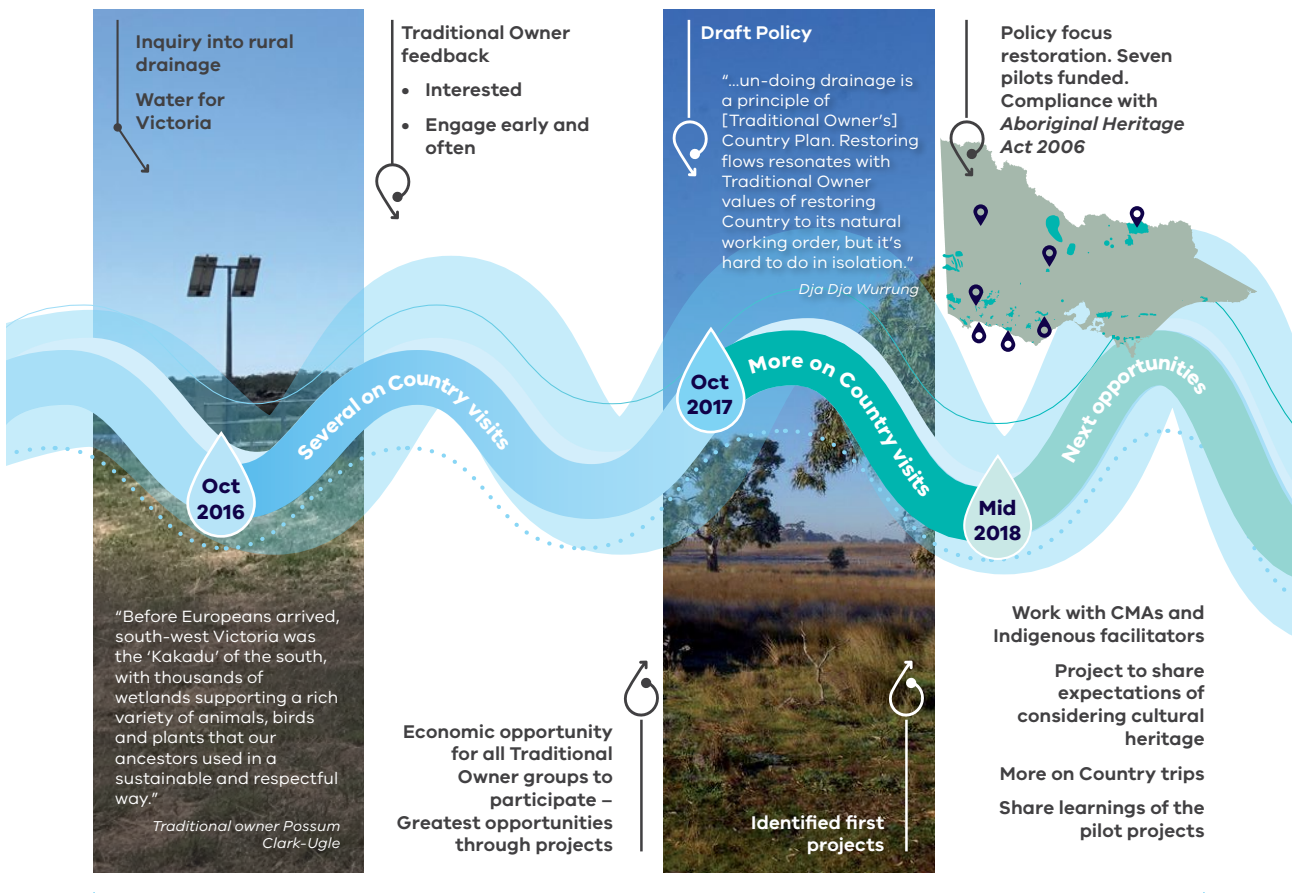
Traditional Owners

Traditional Owners are people who, through membership of a descent group or clan, are responsible for caring for Country. They are Aboriginal people with knowledge about traditions, observances, customs or beliefs associated with a particular area. A Traditional Owner can speak for Country.

Registered Aboriginal Parties

Registered Aboriginal Parties are organisations that hold specific decision-making responsibilities under the *Aboriginal Heritage Act 2006* for protecting Aboriginal cultural heritage.

Policy drivers



Opportunities to involve Traditional Owners and Aboriginal Victorians in planning and management

Figure 6.1 Developing the directions to support partnering with Traditional Owners and Aboriginal Victorians and future opportunities.

6.1.2 Understanding the importance of Aboriginal values

The importance of waterways to Traditional Owners

The Traditional Owners of Victoria assign great cultural, social and economic significance to water. Each group of Traditional Owners holds distinct perspectives relating to identity and religious attachment to place and environmental knowledge, and supports custodial responsibilities to manage interrelated parts of culture. Connections to and relationships with water and wetlands are much broader than consideration of heritage values; they relate to notions of sociality, sacredness, identity and life-giving, as part of the broader means of caring for, connecting to, and speaking for Country.

Waterways and wetlands, including floodplain areas that are prone to inundation, have always been important places for Traditional Owners and Aboriginal Victorians to come together as families and communities for social, economic, religious and recreational activities. Waterways are valued for many different reasons: they were routes of travel, trade and communication, conduits for ceremony and ritual, and rich sources of food, medicines and other resources. Rivers, streams and lakes have also served as boundaries between clans and nations, giving them primary importance in the political life of Aboriginal peoples.

The values and connections of Traditional Owners and Aboriginal Victorians are articulated in Country plans, and in submissions to government reports and inquiries.

Eastern Maar consider waterways in this way:

*We believe the spirits of our dead reside in our waterways and water bodies, and that they use animate and inanimate objects to move through Country.*³

And for Dja Dja Wurrung:

*Our rivers are the veins of Country, and provide food and medicine, and places to camp, hunt, fish, swim and hold ceremonies. They are places that are central to our creation stories, and many of our cultural heritage sites are associated with waterways – burial sites, birthing sites and middens. Our waterways are places that we connect with our ancestors and pass traditional knowledge on to our children and grandchildren.*⁴

Archaeological sites associated with Aboriginal occupation often have a strong association with waterways. Indeed, proximity to water has been identified as one of the key determinants of

archaeological potential. The clear majority (95 per cent) of the 30,000 known significant Aboriginal places and heritage sites recorded in Victoria are located on or near waterways. This strategy recognises that Victorian rivers, lakes, swamps and coasts are areas of cultural heritage sensitivity that have prescribed protections under the *Aboriginal Heritage Act 2006*.

Effects of drainage on Aboriginal heritage

Dryland rural drainage has clearly led to increased agricultural productivity in Victoria, but the effects of rural drainage have eroded the capacity of Country, including waterways, to sustain Indigenous economies, with significant social consequences.¹⁵ Historically, Traditional Owners were not specifically consulted over the declaration of drainage areas or the implementation of drainage systems. Many Traditional Owners will testify to the loss of control and autonomy, the inability to access and holistically manage customary estates, to exercise custodial authority and to prevent further ecological degradation and economic impoverishment. The management of the water quality of waterways receiving drainage is also an issue that concerns Traditional Owners (see Section 5.4).

In a submission to the 2013 Victorian Parliamentary inquiry into rural drainage, the Framlingham Aboriginal Trust stated:

*In the words of traditional owner Possum Clark-Ugle, "Before Europeans arrived, south-west Victoria was the 'Kakadu' of the south, with thousands of wetlands supporting a rich variety of animals, birds and plants that our ancestors used in a sustainable and respectful way."*¹⁶

The inquiry should note that the historical basis for drainage schemes lies in the importation to Australia of European land management practices that are ignorant of local hydrological, meteorological, ecological and cultural realities. This ignorant approach to land management quickly swept away vast tracts of sustainably managed habitat that underpinned the economies of Aboriginal people in Victoria.

The Victorian Government acknowledges the harm caused to Aboriginal values by past practices in this context, and believes that sound management practices for dryland rural drainage must include the consideration of Aboriginal values. Managing the effects of dryland rural drainage on Aboriginal values helps to protect sites of valuable cultural heritage sensitivity, provides opportunities to reconnect Traditional Owners to waterways to revive culture, and contributes to an improved sense of identity.

6.2 Working with landholders to avoid impacts of drainage on Aboriginal cultural heritage

Victoria's rich Aboriginal cultural heritage is protected by the *Aboriginal Heritage Act 2006*, which was strengthened in 2016 to incorporate intangible heritage for the first time. The Act provides protection for all Aboriginal places, objects and human remains, as well as intangible heritage, regardless of whether they are included in the Victorian Aboriginal Heritage Register and regardless of land tenure. The following stakeholders have specific statutory roles and responsibilities under the Act, which are connected to their roles in the management of dryland rural drainage:

- Victorian Aboriginal Heritage Council is responsible for providing advice on matters of Aboriginal cultural heritage to prescribed stakeholders including the Minister of Aboriginal Affairs. The discovery of any Aboriginal ancestral remains during works on private or public land must be reported to the council.
- Registered Aboriginal Parties are organisations that hold specific decision-making responsibilities under the Act for protecting Aboriginal cultural heritage. For example, they are responsible for evaluating cultural heritage management plans and cultural heritage permit applications. Registered Aboriginal Parties can also enter into Aboriginal Cultural Heritage Land Management Agreements with a public land manager for the purpose of protecting cultural heritage and cultural landscapes during land management activities.
- Landholders are responsible for reporting the discovery of Aboriginal cultural heritage and for not causing harm (without the appropriate authorisation under the *Aboriginal Heritage Act 2006*) i.e. an approved cultural heritage management plan or cultural heritage permit to such places while undertaking dryland rural drainage works, including maintenance.

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* identifies heritage items of national significance and provides protection mechanisms for these items. If an action is proposed that significantly affects a nationally listed heritage item, approval is required from the Australian Government – in addition to state and local approvals

There are varying approaches to considering Aboriginal heritage. The case study – Taungurung supporting partnerships with local landholders – provides an example of the benefits of a partnership approach to considering Aboriginal heritage in the Seven Creeks area, near Euroa. There is also a lack of clarity among landholders and agencies about when and how the legislation is triggered. For example, what triggers the requirement for a Cultural Heritage Management Plan? Or when would it make sense to prepare a Voluntary Cultural Heritage Management Plan? The pilot study - Considering cultural heritage in the Woody Yaloak/Lough Calvert drainage areas – provides a way to consider opportunities to prepare a Voluntary Cultural Heritage Management Plan that will support the commitment in the strategy to raise awareness and clarify expectations for the management of Aboriginal cultural heritage (Action 6a).

Action 6a

Partner with Registered Aboriginal Parties to raise awareness and clarify expectations for the management of Aboriginal cultural heritage in their respective areas

Traditional Owner organisations will be invited to lead work with the support of the Department of Environment, Land, Water and Planning, and others, to clarify how the obligations in the *Aboriginal Heritage Act 2006* apply in the context of dryland rural drainage. Guidelines will be developed and included in the drainage resource kit. The guidelines will consider:

- The roles and responsibilities of stakeholders who have specific statutory responsibilities under the *Aboriginal Heritage Act 2006*
- A checklist for landholders and government agencies on how to apply the cultural heritage obligations in a dryland rural drainage context
- Opportunities to develop voluntary cultural heritage management plans
- Examples of effective consideration of cultural heritage values
- Options for landholders to seek support (such as for the preparation of dryland rural drainage management plans)
- Information on compliance and enforcement.

Lead – Department of Environment, Land, Water and Planning

Case study: Taungurung supporting partnerships with local landholders

Victorian Aboriginal groups have spent many years working to improve relations and partnerships with catchment management authorities and other agencies involved in natural and cultural heritage resource management. Councils are also working to improve their practices and to build stronger partnerships with Traditional Owners. For example, the Taungurung Clans Aboriginal Corporation and local landowners in the Seven Creeks area near Euroa, where restoration activities are underway, have forged collaborative relationships over cultural heritage. Artefacts have been found by landholders and willingly brought to the attention of Taungurung to share knowledge. As the landholders increasingly realise that the Taungurung people's prime objective is to discover more about their past and not to impede development, more and more landowners have come forward.

The Taungurung Clans Aboriginal Corporation is building on this goodwill by offering education programs to councils and their planning departments in cultural heritage management. The Corporation is running workshops to promote common procedures, improve rates of compliance with the *Aboriginal Heritage Act 2006* and encourage councils to take a proactive approach.

6.3 Traditional Owner involvement in restoration works

Restoration work constitutes a large component of reconnecting people and communities with the natural environment, and the government's *Water for Victoria* plan commits to investing \$222 million in waterway and catchment health in Victoria to support on-ground works over four years.

In the words of Dja Dja Wurrung:

... un-doing drainage is a principle of [Traditional Owner's] Country Plan. Restoring flows resonates with Traditional Owner values of restoring Country to its natural working order, but it's hard to do in isolation.¹⁴

The *Victorian Waterway Management strategy* provides the framework for maintenance or improvement of the condition of waterways. Arrangements will be included to encourage and facilitate restoration of drainage areas that are no longer required for drainage purposes, or where there is goodwill from landholders to support environmental or cultural values (Section 5.4).

Restoration of drainage areas offers a means by which Traditional Owners can partner with landholders to bring about environmental improvements, build technical capability, and provide land management services to the wider community. Catchment management authorities will partner with Traditional Owners to help landholders consider whether drainage services are still required (for drainage systems that they currently or previously had a role in managing) and, if landholders no longer see a need for drainage services, to consider opportunities to support the restoration of cultural values.

Policy 6a

Identify priority areas for restoration of previously drained areas for cultural benefit

In line with the *Victorian Waterway Management Strategy*, regional waterway strategies will identify actions to mitigate the effects of existing drainage on Aboriginal cultural values where (i) it is no longer required for drainage purposes by landholders, (ii) it is feasible and cost effective, and (iii) where it has community support and does not affect other stakeholders. This consideration will reflect a broad definition of cultural heritage values.

Traditional Owners and Aboriginal Victorians will be invited to work with catchment management authorities to consider a combination of incentives, education, awareness and partnerships with the private sector and landholders to encourage restoration works.

Lead – Catchment management authorities in partnership with Traditional Owners and Aboriginal Victorians

There are a number of existing examples of Traditional Owners and landholders collaborating to support restoration works. For example, Gunaikurnai has engaged in partnership arrangements to manage weeds and plant trees, Yorta Yorta Aboriginal Corporation has identified wetland restoration as a key goal of the organisation, and Gundijtmara Aboriginal Corporation shares knowledge of land management through the Yarns on Farms initiative.

As the pilot studies at Long Swamp and Budj Bim demonstrate, activities to restore waterways where drainage services are no longer required by landholders would be supported by Traditional Owners.¹⁴

Pilot study: Considering cultural heritage in the Woody Yaloak/Lough Calvert drainage areas

The Woody Yaloak/Lough Calvert drainage area in western Victoria is a place of Aboriginal cultural heritage sensitivity. An archaeological survey of the Corangamite Basin, published in 1998¹⁷, identified Cundare Pool as being geomorphologically within the Quaternary Sediments Unit, which has been identified as an area of the highest archaeological sensitivity within the region. It identified potential archaeological features and items including mounds, stone artefacts scatters, fish traps, stone huts, earthen rings, quarries and burials.

A due diligence search of two project sites by TerraCulture Heritage Consultants identified artefacts on one site (see photo below) and items of historical heritage. Based on these discoveries, the Corangamite Catchment Management Authority will invite Eastern Maar to partner with them to develop a Voluntary Cultural Heritage Management Plan covering the areas of natural features within the drainage areas.

Eastern Maar will be invited to help shape the development of the voluntary cultural Heritage Management Plan. Based on this partnership arrangement the following opportunities will be considered:

- Review all relevant heritage databases and other relevant available literature
- Provide a review of land use and topography for the activity area
- Conduct site assessments with the support of a Heritage Advisor, as appropriate to identify any Aboriginal cultural heritage within the activity area
- Discuss any opportunities and constraints in regard to cultural heritage associated with management activities (high impact) within the activity area
- Produce a Cultural Heritage Management Plan suitable to guide future maintenance and capital works in the activity area.

The findings of this work will help to guide consideration of Aboriginal cultural heritage and the merits of voluntary cultural heritage planning in a dryland rural drainage area (Action 6a).



Pilot study: **Stage two for Long Swamp – Putting the swamp back into Long Swamp**

Long Swamp is one of the largest wetlands in the Moolort Plains wetland complex of central Victoria. This wetland complex is situated on the north-eastern tip of the Victorian Volcanic Plain, the only national biodiversity hotspot located completely in Victoria. Situated between Maryborough and Castlemaine, the complex contains approximately 80 diverse wetlands, consisting of red gum swamps, lignum swamps, cane grass swamps and shallow freshwater marshes. The wetland system supports a wide range of native wildlife, including the iconic Brolga.

Long Swamp is an important site to the local Traditional Owners, the Dja Dja Wurrung, who wrote a report about the value and importance of the swamp in 2013. They have conducted preliminary cultural surveys and undertaken on-ground works at the swamp over the past few years.

Long Swamp was owned for more than 100 years by several private landholders who carried out agricultural activities on the bed of the swamp. In 1965, at the request of these landholders, the local shire drained the swamp. The swamp bed has some levels of natural salinity, and it was stated at the time that a drain would help to reduce these levels, although many locals think this reason was only cited to cover for the primary reason for drainage: to create more arable land.

In the 1990s, the conservation department at the time attempted to purchase the swamp based on increased environmental priorities, but was only successful in securing 20 per cent of the area. This land was then handed to Trust for Nature.

In 2014, the North Central Catchment Management Authority and Trust for Nature tried to purchase the remaining land with funding from the local community and the Department of Environment, Land, Water and Planning. Of the three landholders, two agreed to sell and one did not. As a result, Trust for Nature now owns approximately 95 per cent of the swamp, which provides an opportunity to install a structure at the discharge site that will hold water in the bed of the swamp – thus putting the ‘swamp’ back into Long Swamp.

In 2016, the purchase was marked by a celebration event at the swamp, officially launched by the Minister for Energy, Environment and Climate Change, Lily D’Ambrosio.

Now that most of the land in the swamp has been secured for conservation, the next stage of the restoration is proposed to support:

- The construction of a regulator to maintain water levels and restore the natural hydrology, and minor earth works on the drain bank to improve flow
- Weed control, which is an associated wetland rehabilitation activity. Spiny Rush, Paterson’s Curse and Horehound require treatment in large areas of the bed. Dja Dja Wurrung can undertake weed control activities, while spending time on Country. The use of fire is a possibility to help manage weed growth and provide better access for herbicide treatment
- Cultural surveys to build up the cultural knowledge of Long Swamp. It would be highly beneficial to conduct further cultural heritage inspections, particularly on the parcels of land that have been most recently purchased.

Dja Dja Wurrung wish to learn more about the history of the site to help guide present day management. Dja Dja Wurrung also has an advisory group, Kapa Gatjin, to help inform the restoration process from a cultural perspective.

With the execution of these works, Long Swamp will once again become a highly valuable ecological asset in the heart of the state-significant Moolort Wetlands. It was once known as the ‘jewel in the crown’ by locals who valued the wetlands, and this project provides an opportunity to again have the site contribute to a greater wetland estate.



Pilot study: **Restoring cultural practices across the Budj Bim landscape**

The Budj Bim landscape, located on the Budj Bim lava flow in south-west Victoria, is a distinctive landscape of waterways, swamps, sink-holes and lakes that resulted from the volcanic eruption of Budj Bim (formerly known as Mt Eccles) around 30,000 years ago. Over many thousands of years, the Gunditjmara people developed the Budj Bim landscape through the construction of a sophisticated system of channels, ponds and fish traps. These structures supported a unique aquaculture system, unlike anything seen elsewhere in Australia.

Drainage, stream realignment, groundwater extraction and land use changes have resulted in alterations to groundwater and surface water flow pathways. These changes have affected the ability of Gunditjmara people to undertake these important cultural practices.

A project has just commenced to identify options for restoring flow to these traditional aquaculture systems. This is likely to include modification to drainage systems to reinstate flow through these culturally important areas. This project builds on the success of restoration works at Lake Condah in 2010, which saw the construction of a new weir to retain water that was previously drained into Darlots Creek.

The project is being delivered in partnership with Gunditj Mirring Traditional Owner Aboriginal Corporation and forms part of an integrated program to protect and improve the significant environmental values and Gunditjmara cultural heritage places within the Budj Bim landscape.



As a starting point, a number of pilot projects to improve understanding of the opportunities to support Aboriginal cultural values have already commenced. Some of these projects were identified by Traditional Owners as part of their engagement in the development of this strategy. Others were identified by Traditional Owners pursuing other aspirations (Figure 6.2).

Action 6b

Commence pilot projects to consider Aboriginal aspirations relating to dryland rural drainage

As a starting point, work will commence on up to six pilot projects to support restoration of drainage areas to meet Aboriginal and cultural values.

Lead – Catchment management authorities in partnership with Traditional Owners and Aboriginal Victorians, or Traditional Owners organisations

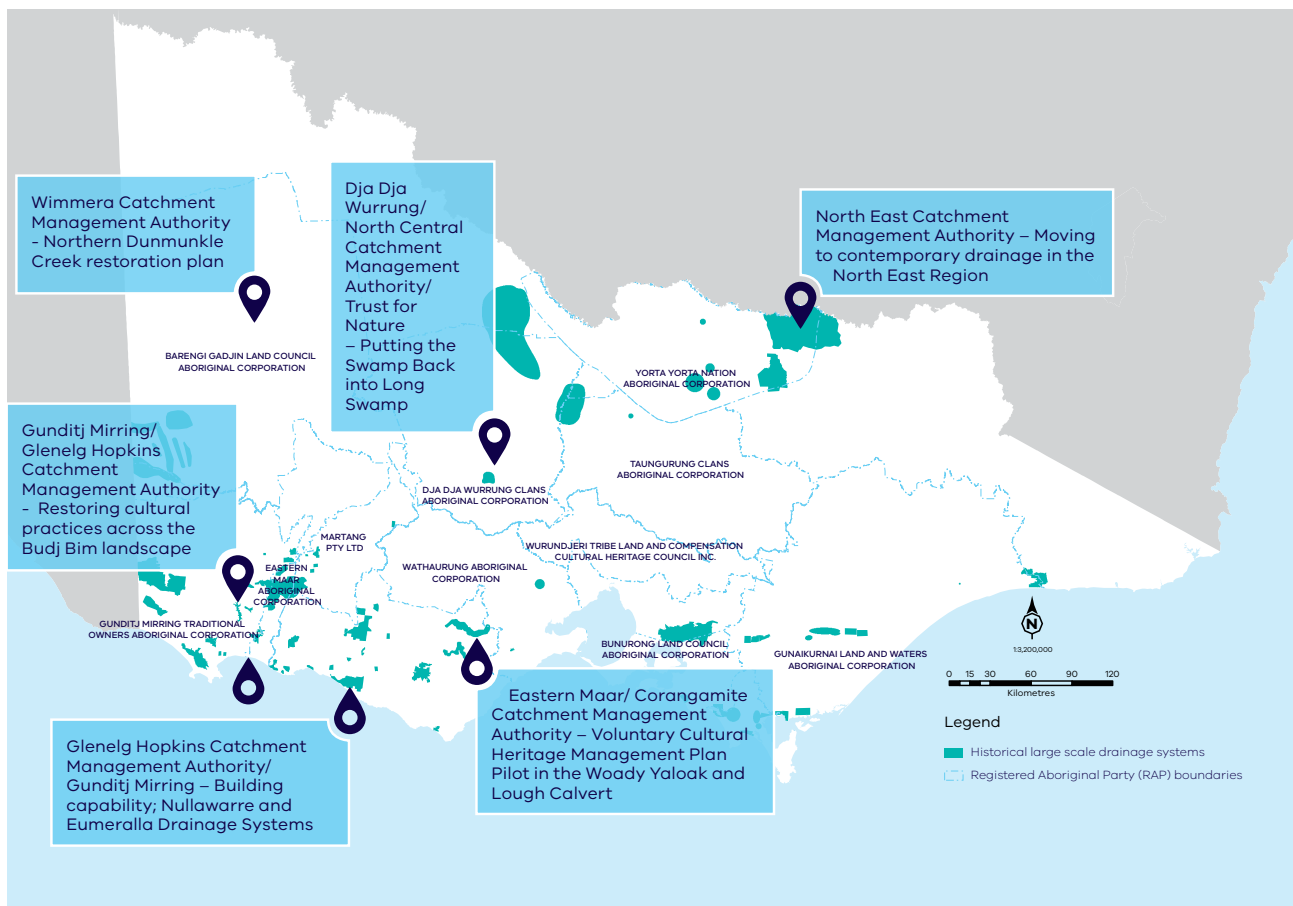


Figure 6.2 Pilot studies to investigate opportunities to strengthen Aboriginal cultural values. Shown are the Registered Aboriginal Party boundaries, correct as of 15 January 2017. Note that these are Registered Aboriginal Parties for the purposes of the functions in the Cultural Heritage Act 2006. Traditional Owners may also have Native Title Settlement or Settlement under the Traditional Owner Settlement Act 2010. For the latest Registered Aboriginal Party boundaries please refer to <https://achris.vic.gov.au/#/onlinemap>

7

Delivering the strategy





Chapter guide

This chapter outlines how stakeholders will work together to deliver the Victorian Rural Drainage Strategy, and details the measures that will be used to gauge the success of the strategy. The chapter brings together all the actions and policies in the strategy to show how the contemporary arrangements for dryland rural drainage will be implemented.

7.1 Working together to deliver contemporary arrangements for dryland rural drainage

Complex natural resource management invariably involves multiple stakeholders who must work in partnership to achieve the best results. Under this Victorian Rural Drainage Strategy, measures have been put in place to help strengthen partnerships between the key stakeholders. The effectiveness of these partnerships will underpin the successful delivery of the strategy.

Having government agencies working in partnership with landholders will not only result in more effective and sustainable drainage works, but will help build local economies and support the liveability of regional Victoria. Broader involvement of Traditional Owners and Aboriginal Victorians in dryland rural drainage management will also help to meet the Victorian Government’s strategic objectives for Aboriginal involvement in water management and planning (Action 7a).

Tables 7.2 and 7.3 outline the actions and policies that will support implementation of the Victorian Rural Drainage Strategy. They detail the types of resources and support to be provided for agencies and landholders in working together to plan, manage and maintain drainage systems.

Action 7a

Support the ongoing implementation of the Victorian Rural Drainage strategy through an implementation working group

The Department of Environment, Land, Water and Planning will partner with key stakeholders, including Traditional Owners and Aboriginal Victorians, landholders and government agencies, to support the transition of all stakeholders to the new arrangements under the Victorian Rural Drainage Strategy. This support will include coordinating actions arising from the strategy, and aligning these actions with broader government directions and policies.

Lead – Department of Environment, Land, Water and Planning

7.2 Learning through delivery

Delivery of the strategy will be based on lessons learned through implementation. These lessons will be used to refine the program and inform and improve future strategies. A number of pilot projects are currently being undertaken with regional partners to manage specific drainage issues, and the outcomes of those pilot projects will support implementation of the strategy.

Data will be collected throughout the life of the Victorian Rural Drainage Strategy, with an evaluation of the success of the strategy to be conducted in 2023. The evaluation will assess progress in delivering strategy actions and directions. It will also provide new knowledge and information to update the strategy implementation plan, and it will measure the strategy’s success in meeting its outcomes (see Table 7.1). This will ensure there is a record of achievements and lessons learned, and an evidence base for future management approaches. Table 7.1 outlines on-the-ground changes expected to be made by meeting the strategy outcomes, and how these changes will be measured.

Action 7b

Delivering the strategy

The Department of Environment, Land, Water and Planning will oversee, monitor and evaluate the implementation of the Victorian Rural Drainage Strategy. The success of the strategy will be judged by the extent to which the proposed outcomes of the strategy have been met. To this end, the Department will:

- Undertake an evaluation of the strategy by 2023
- Collect data prepared by relevant Government agencies as described in Table 7.1
- Report publicly on progress and achievements to deliver the Victorian Rural Drainage Strategy.

Lead – Department of Environment, Land, Water and Planning

Table 7.1 On-the-ground changes expected to be made by meeting the strategy outcomes

Outcome – What is the strategy trying to achieve?	What difference will the strategy make over the next three to five years?	How will we know what has changed?
Landholders understand the various ways they can manage dryland rural drainage.	Landholders will take up opportunities for new arrangements to manage dryland rural drainage either individually or through collective agreements. <ul style="list-style-type: none"> • Action 4a (page 26) • Policy 4a (page 26) 	Data on the number of drainage groups that have been formalised and that have developed drainage management plans will be collected from catchment management authority and council annual reporting.
Cultural and environmental values are protected with increased efficiency.	A significant number of dryland rural drainage areas will be managed for environmental or cultural values. <ul style="list-style-type: none"> • Action 4c – (page 39) • Action 5a – (page 52) • Policy 5c – (page 56) • Action 6a – (page 62) • Policy 6a – (page 63) • Action 6b – (page 67) 	Data provided by relevant government agencies and Traditional Owner organisations will show which agreements include the protection of environmental and cultural values.
Priority waterways affected by dryland rural drainage are managed to provide cultural and environmental benefits.	The implementation of regional waterway management strategies includes on-the-ground works to improve management of dryland rural drainage. <ul style="list-style-type: none"> • Action 5c – (page 56) 	Data provided by catchment management authorities in their annual reporting will show where on-the-ground works have been used to improve dryland rural drainage.
Relevant government agencies have clear roles and responsibilities, and are aware of opportunities to work in partnerships to support landholders managing dryland rural drainage.	Staff from relevant government agencies will be clear about their roles and responsibilities, and agreements will be reached in reasonable timeframes. <ul style="list-style-type: none"> • Policy 3a (page 23) • Policy 4b (page 28) • Policy 4g (page 32) • Action 4c (page 39) • Policy 4h (page 39) • Policy 4i (page 41) • Action 4d (page 45) • Policy 4k (page 47) 	A Department of Environment, Land, Water and Planning lead survey of staff from relevant government agencies will be conducted to learn how clear they are about their roles and responsibilities.
Relevant government agencies work together with landholders to re-build capability and support ongoing arrangements for drainage management.	Relevant government agencies will increasingly consider managing dryland rural drainage as an everyday part of their business. Some will also adopt formal process arrangements. <ul style="list-style-type: none"> • Action 4b – (page 33) • Action 5b – (page 53) • Action 7a – (page 70) • Action 7b – (page 70) 	A Department of Environment, Land, Water and Planning lead survey of relevant government agencies will be conducted to gauge how they are dealing with dryland rural drainage.

7.3 Implementation plan

All actions and policies to be implemented under the strategy are summarised in the table below, with lead responsibility, partners and delivery timelines (Table 7.2).

Table 7.2 – Delivery of actions and indicative timelines for the Victorian Rural Drainage Strategy

Actions			
Actions to be undertaken to implement the strategy	Lead Responsibility	Delivery Partners	Timeframe
Chapter 4 – Managing Dryland Rural Drainage			
<p>Action 4a</p> <p>Develop a drainage resource kit to support landholders to make choices about how they manage dryland rural drainage</p> <p>The Department of Environment, Land, Water and Planning, working with key stakeholders, will develop a drainage resource kit to provide landholders with the information they require to manage their dryland rural drainage under the arrangements described in this strategy. The drainage resource kit will continue to be developed and refined based on learning from pilot projects. It will include:</p> <ul style="list-style-type: none"> • An overview of the ways landholders can manage dryland rural drainage and the support available to them • A technical tool to help landholders consider the likely costs and benefits of investing in improved dryland rural drainage • Information about landholders' obligations to obtain approvals for drainage works • Guidance for landholders seeking the best value for money from drainage works, while also seeking to minimise the possible impacts of drainage works • Information about the legal arrangements for establishing drainage committees and the options for governance structures • Options for dispute resolution 	Department of Environment, Land, Water and Planning	Councils; catchment management authorities; Victorian Farmers Federation; Department of Economic Development, Jobs, Transport and Resources; Traditional Owner Groups	On release of strategy
<p>Action 4b</p> <p>Information on options available for dispute resolution</p> <p>The drainage resource kit will include information for landholders on the options available to them to manage dispute resolution in a range of circumstances.</p>	Landholders	Councils; Department of Environment, Land, Water and Planning	On release of strategy
<p>Action 4c</p> <p>Establish contemporary arrangements for systems previously managed by catchment management authorities</p> <p>By the end of 2020, catchment management authorities will finalise the pilot studies to investigate future management arrangements for the seven drainage areas where they have been involved in providing drainage services.</p>	Catchment management authorities	Department of Environment, Land, Water and Planning; councils; landholders	2020

Actions

Actions to be undertaken to implement the strategy	Lead Responsibility	Delivery Partners	Timeframe
<p>Action 4d</p> <p>Establish contemporary drainage management arrangements for the Eumeralla and Nullawarre drainage areas with administrative support from government agencies</p> <p>Councils, catchment management authorities and the Department of Environment, Land, Water and Planning will work together with landholders to investigate future management arrangements for the Eumeralla and Nullawarre drainage areas.</p> <p>The Glenelg Hopkins Catchment Management Authority will lead a pilot study to determine options for landholders and councils to manage the Eumeralla and Nullawarre drainage areas.</p> <p>For these two pilot projects, councils will provide ongoing administrative support to landholders where they continue to want drainage services and where the contemporary requirements outlined in this strategy are met.</p>	<p>Catchment management authorities</p>	<p>Councils; Department of Environment, Land, Water and Planning; landholders</p>	<p>2020</p>

Chapter 5 – Improvements for the environment

<p>Action 5a</p> <p>Provide increased clarity for landholders about approvals</p> <p>The drainage resource kit will include information that provides increased clarity about where works are unlikely to be approved or where a greater level of investment in environmental considerations is required for works that could have significant environmental impacts.</p> <p>This action will improve clarity and consistency about where and how approvals for drainage works are considered across the state. It will also provide clarity about the enforcement provisions that are designed to regulate landholders’ compliance with existing obligations.</p>	<p>Department of Environment, Land, Water and Planning</p>	<p>Councils; catchment management authorities</p>	<p>2019</p>
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Actions

Actions to be undertaken to implement the strategy	Lead Responsibility	Delivery Partners	Timeframe
<p>Action 5b</p> <p>Provide guidance on the preparation of dryland rural drainage management plans</p> <p>The Department of Environment, Land, Water and Planning will work with key stakeholders, including councils, Traditional Owners and Aboriginal Victorians, and catchment management authorities to develop guidance on how to prepare dryland rural drainage management plans. The guidance will include:</p> <ul style="list-style-type: none"> • Indications of where information may be required to demonstrate that the drainage works meet approved objectives and standards • Information on how the plan is capable of being registered on title • Lessons from Melbourne Water to help the catchment management authorities to tailor dryland rural drainage management plans to meet the needs of landholders within their regions (Policy 4i) <p>How and when landholders will be supported to consider the cost distribution will be based on who benefits from the management plans – essentially, those whose properties are inundated or waterlogged less often than they would have been without dryland rural drainage.</p> <p>Once the planned maintenance activities detailed in the plan have been approved by each of the relevant regulatory bodies, planned maintenance will be allowed without the need for further approvals for a period of up to 15 years (provided it is carried out in line with the conditions of those approvals – which could include a requirement to adhere to the dryland rural drainage management plan), at which time the approvals will be reviewed and then renewed with or without changed conditions.</p>	<p>Landholders</p>	<p>Catchment management authorities</p>	<p>2018</p>
<p>Action 5c</p> <p>Update the guidelines for developing regional waterway management strategies to include previously modified drainage areas in the priority-setting framework.</p> <p>The guidelines for developing regional waterway management strategies will be updated to include previously modified drainage areas in the priority-setting framework so that the restoration works that enhance or maintain values can be considered in these areas when investment decisions are being made.</p>	<p>Department of Environment, Land, Water and Planning</p>	<p>Catchment management authorities</p>	<p>By 2022</p>

Actions

Actions to be undertaken to implement the strategy	Lead Responsibility	Delivery Partners	Timeframe
Chapter 6 – Supporting collaboration with Aboriginal Victorians			
<p>Action 6a</p> <p>Partner with Registered Aboriginal Parties to raise awareness and clarify expectations for the management of Aboriginal cultural heritage in their respective areas</p> <p>Traditional Owner organisations will be invited to lead work with the support of the Department of Environment, Land, Water and Planning, and others, to clarify how the obligations in the <i>Aboriginal Heritage Act 2006</i> apply in the context of dryland rural drainage. Guidelines will be developed and included in the drainage resource kit. The guidelines will consider:</p> <ul style="list-style-type: none"> • The roles and responsibilities of stakeholders who have specific statutory responsibilities under the <i>Aboriginal Heritage Act 2006</i> • A checklist for landholders and government agencies on how to apply the cultural heritage obligations in a dryland rural drainage context • Opportunities to develop voluntary cultural heritage management plans • Examples of effective consideration of cultural heritage values • Options for landholders to seek support (such as for the preparation of dryland rural drainage management plans) • Information on compliance and enforcement 	Department of Environment, Land, Water and Planning	Catchment management authorities; councils; Registered Aboriginal Parties and other relevant government agencies	2019
<p>Action 6b</p> <p>Commence pilot projects to consider Aboriginal aspirations relating to dryland rural drainage</p> <p>As a starting point, work will commence on up to six pilot projects to support restoration of drainage areas to meet Aboriginal and cultural values.</p>	Catchment management authorities in partnership with Traditional Owners and Aboriginal Victorians	Department of Environment, Land, Water and Planning	2018
Chapter 7 – Delivering the strategy			
<p>Action 7a</p> <p>Support the ongoing implementation of the Victorian Rural Drainage strategy through an implementation working group</p> <p>The Department of Environment, Land, Water and Planning will partner with key stakeholders, including Traditional Owners and Aboriginal Victorians, landholders and government agencies, to support the transition of all stakeholders to the new arrangements under the Victorian Rural Drainage Strategy. This support will include coordinating actions arising from the strategy, and aligning these actions with broader government directions and policies.</p>	Department of Environment, Land, Water and Planning	Councils; catchment management authorities; Victorian Farmers Federation; Department of Economic Development, Jobs, Transport and Resources; Traditional Owner Groups	2020

Actions

Actions to be undertaken to implement the strategy	Lead Responsibility	Delivery Partners	Timeframe
<p>Action 7b</p> <p>Delivering the strategy</p> <p>The Department of Environment, Land, Water and Planning will oversee, monitor and evaluate the implementation of the Victorian Rural Drainage Strategy. The success of the strategy will be judged by the extent to which the proposed outcomes of the strategy have been met. To this end, the Department will:</p> <ul style="list-style-type: none"> • Undertake an evaluation of the strategy by 2023 • Collect data prepared by delivery partners as described in Table 7.1 • Report publicly on progress and achievements to deliver the Victorian Rural Drainage Strategy. 	Department of Environment, Land, Water and Planning	Councils; catchment management authorities; VicRoads and VicTrack; Department of Economic Development, Jobs, Transport and Resources; rural water corporations; Traditional Owner Groups, and Registered Aboriginal Parties.	2023

Policies

Policies that provide the management framework for dryland rural drainage	Lead Responsibility	Delivery Partner
Chapter 3 – Roles and responsibilities for dryland rural drainage in Victoria		
<p>Policy 3a</p> <p>Shared arrangements for managing dryland rural drainage in Victoria</p> <p>The arrangements for managing dryland rural drainage outlined in Table 3.1 of the Victorian Rural Drainage Strategy will apply throughout Victoria.</p>	Partnerships between all agencies and landholders with responsibility for dryland rural drainage	
Chapter 4 – Managing Dryland Rural Drainage		
<p>Policy 4a</p> <p>Provide tools and information to landholders so they can understand their options for managing dryland rural drainage</p> <p>A drainage resource kit will be available to support landholders to manage their dryland rural drainage under contemporary arrangements. The resource kit and other information will be provided by councils where appropriate.</p>	Councils	Department of Environment, Land, Water and Planning
<p>Policy 4b</p> <p>Agencies with responsibilities for public infrastructure will continue to manage their interactions with individuals’ drainage works</p> <p>Where a property’s drainage interacts with a piece of public infrastructure such as a road culvert or table drain, the relevant agency will continue to resolve issues through its existing prioritisation processes.</p>	Councils; VicRoads; VicTrack; catchment management authorities	

Policies

Policies that provide the management framework for dryland rural drainage	Lead Responsibility	Delivery Partner
<p>Policy 4c</p> <p>Landholders can continue to manage drainage through amicable agreements</p> <p>Landholders can continue to use non-written agreements to manage and maintain shared dryland rural drainage systems, but the information in the drainage resource kit (see Policy 4a), will encourage landholders to consider formal written agreements to support all parties if circumstances change (Policy 4d).</p>	Landholders	
<p>Policy 4d</p> <p>Landholders can continue to manage dryland rural drainage systems through written agreements</p> <p>Landholders are enabled and encouraged to enter into written agreements to manage and maintain dryland rural drainage systems. Written agreements make it easier for those landholders who already have amicable arrangements for dryland rural drainage management to work together and safeguard the arrangements for the future.</p>	Landholders	Councils
<p>Policy 4e</p> <p>Landholders can choose to prepare drainage management plans</p> <p>Landholders will be responsible for preparing dryland rural drainage management plans with the support of catchment management authorities.</p> <p>In developing drainage management plans, landholders will consider how costs will be distributed to those who benefit from the drainage system – that is, those landholders whose land is inundated or waterlogged less often than it would be without dryland rural drainage.</p>	Landholders	Catchment management authorities
<p>Policy 4f</p> <p>Principles for supporting landholders to manage dryland rural drainage</p> <p>Formal drainage committees may receive administrative support and guidance from agencies if:</p> <ul style="list-style-type: none"> • The need to manage the drainage system has the support of landholders who benefit from the drainage system – that is, those landholders whose land is inundated or waterlogged less often than it would be without dryland rural drainage • The landholders benefiting from the drainage system agree to pay for the maintenance and administrative costs of the system • The benefiting landholders are willing to participate in a formally constituted local drainage management committee • The formally constituted drainage committee holds appropriate insurance. 	Landholders	
<p>Policy 4g</p> <p>Supporting landholders to prepare dryland rural drainage management plans</p> <p>Catchment management authorities will facilitate discussions and provide guidance to landholders who seek support in developing dryland rural drainage management plans.</p>	Catchment management authorities	

Policies

Policies that provide the management framework for dryland rural drainage	Lead Responsibility	Delivery Partner
<p>Policy 4h</p> <p>Managing existing drainage infrastructure on waterways where ownership is unknown</p> <p>Where ownership of drainage infrastructure on waterways is unknown, catchment management authorities will assess and identify priority drainage structures for removal in the relevant regional waterway strategy.</p>	<p>Catchment management authorities</p>	
<p>Policy 4i</p> <p>Managing waterways and drainage in Melbourne</p> <p>This strategy does not alter the waterways and drainage management arrangements in Melbourne. Where landholders receive increased levels of service for drainage arrangements, they will continue to pay for those services.</p> <p>In managing the Koo Wee Rup and Longwarry Flood Protection areas, Melbourne Water, in partnership with landholders and other agencies, will continue to implement and review its dryland rural drainage management to ensure they remain robust.</p> <p>Melbourne Water will share with catchment management authorities the lessons it has learned in its role in helping to manage the Koo Wee Rup and Longwarry Drainage area. This will help the catchment management authorities to tailor dryland rural drainage management plans to meet the needs of landholders within their regions.</p>	<p>Melbourne Water</p>	
<p>Policy 4j</p> <p>Managing existing drainage infrastructure vested in agencies</p> <p>The responsibility for managing drainage infrastructure and associated infrastructure such as table drains, culverts, bridges and water-regulating structures remains with the authority that was vested with it. Those authorities will continue to be responsible for managing any risks associated with that infrastructure in line with their procedures or policies.</p> <p>Ongoing support for drainage services will only be provided where landholders agree to the principles for supporting landholders to manage dryland rural drainage outlined in this strategy (Policy 4f).</p>	<p>Councils; catchment management authorities</p>	
<p>Policy 4k</p> <p>Managing dryland rural drainage where it interacts with irrigation drainage services and the take and use of water</p> <p>Rural water corporations will regulate the take and use of water and manage infrastructure and drainage associated with irrigation in regulated districts.</p> <p>In areas where dryland rural drainage infrastructure drains into irrigation district infrastructure, or where dryland rural drainage has been established in or near an irrigation area, and existing arrangements are in place for landholders pay for these services, rural water corporations will continue to provide drainage services.</p>	<p>Rural water corporations</p>	

Policies

Policies that provide the management framework for dryland rural drainage	Lead Responsibility	Delivery Partner
Chapter 5 – Improvements for the environment		
<p>Policy 5a</p> <p>Considering the water quality impacts of dryland rural drainage</p> <p>Dryland rural drainage management plans will avoid, or at least minimise the impact of dryland rural drainage on receiving waterways.</p>	Landholders	
<p>Policy 5b</p> <p>Considering climate change and climate variability in drainage management</p> <p>As part of the drainage resource kit, councils will provide landholders with guidance materials to help them take account of climate change and climate variability when making decisions regarding investment in drainage management (Policy 4a).</p> <p>Where landholders ask catchment management authorities to provide them with support in developing drainage management plans (Policy 4g), the catchment management authorities will encourage landholders to consider up-to-date climate change information before committing to significant investment in improving management of dryland rural drainage.</p>	Landholders	
<p>Policy 5c</p> <p>Identify priority areas for environmental restoration of waterways</p> <p>In line with the <i>Victorian Waterway Management Strategy</i>, regional waterway strategies will identify actions to mitigate the impacts of existing drainage on waterways where it is feasible and cost-effective, where it has community support and where it does not affect other stakeholders.</p> <p>Catchment management authorities, in partnership with key stakeholders including Traditional Owners, will consider a combination of incentives, education, awareness and partnerships with the private sector to encourage environmental restoration.</p>	Catchment management authorities	
Chapter 6 – Supporting collaboration with Aboriginal Victorians		
<p>Policy 6a</p> <p>Identify priority areas for restoration of previously drained areas for cultural benefit</p> <p>In line with the <i>Victorian Waterway Management Strategy</i>, regional waterway strategies will identify actions to mitigate the effects of existing drainage on Aboriginal cultural values where (i) it is no longer required for drainage purposes by landholders, (ii) it is feasible and cost effective, and (iii) where it has community support and does not affect other stakeholders. This consideration will reflect a broad definition of cultural heritage values.</p> <p>Traditional Owners and Aboriginal Victorians will be invited to work with catchment management authorities to consider a combination of incentives, education, awareness and partnerships with the private sector and landholders to encourage restoration works.</p>	Catchment management authorities	Traditional Owners and Aboriginal Victorians

8 Glossary

Aboriginal Victorians An Aboriginal Victorian is a person of Aboriginal descent who identifies as Aboriginal and is accepted as such by the Victorian Aboriginal community in which he or she lives.

Adaptation Changes in natural or human systems to prepare for actual or expected changes in the climate to minimise harm, act on opportunities or cope with the consequences.

Agencies For the purposes of the strategy, the term agencies includes councils and catchment management authorities, the Department of Environment, Land, Water and Planning, and the Department of Economic Development, Jobs, Transport and Resources. It can also include Vic Roads and VicTrack.

Assets Resources that provide benefit. Drainage assets can include, for example, infrastructure such as pipes and pumps, culverts, dams, bores and table drains.

Biodiversity The numbers and variety of plants, animals and other living beings, including micro-organisms, across our land, rivers and oceans. It includes the diversity of their genetic information, the habitats and ecosystems in which they live and their connections with other life forms.

Catchment An area where water falling as rain is collected by the landscape, eventually flowing to a body of water such as a creek, river, dam, lake or ocean, or into a groundwater system.

Catchment management authorities The *Catchment and Land Protection Act 1994* established 10 catchment and land protection regions, each with a catchment management authority responsible for the integrated planning and coordination of land, water and biodiversity management.

Climate change Changes in the state of the climate, including an increase in extreme weather events, long-term changes in weather patterns and sea level rise, attributed directly or indirectly to human activity.

Community Includes individuals, public and private landholders, community groups and business owners.

Country Aboriginal culture revolves around relationships to the land and water. For Traditional Owners, Country is a part of who they are, just as they are a part of it.

Country Plans Country Plans are one way for Traditional Owners to articulate their priorities and aspirations for looking after Country. They can be strategic plans that encompass physical and spiritual concepts of Country. They can also provide a strategic basis for partnerships, and identify management actions and economic opportunities.

Cultural Heritage Management Plan (CHMP) Where rehabilitation work is planned in an Aboriginal place that is associated with ancestral remains, and for which a permit is not applicable, a Cultural Heritage Management Plan may be appropriate. A proponent seeking to undertake works may choose to prepare a Voluntary Cultural Heritage Management Plan.

Culvert A structure that allows water to flow under a road, railroad, trail, or similar obstruction.

Department of Economic Development, Jobs, Transport and Resources Victorian Government department working across multiple portfolios. Within this department, Agriculture Victoria works with the agriculture and fisheries industries on research, development and extension to improve production, connect the sector with international markets, support development and maintain effective biosecurity.

Department of Environment, Land, Water and Planning Victorian Government department that brings together planning, local government, environment, energy, suburban development, forests, emergency management, climate change and water functions into a single department to strengthen connections between the environment, community, industry and economy.

Delivery partners Groups or government agencies that work with the nominated lead responsibility party, to provide support through specialised knowledge and advice or works to deliver actions and policies.

Drainage The works and functions related to the collection and removal of local rainfall runoff from land prone to natural water-logging.

Dryland agriculture Agricultural land that is not actively connected to surface water supplies, via direct contact or irrigation. Dryland farmers manage their own on-farm water supplies, including waterlogging.

Dryland rural drainage For the purposes of this strategy, dryland rural drainage is defined as the works and functions related to the collection, and timely removal, of excess water generated by high rainfall to support agriculture production. It involves enhancing the hydraulic capacity of drainage lines and soils, and increasing the rate at which water will flow off (or through) and away from land, to support increased agricultural production in dryland areas.

Ecosystem A dynamic complex of plant, animal, fungal and microorganism communities and the associated non-living environment interacting as an ecological unit.

Floodplain Low-lying land adjacent to a river or stream with unique ecosystems dependent on inundation from flood events.

Floodplain management Flood prevention activities and flood management together with related environmental activities (see also floodplain).

Groundwater Water that is beneath the earth's surface in pores and crevices of rocks and soil. The layers of soil and rock that contain useable quantities of groundwater are called aquifers.

Hydraulic capacity A measure of the maximum volume of flow able to pass through a material, structure or watercourse.

Hydrology The scientific study of water and its movement, distribution and quality.

Irrigation drainage Networks implemented to remove excess surface water generated by rainfall events from irrigated landscapes.

Landholders People who own land and, in particular, individuals who make their living from it.

Lead responsibility Key group or government agency that is accountable to undertake works or provide services to deliver actions and policies.

Melbourne Water Supplies bulk drinking and recycled water to Melbourne, manages its water supply catchments, sewage treatment and rivers, creeks and major drainage systems.

Millennium Drought The drought in Victoria that lasted from 1997 to 2009.

Peri-urban drainage Drainage in non-urban areas close to cities and towns. Peri-urban areas are often described as areas of rapid land use change where more intensive use is becoming more common.

Ramsar wetlands Wetlands of international significance designated under the Ramsar Convention.

Reservoir Natural or artificial dam or lake used for the storage and regulation of water.

Riparian Land or vegetation that adjoins a river, creek, estuary, wetland or lake.

Runoff Rainwater that drains into the surface drainage network to become streamflow; also known as rainfall excess.

Rural water corporations Provide a range of water services to customers within their service areas. The services comprise water supply, sewage and trade waste disposal and treatment, water delivery for irrigation and domestic and stock purposes, drainage, and salinity mitigation services.

Stormwater Runoff from urban areas. There is a net increase in runoff from urban development due to water not being able to seep into the ground because of impervious surfaces such as roofs and roads.

Streamflow The flow of water once it enters a river, stream or channel.

Surface water Water on the surface of the planet, including streams, rivers, lakes, wetlands and oceans.

Table drains Normally earthen drains excavated next to, and running alongside, roadways and that are designed to ensure the road is properly drained. This term can also refer to communal drainage for rural drainage schemes.

Traditional Owners People who, through membership of a descent group or clan, are responsible for caring for Country. Aboriginal people with knowledge about traditions, observances, customs or beliefs associated with a particular area. A Traditional Owner is authorised to speak for Country and its heritage. For the purposes of application of the *Aboriginal Heritage Act 2006*, a Traditional Owner is defined as:

(a) An Aboriginal person with particular knowledge about traditions, observances, customs or beliefs associated with the area;

(b) A person with responsibility under Aboriginal tradition for significant Aboriginal places located in, or significant Aboriginal objects originating from, the area; or who is a member of a family or clan group that is recognised as having responsibility under Aboriginal tradition for significant Aboriginal places located in, or significant Aboriginal objects originating from, the area.

Vegetation communities A relatively uniform patch of plant species within a designated area, which is distinct from neighbouring patches of different vegetation types.

Waste In the context of the State Environment Protection Policy (Waters), waste includes any matter whether solid, liquid, gaseous or radio-active that is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment.

For example, rainfall runoff with contaminants from properties would be considered waste.

Wastewater Water, otherwise known as sewage, that has had its quality affected by human influence, deriving from industrial, domestic, agricultural or commercial activities.

Water corporations Government owned organisations that provide a range of water services to customers within their service areas, including water supply, sewage and trade waste disposal and treatment, water delivery for irrigation and domestic and stock purposes, drainage, and salinity mitigation services. Some water corporations have a regulatory function for the diversion of water from waterways and the extraction of groundwater. Formerly known as water authorities.

Water quality Refers to the chemical, physical, biological, and radiological characteristics of water. It is a measure of the condition of water relative to the requirements of one or more biotic species and or to any human need or purpose.

Waterways Rivers and streams, their associated estuaries and floodplains (including floodplain wetlands) and non-riverine wetlands.

Waterway managers Authorities with a waterway management district under the *Water Act 1989* – these are the nine regional catchment management authorities and Melbourne Water in the metropolitan region.

Weir A barrier across a river designed to alter flow characteristics.

Wetlands Natural, modified or artificial areas subject to permanent or temporary inundation, that hold static or very slow moving water and develop, or have the potential to develop, biota adapted to inundation and the aquatic environment. Wetlands may be fresh or saline.

Photo credits

Front cover: *Wet Paddocks* (Victorian Catchment Management Council)

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Appendix 1

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