

An overview of the Victorian Waterway Management Strategy



The Department of Environment and Primary Industries proudly acknowledges and pays its respects to Victoria's Native Title holders and Traditional Owners and their rich culture and intrinsic connection to Country.

The department also recognises and acknowledges the contribution and interests of other Aboriginal people and organisations in waterway management.

Finally, the department acknowledges that the past injustices and continuing inequalities experienced by Aboriginal people have limited, and continue to limit, their proper participation in land, water and natural resource management.

List of Photos

- Cover:* Baker's Swamp, Moolort. Photographer: Nick Layne
- Page 1:* River Red Gums on the Murray River. Courtesy DEPI
- Page 2:* Project staff travel to Mildura to discuss the draft Strategy. Courtesy DEPI
- Page 3:* Having fun on Lake Bolac. Courtesy Ararat Rural City
- Page 5:* Sydenham Inlet. Photographer: Sean Philipson
- Page 7:* Looking out on the Morass. Photographer: Simon Dillinger
- Page 11:* Waterwatch volunteers undertake important monitoring activities. Courtesy DEPI
- Page 12:* Enjoying the Glenelg River. Photographer: Johanna Slijkerman (top)
Budgee Creek. Photographer: Shar Ramamurthy (bottom)
- Page 13:* Vegetated riparian land on the Lower Franklin River. Courtesy West Gippsland CMA (top)
Water quality affecting the Murray Cray. Photographer: Keith Ward (centre)
Fish ladder at Cowwarr Weir, Thomson River. Courtesy West Gippsland CMA (bottom)
- Page 14:* Kinnairds shallow freshwater wetlands. Photographer: Yvette Baker (top)
Powlett River. Courtesy West Gippsland (bottom)
- Page 15:* Moyne River, Port Fairy. Courtesy Glenelg Hopkins CMA (top)
Imperial Hotel Bairnsdale. Courtesy East Gippsland CMA (centre)
At the Mallee Catch a Carp day. Courtesy Mallee CMA (bottom)
- Page 16:* School students river rafting on the Mitchell River. Photographer: Cuc Chong
- Page 17:* Canoeing on the Glenelg River. Photographer Johanna Slijkerman

Authorised and published by the Victorian Government,
Department of Environment and Primary Industries,
8 Nicholson Street, East Melbourne, September 2013

© The State of Victoria Department of Environment and Primary Industries 2013
This publication is copyright. No part may be reproduced by any process
except in accordance with the provisions of the *Copyright Act 1968*.

Print managed by Finsbury Green September 2013.

ISBN 978-1-74287-893-5 (Print)
ISBN 978-1-74287-894-2 (PDF)

Accessibility

If you would like to receive this publication in an alternative format,
please telephone DEPI Customer Service Centre 136 186, email
customer.service@depi.vic.gov.au, via the National Relay Service on 133 677
www.relay.vic.gov.au This document is also available on the internet at
www.depi.vic.gov.au

Disclaimer

This publication may be of assistance to you but the State of Victoria and
its employees do not guarantee that the publication is without flaw of any
kind or is wholly appropriate for your particular purposes and therefore
disclaims all liability for any error, loss or other consequence which may
arise from you relying on any information in this publication.

An overview of the Victorian Waterway Management Strategy

The Victorian Waterway Management Strategy (the Strategy) provides the framework for government, in partnership with the community, to maintain or improve the condition of rivers, estuaries and wetlands so that they can continue to provide environmental, social, cultural and economic values for all Victorians. The framework is based on regional planning processes and decision-making, within the broader system of integrated catchment management in Victoria.

The Strategy is intended for State government, waterway managers, land managers, local government, other regional agencies or authorities and management partners, Traditional Owners, landholders and community groups involved in waterway management or activities that may affect waterway condition. It outlines the Victorian Government's policy on regional decision-making, investment, management activities and specific management issues for waterways. It provides clear guidance on the development and implementation of the regional strategies and management plans that are integral to the success of the waterway management program in Victoria. The Strategy also describes the institutional arrangements for waterway management in Victoria.

Specifically, the Strategy establishes:

- a vision, guiding principles and management approach
- a transparent, integrated waterway management framework that:
 - facilitates regional decision-making with community input
 - sits within an integrated catchment management context
 - comprehensively integrates waterway management activities
- an adaptive management framework and flexible approach to manage through the challenges of drought, flood, bushfire and the potential impacts of climate change
- aspirational Strategy targets that summarise key regional management activities over the next eight years that aim to maintain or improve the condition of waterways
- clear policy directions for waterway management issues
- specific actions that will deliver more effective and efficient management of waterways.



Strategy background and fundamentals

The Strategy background and fundamentals are outlined in Chapters 1 - 6. Key concepts from these chapters are described below.



Development process

The policies and actions in the Strategy have been the subject of extensive discussion and review as part of a strong consultation program (see Figure 1). Four dedicated committees have met many times over the past four years and include a Stakeholder Reference Committee, Expert Scientific Panel, Internal Review Committee and the Victorian Waterway Managers' Forum. Additional stakeholders, such as water corporations and the Victorian Traditional Owner Land Justice Group, were engaged on specific waterway management issues. Feedback was also invited from all Victorians during the six-week public consultation period for the *Draft Victorian Waterway Management Strategy*. This community input, and how it was considered in developing the Strategy, is outlined in the report *Community Feedback: Draft Victorian Waterway Management Strategy*.

These documents are all available at:

www.depi.vic.gov.au/water/rivers-estuaries-and-wetlands

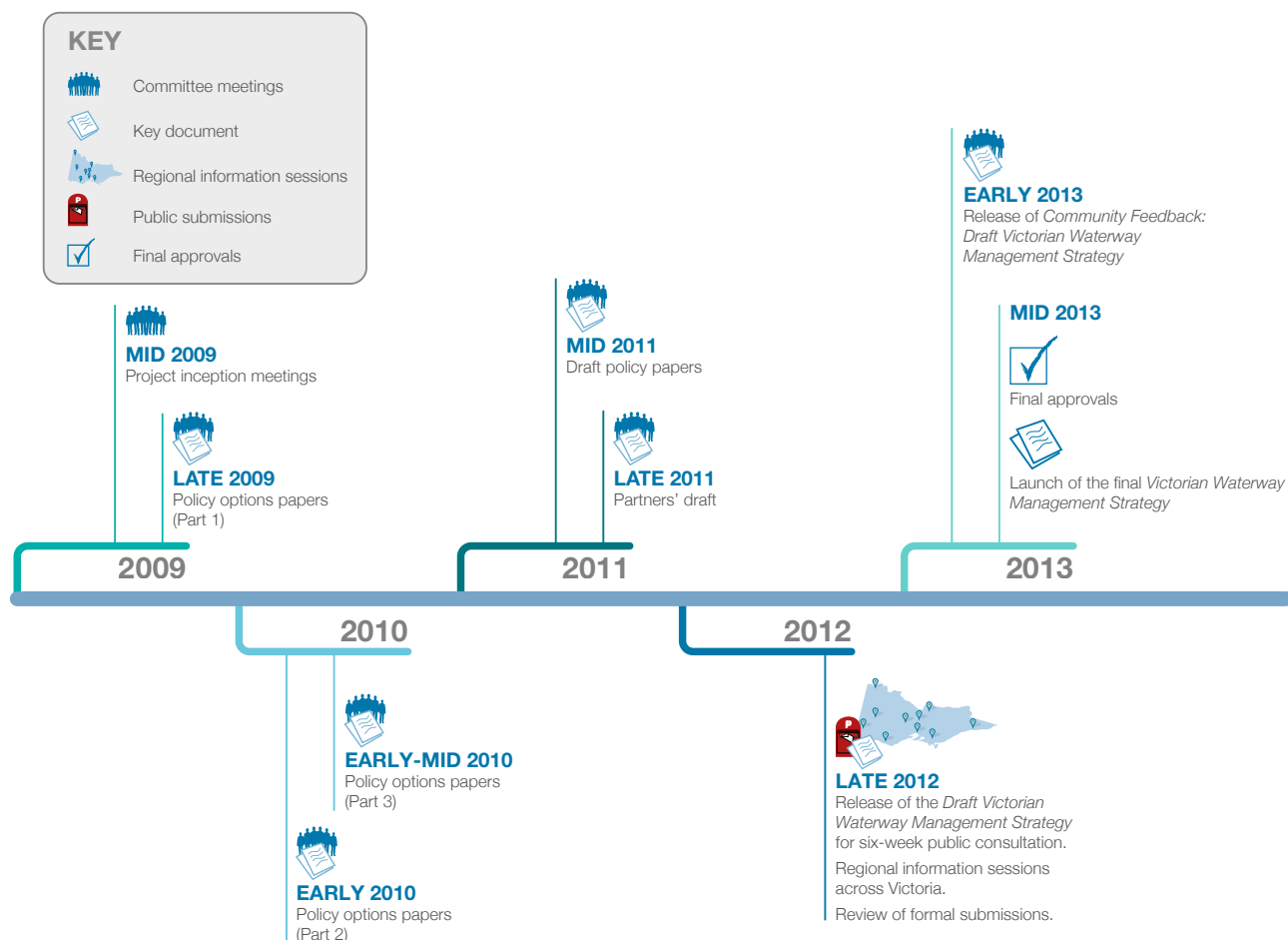


Figure 1: Timeline of key events in developing the Strategy



The vision for Victoria's waterways is:

Victoria's rivers, estuaries and wetlands are healthy and well-managed; supporting environmental, social, cultural and economic values that are able to be enjoyed by all communities.

Current waterway condition

The condition of waterways in Victoria is periodically assessed by the Department of Environment and Primary Industries (DEPI) using the Index of Stream Condition (ISC), Index of Wetland Condition (IWC) and the pilot Index of Estuary Condition (IEC).

Rivers

The third ISC assessment (incorporating data from 2004-2010) showed that across Victoria 12% of total river length assessed was in excellent condition, 11% in good condition, 43% in moderate condition, 19% in poor condition, 13% in very poor condition and 2% had insufficient data (see Figure 2).

Data can also be compared across different regions of Victoria (see Figure 3). For example, when data in the East Gippsland river basin (basin 21) is combined it shows that more than 70% of river length in this basin is in good or excellent condition.

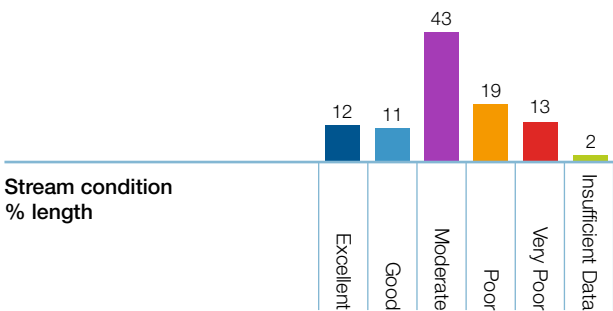
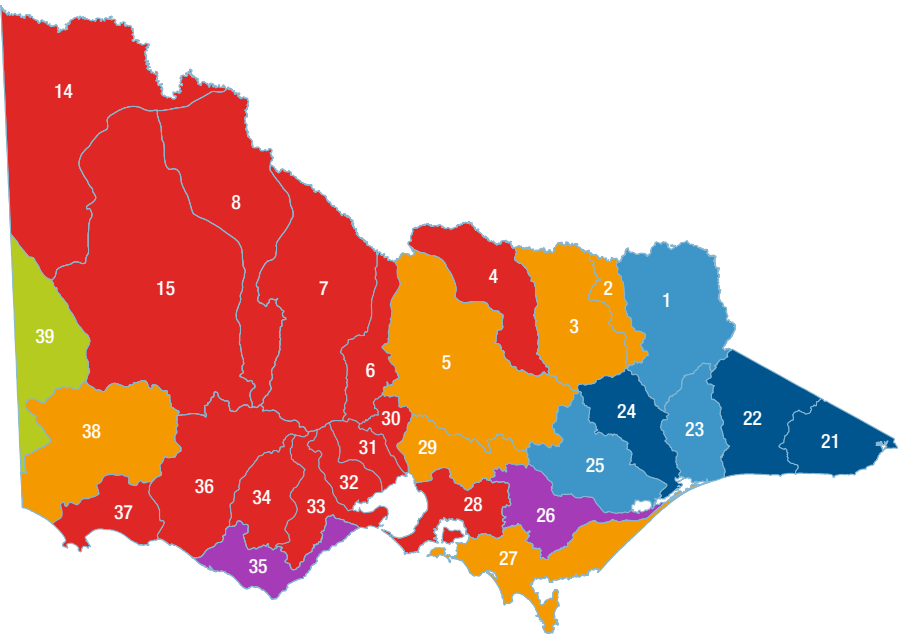


Figure 2: Condition of rivers in 2010




Environmental Condition	Basin Names							
 >70%	1 Upper Murray	14 Mallee	27 South Gippsland	35 Otway				
 51-70%	2 Kiewa	15 Wimmera	28 Bunyip	36 Hopkins				
 31-50%	3 Ovens	21 East Gippsland	29 Yarra	37 Portland				
 11-30%	4 Broken	22 Snowy	30 Maribyrnong	38 Glenelg				
 <10%	5 Goulburn	23 Tambo	31 Werribee	39 Millicent Coast				
 Insufficient Data	6 Campaspe	24 Mitchell	32 Moorabool					
	7 Loddon	25 Thomson	33 Barwon					
	8 Avoca	26 LaTrobe	34 Corangamite					

Figure 3: Percentage length of rivers in each basin with good or excellent condition.

Wetlands

In 2009/2010, the IWC was used to benchmark the condition of almost 600 high value wetlands. The assessment found that 24% were in excellent condition, 32% in good condition, 30% in moderate condition, 13% were in poor condition and 1% in very poor condition. Wetlands on public land were generally in better condition than those on private land (see Figure 4).

Estuaries

A pilot IEC program has recently been undertaken to trial methods for assessing the health of Victoria's estuaries. This preliminary program showed that estuaries were least modified in areas of West Gippsland and far east Gippsland. There were substantial modifications to some estuaries in western Victoria and Port Phillip Bay.

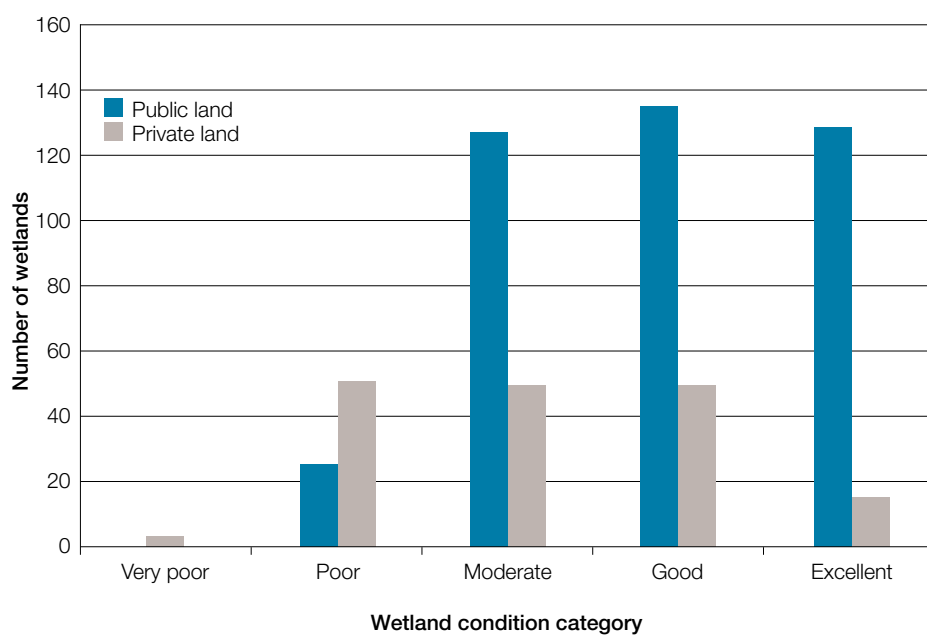


Figure 4: Condition of wetlands in 2009/10



The Department of Environment and Primary Industries assesses the condition of waterways to inform policy and management.

Catchment and waterway management in Victoria

In Victoria, there are ten catchment management regions (see Figure 5) and each has a catchment management authority to co-ordinate integrated management of land, water and biodiversity.

Catchment management authorities also have specific responsibilities for waterway management (under the *Water Act 1989*), except in the Port Phillip and Westernport region where Melbourne Water have the waterway management responsibilities.



Figure 5: The ten catchment management regions in Victoria.

Management objective for waterways in Victoria

Improving the environmental condition of waterways in priority areas is a critical task to sustain populations of native plants and animals, provide opportunities for recreation, protect cultural values, and support economic development through important industries such as tourism and agriculture (see Figure 6).

The overarching management objective of the strategy is to maintain or improve the environmental condition of waterways to support environmental, social, cultural and economic values.

Management activities will focus on maintaining or improving the environmental condition of priority waterways to provide public benefits.

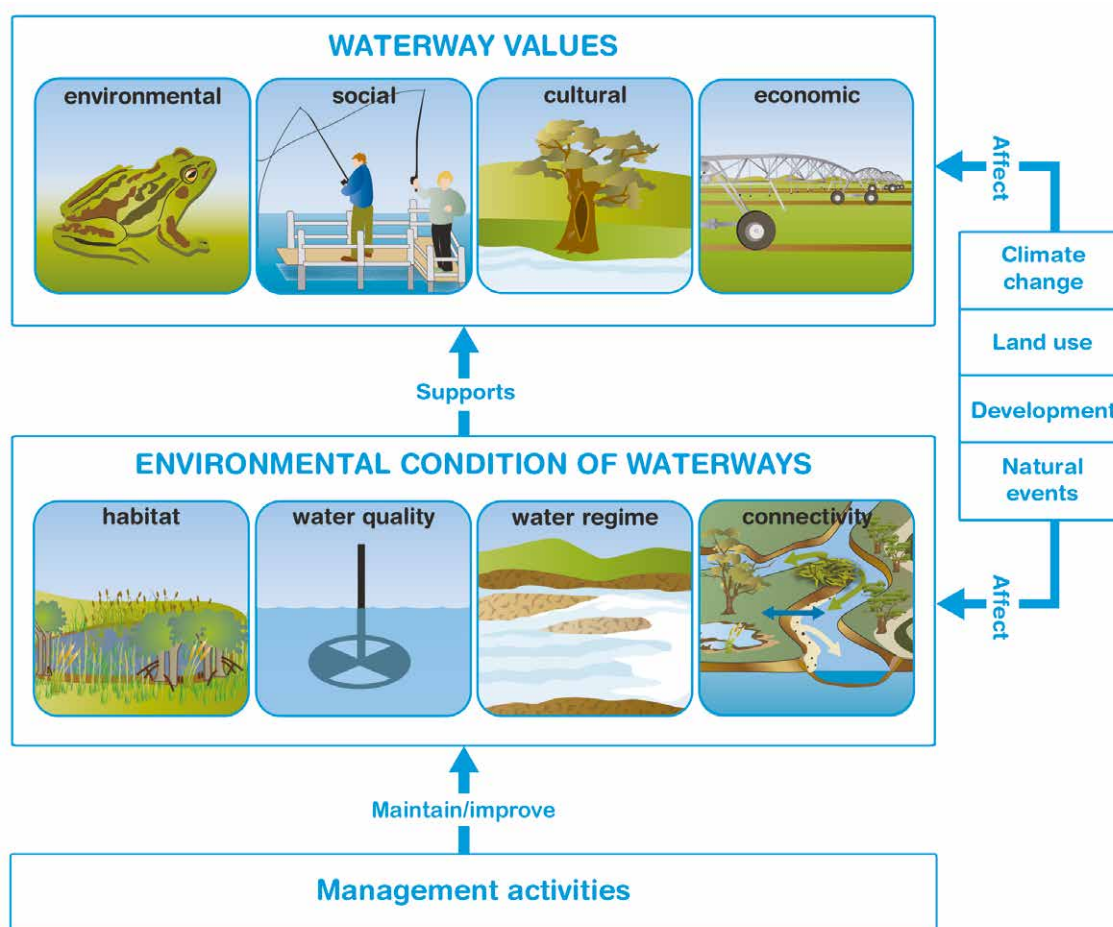


Figure 6: The drivers of environmental condition that support the values of waterways.

Management approach for waterways in Victoria

The approach for managing waterways involves four key elements:

- recognising the importance of waterways with formal international, national and state significance
- implementing and maintaining onground works and managing environmental water in priority waterways
- fostering strong community partnerships
- using regulation (legislation and statutory processes).

Implementing the management approach

The management approach for waterways will be implemented through the 'Victorian Waterway Management Program'. The Department of Environment and Primary Industries (DEPI) is primarily responsible for oversight of the Program and establishing the state policy framework for waterway management. Regional implementation of the Program is led by the waterway managers (that is, catchment management authorities and Melbourne Water in the metropolitan region).

This Program is an eight-year adaptive management cycle (except for Melbourne Water who operate on a five-year cycle), where learning occurs at all stages and is used to update and improve the program in subsequent cycles.

The Victorian Waterway Management Program (see Figure 7) involves the following stages and components:

- **Strategy and planning** – statewide policy framework and targets, planning for waterway management through regional Waterway Strategies with priorities and regional targets.
- **Implementation and monitoring** – Government and other investment in regional priorities, implementation of priority management activities, monitoring of management activities (intervention monitoring) and long-term resource condition assessment.
- **Evaluation and reporting** – management reporting, resource condition reporting, program evaluation and improvement.

Community participation and research and innovation occur across all parts of the Program.

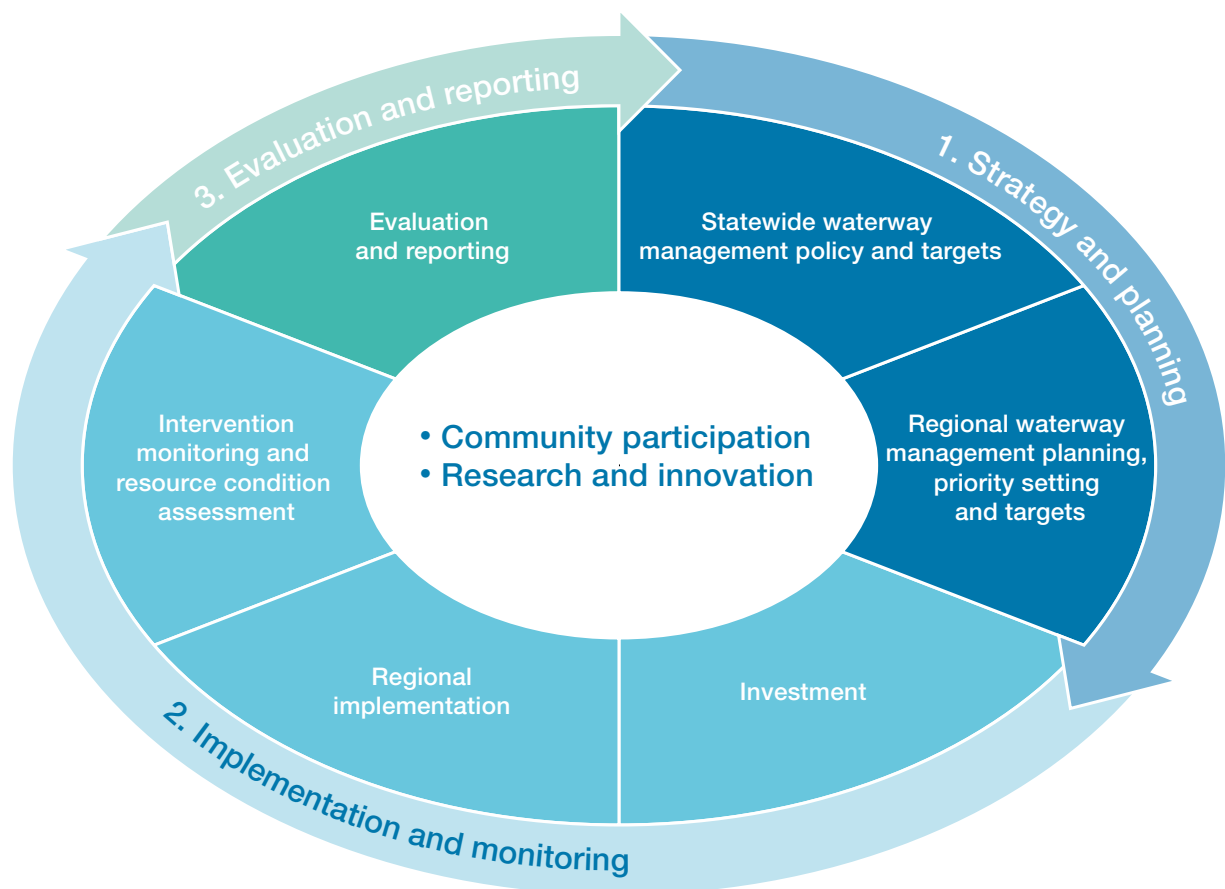


Figure 7: The eight-year adaptive management cycle of the Victorian Waterway Management Program.

Regional waterway management

Development and implementation of regional Waterway Strategies for each of the ten catchment management regions across Victoria (see Figure 5) will deliver key elements of the management approach outlined in the Strategy. The regional Waterway Strategies and other key planning documents for waterway management are shown in Figure 8. This diagram also illustrates the links to important regional plans such as the Regional Catchment Strategies and regional Sustainable Water Strategies. The regional Waterway Strategies, required under the *Water Act 1989*, will identify high value waterways and priority management activities over an eight-year period. They will be based on a transparent, regional priority setting process and be developed in close consultation with key partners and the community. This process will ensure that investment in onground works and environmental water management is targeted at priority waterways to achieve the greatest community gain.

The regional Waterway Strategies will build on the success of the previous regional River Health Strategies by expanding their scope to include wetlands and estuaries (where applicable). They will also comprehensively integrate priorities for environmental water management with other waterway management activities.

The regional Waterway Strategies will:

- identify high value waterways (based on environmental, social, cultural and economic values)
- determine priority waterways for the eight-year planning period
- include a regional work program of management activities for priority waterways (including environmental water management)
- guide investment into multi-year projects and annual work programs
- be developed in consultation with regional agencies and boards, Traditional Owners, the regional community and other key stakeholders
- seek comments on a draft strategy during a public consultation period of at least one month
- be endorsed by the Minister for Water and the Minister for Environment and Climate Change.

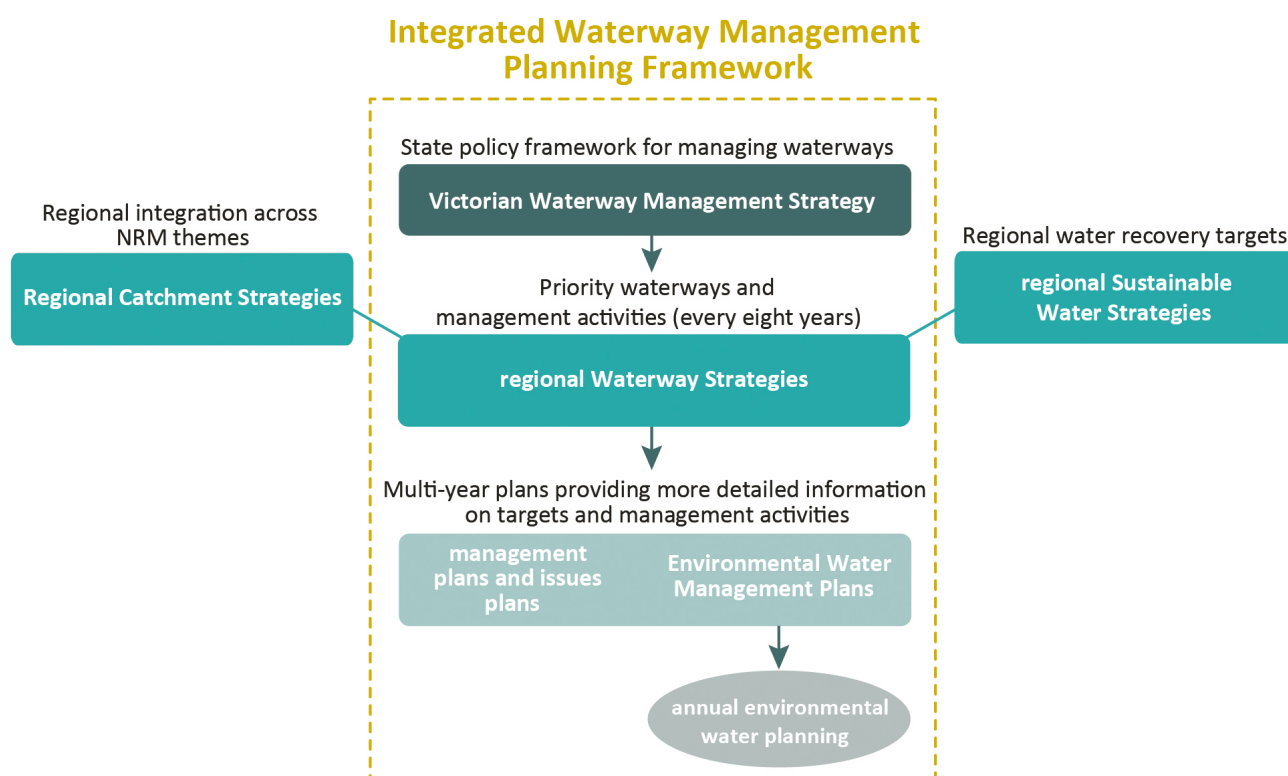


Figure 8: The Integrated Waterway Management Planning Framework.

Principles for identifying high value waterways

Waterways have many values and information about those values is critical to the development of the regional Waterway Strategies.

High value waterways are not just those with environmental values, they also include waterways that are important for their high social, cultural or economic values.

Waterways will be considered high value if they have one, or more, of the following characteristics:

- formally recognised significance
- presence of highly threatened or rare species and ecological communities
- high naturalness values (for example, aquatic invertebrate¹ communities or riparian² vegetation) or special waterway features (for example, drought refuges³ or important bird habitat)
- high social, cultural or economic values (for example, recreational fishing, Aboriginal cultural heritage and urban or rural water sources).

Identifying regional priorities

Priority setting is a core activity in planning to ensure that the best outcome is achieved from the available resources. A transparent process for setting priorities is undertaken in each region based on detailed information about waterways, their values, threats to those values and the levels of risk. The outcomes of the regional priority setting process are described in Figure 9.

The regional priority setting process underpinning development of the regional Waterway Strategies must:

- develop regional goals for waterway management
- identify high value waterways (based on environmental, social, cultural and economic values)
- filter the high value waterways and select those that align with the regional goals
- identify threats to the values of those waterways and assess the level of risk
- determine priority waterways for the eight-year planning period
- identify high level management activities and assess their feasibility and cost effectiveness
- select priority management activities to form a regional work program for the eight-year planning period.

	Low risk to values	High risk to values
Priority waterways	Management activities to maintain waterway condition	Management activities to reduce threats to waterway condition
Other waterways	Not a priority within the eight-year planning period	Management activities only if they: <ul style="list-style-type: none"> • reduce threat to high value waterways • provide connectivity⁴ • protect public infrastructure or reduce risks from extreme events • maintain or strengthen community commitment to improving the condition of local waterways • are required to meet statutory or regulatory obligations.

Figure 9: Summary outcomes of the regional priority setting process.

Community participation

Rivers, estuaries and wetlands are important to everyone in the community and are a fundamental part of our common heritage. All Victorians, from our cities to the regions, have a stake in how healthy our waterways are and may want opportunities to be involved in their management.

Local communities in Victoria are strongly involved in 'hands on' work to improve catchment and waterway health. Landholders, particularly farmers, have a long history of looking after land and water resources by controlling weeds and invasive species, planting trees and fencing riparian land.

Victorian Traditional Owner involvement in waterway management

Victorian Traditional Owners have strong cultural obligations to manage waterways on their Country⁶. Their aspirations regarding waterway management span the full range of environmental, social, cultural and economic values that waterways provide.

Given the strong aspirations and rights of Traditional Owners to be involved in waterway management on their Country, they are considered critical partners in the development of the regional Waterway Strategies.

The Victorian Government is progressively strengthening partnerships with Traditional Owners through joint and co-operative management agreements over public land.

The Victorian Government will continue to support community participation in planning, implementation and monitoring activities for waterway management programs.

The Victorian Government will continue to promote local action by supporting the work of individuals, community-based natural resource management groups and other volunteer groups to maintain or improve the environmental condition of catchments and waterways.



All Victorians, from our cities to the regions, have a stake in how healthy our waterways are.

Management issues

The Strategy outlines a range of management issues for waterways and specific policies and actions for each. The following management issues and key improvements are detailed in Chapters 7–16.



Chapter 7 – Recreational use of waterways

For recreational use of waterways the Strategy will:

- encourage and support community involvement in waterway planning for, and management of, recreational use of waterways
- acknowledge the importance of waterways for recreation and promote sustainable recreational use
- manage risks associated with recreational use through guidelines, protocols and education.



Chapter 8 – Environmental water management

For environmental water⁶ management the Strategy will:

- reaffirm Victoria's approach to managing environmental water, in recognition of the advances that have been made in recovering water for the environment and establishing robust frameworks for its management
- clarify the roles, responsibilities and relationships between waterway managers, the Victorian Government, the Victorian Environmental Water Holder and the Commonwealth Environmental Water Holder, as well as Victoria's interaction with the Murray-Darling Basin Authority and Murray-Darling Basin Plan
- provide policy direction to address complex environmental water management issues, such as considering social and cultural benefits that are supported by environmental water
- describe tools to achieve more efficient and effective use of existing environmental water
- outline actions to reduce risks to environmental water availability
- identify and manage groundwater-dependent ecosystems
- support research and monitoring to improve knowledge about the ecological outcomes of environmental water use.



Chapter 9 – Riparian management

For riparian management the Strategy will:

- establish a framework to progressively maintain and improve priority public and private riparian land through voluntary agreements for fencing, weed management, revegetation and long-term management of riparian land
- strengthen the partnership approach to managing riparian land, between private landholders, government and relevant agencies and clarify the roles of various agencies in riparian management
- review and/or reform legislative and administrative arrangements to improve management of public riparian land
- provide clear management directions for difficult riparian management issues such as controlled grazing⁷, long-term management of fences and fenced riparian land, and access to water for stock.



Chapter 10 – Water quality

For water quality the Strategy will:

- update the regional planning arrangements for water quality management
- set objectives for water quality monitoring across Victoria
- outline agency roles and responsibilities for water quality management
- commit to clarifying and strengthening roles and responsibilities for managing water quality incidents.



Chapter 11 – The river channel

For managing the river channel the Strategy will:

- promote a partnership approach between land and water managers, local government and the community
- identify opportunities to maintain or improve river channel condition by reducing risks associated with existing instream structures such as water storages or weirs
- commit to develop best practice standards for construction and maintenance works in waterways
- improve connectivity to support native fish populations and monitor effectiveness of fish passage works.



Chapter 12 – Wetlands

For wetlands the Strategy will:

- comprehensively integrate the management of wetlands with the management of rivers and estuaries
- commit to maintaining the values of Ramsar sites (incorporating site management plans into the regional Waterway Strategies), monitoring their ecological character and providing clarity regarding the listing of new Ramsar sites
- commit to environmental watering of high value wetlands on the floodplains of regulated rivers, on a priority basis
- ensure public land managers and waterway managers work together more closely to manage wetlands in parks and reserves
- ensure that wetland biodiversity is integrated into landscape connectivity⁴ planning
- outline approaches for maintaining and improving connectivity⁴ between rivers and floodplain wetlands
- outline arrangements for improving the long-term security of wetlands on public land reserves in fragmented landscapes⁸
- commit to providing assistance for landholders to improve the conservation and sustainable use of wetlands on private land
- outline the existing arrangements for mitigating risks to wetlands from irrigation drainage and provide for better protection of wetlands from rural drainage.



Chapter 13 – Estuaries

For estuaries the Strategy will:

- comprehensively integrate the management of estuaries with the management of rivers and wetlands
- clarify and formalise organisational responsibility for estuary entrance management
- improve strategic planning of management activities to maintain or improve the environmental condition of estuaries
- enhance knowledge to support improved estuary management
- strengthen programs to increase community awareness of, and involvement in, estuary management.



Chapter 14 – Waterways in urban areas

Improved condition of waterways in urban areas will be a key outcome of the Government's *Living Victoria* initiative for urban water, which is a commitment to:

- support liveable and sustainable communities
- protect the environmental health of urban waterways and bays
- provide secure water supplies efficiently
- protect public health
- deliver affordable essential water services.



Chapter 15 – Extreme events of flood and bushfire

For extreme events of flood and bushfire the Strategy will:

- better integrate future flood management with waterway management
- improve consideration of waterways in bushfire planning and management
- ensure that waterway values and assets are included in bushfire and flood rapid risk assessment processes
- provide direction for reviewing and reprioritising resource allocation after an extreme event.



Chapter 16 – Invasive species management in waterways

For invasive species management in waterways the Strategy will:

- establish a risk-based approach, which takes into account both current and future risk for invasive species management in waterways
- outline an holistic and integrated approach to invasive species management
- identify priorities for improved knowledge, surveillance and community and industry awareness.

Management arrangements

The Strategy describes the monitoring, reporting and evaluation processes that contribute to effective adaptive management over the eight-year planning period. The institutional arrangements, roles and responsibilities of key agencies and partners in waterway management are also described. This information is found in Chapters 17 and 18.

Community thoughts on waterways and their management

“The *Victorian River Health Strategy* successfully guided a significant program of river health improvement through a very challenging period of low stream flows and laid a robust foundation for this Victorian Waterway Management Strategy.”

– **Community group #5**¹⁰

“It is very encouraging to see that wetlands and estuaries are now included in the waterway strategy.”

– **Individual #10**¹⁰

“We strongly support the guiding principles of partnerships, community involvement, integrated catchment management and value for money. In particular there has been a serious disconnect in the past between what happens in a waterway or riparian zone and the influence of the surrounding catchment. This integrated approach is most welcome.”

– **Community group #18**¹⁰

“Platypus sampling and monitoring has made me very interested in the health of this waterway.”

– **North Geelong resident about Werribee River**⁹

“The Ovens and King rivers have maintained their usefulness, beauty and charm due to ongoing care and management.”

– **Linton resident**⁹

“On one early morning walk along the Merri Creek I saw a Sacred Kingfisher.”

– **Melbourne northern suburbs resident**⁹



Endnotes

1. Aquatic invertebrate refers to insects and bugs and other small animals with no backbone that live in waterways.
2. Riparian refers to land or vegetation that adjoins a river, creek, wetland or estuary.
3. Drought refuges refer to critical remaining sources of water in otherwise dry landscapes that help species survive drought.
4. Connectivity refers to the links between different habitats and species within a landscape.
5. The term “Country” is often used by Traditional Owners to describe their traditional lands and waterways.
6. Environmental water is water to support environmental values and ecological processes.
7. Controlled grazing refers to controlling a stock grazing regime, within fenced riparian land by managing factors such as the timing (eg. winter vs. spring), intensity (eg. number of stock) and duration (eg. one week) of the grazing, compared to having stock graze there all the time. It can be a useful management tool to control weeds and maintain or improve native vegetation.
8. Fragmented landscapes are those where vegetation or habitat size has been reduced or disconnected, usually by human activity.
9. Department of Sustainability and Environment 2011, *My Victorian waterway*, Department of Sustainability and Environment, Melbourne.
10. Comments taken from submissions received during the public consultation period on the *Draft Victorian Waterway Management Strategy*.



For more information call the
Customer Service Centre **136 186**

www.depi.vic.gov.au