

The Victorian Waterway Management Strategy 2013-2021: Final lessons and what's next

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Key Points

- The Victorian Government released the *Victorian Waterway Management Strategy* (the Strategy) in 2013, providing a comprehensive policy framework for managing the health of Victoria's rivers, estuaries and wetlands over the proceeding eight years.
- The Victorian Department of Environment, Land, Water and Planning (DELWP) recently commissioned an independent review, as part of the final evaluation phase of the Strategy. The review was led by RM Consulting Group (RMCG) with input from an expert panel from the waterway and catchments industry.
- The review found that the Strategy has been an effective and powerful vehicle for driving waterway restoration programs across the state over the last eight years, building on the momentum of the 2002 Victorian River Health Strategy. The Strategy also provided a strong policy framework for managing a range of waterway issues, with significant advancements from the previous strategy.
- The review recommended a number of areas where the Strategy could be strengthened, rather than wholesale change. These recommendations included modernising the engagement process for the new Strategy, particularly in partnering with Traditional Owners and supporting self-determination. Other recommendations included advancing the policy framework to align with recent government policies and initiatives for climate change, Ramsar wetlands, water quality and other areas relevant to waterway health; better enabling integration of waterway and catchment programs; exploring new mechanisms and management tools for the protection of waterways; and continuing to improve approaches for demonstrating outcomes and adaptive management.
- DELWP will consider the findings of the review as it embarks on the development of the next Strategy by 2023, in partnership with Traditional Owners, other parts of the water and catchment sector and the broader Victorian community. Consultation on issues and opportunities for the new Strategy will begin later this year and DELWP is inviting the waterway and catchments industry to take part.

Abstract

The Victorian Government released the *Victorian Waterway Management Strategy* in 2013, providing a comprehensive policy framework for managing the health of Victoria's rivers, estuaries and wetlands. The eight-year strategy was designed to guide state and regional-level planning and programs, and to provide detailed policies for a range of waterway management issues.

The Victorian Department of Environment, Land, Water and Planning (DELWP) recently commissioned an independent review, as part of the final evaluation phase of the strategy. The Review was led by RM Consulting Group (RMCG) with input from a four-member expert panel and a range of delivery partners and stakeholder organisations involved in the development and implementation of the strategy.

The Review has demonstrated how instrumental the strategy has been in helping to maintain and improve the health of Victoria's waterways. Addressing past damage to Victoria's waterways is a long-term commitment and tackling new pressures is a complex and continuing challenge. However, it's clear that the Strategy has led

to significant policy advancements in several areas and provided a solid platform for regional planning, investment and on-ground management over the last eight years.

The strategy built on lessons from the Victorian River Health Strategy 2002-2012. We now have a legacy of almost 20 years of state-wide policy to build upon. DELWP is keen to learn from our reviews and other lessons from across Australia as we prepare to develop our next strategy by 2023. Our lessons are likely to have broader application to other waterway policy-makers and practitioners across Australia.

Keywords

waterways, rivers, wetlands, estuaries, policy, strategy, Victoria, evaluation

Introduction

In 2013, the Victorian Government released the Victorian Waterway Management Strategy, providing a comprehensive policy framework for managing the health of Victoria's rivers, estuaries and wetlands (Figure 1). The eight-year strategy was designed to guide state and regional-level planning and programs, and to provide detailed policies for a range of waterway management issues.

Victoria has a long history of recognising the importance of waterway and catchment health and establishing strong policies and programs for restoration. In the late 1990's, a broad-scale assessment program was established to benchmark the condition of Victoria's rivers – the Index of Stream Condition. This was a significant achievement as it was the first complete and comprehensive assessment of environmental condition of rivers anywhere in Australia. The assessment, undertaken by the Victorian Department of Natural Resources and Environment, found that the majority of the state's river basins had less than 10% of their river length in good or excellent condition (DNRE 1999). The report highlighted the scale of the challenge for Victoria's policy makers and practitioners in addressing the legacy of environmental degradation since European settlement.

To ramp up restoration of the state's rivers, the Victorian Government released the Victoria River Health Strategy in 2002 (DNRE 2002). The strategy represented the state's first state-wide policy framework for communities to work in partnership with the Victorian government to manage and restore the state's rivers over the long term. The strategy enabled excellent progress in restoring the state's rivers with the installation of over 7,000 km of riparian fencing and other protection measures, the creation of fish passage at over 150 locations and delivery of environmental flows to 71 river reaches (DSE 2010). A total of \$141 million was invested in river restoration across the state from 2004-2012. Catchment Management Authorities (CMAs) across regional Victoria (and Melbourne Water in the metropolitan region) played a crucial role in delivering extensive environmental works and watering programs on-ground, in partnership with local communities.

At the end of the eight-year strategy, the Victorian Department of Environment and Sustainability undertook a final review (DSE 2010). The review highlighted several key improvements to progress the state policy framework. These included:

- Managing all waterways within a single framework – Expanding the policy framework to incorporate the management of wetlands, estuaries and consideration of impacts on marine receiving waters
- Directing investment to regional priorities – A clearer process for setting regional priorities for waterway restoration, considering environmental, social, cultural and economic values and the level of risk to those values
- Setting practical objectives for waterways – Recognition that there can be different management objectives for waterways depending on their current condition and future outlook
- Using environmental water efficiently and effectively – Establishing new planning processes for environmental water management to ensure that water held by the new Victorian Environmental Water Holder is used efficiently and effectively
- Recognising working waterways need ongoing management – Ensuring that regional strategies include maintenance as a vital activity to secure both past and future investment in waterway restoration

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- Strengthening community partnerships in waterway management – Enabling greater opportunity for local communities and Traditional Owners to participate in waterway planning, implementing and monitoring
- Managing through droughts, bushfires and floods – Enabling regional programs to be modified in response to climatic events and mechanisms for disaster recovery programs
- Planning for the potential impacts of climate change – Better preparing for the full range of possible climate conditions and implications for waterway health
- Using new knowledge and an updated adaptive management approach – Articulating evidence-based logic models to identify the most appropriate management activities to reduce particular threats to waterways and highlight priority activities for further research.

The review provided a solid platform to inform the development of the next eight-year strategy – the Victorian Waterway Management Strategy.

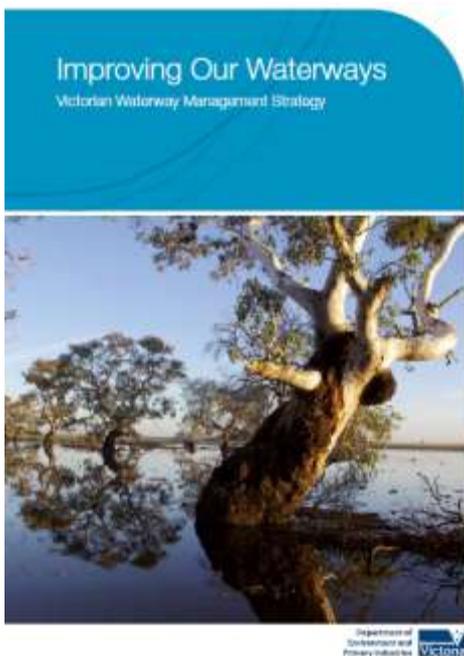


Figure 1. Front page of the Victorian Waterway Management Strategy 2013-2021

Overview of the Strategy

Purpose and key elements

The overarching policy objective for the Victorian Waterway Management Strategy was to maintain or improve the health of Victoria's waterways to support environment, social, cultural and economic values that are important to communities. The Strategy was designed to address community expectations and obligations for waterway management expressed in the *Victorian Water Act 1989*, the *Catchment and Land Protection Act 1994* and other relevant state and national legislation and policies and international agreements.

The Strategy was intended for state government, waterway managers (such as CMAs and Melbourne Water), land managers, local government, other regional agencies and authorities, management partners, Traditional Owners, landholders and community groups involved in management activities that might affect waterway condition. The Strategy was designed to help all stakeholders understand the institutional arrangements for waterway management in Victoria and their role and responsibilities.

In particular, the Strategy aimed to provide clear policy and guidance to waterway managers on the development and implementation of their regional strategies and management plans. The policy intent was to address the drivers of environmental condition decline in priority waterways to provide public benefits (Figure

2). Management activities were to focus on implementing and maintaining on-ground works and managing water for the environment in priority waterways and fostering strong community partnerships. The Strategy was also to assist waterway managers in undertaking their statutory functions under the Water Act.

The Strategy included the following key elements:

- A vision, guiding principles and management approach
- A transparent, integrated waterway management framework that would facilitate regional decision-making with community input and within an integrated catchment management context
- 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
- Clear policy direction for management issues
- Specific actions to deliver more effective and efficient management of waterways.

Detailed policies and dedicated chapters were included for the following management issues: recreational use of waterways; environmental water management; riparian management; water quality; river channel; wetlands; estuaries; waterways in urban areas; extreme events of flood and bushfires; and invasive species.

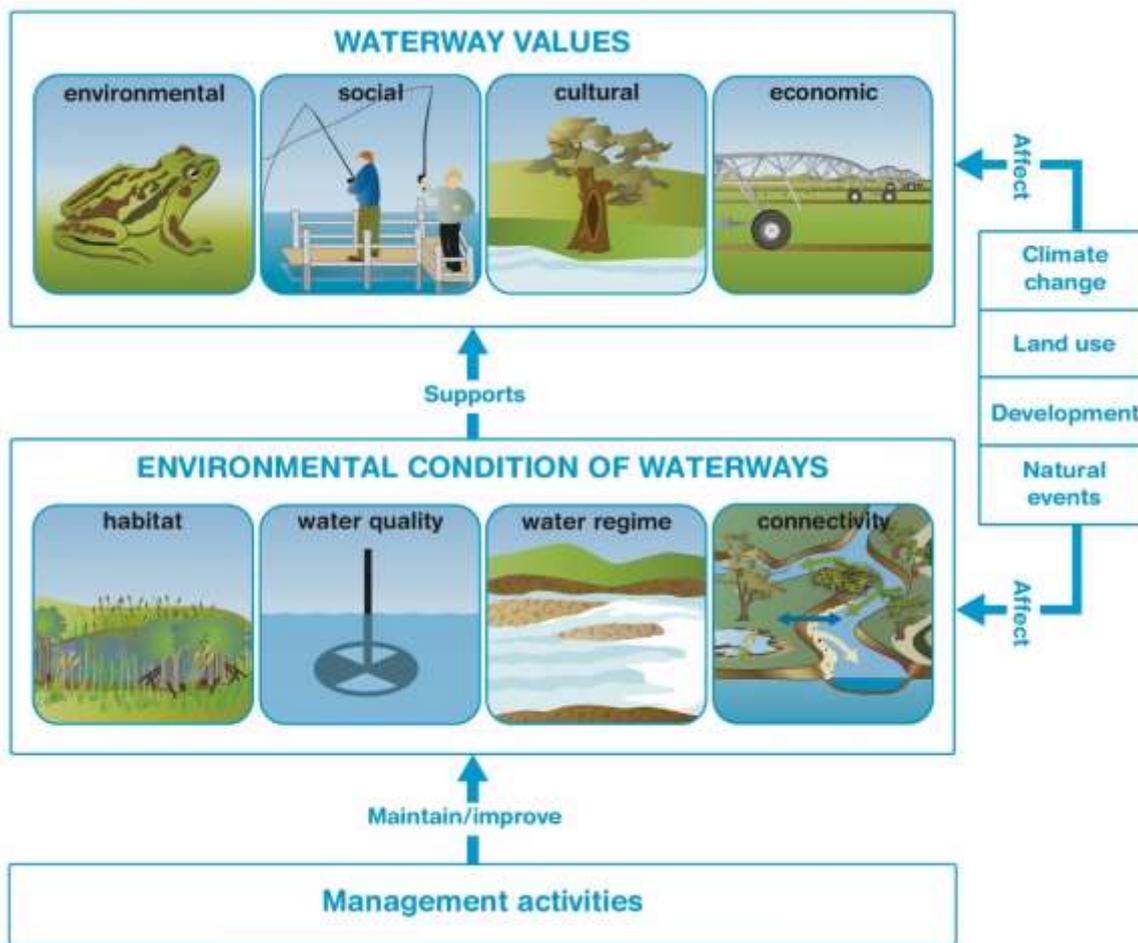


Figure 2. The overarching approach of the Victorian Waterway Management Strategy 2013-2021

Implementation and review

Implementation of the Strategy was led by the Victorian Department of Environment, Land, Water and Planning (DELWP), which is the lead agency for state water policy and programs in Victoria. Regional implementation was led by the nine CMAs in regional Victoria and by Melbourne Water for the Port Phillip and Westernport region. These organisations have specific responsibilities for waterway management under

the Water Act, including the development and implementation of Regional Waterway Strategies in partnership with other local authorities and agencies, Traditional Owners and the broader community. Other statutory responsibilities for waterway managers include authorising works on waterways; acting as a referral body for planning applications, licences to take and use water and construct dams, for water use and other waterway management issues; assisting response to natural disasters and extreme events where they affect waterways; undertaking community participation and awareness programs (such as through [Waterwatch](#) and [Estuarywatch](#) citizen science initiatives); and other functions for floodplain management and regional drainage.

Funding for implementation of the Strategy at state and regional levels was collected through Victoria’s Environmental Contributions. Environmental Contributions are funds collected from the state’s water supply authorities under the *Water Industry Act 1994*. Under a 2004 amendment to the Act, environmental contributions are collected to fund initiatives that seek to promote the sustainable management of water or address adverse water-related environmental impacts. Funding for implementation of programs within the Port Phillip and Westernport region was largely through the Waterways and Drainage Charge collected by Melbourne Water from water customers within that region.

As the Strategy has now reached the final stages, DELWP recently commissioned an independent review to evaluate its successes and learnings. Evaluation and reporting is an important step in the eight year adaptive management cycle of the Strategy and the review was a committed action (Figure 3). Identifying and understanding the key strengths, limitations and lessons from the current Strategy will be instrumental to improving the next Strategy. Later this year DELWP will prepare a separate final report acquitting the Strategy against management outcome targets and committed actions.



Figure 3. A final evaluation is part of the eight-year adaptive management cycle in the Victorian Waterway Management Strategy 2013-2021

The independent review was conducted by RM Consulting Group (RMCG) with input from a four-member industry expert panel - Dr. Tamara Boyd, Dr. Sandra Brizga, Professor Barry Hart and Professor Ian

Rutherford. The panel was established by DELWP to work alongside RMCG in providing independent high-level strategic advice and expertise to the review of the Strategy, including the review framework.

The purpose of the final review was to:

- provide a high-level evaluation of the Strategy, including what went well, the appropriateness of the Strategy, and any challenges with implementation;
- appraise the success, strengths and weaknesses of the Strategy as a policy framework for the management of waterways; and
- identify key areas for improvement for the next Strategy based on the learnings from the current Strategy.

Approach of the review

The framework for the review focused on three components or themes:

- **Design** (development) of the Strategy
- **Delivery** (implementation) of the Strategy
- **Impact** (success and lessons) of the Strategy, including progress towards its vision and objectives.

A series of key review questions were developed for each of the three themes (Table 1). The questions were shaped by the objectives of the Strategy, its vision, purpose and the other key elements. The review framework also outlined the success criteria or indicators that were used to address each question, along with the data collection method used (for example interviews, surveys or desktop review).

Table 1: Key review questions

THEME	QUESTION
Design	Effectiveness 1. How effective was the process used to develop the Strategy? Appropriateness 2. To what extent did the Strategy provide an appropriate suite of policies and actions to address the vision and objectives?
Delivery	Effectiveness 3. How effectively was the Strategy delivered? 4. To what extent was delivery of the Strategy adaptively managed? Appropriateness 5. What have been the strengths and challenges of the regional planning framework?
Impact	Outcomes 6. What progress was made towards fulfilling the Strategy’s overarching vision and policy objectives? Legacy 7. What is the enduring legacy of the Strategy’s policy outcomes?

Data was collected through three methods:

- Desktop review of existing strategy documentation
- Broad online stakeholder survey (using Likert and related rating scales) to acquire quantitative data
- Targeted semi-structured interviews and workshops, and input of the Expert Panel to gather qualitative data and greater depth on specific areas of interest.

Across the whole data collection process, a total of 58 stakeholders were interviewed, 47 participants completed the on-line survey, there were two workshops with the DELWP policy and program leads, a briefing for waterway managers and the four expert panellists participated in two workshop sessions.

Stakeholders invited to participate in the interviews and/or survey were mainly those who had been involved in the development or implementation of the Strategy – either directly themselves or their organisation.

Organisations included DELWP, other state government agencies, waterway managers (CMAs and Melbourne Water), peak bodies and advocacy groups and other waterway and catchments industry experts.

Data from the interviews, workshops and surveys were collated and analysed using the agreed review framework. RMCG also undertook a desktop review and identified some of the key policy developments and related government waterway related initiatives within the lifetime of the Strategy (Figure 4.). Drawing on this analysis, RMCG identified the key findings for each of the themes – design, delivery and impact. These findings and their implications were considered and reviewed at a second meeting with the expert panel and formed the basis for developing the recommendations.

Review findings

This review has found the Strategy has built upon the strong foundations of the 2002 Victorian River Health Strategy and has been instrumental in maintaining momentum in improving the health of Victoria's waterways. Overall, the review has been overwhelmingly positive, with an emphasis on minor Strategy improvements rather than wholesale change.

The Strategy's vision for the management of Victoria's waterways was determined to be clear and well-defined, with the suite of policy themes in the Strategy appropriate at the time of its development in 2013. The enduring partnership approach between regional waterway managers and DELWP throughout all areas of the Strategy, from its development to implementation, was a strength with evidence of policy guidance in informing the development of regional waterway strategies. Stakeholders found the Strategy framework had assisted in their role over the last eight years.

The increased scope of the Strategy to include wetlands and estuaries was seen as a key success, however, the next iteration would benefit from a greater focus on climate change and adaptation (particularly relating to a drying climate and sea level rise), and floodplain ecology and connectivity between rivers, wetlands and floodplains.

Over the last eight years, the Strategy has provided a solid basis for regional planning, investment and on-ground management of waterways that incorporates lessons learned from the preceding decade. This has largely been due to the levels of resourcing, clearly defined roles and responsibility for implementation, and the suite of guiding policies for delivering waterway management outcomes in Victoria.

The Strategy and related guidance materials and arrangements enabled the most progress to occur in community engagement, priority and target setting, and management action planning. However, adaptive management could have been improved to allow for new information, new policy directions and unanticipated issues to be managed over the course of its eight-year management cycle.

Over 81% of the Strategy's 96 actions have been completed or are ongoing, with another 16% in progress. A majority of the Strategy's management outcome targets have also been exceeded.

The Strategy has led to significant policy advancements in all areas with some particularly significant policy gains evident including estuary management, environmental watering, and wetland management, as well as improvements to community participation and engagement with Traditional Owners and Aboriginal Victorians.

The Strategy also progressed several key improvements required to progress the state waterway policy framework identified in the review of the former Victorian River Health Strategy. Most progress was made in strengthening community partnerships in waterway management, directing investment to regional priorities, managing all waterways within a single framework, and recognising working waterways need ongoing management.

Review recommendations

Despite the success of the Strategy in delivering a range of policy and on-ground management outcomes for waterway health, there are areas where the Strategy could be strengthened. This includes addressing the legacy of past impacts to Victoria's waterways, which should remain an ongoing focus for the years to come, as well as tackling new pressures, particularly from those associated with climate change and population growth. This review has identified a number of these challenges and areas for improvement for consideration in the development of the next Strategy.

Firstly, there are updates required to bring the Strategy into line with recent legislative and policy advances through Water for Victoria and the *Water and Catchment Legislation Amendment Act 2019*, relating to recreation and Aboriginal water values and urban waterways and integrated water management. Other policy advances to update include water quality management and regulation through the *Environment Protection Act 2017* and implications of the *Marine and Coastal Act 2018* and the Victorian Auditor General's Office report on Ramsar wetland management. Other policy areas that will require a renewed focus under a new Strategy include climate change and climate adaptation (particularly under a drying climate and sea level rise) and reference to the new *Climate Change Act 2017*, floodplain ecology and waterway connectivity between wetlands and floodplains, management of wetlands on private land and a more effective long-term policy approach for managing estuary mouth openings and protecting estuarine health.

In relation to the waterway management framework, this review has also highlighted areas where the Strategy could be strengthened. This included a greater focus on integrated catchment management outcomes and better linkages between management and policy themes at both state and regional levels, as well as greater alignment of regional waterway strategies with regional catchment strategies, with a greater focus on catchment-based impacts on waterways. The other key area was the adaptive management framework and more effective guidance and processes to support its application similar to the seasonally adaptive approach applied to management of water for the environment through the annual Seasonal Watering Plan process. This also includes new processes to improve, capture and share information and knowledge about catchments and waterways to inform adaptive management and enable continuous improvement of management practices.

The review identified a number of key areas for greater breadth and depth in stakeholder commitment to strategy development and implementation, particularly for individual management themes, such as local government or other DELWP programs (Coasts and Marine, Biodiversity, and Planning). Areas to be examined include the co-design approach recently used in the development of the Healthy Waterways Strategy for the Port Phillip and Westernport Region, as well as the importance of the transitioning from a model of engagement/involvement with Traditional Owners to one of First Nations leadership and partnership, which reflects the commitment to self-determination.

Existing waterway management approaches and their effectiveness in delivering long-term waterway management outcomes were also explored by the review. Of particular note was the need for strengthened policies in the Strategy and other state policies (e.g. Victorian Planning Provisions under the *Planning and Environment Act 1987*) and improved use of planning tools aimed at protecting waterway health, particularly for waterways experiencing population growth, urban development pressures or major infrastructure developments (including those that trigger an Environment Effects Statement).

Lastly, with significant volumes of water recovered for the environment, and large government investment being made in catchment and waterway health through the Environmental Contribution Levy, it is also vital to be able to clearly demonstrate and communicate the waterway health outcomes that are achieved. This last point is fundamental to ensuring continued government and community confidence in the program, and for maintaining corresponding levels of investment. The significant work undertaken and momentum gained by DELWP and regional waterway managers in recent years in the development of robust target setting and corresponding intervention monitoring programs through Victorian Environmental Flows Monitoring and Assessment Program, Wetlands Monitoring and Assessment Program, the Riparian Interventional Monitoring Program and the establishment of 'flagship' waterways should be continued. The review recommended that this be

supported through a renewed focus on appropriate capacity building and knowledge exchange opportunities aimed at the current and next generation of water and catchment management professionals.

The review provided recommendations for improved state-wide waterway management and for consideration in the development of the next Victorian Waterway Management Strategy:

1. Maintain the key design elements of the existing Strategy
2. Improve the structure of the Strategy and clarity of its purpose
3. Update the Strategy to reflect new and emerging government waterway policy
4. Modernise engagement processes to improve the breadth and depth of stakeholder commitment to implementation
5. Develop greater integration to deliver catchment and waterway outcomes
6. Consolidate processes to demonstrate and communicate outcomes, and measures of success
7. Extend the adaptive management framework to respond to a broader range of waterway management drivers and management scales
8. Explore fit for purpose management tools to deliver more effective waterway outcomes
9. Build capacity for the current and next generation of waterway and catchment management professionals.

Developing the next Strategy

As the current Strategy expires this year, DELWP is about to commence development of the next Victorian Waterway Management Strategy. A renewed strategy is needed to continue to provide the policy framework and direction for the management of waterway health at state and regional levels, and to guide on-ground waterway management activities.

Development of the next Victorian Waterway Management Strategy will occur over the next two years (2021-2023) and will include partnership with waterway managers and Traditional Owner groups and input from key stakeholder groups and agencies.

Formal partnership and advisory groups will be established to have input to the various policy areas of the Strategy. Later this year, DELWP will begin to engage widely across the Victorian environmental sector and broader community on issues and opportunities for the new Strategy. DELWP will then collaborate with project partners to develop the new Strategy. Full public consultation on the draft Strategy will be a vital step before the Strategy is finalised and submitted for Ministerial approval.

A significant focus of the new Strategy will be enabling self-determination for Traditional Owners in the management of waterways and better protection for their cultural values and uses. DELWP is seeking to partner with Traditional Owner groups across the State on the development of a new framework that supports the aspirations of each group and meaningful partnerships at state and regional levels.

In developing the next Strategy, DELWP is also seeking to:

- Develop a refreshed vision and policy framework for managing the health of Victoria's waterways.
- Provide a contemporary and integrated management framework that reflects latest science and issues.
- Ensure a clear authorising environment for programs and investment at state and regional levels.
- Develop an improved governance and partnership model for waterway health management in Victoria.

There is much work left to do in restoring the health of Victoria's waterway and addressing the legacy of environmental degradation since European settlement. This is a long-term commitment, and it will take generations to realise the outcomes of current waterway policies and on-ground investment programs. In addition, Victoria is now facing the challenges of rapidly growing cities and towns placing pressures on waterways, and a drying climate with more frequent and intense bushfires, droughts and floods. Community expectations are also shifting with growing calls for greater attention to the social and recreational benefits of waterways. The next Strategy will be an important opportunity to grapple with these issues and work together on new approaches for managing the state's waterways.

Conclusions

The Victorian Waterway Management Strategy has been a highly successful vehicle for advancing the management of Victoria's rivers, wetlands and estuaries. The independent review has demonstrated that the Strategy has provided a highly comprehensive and integrated policy framework for managing the health of Victoria's waterways, with strong buy-in from the state's delivery partners for waterway management – the nine regional CMAs and Melbourne Water.

Key elements of the Strategy that have ensured its success can be summarised as:

- A clear vision, guiding principles and management approach
- A transparent, integrated waterway management framework to guide regional planning and programs, with strong community input
- An adaptive management framework and flexible approach to manage through the challenges of extreme events and other climate change impacts
- Aspirational strategy targets that summarise key regional management activities over the life of the Strategy
- Clear policy direction and detailed policy statements for a range of management issues
- Specific actions for more effective and efficient management of waterways.

Other key success factors have included a strong government funding stream for implementation of the Strategy, strong institutional arrangements and clear role and responsibilities for waterway management in Victoria and enduring support for the Strategy despite changes of government.

The independent review has also proved to be a highly valuable exercise to reflect on the design, delivery and impact of the Strategy and identify key areas to focus and build upon in the next Strategy.

Acknowledgments

The authors would like to thank all those who contributed to the Victorian Waterway Management Strategy Independent Review via participation in workshops, interviews and/or the online survey. This includes many staff from across DELWP, CMAs, Melbourne Water, other Victorian government agencies, peak bodies and other organisations involved in the design or delivery of the Strategy.

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The authors would also like to acknowledge all staff who have worked in DELWP Water and Catchments Group and our delivery partner organisations over the last decade for making the Strategy such a successful initiative for Victoria's waterways.

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