



Integrated Water Management Framework **2024**

Acknowledgement of Country

Greater Western Water respectfully acknowledges Aboriginal and Torres Strait Islander peoples as Australia's first peoples.

We respectfully acknowledge the Traditional Owners of the lands and waters upon which we work, operate and rely, the people of the Kulin Nation. We pay our deepest respects to their Elders, past, present and emerging.

We acknowledge the continued cultural, social and spiritual connections that Aboriginal and Torres Strait Islander peoples have with the lands and waters, and recognise and value that the

Traditional Owner groups have cared for and protected them for thousands of generations.

In the spirit of reconciliation, we remain committed to working in partnership with local Traditional Owners to ensure their ongoing contribution to the future of the water management landscape while maintaining their cultural and spiritual connections.

Image: Paisley Park, Altona North. Stormwater harvesting project. **Image credit:** Peter Casamento



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Cover image: Paisley Park, Altona North. Stormwater harvesting project. **Image credit:** Peter Casamento

Background

Purpose of this document

This document seeks to guide and clarify Greater Western Water's approach to integrated water management. It:

- describes the importance of integrated water management in relation to Greater Western Water's operating context.
- articulates our business's ambition for integrated water management.
- describes the role we can play in advancing shared policy outcomes.
- sets out strategic actions to guide the implementation of this framework.

Greater Western Water services over 596,000 residential customers and over 47,000 non-residential customers across an area of 3,700 square kilometres, stretching from Melbourne's CBD, and inner-east, north, west, and north-west suburbs through the Melton and Sunbury growth corridors to Bacchus Marsh, the Macedon Ranges, Little River and surrounding townships and regions.

The service region is already experiencing the impacts of climate change and a growing population. Drying conditions mean that water availability is expected to drop over time. Meanwhile, our urban populations are growing rapidly, which will increase the demand for water, particularly in its capacity to drive liveable, resilient, and equitable urban environments. Some key trends and associated risks are noted below.¹

- Population growth forecasts for the west far exceed the average growth rate of metropolitan Melbourne, at 43% compared to 32% between 2021-2036. This has significant cost implications for delivering new and managing existing infrastructure.

- Since the 1960s, average rainfall has fallen by 7% while average low and high temperatures have increased by 14% and 3% respectively. Similarly, water availability in the Maribyrnong and Werribee basins has declined by 17% and 18% respectively since 1975.² Over time, the amount of water collected will continue to reduce while demand for water will increase.
- Extreme events, like bushfires and floods, are expected to increase in frequency and severity over time. These events can threaten water supply and may compromise water infrastructure.
- Waterway quality in our region is worse than the state average. Increased stream pollution and biodiversity decline is likely as urban development increases.
- Limited tree canopy cover and access to public open spaces contributes to greater observance of the urban heat island effect relative to other parts of urban Melbourne. The effect will be more pronounced in the future as the climate changes, leading to greater demand for water to support open spaces.
- Communities are characterised by large degrees of ethnic and socio-economic diversity, with significant pockets of disadvantage evident across the west and south-west. The urban heat island disproportionately affects vulnerable and disadvantaged people.

At the national and international level, Greater Western Water continues to support initiatives that promote broader health, prosperity, and liveability outcomes. For example, we participate in the United Nations Global Compact and seek to advance the Sustainable Development Goals (SDGs) through our business activities (**Figure 1**).



Figure 1. Alignment of eight SDGs to our Corporate vision and strategic outcomes³

Globally, this decade (2020-2030) is considered critical for action to address the world’s biggest challenges. Analysis suggests that efforts to significantly reduce emissions need to occur this decade to limit warming to around 1.5°C.⁴ Indeed, the latest projections highlight a two-in-three chance that a single year will cross the 1.5°C threshold by 2028,⁵ and recent reports of record-breaking heat further underscore the urgency of action on climate change.⁶ Likewise, the current speed and scale of progress towards the SDGs has prompted calls for more ambitious local and global action to accelerate sustainable solutions by 2030.⁷

Collectively, these regional and international drivers highlight the need to re-examine the way we plan, deliver, and manage water services to our customers. Under conventional arrangements, different elements of the urban water cycle (**Figure 2**) – such as water supply, wastewater, stormwater, and waterways – are managed in isolation. Water corporations like Greater Western Water only control parts of this cycle (namely water and wastewater services), which constrains our ability to deliver whole-of-water cycle outcomes. This makes collaboration with other responsible entities essential to addressing the complex suite of drivers we face in our region and beyond.

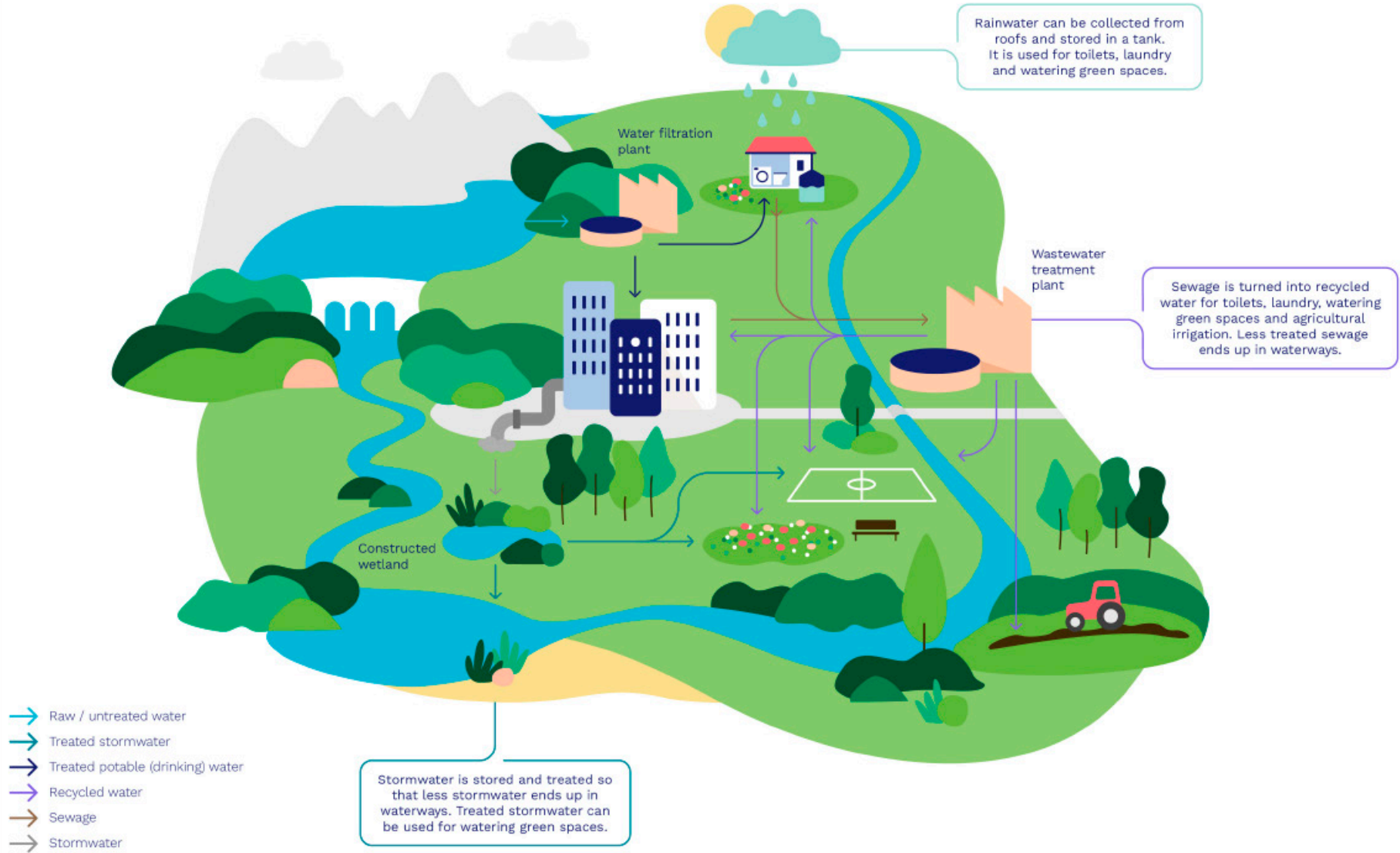


Figure 2. The urban water cycle

Integrated water management offers one potential approach. It is a practice focused on the holistic consideration of all parts of the water cycle within a catchment. It acknowledges that water and land use activities are intrinsically linked as part of an integrated system, and collaboration is key to delivering place-based outcomes.

Several aspects of the integrated water management approach highlight its suitability to respond to the increasingly complex and interlinked set of challenges facing our region (see an example below).

Specifically, integrated water management provides a pathway for:

- recognising the broader role and value of water in driving environmental, cultural, social, and economic outcomes for our communities.
- identifying servicing solutions that are sensitive to the local conditions and needs of the environment and communities they support.
- working closely with stakeholders through partnerships and collaboration to share resources, resolve issues, and maximise the benefits we can collectively achieve.

Integrated water cycle adaptive planning for future water services in the west

In recognition of the increasingly complex and interlinked resource challenges affecting service provision in the west, Greater Western Water undertook a unique planning project (known as the 'Integrated Water Cycle Mass Balance') that set out to re-examine the movement of water, its uses and disposal across our service area and beyond.

The project investigated all water demands (urban, irrigation, environment, Traditional Owners) and considered how all water sources (river water, recycled water and stormwater) can meet these demands. This analysis led to the development of a suite of alternative, sustainable pathways for the effective management of different water sources in the long-term.

The project has revealed the importance of:

- **Focusing on the whole catchment water cycle** – this allows for consideration of the interdependencies between different uses and sources and supports identification of opportunities that can deliver multiple benefits across our region.
- **Collaborating with key partners** – working with our partners allows for a more nuanced understanding of different regional issues and opens a broader range of opportunities for consideration.
- **Adaptive planning** – this approach seeks to address the complexity and uncertainty of future challenges by keeping as many options open for as long as possible. It ensures we understand key decision points for different potential pathways, including the preparatory work required to support implementation, so that we are ready to make informed decisions at the right times.

Our ambition for integrated water management

We embed the practice of integrated water management in the way we do business.

- **We plan for enduring success.** We are holistic. We carefully consider the needs of current and future generations at all scales as we plan, design, deliver and operate our infrastructure.
- **We take a system-wide, whole of water cycle approach.** We consider interdependencies between different uses and sources of water to enhance outcomes (like water security, environmental health, community wellbeing and liveability) for our customers, community, and Country.
- **We collaborate with purpose for mutual benefit.** We partner with local governments, state agencies, water corporations, Traditional Owners and others, to advance common aspirations. We share in the costs, risks and benefits.
- **We are resourceful.** We deliver efficient outcomes for our customers by prioritising cost-effective solutions that address multiple objectives. We innovate to reduce waste and maximise value across all stages of the asset lifecycle. We ensure our people are equipped to maintain outcomes in the longer term.
- **We manage risk and uncertainty.** We understand our operating environment to effectively anticipate and minimise risks. We are flexible and able to adapt as conditions change.
- **We demonstrate industry leadership.** We inspire the sector by delivering innovative, multi-functional infrastructure. We build capacity and share knowledge with our partners and communities.

Integrated water management will help us achieve our vision for **Thriving people and Country** by:

- future-proofing services across our region through enhanced access to alternative water sources that can support a range of fit for purpose uses – thereby **delivering value for our customers**.
- advancing liveability, wellbeing, and resilience through the expansion of urban green spaces and tree canopy cover – thereby **supporting communities to thrive**.
- working with Traditional Owners, local communities, other water corporations and government agencies to restore the environmental health of our catchments and waterways – thereby **healing and caring for Country**.

Adopting an integrated water management approach enables us to not only improve but *transform* how we work to plan, deliver and manage different services. It provides a means of turning challenges for the business into opportunities for our customers and community. For example, managing excess recycled water can drive a positive outcome for our non-residential customers, through access to new alternative water services.

When implemented well, integrated water management can promote resource efficiencies through shared coordination and management, as well as enhance the value delivered by a project. Different outcomes can be realised across multiple scales in ways that benefit both current and future generations.

As a business, we have continued to demonstrate our commitment to integrated water management through:

- supply of recycled water to residential and business customers, to support a broad range of activities such as agriculture (with the **Western Irrigation Network**), industry, garden watering, car washing, toilet flushing and laundry.
- different investigations to understand how we can expand the uses of recycled water, treated stormwater and rainwater across our service area and contribute to Melbourne's long-term water security.
- developing and refining tools to assess the overall impact of different projects on the total water cycle balance.
- our participation in the **Integrated Water Management Forums**, which seek to advance a broad range of catchment outcomes.
- long-term partnerships to support community wellbeing (such as **Greening the West**) and waterway health (such as the **Chain of Ponds Collaboration**).
- offering a free education incursion program to all schools and community groups in our service region focusing on sustainable water resource management.

- co-delivery of stormwater harvesting schemes with councils and customers through the **Stormwater Harvesting Partnership Program**.
- our review of developer integrated water management plans for new subdivisions, and our participation in precinct structure planning activities, which both seek to influence urban growth outcomes.

Building on the successes of the past, and moving beyond individual initiatives will require a systemic, business-wide approach to integrated water management. This framework seeks to support this aspiration by establishing integrated water management as a business transformation opportunity. It recognises integrated water management as a viable pathway for responding to industry challenges, delivering corporate outcomes, and contributing to sector commitments. The next section describes these commitments and identifies initial focus areas for further development.

Image: Laverton Reserve, Laverton. Stormwater harvesting project.



Our role in policy delivery

Since the release of the state's water plan *Water for Victoria* in 2016, there has been a significant increase in the number of policies, directives and actions related to integrated water management across various water, planning and environmental strategies (see **Appendix A: Key strategic documents**).

The increasing breadth and complexity of these strategies as they relate to integrated water management highlights the need for a coordinated approach to advancing shared outcomes.

Current planning activity guiding implementation

The parallel development of the *Central and Gippsland Region Sustainable Water Strategy* and *Greater Melbourne Urban Water and System Strategy* has resulted in a suite of policies and actions that are highly complementary and reinforcing. Current activity within the sector reflects this, with a focus on co-delivery of key commitments, notably:

- water efficiency and demand-side management
- returning water to the environment and Traditional Owners
- new urban water supply augmentation options via the Water Grid Plan.

Alongside this work, the Metropolitan Integrated Water Management Forums (the Forums) continue to advance a catchment-wide approach to integrated water management. Greater Western Water is a member of the Werribee, Maribyrnong, and Yarra Forums. Since the inception of the Forums, we have worked closely with partner organisations to develop a shared vision, strategic outcomes, performance indicators, measures, targets and priority actions for each catchment. We continue to participate in the Forums and support the current implementation focus of Forum activities.

Advancing outcomes by delivering the catchment performance targets

Focusing on the delivery of the catchment performance targets provides a pathway to clearly define and advance our contribution to key policy outcomes.

The catchment performance indicators, measures and targets seek to connect siloed activity within the sector. By bringing together related policy outcomes (advanced by the documents described in **Appendix A: Key strategic documents**) under a single framework and reinforcing policy connections through cross-referencing in key strategic documents,⁸ the *Catchment Integrated Water Management Plans* provide an effective and efficient way to coordinate progress towards a broad range of outcomes.

Broad buy-in by Forum partners provides a strong foundation to progress collective action. The endorsement of the *Catchment Integrated Water Management Plans* by Forum partners in 2021 included a commitment to adopt catchment performance indicators, measures, and targets within organisational activities, and to support ongoing efforts to advance implementation and track our progress. The established relationships, commitment and good will between member organisations, support provided by the State government, and the profile of the Forums provide a unique authorising environment to deliver shared outcomes.

Our efforts to advance these catchment performance targets begin by clarifying our desired role. Three potential roles for the business are:

Lead – We take a clear lead role in identifying and realising opportunities because it’s an area of high interest to our customers and community. This means we are likely to invest more time and effort than other partners.

Partner – We work closely with others to identify and realise an opportunity. We take a partnership approach because it’s of interest to our customers and community. We share in the risks, costs, and benefits. We may lead some tasks but not all.








Support – We help others by informing the work they do and the decisions they make. Others have a clear lead role, but we are interested in and seek to influence their work to ensure the best possible outcomes.






Table 1 shows our role for each of the Werribee and Maribyrnong catchment performance targets, with a particular focus on targets set over the next decade. For the Yarra catchment, our role in delivering each target is one of ‘Support’, in recognition of the small portion of the catchment covered by our service area. More generally, we support any roles our Forum partners seek to play across these catchments as we recognise that our collective efforts will deliver benefits for the region and beyond.







Image: Stormwater harvesting project.



Table 1. Our role in delivering the Werribee and Maribyrnong catchment performance targets⁹

Strategic outcome	Performance indicators	Performance measure	Targets				Our role	2030 Strategy
			Werribee	Maribyrnong	Greater Melbourne	When		
1. Safe, secure, and affordable water supplies in an uncertain future	1.1 Decrease potable water use 1.2 Increase use of fit-for-purpose water source	1.1a. Residential potable water use (Litres/person/day)	-	-	150 ¹⁰	2024	Lead	 Customers
		1.2b. Alternative water sources ¹¹ that substitute potable mains water supply (GL/year)	16	6	53 ¹²	2030	Lead	 Customers
2. Effective and affordable wastewater systems	2.1 Increase use of resources recovered from wastewater to stimulate a circular economy	2.1a. Recycled water delivered to customers (GL/year)	-	-	85	2030	Lead	 Customers
		2.1b. Nitrogen recovered at treatment facilities for beneficial use (%)	-	-	94	2050	Lead	 Country
		2.1c. Carbon recovered at treatment facilities for beneficial use (%)	-	-	67	2050	Lead	 Country
3. Existing and future flood risks are managed to maximise outcomes for the community	3.1 Reduce flooding impacts on communities 3.2 Increase surface runoff storage created through multifunctional assets	3.1. Reduction in Annual Average Damage (AAD) delivered by flood management initiatives (\$ millions addition to baseline)	3-13	4	37-102	2030	Support	 Country
		3.3. Projects that cross-consider IWM and flood mitigation opportunities as part of their design (%)	100	100	100	2030	Partner	 Country

Strategic outcome	Performance indicators	Performance measure	Targets				Our role	2030 Strategy
			Werribee	Maribyrnong	Greater Melbourne	When		
4. Healthy and valued waterways and marine environments	4.1 Reduce the total urban stormwater runoff volume discharged to receiving waters	4.1. Mean annual urban runoff volume reduction (GL/year)	12	8	70	2030	Partner	 Country
	4.2 Decrease pollutants discharged to receiving waters 4.3 Increase environmental benefit to waterways through addition of water to the environmental water reserve, which is of an appropriate quality, magnitude, duration, and timing	4.3. Volume of water secured for the environment to improve waterway health (GL/year)	14.6	7	53.9 ¹³	2032	Partner	 Country
5. Healthy and valued urban and rural landscapes	5.1 Increase street trees that are supported with permanent (active or passive) irrigation from an alternative water supply	5.1. Street trees that are supported with permanent irrigation from an alternative water supply (%)	14	10	12	2030	Partner	 Communities
	5.2 Increase provision of alternative water sources for adequate irrigation of public open spaces	5.2a. Active public open space (sports fields and organised recreation) supported by an alternative water source (%)	22	20	19	2030	Partner	 Communities
	5.3 Reduce urban heat for the purposes of enhancing human thermal comfort	5.2b. Passive public open space (parkland and gardens) supported by an alternative water source (%)	9	16	6	2030	Partner	 Communities

Strategic outcome	Performance indicators	Performance measure	Targets				Our role	2030 Strategy
			Werribee	Maribyrnong	Greater Melbourne	When		
6. Community values are reflected in place-based planning ¹⁴	6.2 Increase integrated water management's contribution to a community's sense of place, health, and wellbeing	6.3. Rating of community literacy regarding the water cycle (out of 5)	5	4.5	4.5	2030	Partner	 Customers
	6.3 Improve communities' connection with and understanding of the water cycle	6.4. Rating of whether water is a key element in city planning and design process (out of 5)	5	4.5	4.5	2030	Support	 Customers
	6.4 Increase consideration of the water cycle in town planning							
7. Jobs, economic benefits, and innovation	7.1 Increase the use of alternative water sources for products and services	7.1a. Alternative water supplied to agricultural production (GL/year)	41	2	63	2030	Lead	 Customers
Enablers	E1. Increase organisational commitment to integrated water management	E1. Rating of vision, leadership and long-term commitment through vision statement and objectives articulated in corporate documents (out of 5)	5	5	4.5	2030	Lead	 Progress
	E2. Increase stakeholder capacity to successfully deliver integrated water management	E2. Rating of knowledge, skills, and organisational capacity (out of 5)	5	5	4.5	2030	Lead	 People
	E3. Increase collaboration and partnerships across industry and government	E3. Rating of cross-sector institutional arrangements and processes (out of 5)	5	5	4.5	2030	Partner	 Partnerships

Overall, we seek to contribute to the delivery of all Forum targets, and intend to ‘Lead’ action on eight performance measures across our service region:





- 1.1a. Residential potable water use (Litres/person/day)
- 1.2b. Alternative water sources that substitute potable mains water supply (GL/year)
- 2.1a. Recycled water delivered to customers (GL/year)
- 2.1b. Nitrogen recovered at treatment facilities for beneficial use (%)
- 2.1c. Carbon recovered at treatment facilities for beneficial use (%)
- 7.1a. Alternative water supplied to agricultural production (GL/year)¹⁵
- E1. Rating of vision, leadership and long-term commitment through vision statement and objectives articulated in corporate documents (out of 5)
- E2. Rating of knowledge, skills, and organisational capacity (out of 5).

We also seek to ‘Lead’ action on two lagging measures,¹⁶ as they align with our customer outcomes.

- 1.1b. Non-residential potable water use (GL/year)
- 7.1b. Alternative water supplied to businesses and industry (>0.01GL/year) (GL/year)

Finally, we acknowledge our ongoing responsibility to support the First Nations people’s right to self-determination on the Country where we operate. **Table 2** includes an additional outcome area, performance indicators and measures that are aligned with our approach to reconciliation.

Table 2. Our role in enhancing cultural values

Strategic outcome	Performance indicators	Performance measure	Our role	2030 Strategy
Traditional Owner partnerships to enhance cultural values¹⁷	TO1. Increase water returns to Traditional Owners	TO1a. No. of water return proposals submitted	Lead	 Country
	TO2. Increase the capacity of Traditional Owners in water management	TO1b. Volume of water available for Traditional Owners (ML/yr) ¹⁸	Lead	 Country
	TO3. Increase organisational capability to consider cultural value enhancement opportunities	TO2. No. of partnership agreements with Traditional Owners	Partner	 Partnerships
		TO3. New business cases that actively consider enhancement opportunities (%)	Lead	 Country

Implementation of this framework

Full realisation of the catchment performance targets and the policy outcomes they support would require a step-change in organisational and industry practices. Accordingly, to effectively perform the roles outlined in **Table 1** and **Table 2** we need to adopt a transitions mindset. This means focusing our implementation efforts on establishing the enabling conditions required for transformative change.

Five factors have been identified as critical to creating an enabling environment for transitions.¹⁹ These are described in **Table 3**, along with a suite of strategic actions designed to reinforce progressive shifts in enabling conditions.

The delivery of this framework will be guided by an implementation plan. The plan will outline key activities for each strategic action, lead roles and delivery timeframes. It is anticipated that this plan will be a living document and evolve as required.

Table 3. Strategic actions to create an enabling environment for implementation

Enabling factor	Strategic actions	Timing
Champions (individuals and groups) committed to driving change	1. Establish a cross-organisational network to connect champions across the business.	Short-term
	2. Support capacity building and leadership among key stakeholders (e.g., Traditional Owners, councils, developers).	Ongoing
Platforms for connecting to coordinate action and support information sharing	3. Equip and empower the cross-organisational network to drive a coordinated approach to delivering policy outcomes, including our contributions to the catchment performance targets.	Short-term
	4. Continue to participate in industry forums to further collaboration and learning.	Ongoing
Scientific and practical knowledge to advance local solutions to critical resource challenges	5. Continue to progress integrated water cycle adaptive planning.	Ongoing
	6. Undertake required investigations to inform critical decision points for future services.	Ongoing

Enabling factor	Strategic actions	Timing
<i>Projects and applications to trial, demonstrate and refine solutions</i>	7. Capture, consolidate and share lessons from existing projects.	Short-term
	8. Continue to partner with councils to co-deliver stormwater harvesting schemes, building on lessons from existing projects.	Ongoing
	9. Engage with customers and stakeholders to identify pilot projects to demonstrate a broad range of beneficial uses for fit-for-purpose recycled water, including the efficacy of different technologies.	Short-term
<i>Practical and administrative tools to support and guide implementation</i>	10. Inform policy, legislative and regulatory reform activities to improve delivery of integrated water management outcomes.	Ongoing
	11. Work with industry partners and forums to develop tools to support data and knowledge sharing, demonstrate broad economic benefits and justify investment, planning and design, decision making, monitoring and review.	Ongoing
	12. Identify opportunities to improve implementation of integrated water management through existing organisational systems, programs, processes, procedures, standards, and tools. This includes identifying key risks and challenges associated with current practices to guide business improvement activities.	Medium-term

Image: Stormwater harvesting project.



Appendix A:

Key strategic documents



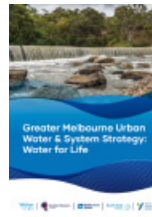
Water for Victoria (2016) responds to the impacts of climate change and a growing population on our water systems. Actions 5.7 and 5.8 seek to advance holistic, place-based, and collaborative approaches to integrated water management. It is the catalyst for the integrated water management forums.



The *Integrated Water Management Framework for Victoria (2017)* sets out the objectives and governance of Victoria's integrated water management forums. Each metropolitan forum has since developed a Strategic Directions Statement and a plan for their catchment.



The *Central and Gippsland Region Sustainable Water Strategy (2022)* sets policy directions and outlines actions for securing the region's long-term water supplies in the region. Notably, Chapter 3 highlights increased use of recycled water, stormwater, and rainwater through integrated water management as 'central' to the Strategy. Chapter 4 describes opportunities to return water to rivers and Traditional Owners through integrated water management. Chapter 8 sets environmental water recovery targets. Chapter 9 outlines the Water Grid Plan readiness framework and the quadruple-bottom-line assessment approach to guide how we plan for future water supply options.



The *Greater Melbourne Urban Water and System Strategy: Water for Life (2023)* explores the water challenges outlined in *Water for Victoria* and outlines an adaptive pathway to reduce our reliance on river water over a 50-year period. The Adaptive Plan highlights the role of integrated water management in reducing demand on our system through increasing our use of diverse water sources, potentially saving up to 70–200 GL/year by 2070. Actions 4.2, 6.2, 6.5 and 6.6 seek to enhance investment in alternative water supplies.



Victoria's Climate Change Strategy (2021) seeks to reduce the state's emissions from 2005 levels – by 28 to 33% by 2025, and 45 to 50% by 2030 – on the way to net-zero emissions by 2050. It makes provisions for an *Adaptation Action Plan* for Victoria's water system.



The *Water Cycle Climate Change Adaptation Action Plan (2022)* is focused on integrating climate change adaptation across all aspects of the Water Cycle system. The Plan recognises the need to diversify our water supplies by increasing the uptake of stormwater and recycled water, and the role of integrated water management planning in driving place-based climate adaptation opportunities.



Water is Life (2022) establishes a framework to increase Traditional Owner roles in and resources for water management across Victoria. The Nation Statements express Traditional Owners' cultural and water-related values, goals, aspirations, outcomes, and any other relevant information deemed important by each Nation.

Integrated water management provides a pathway for increasing access to water for Traditional Owners, and support the Healthy Mob, Healthy Country and Sovereignty & Self-determination benefits described in the Cultural Benefits Framework.



The *Port Phillip and Western Port Regional Catchment Strategy (2021)* describes how land, water and biodiversity is managed across the region, highlights the connections between them, and identifies targets for the future health and resilience of the region's environment. The Strategy highlights the need to make greater use of fit-for-purpose recycled water and stormwater to secure our water supply.



Victorian Waterway Management Strategy (2013) provides the framework for waterway management in Victoria. It seeks to integrate activities within regional planning and catchment management processes. A new Strategy will be finalised in 2025.



Healthy Waterways Strategy (2018–28) is the overarching planning document for the management of rivers, wetlands and estuaries in the Port Phillip and Westernport region. It acknowledges integrated water management as key to addressing the waterway challenges associated with urban stormwater.



Plan Melbourne 2017–2050 is a metropolitan planning strategy shaping the growth of Melbourne. Directions under Outcome 6 aim to create a city that is more sustainable and resilient by making the best use of all water sources, adopting an integrated water management approach, and supporting a cooler, greener Melbourne with healthy waterways.



Melbourne’s Future Planning Framework includes *draft land use framework plans* for the 6 metropolitan regions. These are long term strategic plans to guide land use, infrastructure, transport, and development for the next 30 years. The draft Inner, Western and Northern metro plans include strategies and directions to facilitate and implement integrated water management initiatives to improve water quality, reduce the impacts of stormwater inundation, utilise stormwater and protect key water assets.



The *Melbourne Sewerage Strategy (2018)* is an ambitious 50-year strategy that sets the direction for wastewater management in Melbourne. It explains how our sewerage system can evolve from a waste disposal system to one which plays a critical role in meeting urban water demands, sustainably managing waste and enhancing resource recovery. The Strategy embraces integrated water management as a pathway for further integrating the sewerage system as a valued part of the urban water cycle.



The *Flood Management Strategy for Port Phillip and Westernport (2021-2031)* aims to enhance the flood resilience of the region. The Strategy recognises the opportunity to take a holistic approach by adopting an integrated water management to develop catchment-wide and place-based responses to flooding that can provide multiple benefits.



The *Open Space for Everyone Strategy (2021)* guides all levels of government in the planning, management, and delivery of a quality open space network over the next 30 years. The direction ‘Protect our inherited open space legacy’ encourages open space managers to invest in actions to mitigate, adapt to and recover from the impacts of climate change including with integrated water management.



Protecting Victoria’s Environment – Biodiversity 2037 (2017) is the Victorian Government’s plan to halt biodiversity decline and improve the state’s natural environment. It highlights the need to create more liveable and climate-adapted local communities by planting trees and using integrated water management to reduce heat, improve water quality and provide opportunities for people to connect with nature.



The *Greening the West Strategic Plan 2020-2025* seeks to maximise urban greening (particularly via sustainable water supplies), support climate adaptation, improve health and liveability in the west, and enhance community participation in greening. It advocates for a regional approach in fostering projects and activities that deliver increased vegetation and public use of quality green space.



The *Waterways of the West Action Plan (2021)* seeks to restore the status of the region's waterways as living and integrated natural entities, and the Bunurong, Wadawurrung and Wurundjeri Woi Wurrung peoples as the Voice of these living entities. The Action Plan includes broad directions and actions to address waterway pollution, enhance waterway amenity and strengthen land use planning and development controls.

Notes

- 1 These trends and risks are described in detail in the *Greater Western Water Regional Profile* report prepared by SGS Economics and Planning Pty Ltd in 2021 for Greater Western Water.
- 2 Department of Environment, Land, Water and Planning (2020). *Long-term water resource assessment for southern Victoria*. Available: <https://www.water.vic.gov.au/our-programs/long-term-water-resource-assessments-and-strategies>
- 3 Greater Western Water (2022). *2030 Corporate Strategy*. Available: <https://www.gww.com.au/about/corporate-information/our-strategies-plans-reports/2030-strategy>
- 4 Climate Council of Australia (2021). *Aim High, Go Fast: Why Emissions Need to Plummet this Decade*. Available: <https://www.climatecouncil.org.au/resources/net-zero-emissions-plummet-decade/>
- 5 World Meteorological Organization (2023). *Global Annual to Decadal Climate Update for 2023-2027*. Available: <https://library.wmo.int/idurl/4/66224>
- 6 World Meteorological Organization (2024). *State of the Global Climate 2023*. Available: <https://library.wmo.int/records/item/68835-state-of-the-global-climate-2023>
- 7 United Nations (2020). *Decade of Action*. Available: <https://www.un.org/sustainabledevelopment/decade-of-action/>
- 8 For example, note Action 4.2 of the *Greater Melbourne Urban Water and System Strategy* and Policies 3-1 and 3-3, and Actions 3-4 and 3-6 of the *Central and Gippsland Region Sustainable Water Strategy*.
- 9 Only performance measures with agreed targets have been included in this table.
- 10 This target reflects Action 2-1 of *Central and Gippsland Region Sustainable Water Strategy*.
- 11 Alternative water sources refer to recycled water, rainwater, and urban stormwater.
- 12 Action 4.2 of the *Greater Melbourne Urban Water and System Strategy: Water for Life* adopts this target.
- 13 The targets for this measure reflect the environmental water recovery targets set in Chapter 8 of the *Central and Gippsland Region Sustainable Water Strategy*.
- 14 Note performance indicator 6.1 and associated measures have been superseded by the addition of a new outcome area, see Table 2.
- 15 A flexible approach will be adopted to progress the alternative water supply targets (1.2b, 2.1a and 7.1a), given these are strongly influenced by climatic and other exogenous factors.
- 16 Lagging measures do not have targets set against them and are nominated for ongoing monitoring only.
- 17 This outcome and associated performance indicators and measures are additional to those developed by the Forums to reflect Greater Western Water's approach to reconciliation.
- 18 Performance measures TO1a and TO1b reflect Action 4-2 of the *Central and Gippsland Region Sustainable Water Strategy*; and Action 5.5 of the *Greater Melbourne Urban & Water System Strategy*.
- 19 Hammer, K., Rogers, B.C., Gunn, A., Chesterfield, C. (2020). *Transitioning to water sensitive cities: insights from six Australian cities*. Melbourne, Australia: Cooperative Research Centre for Water Sensitive Cities. Available: https://watersensitivecities.org.au/wp-content/uploads/2020/09/300915_V3_Insights-from-six-Australian-cities.pdf

Image: Laverton Reserve, Laverton. Stormwater harvesting project.
Image credit: Peter Casamento



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