Evaluation of the Fifth Tranche of the Environmental Contribution – 2024 End-Of-Tranche Evaluation

Department of Energy, Environment and Climate Action

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Executive summary

Background to the Environmental Contribution

The Environmental Contribution (EC) is a key mechanism for the Victorian Government and the broader community to deliver outcomes for the public good that promote the sustainable management of water and address adverse water-related environmental impacts. The EC is funded through contributions from Victoria's 18 water corporations under an Order made by the Minister for Water.

The fifth 4-year tranche (EC5) commenced on 1 July 2020 and raised $693.9 million to fund initiatives aligned with the delivery of the Victorian Government's overarching water plan released in 2016 – *Water for Victoria*. EC5 has also been aligned with Victorian water policies and strategies that have been developed since *Water for Victoria*, including *Water is Life: Traditional Owner Access to Water Roadmap (2022)*, and the *Central and Gippsland Region Sustainable Water Strategy 2022 (*CGRSWS*)*. EC5 comprises 14 initiatives, delivered as 38 projects. Many of the initiatives build on work completed in earlier EC tranches.

Evaluation purpose and approach

The purpose and approach for the two-phased EC5 evaluation is summarised in Figure E1. The End-Of-Tranche evaluation (this report) details the achievements and lessons from the 4 years of the EC5 initiatives (and constituting projects), fulfilling the requirement of Section 196 of the *Water Industry Act 1994* and EC governance requirements. This evaluation is focused on the dual purposes of accountability and continual improvement. This report documents and reflects on the achievements, challenges, and lessons from delivery of EC5 through analysis of the impacts, effectiveness, efficiency, appropriateness, and legacy of EC5. It also documents key lessons, opportunities, and future priorities for the EC.

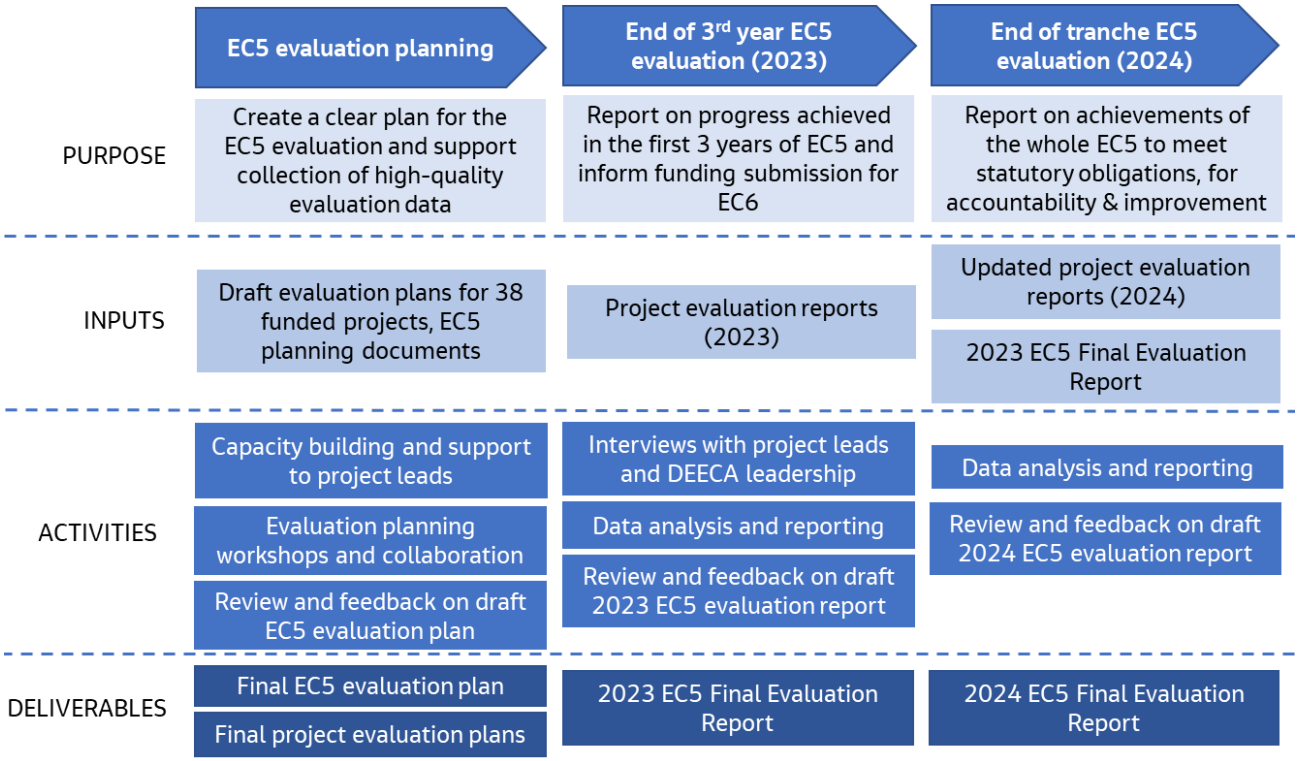

Figure E 1.Summary of the EC5 evaluation purpose and approach

Summary of evaluation findings

Over the 4 years of EC5, a broad range of positive outcomes for the environment, communities, and industries throughout Victoria have been achieved. A key driver of these achievements was the way in which EC5 initiatives either built on or extended work started in EC4 or earlier tranches. Key findings against the evaluation domains are summarised in Table E1.

Table E 1.Summary findings against each evaluation domain

Evaluation Domain	Findings summary
Impact	Key findings for each of the EC5 long-term outcomes are: ▪ **Water Security:** The development of the CGRSWS and associated implementation was a key achievement of EC5. By taking a 50-year view of the water needs of urban users, rural users, Traditional Owners, and the environment, the CGRSWS provided a balanced approach to increasing water supply and sharing water resources into the future that has been integral in minimising conflicts between affected parties while achieving beneficial outcomes for climate change and population growth. A range of on-ground works, designs, and planning for uptake of manufactured water supplies through an Integrated Water Management (IWM) approach were delivered, representing a shift from primarily policy and planning (in EC4) toward implementation. A suite of reviews, planning processes, reform and technology improvement activities has supported progress toward reducing pressure on the water grid, improving functioning of water markets, and enhancing the water entitlement framework. ▪ **Water Efficiency:** Water efficiency outcomes were delivered to multiple facets of the Victorian community, including schools, urban households, irrigators, and regional communities. The Community Rebate Program (CRP) and Community Housing Retrofit Program (CHRP) saved 0.298 GL/yr in households and emergency community housing properties. The Schools Water Efficiency Program (SWEP) saved 1.9 GL over the investment period. Investments in residential behaviour change initiatives contributed to the Smart Water Advice portal, providing water saving tips to households and businesses, updating Target 155 to Target 150, and Victoria's contribution to the Commonwealth's Water Efficiency Labelling Standards (WELS) scheme, which resulted in 4 GL of water savings over the period. Irrigators are more prepared for a future with reduced water availability, and irrigation losses are on track to be reduced by up to10.3 GL annually under the Macalister Irrigation District Modernisation Phase 2 Project (upon project completion in EC6). A modern risk-based compliance and enforcement framework was implemented to manage unauthorised take of water. ▪ **Waterway and Catchment Health:** Strong progress was made in improving the health of waterways and catchments throughout Victoria, with the continuation and extension of several long-term projects. EC5 enabled a suite of 52 IWM projects, including stormwater harvesting, recycled water and rainwater harvesting projects which – when completed – will result in significant stormwater pollution reduction. Over 46,764 ha of place-based on-ground catchment stewardship projects were delivered, along with 35,465 ha of waterway vegetation improvement works across priority sites, continuation and expansion of the Flagship Waterway projects, the Jan Juc daylighting project, and commitment to deliver 88 projects from *Burndap Birrarung burndap umarkoo*, the Yarra Strategic Plan (YSP), focused on protecting and enhancing Birrarung (the Yarra River) and its parklands. Over 3,212 GL of water for the environment was delivered to 161 rivers and wetlands sites in 2023-24, 154 sites in 2022-23, 170 sites in 2021-22, and 225 sites in 2020-21. While environmental outcomes generally take time to accrue following investment in waterway health projects, monitoring programs are beginning to show long-term positive environmental changes associated with works from EC5 and earlier tranches, building a strong evidence base.

Evaluation Domain	Findings summary
	▪ **Traditional Owner Priorities:** Over EC5, frameworks and strategies have been delivered to help account for and include Traditional Owners' priorities in water resource management. The publication of both *'Water is Life': Traditional Owner Access to Water Roadmap* and the CGRSWS in 2022 were key achievements of EC5; they represent a policy shift that provides new guidance and policy direction for the inclusion of Traditional Owners in the management of Victoria's water resources. However, there remains significant work to be done to successfully implement the actions from *Water is Life* and the CGRSWS, and meaningfully embed Traditional Owner involvement, values, and principles of self-determination throughout EC projects and the broader Victorian Water sector. ▪ **Inclusive Management:** The EC5 projects were inclusive of social and community values, with 87% of the projects reporting that they are increasing community participation and inclusion of community values in water management. New technology platforms and communications products were developed for improved community and sector access to information. Some priorities shifted throughout EC5 due to COVID-19 disruption and flood recovery works. ▪ **Water Governance:** Many of the projects contributed to meeting the needs of customers and the community, through improved water planning, access to information and inclusion in water planning and decision-making. Flood risks were reduced, as well as the risks posed by the three highest-risk local government authority owned small dams. Climate change was embedded into water sector planning and decision-making through the development of *Guidelines for Assessing the Impact of Climate Change on Water Availability in Victoria*, which have been widely adopted across the Victorian water sector. **Ongoing Foundational Work:** Ongoing surface water and groundwater monitoring and modelling projects continued to build the foundational knowledge base of continuous and comprehensive water monitoring data and information which is used for planning and decision-making across the Victorian water sector. Many of the other EC5 projects noted the use of the EC to fund business-as-usual works that were critical to the project teams achieving their standard objectives and ongoing obligations. Along with benefits of EC funding supporting a range of short and long-term projects, several emerging risks associated with the EC increasingly funding ongoing, business-as-usual activities were noted. **Unintended Outcomes:** Unintended outcomes were observed by 67% of projects. All unintended outcomes reported were positive and included unexpected benefits of building relationships with organisations and groups outside DEECA, deeper partnerships and collaboration with Traditional Owners, and unintended benefits resulting from flexibility and changing policy directions.
Effectiveness 	**Delivery Effectiveness:** The EC is well-designed and well-run, with supportive governance structures and appropriate accountability and reporting requirements. Four-year funding cycles and flexibility in funding at the project level enabled teams to respond to changing contexts and shift priorities as needed. However, there are opportunities for embedding further flexibility and arrangements to promote planning of long-term projects and better support Traditional Owners. There were complexities associated with aligning the timing and reporting requirements of multiple funding sources, and delivery challenges associated with team capacity and staff turnover. **Adapting to Changing Contexts:** EC5 showed a high level of adaptability and flexibility to manage the effects of external influences, including the COVID-19 pandemic, flood and bushfire events. While some delays and changes to workplans were required, the projects were able to adapt. There is a need to ensure that knowledge is retained and lessons learned are actioned from previous events to enable preparedness for future unexpected / emergency events.

Evaluation Domain	Findings summary
	Partnerships and Collaboration: The EC5 projects were highly collaborative and recognised the importance of partnerships in effective delivery. Over 1,300 partnerships were fostered throughout the 38 EC5 projects, with a broad range of stakeholders. These were valuable in achieving the project outcomes, as reported by 95% of projects.
Appropriateness 	**Alignment with the Legislated Objectives and Key Water Management Strategies:** EC5 projects showed clear alignment with the legislated objectives with all EC5 projects reporting contributions to one or both legislated objectives of the EC. The projects were guided by key State Government strategies including *Water for Victoria (2016), Water is Life: Traditional Owner Access to Water Roadmap (2022), and the CGRSWS (2022).* Many of the projects adapted as new State Government strategies were published, to ensure continued alignment with key strategic directions. **Monitoring, Evaluation and Improvement:** These actions were integrated throughout EC5 to promote delivery effectiveness. Almost all (92%) projects reported that learning and improvement were effectively incorporated into the project to foster a culture of continual improvement. Some projects reported using independent evaluations, stakeholder feedback, and sharing of lessons to support improvement. The broader EC tranche governance also supported continuous learning through the requirement for each project to develop an evaluation plan and evaluation report, which is used for whole-of-tranche evaluations, and to foster learning for future tranches. Investment in capacity building sessions for the EC5 project teams as part of the EC5 evaluation process has fostered improvement in the effectiveness of the evaluation plans and reports from EC4 to EC5.
Efficiency 	**Efficiency through Delivery:** Many of the projects delivered their work programs on budget and on time, and where there were variances these were justified in project reporting. Reasons for variation from original work plans included escalating prices due to supply chain issues, lack of staff availability and staff turnover, delays due to COVID-19 restrictions, disruptions from the flood and bushfire events, and higher resource requirements for project elements than was initially planned. **Working with Others to Achieve Better Outcomes:** Almost all (89%) of the project teams agreed that efficiencies were gained through working together with other project teams, and many reported this as a key enabler of successful delivery. The main ways that efficiencies were gained was through knowledge sharing between groups, cost sharing, partnerships and workload sharing and distribution. **Leveraging Additional Funding Sources:** The EC5 $693.85 million investment was augmented by significant co-investment over the tranche. Investment programs were co-funded by a total reported amount of $347.9 million. This represents $0.50 in co-investment for every dollar of investment from the EC. This is considered a conservative estimate, with many areas also reporting co-investment of funding and other resources that were not quantified in the project evaluations. **Options Assessments:** Undertaking options assessment and/or cost-benefit analyses to support project decision-making was reported by 79% of projects. These approaches supported efficient delivery through using structured processes to make investment decisions. Examples of analytical approaches that were used include options papers, cost-benefit tools, best cost options analyses, value for money assessments.
Legacy 	Projects promoted sustained impact through investments in capacity building, long-term partnerships and collaborations, enduring reforms and policy changes, new technology and reporting platforms, and the delivery of on-ground projects focused on creating long-term benefits.

Conclusions and recommendations

Delivery of EC5 strongly aligned with, and made considerable progress towards, the legislated objectives of the EC and key Victorian Government policies and strategies, including *Water for Victoria*, *Water is Life* and the CGRSWS. As with previous tranches of the EC, EC5 provided critical funding that has driven innovation and best practice in water management, enabled planning and delivery of strategic, long-term projects, and delivered ongoing foundational services to meet the needs of the Victorian water sector, communities, and industries.

The findings from the EC5 End-Of-Tranche evaluation point to the need for future EC tranches to respond to current and emerging challenges associated with sustainable water management and protection of environmental values, and to realise the full benefits of EC5 investments and those in earlier tranches. Recommendations have also been developed to support continuous improvement for the EC into the future and have been framed to be relatively discrete actions to provide flexibility around how and when they are implemented based on available funding and resourcing.

Table E 2. Recommendations for continuous improvement of future tranches

Recommendation	Rationale and details
1. Continue EC funding into a 6th tranche. Prioritise future investment to build resilience to existing and emerging challenges, and to support benefits realisation from work started in EC5 or earlier tranches.	Continued investment is required in many areas to maintain the gains made by EC5 and previous tranches of the EC, and to achieve the objectives of *Water for Victoria*, *Water is Life*, the CGRSWS and other key state strategies (for example, the Water Cycle Adaptation Action Plan). Future investment should be directed toward: ▪ **Building water security and resilience in the Victorian water sector, communities, and environments to existing and emerging challenges:** Key themes for increased focus in EC6 include security of supply and demand management, climate change adaptation, supporting the energy transition, environmental stewardship and values, supporting Traditional Owner self-determination, collaboration and relationships, and the integration of new technologies with water planning and decision-making. ▪ **Continuing ongoing projects to support benefits realisation from work started in EC5 or earlier tranches:** Many of the EC5 projects are not discrete four-year investments but require funding over longer periods of time to deliver the EC long-term outcomes. This includes long or medium-term projects that are expected to realise benefits over two or more EC tranches and ongoing business-as-usual work that is foundational to the functioning of the Victorian water sector. Priorities for future funding are outlined in Table E3 below.
2. Continue to support the EC's adaptability to changing conditions and priorities	It is recognised that changing conditions and priorities will emerge throughout each tranche, which can affect the relevance and ability to deliver commitments designed at the funding submission stage. The evaluation found that EC5 projects adapted well to unexpected disruptions (such as the COVID-19 pandemic and extreme weather events), and flexibility in delivery was supported by the EC Project Control Board. New priorities that emerge are managed through maintaining a buffer of unallocated funds that can be directed to these emerging issues. These mechanisms should continue to be supported to provide flexibility in future tranches.
3. Investigate ways to better align multiple funding sources	Many projects utilised co-funding from other sources. However, there were challenges with aligning the timing and reporting requirements of multiple funding sources. While the EC is already aligned with other Victorian budget processes, and there is limited opportunity to modify Commonwealth funding processes, there may be other opportunities for the delivery of EC projects to align with other funding sources. Any alignment between funding sources

Recommendation	Rationale and details
	could support delivery and reporting efficiencies. Therefore, where possible, potential co-funding opportunities should be identified as early as possible.
4. Investigate options for streamlining reporting processes	While the existing governance and reporting structures are functioning well to support effective EC delivery, it would be beneficial to investigate options to reduce duplication and administrative workload through creating more efficient links between regular reporting and evaluation reporting. Opportunities for streamlining reporting between DEECA and partner agencies where there is collaborative work should also be explored.
5. Build in appropriate governance and funding structures to support Traditional Owner involvement	Partnerships with Traditional Owners are of critical importance to the management of Victoria's water resources. Developing these arrangements will help to support Traditional Owner self-determination. Where they currently exist, such as the CGRSWS Traditional Owner Partnership, they will need to be properly resourced and supported. Governance and funding structures will need to be designed in collaboration with Traditional Owner organisations so they can balance the increased demand for engagement and partnership on a wide range of water-related and other matters. Streamlining funding arrangements, supporting capacity building, and ensuring there is oversight of broader engagement with Traditional Owners should be key priorities.
6. Consider economic and social value analyses and /or benefits assessment	There are challenges with articulating the benefits of some projects and the collective benefits of the EC, particularly for ongoing business-as-usual work, maintenance works, and broad policy or planning projects. There is an opportunity to better articulate the benefits of the EC through economic and social values analyses, and/or narratives around how the benefits of delivered projects are realised by Victorian communities, environments, and industries.
7. Consider the opportunities and potential risks associated with EC funding being used for ongoing business-as-usual activities, and build in mitigation measures to future tranches	It is acknowledged that there are a range of opportunities and benefits of EC funding supporting both short- and long-term projects. There is a need to reflect on potential risks that could emerge if the EC is increasingly used for ongoing, business-as-usual activities, such as: ▪ Potential for reduced ability to innovate and implement new projects in response to changing demand and priorities. ▪ Risks to the delivery of critical business-as-usual DEECA activities if funding pool from EC were to decrease. ▪ Difficulty in providing immediate visible project outcomes and benefits of ongoing business-as-usual work, which could lead to poor community perception. Design of future EC tranches should consider these potential risks, along with the opportunities, and build in mitigation measures if required.

Priorities for investment in EC6 and into the future

Continued investment is required to respond to existing and emerging challenges and to maintain and build upon the significant progress made toward improving water security, water efficiency, waterway and catchment health, inclusion of Traditional Owner priorities, inclusive management, and water governance throughout Victoria. Key priorities are summarised in Table E3 and have been categorised into:

- **Response to existing and emerging challenges:** Increased investment in projects to respond and build resilience in the Victorian water sector, communities, and environments to existing and emerging challenges.
- **Realising the full benefits from current and prior investment:** Continuation of ongoing projects to support benefits realisation from work started in EC5 or earlier tranches.

Table E 3. Summary of priority areas for future investment

Category	Priority areas for future investment
Response to existing and emerging challenges	▪ **Adapting to climate change:** There is a need to increasingly integrate adaptive planning into water sector decision-making to support resilience to future weather conditions (for example, floods, fires, and droughts). There is also the need to continue to develop better understanding of how to meet Victoria's water sector objectives in a drying climate, integrate the latest knowledge into water resource plans and strategies, and build capacity in climate change adaptation and mitigation principles. ▪ **Building resilience**: There needs to be an increased focus on proactive resilience to identify emerging trends as they arise, and act quickly. ▪ **Supporting the energy transition:** Water access is pivotal to Victoria's energy transition to net zero emissions as emerging energy technologies, including large-scale hydrogen and pumped hydro projects, require water to operate. Investment is required to support decision-makers, investors, secure the upstream supply chain and contribute towards Victoria meeting its net zero targets. ▪ **Supporting Traditional Owner self-determination and access to water:** Investment in implementation of the actions from *Water is Life* is required to increase Traditional Owner roles and resources in water and waterway management and improve Traditional Owner access to water for self-determined purposes. Considerable effort is still required to address barriers, change legislative and regulatory settings, and achieve a step-change in the return of water to Traditional Owners. ▪ **Delivering the Long-Term Water Resource Assessment:** The Long-Term Water Resource Assessment for Northern Victoria is due to commence in 2025 building on lessons learnt in the Southern Victorian assessment. ▪ **Integrating new technology solutions:** Increased investment in new technologies and platforms to provide opportunities for distribution of information and data informed decision-making. In part, this will involve continuation of new technology platforms delivered in EC5, as well as investigation of emerging applications. There is also an increasing need to manage associated cyber security risks and threats. ▪ **Securing Water Supplies:** Building on the achievements in EC5, look to build secure water supplies into the future by providing opportunities to continue to improve water efficiency, transition to a greater use of manufactured water, reduce reliance on river water and plan and implement augmentations to meet water needs as the population grows and the climate changes. In the future, planning approaches that focus on readiness planning to reduce pressure on the water grid will be key to securing water for all our needs.
Realising the full benefits from existing investment	Medium- and long-term projects that depend on funding over two or more EC tranches: ▪ **Water reforms:** Continued work on the suite of water market reforms and improvements to frameworks and policies for water sharing, management, accountability, and transparency. ▪ **Water Resources Planning and delivery of actions:** Continued implementation of water portfolio priorities YSP, the *Waterways of the West and Rivers of the Barwon (Barre Warre Yulluk) Action Plans* and development of new SWS in the Western and Northern Regions. ▪ **Waterway health:** Long-term investment is required to protect Victoria's waterways and deliver long-term environmental outcomes. Stable, ongoing funding allows for projects to be planned for the timelines necessary to implement meaningful change for waterway health, such as the 10-year flagships program. ▪ **Collaboration and partnerships:** Continuing and building upon existing work to foster a collaborative approach to water management, including strengthening

Category	Priority areas for future investment
	partnerships across water sector agencies, Traditional Owners and between the water sector and Victoria's communities to ensure water security is achieved. ▪ **Traditional Owner priorities:** Continued investment into the Aboriginal Water Program is necessary to maintain employment of Aboriginal Water Officers and enable continuity of long-term Traditional Owner-led water-related projects and priorities. The continuation of the Aboriginal Water Program is a key enabler and foundation for *Water is Life* implementation. ▪ **Water efficiency:** Continued focus on reducing irrigation losses and improving irrigation efficiency through infrastructure investments and extension support to irrigators. Continuation of community, school and household water efficiency projects and behaviour change and education initiatives. ▪ **Integrated water management:** Continuation of mainstreaming the integrated water management approach through the IWM Forums, policy work and supporting grant programs. Future investment in this program builds industry capacity to better adapt to climate change, build resilience, secure water supplies, support the housing development government priority while managing impacts on waterway health. Ongoing foundational, business-as-usual projects: ▪ Ongoing operations of the Victorian Water Register. ▪ Ongoing water compliance activities, management of entitlements, water trading and accounting. ▪ Continuation of long-term surface water monitoring and modelling activities, maintenance of monitoring infrastructure, and provision of foundational water information to the water sector and communities.

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Acronyms and abbreviations

Acronym	Definition
CGRSWS	Central and Gippsland Region Sustainable Water Strategy
CHRP	Community Housing Retrofit Program
CMA	Catchment Management Authority
CRP	Community Retrofit Program
CWCT	Catchments, Waterways, Cities and Towns (a division in Water and Catchments group within DEECA)
DEECA	Department of Energy, Environment and Climate Action (Victorian Government)
EC	Environmental Contribution
EC4	The fourth tranche of the Environmental Contribution (2016-2020)
EC5	The fifth tranche of the Environmental Contribution (2020-2024)
EC6	The sixth tranche of the Environmental Contribution (2024-2028)
GL	Gigalitre (one billion litres)
GM2030	Groundwater Management 2030
ICM	Integrated Catchment Management
IWM	Integrated Water Management
KEQ	Key Evaluation Question
MDB	Murray-Darling Basin
MERI	Monitoring, Evaluation, Reporting and Improvement
OCOC	Our Catchments Our Communities Program
PSP	Partnerships and Sector Performance (a division in Water and Catchments group within DEECA)
SIRS	Statewide Infrastructure and Rural Strategy (a division in Water and Catchments group within DEECA)
SWEP	Schools Water Efficiency Program
WRS	Water Resource Strategy (a division in Water and Catchments group within DEECA)
WELS	Water Efficiency Labelling Standards
YSP	Burndap Birrarung burndap umarkoo, the Yarra Strategic Plan

Key terms – EC5 hierarchy

Term	Definition
Environmental Contribution (EC)	The EC was announced as part of the Victorian Government's 2004 Our Water Our Future white paper and was legislated in 2004 through an amendment to the Water Industry Act 1994 (the Act). The EC is funded through collection of a contribution from Victoria's 18 water corporations, delivering outcomes focused on promoting the sustainable management of water and addressing adverse water-related environmental impacts.
Tranche	The EC is funded and delivered via four-year 'Tranches'. Four complete tranches were delivered between 2004 – 2020.
EC5	The Fifth Tranche of the Environmental Contribution, which invested $693.9 million between July 2020 – June 2024.
Initiative	EC5 has delivered a total of 14 initiatives, which are groups of projects, to make progress toward the EC objectives.
Project	The 14 initiatives delivered under EC5 are made up of 38 discrete projects. An evaluation plan and report were developed for each project, for input to the EC5 evaluation.

1. Introduction

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1. Introduction

1.1 Context

The Environmental Contribution (EC) was announced as part of the Victorian Government's 2004 *Our Water Our Future* white paper and was legislated in 2004 through an amendment to the *Water Industry Act 1994* (the Act). Funded through collection of a contribution from Victoria's 18 water corporations, the EC is a key mechanism for the Victorian Government to deliver outcomes for the public good through promotion of, and actions to achieve, sustainable water management.

The revenue collected via the EC is held by the Department of Treasury and Finance and allocated to the Department of Energy, Environment and Climate Action (DEECA) as part of the annual state budget approval process. DEECA is responsible for managing the delivery of the EC, as well as annually reporting EC expenditure and undertaking a review of the EC at the end of each tranche of funding.

Table 1 provides definitions of the objectives of the EC as established in Part 9 of the Act.

Table 1. Definitions of the EC objectives

Legislated objectives	DEECA Approved definitions
Promote the sustainable management of water	To promote: ▪ Effective management of Victoria's water systems for the present and future, or ▪ Efficient and effective use of Victoria's water systems to better manage within the known limits of the resources, or ▪ The long-term resilience and security of Victoria's water systems
Address adverse water-related environmental impacts	To prevent, remediate, mitigate, or offset: ▪ Adverse impacts on water-related environments arising from water extraction and associated infrastructure, or ▪ Processes that adversely impact on the health of water-related environments

The EC initiatives, which comprise multiple projects, are aimed at achieving the legislative purpose mentioned above and are guided by Victorian Government water management strategies. The first 3 of the 4-year 'tranches' of the EC funded most of the actions required to achieve the objectives of the 2004 *Our Water Our Future* strategy, and the fourth tranche was focused on delivery of the 2016 *Water for Victoria* strategy.

The collections for the first four tranches were as follows:

- tranche 1 (2004 to 2008) collected $226.5 million
- tranche 2 (2008 to 2012) collected $277.6 million
- tranche 3 (2012 to 2016) collected $405.3 million
- tranche 4 (2016 to 2020) collected $537 million.

The fifth 4-year tranche (EC5) commenced on 1 July 2020, with funding of $693.9 million. To guide investment decisions, DEECA undertook a strategic planning process, including identification of performance measures for EC5, investment priorities, and a strategic framework for the tranche. The resulting 14 initiatives were delivered through 38 projects, covering a range of water management priorities including:

- water security
- water efficiency
- waterway and catchment health
- Traditional Owner priorities
- inclusive management
- water governance.

1.2 Purpose and scope

Section 196 of the Act requires that a review of the operation of each tranche of the EC is conducted and that its conclusions are reported to the Minister. A phased approach was taken to evaluate EC5 as follows:

- End-of-third year EC5 evaluation (up to 30 June 2023) – previous report
- End-of-Tranche EC5 evaluation (up to 30 June 2024) – this report.

Table 2 sets out the objectives, evaluation domains and audience for each phase, showing that while the key evaluation domains are the same, each phase has separate objectives and audiences. The focus and key dimensions of the evaluation were discussed and developed as part of an Evaluation Plan prepared by Jacobs in early 2023. They align with common program evaluation domains outlined in the Commonwealth Evaluation Policy[1].

Table 2. Focus of the evaluations

	Objectives and evaluation domains	Audiences
End-of-third year EC5 evaluation	To inform EC6 investment decisions through an understanding of: ▪ Progress made by projects to date towards achieving identified outcomes (Impact) ▪ Appropriateness, efficiency, effectiveness and legacy of project delivery ▪ Key lessons and opportunities from implementation to date	▪ Minister for Water ▪ Cabinet (evaluation findings will inform DEECA's Cabinet submission for EC6) ▪ Central agencies – Department of Treasury and Finance and Department of Premier and Cabinet ▪ DEECA Secretary, Water and Catchments Deputy Secretary and executive leadership team, EC6 business case authors, EC5 initiative leads and policy/program teams.
End-of-Tranche EC5 evaluation	To provide accountability and transparency of investment and support continuous improvement through an understanding of: ▪ What has and has not worked across projects, and as a tranche of funding? ▪ Impact and achievement of outcomes ▪ Lessons and opportunities for the future	In addition to the audiences above, the End-Of-Tranche evaluation will be made publicly available, as part of DEECA's commitment to improve public reporting on the EC. Delivery partners and other stakeholders, including CMAs, Traditional Owner groups, local councils, water corporations, Agriculture Victoria.

[1] Australian Government Dept of Finance (2023) Commonwealth Evaluation Policy and Toolkit, https://www.finance.gov.au/about-us/news/2021/commonwealth-evaluation-policy-and-toolkit

1.3 Structure of the report

This report is structured as follows:

- Section 2 explains the collection of EC5 funds and their allocation across initiatives and projects.
- Section 3 describes the evaluation approach and defines evaluation domains.
- Section 4 presents the findings on the progress of EC5 in achieving the intended outcomes (impact).
- Section 5 presents the findings on the extent to which projects were designed and delivered effectively (effectiveness).
- Section 6 presents the findings on the degree to which investments were appropriate and aligned with the legislated objectives (appropriateness).
- Section 7 presents the findings on how well delivery of EC5 has demonstrated efficient delivery and value for money (efficiency).
- Section 8 presents the findings on the extent to which EC5 impacts are expected to be sustained over time (legacy).
- Section 9 presents the conclusions and recommendations.

Appendix A contains summaries of the evaluation reports prepared by DEECA for the 38 projects and key aspects that are pertinent to the EC5 evaluation.

Appendix B supports Section 4 (impact domain) by summarising project level contributions to each of the EC5 outcomes.

Appendix C provides a graphical summary of the short answer questions from project evaluation reports

2. EC background and summary

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2. EC background and summary

2.1 Policy alignment

Funding allocated through the EC aligns with key Victorian water legislation and policies and the intended outcomes. The following legislation, policies and guidance documents guide investment decisions across the range of initiatives and projects that are funded under the EC, and which outcomes they are intended to contribute toward in the long-term:

- *Water Industry Act* 1994
- *Water for Victoria (2016)*
- *Central and Gippsland Region Sustainable Water Strategy 2022 (CGRSWS)*
- *Water is Life: Traditional Owner Access to Water Roadmap (2022)*
- DEECA portfolio priorities
- EC5 strategic plan/framework
- EC investment criteria.

2.2 Revenue collected

The EC is collected from water corporations based on their revenue. The amount of EC to be collected for each tranche is determined by a rate applied to each water corporation's revenue in a specified base year. EC5 continued the historical rates of 2% of revenue for rural and 5% for urban water corporations, indexed to 2018-19 financial year audited revenue figures. This rate of 2% and 5% collected from rural and urban water corporations respectively has been applied for all EC tranches so far since the establishment in 2004.

The contributions to EC from each of the Victorian water corporations are presented in Table 3.

Table 3. Contributions to EC from revenue of Victorian water corporations

Water corporation	Contribution to the EC ($ million)				
	2020/21	2021/22	2022/23	2023/24	Total
Metropolitan Melbourne water corporations					
Greater Western Water (formerly City West Water)	29.843	33.912	33.912	33.912	135.647
Western Water*	4.069				
South East Water	43.461	43.461	43.461	43.461	173.843
Yarra Valley Water	47.430	47.430	47.430	47.430	189.720
Melbourne Water	0.947	0.947	0.947	0.947	3.790
SUB-TOTAL	**125.750**	**125.750**	**125.750**	**125.750**	**503.000**
Regional urban water corporations					
Barwon Water	9.598	9.598	9.598	9.598	38.393
Central Highlands Water	4.472	4.472	4.472	4.472	17.889
Coliban Water	5.734	5.734	5.734	5.734	22.937
East Gippsland Water	1.654	1.654	1.654	1.654	6.614

Water corporation	Contribution to the EC ($ million)				
	2020/21	2021/22	2022/23	2023/24	Total
Gippsland Water	5.953	5.953	5.953	5.953	23.810
Goulburn Valley Water	3.750	3.750	3.750	3.750	15.000
North East Water	2.998	2.998	2.998	2.998	11.992
South Gippsland Water	1.369	1.369	1.369	1.369	5.475
Wannon Water	3.167	3.167	3.167	3.167	12.668
Westernport Water	1.075	1.075	1.075	1.075	4.302
SUB-TOTAL	**39.770**	**39.770**	**39.770**	**39.770**	**159.080**
Rural water corporations					
Grampians Wimmera Mallee Water	2.601	2.601	2.601	2.601	10.405
Goulburn-Murray Water	2.577	2.577	2.577	2.577	10.309
Lower Murray Water	2.251	2.251	2.251	2.251	9.005
Southern Rural Water	0.530	0.530	0.530	0.530	2.121
SUB-TOTAL	**7.960**	**7.960**	**7.960**	**7.960**	**31.840**
TOTAL ALL	**173.480**	**173.480**	**173.480**	**173.480**	**693.921**

Source: DEECA

**Note: In mid-2021, Western Water and City West Water merged, forming a new entity named Greater Western Water.*

2.3 Summary of EC5 investment

Table 4 shows the distribution of expenditure of the EC5 investment against the 14 initiatives and 38 projects to 30 June 2024. Note that some projects received funding from other fund sources, and a small proportion of initiative funding was appropriated for EC administrative costs.

Table 4. EC5 expenditure by project (approximate)

EC5 initiatives	Projects	EC5 Funding
1. Enhancing urban water security, iconic urban waterways and recreational water	CWCT01: Integrated Water Management (includes both Regional and Metro)	$28, 217,000
	CWCT02: Iconic Urban Waterways Program	$17,128,000
	CWCT03: Recreational Values Program	$5,840,000
	CWCT04: Recycled Water, Stormwater and Onsite Wastewater Policy	$9,000,000
2. Strong foundations for Victoria's water: compliance, markets, water entitlements and oversight of the water grid. Compliance and interceptions: protect	WRS1: Retail Entitlements and Markets	$7,215,000
	WRS2: Water Grid Oversight	$1,688,000
	WRS3: Water Market Reform	$2,700,000
	WRS4: Water Market Transparency	$448,453
	WRS5: Managing Victoria's Water Sharing Framework	$7,442,567

EC5 initiatives	Projects	EC5 Funding
reliability of water entitlements and maximise water resources for regional business and communities (Water Compliance Project only)	WRS6: Licensing framework groundwater and unregulated systems	$6,144,000
	WRS7: Water Compliance Reform	$2,351,959
	WRS8: Accounting for Water Recovery	$2,500,000
3. Sustaining a Resilient and Secure Water Register for Victoria	WRS9: Water Register Operations and Improvements	$35,920,000
4. The evidence base for Victorian water: availability and knowledge	WRS10: Understand and Apply Climate Science to Water	$5,280,000
	WRS11: Surface Water Assessment and Modelling	$4,075,000
	WRS12: Long-Term Water Resource Assessment	$2,355,000
	WRS13: Groundwater Assessment and Modelling	$8,285,000
	WRS14: Surface Water and Ground Water Monitoring	$26,631,000
	WRS15: Water Accounting and Reporting	$2,332,053
	WRS16: Knowledge and Insights	$703,000
5. Making Victorians Water Wise	CWCT05: Water Efficiency Program	$11,140,000
6. Water Wise Rural Communities: Rural-Infrastructure and Sustainable Irrigation Streams	SIRS1: Rural Water Infrastructure Project Oversight and Governance	$9,501,000
	SIRS2: Sustainable Irrigation Program Implementation	$49,000,000
7. Improving recognition and management of water by Traditional Owners and Aboriginal Victorians	CWCT06: Aboriginal Water Program	$24,373,000
8. Building a Sustainable Water Sector	PSP1: Long-term Water Security	$7,103,000
	PSP2: Sustainable Water Strategies	$7,660,000
	PSP3: Mitigating the risks of small dams	$3,000,000
9. Phase One Implementation of the Central and Gippsland Region Sustainable Water Strategy	CWCT07: CGRSWS Funding Stream 2 Diversify Water Sources and Increase Water Efficiency	$39,029,000
	CWCT08: CGRSWS Funding Stream 3 Waterway Health Complementary Measures and Catchment Management Improvement	$9,975,000
	PSP4: CGRSWS - Funding Stream 4 Enable Adaptation to a Variable Climate	$5,987,000
10. Building flood resilience in Victoria	SIRS3: Building Flood Resilience in Victoria	$26,700,000
11. Bendigo Groundwater Management	SIRS4: Central Bendigo Mine Rehabilitation Project - Groundwater	$4,353,000
12. Improving the health of Victoria's waterways and catchments in the face of escalating impacts of	CWCT09: Waterway Health	$125,980,000
	CWCT10: Environmental Water	$67,194,000

EC5 initiatives	Projects	EC5 Funding
climate change Supporting regional communities and economic recovery through healthy waterways	SIRS6: Murray Programs	$7,000,000
	CWCT11: Our Catchments Our Communities Program	$21,750,000
13. Macalister Irrigation District Modernisation Project - Phase 2	SIRS5: Macalister Irrigation District (MID) Modernisation Project - Phase 2	$10,930,000
14. Resilient Water Markets, Regional Communities, and Infrastructure	WRS19: Resilient Water Markets, Regional Communities, and Infrastructure (Stream 1 and 2)	$5,589,000

Source: DEECA

2.4 Summary of key outputs of EC5 investment

A summary of some of the key outputs for each initiative is provided in Table 5. More detailed descriptions of the outputs are presented in the project evaluation summaries in Appendix A.

Table 5. Examples of key outputs from the EC5 investment

EC5 projects	Examples of key outputs
CWCT01: Integrated Water Management	Facilitation of 15 Integrated Water Management (IWM) Forums, policy reforms, capacity building, co-investment program for project implementation, Collaborative IWM Forum strategic plans, including Strategic Direction Statement refreshes in regional Victoria and the Catchment Scale IWM Plans and Action Plans in Metro Melbourne, construction and improvement of wetlands and ecological restoration works.
CWCT02: Iconic Urban Waterways Program	Burndap Birrarung burndap umarkoo – the Yarra Strategic Plan (YSP), Action Plans - Waterways of the West and Rivers of the Barwon (Barre Warre Yulluk), delivery of priority projects, annual reporting, policy development to recognise iconic waterways as living entities and Traditional Owners as their voice, Green Links Grants Program (Round 1).
CWCT03: Recreational Values Program	Management of COVID-19 response across 40 recreational areas, policy work for recreation at storages, grants program, progressed opening Tarago Reservoir to on-water recreation, development of new Recreational Area (Water) Regulations 2023, Greens Lake Action Plan, Flagship Water Wannon, and better linkages between DEECA, the water sector, Traditional Owners and relative government portfolios for collaboration.
CWCT04: Recycled water, stormwater and onsite wastewater policy	Update of regulatory guidelines and frameworks, guidance to partner agencies regarding recycled, stormwater and wastewater management.
WRS1: Retail Entitlements and Markets	Market monitoring and information, governance, entitlements and legislation to support reform including place of take framework.
WRS2: Water Grid Oversight	Delivery of the forward review of resources and the Water Grid Biennial Statement. Undertook stress testing of the Water Grid as part of the Water Sector Climate Change Adaptation Action Plan and Urban Water Strategies.
WRS3: Water Market Reform	Reform options for improving water sharing arrangements in South-Central Victoria, new Ministerial Trading Rules for unregulated systems, removal of '20% rule' for downstream trades in unregulated systems

EC5 projects	Examples of key outputs
WRS4: Water Market Transparency	Published water market information while protecting privacy, working with other jurisdictions and the Commonwealth to facilitate trade, provided feedback on the Water Act 2007 (Cth) amendments and Water Amendment (Restoring our Rivers) Act 2003, social research project into barriers to trade in the South West Limestone Aquifer Groundwater Management Area.
WRS5: Managing Victoria's Water Sharing Framework	Delivery of adaptive and contemporary bulk entitlement and environmental entitlement framework within regulatory guidelines.
WRS6: Licensing framework groundwater and unregulated systems	Maintenance of management and licensing framework for groundwater and unregulated systems, publication of Groundwater Management 2030 (GM2030), licensing review and reform.
WRS7: Water compliance reform	Creation of a statewide regulatory regime to reduce unauthorised take and allow for improved compliance and enforcement, embedded key performance indicators for rural water corporations, telemetry installations and meter upgrades.
WRS8: Accounting for Water Recovery	Independent audit and reviews of water recovery projects, translating the water recovery into water entitlement volumes and reliabilities, creation, and distribution of water shares.
WRS9: Water Register Operations and Improvements	Transition of the Victorian Water Register to a new technology platform and delivering operational requirements.
WRS10: Understand and Apply Climate Science to Water	Guidelines for Assessing the Impact of Climate Change on Water Availability in Victoria, communications products, engagement.
WRS11: Surface Water Assessment and Modelling	Transitioning models to a new platform and updating capabilities to meet the needs of Victoria.
WRS12: Long-Term Water Resource Assessment and Addressing the impacts of mining and extractive industries	Inclusion of actions within the SWS that address findings of Long-Term Water Resource Assessment, preliminary method for the Long-Term Water Resource Assessment for northern Victoria, 2023 Latrobe Valley Regional Rehabilitation Strategy (LVRRS) Amendment review and supporting outputs.
WRS13: Groundwater assessment and modelling	State-wide review of sustainable yields for groundwater systems and assessment of sustainable use, refurbishment and construction of bores, provision of specialist advice.
WRS14: Surface Water and Ground Water Monitoring	Operation and maintenance of 1015 surface water and 1400 groundwater sites, site upgrades, upgrades to water monitoring information systems, Regional Water Monitoring Partnership program, new contracts, delivery of five-yearly analysis of Victoria's surface water.
WRS15: Water Accounting and Reporting	Upgrade of the Victorian Water Account Platform, business-as-usual functions.
WRS16: Knowledge and insights	Water Market Watch app, video content, curriculum-aligned educational content, Building a Better Victorian Water Register Website, enhanced Victorian trade communications to water market participants
CWCT05: Water Efficiency Program	Water efficiency support (water use monitoring, leak alert service, data visualisation) and education materials to schools, delivery of water efficiency rebates to customers in vulnerable and hardship situation and not-for-profit emergency housing organisations, Smart Water Advice portal, updating and promoting Target 155 to Target 150 and Victoria's contribution to the Commonwealth's Water Efficiency Labelling Standards (WELS) scheme.

EC5 projects	Examples of key outputs
SIRS1: Rural water infrastructure project oversight and governance	Secured funding for strategic rural water infrastructure projects across 33 projects totalling approximately $996 million.
SIRS2: Sustainable Irrigation Program Implementation	Irrigation frameworks, Wise Water Use and Best Practice, irrigation drainage and management, salinity compliance with Murray Darling Basin Agreement, Murray Darling Basin Plan water recovery program implementation and monitoring, evaluation and reporting, rural water policy reforms.
CWCT06: Aboriginal Water Program	Facilitation of Aboriginal Water Officer Network, delivery of Water is Life: Traditional Owner Access to Water Roadmap, employment of 24 Aboriginal Water Officers, partnerships with Traditional Owner organisations.
PSP1: Long-term Water Security	Updated Urban Water Strategy Guidelines and oversaw the 2022-2027 Urban Water Strategy updates, commenced review of urban water planning arrangements, Water Sector Circular Economy Action Plan, research projects, global collaboration.
PSP2: Sustainable Water Strategies	Delivery of the CGRSWS, the implementation plan, and a monitoring, evaluation and reporting framework.
PSP3: Mitigating the risks of small dams	Designs and on-ground works to rehabilitate Goldfields dam, Baxter Park dam and the large dam at Traralgon Railway Reservoir Conservation Reserve; upgrades to dam safety portal.
CWCT07: CGRSWS - S2 Diversify water sources and increase water efficiency	Investment in 17 IWM projects, delivery of WaterSmart across all 10 CGRSWS urban water corporations, Victorian urban water efficiency behaviour change initiatives.
CWCT08: CGRSWS - S3 Waterway Health complementary measures and catchment management improvement	Planning and governance of Lower Latrobe Wetlands, Maffra Weir Fishway, Moorabool channel lining and Werribee diversion weir activities, implementation of regional catchment strategy including capacity building works and contribution to CMA priority activities.
PSP4: CGRSWS - S4 Enable adaptation to a variable climate	Trial framework to understand algal risks, trial to calculate benefits of efficient showerheads, progress towards Water Cycle Adaption Action Plan term.
SIRS3: Building Flood Resilience in Victoria	Building Flood Resilience in Victoria program, Victorian Floodplain Management Strategy Implementation, 24/7 activation of FloodZoom in response to flood events.
SIRS4: Central Bendigo Mine Rehabilitation Project - Groundwater	Delivery of long-term solution to prevent mine-impacted groundwater discharges in Central Bendigo, secured funding for solution implementation.
CWCT09: Waterway Health	Delivery of 459 waterway structures, 331.5 km of fencing, 35,465 ha of vegetation and weed control, and 482 management agreements between CMAs and landholders, processing of >30,000 waterway licenses/permits, flagship waterway projects, citizen science programs, monitoring programs and waterway management policies.
CWCT10: Environmental Water	Over 3,212 GL of water for the environment delivered to priority rivers and wetland sites throughout the state: 161 sites in 2023-24, 154 sites in 2022-23, 170 sites in 2021-22, and 225 sites in 2020-21.
SIRS6: Murray programs	Traditional Owner partnerships, 48 Aboriginal waterways assessments, development of monitoring, evaluation, reporting and improvement plans and ecological data base.

EC5 projects	Examples of key outputs
CWCT11: Our Catchments Our Communities Program	Renewal of regional catchment strategies, on-ground stewardship programs, engagement events, planning and regulation.
SIRS5: Macalister Irrigation District Modernisation Project - Phase 2	Treatment of approximately 80 km of leaky channels, construction of 34 km of pipeline and decommissioning of 50 km of old channels resulting in water savings used for agriculture and the environment.
WRS19: Resilient Water Markets, Regional Communities and Infrastructure (Stream 1 and 2)	Victorian implementation of an interstate broker regulation scheme that delivers an agreed interstate standard of conduct, conduction of environmental cultural and recreational assessments.

3. Evaluation framework

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3. Evaluation framework

3.1 Overview

The framework adopted for this evaluation provides a consistent and systematic approach for evaluating the EC at both the project level and for the whole of EC5. The framework embeds common evaluation concepts into each EC funded project from its commencement. It ensures that all projects have an evaluation plan (based on an evaluation plan template and guidelines) and program logic in place, which is reported against annually, and provides a work plan for evaluation of the EC at the end of project funding.

As explained in Section 1.2, the EC5 evaluation comprised 2 phases:

- An evaluation of the progress made by each project up until end of June 2023 (previous report) primarily focused on informing the investment strategy and Cabinet submission to endorse the establishment of EC6.
- An end of program evaluation (this report), which builds on the findings presented in the previous report and fulfills the requirement of Section 196 of the Act and the EC5 governance requirements.

3.2 Methods and approach

A plan for evaluation of the tranche (the 'EC5 evaluation plan[2]') was developed by the Jacobs' evaluation team, with input from DEECA and endorsement by the EC5 Project Control Board. Project teams developed evaluation plans for the 38 projects invested in over the tranche (initially for the third year evaluation, then updated for the End-of-Tranche evaluation). These plans included program logics and specific Key Evaluation Questions (KEQs), with evaluation reporting provided by project delivery teams. As part of evaluation planning for the EC5 evaluation, the Jacobs' project team held an evaluation knowledge sharing session focused on explaining and clarifying key evaluation concepts, and small group sessions were offered to all project leads to assist with consistent and high-quality project level evaluation and reporting.

The project evaluation reports were complemented by interviews with key project leads and DEECA leadership. Both data sources were used in the EC5 evaluation. The evaluation addressed KEQs described in the EC5 evaluation plan, supported by responses to KEQs provided at the project level. This approach was undertaken by DEECA to ensure that all components of each of the 38 projects were captured in the most logical way to enable effective evaluation across EC5.

The EC evaluation framework treats the project evaluation plans and EC5 evaluation plan as separate but interrelated components. The EC5 evaluation assesses the aggregated achievements of the funded projects, capturing the integrated nature of the projects in collectively meeting the EC objectives. These interrelationships are represented in the EC5 program logic. This integration is required because the functions of the individual projects are not discrete; many inform one another or go on to provide support or foundational components for the broader water sector in Victoria. The EC5 evaluation plan acknowledges and, in part, describes these complexities and interrelationships.

The process for the EC5 evaluation is summarised in Figure 1.

[2] Jacobs (2023) Environmental Contribution Tranche 5 Evaluation Plan, Final 15 March 2023

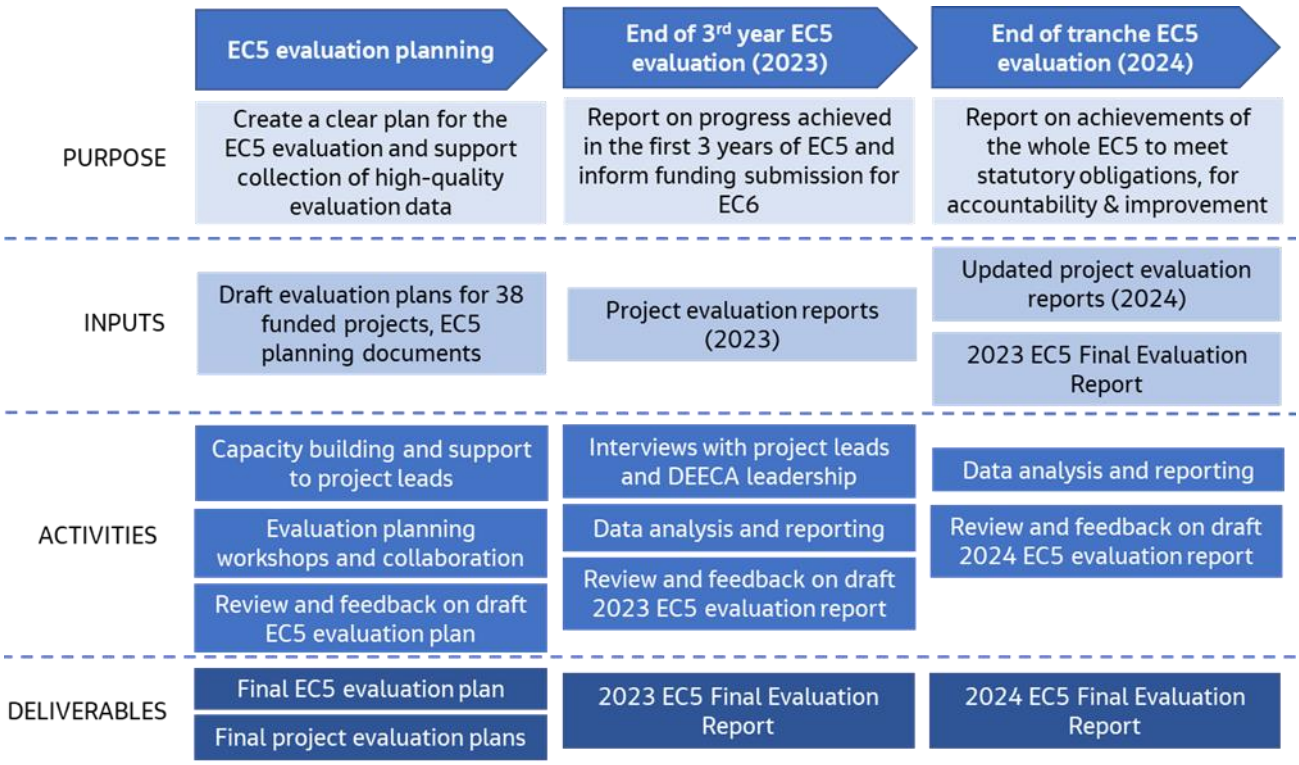


Figure 1. Process for the EC5 evaluation

3.3 Program logic

The program logic summarises the 'theory of change' for EC5 and provides a visual guide to tell the story of how EC5 funded projects collectively contribute to the statutory, long-term objectives.

This program logic is specific to EC5, with outcomes focused on the changes expected by the end of the tranche, based on the planned progress of the projects. It forms a basis for evaluation of the EC5 by setting the scene for EC5's contribution to longer term outcomes. The program logic is shown in Figure 2, and Table 6 provides a description of the program logic hierarchy components.

Table 6. Program logic hierarchy of terms and descriptions

Program logic element	Description
Long-term outcomes	Bigger picture goals the EC outcomes contribute to as specified in the Act
Outcomes: End-of-Tranche 5	Intended effects or changes resulting from EC5, expected by the end of the 4-year tranche 5 funding
Outputs	Products or deliverables that result from project activities. These can be biophysical (such as on-ground works or assets), or non-biophysical (social, institutional, cultural, or economic changes)
Activities	Actions, events, and processes undertaken

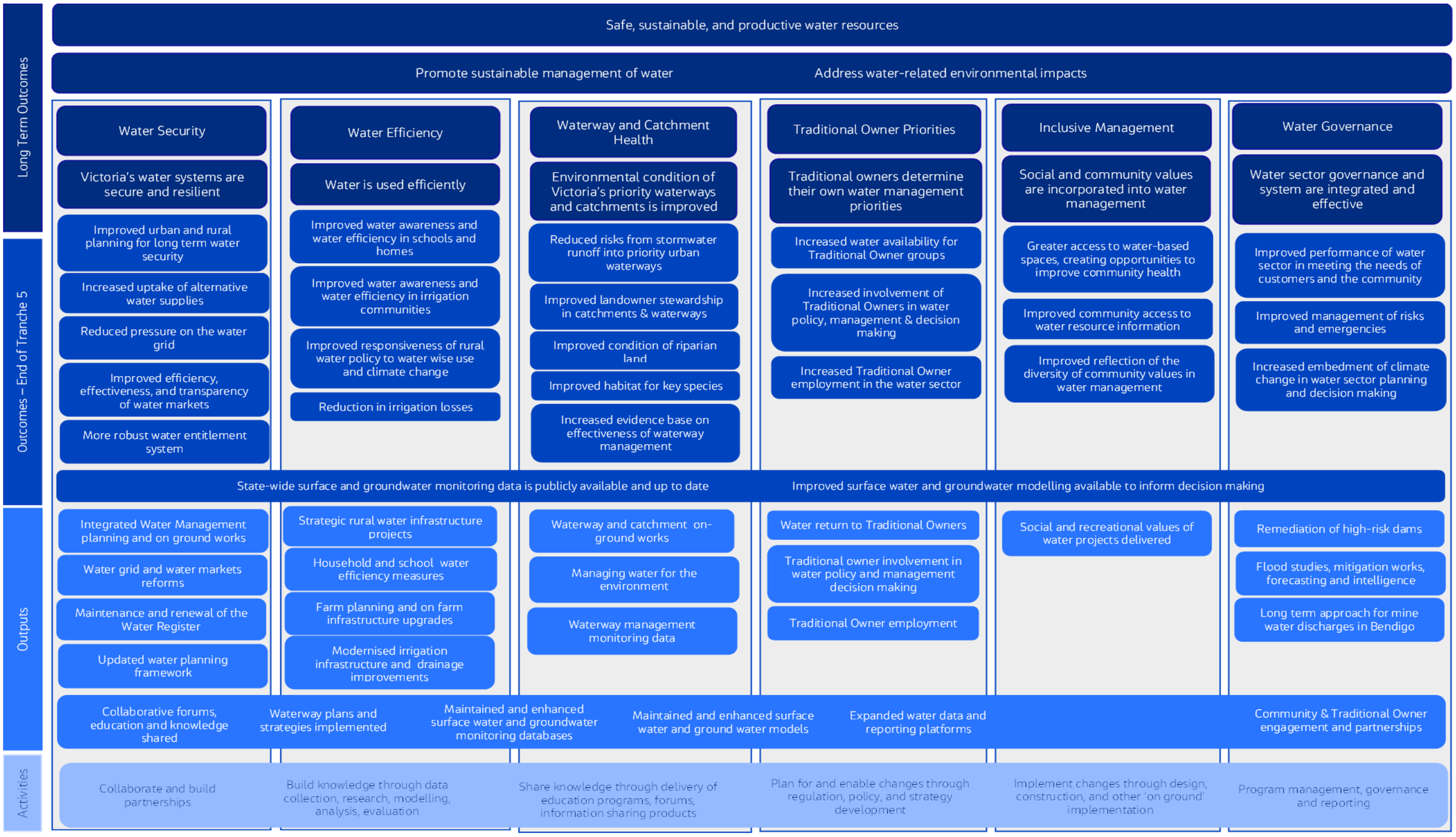


Figure 2. Program logic for EC5 Evaluation

3.4 Evaluation domains and key evaluation questions (KEQs)

Five evaluation domains were used to meet the evaluation objectives. The key questions and sub-key questions for each of the evaluation domains are presented in Table 7.

Table 7. KEQs and associated sub-questions

Domains and KEQs	Sub-questions
Impact	
To what extent did EC5 achieve the desired outcomes?	▪ Water security: What progress has been made toward secure and resilient water systems? ▪ Water efficiency: What progress has been made toward efficient water use? ▪ Waterway and catchment health: How have risks to priority waterways and catchment health been reduced? ▪ Traditional Owner priorities: To what extent were Traditional Owner priorities furthered? ▪ Inclusive management: To what extent were social and community values incorporated into water management? ▪ Water governance: To what extent was the effectiveness of water governance improved? ▪ To what extent has ongoing, foundational work, supported other programs and improved data availability and decision-making? ▪ What unintended outcomes (positive or negative) have arisen?
Effectiveness	
To what extent was EC5 designed and delivered effectively?	▪ What worked well and did not work well about the way EC5 was delivered? ▪ To what extent did funding support the adaptation of projects in response to changing contexts? (For example, COVID-19 pandemic, floods, bushfire) ▪ To what extent did projects develop and work in partnership with other parts of government, other organisations, and community?
Appropriateness	
How suitable were the EC5 investments given the intended objectives?	▪ To what extent was funding allocated in line with the legislated objectives of the EC and guided by key water management strategies? ▪ To what extent did EC funded projects use monitoring and evaluation data to improve management (adaptive management)?
Efficiency	
To what extent has EC5 demonstrated efficiency and value for money?	▪ How has EC5 demonstrated efficiency through delivery? ▪ To what extent were efficiencies gained through working together with others to achieve better outcomes? ▪ Have initiatives leveraged additional funding sources and in what way was this leverage applied? ▪ What evidence is there of initiatives undertaking options assessment and/or cost-benefit analysis of approaches?
Legacy	
▪ To what extent are **impacts** expected to be sustained over time?	

3.5 Performance assessment scale

Figure 3 shows the performance assessment scale used for evaluating the impact domain. The performance assessment scale provides a qualitative assessment of how EC5 has performed against the intended outcomes. The intended outcomes for EC5, and over the long-term, are shown in the EC5 program logic (presented in Section 3.3) and are the benchmark for the assessment.

The purpose of the performance assessment scale is to support the accompanying evaluation narratives, enable findings to be concisely summarised, and communicate clearly where there are areas for improvement.

The EC investment is complex, spanning a broad range of priorities and involves initiatives and projects that are operating at a range of maturity levels, which are influenced by the EC priorities and progress made in past tranches. To address this complexity, two metrics have been used to distinguish between:

- The extent to which the end-of-EC5 outcomes were achieved (from the beginning of EC5 tranche period to the End-Of-Tranche)
- The overall level of progress toward achieving the long-term outcomes (through EC5 and earlier EC tranches).

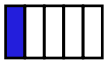
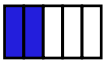
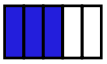
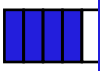
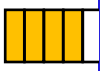
Rating	Extent to which end-of-EC5 outcomes were achieved					Overall progress toward long-term outcomes				
	Very low	Low	Medium	High	Very high	Very low	Low	Medium	High	Very high
										

Figure 3. Performance assessment scales

3.5.1 Limitations of the analysis

Limitations on the evaluation included:

- **There are complex interdependencies across EC tranches and the broader context in which EC investment occurs:** Each subsequent tranche will support the achievement of benefits from previous tranches. That is:
  - works undertaken in subsequent tranches help preserve the benefits achieved in earlier tranches; and
  - the works and benefits from subsequent tranches are dependent on the works and benefits achieved in earlier tranches.

  Also, there are multiple drivers for the outcomes that the EC is contributing toward. These include influences and achievements from other programs, changes to policies and government priorities, and other externalities not funded under the EC. Quantitative assessment of these interdependencies is complex and beyond the scope of the evaluation.

- **An economic assessment was beyond the scope of this evaluation:** While this evaluation reported on efficiency, the scope did not include an economic assessment. This means evaluation of efficiency and value for money is qualitative only and does not quantitatively compare the value of investment to the benefits achieved. However, some of the projects undertook economic assessments as part of the investment cycle and the outcomes of these were reviewed as part of the project evaluations. Monetisation of many of the values the EC supports have traditionally been complex (such as environmental and social values), although new methods and techniques are increasingly being used to analyse these.
- **Relying on qualitative data:** The main source of information used for this evaluation was project evaluation reports developed by DEECA project leads. These were comprehensive and have undergone internal reviews within DEECA prior to their use in the evaluation; however they were of variable quality, with some reports reflecting the purposes of the evaluation better than others. Improvements were made in the reporting process that was used for the third year evaluation, to improve the efficiency and reliability of information provided for the End-Of-Tranche evaluation. Many project evaluation reports used quantitative evidence, where possible, to demonstrate achievements, however there was still significant reliance on qualitative information where quantitative evidence did not exist.

4. Evaluation of impact

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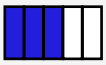
4. Evaluation of impact

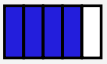
Key findings

- **Overall achievements:** Over the 4 years of EC5, a broad range of positive outcomes for the environment, communities, and industries throughout Victoria have been achieved. A key driver of these achievements was the way in which EC5 initiatives either built on or extended work started in EC4 or earlier tranches. This is supported by evidence of completion of the planned works and outcomes assessments in the detailed project evaluation reports prepared by DEECA project teams. Several projects had to adapt the planned activities throughout the tranche due to changes in sector priorities, delays or to accommodate impacts from unforeseen events (such as COVID-19, floods, bushfires), or project complexities and resourcing issues. These changes were acknowledged and described in the project evaluation reports and were part of the expected evolution of project delivery over the four-year timeframe.
- **Water security:** EC5 delivered a suite of projects to improve Victoria's ability to plan for long-term water security. The development of the CGRSWS, and associated implementation works, were key achievements of EC5. The CGRSWS identified the opportunity for the region to shift away from reliance on river water and move towards climate-resilient, manufactured water to augment the region's water supplies. Options included fit-for-purpose recycled water, treated stormwater and desalinated water. A range of on-ground works, designs, and planning for uptake of diverse water supplies were delivered, representing a shift from primarily policy and planning (in EC4) toward increasing implementation to achieve water security. A suite of reviews, planning processes, reform and technology improvement works were implemented to reduce pressure on the water grid, improve functioning of water markets, and enhance Victoria's water entitlement framework. A summary of the performance assessment for this outcome is shown below:

Rating type	Rating	Rationale
Extent to which end-of-EC5 outcomes were achieved	Medium 	Publication of the CGRSWS and associated implementation works, and a suite of reform works represent key achievements against the end-of-EC5 outcomes. Some aspects experienced changes in approach which resulted in delays to achievement of planned outcomes for EC5 and will flow through into EC6. For example, the development of a renewed Victorian Water Register platform will be part of EC6.
Overall progress toward long-term outcomes	Medium 	Investment through previous EC tranches and other programs has maintained or increased water security in many systems throughout Victoria. Continued work is needed to maintain current water security and build resilience in the face of multiple stressors, such as population growth and a variable and changing climate.

- **Water efficiency:** Water efficiency outcomes were delivered in multiple Victorian communities, including schools, urban households, irrigators and regional communities. Several water efficiency programs have provided significant water savings, water awareness, and cost-saving benefits with 0.298 GL of water saved in households and community housing properties through the Community Retrofit Program (CRP) and Community Housing Retrofit Program (CHRP), and 1.9 GL saved in schools through the Schools Water Efficiency Program (SWEP) over the investment period. Smart Water Advice portal provided water saving tips to households and businesses and Target 155 was reinvigorated to Target 150. Victoria's contribution to the Commonwealth's WELS scheme resulted in 4 GL of water

savings. Irrigators are more prepared for a future with reduced water availability through the provision of educational tools, knowledge, and farm planning support. Irrigation losses are on track to be reduced by up to 10.3 GL annually, through modernisation of over 80 km of irrigation in the Macalister Irrigation District (upon project completion in EC6). A modern risk-based compliance and enforcement framework was implemented to manage unauthorised take of water. A summary of the performance assessment for this outcome is provided shown below.

Rating type	Rating	Rationale
Extent to which end-of-EC5 outcomes were achieved	High 	EC5 continued a range of initiatives focused on improving water efficiency in schools, homes, rural communities and irrigation districts, for which water savings were monitored and quantified. Work to improve regulation of water use compliance was a key achievement of EC5.
Overall progress toward long-term outcomes	Medium 	Prior investment in rural water infrastructure has created the gains in improved irrigation efficiency. However, continued investment and ongoing work is needed to realise the remaining opportunities. Urban water efficiency varies due to multiple factors and there is more work needed to achieve Melbourne's per capita water use targets.

- **Waterway and catchment health:** Strong progress was made in improving the health of waterways and catchments throughout Victoria, with the continuation and extension of several long-term projects. EC5 enabled a suite of 52 IWM projects, including stormwater harvesting, recycled water and rainwater harvesting projects which – when completed – will result in significant stormwater pollution reduction. Over 46,764 ha of place-based, on-ground catchment stewardship projects were delivered, along with 35,465 ha of waterway vegetation improvement works across priority sites. The Flagship Waterway projects were also continued and expanded such as with the Jan Juc daylighting project and a commitment to deliver 88 projects from the YSP, focused on protecting and enhancing Birrarung (Yarra River) and its parklands. Over 3,212 GL of water for the environment was delivered to 161 rivers and wetlands sites in 2023-24, 154 sites in 2022-23, 170 sites in 2021-22, and 225 sites in 2020-21. While environmental outcomes generally take time to accrue following investment in waterway health projects, monitoring programs are beginning to show long-term positive environmental changes associated with works from EC5 and earlier tranches, building a strong evidence base. This includes the recording of significant colonial waterbird breeding at sites that received water for the environment and natural flooding. A summary of the performance assessment for this outcome is shown below.

Rating type	Rating	Rationale
Extent to which end-of-EC5 outcomes were achieved	Very High 	The health of waterways and catchments throughout Victoria were improved, with the continuation and extension of several long-term projects. Increased implementation of IWM initiatives, delivery of a large volume of vegetation and habitat improvement works, environmental water delivery, and delivery of actions from the YSP were strengths of EC5. An increased evidence base was also developed for ecological improvements resulting from waterway management works.
Overall progress toward long	Medium 	Prior EC tranches have invested significantly in waterway and catchment health, and while environmental outcomes generally take time to accrue following investment, there is emerging and strengthening evidence of environmental benefits from EC

term outcomes		investments. Ongoing investment is required to continue to address significant remaining environmental degradation amid continued stressors.

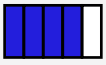
- **Traditional Owner priorities:** Over EC5,frameworks and strategies have increasingly considered and included Traditional Owner priorities and support Traditional Owner participation. The publication of *Water is Life: Traditional Owner Access to Water Roadmap* and the CGRSWS in 2022 were key achievements of EC5. Both documents include standalone Traditional Owner contributions (27 Traditional Owner Nation Statements in *Water is Life*, and Chapter 6 of the CGRSWS) and represent a policy shift that provides new guidance and policy direction for the inclusion of Traditional Owners in the management of Victoria's water resources. Continuation and modest growth in the Aboriginal Water Program means there are now 24 Aboriginal Water Officers, plus dedicated funding for Traditional Owner-led water-related projects across 18 Traditional Owner groups (including the all Registered Aboriginal Parties) and 4 CMAs, to strengthen Traditional Owner capacity and enable greater consideration of Traditional Owner priorities and involvement in the way water is managed and delivered in Victoria. Continued investment is needed into EC6 to successfully implement the actions from *Water is Life* and CGRSWS, and meaningfully embed Traditional Owner involvement, values and principles of self-determination throughout EC projects and the broader Victorian water sector. A summary of the performance assessment for this outcome is shown below.

Rating type	Rating	Rationale
Extent to which end-of-EC5 outcomes were achieved	Very High 	The publication of *Water is Life* in 2022 was a key achievement of the EC5 tranche, representing a policy shift that provides new guidance and policy direction for the inclusion of Traditional Owners which has the potential to deliver tangible outcomes and staged systemic change. Within EC5, the inclusion of Traditional Owners was increasingly integrated into project frameworks and strategies. With increased responsibilities and obligations to include Traditional Owners in water management, new challenges are emerging relating to resourcing and the availability for Traditional Owner organisations to balance and engage with competing priorities, and to exercise self-determination in water management.
Overall progress toward long-term outcomes	Low 	There remains significant work to be done to successfully implement the actions from *Water is Life*, and meaningfully integrate Traditional Owner involvement, values and principles of self-determination throughout EC projects and the broader Victorian water sector. While important progress has been made through EC5, there is still a large gap between the current level of Traditional Ownership self-determined participation and the long-term outcome.

- **Inclusive management:** The EC5 projects were inclusive of social and community values, with 87% of the projects reporting that they are increasing community participation and inclusion of community values in water management. New *Recreational Area (Water) Regulations 2023* were developed to manage recreation at storages, recreational values will be embedded in the new Victorian Waterway Management Strategy, and $2.89 million of grants funds were distributed to support 19 projects focused on improving recreational outcomes. New technology platforms and communications products were developed for improved community and sector access to information. A summary of the performance assessment for this outcome is shown below.

Rating type	Rating	Rationale
Extent to which end-of-EC5 outcomes were achieved	High 	The EC5 projects continued being inclusive of social and community values. Key features of EC5 were a focus on managing recreation at Victoria's water storages, projects focused on improved recreational values and new technology platforms for improved access to information. Some priorities shifted throughout EC5 due to COVID-19 disruption and flood recovery works.
Overall progress toward long term outcomes	High 	Community participation and inclusion of community values were strongly integrated throughout the EC5 initiatives, indicating a high level of inclusive management throughout the Victorian water sector. Significant opportunities remain to improve high value recreation opportunities.

- **Water governance:** Many of the projects contributed to meeting the needs of customers and the community, through improved water planning, access to information and inclusion in water planning and decision-making. Flood risks were reduced, as well as the risks posed by the three highest-risk local government authority owned small dams. Climate change was embedded into water sector planning and decision-making through the development of *Guidelines for Assessing the Impact of Climate Change on Water Availability in Victoria*, which have been widely adopted across the Victorian water sector. A summary of the performance assessment for this outcome is shown below.

Rating type	Rating	Rationale
Extent to which end-of-EC5 outcomes were achieved	High 	Many of the EC5 projects contributed to meeting the needs of customers and the community, through improved water planning, access to information and broad community / stakeholder inclusion in water planning and decision-making.
Overall progress toward long-term outcomes	Very High 	The Victorian water sector enjoys a high level of strong governance integration and effectiveness. Ongoing work, such as that provided in EC5, is needed to maintain and further improve as existing and new challenges emerge, and new technologies present opportunities.

- **Ongoing foundational work:** Ongoing surface water and groundwater monitoring and modelling projects continued to build the foundational knowledge base of continuous and comprehensive water monitoring data and information which is used for planning and decision-making across the Victorian water sector. Many of the other EC5 projects noted the use of the EC to fund business-as-usual works that was critical to the project teams achieving their standard objectives and ongoing obligations. Overall, 81% of the projects reported having a degree of ongoing work (which started prior to EC5 and/or will continue post EC5). Along with benefits of EC funding supporting a range of short and long-term projects, several emerging risks associated with the EC increasingly funding ongoing, business-as-usual activities were noted.

4.1 Overview

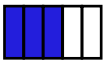
The impact of EC5 was assessed through analysis of the extent to which the projects have collectively achieved, or made progress toward achieving, the 6 overarching EC5 investment objectives, and the 26 End-of-Tranche outcomes articulated in the EC5 program logic (refer section 3.3). The 7 key evaluation questions used to assess impact were:

- What progress has been made toward secure and resilient water systems?
- What progress has been made toward efficient water use?
- How have risks to priority waterways and catchment health been reduced?
- To what extent were Traditional Owner priorities furthered?
- To what extent were social and community values incorporated into water management?
- To what extent was the effectiveness of water governance improved?
- To what extent has ongoing, foundational work, supported other programs and improved data availability and decision-making?

The findings for each of these are discussed in the sections below. The key sources of information used in this analysis were the project evaluation reports prepared by the DEECA project teams, which were reviewed to understand the progress against each outcome over the 4 years of the EC5 (to 30 June 2024). Interviews with selected project teams and DEECA leadership provided further insights.

4.2 What progress has been made toward secure and resilient water systems?

The overall performance assessment for this KEQ is:

Outcome theme	Rating type	Rating	Rationale
Water Security	Extent to which end-of-EC5 outcomes were achieved	Medium 	Publication of the CGRSWS and associated implementation works, and a suite of reform works represent key achievements against the end-of-EC5 outcomes. Some aspects experienced changes in approach which resulted in delays to achievement of planned outcomes for EC5 and will flow through into EC6. For example, the development of a renewed Victorian Water Register platform will be part of EC6.
	Overall progress toward long-term outcomes	Medium 	Investment through previous EC tranches and other programs has maintained or increased water security in many systems throughout Victoria. Continued work is needed to maintain current water security and build resilience in the face of multiple stressors, such as population growth and a variable and changing climate.

This KEQ evaluates progress made toward the Water Security objective of the EC5. The program logic diagram (see Section 3.3) includes the long-term outcome ‘Victoria’s water systems are secure and resilient’ supported by the following End-of-Tranche outcomes:

- improved urban and rural planning for long-term water security
- increased uptake of manufactured water supplies
- reduced pressure on the water grid

- improved efficiency, effectiveness, and transparency of water markets
- more robust water entitlement system

A summary of the achievements made by EC5 projects to these outcomes is provided below. This is supported by examples of some of the main ways that individual projects have contributed to each outcome area, provided in Appendix B.

4.2.1 Improved urban and rural planning for long-term water security

EC5 delivered a suite of projects to improve Victoria's ability to plan for long-term water security. The development of the CGRSWS, and associated implementation works, was a key achievement of the tranche. Other planning-based projects provided improved coordination of planning approaches, collaboration, and planning for adaptation to climate change. These include:

- review and update of the *Urban Water Strategy Guidelines* and assessment of the broader water planning framework
- developing a response to the findings of the *Long-Term Water Resource Assessment for Southern Victoria,* by developing a set of actions in the CGRSWS targeted toward sustainable solutions to addressing decline in water availability
- publication of the first full *Water Cycle Adaptation Action Plan,* focused on ensuring the water sector can continue to provide safe, secure, and reliable water services under a changing climate
- facilitation of the 15 IWM Forums and development of action plans for each Forum supporting the shift towards IWM as business-as-usual water management in Victoria
- transitioning all major Victorian surface water resource systems models from REALM (Resource Allocation Model) to the Source platform, for improved consistency and ability to support policy, planning and management decisions
- a state-wide review of caps for all groundwater systems and statewide assessment of sustainable use of these systems, along with analysis of risks associated with the entitlement framework.

Case Study 1 outlines ways in which the CGRSWS is promoting long-term water security by enabling a shift away from reliance on river water towards climate-resilient manufactured water to augment our water supplies.

4.2.2 Increased uptake of manufactured water supplies

EC5 projects funded the delivery of a range of on-ground works, designs, and planning for uptake of recycled water, stormwater and rainwater supplies. Throughout EC5 there was a shift from primarily policy and planning (in EC4) toward increasing implementation of manufactured water projects. Projects delivered in EC5 will generate around 3.0 GL/yr of manufactured water, and planning and design has commenced for future implementation. This includes 52 projects associated with the IWM Forums, supported by a grants program, and 17 IWM projects in the Central and Gippsland region as part of the CGRSWS implementation.

An enabling environment was also created to increase the uptake of recycled water, rainwater, and stormwater through updating regulatory guidelines, developing risk frameworks, cost-benefit analysis and regulatory impact statements, guidance and capacity building activities for water corporations, local government, CMAs and Traditional Owners, planning system users, government and practitioners.

4.2.3 Reduced pressure on the water grid

Foundational activities were implemented that will help reduce pressure on the water grid in the future, such as establishment of an Executive Advisory Committee to provide oversight and guidance on urban water security.

4.2.4 Improved efficiency, effectiveness, and transparency of water markets

EC5 funded a suite of reform, review, communications, technology improvement and solution implementation works to improve the functioning of water markets. Together, these projects have improved the way Victorian water markets operate, report, and share information.
Some examples include:

- addressing water and cost sharing problems in South-Central Victoria through design of a water sharing framework
- improving water market transparency by publishing information on entities owning > 2% of water entitlements within a system.
- completing the Goulburn to Murray trade rule review and introducing a new place of take approvals framework through legislative changes to the Victorian *Water Act 1989* to support the integrity of the retail entitlement and market framework
- upgrading the Victorian Water Accounts platform
- participating in the Australian Competition and Consumer Commission (ACCC) Inquiry Roadmap
- reviewing and reporting on the effectiveness of water markets across Victoria, with work programs that commit to improvements over time.

Progress was also made toward developing a new technology platform to support the Victorian Water Register. While the original project planned to complete this within the EC5, it was found to be unfeasible based on forecast costs to complete the project and for ongoing operations of the new platform. Following termination of the original project, a new project was established to develop an alternative approach to delivering a Victorian Water Register platform that maximises reuse of the investment made to date, while delivering a value for money outcome.

4.2.5 More robust water entitlement system

The robustness of the Victorian water entitlement system was improved through enhancing entitlement frameworks (bulk, environmental, groundwater, unregulated systems), reducing risks and barriers to users, and improving compliance. This involved:

- 96 changes to bulk and environmental entitlements with 36 of the changes made to realise water recovery from irrigation modernisation projects in northern Victoria.
- setting clear direction for improved groundwater management through development of GM2030; it provides a clear statement of 13 priorities for the next 6 years, protecting the integrity of retail entitlement and market framework through the Goulburn to Murray trade review and Regulatory Impact Assessment, as well as development and implementation of a *Victorian Shortfall Response Plan* and place of take framework.
- enabling audited long-term water recovery from water savings projects to be converted into water entitlement volumes and reliabilities.

Work that was planned on a licensing review for groundwater and unregulated systems experienced delays due to unanticipated lead times, resourcing and the significant level of consultation required to create legislative instruments.

Case Study 1: Central and Gippsland Region Sustainable Water Strategy (CGRSWS) 2022- A move toward manufactured water

Banks of the Birrarung (Yarra River) looking on towards Melbourne city

The role of the CGRSWS is to set policy directions and outline actions for securing the region's long-term water supplies to protect the jobs, farms, ecosystems, communities and Traditional Owners that rely on them. It focuses on the current and emerging water challenges over the next 50 years, during which time the region's population is expected to grow to over 10 million and variability in water availability are projected due to climate change. It contributes to multiple outcomes of the EC including water security, water efficiency, waterway and catchment health, Traditional Owner priorities and inclusive management.

The CGRSWS 2022 covers an area that 6 million Victorians rely on for work and recreation. It also provides drinking water for 90% of Victorians. Hence, adapting to the impacts of climate change and managing associated water security risks is critical to build resilience in communities and to secure a healthy future for all Victorians. Modelling shows that the Central and Gippsland Region is likely to need additional water supplies within the next 10 years and that water supply may need to double over the next 50 years to meet demand. A loss of access to water may lead to lost economic opportunity, loss of recreation, environmental and cultural values, and cost burdens on water customers.

The CGRSWS identifies the opportunity for the region to shift away from reliance on river water and move towards climate-resilient, manufactured water to augment our water supplies. This includes fit-for-purpose recycled water, treated stormwater and desalinated water.

DEECA, the water sector and Traditional Owners will progress regionally significant urban water projects. Investments in new water supplies will aim to balance the region's growing water demands with affordability of supply. Additionally, the use of manufactured water will lead to river water becoming available for other uses, including returning water to Traditional Owners and the environment.

4.3 What progress has been made toward efficient water use?

The overall performance assessment for this KEQ is:

Outcome theme	Rating type	Rating	Rationale
Water Efficiency	Extent to which end-of-EC5 outcomes were achieved	High	EC5 continued a range of initiatives focused on improving water efficiency in schools, homes, rural communities and irrigation districts, for which water savings were monitored and quantified. Work to improve regulation of water use compliance was a key achievement of EC5.
	Overall progress toward long-term outcomes	Medium	Prior investment in rural water infrastructure have created the gains in improved irrigation efficiency. However, continued investment and ongoing work is needed to realise the remaining opportunities. Urban water efficiency varies due to multiple factors and there is more work needed to achieve Melbourne's per capita water use targets.

This KEQ evaluates the extent to which the Water Efficiency objectives of the EC5 were achieved. The program logic (see Section 3.3) includes the long-term outcome 'Water is used efficiently' supported by the following End-of-Tranche outcomes:

- improved water awareness and water efficiency in schools and homes
- improved water awareness and water efficiency in irrigation communities
- improved responsiveness of rural water policy to water wise use and climate change
- reduction in irrigation losses
- improved regulation of water user compliance.

A summary of the achievements made by EC5 projects to these outcomes is provided below. This is supported by examples of some of the main ways that individual projects have contributed to each outcome area, provided in Appendix B.

4.3.1 Improved water awareness and water efficiency in schools and homes

Water efficiency programs have provided significant water savings, water awareness, and cost-saving benefits, with:

- 0.298 GL/yr saved in households and community housing properties through CRP and CHRP through water audits and water efficiency works in 6,035 properties (exceeding the target of 5,275 by 15%), and resulting in average water and wastewater charges of $124/year per customer assisted
- 1.9 GL was saved through leak detection in 905 schools as part of SWEP over EC
- 4 GL has also been saved through Victoria's contribution to the Australian Government's WELS scheme
- Investments in residential behaviour change initiatives contributed to the Smart Water Advice portal, providing water saving tips to households and businesses and reinvigoration of the Target 155 to Target 150 (T150) water conservation behavioural program.

While more work is still needed to reduce Melbourne's average per capita daily water consumption to achieve 150 litres per person per day, T150 is an aspirational target, not a mandatory target / performance outcome.

4.3.2 Improved water awareness and water efficiency in irrigation communities

This outcome was driven through the continued implementation of the Sustainable Irrigation Program, which provides extension support and capacity building to irrigators to assist them with decision-making and future irrigation planning. The irrigation extension program resulted in the development of 86 whole farm plans, for on-farm operational capacity, efficiency, and preparedness for a future with reduced water availability. EC5 also supported DEECA in providing governance and oversight of major water efficiency infrastructure projects in irrigation communities, and to secure funding for 33 new strategic projects ($996 million). Modernisation works in the Macalister Irrigation District were complemented by whole farm planning and on-farm efficiency incentives to landholders to maximise the benefits of both modernisation and on-farm programs.

4.3.3 Improved responsiveness of rural water policy to water wise use and climate change

Chapter 7 of the CGRSWS commits to actions that work with farmers to encourage more efficient use of water and best-practice irrigation, as well as Policy 7-1 that commits to maximising water efficiency in agriculture. During EC5, the *Social and economic impacts of Basin Plan water recovery in Victoria*, and *Water supply and horticultural demand in the southern Murray-Darling Basin* were published, which report on future changes and implications for irrigated agriculture and

communities under a changing climate. The findings from these reports are being integrated into rural water policy.

4.3.4 Reduction in irrigation losses

The Macalister Irrigation District Modernisation Project – Phase 2 is on track to deliver up to 10.3 GL of water recovery and has modernised just over 80 km of irrigation network. The final project achievements and audited water savings will be reported following practical completion in late 2024, and will be reported in the next reporting period.

4.3.5 Improved regulation of water user compliance

An independent review of Victoria's progress during EC5 with implementing a modern risk-based compliance and enforcement framework to manage unauthorised take of water reported very good progress and significant reductions in unauthorised take.

4.4 How have risks to priority waterways and catchment health been reduced?

The overall performance assessment for this KEQ is:

Outcome theme	Rating type	Rating	Rationale
Waterway and Catchment Health	Extent to which end-of-EC5 outcomes were achieved	Very High 	The health of waterways and catchments throughout Victoria were improved, with the continuation and extension of several long-term projects. Increased implementation of IWM initiatives, delivery of a large volume of vegetation and habitat improvement works, environmental water delivery, and delivery of actions from the YSP were features of EC5. An increased evidence base was also developed for ecological improvements resulting from waterway management works.
	Overall progress toward long-term outcomes	Medium 	Prior EC tranches have invested significantly in waterway and catchment health, and while environmental outcomes generally take time to accrue following investment, there is emerging and strengthening evidence of environmental benefits from multi-year EC investments. Ongoing investment is required to continue to address significant remaining environmental degradation amid continued stressors.

This KEQ evaluates progress made toward the Waterway and Catchment Health objective of the EC5. The program logic (see Section 3.3) includes the long-term outcome 'Environmental condition of Victoria's priority waterways and catchments is improved' supported by the following End-of-Tranche outcomes:

- reduced risks from stormwater runoff into priority urban waterways
- Improved landowner stewardship in catchments and waterways.
- Improved condition of riparian land.
- Improved habitat for key species.
- Increased evidence base on effectiveness of waterway management.

A summary of the achievements made by EC5 projects to these outcomes is provided below. This is supported by examples of some of the main ways that individual projects have contributed to each outcome, provided in Appendix B.

4.4.1 Reduced risks from stormwater runoff into priority urban waterways

The IWM project supported a suite of 52 IWM projects including stormwater harvesting, recycled water and rainwater harvesting projects which are expected to result in significant stormwater pollution reduction (prevention of 8,407 kg of nitrogen, 2,299 kg of phosphorus and 258 tonnes of total suspended solids from entering our waterways every year).

A stormwater offset framework and compliance tool was developed with input from industry and councils; four councils have implemented schemes and another four are considering offset schemes within their municipalities. 58 of 65 eligible councils were provided with grants to make data improvements, update onsite wastewater management projects or to undertake risk reducing activities.

Additionally, CGRSWS has funded capital and design works for several stormwater harvesting projects, including the Jan Juc daylighting project, the stormwater harvesting concept design for the Northern and Western Geelong Growth Areas, and the Werribee Reconfiguration project.

4.4.2 Improved stewardship in catchments and waterways

Our Catchments, Our Communities (OCOC) delivered Integrated Catchment Management (ICM) that is strongly community based, regionally focused and collaborative. This resulted in 46,764 ha of place-based, on-ground catchment stewardship projects in EC5. The Waterway Health program also supported CMAs to process approximately 30,000 waterway licenses and permits, floodplain and planning referrals and advice for local councils and the general community providing a critical business-as-usual function focused on catchment stewardship. The Waterway Health program also funded a range of projects focused on increased community and landholder involvement in stewardship activities. One example of this is the Caring for the Campaspe project, which supported landholders to fence and revegetate the river to protect its important environmental and community values, delivering 90 km of fencing, over 270 ha revegetated with native plants and over 400 ha where weed control was undertaken, involving 150 landholders.

4.4.3 Improved condition of riparian land and habitat for key species

Several EC5 projects delivered vegetation and habitat improvement works, including:

- Waterway Health: Delivery of 459 waterway structures (rock chutes, fish “hotels”, large wood, erosion control structures, flow regulators, removal of fish barriers), 331.5 km of fencing used to protect areas alongside waterways, 35,465 ha of vegetation and weed control, and 482 management agreements between CMAs and landholders, to ensure works areas are maintained in good quality for at least 10 years. As a result of these works, 386 river reaches and wetlands in Victoria are maintained or improved every year, with over 366 ha of waterway vegetation improvement works across priority sites. The Flagship Waterway projects also continued and expanded during EC5. Several activities were completed related to improving state policy and regional planning for wetland and catchment health improvements, including characterising wetland hydrologic stress across Victoria, developing habitat distribution models for wetland-dependent species and undertaking analysis to understand current and likely flow alteration under a range of climate change scenarios for unregulated rivers.
- Environmental Water: Delivery of environmental water to 161 rivers and wetlands sites throughout the state in 2023-24, 154 sites in 2022-23, 170 sites in 2021-22, and 225 sites in 2020-21, fully or partially achieving a total of 934 watering actions. Water delivery equated to over 3,212 GL of water for the environment to rivers and wetlands.

- CGRSWS Funding Stream 2 Diversify Water Sources and Increase Water Efficiency: The Jan Juc daylighting project, which is returning the highly disturbed urban waterway to a more natural state through recreating habitat, biodiversity and amenity values as well as delivering significant stormwater quality objectives.
- CGRSWS Funding Stream 3 Waterway Health Complementary Measures and Catchment Management Improvement: Design works for Lower Latrobe Wetlands, Maffra Weir Fishway, Moorabool channel lining and Werribee diversion weir activities
- Progressing 88 projects from the YSP, focused on protecting and enhancing the river and its parklands.
- **Our Catchments Our Communities:** CMAs delivered 46,764 ha of land under active catchment stewardship, including environment works, management services, management agreements, assessments and plans.

4.4.4 Increased evidence based on effectiveness of waterway management

- Waterway Health: The evidence base was increased through the Stream Change assessment: Riparian Woody Vegetation, 2021 Great Australian Platypus Search using eDNA, VEFMAP[3] and WetMAP[4] to evaluate ecological responses to environmental water management, Riparian Intervention Monitoring Program, and Victoria's first index of estuary condition. Some outcomes of these activities include:
  - The Stream Change Assessment Project compared the condition of woody riparian vegetation in 3,400 km of stream length between 2018-2020 and 2010. It found that statewide changes were small, however largest changes occurred where substantial or sustained riparian management had been undertaken.
  - The VEFMAP fish theme completed the most comprehensive assessment to date of long-term trends in Victorian native fish populations, which showed that most examined species declined during the Millenium Drought (2000-2010), but population trends have increased subsequently. VEFMAP fish monitoring also demonstrated strong influences of hydrology (including environmental water), on key processes such as movement, dispersal and recruitment.
  - Riparian Intervention Monitoring Program: found that after three years of interventions such as weed control, revegetation and livestock exclusion, there is positive changes such as increased density of native woody recruits and native taxa. Monitoring of Riparian Intervention Monitoring Program sites for responses to widespread and significant flooding in late 2022 showed that most sites (both intervention and control sites) had some degree of scour and/or mass failure in response to flooding. However, results indicated that the severity and/or frequency of scour and mass failure was less at intervention sites than control sites.
  - DEECA and other organisations partnered with the Odonata Foundation to undertake a state-wide investigation into platypus populations using environmental DNA as part of the Great Australian Platypus Search. Samples were collected from close to 2,000 sites across Victoria with the data improving our understanding of platypus populations across the state.
- Environmental Water: In 2022-23, significant colonial waterbird breeding was recorded at sites that received water for the environment, including:

[3] Victorian Environmental Flows Monitoring and Assessment Program

[4] Wetland Monitoring and Assessment Program

- 2,000 nests of Australian White Ibis and Straw-necked Ibis in Barmah Forest
- 10 species of colonial nesting waterbirds across the Hattah Lakes using 7,000 nests for over 25,500 chicks, with a further 18 waterbird species detected breeding with an additional 1,700 chicks recorded
- over 15,000 birds from 21 species recorded at Gunbower Forest and the Kerang Ramsar wetlands during 69 surveys over spring 2022 and autumn 2023.

- Environmental Water: Increases in waterbird numbers, including several threatened species, were evident in a field survey at Moodie Swamp after environmental watering. Due to the significant number of threatened waterbirds recorded at the wetland Goulburn Broken CMA successfully advocated for the wetland's closure to duck hunting in 2024.
  The field survey found:
  - over 130 Eastern Great Egret (vulnerable per the Victorian Flora and Fauna Guarantee Act 1988) and 100 Plumed Egret (critically endangered per the Victorian Flora and Fauna Guarantee Act 1988), marking the largest Victorian Plumed Egret count in 23 years
  - 14 endangered Brolga, the highest number ever recorded at the wetland.

Case Study 2 provides an example of improved catchment health in irrigation areas of the Goulburn Broken Region, delivered through drainage course declarations which represent a new approach to drainage management. Case Study 3 provides an example of how citizen science is being used to increase community involvement in waterway health and catchment stewardship.

Case Study 2: Victorian Irrigation Drainage program- Goulburn Broken Region

An undersized and partially blocked box culvert has been replaced with two 1200 mm x 450 mm box culverts.

Drainage course declarations (DCDs) have been implemented across the Goulburn Broken Region as part of EC5's funding of the Victorian Irrigation Drainage Program. This project contributes to the EC waterway and catchment health outcomes.

The DCDs provide a mechanism to reconnect natural drainage lines, reflecting a change in attitude to how Victoria manages drainage in irrigated landscapes. This process reduces the risks of waterlogging and salinity to agricultural productivity infrastructure and terrestrial and wetland ecosystems, as well as provides opportunities to restore natural wetland wetting regimes. DCDs are around a quarter of the cost to implement compared to traditional constructed primary drains and enable works to be undertaken to remove artificial obstructions in natural drainage lines.

One example of this is in the Cornella Creek sub-catchment, an actively irrigated catchment covering 270 km². This project included extensive community and stakeholder engagement, in conjunction with a range of drainage investigation activities that included detailed conceptual design, modelling, surveys, infield assessment and on-farm consultation. Works have been completed with regional input by the Goulburn Broken CMA, Goulburn-Murray Water and community including the drainage working group. The Cornella Creek Catchment was declared in August 2019, comprising a total of 17 km of the Cornella Creek Anabranch and Ryan's Floodway. The works ranged from lowering embankments, installing enlarged road culverts, and remediating existing farm drainage structures. At completion this project underwent an independent assessment of costs and benefits that found the project to be highly beneficial to the region's economy.

Case Study 3: Citizen Science- WaterWatch and EstuaryWatch

Citizen science programs are a valuable way for DEECA to support community members to become actively involved in local waterway monitoring and on-ground activities. WaterWatch Victoria and EstuaryWatch Victoria focus on waterway health with over 1,404 active WaterWatch sites and 137 active EstuaryWatch sites across the state. This project is fully funded through the EC5 'Improving Waterways and Catchments' initiative, in partnership with related DEECA and Australian Government initiatives. It contributes to the EC waterway and catchment health and inclusive management outcomes.

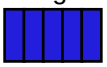
Volunteers undertaking water testing

Established in 1993, WaterWatch Victoria is the longest running citizen science program in Australia. In March 2023, CMAs came together to celebrate 30 years of Waterway Citizen Science and to recognise volunteers for their commitment and contribution to our region's waterways. In May 2023, audiences joined an online panel compiled of longstanding volunteers, coordinators, and researchers to reflect on the past 30 years of waterway citizen science and imagine what the future 30 years may bring. One of the longest serving volunteers is Rob Loats, who has been part of WaterWatch since 1996. Rob now monitors three sites on the Little Murray River near where he lives in Swan Hill, after relocating from Donald and monitoring the Richardson River for many years.

WaterWatch and EstuaryWatch provide important pathways to connect communities to their local environment, build the capacity of communities and create change. Throughout these programs, citizen scientists contributed a total of 65,722 hours to care for Victoria's waterways, equivalent to 8,763 volunteer days in 2021-22. The estimated economic value of volunteer contribution in 2021-22 was $2,743,236. More information on the program's achievements in 2021-22 can be found in the WaterWatch and EstuaryWatch Annual Report.

4.5 To what extent were Traditional Owner priorities furthered?

The overall performance assessment for this KEQ is:

Outcome theme	Rating type	Rating	Rationale
Traditional Owner Priorities	Extent to which end-of-EC5 outcomes were achieved	Very High 	The publication of *Water is Life* in 2022 was a key achievement of the EC5 tranche, representing a policy shift that provides new guidance and policy direction for the inclusion of Traditional Owners which has the potential to deliver tangible outcomes and staged systemic change. Within EC5, the inclusion of Traditional Owners was increasingly integrated into project frameworks and strategies. With increased responsibilities and obligations to include Traditional Owners in water management, new challenges are emerging relating to resourcing and the availability for Traditional Owner organisations to balance and engage with competing priorities, and to exercise self-determination in water management.
	Overall progress toward long-term outcomes	Low 	There remains significant work to be done to successfully implement the actions from *Water is Life*, and meaningfully integrate Traditional Owner involvement, values and principles of self-determination throughout EC projects and the broader Victorian water sector. While important progress has been made through EC5, there is still a large gap between the current level of Traditional Ownership self-determined participation and the long-term outcome.

This KEQ evaluates progress made toward the Traditional Owner objective of the EC5. The program logic (see Section 3.3.) includes the long-term outcome 'Traditional owners determine their own water management priorities' supported by the following End-of-Tranche outcomes:

- increased involvement of Traditional Owners in water policy, management and decision - making
- increased water availability for Traditional Owner groups
- increased Traditional Owner employment in the water sector.

A summary of the achievements made by EC5 projects to these outcomes is provided below. This is supported by examples of some of the main ways that individual projects have contributed to each outcome area, provided in Appendix B.

4.5.1 Increased involvement of Traditional Owners in water policy, management, and decision-making

Over EC5, critical foundations were established that support Traditional Owner involvement, self-determination, objectives, and aspirations. The publication of *Water is Life* and CGRSWS in 2022 were key achievements of the EC5, representing a policy shift which provides new guidance and policy direction for the inclusion of Traditional Owners in water management and decision making.

- *Water is Life* is a nation-leading multi-lingual policy that places the Victorian Government's policy position and Traditional Owner voices side-by-side. The development and final publication of *Water is Life* prioritises collaboration and partnership with Traditional Owners to further enable self-determination. A total of 61 Traditional Owner Nation-level, regional and statewide workshops were held with Traditional Owners throughout the development of *Water is Life*, and 27 Traditional Owner Nation Statements were published alongside the government's policy commitments in the final *Water is Life* document. *Water is Life* establishes pathways to increase Traditional Owner roles and resources in water and waterway management across Victoria and has the potential to deliver tangible outcomes and staged systemic change, if implemented fully.
- The CGRSWS is the first of its kind to be developed through a genuine partnership with Traditional Owners. Representatives of the Traditional Owners in the region sat alongside decision-makers from the government and the water sector and guided the development of the CGRSWS. Traditional Owners developed their own stand-alone chapter, Healthy Country, Healthy Mob which sets out their expectations. Chapter 6: Water justice for Traditional Owners sets the policies and actions that are the next step for water justice for Traditional Owner groups in the region.

These publications have changed how the Victorian Government partners with Traditional Owners and sharpened the focus on working towards Treaty. Many project evaluation reports acknowledged this important shift and provided examples of how inclusion of Traditional Owners has been considered and integrated into project frameworks and strategies.

Other highlights of EC5 related to increasing involvement of Traditional Owners in water policy, management and decision-making include:

- A Traditional Owner stream in the IWM grants program, piloting of Traditional Owner IWM officers, and supporting 14 Traditional Owner led IWM projects. However, Traditional Owner groups and the project team have indicated that dedicated funding support is needed to enable them to develop the skills and capacity to effectively participate in the program and help to generate meaningful contributions from these groups Another area for improvement was identified in regard to ensuring culturally safe and inclusive spaces within IWM Forum meetings to facilitate meaningful participation by Traditional Owner representatives.
- The development of the draft *Greens Lake Action Plan* represented a new way of working collaboratively with water corporations, Traditional Owners and the recreation community to generate shared outcomes.
- The Traditional Owner Partnership developed by the CGRSWS to support self-determined outcomes for Traditional Owners in the region, including identifying opportunities to return water now and in the future, the development of the Cultural Benefits Framework and commitments to resources Traditional Owners in the region to partner during the implementation of the CGRSWS. Feedback from Traditional Owners is that the strategy building process is to be used as an example for other strategy building processes across the Victorian Government.
- Delivery of the Cultural Water for Cultural Economies project and 10 Traditional Owner-led pilot projects focused on access to water for economic development (2019-21), provided foundational information used to inform the government's drafting on Water is Life. The Cultural Water for Cultural Economies project included over 40 meetings and workshops with representatives from 20 Traditional Owner groups.
- Traditional Owner groups were key participants in the catchment stewardship projects as part of the OCOC project, including 12 formal partnerships with Traditional Owner groups and 22 with Aboriginal Victorians.

- Strengthened relationships with the Yorta Yorta Nation Aboriginal Corporation during the development of Black Swamp Environmental Water Management Plan which enabled sharing and learning with Goulburn Broken CMA on culturally sensitive language and improved context for the Moodie Swamp and Lower Broken Creek Environmental Water Management Plans.

However, there is more work to do to meaningfully include and support Traditional Owners in water sector management and decision-making across Victoria. Continued investment is needed into EC6 to successfully implement the full suite of actions included in Water is Life and the CGRSWS, and meaningfully embed Traditional Owner involvement, values and principles of self-determination throughout the EC5 projects and the broader Victorian water sector. A little over half (58%) of the project evaluations indicated that the project supported Traditional Owner self-determination objectives and aspirations. Recognising that many of the projects were historically developed with little or no Traditional Owner involvement, this indicates that Traditional Owner inclusion is increasingly being integrated into the EC and water sector and momentum is building in the right direction.

While the development of *Water is Life*, the CGRSWS and Aboriginal Water Program funding have all contributed significantly to elevating Traditional Owner voices and enabling Traditional Owner self-determination of water management priorities, there is work to be done to create an enabling environment for partnerships with Traditional Owners. Since the beginning of EC5, the Victorian Government and the water sector have increased responsibilities and obligations to include Traditional Owners in the way water is managed in Victoria. However, Traditional Owner organisations report being over-stretched and describe the ongoing challenge of balancing and engaging with multiple and competing priorities. These priorities often suit the needs of Government and/or the water sector, rather than those of Traditional Owners, and therefore reduce Traditional Owners' ability to exercise self-determination in water management.

For Traditional Owners to partner with government and contribute to government processes from an informed position, they must be able to determine and articulate their water priorities, be adequately resourced, and be included as early as possible in the development and delivery of projects. Business case development and program planning must consider the resources necessary to enable Traditional Owners to participate fully in EC projects.

Traditional Owner groups have indicated that more funding support is needed to enable them to develop the skills and capacity to effectively participate in EC projects, and several project evaluations reported on challenges in aligning project work plans with Traditional Owner timeframes and priorities. Future governance and funding structures will need to be designed in collaboration with Traditional Owner organisations to account for the increased demand for engagement and partnership on a wide range of matters across water resource management.

Some relevant strategies suggested by EC5 project teams to support Traditional Owner self-determination and effective partnerships include:

- Having key relationship managers assigned to Traditional Owner partnerships across the EC.
- Increased focus on creating culturally safe and inclusive environments for Elders and other Traditional Owners in collaborative forums / meetings.
- Streamlining funding arrangements and ensuring there is oversight of broader engagement across the EC investment spectrum to avoid burdening Traditional Owner partners.
- Consideration of the ability to carry over Traditional Owner funding between tranches, account for the transitional period (gap) between when one EC tranche and the next, and combine funding streams to minimise administrative burden on Traditional Owner groups.
- Increase flexibility in funding agreements and project plans for Traditional Owner partners, to cater for dynamic and changing priorities and act as an enabler for self-determined priorities.

4.5.2 Increased water availability for Traditional Owner Groups

The Victorian Government recognises First Nations' and Traditional Owners' rights and connection to water through Water for Victoria (2016) and is committed to increasing the water available to Traditional Owners to use for self-determined purposes. Water is Life and the CGRSWS establish pathways to increase water return to Traditional Owner Groups, which forms an important foundational basis for progress toward this outcome.

Delivery of the Cultural Water for Cultural Economies project and 10 Traditional Owner-led pilot projects (2019-21) also focused on understanding the current barriers to Traditional Owners' accessing, using and managing water. These activities provided foundational information used to inform the pathways to increase water returns outlined in Water is Life.

During EC5, the Victorian Government returned water to Traditional Owners through a range of projects including:

- 2 GL section 51 licence on the Mitchell River returned to Gunaikurnai Land and Waters Aboriginal Corporation in south-eastern Victoria.
- 2.5 GL section 51 licence on the Fitzroy River system returned to Gunditj Mirring Traditional Owners Aboriginal Corporation in south-western Victoria.
- two licences for cultural water use (0.200 GL at Buchan Munji and 0.500 GL on the Tambo River) issued to Gunaikurnai Land and Waters Aboriginal Corporation.
- A number of water returns in progress at the time of this End-Of-Tranche evaluation.
- In March 2022, Victoria reported for the National Agreement on Closing the Gap (Inland Waters Target) that Traditional Owners and Aboriginal Victorians held 4.298 GL of water entitlements. As of 30 June 2024, this figure has increased to 9.228 GL.

Other examples of how projects are considering ways to work toward this outcome include:

- The Licensing Framework Groundwater and Unregulated Systems project identified ways to reduce obstacles for Traditional Owners applying for section 51 licences and established an authorisation process allowing Traditional Owner Groups to nominate crown land parcels for a section 51 licence application, where the Traditional Owner group does not own or occupy land.
- Through delivery of water for the environment in partnership with Traditional Owner organisations, and in support of cultural values, such as:
  - Delivering water for the environment to Annulus Billabong in the Yarra system, for the first time - in partnership with Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation in spring 2020 and 2021. These events supported cultural values identified by Traditional Owners, as well as environmental objectives including vegetation growth, habitat and feeding conditions for waterbirds.
  - Supporting the First People of the Millewa Mallee Aboriginal Corporation's restoration and protection of a site of high cultural significance at Robertson Creek in the lower Mallee in spring 2020 with the environmental flows.
  - For the first time in August 2022, 1.913 GL of water for the environment was delivered to partially fill Lake Boort in partnership with Dja Dja Wurrung Aboriginal Clans Corporation, North Central CMA, the VEWH, Goulburn Murray Water and Parks Victoria. The Lake Boort partial fill aimed to support river red gums that were planted in 2017 and culturally important vegetation, such as spiny flat sedge.

- Identification in the CGRSWS of where there is unallocated water on relevant Country and where there are other opportunities to return water to Traditional Owners in the region.

These types of foundational activities can 'set the scene' for future projects to increase water availability, hence they represent interim progress toward the outcome.

4.5.3 Increased Traditional Owner employment in the water sector

All the projects supporting increased involvement by Traditional Owners in water policy, planning and decision-making have supported Traditional Owner groups and/or individuals financially, leading to increased employment in the water sector. This has included:

- Continuation of the Aboriginal Water Program (established in 2016) during EC5 has funded Traditional Owners through the Water, Country and Community Program grants (stages 1 and 2). This program has supported 24 full-time equivalent Aboriginal Water Officer roles and a range of Traditional Owner-led water-related projects across 18 Traditional Owner groups (including all Registered Aboriginal Parties) and 4 CMAs, that have strengthened Traditional Owner capacity and enabled greater involvement in the way water is managed and delivered in Victoria.
- Total funding (through CMAs) to 30 projects for Traditional Owners and Aboriginal Businesses of $883,802.
- The Traditional Owner Partnership (founded from the CGRSWS development process) continues. Funding for RAP groups to participate in decision making in the water sector as well as ensuring implementation of the CGRSWS is ongoing for EC5 and will be required post EC5.

Case Study 4 provides an example of how the Aboriginal Water Officer Network is facilitating increased employment of Traditional Owners in the water sector, and supporting inclusion of Traditional Owner values into water management.

Case Study 4: Aboriginal Water Officer Network

The banks of the Wimmera River during the AWON's visit to Ranch Billabong (Credit: Brodey Hamilton, February 2022)

The Aboriginal Water Officer Network (AWON) is a space for Aboriginal Water Officers (AWOs) to come together to share and discuss knowledge, information and experiences working in the water sector and undertaking projects. It is an opportunity for AWOs to yarn about self-determination, water management practices, cultural knowledge, government processes and policies, among other topics. AWON Meetings are held quarterly, hosted by the AWON and supported by DEECA. They are held on Country by nominated hosts within the AWON and include one full day in a meeting-like format, and one full day undertaking on-Country activities.

Some benefits of the AWON are:

- It provides a safe space for Traditional Owners in the water sector to connect and share cultural and governmental knowledge.
- It provides AWOs with an opportunity to speak with DEECA face-to-face about their priorities for water and any obstacles to self-determination that they face.
- It allows AWOs from all around Victoria to meet in-person, have a yarn and get out on Country together.

The AWO positions provide dedicated resources to support the delivery of Traditional Owner self-determined water priorities, directly contributing to the Traditional Owner priority EC outcomes. The program has initiated funding for 24 full-time equivalent Aboriginal Water Officer positions. AWOs work on Traditional Owner-determined water projects and programs. Partnerships have been fostered between Traditional Owner Corporations, Aboriginal communities, CMAs, and water corporations.

The Aboriginal Water Officer Network (AWON) on Wotjobaluk Country

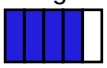
The year of 2022 was a year of firsts for the AWON. On 24 and 25 February, the AWON held its first network meeting of the year, which was also the first in-person meeting in almost 12 months, and the first hybrid meeting ever.

- The COVID-safe event was hosted by Wimmera CMA and Barengi Gadjin Land Council on Wotjobaluk Country.
- An even split of attendees from all around the state dialled in virtually or attended in person for the first day of the meeting.

The AWON kicked off with a warm Welcome to Country by Uncle Ron Marks and a Smoking Ceremony by Lachie Marks near the banks of the Wimmera River. Day 1 provided an opportunity for members to connect and yarn about current projects and priorities. It also involved robust discussions and knowledge sharing around Aboriginal water assessments, strategic planning, relationship building, and learning and development opportunities. Day 2 started with a presentation from Ben Muir on the Ranch Billabong project being undertaken by Barengi Gadjin Land Council and Wimmera CMA, and ended with a deadly trip to and tour of the Ranch itself.

4.6 To what extent were social and community values incorporated into water management?

The overall performance assessment for this KEQ is:

Outcome theme	Rating type	Rating	Rationale
Inclusive Management	Extent to which end-of-EC5 outcomes were achieved	High 	The EC5 projects continued being inclusive of social and community values. Key features of EC5 were a focus on managing recreation at Victoria's water storages, projects focused on improved recreational values and new technology platforms for improved access to information. Some priorities shifted throughout EC5 due to COVID-19 disruption and flood recovery works.
	Overall progress toward long-term outcomes	High 	Community participation and inclusion of community values were strongly integrated throughout the EC5 initiatives, indicating a high level of inclusive management throughout the Victorian water sector. Significant opportunities remain to improve high value recreation opportunities.

This KEQ evaluates progress made toward the Inclusive Management objective of the EC5 tranche. The program logic (see Section 3.3) includes the long-term outcome 'Social and community values are incorporated into water management' supported by the following End-of-Tranche outcomes:

- greater access to water-based spaces, creating opportunities to improve community health
- improved community access to water resource information
- improved reflection of the diversity of community values in water management.

The EC5 projects were inclusive of social and community values, with 87% of the projects reporting that they are increasing community participation and inclusion of community values in water management. Project evaluation reports provided examples of community engagement, capacity building and knowledge sharing activities that supported project outcomes.

A summary of the achievements made by EC5 projects to these outcomes is provided below. This is supported by examples of some of the main ways that individual projects have contributed to each outcome area, provided in Appendix B.

4.6.1 Greater access to water-based spaces, creating opportunities to improve community health

The Recreational Values project completed a range of policy and planning projects focused on improved access for community enjoyment of waterways including development of new Recreational Area (Water) Regulations 2023 to manage recreation at storages and embedding recreational values in the next Victorian Waterway Management Strategy. It also distributed $2.89 million of grants funds to support 19 projects and 11 organisations focused on improving recreational outcomes, including consideration of recreational access to drinking water storages, a policy statement in the CGRSWS and collaboration with Melbourne Water to consider access to Tarago Reservoir. It progressed the flagship Water Wannon project, explored new ways to facilitate recreation using water corporation assets, and delivered four planning and community engagement projects.

One example of an impactful grant contribution leading to improved community outcomes is the Trawool Walking Track project. A $250,000 investment from the Recreational Values project was

pivotal in getting the project off the ground, which facilitated an excellent partnership between Goulburn Valley Water and Taungurung Land and Waters Council, among others. Goulburn Valley Water is a small water corporation, whose focus on recreation to date has been minimal. Through the inclusion of recreational values in their operations, they have been able to deliver on multiple projects to open disused assets for recreational use by communities.

The Recreational Values project also responded to unforeseen events during EC5, with the implementation (and then controlled easing) of COVID-19 restrictions across 40 recreational areas, in collaboration with water corporations and DEECA's emergency management and public land teams. They were also involved in flood recovery works to repair recreation infrastructure following the October 2022 floods.

4.6.2 Improved community access to water resource information

Several projects developed new technology platforms and communications products for improved community and sector access to information, including:

- redevelopment of the Water Management Information System (WIMS) and upgrading the WMIS website
- development of the Water Education Portal (aimed at resources for students and teachers)
- launch of the Water Market Watch iOS app to provide real-time water market information
- upgrade of the Victorian Water Accounts platform to provide a new interactive website to improve the ability of users to engage with the water accounts and download the data for use
- production of photography and video assets to assist in community engagement including social media

Project teams acknowledged that there is a lot of water resources data, analysis, knowledge and insights that is of value to the community. Embracing new and evolving ways of communicating this information should be a high priority to increase community understanding and improve access to it.

4.6.3 Improved reflection of the diversity of community values in water management

Many projects reported working extensively and collaboratively with communities as part of planning and delivery of projects. The My Victorian Water Survey ran for five weeks in March/April 2022 and generated a total of 6,240 online survey responses, gathering a wealth of information about current waterway usage, attitudes and understandings about waterway health, current knowledge and language used by the community, and aspirations for the future.

From the results, almost all respondents said that waterways nurture their wellbeing (94%), and that healthy waterways are important for continued community needs (84%) and for future generations (83%), demonstrating that there will likely continue to be strong community support for initiatives that improve the health, accessibility and amenity of urban waterways. The information collected will help shape water-sector policy, guide investments and inform waterway programs and community engagement.

The development of the YSP was informed by the 50-year Community Vision prepared by a community assembly, and an engagement program that reached 120,000 people. Case Study 5 outlines the collaborative development of the YSP, involving Melbourne Water, Wurundjeri-Woi wurrung Cultural Heritage Aboriginal Corporation, a range of state and local government entities, Yarra Collaboration Committee, Yarra River Community Assembly, and the wider community.

Case Study 5: Development of Burndap Birrarung burndap umarkoo, the Yarra Strategic Plan (YSP)

Annulus Billabong Pacific Black Ducks, VEWH

Burndap Birrarung burndap umarkoo, the Yarra Strategic Plan (YSP) is the first 10-year plan for the Yarra River Corridor to protect and enhance the Birrarung (Yarra River) and its parklands as one living and integrated natural entity. The YSP was developed by Melbourne Water as the lead agency, in collaboration with the Wurundjeri Woi wurrung Cultural Heritage Aboriginal Corporation and state and local government entities with decision-making and land management responsibilities in the Birrarung corridor and on Yarra River Land (responsible public entities). The YSP aligns with the 50-year Community Vision for the Birrarung and regional Healthy Waterways Strategy, as well as supports both the Wurundjeri Woi-wurrung and Bunurong Traditional Owners to increase their participation in the management of land on their respective Country. It contributes to the EC outcomes of water security, waterway and catchment health, Traditional Owner priorities, and inclusive management.,

An important feature of the YSP is the shared commitment to transparent and coordinated decision-making by responsible public entities that enables diverse values to be reflected in the Birrarung's management. This decision-making framework embeds the role of Traditional Owners as custodians of the Birrarung through partnership, representation and involvement in planning and decision-making. The framework enables the development and prioritisation of projects that lead to lasting change in the river's values.

A priority project under the YSP, the Annulus Billabong (Yarra Flats) project has received funds to support identification and implementation of a permanent watering solution. This aims to improve the wetland's water regime to meet ecological watering objectives, improving ecosystem services, cultural and social values. This has led to improvements in managing the billabong, with native wetland cover increasing from ~5% to ~28% in the Annulus Billabong between 2019–22, following successive waterings (Greet et al. 2022).

4.7 To what extent was the effectiveness of water governance improved?

The overall performance assessment for this KEQ is:

Outcome theme	Rating type	Rating	Rationale
Inclusive Management	Extent to which end-of-EC5 outcomes were achieved	High	Many of the EC5 projects contributed to meeting the needs of customers and the community, through improved water planning, access to information and broad community / stakeholder inclusion in water planning and decision-making.
	Overall progress toward long-term outcomes	Very High	The Victorian water sector enjoys a high level of strong governance integration and effectiveness. Ongoing work, such as that provided in EC5, is needed to maintain and further improve as existing and new challenges emerge, and new technologies present opportunities.

This KEQ evaluates progress made toward the Water Governance objective of the EC5. The program logic (see Section 3.3.) includes the long-term outcome 'Water sector governance and system are integrated and effective' supported by the following End-of-Tranche outcomes:

- improved performance of water sector in meeting the needs of customers and the community
- improved management of risks and emergencies
- increased embedment of climate change in water sector planning and decision-making.

A summary of the achievements made by EC5 projects to these outcomes is provided. This is supported by examples of some of the main ways that individual projects have contributed to each outcome area, provided in Appendix B.

4.7.1 Improved performance of water sector in meeting the needs of customers and the community

The Central Bendigo Mine Rehabilitation Project (Groundwater) met customer and community expectations regarding prevention of mine impacted groundwater discharges to Central Bendigo through an interim solution, enabled Central Deborah Gold Mine to continue to offer underground tours, and developed and secured funding for implementation of a long-term management solution.

The level of achievement toward inclusive water management outlined in section 4.6 is also relevant to this outcome, as customer and community needs are closely linked with community access to water information and inclusion in water planning and decision-making.

4.7.2 Improved management of risks and emergencies

Flood risks were better understood and managed through completion of 23 flood studies, 8 planning scheme amendments, 11 flood mitigation infrastructure projects, 23 projects to develop or upgrade flood warning services, and completion of all 56 actions from the Victorian floodplain management strategy. The FloodZoom platform was improved to create a 'one stop shop' experience for flood responders and analysts. Maps from 100% of completed flood studies stored by FloodZoom are now publicly available due to collaboration with the Victorian Government's Digital Twin platform.

The 3 local government authority owned small dams at highest risk of failure have been rehabilitated and preparedness works undertaken, as well as upgrades to the Dam Safety Portal to include local government dams.

4.7.3 Increased embedment of climate change in water sector planning and decision-making

A key achievement of EC5 for this outcome was development of *Guidelines for Assessing the Impact of* Climate Change on Water Availability in Victoria (the Guidelines). Stakeholders rely on this guidance as part of their climate change risk assessments, particularly for water availability for consumptive use, water supply for cities, towns, irrigators and industry as well as for environmental and Traditional Owner outcomes. Ensuring these products remain up-to-date is an important part of enabling the sector to respond to the challenge of climate change. An independent survey conducted to understand the usefulness of The Guidelines to the water sector found:

- 'The Guidelines appear to be universally used by urban water corporations for their Urban Water Strategies and associated water resource planning'.
- 'The consultants interviewed used the guidelines for urban water strategies, but also for environmental type studies and investigations in the rural water area. DEECA teams use the Guidelines in strategic areas such as Sustainable Water Strategies, Long-Term Water

Resource Assessment as well as Urban Water Strategies, and modelling of the northern Victorian regulated systems'.

- 'Almost all participants commented on the high value of the guidelines, that they provide consistent and dependable advice, that they are of high quality and well researched and that they are a "point of truth" for the industry'.

The CGRSWS Funding Stream 4 Water Cycle Climate Change Adaptation Action Plan project improved understanding of climate risks by providing feedback to the water sector on their Corporate Plans and Annual Reports to build capacity to better address the climate change risks. This project also involved in-depth consultation with the water sector on their understanding and management of climate risks, resulting in the establishment of partnerships with CMAs (through a grants program) and water corporations (by agreement with VicWater) to build their climate risk management capacity.

4.8 To what extent has ongoing, foundational work, supported other programs and improved data availability and decision-making?

This KEQ does not link to a specific long-term outcome from the program logic (see Section 3.3). However, this KEQ recognises the importance of ongoing foundational work undertaken throughout EC5 in supporting the End-Of-Tranche outcomes. In particular, the ongoing surface water and groundwater monitoring and modelling projects provided continued development of a detailed knowledge base of continuous and comprehensive water monitoring data and information which is used for planning and decision-making throughout the Victorian water sector.

In addition to the surface water and groundwater monitoring and modelling, many of the other EC5 projects noted the use of the EC to fund business-as-usual works that was critical to the groups achieving their standard objectives and ongoing obligations. Overall, 81% of the projects reported having a degree of ongoing work (which started prior to EC5 and/or will continue post EC5). Project evaluation reports noted the need for long-term, reliable funding to drive important outcomes and create long-term changes in how water resources are managed in Victoria, and that the EC (over several tranches) has been successful in progressing long-term direction and policy work.

It is acknowledged that there are a range of opportunities and benefits of EC funding supporting both short and long-term projects. There is a need to reflect on potential risks that could emerge if the EC is increasingly used for ongoing, business-as-usual activities, such as:

- potential for reduced ability to innovate and implement new projects in response to changing demand and priorities
- risks to the delivery of critical business-as-usual DEECA activities if funding pool from EC were to decrease
- difficulty in providing immediate visible project outcomes and benefits of ongoing business-as-usual work, leading to poor community perception of the EC.

Some examples of ongoing work (in addition to the surface water and groundwater monitoring and modelling outlined above) include:

- The Retail Entitlements and Markets project is part of a broader policy and program development, underpinned by protecting the integrity of, and continually improving, the retail entitlement and water trading framework. The work is ongoing in that policy needs to continue to evolve and adapt to achieve positive and holistic benefits for Victoria as conditions change and new challenges emerge.

- The Managing Victoria's Water Sharing Framework project supported the ongoing administration of bulk entitlements, environmental entitlements and management of large, regulated systems including the support for the Minister for Water in fulfilling their statutory obligations. This work is fundamental to the implementation of most policies relating to water sharing arrangements and recovery of water for the environment, irrigators and Traditional Owners. It is also fundamental in ensuring that water corporations can successfully continue to carry out their primary function of supplying water to their customers and ensuring that environmental water managers can deliver water for the environment.
- For Water Compliance Reform, ongoing work by DEECA is required to ensure water corporations continue to improve their compliance performance and deliver consistent, cost-effective and best-practice compliance outcomes across different water systems into the future.
- The rural water infrastructure project oversight and governance project funding is required to ensure the appropriate expenditure of public money on major water infrastructure projects. This includes seeking public good outcomes and benefits from Government investment, both State and Commonwealth, in water infrastructure projects through the monitoring of performance and compliance of the projects being delivered.
- The Sustainable Irrigation Program involves ongoing activities including Basin Salinity Management 2030 compliance, maintaining Land and Water Management Plans and Irrigation Development Guidelines, optimising irrigation drainage, and irrigation extension.
- There is a legislative requirement for Sustainable Water Strategies (SWS), including to implement existing Strategies and to monitor, report, and review them. The prior EC4 tranche resulted in the review of the Central Region SWS, and midterm review of both the Western and Northern Region SWS. The EC5 led to the development of the 2022 CGRSWS and ongoing monitoring of other SWSs. In future, (EC6 and beyond) there is a need to maintain a core team to monitor, report, evaluate and review SWSs across the state.
- The IWM Program is about mainstreaming a transformative approach to water management. The scale of the change in terms of the number of organisations involved, the community value to be delivered and the policy changes required mean that this change is ongoing.
- For the Waterway Health program, the long-term/ongoing nature of the program is not only beneficial but necessary to meet the project's aims of improving the health of Victoria's waterways. A long-term commitment is required to achieve complex waterway health outcomes (e.g. to complete project planning, on-ground works and follow up monitoring and maintenance to ensure outcomes are being achieved) and the necessity to provide funding over multi-tranche timescales. Stable, ongoing funding allows for CMAs as organisations to continue their program work, and also to continue to build their capacity and knowledge as organisations, and to serve Victoria's regional communities. The ongoing nature also allows for projects to be planned on the timelines necessary to implement meaningful change for waterway health, such as the 10-year flagships program. For example, the Werribee fishway design and Moorabool investigation activities are well underway, but funding will be required for construction to deliver on-ground outcomes for fish passage and waterway improvement.

Case Study 6 demonstrates how the ongoing Regional Water Monitoring Partnership supports the availability of long-term information on Victoria's water resources, informing planning, policy and decision-making.

Case Study 6: Victorian Regional Water Monitoring Partnership

Victoria's Regional Water Monitoring Partnerships supports effective management of water through the provision of accurate, timely and consistent data on both the quality and quantity of Victorian water resources. This ongoing monitoring data from Victoria's key gauging stations and groundwater observation bores provide vital input into a range of uses, including operational decisions by water corporations, compliance, and for the modelling and analysis that is required to develop an understanding of trends and water availability in Victoria's water resources, providing the information to make informed water management decisions. It contributes to decision making throughout the Victorian water sector and the EC outcomes of water security, water efficiency, waterway and catchment health, inclusive management and water governance.

EC5 has funded DEECA's contribution to operating and maintaining 950 surface water and 1,400 groundwater stations across Victoria. As part of the Regional Water Monitoring Partnership, DEECA pays approximately 30% of the costs for the surface water sites and approximately 80% for the groundwater sites. All remaining costs are shared by 55 partner agencies including the Bureau of Meteorology, Murray-Darling Basin Authority, water corporations, catchment management authorities and local government associations. DEECA manages monitoring on behalf of the partners to ensure that data collected is both consistent and high quality. This data is curated and published via the publicly available Water Measurement Information System and to any other related back-end data systems.

Made possible by the tranches of EC funding, 248 surface water sites and 382 groundwater sites have accrued sufficient data to be classified as long-term sites. This critical information allows DEECA to measure long-term trends, including the impacts of climate change, changing demand, and increasing population.

4.9 Unintended outcomes

Many of the projects (67%) reported that unintended outcomes had arisen during EC5. The unintended outcomes were overwhelmingly positive, and the following key themes emerged from the responses:

- unexpected benefits of building relationships with organisations and groups outside DEECA
- deeper partnerships and collaboration with Traditional Owners
- unintended benefits resulting from flexibility and changing policy directions

Each of these is expanded on below.

Benefits of building relationships with organisations and groups outside DEECA

Eleven projects pointed to unexpected outcomes regarding strengthened relationships with other groups, including other management authorities at Commonwealth and Regional levels, other jurisdictions, Traditional Owners and the community. For example:

- The Water Market Transparency project reported a positive unintended outcome of strengthening relationships between the Market Reform and Transparency team and water corporations and other government agencies including with the Commonwealth Department of Climate Change, Energy, the Environment and Water.

- The Understand and Apply Climate Science to Water project reported much broader and deeper connections with scientific and stakeholder communities than anticipated, resulting in research being used and built upon by others, such as the Murray-Darling Basin Authority's Water and Environment Research Program.
- The Resilient Water Markets, Regional Communities and Infrastructure project reported that the development of relationships and connections with stakeholders across Victoria has established a foundation for future work across a range of program areas, particularly with Traditional Owner groups that will serve future collaboration and co-design well.

Deeper partnerships and collaboration with Traditional Owners

Several projects reported unintended benefits resulting from involvement and partnerships with Traditional Owner groups, including:

- For the Recreational Values program, the Greens Lake Action Plan development process represented a significant shift in how we can genuinely partner with Traditional Owners and others to understand shared objectives and establish new and effective ways of working together. The process of developing the draft Greens Lake Action Plan was initiated in response to community concern about lost recreation opportunities, but has led into much broader work, self-determined to achieve lasting change for the wider Corop Wetlands Cultural Landscape.
- The *Traditional Owner Partnership*, which was established to support the development of the CGRSWS, have requested to continue through the implementation phase of the project, to support self-determination and address collective issues in a culturally safe way, indicating the broader usefulness and benefit of this group outside its originally intended purpose. Traditional Owner Partnership members see this forum as a keyway to put forward a collective position, coordinate implementation and keep government accountable.

Unintended benefits resulting from flexibility and changing external environment

There were several unintended benefits identified which were generated through projects taking a flexible approach and making changes based on new policy directions or stakeholder or community values. Examples of these include:

- The development of new software, models, and capability through the surface water modelling and assessment project resulted in readiness to support unplanned complex water management activities including undertaking water recovery projects including Goulburn-Murray Water Connections Project and scenario modelling to support the Murray Darling Basin Plan Implementation.
- As part of CGRSWS Funding Stream 3 Waterway Health Complementary Measures and Catchment Management Improvement – an opportunity to re-design a traditional concrete vertical-slot fishway as a natural-style rock channel was taken, realizing reduced construction costs, providing fish-passage over a greater ranger of flows and requiring less maintenance.
- The Recreational Values Program reported that the establishment of the Water Safety Taskforce, which was a follow on from COVID-19, has been hugely valuable in bringing together agencies involved in water safety to develop relationship and share strategies to tackle the ongoing challenge of balancing the benefits of water recreation with safety.
- Under the Surface Water and Groundwater Monitoring project, the extensive and persistent floods of 2022-23 allowed a large number of surface water gauging sites to have measurements undertaken at the high end of the rating table, improving the accuracy at the high end of the rating tables.

5. Evaluation of effectiveness

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5. Evaluation of effectiveness

Key findings

- **Delivery effectiveness:** The EC has been designed effectively, with supportive governance structures and appropriate accountability and reporting requirements. Four-year funding cycles and flexibility in funding at the project level enabled teams to respond to changing contexts and to shift priorities as needed, however there are opportunities for embedding further flexibility and arrangements to promote planning of long-term projects with funding assurance. Complexities with aligning the timing and reporting requirements of multiple funding sources were discussed, and a need was identified to align the EC funding with other funding sources to assist in delivery efficiency and in best utilisation of sources outside EC funding. Many project evaluation reports described challenges with retaining key capabilities and staff turnover, and the need to ensure that corporate knowledge is retained throughout EC tranches, and that teams are supported. There is an opportunity to better articulate the benefits of the EC through economic and social values analyses, and/or narratives around how the benefits of delivered projects are passed on to Victorian communities, environments and industries.
- **Adapting to changing contexts:** EC5 delivery demonstrated a high level of adaptability and flexibility to manage the effects of external influences, including the COVID-19 pandemic and extreme weather events, specifically flooding and bushfires. While some delays occurred due to the weather events and the COVID-19 pandemic (which particularly affected on-ground works), the department and delivery partners were able to adapt to work with changes. DEECA leadership outlined that support for flexible work throughout EC5 – as a response to the COVID-19 pandemic and other emergencies - was good and should be continued in EC6. DEECA leaders also noted the opportunity to ensure that knowledge is retained and lessons learned are actioned from previous events, to enable preparedness for future unexpected / emergency events.
- **Partnerships and collaboration:** EC5 projects were highly collaborative and recognised the importance of partnerships in effective delivery. Almost all (95%) of the projects reported that partnerships that were developed throughout tranche 5 were valuable in achieving the project outcomes. Project teams reported that over 1,300 partnerships were fostered throughout the 38 EC5 projects, with a broad range of stakeholders. The highest numbers of partnerships with local governments, Traditional Owners, and community organisations

5.1 Overview

The effectiveness of EC5 implementation to the End-of-Tranche was assessed through the following KEQs:

- What worked well and did not work well about the way EC5 was delivered?
- To what extent did funding support the adaptation of projects in response to changing contexts / circumstances? (for example, COVID-19 pandemic, floods, bushfire)
- To what extent did projects develop and work in partnership with other parts of government, other organisations, and community?

The findings for each of these are discussed in the sections below. The key sources of information in this analysis were the project evaluation reports, in which project leads reported on effectiveness

of their projects. Interviews with selected project teams and DEECA leadership provided further insights.

5.2 What worked well and did not work well about the way EC5 was delivered?

The DEECA leadership and project leads reported that EC5 projects were delivered effectively. Almost all (89%) of project evaluations reported that the project management and delivery arrangements supported effective and efficient delivery. Key themes are summarised in Table 8.

Table 8. Summary of what worked well and key areas for improvement for delivery of EC5

Key theme	What worked well	Areas for improvement
Reporting and governance arrangements	▪ Projects consistently included the establishment of working groups, steering committees, communities of practice and forums which provided systematic and inclusive project management. In many cases these arrangements were codesigned with DEECA and partners and these worked well to streamline administrative requirements. ▪ The annual work program process and a high level of accountability to the EC Project Control Board and to the Minister supported appropriate planning, reporting, transparency and change management.	DEECA leadership discussed the potential to further streamline the EC bid process, reporting frameworks, and evaluation process, through: ▪ better links between regular reporting and evaluation reporting, to reduce overall level of effort required, and to enable teams to spend a higher proportion of time on delivery ▪ streamlining reporting between DEECA and delivery partners to avoid additional workload ▪ ensuring there are strong procedures and processes around programs, especially where money is granted to third parties. While this is already working well for some projects, there is the opportunity to further develop inclusive governance models that actively engage Traditional Owners, local governments, community representatives, and other sectors, to strengthen trust and build long-term buy-in.
Delivery and administration	▪ Some projects outlined that a flexible approach which enabled priorities to shift as changes occurred throughout the EC benefited delivery and the ability for the EC to address community needs. ▪ Project community of practices/reference groups were highly effective in driving improvement and identifying risks/solutions at the project level. ▪ Online delivery (e.g., webinars, video meetings), in addition to in-person interactions, has increased the reach and efficiency of projects.	▪ Teams reported that there is a high administrative burden associated with tracking multiple milestones across multiple projects, and a need to balance the requirement for milestones/progress reports with delivery. Opportunities to streamline reporting and administration aspects should be considered. ▪ Internal procurement processes are complex to navigate and would benefit from streamlining and support.
Funding	Adequate flexibility in funding at the project level enabled project teams to respond to changing contexts and to shift priorities as needed, particularly in response to	▪ Some funding was delivered in increments throughout the tranche, impeding the ability of DEECA to make long-term strategic decisions due to funding uncertainty. This also created pressure to deliver projects quickly to utilise

Key theme	What worked well	Areas for improvement
	unexpected disruptions from COVID-19 and extreme weather (e.g., floods and bushfires). Examples included: ▪ The EC Project Control Board was able to realign funding throughout the tranche as needed to ensure the program was kept accountable to agreed objectives and also flexible to emerging needs. ▪ At the start of EC5, a portion of funding was withheld to support new and emerging programs. This was beneficial as it allowed for teams to drive innovation, and to respond to emerging needs and changing priorities throughout the tranche. ▪ The four-year funding cycle allowed for funding of longer and larger projects with less administrative hurdles, as compared to annual funding. ▪ The ability for the EC to provide funding for partners (such as CMAs and water corporations) to enable them to overcome resourcing challenges was crucial in achieving timely project outcomes.	funds for a given financial year. This means that projects were often delivered based on funding availability when a stronger focus on needs and planning was preferred. ▪ While the EC has become a major funding source for water programs, it is not able to fund the full implementation of large infrastructure programs. For EC funded strategies, plans and policies, alternative funding sources may be needed to implement long-term solutions, including climate adaptation and mitigation work. ▪ Many projects utilised co-funding from other sources. Complexities with aligning the timing and reporting requirements of multiple funding sources were discussed, and a need was identified to align the EC funding with other funding sources to assist in delivery efficiency and in best utilisation of sources outside EC funding. ▪ Even a four-year funding cycle is difficult for Traditional Owner organisations with complex organisational operations, barriers and resourcing constraints. The ability to carryover Traditional Owner funding between tranches should be considered. ▪ Several grant projects encountered unforeseen challenges that affected timelines and budgets. Future grant programs could require a more structured approach to risk management during the application process, ensuring that applicants have identified common potential risks and developed mitigation strategies embedded within project submitted.
Team capability and capacity, and partnerships	▪ Strong partnerships and consistent collaboration drove effective implementation. Fostering collaborative structures should remain a priority for future tranches.	▪ There were challenges with retaining key capabilities due to staff turnover, and the need to ensure that corporate knowledge is retained throughout EC tranches. ▪ This included the risk of over-committing to projects without the team capacity and capability to deliver, and ensuring that expectations are aligned with what can feasibly be delivered. ▪ Lack of a clear line of sight to the work of other teams, creating challenges in understanding the interactions between projects. This can also lead to duplicated efforts and inefficient use of resources.
Articulating the impacts and benefits of the EC	Monitoring and evaluation processes for continual improvement were embedded in the EC5 projects as discussed in section 6.3.	▪ The EC relies on contributions raised from Victorian water corporations, and there is a need to articulate the multiple environmental, social, economic and public benefits. DEECA leaders described challenges with articulating the benefits of some projects, particularly for

Key theme	What worked well	Areas for improvement
		ongoing business-as-usual work, maintenance works, and broad policy or planning projects. ▪ There is an opportunity for the EC projects to improve their visibility and understanding within broader community contexts. Increasing community awareness of water management challenges and the benefits of EC initiatives will enhance community literacy and support.

5.2.1 To what extent did funding support the adaptation of projects in response to changing contexts/circumstances? (e.g. COVID-19 pandemic, floods, bushfire)

Almost all (95%) of the project teams agreed that the effects of unexpected events were managed adequately to reduce their impact on project outcomes. This shows a high level of adaptability and flexibility to manage the effects of external influences throughout the tranche. The key unexpected events that occurred during EC5 were the COVID-19 pandemic and associated social/working shifts and extreme weather events, specifically flooding and bushfires. One project evaluation report described:

'The combined impacts of COVID-19, extreme weather emergencies, supply chain uncertainties and inflationary pressures have made it complex and difficult to consistently plan and deliver multiple elements of the [project]. Project managers and stakeholders were faced with multiple reschedules of timelines, and a great deal of adaptive management was necessary'.

Adapting to changing contexts/circumstances throughout EC5 was also a strong theme that emerged from interviews with DEECA leadership. They emphasised that while some delays occurred due to the extreme weather events and COVID-19 (which particularly affected on-ground works), the EC was able to adapt to these changing circumstances. DEECA leadership outlined that support for flexible work throughout EC5 as a response to the COVID-19 pandemic was positive and should be continued in EC6. DEECA leaders also noted the opportunity to ensure that knowledge is retained, and lessons learned are actioned, from previous events, to enable preparedness for future unexpected / emergency events.

However, project teams noted a need to reduce administrative processes to adapt their projects as changes occured, noting that when there were changes to do with personnel, policy direction and team structure that affected project direction and outcomes, there was a significant amount of work required to update EC5 budgets and reporting to reflect the changes. A summary of the types and impacts from changing contexts/circumstances and adaptive responses is provided in Table 9.

Table 9. Impacts and adaptive responses from unexpected events

Unexpected event	Key impacts and management / adaptation responses
COVID-19 pandemic	COVID-19 primarily affected the projects through disruption to in person engagement and travel to attend work sites. DEECA managed to pivot engagement and meetings to hybrid on many occasions for both staff and community events. Where work needed to be re-prioritised, this was undertaken actively in consultation with the Executive and to ensure that time-critical outcomes were still achieved. Projects reported that the presence of existing working groups and steering committees enabled agile problem solving to mitigate project risks. Three examples of adaptive responses include: ▪ Onsite wastewater management systems (OWMS): Local councils that were impacted by floods and COVID-19 were offered a second grants program and additional time to apply for funding. This increased the uptake from 57% to 83% of councils undertaking OWMS related projects. ▪ The State Observation Bore Network site works required re-prioritising as COVID-19 affected the scheduling of works, and regional flooding affected site access. ▪ IWM Forums: Online meetings and digital platforms, while not perfect, were essential in maintaining momentum and should be considered as integral parts of future program delivery.
Flooding	In spring 2022, major flooding occurred in northern Victoria, causing significant damage to many of Victoria's rivers, infrastructure in towns, and other natural assets. The floods had a significant impact on the capacity of key delivery partners and stakeholders, including rural water corporations/licensing authorities, which resulted in changes to timelines, especially where grants were provided, and to project approaches. Resources from DEECA and partner organisations were diverted from planned EC5 projects to focus on flood response priorities, affecting delivery timeframes. Access to work sites was also restricted for long periods due to dangerous conditions. Flooding events spotlighted the capacity of existing DEECA systems to respond. New systems were implemented in response, diverting resources to emergency management. The DEECA Bulk Entitlements and Systems (BES) team has contributed to the government's response to increased public scrutiny on storage manager functions following the October 2022 floods, and has contributed to reviews into storage operations and infrastructure and inquiries into Victoria's preparedness for the 2022 flood event. This has resulted in impacts on the remainder of the work program due to the need to reallocate resources for these functions. Some lessons from this experience include: ▪ the need to build time into work plans to respond to unforeseen events such as those resulting from extreme weather events ▪ in response to the floods, the BES team were asked to respond to community enquiries, which required a specialised skill set outside of BES team's prior experience. This highlighted the importance of recognising when unforeseen events lead to roles outside a team's scope of experience, which require new training or involving appropriate specialists.
Bushfire	Major bushfires occurred in Victoria in 2019–20 causing major damage to the Victorian landscape and having significant impacts on access to communities in rural and regional areas.

5.2.2 To what extent did projects develop and work in partnership with other parts of government, other organisations, and community?

The EC5 projects were highly collaborative and recognised the importance of partnerships in effective delivery. Partnerships were valuable, with 95% of the projects reported that partnerships developed during EC5 were valuable in achieving project outcomes. Project teams reported that over 1,300 partnerships were fostered throughout the 38 EC5 projects, with a broad range of stakeholders. The highest numbers of partnerships were with local government, Traditional Owners, and community organisations, as shown in Figure 4.

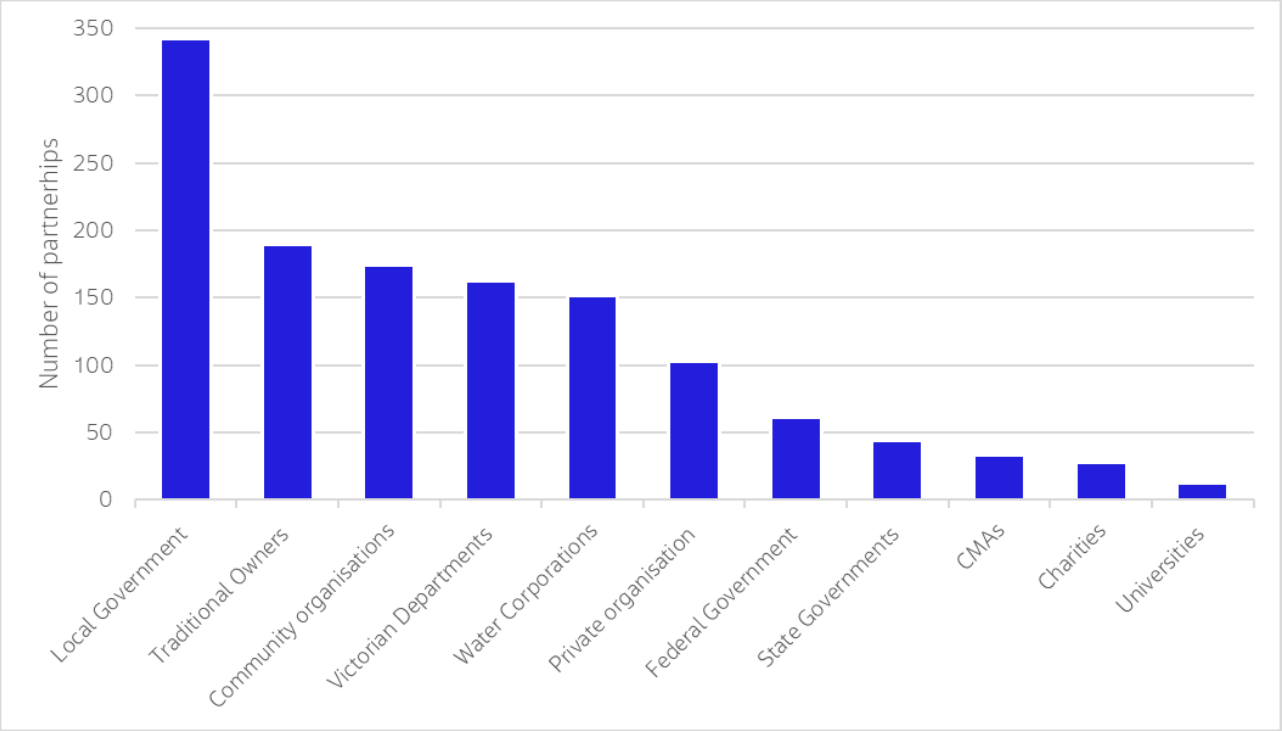

Figure 4. Numbers of partnerships developed with various stakeholders throughout the EC5

Some examples of the value that partnership approaches provided to the projects include:

- The development and implementation of the Lower Werribee Waterway Amenity Action Plan (LWWAAP) and Kitjarra-dja-bul bullarto langi-ut (formerly Barwon River Parklands Masterplan). This approach supported planning for and managing waterways as connected and living entities across land tenures and agency responsibilities, with buy-in from a range of stakeholders at both a development and delivery level. In bringing together state government departments and statutory agencies, local government, Traditional Owners and community groups from the start of the process, a plan was developed that represented diverse values and outcomes.
- The partnership between DEECA and the Department of Education in SWEP proved to be extremely valuable when a single email from the Department of Education resulted in the same number of new registrations as 600 direct calls to schools over a 4-week period from the SWEP team.

- In the Waterway Health project, early engagement and a partnership approach with stakeholders enabled risks to be identified and mitigated, as well as provided opportunities for increasing project efficiency. For example, for the Lower Werribee Diversion Weir fish project, DEECA regularly met with Melbourne Water and Southern Rural Water. During this process, the possibility of working with the proposed Werribee Regional Park was identified, and subsequent discussions with Parks Victoria have resulted in adding a cheaper, more effective option for the design phase.

Project reports also highlighted that where sub-projects were designed and delivered in partnership with other organisations, strong project management practices/contract management is required to ensure outputs are delivered on time/budget.

Although EC5 has been characterised by a high degree of collaboration, DEECA leaders discussed the opportunities for more collaboration with partners to jointly manage resources at every level of governance. This could include better integrated governance when working with CMAs and other regional bodies, as well as building and strengthening existing forums such as the Victorian Waterways Managers Forum, IWM Forums and the Regional Investment Coordinator Forum.

DEECA leaders also emphasised the need to create structures that support self-determination and collaboration with Traditional Owner groups. Case Study 7 below provides an example of collaboration and partnership as a foundation for building capability and capacity in IWM, and to drive implementation. The IWM Forums project team reported that strong relationships and consistent collaboration between stakeholders was vital to the success of the forums, emphasising the importance of networking and sharing knowledge, in driving more effective implementation. They also discussed the need for inclusive decision-making that incorporates diverse perspectives to drive more equitable and sustainable outcomes.

Case Study 7: Integrated Water Management (IWM) Forums

IWM Forums act as a collaborative platform to facilitate the identification, assessment, and implementation of IWM solutions. They directly address water cycle management challenges presented by climate change and urban development in a place-based way. There are currently 15 established IWM Forums that create collaboration across all stages of the water cycle with over 125 partner organisations, including local governments, Traditional Owners, water corporations, CMAs, and the State Government. This program represents the first time that a systematic application of IWM has been designed and implemented at a state-wide scale in Australia.

Each IWM Forum has identified a priority list of actions to address seven key broad strategic outcomes (below) included in the respective Forum Strategic Direction Statement. The IWM Forums have been responsible for identifying and accelerating many projects and policy developments across the water cycle. This includes opportunity identification, plan development, project design and project delivery. Between 2021 and 2024, the IWM Forums stimulated the progression of more than 68 IWM projects. Projects vary in scale and scope, addressing different combinations of the strategic outcomes. Focus areas include water supply and waterway health, healthy urban landscapes and opportunities for economic development. This includes capital works for stormwater harvesting systems, recycled water schemes and rainwater harvesting systems, naturalisation of waterways and place-based plans and designs as well as Traditional Owner led projects.
The IWM Forums represent a change management program that aims to mainstream IWM thinking and approaches for water management across the state, permeating through State Government and partner organisations. This is aligned with broader water industry changes that prioritise and outcomes-based approach and community focus. This project is moving from establishment to acceleration phase, with larger results to be delivered throughout the next tranche of the EC.

Seven broad strategic outcomes each IWM Forum is seeking to achieve

6. Evaluation of appropriateness

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6. Evaluation of appropriateness

Key findings

- **Alignment with the legislated objectives and key water management strategies:** EC5 projects showed clear alignment with the legislated objectives with all EC5 projects reporting contributions to one or both legislated objectives of the EC. The projects were guided by key State Government strategies including *Water for Victoria (2016), Water is Life*: *Traditional Owner Access to Water Roadmap (2022)*, and the CGRSWS (2022). Many of the projects adapted as new State Government strategies were published, to ensure continued alignment with key strategic directions.
- **Monitoring, evaluation and improvement:** These actions were integrated throughout EC5 to promote delivery effectiveness. Learning and improvement were effectively incorporated into the project to foster a culture of continual improvement, as reported by 92% of the projects. Some projects reported using independent evaluations, stakeholder feedback, and sharing of lessons to improve. The broader EC tranche governance also supported continuous learning through the requirement for each project to develop an evaluation plan and evaluation report, which is used for whole-of-tranche evaluations, and to foster learning for future tranches. Investment in capacity building sessions for the EC5 project teams as part of the EC5 evaluation process has fostered improvement in the effectiveness of the evaluation plans and reports from EC4 to EC5.

6.1 Overview

The appropriateness of EC5 implementation to the End-Of-Tranche was assessed through the following KEQs:

- To what extent was funding allocated in line with the legislated objectives of the EC and guided by key water management strategies?
- To what extent did EC funded programs use monitoring and evaluation data to improve management (adaptive management)?

The findings for each of these are discussed in the sections below. The key sources of information used in this analysis were the project evaluation reports, in which project leads reported the appropriateness of their projects. Additionally, interviews with selected project teams and DEECA leadership provided relevant insights.

6.2 To what extent was funding allocated in line with the legislated objectives of the EC and guided by key water management strategies?

As discussed in Section 1.1, the objectives of the EC are legislated in Part 9 of the Act. The projects showed clear alignment with the legislated objectives, with all EC5 projects reporting contributions to one or both legislated objectives:

- Contributing to the promotion of sustainable management of water (97%)
- Addressing water-related environmental impacts (86%)

The projects were guided by the following key State Government water management strategies:

- *Water for Victoria (2016)*

- *Water is Life: Traditional Owner Access to Water Roadmap (2022)*
- *CGRSWS (2022).*

An analysis of alignment of the EC5 projects with each of the actions specified in each of these strategies is provided in Table 10, as reported in the project evaluation reports. Many of the projects also reported contributing to other State or Commonwealth strategies (see Appendix A for further information in the individual project summaries).

Table 10. Alignment of EC5 with Key State Government Water Strategies

EC5 Projects	Water for Victoria (2016)	Water is Life (2022)	CGRSWS (2022)
CWCT01: Integrated Water Management	✓ A5.8	✓	✓
CWCT02: Iconic Urban Waterways Program	✓	✓	✓
CWCT03: Recreational Values Program	✓ A7.1, 7.2, 7.3	–	–
CWCT04: Recycled Water, Stormwater and Onsite Wastewater Policy	✓	✓	✓
WRS1: Retail Entitlements and Markets	✓ A9.3, A9.4, A9.6	–	–
WRS2: Water Grid Oversight	✓ A9.1, A9.2	–	✓
WRS3: Water Market Reform	✓ A9.5, A9.7	–	✓
WRS4: Water Market Transparency	✓ A9.3, A9.4	–	✓
WRS5: Managing Victoria's Water Sharing Framework	✓ A8.1, A8.9	✓ O7	✓ A4-5, A4-4. A4-8,A4-10, A4-11, A9-3
WRS6: Licensing Framework Groundwater and Unregulated Systems	✓ delivered A8.2, A8.3, A8.4, supported A10.1, A10.8, A10.6	✓ O7,O8,O11	✓ A4-4,A4-9,A4-12,A4-13,A4-16,A6-4,A6-5,A6-8,A6-15
WRS7: Water Compliance Reform	✓ A8.5	–	–
WRS8: Accounting for Water Recovery	✓A4.5	✓O7	-
WRS9: Water Register Operations and Improvements	✓	-	-
WRS10: Understand and Apply Climate Science to Water	✓A2.2	-	✓
WRS11: Surface Water Assessment and Modelling	✓ A8.11, A3.3,A8.4,A8.6	✓	✓
WRS12: Long-Term Water Resource Assessment and Addressing the Impacts of Mining and Extractive Industries	✓ A8.8	-	✓A9-6,
WRS13: Groundwater Assessment and Modelling	✓ A2.2, A8.10, A8.11	✓	✓
WRS14: Surface Water and Ground Water Monitoring	✓ A8.10, A8.11	-	-
WRS15: Water Accounting and Reporting	✓A8.10	-	-

WRS16: Knowledge and Insights	✓ A8.10, A3.9, A8.11, A7.2	-	-
CWCT05: Water Efficiency Program	✓ Ch5.3	–	✓ Ch 2: 2-1, 2-3, 2-5, 2-6
SIRS1: Rural Water Infrastructure Project Oversight and Governance	✓	✓	✓
SIRS2: Sustainable Irrigation Program Implementation	✓ A4.6	-	✓
CWCT06: Aboriginal Water Program	✓ A6.1-6.4, 10.4, 10.8, 10.9	✓	✓
PSP1: Long-term Water Security	✓ A5.3,A5.4,A5.7	-	✓ A9-5
PSP2: Sustainable Water Strategies	✓	✓	✓
PSP3: Mitigating the Risks of Small Dams	✓ A10.12	-	-
CWCT07: CGRSWS Funding Stream 2 Diversify Water Sources and Increase Water Efficiency	✓	–	✓ A3-4, 3-5, 3-8, 4-10, 2-1, 2-7, 3-8
CWCT08: CGRSWS Funding Stream 3 Waterway Health Complementary Measures and Catchment Management Improvement	✓	✓	✓
PSP4: CGRSWS Funding Stream 4 Enable Adaptation to a Variable Climate	✓ A2.1, A2.3, A5.4, A9.2, A10.12, A10.3	-	✓
SIRS3: Building Flood Resilience in Victoria	✓ A10.5, A10.12	✓ O2	✓
SIRS4: Central Bendigo Mine Rehabilitation Project - Groundwater	✓	-	-
CWCT09: Waterway Health	✓ A3.4	-	-
CWCT10: Environmental Water	✓	-	-
SIRS6: Murray Programs	✓ A4.11	✓	-
CWCT11: Our Catchments Our Communities Program	✓ A3.3	-	-
SIRS5: Macalister Irrigation District Modernisation Project - Phase 2	✓	-	✓A7-1
WRS19: Resilient Water Markets, Regional Communities and Infrastructure (Stream 1 and 2)	✓ A9.3, A9.4, A9.6	-	-

Note: A (Action), O (Objective), Ch (Chapter)

6.3 To what extent did EC funded programs use monitoring and evaluation data to improve management (adaptive management)?

Monitoring, evaluation and improvement were integrated throughout EC5 to promote delivery effectiveness. Learning and improvement were effectively incorporated into the project to foster a culture of continual improvement, as reported by 92% of projects.

Some projects reported using independent evaluations, stakeholder feedback, and sharing of lessons learned to improve such as:

- The IWM Program, which engaged independent development of an evaluation framework in 2019 and a 2-phase project evaluation (2020 and 2023). The project also collaboratively developed a MERI Plan for the Catchment Scale IWM Plans across metropolitan Melbourne, and has a MERI pilot underway.
- For development of the Water Education Portal, feedback from phase 1 of DEECA's collaboration with the Geography Teachers' Association of Victoria was integrated into phase 2.
- A review was undertaken into Victoria's progress implementing a modern risk-based compliance and enforcement framework to manage unauthorised take of water, reporting very good progress and significant reductions in unauthorised take.
- An independent survey was conducted to gather feedback and understand the usefulness of the newly published *Guidelines for Assessing the Impact of Climate Change on Water Availability in Victoria* to the water sector.
- An independent evaluation of the community water efficiency rebates programs (CRP and CHRP) was conducted during the EC5 period, with findings used to understand the program impacts, and potential for improvements.
- The Aboriginal Water Program utilised feedback from partners from phase 1(EC4) to Phase 2 (EC5) to improve program reporting, with changes made to templates and reporting lines that better suit Traditional Owner partners. For example, partners can provide verbal reporting (yarn updates) rather than written reporting.
- As part of the Waterway Health project, the CMAs completed evaluations of the implementation of the 9 Flagship Waterway projects that commenced in EC4. The evaluations were rich with information and learning and have provided a great insight into these significant projects. The collective evaluations helped DEECA understand common issues and opportunities and identify how we can work with CMAs to maximise the value of future evaluations and streamline effort required for CMAs and DEECA, in EC6 and beyond.

The broader EC governance also supported continuous learning through the requirement for each project to develop an evaluation plan and evaluation report in each EC tranche, which is used for whole of tranche evaluations, and to foster learning for future tranches. Investment in capability building sessions for the EC5 project teams as part of the EC5 evaluation process has fostered improvement in the effectiveness of the evaluation plans and reports from EC4 to EC5.

7. Evaluation of efficiency

Jacobs

7. Evaluation of efficiency

Key findings

- **Efficiency through delivery:** Many of the projects delivered their work programs on budget and on time, and where there were variances these were justified in project reporting. Reasons for variation from original work plans included escalating prices due to supply chain issues, lack of staff availability and staff turnover, delays due to COVID-19 restrictions, disruptions from the flood and bushfire events, and higher resource requirements for project elements than was initially planned.
- **Working with others to achieve better outcomes:** Almost all (89%) of the project teams agreed that efficiencies were gained through working together with other project teams, and many reported this as a key enabler of successful delivery. The main ways that efficiencies were gained was through knowledge sharing between groups, cost sharing, partnerships and workload sharing and distribution.
- **Leveraging additional funding sources:** The EC5 $693.85 million investment was augmented by significant co-investment over the tranche. Investment programs were co-funded by a total reported amount of $347.9 million. This represents $0.50 in co-investment for every dollar of investment from the EC. This is considered a conservative estimate, with many areas also reporting co-investment of funding and other resources that were not quantified in the project evaluations.
- **Options assessments:** Options assessment and/or cost-benefit analyses were undertaken by 79% of projects to support project decision-making. These approaches supported efficient delivery through using structured processes to make investment decisions. Examples of analytical approaches that were used included: options papers, cost-benefit tools, best cost options analyses, value for money assessments.

7.1 Overview

The efficiency and value for money of EC5 implementation to the End-of-Tranche was assessed through the following KEQs:

- How has EC5 demonstrated efficiency through delivery?
- To what extent were efficiencies gained through working together with others to achieve better outcomes?
- Have projects leveraged additional funding sources and in what way was this leverage applied?
- What evidence is there of projects undertaking options assessment and/or cost-benefit analysis of approaches?

The key sources of information used in this analysis were the project evaluation reports, in which project leads reported on efficiency and value for money for their projects. Interviews with select project teams and DEECA leadership provided further insights.

An overall economic / quantitative assessment was the beyond the scope of the EC5 Evaluation. This means that the findings reported below are based on qualitative information and analysis only.

7.2 How has EC5 demonstrated efficiency through delivery?

Efficiency through delivery was demonstrated by:

- Delivery of investment programs within the budget specified.
- Delivery of budgets within specified timeframes.

All initatives reported their progress in comparison to budget and original schedule to the End-of-Tranche, with key findings including:

- Most projects reported that the budget was fully expended each financial year of the EC5 project. Some exceptions included:
  - Escalating prices due to supply chain issues meant that some budget items had to be rescoped or abandoned to keep within overall project budgets.
  - Issues with staff turnover, short-staffing, and lack of the required expertise to deliver were commonly cited as reasons for unexpended budgets (and timeframe delays).
  - The Goulburn to Murray Regulatory Impact Statement took longer and required more resources than expected. The additional cost and staffing to deliver the project were supported by $4.907 million of co-funding from a Federal Funding Agreement for delivery of Murray-Darling Basin projects.
- For some projects, consultation and generating buy-in from stakeholders and decision-makers took longer and required more resources than planned. This was the case for the development and consultation of the Goulburn to Murray Trade Rule review, due to the complex nature of the trade and delivery of water, evolving demands and pressures on our river systems, and increasing understanding of cultural values.
- Many projects reported that they delivered the EC5 outcomes in line with the planned timeframes; however, several reported delays to timeframes due to unexpected events including COVID-19, flooding and bushfires. Refer section 5.2 for details.

Due to complexities with how budget reporting was completed at the project level, reliable data was not able to be sourced on expenditure vs budget for each project throughout EC5. Improved budget reporting for future tranches may enable this analysis as part of future evaluations.

7.3 To what extent were efficiencies gained through working together with others to achieve better outcomes?

Almost all (89%) of the projects agreed that efficiencies were gained through working together with other project teams. The main ways that efficiencies were gained was through knowledge sharing between groups, cost sharing, and workload sharing and distribution. Some examples include:

- Collaboration to generate efficiencies is the fundamental basis for the IWM Forums, which are collaborative platforms that enable different organisations responsible for different parts of the water cycle to identify where collaborative investment and effort could deliver community outcomes more efficiently and effectively. An example includes an analysis to deliver manufactured water opportunities that was undertaken working together with IWM Forum partners and the water industry urban water strategy working groups. Policy reform opportunities were delivered in partnership by working with other projects.
- The Water Knowledge and Insights project reported that working together with other teams within DEECA, our water sector partners, and the general public improved the efficiency of their projects particularly through discovery and scoping phases. This meant they were producing work that was guided by stakeholders to best address their needs.

- For the Water Efficiency Project, delivery efficiencies were gained within water corporations delivering the CRP and CHRP via either their customer and hardship/and or sustainability teams. This allowed the programs to be better targeted and reach more customers through existing water corporation networks (i.e., with community groups).
- The Surface Water Assessment and Modelling project outlined the importance of technical cooperation in achieving objectives efficiently and effectively. The project used model calibration tools from Queensland, noted that urban water corporations used a hydroclimate data transformation tool and seasonal determination approaches, plus cooperation with South Australia on Model Management Systems.

7.4 Have projects leveraged additional funding sources and in what way was this leverage applied?

The EC5 $693.85 million investment was augmented by significant co-investment over the tranche. Projects were co-funded by a total reported amount of $347.9 million. This represents $0.50 in co-investment for every dollar of investment from the EC. This is considered a conservative estimate, with many projects also reporting co-investment of funding and other resources that were not quantified in the project evaluation reports, for example the value of in-kind, volunteer contributions for waterway health and catchment initiatives are often underestimated

While projects reported benefits of co-funding and diversity in funding sources, some challenges reported include:

- complexity in administration and reporting to multiple funders
- the need to manage for program continuation, and potential increase in EC funding when alternative sources are finished.

A breakdown of reported co-funding amounts and co-investors for each project is provided in Table 11. Further detail on co-funding for individual investment programs can be found in Appendix A.

Table 11. Co-investment for EC5 projects

EC5 projects	EC5 funding	Co-investment	Co-investors
CWCT01: Integrated Water Management	$59,788,302	$34,719,781	IWM Forum partners, federal government
CWCT02: Iconic Urban Waterways Program	$16,151,969	$1,883,047	Delivery partners
CWCT04: Recycled water, stormwater and onsite wastewater policy	$10,634,038,	$1,488,000	Dept of Health, water corporations, EPA, Melbourne Water, Councils
WRS1: Retail Entitlements and Markets	$7,215,000	$4,907,000	Federal Funding Agreement for delivery of Murray-Darling Basin projects
WRS10: Understand and Apply Climate Science to Water	$7,092,000	$2,642,000	Bureau of Meteorology and CSIRO
CWCT07: CGRSWS Funding Stream 2 Diversify water sources and increase water efficiency	$39,029,000	$83,571,900	Water corporations and local government authorities
SIRS4: Central Bendigo Mine Rehabilitation Project - Groundwater	$12,030,000	$99,000	Trust funds

EC5 projects	EC5 funding	Co-investment	Co-investors
CWCT09: Waterway Health	$125,980,000	$15,985,600*	Sector partners, community and Traditional Owners
SIRS6: Murray programs	$7,000,000	$7,080,000*	Relief and Early Recovery Treasurer's Advance 2022-23
SIRS5: Macalister Irrigation District Modernisation Project - Phase 2	$10,930,000	$52,170,000	Southern Rural Water, Commonwealth National Water Infrastructure Development Fund
WRS14: Surface Water and Ground Water Monitoring	$26,631,000	Partners pay 70% of costs for surface water sites and 20% of the costs for groundwater sites	55 partner agencies including the Bureau of Meteorology, Murray-Darling Basin Authority, water corporations, catchment management authorities and local government associations

**co-funding amount estimates at the end of the third year of EC5 (June 30 2023)*

7.5 What evidence is there of projects undertaking options assessment and/or cost-benefit analysis of approaches?

Options assessment and/or cost-benefit analyses were undertaken by 79% of projects to support project decision-making. This supports efficient delivery through using structured processes to make investment decisions. Examples of analytical approaches that were used included options papers, cost-benefit tools, best cost options analyses, and value for money assessments. Many of the projects that did not report using these approaches were policy or planning type projects with already defined investment pathways.

8. Evaluation of legacy

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8. Evaluation of legacy

Key findings

- Significant efforts were made in project planning and design to encourage impacts and benefits to endure into the future. The main ways in which projects promoted sustained impacts included:
  - focusing on capacity building
  - fostering long-term partnerships and collaborations
  - implementing enduring reforms and policy changes
  - use of new technology and reporting platforms
  - the delivery of on-ground projects focused on creation of long-term benefits.

8.1 Overview

The legacy of EC5 implementation to the End-of-Tranche was assessed through the following KEQ:

- To what extent are EC5 tranche impacts expected to be sustained over time?

The key sources of information used in this analysis were the project evaluation reports, in which project leads reported on legacy aspects of their project. Additionally, interviews with select project teams and DEECA leadership provided relevant insights.

8.2 To what extent are EC5 tranche impacts expected to be sustained over time?

Significant efforts were made in project planning and design to encourage impacts and benefits to endure into the future. The main ways in which projects promoted sustained impacts include:

- Focus on capacity building (of communities and the water sector personnel), ownership and long-term behaviour change through collaboration, delivery of education programs, information products, and significant engagement.
- Fostering long-term partnerships and collaborations across a wide range of groups in the water sector and the community for development of strategies, planning, design and on-ground delivery.
- Reforms and policy changes, strategies and legislation that create long-term, enduring changes to the functioning of the Victorian water sector. For example, work on developing a new *Victorian Waterway Management Strategy*, development of *Water (Recreational Area) Regulations*, continued grid planning, Water market reforms, water compliance reforms, Birrarung (Yarra River) governance, publication of *Water is Life* and the CGRSWS.
- Improving the availability and quality of information through new technology and reporting platforms, which will be operational into the future. Examples include redevelopment of the Water Monitoring Information System, development of the Water Education Portal (aimed at resources for students and teachers), launching the Water Market Watch iOS app to provide real-time water market information, and upgrade of the Victorian Water Accounts platform.
- Delivery and contribution to on-ground projects that will provide long-term benefits to waterway health, water security, water quality, and climate change resilience.

9. Conclusions and recommendations

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9. Conclusions and recommendations

9.1 Conclusions and recommendations

Delivery of EC5 strongly aligned with, and made considerable progress towards the legislated objectives of the EC, and key Victorian Government policies and strategies, including *Water for Victoria*, *Water is Life* and the CGRSWS. As with previous tranches of the EC, EC5 provided critical funding that has driven innovation and best practice in water management, enabled planning and delivery of strategic, long-term projects, and delivered ongoing foundational services to meet the needs of the Victorian water sector, communities and industries.

The findings from the EC5 End-Of-Tranche evaluation point to the need for future EC tranches to respond to current and emerging challenges associated with sustainable water management and protection of environmental values, and to realise the full benefits of EC5 investments and those in earlier tranches.

Recommendations have also been developed to support continuous improvement for the EC into the future and have been framed to be relatively discrete actions to provide flexibility around how and when they are implemented based on available funding and resourcing.

Table 12. Recommendations for continuous improvement of future tranches

Recommendation	Rationale and details
1. Continue EC funding into a sixth tranche. Prioritise future investment to build resilience to existing and emerging challenges, and to support benefits realisation from work started in EC5 or earlier tranches.	Continued investment is required in many areas to maintain the gains made by EC5 and previous tranches of the EC, and to achieve the objectives of *Water for Victoria*, *Water is Life*, the CGRSWS and other key state strategies (for example, the Water Cycle Adaptation Action Plan). Future investment should be directed toward: ▪ **Building water security and resilience in the Victorian water sector, communities, and environments to existing and emerging challenges:** Key themes for increased focus in EC6 include security of supply and demand management, climate change adaptation, supporting the energy transition, environmental stewardship and values, supporting Traditional Owner self-determination, collaboration and relationships, and the integration of new technologies with water planning and decision-making. ▪ **Continuing ongoing projects to support benefits realisation from work started in EC5 or earlier tranches:** Many of the EC5 projects are not discrete 4-year investments, but require funding over longer periods of time to deliver the EC long-term outcomes. This includes long or medium-term projects that are expected to realise benefits over two or more EC tranches and ongoing business-as-usual work that is foundational to the functioning of the Victorian water sector. Priorities for future funding are outlined in Table 13 below.
2. Continue to support the EC's adaptability to changing conditions and priorities	It is recognised that changing conditions and priorities will emerge throughout each tranche, which can affect the relevance and ability to deliver commitments designed at the funding submission stage. The evaluation found that EC5 projects adapted well to unexpected disruptions (such as the COVID-19 pandemic and extreme weather events), and flexibility in delivery was supported by the EC Project Control Board. New priorities that emerge are managed through maintaining a buffer of unallocated funds that can be directed to these emerging issues. These mechanisms should continue to be supported to provide flexibility in future tranches.

Recommendation	Rationale and details
3. Investigate ways to better align multiple funding sources	Many projects utilised co-funding from other sources. However, there were challenges with aligning the timing and reporting requirements of multiple funding sources. While the EC is already aligned with other Victorian budget processes, and there is limited opportunity to modify Commonwealth funding processes, there may be other opportunities for the delivery of EC projects to align with other funding sources. Any alignment between funding sources could support delivery and reporting efficiencies. Therefore, where possible, potential co-funding opportunities should be identified as early as possible.
4. Investigate options for streamlining reporting processes	While the existing governance and reporting structures are functioning well to support effective EC delivery, it would be beneficial to investigate options to reduce duplication and administrative workload through creating more efficient links between regular reporting and evaluation reporting. Opportunities for streamlining reporting between DEECA and partner agencies where there is collaborative work should also be explored.
5. Build in appropriate governance and funding structures to support Traditional Owner involvement	Partnerships with Traditional Owners are of critical importance to the management of Victoria's water resources. Developing these arrangements will help to support Traditional Owner self-determination. Where they currently exist, such as the CGRSWS Traditional Owner Partnership, they will need to be properly resourced and supported. Governance and funding structures will need to be designed in collaboration with Traditional Owner organisations so they can balance the increased demand for engagement and partnership on a wide range of water-related and other matters. Streamlining funding arrangements, supporting capacity building and ensuring there is oversight of broader engagement with Traditional Owners should be key priorities.
6. Consider economic and social value analyses and /or benefits assessment	There are challenges with articulating the benefits of some projects and the collective benefits of the EC, particularly for ongoing business-as-usual work, maintenance works, and broad policy or planning projects. There is an opportunity to better articulate the benefits of the EC through economic and social values analyses, and/or narratives around how the benefits of delivered projects are realised by Victorian communities, environments and industries.
7. Consider the opportunities and potential risks associated with EC funding being used for ongoing business-as-usual activities, and build in mitigation measures to future tranches	It is acknowledged that there are a range of opportunities and benefits of EC funding supporting both short- and long-term projects. There is a need to reflect on potential risks that could emerge if the EC is increasingly used for ongoing, business-as-usual activities, such as: ▪ potential for reduced ability to innovate and implement new projects in response to changing demand and priorities ▪ risks to the delivery of critical business-as-usual DEECA activities if funding pool from EC were to decrease ▪ difficulty in providing immediate visible project outcomes and benefits of ongoing business-as-usual work, which could lead to poor community perception. Design of future EC tranches should consider these potential risks, along with the opportunities, and build in mitigation measures if required.

9.2 Priorities for investment in EC6 and into the future

Continued investment is required to respond to existing and emerging challenges and to maintain and build upon the significant progress made toward improving water security, water efficiency, waterway and catchment health, inclusion of Traditional Owner priorities, inclusive management, and water governance throughout Victoria. Key priorities are summarised in Table 13 and have been categorised into:

- **Response to existing and emerging challenges:** Increased investment in projects to respond and build resilience in the Victorian water sector, communities, and environments to existing and emerging challenges.
- **Realising the full benefits from current and prior investment:** Continuation of ongoing projects to support benefits realisation from work started in EC5 or earlier tranches.

Table 13. Summary of priority areas for future investment

Category	Priority areas for future investment
Response to existing and emerging challenges	▪ **Adapting to climate change:** There is a need to increasingly integrate adaptive planning into water sector decision-making to support resilience to future weather conditions (for example, floods, fires and droughts). There is also the need to continue to develop better understanding of how to meet Victoria's water sector objectives in a drying climate, integrate the latest knowledge into water resource plans and strategies, and build capacity in climate change adaptation and mitigation principles. ▪ **Building resilience**: There needs to be an increased focus on proactive resilience to identify emerging trends as they arise, and act quickly. ▪ **Supporting the energy transition:** Water access is pivotal to Victoria's energy transition to net zero emissions as emerging energy technologies, including large-scale hydrogen and pumped hydro projects, require water to operate. Investment is required to support decision-makers, investors, secure the upstream supply chain and contribute towards Victoria meeting its net zero targets. ▪ **Supporting Traditional Owner self-determination and access to water:** Investment in implementation of the actions from *Water is Life* is required to increase Traditional Owner roles and resources in water and waterway management, and improve Traditional Owner access to water for self-determined purposes. Considerable effort is still required to address barriers, change legislative and regulatory settings, and achieve a step-change in the return of water to Traditional Owners. ▪ **Delivering the Long-Term Water Resource Assessment:** The Long-Term Water Resource Assessment for Northern Victoria is due to commence in 2025 building on lessons learnt in the Southern Victorian assessment. ▪ **Integrating new technology solutions:** Increased investment in new technologies and platforms to provide opportunities for distribution of information and data informed decision-making. In part, this will involve continuation of new technology platforms delivered in EC5, as well as investigation of emerging applications. There is also an increasing need to manage associated cyber security risks and threats. ▪ **Securing water supplies:** Building on the achievements in EC5, look to build secure water supplies into the future by providing opportunities to transition to water efficiency and manufactured water, reduce reliance on river water and plan and implement augmentations to meet water needs as the population grows and the climate changes. In the future, planning approaches that focus on readiness planning to reduce pressure on the water grid will be key to securing water for all our needs.

Category	Priority areas for future investment
Realising the full benefits from existing investment	Medium- and long-term projects that depend on funding over two or more EC tranches: ▪ **Water reforms:** Continued work on the suite of water market reforms and improvements to frameworks and policies for water sharing, management, accountability and transparency. ▪ **Water resources planning and delivery of actions:** Continued implementation of water portfolio priorities YSP, the *Waterways of the West and Rivers of the Barwon (Barre Warre Yulluk) Action Plans* and development of new SWS in the Western and Northern Regions. ▪ **Waterway health:** Long-term investment is required across the state to protect Victoria's waterways and deliver long-term environmental outcomes. Stable, ongoing funding allows for projects to be planned on the timelines necessary to implement meaningful change for waterway health, such as the 10-year flagships program. ▪ **Collaboration and partnerships:** Continuing and building upon existing work to foster a collaborative approach to water management, including strengthening partnerships across water sector agencies, Traditional Owners and between the water sector and Victoria's communities to ensure water security is achieved. ▪ **Traditional Owner priorities:** Continued investment into the Aboriginal Water Program is necessary to maintain employment of Aboriginal Water Officers and enable continuity of long-term Traditional Owner-led water-related projects and priorities. The continuation of the Aboriginal Water Program is a key enabler and foundation for *Water is Life* implementation. ▪ **Water efficiency:** Continued focus on reducing irrigation losses and improving irrigation efficiency through infrastructure investments and extension support to irrigators. Continuation of community, school and household water efficiency projects and behaviour change and education initiatives. ▪ **Integrated water management:** Continuation of mainstreaming the integrated water management approach through the IWM Forums, policy work and supporting grant programs. Future investment in this program builds industry capacity to better adapt to climate change, build resilience, secure water supplies, support the housing development government priority while managing impacts on waterway health. Ongoing foundational, business-as-usual projects: ▪ operation of the Victorian Water Register ▪ water compliance activities, management of entitlements, water trading and accounting ▪ continuation of long-term surface water monitoring and modelling activities, maintenance of monitoring infrastructure, and provision of foundational water information to the water sector and communities.

Appendix A:

Summaries of project evaluations

Jacobs

Contents

1.1 CWCT01: Integrated Water Management (includes both Regional and Metro)

Initiative	1. Enhancing urban water security, iconic urban waterways and recreational water
Project	CWCT01: Integrated Water Management (includes both regional and metro)
Description	This project seeks to address reduced water security and environmental impacts from discharge of harmful wastewater and stormwater from urban settings through: 1. Providing the Integrated Water Management (IWM) Forums as a collaborative platform to facilitate the identification, assessment, and implementation of IWM solutions. 2. Supporting policy reforms and capacity building to facilitate solution planning and implementation. 3. Co-investment program to facilitate the implementation of IWM solutions.
Outputs	▪ 15 functioning IWM Forums with a priority list of actions and most regional forums with a refreshed strategic direction statement and Catchment Scale IWM Plans for the 5 metro forums. ▪ $14.8 million co-invested in 52 IWM projects including: - Capital works for 3 stormwater harvesting systems, 4 recycled water schemes and 2 rainwater harvesting systems. - Construction of 1 wetland and improvement works to 4 wetlands to capture and treat stormwater to support ecological health of waterways. - Naturalisation and ecological restoration works to 2.45 km of creek line. - Seven place based IWM plans. - Eight detailed designs for alternative water projects. - Fourteen Traditional Owner led IWM projects. ▪ Development and support to relevant policy reforms. ▪ Capacity building.
Summary against evaluation domains	
Impact	While there is some variability in the maturity of the project across metropolitan and regional areas of the State, the project has maintained the necessary foundations for putting IWM as business-as-usual water management practice in cities and towns and has generally achieved the intended medium-term outcomes[1]. Key evidence includes: ▪ priority projects have moved from the planning stage into the delivery stage; there is action 'on-the-ground' ▪ almost all Strategic Direction Statements have been updated in regional Victoria, Catchment Scale IWM Plans are finalised and underway in metropolitan Melbourne, and priority projects are aligned to achieving the shared vision underpinned by a suite of strategic outcomes articulated in the strategic direction statements. ▪ relationships between IWM Forum partners have continued and strengthened. ▪ capacity and capability for applying IWM approaches have increased. ▪ important IWM policy developments have been endorsed. Once complete, impacts of the Grant Program projects will include: ▪ generation of 916 ML/year of alternative water for irrigation. ▪ prevented 8,407 kgs of nitrogen, 2,299 kgs of phosphorus and 258 tonnes of total suspended solids from entering our waterways every year.

[1] Details and specific evidence for these findings are presented in the relevant sections of The IWM Program Phase 2 Evaluation (Jacobs 2023).

	▪ revegetation of 23 ha of riparian spaces. ▪ construction or restoration of 5 wetlands. ▪ naturalisation or restoration of 2.45 km of creek line.
Effectiveness	The project has been delivered on time and within budget, including managing through the COVID-19 pandemic restrictions. Some delivery timelines of some projects required adjustment due to lock down restrictions and supply chain issues. Escalating prices did mean that some projects had to be rescoped or abandoned, but the vast majority have continued and ultimately been completed on time and within budget consistent with revised scopes where necessary.
Appropriateness	▪ The project is highly aligned with the Victorian Government's priorities, and particularly with respect to water security. ▪ The project framework is pitched at a high-level and has sufficient flexibility to remain relevant to Government throughout these changing priorities (and spending patterns). ▪ The project objectives and outcomes remain highly relevant to stakeholders. ▪ There is sufficient flexibility in the project framework to accommodate the changing expectations of stakeholders.
Efficiency	▪ The project has leveraged significant in-kind support by members of the IWM Forum working groups, project and forum meetings and activities. Across the 15 IWM Forums, more than 580 people are directly involved. ▪ This project's investment in the IWM Program has leveraged $32.05 million in IWM Forum partner co-investments and more than $2.6 million of in-kind support. ▪ The Program has demonstrated efficiency via: a. operationalising the Program (i.e. putting systems and tools in place to support DEECA to deliver the Program efficiently) b. the way Forum and Working / Practitioner Groups meetings are held c. the development of shared tools and resources d. the increase in funding available for IWM projects.
Legacy	The project has achieved a lasting legacy as evidenced by the many projects being identified and delivered through the Forum action plans and the significant engagement and participation in the IWM Forums and associated activities. However, there is still more work to do to secure the progress and investment to date as we continue into the acceleration phase of the transition. Government stepping back at this point would result in a backslide in leveraged investment that would be difficult to reverse.
Future priorities	1. IWM Forum and Policy development: Providing the IWM Forums as a collaborative platform to facilitate the identification, assessment, and implementation of IWM solutions that could directly address the problems in a place-based way, including supporting and developing relevant policy reforms and capacity building to facilitate the planning and implementation of the solutions. 2. Co-investment: An IWM Grant Program that co-invests in the following: a. on-ground projects b. IWM plans, feasibility studies, designs, business cases c. IWM officers in Traditional Owner organisations and regional Victoria.

1.2 CWCT02: Iconic Urban Waterways

Initiative	1. Enhancing urban water security, iconic urban waterways and recreational water
Project	CWCT02: Iconic Urban Waterways
Description	Population growth and climate change are increasing demand for water while reducing availability from conventional sources, resulting in threats to our water security, urban waterways and Port Philip Bay. Rapid urbanisation associated with population growth is increasing harmful wastewater and stormwater discharges, adversely impacting land and water environments. At the same time, current management arrangements for our iconic urban waterways and their lands are not maximising the values they provide, with outcomes falling short of community expectations. This project focuses on reducing the adverse economic, environmental, social and cultural impacts of these issues in iconic urban waterways - including the Birrarung / Yarra, Mirrangbamurn / Maribyrnong, Wirribi Yulluk / Werribee and Parwan / Barwon Rivers. This work has taken steps towards healthier local communities and environments, enhancement of values derived from waterways, and support for integrated management of waterways and their lands in line with the cultural values of Traditional Owners.
Outputs	▪ Burndap Birrarung burndap umarkoo, the Yarra Strategic Plan (YSP). ▪ Waterways of the West and Rivers of the Barwon (Barre Warre Yulluk) Action Plans, referred to as the Action Plans. ▪ Annual reporting as required by the Yarra River Protection (Wilip-gin Birrarung murron) Act 2017 (the Act). ▪ Annual reporting on the Waterways of the West and Rivers of the Barwon (Barre Warre Yulluk) Action Plans. ▪ Delivery of priority projects as per funding agreements, aligning with the Action Plans and YSP. ▪ Engagement and capacity building with Traditional Owners, recreational users, community, management agencies and funding bodies in place-based planning. ▪ Governance obligations under the Act regarding Birrarung Council and the YSP lead agency. ▪ Commencement of processes and policy development to recognise iconic waterways as living entities and the Traditional Owners as the 'voice of these living entities'. ▪ Recognition and protection of the waterway amenity values on iconic urban waterways. ▪ Monitoring and evaluation frameworks for the Waterways of the West and Rivers of the Barwon (Barre Warre Yulluk) Action Plans. ▪ Design and delivery of the Green Links Grants Program (Round 1).
Summary against evaluation domains	
Impact	▪ This project has delivered the YSP and the Action Plans as key strategies whose policies and actions underpin a fundamental shift in how we view and manage our urban waterways. Building on Ministerial Advisory Committee (MAC) processes, and the voices heard from our Traditional Owners and community through the MAC's and extensive community engagement, the YSP and Action Plans introduce and embed stronger partnerships with Traditional Owners and collaborative governance to manage waterways as living and integrated entities. The program also supports the Secretariat functions of the Birrarung Council. This has included the employment of an Executive Officer and an admin position, as well as ongoing operational costs such as sitting fees, meeting costs and some modest professional services. ▪ Burndap Birrarung burndap umarkoo, the Yarra Strategic Plan: The project has provided the policy support and funding to kick-start implementation of the YSP.

	88 projects are being undertaken to protect and enhance the river and its parklands - significant progress across the 40 actions of Part 1 of the YSP, with nine delivered, 21 in progress and 10 in their planning phase. ▪ Waterways of the West and Rivers of the Barwon (Barre Warre Yulluk) Action Plans: The Action Plans contained 35 short-term actions to be delivered in the first year of implementation and 35 longer-term within 5 years. All short-term actions have been delivered or are on-going as they relate to self-determine priorities or longer-term policy such as the Healthy Waterway Strategy. In addition, the project supported broader implementation of the Action Plan's key directions through targeted investment and the Iconic Urban Waterways Grants Program including funding for strategic corridor plans such as the Kitjarra-dja-bul bullarto langi-ut Master Plan and the Lower Werribee Waterways Amenity Action Plan.
Effectiveness	▪ The project budget was fully expended each financial year over the EC5 period, funding project delivery, grants programs, and professional services supporting key policy and action delivery for example. ▪ The launch of the Actions Plans and YSP was slightly delayed due to myriad factors, including ensuring appropriate engagement and endorsement by Traditional Owners. However initial delays have not impacted on delivery of both policy and action-based activities of the Program by DEECA, and partner organisations. Priority actions from each of the Plans were supported prior to the launch to enable smooth transition into implementation, and to maintain the momentum built with stakeholders during the development of the Plans. ▪ Grants provided by the Program to delivery partners for governance, implementation of key actions, or via the Iconic Urban Waterways Grants Program have been expended and most projects delivered by the end of EC5 with variations approved for those that required additional time to deliver agreed outcomes. ▪ The project worked closely with Traditional Owner partners in providing funding to support their involvement in policy development, project-based work and Elder time, capacity building and training. This included building in flexibility such that Traditional Owners could exercise self-determination within the scope of involvement in the urban water policy space. ▪ The project supported the effective operations and legislative obligations of the Birrarung Council, in providing independent advice and advocacy on behalf of the Birrarung to the Minister for Water and wider community, including preparation of the annual report on the YSP, tabled annual report to Parliament. ▪ The project worked in partnership to develop policies and actions found in the Central Gippsland Region Sustainable Water Strategy (CGRSWS), Water is Life: Traditional Owner Access to Water Roadmap, and upcoming Victorian Waterways Management Strategy (expected 2025). The project worked in partnership with the Department of Transport and Planning, Melbourne Water, Corangamite Catchment Management Authority, Environment Protection Authority Victoria, Parks Victoria, and as well as local government authorities and community. ▪ The Green Links Grants Program was able to leverage the work and relationships built by the program and focused funding in year one within a program area that encompassed the boundaries of the YSP and Actions Plans.
Appropriateness	This project supported Water for Victoria commitments to transform our cities and towns into the most resilient and liveable in the world so that our communities can thrive in all climates. The project has: ▪ progressed YSP and the Action Plans, including legislative requirements of the Yarra River Protection (Wilip-gin Birrarung murron) Act 2017. ▪ addressed commitments and contributed policy to CGRSWS and Water is Life, and upcoming Victorian Waterways Management Strategy.

	▪ aligned to policy – Plan Melbourne, Biodiversity 2037, Marine and Coastal Policy, and Health Waterways Strategy (HWS). ▪ progressed the Green Links election commitment, launching and awarding funding to 23 projects that will directly repair and revegetate almost 200 hectares of urban waterway corridor. The project outcomes contribute to the goals of *Water for Victoria*, particularly Chapter 3: Waterway and Catchment Health (improving planning arrangements for urban waterways and outcomes of Yarra Ministerial Advisory Committee), and Chapter 5: Resilient and Liveable Cities and towns.
Efficiency	The project has leveraged $1,883,047 in co-contributions towards grants awarded during EC5. The co-contribution types linked to Iconic Urban Waterways Grants is a total of $1,180,690 in-kind contributions, and $702,357 of cash co-contributions. The total amount invested by government was $17.128 million, so grant co-contributions is equivalent to 10.9% of this total. In addition, the Green Links Grants Program, a $10 million dollar investment to protect the states waterways for wildlife, leveraged $4.4 million in co-contributions under Round 1 ($2,821,109.00 in cash and $1,673,176.00 in in-kind contributions). Further, the Federal Government's Urban Rivers and Catchments Program (URCP) (Tranche 1 Grants) closely aligns and is supported by this Program. URCP is an $200 million investment into Urban Rivers, $15.89 million of which is being administered through Victorian State Government – the responsibility resting with this project. The co-investment does not reflect leveraged investment not captured through a formal grant process, such as in-kind support contributed to the development of the YSP and Action Plans.
Legacy	▪ The strong legislative and institutional frameworks established by the Act and YSP are enduring, and this Program has contributed to the early implementation of these frameworks by funding the lead agency role, the Birrarung Council and Secretariat functions, Traditional Owner partners, and projects that encourage a collaborative approach to managing the Birrarung. ▪ Similarly, the Community Vision's for the Action Plans have been incorporated into Regional Catchment Strategies, waterway masterplans, and other documentation that will endure beyond the tenure of the Action Plans themselves. ▪ Finally, this project has set foundational policy that will inform urban waterway management policy to be included in the new Victorian Waterway Management Strategy. This will extend on existing contributions of this project to the CGRSWS and Water is Life: Traditional Owner Access to Water Roadmap.
Future priorities	The key needs to be addressed through future funding are: a. Implementation of water portfolio priorities in Victorian Government's iconic urban waterway plans - the YSP, *Waterways of the West* and *Rivers of the Barwon (Barre Warre Yulluk)* Action Plans. b. Driving the water portfolio's commitment to drive key water reforms, policy and actions from the iconic urban waterways plans into business as usual for these regions and to benefit waterways and communities across Victoria. Under sixth tranche of Environmental Contributions (EC6) the Program will look to deliver: - Outcome 1 of Water is Life: Development of legislative proposals for consideration by Government to recognise waterways and their surrounding lands as living, integrated, natural, and cultural entities in law, with Traditional Owners recognised as a unique 'voice' of the living entities (also building on the Action Plan actions). - Priority water portfolio actions and policy work in the YSP and Action Plans, including at least 3 waterway pollution prevention projects in Melbourne's west; place-based, holistic strategic planning for protection of urban

	waterway corridors and coastal wetlands; and enhancing waterway amenity for Melbourne and regional cities and towns. - Governance of the Birrarung: Funding the lead agency role and the Birrarung Council to enable the Yarra (Birrarung) to be managed as one connected and living entity as required by the Yarra River Protection (Wilip-gin Birrarung murron) Act 2017. c. Continuing implementation of the 10-year YSP, to show incremental progress in plan delivery and ongoing commitment to the governance to enable the Birrarung (Yarra River) to be managed as one connected and living entity, across organisational boundaries, as envisaged by the Act. d. Resourcing the delivery of the Green Links Grants Program (the remaining $4 million of the $10 million committed in the 'Protecting Waterways so our wildlife can thrive – Green Links' election commitment) and the Federal Urban Rivers and Catchments Program which involves overseeing up to $17.6 million of federal funds for urban waterway projects.

1.3 CWCT03: Recreational Values Program

Initiative	**Enhancing urban water security, iconic urban waterways and recreational water**
Project	CWCT03: Recreational Values Program
Description	The program sought to address problems identified through Water for Victoria Chapter 7 Recognising Recreational Values, which highlighted that recreational values were not necessarily being considered in water management planning, and therefore potential opportunities for shared benefits were being missed. The program supported recreational objectives and improved access for the community to better enjoy waterways. This included providing better information to the community to support understanding of the opportunities and limitations on recreational use of waterways and water storages and confidence in the water decision-making that supports this. It also included the development of better management approaches to achieve recreational and social objectives through site or region-specific case study projects.
Outputs	▪ Distribution of $3.3 million of grants funds to support 19 projects and 11 organisations focused on improving recreational outcomes. ▪ Flagship Water Wannon project – new ways to facilitate recreation using water corporation assets, including 4 planning and community engagement projects (recreational opportunities master planning, options assessment, car counters, cultural heritage monitoring). ▪ 15 projects completed by 30 June 2024, with four EC5 projects to be completed by June 2025. ▪ Created better linkages between DEECA, the water sector, Traditional Owners and related government portfolios to achieve greater collaboration, inform decision-making and leverage investment to achieve shared objectives. ▪ Implemented (and then controlled easing of) COVID-19 restrictions across 40 recreational areas, in collaboration with water corporations and DEECA's emergency management and public land teams. ▪ Introduced new *Water (Recreational Area) Regulations 2023*, which came into operation in August 2023. The regulations enable water corporations and CMAs to manage safe public recreation at determined recreational areas, while ensuring their range of values and uses are protected. ▪ Provided $556,990 to 6 water corporations and one CMA to support the development of recreational area management plans required under the new *Water (Recreational Area) Regulations 2023*.

	▪ Development of the draft Greens Lake Action Plan, representing a new way of working collaboratively with water corporations, Traditional Owners and the recreation community to generate shared outcomes. ▪ Working constructively to embed recreational values in the new *Victorian Waterway Management Strategy*. ▪ During the October 2022 floods, damage occurred to recreation infrastructure and $900,000 was allocated through a Treasurer's Advance to water corporations and CMAs for flood recovery works to repair recreation infrastructure. ▪ Consideration of recreational access to drinking water storages, including a policy statement in the CGRSWS and collaboration with Melbourne Water to consider access to Tarago Reservoir. ▪ Progressed the Victorian Government's election commitment to open Tarago Reservoir to on-water recreation, including administration of funding agreements to Melbourne Water and Gippsland Water to upgrade Tarago, Neerim South and Warragul treatment plants, providing governance oversight of the project through secretariat of the Tarago Implementation Steering Committee, leading Traditional Owner engagement and providing input to community engagement.
Summary against evaluation domains	
Impact	**Inclusion of social and recreational values of water in water and waterway planning as business-as-usual practice across the water sector** ▪ All water corporations, CMAs and the Victorian Environmental Water Holder (VEWH) included social and recreational values in corporate planning. ▪ Wannon Water demonstration project provides a model for valuing water corporation assets for recreation: shared with industry, guidelines produced and circulated. ▪ Glenelg Hopkins CMA partnership project for the Merri River demonstrated value of partnering locally with Council and community to achieve recreation, social and environmental outcomes. ▪ Melbourne Water inclusion of Yan Yean Reservoir and Tarago Reservoir recreation access projects in their price plan. ▪ Water Corporations enabling access to new recreation assets under own project. **Improved understanding by the Victorian communities on how to achieve their recreational objectives** ▪ The My Victorian Waterway Survey, conducted in 2022, attracted 6,240 individual respondents. When asked how recreation beside waterways can be improved, the top priorities for most respondents were investment in toilets (57%), walking tracks (51%) and visitor facilities (43%). ▪ New Goulburn-Murray Water platform for community survey to inform their recreation planning. ▪ High levels of engagement from the local and general community through Engage Victoria consultation processes, for both the Draft Greens Lake Action Plan (144 survey respondents) and the Draft Water (Recreational Area) Regulations (85 respondents) including strong attendance at two online information sessions (23 and 29). ▪ New requirement for site-based management planning for recreational areas through the new regulations, including requirement managing authorities to prepare a recreational area management plan for each, and to for consult with the Traditional Owner groups and the community during the development of plans. **Improved access to recreational opportunities on and around water-based natural spaces and water storages** ▪ 19 local or regional scale infrastructure projects funded through EC5 Recreational Values Program grants. This includes on-ground community recreational facilities completed, such as: ▪ Merri River All Abilities Kayak launch. ▪ Trawool Reservoir fishing platform and Walking Track.

	▪ Waranga Basin all abilities picnic and barbeque area. ▪ Public toilets at Bullarto Reservoir. ▪ Kayak/canoe launching and access points on the Jamieson River. ▪ Significant assessment, planning and design of new recreation access opportunities at Yan Yean and Tarago Reservoirs, in partnership with Melbourne Water. ▪ New recreation opportunities created at Goulburn Valley Water sites (Dunyak Moira and Trawool) and Grampians Wimmera Mallee Water sites. ▪ Determined two new recreational areas under the *Water Act 1989* (Barwon River through Geelong and Dunyak Moira) to apply the *Water (Recreational Area) Regulations 2023* and enable improved management and control of areas for the managing authorities. Explored options for a new recreation opportunity at Waranga Basin to act as an offset for lost recreation opportunities at Greens Lake.
Effectiveness	The COVID-19 pandemic had a significant impact on delivery timing but was able to be managed through a variation process to bring them back on track (with modified timing).
Appropriateness	▪ Recognising Recreational Values has been specifically targeted at delivering the three actions in *Water for Victoria* Chapter 7, and this has been achieved. ▪ The strategic context for the program has not shifted significantly since it was created following the 2016 release of *Water for Victoria*. A commitment to enhancing the recreational values of water is articulated in Chapter 7 *of Water for Victoria* (and Actions 7.1, 7.2 and 7.3). If anything, following this commitment and work through EC4 to implement it, the strategic context of the Program and community expectations have sharpened, as well as noticeable growth in the capability and willingness of water corporations to support recreational values. ▪ Significant 'wins' by the community to improve recreational offerings at waterways, such as the 2018 election commitment to open six central Victorian water storages to recreation have demonstrated to the community the benefits of doing so. ▪ Restriction of recreational activity during the pandemic has only underscored the importance of recreation in the everyday lives of Victorians and the benefits that waterways offer for mental health and well-being.
Efficiency	▪ Annually, the program budget was fully expended to within 5% of budget, and was fully expended at the end of the EC5 period. This reflects the careful planning that went into establishing the program and funding arrangements. The grants program was initially allocated over a 2-year time period, which was a useful timeframe to realistically plan and deliver the relatively small planning and infrastructure projects that have been funded to date. Further grants were allocated in the final quarter of 2024 to expend the EC5 budget through an expression of interest process. ▪ Most funds were spent as grants made to our lead delivery partners, CMAs and water corporations to deliver the projects locally in their respective communities. Often this was also done in partnership with other agencies, Traditional Owners and community groups. The CMAs and water corporations were best placed to lead delivery of the projects as in most cases they had existing relationships with these partners locally. Interestingly, cases where projects were delayed may reflect where these local relationships were not as strong or are still developing.
Legacy	**Development of Water (Recreational Area) Regulations 2023:** creates a lasting legacy for water corporations and CMAs to consider recreation in the management of these sites as part of their regular planning and operations, and to consider the needs of the community and Traditional Owners in the process. **Water storage openings:** Following the successful opening of Coliban Water storages to recreation in 2020, and the announcement of the commitment to open Tarago Reservoir to on-water recreation, more lasting opportunities have arisen for the Victorian community to enjoy the benefits of water-based recreation at more

	diverse locations. This is supported by the establishment of Policy 4-5 of the CGRSWS, creating a clear pathway for considering opening water storages. DEECA also supported Goulburn Valley Water in developing a new walking track at Trawool Reservoir, as well as assisted them in determining Dunyak Moira as a recreational area under the *Water Act 1989*, opening up new access for communities to ensure. **Improved partnerships and relationships:** The diverse ranges of projects, policy and regulatory development undertaken by the small Recreational Values team has forged lasting cross-agency relationships across water corporations, CMAs, the Victorian Fisheries Authority, Better Boating Victoria, Traditional Owner groups and others.
Future priorities	Over 2024-2028, the program will be moving to further embed recreational values in planning and management as business as usual for the water sector, and to explore options for additional, sustainable and alternative sources of funding (including opportunities for co-funding from other delivery partners, such as from local councils). This shift will allow the program to build on its foundational work, and to implement the 2019 amendments to the *Water Act 1989* to further consider recreational values and objectives of Victoria's waterways. With a modest grant program for EC6, the next four years of the program will focus on how to support the water sector in the prioritisation and decision-making for recreational values projects, ensuring that funding is allocated strategically to enable to greatest benefit to the community. What will be important going forward is understanding and being able to build a real case for further investment, and demonstrating how this can be prioritised. The new Recreational Area Management Plans as a requirement through the regulations will help bring some consistency to planning for recreation at water storages. More broadly, embedding the consideration of recreation and shared benefits as a principle in regional waterway strategies will help with decision-making about investment at a local level.

1.4 CWCT04: Recycled Water, Stormwater and Onsite Wastewater Policy

Initiative	**Enhancing urban water security, iconic urban waterways and recreational water**
Project	CWCT04: Recycled water, stormwater and onsite wastewater policy
Description	Urbanisation is altering our natural systems through high levels of water consumption and increases in stormwater and wastewater volumes. The investment aimed at contributing to enhancing urban water security and reducing the impacts of urban water discharges by increasing the uptake of recycled water, rainwater and stormwater and an integrated and adaptive approach to managing urban water and wastewater systems. Investment included: ▪ $2.350 million for the onsite domestic wastewater Program to deliver on recommendations made from the Victorian Auditor General Office audit report relating to onsite domestic wastewater management including updated guidance. ▪ On-site Domestic Wastewater Management (ODWM) grants provided $1.36 million to councils to improve management onsite wastewater systems. ▪ $8.284 million towards stormwater, recycled water, and rainwater policy reform.
Outputs	▪ Identification of policy and actions in the CGRSWS that support the increased use of recycled water, rainwater, and stormwater. **Recycled water** ▪ Updated regulatory guidelines which support the increased use of recycled water (Environment Protection Authority Victoria (EPA) publications 168, 1910 and 1911). ▪ Completed template guidance for recycled water use to help industry apply and adjust to the new Victorian recycled water guidelines.

	▪ Acquitted all three recommendations from the Victorian Auditor General's Office audit on supplying and using recycled water. ▪ Completed improvements to recycled water data reporting categories used by the Essential Services Commission and the Victorian Water Accounts. ▪ Funded testing and analysis of emerging contaminants in recycled water at wastewater treatment plants across Victoria (EPA Publication 2054). ▪ Provision of funding to EPA for priority projects to further enhance understanding of emerging contaminants in recycled water, including development of EPA guidance and analysis of crops irrigated with recycled water. ▪ Gap analysis of recycled water education and engagement and progression of associated recommendations. ▪ Risk framework for use of alternative water for environmental benefit (EPA publication 3005). **Stormwater and rainwater** ▪ Undertook a cost benefit analysis and regulatory impact statement on expanding domestic rainwater tank installation. ▪ Undertook a cost benefit analysis to investigate the feasibility of mandating EPA's stormwater flow reduction targets. ▪ Developed draft guidance for councils on implementing stormwater offsets schemes including a policy paper, practice note and draft Victoria Planning Provisions amendment. ▪ Developed guidance to planning system users in the form of an online Resource Portal and Navigator Tool. ▪ Developed a new tool to help planning system users (developers, engineers, councils) demonstrate compliance with their stormwater obligations under the Victoria Planning Provisions (due for launch early 2024-25). ▪ Delivered training and capacity building sessions on stormwater planning requirements in partnership with industry to a statewide audience of local government, CMAs , water corporations and the land development industry. ▪ Produced an animated education video for communities, local government and land development industry on the benefits of IWM. ▪ Advice to government on roles and responsibilities for stormwater assets and services (Melbourne Urban Stormwater Institutional Arrangements (MUSIA)). ▪ Contract management of an $8m grant to Wyndham City Council for delivery of Greening the Pipeline zone 5 through the Suburban Parks Program (note the grant was via a separate funding source). **Onsite Domestic Wastewater** ▪ Co-designed new instrument titled Obligations of Managers of Land or Infrastructure (OMLI). ▪ Updated Guidance Planning permit applications in special water supply catchment areas. ▪ Updated Guidelines for developing, reviewing and updating Onsite Wastewater Management Plans (OWMP) & OWMP risk assessment guidelines. ▪ Updated EPA guidance on the contents of a domestic wastewater plan. ▪ Updated Guidelines for onsite wastewater management and Guidelines for effluent dispersal and recycling systems. ▪ 58 grants to local councils to improvement management of wastewater planning.
Summary against evaluation domains	
Impact	**Increase in the uptake of recycled water, stormwater and rainwater for appropriate uses across Victoria** ▪ Recycled water use data is not yet available for the complete EC5 period to date, however the 2-year average from (2020-21 to 2021-22) is 16%. This is slightly lower than the 5-year average of 18% largely due to high rainfall over the period reducing the demand for recycled water.

	▪ DEECA estimates that through the IWM grants program, DEECA has co-funded 550 ML/year of additional stormwater through 15 projects. **Increased number of stormwater offsets schemes established by local governments across Victoria** ▪ Four councils have implemented schemes, including City of Kingston, Mornington Peninsula Shire and Mooney Valley City Council. ▪ Several councils are currently looking into setting up offset schemes and are due to implement schemes in late 2024, including Merri-bek City Council, Hume City Council and City of Greater Bendigo. **Improved support for the implementation of stormwater management requirements under the planning scheme** ▪ Twenty capacity building training sessions on Victoria's stormwater planning requirements have been delivered in partnership with industry, to a statewide audience of over 900 people. ▪ Course evaluation consistently shows participants having 100% satisfaction with training courses noting improvement in knowledge and skills, likelihood to change practice, and try new approaches. ▪ In June 2022, DEECA engaged a consultant to upgrade the STORM Tool. This has gone through several rounds of user testing and is mostly ready to launch. The final product is due for launch in early 2024-25.
Effectiveness	**Recycled water and Stormwater projects:** Investments made under the project were largely delivered on time and to budget however some project timelines were extended to account for unforeseeable circumstances, such as resourcing challenges, intellectual property issues, or engagement delays. For the most part, these delays did not prevent the planned outcomes from being achieved. **Onsite Domestic Wastewater Management projects:** DEECA provided 58 of the 65 eligible councils with grants to focus on data improvements, updating OWMPs or to undertake risk reducing activities as outlined in Council OWMPs. Analysis of council final reports, has shown the grants program has achieved the following: ▪ 89% of councils with onsite wastewater systems have undertaken onsite wastewater management improvements. ▪ More councils have transitioned from the State Environment Protection Policy (Waters of Victoria) obligations and are better placed to achieve the obligations under the OMLI. ▪ Councils have indicated that they will continue working on projects related to their grant, with several able to engage staff to undertake further onsite wastewater activities. This has incentivised 89% of councils with OWS to improve management and planning processes. ODWM investments were delivered on time and on budget.
Appropriateness	▪ The project progressed and built on projects and investments already underway from 2016-17 to 2019-20, via the Victorian Government investment of $54.167 million of EC4 funds across the whole project (which also included the IWM program). The project aligned with the objectives of the EC and implemented policy and legislative commitments – including those under Water for Victoria (2016), requirements outlined in the Productivity Commission's National Water Reform Report, the Port Phillip Bay Environmental Management Plan 2017-2027 and the VAGO audit Managing the Environmental Impacts of Domestic Wastewater requirements. Several new government strategies and policy documents were introduced which may have slightly altered the focus of discrete projects, but the fundamental direction remains the same. ▪ Socio-political shifts due to COVID and the rise in costs of living. The rise in cost of living has suppressed the appetite for any changes in regulations / obligations that would increase costs to households. This has had flow on impacts to projects such as the improving rainwater tank regulation which proposed to expand the development types required to install rainwater tanks.

	▪ Climate conditions: floods and 3 wet years due to La Nina conditions has contributed to full storages. This challenges the perceived 'need' for public investment in stormwater and recycled water projects.
Efficiency	Several of the projects funded through the project leveraged in-kind support and co-investment from multiple organisations, including: ▪ Recycled water: $144,000 co-contributions by Department of Health, water corporations and EPA, plus in-kind 4.0 full-time equivalent contributions. ▪ Stormwater: MUSIA co-investment by Melbourne Water $368,000, $80,000 co-contributions for Fishermen's Bend Smart Rainwater Tanks Governance Study. ▪ Onsite Domestic Wastewater Management Grants Program: for onsite domestic water management planning: councils reported a contribution of $896,000.
Legacy	**Customer and community acceptance / comfort of alternative water use is increasing:** ▪ Feedback from the CGRSWS showed that there is strong support from the community on the use of recycled water and stormwater for household use, excluding drinking water (98% strongly agree or agree), industry (94% strongly agree or agree), irrigating open space (94% strongly agree or agree), agricultural use (88% strongly agree or agree), boosting water levels and flows in rivers to support river health (73% strongly agree or agree). ▪ 85% of respondents agreed or strongly agreed that they supported additional government investment in recycled water and desalinated water to avoid water shortages, even if it meant moderate increases to their water bill. ▪ Support for using recycled water and stormwater is contingent on water being treated to a high quality or potable standard and being free of contaminants. **Clearer responsibilities between metro councils and Melbourne Water for stormwater management:** ▪ MUSIA implementation is still in progress but has already significantly improved knowledge of council stormwater asset ownership (particularly for waterbodies). **Improved regulatory and governance framework for the management of onsite domestic wastewater systems across Victoria:** ▪ There were eight recommendations for DEECA and EPA to work together with key stakeholders to review the regulatory framework, tools and guidance for domestic wastewater management to address issues and gaps. DEECA acquittal of recommendations was achieved by May 2023, followed by EPA on 1 July 2023.
Future priorities	**Recycled Water:** ▪ DEECA has already provided funds to EPA for the next phase of work in this space, including for: - The development of a formal EPA guidance piece on emerging contaminants in recycled water. Included in this work is the consideration of guideline values for a select group of priority emerging contaminants. - A sampling program of a select group of crops irrigated with recycled water to determine if there is crop uptake of emerging contaminants, any potential risks, etc. **Rainwater and Stormwater:** ▪ Leverage pilot studies to better understand potential new demands for stormwater and rainwater. ▪ Work on addressing rainwater tank and water sensitive urban design (WSUD) asset compliance and ongoing maintenance. ▪ Implement the findings of the feasibility study into mandating stormwater flow targets (regulation, support for industry). ▪ Investigate stormwater institutional responsibilities, including in the Barwon region. ▪ Develop rainwater tank regulation and deemed to satisfy solution.

	▪ Continue to build capacity across industry through the use of tools, and communications to enable better delivery of stormwater management objectives. **Onsite Domestic Wastewater Management:** ▪ Continue to work with Consumer Affairs Victoria / water corporations / councils to improve sewerage treatment options / sewer connection rates (consider legislation changes and Government investment criteria). ▪ Continue to work with the Statewide Wastewater steering committee to improve onsite wastewater management across Victoria. ▪ Work with councils to improve wastewater management (including grants program).

1.5 WRS1: Retail Entitlements and Markets

Initiative	**2.Strong foundations for Victoria's water: compliance, markets, water entitlements and oversight of the water grid**
Project	WRS1: Retail Entitlements and Markets
Description	This project supports a program of works to provide clear and certain rights to water for all types of water users, ensuring that water market settings and system rules are appropriate and protect ecological and cultural values. It also funds actions to protect Victoria's interests in the Murray system, and enhance community preparedness to make informed decisions to manage risks and get more value out of their water. The project sought to address these problems by improving the regulatory framework in declared water systems to enable communities to get the most value out of Victoria's water resources, while protecting shared environmental and Traditional Owner cultural values. It also sought to improve water market confidence, by delivering essential reports and enhancements to market information and making sure market settings are right. This project was the foundational investment in outcomes which were further developed through an additional EC5 project - WRS19: Resilient Water Markets, Regional Communities and Infrastructure (Stream 1 and 2) - which sought to support water reliability and community and investor confidence in a period of increasing demand for water, competition for funding of large-scale infrastructure projects and significant intergovernmental reform.
Outputs	**Market Monitoring and Information:** ▪ Delivered a series of reports and public dashboard including: Broker audit public report, annual trade report; market trends report and trade report dashboard; annual Basin Plan compliance reporting; internal market monitoring dashboard; checks of trade processes; resources; Broker Portal enhancements; confirmed accuracy of price reporting through an annual audit; carryover fact sheets and dashboard; dashboard for an allocation price, and; available water and trade limits and price reporting for Murray trading zones. **Governance, Entitlements and Legislation:** ▪ Introduced a new place of take (PoT) approvals framework through legislative changes to the Victorian Water Act 1989 to strengthen existing users' rights to take water during a shortfall and provide greater flexibility for water users to manage their own delivery risks, including implementing a cap on delivery rights in the Murray River System. ▪ Delivered supporting implementation actions and developed supporting instruments (e.g. transitioning trade rules, rationing and water system zones, and for tagged use restrictions, including in the King and Ovens River systems) to enable the new framework. **Declared Systems Reform:** ▪ Completed Goulburn to Murray trade review (GMTR), including a Regulatory Impact Statement (RIS) process and subsequently implemented new long-term trade rules and operating rules for flows in the lower Goulburn River.

	▪ Secured commitments from Goulburn-Murray Water, the Murray-Darling Basin Authority (MDBA) and southern Murray-Darling Basin (MDB) governments to adhere to operating rules to protect the lower Goulburn River from 2023-24. ▪ Advocated and reached consensus with the MDBA, the Commonwealth and Basin State representatives on amendments to Schedule D of the MDB Agreement through the Basin Officials Committee (BOC). ▪ Removed 'grandfathered' tagged trade exemptions from Victorian entitlements through changes to Victorian legislative instruments to align with changes made to the Basin Plan with the introduction of the Water Amendment (Restoring Our Rivers) Act 2023. ▪ Capped extraction share in the Murray and Ovens systems following stakeholder consultation to reflect delivery risks in those systems. **Murray Systems Management:** ▪ Agreed with WaterNSW on a way of opening trade opportunity across the Barmah Choke for July 2024.
Summary against evaluation domains	
Impact	**Protecting the integrity of the retail entitlement and market framework:** ▪ The project has increased fairness and equity in water markets by providing transparent trade information and monitoring market behaviour to ensure equitable access to trade opportunities. The 2021-22 Water Broker audit shows that there has been continued improvement in broker compliance with the Victorian Water Register (VWR) online Broker Portal use agreement and rules. ▪ The project has also supported the state to continue to advocate for Victoria's interest in interstate sharing and intergovernmental commitments, protecting Victorian entitlement holders and the integrity of the water entitlement and markets framework. Victoria has also met all obligations for water markets and trading rules under Victorian and Commonwealth legislation, including ongoing consultation, reporting and collaboration with rural water corporations, the MDBA, the Australian Competition and Consumer Commission (ACCC) and the Inspector General of Water Compliance. ▪ The project has also supported waterway and catchment health by preventing environmental and third-party impacts of delivering traded water through new trade and operating rules in the Goulburn River. Strong ongoing relationships with storage operators, waterway managers and Traditional Owner groups were formed as part of this process that will also support future collaboration on implementation of the new arrangements. This project has also resulted in improvements to water use efficiency and productivity by providing greater certainty and predictability around the ongoing rule. ▪ The project has also supported the security of Victoria's water systems by giving water users confidence in their rights and flexibility to manage their own water availability and delivery risks through the PoT framework and related work. ▪ Many additional benefits have been realised in terms of educating the community and developing relationships and connections with stakeholders across Victoria, which establishes a foundation for future work across a range of program areas. Work undertaken through this project also supported Victoria's ongoing delivery of obligations and outcomes under the Murray-Darling Basin Plan with regard to river operations and water trading.
Effectiveness	▪ The project successfully implemented major reforms that support the integrity of the retail entitlement and market framework. The Goulburn to Murray Trade and operating rules are demonstrating positive environmental results, with the 2022-23 Scientific Advisory Panel finding less erosion of river banks, a marked increase in vegetation and an increased abundance of macroinvertebrates. ▪ Significant flooding in late 2022 affected the ability to meaningfully consult with water users on PoT approval changes. Flooding also affected the ability to monitor and assess the impacts of the revised lower Goulburn operating rules on the local environmental conditions and delayed the co-design of new governance

	arrangements due to limited capacity of Traditional Owners, Goulburn-Murray Water and MDBA staff as they dealt with flood damage and recovery. The project adapted timelines to ensure sufficient time for meaningful consultation. ▪ This project involved substantial community consultation. DEECA worked closely with Traditional Owners, waterway managers, scientists, river operators, recreational water users, irrigators, water market participants and the broader community to gather additional evidence to assess the impacts of interim rules on trade and river operations, as well as on ecological, cultural and recreational values, as part of the RIS for the GMTR. As reported in the 2023 evaluation report, DEECA partnered with 32 organisations, including Traditional Owners, other Victorian departments and Australian government departments, community organisations and private organisations.
Appropriateness	This project directly aligns with key management strategies, including *Water for Victoria*'s Chapter 9. Chapter 9 contains actions relevant to this project to improve the management and enhancement of Victoria's water markets, in particular actions 9.3 - Improving water market effectiveness, 9.4 - Improving Water Market Information and 9.6 - Improving Trading Rules in Northern Victoria. The project was able to adapt and take on board new information to create solutions that addressed the initial problems identified within the time and budget allocated, to the benefit of all Victorians. In particular: ▪ Early in the project it was realised that the legislative means were not available to implement caps and set rules on extraction share in order to deal with emerging risks to delivering water to users in the Murray River system. This brought about a broader piece of work known as the Place-of-Take legislative reforms, with these changes being implemented in 2022 and 2023. This brought about a broader piece of work known as the PoT legislative reforms, with these changes being implemented in 2022 and 2023. These reforms effectively addressed the major risk to government of legal uncertainty during the unlikely event of a shortfall (i.e. not being able to deliver water to allocation holders when and where they need it). These reforms to the delivery rights framework have provided a clearer, more flexible, and more equitable mechanism to ration delivery if necessary. ▪ Trade rules are required to balance flexibility for water users with hydrological and environmental realities. Prior to the GMTR, the rule on trade from the Goulburn to Murray systems was skewed towards delivering enough water to meet Murray irrigation needs, at a cost to environmental and cultural values in the lower Goulburn. The review was a process of continuous learning, consulting with stakeholders and undertaking research, which led to the interim rules being adapted and transformed into the enduring rules introduced in 2022. The result was a new, refined trade rule and operating rule that still enabled trade for irrigators, while providing more flexibility to achieve improved ecological outcomes and better respected the inherent Cultural values of the river.
Efficiency	▪ Additional funding was leveraged to meet increased staffing and operating costs to deliver the outcomes of the project, which were expanded on the basis of community consultation and Victorian Government commitments early in the EC5 period. Co-funding of $4.907 million from a Federal Funding Agreement for delivery of Murray-Darling Basin projects was leveraged to support these additional costs, as well as ensuring Victoria could continue to deliver on the outcomes of the Basin Plan and meet legislative obligations. This additional federal funding enabled redirection of approximately $1.01 million of the initial EC5 funds to meet other needs in the EC5 business case for Strong Foundations for Victoria's Water. ▪ Separate funding of $5.589m for the complementary project WRS19: Resilient Water Markets, Regional Communities and Infrastructure (Stream 1 and 2) achieved complementary outcomes in bulk entitlement security. Combined, the projects provide greater confidence and transparency in the Victorian water entitlement framework.

	▪ The PoT framework removed the need for the Minister for Water to assess individual works licence applications, reducing the resource burden of individual Ministerial determinations from existing arrangements (which were accounted for in WRS19). ▪ Options assessments were used effectively to support decision-making. Trials were used effectively to test and revise reform settings to achieve positive outcomes, including for the Goulburn to Murray trade review.
Legacy	Published information and improved systems and processes for managing and communicating trade and market behaviours will improve and maintain the confidence in Victoria's entitlement framework. Legislative changes to introduce the PoT take approvals framework are enduring, resulting in stronger delivery rights and permanent arrangements. New water trading and operating rules mean that Victoria's trading rules for the Goulburn system meet legislative requirements and enable water to be traded within ecological and cultural limits of the Goulburn River. Ongoing long-term monitoring of the implementation of outcomes of this will support recovery for the lower Goulburn River, allowing any unforeseen issues to be quickly identified. Relationships with Basin governments have been developed throughout this project. This will allow Victoria to continue to advocate for its interests and protect Victorian entitlement holders and the integrity of the entitlement and markets framework. Community engagement has also built stronger relationships and understanding about water-related issues with the community, as well as an in-depth understanding within DEECA of what community priorities are for entitlements and markets into the future.
Future priorities	Policy needs to continue to evolve and adapt to achieve positive and holistic benefits for Victoria as conditions change. Key priorities continuing beyond this project include: ▪ Continue to support water corporations and their customers to transition to the new PoT framework. ▪ Finalise work with MDBA around Phase 2 of the MDB Agreement Schedule D review and support briefing and endorsement of outcomes through BOC and Murray-Darling Basin Ministerial Council. ▪ Continue to monitor and oversee the water market to ensure it continues to operate effectively, and that market regulation, oversight and architecture continue to meet the needs of a more sophisticated market that more people are reliant on. ▪ Ensure Victoria's retail entitlement and trade framework continues to evolve and adapt to a changing climate and community values, particularly in the context of major changes by the Australian Government to the Basin Plan.

1.6 WRS2. Water Grid Oversight

Initiative	**2. Strong foundations for Victoria's water: compliance, markets, water entitlements and oversight of the water grid**
Project	WRS2: Water Grid Oversight
Description	The objective of this project is to improve the oversight of urban water security. Water sources across Victoria, including climate independent sources like the Victorian Desalination Plant, have been connected by the water grid to improve water security for all Victorians. Greater connectivity through the water grid means that ongoing collaboration between DEECA and water corporations on future water supply augmentations is required. This project is needed to: ▪ Inform policy directions that impact decisions around how the water grid is used. ▪ Remove barriers that impede the way water is transferred (administratively and physically), allowing water users to manage their own risks and provide the most economical infrastructure investments.

Outputs	▪ Developed and undertook stress testing of the south-central Victorian water grid and embedded this process in the Urban Water Strategies. ▪ Developed a suite of data and information on statewide trends and published the water dashboard to support Victorian's understanding of how the water grid is used. ▪ Established the Executive Advisory Committee to act as a coordination body between the water industry and government. The Executive Advisory Committee provides effective oversight and guidance on urban water security and regional-scale augmentation planning in the South-Central connected system. ▪ Developed a 2-tier Quadruple Bottom Line assessment process for ensuring that future urban water supply infrastructure business cases include the assessment of opportunities for water returns to Traditional Owners and the environment as new water supplies come online.
Summary against evaluation domains	
Impact	**Long-term planning for water security:** ▪ The establishment of the Executive Advisory Committee provides coordination between the water industry and government. This will provide effective oversight and guidance on urban water security. ▪ Stress testing provides an understanding of the impact of extreme shocks to the water grid and identifies where additional resilience may be needed. **Water return to Traditional Owners:** ▪ A two-tier Quadruple Bottom Line assessment process and associated documentation that ensures that as future water supply options are developed, consideration is given to their potential to enable water returns to Traditional Owners and the environment.
Effectiveness	Effectiveness indicated through on-track delivery of planned works
Appropriateness	The Executive Advisory Committee delivers on commitments for the management and enhancement of Victoria's water grid in the Government's water policy *Water for Victoria*. It builds on work previously undertaken under the EC4 funding associated with Action 9.1 and 9.2 under Chapter 9: Realising the potential of the Water Grid project in *Water for Victoria* and Action 9-2 in the CGRSWS. The inclusion of a Quadruple Bottom Line assessment process will embed the consideration of water for Traditional Owners and the environment in future regionally significant urban water supply augmentations. This will deliver on Action 4-1 in the CGRSWS: Action 4-1: Investigate options to return water to the environment and Traditional Owners as manufactured water sources are planned for Greater Melbourne and Geelong
Efficiency	The project is within budget but publication of the inaugural WGP was delayed from 2023 due to a decision by the government and is now expected to be published in December 2024.
Legacy	It is considered likely that improvements to augmentation governance, and returning water to Traditional Owners and the environment will be sustained. Key indicators for determining the legacy of the project are: ▪ Regular monitoring of urban water security ▪ Ongoing operation of the Executive Advisory Committee as an endorsement body. ▪ Ongoing following of Quadruple Bottom Line approach in the development of any future water supply augmentation projects.
Future priorities	▪ Ongoing secretariat support for the Executive Advisory Committee and associated working groups. ▪ Future grid stress testing

1.7 WRS3. Water Market Reform

Initiative	**2. Strong foundations for Victoria's water: compliance, markets, water entitlements and oversight of the water grid**
Project	WRS3: Water Market Reform
Description	The objective of this project is to realise the shared benefits of water resources across Victoria, and particularly in the South-Central system, by enabling movement of water to where it is most needed. Improving the effectiveness of all water markets allows for the sharing of water security benefits in ways that are equitable, responsive and transparent. Population growth in the South-Central region of Victoria (Melbourne and surrounding population centres), means there is an increase in the number of water corporations with a need to access and share water in the Melbourne headworks system. This project is needed to: ▪ Develop and implement water sharing arrangements in South-Central Victoria to improve water security outcomes for the region. ▪ Implement changes to policy and rules around trading in groundwater and unregulated systems to enable water to flow to its highest value, while protecting the environment and third parties in the face of changing water resource conditions. ▪ Identify opportunities to improve water market effectiveness in western Victoria.
Outputs	▪ Determined that fundamental conditions for effective urban water market in South-Central Victoria did not exist. ▪ Developed reforms for the creation of a South-Central Pool and improving water sharing arrangements in South-Central Victoria, in collaboration with stakeholders. Commenced development of new Bulk Entitlement arrangements for the 8 water corporations connected to the South-Central system. ▪ Improved water security for customers serviced by Gippsland Water through the acquisition of Greater Yarra System-Thomson River Pool entitlement. ▪ Conducted social research into barriers to groundwater trade in the South-West Limestone Coast region. ▪ Market research conducted to provide information on barriers which are preventing existing or potential water market participants accessing and utilising the market. ▪ Developed recommendations for improving effectiveness of the water market in western Victoria's regulated water system.
Summary against evaluation domains	
Impact	▪ Agreement from key DEECA and water sector decision makers and stakeholders on the reforms developed for the creation of a South-Central Pool and improving water sharing arrangements in South-Central Victoria demonstrates that the project is resolving the problems identified with water and cost sharing. ▪ The research into the groundwater market in the South-West Limestone Coast region has helped identify areas for improvements and developed a plan to address barriers to trade.
Effectiveness	Effectiveness indicated through on-track delivery of planned works
Appropriateness	▪ This project delivers on two commitments in the Government's water policy *Water for Victoria*: 'trial the development of a water market in the South-Central region' and 'develop trading rules in other water systems'. It builds on work previously undertaken under the EC4 funding associated with the development of Action 9.5 and 9.7 under Chapter 9: Realising the potential of the grid and markets project in Water for Victoria. ▪ The CGRSWS was released in September 2022. One action from the CGRSWS is relevant to this project: Action 9.3: Create a South-Central pooled resource and associated reforms

	▪ This action closes out *Water for Victoria* Action 9.5: Trial of a water market in the South-Central region, reflecting that the feasibility assessment of the trial concluding that the fundamental conditions for an effective urban water market in South-Central Victoria did not exist. ▪ As per the CGRSWS, this project has established the foundations for the creation of an effective South-Central pool, through means other than further developing a market.
Efficiency	All three parts of the project were completed within budget and on time as per the project plan.
Legacy	Agreement from decision makers and stakeholders with the reforms developed for the creation of a South-Central Pool and improving water sharing arrangements in South-Central Victoria demonstrates that the project resolves the current problems with water and cost sharing. The extensive stakeholder consultation, co-design, and collaboration in the project means that stakeholders were informed of the different reform models prior to agreement being reached. Therefore, the reforms have been thoroughly interrogated and tested prior to implementation, and should be able to be in place for an extended period of time.
Future priorities	▪ Implementation and operation of the South-Central reform program to create a pooled South-Central resource and appropriate regulatory, entitlement and governance frameworks. ▪ Policy, oversight and input to decisions on water sharing in the South-Central region including supporting regional access, affordability, and decisions on trade and dynamic rebalancing.

1.8 WRS4: Water Market Transparency

Initiative	**2. Strong foundations for Victoria's water: compliance, markets, water entitlements and oversight of the water grid**
Project	WRS4: Water Market Transparency
Description	The Water Market Transparency EC5 project investigated and responded to the community's call for more transparent water markets with the aim to maintain and build community and investor confidence in water markets. Increased competition for water coupled with previous years of drought, low water allocations and the socioeconomic effects from changes out of the Murray-Darling Basin Plan have seen increased community concern and media interest in water markets, including who owns and uses water. In response to community concerns, in 2019 the ACCC was directed to undertake an inquiry into Murray-Darling Basin Water Markets (among a number of other inquiries and reports about water). The ACCC released their final report in March 2021, providing in-depth analysis of water markets across the Murray-Darling Basin, drawn from the ACCC inquiry's powers to compel information from jurisdictions and private parties. The report demonstrated the clear public benefit of water markets and highlighted the need for further reform. This EC5 project ensured Victoria was represented in interjurisdictional forums to respond to the inquiry and provided resources for Victoria to be able to advocate for its priorities during the development of the Australian Government's Water Market Reform Roadmap – an implementation roadmap having regard to the ACCC Inquiry.
Outputs	▪ Published water market information, such as the largest water owners, including names of companies owning 2% or more of water in the largest water systems and introduced new requirements to provide clarity on different types of allocation trade. ▪ Introduced amendments to sections 84EA and 84X of the Water Act 1989 to ensure the publication of water market information aligns with community expectations.

	▪ Developed the Water (Resource Management) Amendment Regulations 2024 to support the amendments in the Water Act 1989 and ensuring individual and commercial privacy is protected while increasing water market transparency. ▪ Provided input into a Basin wide work plan for the Australian Government's Water Market Reform Roadmap and developed a costed and detailed implementation plan for completion of the Roadmap Recommendation. ▪ Launched a pilot for a water market exchange platform in the Macalister Irrigation District (MID) in southern Victoria. ▪ Produced Ministerial Public Accounts and Estimates Committee briefs and Possible Parliamentary Question briefs to support the Minister on market transparency and reform matters. ▪ Provided feedback on the Water Act 2007 (Cth) amendments, Water Amendment (Restoring our Rivers) Act 2023 (related to water market reform aspects of the Act and associated Bill). ▪ Worked together with Southern Rural Water to complete a social research project into barriers to trade in the Southwest Limestone Aquifer Groundwater Management Area and developed a final report.
Summary against evaluation domains	
Impact	▪ This project has made progress toward efficient water use by improving water market transparency and the operation of water markets, in turn enabling efficient, effective resource sharing. ▪ In particular, this project has delivered on the actions identified in consultation ahead of the EC5 period, meeting Victorian Government commitments to improve water market transparency to meet community needs. ▪ This project has delivered foundational work which has supported other programs and improved data availability and decision-making by fulfilling water market reforms as directed by the ACCC water market reform inquiry and participating in the ACCC's Roadmap commitments, effectively communicating Victoria's priorities to the Australian Government. The market exchange trial in the MID also provides valuable insights which may be able to be utilised to support the development of other Victorian Water markets. ▪ The project also improved the effectiveness of water governance through the proclamation of Water Act amendments in 2024, enabling greater clarity and accountability of governance arrangements and supporting further market transparency. This ensures a balance between greater transparency and protection of sensitive information of market participants. ▪ Openness in the water markets and alignment of social and community values into water management has improved market participants' trust in the integrity of water markets. Transparency has been improved by publishing information on any business owning over 2% of water entitlement within a system. This provides insights to address community interest in water ownership focusing on high reliability water shares in Northern Victoria.
Effectiveness	▪ The project has met a number of targets and progressed important work in collaboration with the Australian Government and other Basin states, which will benefit Victoria in the short and long term. ▪ The individual projects that have been set up within Victoria, such as the MID trial, were designed in consultation and collaboration with the rural water corporation and has been delivered within budget. On top of this, the project has successfully contributed to government wide projects such as Victorian Groundwater Management 2030 strategy (GM2030), the CGRSWS and Water for Victoria, in particular by supporting a proactive investigation into the barriers to groundwater trade in south-west Victoria.
Appropriateness	The strategic context behind this project has undergone some changes. Water markets have received relatively less media attention in the past few years due to high water availability over multiple years resulting in lower prices and less stakeholders' concern.

	The relevant Water for Victoria targets that the Water Transparency project was delivering on were: ▪ 9.3 – Improve the effectiveness of water markets ▪ 9.4 – Increase water market transparency and information sharing In addition to these targets the project also worked towards meeting Ministerial obligations under the Water Act 1989, Ministerial public commitments by making information of water ownership on the Water Register available in line with Victorian Government commitments, and addressing the ACCC inquiry. The ACCC inquiry into the Murray-Darling Basin water markets and the subsequent Australian Government Water Market Reform Roadmap was published during the EC5, crystallising necessary actions for water market reform. The ACCC's recommendations were consistent with the long-held principles that have underpinned water market development in Victoria. The GM2030 strategy was developed and finalised during this tranche with a priority area to improve groundwater markets. This resulted in a focus towards the groundwater market in the Southwest Limestone Coast and the decision to investigate barriers to trade in the area.
Efficiency	▪ The project initially had funding allocated for 2020-21 and 2021-22 only but for 2022-23 and 2023-24, all funding to deliver on project outcomes came from the linked project WRS19: Water efficient and resilient communities – Stream 1. ▪ All priority objectives for this project were met within EC5 timeframes, with outputs which delivered on government and community priorities for water markets in Victoria. ▪ Key implementation elements have been delivered effectively, for example the implementation of a water market platform for the MID has not required additional funding since the Program's inception demonstrating a well thought out project scope with collaborative input from stakeholders. ▪ The project has also ensured that Victoria could contribute staffing resources and time to ensure that Victorian interests are considered and included in the implementation of the ACCC roadmap to provide equal outcomes for all Basin States.
Legacy	▪ The positive impacts delivered by this project are likely to continue over time. The reforms to improve market transparency have been instituted in enduring ways, namely through the amendments made to the Water Act 1989, as well as collaborative agreements for interjurisdictional work and projects in partnership with rural water corporations. ▪ The water market exchange in the MID is continuing without EC funding, with future operating costs being met by customer fees and charges. ▪ To ensure progress is sustained over time it is necessary that the work to help create openness and promote transparency from the past five years is continued. This includes acting on any results from the MID project and the barriers to trade research in the Southwest Limestone Coast, as well as continuing to implement the ACCC roadmap and ensuring there are strong systems put in place to maintain and build on the transparency that has been developed already.
Future priorities	Funding from this project has enabled Victoria's involvement and influence in the roll out of the ACCC Roadmap. There is a strong need to continue to partner with other stakeholders to implement agreements and ensure that the agenda remains on track and in the best interest of Victoria. Failing to continue to invest in this area represents major risks to the Victorian government. Continued funding is necessary to expand upon: ▪ The implementation of water market reforms as identified during the ACCC Inquiry. ▪ Work on the inter-valley trade assessment, including working with NSW and MDBA to improve equity of access to inter-valley trade opportunities.

	▪ Development of a new market effectiveness assessment and report, updating and building on the existing report done in 2018. ▪ Existing efforts aimed at enhancing the unregulated surface and groundwater markets, while also advancing the fulfillment of obligations under Priority Area 9 of GM2030. ▪ Addressing outcomes of the social research conducted within the South-West Limestone Aquifer groundwater research project. ▪ Maintaining and progressing efforts in improving transparency in Victoria's water markets.

1.9 WRS5: Managing Victoria's Water Sharing Framework

Initiative	**2. Strong foundations for Victoria's water: compliance, markets, water entitlements and oversight of the water grid**
Project	WRS5: Managing Victoria's Water Sharing Framework
Description	This project delivered an adaptive and contemporary bulk entitlement and environmental entitlement framework to ensure the long-term security and reliability of the Victoria's water resources in the face of multiple changes including climate change, changing water ownership and use, and increasing urban population growth. This project reviewed and enhanced the bulk entitlement and environmental entitlement framework to improve certainty of rights and obligations and increase flexibility for entitlement holders to better manage their water risks.
Outputs	▪ Investigated and implemented options to improve, streamline and rationalise entitlements, resource and storage manager instruments. ▪ Managed water resource sharing rules, bulk entitlements, and system operations under pressure from climate change, changing demand and market influences: 2 system reviews completed in response to changing circumstances, 1 update to system rules, 1 guideline developed. ▪ Undertook business-as-usual activities to ensure that water resource sharing rules, bulk entitlements, environmental entitlements, and system operations are contemporary, fit-for-purpose and able to respond to a changing climate: - Ninety-six (96) changes made to bulk and environmental entitlements. - Thirty-six (36) of these changes to bulk and environmental entitlements were made to realise water recovery from irrigation modernisation projects in northern Victoria. ▪ All minor and major amendments, revocations, and granting of new entitlements were undertaken in such a way that they were 100% compliant with the requirements of the Water Act 1989.
Summary against evaluation domains	
Impact	Between 1 July 2020 and 30 June 2024, 96 changes (consisting of minor and major amendments, revocations, and granting of new entitlements) were made to bulk and environmental entitlements to ensure these instruments remained fit-for-purpose. These actions responded to the following changing circumstances: ▪ Securing water supply for growing communities. ▪ Irrigation modernisation works, the reduction in system losses, and the associated recovery of water for communities, irrigators, the environment and Traditional Owners. ▪ Improved passing flows and operating rules for the management of environmental assets. ▪ The creation of Greater Western Water.
Effectiveness	Some minor amendments to bulk entitlements and environmental entitlements were administrative in nature. Other amendments were material and enduring, delivering positive real-world impacts. The DEECA Bulk Entitlements and Systems team has a

	reputation for providing high quality advice on the administration of the bulk entitlement and environmental entitlement framework, evidenced by regular positive feedback from stakeholders.
Appropriateness	The project delivers practical outcomes which have a positive impact on water resource sharing in Victoria, and is critical to the delivery of other major policy areas such as water recovery in the Murray-Darling Basin. The Projects outcomes were delivered in line with the statutory requirements for bulk and environmental entitlements under the Water Act 1989.
Efficiency	The project was delivered within the allocated budget. Delays in the delivery of specific projects have been minor or caused by factors outside of DEECA's control. This indicates good value of return on investment and appropriate investment planning, design, and delivery to support the desired outcome.
Legacy	Bulk entitlements and environmental entitlements are critical instruments for the provision of water in Victoria. The project has delivered practical on-ground positive impacts and the legacy of this will be long-lasting and enduring.
Future priorities	Any future bids must clearly reflect both the ongoing core functions of the team as well as the broader longer-term projects to deliver strategic bulk entitlement, environmental entitlement, and system management policy improvements to respond to emerging uses and challenges.

1.10 WRS6: Licensing Framework Groundwater and Unregulated Systems

Initiative	**2. Strong foundations for Victoria's water: compliance, markets, water entitlements and oversight of the water grid**
Project	WRS6: Licensing framework groundwater and unregulated systems
Description	The investment supported the obligations of the Minister for Water under the *Water Act 1989* and the ongoing function of DEECA to provide support to and oversight of water licensing delegates to deliver their core functions for the management of unregulated water and groundwater resources. The investment also supported the implementation of projects for continuous improvement of our water licensing framework, management of sustainable and productive access to water and for the development of clear priorities for the management of groundwater unregulated systems across Victoria through: ▪ Review of the *Ministerial Polices for Managing Take and Use Licenses* and development of a licensing framework that facilitates sustainable access to water, protects the security and reliability of licences and minimises environmental risk. ▪ Development of and public commitment to groundwater priorities for Victoria for the next 7 years to set clear direction for improvements to management, through GM2030. This was initially framed as a groundwater strategy, but our focus evolved with project development. ▪ Supported the preparation of new and amended water resource management plans for unregulated and groundwater systems in Northern Victoria, inclusive of economic, environmental, recreational, social and cultural values of water. The new water resource management plans are now available online at the MDBA website. ▪ Implementation of amended Permissible Consumptive Volume caps and developed guidelines for returned water licensing which has improved the non-consumptive licensing process. This supports the emerging renewable energy markets such as hydro-power and use of groundwater for geothermal purposes. This new process improves and optimises the sustainable and productive use of water, with negligible impact on the resource, environment and other entitlement holders. ▪ Improvement of our knowledge of Traditional Owner interests in entitlements. We have reached out to Traditional Owners and are shaping an engagement plan to

	work collaboratively with Traditional Owners to identify any gaps or obstacles in the licensing framework. We have also begun conversations with Traditional Owners about the process of applying for unallocated water to better understand their experience and any potential barriers with the licensing process.
Outputs	▪ **Maintenance of the management and licensing framework for groundwater and unregulated systems** - Core business: Through collaborative work, DEECA has continued to provide information and communication to users and the community to increase understanding of groundwater and unregulated systems. In collaboration with rural water corporations, DEECA has reached out to industry groups and partners to communicate information on groundwater and unregulated systems and the licensing framework. DEECA has continued to provide timely and accurate advice to support delegated licensing functions. ▪ **Groundwater Management 2030 (GM2030):** Development of a set of priorities that outlines DEECA and rural water corporation's priority areas of work to enable better management and licensing of groundwater by 2030. Over the past year, DEECA has undertaken foundational technical work and established robust project planning and management arrangements, including through understanding deliverables which are of most relevance to stakeholders and interdependencies between projects. ▪ **Licensing review and reform (GM2030 Priority Area 8):** Review of the licensing framework and development of new licensing instruments consisting of Trade Rules, Guidelines and Regulations, which will replace the Ministerial Policies for Take and Use Licences and support a clearer and more consistent framework. Review has included analysis of the framework as well as extensive internal and external consultation. ▪ **Traditional Owner access to water and increased involvement in water management:** DEECA invited Traditional Owners to decide if and how they wish to partner with DEECA to deliver GM2030. Embedding opportunities to build partnerships with Traditional Owners is critical to GM2030 and reflects DEECA's commitment to Water is Life. DEECA supported water licensing delegates to assist Traditional Owners complete applications for section 51 licences. This contributes to delivery of Water is Life Outcome 7 and CGRSWS actions 6-5, 6-8. Work has commenced to streamline the licensing application process, including identifying potential barriers to returning water to Traditional Owners. Some improvements have been made to improve the licensing system as well as identification of specific areas where further work is required to streamline the licensing application process and ensure cultural safety. Importantly, this work has facilitated building on DEECA's cultural capabilities, and DEECA's newly established connections with Traditional Owners. This is fundamental to DEECA's work with Traditional Owners in the development and implementation of government policy and future reforms supporting the return of water.
Summary against evaluation domains	
Impact	▪ GM2030 provides a clear statement of 13 priorities for the next 6 years. This statement expresses the water sector's commitment to strong groundwater management, which can adjust to meet opportunities and challenges into the future. The release of GM2030 has increased confidence in the entitlement framework and water management plans. ▪ The GM2030 implementation phase has started under several Priority Areas to review, streamline and identify any gaps within the entitlement and management framework, essential tools that underpin decision-making for water corporations. This will lay the foundation for new and amended licensing/management policies. ▪ Finished the stocktake of the Ministerial Policies for Take and Use Licenses and proposed new licensing instruments, including Licensing Guidelines, Regulations and Trade Rules, to improve clarity in the framework and to ensure flexibility and consistency in decision-making in providing access to Victoria's groundwater and unregulated surface water. The new instruments are currently being developed. The review, which contributes to delivering on GM2030 (Priority Area 8)

	objectives, is fundamental to ensuring the licensing framework remains contemporary and responsive to existing and emerging risks while also meeting the needs of existing and future uses. ▪ Increased involvement and participation of Traditional Owners: – Invited Traditional Owners to participate in GM2030 and groundwater management (GM2030 Priority Area 4). – Supported commitments made in Water is Life and the CGRSWS by identifying ways to reduce obstacles for Traditional Owners applying for section 51 licences. This was achieved through collaborative work with Parks Victoria and the DEECA Bulk Entitlements team, to establish an authorisation process allowing Traditional Owner Groups to nominate crown land parcels for a section 51 licence application, where the Traditional Owner group does not own or occupy land. ▪ Supported commitments made in Water is Life and CGRSWS by assisting water corporations to support Traditional Owners with the licence application process in a way that is culturally sensitive. ▪ Commenced talking to Traditional Owner groups about the licensing review, as well as mapping out how and when Traditional Owners can be involved in the review of licensing instruments and longer-term reform work for delivery of Priority Area 8.
Effectiveness	Significant resourcing was dedicated to collaboration, engagement and partnerships, particularly with water corporations, community and Traditional Owner groups. DEECA initiated a regular statewide communications forum with rural water corporations and continues to consult with partners and stakeholders across Victoria to raise awareness for projects. This engagement significantly improves outcomes by supporting a greater understanding of the needs and expectations of key stakeholders and gaining support for effective change.
Appropriateness	Delivery of this project supported continuous maintenance and improvement of the groundwater and unregulated surface water management and licensing framework to support a prosperous economy, thriving communities and Traditional Owner cultural values while minimising the risk to third parties and the environment. This project supported thousands of water licences held by Victorians that enable access to water and manage the risks associated with the take of that water. It also supported the localised water management planning tools addressing cumulative risk to our precious water resources and systems. This work contributed to the delivery of a number of Water for Victoria, Water is Life and CGRSWS actions and key government priorities including Traditional Owner access to water, energy sector reforms and response to urban growth and changing land use.
Efficiency	Budget has been fully expended in line with the planned budget. Resourcing and capability building is essential to this project both through the funding period and into the future. DEECA is fully resourced and the budget over this period has been used to support building capability within a new team to deliver improved outcomes.
Legacy	A number of process, capability and governance outcomes to support sustained benefits have been achieved: ▪ Activities have supported capability building, understanding and development of processes for Traditional Owner water access. This includes the identification of suitable land parcels. ▪ Capability of both DEECA and water corporation staff for complex licensing issues has been improved through working closely with licensing authorities and stakeholders. ▪ Confidence in the licensing framework has been improved through oversight for clear and consistent licensing decisions. ▪ Progress on our four-year foundational technical work for GM2030, including research, and data collection, to further understanding of the resource and improve best available science to info policy proposals.

Future priorities	Ongoing maintenance and oversight of the unregulated and groundwater licensing and management frameworks will continue to be essential into the future, as water scarcity and increased demand are expected to put pressure on the resource. Improvements to the framework will be driven by: ▪ Traditional Owner self-determination. ▪ Energy sector reforms. ▪ Responding to urban growth and changing land use. ▪ Future proofing groundwater resources. ▪ Regulatory oversight and assurance.

1.11 WRS7: Water Compliance Reform

Initiative	**2. Strong foundations for Victoria's water: compliance, markets, water entitlements and oversight of the water grid**
Project	WRS7: Water Compliance Reform
Description	At the time of the project initiation, the risk of unauthorised take was unacceptably high, causing heightened community concern about the potential for water theft due to high-profile cases in other states. In addition, there were some inconsistencies in how different rural water corporations across Victoria were addressing unauthorised take. Wide-scale unauthorised take was also compromising the integrity of the water market. Particular risks were identified in northern Victoria where there is a heavy reliance on the water market and large irrigation enterprises can quickly take large volumes of water. This project sought to address this problem by implementing a modern regulatory regime to minimise the instance and extent of unauthorised take. This included further implementing modern metering to support compliance and establishing standards and accountability for unauthorised take with rural water corporations to create statewide consistency. It has also ensured that Victoria meets its Murray-Darling Basin Plan compliance obligations. Through this work, DEECA and rural water corporations have successfully delivered priority outcomes under Victoria's zero-tolerance approach to unauthorised take.
Outputs	▪ Supported delivery of an independent review into the extent of unauthorised take and Victoria's compliance capability, and subsequent progress review. ▪ Introduced the implementation of Penalty Infringement Notices (PINs) for unauthorised take of up to 10 ML for all rural water corporations. ▪ Developed unauthorised take escalation policies. ▪ Ongoing effort to embed outcomes from various projects and reviews into the Compliance Team annual work program. ▪ Finalised a statewide rural water corporation compliance and enforcement capability framework and delivered training modules for Authorised Water Officers on compliance and enforcement. ▪ Developed communications strategies and products and provided oversight to ensure consistent public messaging on the Government's zero-tolerance policy and importance of compliance, including public reporting and release of annual Compliance Statistics and Non-Urban Metering Implementation Reports. ▪ Delivered regular reports to meet Minister and DEECA reporting requirements and Ministerial Public Accounts and Estimates Committee and Possible Parliamentary Question briefs on water compliance. ▪ Embedded Key Performance Indicators for rural water corporations to improve compliance and enforcement outcomes and improve transparency and confidence in regulation of unauthorised take. ▪ Developed a cost benefit framework to support telemetry investment decision-making by rural water corporations which has supported funding submissions for state and Commonwealth funding in metering improvements.

	▪ Executed $2.5 million funding agreement to accelerate telemetry installation and meter upgrades for Goulburn-Murray Water private diverters in priority areas, with Project Control Board established and implementation underway. ▪ Supported Victorian contributions to collaborative work with other jurisdictions and the Murray-Darling Basin Inspector-General of Water Compliance, including increased reporting, development of policies and frameworks and supporting audits of accredited Water Resource Plans.
Summary against evaluation domains	
Impact	This project directly improved the effectiveness of Victoria's water governance, by underpinning the Victoria's water entitlement framework with a modern regulatory regime for compliance and enforcement of unauthorised take. All water users across the state are now held to a common standard for compliance and enforcement which promotes the integrity of the water market and broader entitlement framework. Rural water corporations now regularly issue fines for low volume (up to 10 ML) unauthorised take using PINs. The project also supports Victoria's water security by reducing unauthorised levels of take and safeguarding the rights of all water users and the state's water resources. Other beneficial outcomes include: ▪ The establishment of PINs with Fines Victoria has paved the way for introducing PINs to improve other water resource management activities (e.g. recreational services and assets). ▪ The program has resulted in knowledge sharing and collaboration between water corporations. ▪ Engagement processes have provided opportunities for water corporations to leverage off each other and share experiences and approaches. ▪ Victoria's strong compliance standards put it in a good position to advocate for greater compliance in other states, protecting the environment, encouraging a level playing field for water take and supporting greater water security.
Effectiveness	▪ The project successfully reduced unauthorised levels of take, with an independent review by former Victorian Auditor-General, Mr Des Pearson AO, finding there had been very good progress and significant reductions in unauthorised take. ▪ The project was developed and delivered in partnership with rural water corporations, other parts of the Victorian Government (e.g. Fines Victoria) and with Basin Governments. This has included establishing and regularly convening meetings with other agencies, including a compliance Community of Practice with rural water corporations and inter-agency working groups for Authorised Water Officers, metering and communications. Victoria has built strategic relationships with the other jurisdictions on Basin-wide compliance matters and has provided insights on how other jurisdictions can better manage compliance and enforcement. DEECA also supported the implementation of work by the Murray-Darling Basin Inspector-General of Water Compliance, including their audits of implementation of accredited Water Resource Plans. ▪ The success of the project in priority and high-risk areas of water take has meant that an enhanced and consistent approach is now being expanded to lower risk areas of water take like River Murray shortfall compliance and for farm dams. Urban water corporation and CMA Authorised Water Officers are also utilising the online compliance training modules developed through this project.
Appropriateness	▪ This project directly aligns with key management strategies, including Water for Victoria Action 8.5: Ensure a modern compliance regime that works, which committed to modernising the compliance and enforcement regime for water corporations to reflect best practice management. There are also requirements for Victoria to deliver on shared objectives under the Murray-Darling Basin Plan and the Murray-Darling Basin Compliance Compact.

	▪ The strategic context and underlying program logic remained relevant throughout EC5 (and continues to be). Unauthorised take remains an on-going concern and the government's zero-take policy is still a priority. Significant improvements have been made in modernising Victoria's compliance and enforcement regime, with a focus on the highest-risk areas. There are still residual risks which need to be mitigated and areas where addressing lower-tier compliance risks will result in substantial public benefit and improved water resource management outcomes.
Efficiency	▪ All projects have been delivered on time and on budget in accordance with an annual work plan endorsed by relevant executives. Funding was leveraged from the Australian Government to deliver some of the outcomes under this project which were additional to Victorian priorities. ▪ The compliance and enforcement framework emphasises action to prevent unauthorised take (commonly described as voluntary compliance) which is considerably more cost effective than enforcement action following non-compliance. Policies have been developed to define where the recovery of unauthorised take or enforcement is not in the public interest, therefore avoiding further costly compliance and enforcement action. ▪ Economic cost benefit approaches have been developed for prioritising telemetry and to ensure value for money.
Legacy	▪ Compliance and enforcement is expected to improve and evolve to address new compliance challenges as they arise. The new systems and policies are now beginning to be embedded as business-as-usual within DEECA and rural water corporations and will continue to be refined. ▪ Enduring changes that have been introduced through legislation will continue to support compliance over time. However, maintaining low levels of unauthorised take will require ongoing effort by rural water corporations, with support from DEECA in statewide oversight and assurance (see future priorities below). ▪ The Minister's Letter of Expectations now requires rural water corporations to publicly report including to Parliament on compliance and enforcement and on their customers' unauthorised take against performance targets. Public accountability is a powerful incentive for ongoing commitment and continuous improvement. ▪ Victoria also has enduring responsibilities and accountabilities to implement compliance under the Murray-Darling Basin Plan including supporting the Murray-Darling Inspector-General of Water Compliance, which will continue to focus attention on compliance and enforcement.
Future priorities	▪ Implementing a modern regulatory regime is not an exercise of set and forget. It requires ongoing effort to sustain the current low level of unauthorised take across Victoria. Currently there is a relative abundance of water and record low allocation prices due to a number of high rainfall years across Victoria – noting that scarcity and high prices are key drivers for non-compliance. ▪ The Murray-Darling Basin Inspector General Water Compliance requirements and increased public scrutiny will also drive the need for further funding to ensure ongoing accountability and support of Victoria's obligations. ▪ There is now an opportunity to build on the initial success of the compliance and enforcement framework's success in reducing unauthorised take and improve the regulatory environment and compliance of broader water resource management activities. This includes: - Roll out PINs to support improved compliance and enforcement outcomes in other areas of water resource management – e.g., recreational water management regulations. - Finalise a water allocation bad debt policy for the VWR. - Continue to lead the development of the Shortfall Compliance Approach and unmetered take estimation procedures. - Develop the project plan for the implementation of the Minister's Power to Deduct.

	- Continue to review Water Infringement Regulations (2020) to rectify administrative issues. - Continuing to socialise the cost benefit tool to telemeter irrigators meters with the rural water corporations. - Improving the effectiveness and consistency of compliance and enforcement regarding lower risk areas of water take – including small catchment dams.

1.12 WRS8: Accounting for Water Recovery

Initiative	**2. Strong foundations for Victoria's water: compliance, markets, water entitlements and oversight of the water grid**
Project	WRS8: Accounting for Water Recovery
Description	▪ The Australian and Victoria Governments, and irrigators have invested more than $2.5 billion dollars to modernise the public irrigation systems to reduce water being lost by these systems. The water recovered is to provide additional water for the environment, irrigation, urban water supplies and for Traditional Owners. ▪ Distributing the water recovery requires creating water entitlements equivalent to the long-term water recovery and making amendments to bulk entitlements. The Minister for Water cannot approve the issuing of water entitlements and necessary bulk entitlement amendments until assured there are no third-party impacts. To demonstrate there are no third-party impacts, the Minister's water savings protocol requires the water recovery to be independently verified and water set aside to mitigate the adverse environmental impacts from a more efficient irrigation system. ▪ The project enabled the audited long-term water recovery to be converted into water entitlement volumes and reliabilities and for the legally necessary amendments to bulk entitlements to be made. ▪ Converting the water recovery into water entitlements enabled distributing the water recovery benefits, including to the Australian Government, thereby meeting contractual obligations. ▪ The project was also critical for Victoria to demonstrate its progress to meeting its water recovery target obligations under the Murray-Darling Basin Plan.
Outputs	▪ Conducted independent audit and reviews of water recovery for: - the Goulburn-Murray Water Connections Project and Water Efficiency Project (GMW WEP). - the modernisation of the Southern Rural Water Maffra Weir and Willang Yarn balancing storage. - a final audit of water recovery achieved by Phase 1A of the Macalister Irrigation District 2030 Irrigation Modernisation Program. - Tranche 1 Audit of the Lower Murray Water Sunraysia Water Efficiency Project (LMW SWEP). ▪ Implemented amendments to respective loss bulk entitlements to account for the water recovery. ▪ Translated the water recovery into water entitlement volumes. Coordinated and led in the timely allocation achieved by the Goulburn-Murray Water Connections Project and identified additional water recovery (returned to Traditional Owners). Successfully closed out the Connections Project, ensuring the distribution of water recovery to the Commonwealth and Victorian environmental water entitlement holders, Melbourne retail water corporations and irrigators. ▪ Successfully completed the timely distribution of water shares to the Australian Government for both stages 1 and 2 of the GMW WEP. ▪ Successfully completed the timely distribution of water shares to the Australian Government for Tranche 1 LMW SWEP.

	▪ Successfully completed the creation of high- and low -reliability water shares in the MID for sale by Southern Rural Water. ▪ Verified the water recovery estimates for the Lower Murray Water business case for further modernisation of their irrigation district (Water Efficiency Project) and reviewed Lower Murray Water metering plan. ▪ Revised water recovery conversion factors to estimate long-term water recovery for Southern Victoria which is more representative of the drying climate. ▪ Monitored and provided quarterly reports on water recovery generated from irrigation modernisation and water recovery projects to the MDBA.
Summary against evaluation domains	
Impact	▪ Assurance that water recovered from irrigation modernisation is verified and that associated water entitlements issued for the water recovery will not adversely impact the environment and on the reliability of existing water entitlements. ▪ Since EC5 commenced, there have been 6 independent audits and 9 independent technical reviews for water recovered through modernisation of water storages. Each audit and review have resulted in the water recovery being independently verified and accepted by DEECA and the Minister. Water entitlements have subsequently been issued for the verified long-term water recovery. This has led to enduring entitlement for the environment, irrigators, cities and towns, and Traditional Owners.
Effectiveness	▪ A process of continuous improvement is embedded into the procurement process of independent water recovery auditors: - To continuously improve the operation of the independent panel, DEECA evaluates the performance of each engagement against agreed standards and measures. DEECA focuses on communicating quality expectations to suppliers to rectify communication issues to embed further quality controls into procurement processes; - DEECA prepares an annual report on the performance of the Independent Panel of Water Recovery Auditors and Verifiers. This includes reporting on any shortcomings of the audit, the extent they were addressed by the supplier and opportunities to improve the audit process.
Appropriateness	▪ The allocation of funding was aligned with Action 4.5 of Water for Victoria, as it adhered to principles for public investment in rural water infrastructure projects. This includes the implementation of Water Savings Protocols to estimate water savings from district assets prior to converting savings into entitlements and improvements to monitoring and reporting of farm water use efficiency in irrigation district. ▪ The Panel of Independent Water Recovery Auditors and Reviewers (the Panel) was established by the DEECA Water Resource Strategy (WRS) division in August 2020, to support independent auditing and verification of water recovery estimates and provide technical advice on water recovery. A series of checks and balances were incorporated into the panel arrangements, to maintain fairness, accountability, and transparency in associated expenditures. For example, panel rules required annual reporting on panel outcomes, and performance reporting after each engagement is completed. The panel also enables fair distribution of work by providing reasonable opportunity to every supplier on the panel.
Efficiency	▪ All engagements were completed on time, within budget and were of a high standard. However, on one occasion, completion of a water recovery audit was delayed due to resourcing constraints within a partner water corporation. ▪ All suppliers were selected from the Independent Panel of Water Recovery Auditors and Verifiers and where appropriate subject to competitive tender. ▪ In some cases, e.g. GMW WEP and LMW SWEP, the audits were time critical and needed to be completed on schedule to support Victoria's contractual obligations with the Australian Government. DEECA ensured that they were supported by the water corporations as a very high priority and that the DEECA

	Water and Catchments Group senior executive were engaged and committed to the water recovery verification process.
Legacy	▪ The audits have been open to public scrutiny and have been trusted, and the audit process is now mature and repeatable. ▪ The Minister's water savings protocol is published on the DEECA website. The protocol sets out the roles and responsibilities for organisations involved in irrigation modernisation projects and the methods to determine the long-term water recovery. It includes DEECA's responsibility to establish a panel of independent water recovery auditors and verifiers. ▪ The protocol continues to be refined for lessons learnt to continuously improve the methods for determining the long-term water recovery.
Future priorities	▪ Verification of water recovery for significant projects is currently underway including new water recovery works and measures projects (2-3 projects). ▪ To ensure continued confidence and assurance, water recovery team will continue to implement updates and changes within the water savings protocols.

1.13 WRS9: Sustaining a Resilient and Secure Water Register for Victoria

Initiative	**3. Sustaining a Resilient and Secure Water Register for Victoria**
Project	WRS9: Water Register Operations and Improvements
Description	The investment was seeking to continue operation of a Victorian Water Register (VWR) that provides a public, authoritative record of water entitlement ownership and enables the government to meet its legislative obligations under the Water Act 1989 (Victoria) and the Water Act 2007 (Commonwealth). The investment as originally envisaged comprised 2 components (a) business-as-usual (BAU) VWR operations and (b) delivering an upgraded VWR platform (Transform Project). As detailed below, the second component was significantly modified during the EC5 period. **BAU Operations:** The BAU operations component of this project encompasses provision of day-to-day maintenance and support activities to ensure the VWR platform is available to users and that VWR services are delivered. The key benefits an operational VWR delivers are: 1. Maximising the value of irrigated agricultural production – by supporting the efficient and effective operation of water markets, the new VWR will support farmers to maximise the value of their production. 2. Strong entitlements and planning – the VWR underpins secure rights to water and its information and data is used to inform water resource planning. 3. Making the best use of Victoria's water grid and markets – the VWR facilitates the efficient trading of water products and underpins a range of options that customers and stakeholders can use to manage risks. **Transform Project:** The second component of this project entails transitioning the VWR to a new technology platform. The key driver of this component is that the current VWR is operated on an outdated, unsupported IT platform. The Transform project also sought to deliver additional enhancements for VWR beneficiaries, such as more efficient processes and an improved online service offering. During the period December 2022 to July 2023 the Transform project, together with the VWR Partners and the Water Registrar delivered a comprehensive understanding of the current VWR, and documented future requirements. **Transition from Transform project to Evolve project:** Subsequent to completing a successful Request for Tender process, DEECA onboarded a new VWR Implementation Partner in July 2022 enabling the Transform

	project to enter into a project discovery stage. Following project discovery, the project entered a delivery stage that commenced in December 2022. During the period December 2022 to July 2023 slippage in provision of planned deliverables against actual deliverables for each project increment occurred. The small, incremental slippages accumulated over time and resulted in: 1. Significant project schedule slippage; and 2. Higher than planned consumption of project resources During the period August 2023 – December 2023 the project was ramped down to manage commercial risk and expenditure while a review of the project was undertaken. Two formal variation proposals to complete the project were provided by the VWR Implementation Partner as part of the project review. These proposals forecast increased costs and time to complete the project that were significantly more than previous estimates and were not commensurate with the business benefits proposed to be delivered. DEECA's assessment was that continuing the active approach to delivery of the project and its benefits was no longer viable based upon the forecast increase in costs and time to complete the project and the forecast future BAU operational costs. In March 2024 the Minister approved terminating the agreement to build a new VWR with the VWR Implementation Partner and approved DEECA proceed with preparing a new procurement to build a new VWR that aligns with the Victorian 2024-25 budget outcome. Assets built by the Transform project with potential to be leveraged by a new VWR Evolve project (refer Outputs section below). In April 2024, a new project - Project Evolve - was established to develop an alternative approach to delivering a new VWR that maximises reuse of the investment made to date, aligns with the Victorian 2024-25 budget outcome and delivers value to the Victorian community.
Outputs	▪ VWR BAU operations deliver an accessible, public register of all water related entitlements in Victoria, provide services (e.g. held desk, water market administration services), and provide information required to effectively manage Victoria's water resources and support Victoria's water markets. ▪ Assets built by the Transform project with potential to be leveraged by the new VWR Evolve project include: – Data platform – Designs for the new website (templates & data flows) – Website technologies – Power BI Reports – Identity management – Integration Designs and File Transfer Components – D365 "Foundation" components (environments, connections with Azure, Data flows for ingestion into the Data Platform)
Summary against evaluation domains	
Impact	**The VWR is a critical enabler of Victoria's entitlements framework that delivers:** ▪ Secure entitlements with tenure that is certain and protected, including bulk entitlements, environmental entitlements, water shares, section 51 licences, and contractual agreements to supply. ▪ Limits on entitlements (volumes, extraction rates and locations, diversion rules and sharing arrangements). ▪ Implementation of seasonal water allocation rules that respond to water availability. ▪ Clear consultative processes before entitlements can be changed. ▪ Ability to trade, using markets to facilitate efficient movement of water.

	▪ Private rights enabling individuals to take water for domestic and stock purposes in certain circumstances without a licence. **The new VWR will deliver the following key benefits:** ▪ Secure – the VWR platform continues to be secure, meeting evolving community expectations about data privacy and cyber security. ▪ Reliable – available when required and provides the authoritative point of truth for VWR water-related entitlement records and information. ▪ Efficient VWR Partner processes – the costs to VWR Partners of delivering services via the VWR platform are maintained or reduced. ▪ Accessible, responsive and user-friendly services – enables end users to understand and manage their water needs and obligations. ▪ Compliance by design – implements the Victorian entitlement framework and relevant policy commitments.
Effectiveness	**What worked well:** ▪ Transitioning maintenance and support services from the incumbent vendor to a new vendor without disruption to VWR services. ▪ BAU operations were delivered in a manner that met all relevant service standards. ▪ Several changes to trade facilitation services were successfully introduced to mitigate risks of system outages caused by the existing ageing IT platform. ▪ BAU operations delivered improved contract management reporting which ensured robust governance of BAU Information and Communications Technology (ICT) service providers and assisted the BAU operations team to effectively manage workloads. ▪ The business case underpinning the project was comprehensive, the business benefits were mapped early and well understood by the project team and Transform Project Control Board (Transform PCB) prior to commencing work with the vendor. ▪ The project team culture was strong, and the team supported each other and showed persistence through difficult times. ▪ Good project participation, time commitment and support from water corporation and water registrar stakeholders, and DEECA WRS teams, to provide input into requirements and design. ▪ Stakeholder engagement was effective through Business & Customer Working Group and Technical Working Group forums, and also through showcases and in-person visits. ▪ Having a Project Assurance Advisor engaged from the beginning of the project and sitting on the PCB. ▪ The project team took the opportunity to engage early and work with key stakeholders and partners to reengineer and simplify processes where possible, prior to engaging with the vendor. **What didn’t work well:** ▪ The Transform project vendor had unrealistic expectations on velocity and throughput considering DEECA’s resource profile and did not use appropriate sizing and data to inform planning. ▪ The Transform project vendor relied upon the DEECA to provide information about the current system, rather than using their technical team to analyse the system directly, with consequent time and resource impacts, and incomplete understanding. ▪ Vendor project reporting was not sufficiently detailed to allow DEECA to assess progress against schedule, deliverables, costs and risks and DEECA did not have a strong enough project management office (PMO) setup from the beginning to drive the required change in this area. ▪ Roles and responsibilities between the vendor and the DEECA project team were not always clear.

	▪ DEECA did not have sufficient experience / capabilities in the new technologies being used, leading to increased reliance on the vendor and reduced ability to challenge or influence decisions or advice. ▪ DEECA did not have appropriate mechanisms in place to track escalated issues to ensure effective and timely resolution.
Appropriateness	The project's primary objective was to ensure that the VWR – and its related services – remain fit-for-purpose as a trusted, secure and accessible record of Victorian water entitlements. Given the fundamental role the VWR plays in the sector, the level and overall scope of the investment was appropriate. Both components (BAU and uplifting the VWR) were required to achieve the objective. The approach for the Transform project assumed it was viable to deliver all the planned benefits of the VWR via a 'greenfield' approach of entirely rebuilding the VWR on newer technology. The complexity discovered in adopting this approach during execution of the Transform project suggests that this approach could have been more thoroughly considered, including consideration of alternative approaches
Efficiency	The delivery of a new VWR has been restructured to align with the Victorian 2024-25 budget (refer Description section above).
Legacy	The delivery of BAU operations during the EC5 period contributes to long-term confidence in Victorian water markets and DEECA's role as operator of the VWR and administering the trading framework. The benefits delivered by an upgraded VWR (refer Impact section) are long-term and will be of value to VWR Partners and stakeholders into the future.
Future priorities	▪ Continued delivery VWR BAU Operations ▪ Complete transition of current VWR onto a supported, secure and reliable technology platform. ▪ Deliver new services for VWR users: - Electronic Lodgement services providing farmers, irrigators and water market participants efficient, fully digital (paperless) services when undertaking business transactions such as water share transfers, water allocation trading, bore construction licenses, works licenses, etc. - Personalised mobile services providing farmers, irrigators, license holders and water market participants mobile access to services that support operational and investment decisions within their business. Mobile services provide capability that includes managing water entitlement assets such as water shares and allocations, initiating and monitoring progress of lodged applications and receiving notifications relating to, VWR business transactions, water asset security and self-regulation / compliance.

1.14 WRS10: Understand and Apply Climate Science to Water

Initiative	**4. The evidence base for Victorian water: availability and knowledge**
Project	WRS10: Understand and Apply Climate Science to Water
Description	The aim of the second phase of the Victorian Water and Climate Project (VicWaCI2) research program was to equip Victoria's water sector stakeholders and communities to plan for, and adapt to, the impact of climate change on our water resources. The broad objectives of the research strategy are: ▪ Improving our understanding of the impact of climate change on water resources. ▪ Maximising the value from research investment in Victoria. VicWaCI2 builds on research output from the first phase of the Victorian Water and Climate Project (VicWaCI), focusing on water sector research needs in climate science and hydrology, creating a pathway for sharing the latest research and translating this into policy and action.

Outputs	▪ The development of communication products: fact sheets, webinars, newsletters, conference presentations, VicWaCI2 annual science day, scientific journal articles ▪ Working with stakeholders to understand research needs, support and embed climate change impact and adaptation into planning (e.g. through the Urban Water Strategies, CGRSWS) ▪ Release of the Guidelines for Assessing the Impact of Climate Change on Water Availability in Victoria (November 2020) and providing information to support the next update. ▪ Release of a synthesis report summarising the insights from the Victorian Water and Climate Project – Victoria's water in a changing climate (DEECA, February 2021)
Summary against evaluation domains	
Impact	**Application and communication of research findings:** ▪ Research findings and advice from the Program have been applied in a diverse range of water resource planning processes, such as into long-term climate trend information in Annual Water Outlook reports produced each year by water corporations, informed the Victorian Annual Water Outlook produced by DEECA, Urban Water Strategies produced by all Victorian water corporations, and the 2023 Victorian State of the Environment Report produced by the Commissioner for Environmental Sustainability, Victoria. ▪ Information from the research program has been communicated to water sector stakeholders through webinars, newsletters, VicWaCI website, targeted stakeholder engagement such as workshops, interviews, and meetings, annual VicWaCI Science Day, presentations, research papers, conference papers and seminars. ▪ Newsletter subscribers are made up of a range of groups with subscriptions growing close to 350. **Broadened suite of transparent and accessible information to enable an informed community** The Guidelines for Assessing the Impact of Climate Change on Water Availability in Victoria provide guidance to Victorian urban water corporations, and are also used by rural water corporations, DEECA teams, and consultants. Support with application of the guidelines was a significant part of the work of the program over this period. An independent survey conducted to understand the usefulness of the Guidelines to the water sector found: ▪ 'The guidelines appear to be universally used by urban water corporations for their Urban Water Strategies and associated water resource planning'. ▪ 'The consultants interviewed used the guidelines for Urban Water Strategies, but also for environmental type studies and investigations in the rural water area. DEECA teams use the guidelines in strategic areas such as Sustainable Water Strategies, Long-Term Water Resource Assessment as well as Urban Water Strategies, and modelling of the northern Victorian regulated systems'. ▪ 'Almost all participants commented on the high value of the guidelines, that they provide consistent and dependable advice, that they are of high quality and well researched and that they are a "point of truth" for the industry'. **Informing Policy Makers:** ▪ Key findings from the research program, including VicWaCI, inform various water resource strategies (e.g. Urban Water Strategy, Central and Gippsland Region Sustainable Water Strategy) and policy papers. Those findings have been applied to assess climate change impact on water availability. ▪ Annual Water Outlooks developed by urban water corporations used information developed through the climate and hydrology research Program as part of the longer-term context for their outlooks. ▪ The CGSWS used the science from the program as an important part of the evidence base, informing many of the actions and policy positions developed.

	▪ Provided an evidence base to support Latrobe Valley Regional Rehabilitation Project activities, including targeted assessments of current and future water resource availability for mine rehabilitation. ▪ Latest climate science emerging through VicWaCI2 is playing a significant role in informing work across the Murray-Darling Basin on understanding and responding to climate change challenges.
Effectiveness	▪ Interviews conducted to gather feedback on the use of the *Guidelines for Assessing the Impact of Climate Change on Water Availability in Victoria* indicated these are a useful resource, providing consistent and dependable advice. Interviewees included consultants, urban water corporations, and other DEECA teams that use the Guidelines for their work. Some examples of the feedback are as follows: - 'For planning decision-making, the information in the guidelines is very useful in terms of explaining to exec the range of plausible outcomes and building appropriate lead time into adaptive decision-making processes'. - 'the water corps trust the scientific and expert advice contained in them.' - 'Clients value being able to say that what they do aligns with DEECA guidelines.' - '…it is really powerful for governments to be able to say that they expect organisations to plan for climate change and to refer to the guidelines as how to do it.'
Appropriateness	▪ Action 2.2 in *Water for Victoria* is intended to continue to build our understanding of how climate change will affect water resources by investing in research on climate change and building partnerships with stakeholders to share knowledge and apply research to policy, planning and practice. VicWaCI and VicWaCI2 is a project to implement Action 2.2. ▪ Action 2.2 *Water for Victoria* remains current. Since the beginning of the EC5 period, there has been a new Australian Government that has committed to undertaking a new Murray-Darling Basin Sustainable Yields project ahead of the *Murray-Darling Basin Plan* review. Climate change information is a significant focus of the activities currently underway, with this investment through EC5 supporting Victoria's contribution and interests in these activities.
Efficiency	The economic value of VicWaCI cannot be directly estimated, however will most likely be derived from three main benefits: ▪ Improved water resource planning that enables longer lead times to develop and implement considered strategies and prudent investments for water supply augmentation. ▪ Better coordinated and more consistent planning for water infrastructure investment and water trade. ▪ Avoidance of direct investment by water corporations in climate and climate change science to support water resource planning. ▪ The Bureau of Meteorology and Commonwealth Scientific and Industrial Research Organisation (CSIRO) provided $1.621 million and $1.021 million as co-funding to the program respectively.
Legacy	▪ An established Community of Practice of water resource modellers continues to apply climate change information to water resource models to assess climate change impact and water availability by using the guidance and data developed through the VicWaCI research program. ▪ There is a demonstrated reliance on the *Guidelines for Assessing the Impact of Climate Change on Water Availability in Victoria* across the water industry and parts of government for planning purposes and decision-making on short to very long-term scale. ▪ The networks formed between water sector stakeholders, DEECA and the VicWaCI researchers provide both immediate and future benefits around access, understanding and application of the science.

Future priorities	▪ The needs of Victorian water sector stakeholders for continued connection and improvement of the science relies on State investment into application focused climate science and hydrology programs. ▪ Examples of future needs include the need to incorporate the latest Intergovernmental Panel on Climate Change (IPCC) models of the global climate into guidance and decision-making, along with considering how to incorporate improved knowledge about changes in climate variability over time. ▪ Future funding of the program will ensure the sector continues to adapt to the changing climate and respond appropriately, in and efficient and evidenced based way.

1.15 WRS11: Surface Water Assessment and Modelling

Initiative	**4. The evidence base for Victorian water: availability and knowledge**
Project	WRS11: Surface water assessment and modelling
Description	This program of surface water assessment and modelling supports the sustainable management of Victoria's water resources, including the security and transparency of Victorian entitlement framework and planning, delivery of Water for Victoria actions and effective interstate water-sharing arrangements. The surface water analyses and models are fundamental in informing government's decision-making project to sustainably manage its water resources, such as Victoria's water grid augmentation, quantification of climate change impacts, sustainable diversion limits under Murray-Darling Basin Plan, long-term water resource assessment, sustainable water strategies, urban water strategies, and equitable sharing of resources between consumptive, environmental and recreational users. The investment delivered these benefits through continued development of a comprehensive and more defensible surface water modelling platform (Source), consistent with national modelling , pilot automation of the platform and improved sharing with water corporations (and the broader modelling community to ensure transparency and consistency).
Outputs	▪ Transition from the Resource Allocation Model (REALM) to Source next generation hydrological modelling to deliver next generation models to underpin decision-making. - Model development, completion, integration, enhancement and maintenance. - Enhancing and maintaining implementation systems and processes. - Capability building and communication. ▪ Modernising Victoria's hydrological modelling capabilities to meet emerging needs. - Automation and forecasting pilot. - Model management. ▪ Compliance with Victoria's water reporting obligations – Commonwealth section 71 reporting ▪ Protecting Victoria's interest in interjurisdictional negotiations including *Murray-Darling Basin Plan* implementation/advice.
Summary against evaluation domains	
Impact	▪ Source next generation models are being used to support policy, planning and management decisions across urban and rural systems. Stakeholders also anticipate that Source will support decisions relating to operations, compliance, accounting, markets and forecasting in the future as models are enhanced and functionality further improves. ▪ Since 2020, an increasing number of stakeholders are using Source models to support processes related to: - IWM forums - *Sustainable Water Strategies*, including the recent CGRSWS

	- *Long-Term Water Resource Assessments*, including an impact study on the Mitchell River system - environmental watering plans - *Urban Water Strategies*, including the 2022 Urban Water Strategy renewals - *Water Resource Plans* - Annual operations plans. ▪ Source models support users to make more robust and defensible decisions. Stakeholders cited the daily timestep in Source as an important factor in increasing the granularity of model outputs, and therefore, providing a more detailed view of the system and a more useful evidence base for decision-making. They also highlighted the ability to use outputs from one model as inputs to another model with a shared boundary as an important benefit. Aligning inputs and outputs between models supports consistency between the models and results and creates efficiency in running the models. Stakeholders reported that the new climate change plugin has also helped to improve forecast modelling. ▪ Policymakers continue to use Source to support water management in the Murray-Darling Basin, including in relation to managing delivery constraints in the Lower Murray and as part of Victoria's annual assessment and reporting of compliance with the cap and sustainable diversion limits under the *Murray-Darling Basin Plan*. Other examples of Source supporting decision-making include understanding channel capacity sharing and modelling inter-valley trade between the Goulburn and Murray catchments. The ability to link inputs and outputs between the Murray and Goulburn models is key to supporting this work. ▪ Compliance with statutory obligations were fully achieved with annual assessments of Victoria's compliance with the cap on water diversions (schedule E of the *Murray-Darling Basin Agreement*) and sustainable diversion limit (section 71 of *Water Act 2007* (Commonwealth)) completed each year as required.
Effectiveness	▪ Stakeholders within Victoria continued to experience benefits of collaboration including efficiencies from pooling resources for model development and maintenance, a reduction in duplication of work, development of a shared understanding of how they do and should work, development of consistent model assumptions and sharing outputs to be used as inputs in other models. ▪ This supported overcoming resource and capability constraints for some organisations, such as water corporations and CMAs, that do not currently have in-house Source capability. ▪ Effective delivery was supported by preparing and following a clear workplan to guide strategy delivery; preparing and following a process for prioritising requests for support; progressing arrangements to enable model sharing and collaboration within Victoria and engaging in conversations on a Murray-Darling Basin-wide approach; and facilitated capability-building and knowledge sharing within Victoria. ▪ Resourcing challenges, particularly attracting and retaining specialised skilled staff, have increased both within Victoria and nationally. Resourcing constraints have limited the speed at which model software can be improved.
Appropriateness	▪ The project investment was effectively targeted to ensure that Victoria met legislative obligations and delivered on strategic priorities.
Efficiency	▪ Expenditure aligns with the budget.
Legacy	▪ EC5 investment has contributed to development of next generation tools and capability that will be used to inform decisions relating to water policy, planning, management, compliance, accounting, markets and forecasting over the coming years. ▪ All major Victorian surface water resource systems models were transitioned from REALM to Source platform with required collaboration and co-operation with portfolio agencies (water and catchment management authorities). These models

	will be used to support and provide advice for Government's and stakeholder projects and investments over the coming decades. ▪ The Victorian Hydrological Modelling Group is comprised of modelling practitioners and water resource managers from DEECA, water corporations, CMAs and consultants. The group meets regularly to share knowledge and build capability and develop networks. This has resulted in the efficient development and maintenance of Source models with stakeholders contributing time to provide data and advice without cost to DEECA and allowed for the new Source models to be applied (over 15 projects supported to date) to deliver return on investment. This is expected to continue.
Future priorities	The project provided a range of functions, which continue to be important for the ongoing management of water resources. The drivers that had informed the project remain today, and, if anything, have become even more pressing. The need to ensure best available knowledge to inform policy and management decisions continues, with drivers include: ▪ The value of water is increasing as it is essential for our economy, communities and environment. ▪ The demands on water resource management are evolving and increasing in complexity as climate change and population growth increase pressure on water resources. ▪ Best-practice water resource modelling and IT standards for software are evolving and modelling needs to be efficient and responsive to meet the growing needs of water and natural resource management. ▪ Continue to develop model-sharing arrangements for Victoria (through the model management system), and actively engage with the MDBA on their Murray-Darling Basin-wide model sharing approach (the Integrated River Modelling Uplift Program) to increase consistency and efficiency through easier sharing of models, assumptions and outputs.

1.16 WRS12 Long-Term Water Resource Assessment and Addressing the impacts of mining and extractive industries

Initiative	**4. The evidence base for Victorian water: availability and knowledge**
Project	WRS12 Long-Term Water Resource Assessment and addressing the impacts of mining and extractive industries
Description	**Long-Term Water Resource Assessment:** A critical role of government is the security of water resources. Established under legislation in 2005, the Long-Term Water Resource Assessment (LTWRA) is undertaken every 15 years. The first assessment for southern Victoria was completed in 2020 and found that long-term surface water availability had declined across the region by up to 21%. This reduction in water availability has been attributed to dryer conditions, with the interception of water by farm dams and plantations also being contributing factors. **Addressing the impacts of mining and extractive industries:** This project has supported the team to assess progressive reviews of mine rehabilitation applications and has supported Water and Catchments Group contributions to the Hazelwood Environmental Effects Statement process with a representative sitting on the Technical Advisory Group. The project has also allowed the Water and Catchments Group to map out future requirements under the Commonwealth Environment Protection and Biodiversity Act 1999 environmental assessment process. This work is one part of the DEECA Water and Catchment's Group broader work to ensure sustainable water management is considered in other sector's activities and throughout the energy transition in Victoria.
Outputs	▪ Developed the policy rationale and approach for the CGRSWS to provide the response to the LTWRA findings to support broader policy goals (June 2021 for draft CGRSWS).

	▪ Preparation and publication of 'Central and Gippsland Region Sustainable Water Strategy Discussion Draft Technical guide to figures' (October 2021). ▪ Developed the technical evidence base and inclusion of actions within the CGRSWS that address findings of LTWRA within broader policy context, including re-allocation of the Latrobe 3-4 Bench water entitlement. ▪ Proposed improvements to the methodology for the LTWRA in northern Victoria were identified through consultation with Water and Catchments Group stakeholders. ▪ Preliminary method developed for the LTWRA in northern Victoria. ▪ Supported Resources Victoria to review the Latrobe Valley Regional Rehabilitation Strategy and release the 2023 Latrobe Valley Regional Rehabilitation Strategy (LVRRS) Amendment. ▪ Release of technical reports and explanatory note to support the 2023 LVRRS Amendment (Explanatory note guidance to surface water access for Latrobe Valley mine rehabilitation, DEECA 2023) (Technical report Latrobe surface water access, DEECA 2023)
Summary against evaluation domains	
Impact	▪ The CGRSWS incorporates a comprehensive set of actions aimed at addressing the findings of the LTWRA in southern Victoria. These actions were developed in response to the identified decline in long-term water availability, which had a disproportionate impact on the environmental water reserve. ▪ There is a high likelihood that the LTWRA response will promote sustainable management of water in Victoria. The effectiveness of the actions included in the CGRSWS to respond to the LTWRA hinges on successful implementation, stakeholder engagement, evidence-based decision-making, continuous monitoring, and a long-term perspective. ▪ To support the release of the LVRRS Amendment in 2023 and provide guidance on access to surface water from the Latrobe River system, DEECA has: - developed an explanatory note providing guidance on the type of access arrangements that could apply to surface water from the Latrobe River system for the purpose of mine rehabilitation - commissioned an independent technical assessment on the type of conditions that could apply to water access for Latrobe Valley mine rehabilitation and associated risks and benefits to environmental and Traditional Owners' values. ▪ The impact of the LVRRS Amendment and supplementary guidance has provided water policy to for earlier application by mine licensees for mine rehabilitation. The Minister for Water received an application from AGL Loy Yang for a new bulk entitlement to surface water from the Latrobe River system for water-based rehabilitation of the Loy Yang coal mine. At the time of writing, this application remains under consideration.
Effectiveness	▪ Stakeholders continued to experience benefits from strong co-ordination across the DEECA Water and Catchments Group to extend the evidence base from LTWRA for southern Victoria to inform the CGRSWS and to identify potential improvements to the LTWRA methodology for northern Victoria. ▪ Stakeholders continued to experience benefits from Planning and Impact Assessments Team representatives representing DEECA Water on Whole of Government mine rehabilitation planning working groups.
Appropriateness	▪ The investment addressed action 8.8 from Water for Victoria: Align the sustainable water strategy and long-term water resource assessment processes' and has been successful in supporting decision-making to address the impact of past changes in water availability while also planning for future declines. By endorsing the new CGRSWS as the process to respond to the findings of the LTWRA technical assessment, the investment has demonstrated a cohesive and integrated approach to water resource management. This alignment ensures that

	the strategy is well-informed by the assessment's evidence base, enabling effective planning and sustainable water management practices. ▪ The Mining and Extractives investment addressed DEECA's commitment in the LVRRS to: - deliver 'Guidance on potential water sources and access arrangements for mine licensees to undertake rehabilitation'. - further assess the feasibility of manufactured water, and - provide guidance on the use of climate change scenarios for water resource planning for mine rehabilitation
Efficiency	Both, the response to the LTWRA findings and Mining and Extractives project demonstrated effective application of inputs, including time, cost, and resources. The delivery of the projects was accomplished within the budget specified in the EC5 funding, showcasing efficient financial management. Furthermore, projects were completed on time, indicating a well-organised and coordinated effort by all stakeholders involved in the project
Legacy	▪ The LTWRA methodology and groundwork provide valuable insights for informing future iterations of the assessment. Building on successful elements, the next assessment can be enhanced by refining methodology, assessment techniques, and data sources and collection methods to draw out insights to inform future action. ▪ The stakeholder engagement across the DEECA Water and Catchments Group has identified opportunities to consider long-term changes to water held by Traditional Owners across Victoria as part of the LTWRA, subject to further consideration by Traditional Owner Group, this could be an important way to document progress in water returns to, and outcomes for Traditional Owners – which is a priority area for Government.
Future priorities	**Long-Term Water Resource Assessment** ▪ Upcoming legislative requirement to commence the LTWRA for northern Victoria ▪ Technical support for future Sustainable Water Strategies implementation and development **Addressing the impacts of mining and extractive industries** ▪ Communicating the findings from water-based implementation actions for LVRRS to stakeholders. ▪ Leading the DEECA Water and Catchments Group contribution to transition from coal fired power generation in Latrobe Valley. ▪ Assessment of the water-related matters of the Latrobe Valley mine licensees rehabilitation plans. ▪ Finalisation of the Hazelwood Environmental Effects Statement process, and involvement in the Technical Reference Groups for the Environmental Effects Statement processes for Yallourn and Loy Yang, if needed. ▪ Support for broader Latrobe Valley transition activities including actions in the CGRSWS. ▪ Provide guidance on, and assessment of, any application for surface water, groundwater or manufactured water that may be sought for mine rehabilitation.

1.17 WRS13: Groundwater Assessment and Modelling

Initiative	**4. The evidence base for Victorian water: availability and knowledge**
Project	WRS13: Groundwater assessment and modelling
Description	To deliver water security government needs a clear view of the amount of water available now and in the future, and the factors that affect that availability. Groundwater availability is determined through robust monitoring of groundwater levels, metering of use and detailed modelling and assessment. It considers the patterns of use, including agriculture, domestic use and extractive industries such as

	mining, and the needs of the environment. Climate change is making the assessment of water availability more complex and more important.
Outputs	During EC5, the project has: ▪ Completed a statewide assessment of groundwater availability which will inform a review of limits of take. ▪ Specialist advice - Provided advice on existing and emerging water related risks associated with the water entitlement framework, including South Australian-Victorian Border Groundwaters Agreement Review Committee, and the mining and extractive industries. ▪ Improved the quality and accuracy of groundwater monitoring data, through refurbishment of 23 priority bores and construction of 39 new bores.
Summary against evaluation domains	
Impact	The project provides an improved, shared understanding of groundwater and its uses for evidence-based management. The state-wide assessment of groundwater availability is a key part of the first priority action of a series of priority actions of DEECA and the rural water corporations over the next 7 years to improve groundwater management. The vision is to ensure the sustainable use of groundwater that supports existing and new uses, protects ecosystems and supports living cultural landscapes.
Effectiveness	The project has achieved its objectives, within time and on budget. Engaging early with delivery partners and independent expert reviewers contributed to the effectiveness of the project.
Appropriateness	The project was highly aligned to the: ▪ objectives the EC ▪ actions within Water for Victoria, specifically item 1.3 and outcome 8.11. ▪ several water monitoring and reporting obligations under the Water Act 1989 for the Minister for Water.
Efficiency	▪ The project achieved the targets ahead of schedule and below budget. This enabled works to be expanded to include 38 additional high priority sites/bores on top of the original target of refurbishment of 4 priority bores and construction of 20 new bores. ▪ The methodology of the Sustainable Yield project aimed to develop a generic method for assessing future changes in Victoria's groundwater availability and evaluate whether such changes can cause broader adverse impacts. The methodology prioritised simplicity and cost-effectiveness, tailored to address uncertainties that affect decision-making. ▪ This indicates good value of return on investment and appropriate investment planning, design and delivery to support the desired outcome.
Legacy	The broader benefits are reliable water availability information and rigorous water availability analysis provides confidence to water users and policy makers in considering the policy, regulatory and legislative reforms necessary to ensure the water entitlement and planning framework are robust and efficient.
Future priorities	**Monitoring data – data collection and assets:** ▪ Recondition 155 groundwater monitoring network bores and refurbish 35 bores in areas with insufficient observation bores to ensure access to sustainable groundwater volumes across Victoria. **Assessments and advice:** ▪ Improved understanding of effects of groundwater use and climate change on Victoria's groundwater resources. ▪ Automating groundwater condition reporting and development of tools for stakeholder engagement on sustainable use of all groundwater systems. ▪ Negotiations on interstate groundwater sharing arrangements with South Australia, and development of Sustainable Water Strategies.

	▪ Support the integrated planning and decision-making for the rehabilitation of the Latrobe Valley coal mines by providing guidance to the government, mine operators, and the community on groundwater related matters.

1.18 WRS14: Surface Water and Groundwater Monitoring

Initiative	**4. The evidence base for Victorian water: availability and knowledge**
Project	WRS14: Surface water and groundwater monitoring
Description	▪ A detailed knowledge base of continuous and comprehensive water monitoring underpins all water resource investment, allocation arrangements and water sharing across agriculture, urban and environmental uses. ▪ The investment has funded the DEECA component of running and maintenance of 950 surface water and 1400 groundwater stations across the state. DEECA pays approximately 30% of the costs for the surface water sites and approximately 80% for the groundwater sites. The remaining costs are shared between over 55 external partners (Bureau of Meteorology, MDBA, water authorities, and local councils) who come together to share the costs through the Regional Water Monitoring Partnership (RWMP). Through this arrangement, DEECA gains access to all the partner monitoring data, and curates and publishes this data via the Water Monitoring Information System (WMIS) and related back-end data systems. ▪ EC5 investment also was expected to deliver vastly improved service to allow users to search, display and download data by funding the redevelopment of the WMIS website.
Outputs	▪ New groundwater contract (3+1 +1 year contract worth $5.7M). ▪ New laboratory services contract (3+1+1 year contract worth $2M). ▪ New surface water monitoring contract (4+1+1 year contract worth $68.2M). ▪ Annual data collection of surface water data at 950 surface water locations. ▪ 1015 surface water and groundwater sites upgraded from 3G to 4G telemetry. ▪ Annual collection of groundwater data at 1400 groundwater bores. ▪ Monthly maintenance to all surface water sites and quarterly maintenance groundwater bore sites to keep sites in good working order so that there is minimal data loss. ▪ 2,195 maintenance works and upgrades of equipment at surface water sites. ▪ Upgrade of RWMP support systems for surface water, water quality and groundwater contracts to meet partner requirements. ▪ Major overhaul of WMIS to introduce a new data model and address user requirements following the user needs analysis. ▪ The delivery of the 5 yearly analysis of the quality of Victoria's surface water as required under the Water Act 1989 (section 22)
Summary against evaluation domains	
Impact	**Improved quality and accuracy of monitoring data** ▪ There has been significant investment in infrastructure to ensure that equipment is kept in full working order which results in minimal loss of data. DEECA has spent approximately $1 million on instrument repairs and upgrades (excluding 4G upgrades). The impact of this investment was seen in the 2022 floods where the network only suffered minimal loss of data. ▪ The entire surface water and groundwater real time data network has been upgraded from 3G to 4G before Telstra turns off the 3G network in late 2024. **Improved data availability and information products:** ▪ A user needs analysis was undertaken to assess if the WMIS was meeting user expectations. This review recommended a wide range of improvements would be

	required to fully meet user expectations. As a result of this review, WMIS has been redeveloped in collaboration with the software vendors. ▪ DEECA delivered an upgraded WMIS website available through the existing online portal: data.water.vic.gov.au. WMIS publishes consistent statewide water quality information from the RWMP and has improving functionality like advanced search, data downloads and filtering capability with a GIS interface. Future enhancements planned for WMIS will further improve functionality and usability of the platform. ▪ Prioritisation of groundwater bores: The groundwater monitoring network has been reduced from 2,400 bores to 1,400 core bores. ▪ The production of the 5 yearly analysis of the quality of Victoria's surface water addressed the key questions of how water quality varies across Victoria and why, how water quality has changed over time, how long-term climate variability impacts water quality. In addition, the analysis gathered data to understand how bushfires affect water quality, how blue-green algal blooms are changing and understanding low dissolved oxygen events. **Management of the RWMP:** ▪ From the latest user survey 93% of respondents were satisfied/ very satisfied with the data they were receiving. ▪ From the latest user survey 97% of respondents are satisfied/ very satisfied that the RWMP provides an efficient monitoring service, and that the data is consistent and reliable.
Effectiveness	Effectiveness indicated through delivery in line with work plan
Appropriateness	From the latest user survey 97% of respondents were satisfied / very satisfied that the RWMP monitoring services delivered matched their needs and monitoring objectives.
Efficiency	▪ The program has been delivered within budget. ▪ Cost sharing arrangements has significant benefits in that it allows all RWMP partners to access data and information that they have not contributed to. For example, DEECA contributes approximately 30% of the total monitoring cost and has access to 100% of the data collected across the state.
Legacy	▪ Continuation of monitoring at long-term sites over the EC5 period under this project provides Victoria with an unbroken long-term record of water resource conditions that will underpin long-term modelling and planning for the sector for many years. ▪ Continuation sharing information via the website over the long term is a key focus of the program. Improvements made to the website delivered by this project will help ensure RWMP partners, the sector more broadly, and the Victorian public can access this data over the longer term.
Future priorities	▪ Funding needs to be kept at current levels in real terms, otherwise the number of monitoring sites and the amount of maintenance will need to be decreased. This will result in a network that is not reliable or as comprehensive. This would have implications for reporting, compliance, and modelling and assessments. ▪ There will need to be a major one-off investment in asset renewal during the next EC tranche.

1.19 WRS15: Water Accounting and Reporting

Initiative	**4. The evidence base for Victorian water: availability and knowledge**
Project	WRS15: Water Accounting and Reporting
Description	The investment proposed to continue to deliver critical business-as-usual functions including: ▪ Accounting functions for operation of the VWR, and support for users of the register

	▪ compiling and publishing the annual Victorian Water Accounts which provide a transparent assessment of water availability and use by river basin, groundwater catchment/groundwater management unit and state-wide. ▪ Regular reporting on the status of water resource condition to the Minister, executives and other decision-makers within DEECA. ▪ Regular reporting on water resource condition to the public via the Current Water Snapshot website. ▪ providing accurate water quantity data for a wide range of other annual and ad-hoc uses, for the Bureau of Meteorology, MDBA, policy and decision-makers. Furthermore, the investment funded a one-off upgrade of the Victorian Water Accounts platform, building a new interactive website to improve the ability of users to engage with the water accounts and download the data for use.
Outputs	▪ Published Victorian Water accounts in PDF and on websites. ▪ Daily (when required) and weekly water resource condition reports for the Minister's Office and water executives. ▪ Weekly Current Water Snapshot website report to provide a public summary of water resource condition Water register accounting transactions to maintain correct retail register account balances for 116,000 customer accounts and 148,000 water entitlements. ▪ Reconciliation spreadsheets and reports to provide transparency of process. ▪ Advice and support to users requiring assistance with VWR functions. ▪ Data files to meet internal and external users' data needs.
Summary against evaluation domains	
Impact	**Improved level of service and information availability to Vic water users:** ▪ Legislative requirements to publicly report on water availability and use are met. ▪ Over the four years of EC5, the Water Register team has consistently improved the turn-around time for end of financial year roll-over, including the application of carryover and the opening of trade opportunities for customers. ▪ Relevant components of the data from the Victorian Water Accounts were regularly made available earlier to meet specific needs. On many occasions, these data requests were quite time consuming and contributed towards delays of the overall accounts release. The team considers that meeting these (often time-critical) information needs of internal and external customers is an important function of the team. ▪ In 2021, planning commenced for a comprehensive new website to replace the online water accounts formats, which would be more interactive and user friendly. This website will be complete by the end of EC5. The team has received significant positive feedback from users about the value of the Victorian Water Accounts, as well as input into how the new website would increase its value, including: a. The Victorian Auditor-General's Office, in its final public audit report for a 2021 audit of recycled water use in Victoria, stated that 'DELWP (then Department of Environment, Land, Water and Planning, now Department of Energy, Environment and Climate Action (DEECA)) is also working to improve publicly available water data. For example, DELWP (DEECA) developed the Victorian Water Accounts, which is an online, user-friendly and engaging overview of water use and availability across the state'. b. Learning materials based on the Victorian Water Accounts have been created for the Geography Teachers' Association of Victoria, and these have been well received and used, due to their ability to tie in well with the curriculum. ▪ User research into the expected value of the new website was conducted, with users asked what they liked about the current sites and how we can make it better. These insights informed the design of the new site. Some quotes from users include:

	a. ‘With so much data, it'd be great to have more flexibility in how it's presented. But as a pdf, I think it does a good job’. b. ‘It’s the raw point of truth as it should be, without too much inference. But there is an opportunity to show more patterns in the data for people to draw their own inferences and read context’. c. ‘(It would) Be good to be able to turn off and on the layers so you don't have to have all the info if you don't want it’. ▪ Minor improvements to the website based on user feedback have been actioned for the 2022-23 accounts, and the water accounting team will make further improvements in future releases
Effectiveness	Through the period of EC5, the data and information in the Victorian Water Accounts has generally been available to key users within nine months of the end of the water year. The exception was the publication of the 2020-21 Accounts which was published with a longer lag after the end of the 2020-21 water year, for several reasons: ▪ Resourcing challenges in the team – 5 skilled technical staff either left the team or moved roles within the team during this period, resulting in significant on-boarding and up-skilling work to enable new personnel to learn and undertake their roles. In some cases, roles were left empty for several months during extended recruitment processes, which impacted team productivity. ▪ The design and development of a new website for the Victorian Water Accounts using an Agile project management approach was very time-consuming and significantly impacted the delivery of the 2021-22 accounts. Following this, the team needed to re-design the structure, format and language style of the Victorian Water Accounts, and re-write all of the content sections, to make the accounts suitable for a website display rather than a Portable Document Format (PDF) report. ▪ The Victorian Water Accounts product, while important and valued, is less time critical in its release time than some other deliverables, meaning that the team could choose to delay release of the 2020-21 accounts in order to ensure delivery of other priority EC5 projects.
Appropriateness	▪ The project primarily aimed to deliver Action 8.10 of Water for Victoria: To provide clear information about water resources to the community, along with contribution to a range of other actions. ▪ There have been no material changes to the strategic context, and the Victorian Government continues to broadly have a ‘digital first’ approach to government service delivery. The requirement to provide accurate and up to date water resource information for Government and the community to support informed decision-making in a drying climate remains critical, and the Program logic remains valid.
Efficiency	▪ The design and build of the beta Victorian Water Accounts website is the key project against which efficiency is assessed. The majority of other expenditure was for staffing. ▪ The new beta Victorian Water Accounts website was delivered on time and within the agreed budget. The budget of the contract at the start of the project was $537,470, and this full amount was spent by the DEECA. This was considered excellent value for money given that the developed product is of very high quality and meets all of the essential requirements set by the team, as well as many of the ‘nice to have’ features.
Legacy	▪ Most of the work in this project is business-as-usual imperative, which means that the impacts of individual activities/outputs will not necessarily persist over time, but rather the activities/outputs themselves will be repeated weekly, monthly or yearly as appropriate. ▪ However, there have been some activities and outputs which will have ongoing legacy. One key example is improvements to the Victorian Water Accounts, including the development of an interactive new user-friendly website to present

	the data in a way that will be much more engaging and easy to use. This website will be improved over time beyond the beta version, and will be used for many years. The user needs research conducted for the Victorian Water Accounts project has also delivered an uplift in DEECA's team capability in this area, which has delivered value for other website-based projects. ▪ The education profession is already engaging with DEECA to use the Victorian Water Accounts to help with their curricula, so the investment's impacts would be expected to occur over time by producing a young population that is more informed about water management. ▪ The water data provided to many interested water users has informed a wide range of policy and strategy documents both inside and external to government, and the benefit of these strategies being well-informed will also be felt into the future.
Future priorities	▪ Adaptation to the uplifted VWR, including rebuilding systems and processes as appropriate, bug-testing and correction, undertaking training and developing/delivering it to other users. ▪ Ongoing hosting, support and maintenance costs for the new website. ▪ Adapting and improving VWA development processes based on new VWR and new VWA website.

1.20 WRS16: Knowledge and Insights

Initiative	**4. The evidence base for Victorian water: availability and knowledge**
Project	WRS16: Knowledge and insights
Description	The goal of the Water Knowledge and Insights (WKI) EC5 Program was to improve the community's access to water resource information. This included information where water is located, how it is shared and accessed, resource condition and risks amid broader concepts found within the Water and Catchments Group's workplan. The project sought to address engagement and awareness among water users with a particular focus on future water stewards. These goals were to be achieved by taking water data, information and reports created by DELWP / DEECA and promoting them to the public through the development of user platforms, social media and improved online resources, based around an initial four significant concepts: ▪ Creating curriculum-aligned resources for teachers to encourage use of DELWP's water resource information. ▪ Defining data cataloguing and reporting requirements for the Water Insights Library in a user requirements document to go to market (cancelled in 2021). ▪ Enhancing water reporting webpages. ▪ Creating social media posts about Victorian water resource information.
Outputs	▪ Water Market Watch app (2019–21). ▪ Water Market Watch app video (2020). ▪ Surface water modelling video—'How surface water monitoring works' (2020). ▪ Social media strategy document—'Water information for the community' (2020). ▪ Water website heatmapping analytics (2020). ▪ Registered Aboriginal Party boundary geospatial layer (2021). ▪ Water market information dashboard videos (2021). ▪ PowerBI training for Water Resource Strategy staff (2021). ▪ Visualising Our Communications (Compliance Project 2A) (2022). ▪ Victorian Water Accounts video (2022). ▪ DEECA and Geography Teachers Association Victoria student and teacher water lesson plan resources (2022).

	▪ DEECA and Geography Teachers Association Victoria Water Education Portal (2023–24). ▪ Building a Better Victorian Water Register Website (2023–24). ▪ Enhanced Victorian trade communications to water market participants including delivery of Barmah Choke Trade Protocol with WaterNSW (2022–present). ▪ Visualising Our Communications 2 (Gippsland) (2024) .
Summary against evaluation domains	
Impact	▪ WKI's work with the Geography Teachers Association Victoria has significantly improved access of Victorian water management information to our future water stewards (and to families) by offering students and teachers easy to use and accessible platforms and resources. Student and teacher resources offered young people the chance to roleplay and run exercises to gain greater understanding of Victoria's water resources. While the Water Education Portal will be a valuable asset into the future that leverages video content and other educational resources to portray a rounder vision of Victoria's water resource management while also offering career advice that gives teachers the opportunity to promote the water sector to high school students with clearer and more logical directions. ▪ Water Market Watch iOS app was developed and adopted by stakeholders, providing real-time water market information. This change enhances stakeholders' access to water-related data and aligns with the desired end-of-Program outcome of improving community access to water resource information. ▪ The feedback on the iOS App Store helps in evaluating the app's acceptance by stakeholders by offering insights into users' experiences, highlighting both positive aspects and areas that may need attention. This feedback can inform future updates and enhancements to the app, ensuring that stakeholders' needs and preferences are addressed. Overall, the adoption of the Water Market Watch iOS app by stakeholders and the feedback received on the iOS App Store indicate that the app is serving its purpose of providing real-time water market information. The app has an average user score of 3.5 stars on the iOS platform. ▪ WKI worked closely with three water corporations (Goulburn-Murray Water, Lower Murray Water, and Southern Rural Water) to develop the Visualising Our Communications project. The first of these covered the north (from Shepparton to Mildura) and south (Ballarat, Bacchus Marsh) of Victoria, while the second covered the east (Gippsland). The photographic and video deliverables of this project have been utilised across DEECA, GMW Lower Murray Water, and Southern Rural Water including in policy documents, research and annual reports, online web content, customer information presentation, social media, fact sheets and other important water communications. The deliverables are also available for use by the broader department and will be of particular use for Agriculture Victoria, Resources Victoria and DEECA communications division. These uses including the DEECA Annual Report 2022–23 and the anecdotal acclaim from staff and executives proves their value for money and highlight the benefit of such collaborations. ▪ The production of videos for use across social media and online website platforms has allowed for greater understanding of complex ideas such as those found in water monitoring as well as offering water users easy-to-follow instructions for how to work with the data we publicly release. ▪ This project allowed DEECA to meet several of its actions as detailed in the CGRSWS, particularly those around community education and improved access to information.
Effectiveness	Several changes have happened to the WKI team since commencement of EC5. Changes to team full-time equivalent make-up, divisional and reporting changes, budget, plus the realities of the department's social media protocols and communications strategies have meant that some changes were made to the operation of WKI. However, despite this, the core Program logic of WKI remained the same and continued to add value to the Water Resource Strategy Division and the

	broader community, particularly for areas whose work programs were strongly related to the WKI team's. With a strong focus on outputs that fit into Water and Catchments Group's broader goals, WKI has delivered on the underlying role it was created to fill. Most significantly, one of the key projects as laid out in Stream 2 of the EC5 bid ('The evidence base for Victorian water: availability and knowledge') was removed from the WKI workplan and its budget (of $1 million) was reallocated. This deliverable, to build 'a new component includes delivery of a Water Insights Library that will integrate existing water information sources to improve co-ordination and access to water information', was cancelled in 2022. Further budget was excised from WKI with works developed through alternative means including through the team's integration with the Market Operations and Insights team of the Water Resource Strategy Division. Water Knowledge and Insights team provided key support including expertise, knowledge and guidance on strategic direction as inputs into the development of social media assets created by other WCG teams. Water Knowledge and Insights also delivered important work for the Market Operations and Insights team, improving the accessibility and quality of information for recurring trade openings across the EC5 period.
Appropriateness	The initial work Program plan was designed in a way that allowed for flexibility in some of its deliverables, and which was appropriate for the needs of the community and for Water and Catchments Group. This allowed the team to be intuitive in developing ideas that respond to immediate needs as well as evolving long-term aspirations for water resource management including some projects that arose out of the completed delivery of the CGRSWS and other works undertaken by Water and Catchments Group. The flexibility meant that we could work alongside stakeholders both inside and outside of the department and better understand their needs, working together to produce products that have genuine value and which have been properly scoped, defined and resourced. As a result, the delivered projects yielded strong results. For example, the WKI EC5 Program plan's wording to deliver enhanced water resource information did not encompass the Building a Better Victorian Water Register Website project when it was first conceived. But the administration of this particular project will be one of the team's major works. Meanwhile, the Insights Library project was considered relevant in the EC5 drafting process, but ultimately wasn't strong enough and its funding was reallocated. Because much of the work undertaken by Water Knowledge and Insights depended on the work of other teams across the Water Resource Strategy Division (and Water and Catchments Group more broadly), we were able to more appropriately focus on how our investment concepts worked with the other work being done by colleagues. This allowed for work to be delivered that was not only value for money but will have a longer legacy because they were borne out of collaboration and necessity.
Efficiency	▪ During the period of EC5, staffing costs and budget lines were adjusted to align with the available resources. The reconfiguration allowed WKI to achieve its objectives within the given constraints. However, it is important to highlight that due to budget and staffing limitations, the Insights Library project could not be pursued alongside the other work programs being delivered by WKI. If the Insights Library project had been included, it would have required additional full-time equivalent resources.
Legacy	▪ Team skills allow for future improved to be made to the VWR website while requiring less external resources. This ensures that the website will be able to continue to operate according to its guiding principles and require less large-scale redevelopments. ▪ By producing works that integrate water and its management into high school geography classes, young people are being directly delivered information that they wouldn't otherwise have access to, and potentially fosters interest in the water sector that would be almost impossible to achieve otherwise.

	▪ Video work remains online, allowing anybody the option to learn about and better understand water resource information across a range of subjects. ▪ Visualising our Communications products continue to provide benefit to the department as a resource of imagery and video for use in reports, web content, video and social media, which aid in our ability to communicate messages to the public as well as within DEECA. ▪ Upon its release, the Water Education Portal will create a centralised location for water information that is appropriate for schools and families with minimal upkeep.
Future priorities	▪ Education resources will be maintained by both DEECA and the Geography Teachers' Association of Victoria until 2026 to ensure content is up to date and all hyperlinks and videos are working, as well as language remains aligned with education standards as well as remain accurate to Victorian Government policy positions across areas such as climate change and recycled water. ▪ Future work is required to further improve the Victorian Water Register website and other water resource webpages / content. These websites should continue to evolve with innovative design and improved access so that we can remain ahead and an example to others. Work in future must also consider the needs of Traditional Owners and their ability to have information that can help their goals towards water ownership and management. Further work in partnership with Traditional owners is required in EC6.

1.21 CWCT05: Water Efficiency Program

Initiative	**5. Making Victorians Water Wise**
Project	CWCT05: Water Efficiency Program
Description	Victoria is growing at a rapid rate, with population growth increasing demand for water while climate change is reducing the reliability of supply. This is driving the need to use the water we have more efficiently and continue to build the capacity of Victorians to be water wise. Reduced water use alleviates pressure on water delivery for both critical human needs and economic growth. To reduce water use, communities need to know how and why to take action and how they are currently using water, through education on waterwise behaviours and water use data. The investment also aims to ensure vulnerable and hardship sectors are supported to take action to save water and relieve affordability pressures.
Outputs	▪ At the end of June 2024, the Schools Water Efficiency Program (SWEP) delivered water use monitoring, leak alert service, data visualisation through the SWEP online portal and provided dedicated science and maths curriculum materials to 1,4522 schools with 212 of these registered during EC5. A total of $5 million was invested in SWEP over 4 years. ▪ The total (including co-funding) $4.894 million for the Community Rebate Program (CRP) and Community Housing Retrofit Program (CHRP) has helped low income and vulnerable customers and not-for-profit emergency housing organisations improve the water efficiency of their properties, leading to lower water bills and increased well-being. At 30 June 2024, a total of 6,035 rebates were delivered, made up of 5,295 individual customer rebates and 810 emergency not-for-profit housing properties. ▪ The $0.29m investment in residential behaviour change projects contributed to the Smart Water Advice portal, providing water saving tips to households and businesses, reinvigoration of Target 155 (updating it to Target 150), continuing regional Victoria's Target Your Water Use (TYWU) projects and Victoria's contribution to the Australian Government's Water Efficiency Labelling and

[2] Accumulated number of schools registered to SWEP since launch in 2012.

	Standards (WELS) scheme, which regulates and provides consumer advice on water using products at the point of sale.
Summary against evaluation domains	
Impact	▪ Between 2020-21 to 2023-24, the CRP and CHRP Programs undertook water audits, fixed leaks and upgraded water using appliances for 6,035 households and emergency community housing properties. This exceeded the EC5 Making Victorians Waterwise target of 5,2753 rebates by 15%; the accumulated water savings has resulted in 298 megalitres of water saved over EC5 and equates to $0.75 million4 in total bill savings from reduced water and wastewater charges or $124 average saving per customer assisted per year. Once water efficient products are installed, the water savings continue for the life of the product. ▪ The 2023 independent review of CRP and CHRP found that almost 80% of survey participants assisted by CRP would have not upgraded (40%) or would have delayed their upgrade by up to 5 years (37%) without help from the Programs, and around 50% of respondents stated they had changed their behaviour to save water after participating in the Programs. 5 ▪ An evaluation of the CPR and CHRP found that the Programs were effective in reaching customers that are generally vulnerable or in hardship situations; for CRP 81% were concession card holders and 29% had a disability; for CHRP survey responses indicate that from the houses tenants34% identified as having a disability, 31% spoke a language other than English, and 31% identified as Aboriginal or Torres Strait Islander.6 ▪ SWEP increased its reach to monitor and provide leak alerts to 1,452 schools across Victoria. Over the investment period, SWEP data monitoring identified a total of 3,010 leak events6 in 905 schools (60% of registered schools) and saved 1.9 gigalitres of potable water equating to $8.46 million in avoided water and wastewater costs to schools. This represents a payback period of 2.3 years. ▪ VicFacilities; a modified version of SWEP for non-residential sites; monitored and provided leak alerts to 291 high-water using government and business customers. Early detection of leak alerts helped participating organisations to identify and save 110 megalitres of water wastage, equating to $388,748 in avoided water bill costs. Sites monitored through VicFacilities include aged care, hospitals and sports grounds. ▪ Victoria's contribution to the Australian Government's WELS scheme, which regulates and provides consumer advice on water using products at the point of sale, resulted in 4 GL of water savings and national economic return of $587,416.7 The benefit cost ratio of the WELS scheme is 8.8.8 ▪ As part of the review, it became apparent that the forms to apply for exemptions to permanent water-saving rules, a stage of water restrictions or to apply for a Water Use Plan were inconsistent across the urban water corporations, with some having no forms available on their websites. DEECA therefore led a project which resulted in all urban water corporations hosting 17 consistent online forms on their websites. ▪ Permanent Water Savings Rules and Water Restriction By-laws were reviewed and updated to ensure continued effectiveness and efficiency, in consultation with water corporations, industry stakeholders and community.

[3] Combined target made up of *Making Victorians Water Wise* (4,235 rebates) and *Delivering community benefits through implementation of the Central and Gippsland Region Sustainable Water Strategy* (1,040 rebates).

[4] Based on 2023-24 average water and wastewater charges of $2.53 per kilolitre.

[5] 2023, Community Rebate Program (CRP) and Community Housing Retrofit Program (CHRP) Evaluation Report, Marsden Jacobs.

[6] Leak event is occurrence where water used is above 0 litres between 12:00AM – 1:00AM.

[7] 2022, WELS Strategic Plan 2022-25, Australian Government Department of Climate Change, Energy, the Environment and Water.

[8] 2015, Evaluation of the environmental and economic impacts of the WELS scheme, Institute of Sustainable Futures for the Australian Government Department of Agriculture and Water Resources.

	▪ During the EC5 period, Melbourne's per capita water use increased by four litres; from 163 litres per person per day in 21-22, reducing to 161 litres per person per day in 2021-23.9 Since August 2021, Melbourne storages remained above 80% full and water restrictions were not required.10 The Melbourne 2022-23 per capita water use needs to reduce by 11 litres to meet the current voluntary target of 150 L/P/D.
Effectiveness	COVID-19 and wetter than average rainfall conditions from 2020-21 onwards (after three exceptionally warm and dry years through to 2019-20) limited the opportunities for water saving messaging, including Target 150 and TYWU promotions over the EC5 period. Target 155 (now Target 150), TYWU and the Make Every Drop Count campaign from EC4 focussed on free promotions, mostly via water corporation social media channels. For SWEP, most schools were offline during COVID-19 and active outreach was not possible. Low registration and engagement continued into subsequent wet years. Feedback received from schools indicates that the key barrier to registering is that water efficiency is a lower priority within schools compared to energy, waste and other day-to-day operations. There is also a perceived time burden to act on SWEP data and integrate SWEP into the classroom. As a result, SWEP registrations were 20% below the end-EC5 target (1452 versus 1800 schools registered). From an education perspective, school closures also limited onsite education outreach and instead the SWEP team focused on updating the curriculum materials for maths and science. These resources were available for download within the SWEP portal, however without active promotion, uptake was low both due to low awareness and lack of teacher time. For CHRP, stronger collaboration with relevant housing organisations/departments is required to streamline and centralise delivery. The EC5 delivery model resulted in CHRP water corporations contacting individual housing managers rather than coordinating assistance through central organisations, which created delays and inconsistency in approvals. CHRP used 25% of funding to cover these administration costs, however a centralised approach targeting statewide housing organisations with more support from DEECA provides opportunity to remove or reduce the cost. This would reduce costs used for administration, but places administrative burden internally on the water efficiency team.
Appropriateness	▪ Government, through Water for Victoria, committed to focus on urban water efficiency to ensure that water efficiency measures are developed and supported by water corporations and their communities. Making Victorians Water Wise complemented this focus and aimed to build on past actions taken by government, water corporations and by individuals to ensure Victoria has secure water supplies and to defer any new and more expensive water supply options as long as possible. Water efficiency is the least cost measure and contributes significant volumes of water savings. ▪ The Victorian Government continues to be committed to water efficiency and the need to build community capacity to use water wisely. The underlying Program logic remains relevant. ▪ Release of the CGRSWS in 2022 further reinforced the need for investment in water efficiency Programs, including commitment to ongoing investment in the CRP and CHRP, SWEP and behaviour change through campaigns, technology and digital innovation. ▪ The EC5 period has coincided with three La Nina years of above average rainfall: an El Nino year with drier conditions was declared in September 2023, easing to neutral by the end of EC5. In these wet or neutral climatic conditions, an ongoing baseline of water efficiency projects needs to be in place, which can be increased during warmer and drier periods.

[9] 2022, Melbourne's Water Outlook, Greater Western Water, Melbourne Water, South East Water, Yarra Valley Water.

[10] Historical Water Storage Levels, Melbourne Water

	▪ Impacts of COVID-19 and rising cost of living has increased the importance of affordability, making programs such as the CRP and CHRP more important over EC5.
Efficiency	▪ The cost-benefit analysis of the CRP and CHRP program investment over the period analysed has delivered combined net welfare benefits to society of the order of $1.2 million, equating to a benefit to cost ratio of 1.2 to 1 ($1.20 of value for every $1.00 spent).11 There are also intangible benefits cited by water corporations and customers, which include improved water industry reputation, increased social cohesion and inclusion, and health and well-being benefits. For example, 12% of participants who responded to the CRP and CHRP evaluation survey cite improved well-being (through reduced bill pressures, pride in home due to new fixtures and fittings), and 10% cite improved knowledge about how to save water.12 ▪ In return for the $5 million investment, SWEP delivered savings of 1.9 gigalitres in avoided water use through early leak detection, equating to $8.46 million in avoided water and wastewater costs to schools. This represents a payback period of 2.36.
Legacy	▪ The avoided water waste resulting from lower water flows of the more efficient fixtures and appliances benefits the customers each time the water appliance or fixture is used, with impacts lasting for the product life (assuming it remains in good working order). The CRP and CHRP 2023 evaluation found that around 50% of participants that responded to the survey indicated that they have changed their behaviour to save water within their home/housing property as a result of the programs.13 ▪ For SWEP and VicFacilities, the benefits of monitoring and identifying leaks are expected to last at least as long as the organisations remain signed up to the program. The financial savings associated with the timely identification of leaks allows the organisations to take timely action to fix the leaks; providing benefits into the future (as this money saved from avoided water bills can be invested elsewhere). ▪ SWEP also influences behaviour change through its student curriculum resources on saving water, helping to build water efficiency awareness. This, alongside customer behaviour change programs, aims to ensure communities have consistent and constant messaging around the importance of saving water and how to save water in the home.
Future priorities	SWEP and VicFacilities saves Victorian schools water and money by installing data loggers on water meters and alerting schools where there is high water usage. Approximately half of Victoria’s urban water corporations do not have a digital metering strategy in place and those that do are focused on residential digital metering for billing purposes. Customer dashboards that provide meaningful data for schools and other organisations are even less progressed. In the short-term (next EC6 period), SWEP will therefore continue to address both of these gaps for the school and non-residential sector. As more water corporations begin to roll out digital metering, the data logger installation component of SWEP is expected to become obsolete but the schools’ online portal is expected to become more important, providing a key behaviour change and data visualisation tool for both students and asset managers. In the future, this will provide opportunity for SWEP to direct more resources towards improving its educational and data use components, rather than data logger installation and maintenance.

[11] 2023, CRP and CHRP Evaluation Report Draft, Marsden Jacobs (report to be finalised in September 2023), pg. 35.

[12] 2023, CRP and CHRP Evaluation Report Draft, Marsden Jacobs (report to be finalised in September 2023), pg. 77.

[13] 2023, Community Rebate Program (CRP) and Community Housing Retrofit Program (CHRP) Evaluation Report, Marsden Jacobs.

	The next phase of SWEP and VicFacilities in EC6 will focus on rebuilding the digital platform to better support digital metering integration across Victoria's water corporations. For SWEP, opportunities to increase registrations and joint education projects will be sought through stronger partnerships with the Department of Education and Sustainability Victoria. The focus for the 2024-25 State Budget on reducing cost of living pressures for families means CRP and CHRP can become more prominent programs for government support to the community for affordability. In EC6, these 2 programs will be streamlined into a single Community Rebate and Housing Program so that all water corporations can support both individual and community housing properties. The program will also target greater water use reductions and bill savings by offering voluntary upgrades to 5-star WELS rated showerheads.

1.22 SIRS1: Rural Water Infrastructure Project Oversight and Governance (also currently includes reporting on Programs funded from other sources, e.g. East Grampians Water Supply Project)

Initiative	**6. Water Wise Rural Communities: Rural-Infrastructure and Sustainable Irrigation Streams**
Project	SIRS1: Rural water infrastructure project oversight and governance (also currently includes reporting on Programs funded from other sources, e.g. East Grampians Water Supply Project)
Description	To resource a highly skilled core team responsible for providing governance and oversight of water infrastructure projects that have Government investment in Victoria. The team ensures appropriate expenditure of public money on major water infrastructure projects, by: 1. seeking public good outcomes and benefits from government investment in water infrastructure projects through the monitoring of performance and compliance of the projects being delivered. 2. investigating and evaluating future regional water infrastructure opportunities that provide long-term water security and efficiency in rural, regional and peri-urban communities, which may result in the development of new shovel ready projects that Victorian Government may choose to invest in and/or are suitable for submission for Commonwealth investment. 3. providing appropriate governance and oversight of projects that deliver Victoria's water savings obligations under the Basin Plan target which meets the Australian Government commitment.
Outputs	Rural Water Projects has maintained a dedicated team of 5 full-time equivalent staff, provide strong governance and oversight of water infrastructure projects with a growing capacity through knowledge and experience to undertake due-diligence work to guide future investment through experience and expertise. ▪ As of June 2023, DEECA has secured funding for strategic rural water infrastructure projects across 25 projects totalling approximately $839 million. Since July 2023, DEECA has secured an additional 8 projects totalling approximately $157 million. ▪ DEECA has continued to engage stakeholders and community to better inform opportunities and learning on rural water infrastructure projects, hosting strategic planning forums with water corporations, and attending external group meetings including with Water Services Association of Australia at the request of the National Water Grid Fund. ▪ In 2023 and 2024 the Department was invited to host the National Water Grid Fund executives and state and territory counterparts for the inaugural Annual National Water Grid meeting over 2 days. The meeting shared learnings on successful project deliveries and case studies throughout Australia.

Summary against evaluation domains	
Impact	**Targeted and efficient investment in rural water infrastructure:** ▪ Through the delivery of infrastructure projects like the Macalister Irrigation District (MID) Phase 2 Modernisation Project and Goulburn-Murray Water Connections Project the rural water infrastructure project team are supporting rural communities to be adequately prepared to meet the challenges of drought and climate change. ▪ DEECA has developed or overseen detailed business cases, secured funding and provided oversight and governance of new and ongoing projects with the ongoing submission for funding from the twice-yearly National Water Grid Fund rounds. ▪ Improved rural water security in targeted areas through governance and support to range of projects focused on improving water security, boosting productivity, supporting emergency preparedness, and providing significant regional community benefit. **Improved transparency and accountability of government investment:** ▪ DEECA has worked with water corporations and the Australian Government to seek funding for projects consistent with the Water for Victoria investment principles. There has been success in aligning project bids with National Water Grid Authority investment frameworks to leverage contributions from the Australian Government. This has resulted in successful funding bids for projects like Wannon Water's Water for Wannon Project, the first successful peri-urban funding bid under the revised National Water Grid Authority framework. ▪ DEECA continues to deliver projects on time and within budget, in agreement with the National Water Grid Authority. ▪ DEECA continues to support and provide practical feedback to the Commonwealth on their refinement of National Water Grid Fund program. ▪ Additionally, DEECA has facilitated clear pathways for the close out process for projects that are entering completion, and in particular, enabled strong hand over for stakeholders in carrying out water savings audits. This has ensured clear responsibility of projects and associated risk post construction.
Effectiveness	DEECA has continued to build on the quality relationship with stakeholders within water corporations and the Australian Government.
Appropriateness	Funding and resources were allocated in a way that matched the appropriate needs in governing the growing number of projects they oversee. The Governance and Oversight team was funded in line with Victoria's statutory functions more broadly, as set out in: 1. the Water Act 1989 2. Part 4 of the Climate Change Act 2017 and pilot Water Sector Climate Change Adaptation Action Plan 3. Australian Government's National Water Infrastructure Development Fund funding guidelines and the State's Water for Victoria plan 4. Provided oversight of projects that delivered water savings to meet the State's obligations under the Basin Plan. Governance and oversight of projects has been affected by the COVID-19 Pandemic through resourcing challenges, escalation construction costs, supply chain delays, rescoping constraints and inflated manufacturing costs. They effectively managed project timelines in agreement with key stakeholders, to ensure risks were managed through the need for projects to be rescoped or managed within budget. Strategically the scope of projects available for funding partnerships has increased with regional and peri-urban interfaces being considered for and awarded funding, and there is an increase in IWM including recycled water projects. This has diversified the portfolio of works for Governance and Oversight within the Statewide Infrastructure and Rural Strategy Division.

	New projects are more rigorously considered for Traditional Owner outcomes, through early engagement more consistent with community expectation, the State's commitment to Aboriginal self-determination through the Water is Life Program and reflected in the changes to funding frameworks of the Australian Government's National Water Grid Fund.
Efficiency	This project's objective is to improve efficiency, effectiveness, and capability in investing in rural water infrastructure. DEECA has a consistent and repeatable engagement approach in seeking new project proposals from water corporations, and engaging with the Australian Government to ensure proposals are appropriate for submission for co-funding. This ensures both DEECA and water corporation resources are maximised. Other funding sources from the State and National Water Grid Fund for some projects, including MID 2 and drought resilience works in reviewing and expanding Victoria's network of Emergency Water Supply Points. DEECA remains open to and carries our environmental scanning for additional sources of funding to deliver similar outcomes within Victoria.
Legacy	Note number of close outs underway - ongoing engagement in project close out processed to ensure little to no risk to central government. Attracted investment leading to improved service delivery and water supply. Building of corporate knowledge and relationships to continue to governance of major water infrastructure projects.
Future priorities	The need for continued governance and oversight capacity in Statewide Infrastructure and Rural Strategy Division is an ongoing requirement to ensure new and ongoing projects meet DTF, legislative requirements and community expectations. As the climate continues to dry and investment in water security for Victorians progresses, the delivery and oversight of projects, development of business cases and investigation of new technologies will require continued resources and capacity.

1.23 SIRS2 - Sustainable Irrigation Program Implementation - Rural Water Policy Implementation

Initiative	**6. Water Wise Rural Communities: Rural-Infrastructure and Sustainable Irrigation Streams**
Project	SIRS2 - Sustainable Irrigation Program Implementation - Rural Water Policy Implementation
Description	The Sustainable Irrigation Program sought to work in with complementary programs delivered by CMAs, Agriculture Victoria and rural water corporations to achieve the following outcomes: ▪ Improved resilience and adaptability of Victoria's irrigation sector to reduced water availability ▪ The offsite impacts of irrigated agriculture are managed within agreed targets ▪ Increased responsiveness and uptake of rural water policy across the irrigation sector
Outputs	The project is composed of the following main funding streams: ▪ Irrigation Frameworks – funds Land and Water Management Plans (LWMPs) and other relevant strategies that identify key regional issues and mitigation measures. ▪ Wise Water Use and Best Practice – focuses on building irrigator capacity to adapt to reduced water availability as well as minimising the impacts from excessive water use. ▪ Irrigation Drainage and Management – supports the optimisation of irrigation drainage management, based on cost and risk in priority catchments.

	▪ Basin Salinity Management 2030 (BSM2030) – ensures compliance with schedule B of the Murray-Darling Basin Agreement and BSM2030 strategy. This stream focuses on assessing and monitoring the salinity impact of land and water management activities in the Basin. ▪ Rural Water Policy – engages in a diverse range of activities that seek to promote social, environmental and economic outcomes in irrigated regions through rural water policy reforms.
Summary against evaluation domains	
Impact	**Irrigators are supported to make timely and informed decisions:** ▪ The program has delivered over 3,000 engagement event participations, including field days aimed at improving knowledge and skills relating to irrigation. This in been provided in conjunction with one-to-one irrigation extension advice and case management as well as webinars on topics ranging from information on changes to policy that has implications for irrigation water availability, delivery and use as well on farm irrigation advice. This has continued to support informed decision making in relation to a range of irrigation water use practises, including planning for changes in farm irrigation layout and optimising on-farm irrigation water use, particularly in relation to pressurised irrigation (which when not set-up correctly can affect irrigation water application uniformity and also energy use in applying water). ▪ Tools and information pieces have been produced to assist with future planning and longer-term needs. For example, comprehensive research into the potential impacts of climate change on horticultural developments and regional water table mapping. Field day training seminars recently delivered on lateral move and centre pivot irrigation systems to Northern and Southern irrigators has provided knowledge and skills in managing irrigation uniformity and optimising efficiency from a water an energy perspective. **Rural water policy is responsive to emerging issues and supports wise water use and resilience to climate change:** ▪ RWP has continued to work with Victorian irrigation communities on understanding and managing socioeconomic impacts of further water recovery from Victoria under the Murray-Darling Basin Plan. Key highlights include: - Publishing the 'Social and economic impacts of Basin Plan water recovery in Victoria' report which outlined how previous water recovery reduced irrigation and regional viability and adversely impacted the water market. - A 2022 update to the report 'Water supply and horticultural demand in the southern Murray-Darling Basin' prepared by Aither, which predicts future changes and implications for the water sector under a variable climate. - Releasing the Victorian Government's 'Planning our Basin future together– a prospectus to safeguard Victoria's environments and communities in the Murray-Darling Basin' in May 2024, outlining Victoria's strategic approach to further water recovery in the context of the legislative changes made by the Australian Government. During development of the 'Prospectus', RWP led extensive community and stakeholder engagement. Consultation input sought through Engage Victoria website garnered over 100 submissions (93 survey responses and 22 written submissions), in addition to feedback provided to this prospectus document provided through direct meeting discussions. - RWP completed a 12-month feasibility study into reconfiguration options for the Broken system involving consultative committee co-designed project principles and extensive community engagement. - RWP has continued to coordinate the Solar Guideline process and contribute to key renewable energy-related policy and planning projects to ensure alignment with state planning policy on the protection of declared irrigation districts. - RWP provided policy input to the Central and Gippsland Region Sustainable Water Strategy (CGSWS). This included formulating and facilitating the

	development of agricultural water-related policy responses and actions for inclusion in the CGSWS. - RWP actively contributed to the development of the Goulburn Murray Resilience Strategy and provided state government support for implementation, including through the Agricultural Redevelopment Coordinator project. - The extensive land and water use mapping conducted across key irrigated landscapes in Victoria through the Regional Integrated land and Water Use Mapping Program (RILWUM) has shown significant land use change over time. Valuable data collection and information sharing achieved through RILWUM with our partners is helping to identify trends and emerging risks to maintain management frameworks that are fit for purpose. **On-farm irrigation practices are improved:** ▪ The irrigation extension program provides a range of incentives that are tailored to regional needs, whether it be irrigation system upgrades, whole farm plans, scheduling equipment, re-use systems, soil surveys, system checks and more. We've seen widespread uptake of the incentive Programs, which are a key mechanism for driving productive and sustainable irrigation practice. ▪ For example, there have been approximately 86 incentives approved for Whole Farm Plans (WFPs) across the state (from EC5 and EC5.2). WFPs maximise all aspects of on-farm operational capacity and efficiency, whilst minimising environmental impacts. Feedback on the WFP Program in the Goulburn-Murray Irrigation District has been very positive, with 91% of recipients reporting satisfaction with their plan. ~75% of recipients would not have invested in a WFP if it weren't for the incentive, showing that it's the program exclusively driving this change and ~97% agree that the Program should continue, highlighting its value. ▪ Further, the program has tracked the implementation of WFPs to show that physical works are being undertaken and actually achieving improved practices and outcomes. For example, 72% of farms have completed over 50% of their infrastructure installation. WFPs as a mechanism for improved efficiency help irrigators prepare for a future with reduced water availability. **The impacts of irrigated agriculture on salinity and water quality are managed within agreed target:** ▪ The establishment of Drainage Course Declarations (DCDs) secured improved irrigation drainage for 12,670 ha of farm land (including the Waranga priority drainage project), helping mitigate the impacts of waterlogging, salinity and elevated water tables. ▪ There have been 6 technical reviews of accountable actions completed under the BSM2030 register in Victoria and another 4 technical reviews are currently progressing. ▪ By doing so, not only are we meeting these obligations, but we are maintaining an accurate view of the state's salinity risk profile. ▪ In addition to the technical reviews, the regional stakeholders conduct extensive groundwater and surface water monitoring. This has allowed for longer-term groundwater trend analysis and adaptive risk management.
Effectiveness	COVID-19 acted as a major disruption to the implementation of the Sustainable Irrigation Program throughout the EC5 period. Practical in-person support for irrigators became difficult, however the program adapted, adopting new ways to engage with irrigators to provide the support needed. This included adoption of webinar delivery to enable dissemination of information over a broad geographical reach and allowing people to view these online presentations after the event. A weekly irrigation requirement summary email was piloted to provide information on climatic conditions and irrigation demand across Northern Victoria during the irrigation season. This trail has provided popular and efficient in providing an additional decision support to irrigators seeking to manage water budgets and

	productive use of water (with over 800 subscribers to these e-newsletter and also accessing other online events). These new ways of engagement were also adopted by DEECA and our agency partners to ensure that communication and collaboration remained constant, in addition to the more traditional face-to-face approaches (which support a more interactive and nuanced set of information exchange). Despite the challenge that COVID-19 posed, the program was still able to deliver on a lot of the activities and outputs identified in the Program logic.
Appropriateness	Changes to strategic direction ▪ Over the EC5 period, Victoria has experienced above-average wet years and significant. Irrigation drainage management has become a heightened priority to support irrigators under a variable climate. ▪ Another strategic consideration for EC5 has been the changes to regional irrigation footprints. Through water-trading we've seen both reduction and expansion of regional footprints, namely a significant increase to the rate of development in the Mallee. ▪ EC5 has demonstrated how the Program responds to the needs of the regions in supporting opportunities for Traditional Owner collaboration, whether it be supporting Traditional Owners who own agricultural land, or engaging with Traditional Owners on Drainage Course Declarations or co-hosting events to promote cultural learning and joint management.
Efficiency	Innovations around the Drainage Course Declarations and associated engagement, design and implementation works has provided for cost-effective shift in the irrigation drainage program which can be built on in future investment to maximise environmental, drainage management outcomes. Investment through EC5 has supported the irrigation sector in reaping benefits of irrigation investment, including the distribution of water savings to funders including the irrigation sector. ▪ Sustainable Irrigation Program has developed a guidance document to support good governance practices in the disbursement of public funds via grants programs. This has helped to support transparent decision-making practises which deliver the improved water management outcomes of the EC funding in a cost-effective way. ▪ RWP has completed the Irrigator's Share Distribution (ISD) project, delivering 77.68 GL of water recovered under the Connections Project to eligible delivery shareholders in the Goulburn Murray Irrigation District. The project was undertaken in close collaboration with Goulburn Murray Water and irrigation stakeholders.
Legacy	▪ Investment in the planning and engagement processes through the land and water management planning framework and updating the Irrigation Development guidelines to ensure they remain contemporary to technology, policy, and legislation. ▪ Compliance with the BSM2030 ensuring Victoria's ability to understand and manage salinity risks within the Victorian portion of the Murray-Darling Basin. ▪ Finalisation of the Shepparton Irrigation Region Land and Water Management Plan 2050 which will enable continued community input to government efforts in supporting a sustainable and resilient irrigation sector in that region. ▪ Development of responsive and current information on trends of land and water use, and data to support informed decisions about socio economic impacts of water recovery projects on the irrigation sector. ▪ RWP has completed the process to review the Lake Eildon Houseboats regulations, remaking the regulations in June 2024 following extensive government agency, stakeholder and community engagement.

Future priorities	▪ There is a key need to continue the implementation of BSM2030. Salinity risk in Victoria is dynamic and requires constant adaptation to mitigate risk and meet our state and federal obligations. ▪ BSM2030 review – The MDBA will commence a strategic review of BSM2030 in consultation with Basin jurisdictions in 2026 with long-term impacts to salinity management in Victoria and across the Basin. Preparations for Victoria have begun during EC5 in 2022. This involved DEECA, CMAs and water corporations undertaking strategic review workshops and progressing key salinity impact assessments such as the Victorian Mid-Murray Storages salinity impact assessment and Shepparton Irrigation Region Land and Water Management Plan accountable action review. These activities have provided input for MDBA to consider in scoping the BSM2030 strategic review. They will also establish a technically sound understanding of salinity management in the Basin at the start of the strategic review and position Victoria to provide informed policy input during the strategic review. DEECA, CMAs and water corporations will need to undertake further technical and strategic activities during the life of the BSM2030 strategic review to position Victoria as an effective partner. ▪ LWMPs have a strong history in delivery results for irrigators, the broader community and the environment. LWMPs are a key mechanism to secure future support for these stakeholders, especially helping them adapt to regional-specific issues and a constantly changing sector. During EC5 LWMPs in 5 catchment regions have been implemented and reviews/updates have been occurring (with a new plan for the Shepparton Irrigation Region prepared by Goulburn-Broken CMA with input from partners including North Central CMA as a neighbouring catchment). This work funded through the EC5 project has aided regional priority setting to be contemporary to emerging issues and to take on information gained through activities such as the land use mapping project outputs. ▪ Sustainable Irrigation Program with delivery partners to ensure that the irrigation drainage program continues to be responsive to the changing climatic conditions, irrigation land-use patterns and institutional approaches to the funding any agreed drainage management. Given it is a function that is closely linked to on-farm productivity and off-farm impacts and will promote the sustainability and viability of regions, this will need ongoing consideration in addition to the environmental benefits that accrue due to reinstatement of more natural water flows. ▪ There will be a need to continue actively managing and responding to socioeconomic impacts of further water recovery under the Basin Plan in partnership with key government agencies, stakeholders and the community. ▪ There are always new and emerging risks in this sector, for example climate change or cumulative impacts of increased development. For the sector to adapt, the project must continue to provide extension support to irrigators, whether it be improving knowledge, resilience or providing practical assistance. Extension support was paramount in the response to the 2022 floods. It will be paramount to support irrigated agriculture sector resilience to future dry seasons. This cannot be undervalued to promote adaptation and protect future prosperity.

1.24 CWCT06: Aboriginal Water Program

Initiative	**7. Improving recognition and management of water by Traditional Owners and Aboriginal Victorians**
Project	CWCT06: Aboriginal Water Program
Description	This investment seeks to address the impacts of the historical exclusion of Traditional Owners and Aboriginal Victorians from the way that water is managed, accessed and used in Victoria. The investment into this project will address the problem by: ▪ Supporting Traditional Owner involvement in water management by funding Aboriginal Water Officer positions.

	▪ Maintaining governance resourcing for the current number of meetings of the Aboriginal Water Officer Network per year. ▪ Employing Victorian Public Service staff to facilitate the Aboriginal Water Program, establish and proactively manage funding agreements, develop the Aboriginal Access to Water Roadmap, and build and maintain effective, respectful relationships with Traditional Owner partners as a foundation for Water and Catchment Group's work.
Outputs	▪ Traditional Owners are employed in the water sector. ▪ Traditional Owners are supported to self-determine priorities, involvement and projects in the water sector ▪ Traditional Owners influence over water policy and management decision-making is increased. ▪ Aboriginal values, priorities and knowledge of water are acknowledged, documented and influence water policy, management and opportunities. ▪ Traditional Owners are enabled to manage water for cultural, commercial and spiritual purposes ▪ A Traditional Owner Access to Water Roadmap is developed.
Summary against evaluation domains	
Impact	**Key change – development, release and commencing implementation of Water is Life: Traditional Owner Access to Water Roadmap:** ▪ Released in September 2022, Water is Life is a nation-leading multi-lingual policy that places government's policy position and Traditional Owner voices side by side. The policy establishes pathways to increase Traditional Owner roles, responsibilities and resourcing in water management in Victoria and forms a key pillar of the Department's Aboriginal Water Program and its commitment to enabling Traditional Owner self-determination. ▪ 'Water is Life is not a Treaty, but it is underpinned by the Victorian Government's commitment to justice and self-determination. Water is likely to be a significant consideration in future Treaty negotiations. Policies and actions in Water is Life will be regularly reviewed and updated in line with outcomes from the treaty process' from p18 Water is Life. ▪ Development of Water is Life (2021-2022) included a total of 61 Traditional Owner Nation-level, regional and statewide workshops with Traditional Owners, as well as the publication of 27 Traditional Owner Nation Statements alongside the government's policy commitments in the final Water is Life document. ▪ Delivery of the Cultural Water for Cultural Economies project and 10 Traditional Owner-led pilot projects focused on access to water for economic development (2019-2021), provided foundational information used to inform the government's drafting on Water is Life. The Cultural Water for Cultural Economies project included over 40 meetings and workshops with representatives from 20 Traditional Owner groups. ▪ The launch of Water is Life, and the policy commitments within it, has changed how Government partners with Traditional Owners and has sharpened the focus on working towards Treaty. **The Water Country and Community Program partners with and directly funds:** ▪ All 11 Traditional Owner Corporations recognised as Registered Aboriginal Parties, 4 catchment management authorities (CMAs), and 7 Traditional Owner groups without formal recognition. ▪ Program funding has enabled improved relationships between Traditional Owner groups and water sector partners such as CMAs, including through the funding of 24 full-time equivalent Aboriginal Water Officer roles and a suite of water-related projects. The program strengthens Traditional Owner capacity and enables greater Traditional Owner involvement in the way water is managed and delivered in Victoria.

	▪ '[The] value of relationship has changed; [we're] seen as active participant, rather than bystander' – Aboriginal Water Officer reflecting on the improved relationship their organisation has with the water sector with regard to caring for Country (Aboriginal Water Officer Annual Report 2022-23) ▪ 'As part of our ongoing partnership we are committed to recognising and including Aboriginal values and objectives for water in all water planning, management and decision-making, with feedback and guidance from [TO organisation name]' – Aboriginal Water Officer role based within a CMA, 2023. ▪ 'Taking community on Country is the most amazing thing about this Program – last on Country meeting was really special and powerful' – Aboriginal Water Officer 2023 **Increased water available for Traditional Owner groups:** The Victorian Government recognises First Nations' and Traditional Owners' rights and connection to water through Water for Victoria (2016) and is committed to increasing the water available to Traditional Owners to use for self-determined purposes. During EC5, the Victorian Government has already started returning water to Traditional Owners: ▪ 2 GL section 51 licence on the Mitchell River returned to Gunaikurnai Land and Waters Aboriginal Corporation in south-eastern Victoria ▪ 2.5 GL section 51 licence on the Fitzroy River system returned to Gunditj Mirring Traditional Owners Aboriginal Corporation in south-western Victoria ▪ Two licences for cultural water use (200 ML at Buchan Munji and 500 ML on the Tambo River) issued to Gunaikurnai Land and Waters Aboriginal Corporation. ▪ A number of water returns in progress at the time of this End-Of-Tranche evaluation ▪ In March 2022, Victoria reported for the National Agreement on Closing the Gap (Inland Waters Target) that Traditional Owners and Aboriginal Victorian organisations held 4.298 GL of water entitlements. As at 30 June 2024, the volume of water entitlements has increased to 9.228 GL. ▪ Six policies and strategies that reflect Traditional Owner led processes for the sustainable management of water: - Water for Victoria (Actions 6.1, 6.2, 6.3, 6.4, 10.4, 10.8 and 10.9) - Water is Life: Traditional Owner Access to Water Roadmap (released September 2022) - CGRSWS (released September 2022) - Water Resource Plans (North and Murray Victoria) - Burndap Birrarung burndap umarkoo, the Yarra Strategic Plan (YSP) (released February 2022) - Waterways of the West Action Plan (December 2021) ▪ Ten Traditional Owner Organisations in the first year of the Water Country Community Program have reported a greater involvement in and influence on water policy and management decision-making. ▪ The number of projects supported through CMAs for Traditional Owners and Aboriginal Businesses is 30 across ten CMAs with total funding of $883,802.
Effectiveness	▪ The project promotes the effective management of Victoria's water systems by strengthening partnerships between government and Traditional Owners to increase Traditional Owner roles, responsibilities and resourcing in water management. By increasing Traditional Owner involvement in water policy, management and decision-making, as well as increasing the water available to Traditional Owners, water management in Victoria increasingly benefits from both Traditional Ecological Knowledge and Western science to deliver environmental, social, cultural and economic outcomes.
Appropriateness	▪ The Aboriginal Water Program is a key pillar for implementing the government's commitments under Water for Victoria to increase the recognition and inclusion of

	Aboriginal cultural values and uses in water management, increase Aboriginal access to water, and increase Aboriginal capacity in the water sector through delivery of ongoing actions (Actions 6.1, 6.2, 6.3, 6.4, 10.4, 10.8 and 10.9) ▪ The Water Country and Community Program (stages 1 and 2) administered by this project strongly aligns with Pupangarli Marnmarnepu (Aboriginal Self-determination strategy) ▪ The Program is designed to better include Aboriginal people in water management and to reconnect communities to water for cultural, economic, customary, and spiritual purposes. It does this by making funding available for Aboriginal Water Officers and projects to better progress Aboriginal access and management to water, for self-determined purposes. ▪ Specifically, the resources funded within Traditional Owner Organisations, speak to this alignment and the value of these resources as conduits to facilitate community water related priorities, develop strategies and to partner with Government on water management policy decisions.
Efficiency	▪ Additional funding under EC was sought under the Water Access and Ownership Traditional Owners budget bid ($3.353 million) for the coordination and initial delivery on the Aboriginal Access to Water Roadmap. This funding was approved to ensure effective coordination of the Aboriginal Access to Water Roadmap (including through grants to Traditional Owners), and support to enable further Traditional Owner partnerships that make efficient use of Government funding and Traditional Owner capacity
Legacy	▪ Significant progress has been made through EC investment in the Aboriginal Water Program since 2016 and the benefits are starting to be realised. Continued investment into the Aboriginal Water Program is necessary to maintain employment of Aboriginal Water Officers and enable continuity of long-term Traditional Owner-led water-related projects and priorities. The continuation of the Aboriginal Water Program is a key enabler and foundation for Water is Life implementation. ▪ Project has started foundational changes to the water and catchments sector, articulated in Water is Life. ▪ Water is Life acknowledges that since the colonisation of land and waters, Australia's First Nations peoples have been treated as bystanders in the management, allocation and ownership of water and water landscapes. ▪ Water is Life takes a restorative justice approach that respects the rights of Traditional Owners and enables the omission of their water rights and interests to begin to be addressed. ▪ Water is Life establishes pathways to increase Traditional Owner roles and resources in water and waterway management across Victoria, and implemented fully will deliver tangible outcomes and staged systemic change.
Future priorities	▪ Supporting Traditional Owner involvement in water management by maintaining Aboriginal Water Officer positions in Traditional Owner Groups across Victoria and CMAs ▪ Maintain governance resourcing for the current number of meetings of the Aboriginal Water Officer Network (AWON) per year, and oversight of Water is Life implementation (Outcome 12 in Water is Life). ▪ Provide funding and resourcing for Traditional Owner-led water management projects and Traditional Owner participation in Water is Life pilot studies to initiate the 'learning by doing' pathway. ▪ Provide an annual budget for any fees and charges eventuating from projected water returns in line with Water is Life (Outcome 9) during the EC6 period ▪ Maintain current Victorian Public Service staffing to: - build and maintain effective, respectful relationships with Traditional Owner partners - lead delivery of Water is Life policies, actions, and reform

	- establish and proactively manage funding agreements.

1.25 PSP1: Water Security, Resilience and Oversight of Strategic Investments / Long-term Water Security

Initiative	8. Building a Sustainable Water Sector
Project	PSP1: Water Security, Resilience and Oversight of Strategic Investments / Long-term Water Security
Description	To help address challenges such as climate change and population growth, the Victorian water sector has many interrelated planning processes including LTWRAs, Sustainable Water Strategies and Urban Water Strategies that contribute to the maintenance of water security. However, these processes are all at different scales and the responsibility of undertaking these framework sits with various specialists within government and across partner organisations. Fragmented and misaligned frameworks can lead to an increased risk of the Victorian water sector being unable to continue to provide safe, reliable and affordable water for cities and towns or support a healthy environment and prosperous water-dependent economy across the state. This project sought to promote the sustainable management of water by developing a long-term, coordinated approach for improving water security across Victoria, including reforms to the water planning and management frameworks for the sector and embracing new and innovative methods of service delivery and knowledge sharing. This project also sought to improve responses to emerging pressures on water resources and the sector more broadly through a circular economy and renewable energy transition. The project was divided into 5 sub-projects aimed at supporting different aspects of long-term water security.
Outputs	▪ **Blue Urban:** - Reviewed the 2016 Urban Water Strategy guidelines and developed updated Urban Water Strategy guidelines for the water sector. - Coordinated 12 x Urban Water Strategies from urban water corporations and 1 x joint strategy – Greater Melbourne Urban Water System Strategy published by each urban water corporation. DEECA has developed a statewide summary of water security across Victoria and major planned augmentations based on combined Urban Water Strategies results. - Coordination of the 2021-22, 2022-23 and 2023-24 Victorian desalination orders and supporting desalination handbook and communications material. ▪ **Blue Circle:** Established a Water Sector Circular Economy Working Group and collectively developed the 2022-2023 and 2023-2024 Water Sector Circular Economy Action Plan to deliver identified priority actions including creating a shared measurement framework for circular economy in the Victorian water sector. Provided $815,000 in seed funding to attract more than $1.9 million in water sector investment towards research and projects focusing on water sector needs in a circular economy transition. ▪ **Blue Community:** Included as Action 9-5 in the CGRSWS, this involved consultation and workshops with the sector, creation of Water and Catchments Group Communications Community of Practice group, and implementation of 3 x research projects (brand awareness, community knowledge and engagement review). ▪ **Blue Global:** Memorandum of Understanding with Israel for international knowledge sharing was developed but not endorsed, online and in -person delegations with countries from Whole of Victorian Government target regions including South East Asia, workshops and knowledge sharing, supported Victorian engineering students on a study tour to India. Program ceased in 2023-2024 due to reprioritisation of budget and resources within Water and Catchments Group.

	▪ **Blue Print:** Water Security Discussion Paper for the Secure Water Innovative Futures Together (SWIFT) internal working group (2019), Frontier Economics: Water Planning Assurance (September 2022), First principles review of the urban water security planning framework (2023).
Summary against evaluation domains	
Impact	**Comprehensive, better aligned state-wide water planning involving partnerships with traditional owners:** ▪ The 2022 Urban Water Strategy process was improved through the review of the Urban Water Strategy guidelines, resulting in several changes to core requirements to improve the next iteration of Urban Water Strategies. This included greater planning for water security including Traditional Owner engagement, stress test scenarios and alignment with other water planning frameworks. Further accountability has been added for water corporations through mandated reporting on the delivery of key Urban Water Strategy actions annually through their Annual Water Outlooks. ▪ The water assurance project is reviewing the broader water planning framework to ensure it works efficiently and effectively to deliver water security for the community at an acceptable cost. ▪ Blue Community will align community messaging on water security through building capability in water literacy with effective and targeted communication strategies. This will include the incorporation of Traditional Owner knowledge, view and values in a way that emphasises self-determination. **Improve sectoral capability and capacity to address threats:** ▪ Transitioning to a circular economy can improve sectoral capability and capacity for the water industry to address threats by reducing emissions and pollution, decrease dependency on unsustainable energy sources and materials and provide new revenue streams and market opportunities through resource recovery. The establishment of the Water Sector Circular Economy Working Group has supported capacity building by sharing learnings, discussing emerging circular economy trends, and showcasing innovative projects to wider audiences to break information silos in the sector. Proactive cross-government collaboration has also enabled the water sector to effectively contribute to strategies relating to waste, energy and climate change. ▪ The development of annual Water Sector Circular Economy Action Plans identifies the most urgent barriers to be addressed to build circular economy capability within the sector and develop outputs that inform future government policy. ▪ Blue Global outputs have contributed to improving sectoral capability in water management through knowledge exchange seminars and delegations. ▪ Blue Community has identified focus topics and preferred organisations to convey messages to the Victorian community, which is informing tailored strategies to increase future engagement on water planning and decision making.
Effectiveness	Effectiveness indicated through delivery in line with workplan.
Appropriateness	▪ **Blue Urban:** The project was planned in a systematic way to be able to identify alignments and misalignments within the Urban Water Strategy framework and broader water policy framework. Timing the guidelines review before the next cycle of Urban Water Strategy allowed the updates to be applied effectively while not impacting water corporations' planning processes. Engagement with the water corporations during the guidelines review further improved the delivery of Urban Water Strategy and an evaluation survey upon completion has gathered feedback on the 2022 Urban Water Strategy guidelines and development process to improve future iterations. ▪ **Blue Circle:** This project has been effective to support the delivery of policy actions through the Circular Economy Action Plans and provide meaningful input into the development phase of cross-portfolio strategies at the state and federal level relating the waste, energy and climate change. The Water and Catchments

	Group adopted a collective impact model to support the Water Sector Circular Economy Working Group to identify and deliver progress towards a shared goal while balancing resourcing constraints within the department. ▪ **Blue Community:** This activity was carefully planned to ensure it did not replicate existing work underway across the sector. Intensive consultation was undertaken with water corporations and other organisations ranging from the Water Services Association of Australia and Water Sensitive Cities Australia to VicWater to ensure that all activity complimented or supported existing sector work. ▪ **Blue Global:** This Program has been largely unplanned and reactive due to a lack of resources within the team to sustain appropriate levels of planning. This was consistently raised as a risk with Divisional executives and that risk has been accepted given the post-Covid international environment. The program ultimately ceased in 2023-2024 due to reprioritisation of budget and resources. ▪ **Blueprint:** The project activities were appropriately designed and delivered to support and complement the needs of the major plans and strategies being delivered by the Water and Catchments Group and water corporations over the EC5 period. The Water Assurance Project will progress the work commenced in this sub-project.
Efficiency	▪ Urban Water Strategy guidelines released on time and budget to support the urban water corporations develop their 2022 Urban Water Strategies. ▪ All final Urban Water Strategies were submitted in 2022 (instead of 2021) to accommodate diversion of water corporation internal resources to manage COVID, bushfires, floods and other emergencies within their region. This decision was made by agreement between the department and individual water corporations, and with approval from the Minister. ▪ Desalinated water orders were signed on-time and completed by required due dates. This included appropriate communication material to support decisions to order no desalinated water in 2023-2024 and 2024-2025. ▪ Activities under Blue Circle have been delivered on time and within budget, with on-going deliverables on-track. Through effective information sharing across the Water Sector Circular Economy Working Group, water corporations applied and were successful in receiving grants from Sustainability Victoria, DEECA Energy and DEECA Waste portfolio groups to progress circular economy projects that more closely align with waste and energy outcomes. ▪ Completed activities under Blue Community have been delivered on time and within budget.
Legacy	▪ Establishment of the 2021 Urban Water Strategy guidelines has provided a clear structure and requirements for future iterations of urban water strategies and includes consideration of emerging water requirements such as for renewable energy and greater partnership with Traditional Owners on water-related decisions. The renewed Urban Water Strategy guidelines also increased transparency and accountability for the delivery of Urban Water Strategy actions by mandating progress reporting within the existing Annual Water Outlook process. ▪ Establishment of ongoing working groups and communities of practice in Blue Circle and Blue Community will ensure we continue to uplift capability across the sector into the future. ▪ Advocacy has meant there has been appropriate consideration of the water sector in cross-sectoral strategies including Recycling Victoria: A New Economy; Victoria's Renewable Hydrogen Industry Development Plan and other subsequent regulations including the waste to energy framework to ensure that water sector progress will be continued without unintended barriers from government. Blue Circle has also provided valuable findings and input to inform future policy decisions within Victoria and potential implications for water corporations.

	▪ Inclusion of the Blue Circle program in the Water Cycle Adaptation Action Plan and Blue Community in the CGRSWS will maintain longer-term governance through the monitoring and evaluation of those strategies
Future priorities	**Blue Community:** Funding to implement the recommendations from Blue Community (recommendations to be delivered in 2024) ▪ Barriers to engaging with marginalised communities lead to poor outcomes that disadvantage portions of the community, funding is required to ensure marginalised communities are represented in engagement processes and planning decisions. ▪ Poorly resourced communications and engagement results in a public that cannot engage on future options, funding is required to elevate water to a position in the discourse where the public understands issues and authorises future investment. ▪ Risk averse communications policies lead to failed engagement with long-term water security, funding is needed so that the sector has the ability to move quickly when crisis emerges. **Blue Circle:** Implementation of future iterations of the Water Sector Circular Economy Action Plan and monitoring of the water sector's transition to a circular economy. Key risks and priorities over EC6 include: ▪ Appropriate management of biosolids and sustainable reuse options that support delivery of core wastewater functions while contributing to a circular economy. ▪ Ensuring government review processes of circular economy projects are clear and consistent, and that water corporations establish good governance frameworks for these types of projects into the future without compromising their core water and wastewater functions. ▪ Improve the capacity of water corporations to engage with proponents across waste and energy sectors to ensure risks to water services and infrastructure are well understood and appropriately managed. **Blueprint:** Review outcomes and recommended forward approach to be delivered through Water Assurance Project throughout EC6 period.

1.26 PSP2: Sustainable Water Strategies (renamed from Central and Gippsland Region Sustainable Water Strategy)

Initiative	**8.Building a Sustainable Water Sector – Water Security, Resilience and Oversight of Strategic Investments**
Project	PSP2: Sustainable Water Strategies (renamed from Central and Gippsland Region Sustainable Water Strategy)
Description	To help address the challenges associated with providing affordable water securely, under the Water Act 1989 the Minister for Water can prepare a Sustainable Water Strategy to provide for the strategic planning of the use of water resources within a region. The CGRSWS was developed from 2019 to 2022. The CGRSWS was released by the Minister for Water in September 2022 and has set strategic priorities to improve water security in the region by developing actions to secure supplies across the region over the 50-year planning horizon to meet the challenges of population growth and climate change in the region. The project relied on EC5 funding for its development and secured approximately $58 Million in total for implementation to date (Phase 1: $56.58Million and Phase 2: $1.184 Million), with most of the EC allocation being delivered via program areas across Water and Catchments Group that are responsible for action implementation. The funding assisted with implementation of CGRSWS actions within the first two years, including on-ground projects to achieve waterway improvement and integrated water management. Part of this funding has been delivered via the SWS Program, to a total of $7.66M. Additional funding will be required for the remaining eight years of implementation to deliver on the commitments in the CGRSWS.

Outputs	▪ Draft Strategy (developed in partnership with the water industry and the Traditional Owner groups) ▪ Final Strategy (incorporating feedback from consultation with key partners, industry and peak organisations) ▪ Monitoring, Evaluation and Reporting framework. **The Strategy, outputs, to date, have:** ▪ Contributed to a greater understanding in the community and across Government of the water security challenges facing the region and a clear plan of how to address these collaboratively. ▪ Delivered a suite of integrated policy that improves water security across the region. ▪ Developed an Implementation Plan and commenced the first year of a 10-year implementation Plan. ▪ Undertaken the first Progress Report, which tabled that 79 of 96 actions started. 9 actions have been completed. ▪ Undertaken the second Progress Report, which tabled that of the 111 actions and policies in this report, 16 actions have been achieved (7 completed and 9 ongoing).
Summary against evaluation domains	
Impact	**Release of the CGRSWS draft and final reports with high acceptance of partners, key stakeholder and community** ▪ The CGRSWS Final Strategy was released in September 2022. The public consultation took place from 8 October to 10 December 2021 with well over 2000 people visiting the engagement site and downloading a copy of the discussion draft, 225 people responding to a short survey and 58 detailed submissions received. ▪ Overall, there was strong support for the CGRSWS from those we heard from with feedback highlighting the community's concern for the environment and health of our waterways and support for new manufactured sources of water. All feedback received was considered as the CGRSWS was finalised. **Development of an Implementation Plan** ▪ The Central and Gippsland Region Implementation Plan was developed in the second half of 2022, following the release of the Strategy. ▪ During 2023, DEECA has been working to coordinate delivery of the actions by establishing the first Central and Gippsland Region Sustainable Water Strategy Implementation Advisory Group (CGRSWS IAG).
Effectiveness	Effectiveness indicated through delivery in line with workplan
Appropriateness	▪ The investment was designed and delivered to maximise the collaboration between delivery agencies, DEECA and Recognised Aboriginal Party groups as well as provide opportunities for community involvement and wider water industry input. ▪ An effective governance structure supported the extensive collaborative planning process for action and policy development as well as the engagement undertaken. ▪ The Independent Panel Report made under section 22F(3) of the Water Act 1989 was published to the community in August 2022, with key findings addressed by DEECA. The Final Report found that the CGRSWS is a significant body of work but does have limitations. Some of the limitations noted were outside of the scope of the CGRSWS (such as challenges relating to groundwater, which fall under a separate body of work – GM2030, or limitations of the planning framework itself). DEECA continues to build on detailed analysis for business case development in response to the Panel's findings that the CGRSWS lacks objective analysis for actions as well as the Panels highlight that there is a need to make fundamental changes to the water planning regime.

	▪ The Independent Panel also noted that the water supply outcomes described in the CGRSWS are contingent on future funding being made available.
Efficiency	▪ Delivery the CGRSWS draft and final reports were completed within the timeline and budget specified. The Final Strategy was endorsed by Cabinet and released to the community in September 2022. ▪ The project relied on EC5 funding for its development and secured approximately an additional $58 million for early implementation of the 10-year strategy (Phase 1: $56.58 million and Phase 2: $1.184 million). Funding for the remaining 8 years of implementation is subject to future budget bids.
Legacy	▪ The Traditional Owner Partnership, established to support the development of the CGRSWS, have requested to continue through the implementation phase of the project, to support self-determination and address collective issues in a culturally safe way. ▪ The Consultative Committee, as a result of the process, structure and membership that lead to positive collaboration and meaningful policy changes; requested to continue to meet annually to ensure implementation of the CGRSWS. This has now occurred. ▪ The strategy itself provides a legacy for future implementation of the 96 actions and 41 policies and is focused on actions to improve long-term outcomes.
Future priorities	▪ Funding for action delivery. There are 96 actions and 41 policies. While many actions have commenced under funding secured from Phase 1 and Phase 2 EC5 funding, additional funding is required over the next 10 years. ▪ Funding to Continue the Traditional Owner Partnership to support self-determination through implementation of the Strategy. ▪ Coordination of action delivery by focusing on areas that require a high level of collaboration where new policy directions have been set, including findings ways to return water to traditional owners, increasing the supply of Manufactured water, involving integration and coordination with the Water Grid planning process and increasing the environmental water reserve via water recovery targets set in the Strategy. ▪ In the future, funding will be required to support future Reviews and new Sustainable Water Strategies.

1.27 PSP3: Mitigating the Risks of Small Dams

Initiative	**8.Building a Sustainable Water Sector – Water Security, Resilience and Oversight of Strategic Investments**
Project	PSP3: Mitigating the risks of small dams
Description	The purpose of the project was to assist local government authorities to reduce emergency risks and improve the safety of small dams in Victoria. The project will improve the long-term resilience and safety of local government authority operated dams and make recreational areas and public amenities safer for communities. It was also intended to provide the Victorian Government with a level of assurance that these high–risk structures are managed according to current standards and practices, improving emergency preparedness and response, and thereby reducing the burden on emergency agencies.
Outputs	**Rehabilitate structures:** ▪ The rehabilitation works for the Goldfields Dam, owned by the Central Goldfields Shire Council, have been successfully completed. The upgrade involved remediating both the dam embankment and the spillway, with a total project cost of $1,100,000. Funding for the project has been fully disbursed to the Central Goldfields Shire Council. ▪ The rehabilitation works for Baxter Park dam owned by the Frankston City Council have been successfully completed. The upgrade involved remediating both the dam embankment and outlet works, with a total project cost of

	$1,000,000. Funding for the project has been fully disbursed to the Frankston City Council. ▪ The rehabilitation works for Traralgon Reserve Large dam owned by the Latrobe City Council have been successfully completed. The upgrade involved remediating both the dam embankment and outlet works, with a total project cost of $1,100,000. Funding for the project has been fully disbursed to the Latrobe City Council.
Summary against evaluation domains	
Impact	**Improved response to dam safety incidents:** ▪ Dam failure risks posed by the three highest risk local government authority structures will be reduced with the rehabilitation works undertaken through this Program, safeguarding the downstream community, property and the environment. Furthermore, operations and maintenance plans, surveillance plans and dam safety emergency plans were developed or updated during this project for improved ongoing management of these structures. ▪ Several dam safety training programs have been conducted for local government staff over the past three years and they have been well attended (over 60 local government authority staff members attended the training sessions). All attendees provided valuable feedback to DEECA. ▪ Some local government authorities have outsourced dam safety annual inspections to external consultants due to lack of internal dam safety expertise. Local government authority staff members also attend these inspections with their consultants. This is a good opportunity for local government authority staff to gain hands on experience in dams. **Better planning and decision-making:** ▪ DEECA's Dam Safety Portal will be upgraded to include local government dams. This will enable better planning and decision-making for DEECA and other partner agencies. ▪ Better access to information on local government dam safety risks will be available to authorised users 24/7, 365 days a year. ▪ Easier and better presentation of information on key local government sector dam safety risks with improved visual representation of locations of dams will be available in the future.
Effectiveness	Effectiveness indicated through delivery in line with workplan
Appropriateness	The projects are consistent with the objectives of environmental contributions as well as the following: ▪ Water for Victoria – Action 10.12 ▪ DELWP 2020 Strategic Priority ▪ Water Act 1989, Emergency Management Act 2013, Emergency Management Manual of Victoria
Efficiency	Under this funding program, grant funding was provided to the following local government authorities: ▪ Central Goldfields Shire Council – to remediate Goldfields Dam (grant funding of $ 930,000 provided with contribution of $ 170,000 in kind by local government authority) ▪ Frankston City Council – to remediate Baxter Park Dam (grant funding of $923,000 provided with contribution of $77,000 in kind by local government authority) ▪ Latrobe City Council – to remediate Old Inglewood Dam (grant funding of $927,000 provided contribution of $173,000 in kind by local government authority) The program will be delivered on time and within budget. Inputs into the program were applied well to produce expected outputs. The Program budgets were fully expended annually, reflecting the effective and careful planning that went into establishing the Program.

	Most of the funds in the project to mitigate risks on small dams were spent as grants with our lead delivery partners, local government authorities, to deliver the remediation of the identified high-risk structures. DEECA's enterprise Grants Management System was used to administer these funding agreements. The Grants Management System allows for tracking, approvals, progress and final reports, evaluations. Local contractors were used for construction work. While providing local employment, local industries and businesses gained significant exposure.
Legacy	These projects have assisted in putting in place well established systems, processes and practices to support Victoria's emergency sector for local government dam safety related emergencies, contributing to: ▪ The ongoing program of information sessions for local government authorities that own dams in dam safety management. ▪ DEECA assisting the local government sector in undertaking annual emergency exercises with relevant stakeholders. ▪ Local government dam safety information will be uploaded into DEECA's dam safety portal during this year. Local government authority dam safety information is now available during and after emergencies.
Future priorities	This program has highlighted the importance and the obligations of managing dams by local government authorities. It is important to continue collecting relevant information and assessing risks associated with small council dams in Victoria, and where possible providing funding as a catalyst to manage the risks.

1.28 CWCT07: CGRSWS Funding Stream 2 Diversify Water Sources and Increase Water Efficiency

Initiative	**9. Phase One Implementation of the Central and Gippsland Region Sustainable Water Strategy**
Project	CWCT07: CGRSWS Funding Stream 2 Diversify water sources and increase water efficiency
Description	▪ Water-related climate challenges are particularly evident in the Central and Gippsland region. The region's water supply will need to double over the next 50 years to meet growing demands and because there is less water flowing into our rivers and dams. We need to apply an integrated water management approach to understand how new sources of water such as stormwater and recycled water can be used to meet the region's water needs as well as help reduce the environmental impacts of urbanisation on receiving waterways. ▪ This early implementation of the strategy is drawing on the systems and governance in place from the IWM Program and the Water Efficiency Program. The project objective was expected be achieved through the IWM Water Efficiency Programs by: - Identifying and co-investing $5.7 million in place-based priority projects to increase the use of rainwater, stormwater and recycled water across the CGRSWS region. - Co-investing $1.2 million in the Jan Juc Creek Daylighting project ($0.7million) and Winchelsea IWM stormwater capital works project ($0.5 million). - Co-investing $24.829 million in the construction of a recycled water network to deliver recycled water to public open space, golf courses, horticulture and nurseries in the Kingston, Bayside and Monash municipalities. - Providing $7.3 million in support for businesses and councils to save water and maintain green open spaces through water efficiency audits, rebates, digital metering and to invest in behaviour change measures.

Outputs	**Outputs delivered under IWM projects:** ▪ $31.729 million co-invested in 17 IWM projects throughout the Central and Gippsland region. Outputs from these projects include: ▪ An estimated 2,078 ML/year of alternative water produced for use from the 8 capital on-ground projects. ▪ Nine feasibility studies, business cases or concept designs for alternative water projects and large-scale alternative water planning. **Outputs from the $7.3 million water efficiency component are:** ▪ Delivery of WaterSmart across all 10 CGRSWS urban water corporations, assisting a minimum of 370 large and medium non-residential customers to implement on-site water use monitoring and/or undertake water efficiency audits. (two-year delivery period from September 2023 to September 2025). At 30 June 2024, the program had assisted 408 customer sites, exceeding the minimum target of 370. ▪ A synthesis of existing and planned water efficiency behaviour change projects in Victoria and other jurisdictions, to identify gaps and opportunities for collaboration (Final report Victorian urban water efficiency behaviour change projects completed in September 2023).
Summary against evaluation domains	
Impact	**Improved efficiency in non-residential orgs: Water Efficiency component** ▪ WaterSmart launched in September 2023 and at 30 June 2024, 408 non-residential customer sites were assisted to install digital water use monitoring. Water use monitoring provides essential data to customers and helps them to identify high water usage which can lead to early rectification of leaks and faulty equipment. In EC5 WaterSmart saved participating customers a total of 16.7 ML in avoided potable water usage through early leak detection and customised alerts. The program will continue for a full 2 years through to September 2025. **Increased diversification of water sources:** ▪ IWM Program has co-invested in nine capital projects which will ultimately harness an estimated 2099 megalitres of recycled water and stormwater. For example, Dingley Recycled Water Scheme: 42 km of trunk and distribution mains and reticulation network to 40 public and private sites, which will deliver 1800 ML annually of Class A recycled water from the Eastern Treatment Plant to these sites and can save up to 300 ML per year of potable water and reduce the drawdown on local groundwater. There is an opportunity for the Dingley network to be expanded to support the future populations of the Suburban Rail Loop Precincts. ▪ Nine feasibility studies, business cases or concept designs for alternative water projects and large-scale alternative water planning are exploring significant additional volumes of alternative water. The Werribee reconfiguration project is exploring substituting recycled water volumes in the order of 16 GL/year. **Return of water to Traditional Owners and the environment:** ▪ The Werribee Reconfiguration Project (exploring substituting recycled water volumes in the order of 16 GL/year) for water return to Traditional Owners and the Environment. **Contribution to waterway health:** ▪ Jan Juc daylighting project has the objective of returning the highly disturbed urban waterway to a more natural state. This includes recreating habitat, biodiversity and amenity values as well as delivering significant stormwater quality objectives to an older urban catchment that drains to a popular beach location. ▪ The stormwater harvesting concept design for the Northern and Western Geelong Growth Areas could be the only feasible way of protecting the waterways and bay

	in the region from significant adverse impacts of stormwater from this large-scale urban development. ▪ Werribee Reconfiguration project could have a significant impact on the Werribee River's waterway health through return of water to the environment and improvements in the flow regime. ▪ The three stormwater projects funded will have the beneficial impact of reducing the adverse impacts of stormwater to the waterways.
Effectiveness	Effectiveness indicated through delivery in line with workplan.
Appropriateness	In 2022, a new CGRSWS was released. The CGRSWS sets-out a range of management actions to ensure we have enough water to fully meet future needs for all users over the next 10 years. The CGRSWS had IWM and water efficiency as a central plank in meeting the forecast shortfall, together with large scale augmentation, with up to one third of the 600 GL shortfall anticipated by 2070, to be met with IWM solutions. ▪ This project focuses on early implementation of some components of the following actions identified in the CGRSWS (actions 3-4, 3-5, 3-8, 4-10, 2-1, 2 - 7, 3-8) ▪ This Program has directly addressed the identified need to diversify water sources as set out in the CGRSWS.
Efficiency	**Water Efficiency component:** ▪ WaterSmart is delivered by the 10 CGRSWS water corporations direct to their non-residential water customers. This is the most efficiency method of delivery as water corporations already have existing relationships with each customer. Program funds were allocated in consultation with water corporations and based on the percentage of high-water using non-residential customers. Audits targeted at outdoor sporting grounds leverage water corporations' existing relationships with local councils and shires and prioritise sites that have already been identified through place-based decision-making frameworks such as drought preparedness plans. **IWM component:** ▪ The funds have been carefully allocated to value for money projects identified through IWM Forum strategic processes. The management of the grants including the funding agreements are designed to ensure that funds are delivered in line with original scope. The funds have been expended in line with the original scope of this funding project. ▪ The project demonstrated efficiency by utilising existing networks and resources, especially through IWM Forums. ▪ For the IWM component the value of investment is considerable with $31.729 million leveraging in excess of $83.571 million in cash contributions and even more from in kind contributions. No methods for more productive or efficient use of the resources has been identified.
Legacy	**Water efficiency component:** ▪ The financial savings associated with early identification of leaks allows customers to take early action to fix the leaks and equipment; this benefits not only the business but local economies into the future (as this money saved from avoided water bills can be invested elsewhere). Equipment upgrades implemented as a result of audits will continue to save water over the effective life of the equipment. ▪ Centralised water efficiency communications will facilitate greater collaboration among urban water corporations, achieve efficiencies of scale, and ensure consistent messaging across the state. **IWM component:** ▪ Infrastructure projects have very long design lives – they are designed to continue on into the future.

	▪ The IWM Forum process is designed to continue to identify and deliver these types of projects across the state. With each project delivered, more expertise across the industry is developed. The funding from this project has been an important contribution with the 17 diverse projects funded. ▪ Many of the project's outcomes, such as improved stormwater management and use, enhanced water recycling systems, waterway improvements and greening, provide long-term environmental benefits. These projects not only address immediate challenges but also contribute to the resilience of urban and regional environments against climate change.
Future priorities	**Water Efficiency component:** ▪ data from non-residential water use monitoring and water efficiency audits will identify industry-specific water use trends and aid sector-specific benchmarking and best practice guidance. ▪ The water monitoring component of WaterSmart requires customers to continue water use monitoring for three years; this allows water corporations to build and maintain strong relationships and encourage water efficiency actions across their highest water using customers. ▪ The program will continue delivery through to 30 September 2025 with funds from CGRSWS Funding Stream 2. In May 2024, the Victorian Budget allocated $4.67 million to WaterSmart; this will allow statewide expansion of the program (to all other non-CGRSWS water corporations), and support investigation of other projects as raised in the CGRSWS such as industry benchmarking. ▪ The Make Every Drop Count statewide expansion pilot project will continue to be delivered until 30 October 2026. Key future priorities of the project include: - engagement with all Victorian urban water corporations. - creation of a library with a suite of marketing and communications materials that leverage the existing Make Every Drop Count creative platform, but can also be used independently by individual urban water corporations as desired. - development of a governance framework that enables Victorian water corporations to participate in the future development of marketing materials. **IWM Program:** 1. IWM Forum and Policy development: Providing the IWM Forums as a collaborative platform to facilitate the identification, assessment, and implementation of IWM solutions that could directly address the problems in a place-based way, including supporting and developing relevant policy reforms and capacity building to facilitate the planning and implementation of the solutions. 2. Co-investment: An IWM Grant Program that co-invests in the following: - On-ground projects - IWM plans, feasibility studies, designs, business cases - IWM officers in Traditional Owner organisations and regional Victoria

1.29 CWCT08: CGRSWS Funding Stream 3 Waterway Health Complementary Measures and Catchment Management Improvement

Initiative	**9. Phase One Implementation of the Central and Gippsland Region Sustainable Water Strategy**
Project	CWCT08: CGRSWS Funding Stream 3 Waterway Health complementary measures and catchment management improvement
Description	The CGRSWS has identified proposed complementary measures and catchment management actions to enable water users, water corporations, CMAs and Melbourne Water to manage and respond to water threats over the next 10 years. Complementary measures do not involve water recovery but can improve the overall

	health of the waterway. For example, installing a fishway on a barrier to fish movement does not increase the volume of water available to the environment, but can improve the benefits from environmental flows. In some cases, the use of complementary measures can decrease the volume of water that needs to be recovered to achieve ecological objectives, or bring environmental benefits that would otherwise not be feasible. Similarly, catchment management improvements such as increased community stewardship of local land can lead to better management of runoff and improvements in water quality. This investment funds targeted on-ground projects to support the health of the Lower Latrobe Wetlands and Macalister River, investigate options for future priority works in the Werribee and Moorabool rivers and implement other management improvements for waterways in the Central and Gippsland regions.
Outputs	▪ Lower Latrobe Wetlands, Maffra Weir Fishway, Moorabool channel lining and Werribee diversion weir activities: initial year of funding and resources were focussed on setting up the planning and governance of these projects, including revised detailed design and detailed costing for the Maffra Weir fishway, funding agreements signed, set up of working groups for Werribee diversion weir design. ▪ Regional Catchment Strategy Outcomes: Much of the progress so far has focused on capacity building with increasing emphasis this year on providing grants to partners, Traditional Owners and community to leverage the support for targeted on-ground works. ▪ Contribution to state-wide CMA priority activities: Preparation of the annual CMA Actions and Achievements Reports, support for the state-wide CMA climate change coordination role, active participation in networks, financial contributions to projects.
Summary against evaluation domains	
Impact	Construction projects for fish barrier removal and improving the effectiveness of watering infrastructure are underway, and, when complete, will reduce risk to priority waterways as described below: ▪ Lower Latrobe Wetlands regulators. Progress on this project as outlined above will ensure that by 2027 regulators will be constructed on these high value wetlands that are part of the Gippsland Lakes Ramsar site. These regulators will improve watering regimes to preserve and strengthen freshwater-dependent values in these wetlands in the medium term, and allow time to plan for the long term (including climate change impacts), in accordance with Australia's international obligations under the Ramsar Convention, and will reduce the hydrological risks to the wetlands from climate change and water shortages. ▪ Maffra Weir Fishway. Progress on this project as outlined above will ensure that the Maffra Weir fishway will be completed by 2027, which will improve the abundance, distribution and diversity of native fish species in the Macalister River and broader Gippsland catchment. The Maffra weir needs to remain in the system to provide water to the Macalister Irrigation District, but is currently preventing migratory native fish species - including the Environment Protection and Biodiversity Act 1999 listed Australian grayling and culturally significant river blackfish – from accessing 34 km of high- quality habitat. The detailed modelling and design completed on this project will ensure the fishway will not interfere with the weir's function of delivering irrigation water while simultaneously providing passage for the native fish to access the 34 km of high-quality habitat upstream of the weir. This habitat also receives regular watering from Lake Glenmaggie and will be a reliable drought refuge for native fish species therefore reducing the risk to key native fish species under climate change. This project will also maximise the benefits of the existing environmental entitlement and any future water recovery for the environment in this waterway. ▪ Investigate the impacts to the Moorabool Yulluk from the closure of Batesford Quarry. Wadawurrung Traditional Owners Aboriginal Corporation has been engaged to lead Stage 1 of this investigation, which includes preliminary investigations to determine the best methods of restoring and rehabilitating the

Moorabool River at Batesford Quarry and preventing flow losses. These investigations will consider environmental and Wadawurrung Traditional Owner cultural values and contribute to the resilience and liveability of the North and Western Geelong Growth Area neighbourhoods through integration of this work with the Integrated Water Management Plan. Wadawurrung Traditional Owners Corporation have engaged a consultant to determine impact to Moorabool Yulluk from the closure of Batesford Quarry and best methods of restoring and rehabilitating the river and preventing flow losses.

- Lower Werribee Diversion Weir fishway. Currently the Lower Werribee Diversion Weir is both a barrier to fish passage and limits the range of environmental flows that can be delivered downstream of the weir due to a limited outlet capacity through the weir. The fishway currently undergoing detailed design will reduce risks to the ecological values of the Werribee river in two important aspects; 1) connect the estuary to important drought refuge habitat upstream of the diversion weir for native fish species, including tupong and Environment Protection and Biodiversity Act 1999 listed Australian grayling. This will improve resilience of native fish populations to risks such as water shortages and climate change 2) provide a greater range of environmental flows to the lower Werribee and estuary, which will improve water quality and flow regimes for ecological values downstream of the weir and reduce the risks of algae blooms under climate change.

Other activities have increased inclusive management by incorporating social and community values in waterway management as outlined below:

- The Kooyongkoot Alliance (KKA) continues to drive collaboration bringing together over 20 Friends Groups from across the Gardiners Creek (KooyongKoot) catchment. The Gardiners Creek Regional Collaboration is driving the development of a strategic plan. Investment in this has been committed five local councils, Yarra Valley Water, Melbourne Water, Deakin University and the KKA. KKA received a Green Links Grant to fund revegetation works at Gardiners Creek Reserve, Burwood, in collaboration with Urban Guerrillas, Whitehorse City Council, Deakin University and a number of local Friends and community groups. This is one of three Green Links Grants located along Gardiners Creek and being undertaken by Collaboration or Alliance members. A funding agreement has been finalised with Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation to self-determine their priorities and resource needs for KooyongKoot/Gardiners Creek, and support their engagement with the KKA. This work will complete Action 8-12 in the CGRSWS.
- The Yering Gorge to Yarra Junction ICM project has been working with the Wurundjeri to plan and deliver on-ground habitat restoration works at Nunganala Habitat Hub which has included the delivery of one habitat plan and 45 ha weed control. The I 'heart' the Mornington Peninsula project has also developed a template land management plan and started engaging landowners in the project area, in addition leveraged investment through Melbourne Water is enabling the Bunurong Land Council's Environment Team to deliver complimentary natural resource management works in the project area. The Living Links Urban Forest Project is making great progress in the establishment of Climate Ready Vegetation Plots as well as setting up Micro-forest demonstration sites.

Traditional Owner priorities have been furthered in projects funded by this project, as outlined below:

- The Wadawurrung Traditional Owners Aboriginal Corporation have been engaged directly to undertake the Stage 1 investigation to rehabilitate the Moorabool Yulluk. DEECA has also provided Wadawurrung Traditional Owners Aboriginal Corporation with funding to undertake this work.
- This program has included work with the following Traditional Owner groups to support self-determination: Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation, Bunurong Land Council Aboriginal Corporation, Wadawurrung Traditional Owners Aboriginal Corporation, Wandoon Estate, Worawa College

	▪ Wurundjeri Woi Wurrung Traditional Owners have been supported to self-determine their involvement in the collaboration for the KooyongKoot activity. Funding up to $125,000 had been made available to the Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation to support their participation in planning activities.
Effectiveness	Effectiveness indicated through delivery in line with workplan
Appropriateness	Under section 22 of the Water Act 1989, the Victorian Government is clearly assigned the responsibility to develop, implement and review a Program of Sustainable Water Strategies for Victoria's regions. The CGRSWS was released in September 2022 and this investment will meet five key actions from this strategy. Project activities are aligned to existing policies, including Water for Victoria, Victorian Waterway Management Strategy, regional Waterway Strategies and the strategic direction statement: Our Catchments, Our Communities: Building on the legacy for better stewardship.
Efficiency	Funding to the CMAs and Traditional Owner Corporation was actively managed to ensure that outputs were delivered according to the budget and timelines set out in Funding Agreements. This was achieved by: ▪ 100% of milestones delivered on time as per the funding agreement. ▪ The CMA delivered the activities as budgeted as per the Funding Agreement. ▪ 100% of Programs delivered in line with plans. The Regional Catchment Strategy Outcomes Program has leveraged other significant resources inputs from sector partners, community and Traditional Owners totalling $15,985,600.
Legacy	▪ If stakeholders and partners take ownership of the projects and their outcomes, then there is a high likelihood that the positive impacts of the project will continue over time. There has been significant engagement and support for community and partner capacity building and continued uptake/action on catchment stewardship in line with the objectives of the Port Phillip and Westernport Regional Catchment Strategy. ▪ Governance arrangements focused on long-term improvement of waterway and catchment health. ▪ Good case studies provided in evaluation report
Future priorities	▪ Increasing labour and material costs are likely to increase the overall construction costs hence additional funding may be required from EC6 to address funding shortfalls if these eventuate. ▪ For the Werribee fishway design and Moorabool investigation activities, additional funding will be required for construction to deliver on-ground outcomes for fish passage and waterway improvement.

1.30 PSP4: CGRSWS Funding Stream 4 Enable Adaptation to a Variable Climate

Initiative	**9. Phase One Implementation of the Central and Gippsland Region Sustainable Water Strategy**
Project	PSP4: CGRSWS Funding Stream 4 Enable adaptation to a variable climate
Description	The Climate Change Act 2017 directed government to prepare and implement an adaptation action plan for the water cycle system every five years to ensure timely and appropriate action was taken to protect this essential resource. A pilot plan was delivered with the support of EC4 funds, and the first full Water Cycle Climate Change Adaptation Action Plan (WCAAP) was launched in mid-2022. The EC5 supported implementation of the first 2 years of WCAAP's 5-year term. Successful implementation of the WCAAP will:

	▪ Assist the water sector to embed climate change as a business-as-usual consideration for water planning, design, operations, decision-making and delivery. ▪ Enable the water sector to continue to play a lead role in moving the state towards net-zero emissions by 2045. ▪ Ensure the water sector can continue to provide safe, secure, and reliable water services. ▪ Build the water sector's capacity and capability to deal with climate-amplified extreme events. ▪ Avoid economic and social costs of shocks to water supplies from increased future demand, combined with increased risk of climate-amplified extreme events, by preparing for and mitigating impacts to water security.
Outputs	▪ Trial of a framework to understand future changes in algal risks across Victorian water bodies, and centralised knowledge sharing to manage these risks (WCAAP Action 11.) ▪ Trial to calculate the energy and greenhouse gas emissions benefits of efficient showerheads, to inform assumptions on household water-related energy use and future strategies to increase uptake of efficient fixtures and fittings (WCAAP Action 19.) ▪ Support for Traditional Owner self-determination in climate adaptation planning and implementation across the water cycle system (WCAAP Action 15), including the trial watering of the Durdidwarrah wetland by the Wadawurrung Traditional Owners Aboriginal Corporation and the provision of grants to 15 Registered and non-Registered Aboriginal Parties to support participation in the development of an updated Victorian Waterway Management Strategy. ▪ Establishment of the Water Minister's Climate Innovation Challenge (WMCIC), with four collaborative and sector-led climate action projects funded in 2023, for delivery over 2023-2025. ▪ Publication of Guidance on delivering multi-benefit carbon offsetting projects in the water sector, to help Victoria's water sector to co-invest with other entities to assess and deliver high value carbon offset projects which result in multiple social, environmental, and economic benefits. ▪ Establishment of a Monitoring, Evaluation, Reporting and Improvement framework for measuring progress toward the WCAAP outcomes (WCAAP action 14.) ▪ Establishment of a Victorian Catchment Management Authority Water Cycle Adaptation Program (reported under WCAAP Actions 9 and 21) to identify and support adaptation to local climate risks to waterway health. ▪ Establishment of six on-ground adaptation projects nominated by Integrated Water Management Forums (reported under WCAAP Actions 1 and 8), to build local water cycle resilience to climate impacts.
Summary against evaluation domains	
Impact	Victoria's integrated approach to water cycle system adaptation through the WCAAP is world leading. This is evidenced by the federal government's request for our program to deliver training to Asia Pacific partners on adaptation action planning through the Australian Water Partnership in early 2023, and an invitation from the Asian Development Bank to present as part of their e-marketplace on the innovative economic opportunities that can arise from climate action. The Program is also regularly invited to present to domestic stakeholders at forums such as the national OzWater and Adaptation conferences on our integrated approach to climate action planning. These opportunities to uplift global and local climate action ambition, through demonstrating rapid adaptation and mitigation is possible, have the potential to address the global challenge and contribute to water cycle system resilience. ▪ **Improved understanding of climate risks:** The WCAAP team reviewed and provided feedback on the Corporate Plans and Annual Reports of nine Catchment Management Authorities and 18 Victorian Water Corporations

	annually during the funding period. This oversight and improvement process will help the sector to build capacity to better address the risks of climate change. The program team also conducted in-depth consultation with the water sector on their understanding and management of climate risks. The outcomes of this consultation have enabled refinement of government's service offering to the sector, resulting in the establishment of partnerships with CMA's (through a grants program) and water corporations (by agreement with VicWater) to build their climate risk management capacity. ▪ **Involvement by Traditional Owners:** Grants provided 15 Registered Aboriginal Parties and non-Registered Aboriginal Party groups to enable self-determined participation in the development of an updated Victorian Waterway Management Strategy, which embeds climate adaptation into the management of rivers, estuaries and wetlands across the state. This is a significant increase in involvement in and influence on water policy and management decision-making processes by non-Registered Aboriginal Parties. ▪ **Improved ability to response to algal risks:** A framework to understand future risk of toxic algal outbreak was trialled at Lake Eppalock, and results of that trial were socialised with the Statewide Algal Managers Forum convened by the DEECA Water Emergency Management team. Interest in the results led to the trial being expanded to a further three sites, with work currently underway.
Effectiveness	The EC funding cycle itself can be a barrier to efficient and effective achievement of outcomes. The WCAAP program of work operates to a legislated five-year delivery timeline, that does not align with the EC funding cycle. Whilst the amount we received in EC5 could conceivably have funded the full 5-year WCAAP, were we allowed to disburse the funds over the legislated WCAAP delivery period, we needed to seek alternate funds (through EC6) to retain program staff for full and effective implementation of this program. Given the constrained timeframe for delivery associated with EC5 funding, and the complexity of the policy challenge being addressed by this funded project, the program team took additional measures to ensure the effectiveness of the EC investment. The additional governance and integrity measure of an independent probity advisor was appointed to guide the design and delivery of a new grants program as a vehicle to meet the outcomes of EC5 and the WCAAP. All grants awarded through this project were compliant with the approved probity plan.
Appropriateness	**Strategic Context:** ▪ At the time of the EC5 funding allocation, this program of work was delivering against Water for Victoria (actions 2.1 and 2.3) and Victoria's Climate Change Adaptation Action Plan 2017-2020. It was also being designed in readiness for delivery of a legislative obligation under Victoria's Climate Change Act 2017. ▪ In 2022, Victoria's Water Minister directed the water sector to achieve net zero emissions by 2035. The state's net zero emissions target has been brought forward to 2045, and a whole-of-government net zero emissions target is likely to be established. The Victorian Government also became the first Australian Government to commit to implement the Uluru Statement of the Heart in full. Progress toward Treaty has been swift and has involved a significant pivot toward support for self-determination. ▪ The impacts of climate change have also been felt by the water system, with bushfires over 2019-20, floods in 2022 and storms in 2023 increasing the need for investment in community and environmental resilience to the cascading and compounding impacts of climate change. The need to fully incorporate climate risk into recovery decisions and future planning by the water sector has also increased in urgency. ▪ These elevated strategic priorities have required us to adjust the focus and mode of our work on the WCAAP, as is reflected in the updated program logic.
Efficiency	Whilst adequate progress is being made within the 5-year WCAAP timeline, the Program did not meet its expected level of EC expenditure in 2022-23 financial year due to staffing challenges. As a result of the 2022 floods and other staff movements,

	EC funded positions supporting this Program were occupied at around 50% capacity for the first year of the Program, slowing progress. With a full team available to implement the program in 2023-24, substantial progress was made during the final EC5 funded year of this project, resulting in reportable progress against every WCAAP action that has been designed for efficient staging across the WCAAP period. Further efficiencies were realised in response to the Budget and Finance Committee decision in December 2023 to align EC expenditure with Government committed reductions. $537,000 allocated to this project was returned following work to refine the program in line with lessons learnt and stakeholder feedback, leveraging existing projects and better targeting investment. The efficiencies achieved will not prevent achievement of program outcomes.
Legacy	The plan was developed within a longer-term resilience planning cycle (as set out in the Climate Change Act 2017, with specific adaptation objectives to 2050 detailed in Victoria's Climate Change Strategy) with the ultimate objective of transformational adaptation. Unique among Victoria's seven system-based Adaptation Action Plans, the WCAAP was designed consistent with advice from the Intergovernmental Panel on Climate Change on the potential for multiple and lasting benefits when adaptation and mitigation action is designed and implemented together, taking trade-offs into account. The funded program invested broadly in water cycle resilience priorities that were identified by the water sector and partners, with great potential for impacts to grow over time, such as: ▪ Funding the development of IWM Plans for the high climate risk exposure locations of Queenscliff and Lakes Entrance. These plans will enable long term strategic action to be taken by local partners to build local resilience. ▪ Seed funding innovation and lesson sharing by the water sector, through a CMA grants program and the WMCIC. Many entrants to the WMCIC were 'proof of concept' projects that attracted significant sector co-funding and had high potential for entities either cost savings or income generation.
Future priorities	With the World Meteorological Organisation predicting the next five-year period to be the hottest on record, investment in water cycle system resilience, the circular economy transition and emergency preparedness is a government priority. Funding was secured through EC6 to complete implementation of the legislated WCAAP 2021-2026, develop and begin delivery of a WCAAP 2027-2031, and maintain the water sector's orderly transition to a net-zero emissions and disaster-ready future.

1.31 SIRS3: Building Flood Resilience in Victoria

Initiative	**10. Building Flood Resilience in Victoria**
Project	SIRS3: Building Flood Resilience in Victoria
Description	Victorian communities remain exposed to avoidable damage and economic stress relating to the impacts of flooding. Increased frequency of extreme rainfall driven by a changing climate will intensify flood damage to settlements, infrastructure, and environmental and cultural values. Government's response to the Victorian floods review implementation plan (2012) committed to 'developing a continual improvement Program by updating the Victorian Flood Management Strategy and regional floodplain management strategies to provide the framework for community and agency involvement in planning, prioritising and implementing flood mitigation activities.' Tranche 4 of the environmental contributions funded the commitment to develop the strategies. Funding through tranche 5 was secured to progress their implementation. The investment expected to achieve flood resilience outcomes by targeting investment to four clearly defined key priorities: ▪ strategy and policy implementation

	▪ on-ground works and projects ▪ funding support for regional delivery partners (VICSES and CMAs) ▪ investment in FloodZoom.
Outputs	▪ Delivery of the building flood resilience in Victoria Program has reduced the exposure of Victorian communities to impacts of floods, with funding directed to 23 flood studies, 8 planning scheme amendments, 11 flood mitigation infrastructure projects, and 23 projects to develop or upgrade flood warning services. ▪ The program has also worked with local councils to secure $9.299 million of federal government National Flood Mitigation Infrastructure Program funding to construct high priority flood mitigation levees: Numurkah $2.382 million, Wangaratta $3.500 million, Castlemaine $2.217 million, Carisbrook $1.200 million ▪ The Victorian Floodplain Management Strategy has informed consistent decisions and actions for management of flood related issues during the term of EC5. An independent audit and 3 published implementation progress reports show Victoria's floodplain management strategy has been effectively implemented - all 56 actions were completed or embedded as business-as-usual practice. ▪ The 2022 October – December floods saw the FloodZoom platform activated for 24/7 access for several months. The program has advanced the platform to keep pace with evolving needs of users with a statutory planning module for CMAs, continual updates with flood mapping, data, and intelligence products from flood studies (currently more than 200), routine engagement with user groups to ensure continual improvements in line with expectations, updated dashboard to include current warnings in near real time, linked to maps, creating a one-stop shop experience for flood responders and analysts. In a significant step, maps from 100% of completed flood studies stored by FloodZoom are now publicly available due to collaboration with the Victorian Government's Digital Twin platform.
Summary against evaluation domains	
Impact	**Emergency management planning underpinned by high quality information:** ▪ DEECA is meeting its obligations under the under the Emergency Management Manual of Victoria to support Victoria State Emergency Service in responding to floods. **Communities and agencies and other organisations have access to high quality flood risk information:** ▪ 'Overall communities within the North Central CMA region were better positioned to respond to the floods of spring 2022 when compared with flooding of 2010-2011. This can be attributed to investment in flood studies, mitigation planning and infrastructure across the region'. North Central Regional Floodplain Management Strategy Mid-term implementation snapshot 2023. ▪ Flood studies funded by the project have provided intelligence and mapping for more than 50 communities, where previously data was outdated, inaccessible or didn't exist. ▪ Continual upload of data from flood studies into FloodZoom, with the assistance of CMAs has ensured this information was readily available to flood analysists in 2022 and provided in a clear and timely way. FloodZoom contains more than 200 completed flood studies. ▪ The FloodZoom collaboration with Digital Twin Victoria went live in December 2023. Victorians now have on call on-line access to flood maps for their property and neighbourhood for the first time without needing specialist software., ▪ Maps from 100% of completed flood studies are shared with the community through Digital Twin Victoria. ▪ Victoria's flood map database is shared with the Insurance Council Australia a minimum of once per financial year. ▪ Flood studies update municipal flood emergency plans, documenting trigger-based responses and actions.

	▪ After Action Reviews were coordinated in 2023 by DEECA to test the effectiveness of the Victorian Floodplain Management Strategy funding availability, warnings and FloodZoom function during the 2022 floods. Outcomes confirm that while there is still work to do, agencies report a high level of comfort with the quality and availability of information. **Flood mitigation infrastructure is built and maintained where it is cost effective and socially and environmentally feasible:** ▪ Six of Victoria's highest priority flood mitigation infrastructure construction projects have received funding or are fully funded. ▪ Ongoing management and maintenance arrangements for flood mitigation infrastructure are accepted or actively under investigation for improvements. ▪ Benefiting communities are contributing to the capital costs, and the ongoing maintenance and management costs, of the flood mitigation infrastructure they have prioritised for their area. **Communities, agencies and other organisations have improved understanding and communication of flood risk and application of land use planning tools:** ▪ Regional floodplain management strategies have proven a successful way of understanding and sharing flood risk mitigation priorities and collaborating to achieve land-use planning outcomes. ▪ 'An added benefit of improved collaboration and understanding of roles and responsibilities has seen an improved understanding and collaboration at the start of planning for new urban growth zones…..There has been considerable improvement in flood knowledge, especially where the flood hazard coincides with development pressure'. Corangamite Regional Floodplain Management Strategy: Mid-term implementation report 2023. ▪ The project has co-funded eight projects to implement flood maps from recently completed flood studies into planning schemes. The project has drawn on this experience and success to provide supporting evidence for the Flood Reclamation Road Map funding submission. This has secured $3.9 million to implement further flood mapping into planning schemes over the next three years (to be implemented by Department of Transport and Planning).
Effectiveness	In 2022, the third biennial Victorian Floodplain Management Strategy snapshot report was published. All 56 Victorian Floodplain Management Strategy actions have been completed or embedded as part of business-as-usual practice. An audit of the strategy's implementation conducted by Ernst and Young determined that clear governance structures had been established to engage with key delivery partners to oversee the implementation of the strategy. The audit also found that the department had put in place effective processes to monitor and report on the delivery of the strategy actions, including providing evidence of work carried out. Investment in building community flood resilience is guided by Regional Floodplain Management Strategies (RFMS). In 2023 an analysis of Victoria's investment in RFMS priorities was completed with the services of a specialist in investment cost – benefit and effectiveness analysis. The analysis confirms that there has been significant progress in delivering the communities' priority actions. A clear measure of effectiveness of the EC5 investment is our capacity to respond well to the 2022 floods Inquiry.
Appropriateness	Investment in priority flood mitigation actions contributes to Water for Victoria section 10.5 'Managing Exceptional Circumstances', specifically Action 10.12 'Improve emergency management capability'. The Victorian Floodplain Management Strategy clarifies flood emergency roles within the water sector. Local councils and Victoria State Emergency Service have received funding to update emergency response plans and develop new ones where required. Funding supports floodplain management agencies to build their communities' resilience to future floods through implementation of priority flood mitigation projects documented through regional floodplain management strategies. The FloodZoom platform contributes to addressing the Action 10.12 commitment to 'enhancing information systems and

	processes to monitor, evaluate, communicate and continuously improve the management of water sector risks
Efficiency	In addition to leveraging significant federal government funding of $9.299 million for priority flood mitigation infrastructure and $1.350 million towards other flood projects (Risk and Resilience Grants Program), the Program secured $7.080 million funding from the Relief and Early Recovery Treasurer's Advance 2022-23. This funding is value adding to the EC5 project, directed to developing new innovations for historic levee management, in consultation with our Program delivery partners and affected communities. A further $15 million has been secured for new flood studies ($10 million) and progressing flood mitigation infrastructure projects to shovel ready status, to prepare local government authorities for future funding opportunities. The program has allocated years one and two of five of this funding from the Flood Reclamation Roadmap - fast tracking council flood planning. The Building Flood Resilience in Victoria budget has been fully acquitted annually.
Legacy	Our 9 RFMS will continue to guide investment in priority flood projects communities want implemented and have agreed they can afford to maintain. The VFMS will acknowledge and where appropriate evolve going forward, particularly in response to outcomes from the Parliamentary Inquiry into the October 2022 floods.
Future priorities	The Victorian Government's FloodZoom platform has been a tool for flood response and preparation since its inception. Our society increasingly expects to 'self-serve' information from on-line sources rather than seek data through third parties. To remain cost effective FloodZoom is moving towards being increasingly accessible. This is being achieved cost-effectively through partnering with Digital Twin Victoria. Maps from 100% of flood studies held by FloodZoom will be available for public viewing on Digital Twin Victoria. The EC6 funded Reducing the risks of flooding in a changing climate 2024–28 will continue government's commitment to fund at least 6 new flood studies per annum. Continued investment in planning and design phases of flood mitigation infrastructure projects will ensure our local councils are well positioned to access future funds sources for construction. As discussed, solutions to increasing costs for delivery partners, challenges attracting and retaining staff, and a lack of suitable service providers in the Victorian market have been raised consistently as key needs across our regions. The potential for stakeholders, particularly local councils to turn their attention and resources to preparing for a drying period under El Nino conditions may be a challenge for the project. This potential will be managed by supporting partners with suitable resourcing and continued genuine engagement.

1.32 SIRS4: Central Bendigo Mine Rehabilitation Project - Groundwater

Initiative	**11. Central Bendigo Mine Rehabilitation Project - Groundwater**
Project	SIRS4: Central Bendigo Mine Rehabilitation Project - Groundwater
Description	This project was developed to support waterway health by preventing the discharge of odorous, arsenic-rich groundwater in Bendigo's central business and key tourism precinct. The project also supports economic development and tourism. Due to the immediate need to act to prevent groundwater recovering and discharging at the surface, the project had two work streams: i. Immediate actions to prevent groundwater recovery and discharge. ii. Investigate the underlying cause and develop a long-term management approach. The immediate response was to implement a pumping and management system for the groundwater which was followed by interim solution which included construction of a treatment system to remove arsenic, sulphides, metals and salt. This

	management approach met the broader goal of safeguarding Bendigo's urban waterways and amenity from mine-impacted groundwater discharge. The second stream of work was to conduct rigorous investigations to better understand the cause of the contamination and then determine options for long-term management. These investigations have improved the understanding of drivers behind the poor-quality water, the need for perpetual intervention and water treatment and the best ways to manage the groundwater into the future.
Outputs	The initial EC5 investment was allocated to the following activities: ▪ An additional year of groundwater treatment by Coliban at the New Moon site ($3 million). ▪ Project management, studies into groundwater impacts and engagement with the community and Traditional Owners ($0.5 million). The subsequent EC5 investment granted in May 2021 was for delivery of a sustainable solution for groundwater management issues resulting from Bendigo's historic mine workings and its impact on Central Bendigo and the Bendigo Creek. The project sought to address the impacts of historical mining in and around central Bendigo by undertaking works to: ▪ Develop a community agreed long-term solution. ▪ Maintain government's commitment to continue with the current management arrangement which allows for the historic Central Deborah Gold Mine tourist attraction to continue to operate into 2022-23 while a long-term solution is being implemented. Development of the long-term solution had the following components to ensure successful completion: ▪ Business case development and community engagement. ▪ Engineering feasibility and design. ▪ Environmental assessments and approvals. ▪ DEECA project management.
Summary against evaluation domains	
Impact	▪ **Prevention of mine-impacted groundwater discharges from areas controlled by interim solution:** Interim management solution has met operational requirements treating 1,073 ML of water over the period. Water has been used for either dust suppression or release to the Bendigo Creek. Water treatment has met standards and release criteria. No uncontrolled discharges have occurred from the managed zone. ▪ **Stakeholder engagement:** Stakeholders have remained involved and engaged in the project since the representative group was established in 2015. An independent chair guided the group and promoted honest and open discussions. Traditional Owners Dja Dja Wurrung Aboriginal Corporation Chief-Executive Officer joined the group in 2020-21 and this involvement was pivotal for the project, ensuring that project aligned with Traditional Owner ambitions to "Heal Country" and improve waterways. ▪ **Central Deborah Gold Mine been able to offer underground tours:** Underground tours have been conducted continuously since 2020 during the planning and preliminary design phase. Construction is expected to commence in 2024-25 and this key evaluation question will remain in force until construction is completed. ▪ **Long-term management options:** Investigations and stakeholder engagement have resulted in the selection of a long-term management solution for the issue. The work conducted by Jacobs was utilised in the preparation of a budget bid that was submitted in December 2021. In May 2022, the Victorian Government announced $51.8 million in funding from appropriations for the design and construction of the long-term management approach. The long-term solution is to be implemented by mid-2026.
Effectiveness	

Appropriateness	The Victorian Government has been committed to the project since 2013, when the Premier tasked DEECA through the Minister for Water (then Department of Environment and Primary Industries, followed by DELWP, now DEECA) with leading the Victorian Government's response to the issue of groundwater recovering in mine workings beneath urban Bendigo. The groundwater project has had an ongoing Victorian Government commitment since 2013 in various budget announcements and media releases. In August 2020, the Minister for Water committed to continuing the current interim arrangements into 2021-22 and 2022-23 if required. This commitment came in response to concerns raised by Local Member Minister Jacinta Allan on behalf of Bendigo Heritage Attractions who faced uncertainty over the future of the Central Deborah Gold Mine tourist attraction. Following investigations into the causes of poor-quality groundwater underneath central Bendigo, the problem has been recognised as a consequence of mining activity and future funding will therefore be sought from alternative budgets (non-EC). The project will continue to support waterway health by providing a sustainable source of clean water to the Bendigo Creek and preventing new unmanaged discharges of arsenic and heavy metals.
Efficiency	▪ Governance arrangements for the project have been effective, with the project delivering within expected timeframes and budgets. The project is overseen by a Project Control Board with representatives from both Resources, and Water and Catchments Group, due to the identification of groundwater quality issues resulting from historical mining activities. ▪ The project has been delivered within budget. Some reallocation of funding for project tasks has occurred in the period, allowing critical works to occur at the New Moon Treatment Plant and Central Deborah Gold Mine. The DEECA project team has comprised between 1-3 staff over the delivery period. ▪ Delivery of the project stages within the time frames specified in the project plan: In general, the project has been delivered according to the project plan. There have been some adjustments made along the way to accommodate the longer than expected resolution of the groundwater licence holder issue and the approach to submitting the EPA licence application involved a lengthy negotiation of expectations. ▪ The Project Steering Committee met regularly throughout the development and operation of the interim solution at the New Moon treatment plant. The Project Steering Committee continues to be an effective committee that oversees operational issues and coordinates and decides on the appropriate allocation of resources and expenditure. The Project Steering Committee has been fundamental to developing the 2 funding agreement extensions required during the delivery period. The Project Steering Committee, particularly Coliban Water, have also provided invaluable advice on long-term solution development through this forum.
Legacy	
Future priorities	Following investigations into the causes of contaminated groundwater underneath central Bendigo, the problem has been recognised as a consequence of mining activity and future funding has been sought and achieved from alternate budget sources (non-EC). Funding was secured in the May 2022 and 2024 state budget through appropriations for the implementation of the long-term sustainable solution and the ongoing operation and maintenance for the next 25 years. The procurement process of the Design, Construct, Operate and Maintain contract and the Superintendent contract are underway and expected to be in place by early 2025.

1.33 CWCT09: Waterway Health

Initiative	**12. Improving the health of Victoria's waterways and catchments in the face of escalating impacts of climate change/ Supporting regional communities and economic recovery through healthy waterways**
Project	CWCT09: Waterway Health
Description	This investment of $125.98 million seeks to deliver an integrated output-based set of Programs to continue to protect and restore Victoria's regional waterways which are severely degraded from over 150 years of post-colonisation human intervention and economic development and exacerbated by climate change. This protection and restoration of these waterways is a multi-generational task which also needs to adapt to the future challenges of climate change and Victoria's expanding population. This investment supports an integrated program of works that include: ▪ Delivery of over 20 regional physical on-ground works programs/projects to protect and restore priority waterways of high value to regional communities (including Ramsar sites). ▪ The delivery of citizen science Programs (e.g. WaterWatch, EstuaryWatch, River Detectives) to engage community, educate and build awareness. ▪ Employment and partnering with Traditional Owner groups to get more Aboriginal Victorians working on and healing Country. ▪ Processing thousands of regional planning and works permits and licences. ▪ Implementation of a targeted monitoring program to inform policy and support program adaptation to climate change impacts and other emerging threats and opportunities. ▪ the development of new regional and state-wide waterway management strategies and policies ▪ This program is primarily delivered by the 9 regional CMAs and Melbourne Water in the metropolitan region through grants / funding agreement (approximately 95% of $125.98 million).
Outputs	In EC5 the following outputs were delivered: ▪ 459 waterway structures including rock chutes, fish "hotels", large wood, erosion control structures, flow regulators, removal of fish barriers. ▪ 331.5 km of fencing used to protect areas alongside waterways (especially from cattle grazing) so that local indigenous vegetation can be established. ▪ 35,465 ha of vegetation and weed control established along waterways to improve the riparian zone, reduce erosion and provide habitat. ▪ 482 management agreements between CMAs and landholders, to ensure works areas are maintained in good quality for at least ten years, allowing vegetation to properly establish. ▪ 7273 cultural, ecological, property-based, social, flora and fauna, surface-water assessments. ▪ 37,563 participants at conferences, field days, events, meetings, workshops, presentations – connecting with community and partners to ensure they understand and support the work to be delivered and have opportunities to participate.
Summary against evaluation domains	
Impact	▪ In EC5, the waterway health program has delivered 34,366 ha of waterway vegetation improvement works across priority sites in Victoria (Budget Paper 3 measure). Waterway vegetation improvement works includes fences along waterways built or maintained, vegetation established, modified or maintained, and pest plant and animal control works undertaken. As a result of these works, over 386 river reaches and wetlands in Victoria are maintained or improved every year.

- In EC5, CMAs processed over 30,000 waterway licences and permits, floodplain and planning referrals and advice for local councils and the general community, over 90% of which were processed within statutory timeframes. This is a core statutory function that CMAs perform to facilitate appropriate use and development of Victoria's public waterway, protecting the health of our waterways.
- The Flagship Waterway projects were a cornerstone of the EC4 waterways program and have continued and expanded during EC5. An initial 9 project sites (one per CMA) were started under EC4, and a further nine have been commenced during EC5. They are a key element of delivering Action 3.4 in Water for Victoria. During 2023-24 the CMAs completed evaluations of the implementation of the nine Flagship Waterway projects that commenced in EC4. The evaluations were rich with information and learning and have provided a great insight into these significant projects. The collective evaluations helped DEECA understand common issues and opportunities and identify how DEECA can work with CMAs to maximise the value of future evaluations and streamline effort required for CMAs and DEECA, in EC6 and beyond.
- A number of programs have collected important data (evidence) that evaluates waterway and environmental water health to guide improvements in waterway management practices, and to inform state and regional waterway planning, evaluation and reporting. Including the: Stream Change Assessment: Riparian Woody Vegetation, 2021 Great Australian Platypus Search using eDNA, VEFMAP14 and WetMAP15 to evaluate ecological responses to environmental water management, Riparian Intervention Monitoring Program (RIMP), Victoria's first Index of Estuary Condition was completed and released in September 2021 as well as several projects to understand waterway hydrology and aquatic biodiversity aimed at supporting state and regional planning.
- The Stream Change Assessment Project compared the condition of woody riparian vegetation in 3,400 km of stream length between 2018-2020 and 2010. It found that at statewide and regional extents changes were small, however the largest changes occurred where substantial or sustained riparian management had been undertaken.
- More than 20 projects have been funded through VEFMAP and WetMAP focusing on fish, vegetation, birds and frogs, and outputs have been used by managers to guide the development and refinement of environmental water management plans (EWMPs), and environmental water operational decisions. The VEFMAP fish theme completed the most comprehensive assessment to date of long-term trends in Victorian native fish populations, which showed that most examined species declined during the Millenium Drought (2000-2010), and population trends have increased subsequently. VEFMAP fish monitoring has also demonstrated strong influences of hydrology (including environmental water), on key processes such as movement, dispersal and recruitment.
- In 2022-23 the Riparian Intervention Monitoring Program (RIMP): found that after 3 years of management interventions, such as weed control, revegetation and livestock exclusion, there is evidence of positive changes such as increased density of native woody recruits and the number of native taxa. Monitoring of RIMP sites for responses to widespread and significant flooding in late 2022 showed that most sites (both Intervention and Control) had some degree of scour and/or mass failure in response to flooding. However, results indicated that the severity and/or frequency of scour and mass failure was less at intervention sites than control sites. Generally, most intervention sites had more instream and/or littoral vegetation present than control sites. Sites with a high cover of instream or littoral vegetation, appeared to have less flood impact (scour and mass failure) than sites with little or no instream and littoral vegetation.

[14] Victorian Environmental Flows Monitoring and Assessment Program

[15] Wetland Monitoring and Assessment Program

- DEECA and other organisations partnered with the Odonata Foundation to undertake a state-wide investigation into platypus populations using environmental DNA as part of the Great Australian Platypus Search. Samples were collected from close to 2,000 sites across Victoria with the data improving our understanding of platypus populations across the state. The project was made possible through the great support and coordination of WaterWatch Victoria, CMAs, Parks Victoria and enthusiastic community volunteers.
- A project was undertaken to characterise wetland hydrologic stress in Victoria using data from 1988-2022. Hydrologic stress measures showed a general decline in wetland hydrology (mean and maximum magnitude, duration, and frequency) and indicate over 20% of wetlands in Victoria substantially deviated from their historical hydrologic regimes. Projections of hydrological stress under climate change were also explored and indicated that between 1,399 and 1,706 wetlands as 'lost' due to declining inundation, primarily affecting seasonal and episodic wetlands in north-western Victoria. Projections also indicate significant decreases in permanent and seasonal wetlands, with an increase in episodic wetlands. This information will be used to guide state and regional planning and management of wetlands.
- A project to develop habitat distribution models for Victoria's wetland-dependant species was undertaken to predict where suitable habitat may exist wetland species, based in part on verified observations of the species in their natural environments. These habitat distribution models will be used as an input to guide state policy and development of a tool for informing regional planning.
- A project was undertaken to understand current and likely flow alteration under a range of climate change scenarios for unregulated rivers, using hydrological modelling and analyses. The outputs of this work also include an estimate of when hydrological change is likely to occur for each catchment. These hydrological data will ultimately be linked to information about aquatic species to understand the ecological implications of current and future hydrological stress on the biota present in unregulated catchments across Victoria. These outputs will be used to guide state and regional planning and management.
- Anges River / Corner Inlet Flagship Project: After many years of hard work and consistent investment from EC tranches, a major outcome has been reached at the West Gippsland CMA Agnes River/Corner Inlet Flagship site - the last remaining stand of willow trees has been removed from the of the Agnes River, making it completely free of this highly invasive and damaging species. There are very few waterways in Victoria where all willows have been successfully removed; this is a first for the CMA and a win for the environment.
- Engaging community, integrating community views: The My Victorian Waterway survey ran for five weeks in March/April 2022. A total of 6,240 online surveys were completed. The design of the data collection approach ensured the sample was sizeable and representative of the adult Victorian population in terms of age, gender and location, including representation across all regions of the state. The survey gathered a wealth of information about current waterway usage, attitudes and understandings about waterway health, current knowledge and language used by the community, and aspirations for the future. The story told by participants paints a clear picture of the great importance and value of healthy waterways for all Victorians and future generations. The data from the My Victorian Waterway survey will be used to help shape water-sector policy, guide investments and inform waterway Programs and community engagement by the Victorian Government and other partners.
- Traditional Owner partnerships: 48 out of 61 Waterway Health projects involved partnership agreements (34) and/or engaged Aboriginal businesses (31). 31 different Traditional Owner groups were engaged in project development and/or implementation in some capacity (or CMAs intended to engage them). In EC5, Traditional Owner groups / Aboriginal Victorians received $2,862,228 of funding from CMAs. Of this, $2,468,567 went to 15 different Traditional Owner groups,

	and $393,661 went to Aboriginal Community-Controlled Organisations, Aboriginal-owned private businesses, and employment programs. ▪ Physical interventions on waterways are undertaken by waterway managers throughout Victoria to improve the condition of waterways. The Technical Guidelines for Waterway Management, published in July 2024, provide options and specifications for those interventions, recognising threats to waterway values and the underlying physical and ecological processes within our waterways. The guidelines incorporate recent advances in best practice for waterway health protection and improvement.
Effectiveness	The combined impacts of COVID-19, extreme weather emergencies, supply chain uncertainties and inflationary pressures have made it complex and difficult to consistently plan and deliver multiple elements of the Program. Project managers and stakeholders were faced with multiple reschedules of timelines, and a great deal of adaptive management was necessary. The combined impact of the shifting operational / delivery contexts as outlined above have made EC5 the most difficult period to deliver the program since its inception in the early 2000s. Since 2020, CMAs have faced significant challenge in delivering this outdoor on-ground works due to COVID restrictions impacting staff availability and restricted engagement with landholders and the community; the pandemic delaying budgets and funding opportunities; persistent wet conditions in different regions of the state due to La Niña and the resulting significant storm and flood events in the Gippsland region in April and June 2021, and again in northern Victoria between October 2022 and January 2023. Despite these challenges, the program was successfully acquitted by 30 June 2024.
Appropriateness	This project was scoped to address actions in the Victorian Waterway Management Strategy (VWMS) and Water for Victoria, align to the 9 regional Waterway Strategies approved in 2014 by both the Minister for Water and Minister for Environment and meet statutory functions and obligations as outlined in the Water Act 1989. A significant shift in the policy context for delivery of the program was the release of Water is Life. It provides an important framework to create and maintain a careful and considered balance between Traditional Owner self-determination in water access and management and the rights and entitlements of a range of stakeholders. Over 2023- 2024, DEECA engaged with Traditional Owners on policy to inform the development of the draft VWMS. The engagement approach used multiple pathways, including one-on-one meetings, regional discussions (groups and individual), online drop-in sessions and other existing forums.
Efficiency	The combined impacts of COVID-19, extreme weather emergencies, supply chain uncertainties and inflationary pressures made it complex and difficult to consistently plan and deliver multiple elements of the Program. Project managers and stakeholders were faced with multiple reschedules of timelines, and a great deal of adaptive management was necessary. The combined impact of these shifting operational / delivery contexts have made the EC5 the most difficult period to deliver the program since its inception in the early 2000s. The percentage expenditure against budget started slowly during COVID and was further impacted by the major floods of Oct 2022. It recovered strongly and all funds were expended by 30 June 2024.
Legacy	An example of the successful legacy of waterway programs delivered under the Environmental Contribution is was achieved through implementation of the Regional Riparian Action Plan (RRAP) across EC3, EC4 and EC5. The RRAP was a 5-year plan which commenced in the final year of EC3 (2015-16) and ran across EC4 to 2020. The aim was to accelerate on-ground riparian management works to improve the health of riparian land along Victoria's regional rivers, estuaries and wetlands. After five years of the action plan's implementation – 2015-20 – the key outcomes achieved include the protection and improvement of: ▪ Nearly 3,500 kms of riparian land (140% of the 5-year action plan target). ▪ Over 53,000 ha of riparian land (190% of the 5-year target).

	The plan was so successful that the Victorian Government supported an extension and expansion of the RRAP across EC5. The continuation of this Program clearly demonstrates the legacy and influence of one EC-funded project on a further tranche of EC. In terms of breadth of legacy, the development of the new VWMS is arguably the most significant piece of work to be delivered under the EC5 Waterway Health Program, as this strategy will set direction and intent for all works and outcomes for the Program for the next eight years. A discussion starter was released in late 2023, along with online consultation sessions to inform the development of a new draft strategy.
Future priorities	▪ This program needs to be substantial in size and sustain active management for environmental outcomes- over the long term (50 years+) across the state to deliver the required outcomes; need sustained, secure funding for this – e.g. Flagship Waterway Program. This is proportionate to the timescale of the damage caused since colonisation and the highly modified water landscape in which waterways are highly valued by communities. ▪ Need for funding for CMAs to meet the aims of Water is Life. Through implementation of Water is Life, CMAs must continue to build relationships and capacity with Traditional Owners and undertake education and information on the waterway manager functions and responsibilities to support increased Traditional Owner role in decision making. CMAs have advised that this will require dedicated funding. ▪ Climate change adaptation and mitigation – This will continue to be very important over the next EC tranche, and with the expanding and diverse impacts of climate change across the state, waterway managers will need to apply a climate change lens to all that they do.

1.34 CWCT10: Environmental Water

Initiative	**12. Improving the health of Victoria's waterways and catchments in the face of escalating impacts of climate change/ Supporting regional communities and economic recovery through healthy waterways**
Project	CWCT10: Environmental Water
Description	The Environmental Water investment of $64.241M seeks to deliver an integrated output-based set of Programs to continue to protect and restore Victoria's regional waterways which are severely degraded from over 150 years of human intervention and economic development and exacerbated by climate change, through: ▪ Grants to CMA delivery partners for employment of regional Environmental Water Reserve Officers (EWROs), environmental water infrastructure works and measures projects, environmental water community engagement and shared benefit projects, engagement and involvement of Traditional Owners and Aboriginal communities in environmental water planning and management. ▪ Management of environmental water entitlements (VEWH). VEWH provide services as legislated in the Water Act 1989 to manage environmental water entitlements across all of Victoria, via a mix of operational, technical, communications, engagement and administrative functions. ▪ Murray-Darling Basin Plan Program delivery. This component provides funding so Victoria can continue to meet its Murray-Darling Basin Plan obligations.
Outputs	▪ Delivered environmental water to 161 rivers and wetlands sites throughout the state in 2023-24, 154 sites in 2022-23, 170 sites in 2021-22, and 225 sites in 2020-21. ▪ Delivered over 3,212,000 ML of water for the environment to rivers and wetlands throughout Victoria (including over 846,000 ML from the VEWH, 1,869,000 ML from the Commonwealth Environmental Water Holder, over 497,000 ML from The Living Murray).

	▪ Funding provided to CMAs between 2020-24 for environmental watering planning, engagement, monitoring and reporting.
Summary against evaluation domains	
Impact	**Improved management of water for the environment:** ▪ Fully or partially achieved a total of 934 watering actions at sites prioritised for watering between 2020-21 and 2023-24. In 2020-21, 92% of required potential watering actions were fully or partially achieved, in 2021-22, 91 per cent was achieved, in 2022-23, 99 per cent was achieved and in 2023-2024, 95 per cent was achieved. These actions have contributed to the protection of aquatic and riparian flora and fauna species. ▪ Implementing Murray-Darling Basin Plan environmental watering obligations (Chapter 8, Environmental Watering Plan) in partnership with the VEWH and CMAs. **Improved management of water for the environment to meet environmental objectives:** ▪ Delivery of a coordinated spring watering event in the Murray system from Lake Hume to the sea, which was a joint action by the Commonwealth Environmental Water Holder, VEWH, NSW Department of Planning, Industry and Environment and South Australian Government with the MDBA as manager of The Living Murray. The event focussed on outcomes in the Murray River channel and supported outcomes at Barmah Forest. A mixed nesting event of 450 straw-necked ibis, Australian white ibis and royal spoonbill, listed as vulnerable in Victoria, occurred in Barmah Forest in early 2021. This was the first successful event observed for these species in the forest for four years. Other species are expected to have bred also; sound recorders picked up calling of Australasian bittern during its nesting season. This species is endangered in Victoria. ▪ In autumn-winter 2021, the watering of high-priority wetlands in the southern Hattah Lakes system in autumn-winter 2021, where more than 27,000 ML of water was delivered to low-lying wetlands to improve the condition of trees, stimulate the growth of aquatic plants, support carbon and nutrient cycles and provide food and habitat for waterbirds. ▪ A new action was included in the Barmah Forest section of the Seasonal Watering Plan 2021-22 to provide low flows in the Murray River between August and December to protect nesting habitat and improve Murray cod recruitment. ▪ In 2022-23, significant colonial waterbird breeding was recorded at sites that received water for the environment and natural flooding, including: - Approximately 2,000 nests of Australian White Ibis and Straw-necked Ibis (and possibly Royal Spoonbill) in Barmah Forest. - Ten species of colonial nesting waterbirds across the Hattah Lakes using 7,000 nests for over 25,500 chicks, with a further 18 waterbird species detected breeding with an additional 1,700 chicks recorded. - Over 15,000 birds from 21 species recorded at Gunbower Forest and the Kerang Ramsar wetlands during 69 surveys over spring 2022 and autumn 2023. ▪ Lake Hindmarsh retained water from the 2022 floods, with additional flows entering during the 2023/24 period. These were not part of regulated environmental flows, but Victorian rules that protect passing flows enabled the lake to sustain benefits from natural flooding, and maintain its connection to the Lower Wimmera River. Three bird surveys were completed by a contractor in 2023 and 2024 and observed: - A total of 76 different wetland bird species, of which 5 are listed as Threatened under the Victorian Flora and Fauna Guarantee Act 1988, 2 species found are migratory shorebirds. - Over 15,000 Great Cormorants, 10,000 Australian Shelduck and 800 Australian Pelican present.

	▪ Increases in waterbird numbers, including several threatened species, were evident in a field survey at Moodie Swamp after environmental watering. Due to the significant number of threatened waterbirds recorded at the wetland Goulburn Broken CMA successfully advocated for the wetland's closure to duck hunting in 2024. The field survey found: - Over 130 Eastern Great Egret (vulnerable per the Victorian Flora and Fauna Guarantee Act 1988) and 100 Plumed Egret (critically endangered per the Victorian Flora and Fauna Guarantee Act 1988), marking the largest Victorian Plumed Egret count in 23 years. - 14 endangered Brolga, the highest number ever recorded at the wetland. ▪ The delivery of water for the environment continues to provide optimal conditions for the critically endangered Murray hardyhead to thrive at Kunat Kunat and Lake Elizabeth. This species is listed under the Victorian FFG Act 1988. Water deliveries have provided optimal conditions for the vegetation and fish to thrive in 2024. Attempts to bolster populations and distribution of the species has begun with a translocation of 7 individuals to Falla Dam. **Management actions to enhance fish connectivity and species recovery:** ▪ Construction of the fishway in 2023 on a weir in the Buchan River, which is a major tributary of the Snowy River. The fishway provides a connection from the Snowy River to the high altitude sub-alpine regions of the Nunniong Plateau, allowing native fish to complete migratory or breeding behaviour upstream and accessing an additional 127km of the largely undisturbed forested reaches of the Buchan River. In February 2024, a number of native fish were surveyed upstream and downstream of the fishway, including the Environment Protection and Biodiversity Conservation Act 1999 listed Australian grayling. The Environment Protection and Biodiversity Conservation Act 1999 listed Cox's Gudgeon were also recorded at the top and bottom of the fishway, indicating this threatened species is moving through the fishway. ▪ In March 2024, a 2-day Tandanus Catfish fishing competition was held in the Glenelg River resulting in the relocation of 102 catfish to the Murray-Darling Basin as an effort to improve the catfish population after the 2022 blackwater event. ▪ Removal of the Bromfield Street Weir in early 2024, which has significantly improved fishway passage on the Merri River. Post-weir removal surveys in May 2024 showed that diadromous, migratory, and marine visitor species were all present upstream of the weir, where before the weir removal they had been absent. **Opportunities for involvement and water return to Traditional Owners:** ▪ Delivering water for the environment to Annulus Billabong in the Yarra system, for the first time - in partnership with Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation in spring 2020 and 2021. These events supported cultural values identified by Traditional Owners, as well as environmental objectives including vegetation growth, habitat and feeding conditions for waterbirds. ▪ Supporting the First People of the Millewa Mallee Aboriginal Corporation's restoration and protection of a site of high cultural significance at Robertson Creek in the lower Mallee in Spring 2020 with the environmental flows. ▪ For the first time in August 2022, 1,913 ML of water for the environment was delivered to partially fill Lake Boort in partnership with Dja Dja Wurrung Aboriginal Clans Corporation, North Central CMA, the VEWH, Goulburn Murray Water and Parks Victoria. The Lake Boort partial fill aimed to support river red gums that were planted in 2017 and culturally important vegetation, such as spiny flat sedge. ▪ Strengthened relationships with the Yorta Yorta Nation Aboriginal Corporation during the development of Black Swamp EWMP which enabled sharing and learning with Goulburn Broken CMA on culturally sensitive language and improved context for the Moodie Swamp and lower Broken Creek EWMPs.
Effectiveness	Refer to the operational context challenges in Waterway Health summary.

Appropriateness	This project was scoped to address actions in the VWMS and Water for Victoria, support delivery the 9 Regional Waterway Strategies approved in 2014 by the Minister for Water and Minister for Environment, and for CMAs and the VEWH to meet statutory functions and obligations as outlined in the Water Act 1989 and Catchment and Land Protection Act 1994. Since this project was funded, the Victorian Government has released two key policy documents (in late 2022), including Water is Life and the CGRSWS. Both have reinforced the importance of partnering with Traditional Owners to achieve meaningful outcomes, and to continue policy and implementation work around the sustainable use of water resources to address declines in environmental condition of waterways.
Efficiency	▪ 100 per cent of VEWH milestones have been delivered on time as per the funding agreements. ▪ VEWH have delivered milestones within allocated budgets as per the funding agreements. ▪ 100 per cent of CMA Environmental Water projects have been delivered on time as per the Victorian Waterway Program Investment Framework (VWPIF) funding agreements (noting that the majority of projects have been completed with funding agreements due to expire by 31 December 2024). ▪ 100 per cent of Environmental Water projects delivered as budgeted as per the VWPIF funding agreements. The Environmental Water program's close collaborations with a broad range of scientists, research institutes, consultancies and government agencies has made use of diverse and targeted expertise and shared effort, equipment and results. For example: ▪ Co-investment in a project with Melbourne Water to support investigations into the supply of alternative water to the Werribee River for environmental benefit. This will provide information on the circumstances under which recycled water or stormwater could be used for environmental benefit in the Werribee River. ▪ Co-investment in a PhD research project to assess the effects of flows in the lower Goulburn River on freshwater shrimp. The project is led by RMIT University and will examine the diet of shrimp in the lower Goulburn River to determine where in the river they are feeding and to see how their diet changes with age. eDNA technology will be used to sequence the material in their gut to detail their food sources. This project complements the research and investigations program funded by DEECA to assess the performance of new Goulburn River operating rules.
Legacy	There is a solid foundation for Victoria's environmental watering program, which includes a strong governance framework and regional delivery model, led by CMAs with community support and participation. The impacts of this investment are highly likely to continue over time due to: ▪ Continual improvements in the evidence base and governance for environmental water management. The CMA's integrated waterway programs are designed to meet Regional Waterway Strategy objectives, including through environmental water delivery. This is supported by sophisticated monitoring framework funded by this project to inform adaptive management at the local and regional level, and ensure watering outcomes and complementary actions are optimised in a changing climate and as new information becomes available. ▪ Strong community support and participation in the program. Engaging community has been a key aim of this investment, to continue to raise awareness and educate people about the importance of waterway health and water for the environment. More than 6,070 individuals have been engaged from 2020-2023 in events and networks funded through this investment. ▪ Government commitments to increase the role of Traditional Owners in environmental water management (and waterway management, more broadly). This will enable dual environmental and cultural benefits to be provided by the

	environmental watering program, overall increasing the benefits. While this is at an early stage, with Water is Life having only been released in late 2022, increased participation of Traditional Owners in environmental water management has been facilitated at selected trial sites throughout Victoria.
Future priorities	▪ Continue to build on previous investment that has protected, maintained and restored Victoria's regional waterways and catchments. Over 150 years of post-colonisation intervention and economic development has caused severe degradation. the rehabilitation process to address environmental, social and cultural values of waterways is incremental, and requires complex and ongoing active management. It is the primary reason why the EC was created under the Water Industry Act 1994. Much has been learned on how to manage this successfully through this program. ▪ Adapt the program to implement new policies including those in Water is Life, the CGRSWS and the new VWMS to be released in 2025. These strategies require the program to adapt to the pressures of climate change, land use change and Government commitments to increasing the role and resources for Traditional Owners in waterway management and will require further resources. ▪ Reflecting changes in the operational context including supply chain disruptions and inflationary pressures will ultimately mean additional funding will be required to deliver projects, specifically those that have a labour or construction/works aspect. Elevated costs of materials including cement, timber and fuel have been noted by delivery partners and made delivery within project budgets particularly challenging. Economic impacts have also been compounded due to global inflationary pressures during the EC5 period, which has now led to further increases in the costs of essential materials, as well as contractors and suppliers. This will require ongoing improvements to decision making frameworks to prioritise activities at meaningful scales to meet regional objectives and statewide outcomes.

1.35 SIRS6: Murray Programs

Initiative	**12. Improving the health of Victoria's waterways and catchments in the face of escalating impacts of climate change/ Supporting regional communities and economic recovery through healthy waterways**
Project	SIRS6: Murray Programs
Description	The aim of the Victorian Murray Floodplain Restoration Project (VMFRP) is to return a more natural inundation regime across approximately 14,000 ha (9 sites) of high ecological value Murray River floodplain in Victoria and improve the ecological, socio-economic and cultural values of the floodplains. All sites are part of the package of Sustainable Diversion Limit (SDL) adjustment measures under the Murray-Darling Basin Plan. This program focused on: ▪ The continuation and expansion of Traditional Owner engagement undertaken by the Mallee and North Central CMA's and to: - Identify within VMFRP opportunities to identify and achieve Traditional Owner values and aspirations for Country. - Inform long-term environmental watering operations and/or watering regimes after the VMFRP construction. - Develop pathways with Traditional Owner groups to deliver on long-term aspirations within each VMFRP project area. ▪ The demonstration of the success of the VMFRP through contributing to the development of a fit for purpose and comprehensive ecological, socio-economic and cultural monitoring, evaluating and reporting program; and to provide data to support the application of adaptive management to each environmental watering event that supports ecological, cultural and socio-economic benefits.

Outputs	▪ Traditional Owner engagement and partnerships – new partnerships developed and/or existing partnerships expanded across the VMFRP area which includes 14 different Traditional Owner groups. ▪ Completion of 48 Aboriginal Waterway Assessments with 171 individual participants and 10 groups, undertaken with the Mallee CMA. ▪ Development of an ecological monitoring, evaluation and reporting plan that has been updated to reflect the outcomes of the five central sites Minister for Planning's assessment under the environmental effects statement/environment report process. ▪ Collection of first year baseline ecological data (vegetation, fish, birds, frogs) and further baseline ecological data collection as required post the 2022 floods.
Summary against evaluation domains	
Impact	**Traditional Owner partnerships and self-determination:** ▪ Traditional Owner engagement and partnerships – new partnerships developed and/or existing partnerships expanded across the VMFRP area which includes 14 different Traditional Owner groups. ▪ Completion of 48 Aboriginal Waterway Assessments with 171 individual participants and 10 groups completed with the Mallee CMA. **Improved understanding of benchmark conditions and ecological significance at all 9 sites:** ▪ The collection of baseline ecological data (vegetation, fish, birds, frogs) has been undertaken for 2 years across the nine sites and led by the Mallee and North Central Catchment Management Authorities. This includes the establishment of an ecological database to consistently store and manage data for effective evaluation and reporting. This work also contributed to the regulatory approvals environment assessment process required for the Environment Effects Act 1978 (Victoria) and the Biodiversity Conservation Act 1999 (Commonwealth). **Monitoring to inform adaptive management:** ▪ Development of consistent monitoring methods and evaluation for the objectives across all 9 sites and the collection of baseline data. These methods have been developed to align with similar monitoring Programs such as The Living Murray and incorporate lessons in application. This has resulted in the VMFRP monitoring Program collecting data that can be evaluated across all 9 sites which will facilitate adaptive management and effective reporting to government and stakeholders on the benefits of the program. In addition, a database has been established to enable the storage and integrity of the data into the future.
Effectiveness	This work enables DEECA to: ▪ deliver on key policies such as Water for Victoria and Water is Life by involving Traditional Owners in the planning and construction phase of the VMFRP; and ▪ report on and demonstrate the success of the program by establishing a comprehensive monitoring, evaluation and reporting Program for adaptive management. Both workstreams provide inherent value. The ecological baseline monitoring data will be retained and will form part of DEECA Water and Catchments broader floodplain Monitoring, Evaluation and Reporting Program. The Traditional Owner Aspirations work supports Traditional Owner participation and capacity building in environmental watering planning. This knowledge and data can be applied to future environmental watering projects.
Appropriateness	At the time of funding the relevant policies the investment aimed to deliver on are: ▪ The DEECA Aboriginal Self-Determination Reform Strategy 2020-2025 titled Pupangarli Marnmarnepu 'Owning our Future'. ▪ Water for Victoria Action 4.11 ▪ Murray-Darling Basin Plan ▪ The Traditional Owner engagement work builds upon the information generated from the Victorian Water Resource Plans (Victoria's North and Murray) by

	articulating and documenting Traditional Owner land and water aspirations for the Murray Floodplain where the VMFRP works are proposed. Since this project was funded, there has been a policy progression towards more Traditional Owner self-determination and genuine and meaningful outcomes with the 2022 framework, Water is Life. Regarding the VMFRP implementation, there has been an increase in the compliance monitoring requirements through the environmental assessment under the Environment Effects Act 1978 and Environment Protection and Biodiversity Conservation Act 1999.
Efficiency	Both projects experienced delays and access issues to the VMFRP sites due to the October 2022 flooding, in addition to the delays caused by the Covid pandemic. These delays have been managed through revised workplans and contract variations. The ecological baseline monitoring contracts with Mallee and North Central CMA incorporated the ability to pivot and adapt the workstream through milestones requiring review of the Monitoring, Evaluation and Reporting plan and hold points to provide opportunities for alignment with any new developments such as outcomes from the regulatory approvals process. North Central CMA indicated that efficiencies were made by using the same field work consultants and aligning the timing with the ecological monitoring Program for the Living Murray.
Legacy	▪ Investment in the Traditional Owner partnerships is intended to foster long-term relationships for the ongoing and increased involvement of Traditional Owners in management and operations of the infrastructure. It is important to continue to invest in these relationships that have taken a lot of time to expand and build trust. ▪ This is a long-term monitoring Program developed to demonstrate and report on the success of the VMFRP and to provide data to support the application of adaptive management to each environmental watering event that supports ecological outcomes, and combined with 20 years of monitoring from The Living Murray program, supports the building of a strong evidence base for environmental works projects.
Future priorities	▪ To finalise baseline monitoring and address any gaps, including any further conditions arising out of regulatory approvals assessment - noting that this is conducted in an adaptive management framework where further refinements will be made pending future funding, infrastructure progressed and site objectives and risks. ▪ To commence policy work to prioritise and integrate the monitoring and ongoing operations and maintenance activities into the broader environmental watering policy and monitoring, evaluation and reporting programs in Catchments Waterways Cities and Towns Division of DEECA. ▪ To uphold the commitment made by the project and the Traditional Owners to maintain trust in relationships that have taken a lot of time and investment into building. Funding will be required to continue to expand self-determined projects by Traditional Owners related to their land and water aspirations for floodplains across the VMFRP area and environmental watering more broadly.

1.36 CWCT11: Our Catchments Our Communities Program

Initiative	**12. Improving the health of Victoria's waterways and catchments in the face of escalating impacts of climate change/ Supporting regional communities and economic recovery through healthy waterways**
Project	CWCT11: Our Catchments Our Communities Program
Description	The $21.75 million of EC5 has supported the implementation of Water for Victoria Action 3.3 Invest in integrated catchment management through delivery of the Our Catchments, Our Communities (OCOC) strategy.

	The implementation of the OCOC program was intended to increase the ability of CMAs to address natural resource management problems with an integrated approach and a strong drive for capacity-building in sector partners and the broader community. The EC5 funding for the OCOC Program was directed toward coordinated Regional Catchment Strategy implementation, improved partnerships and the delivery of better catchment stewardship. After 4 years of delivery, the OCOC program has improved progress toward healthy, sustainable and productive land, water and biodiversity maintained through Integrated Catchment Management (ICM) that is strongly community based, regionally focused and collaborative.
Outputs	▪ Renewed all 10 Regional Catchment Strategies that set strategic directions for natural resource management. Renewed Regional Catchment Strategies contain a consistent set of ICM outcomes across the 10 CMA regions (100% of EC5 target). ▪ CMAs delivered 46,764 ha of place-based on-ground catchment stewardship projects deliver water, biodiversity, land health and productivity benefits for regional and local communities and Traditional Owners. ▪ CMAs delivered structural works such as fencing (74 km), roads (17 km), recreational facilities (25), water troughs (25) and bridges (2). ▪ CMAs delivered engagement events (field day, training, workshops and presentations) that attracted 15,344 participants. This makes up 185% of the target (8282) for the OCOC Program for EC5. ▪ CMAs delivered partnerships (433), assessments (1028), management agreements (128), publications (383) and plans (203). ▪ CMAs have recorded twelve formal partnerships with Traditional Owner groups and 22 with Aboriginal Victorians. Traditional Owner voices feature in planning (e.g. in Regional Catchment Strategies) and on-ground delivery and are supporting Aboriginal self-determination. ▪ DEECA has delivered annual events (summits, workshops and seminars) sharing knowledge and building capacity amongst catchment partners/peers and the community.
Summary against evaluation domains	
Impact	▪ The OCOC Program has increased the area of active stewardship improving catchment health and resilience across Victoria aligned to Regional Catchment Strategy priorities. **Evidence of contribution to long-term Program outcomes (as per the OCOC Program logic and agreed quality and quantity indicators):** ▪ CMAs have delivered 17,530 goods and services related to planning and regulation. These include engagement events (15,344), partnerships (433), assessments (1028), publications (383), management agreements (128) and plans (203). This makes up 178% of the target (9838) for EC5. ▪ CMAs have delivered 46,764 ha of land under active catchment stewardship in Victoria. Active stewardship include environment works, management services, management agreement, assessment and plan. **Evidence of delivery of the four short-term Program outcomes (as per the OCOC Program logic and agreed quality and quantity indicators):** ▪ CMAs have recorded 12 formal partnerships with Traditional Owner groups and 22 with Aboriginal Victorians. Traditional Owner voices feature in planning (e.g. in Regional Catchment Strategies) and on-ground delivery and are supporting Aboriginal self-determination. ▪ Case studies/ most significant change stories – included in the mid-term evaluation report (2023).
Effectiveness	Indicated through delivery in line with work plan,
Appropriateness	The careful design of the OCOC Program ensures that all OCOC projects and activities align with the long-term outcome of OCOC – Action stewardship to improve

	catchment health and resilience. Therefore, all of the OCOC Program's delivery approaches (e.g. implementation, monitoring, reporting, communications and engagement methods) have been appropriate to the objectives of the Program.
Efficiency	There were minimal outputs during the 2020-21 financial year due to the COVID-19 global pandemic restricting engagement and on-ground works. Focus was redirected to renewing the Regional Catchment Strategies and collaborative planning (online). The OCOC Program delivered all the deliverables related to environmental works (118%), management services (145%) and planning and regulation (178), and most of deliverables for structural works (89%).
Legacy	▪ Several state-wide approaches and processes have been developed through this investment to provide an enduring, efficient and consistent approach to program implementation and reporting across the 10 CMAs, such as the Aboriginal Participation Guidelines for Victorian CMAs, the Community Engagement and Partnerships Framework for CMAs, The Regional Catchment Strategies Outcomes Framework, DEECA Standard Outputs, and the Catchment Partnership Agreements Framework. ▪ Partnerships and engagement focused on creating long-term learning and behaviour change. ▪ Benefits of on ground works will endure with ongoing stewardship
Future priorities	**Active stewardship to support healthy catchments, community resilience and Traditional Owner aspirations for Country, including:** ▪ **Catchment Stewardship Projects:** catchment stewardship projects that deliver integrated catchment management with key partners, leverage coordinated investment for on ground environmental works, build capacity and change land management practices. ▪ **Catchment Partnerships:** CMAs to form partnerships with Traditional Owners, water corporations, Environmental Agencies, community groups, landholders, industry, and other non-governmental sector partners (such as Trust for Nature, Landcare networks and Greening Australia) to coordinate the implementation of 10 statutory Regional Catchment Strategies. These partnerships provide a forum for collaboration, enabling partners to align their efforts and leverage investment into projects and activities that deliver Regional Catchment Strategies. ▪ **Statewide Program Delivery:** maintenance and development of DEECA standards for natural resource management delivery and data reporting; guidance for annual catchment condition and management reporting for CMAs; Regional Catchment Strategies implementation reporting and mid-term Regional Catchment Strategies review in 2025; review of the effectiveness of Special Water Supply Catchment Areas that protect Victoria's drinking water supplies; and implementation of the *Victorian Rural Drainage Strategy* in partnership with CMAs.

1.37 SIRS5: Macalister Irrigation District Modernisation Project – Phase 2

Initiative	**13. Macalister Irrigation District Modernisation Project – Phase 2**
Project	SIRS5: Macalister Irrigation District Modernisation Project – Phase 2
Description	The Macalister Irrigation District (MID) covers 53,000 ha in the Gippsland region, contributing an estimated $500 million each year to the Victorian economy through agricultural activities including dairy, cropping, beef production and vegetable growing. The district is constrained by low service levels and inefficient on-farm irrigation practices, limiting on-farm productivity and profitability. The MID also contributes approximately 30% of nutrient run-off received by the Gippsland Lakes. In addition, the condition of ageing infrastructure and assets at risk of failure not only impacts delivery efficiency (at 75%) but has the potential to interrupt supply to almost

	all the MID and severely damage local industry. Improving water security and efficiency was the key driver for the State investing in the modernisation project. The $62.6 million MID Modernisation Phase 2 Project is aimed at modernising the irrigation district which would result in achieving up to an estimated 10.3 GL of water savings and improve agricultural productivity in the district. The project is funded with one-third contribution from the Southern Rural Water, and one-fifth from the state and half from the Australian Government through the National Water Infrastructure Development Fund.
Outputs	The works are treating approximately 80 kms of open leaky channels, constructing roughly 34 km of pipelines and decommissioning of an estimated 50 kms of old channels. Additionally, the project rationalises up to 450 old, inefficient and manual outlets throughout the district by either upgrade or removal. The final number of outlets installed will be finalised as the project reaches practical completion in late 2024, and will be reported in the next reporting period. 16.7% of the anticipated water savings will be retained for the environment, with the remaining for agriculture.
Summary against evaluation domains	
Impact	**Create a sustainable, resilient, and efficient supply system:** ▪ The MID Phase 2 project is on track to meet the Water Savings target of up to10.3 GL which will undergo Auditing before being realised by Water Recovery at the conclusion of the project. ▪ The project to date has modernised just over 80 km of irrigation network, improving delivery efficiency as irrigated properties are connected to the modernised system. The project has modernised over 120 outlets and 6 regulators across both Stratford and Nuntin supply channels. **Stimulate adoption of on-farm best-practices:** ▪ To date the cumulative connections for MID Phase 2 number over 250 properties with 25 on-farm plans developed for irrigated landholders in the MID. ▪ The MID Phase 2 project has provided a linkage between infrastructure projects and complimentary sustainable irrigation projects on-farm by the delivery of whole farm planning and on-farm efficiency incentives to landholders to maximise the benefits of both modernisation and on-farm Programs. This has led to better water use efficiency and reduced runoff of nutrient load into the Gippsland lakes, thereby enhancing its water quality and biodiversity and delivery of on farm plans **Eliminate 'base-flow' export to rivers and lakes:** ▪ While the project continues to modernise the irrigation network in the MID, monitoring efforts are unable to commence until its rationalised conclusion. Southern Rural Water is responsible for monitoring and reporting water quality and responding to events for which nutrient run-off is the cause; i.e. algae blooms in the Gippsland Lakes **Local employment:** ▪ Over the life of the project, MID Phase 2 anticipated creation of an estimated 250 jobs including the contracted requirement to utilise the Working for Victoria (Building Stimulus). To date, approximately 76 direct jobs have been created in the 3 years of project delivery.
Effectiveness	▪ During tender processes for the two largest infrastructure components of the project; the modernisation of the Newry and Nuntin channels, a significant increase in costs were realised, driven by the COVID-19 pandemic and the consequential inflation of construction related costs since the initial bid. Works on the Newry and Nuntin pipelines could not both be delivered within the current project budget. The Newry component of the works proceeded as it included a more significant scope of work and was more critical to the efficient operation of the irrigation district. A variation was executed in late 2023 between the Victorian Government, Australian Government and Southern Rural Water to revise the scope of project.

	This variation removed the Nuntin pipeline construction from the program of works and replaced the milestone with the installation of an automated transition outlet and automated regulator on the Nuntin channel system. The scope change had no impact on the associated Australian Government funding, with the full funding remaining available for the completion of the project. Southern Rural Water continues to investigate opportunities to deliver the Nuntin component of the MID 2 Project.
Appropriateness	▪ The MID Phase 2 Project is funded in line with Victoria's statutory functions as set out in the Water Act 1989 and is consistent with policy objectives (b), (c), (d), and (e) contained within Part 4 of the Victorian Climate Change Act 2017. The MID is also consistent with the Pilot Water Sector Climate Change Adaptation Action Plan which has been developed as a requirement under the Climate Change Act 2017. ▪ The MID Phase 2 Project has been affected by the COVID-19 Pandemic through escalation of construction costs, supply chain delays, rescoping constraints and inflated manufacturing costs. ▪ Strategically the scope of projects available for funding partnerships has increased; at the time of bidding rural-only projects were tabled. Since the MID Phase 2 Project, regional, and rural-urban interfaces have been considered and awarded funding, and there is an increase in integrated water management including recycled water projects. ▪ Since initial bidding on the MID Phase 2 Project, new projects are more rigorously considered for Traditional Owner outcomes, through early engagement consistent with community expectation, the State's commitment to Aboriginal self-determination and reflected in the changes to funding frameworks of the Australian Government's National Water Grid Fund.
Efficiency	▪ Project governance has supported efficient delivery through regular meetings of the Project control group, Rural Water Projects team, regular field visits, monthly reporting to the Australian Government, quarterly financial reports. ▪ By mutual agreement with funding partners and through negotiations with the Australian Government, milestone and payment schedules of relevant milestones were varied by deed or agreement, as required, to account for increased costs. ▪ Following receipt of Milestone Achievement Reports, 100% of milestone payments were made on schedule as per individual project funding agreements.
Legacy	▪ Up to 10.3 GL of long-term water savings. ▪ Enduring improved on-farm practices through sustainable farm planning. ▪ Improved service delivery to rural customers. ▪ During the construction of the project, Traditional Owner grinding stones were identified, these have been removed in partnership with the Gunaikurnai Land and Waters Aboriginal Corporation. They will be relocated for display at a permanent site at Lake Glenmaggie. Southern Rural Water and the Gunaikurnai Land and Waters Aboriginal Corporation are working together to formalise designs for the display and associated gardens.
Future priorities	▪ Southern Rural Water and the governance team continue to investigate further opportunities to modernise the MID. Southern Rural Water has developed the 'Macalister Fresh' concept which builds on modernisation by creating industry and community partnerships to market the region's agricultural sector, and a business case is being developed with funding provided through the State with delivery in track for June 2024. The outcome of successful project bids arising from this business case will add significant economic, social, environmental and heritage value to the modernisation.

1.38 WRS19: Resilient Water Markets, Regional Communities and Infrastructure (Stream 1 and 2)

Initiative	14. Resilient Water Markets, Regional Communities and Infrastructure
Project	WRS19: Resilient Water Markets, Regional Communities and Infrastructure (Stream 1 and 2)
Description	This project was intended to position DEECA programs to support water reliability and community and investor confidence in a period of increasing demand for water and significant intergovernmental reform. It sought to address community concerns about the practices of water brokers through broker reform and regulation and involvement in inter-governmental reform. It also sought to build foundational data on the effects of flow changes on the ecological and cultural values of the lower Goulburn River to inform reforms to trade and operating rules. Finally, it sought to manage delivery shortfall risk to bulk, urban and environmental water and improve community understanding of Murray operations and delivery risk to build public confidence in the process of managing shortfall events. This project had significant alignment with, and builds on the foundational outcomes targeted through WRS1: Retail Entitlements and Markets which sought to improve confidence and transparency of retail entitlements, and WRS4: Water Market Transparency that supported Victoria's representation and response to the ACCC inquiry into Murray-Darling Basin Water Markets.
Outputs	**1. Interstate broker regulation scheme:** ▪ Provided input on the Victorian component of an interstate broker regulation scheme that delivers an agreed interstate standard of conduct, submitted feedback on a draft Bill to amend the Commonwealth Water Act 2007 to insert a framework for a mandatory Intermediaries Code (the Code) and ensured Victoria was represented at interjurisdictional meetings to discuss the development of the Code (this work also aligned to the Water Market Reform Roadmap which was delivered as part of the WRS4: Water Market Transparency project. ▪ Prepared intergovernmental briefing materials for Victorian representatives to support the above. **2. Murray operations and delivery risks:** **2A: Improving community understanding of Murray operations and delivery risk** ▪ Prepared communication tools and materials for delivery risks to disseminate community information and updates on delivery risks in the River Murray system. This included developing the Victorian River Murray Shortfall Response Plan to provide confidence and transparency in shortfall risk event management ▪ Initiated annual workshops with authorities including Victorian state authorities (e.g. Agriculture Victoria), rural water corporations, environmental water holders, the MDBA and Basin States to build clear and consistent messaging on delivery risks to community water market participants. ▪ Completed assessment of annual reports on applications for water extraction from the River Murray system in the lower Murray region. ▪ Completed 'Closing the Loop' feedback report addressing concerns from stakeholders and water users on management and communication of delivery risks. **2B: Managing delivery shortfall risk** ▪ Supported the Minister of Water's determination of 218 lower Murray works licence applications and completed final works licence application assessments before the Place of Take (PoT) framework replaced this requirement (see WRS1: Retail Entitlements and Markets for PoT framework output). ▪ Actively worked with Basin agencies to monitor and manage shortfall risks and, ultimately, established interim shortfall sharing arrangements for bulk, urban and

	environmental water holders for 2023-24. Supporting activities included active monitoring of river operational risks with the MDBA and water corporations; participating in the interjurisdictional Capacity Policy Working Group to understand, mitigate, manage and respond to shortfall risks; helping to coordinate cross-state crop area mapping to better understand future crop demands; and reviewing infrastructure and operation options to resolve known risks identified in the Barmah-Millewa Feasibility Study through the Barmah-Millewa Program. **2C: Environmental, Cultural and Recreational Assessments for the lower Goulburn River and surrounding areas** ▪ Conducted environmental sampling on the lower Goulburn River, Lower Broken Creek and Campaspe River to better understand the potential effects of a new flow regime for the delivery of traded and environmental water. This, included convening a Scientific Advisory Panel (SAP) to assess the ecological risks and opportunities of different operating rules for the lower Goulburn. Annual SAP reports were finalised and published, including monitoring reports for the lower Goulburn River and Lower Broken Creek. The Lower Goulburn Flows Collaborative Partnership Group was also established to bring together key organisations involved in monitoring environmental and cultural impacts of the operating rules. ▪ Completed Aboriginal Water Assessments, and undertook annual surveys on culturally significant locations for the Goulburn River, Broken Creek and Campaspe. DEECA also facilitated meetings and two-way learning between scientists and Traditional Owners. ▪ Consulted with recreational fishing representation groups (e.g. Victorian Fisheries Authority) to assess impacts to recreational fishing access. ▪ Produced a report (2022) with Goulburn Broken CMA and Streamology on the social values of recreational site availability (e.g. sandbars), and the effects of different flow regimes and operating rule settings, in the lower Goulburn River. ▪ Used the environmental, cultural and recreational assessments and information listed above to evaluate the effect of inter-valley trade and proposed operating rules for the Goulburn River on these values
Summary against evaluation domains	
Impact	▪ The project has supported the security of Victoria's water system by providing confidence and a level of certainty on how shortfall risks will be managed. Interim shortfall sharing arrangements have been put in place to support the system's resilience to any emerging capacity and delivery risks in 2024. This also supports efficient water use by underpinning the security of the water market, which in turn, enables efficient, effective resource sharing. ▪ The project directly supports the effectiveness of water governance by providing greater consistency of regulation of water brokers across states. The ACCC recognised Victoria's leading position in many areas of its Murray-Darling Basin water market inquiry, including Victoria's transparency of water market intermediaries. ▪ The project has also improved data availability and understanding of environmental, cultural and recreational impacts of operating rules in the lower Goulburn River, Lower Broken Creek and Campaspe River. This has provided information to inform improved trade and operating rules in the Goulburn that reduce risks to waterway and catchment health and incorporate social and cultural values, while also meeting irrigation and consumptive water use demands (see WRS1: Retail Entitlements and Markets evaluation report for specific impacts from the Goulburn trade review and new rules). Long-term monitoring will improve decision-making over time. ▪ The project has increased opportunities for a Traditional Owner voice in River Operations. Two-way learning events were facilitated among Traditional Owners and the SAP, as well as ongoing opportunities for mutual learning and connection with DEECA, waterway managers and river operators. Following the commencement of the operating rules in 2022, governance arrangements

	were renewed via co-design with Traditional Owners to provide oversight over the rules.
Effectiveness	▪ The overall project has met a number of targets and progressed important work in collaboration with the other Basin states, which will benefit Victoria in the short and long term. ▪ The project successfully developed foundational data that was used to inform effective decision-making and long-term reform of Goulburn to Murray Trade rules (see WRS1: Retail Entitlements and Markets). Initial monitoring results from the 2022-23 Scientific Advisory Panel on the Goulburn to Murray Trade rules indicate a positive environmental response in the lower Goulburn since the rules were introduced in 2022. The wet conditions so far have meant that the effectiveness of the rules has yet to be tested in years of high IVT demand. There has also been greater trade opportunity from the Goulburn to the Murray under the new rules than expected, which is a positive outcome for Murray irrigators. ▪ Draft broker regulations have been released that will support better water market transparency and confidence once implemented. Interim shortfall sharing arrangements provide arrangements to effectively manage capacity and delivery risks in 2024.
Appropriateness	This project directly aligns with key management strategies including actions in Chapter 9 of Water for Victoria, in particular actions 9.3 – Improving water market effectiveness, 9.4 – Improving Water Market Information and 9.6 – Improving Trading Rules in Northern Victoria. ▪ This project also supported progress of Victoria's contribution to two of the four 2021 Murray–Darling Basin Ministerial Council priorities. 1. delivery risks in the Murray system 2. timely implementation of key reforms from the ACCC Murray-Darling Basin water markets inquiry (2021). As part of this project, a program has been set up to continue to monitor the implementation of operating rules for the Goulburn River to build the technical understanding of the how the operating rules are performing under a range of conditions. ▪ This is the most appropriate way to approach these problems and learning in this area and will allow the Victorian Government to improve settings over time, and enable agencies involved in river operations to adapt and apply a changed operating regime under the new rules.
Efficiency	▪ All individual projects have been delivered on time and on budget, indicating well developed scopes and managed projects. ▪ The investment into foundational evidence and stakeholder consultation have supported effective Goulburn to Murray trade changes, thereby reducing potential inefficiencies from implementing ineffective or unsupported changes.
Legacy	▪ The introduction of a framework for the Intermediaries Code in the Water Act 2007 (Commonwealth) shows clear intent for the introduction of a Brokers Code. The legacy of the introduction of the Code is yet to be realised, but with the framework being enshrined in legislation, it is expected to have long-term effects. ▪ Changes to the Goulburn to Murray trade and operating rules were based on a holistic understanding of implications for environmental, cultural and recreational values, and will provide enduring benefits. Monitoring over future years will provide evidence of whether the rules will continue to perform as expected under a range of conditions. ▪ Regular updates to the Shortfall Response Plan on the VWR will continue to provide information to the community and investors about delivery risks.
Future priorities	Policy needs to continue to evolve and adapt to achieve positive and holistic benefits for Victoria as conditions change. Key priorities for this project include: ▪ Supporting monitoring and assessment of the impacts of the new Goulburn to Murray trade and operating rule on the environmental condition of the lower

	Goulburn River and developing a plan to transition monitoring to business-as - usual. ▪ Integrating the operating rules for the lower Goulburn River into Victoria's bulk entitlements framework to ensure Victorian river operators adhere to operating rules and have a transparent basis for doing so. ▪ Responding to increasing delivery risks in the River Murray and continuing to improve the framework for sharing delivery capacity of the system. This will include continuing to work with the Basin agencies to investigate Ministerial Council-approved policy and infrastructure options identified in the Barmah-Millewa Feasibility Study through the Water Delivery Optimisation Program. ▪ More broadly, continuing to represent Victoria's interests in managing our rivers and protecting our share of the water in the River Murray.

Appendix B:

Impact domain: Examples of project contributions to end of tranche outcomes

Jacobs

This appendix expands on the summary of achievements made by EC5 projects toward the EC5 End-of-Tranche and long-term outcomes provided in Section 4 of the End-of-Tranche EC5 Evaluation Report. It provides examples of some of the main ways that individual projects have contributed to each outcome area.

1.1 What progress has been made toward secure and resilient water systems?

1.1.1 Improved urban and rural planning for long-term water security

Five of the EC5 projects directly contributed to improving urban and rural planning for long-term water security, with others providing indirect contributions to this outcome. Some examples of significant progress toward this outcome include:

- **PSP1: Long-Term Water Security:** This project developed a long-term, coordinated approach for improving water security across Victoria. Review and update of the *Urban Water Strategy Guidelines* resulted in several key improvements, including increased Traditional Owner engagement, inclusion of stress test scenarios and alignment with other water planning frameworks. Assessment of the broader water planning framework also commenced to ensure it works efficiently and effectively to deliver water security for communities at an acceptable cost.
- **CWCT01: Integrated Water Management (IWM):** IWM is a key approach for diversifying water sources and approaches that support water security. Through facilitation of the 15 IWM Forums collaborative platforms to identify, assess, and implement IWM solutions, and through supporting relevant policy reforms, the program has increased the capacity and capabilities to apply IWM throughout Victoria. The program also made good progress towards entrenching IWM as a business-as-usual water management across the state.
- **PSP4: Central and Gippsland Region Sustainable Water Strategy (CGRSWS) Funding Stream 4 Water Cycle Climate Change Adaptation Action Plan:** Building on a pilot plan developed in the fourth tranche of the Environmental Contribution (EC4), the first full *Water Cycle Adaptation Action Plan* was launched in mid-2022. Implementation of the plan in the fifth tranche of the Environmental Contribution (EC5) focused (in part) on ensuring the water sector can continue to provide safe, secure, and reliable water services under a changing climate.
- **WRS12: Long-Term Water Resource Assessments and Addressing the Impacts of Mining and Extractive Industries:** This project developed a response to the findings of the *Long-Term Water Resource Assessment for Southern Victoria*, by including a comprehensive set of actions in the CGRSWS that are targeted towards addressing decline in long-term water availability and promoting sustainable management of water in Victoria.
- **PSP2: Sustainable Water Strategies:** A Sustainable Water Strategy provides for the strategic planning of the use of water resources within a region to help address the challenges associated with providing affordable water securely. EC5 funded the development of the CGRSWS and Implementation Plan (published in 2022) and supported implementation of CGRSWS actions in the first two years of the CGRSWS. For the first progress report, 79 of 96 actions had been started and 9 actions were completed. For the second progress report, of the 111 actions and policies, 16 actions have been achieved (7 completed and 9 ongoing). Actions to date have contributed to an improved understanding of the water security challenges and solutions in the region.
- **WRS10: Understand and Apply Climate Science to Water:** Key findings from research undertaken through this project have been used to inform various water resource strategies (e.g. *Urban Water Strategy*, CGRSWS) and policy papers. The findings were specifically applied to assessments of the impact of climate change water availability.

- **WRS11: Surface Water Assessment and Modelling:** This project supported the sustainable management of Victoria's water resources through transitioning all major Victorian surface water resource systems models from REALM (Resource Allocation Model) to the Source platform. Source is a comprehensive and more defensible surface water modelling platform consistent with Australian national modelling, with pilot automation of the platform and improved sharing across water corporations (and the broader modelling community to ensure transparency and consistency). Source next-generation models are also being used to support policy, planning and management decisions across urban and rural systems.
- **WRS13: Groundwater Assessment and Modelling:** This project provided an improved, shared understanding of groundwater and its uses for evidence-based management. In EC5, a state-wide assessment of groundwater availability was completed, which will inform a review of limit of takes. Specialist advice was also provided about existing and emerging water related risks associated with the water entitlement framework. The quality and accuracy of groundwater monitoring data was also improved through the refurbishment of 23 bores and construction of 39 new bores.

1.1.2 Increased uptake of alternative water supplies

EC5 projects delivered of a range of on-ground works, designs, and planning targeted towards improving uptake of alternative water supplies. Three of the most significant contributions to increasing uptake of alternative water supplies were:

- **CWCT01: Integrated Water Management:** The IWM project co-invested in a grants program supporting 52 IWM projects, including capital works for 3 stormwater harvesting systems, 4 recycled water schemes, 2 rainwater harvesting systems and 8 detailed designs for alternative water projects. Once complete, the projects will generate an estimated 916 ML/year of alternative water for irrigation, alongside other benefits as described in the other outcome areas.
- **CWCT04: Recycled Water, Stormwater and Onsite Wastewater Policy:** This project contributed towards creating an enabling environment to increase the uptake of recycled water, rainwater and stormwater through updating regulatory guidelines, developing risk frameworks, undertaking cost benefit analysis and regulatory impact statements, and developing guidance for councils, planning system users, government and practitioners. Twenty educational sessions on Victoria's stormwater planning requirements were delivered to over 900 people, with 100% of participants rating that they were satisfied with the training. Four local government councils implemented new stormwater offset schemes (City of Kingston, Mornington Peninsula Shire, Mooney Valley and City of Darebin), and several more are investigating options for setting up schemes within their municipalities. DEECA estimates that through the IWM grants program, DEECA has co-funded 550 ML/year of additional stormwater through 15 projects.
- **CWCT07: CGRSWS Funding Stream 2 Diversify Water Sources and Increase Water Efficiency:** EC5 supported the co-investment of $31.729 million in 17 IWM projects throughout the Central and Gippsland region. This included 8 capital on-ground projects that will generate an estimated 2,078 ML/year of alternative water supply. The largest of these is the Dingley Recycled Water Scheme, which includes 42 km of trunk and distribution mains and a reticulation network to 40 sites that will deliver recycled water from the Eastern Treatment Plant, saving up to 300 ML/year of potable water and reducing groundwater drawdown. This network could be expanded to support future populations of the Suburban Rail Loop Precincts. The project also supported, 9 feasibility studies, business cases or concept designs for alternative water supply projects.

1.1.3 Reduced pressure on the water grid

Progress was made toward this outcome through the Water Grid Oversight project. Through establishment of an Executive Advisory Committee to provide oversight and guidance on urban water security, this project increased collaboration and coordination between the water industry and government.

1.1.4 Improved efficiency, effectiveness, and transparency of water markets

Improving the effectiveness of water markets allows for the sharing of water security benefits in ways that are equitable, responsive and transparent. Throughout EC5, significant progress toward this outcome has been achieved through:

- **WRS3: Water Market Reform:** This project made progress towards resolving water and cost sharing problems in South-Central Victoria through the collaborative design of a water sharing framework, which has been supported by stakeholders.
- **WRS4: Water Market Transparency:** This project improved water market transparency by publishing information on businesses that own over 2% of water entitlements within a system. Publication of this information helps foster transparency and openness in water markets and improves market participants' trust in the integrity of water markets. Other work to support water market transparency include input to a Basin-wide workplan for the Australian Government's *Water Market Reform Roadmap*, the development of an assessment framework for fair and equitable access to intervalley trade with NSW, a pilot for a water market exchange platform in the Macalister Irrigation District, and support to the Minister on market transparency and reform matters.
- **WRS19: Resilient Water Markets, Regional Communities and Infrastructure:** Through EC5, this project addressed community concerns about the practices of water brokers through broker reform and regulation and involvement in inter-governmental reforms. This included providing input on the Victorian component of an interstate broker regulation scheme that delivers an agreed interstate standard of conduct and developing foundational data to inform effective decision-making and long-term reform of Goulburn to Murray Trade rules (see WRS1: Retail Entitlements and Markets). Draft broker regulations were also released that will support better water market transparency and confidence once implemented. Interim shortfall sharing arrangements provide arrangements to effectively manage capacity and delivery risks in 2024.
- **WRS9: Water Register Operations and Improvements:** This project supported the operation of the Victorian Water Register, critical to enabling effective management of Victoria's water entitlement framework. It also made efforts to transition the Victorian Water Register to a new technology platform that provides efficient application processing, new online services, security and reliability, improved communications, real-time data, and improved analytics and visualisation. However, delays in project delivery coupled with higher than planned use of project resources led to a review of the approach which found it to be infeasible based on forecast costs to complete the project and for ongoing operations. Following termination of the original project, a new project was established to develop an alternative approach to delivering a Victorian Water Register platform that maximises reuse of the investment made to date, while delivering a value for money outcome.
- **WRS15: Water Accounting and Reporting:** This project delivered critical business-as-usual functions, including accounting for operation of the Victorian Water Register, support for Victorian Water Register users, publishing the annual Victorian Water Accounts, regular reporting on water resource condition and water quantity data. It also delivered an upgrade of the Victorian Water Accounts platform, building a new interactive website to improve the ability of users to engage with the water accounts and download the data for use.

The Victorian Auditor-General's Office, in its 2021 audit of recycled water use in Victoria, stated that "DELWP (then Department of Environment, Land, Water and Planning, now Department of Energy, Environment and Climate Action (DEECA)) is also working to improve publicly available water data. For example, DELWP (DEECA) developed the Victorian Water Accounts, which is an online, user-friendly and engaging overview of water use and availability across the state."

1.1.5 More robust water entitlement system

Examples of ways in which the EC5 projects have contributed to this outcome include:

- **WRS5: Managing Victoria's Water Sharing Framework:** This project reviewed and enhanced the bulk entitlement and environmental entitlement framework to improve certainty of rights and obligations and increase flexibility for entitlement holders to better manage their water risks. In EC5, 96 changes (consisting of minor and major amendments, revocations, and granting of new entitlements) were made to bulk and environmental entitlements, with 36 of the changes made to realise water recovery from irrigation modernisation projects in northern Victoria.
- **WRS6: Licencing Framework Groundwater and Unregulated Systems:** This project performed the core business function of maintaining the management and licensing framework for groundwater and unregulated systems. It also developed Groundwater Management 2030 (GM2030), which sets clear priorities to enable better management and licencing of groundwater by 2030. The release of GM2030 contributes to improved confidence in the water entitlement framework and water management plans. The GM2030 implementation phase has started under several priority areas to review, streamline and identify any gaps within the entitlement and management framework, essential tools that underpin decision-making for water corporations. This will lay the foundation for new and amended licensing / management policies.
- **WRS1: Retail Entitlements and Markets:** This project contributed to protecting the integrity of the retail entitlement and market framework and increased fairness and equity in water markets by providing transparent trade information and monitoring market behaviour to ensure equitable access to trade opportunities. New water trading and operating rules mean that Victoria's trading rules for the Goulburn system meet legislative requirements and enable water to be traded within ecological and cultural limits of the Goulburn River.
- **WRS8: Accounting for Water Recovery:** This project enabled the conversion of long-term water recovery from water savings projects into water entitlement volumes and reliabilities. The project also delivered the legally necessary amendments to bulk entitlements to be made, and funded the audit. This enabled distribution of water recovery benefits, and for Victoria to demonstrate its progress with meeting its water recovery target obligations under the Murray-Darling Basin Plan.

1.2 What progress has been made toward efficient water use?

1.2.1 Improved water awareness and water efficiency in schools and homes

The Water Efficiency Program has delivered water awareness and efficiency measures in schools and homes through the Schools Water Efficiency Program (SWEP), the Community Rebate Program (CRP) and the Community Housing Retrofit Program (CHRP). Key achievements for **CWCT05: Water Efficiency Program** include:

For CRP and CHRP:

- These programs undertook water audits, fixed leaks and upgraded water using appliances for 6,035 households and emergency community housing properties exceeding the EC5 Making Victorians Waterwise target of 5,275[1] rebates by 15%. The accumulated water savings resulted in 298 ML of water saved during EC5, equating to $0.75 million[2] in total bill savings from reduced water and wastewater charges or $124 average saving per customer assisted per year. Once water efficient products are installed, the water savings continue for the life of the product.
- Around 50% of customers who responded to an independent evaluation survey stated they had changed their behaviour to save water after participating in the CRP or the CHRP.
- An independent evaluation found that the programs were effective in reaching customers that are generally vulnerable or in hardship situations. For CRP, 81% were concession card holders and 29% had a disability. For CHRP housing, 34% of tenants identified as having a disability, 31% spoke a language other than English, and 31% identified as Aboriginal or Torres Strait Islander. Almost 80% of customers would have not upgraded their appliances within the next 5 years without assistance from the CRP.

For SWEP:

- SWEP has delivered water use monitoring, leak alert services, and data visualisation through the online portal and provided dedicated science and maths curriculum materials to 1,452[3] schools, with 212 of these registered during EC5. A total of $5 million was invested in SWEP over 4 years.
- SWEP data monitoring identified a total of 3,010 leak events[4] in 905 schools (60% of registered schools) and saved 1.9 GL of potable water equating to $8.46 million in avoided water and wastewater costs to schools. This represents a payback period of 2.3 years.

The project also provided Victoria's contribution to the Australian Government's Water Efficiency Labelling and Standards (WELS) scheme, which regulates and provides consumer advice on water using products at the point of sale. This resulted in 4 GL of water savings and national economic return of $587,416.[5]

[1] Combined target made up of *Making Victorians Water Wise* (4,235 rebates) and *Delivering community benefits through implementation of the Central and Gippsland Region Sustainable Water Strategy* (1,040 rebates).

[2] Based on 2023-24 average water and wastewater charges of $2.53 per kilolitre.

[3] Accumulated number of schools registered to SWEP since launch in 2012.

[4] Leak event is occurrence where water used is above 0 litres between 12:00AM – 1:00AM.

[5] 2022, WELS Strategic Plan 2022-25, Commonwealth Department of Climate Change, Energy, the Environment and Water.

During the EC5, Melbourne's per capita water use remained relatively stable; from 160 litres per person per day in 2020-21, 163 litres in 2021-22, reducing to 161 litres per person per day in 2022-23.[6] Since August 2021, Melbourne storages remained above 80% full and water restrictions were not required.[7] The Melbourne 2022-23 per capita water use needs to reduce by 11 litres to meet the current voluntary target of 150 litres per person per day.

The **CWCT07: CGRSWS Funding Stream 2 Diversify Water Sources and Increase Water Efficiency** program also delivered water efficiency outcomes through delivery of WaterSmart across all 10 CGRSWS urban water corporations, assisting a minimum of 370 large and medium non-residential customers to implement on-site water use monitoring and/or undertake water efficiency audits (two-year delivery period from September 2023 to September 2025). At 30 June 2024, the program had assisted 408 customer sites, exceeding the minimum target of 370. This also included a synthesis of existing and planned water efficiency behaviour change activities in Victoria and other jurisdictions to identify gaps and opportunities for collaboration.

1.2.2 Improved water awareness and water efficiency in irrigation communities

EC5 projects delivered of a range of infrastructure and modernisation projects to improve water efficiency in irrigation communities and provided educational tools and knowledge to irrigators to improve water awareness. The major projects supporting this outcome were:

- **SIRS1: Rural Water Infrastructure Project Oversight and Governance:** EC5 investment supported DEECA in providing governance and oversight of major water infrastructure projects focused on water efficiency in irrigation communities such as the Macalister Irrigation District Phase 2 Modernisation and the Goulburn-Murray Water Connections project. DEECA also engaged with stakeholders and the community to improve project outcomes and raise awareness of water efficiency, and secured funding for new strategic water efficiency infrastructure projects. As of June 2023, approximately $839 million of funding had been secured for strategic rural water infrastructure projects across 25 projects totalling $839 million. Since July 2023, DEECA has secured an additional 8 projects totaling approximately $157 million.
- **SIRS2: Sustainable Irrigation Program Implementation:** This project improved water awareness and water efficiency by providing educational tools and knowledge to irrigators to assist them with decision making, and future planning on farm. This included engaging with over 3000 participants, including field days aimed at improving knowledge and skills relating to irrigation. This project also included an irrigation extension program which provided incentives to irrigators to drive productive and sustainable irrigation practices, including irrigation system upgrades, whole farm plans, scheduling equipment, re-use systems, soil surveys and system checks. There was high uptake of the incentives during EC5, including 86 whole farm plans, which aim to maximise all aspects of on-farm operational capacity and efficiency, and prepare irrigators for a future with reduced water availability. The project tracked the implementation of whole farm plans, showing that physical works are being undertaken and are achieving improved practices and outcomes (72% of farms with a whole farm plan have completed over 50% of their planned infrastructure improvements).

[6] 2024, Melbourne's Water Outlook 2024, Greater Western Water, Melbourne Water, South East Water, Yarra Valley Water.

[7] Historical Water Storage Levels, Melbourne Water

- **SIRS5: Macalister Irrigation District Modernisation Project – Phase 2:** This project modernised just over 80 km of irrigation network which supports improved delivery efficiency as irrigated properties are connected to the modernised system. So far, over 250 properties are connected to the modernised system. The final project achievements and audited water savings of up to 10.3 GL will be reported following practical completion in late 2024, and will be reported in the next reporting period. The infrastructure works were complemented by whole farm planning and on-farm efficiency incentives to landholders to maximise the benefits of both modernisation and on-farm programs, delivering 25 on farm plans.

1.2.3 Improved responsiveness of rural water policy to water wise use and climate change

Examples of ways in which the EC5 projects have contributed to this outcome include:

- **SIRS2: Sustainable Irrigation Program Implementation**: This project contributed to this outcome through publication of *Social and economic impacts of Basin Plan water recovery in Victoria*, and *Water supply and horticultural demand in the southern Murray-Darling Basin*, which examined future scenarios and implications for the irrigated agriculturalists and their communities under a changing climate. Extensive land use mapping was also undertaken in Victoria through the Regional Integrated Land and Water Use Mapping Program (RILWUM) which has shown significant land use change over time. Valuable data collection and information sharing achieved through RILWUM will support ongoing analysis to identify trends and emerging risks that support improved design of management frameworks and decision making.
- **PSP2: Sustainable Water Strategies:** The CGRSWS includes a chapter outlining ways to support farmers to adapt and expand in a drying climate by using water more efficiently and through greater use of recycled water and treated stormwater (Chapter 7 - Water for agriculture). The CGRSWS commits to actions that work with farmers to encourage more efficient use of water and best-practice irrigation through advice and incentives via the Sustainable Irrigation Program and help farmers to reduce the effects of irrigation on the environment, including salinity, nutrient runoff and waterlogging, to support a sustainable and productive industry. This is evidenced by the Policy 7-1 which commits to maximising water efficiency in agriculture, which provides resources and industry commitment to continue to upgrade inefficient water supply infrastructure.

1.2.4 Reduction in irrigation losses

The key project that contributed to this outcome was:

- **SIRS5: Macalister Irrigation District Modernisation Project – Phase 2:** This project is on track to deliver up to 10.3 GL of Water Recovery and has modernised just over 80 km of irrigation network. The final project achievements and audited water savings will be reported following practical completion in late 2024, and will be reported in the next reporting period.

1.2.5 Improved regulation of water user compliance

The key project that contributed to this outcome was:

- **WRS7: Water Compliance Oversight and Reform:** This project implemented a modern regulatory regime for compliance and enforcement for unauthorised take of water. Victoria's demonstration of strong compliance standards supports its position and advocacy for greater compliance in other states, protects, encourages a level playing field for water take and supports greater water security for all water uses (including the environment). The project successfully reduced unauthorised levels of take, with an independent review by former

Victorian Auditor-General, Mr Des Pearson AO, finding there had been very good progress and significant reductions in unauthorised take since the reforms were introduced.

1.3 How have risks to priority waterways and catchment health been reduced?

1.3.1 Reduced risks from stormwater runoff into priority urban waterways

Improving stormwater management can reduce the adverse impacts of stormwater to waterways and support their ecological health. Throughout EC5, significant progress toward this outcome has been achieved through:

- **CWCT01: Integrated Water Management:** The IWM project co-invested in a grants program supporting 52 IWM projects including capital works for 3 stormwater harvesting systems, 4 recycled water schemes, 2 rainwater harvesting systems, construction of 1 wetland and improvement works to 4 wetlands to capture and treat stormwater to support ecological health of waterways and 8 detailed designs for alternative water projects. Once complete, the projects are expected to result in the prevention of 8,407 kgs of nitrogen, 2,299 kgs of phosphorus and 258 tonnes of total suspended solids from entering our waterways every year.
- **CWCT04: Recycled Water, Stormwater and Onsite Wastewater Policy:** This project provided guidance to councils on stormwater offset schemes, with four local government councils implementing new stormwater offset schemes (City of Kingston, Mornington Peninsula Shire, Mooney Valley and City of Darebin), and several more are investigating options for setting up schemes within their municipalities. A new tool was also developed to help planning system users (developers, engineers, councils) demonstrate compliance with their stormwater obligations under the Victorian Planning Provisions (due for launch early 2024-25). The project also supported implementation of stormwater management requirements under the planning scheme, delivering information sessions to over 900 participants. The project also provided 58 of 65 eligible councils with grants to focus on data improvements, updating Onsite Wastewater Management Projects or to undertake risk reducing activities, with 89% of councils having improved their management and planning processes.
- **CWCT07: CGRSWS Funding Stream 2 Diversify Water Sources and Increase Water Efficiency:** This project funded capital works and feasibility / design works for several stormwater projects which will reduce adverse impacts of stormwater to waterways. These include the Jan Juc daylighting project, the stormwater harvesting concept design for the Northern and Western Geelong Growth Areas and the Werribee Reconfiguration project.

1.3.2 Improved stewardship in catchments & waterways

EC5 projects delivered of a range of projects to improve stewardship in catchments and waterways. The major projects supporting this outcome were:

- **CWCT08: CGRSWS Funding Stream 3 Waterway Health Complementary Measures and Catchment Management Improvement:** This project increased inclusive management by incorporating social and community values in waterway management. Examples of this include the Yering Gorge to Yarra Junction Integrated Catchment Management (ICM) project which engaged and worked with the Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation to plan and deliver on-ground habitat restoration works at Nunganala Habitat Hub, and included the delivery of one habitat plan and 45 ha weed control. The I 'heart' Mornington Peninsula project also developed a template land management plan and started engaging landowners in the project area. In addition, leveraged investment through Melbourne Water is enabling the Bunurong Land Council's Environment Team to deliver complimentary natural resources management works in the project area. The Living Links Urban Forest Project made

great progress in the establishment of Climate Ready Vegetation Plots, as well as setting up micro-forest demonstration sites.

- **CWCT11: Our Catchments Our Communities (OCOC) Program:** Throughout EC5, this project made progress toward healthy, sustainable and productive land, water and biodiversity maintained through ICM that is strongly community based, regionally focused and collaborative. OCOC delivered 46,764 ha of place-based on-ground catchment stewardship projects, resulting in water, biodiversity, land health and productivity benefits for regional and local communities and Traditional Owners. Catchment Management Authorities (CMAs) also delivered engagement events (15,344 participants), partnerships (433), assessments (1,028), publications (383), management agreements (128) and plans (203).
- **CWCT09: Waterway Health Program**: In EC5, CMAs processed over 30,000 waterway licenses and permits, floodplain and planning referrals and advice for local councils and the general community, over 90% of which were processed within statutory timeframes. This is a core statutory function that CMAs perform to facilitate appropriate use and development of Victoria's public waterways, protecting the health of our waterways. The project also funded a range of activities focused on increased community and landholder involvement in stewardship activities. One example of this is the Caring for the Campaspe project, which supported landholders to fence and revegetate the river to protect its important environmental and community values, achieving 90 km of fencing, over 270 ha revegetated with native plants and over 400 ha where weed control was undertaken, involving 150 landholders. The project also undertook many community events and engagement activities, from school and community group tree planting to 'Chicks in the Sticks' gatherings. Overall, nearly 4,000 people were involved in 45 community events.

1.3.3 Improved condition of riparian land and habitat for key species

Improving the condition of riparian land and habitat is critical to supporting key species within waterways. Throughout EC5, significant progress toward this outcome has been achieved through:

- **CWCT09: Waterway Health Program:** In EC5, this project delivered:
  - 459 waterway structures, including rock chutes, fish "hotels", large wood, erosion control structures, flow regulators, removal of fish barriers.
  - 331.5 km of fencing used to protect areas alongside waterways (especially from cattle grazing) so that local indigenous vegetation can be established.
  - 35,465 ha of vegetation and weed control established along waterways to improve the riparian zone, reduce erosion and provide habitat.
  - 482 management agreements between CMAs and landholders, to ensure works areas are maintained in good quality for at least ten years, allowing vegetation to properly establish.
  - 7,273 cultural, ecological, property-based, social, flora and fauna, surface-water assessments.
  - Several activities were completed related to improving state policy and regional planning for wetland and catchment health improvements, including characterising wetland hydrologic stress across Victoria, develop habitat distribution models for wetland-dependent species and analysis to understand current and likely flow alteration under a range of climate change scenarios for unregulated rivers.

As a result of these works, over 386 river reaches and wetlands in Victoria are being actively maintained or improved every year. The Flagship Waterway projects also continued and expanded during EC5. An initial 9 project sites (one per CMA) were started under EC4, and a further 9 commenced during EC5. While the delivery of physical works programs at these sites (along with

related ICM activities) is a primary part of each project, community engagement is also considered a vital part.

An outstanding flagship project delivered in EC5 was the Agnes River / Corner Inlet Flagship Project. After many years of hard work and consistent investment from EC tranches, a major outcome was reached at the West Gippsland CMA Agnes River/Corner Inlet Flagship site with the last remaining stand of willow trees removed from the Agnes River, making it completely free of this highly invasive and damaging species. There are very few waterways in Victoria where all willows have been successfully removed. This is a first for the CMA and a win for the environment.

- **CWCT07: CGRSWS Funding Stream 2 Diversify Water Sources and Increase Water Efficiency:** This project co-invested in the Jan Juc daylighting project which seeks to return this highly disturbed urban waterway to a more natural state. This includes recreating habitat, biodiversity and amenity values, as well as delivering significant stormwater quality objectives to an older urban catchment that drains to a popular beach location.
- **CWCT08: CGRSWS Funding Stream 3 Waterway Health Complementary Measures and Catchment Management Improvement:** This project made progress in the planning and design of measures that improve overall waterway health. Works on the Lower Latrobe Wetlands, Maffra Weir Fishway, Moorabool Yulluk (Moorabool River) and Werribee diversion weir activities have so far focused on governance, investigations and infrastructure design, with construction works to follow.
- **CWCT10: Environmental Water:** This project delivered environmental water to 161 rivers and wetlands sites throughout the state in 2023-24, 154 sites in 2022-23, 170 sites in 2021-22, and 225 sites in 2020-21, fully or partially achieving a total of 934 watering actions. Water delivery equated to over 3,212,000 ML of water for the environment to rivers and wetlands throughout Victoria (including over 846,000 ML from the Victorian Environmental Water Holder, 1,869,000 ML from the Commonwealth Environmental Water Holder, over 497,000 ML from The Living Murray). It also delivered works to protect and restore Victoria's waterways through providing grants to CMA delivery partners for employment of regional environmental water reserve officers, environmental water infrastructure works and measures projects, environmental water community engagement and shared benefit projects, plus engagement and involvement of Traditional Owners and Aboriginal communities in environmental water planning and management. It also funds the management of environmental water entitlements, the Victorian Environmental Water Holder and provided Murray-Darling Basin Plan program delivery during the EC5.
- **CWCT02: Iconic Urban Waterways:** This project is focused on reducing the adverse economic, environmental, social and cultural impacts of urbanisation and population growth on iconic urban waterways –including the Birrarung / Yarra, Mirrangbamurn / Maribyrnong, Wirribi Yulluk / Werribee and Parwan / Barwon Rivers. Following delivery of Burndap Birrarung burndap umarkoo, the Yarra Strategic Plan (YSP) and Action Plans, implementation of the YSP commenced during EC5, which includes delivery of 88 projects focused on protecting and enhancing the river and its parklands. The project also delivered the Waterways of the West and Rivers of the Barwon (Barre Warre Yulluk) Action Plans and supported implementation through a grants program.
- **CWCT11: Our Catchments Our Communities:** CMAs delivered 46,764 ha of land under active catchment stewardship in Victoria. Active stewardship includes environment works, management services, management agreements, assessments and plans.

1.3.4 Increased evidence base on effectiveness of waterway management

EC5 increased the evidence base on the effectiveness of waterway management with monitoring and evaluation of waterway and environmental water health to inform future strategies and decisions. Throughout EC5, significant progress toward this outcome has been achieved through:

- **CWCT09: Waterway Health Program:** This project collected important data that supports evaluation of waterway and environmental water health to guide improvements in waterway management practices, and to inform state and regional waterway planning, evaluation and reporting. It included the Stream Change Assessment: Riparian Woody Vegetation, 2021 Great Australian Platypus Search using eDNA, VEFMAP (Victorian Environmental Flows Monitoring and Assessment Program) and WetMAP (Wetland Monitoring and Assessment Program) to evaluate ecological responses to environmental water management, Riparian Intervention Monitoring Program, and Victoria's first Index of Estuary Condition. Some examples of findings from these projects includes:
  - The Stream Change Assessment Project compared the condition of woody riparian vegetation in 3,400 km of stream length between 2010 and 2018-20. It found that at statewide and regional extents, changes were small, however the largest changes occurred where substantial or sustained riparian management had been undertaken.
  - More than 20 projects were funded through VEFMAP and WetMAP focusing on fish, vegetation, birds and frogs, and outputs have been used by managers to guide the development and refinement of environmental water management plans, and environmental water operational decisions.
  - Riparian Intervention Monitoring Program found that after 3 years of management interventions, such as weed control, revegetation and livestock exclusion, there is evidence of positive changes such as increased density of native woody recruits and the number of native taxa.
- **CWCT10: Environmental Water:** In 2022-23, significant colonial waterbird breeding was recorded at sites that received water for the environment and natural flooding, including:
  - Approximately 2,000 nests of Australian White Ibis and Straw-necked Ibis (and possibly Royal Spoonbill) in Barmah Forest.
  - Ten species of colonial nesting waterbirds across the Hattah Lakes using 7,000 nests for over 25,500 chicks, with a further 18 waterbird species detected breeding with an additional 1,700 chicks recorded.
  - Over 15,000 birds from 21 species recorded at Gunbower Forest and the Kerang Ramsar wetlands during 69 surveys over spring 2022 and autumn 2023.

1.4 To what extent were Traditional Owner priorities furthered?

1.4.1 Increased involvement of Traditional Owners in water policy, management & decision making

Traditional Owners were a core focus of EC5 with increased involvement of Traditional Owners in water policy, management and decision making for the majority of project. Examples of ways in which the EC5 projects have contributed to this outcome include:

- **CWCT06: Aboriginal Water Program:** This project developed, released and commenced implementation of *Water is Life: Traditional Owner Access to Water Roadmap.* This nation-leading multi-lingual policy places government's policy position and Traditional Owner voices side-by-side. The policy establishes pathways to increase Traditional Owner roles, responsibilities and resourcing in water management in Victoria and forms a key pillar of DEECA's Aboriginal Water Program and its commitment to enabling Traditional Owner self-determination. Development of *Water is Life* (2021-22) included a total of 61 Traditional Owner Nation-level, regional and statewide workshops with Traditional Owners, as well as the publication of 27 Traditional Owners nation statements alongside the government's policy commitments in the final *Water is Life* document. The launch of *Water is Life*, and the policy commitments within it, has changed how Government partners with Traditional Owners and has sharpened the focus on working towards Treaty. Continuation of the Aboriginal Water Program (established in 2016) throughout EC5 has supported Traditional Owners through the Water, Country and Community Program grants (stages 1 and 2). This project supported 24 full-time equivalent Aboriginal Water Officer roles and a range of Traditional Owner-led water-related projects across 18 Traditional Owner groups (including the 11 Registered Aboriginal Parties) and 4 CMAs, that have strengthened Traditional Owner capacity and enabled greater involvement in the way water is managed and delivered in Victoria.
- **CWCT01: Integrated Water Management:** This project contributed toward this outcome through a Traditional Owner stream of the grants program and the piloting of support for Traditional Owner IWM Officers. This included co-investment in a grants program that supported 14 Traditional Owner led IWM projects. However, the Traditional Owner groups indicated that more funding support is needed to enable them to develop the skills and capacity to effectively participate in the IWM Program in a way that enables self-determination objectives and aspirations. This project also often has an urban and peri-urban focus, which may not fully align with the priorities of some Traditional Owner groups, who place greater emphasis on rural and natural environments. The scope of this project may need to be adjusted to include rural and natural environment considerations to ensure that it better reflects Traditional Owner values and priorities.
- **CWCT02: Iconic Urban Waterways:** This project worked closely with Traditional Owner partners to provide funding to support their involvement in policy development, project-based work, Elder time, and capacity building and training. This included building in flexibility such that Traditional Owners could exercise self-determination within the scope of involvement in the urban water policy space.
- **CWCT03: Recreational Values Program:** Traditional Owner self-determination was supported through the development of the draft Greens Lake Action Plan, representing a new way of working collaboratively with water corporations, Traditional Owners and the recreation community to generate shared outcomes.
- **WRS6: Licensing framework groundwater and unregulated systems:** One of the priorities included in GM2030 that was delivered through this project was inviting Traditional Owners to participate in GM2030 and groundwater management.

- **PSP1: Long-term Water Security:** The updated *Urban Water Strategy Guidelines* include specific core requirements for including Traditional Owner engagement in urban water planning. On-going research as part of the Blue Community work program will build capability in water literacy with effective and targeted communication strategies and will include the incorporation of Traditional Owner knowledge, views and values in a way that emphasises self-determination.
- **PSP2: Sustainable Water Strategies:** The CGRSWS developed the Traditional Owner Partnership to ensure self-determined outcomes for Traditional Owners in the region. Chapter 6 of the CGRSWS commits the Victorian Government to addressing historical and ongoing exclusion from water planning. The CGRSWS will deliver shared benefits at a cultural landscape level by involving Traditional Owners in decisions for holding and using water that is culturally sensitive and uses the principles under caring for Country of the region's waterways. The approach is evidenced by the development of the Cultural Benefits Framework. The Cultural Benefits Framework uses Traditional Owner ecological knowledge to identify the benefits of Traditional Owners managing and owning water. The Traditional Owner Partnership is considered a benchmark approach to collaboration and partnering with Registered Aboriginal Parties in the regions. It has resulted in an allocation of funding to continue the partnership as the CGRSWS is implemented. As a result, actions in the final CGRSWS identify ways to return water to Traditional Owners that is enduring. Feedback from Traditional Owners is that the CGRSWS building process is to be used as an example for other strategy building processes across Government.
- **PSP4: CGRSWS Funding Stream 4 Enable Adaptation to a Variable Climate:** Grants were provided to 15 Registered Aboriginal Parties and non-Registered Aboriginal Party groups to enable self-determined participation in the development of an updated *Victorian Waterway Management Strategy* that embeds climate adaptation into the management of rivers, estuaries and wetlands across the state. This is a significant increase in involvement in, and influence on, water policy and management decision making processes by non-Registered Aboriginal Party groups.
- **CWCT09: Waterway Health:** Across the project, partnerships between CMAs and Traditional Owners were facilitated through a variety of activities, such as:
  - Coordination and advisory committees, evaluation workshops, consultation and advice in project design, planning, strategy and delivery.
  - Delivery of on-ground works on Country, monitoring, surveying, and recording activities.
  - Review and development of key CMA policy & strategy.
  - Carrying out welcome to country & smoking ceremonies.
  - Incorporating traditional knowledge into existing activities.
  - Sharing of knowledge, research, and technology.
  - Training for Traditional Owner Corporation/s staff.
  - Aboriginal Waterway Assessments.
- **CWCT10: Environmental Water:** This project involved engagement with and participation of Traditional Owners and Aboriginal communities in environmental water planning and management.
- **SIRS6: Murray Programs:** New partnerships were developed and/or existing partnerships expanded across the Victorian Murray Floodplain Restoration Project area which includes 14 different Traditional Owner groups. Aboriginal Waterways Assessments have been a key aspect to inform land and water aspirations. In EC5, 48 were completed through the Mallee CMA, with 171 individual participants and 10 groups.

- **CWCT11: Our Catchments Our Communities:** Traditional Owner groups were key participants in the Catchment stewardship projects, with 12 formal partnerships with Traditional Owner groups and 22 with Aboriginal Victorians. Traditional Owner voices featured in planning (e.g. in the Regionals Catchment Strategies) and on-ground delivery and are supporting Aboriginal self-determination.

1.4.2 Increased water availability for Traditional Owner groups

In EC5, the Victorian Government started returning water to Traditional Owners and has identified opportunities to increase water availability for Traditional Owner groups. Examples of ways in which the EC5 projects have contributed to this outcome include:

- **WRS2: Water Grid Oversight:** This project delivered a two-tier Quadruple Bottom Line assessment process and associated documentation that ensures the development of future large scale water supply will include consideration of how the project(s) may enable returning water to Traditional Owners and the environment.
- **WRS5: Managing Victoria's Water Sharing Framework**: Provided support for the return of water to Traditional Owner groups across Victoria through administration of the entitlement framework.
- **WRS6: Licensing framework groundwater and unregulated systems:** This project supported commitments made in *Water is Life* and the CGSWS by identifying ways to reduce obstacles for Traditional Owners applying for section 51 licences and established an authorisation process allowing Traditional Owner Groups to nominate crown land parcels for a section 51 licence application, where the Traditional Owner group does not own or occupy land. Traditional Owners were also invited to participate in GM2030 and groundwater management.
- **PSP2: Sustainable Water Strategies:** The final CGRSWS identified where there is unallocated water on relevant Country and where there are other opportunities to return water to Traditional Owners in the region, such as:
  - Actions 4-3 and 4-4 related to the return of water in the Moorabool River to the Wadawurrung Traditional Owners Aboriginal Corporation.
  - Actions 4-9 and 6-10 commit to returning water to Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation, including from the Amcor licence.
  - Actions 6-7 commits to evaluating opportunities to return water to Bunurong Land Council Aboriginal Corporation currently used by the Royal Botanic Gardens.
  - Action 4-8 commits the government to a reallocation of the Latrobe 3 – 4 Bench bulk entitlement to share water with Gunaikurnai Land and Waters Aboriginal Corporation and the environment.
  - Action 6-16 commits the Government to return water to the Eastern Maar Aboriginal Corporation in the Barwon River.
- **CWCT07: CGRSWS Funding Stream 2 Diversify Water Sources and Increase Water Efficiency:** The Werribee Reconfiguration Project explored substituting recycled water volumes in the order of 16 GL/year for water return to Traditional Owners and the environment.
- **CWCT06: Aboriginal Water Program:** The Victorian Government recognises First Nations' and Traditional Owners' rights and connection to water through *Water for Victoria* (2016) and is committed to increasing the water available to Traditional Owners to use for self-determined purposes. *Water is Life* and the CGRSWS establishes pathways to increase water return to Traditional Owner groups, which forms an important foundational basis for progress toward this outcome. Delivery of the Cultural Water for Cultural Economies project and 10 Traditional

Owner-led pilot projects (2019-2021) also focused on understanding the current barriers to Traditional Owners' accessing, using and managing water. These activities provided foundational information used to inform the pathways to increase water returns outlined in *Water is Life*. During EC5, the Victorian Government started returning water to Traditional Owners:

- 2 GL section 51 licence on the Mitchell River returned to Gunaikurnai Land and Waters Aboriginal Corporation in south-eastern Victoria.
- 2.5 GL section 51 licence on the Fitzroy River system returned to Gunditj Mirring Traditional Owners Aboriginal Corporation in south-western Victoria.
- Two licences for cultural water use (200 ML at Buchan Munji and 500 ML on the Tambo River) issued to Gunaikurnai Land and Waters Aboriginal Corporation.
- A number of water returns in progress at the time of this End-Of-Tranche evaluation.
- In March 2022, Victoria reported for the National Agreement on Closing the Gap (Inland Waters Target) that Traditional Owners and Aboriginal Victorian organisations held 4,298 ML of water entitlements. As of 30 June 2024, the volume of water entitlements has increased to 9,228 ML.

1.4.3 Increased Traditional Owner employment in the water sector

All projects supporting increased involvement by Traditional Owners in water policy, planning and decision making have supported Traditional Owner groups and/or individuals financially, leading to increased employment in the water sector. Some specific examples are provided below:

- **CWCT06: Aboriginal Water Program:** The Water Country and Community Program partners with, and directly funds, all 11 Traditional Owner Corporations recognised as Registered Aboriginal Parties, 4 CMAs, and 7 Traditional Owner groups without formal recognition. Program funding throughout EC5 has enabled improved relationships between Traditional Owner groups and water sector partners such as CMAs, including through the funding of 24 full-time equivalent Aboriginal Water Officer roles and a suite of water-related projects. Highlights include:
  - 10 Traditional Owner Organisations in the first year of the Water Country Community Program have reported a greater involvement in and influence on water policy and management decision making.
- **CWCT08: CGRSWS Funding Stream 3 Waterway Health Complementary Measures and Catchment Management Improvement**: This project involved direct engagement, funding support and work with the following Traditional Owner groups to support self-determination: Wurundjeri WoiWurrung Cultural Heritage Aboriginal Corporation, Bunurong Land Council Aboriginal Corporation, Wadawurrung Traditional Owners Aboriginal Corporation, Wandoon Estate, Worawa College. This has supported all three Traditional Owner corporations' growing interest in establishing nurseries and bush foods businesses. Direct funding for this work to support broader self-determination and leveraging wider partnerships totalled $223,000.
- **CWCT09: Waterway Health**: Out of the 61 Waterway Health projects, 48 were involved in partnership agreements (34) and/or engaged Aboriginal businesses (31). There were 31 different Traditional Owner groups engaged in project development and/or implementation in some capacity (or CMAs intended to engage them). In EC5, Traditional Owner groups/Aboriginal Victorians received $2,862,228 of funding from CMAs. Of this, $2,468,567 went to 15 different Traditional Owner groups, and $393,661 went to Aboriginal Community-Controlled Organisations, Aboriginal-owned private businesses, and employment programs.

1.5 To what extent were social and community values incorporated into water management?

1.5.1 Greater access to water-based spaces, creating opportunities to improve community health

Creating greater access to water-based spaces can also lead to new environmental, recreational and social opportunities to improve community health. Throughout EC5, significant progress toward this outcome has been achieved through:

- **CWCT03: Recreational Values:** This project completed a range of planning / policy actions focused on supporting improved access for the community to better enjoy waterways, including development of new Recreational Area (Water) Regulations 2023 to manage recreation at storages and embedding recreational values in the new Victorian Waterway Management Strategy. It also distributed $2.89 million of grant funds to support 19 projects and 11 organisations targeted towards improving recreational outcomes, including consideration of recreational access to drinking water storages, a policy statement in the CGRSWS and collaboration with Melbourne Water to consider access to Tarago Reservoir. It progressed the Flagship Water Wannon project, explored new ways to facilitate recreation using water corporation assets, and delivered 4 planning and community engagement projects.
- **CWCT02: Iconic Urban Waterways:** This project was targeted towards reducing the adverse economic, environmental, social and cultural impacts of urbanisation and population growth on iconic urban waterways (including the Birrarung / Yarra, Mirrangbamurn / Maribyrnong, Wirribi Yulluk / Werribee and Parwan / Barwon Rivers). It has contributed towards achieving healthier local communities and environments and enhancement of values derived from water environments.
- **PSP2: Sustainable Water Strategies:** The CGRSWS recognises the importance of recreational users and recreational values. Actions in the CGRSWS underpin identifying opportunities to increase access to recreational opportunities.

1.5.2 Improved community access to water resource information

EC5 projects delivered a range of projects to improve data availability and access to water resource information in formats that were more engaging and user-friendly. Three of the most significant contributions to improving community access to water resource information were:

- **WRS14: Surface Water and Groundwater Monitoring:** This project improved data availability through review and redevelopment of the Water Management Information System (WMIS) which led to an upgraded WMIS website available through the existing online portal: data.water.vic.gov.au. WMIS publishes consistent statewide water quality information from the Regional Water Monitoring Partnership and has improved functionality like advanced search, data downloads and filtering capability with a GIS interface. Future enhancements planned for WMIS will further improve functionality and usability of the platform.
- **WRS16: Water Knowledge and Insights:** This project improved community access to water resource information through promoting water data, information and reports created by DEECA to the public through the development of user platforms, social media and improved online resources. Highlights of the work during EC5 included early development of the Water Education Portal, aimed at resources for students and teachers (yet to be launched), the Water Market Watch iOS app to provide real-time water market information, and the Visualising Our Communications project with Goulburn-Murray Water, Lower Murray Water, and Southern Rural Water, which leveraged collaboration to produce a suite of marketing products (including photography, video and interviews) which has been used across DEECA, Goulburn-Murray Water, Lower Murray Water and Southern Rural Water policy documents, research and

annual reports, online web content, customer information presentation, social media, fact sheets and other important water communications. This project has also been leading the discovery process for Building a Better Victorian Water Register Website project.

- **WRS15: Water Accounting and Reporting:** This project delivered a new interactive website to improve the ability of users to engage with the water accounts and download the data for use. The Victorian Auditor-General's Office, in its 2021 audit of recycled water use in Victoria, stated that "DELWP (DEECA) is also working to improve publicly available water data. For example, DELWP (DEECA) developed the Victorian Water Accounts, which is an online, user-friendly and engaging overview of water use and availability across the state." Minor improvements to the website based on user feedback have been actioned for the 2022-23 accounts, and there will be further improvements in future releases.

1.5.3 Improved reflection of the diversity of community values in water management

Waterways are shared public places and water management should seek to incorporate the diversity of community values. Throughout EC5, community input and insights were sought with community values integrated in water management through:

- **CWCT09: Waterway Health Program:** The My Victorian Waterway survey ran for five weeks in March/April 2022. A total of 6,240 online surveys were completed. The survey gathered a wealth of information about current waterway usage, attitudes and understandings about waterway health, current knowledge and language used by the community, and aspirations for the future. The story told by participants paints a clear picture of the great importance and value of healthy waterways for all Victorians and future generations. The data from the My Victorian Waterway survey will be used to help shape water-sector policy, guide investments and inform waterway programs and community engagement by the Victorian Government and other partners.
- **CWCT03: Recreational Values:** This project fostered ways to understand and integrate community values in water management, including through the new Goulburn-Murray Water platform for community survey to inform their recreation planning. There were high levels of engagement from the local and general community through Engage Vic consultation processes, for both the Draft Greens Lake Action Plan (144 survey respondents) and the Draft Water (Recreational Area) Regulations (85 respondents) including strong attendance at two online information sessions (23 and 29). It also introduced a new requirement for site-based management planning for Recreational Areas through the new regulations, including requirement for consultation with the community.

1.6 To what extent was the effectiveness of water governance improved?

1.6.1 Improved performance of water sector in meeting the needs of customers and the community

Examples of ways in which the EC5 projects have contributed to this outcome include:

- **SIRS4: Bendigo Minewater Project**: This project met customer and community expectations regarding prevention of mine impacted groundwater discharges to Central Bendigo through an interim solution, enabled Central Deborah Gold Mine to continue to offer underground tours, and developed and secured funding for implementation of a long-term management solution.
- All projects listed under the outcome - Improved community access to water resource information (see above)

1.6.2 Improved management of risks and emergencies

EC5 improved on the management of water risks and emergencies with a particular focus on building flood resilience and mitigating small dam failure risks. Projects which have contributed to this outcome include:

- **SIRS3: Building Flood Resilience in Victoria:** This project reduced the exposure of Victorian communities to impacts of floods, with funding directed to 23 flood studies, 8 planning scheme amendments, 11 flood mitigation infrastructure projects, and 23 projects to develop or upgrade flood warning services. The project involved working with local councils to secure $9.299 million of federal government National Flood Mitigation Infrastructure Program funding to construct high priority flood mitigation levees in Numurkah, Wangaratta, Castlemaine, and Carisbrook. The project also completed all 56 strategy actions from the *Victorian Floodplain Management Strategy* as shown in an independent audit, and informed consistent decisions and actions for management of flood related issues. The project advanced the FloodZoom platform creating a one-stop shop experience for flood responders and analysts. Maps from 100% of completed flood studies stored by FloodZoom are now publicly available due to collaboration with the Victorian Government's Digital Twin platform.
- **PSP3: Mitigating the risks of small dams:** This project reduced the dam failure risks posed by the three highest risk local government authority structures through implementing rehabilitation works, as well as developing operations and maintenance plans, surveillance plans and dam safety emergency plans. The project also improved dam safety through holding dam safety training programs for local government staff, dam safety exercises, and upgrades to the Dam Safety Portal to include local government dams.

1.6.3 Increased embedment of climate change in water sector planning and decision making

Climate change will introduce new risks to the water sector and impact on availability of water in Victoria. Throughout EC5, significant progress toward embedding climate change in water sector planning and decision making has been achieved through:

- **WRS10: Understand and Apply Climate Science to Water**: This project made significant progress in equipping Victoria's water sector stakeholders and communities to plan for, and adapt to, the impact of climate change on our water resources. The project developed the *Guidelines for Assessing the Impact of Climate Change on Water Availability in Victoria*, which provide guidance to Victorian urban water corporations and are also used by rural water corporations, DEECA teams, and consultants. Support with application of the guidelines was a significant part of the work of the project over this period. An independent survey conducted to understand the usefulness of the guidelines to the water sector found:
  - "The guidelines appear to be universally used by urban water corporations for their Urban Water Strategies and associated water resource planning".
  - "The consultants interviewed used the guidelines for Urban Water Strategies, but also for environmental type studies and investigations in the rural water area. DEECA teams use the guidelines in strategic areas such as Sustainable Water Strategies, Long-Term Water Resource Assessment as well as Urban Water Strategies, and modelling of the northern Victorian regulated systems".
  - "Almost all participants commented on the high value of the guidelines, that they provide consistent and dependable advice, that they are of high quality and well researched and that they are a "point of truth" for the industry."

- Research findings and advice from the project have also been applied in a diverse range of water resource planning processes, such as into long-term climate trend information in Annual Water Outlook reports produced each year by water corporations, informed the Victorian Annual Water Outlook produced by DEECA, Urban Water Strategies produced by all Victorian water corporations, and the 2023 Victorian State of the Environment Report produced by the Commissioner for Environmental Sustainability, Victoria. Information was also communicated to water sector stakeholders through webinars, newsletters, Victorian Water and Climate Initiative (VicWaCI) website, targeted stakeholder engagement such as workshops, interviews, and meetings, annual VicWaCI Science Day, presentations, research papers, conference papers and seminars.
- **PSP4: CGRSWS Funding Stream 4 Water Cycle Climate Change Adaptation Action Plan:** This project improved understanding of climate risks by providing feedback to the water sector on their Corporate Plans and Annual Reports to build capacity to better address the risks of climate change. This project also involved in-depth consultation with the water sector on their understanding and management of climate risks. The outcomes of this consultation have helped refine government's service offering to the sector, resulting in the establishment of partnerships with CMA's (through a grants program) and water corporations (by agreement with VicWater) to build their climate risk management capacity.

Appendix C:

Graphical summary of short-answer questions from the project evaluation reports

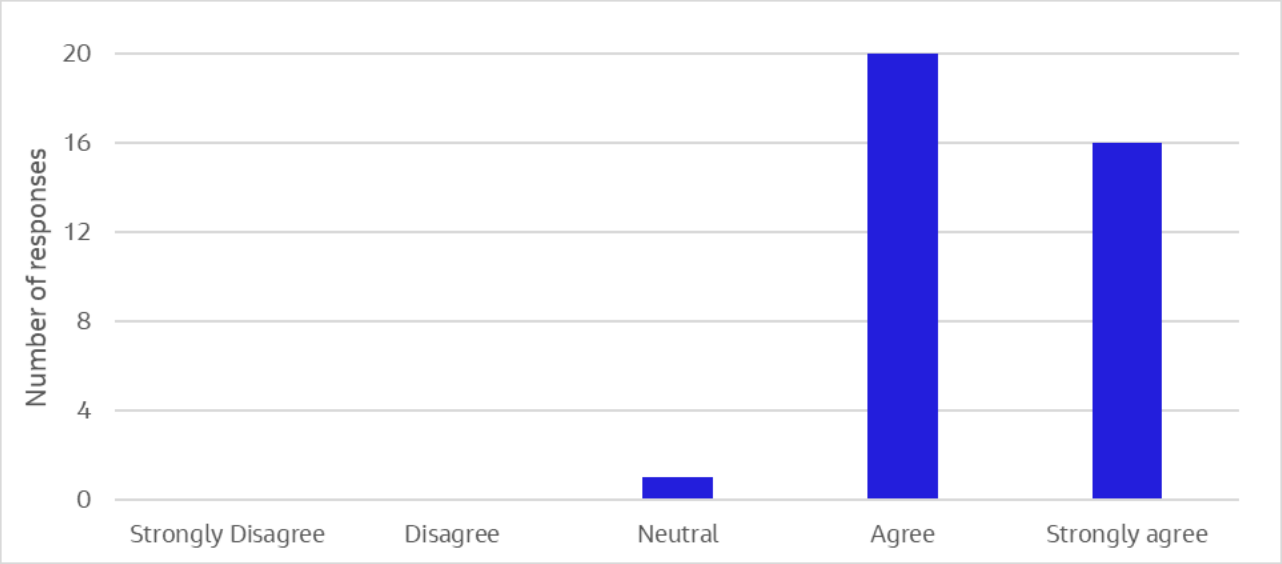
Jacobs

Appendix C: Graphical summary of short-answer questions from the project evaluation reports

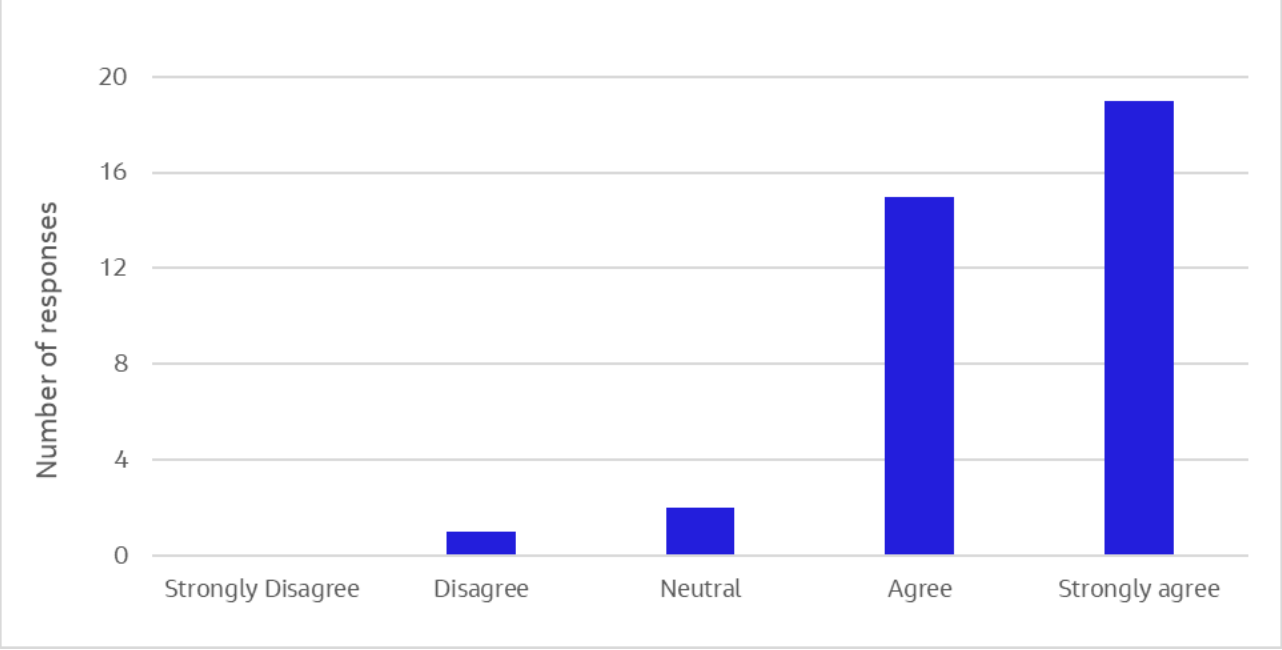
Section 6 of the 2023 EC5 project evaluation reports contained a series of short answer questions which have been referred to throughout this evaluation report. The responses were not updated for the End-of-Tranche evaluation. This Appendix provides a graphical summary of the responses.

To what extent do you agree or disagree with the following statements?

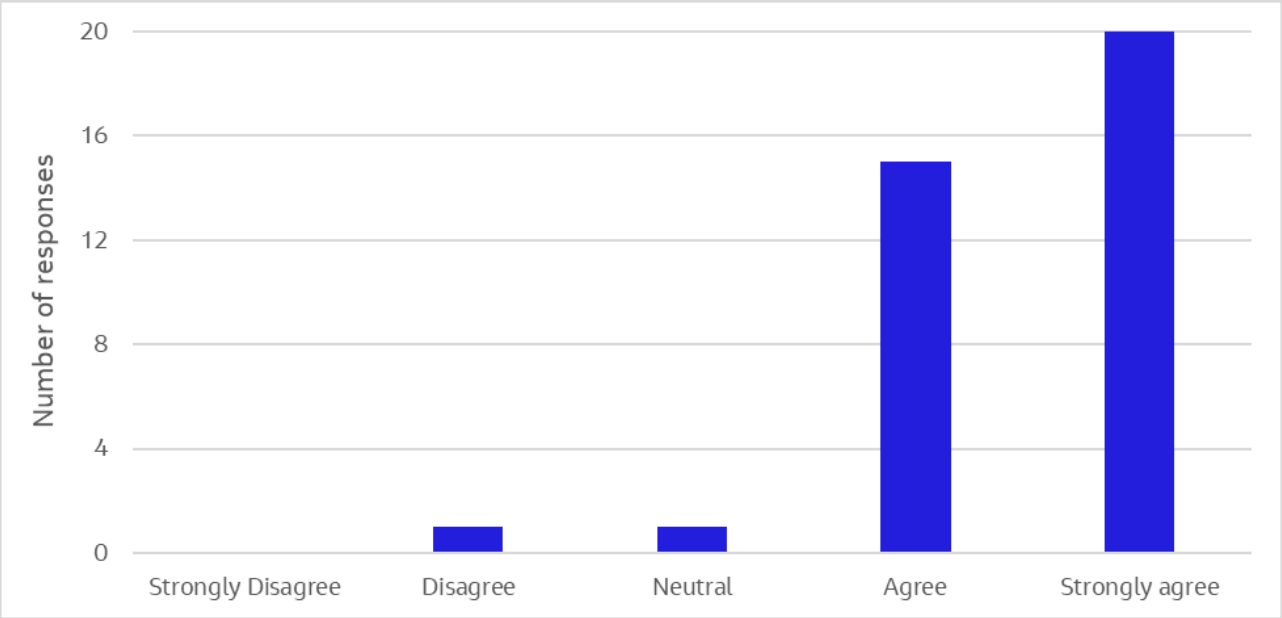
6.1 The effects of unexpected events (such as floods, droughts, covid) and other challenges were managed adequately to reduce their impact on initiative outcomes



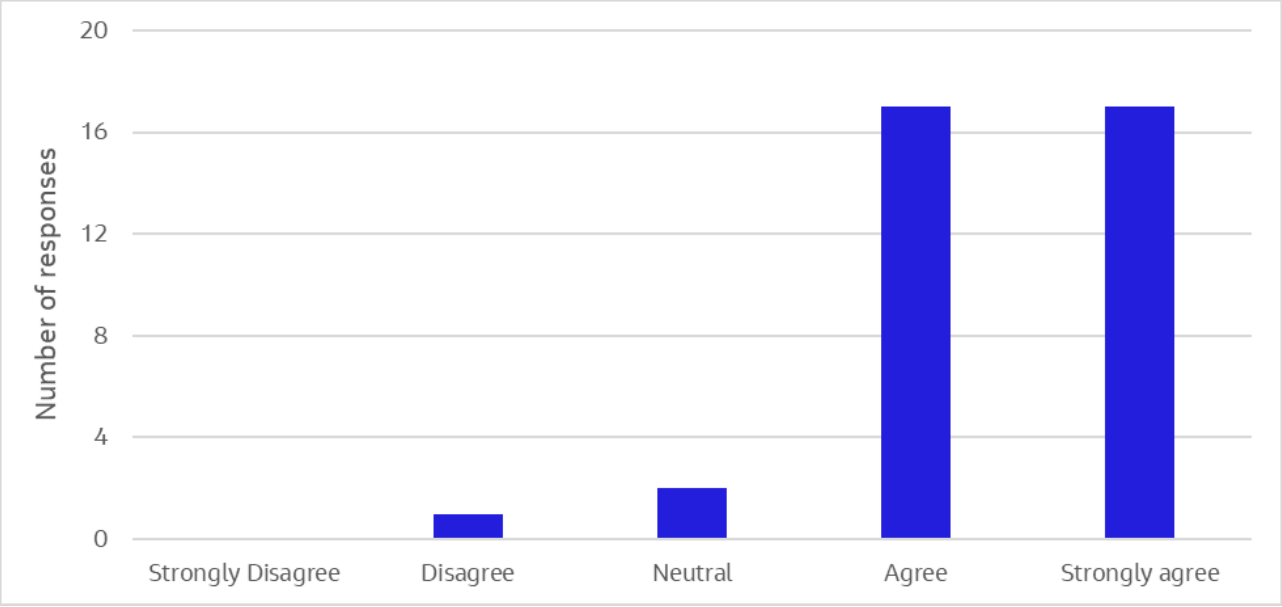
6.2 The initiative is on track to deliver the full set of outputs (products or deliverables) as intended



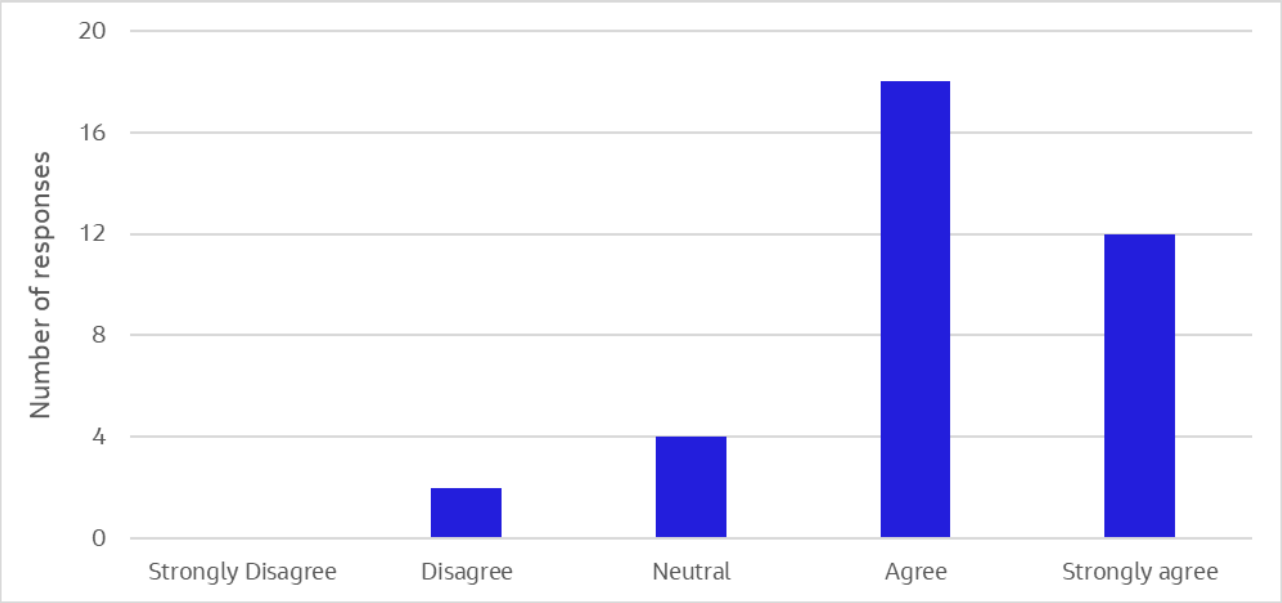
6.3 The initiative is on track to deliver the full set of outcomes (intended effects or changes from tranche) as intended



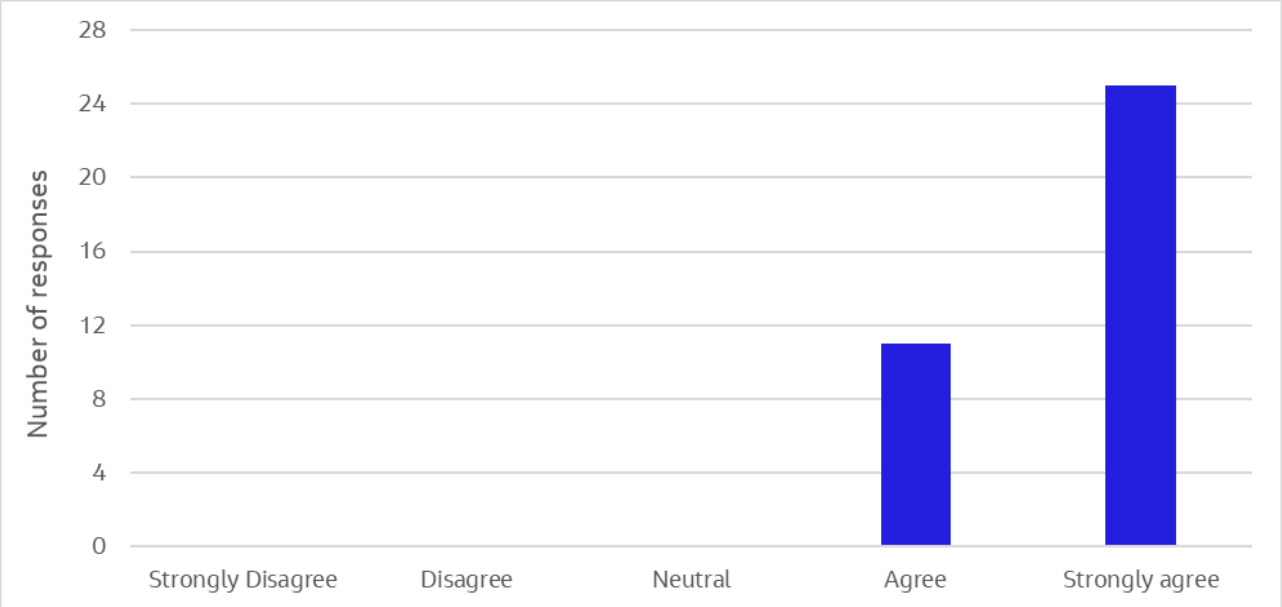
6.4 Initiative management and delivery arrangements supported the effective and efficient delivery of the initiative



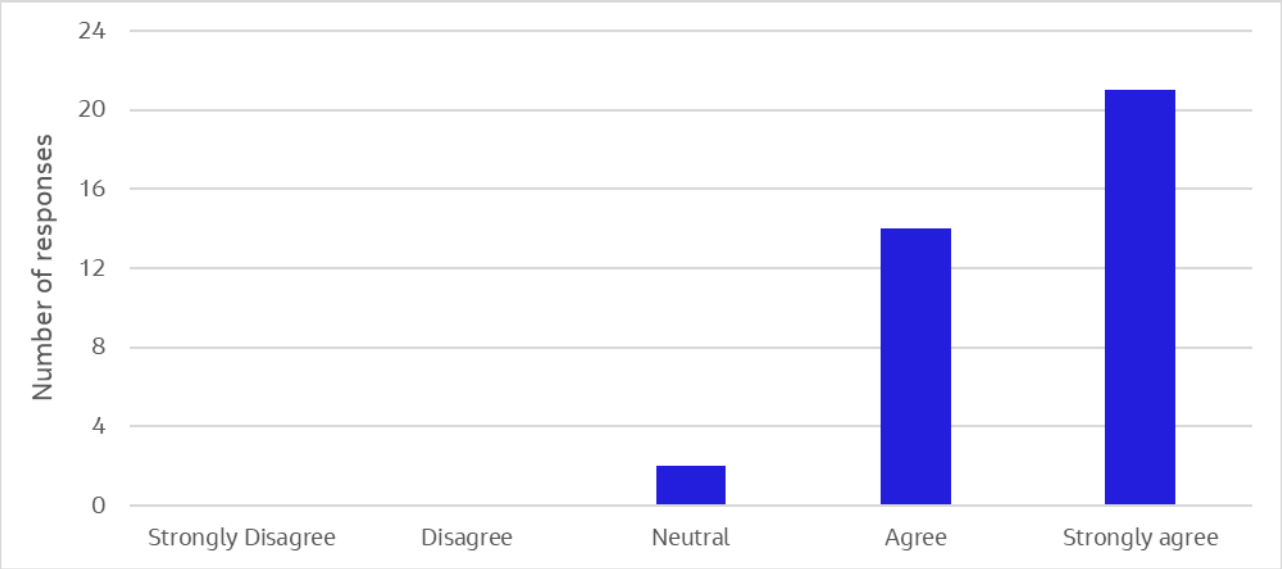
6.5 Options assessment and / or cost-benefit analyses were used effectively to support initiative decision making



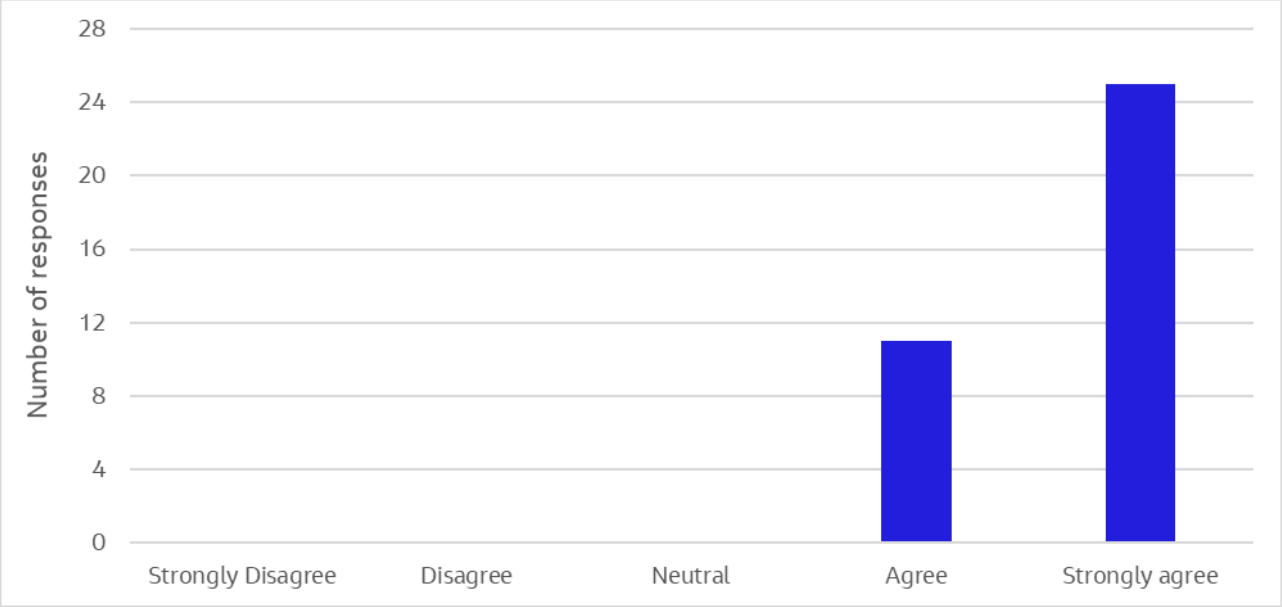
6.6 The initiative enabled Traditional Owner Self-determination objectives and aspirations



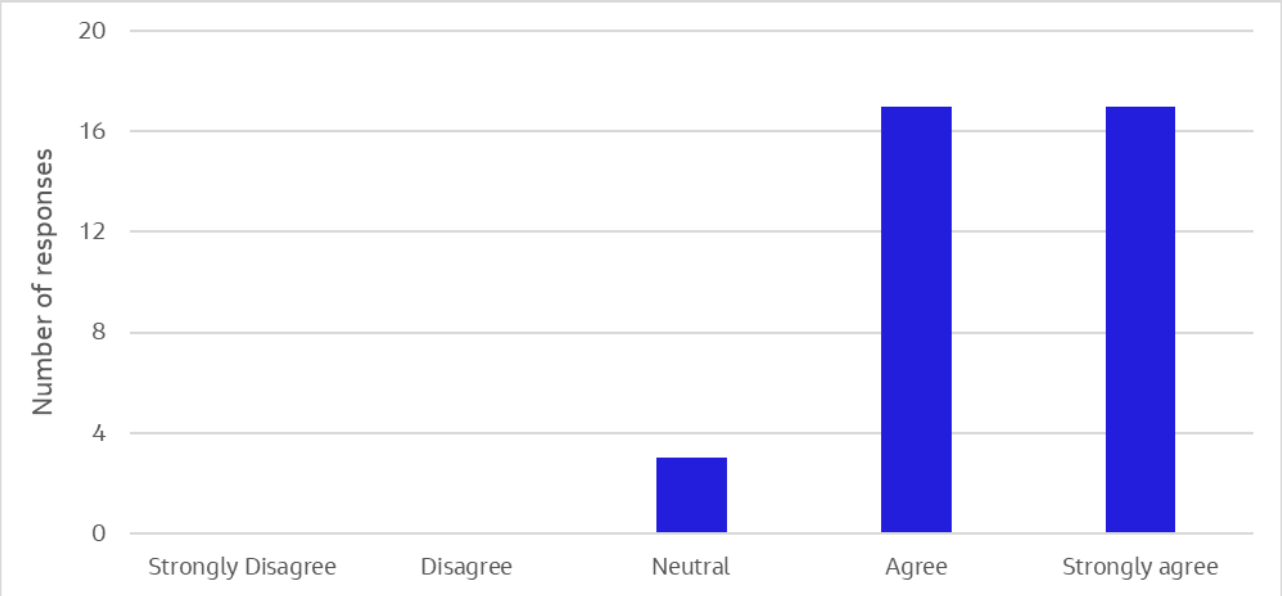
6.7 Learning and improvement were effectively incorporated into the initiative, to foster a culture of continual improvement



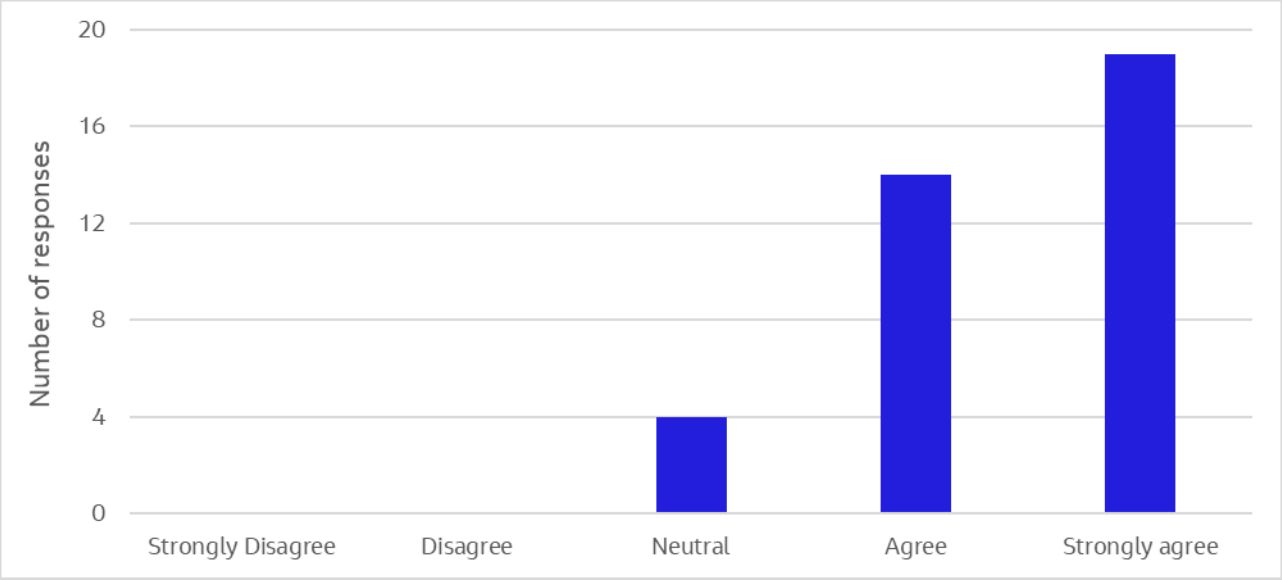
6.8 Partnerships that were developed throughout tranche 5 were valuable in achieving initiative outcomes



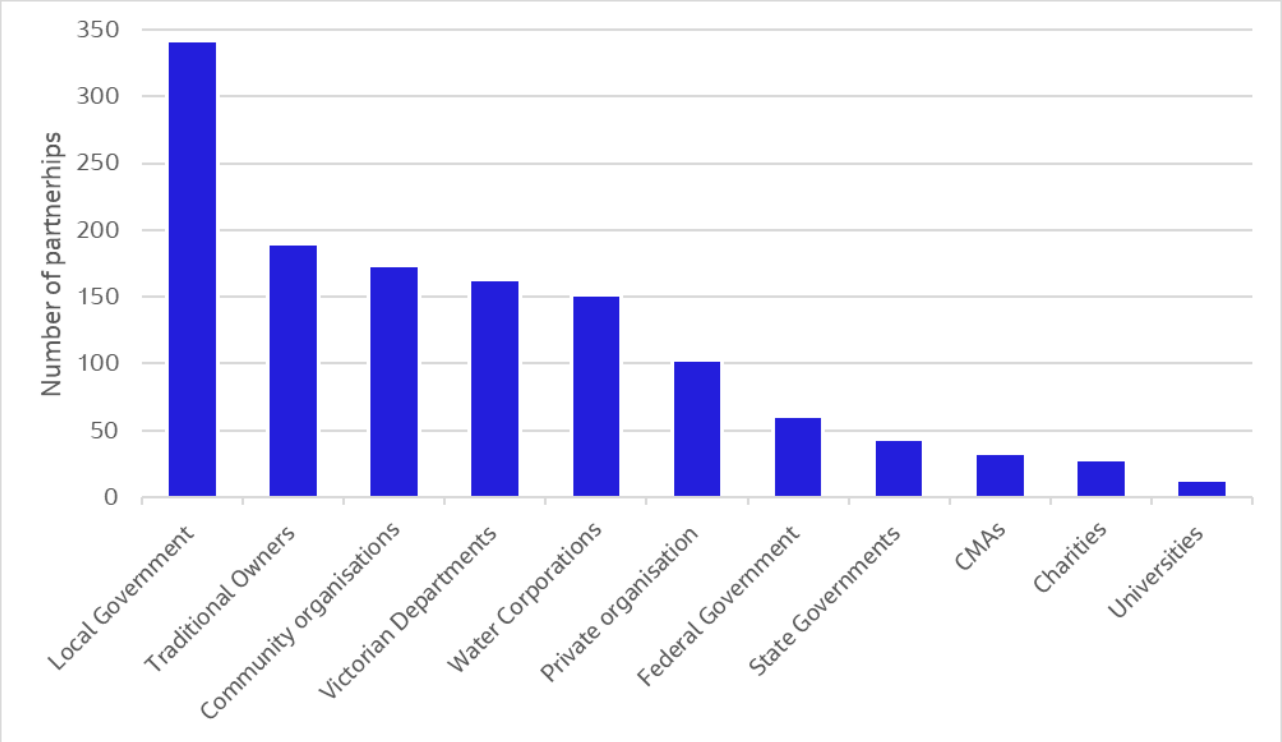
6.9 Efficiencies were gained through working together with other initiatives to achieve better outcomes.



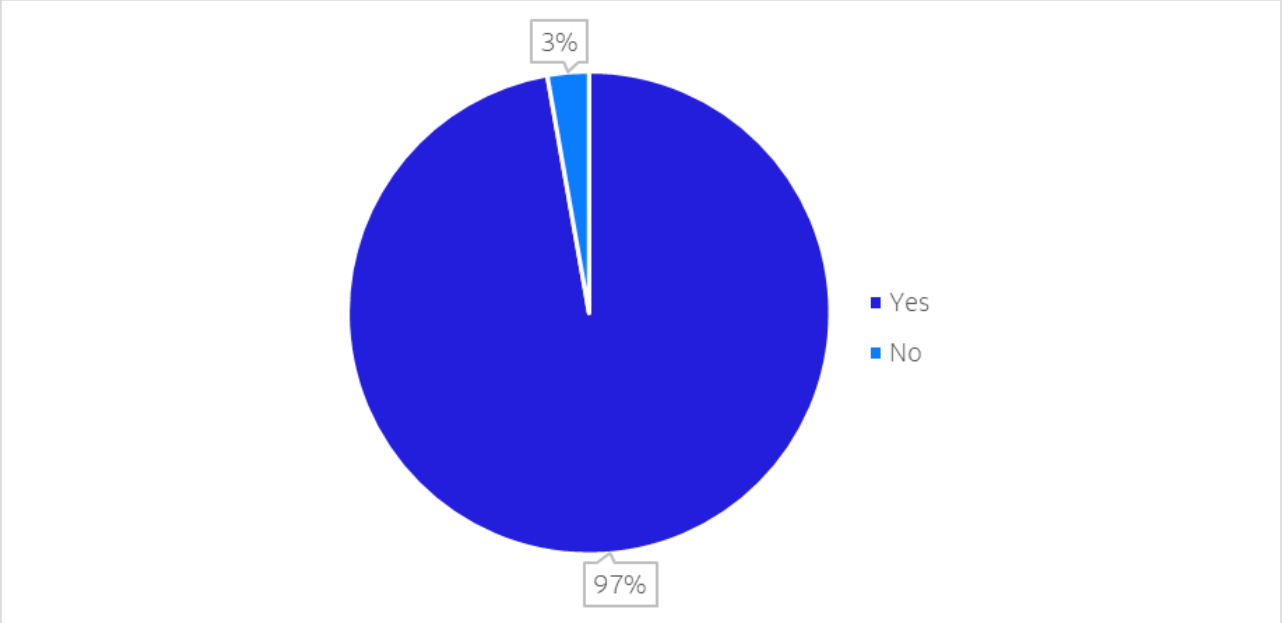
6.10 The initiative is increasing community participation and inclusion of community values in water management



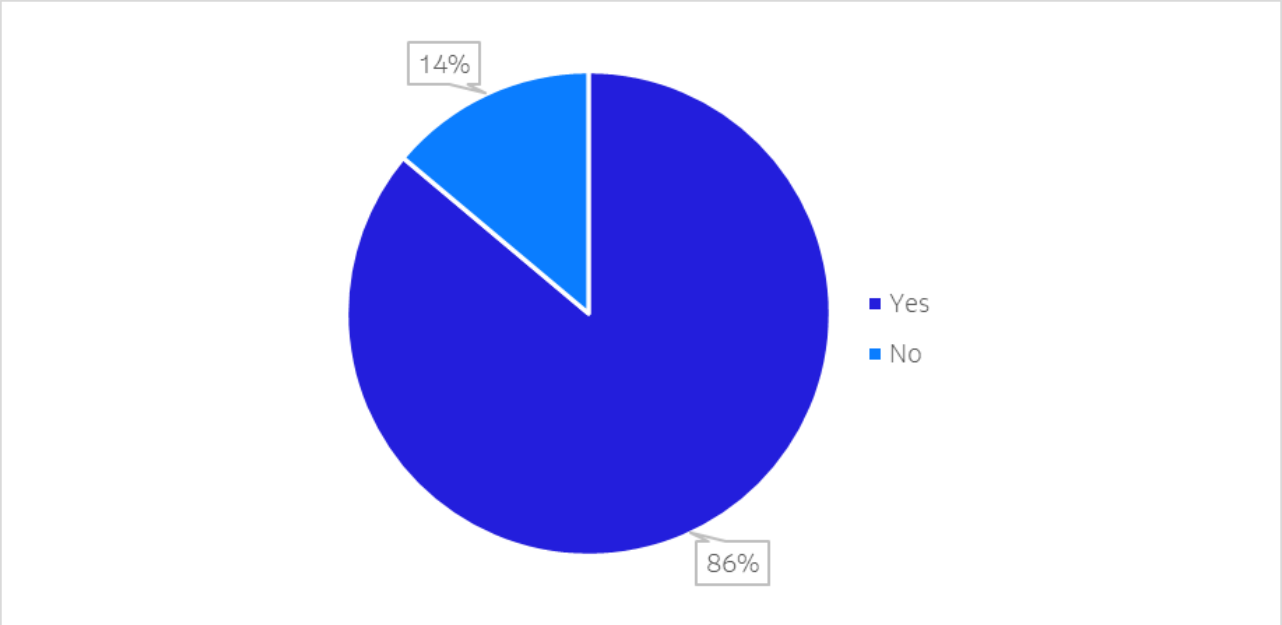
6.11 Did the initiative foster partnerships with others?



6.12 Is the initiative contributing to the promotion of sustainable management of water?



6.12 Is the initiative addressing adverse water-related environmental impacts?



7.3 Does the initiative include work that is of an 'ongoing' nature (i.e. was part of prior EC tranches, and will continue on into future tranches indefinitely)?