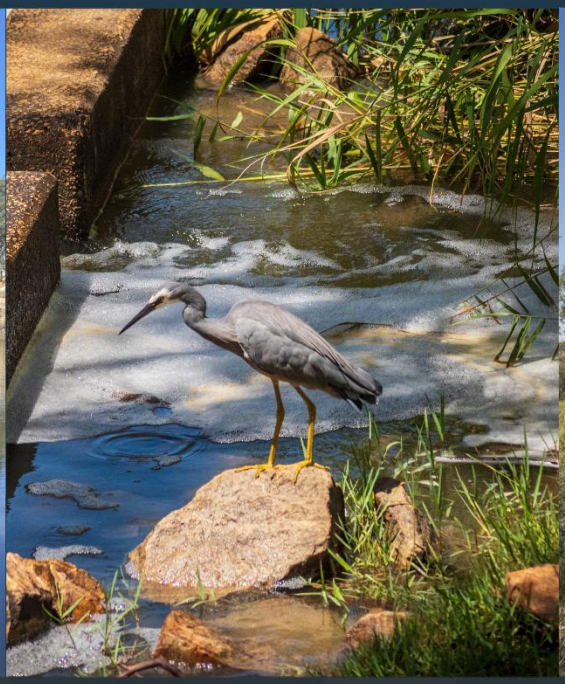
2026-2036







WIMMERA WATERWAY STRATEGY

MONITORING, EVALUATION, REPORTING AND IMPROVEMENT PLAN

VICTORIA State Government Australia

Wimmera CMA

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Acknowledgement of Country

Wimmera CMA acknowledges the Traditional Custodians of the land and waters where we work and pay our respects to Elders past and present.

We acknowledge and respect Traditional Owners, Aboriginal communities and organisations. We recognise the diversity of their cultures and the deep connections they have with Victoria's lands and waters.

We value partnerships with Traditional Owners for the health of people and Country.

Wimmera CMA Board, management and staff recognise the primacy of Traditional Owners' obligations, rights and responsibilities to use and care for their traditional lands and waters.

Acknowledgements

Wimmera CMA thanks the many regional stakeholders, groups and individuals whose contributions assisted with the preparation of the *Wimmera Waterway Strategy 2026-2036* and have guided development of this *Monitoring, Evaluation, Reporting and Improvement Plan* for the *Wimmera Waterway Strategy*.

We acknowledge the Traditional Owners and other Aboriginal and Torres Strait Islander Peoples across the region and pay respect to Elders past, present and emerging.

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Acronyms

BGLC	Barengi Gadjin Land Council
BEWS	*Basin-wide Environmental Watering Strategy*
CMA	Catchment Management Authority
DEECA	Victorian Government Department of Energy, Environment and Climate Action
EMAC	Eastern Maar Aboriginal Corporation
EVC	Ecological Vegetation Class
GWMWater	Grampians Wimmera Mallee Water
MERI	Monitoring, evaluation, reporting and improvement
RCS	*Regional Catchment Strategy*
RWS	*Regional waterway strategy*
Wimmera CMA	Wimmera Catchment Management Authority

Introduction

Wimmera CMA led the development of the *Wimmera Waterway Strategy* (the Strategy) and its *Implementation Plan* (the Implementation Plan) during 2025-26 in collaboration with First Nations organisations, regional stakeholders, community groups and the broader community. Together, these documents provide the strategic direction and actions required to protect and enhance the environmental, cultural, social and economic values of the region's waterways in priority areas over the next decade.

This *Monitoring, Evaluation, Reporting and Improvement Plan* (MERI Plan) outlines the approach for monitoring, evaluating and reporting on the implementation and effectiveness of the Strategy and Implementation Plan. It establishes a framework for assessing progress towards the Strategy's desired outcomes, demonstrating accountability for investment and informing adaptive management over time.

Effective implementation of the Strategy relies on access to timely, reliable and relevant information. Monitoring, evaluation and reporting provide the evidence needed to understand what is working well, identify emerging challenges and assess whether management actions are contributing to the Strategy's long-term outcomes.

This information supports continuous improvement by enabling Wimmera CMA and its partners to adapt priorities, programs and investments in response to new knowledge, changing conditions, risks and opportunities. Through this adaptive management approach, the MERI Plan will support ongoing learning, informed decision-making and collaborative stewardship of the Wimmera region's waterways.

Purpose

The purpose of the MERI Plan is to support the effective implementation of the Strategy and its Implementation Plan by providing evidence for decision-making, accountability, learning and continuous improvement.

MERI objectives

The objectives of this MERI Plan are to:

1. **Measure progress towards desired outcomes -** Monitor and assess progress towards the Strategy's 10-year desired outcomes and determine the extent to which management actions are contributing to improvements in the condition, values and management of waterways across the Wimmera region.
2. **Support evidence-based decision-making -** Provide reliable and timely information to inform waterway management, planning, investment and policy decisions at project, program and strategic scales.
3. **Demonstrate accountability and transparency -** Report on the implementation, effectiveness and outcomes of the Strategy to funding bodies, partners, Traditional Owners, stakeholders, communities and government.
4. **Assess the effectiveness of management actions -** Evaluate whether the Strategy's priorities, actions and investments are achieving intended outcomes and delivering value for the resources invested.
5. **Facilitate learning and continuous improvement -** Identify successes, challenges, risks, opportunities and lessons learned to improve future planning, management approaches and delivery mechanisms.
6. **Support adaptive management -** Enable Wimmera CMA and delivery partners to adapt priorities, programs and investment decisions in response to monitoring results, evaluation findings, emerging issues and changing environmental conditions.
7. **Strengthen collaboration and shared understanding -** Support learning and knowledge sharing among First Nations Peoples, partner organisations, landholders, community groups and stakeholders involved in implementing the Strategy.
8. **Inform future strategies and investment -** Generate the evidence and insights needed to support mid-term and final reviews of the Strategy and inform the development of future regional waterway strategies, implementation plans and investment proposals.

Together, these objectives ensure that monitoring, evaluation, reporting and improvement activities contribute not only to tracking progress and demonstrating achievements, but also to fostering learning, accountability and continuous improvement in the management of the Wimmera region's waterways.

Scope and structure of this plan

This plan is structured around 3 parts:

- **Part 1** - Provides the monitoring, evaluating, reporting and improvement (MERI) framework for the Wimmera Regional Waterway Strategy. This framework:
    - Presents the program logic underpinning the Strategy and associated assumptions and risks.
    - Identifies key questions for evaluating the Strategy's impact, effectiveness, appropriateness, efficiency and legacy.
- **Part 2** - Sets out monitoring measures and indicators for each of the Strategy's 10-year desired outcomes. Monitoring these measures will enable Wimmera CMA to evaluate progress towards, and achievement of, the desired outcomes.
- **Part 3** - Sets out how Wimmera Catchment Management Authority (Wimmera CMA) will communicate and report on implementation and learnings, identifying the main audiences and reporting methods.

Guiding documents and frameworks

This Plan has been developed in accordance with the *Ministerial Guidelines for Regional Waterway Strategies*, issued by the Victorian Minister for Water, which outline the requirements and expectations for the preparation of regional waterway strategies, including expectations for MERI. (1)

The Plan is also informed by a range of national and state MERI frameworks and guidance documents, including:

- Australian Government's Natural Resource Management Monitoring, Evaluation, Reporting and Improvement Framework. (2)
- Victorian Government's Monitoring, Evaluation and Reporting Framework for Land, Water and Biodiversity. (3)
- Victorian Government's Outcomes Reform in Victoria. (4)
- Guidance notes for the development of regional waterway strategies, outcomes and MERI issued by the Victorian Government Department of Energy, Environment and Climate Action.

Collectively, these documents provide the foundation for a structured and outcomes-focused approach to monitoring, evaluation, reporting and continuous improvement. They support the development of clear links between management activities, outputs and intended outcomes, enabling adaptive management, evidence-based decision-making and accountability for investment.

Adaptive management

This MERI plan will be reviewed and updated periodically to ensure it meets its purpose and objectives. This may include refining and prioritising key evaluation questions and sub-questions and revising monitoring measures in response to available resources, data and emerging information. Not all data sources required to establish baselines, support reporting and inform adaptive management are available at the time of preparing this plan. The availability of data and resources over time will inform both implementation of the plan and future plan updates.

Wimmera CMA adopts an adaptive management approach to waterway management and engagement with communities and stakeholders. Adaptive management recognises that knowledge and understanding evolve over time and supports continuous learning by using evidence and experience to inform future decisions. This approach enables management activities to be refined and improved in response to new information, changing conditions and lessons learned during implementation.

Figure 1 illustrates the six stages of the adaptive management cycle:

1. **Strategy development** - Establishing the Wimmera region's desired outcomes for waterways, land, biodiversity and communities and identifying the strategic directions and actions required to support government policy and objectives.
2. **Implementation** - Delivering actions in priority areas through government and partner investment to achieve the Strategy's desired outcomes.
3. **Monitoring** - Collecting information to measure and describe progress towards desired outcomes and assess the Strategy's effectiveness, efficiency, appropriateness, impact and legacy.
4. **Evaluation** - Analysing monitoring data to determine the extent to which outcomes are being achieved, assess the success of management actions and identify lessons and opportunities for improvement.
5. **Reporting** - Communicating the findings of monitoring and evaluation, including achievements, challenges, opportunities and lessons learned.
6. **Improvement** - Applying insights gained through evaluation to refine management approaches, improve implementation and inform future planning and investment decisions.

Together, these stages create a continuous cycle of learning and improvement, ensuring that management decisions remain evidence-based, responsive and focused on achieving long-term outcomes for the Wimmera region's waterways.

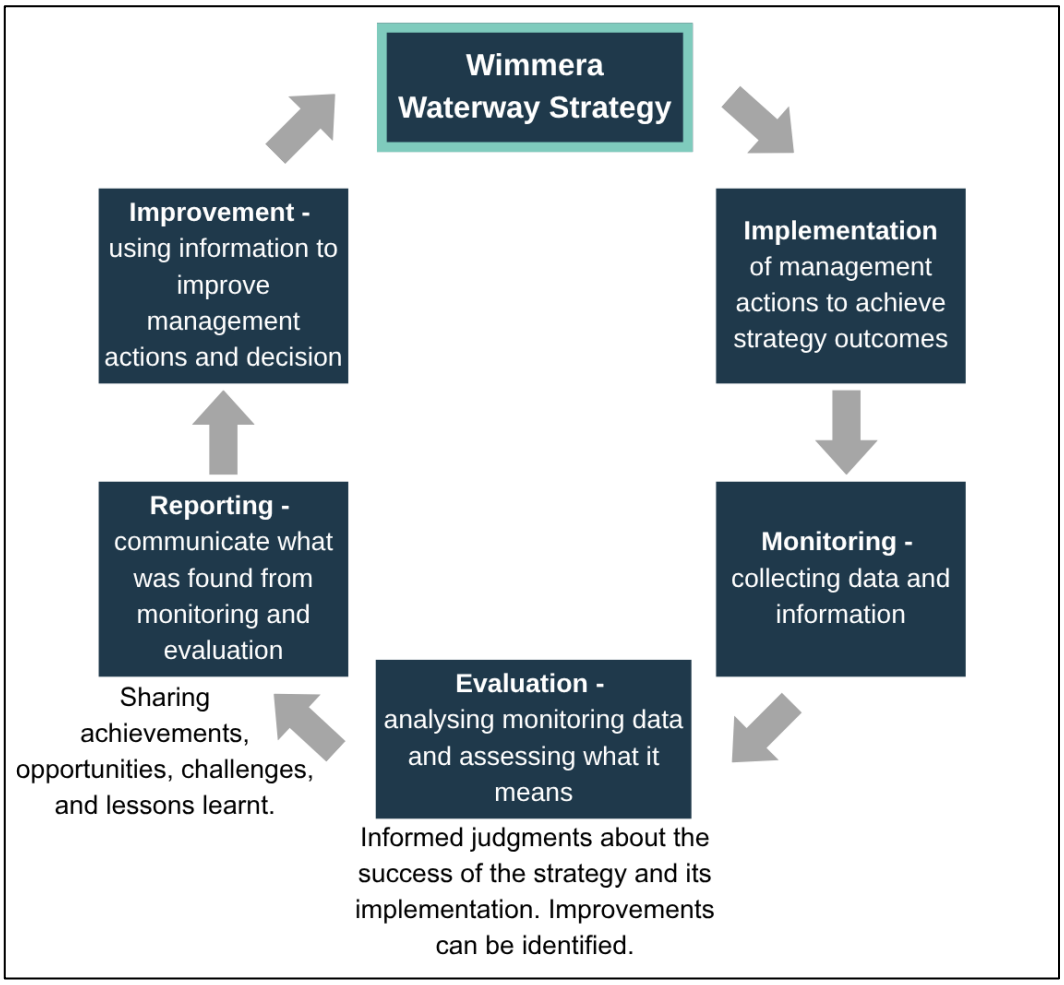


Figure 1. Monitoring, evaluation, reporting and improvement framework and key elements of the adaptive management cycle (adapted from (3)).

Adaptive management opportunities throughout the life of the Strategy include:

- **Annual reflection on learning** through project implementation, review and reporting processes, informing:
    - Improvements to project and program delivery.
    - The development of new investment proposals.
    - Updates to supporting documents, including the Strategy's Implementation Plan and this MERI Plan.
- **Mid-term and final Strategy reviews**, after 5 and 10 years respectively, informing:
    - Assessment of progress towards medium-term outcomes, where appropriate data is available.
    - Identification of opportunities for minor adjustments and adaptive responses to changing circumstances, including major events such as bushfire, flood and drought.
    - Evaluation of the effectiveness of the Strategy, including key lessons learnt and recommendations for future waterway management and planning.
- **Adaptive allocation of resources and management effort** to support response and recovery following extreme events such as floods, bushfires and droughts and the emergence of new threats.
- **Capturing, sharing and applying lessons learnt** from First Nations organisations, stakeholders, community groups, landholders and others involved in implementing the Strategy.

These adaptive management processes will help ensure the Strategy remains relevant, effective and responsive to emerging knowledge, changing environmental conditions and community needs.

Part 1 – Monitoring and evaluation

Program logic

Program logic is a planning tool commonly used in natural resource management to describe how a program is expected to achieve its intended outcomes. It provides a clear line of sight between management actions, the changes they are expected to influence and the long-term outcomes the program seeks to achieve.

The Strategy's program logic is illustrated in Figure 2. It demonstrates how the implementation approaches, actions and outputs delivered by waterway managers, First Nations organisations, community groups, landholders and other stakeholders are expected to contribute to the Strategy's desired outcomes and overall vision for the Wimmera region.

Additional detailed program logic is embedded in the Strategy and Implementation Plan. The Priority Areas section of the Strategy includes logic diagrams showing how medium-term outcomes contribute to the achievement of long-term outcomes. The Implementation Plan further describes the pathway to change by identifying the actions and foundational activities associated with each medium-term outcome, along with the values they are intended to protect and the threats they seek to address.

Over the life of the Strategy, management actions will aim to maintain and improve the condition of waterways and the environmental, cultural, social and economic values they support. In the longer term, this is expected to contribute to a healthy and resilient waterway system that continues to provide benefits for the Wimmera region's First Nations Peoples, communities, environment and economy.

The Strategy's medium-term outcomes (within 10 years), together with associated actions, outputs and foundational activities, are expected to be measurable over the Strategy's implementation period. Progress towards the long-term outcomes (more than 20 years) may also be observable for some outcomes during this period, although others may require longer timeframes before meaningful change can be detected and attributed.

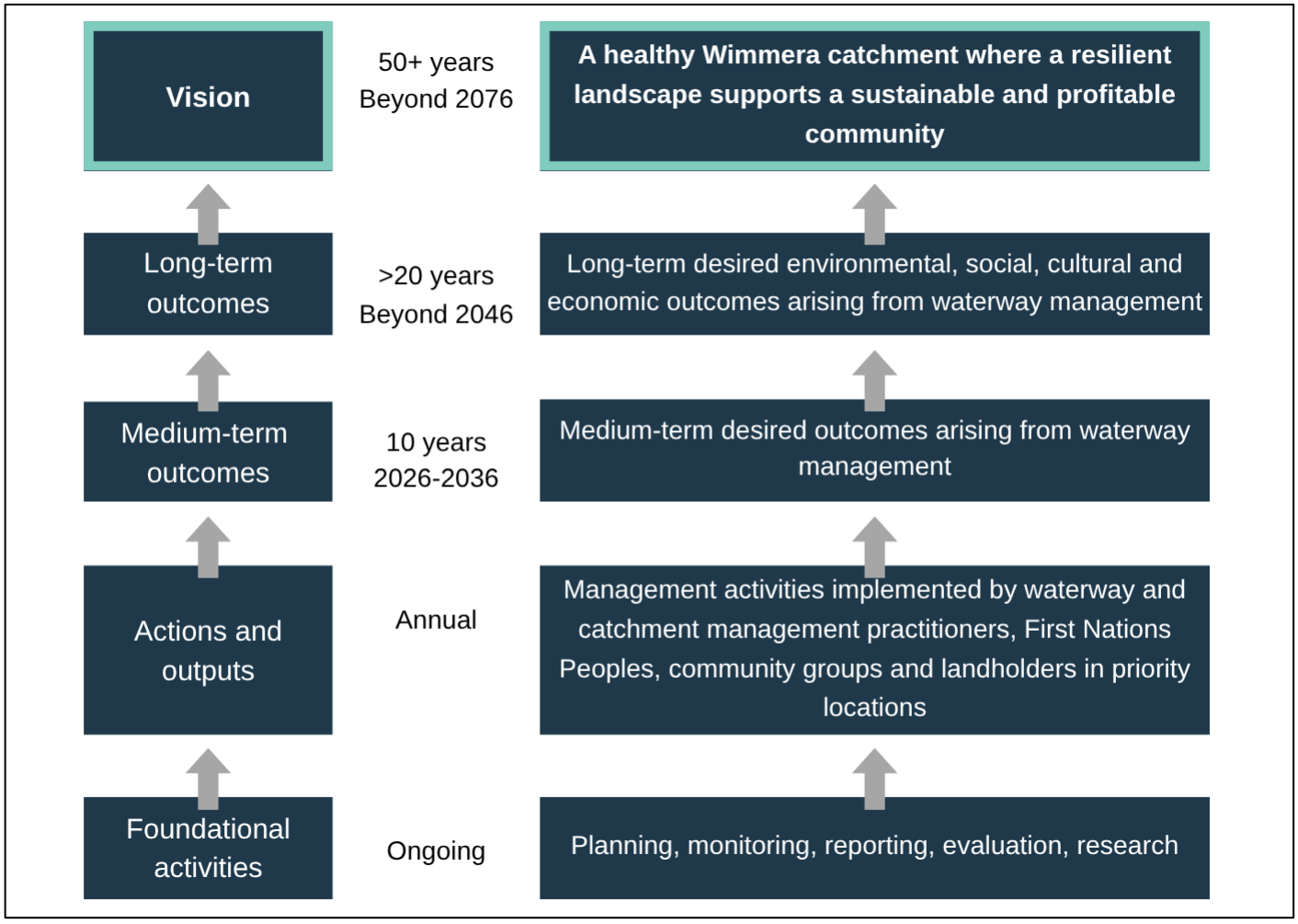


Figure 2. Program logic for the Strategy, showing the links between the regional vision, outcomes and actions.

Assumptions and risk analysis

The program logic shown in Figure 2 describes the pathway through which the Strategy is expected to achieve its vision and intended medium and long-term outcomes. It sets out the sequence of activities, outputs and outcomes that are anticipated to occur over the life of the Strategy. Embedded within each stage of this logic are assumptions about the conditions, behaviours and external factors that support successful implementation and the achievement of desired outcomes.

Assumptions are informed by current knowledge, previous experience, available evidence, historical trends and expert judgement. They represent factors that are considered likely to occur, but which remain uncertain and have the potential to influence the success of the Strategy.

Assumptions exist at multiple levels, from the strategic context through to individual projects and on-ground actions. Table 1 identifies the key high-level assumptions that underpin both the program logic and the implementation of the Strategy. For each assumption, a risk analysis has been undertaken to assess the likelihood that the assumption may hold true and the potential consequences for Strategy implementation and outcomes if this occurs. Where assumptions present a significant level of risk, management responses have been identified to reduce the likelihood or impact of that risk. Table 2 provides the risk assessment matrix used to determine risk ratings and guide the need for management responses.

Many of the assumptions underpinning the Strategy relate to external factors that are outside the direct control of strategy partners, including climatic conditions, policy settings, funding availability, landholder participation, community support and the broader social, economic and environmental context. These assumptions are important because changes in these factors can influence the effectiveness of actions and the achievement of outcomes. Monitoring and evaluation will help test key assumptions over time, improve understanding of the pathways to change and inform adaptive management responses where assumptions are found to be invalid or require refinement.

More detailed assumptions and associated risks will be identified and assessed through project-level planning, monitoring, evaluation, reporting and improvement (MERI) processes as individual projects and actions are developed and implemented.

Table 1. Assumptions associated with the program logic and strategies for managing assumptions and potential impacts.

Program logic level	Assumption	Assumption factors	Likelihood assumption is wrong	Consequence if assumption is wrong	Management required?	Management response
Regional vision > desired outcomes	Achievement of 10- and 20-year outcomes will lead to achievement of the regional vision.	Historical experience and monitoring data provides knowledge about the type of management actions required to achieve outcomes.	Unlikely	Moderate	No management	Monitor implementation of the Strategy in accordance with this MERI Plan.
Desired outcomes	Achievement of desired outcomes will not be detrimentally affected by external influences. Climate and hydrological conditions will remain within the range for which management actions are designed to be effective.	It is well recognised from reviews of previous strategies that there are many influences on land, water and biodiversity outcomes such as climate, land use change, government support and flood, drought and wildfire.	Highly likely	Moderate	Requires management	Regularly evaluate implementation progress and effectiveness. Adapt approaches in response to external influences, where possible. Monitor seasonal climate conditions and adapt Strategy implementation approaches as necessary. Annually review the impact of significant events on Strategy implementation, outcomes and adaptive management measures.

Program logic level	Assumption	Assumption factors	Likelihood assumption is wrong	Consequence if assumption is wrong	Management required?	Management response
Desired outcomes	The community is informed, engaged and supportive of the Strategy's desired outcomes, resulting in improved achievements.	Wimmera CMA's longitudinal research into the social drivers of natural resource management generally supports this assumption.	Likely	Moderate	Consider management	Continue to regularly survey Wimmera landholders regarding the social drivers of natural resource management every 5-6 years. Monitor trends in social media comments. Report regularly to the community on Strategy achievements.
Desired outcomes	The regional delivery model of collaborative partnerships between government, First Nations Peoples, community and other stakeholders is an effective way to deliver the Strategy's desired outcomes.	Supported by almost 30 years of experience by CMAs and delivery partners in delivering land, water and biodiversity projects with demonstrated outcomes.	Unlikely	Moderate	No management	Continue to implement the Strategy collaboratively with partners and stakeholders.
Actions and outputs	Stakeholders will continue to support and participate in Strategy implementation.	Stakeholders showed strong support for Strategy outcomes and approaches during consultation for Strategy development. It is likely that general support will continue in pursuit of social, economic, recreational, cultural and environmental outcomes.	Unlikely	Moderate	Continuation of existing arrangements.	Continue to consult and collaborate with partners and stakeholders to ensure that the Strategy continues to support shared outcomes.
Foundational activity	Monitoring data is available or funded and provides sufficient, accurate and timely evidence to detect meaningful change and inform reporting, planning and decision-making.	Some monitoring activities are currently unfunded. Some monitoring measures rely on state-funded monitoring to occur in future.	Likely	Moderate	Consider management	Ensure resources are set aside for MERI Plan implementation. Review monitoring requirements and identify data gaps. Prioritise and seek resourcing of projects to supply data (at a CMA or state-wide level). Include budget requirements for monitoring programs in relevant investment bids.

Program logic level	Assumption	Assumption factors	Likelihood assumption is wrong	Consequence if assumption is wrong	Management required?	Management response
Foundational activity	Investment and resourcing will be available to implement priority management actions to support achievement of desired outcomes.	There are currently some outcomes that do not have funded management actions for implementation.	Likely	Severe	Requires management	Advocate for and seek funding from state and federal governments and other sources. Use MERI Plan and project reporting to demonstrate the outcomes of implementation work and advocate for further funding. Collaborate with regional delivery partners to achieve unfunded actions where possible.

Table 2. Matrix for assessing the risk level and if a management response is required.

Likelihood - of assumption being wrong	**Consequence -** impact on strategy vision, outcomes, or budget if assumption is wrong		
	Minor <5% variance	**Moderate** 5-15% variance	**Severe** >15% variance
Unlikely Less than 25% chance	No management	No management	Consider management
Likely 25-75% chance	No management	Consider management	Requires management
Highly likely >75% chance	Consider management	Requires management	Requires management

Key evaluation questions

Evaluation uses evidence from monitoring, reporting and other relevant sources to assess the performance and effectiveness of the Strategy and its implementation. It helps determine the extent to which desired outcomes are being achieved, understand the factors influencing success and identify opportunities to improve future management, planning and investment.

Evaluation involves a systematic and objective assessment of the Strategy and its implementation against a set of key evaluation questions. Table 3 sets out the evaluation questions and monitoring measures for the Strategy. These questions are aligned with the standard evaluation themes commonly applied in natural resource management:

1. **Impacts** - Changes to waterway condition, management activities or institutions.
2. **Appropriateness** - Addressing the needs of beneficiaries and against best practice.
3. **Effectiveness** - Achievement of desired outcomes.
4. **Efficiency** - Value or return from investment.
5. **Legacy** - After the strategy ends. [3]

Evaluation goes beyond describing what has happened. It seeks to understand why particular outcomes have or have not been achieved and what can be learned to improve future performance. Evaluation findings will be used to:

- Assess progress towards the Strategy's desired outcomes.
- Identify the factors contributing to successes, challenges and unintended outcomes.
- Test and refine the assumptions underpinning the Strategy.
- Examine trends and changes identified through monitoring.
- Identify lessons learned and their implications for future decision-making.
- Consider alternative approaches or management responses that may improve outcomes.
- Inform adaptive management, continuous improvement and future investment decisions.

Through this process, evaluation supports accountability, organisational learning and evidence-based decision-making, ensuring the Strategy remains responsive to emerging knowledge, changing conditions and stakeholder needs.

Given the number and breadth of key evaluation questions included in Table 3, Wimmera CMA will undertake a review of the evaluation framework prior to the mid-term and final reviews to identify priority questions for detailed evaluation. This process will focus evaluation effort on the most critical questions for assessing Strategy performance, informing adaptive management, guiding future investment and supporting the development of the next regional waterway strategy.

Prioritising key evaluation questions will enable evaluation resources to be targeted where they can provide the greatest value, while recognising that not all questions will require the same level of investigation. Priority questions may be assessed through detailed analysis, while others may be addressed using approaches such as case studies, qualitative assessments, expert judgement or performance rubrics.

Undertaking this prioritisation prior to the mid-term and final reviews will allow decisions to be informed by implementation experience, data availability, emerging issues, stakeholder information needs, resourcing levels and changes in policy, environmental conditions or investment priorities. This approach will help ensure that evaluation remains practical, proportionate and focused on generating useful insights to support continuous improvement and long-term waterway management outcomes.

Table 3. Key evaluation questions and monitoring measures.

Key evaluation questions	Sub-questions	Monitoring measures - What will be measured or analysed	Data source	Frequency
Impacts: Changes to resource condition, management activities or institutions.				
To what extent have the Strategy's desired outcomes been achieved?	What progress has been made towards achieving the Strategy's desired outcomes?	Measures for monitoring the Strategy's desired outcomes as set out in Part 2 of this monitoring plan.	As set out in Part 2 of this monitoring plan.	Mid-term review. Final review.
	To what extent can the outcomes observed be attributed to the Strategy, as opposed to other factors?	Analysis of contributing factors and external environment.	Feedback from Wimmera CMA project managers and delivery partners and case studies. Factors influencing progress (see Efficiency section).	Final review.
	What adjustments could improve the likelihood of achieving remaining outcomes?	Analysis of unachieved outcomes: • Can any future actions be taken to achieve the outcome? • Are there any barriers preventing the outcome from being achieved? • Has the desired outcome changed, or is it no longer relevant or desired?	Feedback from Wimmera CMA project managers and delivery partners and case studies.	Mid-term review. Final review.
	Were there any unforeseen impacts resulting from implementation of the Strategy and what were they?	Positive and negative unforeseen impacts.	Feedback from Wimmera CMA project managers and delivery partners and case studies. Analysis of condition data.	Final review.

Key evaluation questions	Sub-questions	Monitoring measures - What will be measured or analysed	Data source	Frequency
Appropriateness: Addressing the needs of beneficiaries and against best practice.				
To what extent were the Strategy's vision, outcomes, priorities and the Implementation Plan's actions appropriate for the region, stakeholders and the community?	To what extent did the Strategy and its Implementation Plan align with the needs and expectations of key stakeholders and the Wimmera community?	Feedback provided by the Wimmera community and key stakeholders. Key stakeholders include: • Wimmera community. • First Nations Peoples. • Victorian Government. • Australian Government. • Local government. • Water, natural resource and catchment management organisations and groups.	Feedback and case studies collected from the Wimmera community and key stakeholders via a survey, meetings, workshops or other mechanism.	Final review.
	To what extent have the regional and local conditions and challenges reflected in the Strategy remained current?	Analysis of available condition and threat data.	Various.	
	To what extent has the Strategy's implementation ensured appropriate engagement with the community?	Feedback from community participants in Strategy delivery actions. Community participation levels and reasons for high or low participation.	Formal and informal project delivery feedback from community participants and from the *Victorian Riparian Works Review Program.* National Soil Cooperative Research Centre's *Rural Landholder Social Benchmarking Study - Wimmera Rural Landholder Survey*, conducted periodically since 2002. Most recent survey conducted in 2026, providing a benchmark for the Strategy. Case studies.	Final review.
To what extent were the Implementation Plan's actions appropriate for achieving the vision and desired outcomes?	To what extent were the actions set out in the Strategy's implementation plan appropriate for achieving the Strategy's outcomes, including the scope and timeframes?	Extent to which actions were informed by research, best practice or proven approaches.	Feedback from CMA project managers and delivery partners and case studies.	Final review.

Key evaluation questions	Sub-questions	Monitoring measures - What will be measured or analysed	Data source	Frequency
Effectiveness: Achievement of desired outcomes.				
How effectively has the Strategy delivered its intended outcomes through the achievement of its Implementation Plan's actions?	To what extent were the actions in the Implementation Plan completed as intended? What factors influenced progress?	Implementation of planned management actions. Evaluation of actions not achieved, factors influencing progress and impacts this had on achievement of outcomes.	Wimmera CMA's standard output database. Input from delivery partners. Case studies.	Collate annually. Evaluate at mid-term and final reviews.
		Climate conditions, extreme events and their influence on Strategy implementation and outcomes.	Bureau of Meteorology data. Extreme event data. Feedback from CMA project managers and delivery partners, including project reports and case studies.	Collate annually. Evaluate at mid-term and final reviews.
		The sufficiency of funding for achieving progress towards Strategy outcomes. Was it available for all outcomes or were there gaps? Did it change over time?	Feedback from CMA project managers and delivery partners, including project reports. Analysis of available funding and gaps in implementation of management actions to achieve desired outcomes.	
		The impact of changes in government policies and priorities on Strategy implementation.	Victorian Government and Australian Government policies and priorities and associated funding. Feedback from CMA project managers and delivery partners, including project reports and case studies.	
		Participation by landholders and community groups in implementation programs.	Participation data. Feedback from CMA project managers and delivery partners, including project reports and case studies.	
		The effectiveness of coordination of implementation between delivery partners.	Feedback from CMA project managers and delivery partners, including project reports and case studies.	
		Changes in partnerships and relationships and their effect on Strategy implementation.	Feedback from CMA project managers and delivery partners, including project reports and case studies.	

Key evaluation questions	Sub-questions	Monitoring measures - What will be measured or analysed	Data source	Frequency
Efficiency: Value or return from investment.				
To what extent has RWS delivery been efficient and how well has it leveraged cross-organisational collaboration?	To what extent was Strategy implementation supported by cross-organisational collaboration? What efficiency gains resulted from cross-organisational collaboration?	Collaboration and coordination between delivery partners, including to minimise duplication of effort and make best use of skills, expertise and resources.	Feedback from CMA project managers and delivery partners, including project reports and case studies.	Final review.
To what extent has implementation of the Strategy been adaptively managed?	What processes and management arrangements were in place to support adaptive management of Strategy implementation?	Analysis of management arrangements and MERI processes at strategy and project level.	Documentation describing management arrangements and MERI processes. Feedback from CMA project managers and delivery partners, including project reports and case studies.	Mid-term review. Final review.
	What learnings and improvements were identified? How did implementation approaches respond to identified learnings, improvements, new knowledge, information or changed circumstances?	Changes arising from climate events, new knowledge and information, changes in other circumstances.	Feedback from CMA project managers and delivery partners, including project reports and case studies.	
Legacy: After the strategy ends.				
To what extent are the Strategy's outcomes expected to endure beyond the life of the Strategy?	To what extent are the Strategy's outcomes likely to continue or be maintained beyond the life of the Strategy?	• Continuation of outcomes and benefits without program funding - analysis of outcomes requiring ongoing management, maintenance work and investment. • Leveraged funding or follow-on investment. • Resilience – the extent that outcomes are vulnerable to changing environmental conditions and extreme events.	CMA project managers and delivery partners, including project and annual reports and case studies.	Final review.

Key evaluation questions	Sub-questions	Monitoring measures - What will be measured or analysed	Data source	Frequency
	What enduring changes to the Wimmera's waterways, landscapes and partnerships have been delivered under the Strategy?	Waterways and landscapes: • Changes in ecological condition. • Changes to access for recreation and recreational opportunities. • Improvements to infrastructure and changes to management arrangements, for example, for water for the environment. Partnerships and governance: • Commitment to continue partnerships and collaborations. • Number and type of active stakeholders continuing to be engaged. • Stakeholder and landholder attitudes and behaviours. • Evidence of ongoing joint initiatives, co-investment and shared decision-making. • Ongoing changes to governance structures or formal agreements.	Longitudinal data including monitoring data for water quality, flows and wetland filling, native fish, platypus, native vegetation, invasive plants and animals, Flagship waterway and Ramsar site MERI and condition data such as indices of stream and wetland condition, where avaialble (noting this may be hard to attribute to the Strategy). CMA project managers and delivery partners, including project and annual reports and case studies. National Soil Cooperative Research Centre's *Rural Landholder Social Benchmarking Study - Wimmera Rural Landholder Survey*, conducted periodically since 2002. Most recent survey conducted in 2026, providing a benchmark for the Strategy.	Final review.
	To what extent has the Strategy influenced ongoing practices, behaviours or decision-making among the community?	Community: • Changes in awareness, attitudes and stewardship behaviours. • Participation in waterway and catchment management activities. • Capacity built – increase in skills, knowledge, local leadership.	National Soil Cooperative Research Centre's *Rural Landholder Social Benchmarking Study - Wimmera Rural Landholder Survey*, conducted periodically since 2002. Most recent survey conducted in 2026, providing a benchmark for the Strategy. Potential to form survey questions that allow data to be analysed for correlations. *My Victorian Waterway Survey* (https://www.water.vic.gov.au/waterways/my-victorian-waterway-survey). *Regional Wellbeing Survey* (https://www.canberra.edu.au/research/centres/hri/research-projects/regional-wellbeing-survey).	Final review.

Knowledge gaps

Effective waterway management relies on sound knowledge of environmental, social, economic and cultural values, as well as the processes that influence them. While a substantial knowledge base exists for the Wimmera region, important uncertainties remain. These knowledge gaps can affect the effectiveness of management actions, the achievement of desired outcomes and the region's capacity to respond to emerging challenges such as climate change.

The MERI Plan, together with supporting documents such as Flagship Waterway MERI Plans, Environmental Water Management Plans and Ramsar management plans, identifies the uncertainties underpinning the Strategy's outcomes framework. These documents guide targeted investigations and research that will improve understanding of waterway values, processes and management responses, and ensure that new knowledge is incorporated into planning, investment and management decisions over time.

Knowledge theme	Key knowledge gap	Why it matters	Strategy outcome supported	Priority	Proposed investigation or research	Lead organisation (bold) and partners (not bold)	Timing
Climate change adaptation and resilience	Understanding how climate change may affect waterway values and management effectiveness, particularly over the long-term.	Understanding future risks is essential for adapting management approaches, prioritising investment and understanding where environmental, cultural, social and economic values can be maintained under changing climatic conditions.	Medium outcome 2. More waterways have improved management to enhance habitat, landscape connectivity and resilience. Medium outcome 4. Drought refuges support native species' survival and resilience during dry periods. Medium outcome 6. Waterways identified as high priority for recreation and amenity provide enhanced recreational opportunities and community benefits, while minimising impacts on their environmental values.	High	Investigate projected climate change impacts on priority areas, species and values, and identify adaptation pathways and management responses.	**Wimmera CMA** First Nations organisations DEECA Research organisations	2026-2036
	Suitable and feasible locations for managed drought refuge pools are not fully understood across the catchment.	Drought refuges may be critical for persistence of aquatic species during prolonged dry periods and under climate change.	Medium outcome 4. Drought refuges support native species' survival and resilience during dry periods.	High	Identify and assess potential drought refuge sites and associated habitat values.	**Wimmera CMA** First Nations organisations Victorian Environmental Water Holder Commonwealth Environmental Water Holder DEECA GWMWater	2026-2031
	Optimal management of established drought refuge areas.	To ensure effective drought and climate change response and protection of species and ecological functions.		High	Monitor and evaluate the effectiveness of drought refuge management during dry years. Apply key learnings to improve management.		2026-2036

Knowledge theme	Key knowledge gap	Why it matters	Strategy outcome supported	Priority	Proposed investigation or research	Lead organisation (bold) and partners (not bold)	Timing
Management of water for the environment	Understanding the environmental, cultural, social and recreational outcomes achieved through delivery of water for the environment, and opportunities to optimise outcomes under changing climatic conditions.	Understanding the full range of benefits delivered by water for the environment is essential for improving water management decisions and maximising outcomes.	Medium outcome 2. More waterways have improved management to enhance habitat, landscape connectivity and resilience. Medium outcome 4. Drought refuges support native species' survival and resilience during dry periods. Medium outcome 5. Risks to water quality in Wimmera waterways are managed where possible to reduce impacts on values. Medium outcome 6. Waterways identified as high priority for recreation and amenity provide enhanced recreational opportunities and community benefits, while minimising impacts on their environmental values. Medium outcome 7. Healthier waterways enable more On Country activities for First Nations Peoples.	High	Review environmental watering outcomes across the catchment and investigate opportunities to optimise environmental watering under current and future climate scenarios.	**Wimmera CMA** First Nations organisations Victorian Environmental Water Holder Commonwealth Environmental Water Holder DEECA GWMWater	2026-2031
Erosion and sediment management	Priority locations for erosion control where eroding tributary waterways are contributing or are at risk of contributing significant sediment loads to downstream high value waterways.	Erosion and sedimentation can degrade water quality and downstream aquatic habitat and ecological values. It is several years since priority locations were previously identified. Since then, the highest priority sites have been addressed and changes have occurred in the catchment, warranting a revisit of priorities to guide the location of future erosion control actions.	Medium outcome 2. More waterways have improved management to enhance habitat, landscape connectivity and resilience. Medium outcome 5. Risks to water quality in Wimmera waterways are managed where possible to reduce impacts on values.	High	Map and prioritise erosion hotspots and areas contributing the largest amounts of sediment in the upper catchment.	**Wimmera CMA** Private landholders	2026-2029

Knowledge theme	Key knowledge gap	Why it matters	Strategy outcome supported	Priority	Proposed investigation or research	Lead organisation (bold) and partners (not bold)	Timing
	The condition of high value waterways downstream of erosion sites.	Understanding the impacts of sediment delivery on downstream waterways is important for targeting erosion management investments and evaluating outcomes.		Medium	Assess waterway condition, sediment impacts and ecological responses in downstream reaches affected by erosion and sediment delivery.	**Wimmera CMA**	2026-2029
Species persistence and recovery	Platypus persistence beyond the MacKenzie River, including reported occurrences and habitat suitability in the Upper Catchment local area and Wimmera River.	Understanding population distribution is essential for protection and recovery efforts to reduce the risk of local extinction of this species in the Wimmera.	Medium outcome 1. Ongoing collaboration and two-way learning in waterway planning and management, supporting self-determination and strengthening partnerships with First Nations Peoples. Medium outcome 8. Key water-dependent species are supported in waterways that provide suitable habitat, including during dry conditions.	High	Conduct targeted surveys and habitat assessments in the Upper Catchment and Wimmera River system.	**Wimmera CMA** Barengi Gadjin Land Council Research organisations Community groups including Project Platypus Landcare Network	2026-2031
	Understanding the breeding requirements, habitat needs and locations where suitable habitat exists in Wimmera waterways for river blackfish and small-bodied native fish.	Understanding breeding requirements and habitat needs is essential for supporting conservation efforts and targeting suitable waterways for potential reintroductions to reduce the risk of local extinction of river blackfish and for supporting population of small-bodied native fish in the Wimmera.		High	Research breeding requirements, habitat needs and locations where suitable habitat exists in Wimmera waterways for river blackfish and small-bodied native fish.	**Wimmera CMA** Barengi Gadjin Land Council Fishing, Hunting and Outdoor Victoria Research organisations	2026-2031

Knowledge theme	Key knowledge gap	Why it matters	Strategy outcome supported	Priority	Proposed investigation or research	Lead organisation (bold) and partners (not bold)	Timing
	Conditions suitable for supporting native fish breeding in the Wimmera River and other streams, particularly for golden perch.	This affects opportunities to support self-sustaining populations. This information would inform fish habitat management and waterway restoration programs.		Medium	Investigate spawning triggers, recruitment success and habitat suitability.	**Wimmera CMA** Fishing, Hunting and Outdoor Victoria Research organisations	2026-2031
	The distribution, population status and habitat requirements of freshwater mussels in the Wimmera, feasible future actions and priority locations to support their conservation and recovery.	Freshwater mussels were previously abundant in Wimmera waterways. This information is essential for supporting their persistence and recovery. This species is culturally significant and an identified priority for Barengi Gadjin Land Council.		High	Investigate the distribution, population status and habitat requirements of freshwater mussels in the Wimmera, feasible future actions and priority locations to support their conservation and recovery.	**Wimmera CMA** Barengi Gadjin Land Council Research organisations	2026-2036
	The distribution, population status and habitat requirements of freshwater crayfish in the Wimmera, feasible future actions and priority locations to support their conservation and recovery.	This information is essential for supporting the persistence and recovery of freshwater crayfish in Wimmera waterways. They are culturally significant and an identified priority for Barengi Gadjin Land Council.		High	Investigate the distribution, population status and habitat requirements of freshwater crayfish in the Wimmera, feasible future actions and priority locations to support their conservation and recovery.	**Wimmera CMA** Barengi Gadjin Land Council Research organisations	2026-2036

Knowledge theme	Key knowledge gap	Why it matters	Strategy outcome supported	Priority	Proposed investigation or research	Lead organisation (bold) and partners (not bold)	Timing
Ramsar site management	The ability of the eucalypt woodland to persist and support ecosystem functions in the absence of extensive flooding and understanding benefits from local rainfall and runoff.	Understanding woodland resilience is important for informing management actions and maintaining ecological character under a drying climate.	Medium outcome 2. More waterways have improved management to enhance habitat, landscape connectivity and resilience. Medium outcome 8. Key water-dependent species are supported in waterways that provide suitable habitat, including during dry conditions.	Medium	Investigate woodland condition, regeneration and response to alternative water sources including rainfall and local runoff.	**Wimmera CMA** Parks Victoria Research organisations	2026-2036
	Comprehensive understanding of regent parrot numbers and breeding at Lake Albacutya. Assessment of other potential threatened species occurring at the site, including pink cockatoo.	Improved understanding of threatened species presence, abundance and breeding success is important for meeting Ramsar obligations and informing management actions.		Medium	Undertake targeted surveys and monitoring of regent parrots, pink cockatoo and other threatened species at Lake Albacutya and their habitat.	**Wimmera CMA** Parks Victoria Research organisations	2026-2036
First Nations Peoples' values and knowledge	Strengthening understanding of how cultural knowledges can inform planning, management and monitoring.	Supports self-determination, two-way learning and incorporation of First Nations knowledge systems into waterway management.	Medium outcome 1. Ongoing collaboration and two-way learning in waterway planning and management, supporting self-determination and strengthening partnerships with First Nations Peoples. Medium outcome 7. Healthier waterways enable more On Country activities for First Nations Peoples.	High	Partner with First Nations organisations to document, apply and evaluate cultural knowledge approaches in waterway planning, management and monitoring, where free and informed consent is provided.	**Wimmera CMA** **Barengi Gadjin Land Council** **Eastern Maar Aboriginal Corporation**	2026-2036

Knowledge theme	Key knowledge gap	Why it matters	Strategy outcome supported	Priority	Proposed investigation or research	Lead organisation (bold) and partners (not bold)	Timing
	Identifying culturally meaningful indicators of waterway health and success.	Enables monitoring and evaluation to better reflect First Nations values and aspirations for waterways and Country.		High	Co-design and trial culturally meaningful indicators and monitoring approaches with First Nations organisations.		
Waterway connectivity and ecological function	Waterway and riparian condition and processes that support connectivity.	Understanding connectivity processes helps guide prioritisation of restoration works, improve habitat linkages and support species movement across the landscape.	Medium outcome 2. More waterways have improved management to enhance habitat, landscape connectivity and resilience. Medium outcome 8. Key water-dependent species are supported in waterways that provide suitable habitat, including during dry conditions.	Medium	Assess ecological connectivity, barriers to movement, riparian condition and priority opportunities for restoration and reconnection.	**Wimmera CMA** DEECA First Nations organisations Research organisations Community groups such as Landcare networks	2026-2036

Part 2 – Evaluating achievement of outcomes

Overview

This section outlines how Wimmera CMA will monitor and evaluate progress towards achieving the Strategy's desired medium-term (10-year) outcomes.

Each medium-term outcome is supported by an outcome statement and a description of what success looks like. Together, these describe the desired changes or conditions the Strategy seeks to achieve and provide a clear basis for assessing whether management actions are delivering the intended environmental, cultural, social and economic benefits.

Accompanying each medium-term outcome is a table that outlines how progress will be monitored and evaluated over the life of the Strategy. These tables identify:

- **Statements of success** that define the specific changes expected to occur for priority areas, priority species, or other outcomes.
- **Specific evaluation questions** that guide monitoring, evaluation and learning.
- **Indicators** used to measure progress towards, and achievement of, the outcome, including monitoring methods and timing.
- The **organisation responsible** for collecting, managing or reporting the data.
- The **evaluation approach** and timing.
- Relevant **reference documents** that provide additional monitoring and evaluation guidance, such as Flagship Waterway MERI Plans, Environmental Water Management Plans, Ramsar plans and other supporting documents.

Together, these monitoring and evaluation activities will enable Wimmera CMA and its partners to track progress, assess the effectiveness of implementation, support adaptive management, and report on the Strategy's impact and achievements, as outlined in Table 3.

Medium-term outcome 1.

Ongoing collaboration and two-way learning in waterway planning and management, supporting self-determination and strengthening partnerships with First Nations Peoples.

Outcome statement:

Waterway planning and management occur in genuine partnership with First Nations Peoples. Registered Aboriginal Parties in the Wimmera, Barengi Gadjin Land Council and Eastern Maar Aboriginal Corporation, are empowered to embed their knowledge, cultural values and priorities in decision-making in self-determined ways.

Collaborative partnerships support self-determination through ongoing respectful two-way learning, where cultural knowledges and scientific evidence are equally valued and inform practice.

Agencies demonstrate strong capability in culturally informed engagement and collaborative waterway management.

This approach results in waterway management that:

- Reflects and prioritises cultural values alongside environmental, social and economic outcomes.
- Upholds the rights and aspirations of First Nations Peoples.
- Achieves more sustainable, inclusive and place-based outcomes.

What will success look like?

- First Nations organisations self-determine the nature and level of their involvement in waterway planning and management partnerships.
- Waterway planning and management occur in collaborative partnership with First Nations organisations, collectively shaping decisions and priorities.
- Waterway management plans and projects reflect cultural knowledges and values alongside scientific evidence and broader community aspirations.
- Strong, trusted partnerships support ongoing two-way learning and culturally informed practice across agencies.

Priority area

- All Wimmera waterways, especially priority areas (means-based outcome).

Themes

- Rivers and streams.
- Wetlands.

Local areas

- Whole catchment.

What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
Waterway planning and management is developed collaboratively with First Nations organisations, Barengi Gadjin Land Council and Eastern Maar Aboriginal Corporation, with evidence of shared priority-setting and decision-making.	To what extent is waterway planning and management occurring in collaborative partnership with First Nations organisations?	The number and percentage of waterway-related plans and projects implemented in collaboration with First Nations organisations. Examples of collaborative partnerships.	Annual reports. Discussions with First Nations group representatives.	Collect data annually.	Identify the number and proportion of waterway-related projects and plans informed by First Nations organisations. Compare this total to the previous monitoring period to assess the level of change over time. Draw on case studies to demonstrate collaborative partnership successes and learnings.	Mid-term review – 2031. End of strategy – 2036.	Wimmera CMA Barengi Gadjin Land Council Eastern Maar Aboriginal Corporation	*Monitoring, Evaluation, Reporting and Improvement Plan for the Wimmera Regional Catchment Strategy 2021-27.* (The approach has been adapted and expanded here).
First Nations organisations determine how, when and to what extent they partner in waterway planning and management, consistent with their rights, aspirations and governance structures.	To what extent are First Nations organisations able to exercise self-determination regarding the nature and level of their involvement in waterway planning and management partnerships?	Reported satisfaction with the level of self-determination and influence in waterway-related partnerships. Examples of self-determined decision-making.	Discussions with First Nations group representatives. Short evaluation form including a satisfaction score and feedback.	Collect data at end of projects. (Note: it may be useful to collect data if staff are leaving an organisation, noting staff turnover impacts on reestablishing trust and relationships).	Evaluate feedback from First Nations group representatives. Identify learnings and areas for improvement. Draw on case studies to evaluate self-determined decision-making.			
Partnerships with Barengi Gadjin Land Council and Eastern Maar Aboriginal Corporation are characterised by trust, respect, transparency and shared accountability.	To what extent have enduring and trusted partnerships been established between First Nations organisations and waterway management organisations?	Level of trust reported by First Nations group representatives and waterway management organisations.	Discussions with First Nations group representatives. Short evaluation form including a trust score and feedback.	Mid-term review – 2031. End of strategy – 2036. (Note: it may be useful to collect data if staff are leaving an organisation, noting staff turnover impacts on reestablishing trust and relationships).	Evaluate feedback from First Nations group representatives. Identify learnings and areas for improvement.			
		Number and longevity of collaboration mechanisms including partnership agreements, governance arrangements, resource sharing and partnership meetings.	Annual reports. Discussions with First Nations group representatives.	Collect data annually.	Identify the number and longevity of collaboration mechanisms. Compare this total to the previous monitoring period to assess the level of change over time. Identify learnings and areas for improvement.			
Waterway plans and projects demonstrate the integration of cultural values, cultural knowledges and scientific evidence. Knowledge sharing is respectful and contributes to improved decision-making.	To what extent has two-way learning occurred between First Nations organisations and waterway management organisations?	Reported increases in mutual understanding of waterway knowledge, values and priorities.	Discussions with First Nations group representatives. Short evaluation form.	Collect data at end of projects. (Note: it may be useful to collect data if staff are leaving an organisation, noting staff turnover could impact on results).	Evaluate feedback from First Nations group representatives. Identify learnings and areas for improvement. Draw on examples to demonstrate decisions or practices influenced by two-way learning.			
		Examples of strategies, plans, decisions and practices influenced by two-way learning.	Annual reports. Discussions with First Nations group representatives.					
Agency staff demonstrate increased cultural capability, confidence and competence in working collaboratively with First Nations Peoples. Policies, systems and processes support culturally informed engagement and partnership approaches.	To what extent has waterway planning and management become more culturally informed through collaborative partnerships and two-way learning?	The number and percentage of waterway-related plans and projects that include cultural objectives, values and knowledge.	Discussions with First Nations group representatives. Annual or end of project reports.	Collect data at end of projects.	Evaluate feedback from First Nations group representatives. Identify learnings and areas for improvement. Draw on examples to demonstrate decisions or practices influenced by two-way learning.			
		Reported satisfaction by First Nations group representatives with the representation and application of cultural values in waterway-related plans and projects.	Discussions with First Nations group representatives. Short evaluation form.	Collect data at end of projects. (Note: it may be useful to collect data if staff are leaving an organisation, noting staff turnover could impact on results).				
		Reported satisfaction by First Nations group representatives that planning and engagement processes are culturally appropriate.	Discussions with First Nations group representatives. Short evaluation form.	Collect data at end of projects. (Note: it may be useful to collect data if staff are leaving an organisation, noting staff turnover could impact on results).				

Medium-term outcome 2.

Priority areas have improved management to enhance habitat, landscape connectivity and resilience.

Outcome statement:

Improved management of waterways in priority areas supports healthy, connected and resilient aquatic and riparian ecosystems. Targeted protection, restoration and management activities improve habitat quality, strengthen aquatic and riparian connectivity and enhance the ability of waterways and surrounding landscapes to adapt to environmental change and disturbance.

Management is informed by scientific evidence, cultural knowledges, local knowledge and collaboration, creating connected networks of waterways, wetlands and riparian habitats that sustain biodiversity and ecological processes.

Targeted waterway management of priority areas:

- Improves the condition, extent and connectivity of aquatic and riparian habitats.
- Enhances habitat availability and reduces the impact of key threats to native species.
- Supports the persistence, movement and recovery of native flora and fauna populations.
- Protects and strengthens ecological functions and processes that underpin healthy waterways.

This will increase the resilience of waterways by improving their capacity to maintain ecological and biophysical processes, support waterway values and recover from climate variability, extreme events such as drought, fire and floods, long-term climate change and other environmental pressures.

As a result, waterways are better able to support healthy ecosystems and deliver enduring benefits for the environment, communities and First Nations Peoples.

What will success look like?

- Waterways in priority areas show stable or improving ecological condition and habitat quality, where possible.
- Habitat protection and restoration activities have increased aquatic and riparian connectivity within waterways and between waterways, wetlands and surrounding landscapes.
- Native species have improved access to connected habitats and movement corridors.
- Waterways in priority areas are more resilient and better able to withstand, adapt to and recover from environmental disturbances.
- First Nations Peoples, communities, landholders and other stakeholders contribute to coordinated actions.
- Waterway values and the ecological condition that underpins formal recognitions, such as Ramsar wetlands and Heritage Rivers, are maintained or improved where possible.

Links to other outcomes

While this outcome is primarily focused on habitat, connectivity and resilience, improved water quality is an important co-benefit of many management actions. There is some overlap with Medium-term Outcome 5, which directly targets water quality risks and their effects on waterway values. To avoid duplication, monitoring and evaluation focused specifically on water quality improvements are addressed under Medium-term Outcome 5 rather than this outcome.

There is also overlap with Medium-term Outcome 3 which focuses on wetlands. To avoid duplication, wetlands are covered under Medium-term Outcome 3 rather than this outcome.

Additionally, many actions contributing to this outcome are delivered through the efforts of community groups, landholders and other partners. This aligns with Medium-term Outcome 10, which focuses on increasing stewardship and participation in waterway care. To avoid duplication, monitoring and evaluation specifically related to stewardship, participation and behaviour change are addressed under Medium-term Outcome 10 rather than this outcome.

Themes and local areas	Priority area	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
Themes: • Rivers and Streams **Local Areas:** • Hindmarsh	**Lower Barringgi Gadyin (Wimmera River)** Part of the **Lower Wimmera Flagship Waterway** and **Wimmera Heritage River**.	The abundance, movement and species richness of native fish species in the lower Barringgi Gadyin (Wimmera River) is maintained or improved, supported by water for the environment and complementary management activities.	To what extent has the abundance, movement and species richness of native fish species in the lower Barringgi Gadyin (Wimmera River) been maintained or improved over the evaluation period?	As set out in the *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024)* and *Wimmera Native Fish Management Plan (2022).*						*Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).* *Wimmera Native Fish Management Plan (2022).*
		The species richness and spatial extent of in-channel aquatic vegetation are maintained or improved and the abundance of aquatic vegetation is increased, supported by water for the environmental and complementary management activities.	To what extent has the species richness and extent of in-channel aquatic vegetation been maintained and the abundance of aquatic vegetation improved?	As set out in the *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*						*Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*
		The availability and quality of refuge habitats for native fish species are maintained or improved, with channel capacity preserved and sediment accumulation minimised.	To what extent have refuge habitats for native fish species been maintained or improved through the retention of channel capacity and prevention of excessive sedimentation?	As set out in the *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*						*Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*
		Where possible, salinity and dissolved oxygen levels are effectively managed to reduce risks to native fish, instream and riparian vegetation and recreation and amenity values in the Lower Barringgi Gadyin (Wimmera River) and weir pools.	To what extent were salinity and dissolved oxygen conditions observed outside the tolerance ranges of Australian smelt, carp gudgeon, flatheaded gudgeon, golden perch, silver perch and freshwater catfish that have been recorded in the Lower Barringgi Gadyin (Wimmera River)? To what extent was surface water salinity maintained at adequate levels to enable growth and reproduction of aquatic and riparian vegetation?	NOTE: This is addressed under Medium-term Outcome 5, following the method outlined in the *Monitoring, Evaluation, Reporting Improvement Plan for the – Lower Wimmera Flagship Waterway Project.*						*Monitoring, Evaluation, Reporting Improvement Plan for the – Lower Wimmera Flagship Waterway Project (2023).*
		Riparian habitat extent and the condition of river red gum communities are maintained or improved. The connectivity of riparian habitat is maintained or improved, enabling the movement and dispersal of terrestrial species.	To what extent has: • River red gum health changed over time? • The diversity and cover of streamside native vegetation changed over time? • The condition of riparian ecological vegetation classes improved?	As set out in the *Monitoring, Evaluation, Reporting Improvement Plan for the – Lower Wimmera Flagship Waterway Project* and *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*						*Monitoring, Evaluation, Reporting Improvement Plan for the – Lower Wimmera Flagship Waterway Project (2023).* *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*

Themes and local areas	Priority area	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
			To what extent has the impact of direct stock access along the Lower Wimmera been reduced?	As set out in the *Monitoring, Evaluation, Reporting Improvement Plan for the – Lower Wimmera Flagship Waterway Project.*						*Monitoring, Evaluation, Reporting Improvement Plan for the – Lower Wimmera Flagship Waterway Project (2023).*
		Geomorphic habitat quality is maintained or improved through the preservation of channel form, clean substrates and an open stream bed.	To what extent has the quality of geomorphic habitat been maintained or improved through the preservation of channel form, substrate condition and prevention of stream bed colonisation?	As set out in the *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*						*Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*
		The connectivity of instream habitat between river reaches is maintained or improved, enabling the movement and dispersal of native fish.	To what extent has connectivity between river reaches been maintained or improved to facilitate native fish movement?	As set out in the *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*						*Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*
		The impacts of carp and overall biomass of carp are reduced, where feasible, resulting in improved aquatic habitat condition and better outcomes for native fish populations.	To what extent have the impacts of carp been reduced?	Relative abundance and distribution of carp. Evidence of carp congregating and breeding. Evidence of reduced carp-related habitat disturbance through decreased turbidity and improved water clarity.	Catch per unit effort and record lengths, weights and abundances during electrofishing. Number and proportion caught during Dimboola and Jeparit fishing competitions relative to native fish caught. Stakeholder and community reports and staff observations of carp congregating and breeding. Environmental DNA (eDNA) technology. Water quality monitoring for turbidity.	Annual. Spring to detect breeding.	Compare the number of native fish relevant to European carp caught during fish surveys and fishing competitions. Compare trends over time.	2031 2036	Wimmera CMA.	*Wimmera Carp Management Plan (2020).* *Monitoring, Evaluation, Reporting and Improvement Plan for the Wimmera Regional Catchment Strategy 2021-27.*
Themes: • Rivers and streams • Wetlands **Local areas:** • Hindmarsh	**Barringgi Gadyin (Wimmera River) terminal lakes system** Including Gurru (Lake Hindmarsh), Ngalpakatia/Ngelpagutya (Lake Albacutya) (Ramsar site) and Outlet Creek. Part of the **Lower Wimmera Flagship Waterway** and **Wimmera Heritage River**.	Riparian vegetation communities, including the salt-tolerant river red gum community, are maintained or improved, enabling Ngalpakatia/Ngelpagutya (Lake Albacutya) to continue providing habitat for terrestrial and water-dependent species across both dry and inundated phases, where feasible given natural water availability.	To what extent has the condition and extent of riparian and woodland vegetation at Ngalpakatia/Ngelpagutya (Lake Albacutya) been maintained or improved over time?	Extent of riparian vegetation communities and salt-tolerant river red gum. Vegetation condition score. Canopy health of river red gums. Level of recruitment.	Vegetation mapping and assessments. Monitoring plots.	2031 2036	Compare changes in vegetation characteristics.	2031 2036	Wimmera CMA. Parks Victoria. Barengi Gadjin Land Council.	*Lake Albacutya Ramsar site Annual Action Plan.* *Monitoring, Evaluation, Reporting and Improvement Plan for the Wimmera Regional Catchment Strategy 2021-27.*

Themes and local areas	Priority area	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
				Presence and abundance of invasive plants and rabbits.						
		Pine-Buloke woodland condition and regeneration is maintained in Ngalpakatia/Ngelpagutya (Lake Albacutya)'s riparian zone, with reduced impacts from rabbits including erosion risk and dune instability.	To what extent have management activities reduced the impacts of rabbits on Pine-Buloke woodland regeneration and dune stability?	Extent of Pine-Buloke woodland and vegetation condition score. Level of recruitment. Presence and abundance of rabbits.	Pine-Buloke condition assessments. Rapid rabbit assessments and spotlight transects. Extent of dune erosion.	Annual - rabbits. 2031 and 2036 – Pine-Buloke woodlands.	Compare changes in Pine-Buloke woodland community condition and recruitment. Assess trends over time.			
		The lake bed zone of Gurru (Lake Hindmarsh) and Ngalpakatia/Ngelpagutya (Lake Albacutya) supports the establishment and persistence of native vegetation representative of the wet and dry phases of an episodically inundated semi-arid wetland.	To what extent does the lake bed zone support vegetation representative of the wet and dry phases of an episodically inundated wetland in a semi-arid environment?	As set out in the *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*						*Environmental Water Management Plan – Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*
		Waterbird feeding, roosting and breeding habitats are available during episodic lake-filling events and extensive wetland habitat is maintained to support large and diverse waterbird populations during periods of widespread natural flooding.	To what extent does the lower terminal lakes system provide habitat that supports waterbird abundance, diversity and breeding during episodic inundation and natural flooding events?	As set out in the *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*						*Environmental Water Management Plan – Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*
		Gurru (Lake Hindmarsh) receives episodic inflows when natural high-flow events occur, supporting waterbird habitat and breeding.	To what extent do episodic inflows to Gurru (Lake Hindmarsh) provide habitat conditions that support waterbird use and breeding?	As set out in the *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*						*Environmental Water Management Plan – Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*
		Fringing woodland habitat continues to provide habitat and refuge for migratory and resident woodland bird species, including regent parrot and pink cockatoo.	To what extent do regent parrots and pink cockatoo continue to utilise fringing woodland habitat?	As set out in the *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*						*Environmental Water Management Plan – Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*
		The condition of wetland and fringing woodland habitat is maintained or improved, particularly around dunes and priority vegetation areas.	To what extent is the condition of wetland and fringing woodland habitat maintained or improved, particularly around dunes and priority vegetation areas?	As set out in the *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*						*Environmental Water Management Plan – Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*
Themes: • Rivers and streams **Local areas:** • Horsham	**Mid Barringgi Gadyin (Wimmera River)**	Native fish populations in the mid Barringgi Gadyin (Wimmera River) are maintained or improved, supported by suitable flow conditions and aquatic habitat.	To what extent has the abundance, movement and species richness of native fish species in the mid Barringgi Gadyin (Wimmera River) been maintained or improved?	As set out in the *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024)* and *Wimmera Native Fish Management Plan (2022).*						*Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*

Themes and local areas	Priority area	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
										Wimmera Native Fish Management Plan (2022).
		The species richness and spatial extent of in-channel aquatic vegetation is maintained or improved and the abundance of aquatic vegetation is increased, supported by water for the environmental and complementary management activities.	To what extent has the species richness and extent of in-channel aquatic vegetation been maintained and the abundance of aquatic vegetation improved?	As set out in the *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*						*Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*
		The availability and quality of refuge habitats for native fish species are maintained or improved, with channel capacity preserved and sediment accumulation minimised.	To what extent have refuge habitats for native fish species been maintained or improved through the retention of channel capacity and prevention of excessive sedimentation?	As set out in the *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*						*Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*
		Where possible, dissolved oxygen levels are effectively managed to reduce risks to native fish, instream and riparian vegetation and recreation and amenity values in the mid Barringgi Gadyin (Wimmera River) and Horsham weir pool.	To what extent were salinity and dissolved oxygen conditions observed outside the tolerance ranges of Australian smelt, carp gudgeon, flatheaded gudgeon, golden perch, silver perch and freshwater catfish that have been recorded in the mid Barringgi Gadyin (Wimmera River)? To what extent was surface water salinity maintained at adequate levels to enable growth and reproduction of aquatic and riparian vegetation?	NOTE: This is addressed under Medium-term Outcome 5, following the method outlined in the *Monitoring, Evaluation, Reporting Improvement Plan for the – Lower Wimmera Flagship Waterway Project.*						*Monitoring, Evaluation, Reporting Improvement Plan for the – Lower Wimmera Flagship Waterway Project (2023).*
		The extent of riparian habitat and condition of river red gum communities are maintained or improved. The connectivity of riparian habitat is maintained or improved, enabling the movement and dispersal of terrestrial species.	To what extent has: • River red gum health changed over time? • The diversity and cover of streamside native vegetation changed over time? • The condition of riparian ecological vegetation classes improved?	As set out in the *Monitoring, Evaluation, Reporting Improvement Plan for the – Lower Wimmera Flagship Waterway Project* and *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*						*Monitoring, Evaluation, Reporting Improvement Plan for the – Lower Wimmera Flagship Waterway Project (2023).* *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*
		Geomorphic habitat quality is maintained or improved through the preservation of channel form, clean substrates and an open stream bed.	To what extent has the quality of geomorphic habitat been maintained or improved through the preservation of channel form, substrate condition and prevention of stream bed colonisation?	As set out in the *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*						*Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*
		The connectivity of instream habitat between river reaches is maintained or improved, enabling the movement and dispersal of native fish.	To what extent has connectivity between river reaches been maintained or improved to facilitate native fish movement?	As set out in the *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*						*Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their*

Themes and local areas	Priority area	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
										terminal lakes (2024).
		The impacts of carp and overall biomass of carp are reduced, where feasible, resulting in improved aquatic habitat condition and better outcomes for native fish populations.	To what extent have the impacts of carp been reduced?	Relative abundance and distribution of carp. Evidence of carp congregating and breeding. Evidence of reduced habitat disturbance through decreased turbidity and improved water clarity.	Catch per unit effort and record lengths, weights and abundances during electrofishing. Number and proportion caught during Dimboola and Jeparit fishing competitions relative to native fish caught. Stakeholder and community reports and staff observations of carp congregating and breeding. Environmental DNA (eDNA) technology. Water quality monitoring for turbidity.	Annual. Spring to detect breeding.	Compare the number of native fish relevant to European carp caught during fish surveys and fishing competitions. Compare trends over time.	2031 2036	Wimmera CMA.	*Wimmera Carp Management Plan (2020).* *Monitoring, Evaluation, Reporting and Improvement Plan for the Wimmera Regional Catchment Strategy 2021-27.*
Themes: • Rivers and streams **Local areas:** • Horsham	**MacKenzie River, Burnt Creek and Bungalally Creek**	The condition, extent and connectivity of riparian vegetation is improved, contributing to the restoration of continuous native riparian vegetation corridors between Gariwerd (Grampians National Park) and the Barringgi Gadyin (Wimmera River).	To what extent has the condition, extent and connectivity of riparian vegetation been improved?	As set out in the *Environmental Water Management Plan - MacKenzie River and Burnt and Bungalally Creeks (2025).*						*Environmental Water Management Plan - MacKenzie River and Burnt and Bungalally Creeks (2025).*
		The condition of river red gum dominated ecological vegetation classes is maintained.	To what extent has the condition of river red gum dominated ecological vegetation classes been maintained?							
		Suitable flow conditions and improved aquatic habitat support native fish population persistence, with evidence of episodic dispersal between habitats.	To what extent has the recruitment, maintenance and dispersal of targeted fish communities including southern pygmy perch, obscure galaxias and river blackfish been improved?							
		The connectivity of instream habitat between river reaches is maintained or improved, enabling the movement and dispersal of native fish.	To what extent has connectivity between river reaches been maintained or improved to facilitate native fish movement?							
		Practical and feasible options to improve the reliability of water for the environment supplied from Lake Wartook have been assessed to support future implementation.	To what extent have practical and feasible options to improve the reliability of environmental water supply from Lake Wartook been assessed?	Practical and feasible options assessed.	Review of feasibility studies.	On completion of study.	Evaluate the level of confidence in study recommendations.	2031 2036	Wimmera CMA.	
Themes: • Rivers and Streams **Local Areas:** • Upper Catchment	**Upper Barringgi Gadyin (Wimmera River) and tributaries upstream of Glenorchy.**	Sediment generation and movement into the Barringgi Gadyin (Wimmera River) is reduced through improved bed and bank stability, erosion control and riparian protection, consistent	To what extent have riverbed and bank stability improved, reducing sediment generation and delivery to the Barringgi Gadyin (Wimmera River)?	As set out in the *Monitoring, Evaluation, Reporting Improvement Plan for the Rivers 2040 – Wimmera Clearwater Revival - Flagship Waterway Project.*						*Monitoring, Evaluation, Reporting Improvement Plan for the Rivers 2040 – Wimmera*

Themes and local areas	Priority area	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
	This area is the **Upper Wimmera Flagship waterway**.	with Upper Wimmera Flagship outcomes. Riverbeds and banks are stabilised to improve instream channel condition.								*Clearwater Revival - Flagship Waterway Project.*
		Riparian vegetation condition and extent are improved to support more diverse and connected riparian zones, including the Gariwerd (Grampians) to Pyrenees Biolink.	To what extent are improvements in riparian vegetation supporting the diversity and connectivity of riparian habitats within the Gariwerd (Grampians) to Pyrenees Biolink?							
Theme: • Rivers and streams **Local areas:** • Upper catchment	**Mount William Creek and tributaries**	Native fish populations in Mount William Creek are maintained or improved, supported by suitable flow conditions and aquatic habitat.	To what extent has the abundance, movement and species richness of native fish species in Mount William Creek been maintained or improved?	As set out in the *Environmental Water Management Plan – Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*						*Environmental Water Management Plan – Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*
		The species richness and spatial extent of in-channel aquatic vegetation is maintained or improved and the abundance of aquatic vegetation is increased, supported by water for the environmental and complementary management activities.	To what extent has the species richness and extent of in-channel aquatic vegetation been maintained and the abundance of aquatic vegetation improved?							
		Riparian habitat extent and the condition of river red gum communities are maintained or improved. The connectivity of riparian habitat is maintained or improved, enabling the movement and dispersal of terrestrial species.	To what extent has: • River red gum health changed over time? • The diversity and cover of streamside native vegetation changed over time? • The condition of riparian ecological vegetation classes improved?							
		Geomorphic habitat quality is maintained or improved through the preservation of channel form, clean substrates and an open stream bed.	To what extent has the quality of geomorphic habitat been maintained or improved through the preservation of channel form, substrate condition and prevention of stream bed colonisation?							
		The connectivity of instream habitat between river reaches is maintained or improved, enabling the movement and dispersal of native fish.	To what extent has connectivity between river reaches been maintained or improved to facilitate native fish movement?							
		The availability and quality of refuge habitats for native fish species are maintained or improved, with channel capacity preserved and sediment accumulation minimised.	To what extent have refuge habitats for native fish species been maintained or improved through the retention of channel capacity and prevention of excessive sedimentation?							

Themes and local areas	Priority area	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
Theme: • Wetlands **Local areas:** • Hindmarsh • Upper catchment • Yarriambiack and Buloke	**Wimmera Mallee Pipeline-watered wetlands:** **1. Wal Wal Swamp.** **2. Mutton Swamp.** **3. Sawpit Swamp.** **4. Crow Swamp.** **5. Carapugna.** **6. Krong Swamp.** **7. Tarkedia Dam.** **8. Harcoans.** **9. Fieldings Dam.** **10. Challambra Swamp.** **11. Opies Dam.** **12. Pinedale.** **13. Schultz Koschizke.**	Wetland vegetation and riparian habitat condition is maintained or improved through water delivery, infrastructure support and targeted pest plant and animal control where needed.	To what extent has the condition of wetland vegetation and riparian habitats been maintained or improved?	As set out in the *Environmental Water Management Plan - Wimmera Mallee Pipeline Wetlands - Wimmera CMA Region (2016).*						*Environmental Water Management Plan - Wimmera Mallee Pipeline Wetlands - Wimmera CMA Region (2016).*
Themes: • Rivers and streams **Local areas:** • Yarriambiack and Buloke	**Yarriambiack and Dunmunkle Creek** **(medium priority)**	Riparian vegetation condition, extent and connectivity are improved in intermittent-flow systems, Yarriambiack Creek and Dunmunkle Creek, within heavily cleared and cropped landscapes.	To what extent has riparian vegetation condition, extent and connectivity improved?	Extent of riparian and woodland vegetation communities and salt-tolerant river red gum. Vegetation condition score. Canopy health of river red gums. Level of recruitment. Presence and abundance of invasive plants and rabbits.	Vegetation mapping and assessments. Monitoring plots.	2031 2036	Compare changes in vegetation characteristics.	2031 2036	Wimmera CMA	
		Natural hydrology is restored where feasible, including through levee removal or other practical interventions along Dunmunkle Creek.	To what extent has natural hydrology been restored along Dunmunkle Creek?	Reconnection of wetland and floodplain habitats to the creek.	Flow event analysis.	2031 2036	Compare the extent of wetland and floodplain habitats.	2031 2036	Wimmera CMA GWMWater	

Medium-term outcome 3.

Wetland modification, loss and deterioration of condition occurs at a declining rate.

Outcome statement:

This outcome aims to achieve a measurable decline in the rate of wetland modification, loss and deterioration in condition across the region. Over time, fewer new wetlands are impacted annually by modifying activities such as drainage, dam construction, cropping and new land development.

Informed by monitoring that shows a high risk of degradation of wetlands, particularly on private land, this outcome prioritises stronger protection and improved land management practices to address key pressures, including broadacre cropping, stock grazing, adjacent land use, drying conditions and weed invasion.

As these pressures are better managed, the condition of wetland beds, riparian zones, native vegetation and water quality is stabilised and progressively improved.

Overall, wetlands and their associated biodiversity are more effectively conserved, with fewer wetlands lost or significantly altered and a growing proportion maintained or improved in ecological condition over time.

What will success look like?

- A slowing or stabilising number of wetlands impacted annually by modifications including drainage changes, dam construction, cropping and new land development.
- More wetlands are under proactive, sustained stewardship by landholders.
- More wetlands show stable or improving condition, with healthier native vegetation, reduced weed impacts and protected riparian zones.

Themes and Local Areas	Location (Priority Area)	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicator/s	Monitoring method/s	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
Themes: • Wetlands **Local areas:** • Horsham • Upper catchment • West Wimmera	**Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains** **Wetlands with high environmental value** in waterway asset groups: • **South-west Wimmera wetlands** • **Horsham wetlands including the Natimuk–Douglas Chain of Lakes** • **Northern Wimmera Plains wetlands** • **Upper catchment wetlands** **Nationally important wetlands** listed on the Directory of Important Wetlands in Australia, including: • **Natimuk Lake, Natimuk Creek and Lake Wyn Wyn.** • **White Lake.** • **Oliver's Swamp (Lake).** • **Grass Flat (Telfer's) Swamp.** • **Saint Mary's Lake.** • **Heard's Lake.** • **Friedman's Salt Lake.** • **Bitter Swamp.** • **Mitre Lake.** • **Hately's Lake**	The rate of wetlands impacted by modifications including drainage changes, dam construction, cropping and new land development slows or stabilises over time.	To what extent have wetlands on private land been maintained, as demonstrated by stable wetland extent and condition and reduced rates of modification and loss? To what extent have seasonal herbaceous wetlands been maintained?	The number and area of wetlands, including seasonal herbaceous wetlands, modified by crops, drains, dams, banks and other changes. The rate of change over time. Baseline: Wetland modification analysis completed by Wimmera CMA in 2017, identifying the extent and location of wetlands modified by crops, drains, dams, banks and other changes. [5] Additional assessments were completed in 2004 and 2013. Need to establish a recent baseline.	Analysis of aerial photography or satellite imagery, recording observed impacts on wetlands. (Note: explore whether AI tools and technological advancements since the 2017 assessment can improve the efficiency of this analysis).	Baseline 2026-27 Analyse again in 2036 (Note: Analysis can occur in line with the stated schedule if open-source satellite imagery can be used. If not, the schedule will depend on availability of updated aerial imagery).	Compare and evaluate data against 2017 and prior assessments to determine the number and extent of wetlands modified and the trend in the rate of loss over time. Evaluate for seasonal herbaceous wetlands. Mapping available from DataVic: https://www.data.vic.gov.au/ and described here: https://www.vgls.vic.gov.au/client/en_AU/search/asset/1300313/0. Evaluate and discuss likely reasons to explain the rate of loss, where known, such as agricultural and economic drivers, social drivers, climate, farmer and community attitudes and values.	Final review - 2036	Wimmera CMA	*Monitoring, Evaluation, Reporting and Improvement Plan for the Wimmera Regional Catchment Strategy 2021-27.* *Analysis of wetland modifications in the Wimmera CMA region (2021).* [5]
		Wetland buffers, wetland vegetation communities and wetland physical form are maintained or improved on private and public land.	To what extent were wetland buffers, wetland vegetation communities and wetland physical form maintained or improved?	The condition of wetland buffers, wetland vegetation communities and wetland physical form.	Index of wetland condition assessments (if funded) across a random sample of wetlands. Establish a baseline, if possible.	Baseline 2026-27 Analyse again in 2036	Compare and evaluate data against the baseline to determine the extent that wetland buffers, vegetation communities and physical form was maintained or improved over time. Evaluate and discuss likely reasons for change, where known, such as agricultural and economic drivers, social drivers, climate, farmer and community attitudes and values.	Final review - 2036	Wimmera CMA	*Monitoring, Evaluation, Reporting and Improvement Plan for the Wimmera Regional Catchment Strategy 2021-27.*

Medium-term outcome 4.

Drought refuges support native species' survival and resilience during dry periods.

Outcome statement:

Drought refuges in Wimmera waterways are identified and protected, with their condition and habitat maintained to support the survival of native plants and animals during extended dry conditions and drought. These refuges, including permanent or near permanent pools and wetlands, provide critical habitat including water and food resources and shelter when surrounding waterways experience low or no flow.

Targeted management improves the quality and persistence of refuge habitats, reducing degradation pressures and increasing their ability to support native water-dependent plants and animals through periods of extended dry conditions and drought.

What will success look like?

- Key drought refuges are protected and maintained so they consistently hold water and provide habitat during dry periods.
- Major threats are effectively controlled at drought refuge sites, such as stock access and invasive plants and animals.
- During and after dry conditions and drought, native fish, water-dependent plants and waterbirds continue to be present at drought refuge sites, with evidence of recolonisation into surrounding waterways when flows return.

Themes and local areas	Priority area	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents.
Themes: • Rivers and Streams **Local Areas:** • Horsham • Upper Catchment • Hindmarsh	**Drought refuge areas:** • **Mount Cole Creek** • **Lower Barringgi Gadyin (Wimmera River)**	Drought refuge areas consistently hold water and provide habitat during dry periods.	To what extent did drought refuge areas retain water during drought?	The proportion of drought refuges that retained water when the Victorian Environmental Water Holder determined there were drought conditions. Extent of inundation during drought conditions.	Wimmera CMA monitoring.	During drought conditions.	Discuss the number and extent of drought refuge areas holding water and evaluate whether sufficient water was able to be retained or provided to support habitat and values.	End of strategy – 2036.	Wimmera CMA	*Monitoring, Evaluation, Reporting and Improvement Plan for the Wimmera Regional Catchment Strategy 2021-27.* (6)
Themes: • Rivers and Streams **Local Areas:** • Horsham • Upper Catchment • Hindmarsh	**Lower Barringgi Gadyin (Wimmera River)** drought refuge areas at: • Lochiel • Tarranyurk • Arkona • Antwerp. **Mount Cole Creek** drought refuge areas	During and after dry conditions and drought, waterway habitat, environmental values including native fish, riparian and aquatic vegetation, frogs and waterbirds and recreational values are maintained at Lower Barringgi Gadyin (Wimmera River) and Mount Cole Creek drought refuge areas.	To what extent has aquatic vegetation quality, diversity and extent been maintained?	As set out in the *Monitoring program design for drought refuges in Mount Cole Creek and the Lower Wimmera River 2026.*				End of strategy – 2036.	Wimmera CMA	*Monitoring program design for drought refuges in Mount Cole Creek and the Lower Wimmera River 2026.*
			To what extent has the condition of riparian ecological vegetation classes (EVCs) in the immediate vicinity of the refuge pool been maintained?							
			To what extent has adequate surface water salinity been maintained to enable growth and reproduction of aquatic vegetation?							
			To what extent has excessive stream-bed colonisation by terrestrial species been prevented?							
			To what extent has the abundance and species richness of native fish been maintained?							
			To what extent has adequate water quality (low salinity, low temperature) been maintained to support frogs?							
			To what extent has a self-sustaining freshwater catfish population been maintained?							
			To what extent has adequate water quality/habitat for fish refuge locations in dry periods been provided?							
			To what extent has adequate water quality to maintain recreational native species, golden perch, silver perch and Murray cod, been provided in Lower Barringgi Gadyin (Wimmera River) drought refuge areas?							
Themes: • Wetlands **Local Areas:** • Yarriambiack & Buloke • Horsham • Hindmarsh	**Wimmera Mallee Pipeline-watered wetlands:** 1. Wal Wal Swamp. 2. Mutton Swamp. 3. Sawpit Swamp. 4. Crow Swamp. 5. Carapugna Dam. 6. Krong Swamp. 7. Tarkedia Dam. 8. Harcoans. 9. Fieldings Dam. 10. Challambra Swamp. 11. Opies Dam. 12. Pinedale. 13. Schultz Koschizke.	The condition of Wimmera Mallee Pipeline wetlands to function as refugia for water-dependent flora and fauna and terrestrial fauna is maintained or enhanced, particularly during drought and dry conditions.	To what extent has the abundance of wetland flora been maintained or improved?	As set out in the *Wimmera Mallee Pipeline wetlands ecological objectives (2025).* (7)				End of strategy – 2036.	Wimmera CMA	*Wimmera Mallee Pipeline wetlands ecological objectives (2025).* *Environmental Water Management Plan – Wimmera Mallee Pipeline Wetlands – Wimmera CMA Region (2016).* (8)
			To what extent has self-sustaining frog and turtle populations been achieved?							
			To what extent has diverse macroinvertebrate populations been achieved?							
			To what extent have wetland bird populations been supported?							
			To what extent have terrestrial species used the wetland as a watering point?							

Themes and local areas	Priority area	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents.
Theme: • Rivers and streams **Local areas:** • Horsham	**MacKenzie River, Burnt Creek and Bungalally Creek** Drought refuge areas	Options, feasibility, costs and benefits of providing environmental water to drought refuge areas in the MacKenzie River, Burnt Creek and Bungalally Creek system is considered to support persistence of environmental values including habitat, native fish, riparian and aquatic vegetation, frogs and waterbirds during and after dry conditions and drought.	To what extent have the options, feasibility, costs and benefits of providing environmental water to drought refuge areas been considered?	Recommendations regarding drought refuge pool establishment are documented with evidence. Recommendations and evidence are accepted by the Victorian Environmental Water Holder and DEECA.	Discussions and correspondence with the Victorian Environmental Water Holder.	2026 2027 2028	Assess the level of acceptance of evidence and recommendations regarding establishment of drought refuge pools. NOTE: if the drought refuge pools are deemed feasible and established, a detailed MERI approach would be established to assess achievement of the medium-term outcome.	Mid-term review – 2031.	Wimmera CMA	None.

Medium-term outcome 5.

Risks to water quality in Wimmera waterways are managed where possible to reduce impacts on values.

Outcome statement:

Risks to Wimmera waterway values from poor water quality will be proactively managed in priority areas through monitoring and coordinated management addressing factors including erosion, sediment runoff, nutrient loads, salinity and reduced flows.

Proactive and targeted responses to extreme events such as low flows, drought, flooding and bushfire in water catchments will help protect waterway values. This includes timely detection and management of risks such as low dissolved oxygen and blackwater, with actions taken where possible to prevent or minimise impacts.

Management approaches will continue to evolve as feasible new technologies and techniques become available, strengthening the region's ability to respond effectively to risks.

Effective monitoring, coordination and response to water quality risks will help to protect environmental, cultural and community values over time.

What will success look like?

- Where possible, monitoring reliably detects emerging risks to water quality, enabling timely and targeted responses.
- Where possible, impacts from extreme events are detected and minimised. Risks associated with extreme events such as drought, low flows, flooding and bushfire are identified and managed, reducing the severity and duration of impacts such as blackwater events and fish deaths.
- Over the long-term, water quality is stable or improving in priority areas, where possible. Key indicators show no long-term decline and improvement where possible.
- Catchment pressures are reduced through effective management of erosion, sediment and nutrient runoff, resulting in improved water quality and healthier ecosystems.
- Where possible, waterway resilience is strengthened through improved instream habitat and ecosystem function, supporting plants, animals and waterways to better withstand, adapt to and recover from water quality risks.

Themes and local areas	Priority area	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents.
Themes: • Rivers and Streams **Local Areas:** • Hindmarsh	**Lower Barringgi Gadyin (Wimmera River) –** Wimmera Heritage River from Polkemmet to Gurru (Lake Hindmarsh). **Dimboola and Jeparit weir pools** This is part of the **Lower Wimmera Flagship waterway**.	Where possible, salinity and dissolved oxygen levels are effectively managed to reduce risks to native fish, instream and riparian vegetation and recreation and amenity values in the Lower Barringgi Gadyin (Wimmera River) and weir pools.	To what extent were salinity and dissolved oxygen conditions observed outside the tolerance ranges of Australian smelt, carp gudgeon, flatheaded gudgeon, golden perch, silver perch and freshwater catfish that have been recorded in the Lower Barringgi Gadyin (Wimmera River)?	Salinity and dissolved oxygen trigger points for native fish specified in the *Water quality traffic light decision support tool*. [9]	Wimmera CMA's bi-monthly water quality monitoring, supplemented with additional monitoring to guide management when environmental conditions pose a risk to water quality. Permanent water quality probes. Data available in *Victoria's Water Measurement Information System* (https://data.water.vic.gov.au/).	Bi-monthly. As required according to environmental and water quality conditions.	Comparison of salinity and dissolved oxygen levels against trigger points over time with flow data and water for the environment deliveries plotted. Evaluation discussion to note the presence of water quality events such as blackwater and fish deaths and the conditions associated with them.	2032 – mid-term review 2037 – final review	Wimmera CMA will collect and analyse data.	*Water quality traffic lights for native fish: decision support tool for managing poor water quality events.* *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).* [10]
			To what extent was surface water salinity maintained at adequate levels to enable growth and reproduction of aquatic and riparian vegetation?	Salinity thresholds for aquatic and riparian vegetation (to be determined).	Wimmera CMA's bi-monthly water quality monitoring, supplemented with additional monitoring to guide management when environmental conditions pose a risk to water quality. Permanent water quality probes. Data available in *Victoria's Water Measurement Information System* (https://data.water.vic.gov.au/).	Bi-monthly. As required according to environmental and water quality conditions.	Comparison of salinity levels against thresholds for vegetation over time with flow data and water for the environment deliveries plotted. Evaluation discussion to note the presence of water quality events and the conditions associated with them.	2032 – mid-term review 2037 – final review	Wimmera CMA will collect and analyse data.	*Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*
		Where flow conditions can be influenced, the frequency, duration and severity of hypoxic events is managed to reduce risks to native fish and recreation and amenity values in the Lower Barringgi Gadyin (Wimmera River) and weir pools.	To what extent was the risk of hypoxic events effectively managed to reduce risks to native fish and recreation and amenity values?	The number and frequency of hypoxic events – where thresholds for minor, moderate and major events are exceeded, as defined in Appendix 1 of the *Wimmera Catchment Hypoxic Blackwater Coordination Plan*. The number and extent of fish deaths. The number, duration and frequency of events closing areas to recreation and impacting on amenity.	As set out in the *Wimmera Catchment Hypoxic Blackwater Coordination Plan.* [11]		Analyse the frequency, duration and severity of events, including impacts on native fish, recreation and amenity values. Note management interventions undertaken and evaluate their impact on water quality and occurrence of hypoxic events.	2032 – mid-term review 2037 – final review	As set out in the *Wimmera Catchment Hypoxic Blackwater Coordination Plan.*	*Wimmera Catchment Hypoxic Blackwater Coordination Plan.* *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*

Themes and local areas	Priority area	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents.
		Where possible, nutrient levels are effectively managed to reduce the risk of blue-green algae blooms impacting native fish, recreation and amenity values in the Lower Barringgi Gadyin (Wimmera River) and weir pools.	To what extent was the risk of blue-green algae blooms effectively managed to reduce risks to native fish and recreation and amenity values?	The number and frequency of blue-green algae blooms. The number, duration and frequency of blue-green algal bloom events closing areas to recreation and impacting on amenity.	Wimmera CMA's bi-monthly water quality monitoring, supplemented with additional monitoring to guide management when environmental conditions pose a risk to water quality. Permanent water quality probes. Data available in *Victoria's Water Measurement Information System* (https://data.water.vic.gov.au/). GWMWater coordinates blue-green algae via the Regional Blue-Green Algae Coordination Plan. This details GWMWater's monitoring in the Wimmera catchment and how it responds to or passes on details to relevant local water managers for response. It notifies Wimmera CMA when appropriate and informs the public via media reports of blooms and closures. GWMWater maintain an internal database of blue-green algae blooms and record blue-green algae blooms into DEECA's *Floodzoom*, a web-based application for collating data and sharing intelligence.	Bi-monthly. As required according to environmental and water quality conditions.	Analyse the frequency, duration and severity of events, including impacts on native fish, recreation and amenity values. Note management interventions undertaken and evaluate their impact on water quality and occurrence of blue-green algal blooms.	2032 – mid-term review 2037 – final review	Wimmera CMA will collect and analyse data. GWMWater – Wimmera regional coordinator for blue-green algal bloom management. Hindmarsh Shire Council – weir pools. Fisheries Victoria – native fish.	*Monitoring, Evaluation, Reporting and Improvement Plan for the Wimmera Regional Catchment Strategy 2021-27.* (6)
Themes: • Rivers and streams **Local areas:** • Horsham	**Mid Barringgi Gadyin (Wimmera River).** **Horsham weir pool.**	Where possible, dissolved oxygen is effectively managed at levels that reduce risks to native fish, while also supporting recreation and amenity values.	To what extent were dissolved oxygen conditions observed outside the tolerance ranges of Australian smelt, carp gudgeon, flatheaded gudgeon, golden perch, silver perch and freshwater catfish in the Mid Barringgi Gadyin (Wimmera River)?	Dissolved oxygen trigger points for native fish specified in the *Water quality traffic light decision support tool.* (9)	Wimmera CMA's bi-monthly water quality monitoring, supplemented with additional monitoring to guide management when environmental conditions pose a risk to water quality. Permanent water quality probes. Data available in *Victoria's Water Measurement Information System* (https://data.water.vic.gov.au/).	Bi-monthly. As required according to environmental and water quality conditions.	Comparison of dissolved oxygen levels against trigger points over time with flow data and water for the environment deliveries plotted. Evaluation discussion to note the presence of water quality events such as blackwater and fish deaths and the conditions associated with them.	2032 – mid-term review 2037 – final review	Wimmera CMA will collect and analyse data.	*Water quality traffic lights for native fish: decision support tool for managing poor water quality events.* *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).* (10)
		Where flow conditions can be influenced, the frequency, duration and severity of hypoxic events is managed to reduce risks to native fish, instream and riparian vegetation and recreation and amenity values in the Mid Barringgi Gadyin (Wimmera River) including Horsham weir pool.	To what extent was the risk of hypoxic events effectively managed to reduce risks to native fish and recreation and amenity values?	The number and frequency of hypoxic events – where thresholds for minor, moderate and major events are exceeded, as defined in Appendix 1 of the *Wimmera Catchment Hypoxic Blackwater Coordination Plan*. The number and extent of fish deaths. The number, duration and frequency of events closing areas to recreation and impacting on amenity.	As set out in the *Wimmera Catchment Hypoxic Blackwater Coordination Plan.* (11)		Analyse the frequency, duration and severity of events, including impacts on native fish, recreation and amenity values. Note management interventions undertaken and evaluate their impact on water quality and occurrence of hypoxic events.	2032 – mid-term review 2037 – final review	As set out in the *Wimmera Catchment Hypoxic Blackwater Coordination Plan.*	*Wimmera Catchment Hypoxic Blackwater Coordination Plan.* *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*

Themes and local areas	Priority area	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents.
		Where possible, nutrient levels are effectively managed to reduce the risk of blue-green algal blooms impacting native fish, recreation and amenity values in the Mid Barringgi Gadyin (Wimmera River) and weir pools.	To what extent was the risk of blue green algal blooms effectively managed to reduce risks to native fish and recreation and amenity values?			Bi-monthly. As required according to environmental and water quality conditions.	Analyse the frequency, duration and severity of events, including impacts on native fish, recreation and amenity values. Note management interventions undertaken and evaluate their impact on water quality and occurrence of blue-green algal blooms.	2032 – mid-term review 2037 – final review	Wimmera CMA will collect and analyse data. GWMWater – Wimmera regional coordinator for blue-green algal bloom management. Hindmarsh Shire Council – weir pools. Fisheries Victoria – native fish.	*Monitoring, Evaluation, Reporting and Improvement Plan for the Wimmera Regional Catchment Strategy 2021-27.*
Theme: • Rivers and streams **Local areas:** • Upper catchment	**Upper Barringgi Gadyin (Wimmera River) and tributaries upstream of Glenorchy.**	Sediment and nutrient risks to water quality are minimised through proactive erosion control, stock exclusion and riparian native vegetation establishment.	To what extent were riverbanks and beds stabilised, preventing sediment and nutrients entering waterways and impacting on downstream water quality?	As set out in the *Monitoring, Evaluation, Reporting Improvement Plan for the Rivers 2040 – Wimmera Clearwater Revival Flagship Waterway Project.*						*Monitoring, Evaluation, Reporting Improvement Plan for the Rivers 2040 – Wimmera Clearwater Revival Flagship Waterway Project.* [12]
Themes: • Rivers and streams • Wetlands **Local areas:** • Upper catchment • Horsham	**Barringgi Gadyin (Wimmera River) headwaters and catchment, including Mount Cole/Beeripmo State Forest.** **Mount William Creek catchment and Lake Lonsdale.** **Lake Bellfield and catchment.** **Lake Wartook and catchment.**	Risks to downstream environmental values, water supplies and treatment processes from blackwater events and sediment-related impacts are reduced through effective bushfire preparedness and response.	To what extent was water quality in water supply reservoirs adequate to support stock and domestic supply and water for the environment?	Water in water supply reservoirs continues to be available for consumptive use and water for the environment (ie. reservoirs are not closed due to water quality issues following bushfire). Rainfall and runoff conditions post-fire.	GWMWater reservoir water quality monitoring.	As required post bushfire.	Evaluate rainfall and runoff conditions post-fire and measures taken to minimise erosion to discuss their effectiveness in minimising the risk of water quality issues.	2032 – mid-term review 2037 – final review	GWMWater Wimmera CMA	
			To what extent was the risk of hypoxic events effectively managed post-bushfire to reduce risks to native fish and recreation and amenity values?	The number and frequency of hypoxic events occurring post bush-fire – where thresholds for minor, moderate and major events are exceeded, as defined in Appendix 1 of the *Wimmera Catchment Hypoxic Blackwater Coordination Plan*. The number and extent of fish deaths. The number, duration and frequency of events closing areas to recreation and impacting on amenity.	As set out in the *Wimmera Catchment Hypoxic Blackwater Coordination Plan.*	Analyse the frequency, duration and severity of events post-bushfire, including impacts on native fish, recreation and amenity values. Note management interventions undertaken and evaluate their impact on water quality and occurrence of hypoxic events.	2032 – mid-term review 2037 – final review	As set out in the *Wimmera Catchment Hypoxic Blackwater Coordination Plan.*	*Wimmera Catchment Hypoxic Blackwater Coordination Plan.* *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*

Medium-term outcome 6.

Waterways identified as high priority for recreation and amenity provide enhanced recreational opportunities and community benefits, while minimising impacts on their environmental values.

Outcome statement:

Waterways identified as high priority for recreation and amenity will provide improved access and experiences that support a range of community uses. Planning and management will balance recreational demand with environmental protection, ensuring that increased use does not compromise waterway health.

Enabling people to spend time in and around waterways will strengthen connections to nature, encouraging stewardship and a greater appreciation of environmental values. Healthy, well-managed waterways will enhance community wellbeing by providing spaces for relaxation, social connection and outdoor activity.

As a result, these waterways will deliver high-quality, sustainable recreational experiences and amenity, while maintaining and enhancing their ecological values for future generations.

What will success look like?

- Waterways that are high priority for recreation are accessible and well used. People visit regularly, supported by safe and inclusive access for a range of recreational activities.
- Environmental condition, including bank erosion, water quality and riparian vegetation, show no measurable decline because of recreational use.
- Visitor impacts are effectively managed. Infrastructure and other mechanisms manage recreational access and use, preventing environmental damage.

Themes and local areas	Priority area	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
Themes: • Rivers and Streams **Local Areas:** • Hindmarsh	**Lower Barringgi Gadyin (Wimmera River) -** downstream of Polkemmet with high recreational value, especially: • **Weir pools at Dimboola and Jeparit.** • **Barringgi Gadyin (Wimmera River) Discovery Trail between Dimboola and Jeparit.** • **Gurru (Lake Hindmarsh).** • **Ngalpakatia/Ngelpagutya (Lake Albacutya).**	Erosion risks associated with ski-boat use are minimised where practical, supporting sustainable recreation while protecting ecological values, cultural heritage and river health.	To what extent has the length of bank erosion within the Dimboola weir pool been reduced compared with the baseline?	As set out in the *Monitoring, Evaluation, Reporting Improvement Plan for the Lower Wimmera Flagship Waterway Project.*						*Monitoring, Evaluation, Reporting Improvement Plan for the Lower Wimmera Flagship Waterway Project (2023).*
		Tree-fall risks and instream vegetation growth are collaboratively assessed and managed with key stakeholders to balance access for recreation with sustainable, environmentally and culturally responsible river access and use. NOTE: This links to medium-term outcome 1, as Barengi Gadjin Land Council is a key collaborative partner in implementation.	To what extent has the collaborative management of tree-fall risks and instream vegetation growth provided safe and sustainable river access and use for recreation while protecting environmental and cultural values?	Level of stakeholder satisfaction with collaboration and decision-making processes.	Invite feedback from stakeholders. Method to be developed.	At the completion of collaboration.	Evaluate and discuss the level of stakeholder satisfaction with collaboration and decision-making processes. Describe and evaluate the success of any changes made to processes because of feedback and efficiency measures such as management plans or agreements implemented.	End of strategy – 2036.	Wimmera CMA. Barengi Gadjin Land Council. Local government. Public land managers. Recreational user groups.	
				Percentage of priority areas maintained in an accessible condition regarding tree-fall and vegetation growth. Number of access restrictions or closures in priority areas resulting from tree-fall or vegetation issues.	Record the number of areas with closed or restricted access for recreation due to tree-fall and vegetation growth.	Collect data annually.	Evaluate and discuss the extent to which satisfactory outcomes related to the success statement have been able to be collaboratively negotiated with stakeholders, leading to access solutions that balances environmental and cultural outcomes.	End of strategy – 2036.	Wimmera CMA. Barengi Gadjin Land Council. Local government. Public land managers. Recreational user groups.	
Themes: • Rivers and Streams **Local Areas:** • Hindmarsh • Horsham	**Lower Barringgi Gadyin (Wimmera River) -** downstream of Polkemmet with high recreational value, especially: • **Weir pools at Dimboola and Jeparit.** **Mid Barringgi Gadyin (Wimmera River)** especially: • **Horsham weir pool and the river immediately upstream and downstream of Horsham.**	Recreational fishing opportunities are supported in the Barringgi Gadyin (Wimmera River), with target species including golden perch, silver perch and freshwater catfish.	To what extent have populations of target recreational species, golden perch, silver perch and freshwater catfish, been maintained or improved in the Barringgi Gadyin (Wimmera River)?	As set out in the *Monitoring, Evaluation, Reporting Improvement Plan for the Lower Wimmera Flagship Waterway Project* and *Environmental Water Management Plan – Wimmera River, Yarriambiack Creek and their terminal lakes.*						*Wimmera Native Fish Management Plan (2022).* *Monitoring, Evaluation, Reporting Improvement Plan for the Lower Wimmera Flagship Waterway Project (2023).* *Environmental Water Management Plan – Wimmera River, Yarriambiack Creek and their terminal lakes (2024).* *Monitoring, Evaluation, Reporting and Improvement Plan for the Wimmera Regional Catchment Strategy 2021-27.*

Themes and local areas	Priority area	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
		First Nations cultural values and environmental values are protected from recreational impacts through managed access and site management in high-use areas.	To what extent has managed access and site management in priority areas reduced recreational impacts and protected First Nations cultural values and environmental values?	Percentage of priority areas with access management measures in place (e.g. designated tracks, barriers, boardwalks, signage). Number of complaints regarding environmental or cultural impacts. Number of sites requiring restoration due to recreational use.	Record areas with access management measures in place. Record complaints about impacts. Record sites requiring restoration.	Collect data annually.	Evaluate and discuss the extent to which managed access and site management in priority areas reduced recreational impacts and protected First Nations cultural values and environmental values. Descriptions and case studies.	End of strategy – 2036.	Wimmera CMA. Barengi Gadjin Land Council. Local government. Public land managers. Recreational user groups.	
Themes: • Wetlands • Rivers and streams **Local areas:** • Hindmarsh • Horsham • Upper catchment • West Wimmera • Yarriambiack and Buloke	**All priority areas, including:** **Lower Barringgi Gadyin (Wimmera River),** especially: • **Weir pools at Dimboola and Jeparit.** • **Wimmera River Discovery Trail between Dimboola and Jeparit.** • **Gurru (Lake Hindmarsh).** • **Ngalpakatia/Ngelpagutya (Lake Albacutya).** **Mid Barringgi Gadyin (Wimmera River),** especially: • **Horsham weir pool and the river immediately upstream and downstream of Horsham.** **Yarriambiack Creek,** especially: • **Warracknabeal weir pool.** • **Brim weir pool.** **Wetlands with high social and economic value**, especially: • **Nhill Lake.** • **Taylors Lake.** • **Green Lake.** • **Lake Toolondo.** • **Lake Fyans.** • **Lake Bellfield.** • **Lake Wartook.** • **Lake Lonsdale.** • **Lake Charlegrark.** • **Lake Wallace.** • **Lake Ratzcastle.** • **Lake Bringalbert.** • **Lake Marma.** • **Lake Watchem.**	High-priority recreational waterways provide safe, inclusive and well-maintained access that supports a range of recreational activities. Visitor impacts are effectively managed through infrastructure, site design and access controls that prevent environmental damage.	To what extent do high-priority recreational waterways provide safe, inclusive and well-maintained access that supports a range of recreational activities? To what extent are visitor management measures effectively preventing environmental damage associated with recreational use?	Percentage of priority areas with appropriate visitor management and environmental protection infrastructure in place. Percentage of priority areas with evidence of environmental damage. Percentage of priority areas with effective management plans.	Assess areas with access management measures in place. Assess for evidence of environmental damage and record complaints. Assess areas with management plans.	Annual	Evaluate the effectiveness of access management measures in facilitating access for a range of recreational activities while preventing impacts on the environment.	2036	Wimmera CMA. Barengi Gadjin Land Council. Local government. Public land managers. Recreational user groups.	
		Community members increasingly use and enjoy waterways for recreation, relaxation, cultural activities and connection with nature.	To what extent were visitor numbers maintained at priority areas for recreation?	Number of active day users. Number of visit nights per person. Number of overnight visitors. Number of passive day users. Expenditure of user groups. Supporting data from Horsham Rural City Council and tourism operators. Contextual factors, including information on recreational facilities and water levels. Potential to include other supporting indicators e.g. perception of waterway amenity.	Telephone and in-person interviews as per the Street Ryan method. Note this method focuses primarily on the type of user and their modelled expenditure. It does not appear to capture visitor perceptions of waterway amenity.	Annual	Comparison against the three-year average for the baseline period.	2031 2036	Wimmera CMA to extract data from annual Street Ryan reporting as part of the evaluation process.	*Monitoring, Evaluation, Reporting and Improvement Plan for the Wimmera Regional Catchment Strategy 2021-27.* *Wimmera Southern Mallee: Socio-Economic Value of Recreational and Environmental Water (Various 2016-2024).*

Medium-term outcome 7.

Healthier waterways enable more On Country activities for First Nations Peoples.

Outcome statement:

Healthier Wimmera waterways will enable more frequent and meaningful On Country activities for First Nations Peoples. Feedback from First Nations organisations indicates that people are more likely to visit and spend time on Country when waterways are healthy, with direct benefits for their wellbeing and culture. As waterway condition improves, including water quality and ecological health, cultural practices such as gathering, ceremony, teaching and caring for Country will be better supported.

Through ongoing partnerships with First Nations organisations, waterway management will recognise and support cultural values, access and use, building on past successes such as the enhancement of the Ranch Billabong beside the Barringgi Gadyin (Wimmera River) at Dimboola.

This approach supports self-determination by enabling First Nations Peoples to lead, make decisions about and actively care for their Country. In turn, it will strengthen connections to Country and support cultural wellbeing and the continued practice of culture.

What will success look like?

- First Nations Peoples are spending more time on Country, with increased participation in cultural, recreational and community activities at waterways and through meaningful participation in waterway planning and management.
- Waterway sites of cultural significance are healthy, respected and actively cared for, enabling ongoing cultural use.

Themes and local areas	Priority area	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
Themes: • Rivers and streams • Wetlands **Local areas:** • Hindmarsh • Horsham	**Barringgi Gadyin (Wimmera River) and terminal lakes** - especially significant places including: • **Gurru (Lake Hindmarsh).** • **Ngalpakatia/Ngelpagutya (Lake Albacutya).** • **The Ranch Billabong.** • **The Common.** • **Antwerp property including Datchak Creek.** **MacKenzie River.** **Yarriambiack Creek.** **Wetlands and lakes.**	First Nations Peoples are spending more time on Country, supported by healthier waterways and improved cultural access.	To what extent are healthier waterways enabling First Nations Peoples to spend more time on Country?	Increase in time spent on Country at waterways. First Nations Peoples' satisfaction with opportunities to access waterways for cultural purposes.	Discussions with Barengi Gadjin Land Council and Eastern Maar Aboriginal Corporation. Wimmera CMA's annual reporting processes.	Annual.	Evaluate feedback from First Nations organisations and extent of cultural activities occurring. Descriptions and case studies.	2031 2036	Wimmera CMA. Barengi Gadjin Land Council. Eastern Maar Aboriginal Corporation.	*Monitoring, Evaluation, Reporting and Improvement Plan for the Wimmera Regional Catchment Strategy 2021-27.*
		First Nations Peoples are empowered to actively care for and make decisions about healthy waterways, supporting self-determination and strengthening connections to Country.	There is some overlap with Medium-term Outcome 1, which directly focuses on waterway planning and management undertaken in genuine partnership with First Nations Peoples to support self-determination and strengthen connections to Country. To avoid duplication, monitoring and evaluation activities specifically related to waterway planning and management are addressed under Medium-term Outcome 1, rather than this outcome.							

Medium-term outcome 8.

Key water-dependent species are supported in waterways that provide suitable habitat, including during dry conditions.

Outcome statement:

- Key water-dependent species in the Wimmera will be better supported by waterways that provide suitable and connected habitat. Improved waterway condition, including adequate flow regimes and healthier riparian zones and instream habitat, will help sustain populations through periods of low water availability.
- Targeted management actions will protect and enhance critical habitats, prioritising waterways that support species persistence during dry periods. As a result, key species will be more resilient to climate variability, with healthier populations and improved capacity to recover following dry periods, contributing to overall ecosystem health.

Priority species - Platypus

Themes and local areas	Priority areas	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
Themes: • Rivers and streams **Local areas:** • Horsham • Upper catchment	**Upper MacKenzie River**	A viable breeding population of platypus is sustained in the upper MacKenzie River.	To what extent is there evidence of ongoing breeding, juvenile recruitment and population persistence of platypus in the upper MacKenzie River? To what extent is suitable habitat for platypus sustained in the upper MacKenzie River?	Presence of adult males and females. Evidence of breeding by presence of juveniles. Estimated population abundance and trend over time. Genetic diversity and health. Habitat condition and suitability, including sufficient water flows, water quality and riparian vegetation. Extent of presence along the river.	Environmental DNA (eDNA) surveys, trapping and microchip readers at strategic locations. NOTE: initial testing of microchip readers by Wimmera CMA indicated potential for this to be a useful monitoring tool. Further testing is required to refine the methodology for its use. Monitor habitat condition, including water quality, flows and bank and riparian condition, particularly following extreme events including bushfire, drought and floods.	Bi-annually in spring and autumn.	Evaluate changes and trends in the abundance, recruitment and distribution of the platypus population. Seek and evaluate platypus expert advice regarding population health and viability. Evaluate changes in habitat condition, particularly arising from extreme events including bushfire, drought and floods. Assess the effectiveness of measures to maintain or improve habitat following extreme events.	2031 2036	Wimmera CMA Barengi Gadjin Land Council	*Wimmera Platypus Management Plan (2026, draft).* *Environmental Water Management Plan - MacKenzie River and Burnt and Bungalally Creeks (2025).*
	Mid and lower MacKenzie River	There is evidence of platypus dispersal into the mid and lower MacKenzie River. NOTE: Natural dispersal may not be achievable given current water arrangements and physical barriers. Monitoring would only need to occur should suitable flow conditions occur and if barriers are overcome.	To what extent was platypus dispersal facilitated in the mid and lower MacKenzie River?	Presence of platypus in previously unoccupied or rarely occupied sections of the mid and lower MacKenzie River. Number of platypus detected, including males, females and juveniles. Length (km) of connected suitable platypus habitat available. Reduction in barriers and threats affecting platypus movement.	Environmental DNA (eDNA) surveys, trapping and microchip readers at strategic locations when flow conditions are suitable and as defined in the *Wimmera Platypus Management Plan*.	When flow conditions are suitable and as defined in the *Wimmera Platypus Management Plan*.	Evaluate the number and duration of occasions when flow conditions were suitable to support dispersal and there were no barriers to dispersal. Evaluate presence of platypus, including evidence of dispersals.			
Themes: • Rivers and streams **Local areas:** • Horsham	**Burnt Creek**	The feasibility of restoring longitudinal connectivity in Burnt Creek is investigated, to establish the viability of supporting natural dispersal of platypus from the MacKenzie River to the Barringgi Gadyin (Wimmera River).	To what extent is there evidence is that restoring longitudinal connectivity in Burnt Creek is technically, ecologically and economically viable as a mechanism for supporting natural platypus dispersal between the MacKenzie River and the Barringgi Gadyin (Wimmera River)?	Availability and quality of information for assessing restoration options. Level of confidence in the evidence supporting feasibility conclusions. Predicted likelihood that platypus could successfully move through Burnt Creek under restored conditions.	Completion of technical feasibility assessment.	On completion of assessment.	Consider the technical feasibility assessment report and it's recommendations and discussion. Assess the level of confidence in this information.	2031 2036	Wimmera CMA GWMWater	*Wimmera Platypus Management Plan (2026, draft).* *Environmental Water Management Plan - MacKenzie River and Burnt and Bungalally Creeks (2025).*

Themes and local areas	Priority areas	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
Themes: • Rivers and streams **Local areas:** • Horsham	**Mid Barringgi Gadyin (Wimmera River).**	Platypus recovery opportunities are provided through improved riparian habitat and flow management in suitable Barringgi Gadyin (Wimmera River) habitat.	To what extent have riparian habitat improvements and flow management enhanced recovery opportunities for platypus in suitable Barringgi Gadyin (Wimmera River) habitats?	Availability and quality of habitat for platypus.	Platypus habitat assessments using a Habitat Quality Index, as described in the *Wimmera Platypus Management Plan*.	2031 2036	Compare with the baseline habitat quality in the *Wimmera Platypus Management Plan* to evaluate the level of improvement.	2031 2036	Wimmera CMA	*Wimmera Platypus Management Plan (2026, draft).*
Themes: • Rivers and streams **Local areas:** • Horsham • Upper catchment	**For further investigation:** • **Mid Barringgi Gadyin (Wimmera River).** • **Upper Barringgi Gadyin (Wimmera River).** • **Fyans Creek.** • **Mount Cole Creek.** • **Mount William Creek.**	A second population of platypus is established in a waterway with suitable habitat.	To what extent has the feasibility of establishing platypus in a suitable waterway been established?	Availability and quality of information for assessing feasibility. Level of confidence in the evidence supporting feasibility conclusions.	Completion of feasibility assessment.	On completion of assessment.	Consider the feasibility assessment report and it's recommendations and discussion. Assess the level of confidence in this information.	2031 2036	Wimmera CMA Barengi Gadjin Land Council	*Wimmera Platypus Management Plan (2026, draft).* *Environmental Water Management Plan - MacKenzie River and Burnt and Bungalally Creeks (2025).*
			To what extent has a viable and self-sustaining second platypus population been established in a suitable waterway?	Evidence that platypus individuals persist in the waterway over multiple monitoring periods. Juvenile recruitment into the population. Population growth or stable population trend over time. Survival rates of translocated or colonising individuals. Habitat condition and suitability, including sufficient water flows, water quality and riparian vegetation.	Environmental DNA (eDNA) surveys, trapping and microchip readers at strategic locations. Monitor habitat condition, including water quality, flows and bank and riparian condition, particularly following extreme events including bushfire, drought and floods.	Annually or bi-annually.	Evaluate changes and trends in the abundance, recruitment and distribution of the platypus population. Seek and evaluate platypus expert advice regarding population health and viability. Evaluate changes in habitat condition, particularly arising from extreme events including bushfire, drought and floods. Assess the effectiveness of measures to maintain or improve habitat following extreme events.			

Priority species - River blackfish

Themes and local areas	Priority areas	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
Themes: • Rivers and streams **Local areas:** • Horsham • Upper catchment	**MacKenzie River**	A viable breeding population of river blackfish is sustained in the MacKenzie River.	To what extent is there evidence of ongoing breeding, recruitment, population persistence and dispersal of river blackfish in the upper MacKenzie River? To what extent is suitable habitat for river blackfish sustained in the upper MacKenzie River?	Presence of adult males and females. Evidence of breeding such as presence of juveniles. Estimated population abundance and trend over time. Genetic diversity and health. Habitat condition and suitability, including sufficient water flows, water quality and riparian vegetation. Extent of presence along the river.	Catch per unit effort electrofishing surveys. Monitor habitat condition, including water quality, flows and bank and riparian condition, particularly following extreme events including bushfire, drought and floods.	Annually or bi-annually.	Evaluate changes and trends in population abundance, recruitment and distribution. Seek and evaluate river blackfish expert advice regarding population health and viability. Evaluate changes in habitat condition, particularly arising from extreme events including bushfire, drought and floods. Assess the effectiveness of measures to maintain or improve habitat following extreme events.	2031 2036	Wimmera CMA. Barengi Gadjin Land Council. Victorian Fisheries Authority. Victorian Environmental Water Holder.	*Environmental Water Management Plan - MacKenzie River and Burnt and Bungalally Creeks (2025).* *Wimmera Native Fish Management Plan (2022).*
Themes: • Rivers and streams **Local areas:** • Horsham • Upper catchment	**Burnt Creek** **Mount William Creek** **Mount Cole Creek** **Glenlofty Creek** **Barringgi Gadyin (Wimmera River)** **Wetlands with suitable habitat**	Viable and self-sustaining breeding populations of river blackfish are established in waterways with suitable habitat.	To what extent has the feasibility of establishing river blackfish in a suitable waterway within their former distribution been established?	Availability and quality of information for assessing feasibility. Level of confidence in the evidence supporting feasibility conclusions.	Completion of feasibility assessment.	On completion of assessment.	Consider the feasibility assessment report and its recommendations and discussion. Assess the level of confidence in this information.	2031 2036	Wimmera CMA. Barengi Gadjin Land Council.	*Environmental Water Management Plan - MacKenzie River and Burnt and Bungalally Creeks (2025).* *Wimmera Native Fish Management Plan (2022).*
			To what extent have research and investigations provided the knowledge needed to support the reintroduction and re-establishment of river blackfish populations in suitable habitats within their former distribution?	Knowledge gaps relating to key breeding requirements and impediments have been reduced, supporting more informed decision-making and management actions.	Review of research outputs and documentation to assess the extent to which priority knowledge gaps relating to breeding requirements and impediments have been addressed and applied in decision-making.	On completion of research.	Evaluate changes in understanding of key breeding requirements and impediments and the extent to which this knowledge has influenced management actions and decision-making.			
			To what extent has a viable and self-sustaining second river blackfish population been established in a suitable waterway within their former distribution?	Evidence that river blackfish individuals persist in the waterway over multiple monitoring periods. Juvenile recruitment into the population. Population growth or stable population trend over time. Survival rates of translocated or colonising individuals. Habitat condition and suitability, including sufficient water flows, water quality and riparian vegetation.	Catch per unit effort electrofishing surveys. Monitor habitat condition, including water quality, flows and bank and riparian condition, particularly following extreme events including bushfire, drought and floods.	Annually or bi-annually.	Evaluate changes and trends in population abundance, recruitment and distribution. Seek and evaluate river blackfish expert advice regarding population health and viability. Evaluate changes in habitat condition, particularly arising from extreme events including bushfire, drought and floods. Assess the effectiveness of measures to maintain or improve habitat following extreme events.			

Priority species - Freshwater crayfish

Priority species include:

- Western swamp crayfish (*Gramastacus insolitus*).
- Glenelg spiny crayfish (*Euastacus bispinosus*).

Themes and local areas	Priority areas	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
Themes: • Rivers and streams **Local areas:** • Horsham • Upper catchment	**MacKenzie River and Burnt Creek** **Mount William Creek and tributaries** **Upper Barringgi Gadyin (Wimmera River) and tributaries**	Freshwater crayfish locations, population size and habitat requirements in the Wimmera are known. Feasible future actions and locations for freshwater crayfish are identified.	To what extent have the distribution, population status and habitat requirements of freshwater crayfish in the Wimmera been identified and documented? To what extent have feasible future actions and priority locations been identified to support the conservation and recovery of freshwater crayfish in the Wimmera?	Abundance, distribution maps and population structure data are available for target species. Critical habitat areas are mapped and documented. Key habitat characteristics are identified. Key threats are identified. Key management actions and locations are identified.	Survey methods – TBC. Assess habitat characteristics and condition.	Annually or bi-annually.	Evaluate expert advice regarding mapping and assessments of population and habitat characteristics. Assess level of confidence in extent and quality of data.	2031 2036	Wimmera CMA Barengi Gadjin Land Council	*Environmental Water Management Plan - MacKenzie River and Burnt and Bungalally Creeks (2025).*
	MacKenzie River and Burnt Creek	Water for the environment maintains habitat for freshwater crayfish communities.	To what extent has water for the environment maintained suitable habitat conditions to support freshwater crayfish communities in the MacKenzie River and Burnt Creek?	Abundance, spatial distribution and age class distribution of freshwater crayfish	Survey methods – TBC.	Annually or bi-annually.	Evaluate expert advice regarding changes in abundance, spatial distribution and age class distribution of freshwater crayfish in the MacKenzie River and Burnt Creek. Consider the role of water for the environment in supporting the population.	2031 2036	Wimmera CMA Barengi Gadjin Land Council	*Environmental Water Management Plan - MacKenzie River and Burnt and Bungalally Creeks (2025).*

Priority species - Freshwater mussels *(Velesunio ambiguus)*

Themes and local areas	Priority areas	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
Themes: • Rivers and streams **Local areas:** • Hindmarsh • Horsham • Upper catchment	**Barringgi Gadyin (Wimmera River) and tributaries.** **MacKenzie River, Burnt and Bungalally Creeks.**	Freshwater mussel locations, population size and habitat requirements in the Wimmera are known. Feasible future actions and locations for freshwater mussels are identified.	To what extent have the distribution, population status and habitat requirements of freshwater mussels in the Wimmera been identified and documented? To what extent have feasible future actions and priority locations been identified to support the conservation and recovery of freshwater mussels in the Wimmera?	Abundance, distribution maps and population structure data are available for target species. Critical habitat areas are mapped and documented. Key habitat characteristics are identified. Key threats are identified. Key management actions and locations are identified.	Survey methods – TBC. Assess habitat characteristics and condition.	Annually or bi-annually.	Evaluate expert advice regarding mapping and assessments of population and habitat characteristics. Assess level of confidence in extent and quality of data.	2031 2036	Wimmera CMA Barengi Gadjin Land Council	Foundational activity.

Priority species – Waterbirds

Waterbirds are those that rely on aquatic environments, including rivers, streams and wetlands, for habitat, including fresh water, saline and brackish habitat.

Themes and local areas	Priority areas	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
Themes: • Rivers and streams **Local areas:** • Horsham • Hindmarsh • Upper catchment	**Barringgi Gadyin (Wimmera River)** **Gurru (Lake Hindmarsh)** **Ngalpakatia/Ngelpagutya (Lake Albacutya)** **Dock Lake** **Wimmera Mallee Pipeline wetlands**	Management of water for the environment achieves the waterbird outcomes identified in the Environmental Water Management Plans for the Barringgi Gadyin (Wimmera River), Yarriambiack Creek and terminal lakes and Wimmera Mallee Pipeline Wetlands.	As set out in the: • *Environmental Water Management Plan – Wimmera River, Yarriambiack Creek and their terminal lakes (2024).* • *Environmental Water Management Plan – Wimmera Mallee Pipeline Wetlands – Wimmera CMA Region (2015).*					2031 2036	Wimmera CMA. Barengi Gadjin Land Council. Victorian Environmental Water Holder. Commonwealth Environmental Water Holder.	*Environmental Water Management Plan – Wimmera River, Yarriambiack Creek and their terminal lakes (2024).* *Environmental Water Management Plan – Wimmera Mallee Pipeline Wetlands – Wimmera CMA Region (2015).*

Medium-term outcome 9.

Net rates of streamflow interception from water extraction and storages are stabilising in the Barringgi Gadyin (Wimmera River) catchment.

Outcome statement:

Stabilising the rates of streamflow interception from water extraction and storages in the upper Barringgi Gadyin (Wimmera River) catchment will reduce additional pressure on water resources. Expanded access to piped water supply from Grampians storages provides an opportunity to reduce landholder reliance on new or enlarged farm dams and reduce harvesting and use of surface rainfall runoff, including from streams, rivers, creeks and catchment dams, supporting more sustainable water use and preventing further increases in overall take from Wimmera waterways.

As a result, waterways will be better able to support ecological processes and the environmental, cultural and community values that depend on them.

What will success look like?

- A reduction or stabilisation of the impacts of water extraction and farm dam storage on stream flows in upper catchment waterways, as increased access to piped water supplies reduces the need to capture rainfall runoff, easing pressure on stream flows and supporting healthier waterways.

Themes and local areas	Priority area	What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
Themes: • Rivers and streams **Local areas:** • Upper catchment	**Upper Barringgi Gadyin (Wimmera River) and tributaries** **Mount William Creek and tributaries**	A reduction or stabilisation of the impacts of water extraction and farm dam storage on stream flows in upper catchment waterways, as increased access to piped water supplies reduces the need to capture rainfall runoff, easing pressure on stream flows and supporting healthier waterways.	To what extent has the number of new farm dams installed changed over time? To what extent were there differences between the upper catchment as a whole and farms serviced by the East Grampians Pipeline?	The number and size of licences issued for dam construction annually in the Barringgi Gadyin's (Wimmera River's) upper catchment.	Collaborate with GWMWater regarding information about new farm dams registered in the upper catchment. Baseline: historical records to record past trends.	Collect data annually at the end of each financial year.	Compare the baseline number, size/area and water capacity of farm dams with the number at key evaluation points and discuss changes. Compare differences between the upper catchment as a whole and farms serviced by the East Grampians Pipeline. Evaluate and discuss factors influencing changes in farming practices, access to alternative water supply such as pipelines.	Mid-term review – 2031. Final review – 2036.	GWMWater. Wimmera CMA.	*Monitoring, Evaluation, Reporting and Improvement Plan for the Wimmera Regional Catchment Strategy 2021-27.* *Victorian Water Register.* (https://www.waterregister.vic.gov.au/water-entitlements/entitlement-statistics#licenceTable).
			To what extent was rainfall runoff intercepted by farm dams and water storages? To what extent did the number and capacity of farm dams change over time?	The total number, area and water capacity of farm dams in the Barringgi Gadyin's (Wimmera River's) upper catchment. The total number and volume of water entitlements in the Barringgi Gadyin's (Wimmera River's) upper catchment.	Generate statistics and information on the number, area and water capacity of farm dams in the upper catchment using: • Australian farm dams database and interactive portal on density, distribution, water capacity and historical trends of artificial dams in Australia (https://maps.ausdams.org/). Baseline available – 2021. Investigate whether it's possible to obtain a 2026 baseline. • Victorian wetland inventory: Victorian Wetland Inventory (Current) - Dataset - Victorian Government Data Vic, includes the number and area of farm dams. Baseline available – 2025. Statistics for the number and volume of water entitlements from the *Victorian Water Register.* (https://www.waterregister.vic.gov.au/water-entitlements/entitlement-statistics#licenceTable).	Baseline. Mid-term review – 2031. Final review – 2036. Or as data is available.			Wimmera CMA	

Medium-term outcome 10.

Stewardship increases, with more people taking action to care for waterways.

- Means-based outcome.

Outcome statement:

Stewardship of Wimmera waterways will grow, with more landholders, community members and groups actively involved in caring for rivers, wetlands and their floodplains and catchments. Increased awareness, stronger partnerships and supportive programs will empower people to take practical actions, such as improving land management, protecting riparian areas and contributing to waterway health.

As stewardship increases, more people will feel connected to their local waterways and recognise their role in caring for and protecting them. A stronger shared sense of responsibility for waterway health will be fostered across the region, supporting collaboration between communities, First Nations Peoples, landholders and organisations. This collective effort will lead to sustained improvements in waterway condition, ensuring environmental, cultural and community values are protected and enhanced over time.

What will success look like?

- Community awareness and understanding of the environmental, cultural and social values of waterways is increasing, leading to greater support for waterway protection and restoration.
- More people report feeling connected to their local waterways and recognise their role in caring for and protecting them.
- A stronger shared sense of responsibility for waterway health is evident across the Wimmera, with communities, landholders and organisations working together to achieve common outcomes.
- Stewardship actions are contributing to measurable improvements in waterway condition, helping protect and enhance environmental, cultural and community values over time.

Priority area

- All Wimmera waterways, especially priority areas (means-based outcome).

Themes

- Rivers and streams and wetlands.

Local areas

- Whole catchment.

What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
More community members and groups are actively participating in the protection, restoration and management of waterways across the Wimmera.	To what extent are more people actively participating in activities to protect, restore and care for waterways in the Wimmera to protect and enhance environmental, cultural, social and economic values?	Number of community participants in waterway-related on-ground management activities, including revegetation, riparian and wetland protection and management, pest plant and animal control and citizen science.	Extract data regarding participation in waterway-management programs from Wimmera CMA's annual reporting for waterway-related projects. Extract data about participation in community waterway management activities such as revegetation events from Wimmera CMA's engagement register. Work with stakeholder organisations to contribute relevant information via existing annual reporting processes.	Annually.	Assess the change in participation rates over time, comparing baseline data to annual or periodic data. Evaluate whether more people are becoming involved. Where possible, explore and discuss reasons for changes in participation including external factors.	Mid-term review – 2031. Final review – 2036.	Wimmera CMA Stakeholder organisations including Trust for Nature and Landcare networks and groups.	*Monitoring, Evaluation, Reporting and Improvement Plan for the Wimmera Regional Catchment Strategy 2021-27.* Wimmera CMA's Engagement Register.

What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
	To what extent are Landcare, Friends of, Committees of Management and other community groups and their volunteers contributing to projects and activities to care for waterways to protect and enhance environmental, cultural, social and economic values?	Number of groups and their volunteers participating in waterway-related on-ground management activities, including revegetation, riparian and wetland protection and management, pest plant and animal control, citizen science and recreation management.	Collect data from: • Landcare Group Health surveys, Landcare grant reporting data and Landcare facilitator annual reports. • Wimmera CMA's engagement registers and annual project reporting. • Stakeholder organisations via existing annual reporting processes.	Annually.	Assess the change in group participation rates over time, comparing baseline data to annual or periodic data. Evaluate whether more groups and new groups are becoming involved. Where possible, explore and discuss reasons for changes in participation including external factors.	Mid-term review – 2031. Final review – 2036.	Wimmera CMA Landcare and other community groups	Annual Landcare Group Health Reports. Wimmera CMA's Engagement Register.
More private landholders are aware of waterway health issues and participating in best management practices. (Note - overlaps with/subset of top row)	To what extent are more private landholders adopting management practices that protect and enhance waterway health, including riparian protection, sustainable grazing, revegetation and erosion control?	The proportion of survey respondents that used or intend to use management practices that improve waterway health, including: Fencing native bush/grasslands to manage stock access. Establishing off-stream stock watering points. Erecting fencing to manage stock access to waterways. Activities to retain ground cover in the upper catchment to minimise soil erosion, including stock containment areas, grazing management, sowing perennial pastures, maintaining at least 70% groundcover.	Extract relevant data from the *Wimmera Rural Landholder Survey*. Baseline available – 2026 and 2023. Prior surveys occurred in 2017, 2013, 2008 and 2002.	When funding is available to complete surveys. Ideally, every 5 years.	Assess the change in participation rates over time, comparing baseline data to annual or periodic data. Evaluate whether more people are becoming involved. Where possible, explore and discuss reasons for changes in participation including external factors.	Mid-term review – 2031. Final review – 2036. Or as survey data is available.	Wimmera CMA Soil Cooperative Research Centre	*Monitoring, Evaluation, Reporting and Improvement Plan for the Wimmera Regional Catchment Strategy 2021-27.* *Wimmera Rural Landholder Survey* – survey being conducted in 2026. Final report on social drivers of natural resource management drivers in the Wimmera will provide data for this indicator, when available by end of 2026-27. The survey is conducted periodically, with previous reports available for 2023 (https://soilcrc.com.au/resources/surveying-farm-practices/), 2017, 2013, 2008 and 2002: (https://wcma.vic.gov.au/publications-resources/#managementplanning). Approach links to: *Monitoring, Evaluation, Reporting Improvement Plan for the Rivers 2040 – Wimmera Clearwater Revival - Flagship Waterway Project.*

What success looks like (What we specifically expect to influence or change)	Specific evaluation question and purpose	Monitoring indicators	Monitoring methods	Monitoring schedule	Evaluation approach	Evaluation timing	Tasks, responsibilities and status	Reference documents
	To what extent are landholders aware of river health issues and participating in best management practices?	The proportion of survey respondents that believe fencing to manage stock access is an essential part of the work required to protect and conserve waterways and wetlands.			Assess the change in beliefs over time, comparing baseline data to annual or periodic data. Evaluate whether more people are becoming more aware. Where possible, explore and discuss reasons for changes in participation including external factors.			
Strong partnerships between First Nations Peoples, landholders, community groups, government agencies and other organisations are supporting coordinated action for waterway health.	To what extent are partnerships between First Nations Peoples, landholders, community groups, government agencies and other organisations supporting coordinated action for waterway health?	The number of waterway-related partnerships.	Number and type of active partnerships. Level of commitment by stakeholders to continue partnerships and collaborations. Feedback from CMA project managers and stakeholders about partnerships.	Annually.	Assess and evaluate the change in partnerships over time, comparing baseline data to annual or periodic data. Where possible, explore and discuss reasons for changes including external factors.		Wimmera CMA Stakeholder organisations	Wimmera CMA's Engagement and Partnerships Registers.
Community awareness and understanding of waterway health and values is increasing, leading to greater support for waterway protection and restoration.	To what extent has community awareness and understanding of waterway health and values increased?	Percentage of Wimmera community members reporting general knowledge and understanding about waterway health and values.	*My Victorian Waterway Survey* (https://www.water.vic.gov.au/waterways/my-victorian-waterway-survey). Baseline available – 2022. Prior survey in 2009-10. *Regional Wellbeing Survey* (https://www.canberra.edu.au/research/centres/hri/research-projects/regional-wellbeing-survey). Extract relevant data from the *Wimmera Rural Landholder Survey*. Baseline available – 2026 and 2023. Prior surveys occurred in 2017, 2013, 2008 and 2002.	As survey data is available.	Assess change over time, comparing baseline data to the subsequent survey. Evaluate whether waterway health and values knowledge have increased over time. Where possible, explore and discuss reasons for changes.	Final review – 2036. Or as survey data is available.	DEECA - lead for conducting the survey and reporting results. Wimmera CMA	*My Victorian Waterway Survey* (https://www.water.vic.gov.au/waterways/my-victorian-waterway-survey). Baseline available – 2022. Prior survey in 2009-10. *Regional Wellbeing Survey* (https://www.canberra.edu.au/research/centres/hri/research-projects/regional-wellbeing-survey). *Wimmera Rural Landholder Survey* – survey being conducted in 2026. Final report available in 2026-27.

What success looks like **(What we specifically expect to influence or change)**	**Specific evaluation question and purpose**	**Monitoring indicators**	**Monitoring methods**	**Monitoring schedule**	**Evaluation approach**	**Evaluation timing**	**Tasks, responsibilities and status**	**Reference documents**
A stronger shared sense of responsibility for waterway health is evident across the Wimmera, with more people feeling connected to their local waterways and recognising their role in caring for and protecting them.	How and to what extent, have people across the Wimmera become more connected to their local waterways and more likely to take shared responsibility for their care and protection?	Percentage of Wimmera community members reporting: • That they care about the health of local waterways. • A personal responsibility to care for and protect waterways.	*My Victorian Waterway Survey* (https://www.water.vic.gov.au/waterways/my-victorian-waterway-survey). Baseline available – 2022. Prior survey in 2009-10.	As survey data is available.	Assess change over time, comparing baseline data to the subsequent survey. Evaluate whether feelings of responsibility and care for waterways have increased over time. Where possible, explore and discuss reasons for changes in participation.	Final review – 2036. Or as survey data is available.	DEECA - lead for conducting the survey and reporting results. Wimmera CMA	*My Victorian Waterway Survey* (https://www.water.vic.gov.au/waterways/my-victorian-waterway-survey). Baseline available – 2022. Prior survey in 2009-10.

Supporting the Murray-Darling Basin Plan

Murray-Darling Basin outcomes are incorporated into the regional outcomes, *Implementation Plan* and *Monitoring, Evaluation and Improvement Plan* of the *Wimmera Waterway Strategy*. This helps ensure that water for the environment management decisions and other actions address both regional desired outcomes and their contribution to broader Murray-Darling Basin outcomes.

Background

For catchment management authorities within the Murray-Darling Basin, the *Ministerial Guidelines for Regional Waterway Strategies* state that strategies must complement and inform Victoria's contributions to the *Murray-Darling Basin Plan* (*Basin Plan*) and contribute to meeting Victoria's obligations.

The Murray-Darling Basin Authority's *Basin Plan* aims to improve and maintain healthy rivers, floodplains and wetlands. Its overarching goal is to reinstate and protect where possible the ecologically important flows that support the rivers, wetlands and floodplains of the Murray-Darling Basin. [(13)]

The *Basin-wide Environmental Watering Strategy* (BEWS) elaborates on the *Basin Plan's* objectives and targets by describing the expected environmental outcomes for four ecological components:

1. River flows and connectivity.
2. Native vegetation.
3. Waterbirds.
4. Native fish. [(14)]

First released in 2014, the Strategy is updated every 5 years. The third edition, released in 2025, was developed in consultation with relevant experts, including Basin state and territory jurisdictions and technical experts.

The BEWS describes the contribution of specific assets across the Basin to the expected environmental outcomes. Figure 3 illustrates the hierarchy of environmental objectives established for the *Basin Plan*.

The *Basin Plan* defines environmental assets as water-dependent ecosystems that meet criteria set out in its Schedule 8, including those that:

1. Are formally recognised in international agreements or, with water for the environment, are capable of supporting, species listed in those agreements.
2. Are natural or near-natural, rare or unique.
3. Provide vital habitat.
4. Support Commonwealth, State or Territory listed threatened species or communities.
5. Support or, with water for the environment, are capable of supporting, significant biodiversity.

The expected environmental outcomes in the BEWS contribute to the Strategy's outcomes for catchment management regions within the Murray-Darling Basin including the Wimmera. Strategy outcomes are also shaped by other plans and strategies and, in turn, guide objectives in environmental water management plans and annual seasonal watering proposals for regulated waterways (see Figure 4).

Additionally, BEWS outcomes are only relevant for waterways in the Wimmera that are regulated. Unregulated waterways are considered through the development of statutory management plans and local management rules by water corporations, as required.

Figure 3. The hierarchy of environmental objectives established for the Murray-Darling Basin (Sourced from Figure 2 in Basin-wide Environmental Watering Strategy [14]).

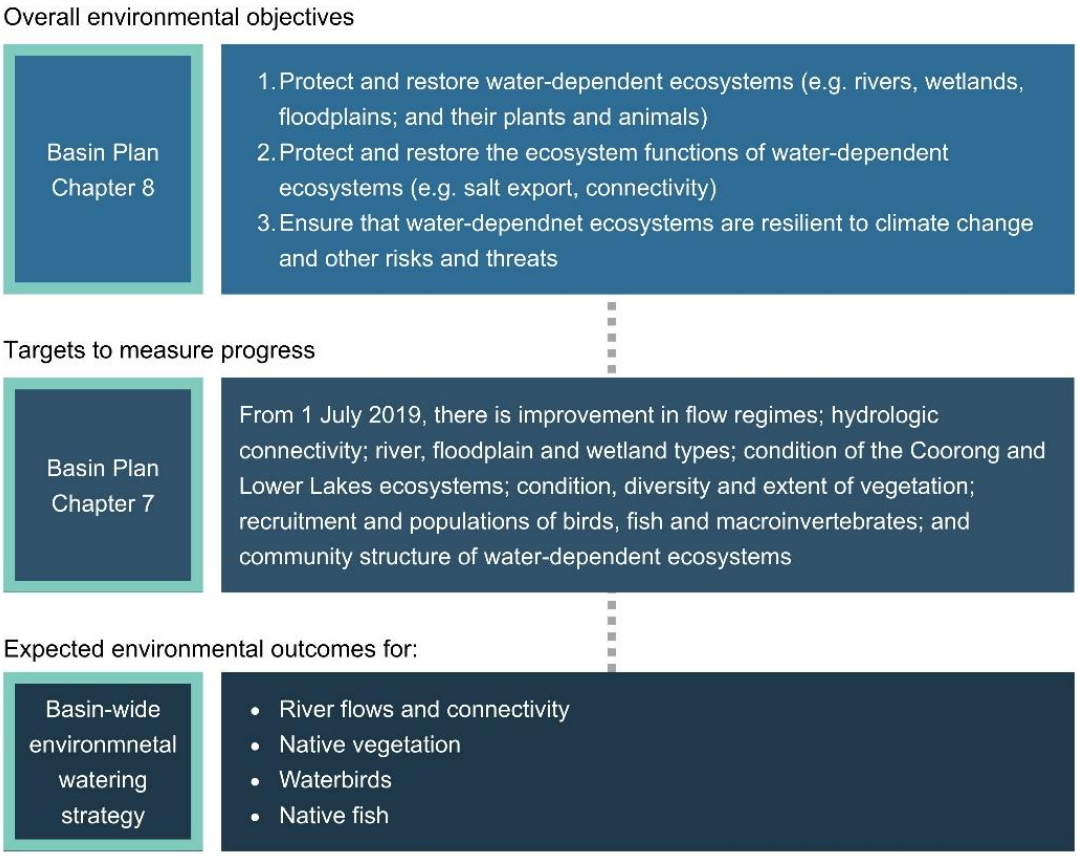


Figure 4. Linkages between outcomes in the Strategy and other sources that inform environmental water management plans and seasonal watering proposals for regulated waterways. [15]

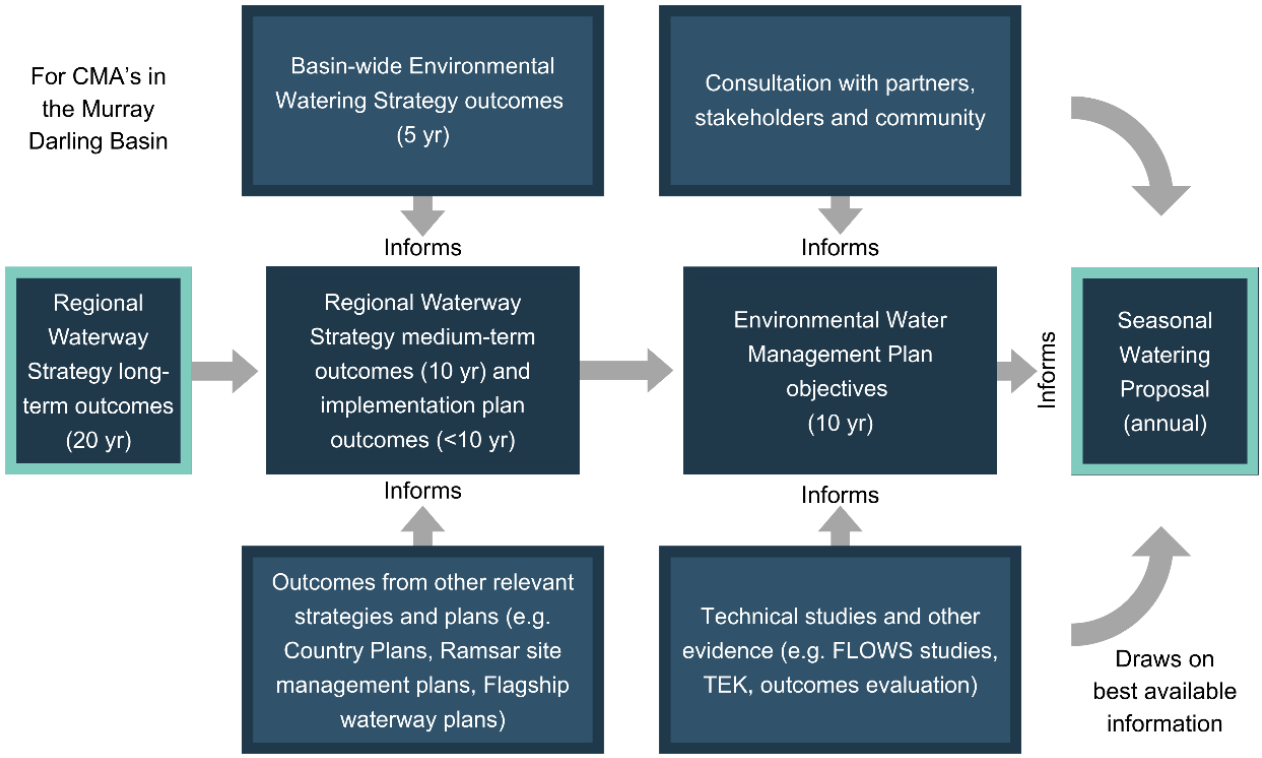


Table 4 summarises the BEWS outcomes relevant to the Wimmera and links them to the *Wimmera Waterway Strategy's* outcomes and MERI Plan statements of success.

Table 4. BEWS expected outcomes by theme relevant to the Wimmera region.

Expected environmental outcomes	Region	Relevant assets	Link to *Wimmera Waterway Strategy* outcomes	Comment
River flows and connectivity: Longitudinal connectivity				
FC1: To keep base flows at least 60% of the natural level. (note: this will be especially important during dry years). Note: Some less-developed rivers have base flows greater than 60% of natural. Where this is the case, the aim is to protect that current level of flow. In other catchments, base flows are currently well below the target 60% of natural flows, especially during dry times. Cease-to-flow events should not exceed natural, where possible.	Wimmera	River Murray tributaries (Note: are not in the Wimmera, however this outcome still applies).	Outcomes are focused on maintaining and improving the values that flows support. Relevant 20-year long-term outcomes: • Waterways with high environmental, social, cultural and economic values are maintained. • Waterway condition, connectivity and resilience is improved, providing habitat that supports native species and native communities. • Water is of sufficient quality to support waterway values and uses at important areas for water supply, cultural, environmental and social values. Relevant 10-year medium-term outcomes: • More waterways have improved management to enhance habitat, landscape connectivity, and resilience. • Risks to water quality in Wimmera waterways are managed where possible to reduce impacts on values. • Drought refuges support native species' survival and resilience during dry periods. • Key water-dependent species are supported in waterways that provide suitable habitat, including during dry conditions.	Maintaining base flows at or above 60% of natural levels, particularly during dry years, is supported through long-term environmental water planning and adaptive annual water management. Environmental water management plans and flow studies identify the flow regimes required to sustain the environmental values and outcomes targeted by the Strategy. These long-term plans guide annual seasonal watering proposals and watering decisions, ensuring that responses to seasonal conditions remain aligned with strategic outcomes and longer-term waterway resilience objectives. Figure 2 illustrates the linkages between flow management and broader Strategy outcomes.
River flows and connectivity: Lateral connectivity				
FC6: A 10 to 20% increase of freshes and bank-full events in the Border Rivers, Gwydir, Namoi, Macquarie–Castlereagh, Barwon–Darling, Lachlan, Campaspe, Loddon and **Wimmera** catchments. Note: The degree to which these outcomes can specifically target the lower floodplain will depend on current constraints in each region and the work underway to address them.	Wimmera	Wimmera River	The Strategy does not include an outcome for flow directly. Outcomes are focused on maintaining and improving the values that flows support. Relevant 20-year long-term outcomes: • Waterways with high environmental, social, cultural and economic values are maintained. • Waterway condition, connectivity and resilience is improved, providing habitat that supports native species and native communities. • Water is of sufficient quality to support waterway values and uses at important areas for water supply, cultural, environmental and social values. Relevant 10-year medium-term outcomes: • More waterways have improved management to enhance habitat, landscape connectivity, and resilience. • Risks to water quality in Wimmera waterways are managed where possible to reduce impacts on values. • Drought refuges support native species' survival and resilience during dry periods. • Key water-dependent species are supported in waterways that provide suitable habitat, including during dry conditions.	Wimmera CMA uses annual seasonal watering proposals for environmental entitlements to deliver outcome-focused, adaptable water management regardless of whether conditions are dry or drought.

Expected environmental outcomes	Region	Relevant assets	Link to *Wimmera Waterway Strategy* outcomes	Comment
Native vegetation: forests and woodlands				
V1: To maintain the extent of forest and woodland vegetation including approximately: • 360,000 ha of river red gum • 409,000 ha of black box • 310,000 ha of coolabah.	Wimmera (and North Central)	Wimmera-Avoca: • 6,500 ha of river red gum • 3,100 ha of black box	Relevant 20-year long-term outcomes: • Waterway condition, connectivity and resilience is improved, providing habitat that supports native species and native communities. Relevant 10-year medium-term outcomes: • More waterways have improved management to enhance habitat, landscape connectivity, and resilience.	The MERI Plan includes statements of success for the medium-term outcome aligned to environmental water management plan outcomes and associated monitoring indicators, including: • Riparian habitat extent and the condition of river red gum communities are maintained or improved. • The connectivity of riparian habitat is maintained or improved, enabling the movement and dispersal of terrestrial species. Vegetation surveys completed since 2020 provide a baseline to assess changes, but are unlikely to address the full extent of the BEWS expected outcome and area.
V2: Improved age class structure of river red gum, black box and coolabah communities to support viable population demographics.				
V3: No decline in the condition of river red gum, black box and coolabah across the Basin.				
V4: Improved condition of river red gum in the Lachlan, Murrumbidgee, Lower Darling, Murray, Goulburn-Broken and Wimmera-Avoca.				
Native vegetation: shrublands				
V5: To maintain the extent of the large areas of lignum shrubland within the Basin. V6: Improvement in the condition of lignum shrublands.	Wimmera	Wetlands in Wimmera-Avoca	Relevant 20-year long-term outcomes: • Waterway condition, connectivity and resilience is improved, providing habitat that supports native species and native communities. Relevant 10-year medium-term outcomes: • More waterways have improved management to enhance habitat, landscape connectivity, and resilience.	The MERI Plan includes statements of success for the medium-term outcome aligned to environmental water management plan outcomes and associated monitoring indicators, including: • The condition, extent and connectivity of riparian vegetation is improved. The current extent of lignum shrubland is not mapped or known. Wimmera CMA undertakes vegetation surveys when funding is available.
Native vegetation: non-woody				
V7: To maintain the extent of non-woody vegetation. (Current extent is not mapped or known)	Wimmera	Wimmera River (closely fringing or occurring within)	Relevant 20-year long-term outcomes: • Waterway condition, connectivity and resilience is improved, providing habitat that supports native species and native communities. Relevant 10-year medium-term outcomes: • More waterways have improved management to enhance habitat, landscape connectivity, and resilience.	The MERI Plan includes statements of success for the medium-term outcome aligned to environmental water management plan outcomes and associated monitoring indicators, including: • The condition, extent and connectivity of riparian vegetation is improved. The current extent is not mapped or known.
V8: Increased periods of growth for communities that closely fringe or occur within the main river corridors.	Wimmera	Wimmera River		Vegetation surveys completed since 2020 could be used as a baseline to assess changes, but are unlikely to address the full extent and area indicated by the expected environmental outcome.
V9: Increased periods of growth for communities that form extensive stands within wetlands and floodplains including (but not limited to) Moira grassland in Barmah-Millewa Forest; common reed and cumbungi in the Great Cumbung Swamp and Macquarie Marshes; water couch on the floodplains of the Macquarie and Gwydir rivers; and marsh club-rush sedgelands in the Gwydir.				

Expected environmental outcomes	Region	Relevant assets	Link to *Wimmera Waterway Strategy* outcomes	Comment
Waterbirds				
B1: The number and type of waterbird species present in the Basin will not fall below current observations. B2: A significant improvement in waterbird populations in the order of 20 to 25% over the baseline scenario, with increases in all waterbird functional groups. B3: Breeding events (the opportunities to breed rather than the magnitude of breeding per se) of group-nesting waterbirds to increase by up to 50% compared to the baseline scenario. B4: Breeding abundance (nests and broods) for all of the other functional groups to increase by 30-40% compared to the baseline scenario, especially locations where the *Basin Plan* improves over-bank flows.	All	Lake Albacutya Lake Hindmarsh These assets are considered critical to achieving a sustainable Basin waterbird community, although do not receive held water for the environment.	Strategy outcomes focus on maintaining, and improving where possible, waterway habitat for waterbird species. Relevant 20-year long-term outcomes: • Waterway condition, connectivity and resilience is improved, providing habitat that supports native species and native communities. • Waterways with high environmental, social, cultural and economic values are maintained. Relevant 10-year medium-term outcomes: • Key water-dependent species are supported in waterways that provide suitable habitat, including during dry conditions. • More waterways have improved management to enhance habitat, landscape connectivity, and resilience. • Wetland modification, loss and deterioration of condition occurs at a declining rate. • Drought refuges support native species' survival and resilience during dry periods.	The MERI Plan includes statements of success for the medium-term outcome aligned to environmental water management plan outcomes and associated monitoring indicators, including: • Waterbird feeding, roosting and breeding habitats are available during episodic lake-filling events and extensive wetland habitat is maintained to support large and diverse waterbird populations during periods of widespread natural flooding. • Gurru (Lake Hindmarsh) receives episodic inflows when natural high-flow events occur, supporting waterbird habitat and breeding. • Management of water for the environment achieves the waterbird outcomes identified in the Environmental Water Management Plans for the Barringgi Gadyin (Wimmera River), Yarriambiack Creek and terminal lakes and Wimmera Mallee Pipeline Wetlands. • Fringing woodland habitat continues to provide habitat and refuge for migratory and resident woodland bird species, including regent parrot and pink cockatoo. Wimmera CMA carries out bird monitoring when key sites receive water, such as Lake Hindmarsh and Dock Lake. Monitoring occurs to assess sites where water is present, when funding is available. Baseline data is unavailable. The Strategy and Implementation and MERI Plans support delivery and monitoring of actions to maintain flows, as well as complementary management actions that support waterbird habitat provision.
Fish				
F1. No loss of native fish species currently present within the Basin. F2. Improved population structure of key fish species through regular recruitment. F3. Increased movement of key fish species. F4. Expanded distribution of key fish species and populations in the northern and southern Basin. F5. Improved community structure of key native fish species. F6. Restored distribution and abundance to levels recorded pre-2007 (prior to major losses caused by extreme drought). This will require annual or biennial recruitment events depending on the species. Note: focus is on short-lived species.	All (basin wide) All (asset scale but relevant assets are not specified in the BEWS)	Appendix C in the BEWS lists important environmental assets for native fish and the reasons, including: • Key movement corridors • High biodiversity • Site of other Significance • Key site of Hydrodynamic diversity • Threatened species • Dry period/drought refuge	Relevant 20-year long-term outcomes: • Waterway condition, connectivity and resilience is improved, providing habitat that supports native species and native communities. • Waterways with high environmental, social, cultural and economic values are maintained. Relevant 10-year medium-term outcomes: • Key water-dependent native species are supported in waterways that provide suitable habitat, including during dry conditions. • More waterways have improved management to enhance habitat, landscape connectivity, and resilience. • Drought refuges support native species' survival and resilience during dry periods.	The MERI Plan includes statements of success for the medium-term outcome aligned to environmental water management plan outcomes and associated monitoring indicators, including: • The availability and quality of refuge habitats for native fish species are maintained or improved, with channel capacity preserved and sediment accumulation minimised. • The abundance, movement and species richness of native fish species is maintained or improved, supported by water for the environment and complementary management activities. The *Wimmera Native Fish Management Plan,* together with the Strategy, guides implementation of native fish actions. The MERI Plan includes monitoring indicators which will contribute to understanding change because of Strategy implementation in line with statement of success, Strategy outcomes and BEWS expected outcomes. Monitoring includes the *Native Fish Report Card* and regular fish monitoring occur when funding is available. F4. The Strategy and *Wimmera Native Fish Management Plan* outline priorities for expanding native fish in the Wimmera, particularly river blackfish. F6. It will be extremely challenging to achieve this expected environmental outcome for non-stocked native fish species in Wimmera waterways due to dry climate and reduced rainfall and runoff since 1997. F9. Assessment is limited as there are no fishway passages on the larger weir pools along the Wimmera River.

Expected environmental outcomes	Region	Relevant assets	Link to *Wimmera Waterway Strategy* outcomes	Comment
F7. Improved population structure (i.e. a range of size/age classes for all species and stable sex ratios where relevant) in key sites. This will require annual recruitment events in at least eight out of 10 years at 80% of key sites, with at least four of these being 'strong' recruitment events. Note: focus is on moderate-long lived species.				F17. Wimmera CMA is supporting fish translocation opportunities by "housing" bred fish in wetland and dam surrogacy sites until they are ready to be reintroduced into Murray-Darling Basin waterways.
F8. A 10–15% increase of mature fish (of legal take size) for recreational target species (Murray cod and golden perch) in key populations.				
F9. Annual detection of species and life stages representative of the whole fish community through key fish passages; with an increase in passage of Murray cod, trout cod, golden perch, silver perch, Hyrtl's tandan, congolli, short-headed lamprey and pouched lamprey through key fish passages to be detected in 2019–2024; compared to passage rates detected in 2014–2019.				
F17. Significant increases in the distributions of key species in the southern Basin. (This may be achieved through the use of re-introductions of species into suitable sites).				

Part 3 – Reporting and communication

Reporting is a key component of the MERI framework. It ensures that information gathered through monitoring and evaluation is communicated in a timely, transparent and accessible way to support learning, improvement, accountability, and decision-making.

Reporting provides Wimmera CMA, First Nations organisations, stakeholder organisations, funding agencies, stakeholders and the community with information about the implementation of the Strategy, progress towards desired outcomes and the effectiveness of management actions and investments. It also provides a mechanism for sharing achievements, challenges, emerging issues and lessons learned throughout the Strategy's life.

Reporting will draw on information collected through monitoring and evaluation activities and will be undertaken at a range of scales and timeframes to meet different information needs. This includes reporting on progress towards medium-term and long-term outcomes and the findings of formal evaluations and strategy reviews.

Importantly, reporting is not only about demonstrating what has been achieved. It also supports adaptive management by identifying opportunities for improvement and informing future planning, investment and management decisions. By sharing evidence and lessons learned, reporting helps build a common understanding of waterway management outcomes and supports continuous improvement across the organisations, groups and individuals contributing to the implementation of the Strategy.

Reporting and communication plan

Table 5 identifies the primary stakeholders at organisational, community, regional and government levels who have an interest in, or responsibility for, the implementation of the Strategy. The table describes the information each stakeholder group requires and the mechanisms that will be used to communicate progress, outcomes and key findings arising from monitoring, evaluation and reporting activities.

Reporting under this MERI Plan will be:

- **Relevant** - addressing the information needs of different audiences.
- **Timely** - supporting effective decision-making and adaptive management.
- **Transparent** - clearly communicating achievements, challenges and limitations.
- **Evidence-based** - drawing on monitoring and evaluation findings.
- **Accessible** - using language and formats appropriate to the audience.
- **Focused on learning** - supporting continuous improvement and knowledge sharing.
- **Proportionate** - ensuring reporting effort is commensurate with available resources and information needs.

This approach ensures that reporting is not simply a compliance activity, but a mechanism for accountability, collaboration, learning and adaptive management throughout the implementation of the Strategy.

Table 5. Reporting and communication processes associated with the Strategy.

Audience	Information needs	Reporting method	Reporting schedule
DEECA and Victorian Government.	To celebrate implementation highlights and progress implementing the Strategy's desired outcomes. Progress towards outcomes, implementation status, risks, opportunities and evaluation findings.	Mid-term and final review reports.	Mid-term review. Final review.
Wimmera CMA Board and Executive leadership.	To celebrate implementation highlights and progress implementing the Strategy's desired outcomes. Progress towards outcomes, implementation status, risks, opportunities, performance against targets and evaluation findings.	Board reports and briefings.	Annual.
		Mid-term and final review reports.	Mid-term review. Final review.
Wimmera CMA project managers and staff responsible for implementing the Strategy.	Delivery progress, monitoring results, lessons learned, adaptive management actions and evaluation findings.	Internal project reporting and reviews. Team meetings.	Ongoing.
First Nations partner organisations.	Progress on shared priorities, cultural outcomes, partnership outcomes, implementation, achievements, challenges, opportunities for collaboration, evaluation findings, waterway condition and management activities.	Partnership meetings. Mid-term and final review reports.	At agreed intervals. Mid-term review. Final review.
Delivery partners and stakeholders.	Progress on shared priorities, partnership outcomes, implementation, achievements, challenges, opportunities for collaboration, evaluation findings, waterway condition and management activities.	Project meetings. Partner forums. Mid-term and final review reports.	At agreed intervals. Mid-term review. Final review.
Landholders, community groups and the regional community.	Waterway values and condition, project achievements, outcomes, opportunities for involvement, success stories and case studies.	Annual reports. Website updates. Media releases. Social media.	Annually or as needed. Mid-term review. Final review.

Process and timing

The scale and frequency of evaluation will vary over the life of the Strategy. Evaluation activities will include annual implementation assessments, as well as more comprehensive mid-term and end-of-term reviews. The timing and scope of these assessments will depend on the availability of funding and resources. Where funding and resources are limited, evaluation efforts will be prioritised in accordance with the approach outlined in this section.

Annual implementation assessments

Wimmera CMA will undertake annual assessments of Strategy implementation at the end of each financial year. These assessments will:

- Measure and evaluate the contribution of management actions towards achieving the Strategy's desired outcomes.
- Identify gaps, challenges and opportunities in implementation.
- Consider the implications of new information, knowledge and lessons learned.

Mid-term review (2031)

A comprehensive review after five years will:

- Assess progress towards the Strategy's desired outcomes, where information is available.
- Evaluate the effectiveness of the Strategy and implementation approaches using the key evaluation questions.
- Consider emerging knowledge, information and changing circumstances that may warrant updates to the Strategy, supporting an adaptive management approach.

Final review (2036)

A final review at the end of the Strategy's nominal life (2036) will inform the next iteration. It will:

- Capture the knowledge, insights and lessons learned through implementation.
- Assess achievements and progress against the Strategy's desired outcomes.
- Evaluate the implications of new knowledge, information, government policy directions, and the aspirations and priorities of regional communities and stakeholders.

Together, these evaluation activities will provide a clear record of achievements, challenges and lessons learned, while building a robust evidence base to support continuous improvement in Strategy implementation and inform future iterations.

The MERI Plan is intended to be a living document that supports adaptive management throughout the life of the Strategy. As implementation progresses, new information, monitoring data, evaluation findings, policy directions, stakeholder priorities and environmental conditions may emerge, creating opportunities to refine and improve the MERI framework.

To ensure the Plan remains relevant, practical and fit for purpose, it will be reviewed and updated prior to the Strategy's mid-term (5-year) and final (10-year) reviews, subject to available resources. These reviews will consider changes in data availability, monitoring methods, evaluation priorities, reporting requirements, assumptions and risks, as well as lessons learned during implementation.

Prioritising monitoring and evaluation effort

The reviews will also provide an opportunity to assess whether monitoring, evaluation and reporting effort is being directed towards the areas of greatest strategic value. Given the breadth of outcomes, measures and key evaluation questions within the Strategy, some elements of the MERI framework may be prioritised for additional evaluation or monitoring effort, while others may be assessed through more targeted or qualitative approaches.

Prioritisation will help ensure that available resources are allocated efficiently and focused on the most critical information needs. This may include areas of high investment, significant risk or uncertainty, emerging management issues, priorities for future decision-making and outcomes that are particularly important for demonstrating the effectiveness of the Strategy. Prioritisation may also reflect stakeholder information needs, data availability, opportunities for learning and the evidence required to inform future waterway planning, policy development and investment programs.

Reviewing and refining the MERI Plan at these key milestones will help ensure that monitoring and evaluation activities remain proportionate, evidence-based and focused on generating meaningful insights that support accountability, continuous improvement and the achievement of long-term waterway outcomes for the Wimmera region.

References

1. **Department of Energy, Environment and Climate Action.** *Guidelines for regional waterway strategies.* Melbourne : Department of Energy, Environment and Climate Action, 2024.

2. **Australian Govenment.** *Natural Resource Management Monitoring, Evaluation, Reporting and Improvement Framework.* Canberra : Commonwealth of Australia, 2009.

3. **DSE.** *Monitoring, evaluation and reporting framework: land, water and biodiversity.* Melbourne : Department of Sustainability and Environment, 2012.

4. **Victorian Government.** Outcomes Reform in Victoria. [Online] 2022. [Cited: February 4, 2026.] https://www.vic.gov.au/outcomes-reform-victoria.

5. **Wimmera CMA.** *Analysis of wetland modifications in the Wimmera CMA region (unpublished).* Horsham : Wimmera Catchment Management Authority, 2021.

6. **Wimmera CMA.** *Monitoring, Evaluation, Reporting and Improvement Plan for the Wimmera Regional Catchment Strategy 2021-27.* Horsham : Wimmera Catchment Management Authority, 2021.

7. **RMCG.** *Wimmera Mallee Pipeline wetlands ecological objectives.* Bendigo, Victoria : RM Consulting Group Pty Ltd for Mallee, North Central and Wimmera Catchment Management Authorities, 2025.

8. **Wimmera CMA.** *Environmental Water Management Plan, Wimmera Mallee Pipeline Wetlands, Wimmera CMA Region.* Horsham : Wimmera CMA, 2015.

9. **Cornell, G, Stoios, R and Lyon, J.** *Water quality traffic lights for native fish. Unpublished Client Report for the Department of Energy, Environment and Climate Action.* Heidelberg, Victoria : Arthur Rylah Institute for Environmental Research, 2024.

10. **Wimmera Catchment Management Authority.** *Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their Terminal Lakes.* Horsham : RM Consulting Group, 2024.

11. **Wimmera CMA.** *Wimmera Catchment Hypoxic Blackwater Coordination Plan .* Horsham : Wimmera Catchment Management Authority, 2023.

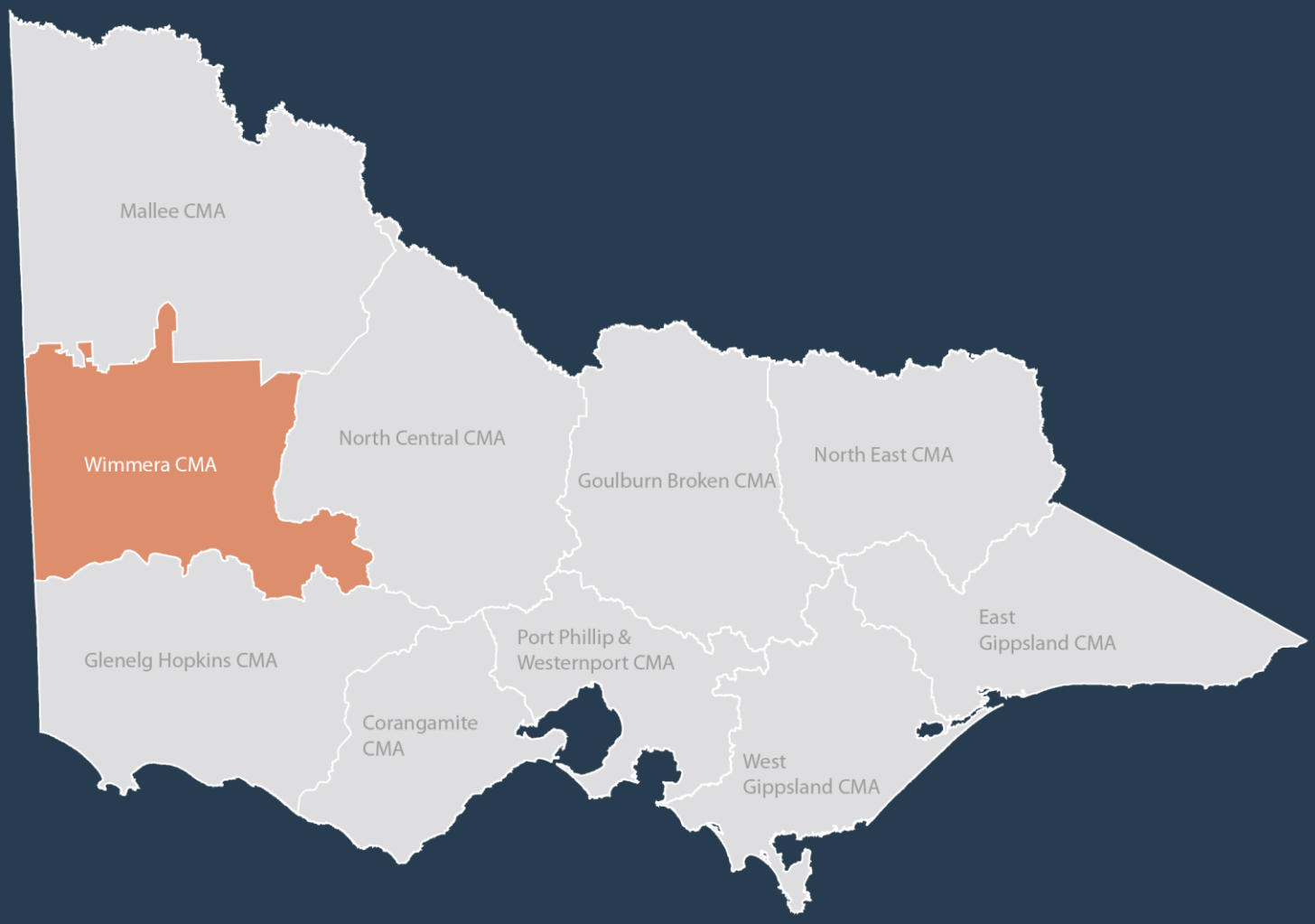
12. **Wimmera CMA.** *Monitoring, Evaluation, Reporting Improvement Plan for the Rivers 2040 – Wimmera Clearwater Revival Flagship Waterway Project.* Horsham : Wimmera Catchment Management Authority, 2022.

13. **Murray-Darling Basin Authority.** *Basin Plan.* Canberra : Murray-Darling Basin Authority, 2025.

14. **Murray-Darling Basin Authority.** *Basin-wide environmental watering strategy.* Canberra : Murray–Darling Basin Authority, 2025.

15. **Department of Energy, Environment and Climate Action.** *Guidance for the development of regional waterway strategies.* Melbourne : Unpublished. Department of Energy, Environment and Climate Action, 2025.

Wimmera CMA is one of 9 CMAs and Melbourne Water working in Victoria under an integrated catchment management approach to achieve sustainability across the state.
Each CMA supports the role that communities and government play in protecting and enhancing local natural environments including waterways.



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