Co-design and co-delivery: Maintaining momentum at the mid-point of the Healthy Waterways Strategy for Melbourne

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Key Points

- The Healthy Waterways Strategy (2018) is the overarching planning document for the management of rivers, wetlands and estuaries in the Port Phillip and Westernport region in Victoria, from 2018 to 2028.
- The Strategy was co-designed by Melbourne Water, its partners and community stakeholders; and is being co-delivered.
- The mid-point in the Strategy was an opportunity to reflect on the success of co-design and the challenges of co-delivery and annual reporting.
- Key lessons learned relate to systems to map and track data and progress; engagement techniques for different audiences, maintaining the momentum of co-design, the development of a website that collates outputs from co-delivery partners, and maintaining flexibility to review and update the Strategy as required.
- These lessons are relevant to the next Strategy for the Port Phillip and Westernport region, and to other jurisdictions embarking on strategy development to guide the implementation of catchment management.

Abstract

- The Healthy Waterways Strategy (2018) is the overarching planning document for the management of rivers, wetlands and estuaries in the Port Phillip and Westernport region in Victoria, from 2018 to 2028. It includes 956+ performance objectives, many of which are reported annually. The Strategy, including performance objectives, was co-designed by Melbourne Water, its partners and community stakeholders; and is being co-delivered. The mid-point in the Strategy has provided an opportunity to reflect on the success of co-design and the challenges of co-delivery and annual reporting.

- The implementation of the Strategy and its mid-term review have raised questions such as - how do you maintain co-delivery and co-reporting over ten years? What systems are needed for reporting, and how long will it take to establish them? How do you write a really good performance objective? And how do you communicate this work to different audiences ranging from politicians to the public?

- This paper presents lessons learned in the Strategy's first five years. These include systems and rubrics to map and track data and progress; engagement techniques for different audiences and maintaining the momentum of co-design; the development of a website that collates outputs from co-delivery partners; and maintaining flexibility to review and update the Strategy as required.

- Key lessons are relevant to the next Strategy for the Port Phillip and Westernport region, and to other jurisdictions embarking on strategy development to guide the implementation of catchment management.

Keywords

Co-design; co-delivery; stakeholder engagement; rivers; estuaries; wetlands; waterway health strategy; monitoring evaluation and reporting.

Introduction

The Healthy Waterways Strategy (the Strategy) is the overarching planning document for the management of rivers, wetlands and estuaries in the Port Phillip and Westernport region (Melbourne Water, 2018). It aims to ensure that the value of these assets to the community is protected and improved, taking a 50-year outlook. It is a requirement under the Victorian *Water Act 1989* that Melbourne Water facilitates a regional waterway strategy. The background to the Strategy, its implementation so far, key learnings and improvement initiatives from a reporting perspective, are presented below.

Background

The 2018 Strategy built on the learnings of the previous Healthy Waterways Strategy (2013-2018) and Stormwater Strategy (2013-2018) which both led to a wide range of waterway and stormwater initiatives. These included improved planning controls, enforcement, research, monitoring, advocacy, knowledge-sharing, vegetation and habitat management, asset protection and renewal, integrated stormwater management, environmental water and diversions management. Towards the end of these strategies, average community satisfaction toward local waterways was measured to be 87 per cent (Waterways Perceptions survey, 2018).

The development of the 2018 Strategy capitalised on these successes and community sentiment, focusing on collaborative design (co-design). It was anticipated that by bringing various stakeholders together to collaborate, share knowledge and align efforts, this Strategy would achieve real and lasting improvements to the health of waterways in the region.

The 2018 Strategy is driven by a single, regional 50-year vision which was adopted from the previous (2013) Healthy Waterways Strategy:

> ‘Healthy and valued waterways are integrated with the broader landscape, and enhance life and liveability. Waterways connect diverse and thriving communities of plants and animals; provide amenity to urban and rural areas, and engage communities with their environment; and are managed sustainably to enhance environmental, economic, social and cultural values.’

Through a co-design process, the community and government agencies worked together to develop priorities and preferred approaches for waterway management. Research and scientific modelling were also used to identify the current condition and environmental and social values of individual waterways across the region, explore the impacts of climate change and human activity on waterways, and tested management options against desired outcomes.

A framework for each of the five major catchments (Dandenong, Maribyrnong, Werribee, Westernport and Yarra) in the Melbourne Water region was developed which identified catchment-specific visions, goals, long-term targets (10 to 50 years), and 10-year performance objectives. The delivery and implementation of performance objectives would enable successful implementation of the Strategy and therefore contribute to long-term, 50-year outcomes. The program logic for the Strategy is presented in Figure 1.

The Strategy also asserted that the overall long-term health of waterways can be assessed using a framework of waterway values and waterway conditions. Acknowledging that not all features of waterways can be effectively assessed and tracked, nine key values were chosen on the basis of their importance to the community, and their ability to represent the range of environmental and social values. The assumption was that improving key values would in turn improve the environmental, social, cultural and economic waterway values, thereby paving the way to achieving the overarching vision of the Strategy. The nine key values are amenity, community connection, recreation, birds, fish, frogs, macroinvertebrates, platypus, and vegetation (Figure 1).

A range of waterway conditions were also chosen which supported the waterway values. These include aspects of waterway health such as stormwater condition, physical form, vegetation quality and extent, water

for the environment, water regime, instream connectivity and water quality. Conditions supporting social key values for rivers were also outlined such as access, participation, recreational water quality and litter absence.

The relationship between 10-year performance objectives, waterway conditions targets and waterway values targets is shown in the Program Logic in Figure 1.

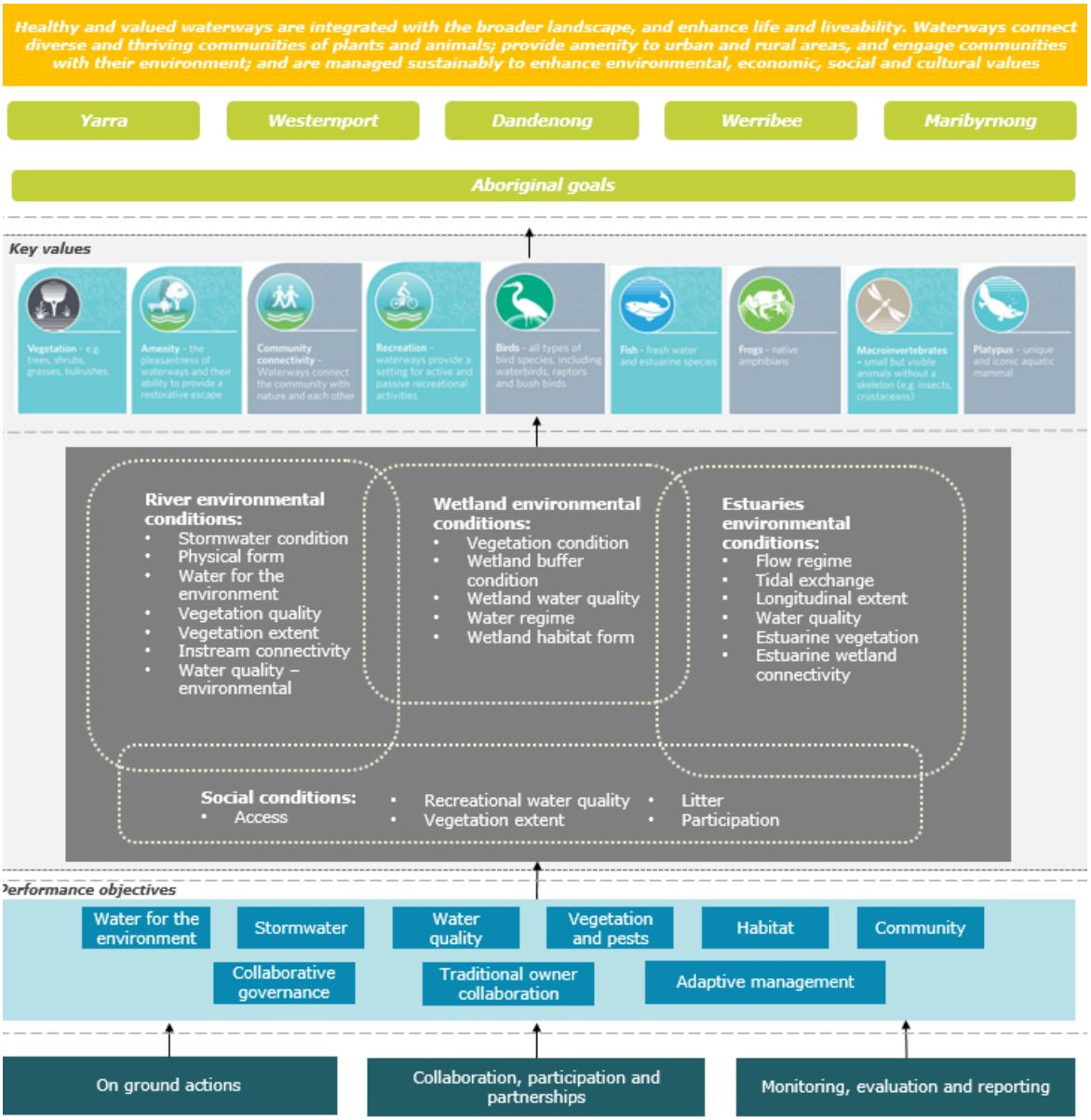

Fig 1 – Program logic for the Healthy Waterways Strategy (Melabourne Water, 2018)

Ten-year performance objectives

Performance objectives were developed for the rivers (and creeks), wetlands and estuaries in 169 sub-catchments, within the five major catchments. They were written in alignment with the overarching Strategy. The performance objectives were initially sorted into groups such as Habitat, Vegetation, Engaged Communities, Community Places, Water for the environment, Water Quality and Stormwater, and then further split into sub-groups, for example Reduce Agricultural Run-off and Reduce Septic Impacts, in the Water Quality Group. An example of a performance objective for vegetation in a particular sub-catchment reads: 'By 2028, maintain existing vegetation (29 km, 114 ha) annually, along priority reaches.' The strategy

also included 45 performance objectives which applied to the whole region (regional performance objectives). The extent of themes covered by the 2018 Healthy Waterways Strategy are shown in Table 1.

Table 1. Themes for which performance objectives were developed in the Strategy

Themes	Asset (rivers, estuaries, wetlands) applied to:
Community – increase access	Rivers, Estuaries, Wetlands
Community – increase participation	Rivers
Habitat – Mitigate threats to physical form	Rivers, Estuaries
Habitat – Improve fish passage	Rivers, Estuaries
Habitat – Protect specific habitat	Rivers, Wetlands
Habitat – Re-engage floodplains	Rivers, Estuaries
Habitat – Manage pests	Estuaries, Wetlands
Stormwater – Treat existing	Rivers
Stormwater – Harvest	Rivers
Stormwater – Infiltrate	Rivers
Stormwater – Build systems	Wetlands
Stormwater – Maintain systems	Wetlands
Stormwater – Implement plans	Wetlands
Vegetation – Establish buffers	Rivers, Wetlands
Vegetation – Protect / maintain	Rivers
Vegetation – Protect / maintain / improve	Estuaries, Wetlands
Water for the environment – Maintain / improve flow regime	Rivers, Estuaries, Wetlands
Water for the environment – Increase reserve volume	Rivers, Estuaries
Water quality – Maintain recreational water use	Rivers
Water quality – Reduce construction run-off	Rivers, Estuaries
Water quality – Reduce industrial runoff	Rivers
Water quality – Maintain STP loads	Rivers
Water quality – Reduce septic impacts	Rivers
Water quality – Reduce agricultural runoff	Rivers, Estuaries, Wetlands
Water quality – Maintain for amenity	Estuaries
Water quality – Monitor	Estuaries
Management – respond to climate change	Estuaries
Cultural	Whole region, regional performance objectives
Economic	Whole region, regional performance objectives
Management	Whole region, regional performance objectives

Governance, implementation and review

The Strategy was to be a shared strategy across Melbourne Water, state and local government, water corporations and the community; and collaborative partners committed to working towards the long-term protection and enhancement of the region's waterways, together. Melbourne Water would take on the lead role in facilitating co-delivery with all partners. A Regional Leadership Group (RLG) was established with representatives from partner organisations such as Melbourne Water, the Victorian State Government, The Environment Protection Authority (EPA), the Municipal Association of Victoria (MAV) and Parks Victoria to oversee the implementation and co-delivery of the Strategy.

The Co-designed Catchment Programs would be reviewed and updated over the 10-year life of the Strategy to reflect changes in catchment condition, progress of works, and to respond flexibly to emerging opportunities or challenges. Progress towards the 10-year targets (performance objectives) would be reported annually for the majority of the 956 performance objectives. Data would also be needed to inform reporting midway, in 2022 ('the mid-term review'), and again in 2026 ('end of Strategy evaluation'), to allow time for evaluation and for findings to be adopted before the preparation of a new strategy.

Tracking Strategy progress

Following the release of the Strategy, Monitoring and Evaluation Plans (MEPs) were developed as part of a broader Monitoring and Evaluation, Reporting and Improvement (MERI) Framework. These plans describe the monitoring indicators and reporting requirements needed to effectively track progress towards targets and

objectives in the Strategy. They also outline how to evaluate the success of the Strategy. Four separate MEPs were developed, one for the Rivers, Estuaries, Wetlands and the Regional Performance Objectives.

The MEPs include crucial details about performance objectives and how they should be judged at the catchment level, as being 'on-track', 'slightly off-track' or 'significantly off-track', each year, over the 10-year Strategy. For many performance objectives, particularly those where numerical data is available, a rubric was developed to enable this assessment. An example of the rubric for Vegetation along rivers and creeks in the Dandenong catchment is shown below.

Year	Establish vegetation (ha)			Maintain vegetation (ha) *=high quality veg (level 4 and 5)		
	On-track	Slightly off-track	Significantly off-track	On-track	Slightly off-track	Significantly off-track
18/19	>3	2-3	<2	>33 and >6*	26-33 and 4-6*	<26 and<4*
19/20	>8	6-8	<6	>66 and >11*	53-66 and 9-11*	<53 and <9*
20/21	>16	13-16	<13	>99 and >17*	79-99 and 13-17*	<79 and <13*
21/22	>39	31-39	<31	>132 and >22*	106-132 and 18-22*	<106 and <18*
22/23	>55	44-55	<44	>165 and >28*	132-165 and 22-28*	<132 and <22*
23/24	>71	57-71	<57	>198 and >34*	158-198 and 27-34*	<158 and >34*
24/25	>94	75-94	<75	>231 and >39*	185-231 and 31-39*	<185 and <31*
25/26	>126	100-126	<100	>264 and >45*	211-264 and 36-45*	<211 and <36*
26/27	>141	113-141	<113	>297 and >50*	238-297 and 40-50*	<238 and <40*
27/28	>157	126-157	<126	>330 and >56*	264-330 and 45-56*	<264 and <45*

Figure 2 Example rubric for assessing progress towards vegetation targets in the Dandenong catchment

Where quantitative data is not available e.g. for mitigating impacts from industrial landuses, construction run-off, or septic tanks, narrative progress reports are written to describe progress towards 10-year targets.

It was originally intended to continue developing rubrics for themes without them in the MEPs, as more data and information became available. However, this process has been slow due to the focus of resources on annual reporting, and loss of staff and corporate knowledge at Melbourne Water. Since the release of the MEPS, a rubric for the Improve Fish Passage theme has been developed and will be approved through the mid-term review process. Other rubrics such as for Improving Physical Form are intended for development in the second half of the Strategy but will be resource dependent.

Key insights:

- Rubrics help track progress *during* the Strategy (not just at the end) - This means that information can be used early, to inform internal and external stakeholders of the potential that targets may not be achieved. It allows for the re-allocation of resources, adaptive management and communication. This data has also been used for the mid- term review of Strategy progress, and recommendations for change, as well as feeding into the development of the next Strategy.

Website development

A key element of reporting on Strategy progress is the development of the Healthy Waterways Strategy website. Initially Melbourne Water needed an accessible site to house the Strategy documents and to present annual reporting of performance objectives and five-yearly reporting of values and conditions across all waterway types and spatial scales (Grice *et al.* 2021). Website development started in 2019 and used user experience (UX) research to determine each different user group and understand their specific needs.

Grice *et al.* (2021) who conducted this research and developed the website, indicated that one of the most important findings of the interviews was that progress towards performance objectives, as opposed to conditions and values, was the most important content to the majority of users.

The website aimed to provide the best of both worlds to users - simplicity for all and detail just for those who want it (Grice 2021). Using the research with users, and an interactive design pattern called progressive disclosure, Grice *et al* aimed to identify which information was most important to which users and present it accordingly.

The monitoring, evaluation, reporting and improvement (MERI) framework for the strategy was developed alongside the website, which posed significant challenges for determining how different indicators would be reported. It was noted by a Senior Executive at Melbourne Water that the team was 'building the plane while flying it'. Once the MERI framework was further developed, it became clear that the amount of information to be presented was immense and complex, far too much even for a progressive disclosure approach to manage. A major design decision was made – the Report Card would be dedicated specifically to reporting progress towards the 10-year performance objectives, to allow this information, deemed most important by the majority of users, to be accessed as easily as possible and not be overcrowded with reporting of the conditions and values. Key values and waterways conditions would be reported in detail separately in a more freeform storytelling fashion with supporting data where it was available. In all, more than 20 iterations of the design were created (Grice *et al* 2021).

In keeping with the need for simplicity on the website, some aspects of the Strategy such as the group and sub-group (theme) names; and the complexity of performance objectives were also streamlined. Group and theme names were reduced in length, for instance from 'Community Places' to 'Community'; and from the original sub-group of 'Increase access to and along waterways, wetlands and estuaries by filling gaps and improving connections to existing path networks', to 'Increase Access' on the website.

In addition, several performance objectives included multiple actions and numerical targets which could not be easily and simply reported on the website under the one performance objective. As a result, performance objectives such as 'for every hectare of new impervious area, this requires harvesting around 5.8 ML/y and infiltrating 2.2 ML/y', were split into the themes 'Harvest' and 'Infiltrate'. This also occurred for vegetation performance objectives related to rivers and some water quality performance objectives.

Key insights:

- Know your audience – don't second guess, conduct user research to determine which information is most important and present it accordingly.
- Keep it simple – in the development of targets, think about how progress towards them might be readily, and clearly reported, including online.

Improvement initiatives:

- In 2024, 'info tabs' began to be populated on the website. These apply to each theme e.g. Vegetation, Stormwater etc. and provide information on the intent of the performance objective, how progress is tracked and data sources that have been used. This initiative summarises information in the MEPs in a much more easily digestible form. Info tabs have been completed for three groups so far (Vegetation, Stormwater and Reduce Agricultural Run-off), with more to follow.

Reporting and communication

Data is gathered annually to assess progress towards performance objectives. This process takes several months after the end of each financial year, and costs approximately 10% of the overall budget for the implementation of the Strategy. Stakeholders are engaged to collect data using a range of techniques such as

preliminary meetings, emails or workshops depending on the group or theme and how familiar staff are with the Strategy and performance objective reporting.

Approximately 84 individuals from Melbourne Water and 85 external stakeholders from 30 stakeholder organisations have contributed to annual reporting in the first half of the Strategy (but these numbers don't include the on-ground, or other staff who might be involved in capturing the data). Much of the data for vegetation performance objectives (such as extent of revegetation, or pest plant and animal control) is sourced through Melbourne Water's GIS system.

A key element of this work is that the engagement is continuous. Each year there are new people (and sometimes organisations) to talk to regarding Strategy reporting. This is due to staff turnover, organisational restructures and improvement initiatives to capture new works which can contribute to Strategy targets. For many of the stakeholders, this is not statutory or mandatory reporting, so a degree of goodwill, understanding of partner organisations, and good working relationships are required.

Working with stakeholders on annual reporting is also an opportunity to identify performance objectives which 'don't quite hit the mark' or don't make sense in a particular sub-catchment (e.g. a performance objective for managing platypus in an estuary, when platypus don't tend to use estuaries; or if a target for hectares treated through revegetation was calculated incorrectly during the development of the Strategy; or if the intent of a performance objective is not clear or measurable). This information can feed into the mid-term review or the next Strategy, allowing performance objectives to be corrected. It is also useful to let stakeholders know that these processes are in place for performance objectives to be refined during the course of the Strategy.

The number of performance objectives in the Strategy can seem overwhelming. However, if nested within catchments, and managed systematically, it can be beneficial in terms of communicating what is going on at 'grass roots level' in a 'Friends Group' patch or at a particular wetland; as well as at a catchment level for an agency. The key is in how the information is communicated appropriately to different audiences (i.e. lumped up or broken down). Some redundancy / duplication has been found in the performance objectives in the Strategy and these are now reported together to avoid unnecessary effort.

Overall, approximately 10% of performance objectives have required refinement through the mid-term review, which is not bad given that there are 956+ of them.

Each year, the data and narrative progress reports from stakeholders are reviewed, entered into templates and then submitted to the web developer TRUII for upload to a staging (draft) website.

In addition, an Annual Summary is prepared for the website which captures the key elements of each annual report e.g. which groups are themes are 'on-track' or 'off-track' and key messages around these. This content is the most useful for communicating strategy progress, or issues to be resolved, to managers within Melbourne Water and partner organisations. It is also provided to the General Manager of Melbourne Water and the Minster for Water for approval before the release of the annual report on the website each year.

Case studies are also developed each year which show-case innovative and interesting projects that are linked to achieving performance objectives, or protecting and improving key values and conditions. Many of the case studies include content such as videos and photos contributed by external partners and stakeholders. They are entertaining to read and have catchy titles. Anecdotally, several stakeholders have commented that these are a 'favourite part of the website' due to their dynamism, emphasis on community, and story-telling.

Annual reporting also includes a review period, where stakeholders who have contributed data are given the opportunity to check and review information on the staging website before it is finalised. Once stakeholders are happy with their data, approvals are sought from within Melbourne Water and DEECA on behalf of the Minister for Water. The annual report is released at the end of each calendar year, or early in the new year.

Key insights:

- The engagement never stops – for many reasons, including staff turnover and restructures, we can't assume that people will understand the reporting process each year. We need to allow time for getting internal and external stakeholders 'up to speed' on the Strategy and the process.

- SMART (Specific, Measurable, Attainable, Relevant, Timebound) targets are good targets – performance objectives written using this system are easy to report on, their intent is clear for stakeholders, and progress towards a measurable target can be tracked. SMART targets eliminate the 'what did the Strategy developers actually mean when they wrote this performance objective five years ago' head-scratching conversations during reporting. In addition, key stakeholders should be consulted prior to the release of the wording of final performance objectives, to ensure they are accurate and able to be implemented.

- Performance objectives that are nested within a catchment, and can be can be 'lumped up or broken down' are useful for communicating different information to different audiences.

Key improvements:

- In 2024, it is hoped to launch a 'lunch and learn' session for (new and old) Melbourne Water staff about the strategy, the website and reporting requirements. This will enable two-way conversations about how reporting gets done amongst other commitments, synergies / efficiencies, and give staff a contact if they have any future queries about the Strategy.

- In 2024 and beyond, it is planned to increase the number of workshops with some stakeholder groups (such as the Rural Land Program within Melbourne Water, or Local Government / Parks Victoria involved in wetland management). This will enable reporting to be completed in one meeting, and allow for communication across stakeholder groups, potentially leading to a community of practice in future.

- Refinements to some performance objectives (e.g. oddities and performance objectives that don't make sense) will be recommended through the Strategy mid-term review.

Maintaining momentum and adaptive management

Maintaining momentum mid-way through a 10-year Strategy, particularly one where face to face collaboration was impacted by COVID-19, is key to the success of the Strategy. Broad scale initiatives are in development but are likely to include more catchment based 'forums' to communicate progress of the Strategy to stakeholders, but also allow for open discussion on implementation issues, or new and emerging issues.

At the finer scale, annual reporting will continue (and will continue to keep stakeholders engaged with the day to day delivery of the Strategy) but will include more face to face workshops and meetings where possible to build Strategy profile, communication and a sense of responsibility for co-delivery. Improvements to make reporting less onerous for stakeholders will also be implemented (e.g. time saving or mapping initiatives). Focus will also be on improving written progress reports, so that they 'tell the story' of the real details of projects, who was involved, why, what did they do and what might happen next? This will build a picture of what has been happening over-time, throughout the Strategy. This will also assist with the end of Strategy evaluation of progress towards performance objectives.

The mid-term review of the Strategy was recently conducted. While the Strategy is making good progress on a number of targets (Figure 3), the review also made recommendations to improve delivery.

Figure 3. Strategy progress

Recommendations from the mid term review are:

1. Refocus effort in critical areas
2. Reinvigorate delivery between Strategy partners
3. Enable traditional owner-led input to review processes and implementation
4. Accelerate delivery of stormwater and pollution management targets
5. Improve protection of natural wetlands and headwater streams
6. Coordinate efforts across agencies to improve water for the environment
7. Find new ways of working with landholders on vegetation management and deer control
8. Expand understanding, assessment and improvement of social values
9. Continue to improve monitoring and evaluation.

These are further described in White *et al,* 2024.

Conclusions

The mid-point of the Healthy Waterways Strategy has provided an opportunity to review Strategy development and implementation. The focus of the second half of the Strategy will be on maintaining and improving progress towards targets, using the tools developed to date, plus a redoubled emphasis on co-delivery. Key lessons learned are relevant to the next Strategy for the Port Phillip and Westernport region, and to other jurisdictions embarking on strategy development to guide the implementation of catchment management.

References

Grice,T. et al.(2021) – *'*Striking the balance between oversimplified and overdetailed: A tale of two report cards.' *in Proceedings of the 10th Australian Stream Management Conference.* River Basin Management Society (RBMS), Melbourne.

Melbourne Water (2018) Healthy Waterways Strategy. Melbourne Water, Melbourne.

White *et al* (2024) 'Healthy Waterways Strategy mid-term review: learning by doing' (in press) *in Proceedings of the 11th Australian Stream Management Conference.* River Basin Management Society (RBMS), Melbourne.