

PRINCIPAL 10: COLIBAN INTEGRATED CATCHMENT MANAGEMENT PLAN PARTNERSHIP

KEYWORDS

Drinking Water Risk Management, Source Water, Catchment, Supply, Natural Resources Management

SOURCE WATER PROTECTION PRINCIPLES

The Case Study is focused on the application of Principle 10 to achieve catchment-related outcomes. The project's development was also driven by the need to protect the source waters of multiple drinking water supplies, which in turn addresses multiple source water protection principles, as listed below:

Principle 10: Achieving source water protection through leading the way and partnerships

In an open drinking water supply catchment, landholders look to the water utility to provide guidance and set the standard for source water protection. If it is perceived that the water utility does not do best practice management, then source water protection initiatives involving landholders are likely to be harder to achieve.

The importance of water utilities' leading the way' in source water protection cannot be overstated.

Leadership is especially true, given water utilities often own and manage lands in the immediate proximity to water supply storages and offtakes.

Enduring partnerships within and across government agencies and councils, and with community and industry groups, Indigenous stakeholders (Principle 11) and catchment landholders are required to achieve source water protection. While water utilities should 'lead the way', sustainable catchment management requires effective and efficient relationships between stakeholders. Only by understanding who has a stake in a decision and understanding the nature of their position and inter-relationships with each other can the appropriate stakeholders be effectively involved in decision-making¹.

Partnerships should focus on shared knowledge regarding stakeholder water values, and consider the state and condition of water resources, processes influencing water quality, and alternative management strategies. When aiming to find a balanced policy outcome, the decision-making process should be completed transparently and equitably, ensuring the source water is protected.

CASE STUDY DETAILS:

Year:

2015 to 2021

Location:

Coliban Region Water Corporation (Coliban Water) and North Central Catchment Management Authority (North Central CMA) are based in the central Victorian town of Bendigo. The Upper Coliban Catchment is located on the northern side of Great Dividing Range of Central Victoria. Part of the Campaspe River basin within the Murray Darling Basin, the Coliban River starts on the range and flows north. The Upper Coliban catchment is defined by three drinking water storages located close together on the Coliban River, starting with the Upper Coliban Reservoir, then the Lauriston Reservoir, with the final storage being the Malmsbury Reservoir.

Team:

Coliban Water, North Central CMA, Dja Dja Wurrung and Local Governments

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¹ Reed, M. S., Graves, A., Dandy, N., Posthumus, H., Hubacek, K., Morris, J., Prell, C., Quinn, C. H., & Stringer, L. C. (2009). Who's in and why? A typology of stakeholder analysis methods for natural resource management. *Journal of environmental management*, 90(5), 1933-1949.

CASE STUDY OUTLINE:

Key drivers:

The Upper Coliban Catchment is an open catchment supplying source water for several drinking water supplies. Coliban Water has a planning function under the Victoria's *Planning and Environment Act 1987*, for the use and development of land in declared water supply catchments. Under the *Land and Catchment Protection Act 1994*, North Central CMA is responsible for prioritising catchment and waterway health by identifying assets within a Regional Catchment Strategy (RCS).

For funding of Natural Resource Management in Victoria, an Environmental Contribution Levy (ECL) is payable by Water Corporations to the State Government under the *Water Industries Act 1994*, and the funds collected are directed to environmental works and initiatives for the sustainable management of water resources, most commonly through tranche programs to the state's Catchment Management Authorities (CMAs). However, the ECL is then invested over a broad geographic area of a catchment, and project investment is directed towards key natural assets identified within the RCS. The demands on ECL funding is high, therefore, a need exists to develop targeted financial support and a business case for land management for source waters used in the supply of drinking water.

Approach taken:

In 2015, Coliban Water and the North Central CMA formed a strategic partnership to develop an Integrated Catchment Management Plan (ICMP) to meet shared objectives of improved catchment health for managing risks to source water quality for drinking supplies and waterway health outcomes.

The ICMP was developed to address improved catchment management outcomes and was underpinned by a partnership between Coliban Water and North Central CMA. The identification of shared strategic goals through a Memorandum of Understanding (MoU) allowed for sustainable economic resourcing of catchment enhancement works and the targeting of source water areas for enhancement. The MoU supported greater collaboration between Coliban Water and North Central CMA, and ultimately provided for the delivery and implementation of the Upper Coliban ICMP, through the Coliban Water and North Central CMA partnership program 'A Healthy Coliban Catchment'.

The strategic intent of the MoU was to create a framework that supports each organisation in achieving its stated objectives in relation to protecting or enhancing the beneficial uses of catchment areas and/or waterways. The key outcome identified in an addendum of actions to the MoU was to develop a Cost-Benefit analysis of a shared ICMP that would support water corporation investment in Natural Resource Management, highlighting the benefits to both Coliban Water and the North Central CMA.

The North Central CMA has considerably greater experience in delivering, and capacity to undertake, the implementation of on-ground works with landowners, than Coliban Water has, both from the perspective of capability and as a core business function. For Coliban Water, to become involved directly in on-ground fencing, restoration or revegetation work² (separate from works on land that Coliban Water either owns or manages) could be seen as a duplication of roles between Coliban Water and North Central CMA.

Through a series of internal and external stakeholder workshops, the formation of a Community Reference Group, which included state government agencies, and the utilisation of the NRM Investment Framework for Environmental Resources (INFFER) tool, targets and goals were established that could then support the benefit:cost analysis of Coliban Water providing a BAU program with matched investment from the North Central CMA programs.

² Principle 2: Multiple barriers are recognised as a protection for source waters and should be maintained. Ensuring waterways are buffered from land use changes and risks.

As discussed, the framework created by the MoU established shared objectives and critically, there was a need to establish the business case for Coliban Water to invest in NRM, through its Pricing Submission 2018 (PS18) to the Victorian Essential Services Commission (ESC), the water industry's economic regulator.³

Outcomes:

To develop the Upper Coliban ICMP a two phase process was adopted:

- Phase 1: Project scoping
- Phase 2: Business Plan and Upper Coliban ICMP development

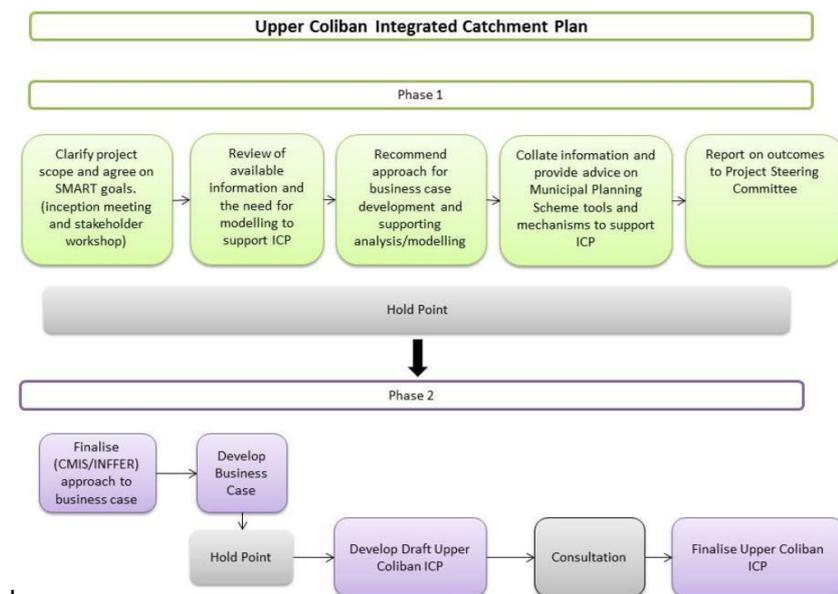


Figure 1 Outline of the project approach

The initial action for the development of the ICMP was the development of a background paper (Roberts, Dickson, Park (2015)), which highlighted the complexity of the issues associated with the achievement of integrated catchment outcomes in the Upper Coliban Catchment. The background paper was viewed as a preliminary assessment of the values, issues, threats, existing initiatives and knowledge gaps.

The establishment of shared understandings of the issues and values to be addressed informed the development of a preferred approach for an ICMP for the Upper Coliban Catchment, which covered:

- The extent to which the inclusion of regulatory and planning scheme tools could be used to achieve the desired outcomes;
- The extent to which land management practices (groundcover management, in particular) should be considered in the mix of catchment activities, in addition to riparian management activities;
- Discussion of the likely barriers to implementation of the management actions and ICMP;
- The availability of evidence, including data and expert local knowledge, to support the development of an Integrated Catchment Management Plan.

A key part of developing a realistic and feasible ICMP is the need to establish 'SMART' goals (i.e. Specific, Measurable, Achievable, Realistic and Time-bound goals). Coliban Water and the North Central CMA agreed on four areas that would meet both organisations' objectives: future development/drinking water quality; waterway health; ecosystem connectivity; and water security. Specifying the SMART goals was the basis upon which options could be assessed as part of the business case development. The agreed SMART goals are outlined below and were developed based on several rounds of discussion and comment. Roberts, Dickson, Park (2016)

³ Principle 6: Appropriate investment and risk-based decision-making should be followed

Future development: *'From 2016, all proposed developments in the catchment require the implementation of appropriate actions to mitigate risks to drinking water quality through offsetting impacts from stormwater runoff quality and quantity in rural living and town zones'.*

Waterway health: *'By 2036, there is no uncontrolled livestock access to Kangaroo Creek, Upper Coliban River and Little Coliban Rivers, as well as the Jones, Milking Yard and Shephards Hut Creeks, and the Malmsbury, Lauriston and Upper Coliban Reservoirs'.*

Ecosystem connectivity: *'By 2036, there is a continuous vegetated riparian corridor, at least an average of 20m wide each side of Kangaroo Creek, Upper Coliban River and Little Coliban Rivers, and where land availability permits, around the Malmsbury, Lauriston and Upper Coliban Reservoirs. Other nominated unnamed waterways will be revegetated to 10m each side'.*

The fourth SMART goal, Water security, *future capacity of all dams on private land*, was identified through the process to be highly constrained by legislation and had the potential to be a barrier for ICMP adoption due to the high sensitivity regarding access to water and water entitlements. Therefore, a decision was made to remove it as a goal and identify water security as a target for further exploration with respect to the impacts of small dams.

The Investment Framework for Environmental Resources (INFFER), has been used extensively by the North Central CMA as a benefit:cost analysis (BCA) tool. INFFER was used to develop the business case due to the maturity of the process, and it is based on a clear articulation of the SMART goals development of an evidence-based logic for proposed interventions and estimations of benefits and costs, expressed as a benefit:cost ratio (BCR) for each option assessed..

The costs to achieve the goals were developed through discussion between the NCCMA and Coliban Water. Some of the staffing requirements were tested with stakeholders through workshops with participants from Dja Dja Wurrung, Landcare Networks, and landowners, and Macedon Ranges and Hepburn Shire Councils. The importance of estimating the amount of waterway protection required caused, by far, the most challenge to the project. In recognition of its importance in protecting the source catchment, particularly the risk posed by pathogens, an additional study was commissioned (Billington (2016)), which also necessitated additional work to define the level of protection of named and unnamed waterways.⁴

A further improvement to the BCR was established due to an investment in water quality monitoring being implemented through the Coliban Water routine sampling program, external to this project. Based on available information, results show that benefits outweigh costs by at least \$1.81 per dollar spent.

This scenario best represents the joint objectives and policy drivers of both organisations. From the North Central CMA's perspective, it incorporates its vision and objectives as articulated in the Regional Catchment Strategy. From Coliban Water's perspective, it recognises the fundamental importance of protecting the catchment as a supply of as high quality raw drinking, as feasible, and acknowledges that more needs to be done if to claim that it is addressing the most effective barrier of protecting the source catchment.⁵

The Upper Coliban ICMP has a 20-year vision, with a 10-15 year investment commitment, to deliver catchment-scale community engagement and land management improvements aimed at reducing risks to source water, as well as providing waterway health benefits and improved biodiversity linkages.

The governance structure for the Implementation of the Upper Coliban ICMP established an agreement between Coliban Water and North Central CMA to form a Technical Working Group, Project Management role and representative functions for the A Healthy Coliban Catchment (AHCC) program.

⁴ Principle 3: Human health protection requires priority – the source integral to Coliban Water Drinking water Risk Management Plan

⁵ Principle 1: Drinking water source protection should not be compromised – the source integral to Coliban Water Drinking water Risk Management Plan

The local Traditional Owners' Djaara, Dja Dja Wurrung People, have achieved Registered Aboriginal Party status, and signed a Recognition and Settlement Agreement with the State Government of Victoria on 28 March 2013. Dja Dja Wurrung Enterprises (DDW Enterprises Pty Ltd), are an active participant in the ICMP, through their inclusion on the Technical Working Group that is driving the ICMP, and through their input into the development of the ICMP's Annual Works Plan. The undertaking of an Aboriginal Waterways Assessment (AWA) for the Upper Coliban River Catchment area provided directions for opportunities for DDW Enterprises to engage, partner and support AWA outcomes within the ICMP.⁶

This project's scale and long-term nature, the implementation approach, and appropriate governance structures between Coliban Water and North Central CMA to deliver appropriate investment outcomes provides invaluable cost efficiencies in delivering NRM investment. The inclusion of catchment community representatives will also provide invaluable support for the project delivery.

The underlying partnership, and the identification of shared strategic goals, allows for sustainable economic resourcing of catchment enhancement works.

Lessons learnt:

Over its first 12 months, the Program re-established a Community Reference Group (CRG)⁷, which was established in the ICMP development phase, and a Technical Working Group (TWG) has also been established to ensure that the Project has a good governance structure, and to make sure that future decisions reflect the goals and aspirations of both organisations, as well as the local community. Maintaining an open dialogue with the catchment community through the Community Reference Group and regular project updates allows for feedback loop in with the decision making process.

The MoU between Coliban Water and the North Central CMA, was reviewed in 2019, and an updated 2021/22 Action Plan that supports the Coliban Water North Central CMA MoU was formulated. The MoU enables the protection and/or enhancement of the beneficial uses of catchment areas and the environment, with a focus on risks to water security from climate change and land-use change. A key action outlined in the MoU addendum Action Plan was the continued development and implementation of the Upper Coliban Integrated Catchment Management Plan.

Ultimately, Coliban Water, the North Central CMA, and the catchment community within the Upper Coliban River catchment will benefit from land management practices and waterway health improvements in the Upper Coliban River catchment area. The outcomes of the ICMP will hopefully leave an enduring, positive environmental and social legacy for this beautiful part of the state of Victoria.

The partnership between organisations provides an integrated approach to catchment management within Victoria's declared water supply protection catchments is a public health and environmental issue. The increasing demand on water resources in the context of climate change provides significant challenges to the north-central region of Victoria regarding balancing the environmental, economic, and social requirements for water.

⁶ Principle 11: Indigenous Australian participation in source protection is vital

⁷ Principle 8: Communication with the community is vital

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