

VICTORIAN INTEGRATED WATER MANAGEMENT FRAMEWORK

Project description

The Victorian IWM Framework ensures that water planning delivers on community expectations for resilience and liveability as we adapt to a changing climate and growing population. The Framework also ensures that broader investment in urban and peri-urban infrastructure takes an integrated approach to maximise water-related community outcomes. The Framework provides a platform to:

- Identify how Integrated Water Management planning contributes to the development of water utility Urban Water Strategies, local government strategies and catchment management and Traditional Owner activities across Victoria;
- Standardise the process of identifying, prioritising and investigating IWM opportunities for inclusion in IWM Plans;
- Identify key areas of policy and regulation reform necessary to deliver IWM;
- Establish IWM Forums across the State involving collaboration between water authorities, local government, catchment management authorities, traditional land owners, state regulators and planning bodies; and
- Guide the development of IWM Plans that reflect community values at a local level.

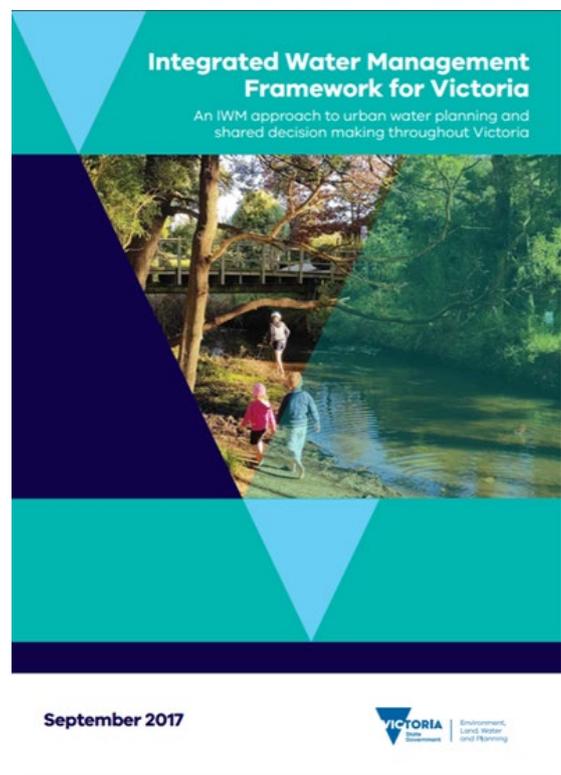


Image: IWM Framework for Victoria. Source: DELWP

Project drivers

THE VISION

The vision for the IWM Framework is supported by the whole-of-government planning policy, including the Victorian state water plan, Water for Victoria, and importantly, land-use planning strategies such as Plan Melbourne¹, and the Regional Growth Plans for each state

¹ DELWP 2017, Metropolitan planning Strategy, *Plan Melbourne, 2017-2050*.

planning region. Plan Melbourne states that “by considering the whole water cycle when planning for urban areas, we can improve wastewater management and recycling, support urban greening and cooling, protect waterways, minimise the impact of flooding and improve water security”.

The IWM Framework itself aims to “provide a consistent process for collaborative integrated water management planning with clear roles and responsibilities to deliver effective urban water management, including water supply, wastewater, flood resilience, urban waterway health and management of public places”².

THE PROBLEM

Over the long term, climate change will mean more extreme climatic events, less rainfall, and potentially 50 per cent reduction in streamflow in parts of Victoria by 2065. Victoria’s population will almost double by 2051, placing further demand on scarce water resources. Our challenge is to do more with less water.

Climate change will also see significant changes to the intensity and frequency of storms resulting in impacts on the quantity and quality of stormwater runoff which in turn impacts on public safety (floods), ecological health of downstream water ways and urban amenity. Increases in impervious area from urban development will exacerbate these impacts.

Population growth increases the generation of wastewater which, when coupled with climate change, also leads to a range of environmental pressures.

Climate change and population growth are also threatening the liveability of urban areas through impacts such as increased urban heat, increased flooding and reduced green spaces.

Significant investment will be made by multiple organisations, including water utilities to accommodate these two drivers – the challenge is to integrate these efforts to optimise total societal benefit.

Stakeholder and community engagement

A central component of the IWM Framework is IWM Forums, which are a non-statutory method of embedding collaboration across stakeholders with responsibility in the water cycle in Victoria. There are five forums across metropolitan Melbourne, corresponding to the five main waterway catchments, and include the metropolitan water corporations, local governments and Traditional Owners within those boundaries. Forums have also been established across regional Victoria based on urban water corporation boundaries, and includes the local governments, Catchment Management Authorities, and Traditional Owners within their service areas.

IWM Forums are attended typically by CEOs and MDs of participating organisations – this helps provide an authorising environment for practitioners at lower levels of the

² Minister for Water, in DELWP, 2017, *Integrated Water Management Framework for Victoria*.

organisations, who attend working groups comprising the same stakeholders, and who work collaboratively to develop projects.

Each IWM Forum has a Chair whose role it is to keep the Forum on track and to manage the often complex strategic process. Chairs can be independent (ie. external to government and agencies) or from one of the agencies involved in the IWM Forum process.

The Victorian IWM Framework states that IWM Forums will consider the water cycle with an urban focus that extends across peri-urban boundaries. The urban water cycle is made up of natural and constructed assets, including waterways, groundwater, water supply, wastewater and drainage. These are influenced by landscapes and land development.

The IWM Forums' objectives are to:

- Facilitate enduring collaboration in water management planning across organisations, sectors and disciplines;
- Create a shared vision for water management at a defined geographical scale;
- Develop a pathway to achieve the vision, including identifying and prioritising projects;
- Coordinate and oversee the ongoing planning and delivery of priority projects at the IWM Forum Area scale;
- Ensure community and traditional owner values are represented in water management planning;
- Identify barriers to efficient IWM delivery; and
- Ensure investment in water management projects is optimised to deliver multiple benefits and best community value solutions.

Outcomes sought

The IWM Framework proposes seven strategic water-related outcomes that will deliver on the vision in the state water plan, Water for Victoria, to “build resilient and liveable cities and towns”. These are presented in Figure 9 below.

Victoria's IWM strategic outcomes

Safe, secure, affordable supplies in an uncertain future	Effective and affordable wastewater system	Avoided or minimised existing and future flood risks	Healthy and valued waterways and marine environments	Healthy and valued urban landscapes	Community values are reflected in place based planning	Jobs, economic growth and innovation
A diverse range of water supplies and resources	Meets public health and environmental standards	Appropriate levels of flood protection in urban areas	Waterway health is maintained and improved	Active and passive recreation supported by water	Diverse urban landscapes that reflect local conditions and community values	Jobs and economic growth supported by water
Water quality meetings regulatory standards and community expectations	Effective sewerage systems	Community and property resilient to local flood risk	Health of marine environment is maintained and improved	Improved connectivity and access for active transport links	Empower and engaged community	Innovative planning and operation
Efficiently managed water and demand	Optimised onsite domestic systems			Urban landscapes retain moisture for cooler, greener cities and towns	Local water related risks and issues understood and managed	Strong governance, collaboration and performance
Secure water supply for industry and economy	Waste-to-resource opportunities are maximised			Waterways and coast environments accessible as valuable open space		
Water available to maintain valued green community assets				Aboriginal cultural values associated with waterways protected		

Figure: Strategic outcomes from the Victorian Integrated Water Management Framework. Source: MSDI

Subsequent work recognised that all seven outcomes need to be supported by three strategic enablers that reflect the ability and willingness of organisations to implement IWM, that is: commitment, collaboration and capacity.

These are reflected in the *IWM Principles and Best Practice for Water Utilities* paper as the three Enabling Outcome Areas:

- Key Outcome Area 1 – An engaged, inspired and knowledgeable community that drives decision making
- Key Outcome Area 2 – Leadership and capacity
- Key Outcome Area 3 – Institutional, policy and regulatory arrangements that drive integrated and collaborative approaches to water cycle planning

The major deliverable of each IWM Forum is to develop a Strategic Directions Statement – essentially a statement of collaborative intent by all stakeholders involved in each Forum, to work towards ‘best endeavours’ (as IWM Forums are not a statutory process). Importantly, these documents were developed collaboratively with input from practitioners in each participating organisation, contain each organisation’s logo, and are publically available.

The above list of Strategic Outcomes is used in the analysis and evaluation of all the Victorian IWM programs and projects, and are tailored to the particular needs of each region as part of the region’s Strategic Directions Statement.

Options assessed

The Victorian IWM Framework was developed as a top down and bottom up approach, in response to both government leadership and industry and community expectations. DELWP

undertook a scan of policy and strategic approaches elsewhere in Australia and overseas before developing this approach in consultation with stakeholders and the community.

Discussion

OUTCOMES TO DATE FROM IWM FORUM PROCESS

To date each of the metropolitan Forums, and most of the regional Victorian Forums have developed a Strategic Directions Statement³ which contains their own unique place-based sets of outcomes, within the overall framework outlined above. These documents contain a transparent pipeline of priority IWM projects that have been co-developed with stakeholders.

In addition, the metropolitan Melbourne Forums are overseeing the development of their own catchment-scale IWM Plans³. For each of the outcomes identified in their Strategic Directions Statement a total of 27 measures have been approved by all stakeholders and a corresponding set of indicators. For example, for the strategic outcome “Community values are reflected in place-based planning”, the indicators developed include:

Indicator: Increase IWM’s contribution to a community’s sense of place, health and well-being.

Measure: Hectares of blue-green infrastructure created or enhanced by collaborative water management.

Work is also being undertaken with Traditional Owners to develop an appropriate indicator to reflect the need to increase the mutual capacity of Traditional Owners and government agencies to partner in IWM programs, planning, and policy and project delivery.

STRATEGIC AND POLICY CONTEXTS

The Victorian water planning framework provides for a range of strategies for different time frames and different system opportunities, for example: the Long Term Water Resource Assessment – undertaken every 15 years; Sustainable Water Strategies every 10 years; urban water and river health strategies undertaken every 5 years; and annual plans such as drought response plans and environmental watering plans.

This framework has served Victoria well over recent years and provided the strategic foundation for big decisions such as:

- The Victorian Desalination Plant to provide additional water security for Melbourne;
- Determining how much water should be allocated to the Yarra River for environmental flows;
- Flood management and river health strategies;
- Demand Management programs; and

³ <https://www.water.vic.gov.au/liveable/integrated-water-management-program/forums>

⁴ See, for example, DELWP, 2018.

- Local recycled water schemes.

However, the Victorian IWM Framework builds on this existing water planning framework and systematically considers the broader range of liveability outcomes that are often delivered – or co-delivered – by local government, Traditional Owners, catchment management authorities, planning authorities and private developers.

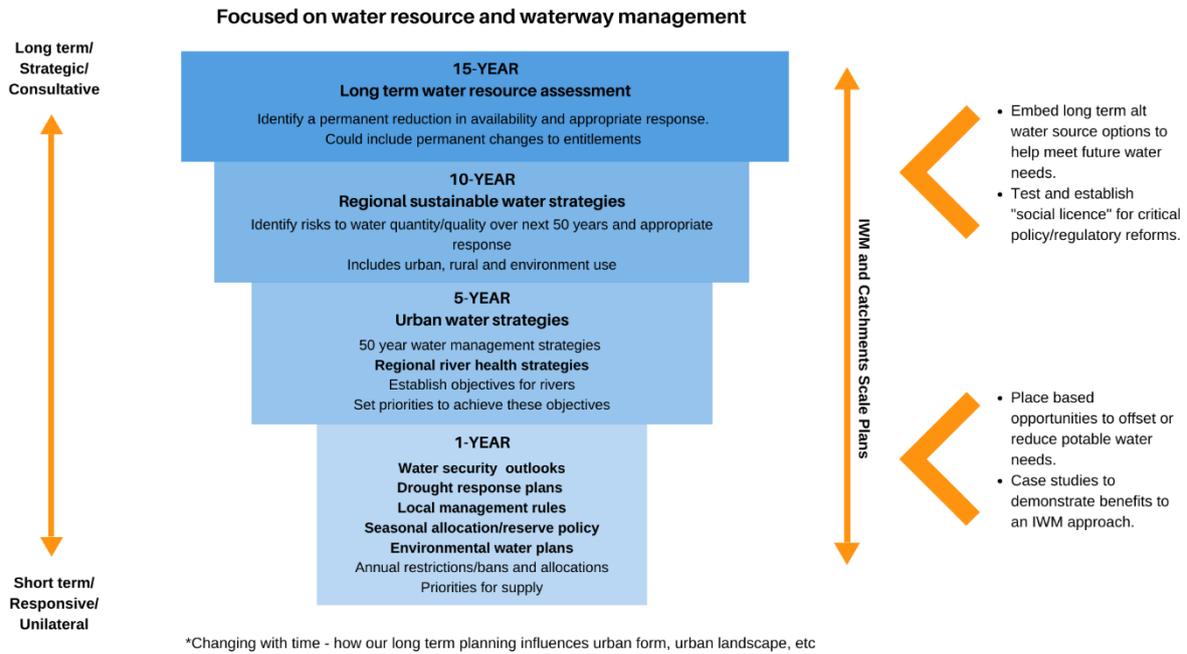


Figure: Victoria's strategic water planning context. Source: MSDI.

CLEAR ACCOUNTABILITIES AND SHARED VALUES

The value of an IWM planning approach lies in its holistic consideration of the entire water cycle. This requires each stakeholder involved in delivering IWM outcomes to recognise the accountabilities and opportunities of other organisations. IWM options are present where there is overlap. The range of stakeholders in IWM in Victoria are presented in Table 3.

Table: IWM stakeholders in Victoria.

Agency	Accountability
Victorian Government and Departments	Legislation Policy Regulation Planning
Environment Protection Authority	Environmental regulation (including best practice guidelines and protection policies)
Essential Services Commission	Economic regulation
Water Corporations	Water supply Wastewater management and trade waste management Waterway and major drainage systems (Melbourne Water only) Waterway health (Melbourne Water only) Floodplain management (Melbourne Water only) Urban stormwater management (Melbourne Water only) Environmental water (Melbourne Water only)
Catchment Management Authorities	Catchment scale land capability and management
Local government	Urban stormwater management Parks and gardens management Onsite domestic wastewater management Urban planning Building and planning approvals
Other government agencies responsible for delivering directly, or indirectly, IWM Outcomes	Transport Health Energy
Property owners, residents and businesses	Meeting terms and conditions of services provided Following permit conditions Onsite water management, e.g. rainwater, stormwater
Victorian Planning Authority	Urban growth structure planning for Melbourne and (where invited) regional Victoria
Developers	Construction of development scale water infrastructure

POLICY AND REGULATORY MATTERS

The Victorian IWM Framework sets up an authorising environment for a dual process:

1. Stakeholders take part in non-statutory IWM Forums and commit to best endeavours to deliver lowest community cost outcomes; and

2. Government and regulators commit to prioritising and working towards removing policy, legislative and regulatory barriers to effective IWM implementation.

Importantly, taking on some of the more challenging policy and regulatory barriers (such as stormwater policy, and working with the state government Planning department to embed IWM in planning policy) has helped ensure transparency and accountability for the state government departments involved in IWM, and galvanise external stakeholders to more fully engage with the IWM Forum process, despite it being non-statutory.

There are a number of policy and regulatory matters that need to be reviewed and in some cases amended or developed anew to enable the delivery of the IWM Outcomes (ie. the **enabling outcomes** as presented in this report). The priority areas being reviewed are illustrated in the Figure below. These priority areas were identified and prioritised by the IWM Forums and DELWP receives expert advice on these matters from a Resilient Cities and Town Reference Group that comprises senior and experienced policy practitioners from a cross section of external stakeholder groups.



Figure: Victorian government urban water policy reform priorities. Source: DELWP.

EVALUATION AND FINANCING

Some of the most accessible economic evaluation guidance and tools are those produced by the CRC for Water Sensitive Cities⁵, and referred to in earlier sections of the IWM Principles and Best Practice for Water Utilities paper.

Recognising that many IWM projects have encountered difficulties at the distributional analysis stage, DELWP has produced guidance for dealing with questions of allocation of

⁵ CRC WSC, 2020.

costs of projects⁶. A summary of the steps recommended by DELWP is presented in the Figure below.

1	Quantify the benefit for each party
2	Allocate roles, responsibilities, costs and risks to parties
3	Compare costs to benefits for each party
4	Transfer between parties
5	Define gap and transfer from party responsible for 'unquantified benefits'

Figure: DELWP Cost Allocation Framework steps. Source: DELWP

Reflections and lessons learned

IWM Forums continue to draw on the strategic outcomes collectively defined at the beginning of the process (and embedded in Strategic Directions Statements) to guide and prioritise work, including individual IWM projects and the catchment-scale IWM plans. The key learnings from the IWM Forum process so far are:

- a. The evidence is continuing to justify why a catchment/region-based approach is needed to deal with the challenges of managing the water cycle as populations grow and climate change takes hold.
- b. Addressing these significant challenges require resources to be allocated to priority collaborative planning activities that deliver multiple benefits for communities and the environment.
- c. Multi-organisational collaborative planning exercises are more expensive and often slower, but enable optimal efficient servicing and planning solutions to be identified, leading to long term cost-effectiveness and improved outcomes.
- d. IWM planning is often necessary at multiple scales, must be adaptive and is consequently complex.
- e. It is essential to invest in capability/capacity-building qualities relevant to the IWM collaboration and the planning process to ensure transparency, particularly around funding, which over time will work to support inter-organisational trust and relationship building.

⁶ DELWP, 2017. *A cost allocation framework for IWM projects*.

A number of policy and regulatory challenges associated with implementing collaborative IWM plans have been identified. Whole of government commitment to resolving these challenges is proving successful to maintaining buy in from stakeholders to commit their best endeavours to progress projects. The key learnings from this process are:

1. Supportive authorising environments are essential to empower the multi-disciplinary / multi-organisational teams undertaking IWM planning. The IWM Forums facilitate this by ensuring senior executives are providing the strategic direction and supporting their staff to enable working groups and forums to hold themselves to account, and ensuring that this complex planning remains a priority for each organisation and progresses.
2. Independent (ie. external) IWM Forum Chairs have proven invaluable in obtaining and maintaining senior executive buy-in and facilitating the collaborative leadership demonstrated by the forum members.