



Water for Bayside
**Integrated Water
Management Plan**
2024—2027





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Acknowledgement of Country

Bayside City Council acknowledges the Bunurong people of the Kulin Nation as the traditional custodians of the lands and waterways in the area now known as Bayside, and pays respect to their elders past and present, as well as to all First Nations’ communities who significantly contribute to the life of the area.

Photo (cover image and previous page):

Yalukit Willam Nature Reserve



Executive Summary

In December 2019, Bayside City Council unanimously declared a climate emergency recognising the need for urgent and meaningful action on human-induced climate change. Council subsequently developed the Climate Emergency Action Plan 2020–2025 which details actions Council will take to respond to the climate emergency, as well as support for the community to take action on climate change. Water, in all forms, is a key consideration within the climate emergency, and in the Action Plan.

Council developed its Integrated Water Management Plan 2019–2039 ‘Water for Bayside’, to provide clear direction for managing water as a precious resource. At the time it was considered appropriate to develop a twenty year plan, however Council has since recognised the developments in both climate change and the water sector and acknowledges the impact this will have on strategic decisions in future planning and service delivery. In response, Council has reviewed and adjusted the Water for Bayside timeline to a three year Plan. This reviewed Water for Bayside provides the strategic framework for the delivery of water related activities with consideration of climate change, cultural heritage, water management processes, and community demand. It also supports the delivery of the Bayside 2050 Community Vision. The Community Vision, in part, highlights that Council leads the way in acting on the climate emergency.

The current three year Water for Bayside allows for an earlier holistic review of integrated water management in 2027, providing Council with the flexibility to develop a longer term strategy based on updated risk analysis, community engagement and the latest scientific evidence.

As an urban municipality with a highly utilised coastal border, and under pressure from population growth, Bayside faces social, environmental, economic, and cultural management challenges. We must adapt to climate change and changing water patterns as we continue to experience flash flooding, extreme rainfall events, heatwaves, and droughts.

Urbanisation sees an increase in impervious surfaces, such as pavements, roofing and building coverage which increases the risk of flooding from surface runoff in urban areas. Flash flooding alongside polluted stormwater runoff places our ecosystems at risk and has considerable impacts on our community and Port Phillip Bay.

In response to the changing climate and increasing urbanisation, Council has implemented innovative projects and developed strategies to respond to the pressures on our water cycle.

Photo (above): Aerial Image of Sandringham Harbour



We are committed to transforming the Yalukit Willam Nature Reserve into an environmental park that delivers significant environmental and social benefits for the community. Yalukit Willam means ‘people of the river’ and refers to the people who lived in this area before European settlement. This unique opportunity ensures a natural system is created that maximises water treatment, flood mitigation, stormwater harvesting, re-use and diversion, while acknowledging the people and land prior to settlement.

Council developed the Urban Forest Strategy 2022–2040, and subsequent Precinct Plans, setting the strategic direction to ensure the continued expansion, diversification, health, and retention of a resilient urban forest. We need to restore ecosystem functions in our municipality to provide increased habitat, reduce the impacts of urban heat effect and stormwater and pollutant runoff and mitigate increased carbon dioxide through sequestration.

“ In response to the changing climate and increasing urbanisation, Council has implemented innovative projects and developed strategies to respond to the pressures on our water cycle.”

Council’s three year Integrated Water Management (IWM) action plan continues to address initiatives for flood storage, stormwater harvesting and stormwater treatment projects.

The development of Water for Bayside allows Council to focus on improving drainage and reducing local flooding, managing our green spaces, improving habitat for biodiversity, decreasing pollution entering the Bay, protecting the ecological function of water and reinforcing the key message of water being a precious resource. It also presents Council with opportunities to develop and support water management education and advocacy while linking traditional knowledge and mainstream water management into urban water design solutions.



1. Integrated Water Management

What is it and why is it important

Integrated Water Management (IWM) is a holistic and collaborative approach to water planning and management bringing together all aspects of the water cycle. It provides greater value to communities by identifying and leveraging opportunities to optimise water-related outcomes including management of waterways, wastewater, surface and groundwater, rainwater collection, stormwater drainage and the supply of drinking water.

Prior to European settlement, the city of Bayside was inhabited by the Bunurong people. During this time, Elster Creek as well as other small creeks provided drinking points for the Bunurong as well as habitat for the local flora and fauna. Sand dunes and cliffs stabilised with coastal vegetation were prominent features.

By acknowledging the Bunurong people as the Traditional Owners of the area, it reminds us that our First Nations people are the traditional custodians of the land and waters of Australia. It tells of their deep connection to Country, and to their cultural identity.

As custodians of the land, our First Nations people continue to care for Australia's, and Bayside's water resources. Water plays an important role in storytelling and learning, helping to continue the spiritual relationship with, to and on Country.

European settlement brought, and continues to this day, extensive development resulting in a myriad of challenges. Increasing human population and land use changes continue to greatly affect how water moves across the landscape which affects the water and pollutant balance.

Figure 1 models the flow of water which travels through Bayside's municipality. It models the water entering Bayside, shows what happens to the water within our municipality, and the amount which flows into Port Phillip Bay. Although it should be noted that there are limitations within the build of the Water Balance Model, it does provide an insight as to how water travels through the municipality. The model demonstrates a great opportunity for installation of water sensitive urban design (WSUD) on private property.

Photo (above): Tulip Street Pond 2019



Figure 1: Bayside’s municipality Water Balance Model

Bayside – Today’s average water balance (annual average*)

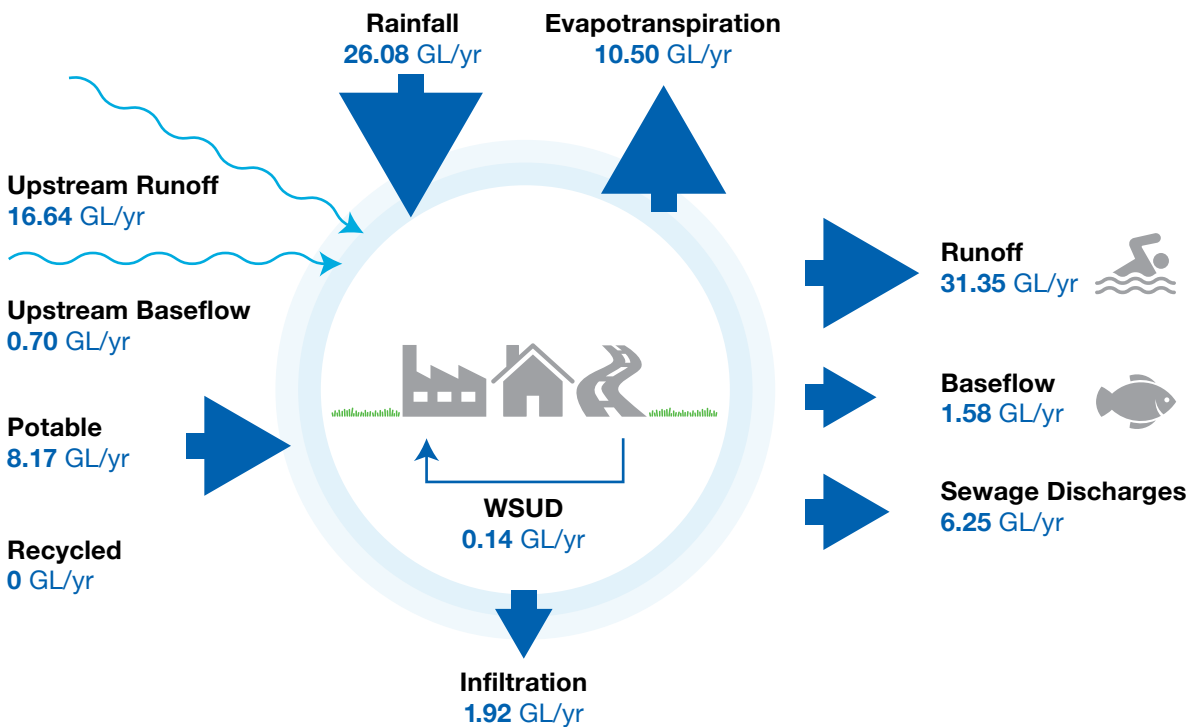


Figure 2: Bayside’s municipality Pollution Balance Model

Bayside – Today’s average pollutant balance (annual average*)

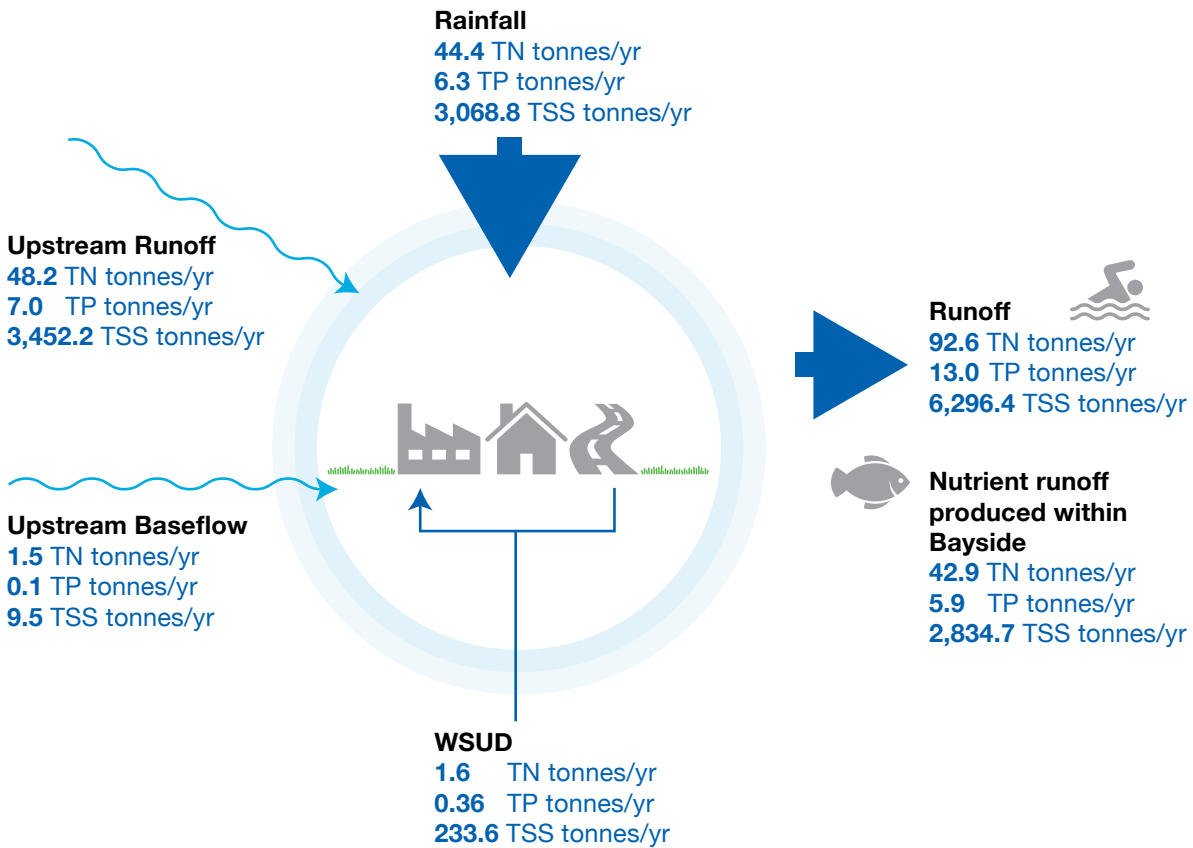


Figure 2 models the flow of pollutants (total nitrogen, total phosphorus and total suspended solids) coming into Bayside, what’s generated within our boundary, and then what exits into the Bay.

As with Figure 1, it should be noted that there are limitations within the build of the Pollution Balance Model, however it does provide an insight as to how pollution travels through Bayside. The model demonstrates the impact high levels of development (and associated lack of pervious surfaces) has on stormwater leaving Bayside and entering the Bay.

As the challenges of climate change, population growth and urban development increase, the need for an integrated approach to water management is imperative. Urbanisation sees an increase in impervious surfaces, which causes significant alterations to natural water flow. Increasing extreme weather events can cause flash floods and, alongside polluted stormwater runoff, can place our important ecosystems at risk and have considerable impacts on our community.

Although Council’s potable water consumption accounts for 2% of the water consumed across Bayside, Council understands the vital role we play in supporting our community through implementation of education campaigns and infrastructural assistance and guidance as well as the key advocacy role to both the state government and our water authorities.

Integrated water management must be considered alongside other elements of Council planning. It requires delivery across public and private land, working with a multitude of stakeholders from all levels of government as well as other organisations.

The IWM Plan will address those challenges and guide the direction of water management until 2027.



Council's vision for water management

As a community, we need to continue to adapt to climate change and changing water patterns as we continue to experience flash flooding, extreme rainfall events, heatwaves, and droughts.

The development of Water for Bayside allows Council to focus on improving drainage and reducing local flooding, as well as better managing our green spaces, improving habitat for biodiversity, decreasing pollution, protecting the ecological function of water and reinforcing the key message of water being a precious resource.

Council's vision for water management is one which is integrated within Council, and externally. Strengthening relationships with other councils, state and federal government, water authorities, businesses, Traditional Owners and our community is key to managing our water.

Council's vision is to:

- reduce the reliance on potable water, while identifying ways to access and increase use of recycled water
- integrate traditional knowledge with mainstream water management into urban design
- identify water sensitive urban design opportunities in capital projects, and
- reduce pollution to Port Phillip Bay.



Brighton Beach

2. Strategic Context

Council Plan 2021–2025

The Council Plan 2021–2025 is a key element of our medium and long-term planning and delivery of services to our community, represented in our Integrated Strategic Planning Framework. The Council Plan is informed by the Community Vision Bayside 2050 which articulates the community's values, priorities and aspirations in the future.

Water for Bayside is delivered within the Council Plan under Goal 1: Our Planet. Goal 1: Our Planet focuses on leading and influencing change to address the climate emergency, reducing its impact on the health of our community, our environment, and our planet.



- Resourcing Strategies**
- Annual Budget
 - Financial Plan (10 years)
 - Supported by a Budget (4 years with annual review)
 - Asset Management Plan
 - Strategic Resource Plan
 - Workforce Plan

Environmental Sustainability Framework 2016–2025

Water for Bayside is aligned to Bayside's Environmental Sustainability Framework 2016-2025 (ESF). The ESF sets consistent direction and guidance for environmental planning and decision-making within Bayside City Council. It aligns with Council's vision of Bayside leading the way demonstrably as a diverse, healthy and liveable place in 2050.

The ESF consists of ten key themes which outline how the Plan's four goals will be achieved. Sustainable Water is one of the themes and includes actions focused on transitioning from potable water to using recycled or stormwater for Council operations, facilities and community consumption, as well as managing and improving stormwater entering the Bay.

Photo (previous page): Brighton Beach. Titus Aparici for Unsplash.

Climate Emergency Action Plan 2020-2025

In December 2019, Bayside City Council declared a climate emergency recognising the need for urgent and meaningful action on human-induced climate change. In response, Council developed the Climate Emergency Action Plan 2020–2025 which details actions Council will take to respond to the climate emergency, as well as support for the community to take action on climate change. Water, in all forms, is a key consideration within the climate emergency, and in the Climate Emergency Action Plan.

The Action Plan outlines seven key themes which reflect the aspirations of the Bayside community and the multi-faceted response required to address the climate emergency. Theme 5: Protect and enhance our natural environment ensures focus on IWM opportunities by supporting biodiversity and habitat through healthier waterways and reduced pollutants to the Bay, managing water resources more efficiently, and using water in the landscape to improve climate resilience.

Roles and responsibilities for water management

The responsibility for integrated water management is not confined to municipal boundaries and IWM requires collaboration through effective partnerships with industry, community, government and Traditional Owners for successful outcomes.

Table 1 lists the roles and responsibilities of the integrated water managers across Victoria.

Table 1. IWM Roles and Responsibilities

Organisation	Roles and Responsibilities
Local Government	<p>Local government plays a significant role in improving the environmental management of urban stormwater. This includes obligations under the State Environment Protection Policy (Waters of Victoria) to:</p> <ul style="list-style-type: none"> • develop stormwater management plans • implement effective management practices, particularly for new developments and drainage systems • prevent wastewater discharges to stormwater drains • monitor and report to the community and relevant stakeholders on the impact of stormwater drains on surface waters • ensure new and retrofit developments include effective design measures and practices to manage stormwater run-off volumes and minimise pollutant run-off in stormwater • provide educational material on stormwater management and pollution avoidance.
Melbourne Water	<p>Melbourne Water is responsible for the management of water supply catchments, treatment and distribution of drinking and recycled water, sewage treatment and removal, and the oversight of catchments, waterways and major drainage systems in the Port Phillip and Westernport regions.</p>
South East Water	<p>South East Water's role is to ensure the delivery of a healthy, reliable supply of water and sewerage services.</p>

Organisation	Roles and Responsibilities
Environment Protection Authority (EPA) Victoria	EPA administers the Environment Protection Act 2017, issuing work approvals and licenses for wastewater discharges. EPA provides support and guidance to help councils meet their obligations under the State Environment Protection Policy (Waters of Victoria).
Department of Energy, Environment and Climate Action (DEECA)	DEECA is responsible for implementing the government's long-term water plan, Water for Victoria. This sets the strategic direction for the state's water management for decades to come.
Bunurong Land Council Aboriginal Corporation	The Bunurong Land Council is the Traditional Owner organisation representing the Bunurong people of the South-Eastern Kulin Nation. The Land Council aims to preserve and protect the sacred lands and waterways of their ancestors, traditional cultural practices and stories.
Victorian Aboriginal Heritage Council	The Victorian Aboriginal Heritage Council appoints Registered Aboriginal Parties to manage and protect Cultural Heritage on their specified country.
Community	Our community has a role to play in IWM. This includes reducing potable water consumption through demand management, using alternatives water sources where appropriate (including rainwater capture in water tanks), ensuring stormwater run-off from their properties isn't contaminated, reducing litter, and contributing to policy and program formation by providing feedback to local and state governments and water authorities.

Table 2 lists the relevant water policy and strategy frameworks guiding integrated water management, both within and external to Council.

Table 2. Water Related Policy and Plan Directions

Bayside City Council Policies & Plans	State Government Plans and Policies
<ul style="list-style-type: none"> • Biodiversity Action Plan 2018–2027 • Urban Forest Strategy 2022–2040 • Open Space Strategy 2012 • Coastal Management Plan 2014 • Asset Plan 2023–2032 • Municipal Public Health and Wellbeing Plan 2021–2025 • Bayside Planning Policy Clause 15.01-2L-02 (Environmentally Sustainable Development) • Elsternwick Park Nature Reserve Masterplan 2020 	<ul style="list-style-type: none"> • Water for Victoria — Water Plan • Integrated Water Management Framework for Victoria, 2017 • Integrated Water Management Forums (specifically Metro IWM Forum and the sub-group Dandenong Catchment Integrated Water Management Plan) • Catchment and Land Protection Act 1994 • Victoria's Resilient Coast- Adapting for 2100+ (section 41 of the Marine and Coastal Act 2018) • Port Phillip Bay Environmental Management Plan 2017–2027 • Urban Stormwater Best Practice Environmental Management Guidelines, Victoria Stormwater Committee 1999 • Healthy Waterways Strategy 2018–28 • State Environment Protection Policy (Waters of Victoria)



3. Our Approach

Developing Water for Bayside

Water is a valuable natural asset and Council has a responsibility to ensure we develop a coordinated approach to water management in an equitable manner, now and for future generations. We must consider current water uses and deliver best practice solutions for water efficiency improvements, conservation activities, and water-reduction goals.

In developing Water for Bayside we considered the following:

- The need to clearly define the relationship between water and liveability and improve understanding of this relationship within Council's Strategic Planning Framework.
- Actions required to mitigate from and address climate change impacts.
- Council's current water practices and their adherence to local and State policies.
- New IWM opportunities to inform a comprehensive program of capital works.
- How to embed IWM into core business, by setting clear strategic directions.

Council developed its Integrated Water Management Plan 2019-2039 'Water for Bayside', to provide clear direction for managing water as a precious resource. At the time it was considered appropriate to develop a 20-year plan, however Council has since recognised the developments in both climate change and the water sector and acknowledges the impact this will

have on strategic decisions in future planning and service delivery. In response, Council has reviewed and adjusted the Water for Bayside timeline to a three year Plan. This reviewed Water for Bayside provides the strategic framework for the delivery of water related activities with consideration of climate change, cultural heritage, water management processes, and community demand. It also supports the delivery of the Bayside 2050 Community Vision. The Community Vision, in part, highlights that Council leads the way in acting on the climate emergency.

The current three year Water for Bayside allows for an earlier holistic review of integrated water management in 2027, providing Council with the flexibility to develop a longer term strategy based on updated risk analysis, community engagement and the latest scientific evidence.

Community Engagement

During the development of the original Water for Bayside, Council undertook community engagement which informed the plan (see Appendix A for engagement outcomes). Comprehensive community engagement will be undertaken when the Climate Emergency Action Plan is reviewed in 2025 and when Water for Bayside is due for renewal.



Key issues

The premise of Water for Bayside is that effective IWM can enhance Bayside's liveability and address the climate emergency, but there are issues which must be addressed in order to achieve this.

The following issues were firstly identified and then addressed through the development of Water for Bayside:

- IWM opportunities must be considered and implemented across all relevant capital projects.
- IWM needs to be a key focus in Council's response to the climate emergency.
- Council must continue to implement new techniques to reduce demand on potable water particularly around the establishment and maintenance of green spaces and sportsgrounds.
- Council must continue to implement a long-term capital works program to implement IWM initiatives that is resourced and funded.
- Council needs to advocate, collaborate and influence for better management of stormwater and improved health of Port Phillip Bay.
- Stormwater assets require long-term asset management to be effective.
- IWM must be embedded as a core service.
- Information on water and flooding changes must be updated to maintain relevance.
- Planning mechanisms are in place to manage stormwater quantity and quality from new development and re-development.
- Council must educate and support the community to manage water as a precious resource.
- Council must investigate how to better support vulnerable communities and determine barriers to water saving.
- Council must integrate Traditional Knowledge with mainstream water management into urban water design.
- Council must develop partnerships with neighbouring councils and together advocate to state government agencies to strengthen opportunities for progressive planning and mitigation policies and funding for climate adaptation measures to address key IWM issues.

Photo (above): Community Coastal Clean Up



4. Collaboration and partnership

Council is an active member in several water-related forums and programs collaborating with stakeholders including water authorities, state government departments, universities and Traditional Owners.

Metropolitan Integrated Water Management Forum

The Victorian Government's strategic water plan, *Water for Victoria 2016*, sets clear objectives on the role water plays for the creation of liveable cities and towns across the state. Actions 5.7 and 5.8 specifically relate to representing community values and local opportunities in planning and putting IWM into practice across Victoria.

To deliver actions 5.7 and 5.8, the Victorian Government developed the *Integrated Water Management Framework for Victoria 2017* which saw the establishment of regional and metro IWM Forums. The IWM Forums identify, coordinate, and prioritise opportunities and areas that would most benefit from collaborative water cycle planning and management.

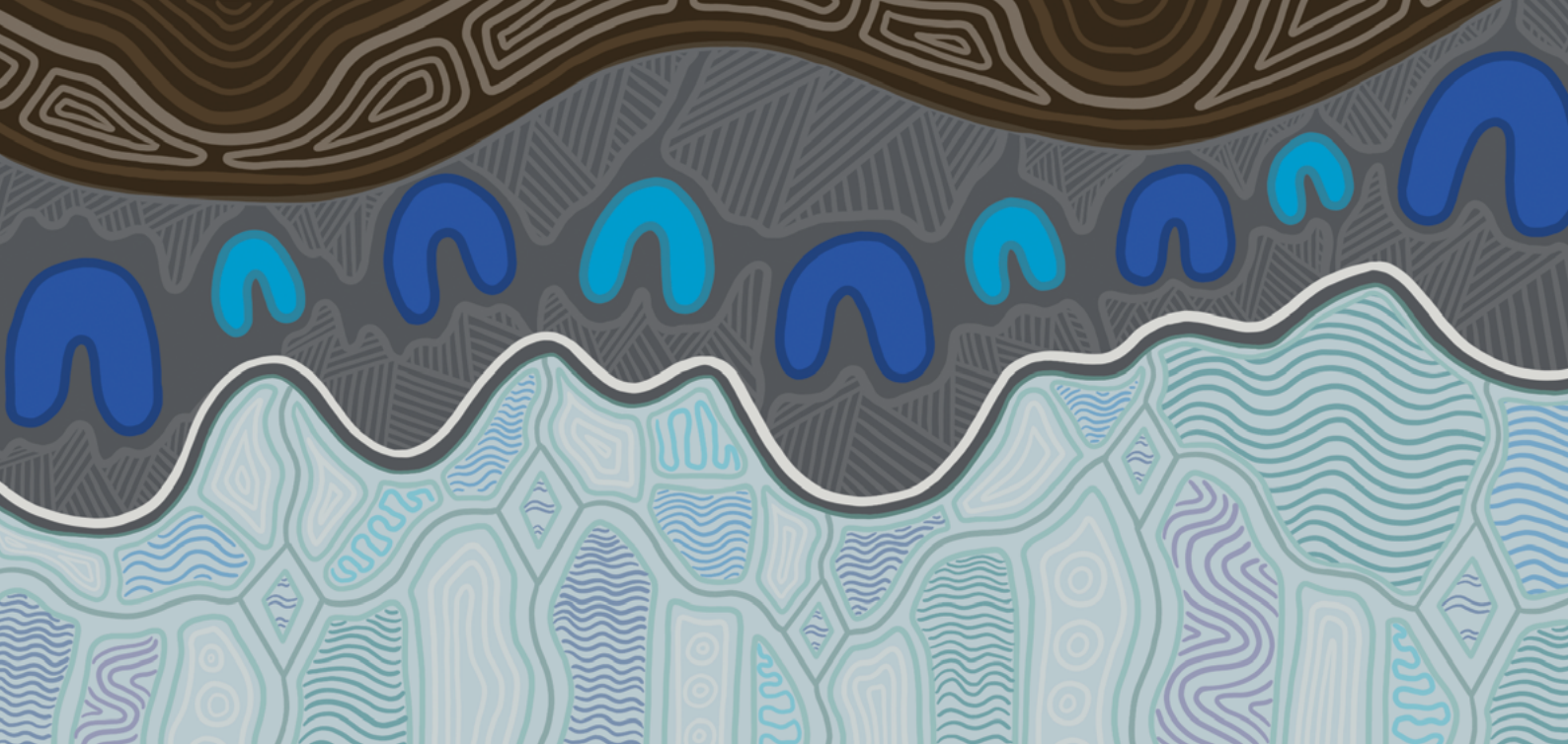
Bayside City Council is a member to the Metro IWMP Forum and Working Group which is responsible for setting guidelines for monitoring, evaluation, reporting and improvement (MERI) well as reporting against sub forum action plans. The Metro IWMP consists of five sub forums within its catchment, including the Dandenong Catchment forum which Bayside is a partner to.

Dandenong Catchment Integrated Water Management Forum

Council's participation in the Dandenong Catchment Forum provides an opportunity to collaboratively work with and strengthen existing relationships with water corporations, the Victorian Planning Authority (VPA) and Traditional Owners to ensure the water cycle efficiently contributes to the liveability of our region. The Forum also provides a mechanism to send key strategic water issues and recommended policy reforms to the State Government.

The Dandenong Catchment IWM Forum Strategic Directions Statement (SDS) (2018) includes a shared vision for the planning and management of water in the specified catchment as well as a suite of strategic outcomes. Further, each SDS includes a portfolio of priority IWM projects and strategies (IWM opportunities) for which the IWM Forum's collaborative partners are committed to progress. Development of a Catchment Scale IWM Plan was identified in the priority portfolio of opportunities in the IWM Forum SDS.

Photo (above): Brian Martin, The Agency of Bunggabi (trees), 2021



The Catchment Scale IWM Plan will support Water for Bayside by providing the scientific basis to measure water improvements across the municipality. As improvement in the catchment cannot be influenced or determined by a single municipality, the Catchment Scale IWM Plan will provide a better assessment of IWM needs on a regional or catchment scale when completed. This will align with the broader objectives of implementing Water for Bayside.

Council's involvement and representation in the Dandenong Catchment IWM Forum from late 2017 has enabled the input and collaboration with other councils in the catchment on IWM issues.

Involvement in the broader Dandenong Catchment IWM Forum continues to benefit Council through a coordinated approach to IWM projects, learning from other Councils, and the potential for Victorian Government funding. For example, Council will participate in Melbourne Water's proposed collaborative partnership with councils in the Elster Creek catchment on a whole-of-catchment analysis and action plan for litter, which will cover opportunities to improve education, enforcement, maintenance and infrastructure.

Repairing Memory & Place – An Indigenous-led approach to urban water design

The Repairing Memory & Place – An Indigenous-led project to urban water design is a pioneering research project aimed at integrating Indigenous knowledge and mainstream water management into urban water design. Funded by the Australian Research Council and coordinated by the Monash Art, Design and Architecture department, the Repairing Memory & Place project brings together the Traditional Owners, Monash University and state and local government.

“ The project aims to develop new tools for urban water management which includes an engagement framework for Indigenous water-management expertise.”

This funding will help to generate to generate new knowledge in urban water management by using On Country learning and design-led approaches to combine the often contrasting knowledge.

The project aims to develop new tools for urban water management which includes an engagement framework for Indigenous water-management expertise.

Council is an active participant in this project which is in line with Goal 5 of its Council Plan which states:

Council and the Bayside community will be environmental stewards, taking action to protect and enhance the natural environment, while balancing appreciation and use with the need to protect natural assets for future generations.

The project is also in line with its Reconciliation Action Plan and the Climate Emergency Action Plan including commitments of:

- Building internal and external relationships.
- Providing accurate cultural information on the Indigenous heritage of Bayside and links to further resources for Indigenous people.
- Maintaining relationship with Traditional Owners to collaborate on climate emergency response.



5. Goals, Objectives & Action Plan

Goals

Water for Bayside consists of five goals which reflect the aspirations of the community, address climate change impacts and contribute to Council's vision for integrated water management.

Addressing these goals, along with greater capacity to consider water within the design of Council projects, will enable Bayside to more fully realise IWM opportunities.

IWM can help to re-frame services delivered by Council, with significant benefits in further improving Bayside's liveability.


Objectives

To achieve our IWM goals, objectives have been developed, each with a suite of actions. These objectives will assist in prioritising and resourcing our integrated water management journey ensuring it is embedded as business as usual within the organisation.

The objectives, and the actions, will ensure we respond to contemporary challenges such as the climate emergency, population growth, urbanisation, budget pressures, social equity as well as focus efforts to engage and collaborate with the community and relevant stakeholders on water management.

Photo (above): Choose Tap installation at Green Point

The Goals and Objectives are as follows:

GOALS	OBJECTIVES
 <p>Goal 1: Water will be managed to enhance Bayside's liveability, improve habitat and address the climate emergency.</p>	<p>Objective 1: Council will manage water to minimise the impact of flooding and deliver IWM initiatives to the climate emergency, recognising the value water plays in habitat and biodiversity.</p>
 <p>Goal 2: Improve the health of Port Phillip Bay and waterways.</p>	<p>Objective 2: Planning mechanisms are in place to manage stormwater run-off from new and re-developments. Enhanced infrastructure improves the quality of stormwater entering our waterways and the Bay.</p>
 <p>Goal 3: Preserve potable water supplies and increase the use of recycled and stormwater.</p>	<p>Objective 3: Council will reduce potable water use and substitute potable water with alternative sources, including stormwater harvesting for passive tree irrigation and recycled water for open space irrigation.</p>
 <p>Goal 4: Improve the community's connection with and understanding of the water cycle.</p>	<p>Objective 4: Council will continue to engage the community to increase their awareness of the water cycle.</p>
 <p>Goal 5: Increase collaboration and partnerships across industry, government, Traditional Owners and the community.</p>	<p>Objective 5: Develop partnerships with neighbouring councils and other key stakeholders, and advocate to state government agencies to strengthen opportunities for progressive planning and mitigation policies and funding for climate adaptation measures to address key IWM issues.</p>

Action Plan

Each goal and objective has a suite of actions which identify how the objective will be met. These actions are outlined in the below action table. The actions outline priority initiatives that will assist to deliver on the Water for Bayside vision.

The actions have been developed to recognise and enhance existing work, what work will need to start and what can be embedded into current priorities. The actions have a nominated timeframe, deliverable, and an estimated cost which will be subject to the annual Council budget process.

The estimated costs are categorised as follows:

Business as Usual (BAU) (can be accommodated in operational budget)

Low	<\$50,000
Medium	\$50,00—\$500,000
High	>\$500,000

The estimated costs in the Action Table below outline which actions are currently funded in either the 4-year capital program, operational budgets or currently unfunded.



Goal 1: Water will be managed to enhance Bayside's liveability, improve habitat and address the climate emergency.

Objective 1: Council will manage water to minimise the impact of flooding and deliver IWM initiatives to the climate emergency, recognising the value water plays in habitat and biodiversity.

	Actions	Timeframe	Estimated Costs	Lead/Key Partners	Outcomes
1.1	Ensure IWM is a priority focus in the development of a new <i>Climate Emergency Action Plan</i> .	Year 2	Low (Unfunded)	Climate, Waste & Integrated Transport	IWM is considered in the new CEAP.
1.2	Finalise the flood modelling.	Year 1	Medium (Funded)	City Assets & Presentation	Flood Mapping is completed.
1.3	Ensure updated flood mapping is included in the development of local <i>Special Building Overlays in the Bayside Planning Scheme</i> .	Year 2	Low (Part funded)	City Assets & Presentation Urban Strategy	Relevant documentation developed to support the planning amendment action.
1.4	Create a central database for potable and recycled water consumption for all Council assets and open spaces to ensure understanding of consumption and trends.	Year 1	Medium (Funded)	Climate, Waste & Integrated Transport	Potable and recycled water is tracked for Council assets including setting a baseline year.
1.5	Develop a suite of indicators and associated targets to monitor progress and measure the success of Water for Bayside.	Year 1	BAU	Climate, Waste & Integrated Transport	Meaningful measures to track progress against the targets are developed.
1.6	Implement water related actions from the Biodiversity Action Plan.	Ongoing	Low (Funded)	Open Space & Recreation	Biodiversity and habitat is enhanced, consistent with the objectives of the Biodiversity Action Plan.
1.7	Implement Council's Lake Management Plans.	Ongoing	High (Part funded)	Open Space & Recreation	Enhancements to each lake are realised, consistent with the objectives of the Lake Management Plans.



Goal 2: Improve the health of Port Phillip Bay and waterways.

Objective 2: Planning mechanisms are in place to manage stormwater run-off from new and re-developments. Enhanced infrastructure improves the quality of stormwater entering our waterways and the Bay.

	Actions	Timeframe	Estimated Costs	Lead/Key Partners	Outcomes
2.1	<p>Apply Clause 15.01-2L-02 from the Bayside planning scheme to achieve best practice in environmentally sustainable development from the design stage through to construction and operation, including:</p> <ul style="list-style-type: none">• Reduce total operating potable water use through appropriate design measures such as water efficient fixtures, appliances, equipment, irrigation and landscaping.• Encourage the appropriate use of alternative water sources (including greywater, rainwater and stormwater).• Incorporate best practice water sensitive urban design to improve the quality of stormwater runoff and reduce impacts on water systems and water bodies.	Ongoing	BAU	Development Services Climate, Waste & Integrated Transport	Clause and Tools applied to new and re-developments.

	Actions	Timeframe	Estimated Costs	Lead/Key Partners	Outcomes
2.2	<p>Apply Clause 15.01-2S Building Design from Bayside planning scheme to include the following strategies:</p> <ul style="list-style-type: none"> • Encourage water efficiency and the use of rainwater, stormwater and recycled water. • Minimise stormwater discharge through site layout and landscaping measures that support on-site infiltration and stormwater reuse. 	Ongoing	BAU	Development Services Climate, Waste & Integrated Transport	Clause applied to new and re-developments.
2.3	<p>Continue to review development plans using:</p> <ul style="list-style-type: none"> • Victorian Planning Provisions Clause 53.18 (Stormwater) Standard W2 & W3, • Victorian Planning Provisions Clause 55.07-5 (Water Sensitive Urban Design) Standard B39 and • Victorian Planning Provisions Clause 58.03-8 (Water Sensitive Urban Design) Standard D13. 	Ongoing	BAU	Development Services Urban Strategy Climate, Waste & Integrated Transport	Planning provisions applied to new and re-developments.
2.4	Incorporate a raingarden program for improved biofiltration and infiltration of stormwater within streetscape and drainage projects where feasible.	Year 2	High (Part funded)	City Assets & Presentation Climate, Waste & Integrated Transport	Raingarden works incorporated within streetscape and drainage projects as per the Sustainable Building and Infrastructure Policy 2022.
2.5	Undertake a review of current locations of Gross Pollutant Traps and assess the need for additional to be installed.	Year 3	Low (Unfunded)	Climate, Waste & Integrated Transport City Assets & Presentation	Clear understanding of whether additional GPTs are required.

	Actions	Timeframe	Estimated Costs	Lead/Key Partners	Outcomes
2.6	Review the operation of current Gross Pollutant Traps and upgrade or replace as required.	Ongoing	High (Funded)	City Assets & Presentation	GPT audit is undertaken, and renewal program is implemented to ensure current GPT's are operating effectively.
2.7	Continue to audit and review the performance of Litter Baskets and upgrade and install additional sites where appropriate.	Ongoing	High (Funded)	City Assets & Presentation	Regular Audits completed.
2.8	Continue to trial innovative solutions to reduce the amount of road surfaces that are directly connected to the stormwater system.	Ongoing	Medium (Part funded)	City Assets & Presentation	Trials are undertaken.
2.9	Update the Drainage Strategy to improve the performance of the drainage network (including developer contributions for targeted drainage asset upgrades).	Year 2	Low (Part funded)	City Assets & Presentation	The drainage network operates effectively.
2.10	Investigate the opportunity to monitor and document the construction of WSUD assets on private developments through the planning and building processes.	Year 1	BAU	Climate, Waste & Integrated Transport Development Services	Clear understanding of WSUD assets across the private realm.
2.11	Continue to implement the Neighbourhood Amenity Local Law 2021 to improve the quality of stormwater run-off from private property and building sites.	Ongoing	BAU	Amenity Protection	Building sites are managed to minimise the risks of stormwater pollution, through the run-off of chemicals, sediments, animal wastes or gross pollutants.



Goal 3: Preserve potable water supplies and increase the use of recycled and stormwater.

Objective 3: Council will reduce potable water use and substitute potable water with alternative sources, including stormwater harvesting for passive tree irrigation and recycled water for open space irrigation.

	Actions	Timeframe	Estimated Costs	Lead/Key Partners	Outcomes
3.1	Ensure the 15-year program for the implementation of stormwater harvesting systems is considered in the capital works program.	Ongoing	High (Part funded)	Climate, Waste & Integrated Transport City Assets & Presentation Open Space & Recreation	Harvested stormwater is used for street tree irrigation.
3.2	Ensure the Sportsground Reconstruction Program includes the installation of more efficient irrigation systems and laying of drought tolerant summer grasses such as Couch and Kikuyu.	Ongoing	High (Funded)	Open Space & Recreation	Reduced potable water use for sportsground irrigation.
3.3	Maximise opportunities to link Council's open spaces to South East Water's <i>Dingley Recycled Water Scheme</i> .	Year 1	High (Funded)	Climate, Waste & Integrated Transport Open Space & Recreation	Green spaces linked to the scheme where feasible.
3.4	Review irrigation practices with a focus on the potential use of moisture sensors for automated application of irrigation.	Year 2	Low (Part funded)	Open Space & Recreation	Irrigation practices reviewed and optimised.
3.5	Continue to monitor performance of all stormwater harvesting, retention and treatment assets so they operate at an optimal level throughout their life cycle.	Year 2	Low (Unfunded)	Climate, Waste & Integrated Transport City Assets & Presentation	The performance monitoring for stormwater management assets is improved.



	Actions	Timeframe	Estimated Costs	Lead/Key Partners	Outcomes
3.6	Consider Water Sensitive Urban Design assets in the update of the <i>Drainage Service Driven Asset Management Plan</i> .	Ongoing	BAU	City Assets & Presentation	Process in place to capture data and information on WSUD performance.
3.7	Ensure incorporation of IWM and WSUD elements into capital works projects on a business-as-usual basis where feasible.	Year 1	Medium (Part funded)	All Departments	IWM and WSUD are considered and implemented where feasible in all relevant capital works projects.
3.8	Investigate options to utilise pervious surfaces on footpath and road upgrades to improve water infiltration.	Year 1	BAU	City Assets & Presentation	Impervious surfaces are minimised to ensure greater water infiltration.
3.9	Deliver the wetland at the Yalukit Willam Nature Reserve.	Year 2	High (Funded)	Open Space & Recreation	The Yalukit Willam wetlands are operational.

Photo (above): Stormwater flowing into a drain



Goal 4: Improve the community's connection with and understanding of the water cycle.

Objective 4: Council will continue to engage the community to increase their awareness of the water cycle.

	Actions	Timeframe	Estimated Costs	Lead/Key Partners	Outcomes
4.1	Promote existing water behaviour/use awareness campaigns such as the Yalukit Willam Nature Association and Waterwatch Citizen Science programs.	Ongoing	Low (Funded)	Climate, Waste & Integrated Transport Open Space & Recreation	Water behaviour/use awareness campaigns are deployed/supported.
4.2	Promote existing and develop new coastal litter and foreshore pollution reduction programs.	Ongoing	Low (Funded)	Climate, Waste & Integrated Transport Open Space & Recreation	Litter and foreshore pollution campaigns are delivered.
4.3	Establish a coordinated program of community awareness under the Love Bayside banner, to build local support and action for a climate emergency response.	Year 1	Medium (Funded)	Climate, Waste & Integrated Transport	Love Bayside Campaigns are deployed.
4.4	Use Council's communication channels to promote Victorian Government and water authority programs.	Ongoing	Low (Funded)	Climate, Waste & Integrated Transport	The community and industry are provided with access to education and incentive programs.



Goal 5: Increase collaboration and partnerships across industry, government, Traditional Owners and the community.

Objective 5: Develop partnerships with neighbouring councils and other key stakeholders, and advocate to state government agencies to strengthen opportunities for progressive planning and mitigation policies and funding for climate adaptation measures to address key IWM issues.

	Actions	Timeframe	Estimated Costs	Lead/Key Partners	Outcomes
5.1	Continue to facilitate internal collaboration on water issues, stormwater management projects, and advice on capital works projects which improve liveability.	Ongoing	BAU	Climate, Waste & Integrated Transport	IWM issues and opportunities are considered and addressed.
5.2	Continue to participate in the <i>Repairing Memory & Place - An Indigenous-led approach to urban water design project</i> .	Year 2	Low (Funded)	Climate, Waste & Integrated Transport Family, Youth & Wellbeing	Integrated Traditional knowledge and mainstream water management tools are used in Council decision making.
5.3	Continue to contribute to the Metro IWM Forum and Working Group and the Dandenong IWM Forum Strategic Directions Statement and Working Group.	Ongoing	BAU	Climate, Waste & Integrated Transport	Participation in IWM Forums.
5.4	Contribute to the proposed Melbourne Water <i>Elster Creek Litter Collaboration</i> project.	Ongoing	BAU	Climate, Waste & Integrated Transport Open Space & Recreation	Proposed <i>Elster Creek Litter Collaboration</i> project is undertaken.
5.5	Support the EPA to deploy their guidelines to eliminate or reduce the risk of harm to human health and the environment through improved environmental practices.	Ongoing	BAU	Amenity Protection Climate, Waste & Integrated Transport	EPA Civil Construction, Building and Demolition Guide deployed.
5.6	Develop and deliver an advocacy program to address the Climate Emergency and improve IWM outcomes.	Ongoing	BAU	Climate, Waste & Integrated Transport Communication, Engagement & Customer Experience	IWM advocacy priorities are clear, specific and supported by key messages to influence other stakeholders.



6. Implementation and reporting

It is essential to maintain a meaningful set of indicators to monitor progress and measure the success of Water for Bayside. As there are many stakeholders involved in progressing improvements to the integrated water management within Bayside, clear indicators will be developed to measure effectiveness of the Plan.

A Water for Bayside Implementation Progress Report will be presented to Council annually outlining progress against the goals, objectives and actions.

Photo (above): Sandringham Beach.
Cherry T for Unsplash.

Appendix A — 2019–2039 IWM Plan research, engagement and development context

In 2015, Bayside City Council successfully sought funding from Melbourne Water’s Living Rivers Program to develop an Integrated Water Management (IWM) Plan. Council engaged an expert consultant to develop the Plan in 2016. As part of a review of the scope of that work, an Opportunities Assessment was completed in 2017 to determine additional opportunities from those previously identified. A comprehensive Technical Background Paper entitled ‘Water For Bayside’ was also completed in 2017.

Water for Bayside replaced the Stormwater Quality Management Plan (2001) and the Sustainable Water Management Strategy (2011).

Existing documents and strategies that informed the development of Water for Bayside 2019 included:

- Community Plan 2025: Building a Better Bayside
- Council Plan 2017–2021
- Wellbeing for All Ages and Abilities Strategy, 2013 and 2017
- Environmental Sustainability Framework (ESF) 2016–2025
- Municipal Strategic Statement
- Bayside Planning Scheme – Clause 22.08 Water Sensitive Urban Design
- Flood Management Plan (2011)
- Drainage Service-Driven Asset Management Plan [D-AMP] (2015)
- Climate Change Strategy (2012)
- Open Space Strategy (2012)
- Bayside Coastal Management Plan (CMP), 2014
- Street Tree Strategy, 2008
- Street and Park Tree Selection Guide, 2016
- Street and Park Tree Policy
- Stormwater Quality Management Plan (2001) and the,
- Sustainable Water Management Strategy (2011)
- Draft Integrated Water Management Plan (DesignFlow, 2016)

Community engagement was conducted in July and August 2019.

Water for Bayside Consultation

The engagement process was open to all residents in the Bayside area with the purpose to feedback on four key questions:

1. Have all the right projects been included?
2. Are there any opportunities we missed?
3. Do you agree with the timeframes?
4. Is there anything you think we should do sooner?

The consultation methodology activities included:

- Project information and questions for response were hosted on the on-line engagement platform Have Your Say.
- Emails to direct Environmental Group convenors to respond to the Plan via Have Your Say or direct reply email were sent.
- Promotion of the draft IWM Plan using Council communication channels, including media release and social media.

Half of the respondents via Have Your Say and email (11 of 22) expressed support for the IWM Plan and the long-term approach. While some respondents expressed disappointment that some expected information or projects were not included in the Plan, none of the comments were described as opposed to the Plan.

Many respondents suggested direct actions to be included in the Plan, however it was determined they can largely be incorporated within the broad scope of existing actions in the Action Plan.



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