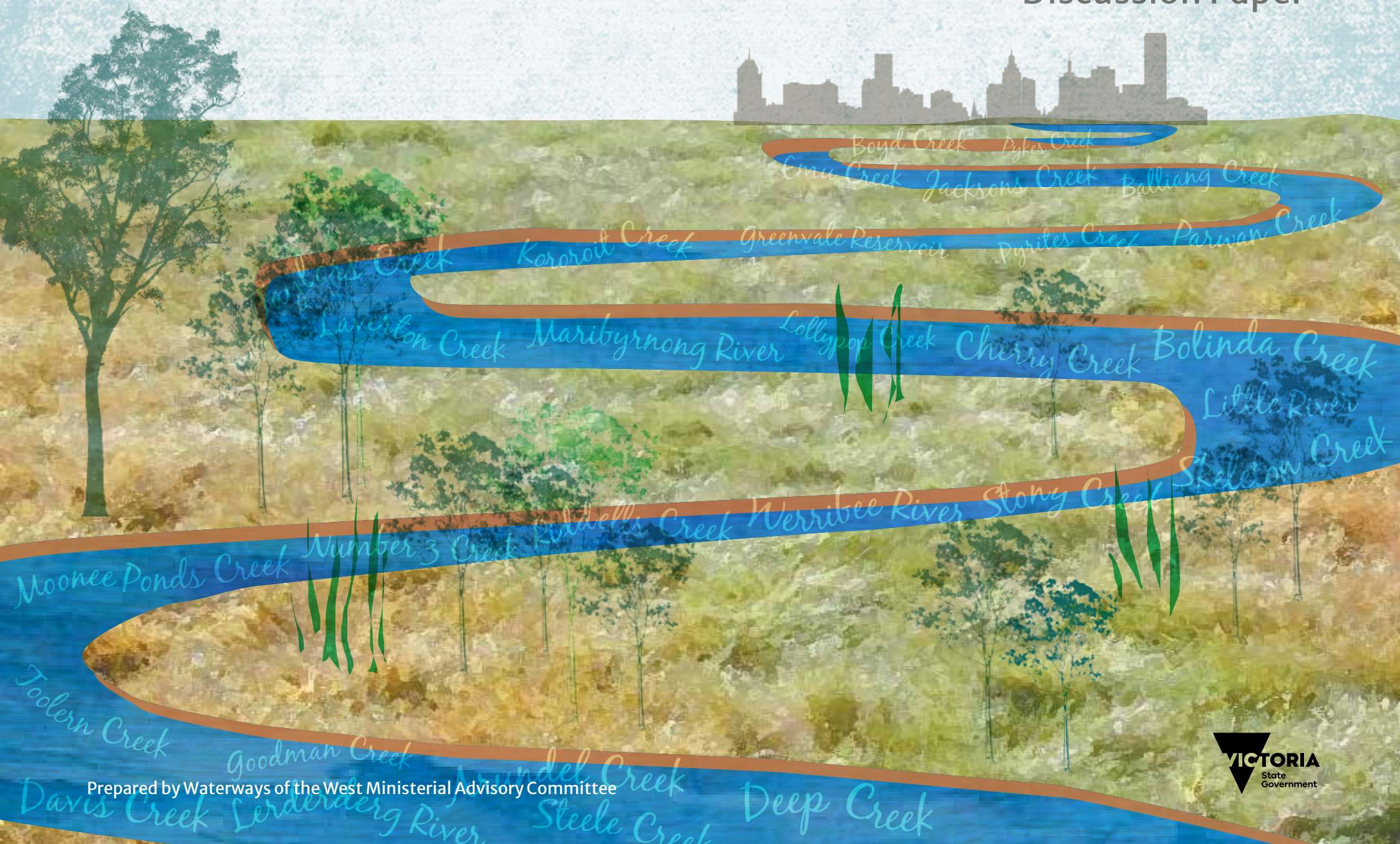


Protecting the Waterways of the West

Discussion Paper



Wurundjeri Woi wurrung foreword

*Rich in resources, our Country sustained Woi wurrung clans for millennia. Much of our Country is defined by water, including the Werribee River to the west, Port Philip Bay and Mordialloc Creek to the south-east. Our northern and north-eastern traditional boundaries are defined by mountains and mountain ranges; including Mount Baw Baw and the Great Dividing Range.**

Through time and continuous connection, our Ancestors developed and honed deep knowledges of these unique volcanic landscapes, local flora and fauna, seasons, and ancient waterways from their source to the sea. Our western waterways are some of the oldest waterways on our Country, carved into existence several thousands of years prior the creation of the Birrarung (Yarra River). They are truly ancient places and identities. Our ancient cultural heritage, including our people's ancestral remains, are found here.

For a fleeting moment post European Settlement, our Woi wurrung clans and other members of the Kulin continued to gather as they had for countless of generations previously. They gathered for Tanderrum (Ceremony). These places are known to have included between the Moonee Ponds Creek and Maribyrnong River, as well as on the higher grounds around the

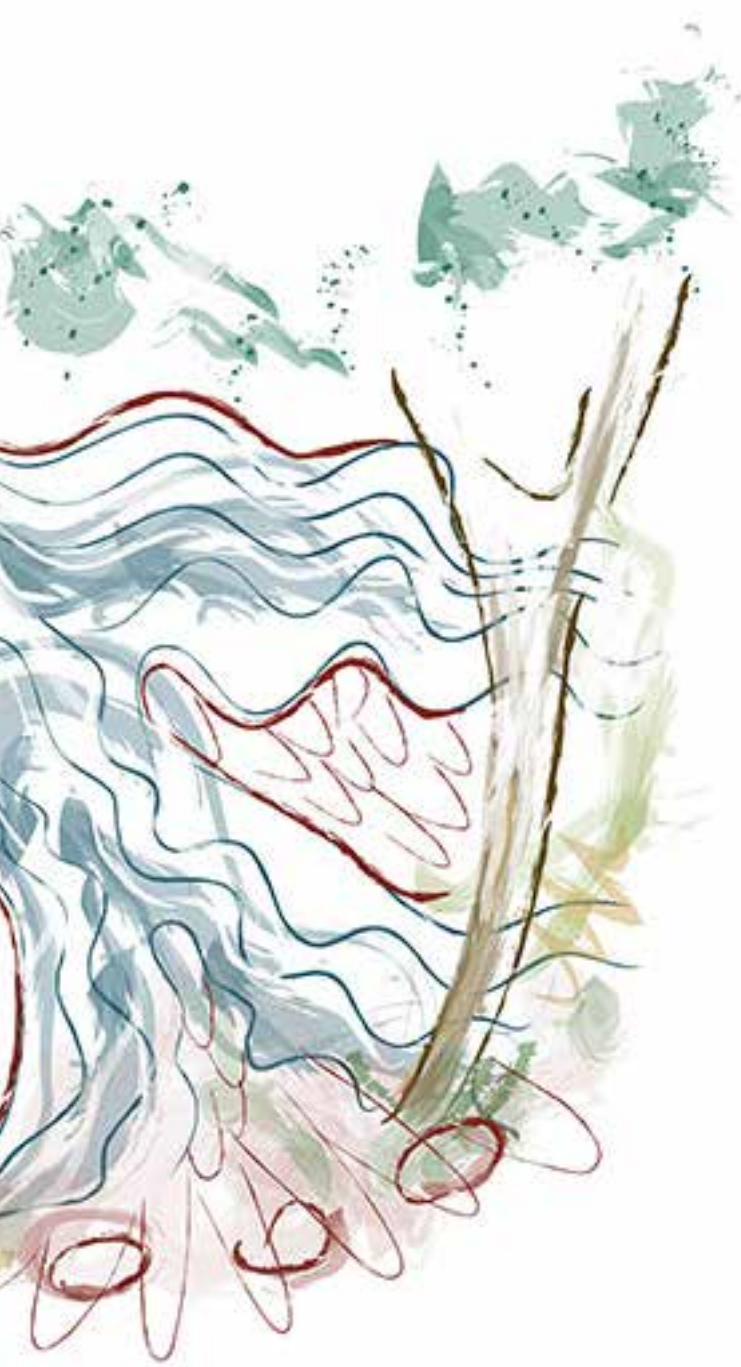
western side of the confluence of the Maribyrnong and the Birrarung. They were not only places of celebration, where our Ancestors feasted, laughed and played together, they were also places of trade and learning, where ideas were shared and decisions made, both large and small. Our western clans also worked hard to balance community and Country by employing sustainable agricultural practices. Terraced myrrnong gardens were cultivated, with bright yellow blooms stretching for kilometres. These golden terraces were observed and remarked upon in the journals of early European Settlers.

Oral history tells us of rock art, found along parts of the Maribyrnong River. Sadly, due to the disruptions of Country associated with the development of Melbourne, and the realignment of the Maribyrnong River, our rock art and the stories they shared have been lost, not only to us, but to all communities who now call the West home.

Today we honour the lost Western Woi wurrung clans by taking responsibility for this area of Country. This includes our commitment to wholly connect the surviving clan of the Woi wurrung – our Clan, with this Country and protecting and restoring its cultural values, both tangible and intangible. We are here for our Ancestors to make decisions about the health of Country.



* Acknowledging the Wurundjeri Woi wurrung people's consideration of Country, no Traditional Owner Group/s have yet been formally recognised by the State of Victoria for parts of this area (refer Appendix, page 74 for a map of Registered Aboriginal Parties Boundaries)



Wadawurrung foreword

Granite plains provide an abundant food source, flour, everything you need. All created by Lowen our creator; he flew down from the north. Everywhere a feather landed, it turned into granite. Lowen lies to rest: we know his place; we visit him and thank him for his creation. You may see a mountain; allow me to see my uncle.

All our rivers are living sources from Bundjil – the Karringalabul Murrup, the Creator spirit. He created all you see.

Our waters were made for our survival, the survival of all things living.

My Country includes these waters from the west of the Little River (*Worrin-yaloke*) to the Werribee River (*Wirribi Yaluk*), up to Fiery Creek. My whole Country boundaries are defined by water, including Port Phillip Bay.

Important decisions were made on the banks of these very rivers by my Ancestors. They were important meeting places. Just as they are today.

The Werribee Yulluk is where the Kulin nation came together in Baieer, a time of year. Exchange of commodities and knowledge concerning Country happened, based on the size of the Moon.

You may have heard of connection to Country: I believe this very component is missing in our world. For Aboriginal people, this is a deep, emotional connection, which is very hard to explain. Is it the fact that we were given animal species to care and nurture you became the PhD student of that very animal you had up to four in your lifetime?

Imagine what the world could be if we all had that; if we all were concerned for a species that is connected to a part of the ecosystem where you live.

The west had it all: water, flour, meeting places. We need to understand the importance of the ancient significance of the area.

Imagine: close your eyes; the sound of running water; the laughter of the children playing; the crackle of the fire; the passing of an emu; the noises from a happy, living system.

This is not lost. It is in a different form now but just as beautiful and important.

If we all could stop and hear the very things, that were here before us. They have the answers: we just need to listen.

Melinda Kennedy

Wadawurrung woman

Acknowledgement

The Waterways of the West Ministerial Advisory Committee (MAC) acknowledges the Wurundjeri Woi wurrung and Wadawurrung peoples as the traditional custodians of the Waterways of the West region.

We pay our respects to their ancestors and Elders, past and present. We recognise and respect their unique cultural heritage, beliefs and relationship to their traditional lands, which continue to be important to them today.

We recognise the intrinsic connection of the Wurundjeri Woi wurrung and Wadawurrung peoples to their traditional lands and value the contribution their caring for Country makes to the management of the waterways and their lands.



We support the need for genuine and lasting partnerships with the Wurundjeri Woi wurrung and Wadawurrung peoples, to understand their culture and connections to Country in the way we plan for and manage the Waterways of the West. By integrating traditional knowledge with contemporary western ecological and community knowledge, we can deliver better environmental outcomes and make communities more liveable, sustainable and inclusive.

We embrace the spirit of reconciliation, working towards equity of outcomes and ensuring an equal voice for Australia's first people.

About the artist

Stephanie Skinner is a Wadawurrung digital artist and illustrator. These artworks reflect the culture, the serene landscapes, and the value of our native wildlife and plants throughout the Waterways of the West region.



More than **280 bird** species recorded
at the Western Treatment Plant.



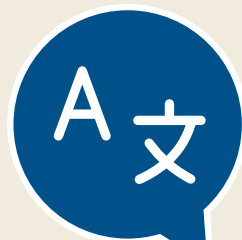
Temperature rise by between
1.2°C and **2.3°C** by 2050,
with higher summer temperatures
and more heat waves.



Almost **5,000 ha**
of public open space.



Population growth from **925,000**
(2018) to **1,900,000** (2040),
an additional 975,000 people.



38% of people in inner-west Melbourne
speak a language other than English at home.



\$100 million of annual farm gate
value from the Werribee Irrigation District.



Sea level rise by at least **0.8 m**
by 2100 in western Port Philip Bay.



Thirteen native
freshwater fish species.



Coastal wetlands and **estuaries**
with internationally recognised
migratory bird habitat.

Wurundjeri Woi wurrung community statement

The Wurundjeri Woi wurrung people have been caring for Country since the beginning of time. Bunjil our Creator gifted us this Country. Our message is that Wurundjeri Woi wurrung people have a deep understanding and knowledge of Country as well as rights to Country, and that this should be valued and respected.

The Wurundjeri Woi wurrung people have an unbroken relationship with Country, caring for this land, its waterways, its plants and animals. Our Ancestral spirits and stories are part of this Country.

There is a deep cultural obligation and birthright to look after Country and keep it healthy. We honour the lost clans and families of the Woi wurrung that did not survive settler policies and practices: the Gunung–Willam–Balluk, Kurung–jang–Balluk and Marin Balluk.

Today our Country is shared with Victorians from many different backgrounds. We believe that Wurundjeri Woi wurrung people must be enabled to take a leading role in working with all state agents as well as communities on matters of Country.

As Traditional Owners, we seek to build solid, working relationships and partnerships across our traditional Country to protect, manage and restore the land and water today and for the future generations.

We have the right and the obligation to speak for Country.



Water and smoking ceremony conducted by the Wurundjeri Woi wurrung elders on the banks of the Maribyrnong (Mirrangbamurn) River.

The Wurundjeri Woi wurrung Cultural Heritage Aboriginal Corporation is the Registered Aboriginal Party (RAP) for Wurundjeri Woi Wurrung country. It has statutory authority for the management of Aboriginal heritage values and culture under the Victorian *Aboriginal Heritage Act 2006*.

Wadawurrung community statement

We acknowledge our Ancestors and our Elders past and present.
We acknowledge that our Ancestors nurtured and cared for
Wadawurrung Country for tens of thousands of years.

We acknowledge the hardships, the horror and the harm that they suffered following colonisation and the devastating impacts of that, which are still evident and felt today.

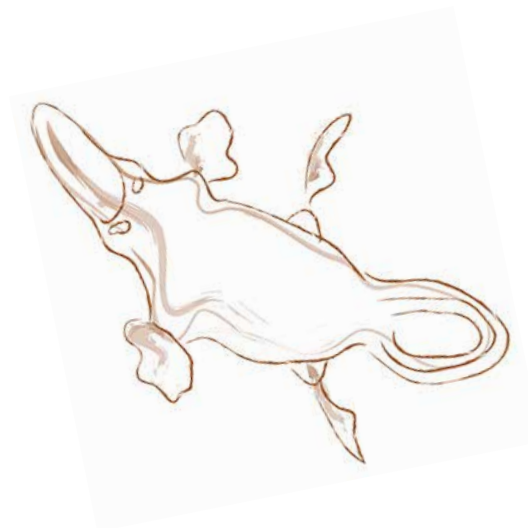
The fact that Wadawurrung people and culture have managed to survive and thrive demonstrates enormous strength, resilience and adaptability.

Wadawurrung people are determined to see their unique cultural heritage protected and respected. Wadawurrung aims to restore traditional knowledge and authority over the management of Wadawurrung Country for the betterment of those living on, prospering from and/or simply enjoying its land, waterways and coastal areas.

Wadawurrung people are the Traditional Owners of this land. Our family have looked after and cared for this Country for over a thousand generations and are still caring for it to this very day.

The Wathaurung Aboriginal Corporation, trading as Wadawurrung, is the Registered Aboriginal Party (RAP) for Wadawurrung Country. It has statutory authority for the management of Aboriginal heritage values and culture under the Victorian *Aboriginal Heritage Act 2006*.

In support of our above responsibilities, we provide a wide variety of services to organisations, assisting them to comply with the Aboriginal Heritage Act. We provide field representatives to assist with the discovery and repatriation of cultural heritage artefacts and ancestral remains. Our induction programs help to acquaint individuals and organisations with our heritage.



Purpose of this discussion paper

This discussion paper was developed by The Waterways of the West Ministerial Advisory Committee (Waterways of the West MAC), with significant input from its Traditional Owner members, to promote community discussion about issues and opportunities to improve the oversight and management of the Waterways of the West.

The Waterways of the West initiatives provide a platform for the sharing of traditional knowledge and culture about the waterways on the Country of the Wurundjeri Woi wurrung and the Wadawurrung people.

The most important issues and opportunities that need to be addressed were identified through consultation with a Reference Group, Traditional Owners, key stakeholders and community.

We want to hear your feedback on this Discussion Paper and ideas you have for protecting the Waterways of the West and their lands.





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Chair's message



The Waterways of the West region is undergoing a period of substantial transformation – together, we have an opportunity to shape the legacy of the region's waterways and ensure the unique landscape and open spaces of these blue green corridors and their environmental, recreational and Traditional Owner cultural values are protected and enhanced for communities now and into the future.

Waterways such as the Maribyrnong and Werribee (*Mirrangbamurn* and *Wirribi Yaluk*) in Woi wurrung and Wadawurrung language) feature strongly in the creation stories of the Wurundjeri Woi wurrung and Wadawurrung Traditional Owners and reflect a deep cultural and spiritual connection that has existed for thousands of generations.

These waterways and their surrounding lands are rich in natural beauty, with expansive volcanic plains of native grasslands, deep river valleys and smaller waterways meandering through the landscape. Melbourne's second largest river, the Maribyrnong (*Mirrangbamurn*), winds from the Macedon Ranges, through Sunbury, Sunshine and Essendon to Footscray and the Port of Melbourne. The region's other great waterway, the Werribee River, has its headwaters in the Wombat Ranges and descends down into Bacchus Marsh through one of Australia's most spectacular river gorges and supports two of Victoria's most

productive horticultural districts on its river flats, irrigated with precious water from its catchment. Suburban and inner urban reaches of these and other waterways such as Kororoit Creek, Skeleton Creek and Stony Creek provide important public parks and areas for the community to enjoy. The region is also rich in coastal wetlands and estuarine environments, providing internationally recognised environmental values.

The Waterways of the West region faces multiple challenges resulting from historic land and waterway use, population growth and climate change. Traditional Owners and the broader community have not been consistently involved or benefited waterway planning and management decisions. Many of these waterways in older urban areas have been polluted, turned into drains, their corridors lined by back fences or industry – a legacy of neglect and abuse. It is one of the fastest growing regions in Australia with its population predicted to more than double





from 975,000 to 1.9 million by 2040. This growth, together with climate change will transform the landscape and put great pressure on the region's limited water resources and the health of its waterways and wetlands. At the same time, the green spine open space network these waterways provide will become increasingly essential to the health and wellbeing of residents and people working in the west.

The Waterways of the West Ministerial Advisory Committee (MAC) has heard from a community passionate to enhance waterway health and, improve accessibility to waterway open space, so that these places provide opportunities for people to connect with nature and each other. We must learn to adapt to a changing climate and the planning and management of waterways in the increasingly urban landscape in order to meet community expectations. There is also a desire to better understand the traditional knowledge and values of the Wurundjeri Woi Wurrung and Wadawurrung people and to incorporate Traditional Owners and their values and culture into the future management and governance of these waterways.

The Ministerial Advisory Committee will provide independent advice to government on protecting, managing and promoting the Waterways of the West. Recognising past and present challenges, we also need to be forward looking with a vision for these waterways in 50 years.

I have been privileged to work with Traditional Owner Elders and other distinguished members of the MAC in preparing this Discussion Paper. We have drawn on extensive initial consultation to highlight priority issues and opportunities.

I encourage you to have your say and contribute to the work of the MAC as we seek to ensure that future generations have the opportunity to enjoy the many values of the region's waterways by strengthening management arrangements and ensuring a strong voice for the community and Traditional Owners.

Chris Chesterfield

Chair

1. Introduction

The Victorian Government has committed to working with the Wurundjeri Woi Wurrung and Wadawurrung Traditional Owners and the wider community to protect the Waterways of the West and their lands for future generations. The government has appointed the independent Waterways of the West Ministerial Advisory Committee (MAC) to make recommendations about how best to recognise, protect and improve the waterway health, amenity, access and community values of the region's waterways and their lands.

The Wurundjeri Woi wurrung and Wadawurrung peoples are the Traditional Owners of much of the Waterways of the West and their lands. Waterways have special cultural significance for Traditional Owners encompassing spiritual, cultural, social, economic and environmental values. Traditional Owners and their land and water management practices and ecological knowledge need to be embedded in water and land planning decisions.

The Waterways of the West region is undergoing a period of transformation. Where factories and workers' cottages once stood, medium and high density housing and business centres are being built. Where there was farmland, new suburbs are springing up. This rapid, large-scale change in land use is an opportunity to address some of the harm done to waterways in the past and to create open space along

waterways, so providing blue-green corridors for the communities of Waterways of the West region, now and into the future.

The population of the Waterways of the West region is forecast to almost double by 2050, and much of this growth will occur in the Waterways of the West region. Climate and rainfall patterns are changing: forecasts are for reduced rainfall and streamflow which will reduce surface water availability for consumptive uses and the environment. These changes will put pressure on the highly valued environmental, cultural and social attributes of the region's waterways and their lands.

The interest, passion and advocacy of communities to protect the region's waterways and their lands helped drive the establishment of the MAC. Our work aligns with and builds on current policies and initiatives to protect these waterways. We will make





recommendations to the Victorian Government, and we seek community feedback on this discussion paper to help form our recommendations.

The Waterways of the West at a glance

The main Waterways of the West are the Maribyrnong River (*Mirrangbamurn*) and the Werribee River (*Wirribi Yaluk*). Other rivers and creeks in the region include Moonee Ponds (*Moonee*) Creek, the Little River (*Worrin-yaloke*) and Laverton, Skeleton and Kororoit Creeks.¹ The region also has important wetlands and coastal estuaries.

The Waterways of the West region is some 4,123 km². Its landscape includes steep river gorges (such as Werribee and Lerderderg gorges), open plains, shallow waterways with undefined banks and river flats. These areas support forests, grasslands, coastal wetlands and estuarine ecosystems. There are also extensive public parks and open spaces within the region, including Brimbank Park, Altona Coastal Park, Holden Flora and Fauna Reserve and Werribee River Park.

Figure 1: Waterways of the West region²

- 1 Maps of the Waterways of the West catchments are provided in the Appendix
- 2 The Waterways of the West region incorporates the Werribee and Maribyrnong Catchments as described in the *Healthy Waterways Strategy*, 2018



The Waterways of the West Ministerial Advisory Committee

The Minister for Water Hon. Lisa Neville and the Minister for Planning, Hon. Richard Wynne established the Waterways of the West MAC in October 2018 to provide independent advice to the government about protecting the Waterways of the West region. We have been asked to provide advice to the Victorian Government by the end of 2019.

The MAC's members have extensive experience in water management, urban planning and design, local government and Traditional Owners' cultural values. They are Chris Chesterfield (Chair), Aunty Doreen Garvey Wandin (until April 2019), Melinda Kennedy, Aunty Diane Kerr, Aunty Alice Kolasa, Shelley Penn, Uncle Dave Wandin (after April 2019) and Lydia Wilson.

The MAC includes members from both Registered Aboriginal Parties in the Waterways of the West region: the Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation (the representative body for the Wurundjeri Woi Wurrung people) and the Wathaurung Aboriginal Corporation (the representative body for the Wadawurrung people). These MAC members shape our understanding of these waterways and the current and future challenges they face. They are helping include

Traditional Owners and their values and culture in planning and decision-making for the future management of the region's waterways and their lands.

The MAC's work builds on and strengthens past collaboration with Traditional Owners; stakeholders including local government, agency and community organisation representatives; and the broader community. This collective input has informed this discussion paper and will continue to shape our recommendations to the government.

In preparing this discussion paper, the Waterways of the West MAC:

- sought input from the community and other stakeholders on key issues and opportunities, through the Engage Victoria online consultation platform



Chris Chesterfield – Chair



Aunty Doreen Garvey Wandin



Melinda Kennedy



Aunty Diane Kerr



Aunty Alice Kolasa



Shelley Penn



Uncle Dave Wandin

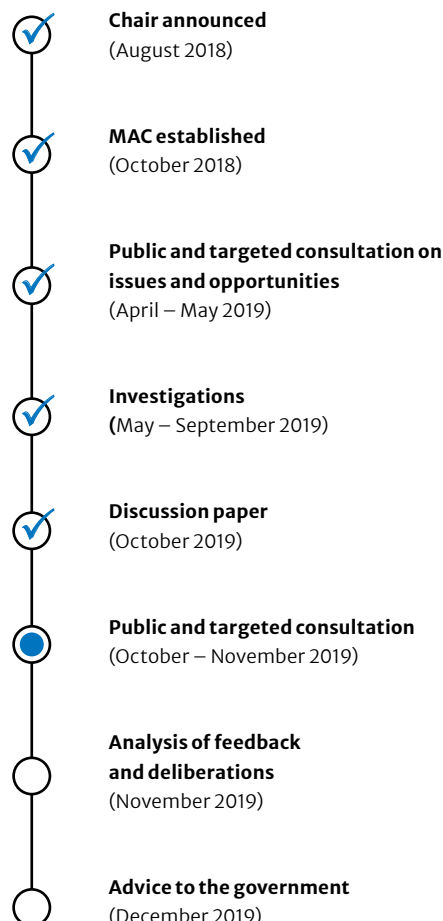


Lydia Wilson

- reviewed outputs from previous, relevant consultation processes and strategic work
- engaged with stakeholders responsible for decision-making and management of the Waterways of the West and with key environmental advocates
- sought advice from an agency reference group
- are overseeing the development of a community vision by the Waterways of the West Community Assembly, representing the community of the region
- provided multiple opportunities for the community to voice its views.

The MAC will prepare a consultation summary report after we have consulted with the community and considered its feedback. We will then report to the Minister for Planning and the Minister for Water with advice and findings about the key issues and opportunities and make recommendations for a *Waterways of the West Action Plan*.

Waterways of the West MAC timeline



Terms of reference

The Ministers for Water and Planning have asked the MAC to:

- oversee a process to develop a community vision for the Waterways of the West and their lands
- identify current and emerging issues affecting the social, environmental and cultural values of the Waterways of the West
- investigate current and consider optimal institutional, legislative and regulatory arrangements for the management, promotion and protection of the Waterways of the West
- investigate additional arrangements to ensure Traditional Owners and the community participate in management decisions
- investigate land use planning and development controls and strategic policy that would mitigate risk to the Waterways of the West and provide a net benefit to the communities of the region
- identify any interim land use planning arrangements that could be put in place immediately
- prioritise issues and opportunities and make recommendations for specific, cost-effective actions and any mandatory requirements for the protection of the waterways.

Have your say

This discussion paper was guided by discussions with community representatives and stakeholders across relevant local government, agencies and community organisations about key issues and opportunities for the waterways and their surrounding lands.

The Waterways of the West MAC would like to hear what you think about the ideas in this discussion paper and any other ideas you have about protecting the Waterways of the West and their lands. We would like your feedback on the four community consultation questions.

The project's webpage – <https://engage.vic.gov.au/waterways-west> – has a link to this discussion paper, background reports and other information to inform feedback.

You can provide feedback online, in person and/or by making a written submission.

Community consultation questions

1. **What is the strength of your support for the directions identified by the MAC?**
2. **When considering the opportunities identified under each of the directions, which ones would you prioritise?**
3. **What other opportunities would support each direction?**
4. **Is there anything else you would like the MAC to consider?**

Online

You can make a written submission by completing the submission form on the web page.

In person

Community workshops and public open houses will be held across the Waterways of the West region including at Melton, Werribee, Sunbury and Footscray: dates, times and details are on the [Engage Victoria website](#).

Written submission

You can make a written submission by:

- completing the online submission form on the project's webpage
- emailing a submission to westernrivers.inbox@delwp.vic.gov.au
- mailing the submission to
Waterways of the West,
Department of Environment, Land,
Water and Planning,
PO Box 500,
East Melbourne VIC 3002.

Submissions will be made public unless you ask for yours to be confidential.

**Please make your submission by
17 November 2019.**



2. The case for change

The Waterways of the West region is transforming and now is the time to ensure the region's waterways and their lands are protected and improved for future generations. Their current state is a legacy of past use and decisions we make today will shape the future of the region's waterways and their lands.

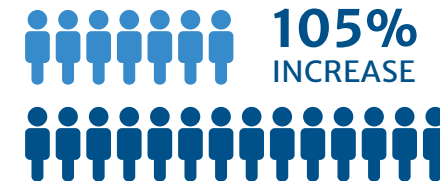
The transformation of the Waterways of the West region

The population of the Waterways of the West region is growing rapidly, and it is forecast to double by 2050. Wyndham and Melton are in the top five five-fastest growing Australian municipalities, and Point Cook, Tarneit and North Wyndham Vale among the fastest growing suburbs. This means more people living, working and playing in the area, and a greater need for waterways and their surrounds to provide recreation and enjoyment opportunities.

The region is a major urban growth corridor and there will be significant greenfield residential development, transitioning large areas from agricultural to urban use, in the next 20 to 30 years. Melton and Bacchus Marsh are examples of localities that have already transitioned from primarily rural to primarily urban land use, as will suburbs such as Hillside and Sunbury South. Altona, Werribee, Maribyrnong, Footscray, Sunshine, Greenvale, Arden, Macaulay and Sunshine West are among locations forecast for further densification and urban renewal.

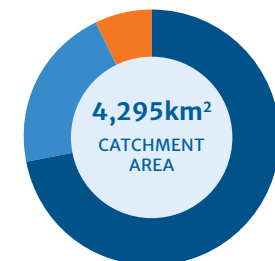
Population growth of the Werribee and Maribyrnong catchments

925,000 NOW (2018)
1,900,000 BY 2040



Land use in the Werribee and Maribyrnong catchments

- Urban 7%
- Natural Vegetation 21%
- Agriculture 72%



Urban growth and development will greatly increase the region's impervious surface area — roofs, roads and other paved areas — generating much more stormwater runoff which will affect the health of the region's waterways. However, such significant growth and change also provides opportunities to rethink the values waterways and their surrounds provide and how best to protect and enhance them.

As the population grows and the amount of private open space diminishes, the need for waterways and their lands to provide recreation, enjoyment and connection opportunities will increase. They have the potential to provide safe, accessible and well-connected recreation and transport thoroughfares for pedestrians and cyclists. They also support multiple recreational opportunities: an opportunity

to connect with nature, use of parklands, trail networks and water-based activities on the main waterways.

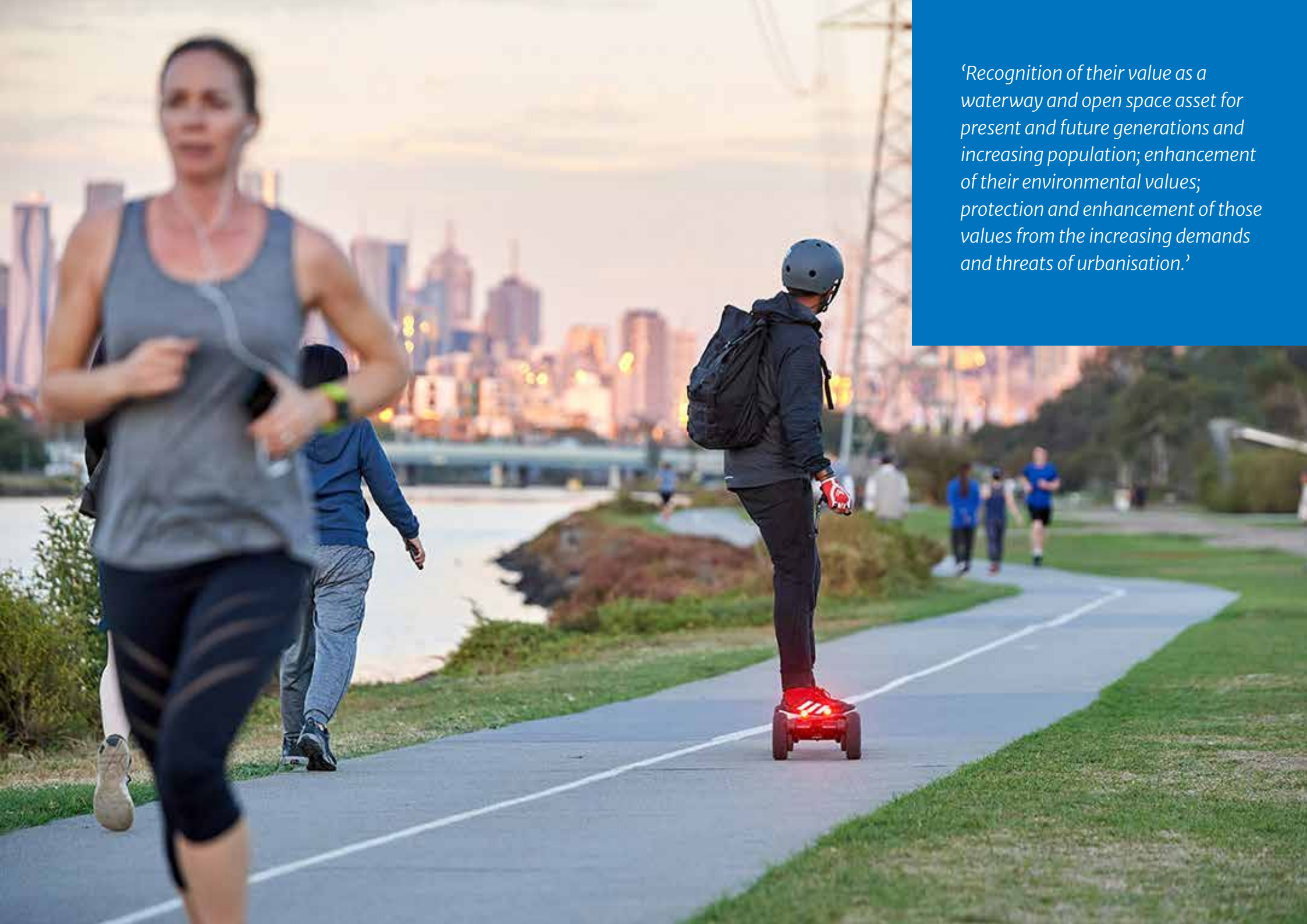
Waterways provide opportunities to develop locally authentic, place-based communities: each place along a waterway is unique, identifiable and connected to its local neighbourhood. Awareness of and access to these local places and to their surrounding open spaces supports the health and wellbeing of people and communities, contributes to a sense of belonging, and encourages physical activity and connection to nature.

Waterways are a critical focal, orientating and linking element for people to enjoy and connect to nature. They offer delight through discovery and recreation in nature, as well as meaning and connection to place

through stories and experiences. The Wurundjeri Woi wurrung and Wadawurrung people have a deep connection to the waterways on their Country, which they share through the generations via stories and experiences. A sense of community and belonging within the places where people live, work and travel is not just an influential determinant of mental and physical health: it also fosters perceptions of security, confidence and comfort, which can encourage people to be active in their neighbourhood as well as socially connected to others.

In the Waterways of the West region, there is now a once-in-a-generation opportunity to protect and improve our blue-green corridors for communities now and in the future.





'Recognition of their value as a waterway and open space asset for present and future generations and increasing population; enhancement of their environmental values; protection and enhancement of those values from the increasing demands and threats of urbanisation.'

Climate change

Climate change will affect the Waterways of the West and their lands. While the beautiful, unique landscapes and ecosystems of the region are adapted to the warmer, drier climate of the Western Victorian Volcanic Plains, climate change is increasing the frequency and duration of hot and dry conditions. Since the mid-1990s, late-autumn and early-winter rainfall in south-east Australia has decreased by 15%, and average rainfall has decreased by 25%.

By 2040, average temperatures are forecast to rise by 1.3° C under a medium-climate-change scenario. This will increase the urban heat island effect in higher-density urban areas with consequent effects on public health and wellbeing than are rural areas.

Less rainfall over the region's naturally dry landscape, as well as rapid population growth and ongoing consumptive demands for water, will put greater pressure on water availability. We are likely to see longer and more frequent periods of no flow in ephemeral waterways and increased frequency of wetland drying. The natural ecology of these systems may not be able to tolerate these changes in the water regime and the impacts on the vegetation communities and species they support. The increased frequency of heatwaves is also predicted to increase the frequency and intensity of bushfires.

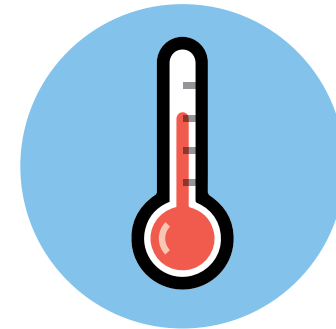
Our drainage systems and waterways are connected, so forecast more-intense rainfall events and resulting stormwater run-off are expected to degrade in-stream water quality, with greater sediment and nutrient loads and less oxygen. This could result in the rapid alteration of habitats and less amenity and access for communities.

Rising sea levels and storm surges will affect the communities and landscapes of the coast.³ This will affect community values and use of coastal land and influence coastal ecosystems including the internationally significant estuarine environments and the region's coastal wetlands. The *Healthy Waterways Strategy 2018–28* forecast that the environmental values of the region's coastal wetlands will decline unless major efforts are made to plan for and mitigate climate change impacts.

The rate and scale of urban development occurring in the region provides an opportunity to shape the future urban landscape to include features which help communities adapt to a hotter, drier climate. Access to cool, green, open spaces along waterways could become an essential feature of urban areas.



Change in average annual rainfall
2.4% decrease by 2040



Temperature increase
1.3°C by 2040

³ A map indicating predicted sea level rise and storm tide by 2070 is provided in the Appendix

Community advocacy and stewardship

There is passionate community support and advocacy to protect the Waterways of the West, with recognition of these waterways as valuable and unique community assets.

Environmental Justice Australia, in collaboration with the Werribee River Association and the Friends of Steele Creek, consulted extensively with the community to develop *A Rivers of the West Act: Draft proposals to protect and restore Melbourne's western rivers and waterways and to defend the liveability of the West*. These groups also helped shape the Waterways of the West MAC's terms of reference.

Active community groups (such as Friends of Moonee Ponds Creek, Friends of Kororoit Creek and Friends of Cruickshank Park, to name a few) have long worked to protect and improve the values of the region's waterways and their lands.

Fifteen Landcare, 'friends of' and other environmental groups working mainly in the Maribyrnong River (Mirrangbamurn) and Werribee River (Wirribi Yaluk) catchments responded to a 2019 Landcare group survey by the Port Phillip and Westernport Catchment Management Authority (CMA). These are just a subset of groups in the region.

The survey found each group volunteered an average of 544 hours a year, which constitutes an in-kind contribution to protecting the Waterways of the West of over \$335,000 a year. It also estimated that for every dollar the government invests through the CMA's Community Grants Program, the community invests \$2.05.



Institutional and policy settings

For the most part, roles and responsibilities to manage the Waterways of the West and their lands are well-defined. In the region, there are two Registered Aboriginal Parties, 11 local government authorities, four water corporations, three planning authorities, several state government departments and many community groups.

At present, there is extensive collaboration between governments, local communities and Traditional Owners for the planning and management solutions for the region's waterways and their lands. These collaborations are generally voluntary or policy-driven, and this can result in situations where Wurundjeri Woi wurrung, Wadawurrung and local community voices have not been invited in to the process.

Governance arrangements should reflect increasing community expectations for the values and services that waterways and their lands provide. While the roles, responsibilities and accountabilities of entities align in many areas, there are also opportunities to clarify and strengthen alignment.

There is a strong Victorian Government policy base to guide the protection of the Waterways of the West. The Waterways of the West MAC is preparing its advice within the context of Victorian Government policy and initiatives to improve environmental protection and the liveability of our cities and towns and to ensure

Traditional Owners and their values and culture are considered in decision-making. The MAC aims to align its proposals with existing forums where possible, to avoid duplication and costly or lengthy establishment processes. In particular, [Water for Victoria, Plan Melbourne 2017–2050](#) and [Yarra River Action Plan Wilip-gin Birrarung murrong](#) set clear directions to protect and improve the Waterways of the West.

These initiatives include actions to:

- improve planning arrangements for urban waterways
- improve the management of water for the environment in a changing climate
- protect and enhance parklands on the adjoining waterways
- protect and enhance the health of urban waterways
- recognise Traditional Owner's and Aboriginal values of and objectives for water
- include Aboriginal values and traditional ecological knowledge in water planning
- include recreational values in water and waterway planning.

Table 1 summarises other relevant Victorian Government initiatives.

'Change attitudes to these amazing areas, greater protection, and work with private landowners to provide private owners the tools and incentives to maintain and protect the valuable biodiversity around them.'



Table 1 Relevant Victorian Government initiatives

Theme	Initiative
Biodiversity	Protecting Victoria's Environment – Biodiversity 2036 Melbourne Strategic Assessment Native vegetation removal regulations Flora and Fauna Guarantee Amendment Bill 2019
Climate change	Victoria's Climate Change Framework
Coasts and marine	Marine and Coastal Act 2018 Draft Marine and Coastal Policy Port Phillip Bay Environmental Management Plan 2017–2017 Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar Site Management Plan
Environment	State Environment Protection Policy (Waters) Environment Protection Amendment Act 2018 VEAC Central West investigation
Land use planning	Plan Melbourne 2017–2050 Melbourne Metropolitan Open Space Strategy (pending) Land-use framework plans Strategic agricultural land assessment Melbourne Urban Forest Strategy Review of Structure Planning Guidelines
Traditional Owners	Country plans
Water (and waterways)	Water for Victoria Healthy Waterways Strategy – a shared strategy across Melbourne Water, state and local government, water corporations and the community Central Region Sustainable Water Strategy Renewal (2022) Integrated water management forums Long-term Water Resources Assessment Water and Catchment Legislation Amendment Bill 2019 , passed to amend the <i>Water Act 1989</i> .

‘Waterways are intrinsically peaceful and life giving – the peace of nature, the ecosystems they support.’



3. The Waterways of the West's unique landscape

The Waterways of the West are part of a unique landscape. It is one of volcanic plains, gorges and river flats which support biologically diverse and nationally significant grasslands, woodlands and internationally recognised coastal wetlands and estuarine ecosystems.

The region's waterways include the Maribyrnong River (*Mirrangbamurn*), Werribee River (*Wirribi Yaluk*) and Moonee Ponds (*Moonee Moonee*) Creek; their headwaters and tributaries; and other creeks and wetlands.

The landscape form, combined with the history of land and waterway use, has shaped the current condition and values of the region's waterways, with European settlement transforming the landscape, often to the detriment of waterway health.

The Wurundjeri Woi Wurrung and Wadawurrung peoples continue to have cultural, spiritual and economic connections to the land and water through their associations and relationships with Country.





A unique landscape

The Waterways of the West region is in the broad landscape of the Western Victorian Volcanic Plain, a recognisable and distinctive setting different to the landscapes east of Melbourne's centre. These generally flat plains form extensive native grasslands with the waterways providing diverse and richly varied natural features.

In the upper catchment of the Werribee River (*Wirribi Yaluk*) and Maribyrnong River (*Mirrangbamurn*), glacial deposits have created landscapes of geological and recreational value (such as the Werribee and Lerderderg gorges). In the lower reaches and the low-lying areas of the Maribyrnong River (*Mirrangbamurn*) catchment close to the city there are extensive floodplains.

Rainfall in the region ranges from about 1,000 mm a year in the headwaters to 450 mm in the rain-shadowed southern plains near Melton and Werribee. Many waterways are ephemeral – they dry up periodically – and wetlands have irregular naturally dry periods. These cycles of wetting and drying have shaped the type of plants and animals the waterways support.



The Werribee River

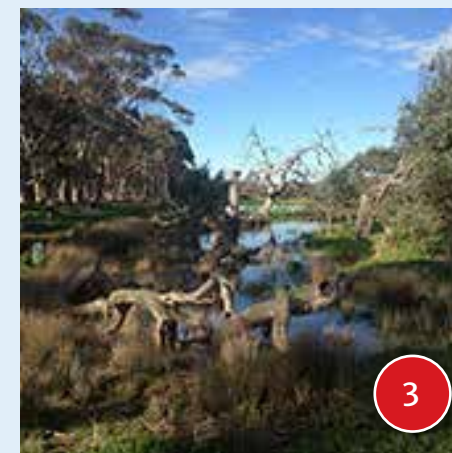
The Werribee River (*Wirribi Yaluk*): from its headwaters in the Wombat State Forest, this iconic river flows for 110 km through natural landscapes, agricultural lands, Ballan, Bacchus Marsh and Werribee before discharging into Port Phillip Bay. The river has a catchment of 2,715 km², and its tributaries include the Lerderderg River, Toolern Creek, Parwan Creek and Djerriwarrh Creek. Other waterways in the catchment flow directly into Port Phillip Bay including the Little River (*Worrin-yaloke*) and Kororoit, Skeleton, Laverton and Lollypop creeks.

Many of the smaller waterways and wetlands within the catchment are ephemeral. As a result, remnant pools, which are frequently fed by groundwater, become important refuge for fish, birds and other fauna during prolonged dry conditions.

The Werribee River (*Wirribi Yaluk*) catchment includes the prime food producing region of the Werribee and Bacchus Marsh irrigation districts. These areas supply Melbourne and the broader area with a large proportion of leafy vegetables, using water from the Werribee River (*Wirribi Yaluk*), recycled water and groundwater.

Little River

Little River (*Worrin-yaloke*) passes through ecologically-significant landscapes of native grassland and woodland as it flows from the Brisbane Ranges National Park, through the Western Treatment Plant and into Port Phillip Bay.

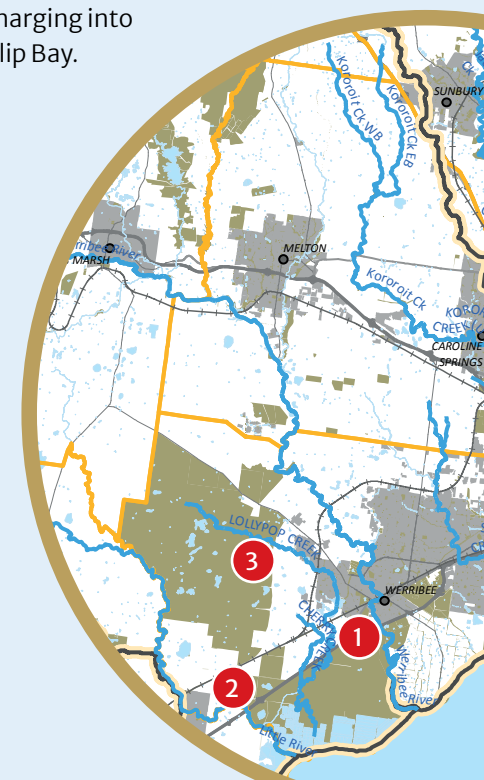


Lollypop Creek

Lollypop Creek is an ephemeral stream that flows through farmland west of Werribee before entering the Western Treatment Plant and discharging into Port Phillip Bay.

Black Forest Swamp

Black Forest Swamp is a natural floodplain depression on Lollypop Creek. It is rich in River red gums and other native vegetation.

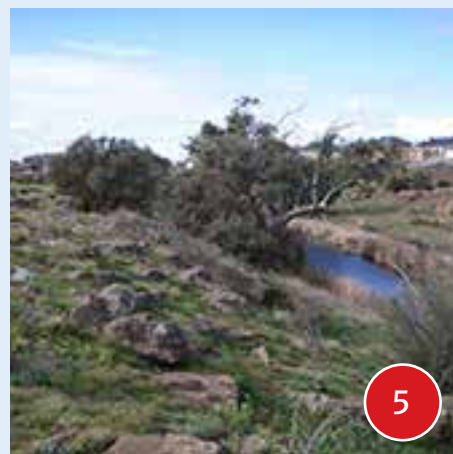


Moonee Ponds Creek

Moonee Ponds (*Moonee Moonee*) Creek extends for about 24 km from Westmeadows in the north to meet the Yarra River (*Birrarung*) under the Bolte Bridge at Docklands. The landscape of the creek is mostly urbanised, apart from rural areas in the upper reaches.



4



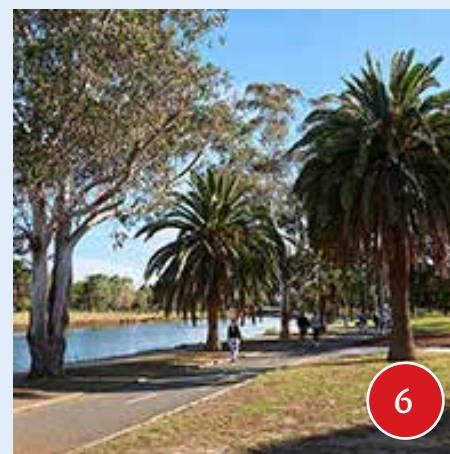
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Kororoit Creek

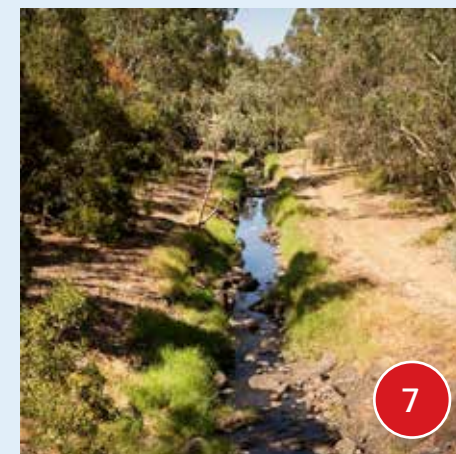
In the northeast of the Werribee catchment, Kororoit Creek originates south of Gisborne, at the foothills of the Great Dividing Range. It flows south-east towards Port Phillip Bay, initially as two main branches (West Kororoit and East Kororoit). These branches converge on the basalt plains north of Melton, west of Diggers Rest. Surrounding land use is rural for most of its course, but its lower reaches pass through the urbanised western suburbs of Melbourne, such as Caroline Springs, Deer Park, Albion and Sunshine. This includes areas of industrial land use. The creek reaches Port Phillip Bay at Altona Coastal Park and Jawbone Conservation Reserve between Altona and Williamstown.

The Maribyrnong River

The Maribyrnong River (*Mirrangbamurn*) is the second-largest in metropolitan Melbourne. It originates near Lancefield and flows to its confluence with the Yarra River (*Birrarung*) in the Port of Melbourne at Coode Island. The river and its tributaries have carved a path through the basalt plains of the region, creating a diverse landscape of escarpments, gorges and river flats. The Maribyrnong River (*Mirrangbamurn*) catchment extends over 1,580 km² and includes the river's tributaries: Deep, Jacksons, Riddells and Emu creeks in its upper reaches and Steele Creek in its lower reaches.



6



7

Stony Creek

Stony Creek runs through the suburbs of St Albans, Albion, Sunshine, Braybrook, Tottenham, Brooklyn, Kingsville and Yarraville: heavily urbanised areas. The creek is concrete channel along many sections before it joins the Yarra River (*Birrarung*) under the Westgate Bridge at the Stony Creek Backwash.



4. Stewardship of the Waterways of the West over time

Victoria's Traditional Owners managed the Waterways of the West and their lands sustainably for more than a thousand generations. European settlement devastated Traditional Owner populations and their land management practices.

European farming, then industrialisation, transformed the region and left a legacy of poor water quality, numerous realigned waterways and limited public access to waterways and their lands, especially in the inner-west.

However, the region's population has grown and an increasingly passionate and active community has called for greater protection and enhancement of the recreational, environmental and Traditional Owner values of the region's waterways and their lands. Urban growth and renewal and a passionate, active community offer opportunities to continue this trend.





Traditional Owners' relationship with the Waterways of the West

For Aboriginal people, Country is much more than a place. Rock, tree, river, hill, animal, human – all were formed of the same substance by the Ancestors who continue to live in land, water, sky. Country is filled with relations speaking language and following Law, no matter whether the shape of that relation is human, rock, crow, wattle. Country is loved, needed, and cared for, and Country loves, needs, and cares for her peoples in turn. Country is family, culture, identity. Country is self.⁴

Traditional Owners have cultural, spiritual and economic connections to the land, water and other resources through their associations and relationships with Country, which they have managed sustainably over a thousand and more generations. Connection to land, waters and resources on Country is important for Traditional Owners' health and wellbeing.

The Wurundjeri Woi wurrung and the Wadawurrung peoples are the Traditional Owners of much of the Waterways of the West region's waterways and lands. The sacred sites and resources, values and stories associated with places, as well as language and ceremonial practices, have been handed down by their Ancestors and Elders. The Wurundjeri Woi wurrung and the Wadawurrung are the custodians of the region's creation stories and spiritual connections.

Traditional ecological knowledge was used by the Traditional Owners to identify, harvest and utilise natural resources sustainably. Wurundjeri Woi wurrung and Wadawurrung land management techniques included fire and seasonal farming. They regularly used low-intensity burning to revitalise areas for agricultural production and to reduce the risk of bushfires.

European settlement and the Wurundjeri Woi wurrung and Wadawurrung peoples' dispossession

European settlement had an appalling effect on the Wurundjeri Woi wurrung and Wadawurrung Ancestors. Diseases and massacres devastated the Aboriginal population, and far more people lost their lives than are recorded in official documents.

Vast areas of land were cleared, and introduced species including horses, sheep, rabbits and foxes greatly altered the landscape, which reduced the

available traditional food and made people less able to manage the land in traditional ways. The fraction that remained were forced onto Aboriginal missions (such as the Coranderk Mission in the Yarra Valley, with which the Wurundjeri Woi wurrung people are strongly associated).

Despite initial attempts by Wurundjeri Woi wurrung and Wadawurrung leaders (such as the Wurundjeri

⁴ Kwaymullina A, 2005, 'Seeing the Light: Aboriginal Law, Learning and Sustainable Living in Country,' *Indigenous Law Bulletin*, May/June 2005, vol, 6, iss. 11.

Woi wurrung Wonga and Barak) to collaborate with and guide the European settlers, the traditional custodians of the land were dispossessed of their lands. The loss of cultural knowledge and connection has been a legacy of this.

The *Half Caste Act 1886* started the expulsion of Aboriginal people of mixed descent — known as half-castes — from Aboriginal stations and reserves to force them to assimilate into European society. These expulsions further separated families and communities from their traditional lands. The policy the Act implemented was a failure: its inhumanity led to *Victoria's Aborigines Act 1910* then to the *Aboriginal Lands Act 1970*, which abandoned the policy.

The rights of Traditional Owners and Aboriginal Victorians are now protected by the *Victorian Charter of Human Rights and Responsibilities Act 2006* and by Australia's adoption of the *United Nations Declaration on the Rights of Indigenous Peoples* in 2007. These laws and international agreements recognise that human rights have special importance for the descendants of Australia's first peoples, and they protect their distinct cultural rights to enjoy their diverse spiritual, social, cultural and economic relationships with their traditional lands and waters.

European farming

European settlers were attracted to the grasslands of the Waterways of the West region, and pastoral farming runs were the main land use in the region in the early 1800s. By the mid-1800s, cropping and wheat-growing had followed, and orchards and market gardens were established in the 1920s.

While farming produced essential food and fibre for a growing population, it also transformed the landscape. Areas were cleared; wetlands were

drained; timber was harvested from along and around waterways; native grasslands were ploughed for cropping; and the soil was compacted by grazing sheep and cattle. Grazing animals also destroyed the first people's Murnong agricultural practice.

Industrial and suburban development have now displaced much agricultural activity in the region, but it is still an important land use: notable are the market gardens of Werribee South and Bacchus Marsh.



Figure 2: Part of the saltwater lagoon and view of Mount Macedon with the Flemington Hills near Melbourne, Eugène von Guérard, 1858

Industrial and urban development

Industrialists and developers saw uses for the rivers of the region for transport, water supply and waste disposal. For example, the Maribyrnong River (*Mirrangbamurn*) connected industries, particularly agricultural processing, to wharves along the river, its tributary Stony Creek and the Williamstown docks.

The growth of industry in the late 1800s prompted increased residential settlement across the growing region, with the once-isolated villages of Spotswood, Yarraville and Newport merging into a suburban and industrial belt. During Melbourne's land sales boom of the 1880s, many of the pastoral leases closer to the centre were subdivided and purchased for housing and town development. Industrialists also developed planned, garden-city-style housing estates in areas such as Essendon and Moonee Ponds, so their workers could live close to their factories in Footscray, Sunshine and Deer Park.

By the early 20th century, chimney stacks and factories lined the Maribyrnong River (*Mirrangbamurn*). The absence of controls over the expansion and operation of industry resulted in the river becoming heavily polluted.

With increased residential populations calling the west home, pressure increased to use the waterways and their lands for recreation and general enjoyment. Fishing became popular at the site of the Angler's Hotel in Maribyrnong and swimming at Bungey's Hole on the Werribee River (*Wirribi Yaluk*). Kororoit Creek at Sunshine became popular for swimming in the 1920s and 30s. Boating and rowing along the Maribyrnong

River (*Mirrangbamurn*) were popular until the early 1880s when water pollution put a stop to regattas.

Other significant industries established across the region. Bluestone, to be used as ballast, was quarried along Stony Creek from the 1850s, and the petroleum industry around Altona was established from 1924. The Cheetham Saltworks started in the 1920s along the coast between Altona and Point Cook, bringing more jobs to the region and reshaping the landscape of lower Skeleton Creek. The Maribyrnong Explosives Factory was built in 1910, and the Royal Australian Air Force established a base at Point Cook in 1921.

Industries in the region and the jobs they created have also shaped the region's demographic and social fabric. The region has a strong multicultural influence from the successive waves of immigrants following European settlement.

From the mid-1970s, globalisation, tariff reductions and other economic changes reduced manufacturing in Melbourne's west. Many of the industrial facilities in the region have closed, creating possibilities for other economic activities and for urban renewal. These transitions have also driven a reappraisal of the importance of the region's waterways and their recreational and environmental values.

Today, we see the environmental legacy of the historic industrial land use: poor water quality, numerous realigned waterways and lack of public access to the waterways and their lands, especially in the inner-west.

'Traditional ecological knowledge was used by the Traditional Owners to identify, harvest and utilise natural resources sustainably.'



Urban growth and renewal

The pace of urban growth in the Waterways of the West region has escalated since the 1990s, with Figure 3 showing the expanding urban footprint through time.

Population growth and the increasing demand for housing within the region has resulted in large-scale rezoning of former agricultural land and former industrial land for new residential developments, including intensive residential development in Werribee, Caroline Springs, Melton and Sunbury.

Improvements in urban planning conventions have resulted in the creation of significant open space along waterways. The Seabrook Estate on Skeleton Creek in Altona was an early example of residential development centred around the waterway with boulevard roads following the waterway, and properties facing onto adjoining open space.

Many new residential subdivisions highlight their waterway-related amenity with names like Caroline Springs, Sanctuary Lakes and Manor Lakes and feature landscaped wetlands prominently. Inner-urban redevelopment sites are also celebrating their waterways (such as those along the Maribyrnong River (*Mirrangbamurn*)).

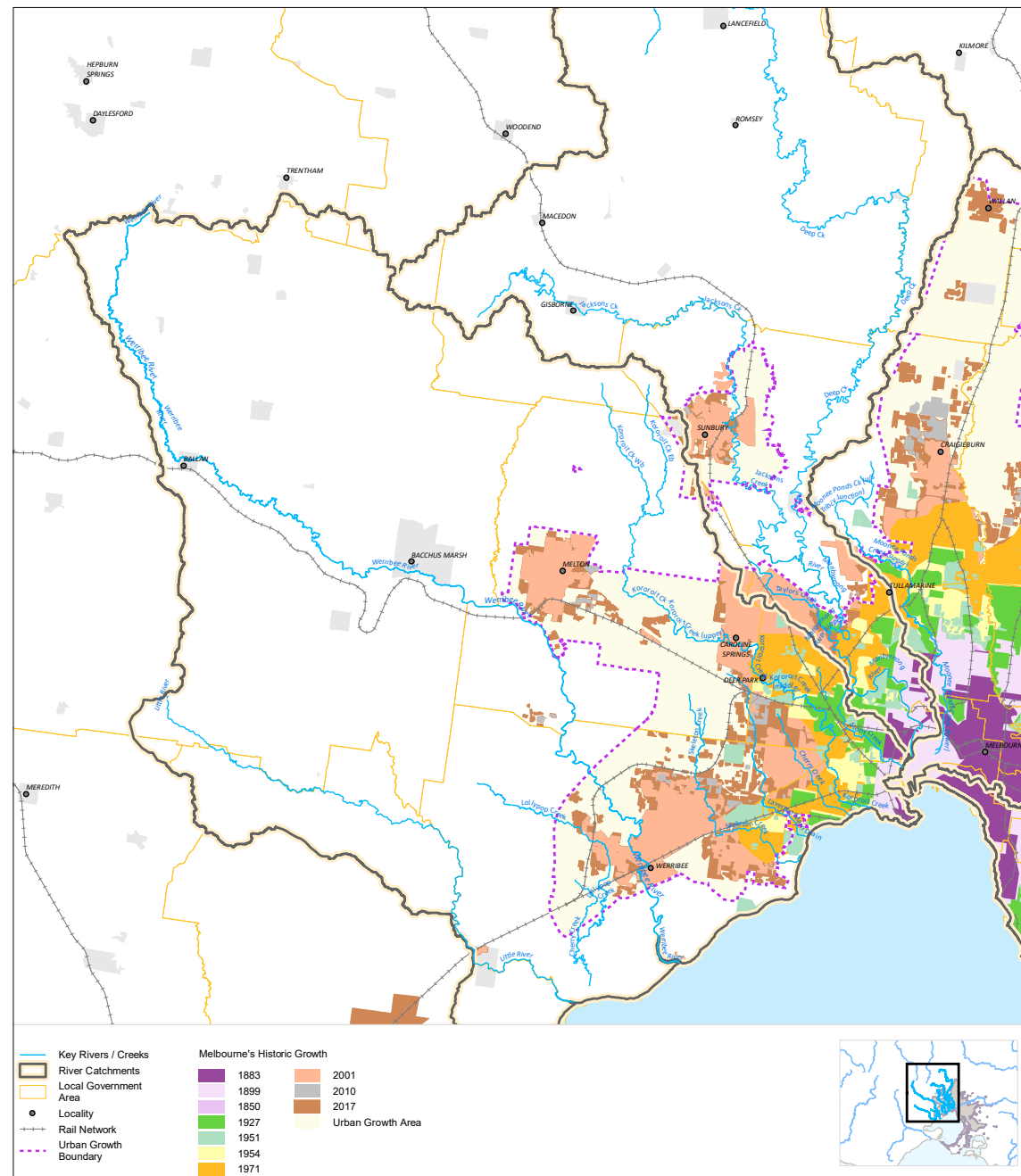


Figure 3: Growth and expansion of the Waterways of the West region since European settlement



The changing approach to managing waterways and their lands

The history of the management of the Waterways of the West and their lands reflects community values and government policies at different phases of Melbourne's development. Key events in the management and governance of the region's waterways and their lands are summarised in Figure 4.

For a large part of the period of European settlement, the region's waterways were used to service the city. In the early period of European settlement until the mid-1800s, Melbourne's waterways were mainly used for water supply and waste disposal. Lack of regulation combined with polluting industries resulted in major declines of water quality in the Maribyrnong River (*Mirrangbamurn*).

As pastoral runs were established, the region's waterways and their lands were claimed as private property. In the late 1880s, the government reserved Crown land water frontages — strips of land running alongside designated waterways — to protect public access to them. Unfortunately, due to the earlier European settlement of the west, there is little Crown land water frontage in the region.

In 1905, the State Rivers and Water Supply Commission was created by bringing together Victoria's earlier irrigation schemes and water supply trusts. The commission then oversaw construction of water supply infrastructure in the Werribee River (*Wirribi Yaluk*) catchment including Pykes and Melton reservoirs: both were built in 1913.

The Melbourne and Metropolitan Board of Works (MMBW) was established in 1891 to manage the city's water supply and sewage, and the forest and parks associated with protecting the water supply catchments. At this time, waterways continued to be seen as only for water supply and drainage. The MMBW's area of responsibility included the lower Maribyrnong River (*Mirrangbamurn*), Moonee Ponds (*Moonee Moonee*) Creek, Stony Creek and the lower reaches of Kororoit, Laverton and Skeleton creeks.

At the same time, responsibilities for water and waterway management in the upper Maribyrnong River (*Mirrangbamurn*) and Werribee River (*Wirribi Yaluk*) catchments were divided between the State Rivers and Water Supply Commission and local governments. More supply infrastructure was built: Merrimu Reservoir was built in 1986, and Rosslynne Reservoir was built on Jacksons Creek in 1973 to supply water to Sunbury, Gisborne and irrigators along Jacksons Creek and the Maribyrnong River (*Mirrangbamurn*).

Since the 1970s, the focus of waterway management has shifted to protecting public and environmental health. As a result of the *Environmental Protection Act 1970*, the Environment Protection Authority Victoria was established and new controls on discharges to waterways were introduced. In the 1970s, the MMBW also set aside green wedge zones, and the state government protected parklands including the Maribyrnong Valley Parklands and conservation reserves in the region.



Melbourne Water was formed in 1992 when the MMBW merged with a number of smaller urban water authorities and it assumed the MMBW's water and waterway management and planning functions for the lower reaches of many of the region's waterways. When the Port Philip and Westernport catchment management authority (CMAs) was formed in 1997 (under the *Catchment and Land Protection Act 1994*), unlike other CMAs, it was not assigned as the waterway manager for its region. This resulted in no agency being designated as waterway manager for the upper Maribyrnong River (*Mirrangbamurn*) and Werribee River (*Wirribi Yaluk*) catchments – a significant gap.

In 2004 the state government recommended Melbourne Water be assigned the role of 'caretaker of river health' for the entire west, to ensure a single agency had overall responsibility for the environmental condition of waterways across

Melbourne. This was realised in 2008 when Melbourne Water's boundary expanded to include the upper Maribyrnong River (*Mirrangbamurn*) and Werribee River (*Wirribi Yaluk*) catchments. Since then, there have been many programs to protect and improve the health of the region's waterways. Melbourne Water has led the development of three Healthy Waterways Strategies and there has been significant implementation of actions and investments to improve waterway health across the Waterways of the West region.

Today's approach emphasises collaboration between waterway managers and communities to protect the values of waterways and their lands. This includes increasing access to and facilities along waterways, protecting and improving riparian and in-stream habitats and improving stormwater management standards and installing infrastructure such as wetlands to better manage stormwater quality.

Between 2014 and 2019, Melbourne Water:

- removed 21,962 m³ of sediment, litter and debris from the region's waterways
- controlled weeds along 2,000 km of waterways
- revegetated 163 km along waterways
- invested \$9.9 million in incentive projects to protect the region's waterways.

In 2000, Melbourne Water also introduced improved stormwater management standards for urban development: the 98 stormwater treatment wetlands in the west are one result of this. They are characteristic features of residential developments and add greatly to open space and amenity while protecting water quality in the region's rivers and creeks.



Waterways of the West Timeline

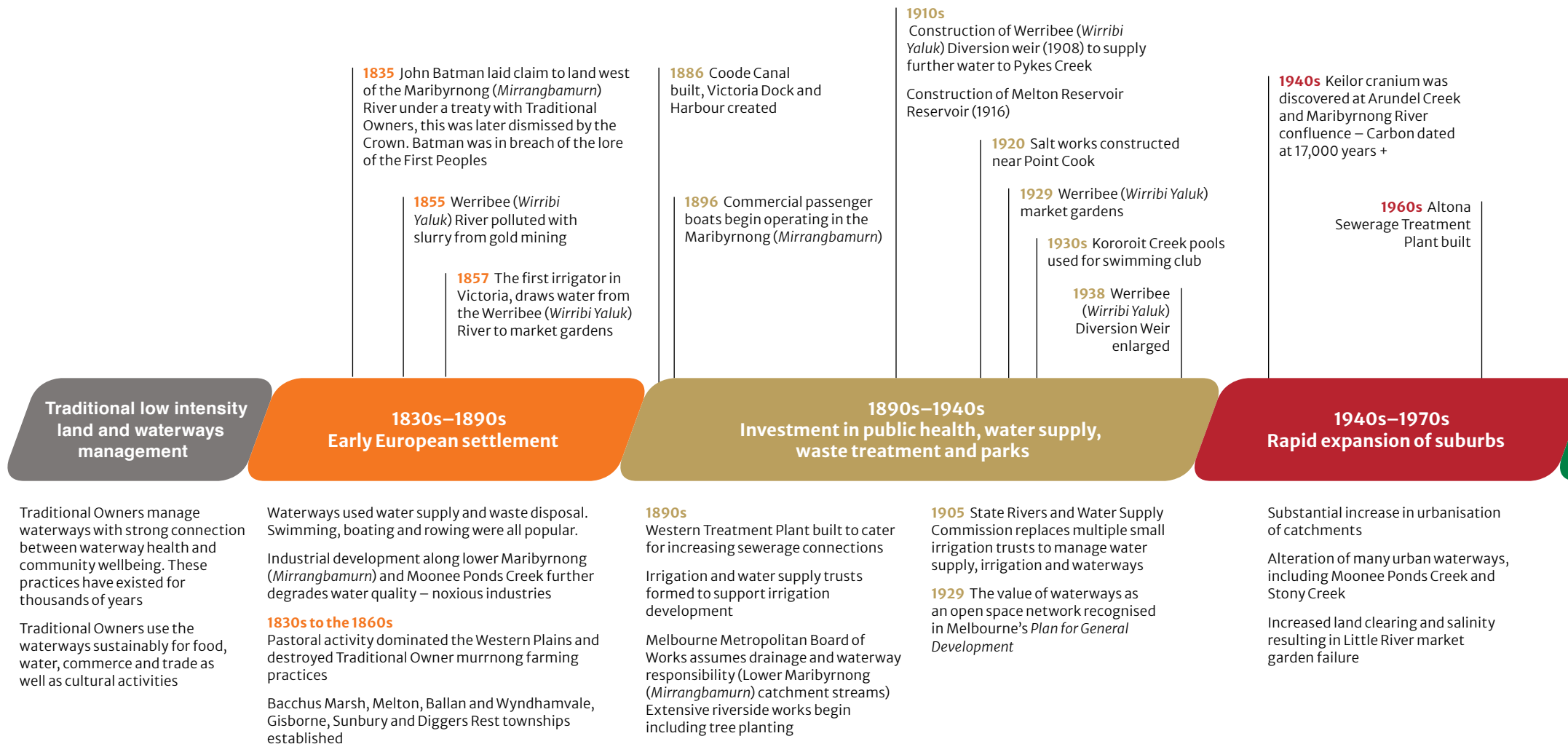


Figure 4: A history of waterway management and development timelines

1972 Organ Pipes National Park declared

1974 Rosslynne Reservoir construction completed

1976 Excavations uncover evidence of Aboriginal life over 30,000 years ago in lower Maribyrnong (Mirrangbamurn)

1976 Brimbank Park opened

1978 Establishment of Point Cook Coastal Park and Werribee (Wirribi Yaluk) Gorge State Park

1980s Wurundjeri Woi Wurrung Corporation formed
Wathaurung Aboriginal Corporation formed

1980s Substantial redevelopment of industrial sites for housing

1986 Construction of Merrimu Reservoir completed

1989 Creation of Lerederg State Park

1990s Point Cook Salt Works wetlands reinstated as migratory bird habitat and Sanctuary Lakes development

2000s Alternative water schemes implemented in Werribee (Wirribi Yaluk) Tourist and Employment Precincts

2006 Environmental water shortfalls for Maribyrnong (Mirrangbamurn) and Werribee (Wirribi Yaluk) Rivers identified

2006 Licensing cap on water diversions

1970s–2000s Significant environmental protection and urban redevelopment

2000s–Current Growth, collaboration and incremental improvements

1970s *Environmental Protection Act 1970* led to the creation of EPA Victoria and large-scale sewerage of outer suburban and prohibition of industrial discharges

MMBW Planning Policies for Melbourne region protect green wedges, manage flooding, reduce pollution and reserve land for recreational use in lower Maribyrnong (Mirrangbamurn) and Moonee Ponds Creek only.

EPA establishes controls relating to discharges into Kororoit Creek

Maribyrnong (Mirrangbamurn) Valley Metropolitan Park established by MMBW

1971 Maribyrnong (Mirrangbamurn) Corridor Wedge Plan

1972 Maribyrnong (Mirrangbamurn) River Action Statement

1980 MMBW (Yarra Development) Act establishes management of Maribyrnong (Mirrangbamurn) River streamside zone

1982 Port Phillip Bay (Western Shoreline) and Bellarine Peninsula recognised as Ramsar wetlands

1984 Rural Water Commission manages irrigation

1989 *Water Act 1989* – recognised that Waterways needed to be managed for 'all' their values. Added priorities of environment

1992 Lerederg River listed as a Heritage River under the Heritage Rivers Act

1997 Catchment and Land Protection Boards, which became Catchment Management Authorities in 1999 were formed. In other parts of Victoria the CMAs hold the Waterway Manager role.

Late 1990s Stormwater treatment wetlands incorporated into developments

2002 *Melbourne 2030* plan reinforces green wedge policy and set urban growth boundaries, opening up significant land for urban development in the West

2006 *Aboriginal Heritage Act 2006* – to provide for the protection of Aboriginal cultural heritage

2008 Wurundjeri Woi wurrung RAP status established

2008 Melbourne Water region extended to include the Werribee (Wirribi Yaluk) catchment and upper Maribyrnong (Mirrangbamurn) catchment.

Waterways and drainage charge across the West and development services schemes applied for all new development

2016 *Water for Victoria* recognises importance IWM, Recreational Values and Cultural values

2018 *Environmental Protection Amendment Act 2018* – introduces General Environmental Duty – a requirements to prevent harm to the environment

2019 *Amendments to the Water Act 2019* require consideration of Aboriginal cultural values and recreation values

5. Managing the Waterways of the West today

Planning and management of the Waterways of the West and their lands are now strongly collaborative. It is a joint effort supported by the policies of agencies and organisations with formal roles and local communities and advocates. That said, there is room for improvement and a need to formalise and embed the collaborative approach to planning and management.

Roles and responsibilities

There are many agencies involved in planning and managing the Waterways of the West and their lands: Table 2 shows roles and responsibilities set out in legislation and regulations. There is however a gap in managing the region's waterways and their lands as a single system, and there is no overarching

mechanism to align objectives and integrate decision-making across organisations. This results in fragmented decision-making and a degree of agency and community uncertainty about institutional arrangements. There is an opportunity to clarify and potentially strengthen some functions.



Table 2 Roles and responsibilities for planning and managing the Waterways of the West region

Institution	Roles and responsibilities
<p>Local councils</p>	<p>Councils are established by the <i>Local Government Act 1989</i> and have responsibilities for land use planning and management including open space under the <i>Planning and Environment Act 1987</i>. They develop local planning frameworks, govern planning approvals for the use or development of private land and issue and enforce planning permits; and they have public health and emergency management roles. They also provide stormwater drainage services to areas of less than 60 ha and manage Crown land as committees of management.</p> <p>Local councils in the Waterways of the West region include Wyndham, Hobsons Bay, Moorabool, Macedon Ranges, Hume, Maribyrnong, Brimbank, Moonee Valley, Melbourne, Melton and Moreland.</p>
<p>Department of Environment, Land, Water and Planning (DELWP)</p>	<p>DELWP is a Victorian Government department that develops and implements statewide policy for waterway health, flood management, urban water and planning. It manages Crown water frontages and other Crown land reserves, protects biodiversity, oversees the water allocation framework and is responsible for the planning and delivery of key open space projects in the region. It also administers the Parks and Reserves Trust Account.</p>
<p>Water</p>	<p>City West Water</p> <p>City West Water is a retail water company that provides drinking water, sewerage, trade waste and recycled water services to the inner and western suburbs.</p>
	<p>Melbourne Water</p> <p>Melbourne Water is a wholesale water company that provides bulk water and sewerage services to water corporations in the metropolitan area, provides stormwater drainage and waterway management services and manages water diversion licences in the lower Maribyrnong River (<i>Mirrangbamurn</i>) catchment. It also collects the waterways and drainage charge.</p>
	<p>Southern Rural Water</p> <p>Southern Rural Water is a rural water corporation that manages the Bacchus Marsh and Werribee irrigation districts, reservoirs (such as Pykes Creek, Melton Merrimu and Rosslynne reservoirs) and water diversion licences in the Werribee River (<i>Wirribi Yaluk</i>) and upper Maribyrnong River (<i>Mirrangbamurn</i>) catchments, as well as groundwater licences.</p>
	<p>Western Water</p> <p>Western Water is a regional water corporation responsible for delivering water (including recycled water) and sewerage services north-west of Melbourne.</p>
	<p>Barwon Water</p> <p>Barwon Water is a regional water corporation responsible for delivering water, sewerage and drainage services to the Geelong region. It manages some small reservoirs in the headwaters of the Little River (<i>Worrin-yaloke</i>) catchment.</p>
	<p>Victorian Environmental Water Holder</p> <p>The Victorian Environmental Water Holder is an independent statutory authority under the <i>Water Act 1989</i> that manages environmental water entitlements.</p>

Table 2 Roles and responsibilities for planning and managing the Waterways of the West region (continued)

	Institution	Roles and responsibilities
Environment	Environment Protection Authority Victoria	Environment Protection Authority Victoria is an independent statutory authority under the <i>Environment Protection Act 2017</i> that protects human health and the environment from the harmful effects of pollution and waste.
	Parks Victoria	Parks Victoria manages public land including some waterway lands for conservation, recreation, leisure, tourism and water transport, and it manages land used for public purposes.
	Port Phillip and Westernport Catchment Management Authority (CMA)	The Port Phillip and Westernport CMA develops and coordinates the implementation of its <i>Regional Catchment Strategy</i> , focusing mostly on land and terrestrial biodiversity management issues.
	Committees of management	Committees of management manage Crown land reserves set aside for the benefit of the Victorian community.
Cultural	Registered Aboriginal Parties (RAPs)	RAPs are established under the <i>Aboriginal Heritage Act 2006</i> and manage and protect Traditional Owners' cultural heritage in Victoria. There are two RAPs in the Waterways of the West region: the Wurundjeri Woi wurrung Cultural Heritage Aboriginal Corporation and the Wathaurung Aboriginal Corporation.
Planning	Victorian Planning Authority (VPA)	The VPA is a state government statutory authority that undertakes strategic planning and coordinates infrastructure for strategically important precincts, so Victorians have equitable access to employment, public transport, public open space and affordable housing.
	Development Victoria	Development Victoria develops and revitalises public buildings and land. It works to increase the diversity of housing near jobs, transport and services and to revitalise major activity centres and urban precincts, to stimulate economic activity and create jobs.
	Precincts, suburbs and regions (Department of Jobs, Precincts and Regions)	Precincts, suburbs and regions partners across government and with community, industry and research organisations to unlock the potential of priority precincts and suburbs across Melbourne. It works to develop distinctive, innovative geographic areas — be they precincts or suburbs — where Victorians can work, live and play.
Economic regulation	Essential Services Commission (ESC)	The ESC assesses and approves water prices, specifies service standards and reports on the performance of water corporations and local governments.

An era of collaborative planning and valuing the waterways and their lands

The Waterways of the West and their lands are central features of many residential developments in the region, and they are promoted as key attractions of these developments.

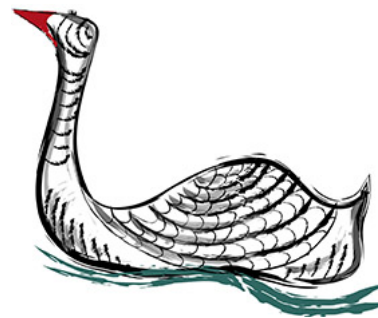
While the Waterways of the West are commonly perceived as degraded and polluted, there are also spectacular areas of relatively untouched natural beauty and examples of well-used, cared-for waterway open spaces. In several areas that were once badly degraded, communities have advocated for better care of these waterways, which has helped change policies, practices and infrastructure. Such community advocacy provides a strong foundation for further action to protect and improve the region's waterways.

The Werribee River (*Wirribi Yaluk*) is a unique opportunity to protect what is a largely unchanged river channel and banks, even as it becomes central to a much larger urban population in future.

The Werribee River (*Wirribi Yaluk*) and Little River (*Worrin-yaloke*) estuaries are the last unmodified estuaries in the Port Phillip Bay catchment. A protected, celebrated Werribee River (*Wirribi Yaluk*) would compare favourably to the Yarra River (*Birrarung*), which is (rightly) much-admired for its natural beauty despite being deepened, lined, straightened, bridged, dammed and built beside between Williamstown and Alphington.

With the closure of many industries since the 1970s, some of the lands of the Waterways of the West have been opened up as public open space as part of the development of residential estates (such as Sanctuary Lakes near Point Cook).

In the 1980s, as community appreciation of the value of waterways, including wetlands, increased, some local community members formed environment and conservation groups (such as the Friends of Kororoit Creek) to clean up their waterways. Some groups prepared waterway strategic plans and started working with councils and state government agencies on waterway enhancement projects (such as revegetation programs) and on building shared trails alongside the waterways.



Collaborative action: Moonee Ponds (*Moonee Moonee*) Creek

Moonee Ponds (*Moonee Moonee*) Creek was concrete-lined in the 1960s to build the Tullamarine Freeway: the Planning Institute of Victoria voted this one of the worst planning decisions in Melbourne's history.

In February 2017, 60 stakeholders began a collaboration process that resulted in 18 organisations and ten partners agreeing on a vision, 'to transform the Moonee Ponds Creek into an iconic waterway for Melbourne that enhances its natural capital and provides high social and environmental benefits to local and wider communities'. In October 2018, 15 organisations – local and state governments, community groups, not-for-profits, businesses and research organisations – signed a memorandum of understanding committing to the Chain of Ponds Collaboration, to help transform the creek.

The collaboration will take a whole-of-catchment approach to managing the creek; identifying collaborative opportunities for the catchment; and protecting and enhancing biodiversity, open spaces, habitat and biolinks along the creek.

Wurundjeri Woi wurrung's Narrap Team

The Wurundjeri Woi Wurrung Cultural Heritage Corporation's [Narrap Team](#) works on Country on natural resource management activities including ecological-cultural burning, restoring the landscape, establishing biodiversity corridors, managing pest animals and plants and fencing. The team also manages properties owned by the Wurundjeri Woi wurrung Tribe Council such as the Sunbury Rings Cultural Landscape. This site comprises three extremely

rare Aboriginal earthen rings indicating the site was an important Aboriginal gathering place.

The Narrap team also partners with stakeholders including the Port Phillip and Westernport CMA and Parks Victoria in projects to rediscover and document the Wurundjeri Woi wurrung people's traditional ecological knowledge.



Landscape-scale change: Grow West

Started in 2000 by the Port Phillip and Westernport CMA, Grow West is a major landscape-change project that brings agencies and groups together to turn back the tide of environmental degradation on 50,000 ha of land between Bacchus Marsh and Ballan. Its activities include revegetation, farm forestry, community engagement, educational activities, workshops and field days. It is developing habitat links between the Wombat State Forest, Werribee Gorge State Park and Brisbane National Park, and it is fighting erosion and reducing sediment discharge into waterways and reservoirs.



Collaborative action: Greening the West

Through the Greening the West collaboration led by City West Water, local governments, communities and water industry partners are restoring native vegetation throughout the region using sustainable land use management practices that balance the dry, rocky landscapes typical of the region with the necessity to provide urban cooling. Under the Greening the West banner in the region's south-west, the Greening the Pipeline project is transforming the 27 km, heritage-listed Main Outfall Sewer – built in the same decade as the Western Treatment Plant – into parkland.



The Werribee Riverkeeper

The Werribee River Association hosts the Werribee Riverkeeper, who along with many passionate, committed locals has been championing the Werribee River (*Wirribi Yaluk*) since the late 1970s. Groups such as the Werribee River Association provide local knowledge, local initiatives, add value, protect investments by authorities and governments and provide opportunities to meet engagement targets or strategies and help build success.

The Riverkeeper's function is to act as the voice of the waterways to protect the river and its catchment's waterways. Waterkeeper Alliance, an international organisation that holds the Riverkeeper trademark, unites more than 300 organisations and affiliates that campaign to tackle the world's most pressing water issues.



Collaboration: Integrated water management (IWM) forums

The 2017 [*Integrated Water Management Framework for Victoria*](#) helps local governments, water corporations, CMAs, Traditional Owners and communities work together to plan, manage and deliver water in Victoria's towns and cities. The Maribyrnong IWM forum was established in November 2017 and the Werribee IWM forum in December of the same year. IWM forums aim to identify, prioritise and oversee the implementation of critical collaborative water opportunities. DELWP facilitates all IWM forums across the state.

The five catchment-based metropolitan IWM Forums recognised a gap in regional planning and as such prioritised the development of catchment scale IWM plans. These plans will guide Forum Members' decision making towards achieving the Forum's vision and strategic outcomes. To do this, the plans will: define Key Performance Indicators for the strategic outcomes of the Forum; develop a narrative of the current state of the catchment; develop the future business as usual state of the catchment, and; develop a narrative of the future desired state of the catchment.

Blue green corridors: Jackson's Creek Regional Parklands

Jacksons Creek Regional Parkland is one of the new regional linear open space corridors to be established collaboratively as part of the Suburban Parks Package lead by DELWP. This park will extend along Jacksons Creek from Diggers Rest to Sunbury – covering an area of 1,008 ha – and provide improved protection of key environmental values and the opportunity for community to connect to nature.

A collaborative model of planning and management is proposed, with DELWP in partnership and with Hume City Council, Melbourne Water, Parks Victoria, Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation, Victorian Planning Authority, Western Water, developers and other private landholders, to develop a Parkland Plan.

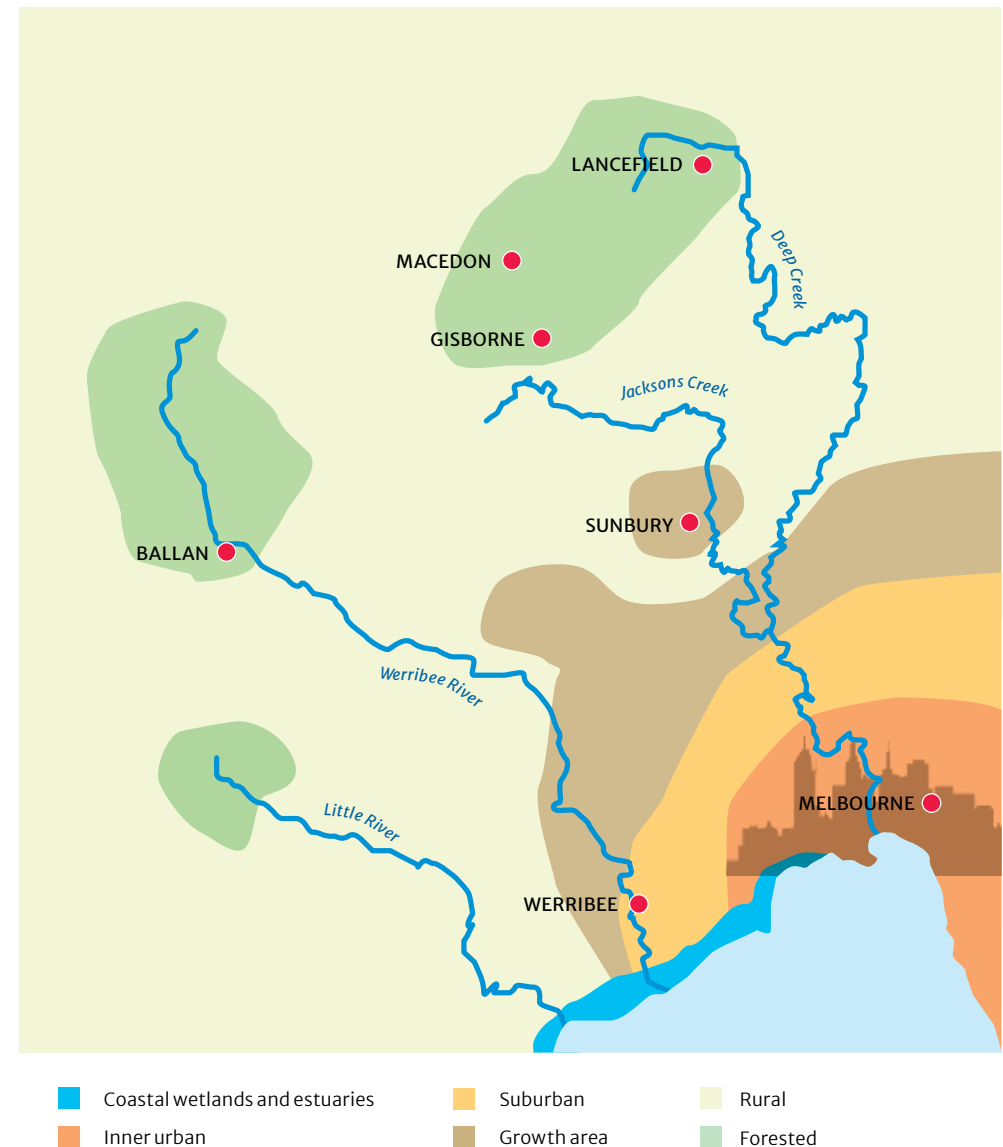


6. The Waterways of the West today

The Waterways of the West and their lands continue to be places for connecting with nature; for walking, fishing and commuting; and for the Wurundjeri Woi wurrung and Wadawurrung Traditional Owners to connect with and care for Country. Despite significant changes to these waterways since European settlement, they are still home to diverse vegetation communities, plant and animal species and provide important environmental values. As well, the waterways provide water for towns and irrigation.

To better understand and describe the issues affecting the region's waterways and the opportunities for improved management, the MAC has grouped issues by land use as opposed to discussing waterways individually.

- Coastal wetlands and estuaries
- Inner urban reaches
- Suburban reaches
- Growth area reaches
- Rural reaches
- Forested reaches.



Coastal wetlands and estuaries

The coastal wetlands and estuaries of the Waterways of the West region were once part of an extensive coastal wetland complex extending through to the junction of Moonee Ponds (*Moonee Moonee*) Creek with the Yarra River (Birrarung). While the landscape includes some of Victoria's most highly modified urban environments, the region also retains important wetland remnants.

The Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar Site was recognised as a wetland of international importance for migratory bird habitat and designated under the Ramsar Conventions in 1982. It includes the Western Treatment Plant and wetlands in the former Cheetham saltworks,

which is now the Point Cook Coastal Park, with over 280 species of birds have been recorded at the Western Treatment Plant. Western Port and Port Phillip Bay (Western Shoreline) and Bellarine Peninsula are also listed as shorebird sites on the East Asian–Australasian Flyway Site Network. These wetlands also support important vegetation communities, including Temperate coastal saltmarsh ecological community, listed as vulnerable under Commonwealth legislation.

These coastal wetlands provide areas of much-valued open space that attract many visitors, including at the Spit Wildlife Reserve, Altona Foreshore Reserve and the Altona Coastal Park.



The Werribee River (*Wirribi Yaluk*) and Little River (*Worrin-yaloke*) estuaries are the last relatively intact, unmodified estuaries along the Port Phillip Bay coastline. These estuaries support rich environmental values including estuarine-dependent fish.

Inner-urban reaches

Reaches of waterways in highly urbanised and often-industrial areas (such as Flemington, Williamstown, Yarraville and Footscray) have generally been highly modified to reduce flood risks and increase drainage capacity. Their water quality is poor to very poor. As a result of Melbourne's early development, inner-urban reaches generally have minimal open space reservation and are closely abutted by private property, much of which has industrial or commercial land uses and limited community access. Inner-urban reaches include the lower sections of the Maribyrnong River (*Mirrangbamurn*), Stony Creek, Laverton Creek and Moonee Ponds (*Moonee Moonee*) Creek.

Run-off from impervious surfaces (such as roofs and paved areas) drains directly to inner-urban waterways in many areas: in some areas, over 70% of the land is impervious. These connections directly deliver pollutants to the waterways through urban and industrial stormwater runoff. In some areas, retrofitting systems and the installation of stormwater treatment wetlands help filter stormwater and protect water quality.

Many areas of formerly industrial land are now being redeveloped for residential and commercial uses, creating both greater need for and opportunities to provide quality open space along these waterways. Views from inner-urban waterways are generally of fences, back yards, buildings and roads, but more–



recent developments tend to front onto waterways where they can. This gives communities greater access to and enjoyment of waterways and visually connects them to their neighbourhood.

Suburban reaches

The suburban reaches of the Waterways of the West flow through residential areas some 10 km and further from Melbourne's CBD. These areas were developed during Melbourne's post-war population boom and include the suburbs of Altona, Sunshine, Maidstone, Laverton, Essendon, Airport West and Keilor. These reaches are frequently adjoined by significant open space that provides recreation and

commuting opportunities. Like inner-urban reaches, suburban waterway reaches have often been greatly modified to reduce flood risks, and they are much-affected by untreated urban stormwater runoff. Future redevelopment of these areas to house more people risks increasing stormwater effects; it also increases demand for access to parklands and other open spaces.



Growth-area reaches

Growth-area reaches are those in areas planned for land-use change from farming to housing — 'greenfield' development — including at Point Cook, Werribee, Hoppers Crossing, Caroline Springs, Sunbury, Diggers Rest and Melton. These waterways reaches have often retained most of their natural form but have a legacy of changed vegetation, weeds and loss of native wildlife resulting from the long history of post-European settlement farming.

Waterways in urban growth areas have seen significant change since the 1990s and will continue to change with urban development, with increasing volumes of stormwater predicted to impact

environmental values. Modern urban planning practices and better management arrangements have resulted in revegetated expanses of open space along many growth area waterways being set aside through regional drainage planning and well-connected trail networks. These areas provide important public open space for local communities in the growth areas, and they are often important in attracting people to the growth areas.

Many smaller waterways have been modified to drain large volumes of stormwater run-off while retaining or creating natural forms including habitat pools and constructed wetlands for treating stormwater.



Rural reaches

Rural reaches of waterways are those outside Melbourne's urban growth boundary including near Macedon, Lancefield, Romsey, Balliang, Ballan and Bacchus Marsh. Waterways in these areas provide important habitat for native plants and animals and opportunities for communities to connect with a more-natural environment close to Melbourne. They also provide water for agriculture and rural towns, with their natural flow regimes frequently being

altered as a result of water extraction. In agricultural areas, there are still patches of remnant native vegetation, with opportunities to re-establish biolink connections across the landscape.

Rural reaches include the Werribee River as it flows through the Bacchus Marsh and Werribee irrigation district and Deep Creek in the upper Maribyrnong catchment.



Forested reaches

Lands around the forested reaches of the region's waterways include large areas of habitat that remain intact and support diverse plant and animal species, some of which are nationally listed. Forested reaches include the Lerderderg River in the Wombat State Forest, upper Deep Creek in the Macedon Ranges, Jacksons Creek in Organ Pipes National Park, the headwaters of the Little River (*Worrin-yaloke*) in the Brisbane Ranges National Park and the Werribee River (*Wirribi Yaluk*) through Werribee Gorge.



Issues facing the Waterways of the West, by waterway type

Coastal wetlands and estuaries

- High visitation
- Pest animals
- Coastal impacts from climate change and rising sea levels
- Gaps in connected coastal reserve
- Pollutants and urban stormwater impacts

Inner urban

- Legacy of early development
- Intrusive development affecting waterway amenity
- Pollution (a legacy of early industry and current pollution)
- The proximity of industry and associated pollution events
- Altered channel form, concrete lining and piping
- Lack of connection in biolinks
- Poor or interrupted access
- Degraded environmental values
- Lack of vegetation for wildlife, amenity and urban cooling
- Public safety
- Poor amenity

Suburban

- Legacy of early development
- Pollution
- Infill developments increasing stormwater and impervious surfaces
- Moderate-to-low environmental values
- Public safety
- Protection of remnant habitats
- Gaps in linear reserves for public spaces and parklands along waterways

Growth area

- Loss of wetlands and grassland habitats
- Increased urban stormwater and impervious surfaces
- Piecemeal and inconsistent planning and management of waterways across jurisdictional boundaries
- Weeds and pest animals

Rural

- Lack of environmental flow
- Runoff from agricultural chemicals
- Lack of public land and access along waterways
- Wastewater treatment plant discharges
- Lack of public access

Forested

- Gaps in public access linkages along waterways
- High visitation
- Weeds and pest animals



Environmental values

Across the region, environmental values are generally greater in the forested and rural reaches of waterways (such as the headwaters of the Lerderderg River in the Wombat Forest and the upper, forested areas of the Maribyrnong system near the Macedon Ranges). The coastal and estuary reaches also support diverse environmental values with important migratory bird habitat and intact estuarine areas.

Inner-urban and suburban reaches of waterways are generally in the poorest environmental condition: urban stormwater, drainage and flood mitigation works as well as pollution have altered the waterway form, hydrology and ecology of these reaches. Despite this, these waterways are usually highly valued by their local communities, to whom they are important places to connect with nature and other people.

There are 13 species of native freshwater fish in the region's waterways including the nationally significant Yarra pygmy perch and Australian grayling. Over one-third of Australian bird species have been recorded at the Western Treatment Plant, with an estimated 65,000 birds there at any one time. Over 130 bird species rely on the riparian lands of the Werribee River (*Wirribi Yaluk*) and over 90 bird species on those of the Maribyrnong River (*Mirrangbamurn*).

There are small populations of Platypus in the lower Werribee River (*Wirribi Yaluk*) and in the upper Maribyrnong system in Jacksons Creek at Sunbury. Platypus is an important species for the Wurundjeri Woi wurrung people.

'The lands and waterways can't breathe under the concrete. The waterways need to be rewilded. I want to see living, flowing, cleaner water in the west of our Country.'

Aunty Alice Kolasa



Urban parklands and open space

There are nearly 5,000 ha of public open space – bushland, coastal reserves, parks and public water frontages – along the Waterways of the West. Much of the west was settled by Europeans as pastoral runs before Crown land water frontages were reserved in the in the 1880s and as a result there is now only 440 ha of public land water frontages along the region's waterways.

The region's parklands, conservation areas and open space celebrate its unique landscape. They include Brimbank Park on the Maribyrnong River (Mirrangbamurn), Organ Pipes National Park, Cheetham Wetlands on the Skeleton Creek estuary and the planned Western Grasslands Reserve. The Victorian Government has also committed

to expanding parklands including the Western Grasslands Reserves, Toolern Creek Park and Werribee River Park. Future precincts in growth areas also include plans for large areas of public open space including the Jacksons Creek Regional Park. Along the region's waterways, the cultural and environmental significance of many open spaces is recognised by heritage or environmental controls over buildings and structures, the river banks and the open spaces themselves.

Waterway corridors also provide important linear transport and recreation links, with bike and walking paths connecting suburbs and other places.

'I enjoy Maribyrnong (Mirrangbamurn) River for its substantial walking/ cycling trails and park spaces. I often take a short walk from my apartment to the river through natural parkland.'



Community connection to nature and wellbeing

Urban waterways offer many opportunities for sport, relaxation and recreation, and for connecting with others and with nature. People who are socially engaged with others and actively involved in their communities tend to live longer and be physically and mentally healthier.

Since 1993, Melbourne Water's biennial Community Perceptions of Waterways survey has investigated community perceptions and uses of the region's waterways. The 2018 survey found a steady upward trend since 2014 in the frequency of visits to the region's waterways. Exercise was the most-often-given reason for visits. General relaxation was the second-most-often-given reason for visits to the Maribyrnong River (*Mirrangbamurn*) and the Werribee River (*Wirribi Yaluk*), with nature appreciation the second reason for visiting Kororoit Creek; 5% of visits were for on-water activities (such as fishing, boating and swimming).

The Maribyrnong River (*Mirrangbamurn*) has a long history of providing opportunities for water-based recreation, particularly after many adjacent factories closed in the 1960s and 70s. Commercial, private and club-based recreational vessels operate on the river, and it is used for rowing, canoeing and fishing.

The Werribee River (*Wirribi Yaluk*) catchment is known for nature-based tourism and recreational activities including bushwalking, fishing, cycling and swimming. The river's estuary is a valued Bream fishery. According to the 2018 [*Draft Healthy Waterways Strategy*](#), there is a high level of community satisfaction with recreational opportunities in the catchment.

Most angling occurs in the Werribee River (*Wirribi Yaluk*) and the Lerderderg River, but only when there is good streamflow. Pykes Reservoir is popular for boating, fishing and swimming. Being domestic water supply reservoirs, Lake Merrimu and Djerriwarrah Reservoir are closed to fishing but people use their surrounds for sightseeing, picnicking and other recreational activities. In the lower reaches of the Werribee River (*Wirribi Yaluk*), canoeing and kayaking are popular activities. A boat ramp at Werribee South provides access to the lower section of the river.



Water supply for towns, irrigation and the environment

The Waterways of the West supply water for towns, irrigation and the environment. The Werribee River (*Wirribi Yaluk*) catchment has numerous reservoirs. Melton, Pykes Creek, Djerriwarrh, Colbrook and Merrimu reservoirs provide water to the Bacchus Marsh and Werribee irrigation districts and drinking water to local urban centres including Melton and Bacchus Marsh. Since the 1980s, irrigation supplies have been supplemented with increasing volumes of recycled water.

The catchment's long-established irrigation districts — the Werribee Irrigation District and the Bacchus Marsh Irrigation District — are two of Australia's most productive food-growing regions. Their market

gardens supply a large proportion of Melbourne's leafy green vegetables and about 10% of Victoria's vegetables. They are also major suppliers to the rest of Australia.

Rosslynne Reservoir near Gisborne is the only large reservoir in the Maribyrnong system, and there are many smaller reservoirs and diversion weirs on the upper tributaries of the Maribyrnong River (*Mirrangbamurn*).

Water is also used to supply industrial users including the large sand quarries on the outskirts of Bacchus Marsh, which provide up to 70% of the sand Melbourne's building industry uses.

Figure 5 shows the volume of entitlements and licences in the Werribee basin — the volume of rights granted to individuals and authorities to take water — and the amount actually taken in 2016–17. Figure 6 shows the same thing for the Maribyrnong basin. In many years including in 2016–17, water use is much lower than the entitlements and licenses volume due to prolonged, low rainfall conditions (as the result of the step change in rainfall and runoff since the mid-1990s) and for other reasons. The region could make better use of the volume of recycled water it produces, acknowledging seasonality, storage and quality remains issues.

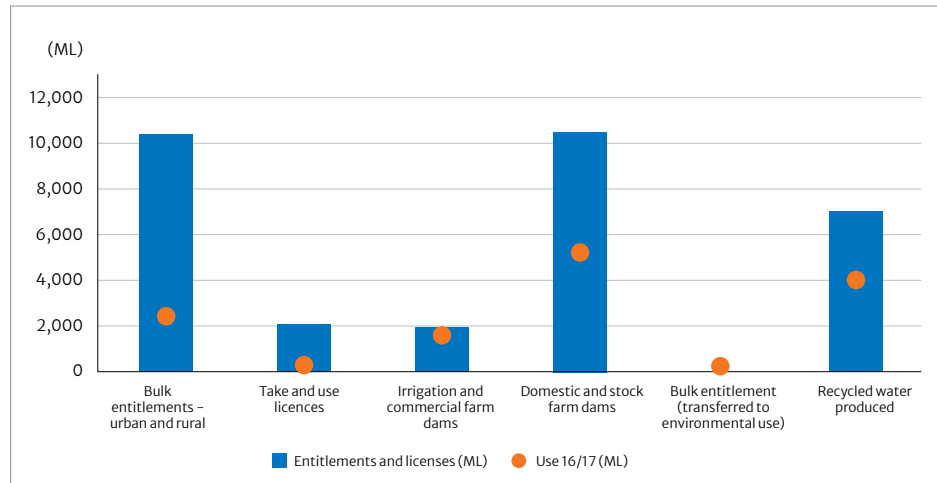


Figure 5: Water entitlements and licences and water use, Maribyrnong basin, 2016–17

Source: Data from Victorian Water Accounts 2016–17

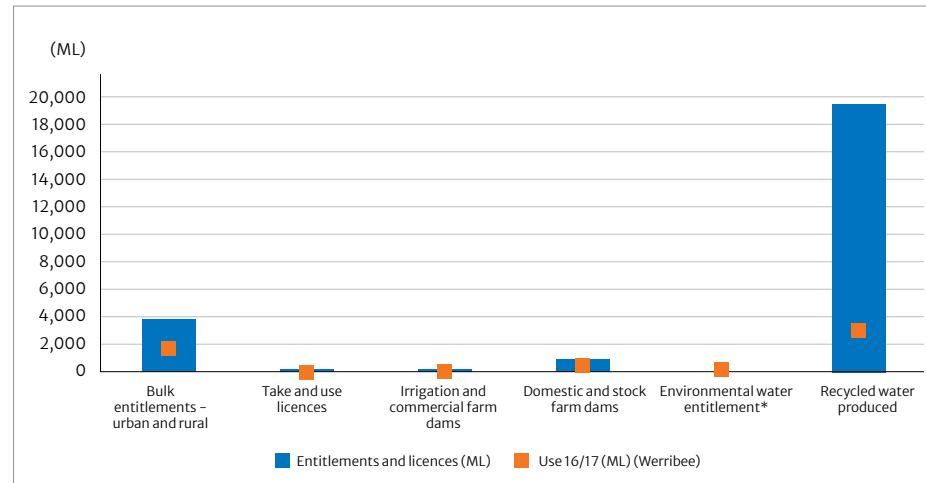


Figure 6: Water entitlements and licences and water use, Werribee basin, 2016–17*

Source: Data from Victorian Water Accounts 2016–17

* The Werribee River Environmental Entitlement 2011 comprises a 10% share of inflows rather than an entitlement volume. The entitlement averages 1,500 ML a year.

Economic values of waterways

The Waterways of the West represent important natural capital. They provide ecosystem services – the benefits people get from nature – and they contribute to the health and wellbeing of the communities who visit, use and care for them.

The region's waterways provide water for drinking and domestic use, for maintaining public spaces like sports

grounds, for agriculture (including the Bacchus Marsh and Werribee irrigation districts) and for industry (to produce food and goods). They also provide drainage services and convey floods. Waterways are linked to increasing property values due to their amenity and visual appeal (such as at Sanctuary Lakes), and many new developments promote their connection to waterways and open space.





7. What we heard

The Waterways of the West MAC acknowledges the significant work, knowledge, insights and input from the community and stakeholders through decades of previous work and engagement activity. The MAC has attempted to build on this through further public and targeted engagement.

The MAC commissioned a review of previous engagement activities about the management of the waterways and their lands. Most recently, community and stakeholders have collaborated with Melbourne Water to develop the [*Healthy Waterways Strategy*](#) and with Environmental Justice Australia to develop [*A Rivers of the West Act: Draft proposals to protect and restore Melbourne's western rivers and waterways and to defend the liveability of the West*](#).

The review found that these activities have collected a vast amount of anecdotal and evidence-based data. The many people and groups who engaged in these activities also show the community wants to be involved in protecting and restoring their valued waterways.

The community feedback and data these engagement activities collected relates to priorities for achieving healthy waterways, catchment health, water for agriculture, recreation, recognition of Aboriginal values, water and planning and engagement with Traditional Owners, water pricing and quality, long-term water security, conservation, access to and the broader use of recycled water, green spaces and the natural environment, and future challenges like growth and climate change.

A summary of community values and issues expressed in previous engagement activities is in Table 3. Across the region, it is clear that the community highly values healthy waterways, the native plants and animals and natural, open spaces along these waterways. Also, community groups have invested enormous reserves of energy into their protection, rehabilitation and health. Issues raised included poor amenity values, urban development close to waterways and the management of stormwater, streamflows and pollution. Another key theme was that there has been extensive engagement and planning with communities, identifying now as the time to action the outcomes of previous engagement activities.

Table 3: Summary of community values and issues from past engagement activities

VALUES	ISSUES
Open space	Urban encroachment and proximity of industry/buildings
Healthy water	Effect on visual amenity
Green infrastructure	Pollution in waterways
Diversity of the river and its tributaries	Lack of feedback on engagement
Maintaining natural spaces	Consistency of planning approvals
More open spaces along the river and its tributaries	Historical abuse and degradation
Recreational use	Stormwater management
Native plants and animals	Rural run-off
Natural stream forms	Highly channelised – managing flows
	Shrinking and fragmented habitats

Engage Victoria

The Waterways of the West MAC’s first phase of public consultation was initiated through the Waterways of the West Engage Victoria web page in April and May 2019, which invited submissions on the issues, pressures and community aspirations for their valued waterways. There were 172 responses to the web page’s survey questions, and 346 markers were put on the page’s interactive map. Most respondents were from the region, but there were also responses from visitors to the region and community and government organisations.

A summary of feedback received through Engage Victoria is presented in Figure 7.

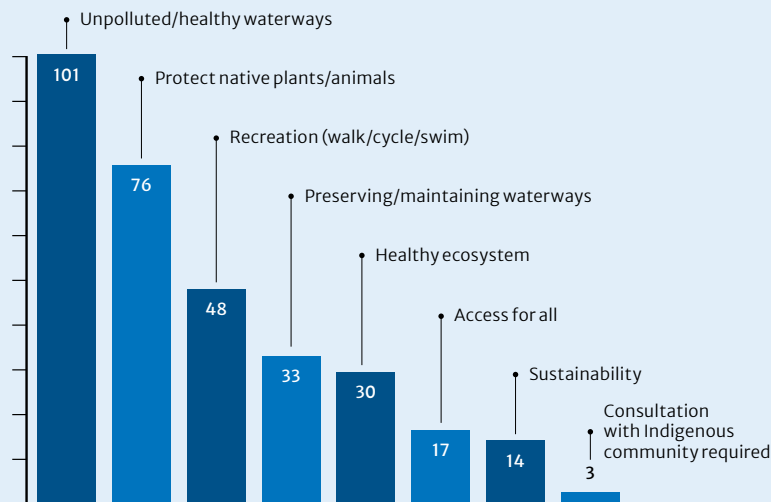
Some community aspirations for the Waterways of the West

‘Make them the pride of the community, set the standard for looking after the environment.’

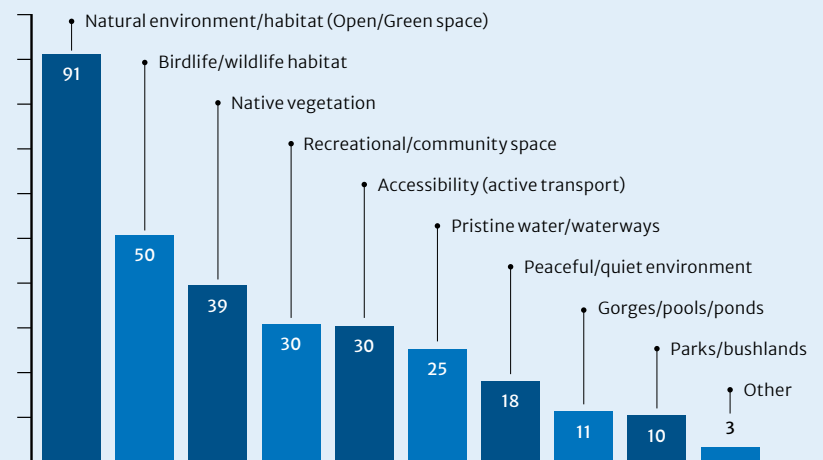
‘Waterways are intrinsically peaceful and life giving – the peace of nature, the ecosystems they support.’

‘Provides a ‘back to nature’ feel in an urbanised environment.’

‘The waterways of the west are rehabilitated and revitalised and recognised as critical places for the health of communities in the west.’



What is your vision for the Waterways of the West?



What do you value most about the Waterways of the West?



What would you most like to see changed about the Waterways of the West?

Figure 7: Summary of Engage Victoria feedback

A vision for the Waterways of the West

The Waterways of the West Community Assembly, formed in June 2019 with representatives of the diverse vibrant community of the region, is developing a community vision for the region's waterways for the next 50 years. This vision will express the community's aspirations about what they value and how they want to interact with the Waterways of the West over the next 50 years.

They are developing the vision with consideration of:

- the personal experiences and values for the waterways of assembly members
- public feedback submitted through the Engage Victoria Waterways of the West web page (May 2019)
- input from Traditional Owners, scientists, community groups, policymakers, planners and others
- the visions of school students of the west for the waterways and their lands
- input from culturally and linguistically diverse focus groups.

Engaging with the culturally and linguistically diverse communities of the Waterways of the West region

The Waterways of the West region has a rich, diverse, multicultural population. The 2016 Census found that about half of the region's community were born overseas or had at least one parent born overseas. Half the region's community speak languages other than English at home.

The MAC commissioned focus groups to hear the voices of people of CALD backgrounds. Community consultation workshops also enabled representatives of the Vietnamese and new and emerging migrant communities to have their say about what they value and how they interact with the Waterways of the West and their lands, now and in the future.

Although participants' use of the waterways varied, they expressed that they value healthy waterways and their lands as places they can relax and socialise. They were concerned about pollution and lack of upkeep, and some were unsure about safety and what activities are allowed near waterways. They were interested and willing to learn more about the waterways and their lands, the strong connections Traditional Owners have to Country and how to become more involved in protecting the region's waterways.



School engagement and developing a student vision

A targeted school engagement program was undertaken to give voice to students' vision for the Waterways of the West, with students presenting their vision to the Community Assembly. This program was facilitated by the Werribee River Association with schools in both the Maribyrnong and Werribee catchments.



Issues and challenges

The MAC, informed through engagement with diverse stakeholders, identified common issues across all waterway reach types:

- the lack of awareness of Traditional Owner cultural values and the need to involve Traditional Owners and embed their values and culture in management arrangements for the Waterways
- responsibilities for land use and waterway planning and management are complex and fragmented
- there is no lead public agency responsible for providing for the amenity and recreation values of the waterways
- there is a lack of strategic landscape planning and integration of land and waterway management at an appropriate scale to protect the waterways
- there is a lack of connected open space and trails along the waterways including between significant park lands.



Opportunities to protect the Waterways of the West through stronger planning controls

The Waterways of the West MAC has been tasked with assessing the adequacy of existing planning system controls and the need for immediate, interim planning arrangements to protect the Waterways of the West. So far, we have focused on reviewing existing planning arrangements, scoping potential issues and opportunities and considering options for the planning system to better protect and enhance the waterways. We are also investigating the following opportunities.

Improve state and regional planning policy

We see an opportunity to better reflect the significance of the Waterways of the West in state- or regional-level planning policy. This would support planning decisions to more effectively respond to the waterways' values.

Deliver regionally consistent protection across waterways

There are currently various planning approaches and responses across the Waterways of the West: for example, the application of environmental management overlays (such as the Environmental Significance Overlay and the Significant Landscape

Overlay). We are interested in ensuring that any new controls are introduced in a streamlined, consistent way across municipal boundaries. This would reflect a regional-scale approach, such as was taken to the delivery of stronger interim planning controls for the Yarra River (*Birrarung*) in 2017, explained under 'Stronger planning controls for the Yarra River' on page 69.

Ensure local development pressures are addressed

We want to ensure the right controls are in place to protect waterways from the visual impacts of new development. While this can also be considered at a regional scale, there is also an opportunity for state and local governments to work together to deliver localised, site-specific planning responses for key areas along the Waterways of the West where development pressure could threaten waterway values.





8. Key directions

Since its inception, the Waterways of the West MAC has examined the current management and planning arrangements for protecting the Waterways of the West and their lands. Agencies and communities have told us about the work underway, what they plan and what they see as their key challenges. We have grouped this feedback into seven key directions, which Table 4 shows, and which will allow the MAC to consider priorities for recommendations to the Victorian Government.

Table 4 Directions for the Waterways of the West and the challenges they are addressing

Key direction	Challenges
1. Embedding Traditional Owners and their values and culture in waterway planning and management	Wurundjeri Woi wurrung and Wadawurrung people and their values, culture and voice are not consistently nor constructively involved in the planning and management of the Waterways of the West and their lands.
2. Protecting water quality and waterway health	Water quality and waterway health are on a declining trajectory. This decline is driven by legacy issues from historic land and waterway use, regular pollution events and chronic pressures such as increased urban development, stormwater discharge and climate change.
3. Providing water for the environment and Country	Increasing demand for water as a result of population growth, combined with continued climate change and less rainfall, is resulting in shortfalls in surface water availability for the environment in the Werribee River (<i>Wirribi Yaluk</i>) and mid-to-upper Maribyrnong River (<i>Mirrangbamurn</i>) catchments. This is reducing the ability of these waterways to meet environmental needs and could potentially impact the cultural values.
4. Enhancing and activating waterways as open space	There is no lead agency or advocate to coordinate the whole-of-region planning, management and promotion of waterways and their lands as important components of Melbourne's public open space network. This results in missed opportunities to protect and activate waterways and their lands and to celebrate their ecological, cultural and social values.
5. Connecting, celebrating and valuing the landscape	With the exception of Traditional Owners and long running 'Friends of' groups, communities in the Waterways of the West region have varying perceptions of, and connection to the Waterways of the West. The recognition and celebration of the unique qualities and beauty of this landscape is not well understood, valued and protected.
6. Improving the resilience of coastal wetlands and estuaries	The coastal wetlands and estuaries of the Waterways of the West region present an enormous unrealised opportunity to create a world-class, nature-based destination that also celebrates the coastal cultural landscape. The region's coastal wetlands and estuaries and the environmental, cultural and amenity values they provide are at high risk from the increasing pressures of climate change, consequent rising sea levels and advancing urbanisation. While the western coastline of Port Philip Bay has numerous coastal reserves, they are not continuous or managed in an integrated way, resulting in gaps to the connection and protection of this region.
7. Integrating land and water planning and management	The region's waterways and their lands are impacted by the frequently incremental and piecemeal approach to planning that results from limited coordination across development and municipal boundaries. Lack of regional-scale planning, and not seeing the Waterways of the West as an interconnected system, is resulting in inconsistent outcomes and missed opportunities to protect and activate waterways and their lands and to maximise and celebrate their ecological, cultural and recreational values.

Direction 1

Embedding Traditional Owners, their values and culture in waterway planning and management

Wurundjeri Woi wurrung and Wadawurrung people and their values, culture and voice are not consistently nor constructively involved in the planning and management of the Waterways of the West and their lands.



The Wurundjeri Woi wurrung and Wadawurrung Traditional Owners continue to have unique tangible and intangible connections to the Waterways of the West and their lands through their associations and relationship with Country. Wurundjeri Woi wurrung and Wadawurrung Traditional Owners have managed the Waterways of the West and their lands for thousands of generations. Wurundjeri Woi wurrung and Wadawurrung Traditional Owners' connection and custodianship of these lands continue, with recognition as Registered Aboriginal Parties (RAP) under the *Aboriginal Heritage Act 2006*.⁵

Traditional Owners have had limited involvement in decision-making for water planning and management. This is for many reasons, most of which are structural and arise from the colonial settler legal legacy. Also, many clans of the Waterways of the West region were decimated as the result of colonisation, and consequently much knowledge of Aboriginal cultural values specific

to the region was lost. Traditional Owners' values and culture have not always been protected and acknowledged, and as a result, Traditional Owners' knowledge and management practices have not been used to benefit water management and planning.

That said, the Waterways of the West MAC recognise there have been recent, positive changes, and there is increasing recognition of the importance and need to include Traditional Owners and their values and culture in water policy, planning and management. This includes amendments in 2019 to the *Water Act 1989* to require Victoria's water resources and waterways to be managed in a way that considers Aboriginal cultural values.

Barriers to change

RAPs are insufficiently resourced. This limits the ability of the Wurundjeri Woi wurrung and Wadawurrung RAPs to take up the increasing number

of invitations to be involved in waterway and land use planning and management decision-making and the increasing expectations they be involved. It also limits the ability of language, family and clan groups to restore and protect their knowledge, culture and connection to this part of Country.

The spiritual connection of Traditional Owners to country is not well understood by the broader community and this connection is not always explicitly recognised in policy, planning and management for the Waterways of the West and their lands.

Knowledge of the current state of Country and context surrounding decision making is essential for Traditional Owners to assist in making decisions on Country. But this information is not always known by Traditional Owners.

The identification and detailed mapping of Aboriginal cultural sites and cultural values along the waterways is frequently a reactive process, occurring as a result of

⁵ A map indicating the appointed Registered Aboriginal Parties within the Waterways of the West region is provided in the Appendix

urban development and planning permit requirements to manage for Aboriginal cultural heritage. The absence of proactive mapping of cultural values is a barrier to including cultural knowledge in the early planning for the Waterways of the West and their lands.

Cultural flows assessments have not been undertaken for the Werribee (*Wirribi*) and Maribyrnong (*Mirrangbamurn*) systems.

In the absence of formal requirements for engagement with Traditional Owners in water and land use planning projects, the Wurundjeri Woi wurrung and Wadawurrung have experienced inconsistent invitation for participation and engagement.

There are different interpretations of waterways in legislation – the *Water Act 1989* and the *Aboriginal Heritage Act 2006*. This affects the requirement to engage with the RAPs in planning permit decisions. Unnamed waterways do not trigger the requirement to undertake Cultural Heritage Management Plans under the *Aboriginal Heritage Act 2006*.

Where we need to get to

Wurundjeri Woi wurrung and Wadawurrung Traditional Owners and their values, culture and voices are embedded in waterway planning and management, with Registered Aboriginal Parties able to determine their level of involvement in waterway management and planning decisions. Traditional Owner objectives to manage Country are recognised and access to Country is supported.

Opportunities

The Wurundjeri Woi wurrung and Wadawurrung Traditional Owner members of the Waterways of the West MAC have led the MAC's work to identify opportunities to embed Traditional Owner values and culture in the planning and management of the region's waterways and their lands. With this leadership, the MAC identified the following opportunities:

- A. Long-term funding arrangements for Registered Aboriginal Parties to build their capacity and improve their participation at all levels of waterway planning and management.
- B. Continued support for increased cultural awareness and education programs to connect the diverse community of the Waterways of the West region with the Traditional Owners.
- C. Establish permanent, formalised requirements to invite Traditional Owner organisations to contribute to the planning and management of waterways and their lands. This would enable Traditional Owners to determine the extent of their involvement, taking account of improved funding and greater capacity to be involved.
- D. Support Traditional Owners of Country to proactively map cultural values of waterways and their lands and use the mapping information for waterway planning and management.
- E. Support Traditional Owners of Country to undertake cultural flows assessments of the Werribee (*Wirribi*) and Maribyrnong (*Mirrangbamurn*) systems and consider this information in decision-making about the allocation of water to support cultural values and water for the environment.
- F. Work with Traditional Owners to determine an appropriate process to embed cultural connections to Country in formal land planning mechanisms (such as embedding Healthy Country Plans in the planning system).

Direction 2

Protecting and enhancing water quality and waterway health

Water quality and waterway health are on a declining trajectory. This decline is driven by legacy issues from historic land and waterway use, regular pollution events and chronic pressures such as increased urban development, stormwater discharge and climate change.



The ongoing, sustained good health of the Waterways of the West is required to provide ecosystem services and is important for the personal, spiritual and cultural wellbeing of Traditional Owners and the broader community.

Melbourne Water is the designated waterway manager and caretaker of waterway health for all waterways in the Port Phillip and Westernport region including the Waterways of the West. Melbourne Water invests heavily in programs to protect and enhance waterway health, and works in partnership with other agencies, groups and individuals to do so.

The Healthy Waterways Strategy incorporates planning for all waterway types across the Port Phillip and Westernport region, including wetlands and estuaries. In line with this and previous Healthy Waterways Strategies, Melbourne Water has implemented significant investment in programs to improve waterway health across the Waterways of the West region.

As indicated in Direction 1, cultural flow assessments have not yet been undertaken for the Werribee and Maribyrnong systems and as such Traditional Owner cultural values are not routinely incorporated into waterway and wetland condition monitoring and reporting.

Urban stormwater and wastewater management

Urban runoff carries pollutants that degrade waterways, wetlands, beaches and bays. Changes to the flow regime of waterways due to increased stormwater runoff degrades the ecology of rivers and reduce their amenity (such as through erosion and transporting litter).

Stormwater management practices for metropolitan urban developments have evolved and improved over time. However, because of historic development, most stormwater runoff in older urban areas across Melbourne is untreated before it discharges into waterways.

Drainage and stormwater management planning for new growth areas must meet the Victorian EPA's current best practice environmental management (BPEM) guidelines. These currently include performance objectives to manage stormwater water quality but do not include effective standards for stormwater volume management. The *Healthy Waterways Strategy* identifies a need to better manage excess volumes of urban stormwater, to meet community expectations for the health of our waterways and bays.

Government policy and commitment to improve stormwater management for greener environments and healthier waterways is expressed in [*Water for Victoria*](#), the [*Plan Melbourne 2017–2050*](#) and [*Yarra River Action Plan Wilip-gin Birrarung murrn*](#) and the [*Port Phillip Bay Environmental Management Plan 2017–2027*](#).

Population growth in the Waterways of the West region will steadily increase the volume of wastewater from industrial, commercial and residential properties that must be treated by the many sewage treatment plants in the region. Most of the treated water from these plants is currently discharged into local

waterways or directly to Port Phillip Bay. Alternative management options, such as recycling of treated water, will be required to help manage this additional wastewater.

The Victorian Government is undertaking a number of initiatives to address these issues, namely:

- Victorian Planning Provisions were amended in 2018 to extend environmental performance standards for stormwater management to commercial, multi-dwelling and industrial subdivisions and developments, (provisions for residential subdivision have been in place since 2006).



- A review of the current EPA stormwater performance standards is currently underway and is likely to identify the need for more specific, place-based standards to reflect local waterway values and sensitivity to urban stormwater disturbance. The inclusion of flow reduction objectives is also being considered
- DELWP, the Municipal Association of Victoria and Melbourne Water are leading the Melbourne Urban Stormwater Institutional Arrangements review, to clarify the responsibilities of Melbourne Water and local governments in managing stormwater assets and services
- Integrated water management forums have been established for the Maribyrnong (*Mirrangbamurn*) and Werribee (*Wirribi*) catchments to identify, prioritise and oversee collaborative water actions. These forums bring together local governments, water corporations, state government departments, CMAs and Traditional Owners.

Pollution

Legacy pollution and contemporary pollution events from commercial and industrial properties have done and continue to impact water quality and waterway values in the Waterways of the West region. They are also expensive to manage, clean up and remediate.

The Victorian Government is undertaking a number of initiatives to address these issues, namely:

- The *Environment Protection Amendment Act 2018*, which takes a new approach to environmental issues, focuses on preventing waste and pollution rather than managing impacts after pollution

has occurred. The Act introduces a general environmental duty, which requires reasonably practicable steps to be taken to eliminate or otherwise reduce risks of harm to human health and the environment from pollution and waste.

- A trial project (until 2020) of Officers for the Protection of the Local Environment, who are EPA employees working in priority local government areas who respond to smaller-scale, lower-risk waste and pollution complaints.

Barriers to change

Waterway health will continue to decline if conventional drainage-engineering approaches to stormwater management are applied in future subdivisional developments, even if they meet current environmental performance objectives for stormwater management performance objectives.

IWM forums have identified social, regulatory, political and economic barriers to effectively implementing IWM and the uptake of alternate water sources including recycled water and stormwater.

There are perceived agency uncertainties in responsibilities and resourcing of works to remediate legacy contamination and current pollution events where the polluter-pays model cannot be implemented (such as orphan sites) or where enforcement action is not likely to recover costs.

Where we need to get to

The water quality and waterway health of the Waterways of the West are improving, with this driven by:

- Improved stormwater management practices, including the delivery of large-scale integrated water management (IWM) projects and uptake of alternative water sources where feasible.
- clear accountabilities for and resourcing of remediation works to address contemporary pollution events and legacy contamination
- the active participation of Traditional Owner Registered Aboriginal Parties in waterway health policy, planning and management
- a changed business and industry culture that supports the prevention of waste and pollution, in line with the introduction of general environmental duty obligations under the *Environment Protection Amendment Act 2018*



Opportunities

The MAC has identified the following opportunities to protect water quality and waterway health.

- A. Address barriers to using alternative water sources and promote them for safe and suitable uses where feasible. In particular, there is a need to consider funding mechanisms to implement larger-scale projects including stormwater harvesting that support IWM and alternative water sources, where these can significantly reduce harmful discharges to waterways.
- B. Support increased enforcement and regulation to reduce the frequency of pollution events.
- C. Clarify responsibilities and investigate alternative funding mechanisms for the clean-up and remediation of legacy contamination and contemporary pollution events where the polluter-pays principle cannot be implemented.
- D. Establish a significant program of education and enforcement to embed a culture and practice of waste and pollution prevention in business and industry in the Waterways of the West region.
- E. Long-term funding arrangements for Traditional Owner Registered Aboriginal Parties to build their capacity and improve their participation at all levels of waterway planning and management.
- F. Support the delivery of the Healthy Waterways Strategy.

Direction 3

Providing water for the environment and Country

Increasing demand for water as a result of population growth, combined with continued climate change and less rainfall, is resulting in shortfalls in surface water availability for the environment in the Werribee River (*Wirribi Yaluk*) and mid-to-upper Maribyrnong River (*Mirrangbamurn*) catchments. This is reducing the ability of these waterways to meet environmental needs and could potentially impact the cultural values.



The MAC heard the community's passion for the ecology of the Waterways of the West to be supported by adequate environmental flows. The long-term health of the Werribee River (*Wirribi Yaluk*) and Maribyrnong River (*Mirrangbamurn*) is not sustainable if the existing levels of water extraction continue.

The natural flows and water regimes of the Waterways of the West have been greatly altered since European settlement. Reservoirs, water extraction and diversions for consumptive uses have reduced the natural flow in the Werribee River (*Wirribi Yaluk*) and the mid-to-upper Maribyrnong (*Mirrangbamurn*) catchment.

The climate of the Waterways of the West region is changing. It has always been a region of low rainfall, but there has been a significant decline in rainfall and therefore streamflow and groundwater levels

over the last 20 years. DEWLP is currently undertaking a *Long-term Water Resource Assessment* to determine if there has been a disproportionate impact to the environment.

Over the next 50 years, the region's population is forecast to double. This, and the changing climate, are forecast to further reduce surface water availability. Access to safe, affordable water – for households, businesses, agriculture and other users, and for keeping our open spaces green – is essential to our vibrant, growing region. Equally, we must ensure our waterways receive the water they need.

There are numerous threatened species in the Waterways of the West (such as the Yarra pygmy perch and Australian grayling) and iconic and culturally important species like the Platypus. These species will suffer if there are shortfalls in water for the environment, as will stream-forming processes and streamside vegetation.

The *Healthy Waterways Strategy* estimates an extra 7 GL of water for the environment is needed in the Werribee (*Wirribi*) system and 5 GL in the Maribyrnong (*Mirrangbamurn*) system to meet the future ecological requirements under a climate change future.

Excess volumes of stormwater in the inner-urban, suburban and growth areas waterways of the region are harming stream forms, ecological processes and water quality. This overabundance of stormwater in the lower reaches of these waterways in no way balances out shortfalls in water for the environment in the upper and mid reaches of the Werribee (*Wirribi*) and Maribyrnong (*Mirrangbamurn*) systems.

Environmental flows are different from Aboriginal cultural flows, having different purposes. Cultural flows can support the outcomes of environmental flows, but they also have economic uses and spiritual and cultural purposes, which Traditional Owners define. There have not been cultural

flows assessments for the Werribee (*Wirribi*) and Maribyrnong (*Mirrangbamurn*) systems.

The Central Region Sustainable Water Strategy is the main policy mechanism for balancing the water needs of the environment and consumptive users in the Maribyrnong River (*Mirrangbamurn*) and Werribee River (*Wirribi Yaluk*). This strategy is scheduled for review, with completion expected by late 2022. Wurundjeri Woi wurrung and Wadawurrung are participating in this process for the first time.

Barriers to change

The Maribyrnong River (*Mirrangbamurn*) does not have an environmental entitlement, although it has previously received some water for the environment from temporary transfers of water licences. The Werribee River (*Wirribi Yaluk*) has an environmental entitlement, but the entitlement is not currently meeting the river's environmental needs.

The increased demand for water that is forecast in the region cannot be met with existing levels of

extraction from the Werribee River (*Wirribi Yaluk*) and Maribyrnong River (*Mirrangbamurn*). A change in the proportions of available water allocated for consumptive and environmental uses might be needed to ensure the long-term sustainability of the resource.

There is a lack of guidance surrounding the use of alternative water sources for environment.

Where we need to get to

Ecological and cultural waterway objectives are met in the Werribee River (*Wirribi Yaluk*) and mid-to-upper Maribyrnong River (*Mirrangbamurn*). This will require an increase in the environmental water reserve and potentially a rebalance of water use between consumptive, environmental and cultural water uses.

Opportunities

The MAC has identified the following opportunities to provide water for the environment and Country:

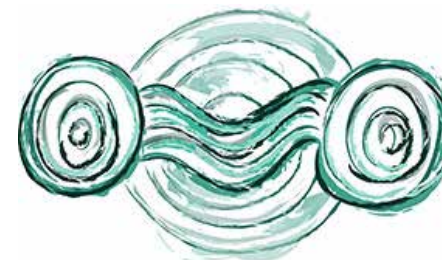
- A. Support urgent action to achieve the water for the environment shortfalls for the Werribee River (*Wirribi Yaluk*) and Maribyrnong River (*Mirrangbamurn*).
- B. Work with the water and other relevant sectors to ensure there is sufficient water to meet ecological and cultural objectives in the Werribee River (*Wirribi Yaluk*) and mid to upper Maribyrnong River (*Mirrangbamurn*). There is a great opportunity to reduce pressure on the health of waterways by making better use of stormwater and recycled water for consumptive purposes, acknowledging seasonality, storage and quality remains issues.
- C. Support Traditional Owners of Country to undertake cultural flows assessments of the Werribee (*Wirribi*) and Maribyrnong (*Mirrangbamurn*) systems and consider this information in decision-making about the allocation of water to support cultural values and water for the environment.



Direction 4

Enhancing and activating waterways and their lands as open space

There is no lead agency or advocate to coordinate the whole-of-region planning, management and promotion of waterways and their lands as important components of Melbourne's public open space network. This results in missed opportunities to protect and activate waterways and their lands and to celebrate their ecological, cultural and social values.



Waterways must increasingly serve as quality open space in the rapidly changing urban landscape of the Waterways of the West region. This requires us to consider what land is available for open space along our waterways, opportunities to access it and the visual interfaces between it and surrounding land. In addition to the cultural and environmental values, waterway lands provide important areas for amenity, recreation, active transport corridors and for connecting people with nature.

Responsibilities for managing waterways and their lands are currently separated, and there is no lead regional agency responsible for planning and managing waterways and their lands for open space. This hinders strategic, integrated and multi-objective decision-making when planning for waterways that provide the amenity and wellbeing that communities want from them.

Historic and contemporary clearing for agriculture and urbanisation have been to the great detriment of

the cultural landscape, with cultural places and values at risk from action and inaction on Country. There is a lack of consistent Traditional Owner involvement in the development, design and management of open space.

Planning system controls and management approaches to protect the lands of waterways as open space are not consistent across local government boundaries. This results in inconsistent outcomes along a single waterway.

DELWP is currently developing a Metropolitan Open Space Strategy, which will take a citywide approach to planning for and delivering open space across metropolitan Melbourne. The Victorian Government has committed \$154 million to the Suburban Parks Program to create more than 6,500 hectares of public open space across greater Melbourne. For the Waterways of the West region this includes establishing the Werribee Township and Kororoit Creek Regional Parks, new investment and planning

in the Werribee River and Toolern Regional Parks and improving access to Jacksons Creek Regional Parkland.

Amendments in 2019 to the *Water Act 1989* require Victoria's water resources and waterways to be managed in a way that considers recreational and Aboriginal cultural values.

Barriers to change

While several agencies including Melbourne Water aspire to improve Melbourne's liveability by providing high-quality, highly valued public open space along waterways, but they do not have a defined function to do so.

It is difficult for agencies to invest in improving the amenity of waterways without a statutory obligation or function to do so or if it cannot be demonstrated that customers have a willingness to pay for such investments, in line with the Essential Service Commission's economic regulation of water services.

Where we need to get to

The realisation, and community awareness, of a connected network of blue-green corridors across the Waterways of the West region, which celebrate the multiple environmental, landscape, social and cultural values of the region's waterways and their lands. The delivery of these open space assets is facilitated by a coordinated governance, planning and management framework that includes a voice for the community and the active participation of Traditional Owners as a mechanism to improve cultural connection and cultural-ecological values.

Opportunities

The MAC has identified the following opportunities to enhance and activate waterways and their lands as open space.

- A. The Waterways of the West and their lands provide a unique regional opportunity to create a network of blue-green corridors that support multiple benefits including high amenity, wellbeing, connection with nature, transport linkages and cultural and environmental values. The undertaking of whole-of-region planning and resourcing to protect and activate these corridors should be a priority.
- B. Designate a caretaker of waterway open space and amenity, with this function recognised as a statutory obligation.
- C. Include Traditional Owners and their values, culture and voice in the planning and management of the region's open space.
- D. Develop strategic Blue-green corridor plans for the major Waterways of the West and investigate priority opportunities for localised masterplanning to guide land use and protect waterways from inappropriate development (see also directions 5, 6 and 7).
- E. Support the urgent delivery of the Metropolitan Open Space Strategy and the creation of a network parks in the region.
- F. Review existing planning controls to identify gaps and inconsistencies, and then develop consistent planning controls across local government boundaries, where appropriate, to protect landscape character and amenity along waterways from the effects of inappropriate development (see also direction 7).
- G. Give effect to the community vision for the Waterways of the West through the planning policy framework, local planning schemes and other appropriate mechanisms (see also directions 5 and 6).

Direction 5

Connecting, celebrating and valuing the landscape

With the exception of Traditional Owners and long running ‘Friends of’ groups, communities in the Waterways of the West region have varying perceptions of, and connection to the Waterways of the West. The recognition and celebration of the unique qualities and beauty of this landscape is not well understood, valued or protected.



Wurundjeri Woi wurrung and Wadawurrung Traditional Owners have cultural, spiritual and economic connections to the Waterways of the West and their lands through their associations and relationship with Country.

There is also a long and rich history of active, passionate community groups and individuals advocating and working to protect and improve the Waterways of the West. The My Victorian Waterways Survey found that people who regularly visit waterways know more about them and have higher aspirations for them: they also behave better towards waterways (such as by being less likely to litter).

The Waterways of the West region has volcanic geology and low rainfall. Many waterways are ephemeral: they naturally dry up periodically. Some waterways have subtle landscape forms (such as ill-defined headwater streams, chain of ponds systems and shallow, seasonal wetlands). This landscape has shaped the ecology of the area, with the region

supporting a rich diversity of plants and animals. Historically, planning and development decisions have not consistently recognised the cultural, social and environmental values of waterways and their lands. This is changing, with recent examples of developments that celebrate waterways and the values they offer the urban landscape and the community.

The lower Maribyrnong River (*Mirrangbamurn*) is currently listed as a Significant River in the State Planning Policy Framework, which requires greater consideration through the planning system.

During its community engagement activities, the Waterways of the West MAC heard that some people from the diverse communities of the region face additional barriers to access nature experiences and environmental education, including language barriers, reliance on public transport and unfamiliarity with the local area.

Barriers to change

Historical land use decisions still limit public access to and interaction with waterways. Urban development in the past did not recognise the many values associated with the waterways and often turned its back on them. Many older urban areas lack connected corridors of open space along creek networks.

The lack of effective, regional, integrated land and water planning and management is explained in Direction 7.

Traditional Owner cultural values and direct access to resources on Country have been lost, as a result of Traditional Owners being removed from Country, as well as destructive legacy and contemporary land use. As a result, some cultural values are only known through oral history, anthropological research or ethnohistorical records.

Waterways continue to suffer pollution events, which can influence community perceptions.

Where we need to get to

Increased recognition, celebration and access to the Waterways of the West and their cultural, amenity, wellbeing and environmental values, with this supporting increased community connection to this unique and beautiful landscape. This value of and sensitivity to waterway environments is reflected in urban strategic planning, development and management.

Opportunities

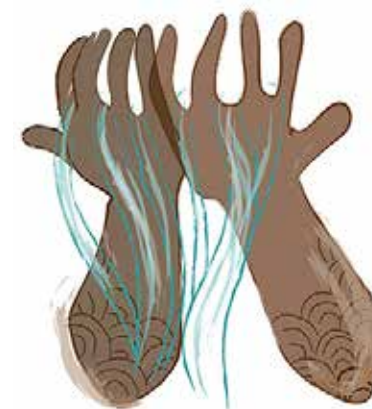
The MAC has identified the following opportunities to connect, celebrate and value the landscape.

- A. Recognise the Waterways of the West as living entities.
- B. Establish a community and Traditional Owner voice for the waterways.
- C. Support opportunities to link the community, Traditional Owners and the local waterway landscape through local activities and communication.
- D. Give effect to the community vision for the Waterways of the West through the planning policy framework, local planning schemes and other appropriate mechanisms (see also direction 4 and 7).
- E. Develop strategic Blue-green corridor plans for the major Waterways of the West and investigate priority opportunities for localised masterplanning to guide land use and protect waterways from inappropriate development (see also direction 4, 6 and 7).
- F. Include Traditional Owners and their values, culture and voice in the planning and management of the Waterways of the West and their lands
- G. Identify the Werribee River (*Wirribi Yaluk*) as a Significant River in the State Planning Policy Framework.
- H. Legislate to recognise the Waterways of the West and their lands as an interconnected system of environmental, cultural and open space assets, and include a requirement to protect them.
- I. Support Traditional Owners to proactively map cultural values of waterways and their lands, and use this information for waterway planning and management. Incorporate Traditional Owners' tangible and intangible cultural values in planning for waterways and their lands.

Direction 6

Improving the resilience of coastal wetlands and estuaries

The coastal wetlands and estuaries of the Waterways of the West region presents an enormous unrealised opportunity to create a world-class, nature-based destination that celebrates the coastal cultural landscape. The region's coastal wetlands and estuaries and the environmental, cultural and amenity values they provide are at high risk from the increasing pressures of climate change, consequent rising sea levels and advancing urbanisation. While the western coastline of Port Phillip Bay has numerous coastal reserves, they are not continuous or managed in an integrated way, resulting in gaps to the connection and protection of this region.



The estuaries of the Werribee River (*Wirribi Yaluk*) and Little River (*Worrin-yaloke*) are the last-remaining unmodified estuaries flowing into Port Phillip Bay, and they are sites of unique natural beauty and ecological value.

Many of the coastal wetlands and estuaries of the Waterways of the West region are of international significance, due to their importance as migratory bird habitats; and they are listed under the Ramsar Convention as part of the Port Phillip (Western Shoreline) and Bellarine Peninsula Ramsar site. Their values are protected by Commonwealth environmental legislation.

The Port Phillip Bay western shoreline has areas of public land and facilities that offer people opportunities to connect with nature and are highly

valued by the community. They include Altona and Point Wilson, Altona Coastal Park, Cheetham Wetlands, Point Cook Coastal Park, Werribee South Foreshore and estuary and the Spit Wildlife Reserve. There are however some significant gaps in the coastal reserve system.

The Healthy Waterways Strategy identifies coastal wetlands and estuaries on the basalt plains as the wetlands in Melbourne most at risk from climate change and urbanisation. The condition and values of the coastal wetlands and their cultural values are on a declining trajectory, which will continue even with substantial interventions. The strategy sets performance objectives for climate change resilience planning for the coastal wetlands and estuaries. It also notes that important vegetation communities like coastal saltmarsh might migrate upstream from

estuaries or further inland from coastal wetlands as sea levels rise. To protect these communities, we must plan for such migration.

The Victorian Coastal Strategy 2014 sets the policy and strategic direction for responding to coastal hazard risks arising from climate change. It identified a need to plan for rising sea levels of not less than 0.8 metres by 2100 and to allow for the combined effects of tides, storm surges, coastal processes and local conditions: with this being implemented in the Planning Policy Framework.

Victoria's Marine and Coastal Policy will be released late in 2019, with a marine and coastal strategy to follow. They will provide statewide guidance and direction for climate change planning for the coastal region, and they will specify roles and responsibilities.

DELWP is working with the CSIRO on a coastal hazard assessment for Port Philip Bay. The assessment will help manage risks to vulnerable coastal environments.

The Victorian Government has also funded a pilot strategic partnership project for the western shoreline of Port Philip Bay. The project aims to improve coastal adaptation and establish biolinks as natural buffers, to protect coastal communities and reduce the fragmentation of coastal nature on public and private land.

Barriers to change

Climate change and rising sea levels will place increasing pressure on the amenity of coastal lands including coastal wetlands and estuaries, which currently provide multiple benefits including environmental protection, open space, recreational opportunities and private use benefits. It is also placing the cultural values and cultural landscape

of the coastal area at risk. The lack of regional planning responses to protect vulnerable coastal areas results in the piecemeal, inconsistent application of planning controls across municipal boundaries.

Where we need to get to:

There is a continuous, connected, blue-green corridor along the coastal areas of the western shoreline of Port Philip Bay. This reserve is a multi-use corridor celebrating the cultural, environmental, amenity and recreational values of the coast, and it supports climate resilience planning for the coastal wetlands and estuaries along the shoreline. Traditional Owners, their values, culture and voice are embedded in the planning for and management of the coastal reserve, with the relevant Traditional Owners able to determine their level of involvement.

Opportunities

The MAC has identified the following opportunities to improve the resilience of coastal wetlands and estuaries.

A. Establish a continuous, connected coastal wetlands park across western Port Philip Bay reaching from Williamstown to Werribee. There is a unique regional opportunity to strengthen the coastal blue-green corridor through the coastal areas of the western shoreline of Port Philip Bay by addressing the current gaps in the reserve network. The corridor would be a major, valued, environmental, cultural and social public open space asset, contributing to a wider appreciation

of the landscape and serving as a tourism asset, supporting the economy of the region. It would make the coastal wetlands and estuaries more resilient to climate change and support the reconnection of Traditional Owners with sea and coastal Country. This would build on the current pilot project and strategic partnership approach to planning for the region's coasts.

B. Develop strategic Blue-green corridor plans for the coastal areas of western Port Phillip and investigate priority opportunities for localised masterplanning to guide land use and protect the shoreline from inappropriate development. This would guide land use and development planning decisions by local governments (see also direction 4, 5 and 7).

- C. Include Traditional Owners and their values, culture and voice in the planning and management of the coastal reserve network.
- D. Strengthen climate change planning to protect the vulnerable coastal environment of Port Philip Bay, in line with the *Victorian Coastal Strategy 2014*.
- E. Identify and fill gaps in the mapping of coastal values and hazards, and use the mapping information for strategic planning work being undertaken in collaboration with councils.

Direction 7

Integrating land and water planning and management

The region's waterways and their lands are impacted by the frequently incremental and piecemeal approach to planning that results from limited coordination across development and municipal boundaries. Lack of regional-scale planning, and not seeing the Waterways of the West as an interconnected system, is resulting in inconsistent outcomes and missed opportunities to protect and activate waterways and their lands and to maximise and celebrate their ecological, cultural and recreational values.

To protect waterways and their lands, we must consider the influence of land use and development outcomes beyond them.

There is currently no overarching strategy to guide regional planning for and management of waterways as an integrated environmental and social asset across jurisdictional boundaries.

Approaches to planning controls to protect waterways and their lands are inconsistent across Local Government boundaries. This can result in piecemeal and inconsistent outcomes for waterways.

A hierarchy of state and local government policies and plans guide growth area planning. At the precinct scale, the current precinct structure planning process is an effective mechanism. But, outcomes are inconsistent at the regional scale because of

the limited integration of precincts into broader regional planning, gaps in strategic environmental assessments for some precincts and implementation of earlier precincts that did not have rigorous strategic planning for waterway outcomes.

Barriers to change

There is currently no agency with the defined function or responsibility for regional-scale planning for waterways and their lands as an integrated social and environmental asset.

Existing planning controls are applied at the local government scale, with inconsistent and limited formal processes to effectively coordinate across municipalities.

Defence Site Maribyrnong

The Defence Site Maribyrnong is a 127.8 ha parcel of land for sale by the Commonwealth, and it is a major urban renewal opportunity in an established area already undergoing much growth and transformation. The site has challenges and opportunities including land contamination, good transport access, heritage values and an interface with the Maribyrnong River (*Mirrangbamurn*). The VPA is leading planning for the site in collaboration with Maribyrnong City Council, Transport for Victoria, other state and local government partners and the community.

Redevelopment of the site could see:

- a continuous stretch of open space on this large bend of the river and setbacks from the river, by applying development controls
- a riverside walking and cycling path
- water-sensitive urban design including centralised stormwater harvesting wetlands; the stormwater could be used for urban greening.



Where we need to get to

Regional-scale strategic planning for the Waterways of the West and their lands in a manner that protects the landscape character and the values it provides. This strategic planning also informs and guides Local Government land use and development planning decisions.

Opportunities

The Waterways of the MAC has identified the following opportunities to integrate land and waterway planning and management.

A. Develop an overarching strategy to integrate the management of the Waterways of the West and their lands as a network of social and

environmental assets. The strategy should cover regional planning of existing and future precincts and urban renewal projects.

B. Develop strategic Blue-green corridor plans for the major Waterways of the West and investigate priority opportunities for localised masterplanning to guide land use and protect waterways from inappropriate development (see also directions 4, 5 and 6).

C. Include Traditional Owners and their values, culture and voice in the planning and management of the Waterways of the West and their lands.

D. Review existing planning controls to identify gaps and inconsistencies, and then develop consistent planning controls across Local Government boundaries, where appropriate, to protect landscape character and amenity along waterways from the effects of inappropriate development (see also Direction 4 and Yarra case study below).

E. Give effect to the community vision for the Waterways of the West through the planning policy framework, local planning schemes and other appropriate mechanisms (see also directions 4 and 5).

Stronger planning controls for the Yarra River (*Birrarung*)

In 2017, the Victorian Government in partnership with six municipal councils introduced stronger planning controls to protect the Yarra River (*Birrarung*) corridor from Richmond to Warrandyte. Implemented on an interim basis, the planning controls strengthen local planning policy to protect the river corridor from visual intrusion by urban development, aiming to preserve the highly significant natural and environmental values of the corridor.

Guided by the Yarra River Protection Ministerial Advisory Committee, the partners worked to

review existing planning controls to identify gaps and inconsistencies, considered recommendations from a landscape assessment as well as previous strategic studies and developed model planning controls with local-level detail and guidance for application along the river corridor.

The Design and Development Overlay (DDO) was applied to specific areas of private land immediately adjacent to the river. This control sets mandatory building heights, development setbacks and overshadowing rules to ensure future development does not encroach on the landscape and environmental values and amenity of the Yarra River.

The Significant Landscape Overlay (SLO) was applied to the wider landscape setting of the river corridor. This control recognises the continuous open space of vegetation and canopy trees that define the river's landscape. It also seeks to guide the river's landscape, environmental and cultural values, protect the riparian zone and access to public open space and guide the siting and design of new buildings.

Having been implemented consistently across the Banyule, Boroondara, Manningham, Nillumbik, Stonnington and Yarra planning schemes, the interim planning controls will be reviewed and finalised by 2021.

9. Next steps

The Waterways of the West region is transforming, and with this transformation comes opportunities to protect, enhance and activate the Waterways of the West, to ensure they continue to provide for the current and future communities of the west.

The challenge is to balance the demands the region's community put on its waterways. As the population grows, there will be pressure from development in the region and greater recreational use of the waterways and their lands.

We need to put in place arrangements including formal, permanent mechanisms to ensure the waterways and their lands provide diverse opportunities to connect with nature, to continue Traditional Owners' cultural practices and share their knowledge, to connect neighbourhood communities and to support diverse, thriving ecological systems. Importantly, community and agencies need to walk together with the Traditional Owners of the lands and waters: the Wurundjeri Woi wurrung and Wadawurrung peoples.

The Waterways of the West MAC will continue to test opportunities to achieve these things with Traditional Owners, relevant agencies, and stakeholders as we develop our recommendations. The MAC will present its recommendations to the Victorian Government by the end of 2019.

Principles for testing opportunities

The Waterways of the West MAC considers that the opportunities need to be explored in more detail, informed by the public consultation, and assessed against the following principles:

- Strong public benefit and/or user pays model
- Extent to which the opportunity delivers on the community vision
- Reduce duplication and complexity and streamline accountabilities
- Complement or build on existing priorities for the protection of the Waterways of the West
- High feasibility of contributing to aspirations
- Achieve multiple benefits
- Provide a legacy for ongoing protection of the waterways and their lands
- Apply leading practice change
- Improve governance arrangements, practices or mechanisms
- Able to implement/apply to other waterways across Melbourne or Victoria
- Maximise opportunities for better resource use
- Apply at the right scale.

Glossary

Amenity: The pleasantness or attractiveness of a place.

Basalt plains: Extensive flat areas of land are formed over hundreds of thousands to millions of years of volcanic activity.

Biodiversity: The numbers and variety of plants, animals and other living beings, including micro-organisms, across our land, rivers and oceans. It includes the diversity of their genetic information, the habitats and ecosystems in which they live and their connections with other life forms.

Catchment: An area of land where runoff from rainfall goes into one river system.

Catchment management authorities: Catchment management authorities are responsible for the integrated planning and coordination of land, water and biodiversity management in each catchment and land protection regions.

Community: Includes individuals, public and private landholders, community groups and business owners.

Country: Traditional Aboriginal culture revolves around relationships to the land and water. For Traditional Owners, Country is a part of who they are, just as they are a part of it.

Country Plan: Country Plans are one way for Traditional Owners to articulate their priorities and aspirations for looking after Country. They can be strategic plans that encompass physical and spiritual concepts of Country, provide a strategic basis for partnerships, and identify management actions and economic opportunities.

Ecosystem: A dynamic complex of plant, animal, fungal and microorganism communities and the associated nonliving environment interacting as an ecological unit.

Environmental Water Entitlement: A legally recognised, secure share of the water resources to be taken from a water system to maintain the environmental values of a water system available.

Ephemeral waterway: A stream that flows only briefly during and following a period of rainfall in the immediate locality.

Escarments: A long, steep slope, especially one at the edge of a plateau or separating areas of land at different heights.

Estuaries: The zone where a waterway meets the sea, influenced by waterway flows and tides and characterised by a gradient from fresh to salt water.

Gigalitre (GL): One billion (1,000,000,000) litres.

Healthy Waterways Strategy 2018 (HWS): A shared strategy across Melbourne Water, state and local government, water corporations and the community. The Strategy provides strategic direction towards a regional vision for the health of rivers, estuaries and wetlands in the Port Phillip and Westernport region.

Ramsar wetlands: Wetlands of international importance designated under the Ramsar Convention.

Riparian: Land or vegetation that adjoins a river, creek, estuary, wetland or lake.

Sewage: Wastewater produced from household and industry.

Sewerage: The pipes and plant that collect, remove, treat and dispose of liquid urban waste.

Stormwater: Is surface run-off from rain and storm events that enters the drainage system. Urban areas, with extensive impervious surfaces such as roofs and roads, results in increased stormwater runoff.

Traditional Owners: People who, through membership of a descent group or clan, are responsible for caring for particular Country. A Traditional Owner is authorised to speak for Country and its heritage.

Tributaries: A freshwater stream that feeds into a larger stream or river. The point where a tributary meets the mainstem is called the confluence. Tributaries do not flow directly into the ocean.

Urban encroachment: Also known as urban sprawl, is a key concept in planning and land use. Urban encroachment is characterised by economic and business development outside of concentrated urban centres. Urban sprawl is also characterised by low-density housing and retail development in suburban areas adjacent to larger urban centres.

Wastewater: Water derived from industrial, domestic, agricultural or commercial activities.

Waterway health/ Waterway condition: Waterway health (or waterway condition) is an umbrella term for the overall state of key features and processes that underpin functioning waterway ecosystems (such as species and communities, habitat, connectivity, water quality, riparian vegetation, physical form, and ecosystem processes such as nutrient cycling and carbon storage).

Waterways: Rivers and streams, their associated estuaries and floodplains (including floodplain wetlands) and nonriverine wetlands.

Waterways of the West: Refers to the Maribyrnong River, Werribee River and the Moonee Ponds Creek. This also refers to the tributaries and other creeks, and wetlands within the Werribee and Maribyrnong Catchments, as described in Melbourne Water's Healthy Waterways Strategy.

Wetlands: Wetlands are areas, whether natural, modified or artificial that hold static or very slow-moving water and develop, or have the potential to develop, biota adapted to inundation and the aquatic environment. Wetlands may be fresh or saline and may hold water permanently or have dry periods.



Appendix 1

Ministerial Advisory Committee

The members of the Waterways of the West Ministerial Advisory Committee represent a diversity of expertise and a depth of experience. These members were selected for their high-level expertise in water management, local government, urban design and Aboriginal values of water and their ability to think strategically and engage with communities.

Chris Chesterfield, Chair, is a nationally recognised leader in waterway and urban water management. He is Chairperson of the Victorian Environmental Water Holder and a leading strategic thinker and research leader at the Cooperative Research Centre for Water Sensitive Cities. Chris chaired the advisory committee that led to the establishment of landmark reforms to protect the Yarra River (*Birrarung*) and now also chairs the Birrarung Council of Wurundjeri Woi Wurrung Elders and community, which acts as the ‘voice of the river’.

Aunty Doreen Garvey-Wandin, Aunty Diane Kerr, Uncle David Wandin and **Aunty Alice Kolasa** have a shared membership on the committee, consistent with the three-family governance model of the Wurundjeri Woi Wurrung Cultural Aboriginal Corporation.

Aunty Doreen Garvey-Wandin is a Wurundjeri Woi Wurrung Elder and Engagement Officer at the Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation. (MAC member October 2018 – April 2019)

Aunty Diane Kerr OAM, a respected Wurundjeri Woi Wurrung Elder, Aunty Di has made a life-long contribution to her community in the areas of health, welfare, education and land rights. Aunty Di is a member

(and former director) of the Dandenong and District Aborigines Co-Operative and former director of Narragool Housing (Koorie Housing Loans). In 2013, Aunty Di was appointed a director of Native Title Services Victoria (now First Nations Legal & Research Services) and six months later became the Chairperson, a position she continues to hold. In 2016, she was appointed by the Minister for Aboriginal Affairs Natalie Hutchins to the Aboriginal Treaty Interim Working Group as a respected community Elder (not in her capacity as a Wurundjeri Woi Wurrung Elder), and has since stepped down from this position. Aunty Di was inducted into the Victorian Aboriginal Honour Roll in 2017 by the Victorian Government. Aunty Di was awarded the Order of Australia Medal in the 2019 Australia Day honours for her contribution to the Victorian Aboriginal Community.

Aunty Alice Kolasa was one of three Wurundjeri Woi Wurrung Elders to provide a cultural framework for the Yarra River Protection Ministerial Advisory Committee. On 22 June 2017, Aunty Alice addressed the Victorian Parliament while tabling the Wilip-gin Birrarung Murrone Bill (Yarra River Protection Bill) 2017. Aunty Alice is passionate about promoting Wurundjeri Woi Wurrung culture and is frequently involved in organising Wurundjeri Woi Wurrung events, Wurundjeri Week, Moomba and other major cultural events including the 2018 Victorian NAIDOC events.

Uncle David Wandin, (MAC member April 2019 – current), was instrumental in the establishment of the Wurundjeri Woi Wurrung Cultural Heritage Corporation’s Narrap Team, a team of cultural land managers

who provide commercial services for authorities and businesses with land and water management responsibilities. Uncle Dave is a recognised leader in the promotion and execution of cultural burns in Victoria. Currently, Uncle Dave and Wurundjeri Woi Wurrung Corporation’s Water Unit are working on the development of the Yarra Strategic Plan, ensuring optimal outcomes for Wurundjeri Woi Wurrung culture and people alongside representatives of responsible public entities identified in the *Yarra River Protection (Wilip-gin Birrarung Murrone) Act 2017*. Uncle Dave is also taking a key role in the rejuvenation of the Galeena Beek properties in Healesville.

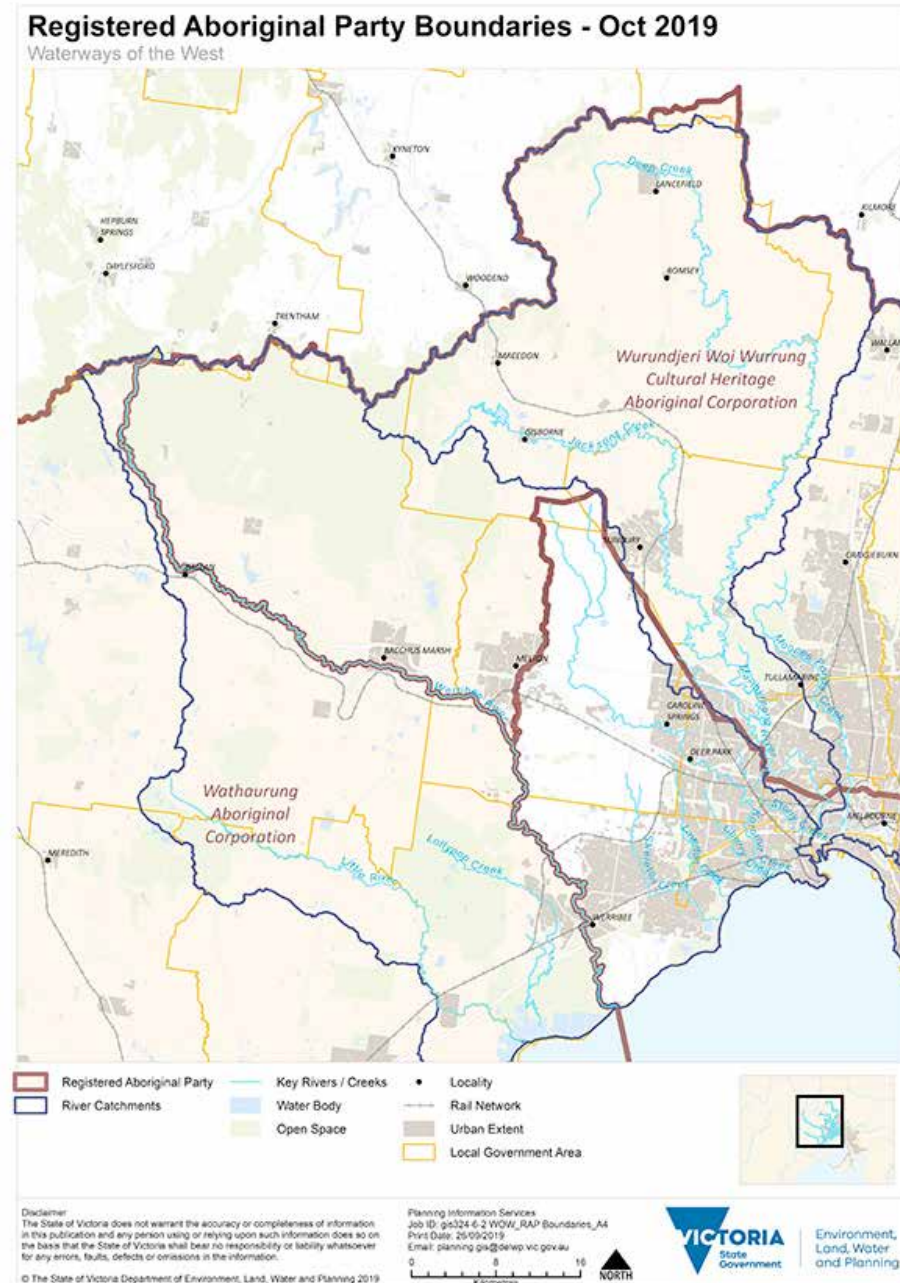
Melinda Kennedy is a Wathaurung woman with extensive knowledge of traditional land and water practices and contemporary natural resource management. She engages with new and older residents in the urban growth communities on Wathaurung Country to provide them with cultural awareness that connects them to their place.

Shelley Penn is an architect and urbanist. Shelley is currently the University Architect at Monash University and is an ongoing member of the Victorian, ACT and NSW State design review panels. She was formerly the Associate Victorian Government Architect.

Lydia Wilson is a senior executive with 25 years’ local government experience. She is Chair of the Maribyrnong (*Mirrangbamurn*) Integrated Water Forum and has been CEO of the Macedon Ranges Shire Council, the Yarra City Council and the Manningham Council.

Appendix 2

Registered Aboriginal Party Boundaries



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