

Whittlesea

Water for all

Our water strategy 2020-2030

# Acknowledgement of Traditional Owners

The City of Whittlesea recognises the rich Aboriginal heritage of this country and acknowledges the Wurundjeri Willum Clan as the Traditional Owners of this place.

Before European settlement, the Aboriginal people of the Wurundjeri Willum Clan lived on the land that now forms the City of Whittlesea and the northern suburbs of Melbourne. They lived on the tributaries of the Yarra River - along the Merri, Edgars and Darebin Creeks - the Plenty River and the Maribyrnong River.

The Wurundjeri Willum people have a strong connection to the land now known as the City of Whittlesea. They travelled the area in search of resources, fresh water, food and shelter; the Plenty River and many creeks offering various types of fish and

birdlife.

The Wurundjeri Willum Clan speak the Woi wurrung language, and the word for water is *baan*.

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# Overview

Whittlesea 2040: a place for all is Council’s vision to create a better future. This water strategy helps to achieve all four Whittlesea 2040 goals, especially Sustainable Environment and Liveable Neighbourhoods.

## How we will deliver better water management

Traditionally, different parts of the water cycle have been managed by different parts of government, with separate responsibilities and goals. It is now widely acknowledged that this approach can lead to missed opportunities.

This strategy describes a new and collaborative process where we recognise and coordinate the management of all aspects of the water cycle together. This includes considering how we select and use water supplies, how we manage wastewater and stormwater, how we protect and improve the health of our waterways and bays, and how we reuse and recycle water locally. By managing water in an integrated way, we can identify and deliver initiatives that will improve our towns and suburbs.

### Our goal

By 2030, the City of Whittlesea will be leaders in the planning, use and management of water for the benefit of all.

### Our five outcomes for success

* Cleaner - Our waterways are healthy and clean
* Greener - Our priority urban and rural landscapes are green and healthy
* Smarter - Our community uses potable water for drinking and alternative water is available for all other purposes
* Prepared - Our city is prepared for droughts and floods
* United - Our community and partners value water and work together to improve water planning, use and management.

Our priorities for action link directly to our five outcomes, with one additional category “Setting up for success”, which will help Council to better manage and optimise council owned and shared water assets.

# Working in partnership

Water management in the City of Whittlesea is a shared responsibility between many agencies and individuals. To coordinate all aspects of the water cycle together, its management needs to be integrated. These six entities play a key role in the management of our water.

* Victorian Government - Sets state-wide policy for water management
* Melbourne Water - Oversees Melbourne-wide water resources, waterways and major stormwater systems
* Yarra Valley Water - Provides water and sewerage services to residents and businesses in the City of Whittlesea
* City of Whittlesea - Manages local stormwater systems, public spaces and facilities, and sets local policy for water management
* Wurundjeri - Represent the traditional owners of the land and water in City of Whittlesea
* Local communities and businesses - Manage their own water use, drainage and sewerage systems on private properties.

This strategy is aligned with state-wide and Melbourne-wide policy, and aims to improve local water management to benefit communities here in the City of Whittlesea.

### How was this strategy developed?

This strategy has been developed in partnership with the agencies involved in water management in the City of Whittlesea, and with a community panel made up of local community members. The strategy was shaped by extensive data collection and analysis, the ideas and discussions which happened across eight workshops, and the results of a community survey.

To create our priorities for action, we started by asking our agency partnerships, as well as local community, businesses, developers and experts in water, environment, community, planning and infrastructure, for ideas on how to deliver our goal. These ideas were refined into actions and prioritised based on how well they help to deliver our goal and outcomes.

# Water in the City of Whittlesea

## Our water cycle

### Water used in the municipality

The good news is that potable water use in the City of Whittlesea is currently lower than the Melbourne average on a per person basis. However, the overall need for water in the area will increase substantially as the population grows, and at the same time, regional water supplies from potable water reservoirs such as the Yan Yean Reservoir are likely to have less water as the climate changes.

Demand for water:

* Now: 15.2GL per year
* 2040: 19.6GL per year

### Wastewater produced in the municipality

As we increase water use in homes and businesses across the municipality, we also increase the wastewater entering our sewers from toilets, showers and sinks. The majority of local wastewater is transferred to the Western Treatment Plant for treatment and then released to Port Phillip Bay.

Wastewater:

* Now: 12.4GL per year
* 2040: 17.6GL per year

### Stormwater produced in the municipality

The amount of stormwater entering into the stormwater pipes which connect to rivers and creeks, will increase significantly as more homes are built. The change in stormwater runoff will be biggest in the growth areas as this is where most new housing will be built, however, stormwater runoff from established suburbs will also increase as properties are sub-divided and more surfaces become paved.

Stormwater:

* Now: 71.2GL per year
* 2040: 81.8GL per year

**Did you know?** Our residents currently use about 151 litres each day. That’s less than Melbourne’s average and the State Government target of 155 L/person/day.

## How are we currently managing our water?

### Alternative water supplies

It will become more important to capture and reuse different sources of water, such as recycled wastewater and stormwater, for local uses where water is not being used for drinking. These ‘fit-for-purpose’ uses of alternative water could include toilet flushing or watering farms, gardens, ovals and parks. The amount of wastewater and stormwater produced in the City will be much greater than local demands for non-potable water, so the availability of water is not an issue. The challenge is identifying and delivering the most effective and affordable options for capturing, treating and supplying alternative water in the right locations.

### What are we already doing?

We have already taken steps to be more prepared for droughts. Many homes and businesses already use rainwater tanks to capture water from the roof to water the garden, use in the laundry, or toilets. Many of the newer suburbs also have access to a recycled water system. Council has also installed alternative water supplies for 11 per cent of the public open space in the City of Whittlesea, using a mix of recycled water and stormwater.

**Did you know?** An estimated 30 per cent of homes in the City of Whittlesea have a rainwater tank.

### Reducing stormwater pollution

Council is responsible for stormwater management in the City of Whittlesea. It manages the local drainage system and takes steps to make stormwater cleaner before it enters rivers and creeks. Natural systems, such as wetlands can be built that use plants and soils to filter and hold water before it enters a waterway. These systems help to reduce pollution, provide habitat for local wildlife, while being attractive gardens and natural spaces for community to enjoy.

### What are we already doing?

Council has built systems to reduce stormwater pollution in some locations, such as the wetland and stormwater harvesting system adjacent to the Melbourne Market in Epping. Under state law, developers are also required to reduce stormwater pollution when new properties are constructed so our new suburbs are being built with more effective and environmentally friendly water management systems and assets than in the past.

**Did you know?** The City of Whittlesea manages more than 350,000m2 of stormwater treatment systems.

### Reducing the impact of flooding

Like many cities, the City of Whittlesea has areas that are likely to flood during very intense rain. By capturing and storing rainwater in tanks, or using natural depressions and basins in the landscape to hold water where it falls, we can take measures to reduce the impact of flooding on our community. These measures can sometimes be designed to also be used as water harvesting systems to provide a local source of non-potable water.

### What are we already doing?

Council and Melbourne Water have been working together to understand flood risk across the City of Whittlesea and to identify areas at risk of flooding. Council is currently completing work which will identify projects to reduce flood risk in key locations.

## Why do we need to do more?

Water is fundamental in the City of Whittlesea, and the municipality also plays an important role in Melbourne’s water cycle. This section highlights the key reasons why we need an integrated approach to water management in the City of Whittlesea.

### A growing population and large growth areas

The population of the City of Whittlesea has grown significantly over recent years, and it is expected to continue to grow rapidly, with a 71 per cent increase expected by 2041. The creation of new urban areas impacts the water cycle in a range of ways, such as:

* More people needing water
* More wastewater created
* More hard surfaces (e.g. roofs and roads) creating more stormwater runoff that can pollute rivers and creeks, and cause flooding.

**Did you know? On** average **there are 76 babies born every week in the City of Whittlesea**

### Preparing for more droughts

Climate change will influence all aspects of the water cycle in the future. Future climates are likely to be drier and hotter, increasing the chance that droughts will be more regular.

The Millennium Drought (1996-2010) resulted in extensive water restrictions being put in place in Melbourne, which had long-lasting impacts on the landscape and on the wellbeing of our communities. We were asked to use water sparingly, and gardens and open spaces became brown and dry. This reduced opportunities for enjoying the outdoors and impacted our health and the health of our environment.

**Did you know? During the Millennium drought rainfall dropped by an average of 30 per cent locally.**

### Preparing for heavier rain events

Climate change is likely to change how our rain falls, with bigger downpours expected in summer, meaning that the risk of flooding will increase in some areas. Locally there have been several floods in recent years caused by intense downpours, including the summer flooding on 29 December 2016. On this day 40mm of rain fell in just 15 minutes, which was over 5 per cent of the total annual rainfall (720mm).

**Did you know?** The intense rainfall event across Melbourne on 29 December 2016 was a one in 1000-year event.

## Our vision for the future

**Our goal**

By 2030, the City of Whittlesea will be leaders in the planning, use and management of water for the benefit of all.

| **Outcome** | **Outcome indicators** | **Measures of success**  **(10 year targets)** |
| --- | --- | --- |
| **Cleaner**  Our local waterways are healthy and clean | Improve the water quality of our local waterways | By 2030, Council will pro-actively maintain and budget for renewal and maintenance of all of its water assets to ensure they meet environmental standards, and are fit for the community’s enjoyment and use. |
| **Greener**  Our priority urban and rural landscapes are green and healthy | Increase the proportion of public open space supported by alternative water sources | By 2030, at least 25 per cent of public open space will be supported by an alternative water source. |
| **Smarter**  Our community uses potable water for drinking and alternative water is available for all other purposes | Decrease in community potable water use  Decrease in community potable water use | Community potable water use will be at least 5 per cent below the Victorian Government Target for per capita consumption.  By 2030, Council potable water consumption will reduce by a further 20 per cent (on a kilolitre per capita basis). |
| **Prepared**  Our city if prepared for droughts and floods | Decrease local flooding impacts | Less than 2 per cent residential properties at risk of flooding in a 1 in 5-year rainfall event.  Less than 10 per cent commercial and industrial properties at risk of flooding in a 1 in 10-year rainfall event. |
| **United**  Our community and partners value water and work together to improve water planning, use and management | Increase in community stewardship of water resources | By 2030, the Plenty River, Merri, Darebin and Edgars Creek will have vibrant and effective community stewardship[[1]](#footnote-1) programs |

## Our priorities for action in your neighbourhood

The City of Whittlesea is a large and diverse municipality, broadly made up of three distinct geographical areas, established, growth and rural, each with its own characteristics. We have specific priorities for action in each of these areas.

**Established areas e.g. Bundoora, Lalor, Mill Park, Thomastown, Epping and South Morang**

These are older urban areas with well-used but aging infrastructure and facilities, low tree canopy cover, and less open space (compared with planned growth areas). Established areas are still experiencing growth and change as properties are sub-divided or redeveloped.

In the established areas **we will look after and expand our existing stormwater treatment systems**, and deliver showcase projects, such as the revitalisation of a priority section of a waterway, and divert local stormwater to support our significant trees.

**Growth areas e.g. Doreen, Mernda, Wollert, Beveridge, Donnybrook and designated growth areas**

These are recently developed and future development areas. New facilities, infrastructure and open spaces have been planned into these developments, and often recycled water supplies and stormwater treatment systems have been included.

In the growth areas **we will plan better outcomes from the start and create new solutions**, for example we will work with homebuilders, developers and the Victorian Planning Authority to support better water outcomes in new developments.

**Rural areas e.g. Eden Park, Humevale, Kinglake West, Woodstock and Yan Yean**

These are rural areas that fall outside of the designated growth areas, with large areas of land used for agriculture and conservation. Rural landowners often play an active role in managing water on their properties.

In the rural areas **we will support local agriculture and improve water management**, for example we will support the extension of recycled water use for agriculture, and work with rural landowners to soak more rain into the ground by improving vegetation and soils, and improve flows to rural waterways.

Map of the City of Whittlesea.

This map shows the location of the established areas to the south east (with the exception of Whittlesea Township in the north), growth areas to the west and rural areas to the north. It also shows the location of our major waterways, Merri Creek along the western edge, Darebin Creek up the middle, and Plenty River toward the east up through our rural areas. Major waterbodies shown include Toorourrong Reservoir in the North and Yan Yean Reservoir to the east. The urban growth boundary is also shown, as well as the major parklands including Kinglake National Park (north), Plenty Gorge Parklands (eastern edge), and Quarry Hills Parkland (south east).

## Our priorities for action across the City

### Setting up for success

Council will change the way it works to ensure our water assets, and those that are shared, are optimised. These changes will help us become cleaner, greener, smarter, more prepared and united in water management across the City of Whittlesea.

**In changing the way we work, we will:**

* Establish a water practitioners group to share knowledge, and work together to improve processes and find new solutions
* Establish the right resources to manage and deliver this Strategy
* Update the water asset register and review the watering practices and maintenance programs for Council’s parks, wetlands, sports fields, and stormwater treatment systems
* Actively monitor and manage the watering of Council’s public open space such as sports grounds and the green spaces around buildings
* Improve the knowledge and skills of our staff and community to achieve better water outcomes through the delivery of innovative pilot projects, new technologies and targeted education
* Complete flood mapping and embed the findings into Council’s mapping and planning mechanisms
* Develop a planning amendment which recognises the inherent and unique environmental values of our rivers and creeks. This is called an environmental significance overlay
* Update the Urban Development Guidelines and resources to improve water management practices, employ strategies to cool our suburbs and make our neighbourhoods great places to live
* Review and update the Water Asset Design Standards for Council’s buildings, roads and public open spaces such as parks, gardens and sportsgrounds
* Ensure our plans and policies consistently support the outcomes and actions of this Strategy
* Work with key agencies (listed on page 6) and our local community on water efficiency and waterway improvement projects (see actions under our ‘United’ outcome on page 19).

### Cleaner

We will deliver these actions to help keep our waterways healthy and clean.

**Asset renewal and innovation**

* Renew and improve the performance of Council’s existing water assets such as stormwater treatment systems and nature strip raingardens
* Renew and replenish existing wetland systems including Carlingford Reserve, Botanica Park Lake, Peter Hopper Lake, and others
* Use smart technology to control our watering systems and monitor waterway health.

**Community partnerships**

* Engage with rural landowners to:
  + improve flows to rural waterways
  + improve their management of natural floodplains.

**Smart water quality monitoring**

The City of Whittlesea is leading a Smart Cities pilot program that will use a network of sensors to better manage our waterways, parks and sports fields.

Working in partnership with local schools and libraries, we installed water quality sensors to help protect platypuses in the Plenty River from stormwater pollution. This project was funded by Melbourne Water.

We also have water level sensors in other waterways to monitor flooding which could assist in early flood detection. We plan to extend the use of sensors across our City.

### Greener

We will deliver these actions to ensure our priority urban and rural landscapes are green and healthy.

#### ****New works and innovation****

* Renew and expand existing stormwater harvesting systems including Melbourne Markets Wetland, Painted Hills Recreation Reserve, and others
* Help water our River Red Gums through diverting local stormwater to water the trees, and smart watering controls
* Build new and expand existing stormwater harvest systems in suitable locations, such as Mill Park Lakes
* Divert stormwater from roads and carparks to water trees, nature strips and parks where this would help both flooding control and irrigation needs.

#### ****Partnership projects****

* Plant more vegetation along local creeks with Melbourne Water and local waterway management committees
* Work with developers to deliver improved and innovative water management solutions in their estates
* Engage with rural landowners to soak more rain into the ground by improving vegetation and soils.

#### Stormwater harvesting at the Melbourne Markets

Built during the Millennium Drought (1996-2010), the Melbourne Markets Stormwater Harvesting project supports a large wetland, ponds for Growling Grass Frogs and the watering of local sports fields.

Stormwater harvesting projects like these are a great way to save potable water and also prevents our waterways from becoming too flooded. We are currently investigating other local projects.

Melbourne Markets project was made possible through Victorian and Australian Government funding.

**Did you know?** Rural landowners can retain existing locally native vegetation to preserve habitat and biodiversity links. Find out more: [whittlesea.vic.gov.au](https://www.whittlesea.vic.gov.au/)

### Smarter

We will deliver these actions to help us conserve potable water for drinking purposes, and have alternative water available for all other purposes.

#### New works and innovation

* Work with Yarra Valley Water to extend the recycled water supply to key sites, such as Houston Street Depot where we grow trees and plants for our streets and parks
* Map opportunities for potential new stormwater harvesting systems in the growth areas
* Embed the principles of leading water management practise (i.e. Integrated Water Management) into facility design and masterplans.

#### Partnership projects and advocacy

* Develop a demonstration site for household water saving and other sustainable technologies
* Work with Yarra Valley Water to investigate how recycled water supplies could be used for agriculture
* Work with developers to include water harvesting for industrial, commercial, and larger residential development
* Advocate to the Victorian Government for more ambitious targets for potable water use reductions.

**Did you know?** On a per person basis, Council has reduced its potable water use from 2.5kL/ person in 2001, to 1.3kL/person in 2018.

**To learn more about saving water at home, visit Yarra Valley Water’s website** [**yvw.com.au/help-advice/saving-water**](https://www.yvw.com.au/help-advice/saving-water)

### Prepared

We will deliver these actions to help our city prepare for droughts and floods.

#### New works and innovation

* Work with developers and home builders to manage local flood levels, by installing smart rainwater tanks and use stormwater offset schemes, particularly in established areas where blocks are being subdivided or redeveloped
* Use the flood mapping data to inform new builds and works to reduce flooding and its impacts
* Install water play in suitable urban parks, creating cool spaces for play during hot times.

#### Partnership projects and advocacy

* Engage with our community on flooding issues
* Advocate for residential water saving initiatives including smart water meters, lower water use targets, community grants and education
* Engage with rural landholders to improve open floodplain management
* Plan for better water outcomes in new developments along Plenty River, Darebin Creek, and other significant waterways in our region.

#### Smart rainwater tanks

The Internet of Things has opened up great possibilities for controlling collection and release of rainwater. Council is trialling smart rainwater tanks at Mill Park Library that will provide rainwater for irrigation, and reduce flooding in the Plenty River. They do this by emptying themselves before heavy rain events so that they can absorb as much rain during storms, avoiding runoff into waterways.

These smart rainwater tanks can also be used in the home, they do all the things a normal tank does and much more, for instance they can be programmed to deliver the right amount of water to your plants in dry hot weather.

**Check out Melbourne Water’s website to learn more about our water cycle** [**melbournewater.com.au/community-and-education/about-our-water**](https://www.melbournewater.com.au/water-data-and-education/water-facts-and-history)

### United

Together with our partners, these actions will help our community and partners to value water and work together to improve water planning, use and management.

They will be delivered in partnership with those who influence our water cycle, such as Melbourne Water, Yarra Valley Water, Department of Environment, Land, Water and Planning, Victorian Planning Authority, the Merri Creek and Darebin Creek Management Committees, the Wurundjeri Land Council, Whittlesea Community Connections, tertiary and adult learning institutions, local business groups, government bodies, and many other local business and community representatives.

#### Community and partnership projects

* Develop household water saving education initiatives and materials that support our residents to improve their water practices at home
* Provide water focused community education and upskilling programs e.g. communities monitoring the health of our creeks and rivers
* Improve our public places along key waterways together, for example redesign and revitalise the concrete drain sections along Darebin and Edgars Creeks, and connect walking and cycling pathways from Yan Yean Reservoir to Plenty Gorge
* Develop recycled water use in agricultural and industry practices through the Whittlesea Community Farm Collective partnership project. The Farm will showcase the use of recycled water; provide volunteering, education and employment opportunities; and grow and provide fresh food to the local food relief network
* Increase Creek Management Committees’ action in the City of Whittlesea
* Establish a Plenty River Management Committee
* Together with our partners, develop and implement an innovative plan for integrated water management for the Upper Merri Creek sub-catchment.

#### Advocacy

* Advocate for stronger integrated water management requirements in the State Planning Provisions, the Victorian Planning Authority Guidelines, and Precinct Structure Plans
* Advocate to the Victorian Government to protect strategic agricultural land, and strengthen the focus on water in our natural rural areas through the Green Wedge Management Plan
* Advocate to the Essential Services Commission, Yarra Valley Water and Victorian Government to fund the extension of recycled water to support agriculture.

#### Indigenous values in water management

We are working with Traditional Custodians (Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation) and other partners to create a pathway

to embed indigenous values (cultural flows) in the management of the Upper Merri Creek. Cultural flows are water flows that improve the spiritual, cultural, environmental, social and economic conditions of Traditional Custodians on their Country.

What will this look like? It might be that indigenous stories and artworks are shared in public spaces, that opportunities to grow and harvest native plants and produce become local businesses, that the Woi wurrung language is adopted for naming of natural features or streets, that Traditional custodians continue their cultural practices and connections around land and waterways on Country. For further information visit [uppermerricreek.com.au](https://www.yvw.com.au/help-advice/saving-water)

**You can get involved by joining a local water group!** Browse from over 15 environmental groups on the City of Whittlesea’s community directory [whittlesea.vic.gov.au](https://www.whittlesea.vic.gov.au/)

**See what Council is currently advocating for:** [**whittlesea.vic.gov.au**](https://www.whittlesea.vic.gov.au/)

## Monitoring our progress

Council will create a working group of skilled leaders and technical experts to deliver the actions of this strategy. Together we will monitor our progress against our measures of success at least once every Council term (4 years). This will allow us to monitor trends, celebrate achievements, recognise efforts and identify areas for further improvement.

The strategy will be reviewed in 2025 and 2030 at which time the water needs and aspirations for the City of Whittlesea will be re-assessed for appropriate action.

## Contacts

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**Call us**

Phone: 9217 2170

National Relay Service: 133 677 (ask for 9217 2170)

Free telephone interpreter service: If you speak a language other than English, please call 131 450

**Email us** [info@whittlesea.vic.gov.au](mailto:info@whittlesea.vic.gov.au)

**Visit our website** [whittlesea.vic.gov.au](https://www.whittlesea.vic.gov.au/)

**Postal address**

City of Whittlesea

Locked Bag 1

Bundoora MDC VIC 3083

1. Stewardship activities including enhancement plantings, litter and weed removal, citizen science, community co-design for revitalisation projects and the celebration of

   cultural identity and place. [↑](#footnote-ref-1)