



Waterways Local Update 2017-18

Melbourne Water's work to enhance waterways and build resilience to flooding in the **Shire of Cardinia**.



940.9 km
SEDIMENT, SILT, LITTER & DEBRIS
REMOVED FROM WATERWAYS



\$479,332
IN COMMUNITY
FUNDING



PLATYPUS
SURVEYS IN
RIVERS AND CREEKS

Melbourne Water plays an active role in the daily lives of Melburnians. We contribute to Melbourne's famous lifestyle by protecting and enhancing over 25,000 km of rivers and creeks, and more than 479 stormwater treatment systems and wetlands in the Port Phillip and Westernport region.

The Waterways and Drainage Charge, which is paid by property owners and collected by retail water companies on our behalf, funds this work. It is an important part of ensuring a thriving natural environment.

Melbourne Water cares for many waterways. Some in your local area include:

- Lang Lang River
- Bunyip River
- Aarat Creek
- Cardinia Creek

Healthy waterways

Maintenance and new projects

We are the caretakers of waterway health in the Port Phillip and Westernport region. Each year, we create and maintain healthy waterways by removing litter, debris and excess sediment. We remove and spray weeds, cut grass and plant native trees and shrubs.

What we have done

Why

7.9 km Revegetation

We plant native trees and shrubs along waterways to provide habitat for birds and animals. Revegetating waterways and replacing weeds with native plants prevents erosion and improves water quality.

85.8 km Weed control

Introduced and noxious weeds can choke waterways and take over from plants that provide healthy habitats for birds and animals.

940.9 m³ Sediment, silt, litter, debris removal

Silt, sediment, litter and debris is removed for drainage and flood protection, and to prevent pollution building up in our waterways and wetlands. An excess of these can impact the habitat for platypus, fish and other animals, as well as native plants.

Carried out works to control weeds, e.g. blackberry and sweet pittosporum, along Deep Creek, downstream of Mullane Road, to improve vegetation condition

The work allows natural regeneration of native vegetation and the planting of native trees, shrubs and grasses, providing habitat for birds and animals and improving the health of waterways.

Carried out works to repair rock chutes and stabilise the bed and bank in Cardinia Creek with rock, soil and jute matting

This work will improve the habitat and conditions for native fish, allowing them to migrate to complete their lifecycles.



Stormwater

Rainwater, stormwater and recycled water are valuable resources. We work closely with Council and local communities to protect our rivers, creeks and bays, provide alternative water sources and improve the stormwater that flows into local waterways by integrating stormwater into the urban landscape. We work closely with Council and local communities to better manage stormwater to protect the environment, provide alternative water sources and improve the stormwater that flows into local waterways.

What we have done

Living Rivers contributed funding to employ a Water Sensitive Urban Design (WSUD) officer

Why

The WSUD officer will help improve WSUD assets to better perform and be better maintained.

Living Rivers contributed funding to construct a swale and two rain gardens at the Council depot

The swale will improve stormwater quality, reduce stormwater quantity and enhance the Toomuc Creek and bay health.

Living Rivers provided funding for the water sensitive urban design of Telopea Street

The WSUD will improve water quality and amenity, reduce sediment in Menzies Creek and increase awareness of WSUD principles in the community.

Through the Clearwater program, we supported Council to take a whole-of-water cycle approach by providing a wide range of tools and resources, and opportunities to participate in a variety of activities

This work helps to improve skills, increase knowledge and foster better networks across councils to change the way we manage water for healthy, connected communities.



The Living Rivers program offers councils funding, expertise and guidance to build their understanding, skills and commitment to manage stormwater within an integrated water management approach. We contributed \$84,500 to projects in your area.

Find out more at melbournewater.com.au/livingrivers



Environmental water

Working with government agencies, councils, industries, landowners and the community ensures we provide the allocated water needed in rivers to maintain healthy natural ecosystems.

What we have done

Why

Worked with the Victorian Environmental Water Holder to deliver three environmental water releases from Tarago Reservoir, along the Tarago and Bunyip rivers

Releasing water from upstream storages mimics flows that would naturally be there if the river wasn't dammed. The releases help to support the habitat for native plants and animals, including the Australian grayling.

Worked with Victorian Environmental Water Holder to update the Tarago and Bunyip Rivers Environmental Flow study, and provided a copy to Bunyip and Tarago Environmental Advisory Group

Updating the study with the current science and working with stakeholders helps to improve river flows.

Worked with the Department of Environment, Land, Water and Planning, and Southern Rural Water on environmental outcomes for river systems in Integrated Water Management forums

Advocating for environmental outcomes for river systems and tributaries improves the health of waterways.

Engaged land holders through the Mitigating Catchment Impacts program to identify opportunities to undertake whole farm plans

Undertaking farm plans enables landholders to access grants to implement water savings and improve stream low flow conditions.

Monitoring and research

We improve local waterways by undertaking regular and extensive monitoring, investigations and research to better understand them.

What we have done

Why

Monthly monitoring of water quality at 16 sites within your area. These tests measure:

- water temperature
- dissolved oxygen
- salinity (conductivity)
- pH level
- nutrients (nitrate, nitrite, ammonia, Kjeldahl nitrogen, soluble reactive phosphorus and total phosphorus)
- indicators of faecal contamination (*E. coli*)
- metals (arsenic, cadmium, chromium, copper, lead, nickel and zinc)

Our water quality monitoring program is designed to assess broadscale, long-term trends in water quality (typically over 8 - 10 years). We use this data to help identify pollution sources and inform the community about local water quality.

Annual platypus surveys in Cardinia Creek, upper Bunyip River, Snake Creek and Sardine Creek within the Bunyip State Park

Improved knowledge of platypus population health and distribution allows us to nurture this important species.

Macroinvertebrate surveys in Toomuc Creek

These surveys improve our knowledge of the condition of waterways and how they change.

Undertook fish surveys along the fish passage in Cardinia Creek to collect eight species of fish

The surveys helped assess the upstream and downstream passage of fish along Cardinia Creek.

Monitored sediment along Deep Creek, Cardinia Creek, and its estuary, and the Bunyip River estuary

This monitoring improves our knowledge of contaminants and guides our management of the waterways.

Planning for future development

We plan for future development to ensure growing communities do not threaten local waterways. We provide advice and assist new developments to ensure they do not increase flood risk.

What we have done

Why

78 referrals for land subdivisions reviewed

Ensure proposed land subdivisions meet current standards for drainage and stormwater quality.

126 development applications reviewed

Ensure that growing communities don't contribute to an increase in flood risk.

176 flood information requests reviewed

Provide flood information to property owners and people interested in purchasing or redeveloping property.

14 applications for works near Melbourne Water assets and works such as bridges, shared pathways and jetties reviewed

Ensure waterways, and the plants and animals that live there, are protected from the potential impacts of building works.

5 stormwater connection applications reviewed

Ensure waterways and the plants and animals that live there, are protected from the potential impacts of construction works.

Flood protection

While floods are natural and we can't stop them all from occurring, we can build our resilience to them and minimise the damage they cause to people, places and communities.

We manage the regional drainage system and work with Council, the Victorian State Emergency Service, the Bureau of Meteorology, property owners and developers to make sure flood information is up to date. We provide flood warning services, prepare flood response plans, and identify and construct new flood protection projects in areas with the greatest need.

What we have done

Why

Worked to make an amendment to the Planning Scheme

Accelerated a planning scheme subdivisions amendment for the Pakenham township to support precinct development.

Continued collecting hydrological data

Data is used to analyse flood warning during emergency situations, as well as for such things as development referrals and projects to reduce the risk of flood.



Nine volunteers in your area provide us with rainfall data by recording information from a rain gauge in their backyard. These figures and the data from our automated gauges provides us with valuable rainfall information.

Find out more at melbournewater.com.au/communityrainreaders

Working with the community

Working collaboratively with community groups, volunteers, land managers and farmers allows for better management of local waterways, natural environments and regional drainage systems. It protects the environment and promotes conservation. If you'd like more information about funding opportunities, please call **131 722** or email river.health@melbournewater.com.au

Funding provided	Grant	For
\$126,911	Stream Frontage Management	Private land owners and managers for works that protect or enhance riverbanks, such as weed control, fencing and planting native trees.
\$126,969	Community Grants	Volunteer and community groups for works that protect or enhance riverbanks on public land, raise awareness, and provide training and education to protect local waterways.
\$13,200	Corridors of Green	Councils and public land managers for projects such as weed control, fencing and creating management plans.
\$127,752	Rural Land Program	Landholders in specific catchments for projects that reduce the amount of sediment and nutrients entering waterways from agricultural land.

We also worked with the local community on several events and initiatives throughout the year.

Who we worked with

What we did

Cannibal Creek Landcare	Provided support to monitor water quality through our Waterwatch program.
Beacon Hills College Growlers	
Beacon Hills College Growlers	Provided support to survey macroinvertebrates along Toomuc Creek.
Toomuc Valley Landcare	
Lang Lang catchment with GippsDairy	Supported GippsDairy to facilitate a two-day nutrient management workshop for dairy farmers.
Western Port Catchment Landcare Network	



Our Space Your Place is an app that helps you find land managed by Melbourne Water to use for projects that benefit the wider community, such as community gardens. We encourage communities to apply to use the land. Find out more at

melbournewater.com.au/ourspaceyourplace or call **131 722**.



Our citizen science programs harness the power of community through Waterwatch programs. They support people to collect and analyse data on platypus, frogs, waterbugs and water quality in their local river or creeks and advocate for waterways to help protect them and promote conservation.

Find out more at melbournewater.com.au/waterwatch or call 131 722.