



Waterways Local Update 2016-17

Melbourne Water's work to improve waterways and provide flood protection in the **Shire of Cardinia**.



142.6 km
WEED CONTROL
ALONG WATERWAYS



PLATYPUS
SURVEYS IN
CARDINIA CREEK



45.5 m³
SEDIMENT AND SILT
REMOVED FROM WATERWAYS

Melbourne Water makes a vital contribution to the famous Melbourne lifestyle by underpinning human health, enhancing community well-being, supporting economic growth and balancing the natural and man-made environment.

Together with our partners, we look after 8,400 km of rivers and creeks, 428 wetland treatment systems and more than 1,400 km of regional drainage systems in the Port Phillip and Westernport region. This work is funded by the Waterways and Drainage Charge, which is paid by property owners and collected by retail water companies on our behalf.

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

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

25.5 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.

142.6 km

Weed control

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

45.5 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 Spartina control works along the inlets of Cardinia Creek

As the first year of a 10-year program to eradicate the highly invasive weed, this work will improve the health of Westernport.

Surveyed weeds and rare or threatened vegetation along the tributaries of Bunyip River to develop an inventory

These investigations reveal areas that may require future works to improve vegetation quality along tributaries of the Bunyip River in the Bunyip State Park and nearby state forest.

Completed structural works on Lang Lang River

Works to stabilise the channel and create fish passage to improve fish migration.

Carried out works to repair the 15 Mile Slip

To improve drainage infrastructure in the Koo Wee Rup and Longwarry Flood Protection District.

Completed works to maintain woody weeds and other vegetation along the banks of the Bunyip Main Drain

The work improves flood protection and habitat, especially for the protected Southern Brown Bandicoot.

Installed a series of rock chutes and fish ladders along Cardinia Creek

The works helps the threatened species *Australian Grayling* and *Dwarf Galaxias* move through the creek.



Stormwater

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 the position of Water Sensitive Urban Design Officer to support the implementation of Council's Integrated Water Management Plan

Why

The position will assist Council to achieve sustainable water management benefits for stormwater quality and water sensitive urban design principles.

Living Rivers supported the feasibility and design of water quality improvements at Gembrook Park

The design will help address current erosion in the park, and provide amenity and opportunities for community education.

Living Rivers co-funded the design and construction of water sensitive urban design works in erosion areas

The project will address erosion and apply interventions that capture sediment and improve water quality.

Through the Clearwater program, we supported Council to take a whole-of-water 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.



Through our Living Rivers program, we worked with Council and contributed \$118,500 to projects that assist waterway health and create sustainable stormwater management solutions in your area.

Find out more at melbournewater.com.au/livingrivers

Environmental water

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

What we have done

Worked with rural landholders in the area to improve waterways

Why

Completed whole-farm water plans and implemented recommendations to improve stream flow from rural properties.

Worked with Bunyip and Tarago Environmental Advisory Group (includes Council, Landcare, landowners and others) to develop the Bunyip and Tarago Environmental Water Management Plan

This 10-year plan outlines the management of environmental water in the catchment by looking at values and threats, and seeking opportunities.

Monitoring and research

We regularly undertake extensive monitoring, investigations and research to help us better understand how we can improve local waterways.

What we have done	Why
Undertook monthly monitoring of water quality at 21 sites within your area. These tests measure: <ul style="list-style-type: none">• water temperature• dissolved oxygen• salinity (conductivity)• pH level• nutrients (nitrate, nitrite, ammonia, Kjeldahl nitrogen, soluble reactive phosphorus and total phosphorus)• indicators of faecal contamination (<i>E. coli</i>)• metals (arsenic, cadmium, chromium, copper, lead, nickel and zinc)	Our water quality monitoring program is designed to assess broad-scale, 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

313

referrals for land subdivisions reviewed

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

289

development applications reviewed

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

119

flood information requests reviewed

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

23

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

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

8

stormwater connection applications reviewed

To 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 aim to 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 with stakeholders to review plans and hydraulic reports to assist with Pakenham train line upgrades and plan for removing level crossings

Ensure proposed works will not impact the floodplain, path of over-land flow, assets and waterways, and that the project is feasible, safe and possible for community use.

Undertook drainage investigations in Koo Wee Rup and Longwarry Flood Protection District

Helps to guide flood improvement works and provide flood protection.

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

The involvement of community groups, volunteers, land managers and farmers supports our management of local waterways and regional drainage systems. If you'd like more information about funding opportunities, please call 131 722 or email river.health@melbournewater.com.au

Funding provided	Grant	For
\$79,842	Stream Frontage Management	Private land owners and managers for works that protect or enhance riverbanks, such as weed control, fencing and planting native trees.
\$105,387	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.
\$33,068	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

Cannibal Creek Landcare

Lang Lang Monitoring Group

Beacon Hills Growlers

Cannibal Creek Landcare

Friends of Cockatoo Creek

Community

What we did

Provided support to monitor water quality through the Water Quality Monitoring program.

Provided support to monitor water quality and the Frog Census, and continued vegetating the wetland to improve habitat values for local frog species, particularly for the endangered Growling Grass Frog.

Presented on the local frogs of Tynong and how the community can protect them, focusing on the threatened Southern Toadlet.

Provided support for Waterbug Census monitoring and resources.

Held a Waterbug Census training day in Bunyip to educate about macroinvertebrates and how to monitor them in local waterways.



Our Space Your Space is an app that helps you find land managed by Melbourne Water that you can use for community projects, 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.



Waterwatch is a citizen science program that encourages communities to monitor platypus, frogs, waterbugs and water quality in their local river or creeks. We empower our volunteers to collect data, protect the waterways environment and share their knowledge.

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