Waterwatch Program

Monitoring Plan

Monitoring Plan

Monitoring Group Name Darebin Water Striders
Waterway Name Darebin Creek

This Plan will be reviewed yearly and adapted and amended as necessary.

General details

Information about our Waterwatch group

Name of monitoring group	Darebin Water Striders
Name of group leader	Peter Grenfell
Waterway(s) to be monitored	Darebin Creek
Local Government Area	City of Darebin
Commencement date of monitoring	19/10/2005

Our Members

Group members will be registered on the Waterwatch database. Provide details of ALL group members who participate in monitoring.

Full name	Email	Phone / Mobile

Emergency Contact Details

Full name	Emergency Contact Name	Relationship	Phone / Mobile

Training Schedule

Your Waterwatch Coordinator will guide you through the first steps of monitoring water quality and assessing the environment.

Event	Proposed date	Complete
Waterwatch Training	NA	All new members will comp
First site visit: site selection and monitoring plan	NA	NA
Second site visit: first water testing and equipment delivery	NA	NA
Third site visit: second water testing	NA	NA
Annual field visit and shadow testing	NA	NA

Data Confidence Schedule

Waterwatch Network meetings are designed to guide you through maintaining your equipment and testing the accuracy of your data. You will also meet other Waterwatch participants.

Event	Proposed date	Complete
Waterwatch Melbourne Data Confidence Exercise: Shadow Testing In-Field		
Waterwatch Melbourne Data Confidence Exercise: Shadow Testing at Network Meeting		
Waterwatch Victoria Data Confidence Exercise: 'Mystery Sampling' Event	21/05/2026	

A schedule of monitoring is included at the end of this document.

Monitoring Plan and Objectives

A brief description of the history of this area

Adjacent to the site, the Darebin Parklands was a quarry for over 80 years from the 1890s onwards, before being used as a tip for about 12 years from the late 1960s. The Darebin Creek Management Committee (DCMC) have been managing the leachate via a series of leachate ponds since the 1980s. Leachate is caused by groundwater passing through the old tip site.
Further upstream, the creek has been affected by industrial waste dumping since at least the 1960s. More recently has seen runoff from roads and other increasing impermeable surfaces leading to increases in nutrients and turbidity. One-off events have included surfactant dumping, pesticides, high turbidity from burst ageing stormwater pipes, and the effects of litter (a platypus found dead in Preston in 2019 bound up in looped litter).
Since the 1980s DCMC, councils and the community have planted thousands of indigenous plants along the creek, aiming to increase habitat, slow water entering the creek, and replace species lost since white colonisation. There have also been a number of wetlands built to slow stormwater and catch pollutants, though many more are needed to make a difference. The Wurundjeri Narrap team has started to reintroduce cultural burning regimes in a number of upstream creek side sites.

The following land uses are present within the catchment

Darebin Creek flows along a 50 km course from its headwaters in farmland north of Woodstock, through a number of highly urbanised suburbs until it reaches the confluence with the Birrarung (Yarra River). Three other creeks flow into the Darebin upstream of this site - the Findon, Hendersons and Donaldsons Creeks. It often sees polluted water coming through the stormwater system.

Land uses include: agriculture in the upper catchment; residential throughout including newer Greenfield developments replacing farmland in the upper catchment; light to heavy industrial in the middle stretches most notably Heidelberg West and Preston; and many large sporting fields including a golf club adjacent to the creek in Bundoora.

The possible concerns for water quality, habitat and biodiversity are

Flash flooding due to increased impermeable surfaces throughout the catchment. Flash flooding events, also a result of climate change, are typically shorter and higher water levels than historical floods.
Flash flooding can lead to bank erosion, bank slumping and an increase in turbidity.
This can effect aquatic macroinvertebrates, which are flushed downstream during heavy rainfall events. It can affect creek bank burrowing fauna such as platypus and rakali, who can drown when floodwaters rise faster than they are expecting.
Creek banks and instream can be scoured during flash flooding events, losing much bank and instream vegetation that provides habitat and helps holds banks together. Logs and snags can also be washed away, causing more loss of habitat.

Increased roads and the effects of urban sprawl and urban intensification lead to more nutrients and pollutants washing off roads, concrete and roofs from across the catchment. This in addition to fertilisers washed into the creek can cause blue green algal outbreaks and weed infestations, especially during summer when water levels are low.

Monitoring Plan

The following positive changes in the area may be measured through Waterwatch monitoring

Monitoring for waterbugs that are local but haven't been seen in recent years. A recent example of this is stonefly larvae.

Look for changes in turbidity and other parameters that are indicators of poor stream health, including pH, phosphate and ammonium.

Reflecting on the above questions, the group wants to know about

Is turbidity in the creek becoming worse, and if so, is it due to upper catchment construction or ageing stormwater and sewerage system infrastructure?
Is there any evidence that conductivity in the creek is improving due to extensive streamside plantings and tree plantings across the catchment, slowing down water table rise?
Are nutrients and pollutants washing into the creek via stormwater continuing to rise?
Is macroinvertebrate diversity and abundance improving or declining? A decline would have a detrimental effect on freshwater biodiversity, the most obvious of which is for platypus.

To tell us the answers to these questions we will measure

Temperature
pH
Dissolved Oxygen
Phosphorus – (Total reactive phosphorus)
Turbidity
Electrical Conductivity
Ammonia
Macroinvertebrates - at lease twice per year in optimum times, (spring and autumn) in selected habitats on the creek such as pools, riffles and bends.

Monitoring Plan

Our Sites (Waterwatch group to receive a copy)

Monitoring at the one or two sites specified below will help us to answer our questions about the health of the area (after the first year of testing additional sites may be added).

Site code (Waterwatch Coordinator to provide)	ME_YDA558	
Site description	Darebin Parklands Dog Ford	
Suburb/town	Alphington	
Melways reference	Melways 31 D10	
Local Government area	City of Darebin (creek borders with City of Banyule)	
Catchment	Yarra	
Management unit	City of Darebin	
Sub-management unit	Darebin Creek Management Committee	
Type of waterway	Creek	
Type of land use	Public open space.	
Access to site	Walking or DCMC staff member driving DCMC vehicle	
Risks to be aware of at this monitoring site	Snakes, spider bites. Extreme weather. Relative isolation. Trips and falls.	
GPS reading	-37.775710, 145.035380	

Monitoring Plan

Monitoring Parameters (Waterwatch group to receive a copy)

Please tick which parameters you will monitor, including the frequency of monitoring.

Parameters	Monitoring Frequency			
	Monthly	Seasonally	Spring and Autumn	Annually (date)
Temperature	☑	☐	☐	☐
Dissolved Oxygen	☑	☐	☐	☐
Turbidity	☑	☐	☐	☐
pH	☑	☐	☐	☐
Electrical	☑	☐	☐	☐
Conductivity (Salts)	☑	☐	☐	☐
Phosphate	☑	☐	☐	☐
Ammonium	☑	☐	☐	☐
Macro-invertebrates	☑	☐	☑	☐
Habitat assessment	☑	☐	☐	☑
Photo point monitoring	☑	☐	☐	☑

Data Management

We plan to keep a copy of all data collected in the following location

All data sheets and relevant photos are entered onto Waterwatch Portal.

Data we collect will be forwarded to the Waterwatch Coordinator in the following way

Via the Victorian Waterwatch portal

We will share the data with our community in the following ways:

Waterwatch Portal, water quality site reports, waterbug reports, newsletter articles, and social media posts.

Monitoring Plan

Our Data Collection Schedule (Waterwatch group to receive a copy)

Include in the calendar below the planned dates of water quality data collection, habitat survey, macro-invertebrate surveys and Waterwatch Network meetings.

January 15 Jan water quality data collection	**February** 19 Feb water quality data collection	**March** 19 March water quality data collection and macroinvertebrate survey
April 16 April water quality data collection	**May** 21 May water quality data collection 21 May QAQC	**June** 18 June water quality data collection
July 16 July water quality data collection	**August** 20 August water quality data collection	**September** 17 Sept water quality data collection
October 15 Oct water quality data collection	**November** 19 Nov water quality data collection and macroinvertebrate survey	**December** 17 Dec water quality data collection and habitat survey

How to report pollution incidents

If you notice pollution incidents in the waterway (e.g. coloured water, sewage, bad smell, etc), please call:

EPA Pollution Watch Line

Melbourne metropolitan area – 9695 2777 (24 hours)

Outside metropolitan Melbourne – 1800 444 004 (24 hours)

Please also notify your Waterwatch Coordinator of the incident.