MCMC WaterWatch Citizen Science Water Quality Monitoring Plan for

Reservoir Frogs WaterWatch, Edwardes Lake & Edgars Creek group

for *Water monitoring at Edwardes Lake, Reservoir.*
Revised 12/03/2025.
Created 2023.

1. Purpose and objectives

The WaterWatch water quality (WQ) monitoring conducted by the Reservoir Frogs WaterWatch, Friends of Edwardes Lake & Edgars Creek group (herein referred to as the Reservoir Frogs WW group) was developed in partnership with Darebin City Council and the Edgars Creek & Edwardes Lake Taskforce. This monitoring aligns with WaterWatch water quality methodology & Data Confidence Plan and with Darebin City Council's *Watershed-Towards a Water Sensitive Darebin Strategy and Implementation Plan 2015-2025.*

The objectives of the monitoring include:

- Having the evidence to advocate for better controls to improve water quality (WQ), riparian habitat and biodiversity.
- Educate the local community including the Friends of Edwardes Lake and the Edgars Creek & Edwardes Lake Taskforce on the current WQ and support recommendations for improvement
- Link WQ data summaries to the Friends of Edwardes Lake website- these are also available on the Merri Creek Management Committee website for public consumption
- Report water pollution events to the EPA and follow up
- Report WQ data to be added to the annual report of the Edgars Creek and Edwardes Lake Taskforce
- WQ data will inform indigenous revegetation priorities

2. Water monitoring with the Aquaread AP-2000 Water Monitoring Probe

The Reservoir Frogs WW group meet monthly to undertake water monitoring of the Edgars Creek and Edwardes Lake. Darebin council has provided the Aquaread AP-2000 Water monitoring probe (and consumables) for water testing, the benefits of the group having access to use this monitoring probe will allow for greater areas to monitor as well as upskilling and training volunteers and citizen scientists within the Reservoir Frogs WW group.

There is a separate instruction manual for the Aquaread AP-2000 Water Monitoring Probe. All users of the Probe must read the instruction manual before using the probe.

3. Custodianship of use of Aquaread AP-2000 Water Monitoring Probe

Darebin council has purchased a water monitoring probe to undertake water monitoring of the Edgars Creek and Edwardes Lake. The Aquaread AP-2000 Water Monitoring Probe is a sensitive unit and care needs to be taken when using it. The use of the probe be undertaken by trained WaterWatch volunteers and the WaterWatch coordinator. Darebin council staff will require access to the monitoring probe from time to time. This will be coordinated between the staff and the volunteers. The probe will continue to be the property of Darebin council. The probe when not stored with the Darebin council staff will be kept at the Friends of Edwardes Lake president's house and insurance of this unit will be the responsibility of the Friends of Edwardes Lake.

MCMC WaterWatch equipment currently held by the group includes: sample pole, kit (box), ammonium and phosphate visocolour (colour comparators), turbidity tube, safety manual, snake bite kit.

This equipment to be returned to the WW Coordinator if the Reservoir Frogs WW group ceases to monitor.

4. Water monitoring points

Water monitoring data spreadsheet

Sites on map with site codes on the WaterWatch data portal : www.vic.waterwatch.org.au

Parameters monitored

P1 ME_YED074 Dissolved Oxygen (D.O) Air and water temperature, turbidity (NTU), pH and salinity (EC)

P2 ME_YED070 D.O, Air and water temperature, turbidity, pH, EC, reactive phosphate and ammonium

P3 ME_YED068 Dissolved Oxygen (D.O) Air and water temperature, turbidity, pH and salinity (EC)

P4 ME_YED066 Dissolved Oxygen (D.O) Air and water temperature, turbidity, pH and salinity (EC)

P5 ME_YED064 Dissolved Oxygen (D.O) Air and water temperature, turbidity, pH and salinity (EC)

P6 ME_YED062 Dissolved Oxygen (D.O) Air and water temperature, turbidity, pH and salinity (EC)

P7 ME_YED061 Dissolved Oxygen (D.O) Air and water temperature, turbidity, pH and salinity (EC)

P8 ME_YED058 Dissolved Oxygen (D.O) Air and water temperature, turbidity, pH and salinity (EC)

5. Frequency and data storage

- The Reservoir Frogs WW group will conduct WQ sampling and monitoring once a month at all 8 sites. Any extra monitoring will be completed by trained Darebin council staff

- All data will be entered onto the WaterWatch Victoria data portal for all to access: ***https://www.vic.waterwatch.org.au/water_data_portal.php***

- All data will be Quality Controlled by the WaterWatch Coordinator. Reservoir Frog WW group members will complete annual WaterWatch data confidence (QAQC) training.

- 1 x Annual waterbug survey (with local community invited to participate) at site ME_YED070 completed to ALT level by Trevor Hausler and added to the National Waterbug Blitz portal https://www.waterbugblitz.org.au/explore.php and a report summary added to the MCMC website YED070 https://www.mcmc.org.au/environmental-education/waterwatch/waterwatch-water-quality-summaries. This survey will be delivered by MCMC WaterWatch.

- This data adds to the other biological monitoring conducted including quarterly bird surveys with Friends of Merri Creek & frog data collected by local community

- Where funding is available, MCMC to run an annual frog survey with Friends of Edwardes Lake and community and ensuring a data set is created to add to the MW frog census app (whether frogs are heard or not).

6. Overview and Background of WaterWatch

Reservoir Frogs WaterWatch volunteers have monitored water quality on the Edgars Creek in Reservoir since 2006. Most of this time the water testing and data were recorded at one location, on the Creek, upstream of Edwardes Lake, and next to the Reservoir Scout Hall on Leamington Street. Site P2: ME_YED070.

In 2020, during the Melbourne COVID-19 lockdowns, there were times when people could only leave their homes for one hour a day. Many Reservoir residents made the most of this opportunity, when shops were closed and group activities cancelled, to go to their local parks to get fresh air and exercise. At the same time the Friends of Edwardes Lake (FoEL) volunteer group became active on Facebook, informing people about wildlife sightings, promoting responsible pet ownership (e.g. dogs on leads) and encouraging people to pick up litter during their daily walks.

The leaders of the FoEL and the Reservoir Frogs WW groups kept bumping into each other at the Lake, and realising their common goals, started working together. FoEL started attending the monthly WaterWatch monitoring sessions near the Reservoir Scout Hall and promoting them on their Facebook page and website.

The relationship further developed when both groups identified a significant water pollution event in 2020 and reported it to the EPA, Melbourne Water and Darebin City Council. The cause was identified and remedied, however, following a number of algal blooms on the Lake and increased community concern about water quality, in 2021 Darebin City Council set up the Edgars Creek & Edwardes Lake Task Force.

After a few meetings the Task Force identified that it needed more data in order to measure what was happening along the waterway. In 2023 Darebin City Council purchased an electronic water testing meter, an Aquaread 2000, for Reservoir Frogs WaterWatch and FoEL volunteers to take monthly measurements at the eight locations noted above.

WaterWatch is a community education and engagement program connecting local communities with river health and sustainable water management issues. In Darebin, the program is funded by Council and has been operating successfully for over fourteen years.

The Darebin Creek and Merri Creek Management Committee WaterWatch program depends on financial support from Darebin City Council to enable the delivery of high-quality waterways education and engagement activities on the Darebin, Edgars and Merri Creeks within the Darebin municipality. Through WaterWatch, the community is supported and encouraged to become actively involved in the monitoring, conservation, and protection of local waterways. Darebin council commits to this program enabling MCMC (Merri Creek Management Committee) to deliver activities and events

on behalf of Darebin council, via the WaterWatch program, in line with Darebin City Council's Watershed – Towards a Water Sensitive Darebin Strategy and Implementation Plan 2015-2025.

A network of *WaterWatch* Coordinators supports local communities across the Port Philip and Westernport catchments. There is one *WaterWatch* Coordinator servicing the Darebin municipality, who:

- Works with Darebin City Council to plan, implement and deliver an extensive range of waterways education experiences to the community.
- Works in partnership with Darebin City Council to promote the conservation and protection of local waterways.
- Raises awareness and understanding of local waterways issues.
- Provides water quality monitoring training to local *WaterWatch* volunteers.
- Facilitates partnership opportunities between all levels of government, private business and the community.
- Covers the Darebin, Merri and Edgars Creeks within the City of Darebin municipal boundaries.

7. Servicing and maintenance

As per the Aquaread ap-2000 water monitoring probe manual, the unit needs to be serviced annually. Costs will be covered by Darebin council. Regular maintenance and cleaning need to occur after each use (refer to instruction manual)

8. WaterWatch Aims

3.1 Increase community awareness and understanding of the importance of river health issues.

3.2 Increase community participation and involvement in river health activities.

3.3 Foster greater community engagement and ownership of local waterways.

3.4 Involve communities in the monitoring of their local waterways.

3.5 Establish partnerships and develop collaborative projects to conserve and protect waterway health.

3.6 Use information gathered by local *Waterwatch* groups to identify solutions to improve the health of local waterways.

3.7 Encourage local communities to become actively involved in the implementation of projects to improve the health of local waterways.

9. Contact Details

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