2019 Waterwatch Water Quality Site Summary Report

Site name & Description: ME_YMR119 Merri Creek at Northcote Golf Club, Brunswick East Monitors: Merri Creek at Northcote/ Brunswick East WW Group; Toni, Evelyn, Helen, Fionnuala and Egi.

Site Introduction

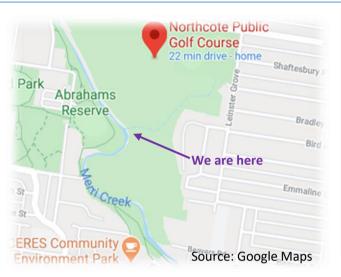
The Merri Creek flows 70km south from Wallan, through the northern suburbs of Melbourne before joining the Yarra River at Dights Falls. This section of Merri Creek is highly urbanised; high traffic area for walkers, cyclists, golfers and dog walkers. Our entry point for sampling is also used regularly by pedestrians and their dogs, as the dogs like to swim in this part of the creek. Directly opposite our sample site, is the Northcote Golf Course green.

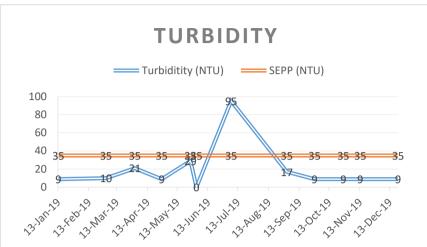
Objectives

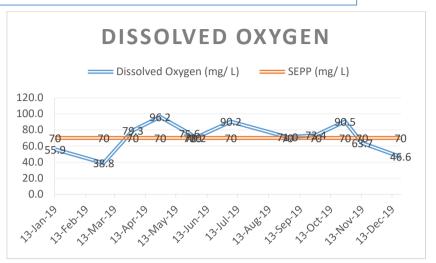
- To track, and document, the water quality of Merri Creek in Brunswick East
- Closely monitor water quality due to proximity of the Northcote Golf Course
- Identify potential pollution source point(s)
- Educate and involve the local community
- To report any observations (colour changes, odours) or outliers (above average readings) to the EPA for further investigation

Monthly Parameters (& units of measurement)

- Air & water temperature (°C)
- Turbidity (NTU)
- n⊢
- Electrical conductivity/salinity (μS/ cm)
- Dissolved oxygen (% sat)
- Reactive phosphate (mg/L)
- Ammonium (mg/L)



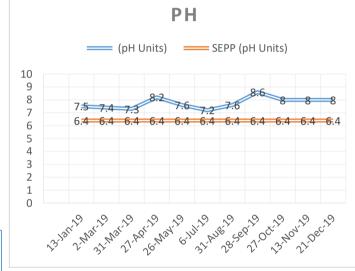


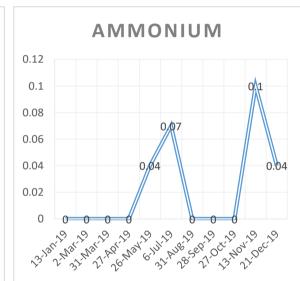






To look at further water quality data for this site (using site code: ME_YMR119) visit the Waterwatch online data portal.





Date	N mg/L N	NH4+ D.	0.%	D.O mg/L	EC μS/cm	pH pH Unit	rP mg	/LP Air ° C	Water ° C	Turb NTU
13-01-2019	0		6	5	1060	7.5	0.07	21	12	9
02-03-2019	0		4	4	1290	7.4	0.07	29	14	10
31-03-2019	0		8	3	600	7.3	0.1	14	14.9	21
27-04-2019	0		1	10	1450	8.2	0.05	14	13.4	9
26-05-2019	0.04		8	3	590	7.6	0.1	12.5	12.7	29
06-07-2019	0.04		8	3	800	7.2	0.1	11	9.5	95
27-07-2019	0.02		1	10	550	8.6	0.1	12.5	10.7	12
31-08-2019	0		8	3	730	7.6	0.1	13	10	17
28-09-2019	0		8	3	760	8.6	0.07	11	11.4	9
27-10-2019	0		g	9	980	8	0.2	14.2	15.5	9
23-11-2019	0.07		6	5	1080	8	0.2	17	18.1	9
21-12-2019	0.04		4	4	1040	8	0.25	19	22.8	9

Ammonium levels were above 0.0 on 5 occasions in 2019. High ammonium can be toxic to aquatic organisms.

Dissolved oxygen saw an increase in levels in the middle of the year. In summer the levels did reduce, which is likely due to warmer weather and lower flows, a normal occurrence. Too much oxygen in the water can affect the blood flow of fish living in the creek; too little oxygen in the water can kill fish within hours.

Electrical conductivity tests the water's salinity. Fresh-water plants and animals find it difficult to survive in water with too much salt. EC levels were above 1000μs/cm on 5 occasions.

pH tests how acidic or basic the water is. Creek water should be fairly neutral (6.8-8). Although there were a couple of higher (over 8) readings, generally pH in this section of Merri Creek were fairly consistent and within a healthy range, when sampled in 2019.

Phosphate is a chemical in water that can lead to excessive growth of aquatic plants or algal blooms, starving the waterways of oxygen. Phosphate fluctuated throughout the year.

Turbidity was unusually high in July (see middle picture). Heavy rain, particularly upstream, may have contributed to the spike in this reading. There was no data recorded in June 2019.