Report compiled: 12/4/23

MERRI CREEK MANAGEMENT COMMITTEE

Incorporated Association
No A0018144A

2 Lee Street
East Brunswick Vic 3057
Ph: (03) 9380 8199
www.mcmc.org.au
admin@mcmc.org.au

ABN 13025599242

Waterbug Report for the community census sampling results on Merri Creek at Connolly Ave. Coburg

Waterwatch Site code and name:

ME_YMR141. Merri Creek, near footbridge 57 Connolly Ave, Coburg (opp De Chene Reserve)

https://www.vic.waterwatch.org.au/site_visit/2333824
Date sampled: 02/04/23 at 10.00am
Surveyors: Trevor Hausler and Julia Cirillo (MCMC staff) with 7 community volunteers

Description
The weather was sunny and the Merri Creek appeared slightly turbid with a medium to high flow. There had been approx. 20mm of rain over the preceding 5 days. We carried out a habitat survey first to determine the variety of habitats to sample. The site was dominated by an extensive riffle with a pool upstream that had some edge vegetation trailing into the water column. Many of the habitats surveyed previously were not available due to the high water level including much of the riffle zone. There were small patches of riffle that could be safely accessed by samplers and some of the edge vegetation was also safely sampled (refer to photo above).

The sampling revealed a moderate range of 18 taxa, though these tended to be dominated by pollution tolerant species. The weighted ALT SIGNAL score was 1.97. This indicates at this section of the Merri Creek it is negatively impacted by stormwater pollution. This is unfortunately usual to be expected in the lower, urban reaches of the Merri Creek, in particular after such a large rain event in the preceding days. The SIGNAL score (and the number of taxa) was in the moderate range of scores recorded for the lower Merri Creek in previous recent studies conducted. This result can be explained by the following:

1) There had been little rain during February (10mm) and March (16mm) prior to the 20 mm rain over the preceding 5 days. This would have left the creek in relatively good condition and minimized the runoff from the latest event. This section of the creek would also benefit by having the Coburg Lake not far upstream of the site. This containment would trap much of the sediment and pollutants coming down from the upstream reaches particularly in periods of low to medium flow. This site is downstream of the confluence with Edgars Creek, but the lower section of Edgars Creek is protected, in the similar way, by the containment at Edwardes Lake, Reservoir.

2) Many of the habitats previously sampled were not available due to the higher flow.

Please refer to Table 1 for the full results.

Table 1. List of Taxa and SIGNAL scores for ME_YMR141 on 02/04/2023.

Name	Common Name	Quantity	SIGNAL 2 Score	Photo
Class Oligochaeta	Aquatic worms	12	2	
Phylum Mollusca				
Family Hyriidae	Freshwater mussels	7	5	
Class Crustacea				
Family Atyidae	Glass Shrimps	4	3	
Class Amphipoda	Sideswimmers, scuds	2	3	
Class Insecta	**Insects**			
Order Coleoptera	**Beetles**			
Family Hydrophilidae	Water scavenger beetles	4	2	
Family Psephenidae Genus *Sclerocyphon*	Water pennies	4	6	
Order Diptera	**True Flies**			
Family Chironomidae	Bloodworms	20	4	

Family Simulidae	Black Fly Larvae	1	5	
Order Hemiptera	**True Bugs**			
Family Corixidae	Waterboatmen			
Genus *Micronecta*	Little brindle boatman	20	3	
Genus *Agraptocorixa*	Static boatmen	2	1	
Order Odonata	**Dragonflies and Damselflies**			
Family Coenagrionidae	Damselflies	10	1	
Suborder Epiproctophora (various families)	Spider Mudeye	3	4	
Family Telephelebiidae	Telephlebs	1	9	
Order Trichoptera	**Caddies Flies**			
Family Hydropsychidae	Net-spinning Caddis	10	6	
Family Ecnomidae	Bandit Caddies	2	6	
Family Leptoceridae				
Genus *Notalina*	Headbanger Caddis	2	6	
Genus *Triplectides*	Stick Caddis	4	3	

Unidentified Leptoceridae (various genera)		1	6	
	TOTALS	109		
			Weighted/ALT SIGNAL2 score	1.97*
			Meaning	Severe Pollution

***Explanatory notes on SIGNAL Score (from the Waterwatch Victoria website)**

Each aquatic macro invertebrate is given an ALT (Agreed Level Taxonomy) SIGNAL2 score depending on their sensitivity to pollutants. SIGNAL stands for Stream Invertebrate Grade Number - Average Level. In 1994, a new version of this method, known as SIGNAL2, was developed and is available on the Federal Government website. By knowing the SIGNAL2 grade for every family, the SIGNAL2 score of a site, and therefore its health, can be assessed. For example a site that has abundant diversity and many sensitive aquatic invertebrates will have a high ALT SIGNAL2 score.

To calculate an ALT SIGNAL2 score for a site:

Step 1. Collect, sort and identify the creatures found at the site

Step 2. Calculate the sum of the individual ALT SIGNAL2 grades

Step 3. Divide the sum of the individual ALT SIGNAL2 grades by the number of different invertebrates collected to calculate the ALT SIGNAL2 score.

A guide for interpreting water health according to the SIGNAL score of a site is given in this table

SIGNAL score ratings

Higher than 6	Healthy habitat
Between 5 and 6	Mild pollution
Between 4 and 5	Moderate pollution
Less than 4	Severe pollution

These ratings were originally developed for very “normal” freshwater streams and rivers, and do not work as well for wetlands or lakes.

This report has been added to the Waterwatch database.

Yours sincerely,

Trevor Hausler
Waterwatch Officer
Julia Cirillo
Coordinator | Waterwatch Program & Rapid Response to Litter Project
Merri Creek Management Committee
juliacirillo@mcmc.org.au
0493 591 724