



Friends of Scotchmans Creek and Valley Reserve Inc



Inc No A0037872K

Waterwatch Report 25th March 2018

Scope

- Aquatic invertebrates sampling at sites 2 & 3.
- Basic chemistry tests at all sites.
- Dissolved Oxygen and Phosphate tests at sites 2 & 3.
- Ammonium tests at all sites.
- Flow measurement and/or observations at all sites.

Weather Conditions

During testing: Overcast (sunny later), mild.

Previous 24 hours: A cool change with 15 mm rainfall.

Previous week: Mild, almost no rain.

Water Quality Results

	YSC010 Site 1A Fiander arm	YSC012 Site 1B Crosby arm	YSC020 Site 2 Regent St	YVA100 Site 3 Valley Creek
Air Temp C	22	22	20.5	21
Water Temp C	20	21	18.5	19
pH	6.7 E	6.6 E	6.4 E	6.5 E
Oxygen Conc. mg/l			3.6 D	4.1 P
Conductivity E.C.	330 F	150 G	190 G	470 F
Turbidity F.T.U	40 D	15 G	43 D	37 D
Phosphorus, soluble ppm			0.049 F	0.020 G
Ammonium NH ₄ ⁺ ppm	0.00 E	0.00 E	0.00 E	0.00 E
Stream Flow (volume) l/s	7.4	6.3	153.1	0.3

(E = Excellent, G = Good, F = Fair, P = Poor, D = Degraded)

Macro Invertebrates Results

	YSC020 Site 2 Regent St	YVA100 Site 3 Valley Creek
Very Sensitive		
<i>Caddisfly larvae</i>	3	1
Sensitive		
<i>Damselfly larvae</i>	7	0
<i>Dragonfly larvae</i>	4	4
<i>Freshwater Yabbies/Crayfish</i>	1	0
Tolerant		
<i>True Bugs (Backswimmers, Water Scorpions, Water Boatmen, Lesser Water Striders, Water Striders/Treaders)</i>	1	1
<i>Freshwater Sandhoppers (Amphiopods)</i>	0	1
<i>Leeches</i>	3	2
<i>Snails (freshwater)</i>	1	20
<i>Flatworms</i>	20	10
Very Tolerant		
<i>Fly larvae</i>	50	6
<i>Freshwater segmented worms</i>	20	30
<i>Blood worms</i>	0	5
Abundance Category	3	2
Total Bug Score	40	34
Stream Condition	Good	Poor

Comments:

- A cool change brought 15 mm rainfall the afternoon before this site visit, after 7 dry weeks.
 - The Glen Waverley Drain (site ME_YSC012, aka Site 1B, Crosby arm) flowed continuously at about 0.5 ML/day throughout the dry period, while the other tributaries slowed to a trickle or less.
 - The downstream site at Regent St (ME_YSC020, site 2) showed signs of high flow over the banks, but had reduced by the time of our visit. The flow was still much higher than the upstream tributaries, because the wetlands were still draining.
 - We measure streamflow rather approximately, tending to overestimate. In this case our measurement at site 2 is 3 times the flow recorded by the Glen Waverley gauge in the retarding dam just upstream (from www.melbournewater.com.au/water/rainfall-and-river-levels#/reader/229639A).

- Valley Ck was flowing quite slowly.
- Scotchmans Ck upstream (site ME_YSC010, site 1a) and downstream at Regent St (ME_YSC020, site 2) was stained a dilute black, which shows as Degraded turbidity measurements.
- Oxygen levels (measured at the downstream sites) were low, rated Degraded or Poor.
- The other water quality measurements were Fair to Excellent.
- The invertebrates sample from Scotchmans Ck (at Regent St) was not as abundant as it was in January, but it did include a 7 cm Yabby and was rated Good. The sample from Valley Ck was rated Poor.

FGB 26/3/2018