



Friends of Scotchmans Creek and Valley Reserve Inc



Inc No A0037872K

Waterwatch Report 21 January 2018

Scope

- Aquatic invertebrate sampling at sites 2 and 3 (the sites at Regent St)
- Basic chemistry tests at all sites.
- Dissolved Oxygen and Phosphate tests at sites 2 and 3 (the sites at Regent St)
- Ammonium tests at all sites.
- Flow measurement and/or observations at all sites.

Weather Conditions

During testing: Warm, sunny and humid.

Previous 24 hours: Warm and sunny.

Previous week: Warm to hot, 1 mm rain 1 week before this site visit.

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	27	27	26	26
Water Temp C	23	22	22	21
pH	6.9 E	6.5 E	6.6 E	6.7 E
Oxygen Conc. mg/l			2.8 D	2.1 D
Conductivity E.C.	490 F	150 G	330 F	1000 D
Turbidity F.T.U	16 G	9 E	11 E	35 D
Phosphorus, soluble ppm			0.108 D	0.085 P
Ammonium NH ₄ ⁺ ppm	0.03 E	1.50 D	0.35 P	0.90 D
Stream Flow (volume) l/s	1.1	14.7	9.5	0.0

(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>	0	1
Sensitive		
<i>Damselfly larvae</i>	50	8
<i>Dragonfly larvae</i>	3	2
<i>Freshwater mussel</i>	10	0
<i>Aquatic caterpillars (Lepidoptera)</i>	1	0
<i>Freshwater Yabbies/Crayfish</i>	1	8
Tolerant		
<i>True Bugs (Backswimmers, Water Scorpions, Water Boatmen, Lesser Water Striders, Water Striders/Treaders)</i>	4	2
<i>Leeches</i>	50	0
<i>Snails (freshwater)</i>	50	25
<i>Flatworms</i>	100	10
Very Tolerant		
<i>Mosquito larvae</i>	0	2
<i>Midge larvae</i>	1	0
<i>Freshwater segmented worms</i>	10	10
<i>Blood worms</i>	10	50
Abundance Category	4	3
Total Bug Score	44	38
Stream Condition	Very Good	Good

Comments:

The water chemistry and flows of these creeks are often only fair in summer.

- However the Glen Waverley Main Drain (site 1b) was flowing much more than the adjacent Scotchmans Ck (site 1a), more than expected after the preceding dry week, and clear-looking.
 - ❖ The chemistry revealed ammonium at 4 times the Degraded level.
- The ammonium level at the downstream site (site 2 at Regent St) was also high, rated Poor.
- Valley Ck was a tiny trickle between pools. All the chemical indicators (except pH) were Poor or Degraded.
- Both downstream sites had low oxygen levels.

Despite the poor water chemistry ratings, the invertebrates samples at both sites at Regent St have achieved spectacularly good ratings.

- There was plenty of vegetation in Scotchmans Ck (site 2), especially in the wide shallow areas, and the sample contained an abundance of creatures, also with a good variety covering the entire range of tolerances to water quality. The rating was Very Good, possibly for the first time ever. There were also many large tadpoles and a very large number of gambusia (the introduced pest “mosquito fish”).
- Valley Ck (site 3) was scarcely flowing but the pools had enough edge vegetation for sampling (in places the creek is too small to get the net in!). The sample had good variety but low abundance of creatures, resulting in a Good rating.

FGB 21 Jan 2018