



Friends of Scotchmans Creek and Valley Reserve Inc



Inc No A0037872K

Waterwatch Report 23 May 2021, rev 1

Scope

- Aquatic invertebrate sampling at sites 2 and 3 (our downstream sites)
- Basic chemistry tests at all sites.
- Dissolved Oxygen tests at sites 2 and 3
- Flow measurement and/or observations at all sites.

Weather Conditions

Previous week: Cold start, 3 mm rain, sunny for the previous few days.

Previous 24 hours: Sunny

During testing: Sunny

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	12.5	12.5	10.5	10.5
Water Temp C	12	11.5	10	10
pH	7.2 G	6.8 E	6.8 E	6.7 E
Oxygen Conc. mg/l			6.0 G	5.4 F
Conductivity E.C.	510 P	210 G	580 P	220 G
Turbidity F.T.U	5 E	9 E	12 E	18 F
Phosphorus, soluble ppm				
Ammonium NH ₄ ⁺ ppm				
Stream Flow estimate l/s	1.2	5.8	19.0	0.03

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

Macro Invertebrates Results

		YSC020 Site 2 Regent St	YVA100 Site 3 Valley Creek
	Bug score	Number found	Number found
Sensitive			
<i>Damselfly larvae</i>	6	8	34
<i>Dragonfly larvae</i>	6	1	1
<i>Freshwater mussel</i>	5	0	8
<i>Freshwater Slaters</i>	5	0	2
Tolerant			
<i>Nematodes</i>	3	0	1
<i>Leeches</i>	3	3	1
<i>Snails (freshwater)</i>	3	0	100
<i>Flatworms</i>	3	20	40
Very Tolerant			
<i>Fly larvae</i>	2	6	1
<i>Freshwater segmented worms</i>	1	1	20
<i>Blood worms</i>	1	2	2
Total Number Found			
		41	210
Total Bug Score			
		22	38
Stream Condition		Poor	Very Good

Comments:

Valley Ck was scarcely flowing, but has some small shaded pools. At the other sites the creeks were flowing well, and looking exceptionally clear. In-stream vegetation in Scotchmans Ck at Regent St (site 2) is becoming dense, filtering out fine sediment (which clings to it).

Our chemical tests were limited in scope by supply problems with some reagents. We did measure...

- Good to Fair oxygen at the tested sites (the downstream sites).
- Good to Excellent pH at all sites.
- High conductivity at sites 1a and 2 (Scotchmans Ck at our upstream and downstream sites).
- Fair turbidity in Valley Ck, Excellent at the other sites.

The waterbug survey ratings from the two downstream sites were remarkably different:-

- The sample from Scotchmans Ck was disappointing, with only 41 creatures. It rated Poor.
- The sample from Valley Ck was better, with an unusually high number of damselfly nymphs found. It rated Very Good.