



Friends of Scotchmans Creek and Valley Reserve Inc



Inc No A0037872K

Waterwatch Report 24 Nov. 2019 rev 1

Scope

- Aquatic invertebrate sampling at sites 1a, 1b.
- Basic chemistry tests at all sites.
- Dissolved Oxygen and Phosphate tests at sites 1a, 1b.
- Ammonium tests at all sites.
- Flow measurement and/or observations at all sites.

Weather Conditions

Previous week: One hot day, otherwise sunny and mild, no rain.

Previous 24 hours: Sunny and mild, no rain.

During testing: Sunny and mild, 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	17	17	17	17
Water Temp C	14	15	16	14
pH	7.2 G	6.7 E	7.2 G	6.7 E
Oxygen Conc. mg/l	5.1 F	4.2 P		
Conductivity E.C.	690 P	210 G	540 P	560 P
Turbidity F.T.U	18 F	16 G	15 G	23 P
Phosphorus, soluble ppm	0.059 P	0.179 D		
Ammonium NH ₄ ⁺ ppm	0.10 F	0.04 E	0.10 F	0.00 E
Stream Flow (volume) l/s	3.0	20.4	15.3	

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

Macro Invertebrates Results

		YSC010 Site 1A Fiander arm	YSC012 Site 1B Crosby arm
	Bug score	Number found	Number found
Sensitive			
<i>Damselfly larvae</i>	6	1	2
<i>Dragonfly larvae</i>	6	0	2
<i>Freshwater mussel</i>	5	1	0
Tolerant			
<i>Snails (freshwater)</i>	3	30	50
<i>Flatworms</i>	3	20	10
Very Tolerant			
<i>Fly larvae</i>	2	1	0
<i>Freshwater segmented worms</i>	1	1	2
<i>Blood worms</i>	1	100	50
Total Number Found		154	116
Total Bug Score		21	20
Stream Condition		Poor	Poor

Comments:

We saw typical summer season degradations in the chemistry, but not many waterbugs.

- Oxygen levels (measured at the upstream sites) were low, as often happens at low flows in these creeks, despite an increase in the aquatic vegetation in the Crosby arm (site 1b).
- Conductivity was high (rated Poor) in Scotchmans Creek (sites 1a and 2) despite moderate water flows, and also Poor in Valley Creek which was flowing very slowly.
- Phosphorus was high (rated Poor or Degraded) in both the upstream branches.
- pH and ammonium levels were good.
- The waterbug samples contained very few sensitive creatures but an abundance of bloodworms (very tolerant of poor water), a few fish (probably gambusia) and several small tadpoles, and we heard a few pobblebonk frogs in the Crosby arm (site 1b). The ratings were Poor.

FGB 25/11/19

rev 1: Changed site 1a flow measurement to 3.0 L/sec