



Friends of Scotchmans Creek and Valley Reserve Inc



Inc No A0037872K

Waterwatch Report 20th March 2016

Scope

- Aquatic invertebrate 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

Previous week: Initially hot, then a cold change and 33 mm rain.

Previous 24 hours: Overcast, 1 mm rain.

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	15	15	12.5	13
Water Temp C	15	16	15	14.5
pH	7.0 E	6.9 E	6.6 E	6.7 E
Oxygen Conc. mg/l			6.9 G	5.5 F
Conductivity E.C.	280 F	530 P	160 G	220 G
Turbidity F.T.U	24 P	10 E	24 P	23 P
Phosphorus, soluble ppm			0.007 E	0.023 G
Ammonium NH ₄ ⁺ ppm	0.03 E	0.07 G	0.00 E	0.00 E
Stream Flow (volume) l/s	12.6	7.0	71.4	1.0

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

Macro Invertebrates Results

	YSC020 Site 2 Regent St	YVA100 Site 3 Valley Creek
Sensitive		
<i>Damselfly larvae</i>	2	3
<i>Dragonfly larvae</i>	1	6
Tolerant		
<i>True Bugs (Backswimmers, Water Scorpions, Water Boatmen, Lesser Water Striders, Water Striders/Treaders)</i>	3	3
<i>Leeches</i>	7	9
<i>Snails (freshwater)</i>	3	10
<i>Flatworms</i>	6	20
Very Tolerant		
<i>Fly larvae</i>	0	1
<i>Freshwater segmented worms</i>	0	10
Abundance Category	1	2
Total Bug Score	25	28
Stream Condition	Poor	Poor

Comments:

- The warm and dry start to Autumn was broken by a cold change with 33 mm rainfall a few days before this site visit. This caused high creek flows and overtopping of all the wetlands ponds.
- At this site visit, the upstream flows were returning to normal, but the wetlands were still draining and causing high flow downstream. Valley Creek was a trickle.
- Upstream degradations were limited to high conductivity in the Crosby arm (GW Main Drain), and a trickle of muddy water entering the Fiander arm (Scotchmans Ck) from the large drain on the east bank.
- We have sampled the invertebrates at the downstream sites twice recently, once just before the recent cold change and rain, then at this site visit (the first samples were for a Cub Scouts environmental night). On both occasions, we found a cleaner sample, more invertebrates and greater variety in Valley Ck than in Scotchmans Ck. At this visit we found a lot of "mosquito fish" (gambusia) in Scotchmans Ck, but none in Valley Ck only 50 metres away. In all cases, the overall invertebrates quality rating was Poor.