



## Friends of Scotchmans Creek and Valley Reserve Inc



Inc No A0037872K

Waterwatch Report 16 Feb 2014

### Scope

- Aquatic invertebrate sampling at sites 1a and 1b (YSC010, YSC012).
- Basic chemistry tests at all sites.
- Full chemistry tests at sites 1a and 1b (YSC010, YSC012).
- Flow measurement and/or observations at all sites.

### Weather Conditions

During testing: Rain showers.

Previous 24 hours: Humid, overnight 6 mm rain.

Previous week: Hot, dry and sunny for 3 weeks.

### Water Quality Results

	<b>YSC010 Site 1A Fiander arm</b>	<b>YSC012 Site 1B Crosby arm</b>	<b>YSC020 Site 2 Regent St</b>	<b>YVA100 Site 3 Valley Creek</b>	<b>YSC099 Site 4 Wetland upper</b>	<b>YSC100 Site 5 Wetland lower</b>
Air Temp C	22	22	22	22	22	22
Water Temp C	19.5	19.5	18.5	19	19	20
pH	6.8 E	6.6 E	6.6 E	6.8 E	6.3 E	7.3 G
Oxygen Conc. mg/l	4.5 P	5.8 F				
Conductivity E.C.	240 G	230 G	290 F	220 G	360 F	270 F
Turbidity F.T.U	34 D	26 P	37 D	48 D	70 D	44 D
Phosphorus, soluble ppm	0.101 D	0.068 P				
Ammonium NH <sub>4</sub> <sup>+</sup> ppm	0.03 E	0.07 G	0.02 E	0.08 G	0.01 E	0.00 E
Stream Flow (volume) l/s	36.1	39.3	176.1	23.5		

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

## Macro Invertebrates Results

	<b>YSC010 Site 1A Fiander arm</b>	<b>YSC012 Site 1B Crosby arm</b>
Very Sensitive		
<i>Caddisfly larvae</i>	10	0
Sensitive		
<i>Damselfly larvae</i>	30	12
<i>Dragonfly larvae</i>	8	2
Tolerant		
<i>Beetle larvae</i>	2	0
<i>True Bugs (Backswimmers, Water Scorpions, Water Boatmen, Lesser Water Striders, Water Striders/Treaders)</i>	4	1
<i>Nematodes</i>	1	0
<i>Leeches</i>	4	2
<i>Snails (freshwater)</i>	30	30
<i>Flatworms</i>	30	4
Very Tolerant		
<i>Mosquito larvae</i>	1	3
<i>Midge larvae</i>	0	1
<i>Fly larvae</i>	30	0
<i>Freshwater segmented worms</i>	4	7
<i>Blood worms</i>	30	30
<b>Abundance Category</b>	<b>3</b>	<b>2</b>
<b>Total Bug Score</b>	<b>45</b>	<b>31</b>
<b>Stream Condition</b>	<b>Good</b>	<b>Poor</b>

### Comments:

- Overnight rain has ended a 3 weeks hot dry period.
- During this dry period, Valley Creek did not flow, but the other creeks did not stop flowing. There was no flow into the wetlands and most of the pond levels fell dramatically.
- The overnight flows reached the upper ponds of the wetlands, but not the last pond which remains at a low level with no flow. Downstream flow was several times the upstream flow, possibly because the upper pond was still draining-down into the bypass pipe.
- The rain has swept a very large amount of litter (rubbish and dry leaves) into the upper branches of the creeks (sites 1a and 1b) but there was little or no litter visible at the other sites.

- Scotchmans Creek at site 1a yielded a pleasing number and variety of invertebrates, including some caddisfly larvae (very sensitive to stream quality), and achieved a "good" rating. The Glen Waverley Drain (site 1b) had less in-stream vegetation and achieved only a "poor" invertebrates rating.
- Despite the good flows, oxygen levels were only poor or fair.
- Turbidity ratings were poor/degraded, as expected after the overnight rain event.
- Phosphorus results were poor/degraded, which is worse than usual in these creeks.

FGB 16/02/2014