



## Friends of Scotchmans Creek and Valley Reserve Inc



Inc No A0037872K

### Waterwatch Report 18<sup>th</sup> Sept 2016

#### 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

During testing: Overcast.

Previous 24 hours: Sunny day, overnight 1.5 mm rain.

Previous week: Unseasonally cold and wet, 48 mm rain.

#### 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>
Air Temp C	11	11	11	11
Water Temp C	12	12	11.5	11
pH	7.4 G	7.0 E	7.2 G	7.2 G
Oxygen Conc. mg/l	8.7 E	8.6 E		
Conductivity E.C.	400 F	210 G	450 F	1270 D
Turbidity F.T.U	20 P	14 E	25 P	20 P
Phosphorus, soluble ppm	0.055 P	0.052 P		
Ammonium NH <sub>4</sub> <sup>+</sup> ppm	0.07 G	0.15 F	0.20 P	0.01 E
Stream Flow (volume) l/s	72.8	15.4	33.6	11.7

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

## Macro Invertebrates Results

	YSC010 Site 1A Fiander arm	YSC012 Site 1B Crosby arm
Sensitive		
<i>Damselfly larvae</i>	1	0
Tolerant		
<i>Beetle larvae</i>	0	1
<i>Leeches</i>	1	0
<i>Snails (freshwater)</i>	6	3
<i>Flatworms</i>	2	0
Very Tolerant		
<i>Mosquito larvae</i>	1	0
<i>Freshwater segmented worms</i>	15	3
<i>Blood worms</i>	1	1
<b>Abundance Category</b>	<b>1</b>	<b>1</b>
<b>Total Bug Score</b>	<b>19</b>	<b>9</b>
<b>Stream Condition</b>	<b>Poor</b>	<b>Poor</b>

### Comments:

- All the creeks were flowing faster than usual and looking quite good, until at 11:30 am Scotchmans Ck (upstream at site 1a) suddenly turned very muddy, presumably from a water mains burst or a building site escape. Our measurements were completed before this event.
- Most of the water quality results were typical of rainy weather: Good pH, Excellent oxygen, Fair or better conductivity, a range of turbidity results, Poor phosphorus, and Fair or better ammonium. However two unusually bad results stand out
  - Very high conductivity in Valley Ck, although the creek look clear and the other chemical results were OK.
  - A Poor ammonium result in Scotchmans Ck, downstream (site 2, Regent St).
- We were disappointed by the very low abundance of waterbugs. Contributing factors were the cold weather, and we associate high stream flows with small bug counts. Lack of vegetation at site 1a (where recent silt removal also removed the vegetation) was not the cause – we got more bugs there than in the adjacent and healthier looking site 1b.
  - The site 1a sample included an unusually large black leech which swam like an eel when disturbed (probably an erpobdellid leech).