



## Friends of Scotchmans Creek and Valley Reserve Inc



Inc No A0037872K

### Waterwatch Report 24 September 2017

#### 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: A sunny break just after 1mm rain.

Previous 24 hours: Sunny.

Previous week: Several sunny days.

#### 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	15	15	15	15
Water Temp C	14	13	14	13
pH	7.0 E	6.7 E	7.0 E	6.7 E
Oxygen Conc. mg/l	8.0 E	9.0 E		
Conductivity E.C.	180 G	160 G	290 F	460 F
Turbidity F.T.U	43 D	41 D	37 D	30 D
Phosphorus, soluble ppm	0.114 D	0.176 D		
Ammonium NH <sub>4</sub> <sup>+</sup> ppm	0.50 D	0.50 D	0.25 P	0.10 F
Stream Flow (volume) l/s	35.3	31.5	109.6	12.6

(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>	2	8
Tolerant		
<i>Nematodes</i>	1	0
<i>Leeches</i>	0	1
<i>Snails (freshwater)</i>	9	20
<i>Flatworms</i>	3	0
Very Tolerant		
<i>Freshwater segmented worms</i>	10	3
<i>Blood worms</i>	20	6
<b>Abundance Category</b>	<b>2</b>	<b>2</b>
<b>Total Bug Score</b>	<b>17</b>	<b>14</b>
<b>Stream Condition</b>	<b>Poor</b>	<b>Poor</b>

### Comments:

- The previous week had several days over 20 deg. and no rain until a cold change brought 1 mm of rain 1 hour before our site visit, causing fast flows during our visit.
- All the creeks appeared cloudy and several of the quality measurements gave Degraded results:
  - The turbidity measurements all rated Degraded.
  - The ammonium levels were unusually high, rated Degraded at the upstream sites, Poor at site 2 (Scotchmans Creek downstream at Regent St), and Fair in Valley Ck (site 3).
  - The phosphorus ratings were Degraded (only the upstream sites were measured).
- Conductivity was Good at the upstream sites, but only Fair downstream.
- All the oxygen and pH ratings were Excellent.
- We resumed waterbug sampling after the winter break, but the catches were small and lacking variety, resulting in Poor ratings. Contributing causes would be the previous cold weather, and sparsity of the aquatic vegetation (especially at site 1a).