



## Friends of Scotchmans Creek and Valley Reserve Inc



Inc No A0037872K

### Waterwatch Report 22 October 2017

#### Scope

- Aquatic invertebrate sampling at sites 2 and 3 (the downstream sites).
- Basic chemistry tests and ammonium tests at all sites.
- Dissolved Oxygen test at sites 2 and 3 (the downstream sites).
- Flow measurement and/or observations at all sites.

#### Weather Conditions

Previous week: Variable, warm at mid-week, 2 mm rain.

Previous 24 hours: Overcast, 1 mm rain.

During testing: Light showers.

#### 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	12	12	12	12
Water Temp C	15	14	14	14
pH	7.1 G	6.6 E	6.7 E	6.8 E
Oxygen Conc. mg/l			9.0 E	8.4 E
Conductivity E.C.	90 E	160 G	260 F	260 F
Turbidity F.T.U	24 P	6 E	13 E	19 F
Phosphorus, soluble ppm				
Ammonium NH <sub>4</sub> <sup>+</sup> ppm	0.20 P	0.25 P	0.07 G	0.08 G
Stream Flow (volume) l/s	26.1	27.8	70.0	10.5

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

## Macro Invertebrates Results

	<b>YSC020 Site 2 Regent St</b>	<b>YVA100 Site 3 Valley Creek</b>
Sensitive		
<i>Damselfly larvae</i>	7	1
<i>Dragonfly larvae</i>	1	0
<i>Freshwater Yabbies/Crayfish</i>	1	0
<i>Freshwater Slaters</i>	0	1
Tolerant		
<i>Beetle larvae</i>	5	0
<i>True Bugs (Backswimmers, Water Scorpions, Water Boatmen, Lesser Water Striders, Water Striders/Treaders)</i>	2	1
<i>Beetles/Dytiscid beetles, Whirligig beetles</i>	2	0
<i>Leeches</i>	1	2
<i>Snails (freshwater)</i>	100	50
<i>Flatworms</i>	100	20
Very Tolerant		
<i>Mosquito larvae</i>	0	1
<i>Fly larvae</i>	0	1
<i>Freshwater segmented worms</i>	100	100
<i>Blood worms</i>	100	50
<b>Abundance Category</b>	<b>4</b>	<b>4</b>
<b>Total Bug Score</b>	<b>39</b>	<b>30</b>
<b>Stream Condition</b>	<b>Very Good</b>	<b>Fair</b>

### Comments:

- The water chemistry indicators were Fair to Excellent except for
  - Turbidity at site 1a (Scotchmans Ck at the upstream site).
  - Ammonium at both upstream sites – usually we get low ammonium measurements, but this is the second consecutive month with higher levels.
  - We could not measure phosphate because of a shortage of a test reagent.
- The invertebrate results were unusually good
  - Valley Creek (site 3) has well vegetated edges which yielded a few sensitive species and large numbers of more tolerant species – these large numbers raised the results rating to Fair.

- Scotchmans Creek (downstream, site 2) has edge and in-stream vegetation which yielded more variety of the sensitive species and greater abundance generally (including very large numbers of aquatic snails and worms). The combined variety and abundance raised the results rating to Very Good.

FGB 25/10/17