



## Friends of Scotchmans Creek and Valley Reserve Inc



Inc No A0037872K

### Waterwatch Report 20 Nov 2016

#### Scope

- Aquatic invertebrate sampling at sites 1a and 1b (our upstream sites).
- Basic chemistry tests at all sites.
- Dissolved Oxygen and Phosphate tests at sites 1a and 1b (our upstream sites).
- Ammonium tests at all sites.
- Flow measurement and/or observations at all sites.

#### Weather Conditions

During testing: Sunny and becoming warm.

Previous 24 hours: Sunny, warm.

Previous week: 11 mm rain to begin, then becoming warmer and sunnier.

#### 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	18.5	20	25	25
Water Temp C	15	16	19	17
pH	7.2 G	6.7 E	6.8 E	6.8 E
Oxygen Conc. mg/l	6.7 G	6.4 G		
Conductivity E.C.	1150 D	550 P	510 P	450 F
Turbidity F.T.U	14 E	9 E	16 G	18 F
Phosphorus, soluble ppm	0.036 F	0.183 D		
Ammonium NH <sub>4</sub> <sup>+</sup> ppm	0.20 P	0.07 G	0.10 F	0.04 E
Stream Flow (volume) l/s	2.8	3.5	11.7	trickle

(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	2
Tolerant		
<i>True Bugs (Backswimmers, Water Scorpions, Water Boatmen, Lesser Water Striders, Water Striders/Treaders)</i>	1	0
<i>Leeches</i>	0	1
<i>Snails (freshwater)</i>	10	40
<i>Flatworms</i>	1	1
Very Tolerant		
<i>Freshwater segmented worms</i>	28	3
<i>Blood worms</i>	18	20
<b>Abundance Category</b>	<b>2</b>	<b>2</b>
<b>Total Bug Score</b>	<b>18</b>	<b>17</b>
<b>Stream Condition</b>	<b>Poor</b>	<b>Poor</b>

### Comments:

- The creek flows were low, after a few rainless days and warming weather.
- The clarity of the creeks at the upstream sites was the best we remember, as shown by Excellent turbidity ratings. However some other chemistry ratings were exceptionally bad.
  - At site 1a (Scotchmans Ck, the Fiander Arm) conductivity rated Degraded and ammonium rated Poor.
  - At site 1b (Glen Waverley Drain, the Crosby Arm) conductivity rated Poor and phosphorus rated Degraded.
  - Oxygen was lower than usual (but rated Good).
- Downstream at site 2 the conductivity was still poor and clarity normal for these sites.
- Valley Ck (site 3) was only trickling between pools, with a slight brown stain, but otherwise Fair or Good ratings (we did not measure oxygen or phosphorus).
- The weedy vegetation on the banks at site 1a has been cleared away, leaving no vegetation overhanging or in the stream for aquatic invertebrate habitat. We sampled by disturbing the sandy bottom then sweeping the net in the water column. This yielded 2 very small damselfly larvae and a larger number of the more tolerant creatures – overall rated Poor.
- Bug sampling in the Crosby Arm (site 1b) was easier, from the in-stream vegetation. However the result was similar, rated Poor.