



## Friends of Scotchmans Creek and Valley Reserve Inc



Inc No A0037872K

### Waterwatch Report 25 May 2014

#### Scope

- Aquatic invertebrate sampling at YSC010 (Site 1A, Fiander arm) and YSC012 (Site 1B, Crosby arm)
- Basic chemistry tests at all sites.
- Dissolved Oxygen and Phosphate tests at YSC010 (Site 1A, Fiander arm) and YSC012 (Site 1B, Crosby arm)
- Ammonium tests at all sites
- Flow measurement and/or observations at all sites.

#### Weather Conditions

During testing: Fine, sunny.

Previous 24 hours: Cool, 1.5 mm rain shower just before this site visit.

Previous week: Mild, 12 mm rain event 2 days before this site visit.

#### Water Quality Results

|  | <b>YSC010<br/>Site 1A<br/>Fiander<br/>arm</b> | <b>YSC012<br/>Site 1B<br/>Crosby<br/>arm</b> | <b>YSC020<br/>Site 2<br/>Regent<br/>St</b> | <b>YVA100<br/>Site 3<br/>Valley<br/>Creek</b> | <b>YSC099<br/>Site 4<br/>Wetland<br/>upper</b> | <b>YSC100<br/>Site 5<br/>Wetland<br/>lower</b> |
|--|---|--|--|---|--|--|
| Air Temp C                                   | 14  | 14   | 18   | 18  | 15   | 18   |
| Water Temp C                                 | 14  | 14   | 15.5                                       | 14  | 14   | 16   |
| pH   | 7.1 G   | 7.1 G  | 7.0 E                                      | 7.0 E   | 6.8 E  | 6.5 E  |
| Oxygen Conc.<br>mg/l                         | 10.0 E  | 8.8 E  |  |   |  |  |
| Conductivity<br>E.C.                         | 100 G   | 90 E   | 160 G                                      | 270 F   | 250 F  | 90 E   |
| Turbidity F.T.U                              | 38 D  | 29 P   | 34 D                                       | 30 D  | 18 F   | 21 P   |
| Phosphorus,<br>soluble ppm                   | 0.137 D                                       | 0.124 D                                      |  |   |  |  |
| Ammonium<br>NH <sub>4</sub> <sup>+</sup> ppm | 0.15 F  | 0.04 E                                       | 0.10 F                                     | 0.02 E  | 0.06 G   | 0.05 G   |
| Stream Flow<br>(volume) l/s                  | 117.6   | 29.9   | 56.4                                       | 8.9   |  |  |

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

### Macro Invertebrates Results

|                                   | <b>YSC010<br/>Site 1A<br/>Fiander<br/>arm</b> | <b>YSC012<br/>Site 1B<br/>Crosby<br/>arm</b> |
|-----------------------------------|---|--|
| Very Sensitive                    |   |  |
| <i>Caddisfly larvae</i>           | 8   | 3  |
| Sensitive                         |   |  |
| <i>Damselfly larvae</i>           | 9   | 15   |
| <i>Dragonfly larvae</i>           | 2   | 13   |
| <i>Freshwater mussel</i>          | 0   | 13   |
| Tolerant                          |   |  |
| <i>Leeches</i>                    | 1   | 6  |
| <i>Snails (freshwater)</i>        | 35  | 20   |
| <i>Flatworms</i>                  | 9   | 30   |
| Very Tolerant                     |   |  |
| <i>Freshwater segmented worms</i> | 30  | 30   |
| <i>Blood worms</i>                | 30  | 30   |
|                                   |   |  |
| <b>Abundance Category</b>         | <b>3</b>                                      | <b>3</b>                                     |
| <b>Total Bug Score</b>            | <b>30</b>                                     | <b>35</b>                                    |
| <b>Stream Condition</b>           | <b>Poor</b>                                   | <b>Poor</b>                                  |

### Comments:

- We found a wide variety of macroinvertebrates in both upstream sites. Both samples included some Caddisfly larvae which are very sensitive to degraded water quality and we rarely find any waterbugs in this category. However, although they may have been present in the samples, we did not record sufficient total numbers of invertebrates to achieve a Fair condition rating.

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