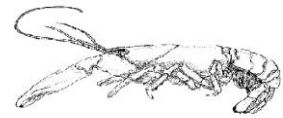




Friends of Scotchmans Creek and Valley Reserve Inc



Inc No A0037872K

Waterwatch Report 22 September 2019

Scope

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

Weather Conditions

Previous week: Some sunny days, 24 mm rainfall

Previous 24 hours: Showers, 4 mm rainfall

During testing: Sunny

Water Quality Results

| | YSC010 Site 1A Fiander arm | YSC012 Site 1B Crosby arm | YSC020 Site 2 Regent St | YVA100 Site 3 Valley Creek |
|--|---|--|--|---|
| Air Temp C | 12 | 12 | 12 | 12 |
| Water Temp C | 12.5 | 12 | 12.5 | 12 |
| pH | 7.3 G | 7.1 G | 7.1 G | 7.0 E |
| Oxygen Conc. mg/l | 9.8 E | 9.0 E | | |
| Conductivity E.C. | 380 F | 180 G | 390 F | 260 F |
| Turbidity F.T.U | 16 G | 11 E | 21 P | 18 F |
| Phosphorus, soluble ppm | 0.026 F | 0.068 P | | |
| Ammonium NH ₄ ⁺ ppm | 0.03 E | 0.01 E | 0.07 G | 0.00 E |
| Stream Flow (volume) l/s | 17.5 | 9.3 | 53.1 | 4.2 |

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

Macro Invertebrates Results

| | | YSC010 Site 1A Fiander arm | YSC012 Site 1B Crosby arm |
|-----------------------------------|--------------|-------------------------------------|------------------------------------|
| | Bug score | Number found | Number found |
| Sensitive | | | |
| <i>Damselfly larvae</i> | 6 | 1 | 4 |
| <i>Freshwater mussel</i> | 5 | 0 | 3 |
| Tolerant | | | |
| <i>Snails (freshwater)</i> | 3 | 35 | 20 |
| <i>Flatworms</i> | 3 | 1 | 4 |
| Very Tolerant | | | |
| <i>Freshwater segmented worms</i> | 1 | 60 | 12 |
| <i>Blood worms</i> | 1 | 50 | 20 |
| | | | |
| Total Number Found | | 147 | 63 |
| Total Bug Score | | 14 | 19 |
| Stream Condition | | Poor | Poor |

Comments:

- Creek flows were slightly higher than normal, following 4 mm overnight rain.
- Most of the water quality physical and chemical indicators were Good or Excellent, with exceptions..
 - Fair conductivity at 3 sites (Good in Valley Ck)
 - High turbidity (rated Poor) in Scotchmans Ck below the wetlands
 - High phosphorus in Scotchmans Ck at site 1a (upstream), rated Poor.
- The waterbug samples were small, with very few sensitive creatures found, more or less as expected at this time of year. Scotchmans Ck (site 1a) still has very little in-stream vegetation to provide waterbug habitat. Both upstream sites rate Poor.
- Litter in the upstream branches is continually confronting, consisting mainly of pieces of plastic sheet and bags, and (in the GW Drain, site 1b) persistent presence of polystyrene foam. Bottles are evident just downstream in the litter trap, at the Blackburn Rd culverts, and in the wetlands.