Friends of Scotchmans Creek and Valley Reserve Inc

Inc No A0037872K

Waterwatch Report 19th March 2017

Scope

- Aquatic invertebrate sampling at sites 2, 3.
- Basic chemistry tests at all sites.
- Dissolved Oxygen and Phosphate tests at sites 2, 3.
- Ammonium tests at all sites.
- Flow measurement and/or observations at all sites.

Weather Conditions

During testing: Warm, sunny
Previous 24 hours: Warm, sunny
Previous week: Mainly warm and sunny, 4 mm rain.

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	19	19	19	19
Water Temp C	18	19	17	17
pH	7.1 G	7.0 E	6.8 E	6.7 E
Oxygen Conc. Mg/l			3.4 D	2.5 D
Conductivity E.C.	530 P	160 G	430 F	610 P
Turbidity F.T.U	20 P	9 E	22 P	29 P
Phosphorus, soluble ppm			0.098 P	0.082 P
Ammonium NH4+ ppm	0.08 G	0.02 E	0.30 P	0.02 E
Stream Flow (volume) l/s	1.0	2.3	21.7	0.0

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

Macro Invertebrates Results

	YSC020 Site 2 Regent St	**YVA100 Site 3 Valley Creek**
Sensitive		
Damselfly larvae	1	12
Dragonfly larvae	2	4
Freshwater shrimps/prawns	0	1
Freshwater Yabbies/Crayfish	0	1
Water Mites	0	20
Tolerant		
True Bugs (Backswimmers, Water Scorpions, Water Boatmen, Lesser Water Striders, Water Striders/Treaders)	0	13
Leeches	0	1
Snails (freshwater)	6	15
Flatworms	4	50
Very Tolerant		
Freshwater segmented worms	4	10
Blood worms	2	3
Abundance Category	**1**	**3**
Total Bug Score	**20**	**42**
Stream Condition	**Poor**	**Good**

Comments:

- Recent and ongoing creek improvement works may have influenced these results:
    - The litter trap just downstream of sites 1a, 1b is being reconstructed. Access to these sites is temporarily fenced off, so samples for site 1a were obtained 20 metres upstream of the usual location and for 1b were obtained 200 metres upstream of the usual location.
    - The wetlands upstream pond has been dredged and low streamflow through the ponds has been re-established after some years when low flows went directly into the bypass pipe. The re-exposed pond banks smelled rancid for about a week afterwards.
    - The willows at site 2 have been removed or cut back to "stags". Stream damage is limited to a short section of bank where machines were moved across the creek. The pool where we take waterbug samples now receives more sunshine.
- An unusually large number of the water quality results were poor (more than expected for summer conditions).

- The Fiander arm (upstream site 1a) was flowing very slowly, with poor conductivity (typical of this site in summer) and poor turbidity, and good pH and ammonium results.
- The Crosby arm (upstream site 1b) was flowing normally and results were Good and Excellent.
- The flow at site 2 (Regent St, downstream) was higher than the upstream total, which may have been the wetlands draining after rainfall 3 days prior. The chemistry results were mostly poor and the waterbug sample poor in number and variety.
- Valley creek had no visible flow and was overgrown with low vegetation between the remaining pools. The chemistry results were mostly poor. However the waterbug sample had good variety and fair abundance, achieving a Good rating.

FGB, 22/3/2017.