



Friends of Scotchmans Creek and Valley Reserve Inc



Inc No A0037872K

Waterwatch Report 20 Jan 2019

ALERT. Scotchmans Ck was polluted at Regent St (site2, ME_YSC020), probably by effluent entering the wetlands bypass pipe from a direct connection under the wetlands. There is such a connecting pipe parallel to and East of Lawrence Rd.

Scope

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

Weather Conditions

During testing: Mild, sunny.

Previous 24 hours: Mild, sunny.

Previous week: Hot at first, later mild, 3 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	22	22	21	21
Water Temp C	19.5	20	19	18.5
pH	7.1 G	6.9 E	6.9 E	6.8 E
Oxygen Conc. mg/l			2.5 D	1.7 D
Conductivity E.C.	430 F	310 F	460 F	450 F
Turbidity F.T.U	32 D	13 E	29 P	50 D
Phosphorus, soluble ppm			0.104 D	0.000 E
Ammonium NH ₄ ⁺ ppm	0.04 E	0.08 G	0.80 D	0.00 E

Stream Flow (volume) l/s	2.1	6.9	10.5	1.2
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(E = Excellent, G = Good, F = Fair, P = Poor, D = Degraded)

Macro Invertebrates Results

		YSC020 Site 2 Regent St	YVA100 Site 3 Valley Creek
	Bug score	Number found	Number found
Very Sensitive			
<i>Caddisfly larvae</i>	7	1	6
Sensitive			
<i>Damselfly larvae</i>	6	20	0
<i>Dragonfly larvae</i>	6	1	1
<i>Water Mites</i>	5	1	0
Tolerant			
<i>True Bugs (Backswimmers, Water Scorpions, Water Boatmen, Lesser Water Striders, Water Striders/Treaders)</i>	4	24	14
<i>Leeches</i>	3	20	0
<i>Snails (freshwater)</i>	3	20	50
<i>Flatworms</i>	3	50	50
Very Tolerant			
<i>Mosquito larvae</i>	2	0	50
<i>Fly larvae</i>	2	2	2
<i>Freshwater segmented worms</i>	1	2	12
<i>Blood worms</i>	1	100	100
Total Number Found		241	285
Total Bug Score		41	29
Stream Condition		Very Good	Fair

Comments:

- **Scotchmans Ck was polluted at Regent St (site2, ME_YSC020), probably by effluent entering the wetlands bypass pipe from a direct connection under the wetlands. There is such a connecting pipe parallel to and East of Lawrence Rd.**
 - The upstream sites have clean water flow with some problems typical of the summer season,
 - Almost all stream flow is bypassing the wetlands ponds due to inlet pit blockage, hence the wetlands ponds are low or dry and almost no flow re-enters the creek from them,
 - Valley Ck is unpolluted and flowing only at a trickle,
 - **Downstream, Scotchmans Ck at Regent St is flowing as expected is but polluted with some foam, turbidity (from a black suspension, rated Poor), smell of hydrogen sulphide, low oxygen (rated Degraded), high conductivity (rated Fair), high phosphorus (rated Degraded) and high ammonium (rated Degraded).**
- Invertebrates results were Very Good and Fair in Scotchmans Ck (downstream) and Valley Ck respectively, despite the pollution. The variety ranged from some small caddisfly larvae (hydroptilidae, with flat leaf-like cases, rated Very Sensitive to water quality) to abundant blood worms (Very Tolerant of water quality).

FGB, 20/Jan/2019