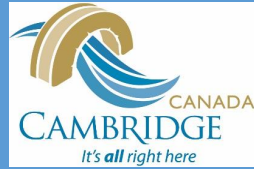




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Freeport Creek SWM Pond 130 SWM Control and Retrofit Alternatives

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PROJECT: Cambridge North Business Park

PROJECT NUMBER: 20165967
MUNICIPALITY: City of Cambridge

Scenario	Title	Pond 130						Railway		Meets Flow Control Objectives	
		NWL Elevation	MWL Elevation	Storage		Peak Flow, m ³ /s		Target Flow	Peak Flow		Target Flow
				Height, m	Volume, m ³	In	Out	m ³ /s	m ³ /s		m ³ /s
1	Existing Conditions	301.25	302.96	1.71	310073	30.678	13.94	7.17	18.095	17.17	No
2	Original Conditions, No Future Development	299.6	302.93	3.33	305077	30.575	18.7	7.17	22.865	17.17	No
3	Pond Unchanged, All Post Control Onsite	301.25	302.98	1.73	314	29.35	14.236	7.17	18.323	17.17	No
4	Pond Controls All SWM, No Onsite	301.25	304.2	2.95	573873	35.44	6.502	7.17	10.938	17.17	Yes
5	Pond outlet moved, All Controls in Pond	301.25	303.9	2.65	616385	37.43	6.211	7.17	9.323	17.17	Yes
6	Pond Controls Restored, All Controls Onsite	300.7	303.71	3.01	467002	29.343	7.031	7.17	11.202	17.17	Yes
7	Pond Controls Restored, All Controls Onsite per MDP	300.7	303.71	3.01	467002	29.343	7.031	7.17	11.137	17.17	Yes
8	Pond Controls Restored, All Controls Onsite, NWL remains	301.25	303.73	2.48	471436	29.343	7.152	7.17	11.276	17.17	Yes

Scenario	Description
1	Existing Conditions with blocked low-flow, current outlet configuration and no future development.
2	Existing Conditions with original low-flow outlet un-blocked, allow the pond to function as originally designed.
3	Pond 130 outlet and water level remain unchanged. All future development controls runoff onsite from 2-year to Regional Events.
4	Pond 130 water level remains as is, but outlet design is reconfigured. Pond 130 controls all existing and future development runoff 2-year to Regional Events. No onsite controls.
5	Same as #3, but outlet moved downstream to alternate crossing. Greater drainage area contributing to pond.
6	Pond 130 water level reduced to 300.7, outlet controls redesigned to restore 2-yr to Reg event storms for existing conditions as intended. All future development lands control onsite 2 to regional Storm. Elevation of 300.7 chosen as 0.1 m lower than Cherry Blossom inlet sewer pipe invert.
7	Pond 130 water level reduced to 300.7, outlet controls redesigned to restore 2-yr to Reg event storms for existing conditions as intended. Future development controls per MDP - Upstream lands control onsite 2 to regional Storm, downstream is only 2 to 100 year.
8	Pond 130 water level remains at 301.25, outlet controls redesigned to restore 2-yr to Reg event storms for existing conditions as intended. Future development controls per MDP - Upstream lands control onsite 2 to regional Storm, downstream is only 2 to 100 year.

* Difference in current volume between 301.25m and 300.70 is approximately 17,000 m3.