Stormwater Management Facilities & Treatment Trains

Instructions

- This template should be used to provide information about stormwater management facilities in support of an application for the first Consolidated Linear infrastructure Environmental Compliance Approval for a **Municipal Stormwater Management System.**
- Information should be provided for all sanitary sewage pumping stations and all combined sewage pumping stations. Please duplicate the tables / sections as needed.
- Please refer to the "Guide to Applying for the First Consolidated Linear Infrastructure Environmental Compliance Approval" for instructions and guidance on how to use and complete this template.

Owner Name	Name of System
The Town of Halton Hills	Municipal Stormwater Management System

R100 – wet SWM pond for Province Sub-division

Location	Located at the dead end of Prince Street, north of intersection of King Street and Dutch Crescent Lat. 43.63779 N Lon. 79.93303 W
Watershed/Subwatershed	Grand River watershed, Silver Creek
Receiver of discharge	Surface discharge to Silver Creek, plus cooling water from the processing plant
Outlet location	Lat. 43.63883 N Lon. 79.92829 W
Catchment Area	15 ha, external area 8 ha
Level of Treatment for suspended solids	Level 1 (80%) Long-term suspended solids removal
Treatment for other contaminants, as required	water temperature
Level of Volume control	10 mm for the area of 5 ha (refer to LID-R10001 for details)
Design Storm	Quantity: 100-yr storm; Quality: 5-yr storm (STM capacity only)
Reference ECA(s)	Pre-authorized under CLI-ECA # 328-S701 (v.1) issued September 27, 2023
Reference Works as part of treatment train	LID-R10001 – infiltration Gallery OGS-R100 – pre-treatment for LID-R10001 FCC- 20 – outlet channel to the Silver Creek from R100
Brief Description	R100 is a wet SWM pond.

	Include two inlets: 1) 600 mm diameter concrete pipe at 2% slope to connect STM to the pond. This inlet is equipped with a headwall. 2) Roadside swale to convey the major overflow to the pond. It is connected to the main call of the pond. The main cell of the pond is design to provide the total storage of 25, 000 m3 of storage for the Regional storm event peak flows control. The WSEL is at 210 m, the top of the berm is at 210.3 m. The storage is the pond is the following: Pp – 5, 000 m3 at 207.5 m (bottom of the pond is at 206 m) Ed – 2, 000 m3 at 208. m Active storage – 15, 000 m3 at 210 m Total storage – 25, 000 m3 at 210.3 m The drawdown time is 48 hours for Ed, and 90 hours for the Regional storm control. The pond's outlet is equipped with two orifices (100 mm installed at 207.5m, and 450 mm installed at 208.5 m). In addition, a 500 mm wide V-notch weir is installed at 209.1 m. The emergency spillway consists of a rectangular weir, 2000 mm wide, 0.3 m deep installed at 210 m designed to convey the flow of 5 cms.
Receive Emergency Sanitary Overflows	No
Notes / Additional Information	

OGS-R100 (OGS to R100 SWM Wet Pond)

Location	Located at the dead end of Prince Street, north of intersection of King Street and Dutch Crescent Lat. 43.63781 N Lon. 79.93305 W
Watershed/Subwatershed	Grand River watershed, Silver Creek
Receiver of discharge	Surface discharge to Silver Creek, plus cooling water from the processing plant
Outlet location	Lat. 43.63883 N Lon. 79.92829 W Downstream of the R100
Catchment Area	3 ha
Level of Treatment for suspended solids	Level 3 (60%) Long-term suspended solids removal
Treatment for other contaminants, as required	Oil removal
Level of Volume control	N/A
Design Storm	Quantity: N/A Quality: Local 90th percentile rainfall event
Reference ECA(s)	
Reference Works as part of treatment train	N/A
Brief Description of each component of treatment train: **OGS STC-750**	OGS STC-750 Receives runoff generated from local street of the proposed subdivision (include street names) and discharges to the LID-R10001 with the overflow to SWM wet pond R100.
Brief Description of each component of treatment train: **SWM Wet Pond R100**	R100 – a wet SWM pond, including 2 inlets, 1 outlet and an emergency overflow route
Receive Emergency Sanitary Overflows	No
Notes / Additional Information	OGS STC-750 Capacity: 3, 000 L of sediment; 915 L of oil; 4, 070 L (TOTAL)

LID-R10001 (infiltration gallery to R100 SWM Wet Pond)

Location	Located at the dead end of Prince Street, north of intersection of King Street and Dutch Crescent Lat. 43.63782 N Lon. 79.93307 W
Watershed/Subwatershed	Grand River watershed, Silver Creek
Receiver of discharge	Surface discharge to Silver Creek, plus cooling water from the processing plant
Outlet location	Lat. 43.63883 N Lon. 79.92829 W Downstream of the R100
Catchment Area	1.5 ha
Level of Treatment for suspended solids	Level 1 (80%) Long-term suspended solids removal
Treatment for other contaminants, as required	Water temperature, water balance
Level of Volume control	30 mm of retention
Design Storm	Quantity: N/A Quality: 30 mm storm event
Reference ECA(s)	
Reference Works as part of treatment train	N/A
Brief Description of each component of treatment train: **LID-R10001**	Infiltration gallery located u/s of R100 and downstream of OGS STC-750 Receives runoff generated by the communal park located at the dead end of Dutch Crescent equipped with an overflow to discharge to the SWM wet pond R100.
Brief Description of each component of treatment train: **SWM Wet Pond R100**	R100 – a wet SWM pond, including 2 inlets, 1 outlet and an emergency overflow route
Receive Emergency Sanitary Overflows	No
Notes / Additional Information	The filter bed is 16.0 m by 6.0 m in size. The underground surface depth is 1.1 m and the surface water storage is 0.75 m. The bed is 1.1 m deep and consists of a 0.6 m deep layer of hard granular sand and the 0.3 m deep lower section of 25-40 mm diameter washed clear stone. The bed is equipped with a 100 mm diameter drainage tile perforated PVC pipe wrapped in a filter cloth.

FCC- 20 – outlet channel to the Silver Creek from R100

Location	Located at the dead end of Prince Street, north of intersection of King Street and Dutch Crescent Lat. 43.63883 N Lon. 79.92829 W
Watershed/Subwatershed	Grand River watershed, Silver Creek
Receiver of discharge	Surface discharge to Silver Creek, plus cooling water from the processing plant
Outlet location	Lat. 43.63883 N Lon. 79.92829 W
Catchment Area	15 ha
Level of Treatment for suspended solids	Level 3 (60%) Long-term suspended solids removal
Treatment for other contaminants, as required	Polishing of the pond's discharge
Level of Volume control	N/A
Design Storm	Quantity: N/A Quality: N/A
Reference ECA(s)	
Reference Works as part of treatment train	N/A
Brief Description of each component of treatment train: **FCC-20**	Concrete lined outfall channel to convey pond's discharge to the tributary of Silver Creek
Brief Description of each component of treatment train: **SWM Wet Pond R100**	R100 – a wet SWM pond, including 2 inlets, 1 outlet and an emergency overflow route
Receive Emergency Sanitary Overflows	No
Notes / Additional Information	The channel is 30 m long, 2.0 m wide, 1.5 m deep, at 1 % grade sized to convey the 100- year flow from the pond with 0.5 m freeboard. The freeboard is required to ensure that no overtopping of the channel occurs during the emergency overflow conditions. The channel is lined with "Uni-lock" and design withstand velocities of up to 10 m/s under the depth of flow of 1.0 m. The channel is equipped with buffles to reduce velocity (match the watercourse velocity of 3 m/s under the 100-year storm) at the confluence point.