

City of Sault Ste Marie
Huron Street Sewage Pump Station
Summary of Proposed Upgrades

Updated: March 29, 2019

Existing Conditions

- located at Civic 99 Huron Street along west side, just south of the CN tracks
- services former St. Mary's River paper site and Brookfield G.S. washroom facility
- constructed in 1962
- consists of a dry well pumping system with an inlet suction well (1.8 X 1.8m)
- 2 - 5hp Wemco torque flow pumps with design capacity of 125 US Gal/min (7.8 L/s) each - (one pump replaced in 1989)
- electrical and control panels located below grade within dry well
- no gravity overflow (must be pumped)
- includes milltronics for level control
- high level and other alarms monitored with SCADA system

System Deficiencies

- up to 56 year old pumps and equipment need replacement (normal life is 25 years)
- confined space entry required for any maintenance work and access to control panels
- no back-up power or connection for portable generator or emergency overflow
- minimal space on site

Proposed Upgrades (refer to Summary of Proposed Alternative Upgrades)

- Construct new pump station complete with wet well, submersible pumps, controls & appurtenances at new location.

Proposed Site (refer to Summary of Proposed Alternative Sites)

- Construct new pump station at new site located on east side of Huron Street (Site 3)

Proposed Design

Service Area:	generally south of CN tracks to International bridge in west and Fort Creek to east excluding St. Mary's Island	
Design Flows:	Current Flows	- 1.04 L/s (peak daily flows based on pump run times from City PWT for Oct, 2018 & peaking factor)
	Initial Period Flows	- 5.63 L/s (peak design flows)
	10-year Flows	- 14.77 L/s (peak design flows)
	Ultimate Flows	- 45.55 L/s (peak desing flows)
Proposed Location:	Site 3	- located 30m east of Huron Street on City owned property
Wet Well Storage:		- sized for ultimate design flows
Proposed P.S. Appurtenances:	(subject to confirmation during detail design)	
	wet well	- precast concrete or FRP
	pumps	- NP-3153 Flygt sewage pumps - (model & sizing to be confirmed) 600V, 3/60 incl. mix flush valves, guide rails, lifting chains, etc.
	controls	- Flygt pump control panel with level sensor ultrasonic and back-up high level float
	interior piping	- stainless steel
	valves	- plug and check valves
	SCADA	- maintain existing RTU for connection to City WAN
	overflow	- to existing storm sewer at upstream MH (inv. 177.60 m)
	other options	- plug-in for portable generator
Yard Piping:	inlet sewer	- new PVC inlet sewer from existing pump station
	forcemain	- 150m dia. PVC forcemain to outlet at Queen installed in 2001 - length - 220 metres / discharge elevation - 179.1 m (at air relief chamber)