


INFORMATION REPORT

TO:	Chair and Members Hamilton Water Sub-Committee
COMMITTEE DATE:	May 3, 2021
SUBJECT/REPORT NO:	Woodward Upgrades Construction Update (PW20043(a)) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	John Helka (905) 546 2424 Ext. 2826
SUBMITTED BY:	John Helka Director, Woodward Upgrades Public Works
SIGNATURE:	

COUNCIL DIRECTION

Not Applicable

INFORMATION

The purpose of this report is to provide committee members an update on the Woodward Upgrade Project (WUP) which is an integral part of the Clean Harbour Program. Additional details are provided in the presentation attached to Report PW200043(a) as Appendix "A".

The program is being delivered through three construction projects:

- Contract 1 – Main Pumping Station Project (MPS);
- Contract 2 – Electrical and Chlorination Project (ELU); and,
- Contract 3 – Tertiary Treatment Upgrade Project (TTU).

Contract 1 – Main Pumping Station Project:

A new main wastewater pumping station is being constructed to replace the existing pumping station. The MPS project is a \$88M contract that is being constructed by Maple Ball Joint Venture and includes the installation of 12 - 700 Hp pumps for a total firm capacity of 1700 million litres per day.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

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Construction started in May 2017 and has well surpassed its halfway point with \$77M of work performed to date, with substantial completion estimated to be February 2022.

Contract 2 – Electrical and Chlorination Project:

The Electrical and Chlorination upgrades project is a \$61M contract being undertaken by Alberici Constructors that will replace the two (2) existing electrical substations and existing standby power building with a new Electrical Power Centre. Dual 13.8 kilo-volt underground distribution loop duct banks around the Wastewater and Water treatment plants and four (4) - three (3) Mega Watt diesel generators providing a total of 12 Mega Watts of emergency standby power are included in the project. The chlorination system is being upgraded to increase chlorination capacity during wet weather flows to provide full disinfection.

Construction started in October 2017 and is nearing completion with \$57M of work performed to date and is estimated to reach substantial completion in October 2021.

Contract 3 – Tertiary Treatment Project:

The Tertiary Treatment Project upgrades (TTU) will have the biggest impact on water quality in Hamilton Harbour. The project adds a higher level of treatment (tertiary) to the wastewater treatment process using Disc Filtration technology. In addition, the project includes an increase in the capacity of the south plant secondary treatment system by doubling the size of the aeration tanks and constructing two (2) new clarifiers, new chlorine contact tank and outfall, along with Redhill Creek modifications. This project will allow us to meet the Hamilton Harbour Remediation Action Plan targets, including the provision of full nitrification for more complete ammonia removal, advanced levels of phosphorus removal, and will require the plant to operate under new environmental effluent compliance limits.

The TTU project is a \$165M construction contract that was awarded to North American Construction. Construction started in April 2019 and has reached its two (2) year anniversary, with \$97M of work performed to date.

Soil Management

The program continues to experience challenges in construction resulting from the discovery of Polychlorinated biphenyl (PCB) hazardous soil in the vicinity of the new chlorine contact tank and the south secondary treatment clarifier area that was not identified in the geotechnical investigation and subsequently not included within the construction Contract. The City's project team continues to follow the approved soils segregation and sampling program to help mitigate overall costs to the City, however, the costs to date have had an impact on the project budget. The project budget contains

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available funds to support these additional costs, however, City staff are forecasting that there may be a requirement to add additional funds to the project at a future date. The project team will continue to monitor the program budget and retire project risks when appropriate. Should additional funds be required to supplement the project they will be requested through the 2022 Water, Wastewater and Stormwater Rate Budget process.

The management of the significant amount PCB soils has impacted the construction schedule which is now estimated to reach substantial completion in November 2022, from the original December 30, 2021 date. This delay has also impacted the Green Infrastructure Fund completion timeline of January 31, 2021, based on our communication with Infrastructure Canada they are receptive of an extension in which City staff will be submitting a formal request in June 2021.

Next Steps:

There is a tremendous amount of effort required over the next one (1) to two (2) years as we commission new equipment, finalize construction and transition the project into operation. Staff are very proud of the collaboration and professionalism amongst all the contractors on site amounting to over one (1) million man-hours worked to date and want to recognize that there have been no recorded lost time injuries.

APPENDICES AND SCHEDULES ATTACHED

Appendix "A" to Report PW20043(a) - Woodward Upgrades Construction Update Presentation