

Municipality of Port Hope

Capital Projects

Project	4013 Clarifier Systems Replacement		
Department	Wastewater		
Version	04 Approved by Council	Year	2023

Description

Project Description

Replacement of clarifier flights, chains, mechanical and electrical equipment.

Project Justification

Clarifiers are settling tanks built with mechanical means for continuous removal of solids being deposited by sedimentation. A clarifier is generally used to remove solid particulates or suspended solids from liquid for clarification and/or thickening. Concentrated impurities, discharged from the bottom of the tank are known as sludge, while the particles that float to the surface of the liquid are called scum.

The Port Hope Sewage Treatment Plant consists of 3 clarifiers. The 2019 Wastewater Treatment Plant Needs Assessment identified these assets as beyond their useful life and complete replacement is required.

Advancements in clarifier technology may be an option and will be investigated as part of this project. (i.e. Variable Frequency Drives) has occurred since the facility was built in 2010.

This project includes three (3) Clarifiers and will be phased over three (3) years i.e. one tank per year.

Municipality of Port Hope

Capital Projects

Project	4013 Clarifier Systems Replacement		
Department	Wastewater		
Version	04 Approved by Council	Year	2023

Budget							
	Total	Prior Years	2023	2024	2025	2026	2027
Expenditures	575,000		575,000				
Funding							
Utility Rates & Reserves							
Contrib fr Wastewater R/F	575,000		575,000				
	575,000		575,000				
Funding Total	575,000		575,000				

Municipality of Port Hope

Capital Projects

Project	4013 Clarifier Systems Replacement		
Department	Wastewater		
Version	04 Approved by Council	Year	2023

Attributes		
Attribute	Value	Comment
Attributes		
Department	Wastewater	
Project Type	Replacement	
Replacement Type	Replacement - Similar	
Tax Levy Allocation	Utilities	
Physical Boundary Location	Urban Port Hope	
Identified in any Council Approved Plan?	Yes	
Identify Council Approved Plan(s)	2020 Water and Wastewater Rate Study	WWTP-21
Project Status	Ongoing	
Asset Management Plan (AMP)		
Existing Asset ID #	11084, 11085, 11086	Clarifier #1,2,3
Replacement Value Identified in AMP (\$)	\$645,506	
Replacement Year Identified in AMP	2021, 2022, 2023	
Estimated Useful Life (in years)	10	
Future Annual Impact on AMP (Cost per year)	\$65,000	
Date		
Start Date	11-Jan-2021	
Completion Date	29-Oct-2023	
To be Completed by Finance		
Approval Status	Approved by Council	2021 Budget Approved of \$207,400 for a total project cost request of \$645,506.
GL Account Number	410-000-4013-6900	

Municipality of Port Hope

Capital Projects

Project	4019 Hope Street Pumping Station Communications & SCADA connectivity Improvements		
Department	Wastewater		
Version	04 Approved by Council	Year	2023

Description

Project Description

Installation of a SCADA system and bell internet infrastructure at Hope Street Pumping Station.

Project Justification

Installation of a SCADA system and bell internet infrastructure at Hope Street Pumping Station includes: addition of bell fiber internet, addition of a firewall system (Hope St PS), addition of a Programmable Logic Controller (PLC), addition and upgrades to electrical control panel to incorporate an internet and SCADA system connection, and updated firewall system (WWTP) to incorporate the addition of a new substation to the SCADA network.

Currently there is no internet infrastructure or SCADA system monitoring at the Hope Street Pumping Station resulting in limited alarm functionalities and controls essential to notifying staff in the event of an emergency. The installation and addition of internet infrastructure and a SCADA monitoring system allows the Hope Street Pumping Station to have alarm system functionality improvements, remote monitoring and controls , and a more rapid emergency response to the substation in the event of an emergency. This project is essential to upgrade the Hope Street Pumping Station to current industry monitoring and alarm functionality standards to mitigate MECPECA contraventions.

This project is to be funded by the remaining balance in the Pumping Station Reserve Fund of \$296,095.

Municipality of Port Hope

Capital Projects

Project	4019 Hope Street Pumping Station Communications & SCADA connectivity Improvements		
Department	Wastewater		
Version	04 Approved by Council	Year	2023

Budget							
	Total	Prior Years	2023	2024	2025	2026	2027
Expenditures	296,095		296,095				
Funding							
Utility Rates & Reserves							
Contrib fr Wastewater R/F	296,095		296,095				
	296,095		296,095				
Funding Total	296,095		296,095				

Municipality of Port Hope

Capital Projects

Project	4019 Hope Street Pumping Station Communications & SCADA connectivity Improvements		
Department	Wastewater		
Version	04 Approved by Council	Year	2023

Attributes		
Attribute	Value	Comment
Attributes		
Department	Wastewater	
Project Type	New Asset	
Replacement Type	N/A	
Tax Levy Allocation	Utilities	
Physical Boundary Location		
Identified in any Council Approved Plan?	No	
Identify Council Approved Plan(s)		
Project Status		
Asset Management Plan (AMP)		
Existing Asset ID #	8270 and 28924	
Replacement Value Identified in AMP (\$)		
Replacement Year Identified in AMP		
Estimated Useful Life (in years)	10 years	
Future Annual Impact on AMP (Cost per year)		
Date		
Start Date	13-Jan-2023	
Completion Date	30-Sep-2023	
To be Completed by Finance		
Approval Status	Approved by Council	
GL Account Number		

Municipality of Port Hope

Capital Projects

Project	5012 Zone 1 Floating Storage		
Department	Water		
Version	04 Approved by Council	Year	2023

Description

Project Description

Review of Zone 1 Floating Storage requirements for the replacement of the Dorset Street West Standpipe.

Project Justification

The existing Dorset Street Standpipe, which provides floating storage for Zone 1 of the Port Hope Drinking Water System (DWS) will require rehabilitation (including interior and exterior coating replacement) in the near future at an approximate cost of \$1,500,000. Given the limited useable capacity of the existing standpipe and the estimated cost of rehabilitation, it is recommended that some consideration be given to replacing the existing standpipe with a Zone 1 elevated tank, similar to the Fox Road Elevated Tank serving Zone 2 of the Port Hope DWS. The Zone 1 elevated tank is an ideal project to put forward for any future rounds of funding as it addresses a definite asset management need re: condition of the Dorset Street Stand Pipe and underground piping, resolves health and safety issues related to access to the below grade areas at Dorset Street and improves security of water supply for Zone 1. A total of \$16,000 has been included in 2021 for a Options and Concept report, followed by \$108,000 in 2022 for the Municipal Class Environmental Assessment (MCEA) and \$167,000 for detailed design in 2023. The estimated total cost of a new water tower is \$3,469,000 in 2024.

Several factors should be considered in selecting the optimum location for a gravity based (floating) storage tank including property ownership, ground elevations (topography), geotechnical conditions, available site area and access, site security, aesthetic impacts, natural impacts, social impacts, heritage or cultural impacts, proximity to existing infrastructure (in particular trunk water mains) and distribution system hydraulics.

A general location plan for the potential elevated tank locations has been attached.

Municipality of Port Hope

Capital Projects

Project	5012 Zone 1 Floating Storage		
Department	Water		
Version	04 Approved by Council	Year	2023

Budget							
	Total	Prior Years	2023	2024	2025	2026	2027
Expenditures	8,150,000		650,000	7,500,000			
Funding							
Gov't Grants							
Provincial Grants	1,370,279			1,370,279			
Federal Grant	1,644,500			1,644,500			
	3,014,779			3,014,779			
Utility Rates & Reserves							
Contrib fr Water R/F	5,135,221		650,000	4,485,221			
	5,135,221		650,000	4,485,221			
Funding Total	8,150,000		650,000	7,500,000			

Municipality of Port Hope

Capital Projects

Project	5012 Zone 1 Floating Storage		
Department	Water		
Version	04 Approved by Council	Year	2023

Attributes		
Attribute	Value	Comment
Attributes		
Department	Water	
Project Type	Replacement	
Replacement Type	Replacement - Upgrade	
Tax Levy Allocation	Utilities	
Physical Boundary Location	Urban Port Hope	
Identified in any Council Approved Plan?	Yes	
Identify Council Approved Plan(s)	2019 Water and Wastewater Rate Study	Project number W-1, W-2 and WF-11
Project Status	Ongoing	
Asset Management Plan (AMP)		
Existing Asset ID #	8268	
Replacement Value Identified in AMP (\$)	\$3,000,000	
Replacement Year Identified in AMP		
Estimated Useful Life (in years)	50	
Future Annual Impact on AMP (Cost per year)	\$60,000	
Date		
Start Date	31-Jan-2021	
Completion Date	31-Dec-2024	
To be Completed by Finance		
Approval Status	Approved by Council	2021 Budget Approved of \$16,000 for a total project cost request of \$3,760,000.
GL Account Number	510-000-5012-6900	

Municipality of Port Hope

Capital Projects

Project	5012 Zone 1 Floating Storage		
Department	Water		
Version	04 Approved by Council	Year	2023

Gallery

S:\Resource Information\PSAB3150 Tangible Capital Assets\Pictures for FMW\Zone 1 Floating Storage.jpg



Municipality of Port Hope

Capital Projects

Project	5013 Upgrade P2503 Pump & Additional Generator		
Department	Water		
Version	04 Approved by Council	Year	2023

Description

Project Description

Hire a consultant to identify the specifications of a generator and the upgrade of booster pump 2503 at the Victoria St Booster Stn, as well as drafting the RFT for the immediate purchase and installation of these assets.

Project Justification

The Victoria St Booster Pumping Station is the most important piece of infrastructure in zone 2 (west side of MPH). All zone 2 water passes through the Booster Stn before being directed to the Jocelyn St Reservoir, Fox Rd Water Tower and to the water users.

Currently the Booster Station does not have standby emergency power generation and relies on one small capacity, diesel operated pump to provide water to Zone 2 during power failures. The existing facility does not have a ventilation system to remove fumes from the diesel pump, creating a carbon monoxide hazard for staff which does not meet current regulatory requirements. A 4000 watt generator is currently deployed during power failures to allow the SCADA system to function in order to communicate with the Water Plant. As the west end of Port Hope continues to develop and as fire flow demands increase, there's a huge need for a reliable Booster Pumping Station.

Booster Pump 3 (P2503) is a diesel and electric operated pump. The diesel motor has surpassed it's useful life and is generally not an option for new applications. The pump portion of this asset is low capacity and needs to be upgraded to meet the current and future pumping needs of the Municipality, including fire flow demands. The Booster Pumping Station has one reliable pump and adding a second reliable, high capacity pump will greatly reduce the risks associated with zone 2.

This project was identified as a need during the most recent condition assessment (4 yrs ago), and was added to the current rate study to be implemented in 2022, as approved by Council.

Municipality of Port Hope

Capital Projects

Project	5013 Upgrade P2503 Pump & Additional Generator		
Department	Water		
Version	04 Approved by Council	Year	2023

Budget							
	Total	Prior Years	2023	2024	2025	2026	2027
Expenditures	226,000		226,000				
Funding							
Tax Levy							
Contrib fr Oper	126,000		126,000				
	126,000		126,000				
Gov't Grants							
Contrib fr OCIF FC R/F	100,000		100,000				
	100,000		100,000				
Funding Total	226,000		226,000				

Municipality of Port Hope

Capital Projects

Project	5013 Upgrade P2503 Pump & Additional Generator		
Department	Water		
Version	04 Approved by Council	Year	2023

Attributes		
Attribute	Value	Comment
Attributes		
Department	Water	
Project Type	New Asset	
Replacement Type	Replacement - Upgrade	
Tax Levy Allocation	Utilities	
Physical Boundary Location	Urban Port Hope	
Identified in any Council Approved Plan?	Yes	
Identify Council Approved Plan(s)	rate study	WF-1
Project Status	Ongoing	
Asset Management Plan (AMP)		
Existing Asset ID #	8275	Pump 2503 is an existing asset and generator is a new asset
Replacement Value Identified in AMP (\$)		
Replacement Year Identified in AMP		
Estimated Useful Life (in years)	30	
Future Annual Impact on AMP (Cost per year)		
Date		
Start Date	1-Feb-2022	
Completion Date	30-Nov-2022	
To be Completed by Finance		
Approval Status	Approved by Council	
GL Account Number		

Municipality of Port Hope

Capital Projects

Project	5018 Replace Truck 4 - Cube Van		
Department	Water		
Version	04 Approved by Council	Year	2023

Description

Project Description

Replace existing 20 year old Truck 4 - Cube Van.

Project Justification

This vehicle was built in 2003 and started being utilized by the Water Division in 2006 after being re-purposed. Truck 4 is the primary vehicle used for emergency situations such as water main breaks, fire hydrant repairs, etc and contains various spare parts and specialized tools for emergency work.

Truck 4 is well beyond its' useful life and requires upgrades to keep it on the road beyond 2023. The chassis is undersized for its' intended purpose which means reducing the amount of critical equipment and parts to maintain the appropriate CVOR (commercial vehicle operators registration) weight. The storage area is open to the drivers cab where staff breath in harmful gas/diesel/chemical fumes while driving.

The replacement vehicle will be larger in size and have an appropriate chassis for our day to day emergency needs. Truck 4 is vital to the Water Distribution Fleet and needs to be equipped for all emergency situations.

The 2020 rate study undervalued the cost of this replacement and additional funding can be used from the 2023 Truck 5 replacement (\$56,000) as it can be pushed out until 2024.

Municipality of Port Hope

Capital Projects

Project	5018 Replace Truck 4 - Cube Van		
Department	Water		
Version	04 Approved by Council	Year	2023

Budget							
	Total	Prior Years	2023	2024	2025	2026	2027
Expenditures	175,000		175,000				
Funding							
Utility Rates & Reserves							
Contrib fr Water R/F	175,000		175,000				
	175,000		175,000				
Funding Total	175,000		175,000				

Municipality of Port Hope

Capital Projects

Project	5018 Replace Truck 4 - Cube Van		
Department	Water		
Version	04 Approved by Council	Year	2023

Attributes		
Attribute	Value	Comment
Attributes		
Department	Water	
Project Type	Replacement	
Replacement Type	Replacement - Upgrade	
Tax Levy Allocation	Utilities	
Physical Boundary Location	Urban Port Hope	
Identified in any Council Approved Plan?	Yes	
Identify Council Approved Plan(s)	2020 Water and Wastewater Rate Study	
Project Status	To be Completed by End of Year	
Asset Management Plan (AMP)		
Existing Asset ID #	858	
Replacement Value Identified in AMP (\$)		
Replacement Year Identified in AMP		
Estimated Useful Life (in years)		
Future Annual Impact on AMP (Cost per year)		
Date		
Start Date	1-Feb-2023	
Completion Date	31-Dec-2023	
To be Completed by Finance		
Approval Status	Approved by Council	
GL Account Number		

Municipality of Port Hope

Capital Projects

Project	5019 Backpulse Pump upgrades		
Department	Water		
Version	04 Approved by Council	Year	2023

Description

Project Description

Refurbish wearable components on membrane filtration Backpulse Pump A and B.

Project Justification

Backpulse pump A and B are critical pumps which are used to backwash the membrane filters. The Water Treatment Plant houses 4 Trains and each train contains 144 membrane module filters. Each train backwashes every 25-90 minutes. Backwashing consists of reversing the flow of water through the membranes to remove contaminants, dirt, debris, etc.

The backpulse pumps were both installed in 2005 and have not received an full overhaul in 17 plus years. If these pumps were to both fail, the Municipality would be without filtered water in 1-2 days.

Municipality of Port Hope

Capital Projects

Project	5019 Backpulse Pump upgrades		
Department	Water		
Version	04 Approved by Council	Year	2023

Budget							
	Total	Prior Years	2023	2024	2025	2026	2027
Expenditures	22,000		22,000				
Funding							
Utility Rates & Reserves							
Contrib fr Water R/F	22,000		22,000				
	22,000		22,000				
Funding Total	22,000		22,000				

Municipality of Port Hope

Capital Projects

Project	5019 Backpulse Pump upgrades		
Department	Water		
Version	04 Approved by Council	Year	2023

Attributes		
Attribute	Value	Comment
Attributes		
Department	Water	
Project Type	Betterment	
Replacement Type	Replacement - Similar	
Tax Levy Allocation	Utilities	
Physical Boundary Location	Urban Port Hope	
Identified in any Council Approved Plan?	Yes	
Identify Council Approved Plan(s)	2020 Water and Wastewater Rate Study	
Project Status	To be Completed by End of Year	
Asset Management Plan (AMP)		
Existing Asset ID #	1187 and 1188	
Replacement Value Identified in AMP (\$)		
Replacement Year Identified in AMP		
Estimated Useful Life (in years)		
Future Annual Impact on AMP (Cost per year)		
Date		
Start Date	6-Mar-2023	
Completion Date	6-Oct-2023	
To be Completed by Finance		
Approval Status	Approved by Council	
GL Account Number		

Municipality of Port Hope

Capital Projects

Project	5020 Drain recirculation Pump Refurbishment		
Department	Water		
Version	04 Approved by Council	Year	2023

Description

Project Description

Refurbish Drain Recirculation Pump A and B.

Project Justification

Drain Recirculation Pump A and B are critical pumps which are used to drain the membrane filtration tanks, neutralize chemical cleans and recirculate the neutralized membrane tank water. The Water Treatment Plant houses 4 trains and each train contains 144 membrane module filters. Each train uses these pumps daily for various membrane maintenance processes.

These pumps were installed in 2005 and have not received an full overhaul in 17 plus years. If these pumps were to both fail, the Water Treatment Plant would not be able to chemically clean it's membranes, drain solids during high turbidity events or perform more rigorous and highly concentrated cleans resulting in the inability to produce drinking water.

Municipality of Port Hope

Capital Projects

Project	5020 Drain recirculation Pump Refurbishment		
Department	Water		
Version	04 Approved by Council	Year	2023

Budget							
	Total	Prior Years	2023	2024	2025	2026	2027
Expenditures	18,000		18,000				
Funding							
Utility Rates & Reserves							
Contrib fr Water R/F	18,000		18,000				
	18,000		18,000				
Funding Total	18,000		18,000				

Municipality of Port Hope

Capital Projects

Project	5020 Drain recirculation Pump Refurbishment		
Department	Water		
Version	04 Approved by Council	Year	2023

Attributes		
Attribute	Value	Comment
Attributes		
Department	Water	
Project Type	Betterment	
Replacement Type	Replacement - Similar	
Tax Levy Allocation	Utilities	
Physical Boundary Location	Urban Port Hope	
Identified in any Council Approved Plan?	Yes	
Identify Council Approved Plan(s)	2020 Water and Wastewater Rate Study	
Project Status	To be Completed by End of Year	
Asset Management Plan (AMP)		
Existing Asset ID #	1189 and 1190	
Replacement Value Identified in AMP (\$)		
Replacement Year Identified in AMP		
Estimated Useful Life (in years)		
Future Annual Impact on AMP (Cost per year)		
Date		
Start Date	6-Mar-2023	
Completion Date	6-Oct-2023	
To be Completed by Finance		
Approval Status	Approved by Council	
GL Account Number		

Municipality of Port Hope

Capital Projects

Project	5021 Highlift Pump 4305 Inspection and Refurbishment		
Department	Water		
Version	04 Approved by Council	Year	2023

Description

Project Description

Inspection and Refurbishment of Highlift Pump 4305.

Project Justification

Highlift pump 4305 (HLP#5) is a 250hp vertical turbine pump used to pump potable water from the Water Treatment Plant to the water distribution system for domestic and fire fighting needs.

In September 2011, HLP#5 experienced catastrophic failure when its' impeller disintegrated, resulting in the inability to pump water and ultimately creating a declared Municipal Emergency where water restrictions were introduced.

In early 2013, HLP#5 was refurbished with stainless steel impellers and has not been inspected since the installation. This project involves a thorough inspection of the impellers and wearable components such as: spider bearings, rubbers, glands, pump shafts/sleeves and epoxy coatings. This is to ensure that the pump stays within its' pump curve for optimal performance. Parts will be replaced accordingly. This inspection will set the approximate time line for future inspections, which is expected to be at 10-20 year intervals moving forward.

This was listed as an Operating project in the 2020 Rate Study and has been changed to a Capital project.

Municipality of Port Hope

Capital Projects

Project	5021 Highlift Pump 4305 Inspection and Refurbishment		
Department	Water		
Version	04 Approved by Council	Year	2023

Budget							
	Total	Prior Years	2023	2024	2025	2026	2027
Expenditures	42,300		42,300				
Funding							
Utility Rates & Reserves							
Contrib fr Water R/F	42,300		42,300				
	42,300		42,300				
Funding Total	42,300		42,300				

Municipality of Port Hope

Capital Projects

Project	5021 Highlift Pump 4305 Inspection and Refurbishment		
Department	Water		
Version	04 Approved by Council	Year	2023

Attributes		
Attribute	Value	Comment
Attributes		
Department	Water	
Project Type	Betterment	
Replacement Type	Replacement - Similar	
Tax Levy Allocation	Utilities	
Physical Boundary Location		
Identified in any Council Approved Plan?	Yes	
Identify Council Approved Plan(s)	2020 Water and Wastewater Rate Study (originally operating under account 510-500-0000-6302 but later changed to capital)	
Project Status	To be Completed by End of Year	
Asset Management Plan (AMP)		
Existing Asset ID #	1118	
Replacement Value Identified in AMP (\$)		
Replacement Year Identified in AMP		
Estimated Useful Life (in years)		
Future Annual Impact on AMP (Cost per year)		
Date		
Start Date	6-Feb-2023	
Completion Date	6-Apr-2023	
To be Completed by Finance		
Approval Status	Approved by Council	
GL Account Number		

Municipality of Port Hope

Capital Projects

Project	5022 Neptune Water Meter Replacement Program		
Department	Water		
Version	04 Approved by Council	Year	2023

Description
Project Description
<p>Water meter replacement program using Neptune Radio Read technology, including all network upgrades. Phase 1 2023 - 263 Industrial, Commercial, Institutional meters (ICI) only (117 meters 1.5"-10", 28 meters 1" and 118 meters 5/8").</p> <p>Phase 2 2024/2025 - 4600 Residential meters plus network upgrades</p>
Project Justification
<p>The Municipality is currently losing upwards of 1 million dollars per year and on pace to replace water meters at a 50 year interval based on the existing Operating Replacement Program. The general life expectancy of a water meter while maintaining accuracy levels above 90% is 17-20yrs. There are 1523 meters beyond the 20yr mark and 2,176 meters that will be in service beyond 20yrs in 2026.</p> <p>Residential meters makeup the bulk of the MPH meters at approximately 4900, whereas ICI adds another 263 meters with some being over 40 years old and 60% accurate at best. Using the following methodology with brand new meters that are near 100% accurate shows an annual Water Revenue of \$4,313,000 vs the 2022 projected revenue within the Financial Plan prepared by Watson and Assoc of \$3,238,818 (2022 Water User rate of \$2.27/m³ x Anticipated 2022 Annual Flows of 1,900,000 m³ = \$4,313,000) adding a cost recovery \$1,074,000 per year. This results in a 3 year payback on the investment and an additional \$15,000,000 in cost recovery beyond the payback period over a 20yr period. (Note: Wastewater revenue will increase as part of this project).</p> <p>The Municipality started installing Neptune Radio Meters in new developments and Welcome a few years ago. Staff can obtain significant and beneficial data such as hourly water usage and trending graphs which not only helps Staff troubleshoot high water consumption concerns but allows the customer to see "real life" numbers. This project would eventually allow customers to view water meter thresholds and set alerts using an app where desired, notifying the customer of high consumption events. Radio read meters would reduce the workload on both Water Billing and Water Operations Staff by: reducing meter read pickups, provide data within minutes for better customer service, obtain information from the office vs driving to site, provide accurate meter reads (less re-reads/no reads/estimates), less processing time for preparing letters for no reads and estimates. The Municipality would no longer spend \$24,000/year in contracted services for meter reads, while all reads would be instantaneous and in-house.</p> <p>Funding Note: This project is not identified in the 2020 Rate Study, however funding can be offset from the Dorset Street Replacement Project which has successfully obtained approximately 3 million dollars in grant money.</p>

Municipality of Port Hope

Capital Projects

Project	5022 Neptune Water Meter Replacement Program		
Department	Water		
Version	04 Approved by Council	Year	2023

Budget							
	Total	Prior Years	2023	2024	2025	2026	2027
Expenditures	440,000		440,000				
Funding							
Utility Rates & Reserves							
Contrib fr Water R/F	440,000		440,000				
	440,000		440,000				
Funding Total	440,000		440,000				

Municipality of Port Hope

Capital Projects

Project	5022 Neptune Water Meter Replacement Program		
Department	Water		
Version	04 Approved by Council	Year	2023

Attributes		
Attribute	Value	Comment
Attributes		
Department	Water	
Project Type	Replacement	
Replacement Type	Replacement - Upgrade	
Tax Levy Allocation	Utilities	
Physical Boundary Location	Urban Port Hope	
Identified in any Council Approved Plan?	No	
Plan?		
Identify Council Approved Plan(s)		
Project Status	Completed in Prior Year	
Asset Management Plan (AMP)		
Existing Asset ID #	water meters - residential and ICI	
Replacement Value Identified in AMP (\$)		
Replacement Year Identified in AMP		
Estimated Useful Life (in years)	17-20	
Future Annual Impact on AMP (Cost per year)		
Date		
Start Date	2-Oct-2023	
Completion Date	7-Mar-2024	
To be Completed by Finance		
Approval Status	Approved by Council	
GL Account Number		

Municipality of Port Hope

Capital Projects

Project	5023 CIP Immersion Heater replacement		
Department	Water		
Version	04 Approved by Council	Year	2023

Description

Project Description

Replacement of the Clean In Place (CIP) tank immersion heater.

Project Justification

The CIP Heater is used to heat the water for weekly chemically enhanced membrane filtration cleans. Heating the water to 35 degrees Celsius allows the membrane pores to expand, creating optimal cleaning conditions to ensure the longevity of the membranes. Based on past experience, the CIP immersion heater should be replaced 8-10 years and the existing unit is at the end of its' useful life. There is no redundancy in place for the CIP Heater and forgoing heated cleans could result in permanent recovery loss resulting in premature failure of the membrane filters. Supply chain issues have created challenges where this product may not be immediately available in an emergency, resulting in up to 52 weeks to receive a replacement.

Municipality of Port Hope

Capital Projects

Project	5023 CIP Immersion Heater replacement		
Department	Water		
Version	04 Approved by Council	Year	2023

Budget							
	Total	Prior Years	2023	2024	2025	2026	2027
Expenditures	25,000		25,000				
Funding							
Utility Rates & Reserves							
Contrib fr Water R/F	25,000		25,000				
	25,000		25,000				
Funding Total	25,000		25,000				

Municipality of Port Hope

Capital Projects

Project	5023 CIP Immersion Heater replacement		
Department	Water		
Version	04 Approved by Council	Year	2023

Attributes		
Attribute	Value	Comment
Attributes		
Department	Water	
Project Type	Replacement	
Replacement Type	Replacement - Similar	
Tax Levy Allocation	Utilities	
Physical Boundary Location	Urban Port Hope	
Identified in any Council Approved Plan?	Yes	
Identify Council Approved Plan(s)	2020 Water and Wastewater Rate Study	
Project Status		
Asset Management Plan (AMP)		
Existing Asset ID #	1112	
Replacement Value Identified in AMP (\$)		
Replacement Year Identified in AMP		
Estimated Useful Life (in years)	8-10 years	
Future Annual Impact on AMP (Cost per year)		
Date		
Start Date	9-Jan-2023	
Completion Date	1-Nov-2023	
To be Completed by Finance		
Approval Status	Approved by Council	
GL Account Number		

Municipality of Port Hope

Capital Projects

Project	5024 Victoria Booster Stn Electrical and Structural Upgrades		
Department	Water		
Version	04 Approved by Council	Year	2023

Description

Project Description

Upgrade electrical and structural items at the Victoria Booster Station as per the 2022 condition assessment recommendations.

Project Justification

In 2022, Aecom was hired to conduct a condition assessment of the Victoria Street Booster Pumping Station (BPS). The BPS is the most important asset in Zone 2 (West end of Port Hope) as it maintains system pressure and fills the Fox Road Water Tower as well as the Jocelyn Street Reservoir for fire fighting needs.

As per the Condition Assessment Report, the items listed below should be repaired or replaced:

- removal of chimney
- foundation crack repairs
- replacement of corroded flange hardware
- Arc Flash study
- Several electrical devices are >60yrs of age and should meet current codes and standards
- Repairs of grounding system/wires
- Move pressure gauges away from electrical boxes

Municipality of Port Hope

Capital Projects

Project	5024 Victoria Booster Stn Electrical and Structural Upgrades		
Department	Water		
Version	04 Approved by Council	Year	2023

Budget							
	Total	Prior Years	2023	2024	2025	2026	2027
Expenditures	47,000		47,000				
Funding							
Utility Rates & Reserves							
Contrib fr Water R/F	47,000		47,000				
	47,000		47,000				
Funding Total	47,000		47,000				

Municipality of Port Hope

Capital Projects

Project	5024 Victoria Booster Stn Electrical and Structural Upgrades		
Department	Water		
Version	04 Approved by Council	Year	2023

Attributes		
Attribute	Value	Comment
Attributes		
Department	Water	
Project Type	Betterment	
Replacement Type	Replacement - Upgrade	
Tax Levy Allocation	Utilities	
Physical Boundary Location	Urban Port Hope	
Identified in any Council Approved Plan?	Yes	
Identify Council Approved Plan(s)	2020 Water and Wastewater Rate Study	
Project Status		
Asset Management Plan (AMP)		
Existing Asset ID #	8273	
Replacement Value Identified in AMP (\$)		
Replacement Year Identified in AMP		
Estimated Useful Life (in years)		
Future Annual Impact on AMP (Cost per year)		
Date		
Start Date	11-Apr-2023	
Completion Date	31-Oct-2023	
To be Completed by Finance		
Approval Status	Approved by Council	
GL Account Number		