

## Tri-County WTP

(2022-Year Recommended Capital/Major Maintenance from 2023 to 2028)

The Ontario Clean Water Agency has identified the following capital projects/major maintenance for your review and approval.

Ref.	Scope of Work	Cost Estimate						Compliance	DWQMS RA Outcome*	Health & Safety	Repair / Maintenance	Lifecycle Replacement	Improvement	Spare Parts Inventory	Approved by Client	Rationale for Project
		2023	2024	2025	2026	2027	2028									
	<b>Treatment Plant</b>															
1	Intake Structure Inspection				\$10,000	\$0			●	●	●				●	Last inspected in 2021. Recommended every 5 years
2	pH Control System-Operating Costs	\$13,000						●			●			●		Annual Costs for O&M of system
3	SCADA/PLC Upgrades-Based off of 2021 Report	\$221,000	\$166,000	\$47,338	\$0	\$0	\$0	●			●		●			SCADA/PLC/Software Upgrades based on 2021 Study
4	Chemical Transfer Pump Replacement	\$4,000		\$4,000		\$4,000						●				Transfer Pumps for CIP System. Life cycle replacement
5	Chlorine/Peroxide Feed Pump Replacement	\$8,000					\$8,000	●				●				Life Cycle Replacement
6	Chlorine Analyzer Replacement	\$6,500	\$6,500	\$6,500	\$6,500	\$6,500	\$6,500	●	●			●	●			Life Cycle Replacement, Technology Improvements
7	Chlorine Gas Dosing System	\$7,500	\$7,500	\$7,500	\$7,500	\$7,500	\$7,500		●	●	●	●	●	●		Continous Improvement/Inspection/Replacement of old piping
8	UV System	\$4,000	\$4,000	\$4,000	\$4,000	\$20,000	\$20,000		●		●	●		●		Requires annual service and complete rebuild every 5 years
9	Storage Tank Inspections		\$10,000						●		●					Inspection recommended every 5 years
10	Storage Tanks Interior re-sealing			\$40,000							●					Recommended in 2019 inspection for 2025
11	Air Manifold Airline and Card replacement	\$11,000				\$12,000	\$12,000					●				4 year Life Cyle Replacement
12	Naturlized Settling Ponds-Phragmites Control										●		●			Continued Control of invasive Phragmites
13	PALL Health Check	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000				●		●			Annual Health Check on PALL Membrane System
14	Replacement of PALL Membranes	\$300,000	\$300,000	\$300,000	\$300,000	\$0	\$0		●			●				Life Cycle Replacement
15	Assets Management Plan	\$15,000														
16	Recommendations from "Yellow Water Study"															
17	Replacing SCBA Equipment	\$8,000								●		●				Current equipment out of date
	<b>Total Estimate - Recommended Capital</b>	<b>\$610,000</b>	<b>\$506,000</b>	<b>\$421,338</b>	<b>\$340,000</b>	<b>\$62,000</b>	<b>\$66,000</b>									
	<b>Highlift and Lowlift Pumps &amp; Motors</b>															
1	Lowlift motors: Replacement of Soft Starters with VFD's	\$25,000										●	●			Continued upgrading to remaining Pump
2	Highlift motors: Replacement of Soft Starters with VFD's	\$40,000										●	●			Continued upgrading to remaining Pump
3	Highlift motor/pump rebuild					\$15,000	\$15,000		●		●					Rebuilds after regular wear and tear
4	Lowlift motor/pump rebuild					\$20,000	\$20,000		●		●					Rebuilds after regular wear and tear
	<b>Total Estimate - Recommended Capital</b>	<b>\$65,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$35,000</b>	<b>\$35,000</b>									
	<b>Structural (includes piping/control, PRV's, Valves, Building envelope, HVAC, chambers)</b>															
1	Raw wetwell maintenance/repairs	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000		●		●		●			Annual contingency for clean out
2	HVAC Repairs or Upgrades	\$5,000		\$5,000		\$75,000					●	●				Repairs and Maintenance to HVAC
3	Settling Tank Clean Outs	\$15,000			\$15,000			●								Sediment Tanks need cleaning every 3 years
4	Lowlift and Associated Building Repairs Fund (IRC BCA Recommendations)		\$201,278	\$15,489	\$92,318	\$71,426	\$15,549			●	●	●	●			Based off of IRC BCA Report completed 2021
5	WTP Building Fund (IRC BCA Recommendations)	\$9,898	\$26,593	\$70,598	\$44,481	\$11,391	\$2,520			●	●	●	●			Based off of IRC BCA Report completed 2021
6	Discharge Header: Repair/Replace failing stainless steel piping	\$50,000	\$50,000						●		●	●	●			Stainless steel throughout plant is failing.
	<b>Total Estimate - Recommended Capital</b>	<b>\$89,898</b>	<b>\$287,871</b>	<b>\$101,087</b>	<b>\$161,799</b>	<b>\$167,817</b>	<b>\$28,069</b>									
	<b>Standpipe, Transmission Main, Remote Chambers</b>															
1	West Lorne Standpipe Refurbishment/Repainting Reserve Contribution				\$1,350,000							●	●			The 2020 Inspection identified that the interior and exterior surfaces require full removal and replacement within 3 to 6 years timeline. Proposes to create reserve for funding of this project. Estimated total project cost of \$1,350,000
2	Remote Chamber Refurbishment	\$30,000	\$30,000								●	●	●			Continued Upgrades to Remote Chambers
3	West Lorne Standpipe Inspection			\$12,000				●	●							Recommended to Inspect every 5 Years.
4	UPS Replacement	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500					●				Life cycle replacement to critical UPS
	<b>Total Estimate - Recommended Capital</b>	<b>\$31,500</b>	<b>\$31,500</b>	<b>\$13,500</b>	<b>\$1,351,500</b>	<b>\$1,500</b>	<b>\$1,500</b>									

## Tri-County WTP

(2022-Year Recommended Capital/Major Maintenance from 2023 to 2028)

The Ontario Clean Water Agency has identified the following capital projects/major maintenance for your review and approval.

Ref.	Scope of Work	Cost Estimate						Compliance	DWQMS RA Outcome*	Health & Safety	Repair / Maintenance	Lifecycle Replacement	Improvement	Spare Parts Inventory	Approved by Client	Rationale for Project
		2023	2024	2025	2026	2027	2028									
	Operations and Maintenance Contingency															
1	Strainers:Purchase of Critical Spare Parts	\$5,000	\$5,000	\$5,000					●					●		
2	Smart Positioner Inventory	\$5,000		\$5,000		\$5,000						●		●		Critical Component for filter operation
3	Pneumatic Actuators	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000		●			●		●		Critical Component for filter operation
4	Rack Butterfly valves	\$2,000		\$2,000		\$2,000						●		●		Critical Component for filter operation
5	UPS Replacement	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500					●				Important to replace before failure or have inventory
6	In-plant Process Motors/Pumps	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000		●			●				Placeholder for emergency repairs
7	Emergency Misc.	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000				●					Placeholder for emergency repairs
	Total Estimate - Recommended Capital	\$32,500	\$25,500	\$32,500	\$20,500	\$27,500	\$20,500									
	Grand Total	\$828,898	\$850,871	\$568,425	\$1,873,799	\$293,817	\$151,069									
	Contingency-5%	\$41,445	\$42,544	\$28,421	\$26,190	\$14,691	\$7,553									
	Total Capital Estimate	\$870,343	\$893,415	\$596,846	\$1,899,989	\$308,508	\$158,622									

2023 Recommended Capital Presented by:  
2023Recommended Capital Approved by:

Name: Sam Smith  
Name

\* **NOTE** : a requirement of DWQMS v. 2.0 is to consider the outcomes of the risk assessment (RA) documented under Element 8 as part of the system's infrastructure review

Legend:

H

High priority recommended to be completed in upcoming year

M

Medium priority recommended to be completed in 1 to 3 years

L

Low priority recommended to be completed in years 4 to 5