

## THE CORPORATION OF THE TOWNSHIP OF SOUTHWOLD

## BY-LAW No. 2020-67

# A BY-LAW TO ADOPT THE 2021 SANITARY SEWER SYSTEM OPERATING AND CAPTIAL BUDGETS

**WHEREAS** it is necessary for the Council of the Township of Southwold, pursuant to Section 290 (1) of the Municipal Act 2001, S.O. 2001, c.25, to prepare and adopt a budget including estimates of all sums required during the year for the purposes of the municipality;

**AND WHEREAS** the Council for the Township of Southwold desires to adopt Operating and Capital Budgets for the Southwold Sanitary Sewer System.

# NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE TOWNSHIP OF SOUTHWOLD ENACTS AS FOLLOWS:

- 1. That the 2021 Sanitary Sewer System Operating Budget, attached as Schedule "A", and forming part of this by-law, is hereby adopted.
- 2. That the 2021 Sanitary Sewer System Capital Budget, attached as Schedule "B", and forming part of this by-law, is hereby adopted.

READ A FIRST AND SECOND TIME, CONSIDERED READ A THIRD TIME AND FINALLY PASSED THIS 23<sup>rd</sup> DAY OF NOVEMBER, 2020.

Mayor Grant Jones

Clerk

Ken Loveland

## **Sanitary Operating**

Sanitary Operating	Account	2020 Budget	2021 Budget	\$ Variance	% Variance	Notes	2022 Forecast	2023 Forecast
Revenue			A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
			THE THE		La Take	Ferndale/Lynhurst - offset below with Transfer to		
	Sewer Fees - Net Capital Portion	(\$50,000)	(\$41,958)	\$8,042	-16.08%	Reserve	(\$43,216)	(\$44,513
01-4411-0385	Sewer Fees - WWTP Operating Portion	(\$46,649)	(\$51,020)	(\$4,371)	9.37%		(\$52,550)	(\$54,127
01-4411-0383	Sewer Investment Income	(\$2,000)	(\$1,000)	\$1,000	-50.00%	Reserve Interest - offset below with Transfer to	(\$1,030)	(\$1,061
01-4411-0611	Transfer from sewer reserve	(\$87,851)	(\$101,556)	(\$13,705)	15.60%		(\$104,603)	(\$107,741
	Total Revenue	(\$186,500)	(\$195,533)	(\$9,034)	11.94%		(\$201,399)	(\$207,441
Expenses								
01-4411-1112	Rds Wages	\$1,500	\$1,000	(\$500)	-33.33%	Site Maint, Driveway	\$1,030	\$1,061
01-4411-1220	Training	\$500	\$500	\$0	0.00%	Misc. Training	\$515	\$530
01-4411-2120	Utilities	\$32,000	\$32,000	\$0	0.00%		\$32,960	\$33,949
01-4411-2140	Materials Supplies	\$15,000	\$12,500	(\$2,500)	-16.67%	Consumables	\$12,875	\$13,261
01-4411-2180	Property maintenance	\$1,500	\$1,500	\$0	0.00%		\$1,545	\$1,591
01-4411-2700	Rds Machine Time to Talbotville Sewer	\$1,000	\$1,000	\$0	0.00%	Site Maint, Driveway	\$1,030	\$1,061
01-4411-3140	Insurance	\$2,500	\$2,575	\$75	3.00%		\$2,652	\$2,732
01-4411-3150	Legal	\$0	\$2,500	\$2,500	0.00%		\$2,575	\$2,652
01-4411-3160	System Maintenance	\$20,000	\$35,000	\$15,000	75.00%	includes annual items as per OCWA Recommendations \$29,400	\$36,050	\$37,132
01-4411-3300	Contracted Services	\$38,000	\$45,000	\$7,000	18.42%	OCWA new agreement, add'l services, Waste Coll	\$46,350	\$47,741
01-4411-3302	Wastewater Testing	\$9,000	\$9,000	\$0		Based on Actuals	\$9,270	\$9,548
01-4411-4200	Plans and studies	\$13,500	\$10,000	(\$3,500)	-25.93%	Misc Studies, engineering	\$10,300	\$10,609
01-4411-6100	Transfer to sewer reserve	\$52,000	\$42,958	(\$9,042)	-17.39%	investment int and quarterly charges transferred to reserve-FERNDALE/LYNHURST SEWER-offset above	\$44,246	\$45,574
	Total Expenses	\$186,500	\$195,533	\$9,033	23.26%		\$201,399	\$207,441
	Net Operating (Revenue)/Expense	\$1	(\$1)	\$36,838	100.00%		(\$1)	(\$1

### Assumptions

62 Talbotville Connections

51 New connections Talbotville

208 Connections Ferndale

168 m3 per HH as per Water/Wastewater Study

Rates as per the Water/Wastewater Study

# **Wastewater Capital**

		Funding 5	Source	]
Capital Items and Projects	Budget	Reserve	Other	Notes
2020 Capital				
Talbot Meadows Subdivision - Engineering	\$25,000	\$25,000		Sewer Reserve
Lynhurst Reconstruction				Sewer Reserve -if needed during reconstruction
OCWA Recommendations	\$38,500	\$38,500		Sewer Reserve
Acoustic Audit - failed in 2018, needs to be redone	\$5,000	\$5,000		Sewer Reserve
Forcemain from 2019	\$1,300,000		\$1,300,000	To be funded by future connections
2020 Total	\$1,368,500	\$68,500	\$1,300,000	
2021 Capital		<del>                                     </del>		
Talbot Meadows Reconstruction - install Sewers	\$920,000		\$920,000	To be funded by future connections, waiting on updat
Lynhurst Reconstruction (from2020)				Sewer Reserve -if needed during reconstruction, could
OCWA Recommendations - Addl Membrane	\$155,000		\$155,000	To be funded by future connections
Talbotville Gore Trunk to Enclave	\$600,000			To be funded by future connections
2021 Total	\$1,675,000	\$0	\$1,675,000	The second secon
2022 Capital		-		
Forcemain	\$2,500,000		\$2,500,000	To be funded by future connections
OCWA Recommendations	\$10,000	\$10,000	42,300,000	Sewer Reserves/Connection Fees
2022 Total	\$2,510,000	\$10,000	\$2,500,000	
2023 Capital				
WWTP Expansion needed when over 500 m3	\$2,000,000		\$2,000,000	To be funded by future connections
OCWA Recommendations	\$5,000	\$5,000	+=,===,===	Sewer Reserves/Connection Fees
2023 Total	\$2,005,000	\$5,000	\$2,000,000	
2024 Capital				
OCWA Recommendations	\$10,000	\$10,000		Sewer Reserves/Connection Fees
2024 Total	\$10,000	\$10,000	\$0	
2025 Capital				
OCWA Recommendations	\$5,000	\$5,000		Sewer Reserves/Connection Fees
2025 Total	\$5,000	\$5,000	\$0	
2026 Capital				
OCWA Recommendations	\$5,000	\$5,000		Sewer Reserves/Connection Fees
2026 Total	\$5,000	\$5,000	\$0	

One Yonge Street, Suite 1700 TEL: 1-800-667-6292 Toronto, Ontario M5E 1E5

FAX: 416-314-8300 www.ocwa.com

October 5th, 2020

Ken Loveland Cao/Clerk Towship of Southwold 35663 Fingal Line Ontario, Canada NOL 1KO

RE: Talbotville Wastewater Treatment Plant

Dear Ken

On behalf of the Ontario Clean Water Agency (OCWA), we have enclosed a rolling six-year list of major maintenance recommendations as per our Services Agreement with a start date of July 11th, 2019. OCWA suggests the following improvements/upgrades to ensure the long-term health and operation of the Talbotville Wastewater Treatment Plant.

At the next scheduled meeting, OCWA's Senior Operations Manager will meet with yourself to discuss the recommendations, projected expenses, and to decide on a course of action. Dialogue with and approvals from the Township of Southwold are key components of the process. Please find a summary of the report in the chart below.

Talbotville Wastewater Treatment Plant	2021	2022	2023	2024	2025	2026
Installation of a flowmeter on the inlet by-pass line back to eq tank 302	\$10,000	\$ -	\$ -	\$ -	\$ -	\$ -
Membrane pump discharge check valves	\$5,000	\$ -	\$ -	\$ -	\$ -	\$ -
Membrane room: purchase floor dehumidification units	\$1,500	\$ -	\$ -	\$ -	\$ -	\$ -
Influent flowmeter: piping modification	\$ 3,500	\$ -	\$ -	\$ -	\$ -	\$ -
Screenings Room: Activated carbon. Replacement of carbon in both drums	\$ -	\$ 5,000	\$ -	\$ 5,000	\$ -	\$ 5,000
Raw equalization tanks: cleaning	\$4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000
Plant diesel generator: annual inspection	\$650	\$650	\$650	\$650	\$650	\$650
Backflow preventers: annual verification/inspection	\$600	\$600	\$600	\$600	\$600	\$600
Influent and effluent flowmeters: annual verifications	\$750	\$750	\$750	\$750	\$750	\$750
Screenings room: screenings bags	\$300	\$300	\$300	\$300	\$300	\$300
Membranes: cleaning of membranes	\$ 10,000	\$ 20,000	\$20,000	\$ 20,000	\$ 20,000	\$20,000
Plant chemicals: (Chlorine, Alum, Caustic)	\$6,000	\$6,500	\$7,000	\$7,500	\$8,000	\$8,500
Headworks check valves and gate valves	\$10,000	\$ -	\$ -	\$ -	\$ -	\$ -
Membrane room: lifting equipment annual inspection	\$500	\$500	\$500	\$500	\$500	\$500
Effluent UV System: bulb and sleeve replacement	\$500	\$0	\$500	\$0	\$500	\$0

Plant blowers: maintenance items including air filters and annual oil changes	\$500	\$500	\$500	\$500	\$500	\$500	
Screenings Room: H2S gas detector annual inspection/verification	\$600	\$600	\$600	\$600	\$600	\$600 \$7,500	
Sludge/biosolids: removal and disposal	\$5,000	\$5,500	\$6,000	\$6,500	\$7,000		
Membranes: module air diffusers	\$5,000	\$ -	\$ -	\$ -	\$ -	\$ -	
Purchase of membranes on unused side	\$115,000	\$ -	\$ -	\$ -	\$ -	\$ -	
Contingency: items not planned for such as possible equipment failure(blowers, motors, pumps,switches)	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	

## Total Capital Estimate \$184,400 \$49,900 \$46,400 \$51,900 \$48,400 \$53,900

As your service provider, OCWA has a comprehensive understanding of the strengths, unique issues and challenges associated with operating your wastewater facility. It is OCWA's intention to work with the Township to determine the scope, budget, and timelines to complete any approved work.

We look forward to continuing to work with you as a trusted partner and advisor in the years to come.

Sincerely,

Mike Taylor Senior Operations Manager



# The Corporation of The Township of Southwold

### (6-Year Recommended Capital/Major Maintenance from 2021 to 2026)

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

Ref.	Scope of Work	2021	202	2	2023	2024		2025		2026	Compilance	lealth & Safety	Repair / Maintenance	Herycle Replecement	тргоvаment	Spare Parts nventory	Approved by Client	Rationale for Project
	Talbotville Wastewater Treatment Plant		21/1/4	(N/ 168)			E-84-80				100040				To be to be			Rationale for Figure
	Installation of a flowmeter on the inlet by-pass line back to eq tank 302	\$10,000	\$	-	\$	- \$	-	\$	- \$	-							-	Recommend to install a magmeter on the by-pass line that returns back to tank 302 to measure when the drum is short circuiting into tank 302.
	Membrane pump discharge check valves	\$5,000	\$	-	\$	- \$	-	\$	- \$									Two plastic wafer disk check valves have failed and require replacement. Recommend to replace and upgrade all three plastic wafer disk check valves with suitable valves that can be properly serviced/rebuilt as required.
	Membrane room: purchase floor dehumidification units	\$1,500	\$	-	\$	- \$	-	\$	- \$									As a result of significant mositure in membrane room, OCWA recommends to purchase two floor dehumidification units to remove moisture in room. A long term permanent solution should be considered.
	Influent flowmeter: piping modification	\$ 3,500	\$		\$	- \$		\$	- \$									The 2019 verification completed by Pierce indicates that draining of the influent raw line will cause issues over the long term with the sensor in the flowtube. It is recommended that sensor be continually submerged in water.
	Screenings Room: Activated carbon. Replacement of carbon in both drums	\$ -	\$	5,000	\$	- \$ 5,0	000	\$	- \$	5,000								Carbon material was replaced in both carbon drums in 2020 and a device wa installed to determine remaining life. Required to be replaced approximately i 2-3 years.
	Raw equalization tanks: cleaning	\$4,000	\$	4,000	\$ 4,000	\$ 4,0	000	\$ 4,000	5	4,000								OCWA recommends that at least two times per year, that the raw eq tanks 30 and 302 be cleaned out and pressure washed to the bottom. Regular cleanin prevents possible damage to the pumps and blockages of downstream piping and valves and the screenings drum, Last cleaned in April 2020.
	Plant diesel generator: annual inspection	\$650		\$650	\$650	\$6	350	\$650	0	\$650								The stand-by generator is required to annually inspected as per the requirements of the Environmental Compliance Approval (ECA). This function completed by Southwold Township staff.
	Backflow preventers: annual verification/inspection	\$600		\$600	\$600	\$6	300	\$600	0	\$600								The two on site backflow preventers are required to be tested annually as per
	Influent and effluent flowmeters: annual verifications	\$750		\$750	\$750	\$	50	\$750	0	\$750								the Township's by-law.  All flowmeters are required to be verified on an annual basis as per the Environmental Compliance Approval (ECA).
0	Screenings room: screenings bags	\$300		\$300	\$300	\$3	300	\$300		\$300								Screenings bags are required to be regularly replaced as they collect unwants materials from entering the treatment plant. Two to four bags get replaced on a weekly basis.
1	Membranes: cleaning of membranes	\$ 10,000	\$ 2	0,000	\$20,000	\$ 20,0	000	\$ 20,000		\$20,000								Membranes were last cleaned by OCWA in summer 2020. Membranes are required to be cleaned at a minimum annually of if membranes are performin poorly. Cleaning also consists of using chlorine and citric acid. 2021 is based on two membranes only and 2022 and beyond is based on cleaning of 4 membranes annually.
2	Plant chemicals: (Chlorine, Alum, Caustic)	\$6,000	\$	6,500	\$7,000	\$7,5	000	\$8,000		\$8,500								Chemicals required for phosphorus removal, and ph adjustment and cleaning of the membranes during backwashes. Ongoing operational requirement.
3	Headworks check valves and gate valves	\$10,000	\$	-	\$	· \$	-	\$	- \$									This work includes for upgrading the existing plastic wafer disk check valves of the three head works pumps, replacement of the three isolation valves. Upgraded check valves allow for proper maintenance and inspection.
4	Membrane room: lifting equipment annual inspection	\$500		\$500	\$500	\$5	000	\$500		\$500								Membrane room lifting equipment requires annual inspection/verification by
5	Effluent UV System: bulb and sleeve replacement	\$500		\$0	\$500		\$0	\$500		\$0		_			-			third party.  UV effluent bulbs and sleeves should be replaced every two years.
6	Plant blowers: maintenance items including air filters and annual oil changes	\$500		\$500	\$500	Sept. 19. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10	000	\$500		\$500								The wastewater plant has multiple blowers which require replacement of filter and annual replacement of oil.

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# The Corporation of The Township of Southwold

#### (6-Year Recommended Capital/Major Maintenance from 2021 to 2026)

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

Ref.					pllanca	Ith & Safety	air / ntenance	ycle	rovement	e Parts ntory	Approved by				
No.	Scope of Work	2021	2022	2023	2024	2025	2026	8	1	Rep	18 E	Ē	Spa	Client	Rationale for Project
17	Screenings Room: H2S gas detector annual inspection/verification	\$600	\$600	\$600	\$600	\$600	\$600								Screenings room H2S gas detector requires to be inspected semi-annually and verified by a third party.
18	Sludge/biosolids: removal and disposal	\$5,000	\$5,500	\$6,000	\$6,500	\$7,000	\$7,500								Generation of sludge/biosolids requires ongoing removal. Annual costs will increase as additional homes are connected into the treatment plant and chemicals will increase once using caking system which is anticipated to commence at around 100 CM/day.
19	Membranes: module air diffusers	\$5,000	\$ -	\$ -	\$ -	\$ -	\$ -								2020 inspection of membranes showed that diffusers in modules are partially failing and Newterra recommends to replace in the near future. Purchase one set of module diffusers in 2021 for replacement when module is cleaned again.
20	Purchase of membranes on unused side	\$115,000	\$ -	\$ -	\$ -	\$ -	\$ -								OCWA recommends to purchase and install the second set of membranes in 2021. This is recommended for continuity of plant operations and to prepare for future population increases and wastewater flows increase. Current ECA 500 CM/day and current cepacity with two unused trains is 250 CM/day.
21	Contingency: items not planned for such as possible equipment failure(blowers, motors, pumps,switches)	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000								Placeholder for unknown breakdowns of equipment.

2021 Recommended Capital Presented by: 2021 Recommended Capital Approved by:

Mike Taylor: Senior Operations Manager Dale LeBritton: Regional Hub Manager

Legend:

H M

High priority recommended to be completed in upcoming year Medium priority recommended to be completed in 1 to 3 years Low priority recommended to be completed in years 4 to 5