



THE CORPORATION OF THE TOWNSHIP OF SOUTHWOLD

BY-LAW NO. 2021-77

**Being a By-Law to adopt the 2022 Sanitary Sewer System
Operating and Capital 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 2022 Sanitary Sewer Operating Budget, attached as Schedule "A", and forming part of this by-law, is hereby adopted.
2. That the 2022 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 13TH DAY OF DECEMBER, 2021.**



Mayor
Grant Jones


CAO/Clerk
Lisa Higgs

Sanitary Operating

Account	2021 Budget	2021 Projected	2022 Draft Budget	\$ Variance	% Variance	Notes	2023 Forecast	2024 Forecast
Talbotville								
Revenue								
Talbotville Per HH Flat Rate	(\$17,651)	(\$13,908)	(\$35,024)	(\$17,373)	98.43%		(\$69,575)	(\$98,783)
Talbotville Per M3 Rate	(\$33,369)	(\$36,373)	(\$59,874)	(\$26,505)	79.43%		(\$107,544)	(\$138,052)
Transfer from Talbotville Sewer Reserve	\$0	\$0	\$0	\$0	0.00%		\$0	\$0
Total Revenue	(\$51,020)	(\$50,281)	(\$94,897)	(\$43,878)	86.00%		(\$177,119)	(\$236,835)
Expenses								
Wages			\$67,000	\$67,000	0.00%	New - allocation of staff time	\$69,010	\$71,080
Overhead			\$20,000	\$20,000	0.00%		\$20,600	\$21,218
Roads Labour Allocation(Site Maint)	\$1,000	\$500	\$500	(\$500)	-50.00%	Site Maint, Driveway	\$515	\$530
Roads Machine Time Allocation(Site Maint)	\$1,000	\$500	\$500	(\$500)	-50.00%	Site Maint, Driveway	\$515	\$530
Training	\$500		\$2,000	\$1,500	300.00%	Misc. Training, anticipate increase with staffing changes	\$2,060	\$2,122
Utilities	\$32,000	\$37,000	\$37,500	\$5,500	17.19%	Based on Prior Year Actuals	\$38,625	\$39,784
Consummables, Chemicals	\$12,500	\$12,500	\$16,250	\$3,750	30.00%	Consumables, Chemicals (+30%), supplies	\$16,738	\$17,240
Property Tax PIL		\$5,000	\$5,000	\$5,000	0.00%	Based on Actuals	\$5,150	\$5,305
Property Maintenance	\$1,500	\$1,200	\$1,500	\$0	0.00%		\$1,545	\$1,591
Insurance	\$2,575	\$2,437	\$2,900	\$325	12.62%		\$2,987	\$3,077
Legal	\$2,500	\$0	\$1,000	(\$1,500)	-60.00%		\$1,030	\$1,061
System Maintenance	\$35,000	\$5,000	\$5,000	(\$30,000)	-85.71%	Additional breakdown starting 2022 - see below	\$5,150	\$5,305
Misc		\$0	\$1,000	\$1,000	0.00%		\$1,030	\$1,061
Contracted Services	\$1,000	\$1,000	\$1,000	\$0	0.00%	Other contracted service ie. Waste Coll \$500, Generator Insp, etc.	\$1,030	\$1,061
OCWA Contract	\$36,000	\$35,979	\$37,562	\$1,562	4.34%	OCWA agreement CPI 4.4% for 2022	\$38,689	\$39,850
OCWA Extra/Out of Scope	\$8,000	\$8,621	\$5,000	(\$3,000)	-37.50%	Extra/Out of Scope estimate for add'l services	\$5,150	\$5,305
Wastewater Testing	\$9,000	\$6,000	\$6,000	(\$3,000)	-33.33%	Based on Actuals	\$6,180	\$6,365
Plans and studies	\$10,000	\$0	\$5,000	(\$5,000)	-50.00%	Misc Studies, engineering	\$5,150	\$5,305
Replace Activated Carbon - Screening Room			\$2,500	\$2,500	0.00%	\$5,000 every other year, annualized to \$2,500	\$2,575	\$2,652
Cleaning Raw Equalization Tanks			\$4,000	\$4,000	0.00%		\$4,120	\$4,244
Membrane Cleaning			\$20,000	\$20,000	0.00%		\$20,600	\$21,218
Sludge/Biosolids Removal			\$5,500	\$5,500	0.00%		\$5,665	\$5,835

Account	2021 Budget	2021 Projected	2022 Draft Budget	\$ Variance	% Variance	Notes	2023 Forecast	2024 Forecast
Disolved Oxygen/pH Meter/Probe Repl			\$3,500	\$3,500	0.00%	annualized to \$3,500	\$3,605	\$3,713
Spare Filter Module Cartridges			\$2,000	\$2,000	0.00%		\$2,060	\$2,122
Equipment Failure/Replacement Contingency			\$5,000	\$5,000	0.00%	items not planned for such as possible equipment, failure(blowers, motors, pumps,switches)	\$5,150	\$5,305
Total Expenses	\$152,575	\$115,737	\$257,212	\$104,637	68.58%		\$264,928	\$272,876
Net Operating (Revenue)/Expense	\$101,556	\$65,456	\$162,315	\$60,759	59.83%		\$87,810	\$36,041
Accumulated Operating Deficit								
Talbotville System		\$410,518	\$572,833				\$660,643	\$696,684
Ferndale/Lynhurst Revenue								
Ferndale Monthly	(\$32,477)	(\$32,000)	(\$38,481)	(\$6,004)	18.49%	Offset below	(\$43,176)	(\$47,754)
Ferndale Per Cubic Meter	(\$61,399)	(\$64,000)	(\$69,842)	(\$8,443)	13.75%	Offset below - to St. Thomas	(\$73,688)	(\$76,636)
Lynhurst Monthly (from St. Thomas)	(\$9,481)	(\$10,000)	(\$10,485)	(\$1,004)	10.59%	Offset below	(\$11,596)	(\$12,825)
Sewer Investment Income	(\$1,000)	(\$2,000)	(\$2,000)	(\$1,000)	100.00%	Reserve Interest - offset below with Transfer to Reserve	(\$2,000)	(\$2,000)
Total Revenue	(\$104,357)	(\$108,000)	(\$120,808)	(\$16,451)			(\$130,460)	(\$139,215)
Expenses								
Ferndale Per Cubic Meter to St. Thomas	\$61,399	\$64,000	\$69,842	\$8,443	13.75%	To St. Thomas	\$73,688	\$76,636
Transfer to sewer reserve	\$42,958	\$44,000	\$50,966	\$8,008	18.64%	Ferndale, Lynhurst, Investment from above	\$56,772	\$62,579
Transfer to Capital Projects			\$25,000	\$25,000	0.00%	Lynhurst Street Reconstruction - Sanitary Exp		
Total Expenses	\$104,357	\$108,000	\$145,808	\$41,451			\$130,460	\$139,215
Reserve for Ferndale/Lynhurst		(\$466,282)	(\$491,282)				(\$621,742)	(\$760,957)
Net Reserves - Sanitary		(\$55,764)	\$81,551				\$38,901	(\$64,273)

Account	2021 Budget	2021 Projected	2022 Draft Budget	\$ Variance	% Variance	Notes	2023 Forecast	2024 Forecast
Inputs/Assumptions								
92 Talbotville Connections								
130 New connections Talbotville								
170 Connections Ferndale								
5 New Connection Ferndale								
168 m3 per HH as per Water/Wastewater Study								
Rates as per the Water/Wastewater Study								
Connections								
Talbotville	62		92				222	302
Ferndale	161		170				175	175
Lynhurst	47		47				47	47
Growth (calc. based on 6 months)								
Talbotville	51		130			TM 85, TG 5, SL/GP 10, DHP 25, Other 5	80	80
Talbotville - Other							40	40
Ferndale			5					
Lynhurst			0					
HH m3 Water Consumption	168		168				168	168
HH/Month	16.81		18.59				20.56	22.74
m3 Rate Talbotville	2.27		2.27				2.27	2.27
m3 Ferndale (to St. Thomas)	2.27		2.41				2.5064	2.606656
Talbotville / HH Flat Qtrly	\$17,650.50		\$35,023.56				\$69,575.04	\$98,782.56
Talbotville m3	\$33,369.00		\$59,873.52				\$107,543.52	\$138,052.32
Total Talbotville	\$51,019.50		\$94,897.08				\$177,118.56	\$236,834.88
Ferndale HH	\$32,476.92		\$38,481.30				\$43,176.00	\$47,754.00
Ferndale M3 (to St. Thomas)	\$61,398.96		\$69,841.80				\$73,688.16	\$76,635.69
Total Ferndale	\$93,875.88		\$108,323.10				\$116,864.16	\$124,389.69
Lynhurst HH (from St. Thomas)	\$9,480.84		\$10,484.76				\$11,595.84	\$12,825.36
Total Revenue	\$154,376.22		\$213,704.94				\$305,578.56	\$374,049.93

Sanitary System Capital Forecast					
			Funding Source		
Capital Items and Projects	Budget		Reserve	Other	Notes
2021 Capital					
Talbot Meadows Reconstruction - install Sewers	\$1,700,000			\$1,700,000	To be funded by connections - in progress
Lynhurst Reconstruction (from2020)	\$25,000			\$25,000	Sewer Reserve -if needed during reconstruction, could be 2022
OCWA Recommendations - Addl Membrane	\$155,000			\$155,000	To be funded by Connection Fees completed
Forcemain to Development Land	\$2,500,000			\$2,500,000	Timing TBD - moved to 2022
Talbotville Gore South Trunk to Enclave/Forcemain	\$600,000			\$600,000	To be funded by Connection Fees - in progress
2021 Total	\$4,980,000		\$0	\$4,980,000	
2022 Capital					
Carry Forwards					
Influent Piping Modifications from 2021	\$3,500			\$3,500	To be funded by Connection Fees
Acoustic Audit - failed in 2018, needs to be redone	\$5,000			\$5,000	To be funded by Connection Fees
Fencing from 2021	\$22,500			\$22,500	To be funded by future connections
Lynhurst Reconstruction - Sanitary Portion(from2020)	\$25,000		\$25,000		Ferndale/Lynhurst Capital Reserve
Forcemain to Development Lands	\$2,500,000			\$2,500,000	To be funded by Connection Fees
OCWA Capital Recommendations					
Filter Building Ventilation and Grate Cover	\$5,000			\$5,000	To be funded by Connection Fees
Antenna/Communication Upgrade	\$3,000			\$3,000	To be funded by Connection Fees
Infiltration Investigation	\$5,000			\$5,000	To be funded by Connection Fees
Equipment Storage Building	\$10,000			\$10,000	To be funded by Connection Fees
2022 Total	\$2,579,000		\$25,000	\$2,554,000	
2023 Capital					
OCWA Capital Recommendations	\$5,000		\$5,000		Reserve
2023 Total	\$5,000		\$5,000	\$0	

Capital Items and Projects	Budget		Reserve	Other	Notes
2024 Capital					
Rate Study (2024/2025)	\$15,000		\$15,000		Reserve
OCWA Capital Recommendations	\$5,000		\$5,000		Reserve
2024 Total	\$20,000	\$0	\$20,000	\$0	
2025 Capital					
Rate Study (2024/2025)	\$15,000			\$15,000	Reserve
WWTP Expansion needed when over 500 m3	\$2,000,000			\$2,000,000	To be funded by Connection Fees
OCWA Capital Recommendations	\$5,000		\$5,000		Reserve
2025 Total	\$2,020,000		\$5,000	\$2,015,000	
2026 Capital					
OCWA Capital Recommendations	\$5,000		\$5,000		Reserve
2026 Total	\$5,000		\$5,000	\$0	
2027 Capital					
OCWA Capital Recommendations					
Membrane Pump Discharge Check Valves	\$5,000		\$5,000		Reserve
Membranes: Module Air Diffusers	\$5,000		\$5,000		Reserve
2027 Total	\$0		\$0	\$0	

The Corporation of The Township of Southwold

(6-Year Recommended Capital/Major Maintenance from 2022 to 2027)

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

Ref. No.	Scope of Work	Year						Compliance	Health & Safety	Repair / Maintenance	Lifecycle Replacement	Improvement	Spare Parts Inventory	Approved by Client	Rationale for Project
		2022	2023	2024	2025	2026	2027								
Talbotville Wastewater Treatment Plant															
1	Membrane pump discharge check valves	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,000								Maintenance/Replacement of Check Valves
2	Screenings Room: Activated carbon. Replacement of carbon in both drums	\$ 5,000	\$ -	\$ 5,000	\$ -	\$ 5,000	\$ -								Carbon material was replaced in both carbon drums in 2020 and a device was installed to determine remaining life. Required to be replaced approximately in 2-3 years.
3	Raw equalization tanks: cleaning	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000								OCWA recommends that at least two times per year, that the raw eq tanks 301 and 302 be cleaned out and pressure washed to the bottom. Regular cleaning prevents possible damage to the pumps and blockages of downstream piping and valves and the screenings drum.
4	Plant diesel generator: annual inspection	\$ 650	\$ 650	\$ 650	\$ 650	\$ 650	\$ 650								The stand-by generator is required to be annually inspected as per the requirements of the Environmental Compliance Approval (ECA). This function is completed by Southwold Township staff.
5	Backflow preventers: annual verification/inspection	\$ 600	\$ 600	\$ 600	\$ 600	\$ 600	\$ 600								The two on site backflow preventers are required to be tested annually as per the Township's by-law.
6	Influent and effluent flowmeters: annual verifications	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750								All flowmeters are required to be verified on an annual basis as per the Environmental Compliance Approval (ECA).
7	Screenings room: screenings bags	\$ 600	\$ 650	\$ 700	\$ 750	\$ 800	\$ 850								Screenings bags are required to be regularly replaced as they collect unwanted materials from entering the treatment plant. Two to four bags get replaced on a weekly basis.
8	Membranes: cleaning of membranes	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000								Membranes were last cleaned by OCWA in summer 2021. Membranes are required to be cleaned at a minimum annually or membranes will perform poorly and reduce plant capacity. Cleaning also consists of using chlorine and citric acid. In September 2021, started operating two new membranes due to high flows/infiltration.
9	Plant chemicals: (Chlorine, Alum, Caustic)	\$ 6,500	\$ 7,000	\$ 7,500	\$ 8,000	\$ 8,500	\$ 9,000								Chemicals required for phosphorus removal, and pH adjustment and cleaning of the membranes during backwashes. Ongoing operational requirement.
10	Membrane room: lifting equipment annual inspection	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500								Membrane room lifting equipment requires annual inspection/verification by third party.
11	Effluent UV System: bulb and sleeve replacement	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500								UV effluent bulbs and sleeves should be replaced every two years.
12	Plant blowers: maintenance items including air filters and annual oil changes	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500								The wastewater plant has multiple blowers which require replacement of filters and annual replacement of oil.
13	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.
14	Sludge/biosolids: removal and disposal	\$ 5,500	\$ 6,000	\$ 6,500	\$ 7,000	\$ 7,500	\$ 8,000								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.
15	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.
16	Dissolved Oxygen/pH Meter Instrumentation/Probe Replacement	\$ 5,000	\$ 2,000	\$ 2,000	\$ 5,000	\$ 2,000	\$ 2,000								The dissolved oxygen system controls the blowers so critical to ensure maintenance/replacement as required for proper operation of aeration system.
17	Filter Building Ventilation and grate cover installation	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -								The ventilation in the membrane filter room requires repair/replacement along with covers for the tanks to reduce humidity in the room
18	Spare Filter Module Cartridges	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000								Placeholder for the replacement of filter modules that are in need of replacement as determined through annual inspection/cleaning program.
19	Antenna/Communication Upgrade	\$ 3,000	\$ -	\$ -	\$ -	\$ -	\$ -								Due to the location of the plant in the valley, it appears that daily reports are missing date due to signal strength issues. Propose to install Ce-FI Wideband Directional Antenna based on consultation with Newterra.
20	Infiltration Investigation/Contingency Planning	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -								Placeholder for the investigation of infiltration issues, which could involve sewer video inspection, inspection of the sewer collection system during storm events, abnormal operations, back-up disposal plan during high EQ Tank events.
21	Building Storage for equipment														Placeholder for discussion as there is very limited storage at facility for equipment/stock/parts etc.
22	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.
Total Capital Estimate		\$70,700	\$50,250	\$56,800	\$55,350	\$58,900	\$61,450	2022 Recommended Capital Presented by:						Mark Harris: Senior Operations Manager	
								2022 Recommended Capital Approved by:						Dale LeBritton: Regional Hub Manager	

Legend:
 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

