



Date: April 27, 2021

To: Mayor Andy Mitchell and Council Members

From: Adam Tobin, Project Coordinator – Water and Sewer
R. Lane Vance, Manager of Financial Services

Subject: Lakefield Water & Sewer Budget 2021

Status: For Endorsement.

Recommendation

That the report related to the Lakefield Water & Sewer Budget 2021 be received for information; and

That Council adopt the Budget Compliance Report for expenses excluded from the 2021 Lakefield Water & Sewer budget as outlined in and as a requirement of Ontario Regulation 284/09; and

That the Department # 30 Lakefield Sewer and Department # 31 Lakefield Water Budget 2021 be approved as presented.

Information

Staff are pleased to present the proposed budgets for department # 30 Lakefield Sewer and department # 31 Lakefield Water for Council's consideration.

As Council will recall we have increased rates in recent years to keep abreast of the increasing costs from Peterborough Utilities Services for the management and operation of the respective systems. The rates were increased in January 2020 in accordance with Council approval of the required by-laws in the fall of 2019.

Based on existing rates in place at this juncture, typical hydro savings and the status of the respective accumulated revenue for both utilities, staff are not recommending a change in rates at this time.

The next review of the adequacy of reserve contributions will come as part of the implementation of the updated Asset Management Plan expected in 2021.

Strategic Plan Reference

Goal # 2 - Achieve excellence in governance and service delivery.

Goal # 3 - Support a sustainable, balanced, and investment-ready community

The annual budget process demonstrates *fiscal responsibility* and ensures that resources are managed responsibly and that taxpayers in the affected area continue to receive the best value for their service area charge.

Financial Impact

No changes are proposed to water and sewer rates at this time.

When the updated Asset Management Plan is presented to Council for discussion, a new capital investment model and corresponding financial strategy will be included.

Attachments

- PSAB Compliance Report – Lakefield Water & Sewer
- Budget Narrative & Worksheet Summary - Department # 30 Lakefield Sewer
- Sewer Capital Project Sheets and Related Photos
- Budget Narrative & Worksheet Summary - Department # 31 Lakefield Water
- Water Capital Projects Sheets and related photos
- Reserve Summary for Lakefield Water and Sewer

Adam Tobin

Prepared By: Adam Tobin
Project Coordinator – Water and Sewer

R. Lane Vance

Prepared By: R. Lane Vance
Manager of Financial Services/Treasurer

Janice Lavalley

Approved By: Janice Lavalley
CAO

Township of Selwyn
2021 PSAB Budget Reconciliation
For Ontario Regulation 284/09

Description	Lakefield
Non Water & Sewer Rates per water & sewer budgets	1,837,745
Water & Sewer Rates	2,006,419
Total Township revenues per budget	<u>3,844,164</u>
Less transfer from reserves - water & sewer budgets	-1,734,306
Less increase in Unfunded Capital	-----
Total PSAB revenues	<u>2,109,858</u>
Total Township expenses per Water & Sewer budgets	3,844,164
Add Annual Amortization (using audit wkg.paper as estimate)	547,838
Less TCA costs in budget (from below)	-1,408,709
Less transfer to reserves - water & sewer budgets	-1,016,896
Less reduction in unfunded capital	0
Total PSAB expenses	<u>1,966,397</u>
Annual surplus in PSAB format	<u>143,461</u>

2021 Budgeted TCA Costs	
Sewer - Plant & Collection	791,452
Water - Plant & Distribution	617,257
Total	<u>1,408,709</u>

Department 30 – Lakefield Sewer

Overview

This Department captures all costs related to sanitary sewer in the Lakefield service area and is funded through user fees of the respective sewer ratepayers.

The system uses a combination of gravity sewer mains, coupled with five (5) local pumping stations, to collect and direct wastewater to the main pumping station. The main pumping station located on Water Street is equipped to pump wastewater through one of two forcemains to the lagoon for treatment.

The lagoon consists of an aerated south cell and a non-aerated north cell. The aerated south cell accepts sewage from the pumping station and allows for the majority of treatment through aeration and settling. The north cell operates as a polishing pond to allow for additional settling and passive chemical treatment. All treated effluent is then directed through a bank of ultraviolet lights for final disinfection and then discharged in accordance with strict provincial guidelines.

Revenue

The sewer ratepayers of Lakefield pay their respective costs in their service area through monthly utility billings provided by Peterborough Utilities Services. This aspect of the bill is managed by PUS Customer Services for a flat fee per bill. The majority of ratepayers are billed by flat rate. Large commercial, industrial and institutional customers are billed based on volumes related to the water meter.

The Lakefield College School and SGS Lakefield Research are billed directly by the Township based on existing agreements that have been in place for many years. The actual rates are now updated annually based on sewer rates established by Council through by-law.

The flat rates for 2021 were already approved by Council and reflect a 0% increase over the 2020 levels.

Expenditures

The majority of the operating expenses that the Township needs to recover are those costs paid to Peterborough Utilities Services for operating & managing the system and providing related billing services.

In addition to costs paid directly to PUS through agreements, additional costs are also budgeted to offset unforeseen expenses, emergency call-ins and specific capital maintenance items.

Given the significant capital expenditures over the last couple of years, reserve levels have experienced a decline, however through ongoing annual reserve contributions the sewer utility will be prepared for future expenditures planned or unexpected.

Department 30 – Lakefield Sewer

In addition, a portion of the George Street Pumping Station project and the LSDA sewer connection will be eligible for development charge funding. These figures are currently being updated and any eligible amounts will be repaid to the sewer reserve as they become available or adjusted at the completion of the project.

Capital Projects

The various components of the Lakefield sanitary sewer collection system are documented in the Township's Tangible Capital Asset data register and in the Selwyn Township Asset Management Plan. As staff is able to work through capital planning by components with the Township engineering firm, asset data is becoming more complete and refinements are improving long term capital budget plans.

The Township continues to reinvest in maintenance and upgrade activities to assure the long term reliability of the wastewater system. The back-up generator replacement at the Main Pumping Station is a great example of such investments.

In terms of expansion, with the completion of the George Street Pumping Station, this year's significant project is the sewer main link for the Lakefield South Development Area.

Please see the attachments for more details on these important system improvements.



Department 30 - Lakefield Sewer

GL Account	Details	2019 Year End Actuals	2019 Approved Budget	2020 Year to Date Actuals	2020 Approved Budget	2021 Proposed Budget
<u>Revenues</u>						
<u>Grants and Receipts</u>						
1-3100-3100	Provincial Grants	1,422	0.00	23,317	23,229	0
<u>Operating Sales - Revenues & Fees</u>						
1-3200-3200	Bank & Investment Interest	14,182	13,500	0.00	12,806	6,824
1-3400-3400	Miscellaneous Receipts	31,872	31,862	0.00	0.00	0
1-3600-3601	Res. & Comm. Sewer Rates	930,996	1,090,471	1,017,346	940,306	963,921
1-3600-3603	Other Municipalities Rate	28,169	28,559	17,781	28,451	23,500
<u>Transfers In</u>						
1-3900-3970	From Accumulated Revenue	70,468	70,468	63,891	63,891	66,184
1-3900-3990	From Reserves	650,406	957,468	75,572	66,988	934,952
Total Revenue		1,727,516	2,192,328	1,197,907	1,135,671	1,995,381
<u>Expenditures</u>						
<u>Operations & Overhead</u>						
1-4000-5100	Salaries & Wages	39,195	47,546	44,408	49,091	42,000
1-4000-5101	P/T - Contract & Student Wages	0.00	0.00	1,976	0.00	0
1-4000-5150	Payroll Benefits	13,518	13,665	15,065	14,110	14,000
1-4000-5180	Mileage	328	750	0.00	750	750
1-4000-5190	Training & Seminars	1,422	2,500	255	2,500	2,500
1-4000-6250	Memberships	402	200	125	200	200
1-4000-6260	Office Supplies	57	1,500	0.00	1,500	1,500
1-4000-6280	Advertising	254	1,000	18	1,000	1,000
1-4000-6310	Audit Fees	2,000	2,000	2,000	2,000	2,000
1-4000-6320	Consulting Fees	0.00	5,000	23,631	28,229	5,000
1-4000-6326	Utility Billing Costs	22,658	22,702	23,529	23,337	23,952
1-4000-6330	Insurance	10,668	10,668	12,877	12,877	10,675

GL Account	Details	2019 Year End Actuals	2019 Approved Budget	2020 Year to Date Actuals	2020 Approved Budget	2021 Proposed Budget
1-4000-6515	Permits/Licences	631	631	631	631	631
1-4000-6750	Telephone	135	135	172	135	175
1-4000-6840	Taxes/Easements/PILs	17,498	14,750	19,511	17,750	19,998
1-4600-6320	Sewer - General - Lab Fees	9,036	7,500	9,127	7,500	9,300
1-4600-6325	Sewer - General - PUS Operating Agreement	400,382	415,866	412,381	412,394	424,766
1-4601-6560	Main Sewage Pumping Station - Equipment Maintenance	8,853	7,500	1,199	7,500	5,000
1-4601-6800	Main Sewage Pumping Station - Hydro	-11,996	-5,675	-7,508	-5,500	-5,000
1-4602-6560	Pumping Stations - Equipment Maintenance	6,681	5,000	5,401	5,000	5,000
1-4602-6800	Pumping Stations - Hydro	-3,007	-1,115	-1,656	-1,000	-1,000
1-4603-5100	Lagoon - Salaries & Wages	878	2,500	1,168	4,000	2,000
1-4603-6200	Lagoon - Materials/Supplies	1,922	5,750	45	5,000	0
1-4603-6560	Lagoon - Equipment Maintenance	7,831	12,500	9,301	17,500	12,000
1-4603-6800	Lagoon - Hydro	-25,549	-12,437	-13,719	-12,000	-12,000
1-4604-5100	Sewer Mains & Connections - Salaries & Wages	570	2,500	0.00	2,500	1,000
1-4604-6360	Sewer Mains & Connections - Sub-Contract	4,115	13,500	36,309	20,000	25,000
1-4604-6500	Sewer Mains & Connections - Equipment Rental	636	2,000	0.00	2,000	1,000
<u>Capital Purchases</u>						
2-4601-6360	Main Sewage Pumping Station - Sub-Contract	7,023	15,000	0.00	6,815	159,448
2-4602-6360	Pumping Stations - Sub-Contract	164,936	329,248	22,530	31,176	55,984
2-4602-6370	Pumping Stations - Engineering/Consulting	36,427	54,185	1,755	0.00	0
2-4603-6360	Lagoon - Sub-Contract	441,352	528,973	0	0.00	0
2-4603-6370	Lagoon - Engineering/Consulting	668	0.00	0.00	0.00	0
2-4604-6360	Sewer Mains & Connections - Sub-Contract	0.00	0.00	26,320	11,234	666,922
2-4604-6370	Sewer Mains & Connections - Engineering/Consulting	13,627	30,062	28,174	17,763	52,598
<u>Transfers Out</u>						
1-4900-6960	To Other Depts	21,293	21,293	21,698	21,698	22,023
1-4900-6970	To Accumulated Revenue	63,891	60,131	66,184	65,175	66,959
1-4900-6990	To Reserves	469,182	575,000	435,000	362,806	380,000
Total Expenses		1,727,516	2,192,328	1,197,907	1,135,671	1,995,381
Balance		0	0	0	0	0

Capital Budget 2021

Department Name: **Sewer**

General Ledger Code(s): **2.30.4601.6360**

Capital Project Name: **Generator Replacement - Water Street Sewage Pumping Station**

Description:

Replace existing 125 kW indoor generator with 200 kW stand alone unitl

Attachments: Photo

Supporting Rationale: Sub-Committee Support: Not Applicable

The rebuild/upgrades originally required by TSSA were estimated to be approximately 50-60% of total replacement value. Since the units were well along in their useful life, the full replacement was seen to be better value for dollar. Having regard for future upgrade requirements at the Sewage Pumping Station the generator was oversized to meet expected future demand.

Strategic Plan/Related Plans Reference:

Achieve excellence in governance and service delivery.

Estimated Total Project Cost

\$159,448

Costs in Current Year's Budget

\$159,448

Financial Plan:

Oversizing of the generator unit will be recovered though future development charges. The remaining funding for these improvements will come from the Lakefield Water reserve .

Part of Long Term Replacement Schedule: Capital Project

Other Key Considerations:

(accessibility, impact on future operations, annual savings, etc.)

Existing 125 kW Water Street SPS Generator



Capital Budget 2021

Department Name: **Sewer**

General Ledger Code(s): **2.30.4602.6360**

Capital Project Name: **Park Sewage Pumping Station Control Panel Replacement & George Street SPS Radio Re-direct**

Description:

Existing Park SPS panel and associated components to be replaced. Antenna at George Street SPS to be re-directed from Elevated Tank to communicate directly with Water Treatment Plant. Re-direction includes installation of new communication equipment.

Attachments: Photo

Supporting Rationale: Sub-Committee Support: Not Applicable

Existing panel and some components have reached end of useful life and require replacement. Existing panel has been leaking for quite some time and prone to wildlife nesting in cabinet. Pumping station is 45 years old and has required very little capital maintenance to this point. Panel component was originally approved in 2020 budget, due to COVID related backlogs with panel manufacturers and electrical installers this project was not completed in 2020. New panel will include radio communication for flow and alarm monitoring, as well as a Generlink socket mounted transfer switch to connect back-up power supply. Since commissioning intermittent communication has been experienced with the current radio alignment at the George Street SPS. Consultation with radio installers determined that re-directing signal back to the WTP and using different equipment will increase reliability.

Strategic Plan/Related Plans Reference:

Achieve excellence in governance and service delivery.

Estimated Total Project Cost

\$55,984

Costs in Current Year's Budget

\$55,984

Financial Plan:

This project is capital maintenance and as such is being funded through Sewer Reserves.

Part of Long Term Replacement Schedule: Capital Project

Other Key Considerations:

(accessibility, impact on future operations, annual savings, etc.)

Park SPS



Capital Budget 2021

Department Name: **Sewer**

General Ledger Code(s): **2.30.4604.6360**

Capital Project Name: **Lakefield Sanitary Sewer Extension**

Description:

Existing dead end sanitary manhole on Bridge Street, provided for future connection of the Lakefield South Development Area, will be extended North to Smith Street and East along Smith to Fraser Street.

Attachments: Photo

Supporting Rationale: Sub-Committee Support: Not Applicable

As identified in the Lakefield Sanitary Servicing Upgrades, Schedule B Municipal Class Environmental Assessment (June, 2016), the majority of greenfield development lands for the community of Lakefield are within the Lakefield South Development Area (LSDA). Through this assessment various servicing options were reviewed in detail, ultimately recommending "Alternative 5a". The installation route of the new sanitary main will also afford residents on Smith, and a portion of Bridge Street, the opportunity to connect to the municipal wastewater system

Strategic Plan/Related Plans Reference:

Achieve excellence in governance and service delivery.

Estimated Total Project Cost

\$697,241

Costs in Current Year's Budget

\$697,241

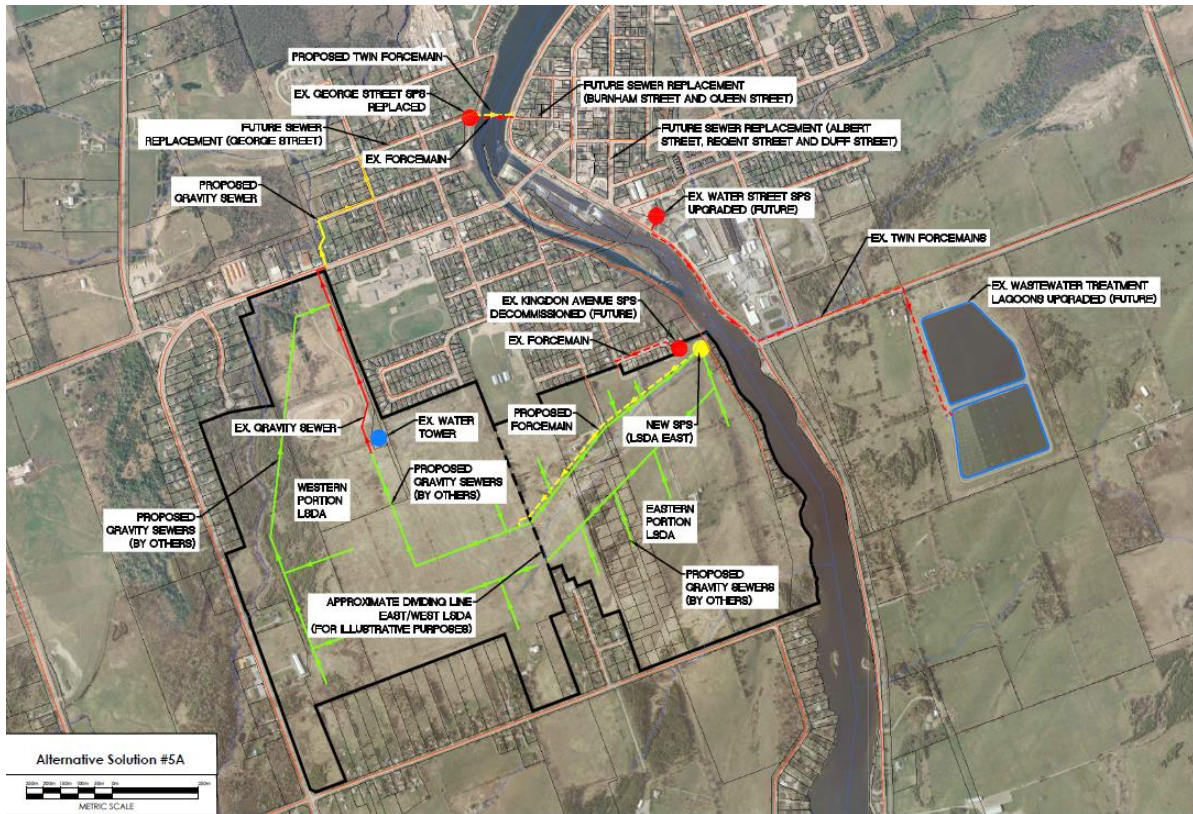
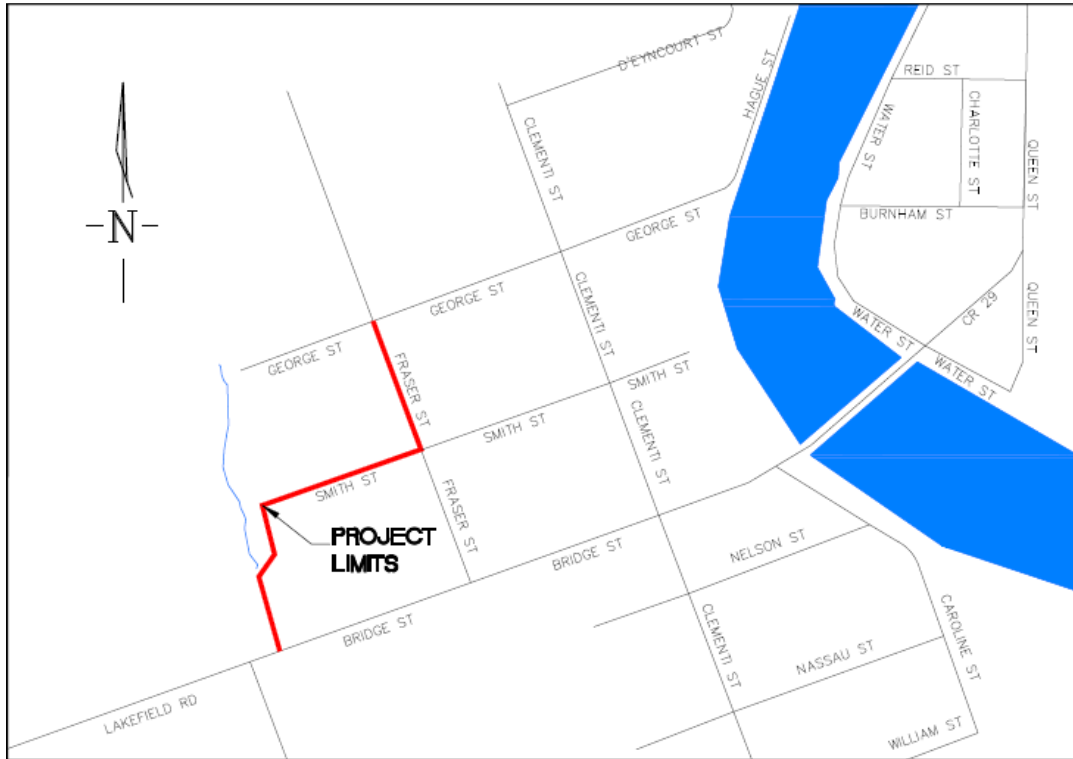
Financial Plan:

This project will impact multiple department budgets including water, sewer, storm sewer and roads. The majority of work will be funded through reserves but will also see contributions from a special service area charge for new sanitary laterals installed along Smith Street. As this project is driven by servicing the Lakefield South Development Area, development charges will also be collected to recover a portion of these costs.

Part of Long Term Replacement Schedule: Capital Project

Other Key Considerations:

(accessibility, impact on future operations, annual savings, etc.)



Capital Budget 2021

Department Name: **Sewer**

General Ledger Code(s): **2.30.4604.6360**

Capital Project Name: **Strickland St. Sewer Service Repair**

Description:

Install sanitary clean-out for access and install Cured-In-Place Pipe (CIPP) in failing sanitary lateral

Attachments: Photo

Supporting Rationale: Sub-Committee Support: Not Applicable

Municipal portion of sanitary lateral is failing , CIPP offers a trenchless solution and minimizes damage to yard/laneway. Project is marginally more than routine maintenance cost, therefore included as a capital investmnet.

Strategic Plan/Related Plans Reference:

Achieve excellence in governance and service delivery.

Estimated Total Project Cost

\$5,088

Costs in Current Year's Budget

\$5,088

Financial Plan:

This project is capital maintenance and as such is being funded from the Lakefield Sewer Reserve.

Part of Long Term Replacement Schedule: Capital Project

Other Key Considerations:

(accessibility, impact on future operations, annual savings, etc.)

Cured-In-Place Pipe (CIPP)



Capital Budget 2021

Department Name: **Sewer**

General Ledger Code(s): **2.30.4604.6360**

Capital Project Name: **Lagoon Outfall Pipe - Section Replacement**

Description:

Replacing approximately 10 m section of Lagoon discharge piping under road allowance on Water Street with PVC, existing material identified in CCTV as Corrugated Steel Pipe (CSP).

Attachments:

Supporting Rationale:

Sub-Committee Support: Not Applicable

Lagoon outfall piping is critical discharge point for treated effluent from the Lakefield Sanitary System. CSP piping is commonly used for entranceway culverts but not common in municipal wastewater systems. Failure in this section of pipe would create surcharge conditions in upstream structures and roadway.

Strategic Plan/Related Plans Reference:

Achieve excellence in governance and service delivery.

Estimated Total Project Cost

\$17,191

Costs in Current Year's Budget

\$17,191

Financial Plan:

This project is capital maintenance and as such is being funded from the Lakefield Sewer Reserve.

Part of Long Term Replacement Schedule: Capital Project

Other Key Considerations:

(accessibility, impact on future operations, annual savings, etc.)

Department 31 – Lakefield Water

Overview

This Department captures all costs related to water in the Lakefield service area and is funded through user fees of the respective water ratepayers.

The water distribution system consists of water mains, hydrants, a booster station, a standpipe and elevated storage tank (water tower). The standpipe and elevated storage tank allow the system to operate as one pressure zone, save and except a small area adjacent to the base of the standpipe which operates in isolation with assistance from the booster station.

The water treatment plant is located at Water Street North and consists of an intake from the Otonabee River, a low lift pumping system located within the water treatment plant, and a treatment process using coagulation, sedimentation, filtration and disinfection. The plant has a two-celled baffled clearwell and a high lift pumping facility discharging to the distribution system.

Revenue

The water ratepayers of Lakefield pay their respective costs in their service area through monthly utility billings provided by Peterborough Utilities Services. This aspect of the bill is managed by PUS customer service for a flat fee per bill. The majority of ratepayers are billed by flat rate. Large commercial, industrial and institutional customers are billed based on volumes captured through water meters.

The Lakefield College School is billed directly by the Township based on an existing arrangement that has been in place for many years at the request of the Ministry of the Environment. The rates are now updated annually based on water rates established by Council through by-law.

The flat rates for 2021 were already approved by Council and reflect a no increase over the 2020 levels. These rates approved by by-law in the fall of 2019 have been in effect as of the January 2021 billing cycle. No additional rate increase is proposed at this time.

Expenditures

The majority of the operating expenses that the Township needs to recover are those costs paid to Peterborough Utilities Services for operating & managing the system and providing related billing services.

Department 31 – Lakefield Water

In addition to costs paid directly to PUS through agreement, additional costs are also budgeted to offset unforeseen expenses, emergency call-ins and specific capital maintenance items.

In comparison to the sewer system, the water system typically includes more additional charges including auto-dialer call outs for fluctuating readings, watermain breaks and related restoration costs.

Capital Projects

As previously noted in the narrative for the sewer department, the various components of the Lakefield water distribution system are also documented in the Township's Tangible Capital Asset data register and in the Selwyn Township Asset Management Plan.

There are a number of significant investments this year as critical pieces of equipment have reached their end of useful life.

Please see the attachments for more details on these important system improvements.



Department 31 - Lakefield Water

GL Account	Details	2019 Year End Actuals	2019 Approved Budget	2020 Year to Date Actuals	2020 Approved Budget	2020 Approved Budget
<u>Revenues</u>						
<u>Grants and Receipts</u>						
1-3100-3100	Provincial Grants	1,422	0	24,001	24,177	0
<u>Operating Sales - Revenues & Fees</u>						
1-3200-3200	Bank & Investment Interest	80,740	60,000	0	56,923	60,426
1-3400-3400	Miscellaneous Receipts	11,000	11,000	253,776	253,560	11,000
1-3700-3701	Res. & Comm. Water Rates	979,955	1,144,412	1,101,956	989,754	1,014,498
1-3700-3703	Water - LCS	36,984	44,842	24,096	37,354	28,000
1-3700-3704	Penalty Charges	3,530	4,071	1,122	3,565	1,000
1-3700-3705	Local Imprvt./Special Charges	689	689	689	689	689
<u>Transfers In</u>						
1-3900-3970	From Accumulated Revenue	134,341	134,341	112,401	112,401	96,281
1-3900-3990	From Reserves	249,217	246,347	43,178	67,397	636,889
Total Revenue		1,497,877	1,645,702	1,561,218	1,545,820	1,848,783
<u>Expenditures</u>						
<u>Operations & Overhead</u>						
1-4000-5100	Salaries & Wages	36,126	39,146	43,582	40,691	42,000
1-4000-5101	P/T - Contract & Student Wages	0.00	0.00	229	0.00	0
1-4000-5150	Payroll Benefits	11,028	12,619	11,085	13,080	14,000
1-4000-5180	Mileage	604	1,250	275	1,250	1,250
1-4000-5190	Training & Seminars	3,925	2,500	215	2,500	2,500
1-4000-6250	Memberships	725	750	789	774	774
1-4000-6260	Office Supplies	0.00	1,500	32	1,500	1,500
1-4000-6280	Advertising	52	1,000	66	1,000	1,000
1-4000-6310	Audit Fees	4,311	4,500	4,967	4,500	4,500
1-4000-6320	Consulting Fees	0.00	5,000	24,316	29,177	19,632

GL Account	Details	2019 Year End Actuals	2019 Approved Budget	2020 Year to Date Actuals	2020 Approved Budget	2020 Approved Budget
1-4000-6326	Utility Billing Costs	23,582	23,675	24,005	24,290	24,924
1-4000-6330	Insurance	11,992	11,992	15,045	15,045	20,772
1-4000-6515	Permits/Licences	1,489	739	739	739	739
1-4000-6750	Telephone	135	135	172	135	175
1-4000-6840	Taxes/Easements/PILs	10,203	9,950	9,377	10,300	9,611
1-4700-6320	Water Expenses - General - Consulting Fees	10,105	8,000	9,971	8,000	10,100
1-4700-6325	Water Expenses - General - PUS Operating Agreement	420,011	424,890	430,509	432,611	445,589
1-4700-6811	Water Expenses - General - Excess Flows	-12,427	0.00	-7,729	0.00	0
1-4701-6560	Water Treatment Plant - Equipment Maintenance	4,651	30,500	6,167	30,500	10,000
1-4701-6800	Water Treatment Plant - Hydro	-50,661	-24,447	-25,494	-24,000	-24,000
1-4702-6560	Water Booster Station - Equipment Maintenance	0.00	1,500	0.00	1,500	0
1-4702-6800	Water Booster Station - Hydro	-800	-640	-150	-400	-250
1-4703-6560	Water Tower/Standpipe - Equipment Maintenance	0.00	5,000	0.00	5,000	10,000
1-4703-6800	Water Tower/Standpipe - Hydro	-5,008	-2,046	-2,491	-2,250	2,250
1-4704-6360	Watermains & Connections - Sub-Contract	704	10,000	1,490	12,500	2,500
1-4705-6360	Watermain Breaks - Sub-Contract	7,372	45,000	13,986	40,000	30,000
1-4706-6360	Water Meters - Sub-Contract	1,106	4,500	13,911	4,500	5,000
1-4707-6360	Water Hydrants - Sub-Contract	0.00	5,000	0.00	5,000	5,000
<u>Capital Purchases</u>						
2-4701-6360	Water Treatment Plant - Sub-Contract	244,811	234,566	38,090	34,566	280,385
2-4701-6370	Water Treatment Plant - Engineering/Consulting	4,405	11,781	0.00	0.00	2,500
2-4703-6360	Water Tower/Standpipe - Sub-Contract	0.00	0.00	5,088	0.00	5,000
2-4703-6370	Water Tower/Standpipe - Engineering/Consulting	0.00	0.00	0.00	10,000	14,572
2-4704-6360	Watermains & Connections - Sub-Contract	0.00	0.00	0.00	13,475	275,036
2-4704-6370	Watermains & Connections - Engineering/Consulting	0.00	0.00	0.00	9,356	24,500
2-4707-6360	Water Hydrants - Sub-Contract	0.00	0.00	0.00	0	15,264
<u>Transfers Out</u>						
1-4900-6960	To Other Depts	21,293	21,293	21,698	21,698	22,023
1-4900-6970	To Accumulated Revenue	112,401	136,049	96,281	100,000	94,937
1-4900-6990	To Reserves	635,740	620,000	825,000	698,783	475,000
Total Expenses		1,497,877	1,645,702	1,561,218	1,545,820	1,848,783
Balance		0	0	0	0	0

Capital Budget 2021

Department Name: **Water**

General Ledger Code(s): **1.31.4000.6320**

Capital Project Name: **Cross Connection Control Program**

Description:

Creation of a Cross-Connection Control Program for implementation in the Lakefield water service area.

Attachments: Photo

Supporting Rationale: Sub-Committee Support: Not Applicable

Backflow into a public water system can pollute or contaminate the water in that system. A Cross Connection Control Program (CCCP) applies to existing industrial, commercial and institutional buildings as well as many home businesses. New buildings or those under renovation are covered by protection from contamination requirements in the Ontario Building Code. Due to limited training options in 2020, related to COVID-19 restrictions, this program was unable to move forward. Staff will be working with local professionals to complete the initial survey stages of this program.

Strategic Plan/Related Plans Reference:

Achieve excellence in governance and service delivery.

Estimated Total Project Cost

\$37,992

Costs in Current Year's Budget

\$14,633

Financial Plan:

This is a new program within the water department and initial set up & related training is being funded from the Lakefield Water Reserve.

Part of Long Term Replacement Schedule: Capital Project

Other Key Considerations:

(accessibility, impact on future operations, annual savings, etc.)

This would be a multi-year project with expenses extending into 2022.



Capital Budget 2021

Department Name: **Water**

General Ledger Code(s): **2.31.4701.6360**

Capital Project Name: **Generator Replacement - Water Treatment Plant**

Description:

Replace existing 100 kW indoor diesel generator with new 200 kW stand alone model.

Attachments: Photo

Supporting Rationale: Sub-Committee Support: Not Applicable

The rebuild/upgrades originally required by TSSA were estimated to be approximately 50-60% of total replacement value. Since the units were well along in their useful life, the full replacement was seen to be better value for dollar. Having regard for future upgrade requirements at the Water Treatment Plant the generator was oversized to meet expected future demand.

Strategic Plan/Related Plans Reference:

Achieve excellence in governance and service delivery.

Estimated Total Project Cost

\$146,909

Costs in Current Year's Budget

\$146,909

Financial Plan:

Oversizing of the generator unit will be recovered through future development charges. The remaining funding for these improvements will come from the Lakefield Water reserve .

Part of Long Term Replacement Schedule: Capital Project

Other Key Considerations:

(accessibility, impact on future operations, annual savings, etc.)

Generator system replacement at these facilities will improve emissions as new units are built to current standards

Existing Water Treatment Plant Generator System



Capital Budget 2021

Department Name: **Water**

General Ledger Code(s): **2.31.4701.6360**

Capital Project Name: **Actiflo Sand Recirculation Pump Replacement**

Description:

Replacement of one Actiflo Sand Recirculation Pump and fittings.

Attachments: Photo

Supporting Rationale: Sub-Committee Support: Not Applicable

Sand recirculation pump is original from Actiflo package plant system installed in 2000. One of the two original sand pumps failed and was subsequently replaced in the spring of 2020.

Strategic Plan/Related Plans Reference:

Achieve excellence in governance and service delivery.

Estimated Total Project Cost

\$17,261

Costs in Current Year's Budget

\$17,261

Financial Plan:

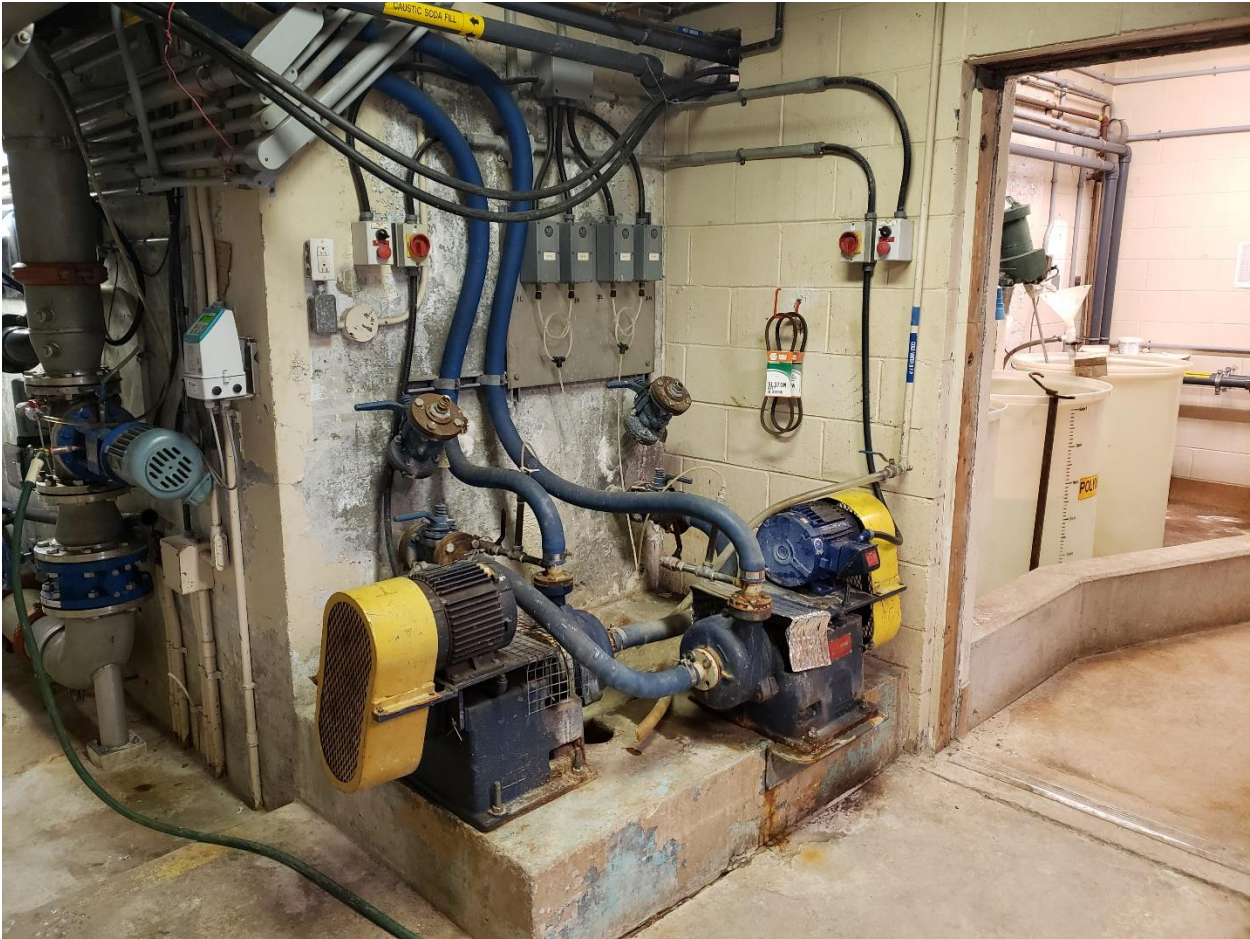
This project is capital maintenance and as such is being funded from the Lakefield Water Reserve.

Part of Long Term Replacement Schedule: Capital Project

Other Key Considerations:

(accessibility, impact on future operations, annual savings, etc.)

Original Sand Recirculation Pumps



Capital Budget 2021

Department Name: **Water**

General Ledger Code(s): **2.31.4701.6360**

Capital Project Name: **Actiflo Lamella Tube Settlers**

Description:

Replace existing Lamella packs in Actiflo Trains 1 & 2

Attachments: Photo

Supporting Rationale: Sub-Committee Support: Not Applicable

Lamella tube settlers are a key component to the Actiflo system, they encourage floc formations to settle and allow clarified water to pass through to the filters. The packs that are currently in use are original with the Actiflo installation in 2000. The tubes are made of PVC and have fatigued over the years, they are now brittle and pieces are prone to breaking off and interfering with other process equipment. While replacing the tube settlers staff will work with a local contractor to set up and test less invasive solutions to cleaning tubes as part of a maintenance program.

Strategic Plan/Related Plans Reference:

Achieve excellence in governance and service delivery.

Estimated Total Project Cost

\$23,151

Costs in Current Year's Budget

\$23,151

Financial Plan:

This project is capital maintenance and as such is being funded from the Lakefield Water Reserve.

Part of Long Term Replacement Schedule: Capital Project

Other Key Considerations:

(accessibility, impact on future operations, annual savings, etc.)



Capital Budget 2021

Department Name: **Water**

General Ledger Code(s): **2.31.4701.6360**

Capital Project Name: **Low lift Pump Replacement**

Description:

Replace existing low lift pump with larger model complete with variable frequency drive (VFD).

Attachments: Photo

Supporting Rationale:

Sub-Committee Support: Not Applicable

Existing low lift pumps are 1980's vintage and have reached end of useful life. Consideration for future plant demand given for selected replacement pump. Incorporation of a variable frequency drive with motor will allow operational flexibility and increase efficiency.

Strategic Plan/Related Plans Reference:

Achieve excellence in governance and service delivery.

Estimated Total Project Cost

\$50,832

Costs in Current Year's Budget

\$50,832

Financial Plan:

This project is capital maintenance and as such is being funded from the Lakefield Water Reserve.

Part of Long Term Replacement Schedule: Capital Project

Other Key Considerations:

(accessibility, impact on future operations, annual savings, etc.)



Capital Budget 2021

Department Name: **Water**

General Ledger Code(s): **2.31.4701.6360**

Capital Project Name: **Radio Communication Upgrade**

Description:

Installation of new sectoral antenna and GE Orbit radio modem.

Attachments: Photo

Supporting Rationale:

Sub-Committee Support: Not Applicable

Existing radio communication network between connected Lakefield facilities uses MDS inet-II radios, these radios have been discontinued and will be no longer supported in a few years. Integrating facilities with new GE Orbit radios and a new sectoral antenna installation at the Water Treatment Plant will allow for communication between both platforms, positioning the system well for future replacement of the remaining MDS inet-II radios.

Strategic Plan/Related Plans Reference:

Achieve excellence in governance and service delivery.

Estimated Total Project Cost

\$5,912

Costs in Current Year's Budget

\$5,912

Financial Plan:

This project is capital maintenance and as such is being funded from the Lakefield Water Reserve.

Part of Long Term Replacement Schedule: Capital Project

Other Key Considerations:

(accessibility, impact on future operations, annual savings, etc.)

Proactive integration of new radio platform will reduce operational down time.

Existing WTP Radio Antenna and Mast



Capital Budget 2021

Department Name: **Water**

General Ledger Code(s): **2.31.4701.6360**

Capital Project Name: **Sodium Hypochlorite Pump and Panel Replacement**

Description:

Replace existing solenoid pumps and panel with new packaged pump panel.

Attachments: Photo

Supporting Rationale: Sub-Committee Support: Not Applicable

Sodium Hypochlorite pump and panels were installed during plant expansion in 2003. Pumps and panel components have since reached end of useful life and due for replacement. Multiple parts have been replaced in original solenoid pumps and panel fittings have developed slow leaks. Peristaltic pumps offer better reliability and consistent dosing. New panel to incorporate ChemFlare fittings which are more chemical resistant.

Strategic Plan/Related Plans Reference:

Achieve excellence in governance and service delivery.

Estimated Total Project Cost

\$17,875

Costs in Current Year's Budget

\$17,875

Financial Plan:

This project is capital maintenance and as such is being funded from the Lakefield Water Reserve.

Part of Long Term Replacement Schedule: Capital Project

Other Key Considerations:

(accessibility, impact on future operations, annual savings, etc.)

Proactive replacement of these components will reduce emergency repairs and operational downtime.

Existing pumps and panel



Capital Budget 2021

Department Name: **Water**

General Ledger Code(s): **2.31.4701.6360**

Capital Project Name: **Turbidimeter Replacement**

Description:

Replace existing HACH TU5300 Actiflo and Clarifier turbidimeters with submersible in-line analyzers.

Attachments: Photo

Supporting Rationale: Sub-Committee Support: Not Applicable

These process sampling locations are a better suited for a submersible analyzer. Replacing current units will allow operations to use the TU5300 models as replacements for discontinued 1720E models currently being used for regulatory filter effluent sampling.

Strategic Plan/Related Plans Reference:

Achieve excellence in governance and service delivery.

Estimated Total Project Cost

\$18,445

Costs in Current Year's Budget

\$18,445

Financial Plan:

This project is capital maintenance and as such is being funded from the Lakefield Water Reserve.

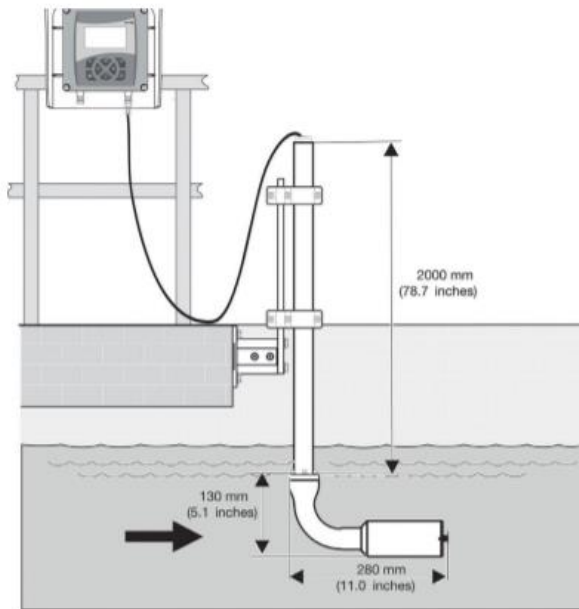
Part of Long Term Replacement Schedule: Capital Project

Other Key Considerations:

(accessibility, impact on future operations, annual savings, etc.)

Proactively installing these units will give operations on-site inventory to replace discontinued models as required, reducing operational down time.

Solitax Immersion Sensor - compatible with existing SC200 controller.







Capital Budget 2021

Department Name: **Water**

General Ledger Code(s): **2.31.4703.6370**

Capital Project Name: **Standpipe Repair - Engineering**

Description:

Consultation with engineering firm familiar with design and operation of Lakefield water system to determine next steps in repair and operation of the Strickland Street Standpipe.

Attachments:

Photo

Supporting Rationale:

Sub-Committee Support:

Not Applicable

The standpipe was refurbished in 2012 and subsequently sustained internal ice damage the following year. Cause determined to be lack of turnover in the system creating ice formation within structure. Implementation of new control narrative at Water Treatment Plant has demonstrated adequate levels of daily turnover in distribution storage. This should now allow for safe operation of the Standpipe when repairs are completed. Consultation noted above will involve a full discussion on a range of repair options.

Strategic Plan/Related Plans Reference:

Achieve excellence in governance and service delivery.

Estimated Total Project Cost

\$14,572

Costs in Current Year's Budget

\$14,572

Financial Plan:

This project is capital maintenance and as such is being funded from the Lakefield Water Reserve.

Part of Long Term Replacement Schedule: Capital Project

Other Key Considerations:

(accessibility, impact on future operations, annual savings, etc.)

Capital Budget 2021

Department Name: **Water**

General Ledger Code(s): **2.31.4704.6360**

Capital Project Name: **Lakefield Sanitary Extension - Watermain Component**

Description:

As part of the Lakefield Sanitary Sewer Extensions project the watermain on Smith Street will be upgraded to 200mm and looped to Bridge Street.

Attachments: **Map**

Supporting Rationale: **Sub-Committee Support: Not Applicable**

Oversizing and looping the watermain as part of this project both; reduces a dead end in the distribution system and adds a secondary feed from the George Street river crossing to the Lakefield South Development Area

Strategic Plan/Related Plans Reference:

Achieve excellence in governance and service delivery.

Estimated Total Project Cost

\$331,140

Costs in Current Year's Budget

\$299,536

Financial Plan:

Oversizing of the watermain will be recovered though future development charges. The remaining funding for these improvements will come from the Lakefield Water reserve.

Part of Long Term Replacement Schedule: **Capital Project**

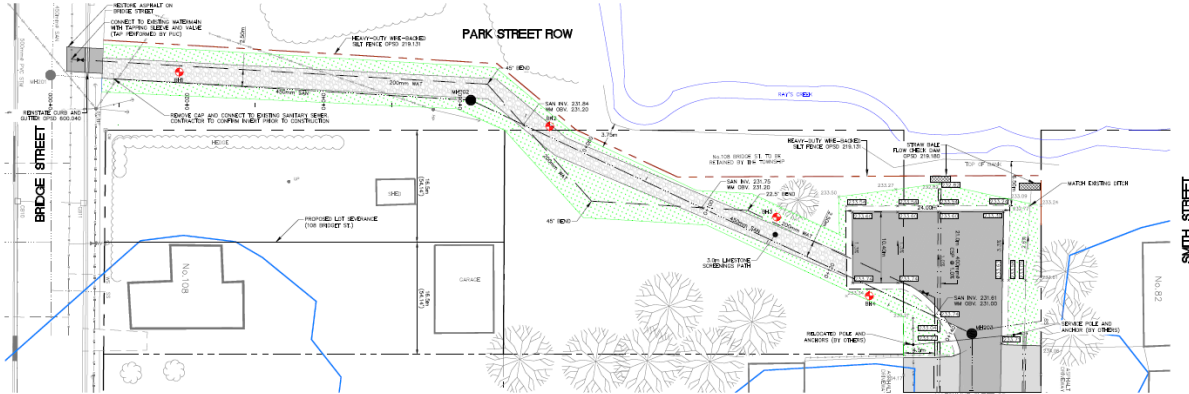
Other Key Considerations:

(accessibility, impact on future operations, annual savings, etc.)

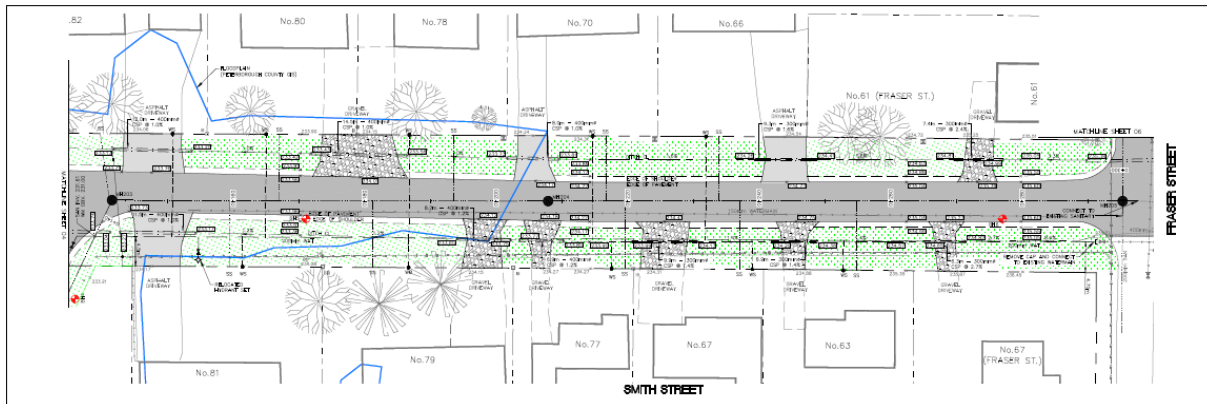
Lakefield Sanitary Extension – Watermain Component

2021

Park Street ROW



Smith Street



Capital Budget 2021

Department Name: **Water**

General Ledger Code(s): **2.31.4707.6360**

Capital Project Name: **Chippewa Avenue Hydrant Replacement**

Description:

Replace hydrant set and isolation valve on Chippewa Avenue

Attachments: Photo

Supporting Rationale: Sub-Committee Support: Not Applicable

Hydrant has a leak that surfaces in ditch during winter months when the ground freezes. PUS operations staff have isolated and bagged the hydrant "out of service" for the past five winters. Seasonally removing this hydrant from service limits fire protection in the area and specifically the adjacent apartment building.

Strategic Plan/Related Plans Reference:

Achieve excellence in governance and service delivery.

Estimated Total Project Cost

\$15,264

Costs in Current Year's Budget

\$15,264

Financial Plan:

This project is capital maintenance and as such is being funded from the Lakefield Water Reserve.

Part of Long Term Replacement Schedule: Capital Project

Other Key Considerations:

(accessibility, impact on future operations, annual savings, etc.)



Township of Selwyn
 Lakefield Sewer and Water Reserves
 Budget Worksheets 2021

Dept. #	Details	Balance Jan. 1, 2021	Transfers Into Reserves	(revenue) Transfers from Reserves	(capital) Transfers from Reserves	Balance Dec. 31, 2021
<u>Working Funds:(Accumulated Revenue)</u>						
Dept. 30	Lakefield Sewer	66,184	66,959	-66,184		66,959
Dept. 31	Lakefield Water	96,281	94,937	-96,281		94,937
	Total Working Funds	162,465	161,896	-162,465	0	161,896
<u>Specific Reserves:</u>						
Dept. 30	Lakefield Sewer	1,100,888	380,000	0	-934,952	545,936
Dept. 31	Lakefield Water	5,003,071	475,000	0	-636,889	4,841,182
	Total Reserves	6,103,959	855,000	0	-1,571,841	5,387,118
	Grand Total	6,266,424	1,016,896	-162,465	-1,571,841	5,549,014