

## AGENDA COMMITTEE OF THE WHOLE ADMINISTRATION & OPERATIONS

## Monday, May 12, 2025, 6:30 PM Corporation of The Township of Edwardsburgh Cardinal Council Chambers, Spencerville Ontario

Indigenous Land Acknowledgement:

The Township of Edwardsburgh Cardinal is situated on traditional territory of Indigenous peoples dating back countless generations, which is rich in history and home to many First Nations, Métis and Inuit people today.

As a Township, we have a responsibility for the stewardship of the lands on which we live, work and play, and today, this meeting place is still home to Indigenous people, and we are grateful to have the opportunity to work on and call this land home.

- 1. Call to Order Chair, Mayor Deschamps
- 2. Approval of Agenda
- 3. Disclosure of Pecuniary Interest or Conflict of Interest & the General Nature Thereof
- 4. Business Arising from Previous Committee of the Whole Meeting Minutes (if any)
- 5. Delegations and Presentations
  - a. MNP LLP Chartered Accountants Jamie Pollock Township Financial Statements
- 6. Consent Agenda

Items listed under Consent Agenda are considered routine or no longer require a further discussion and are enacted in one motion. The exception to this rule is that a Member may request that one or more items be pulled for discussion and voted on separately.

- a. Q1 Facility Maintenance Report [See item 8.a]
- b. Q1 Facility Stats Report [See item 8.b]
- 7. Discussion Items
- 8. Action/Information Items
  - a. Q1 Facility Maintenance Report CONSENT
  - b. Q1 Facility Stats Report CONSENT
  - c. Q1 Building Report
  - d. Q1 Treasury Report

- e. Q1 Budget Report
- f. Award Contract Online Payment Processing Provider
- g. 2025 Asset Management Plan
- h. 2025 Spencerville Lagoon Discharge Report
- i. 2025 Spencerville Systems Funding Option
- j. Award Contract Dundas Street Engineering and Design
- k. Regulate Fireworks Bylaw
- 9. Councillor Inquiries/Notices of Motion
- 10. Member's Report
- 11. Question Period
- 12. Closed Session
- 13. Adjournment

## MINUTES

## COMMITTEE OF THE WHOLE

## **ADMINISTRATION & OPERATIONS**

## Monday, April 14, 2025, 6:30 PM Corporation of The Township of Edwardsburgh Cardinal Council Chambers, Spencerville Ontario

- PRESENT: Deputy Mayor Stephen Dillabough Councillor Joe Martelle Councillor Waddy Smail Councillor Chris Ward John Hunter (Advisory Member) Karen Roussy (Advisory Member)
- REGRETS: Mayor Tory Deschamps
- STAFF: Dave Grant, Director of Operations/Deputy CAO Jessica Crawford, Treasurer Brian Moore, Fire Chief Eric Wemerman, Chief Water/Sewer Operator Chris LeBlanc, Manager of Public Works Candise Newcombe, Deputy Clerk Natalie Charette, Interim Clerk

## 1. Call to Order – Chair, Deputy Mayor Dillabough

Deputy Mayor Dillabough called the meeting to order at 6:30 p.m.

### 2. Approval of Agenda

Moved by: C. Ward Seconded by: W. Smail

That the agenda be approved as presented.

Carried

## 3. Disclosure of Pecuniary Interest or Conflict of Interest & the General Nature Thereof

None.

4. Business Arising from Previous Committee of the Whole Meeting Minutes (if any)

None.

### 5. Delegations and Presentations

a. Spencerville United Church - Holly Howard - Community Grants & Donations

Ms. Howard introduced herself and Ms. Sandra Lawrence, providing an overview of the United Church's role as a central hub for community groups and events, including its regular use by the South Grenville Food Bank. She explained that the funding request is to support the installation of hardwired smoke detectors in the upper ceiling portions of the building.

There was discussion regarding the age of the existing smoke detectors, which were noted to be at the end of service life.

The Chair thanked Ms. Howard and Ms. Lawrence for their presentation.

b. Spencerville Business Community Connections - Holly Howard -Community Grants & Donations

Ms. Howard introduced herself and Ms. Krishna Hutchcroft, and provided an overview of the restructuring of the organization's executive board. She emphasized the Spencerville Business Community Connections' (SBCC) commitment to supporting and giving back to the local community. She also outlined the proposed events for the year, including *Hoppin' Spencerville*, *Summer Fest*, a Trunk-or-Treat event, and *Whoville in Spencerville*.

An additional funding request was presented to cover the purchase of ribs for the *Summer Fest* BBQ Battle, bouncy castle rentals, event prizes, and an upgraded public address system. Road closures and waived facility rental fees were identified as in-kind support needs for 2025.

Ms. Howard noted that the SBCC continues to collaborate with community groups, including SERA and the Cardinal Festival Committee, to prevent scheduling conflicts and promote a balanced calendar of events across the Township.

The Chair thanked Ms. Howard and Ms. Hutchcroft for their presentation.

c. Rural FASD Support Network - Rob More - Community Grants & Donations

Mr. Rob More introduced himself, fellow FASD Support Network board members, and the race director in attendance. He provided an overview of the proposed run routes for the 1K, 3K, and 5K events, as well as details on the registration process, emergency response plan, race schedule, and parking availability. Mr. More also recognized key funding partners, including the Brockville and Area Community Funding Foundation, Brockville Chamber of Commerce, South Grenville District High School, and the Upper Canada District School Board. He presented a funding request of \$3,000 to offset a portion of the timing company's costs. In-kind support needs identified for 2025 included road closures and waived facility rental fees. Mr. More also inquired about potential introductions to corporate partners and local businesses that may be willing to donate concession items for the canteen.

The potential logistics and revenue benefits of establishing a merchandise store were discussed.

The Chair thanked Mr. More for his presentation.

### 6. Consent Agenda

## Moved by: J. Martelle Seconded by: C. Ward

That Committee receives the following consent agenda items as presented:

- a. 2025 Q1 Bylaw Enforcement Report
- b. 2025 Q1 Council Remuneration Report
- c. 2025 Q1 Fire Report
- d. 2025 Q1 Operations Report

Carried

### 7. Discussion Items

a. 2025 Road Program - Proposed Conceptual Adjustments

The Committee received a summary of the report, which outlined a potential collaboration with the Municipality of South Dundas and Counties of SD&G on the proposed bridge work and resurfacing of Pittston Road, should the project be deferred to 2026.

There was discussion regarding the implications of the proposed delays, the location of the Township property line, the need to coordinate schedules to minimize additional road closures or disruptions, and the likelihood of project completion in 2026. There was consensus to support Option 1, and members requested a list of alternative road projects to proceed in place of the deferred work.

b. Curbside Collection Bylaw Review

Committee was provided with a summary of the report and discussed key considerations, including the requirement for clear bags, eligibility for subsidized pricing, potential cost savings with coloured bags, interest in additional waste stream options, maintaining the current collection schedule, alternative bag dimensions, and past challenges with bag tags.

A suggestion was made to standardize curbside collection placement on a designated side of the road to shorten the pickup route.

c. Municipal 911 Addressing Bylaw Update

Committee was provided with an overview of the report and discussed plans to update municipal addressing where it does not align with the proposed numbering scheme. Key topics included improving visibility for emergency response vehicles, the scope and accessibility of the emergency response electronic directory service, offsetting update costs to minimize financial impact on homeowners, and exploring potential grant funding opportunities.

There was consensus to support Option 1.

#### 8. Action/Information Items

a. 2025 Q1 Bylaw Enforcement Report - CONSENT

Moved by: J. Martelle Seconded by: C. Ward

That Committee receive the 2025 Q1 Bylaw Enforcement Report as presented.

Carried

#### b. 2025 Q1 Council Remuneration Report - CONSENT

Moved by: J. Martelle Seconded by: C. Ward

That Committee receive the 2025 Q1 Council Remuneration Report as presented.

Carried

#### c. 2025 Q1 Fire Report - CONSENT

Moved by: J. Martelle Seconded by: C. Ward

That Committee receive the 2025 Q1 Fire Report as presented.

Carried

d. 2025 Q1 Operations Report - CONSENT

Moved by: J. Martelle Seconded by: C. Ward That Committee receives the 2025 Q1 Operations Report as presented.

Carried

e. Upcoming Tax Sales

Committee was provided with a detailed overview of the report and discussed the property tax arrears notification process, the advertising process following the forfeiture of the redemption payment, and the required one-month advertising period prior to a tax sale.

f. Fireworks Bylaw

Committee received a summary of the report and discussed concerns related to limiting the days fireworks may be sold and discharged, the authority of the Fire Chief and BLEO to enforce municipal restrictions, potential exemption options, oversight practices in neighbouring municipalities, and the feasibility of reporting fireworks through the existing burn permit system.

## Moved by: C. Ward Seconded by: W. Smail

That Committee defers the current Fireworks Bylaw attached to this report to the May Committee of the Whole - Administration and Operations meeting to allow staff to obtain further information and provide additional options.

Carried

g. Public Works Buildings - Hazardous Waste Product Removal

Committee was provided with a summary of the report and emphasized the need for a more consistent hazardous waste product disposal schedule.

h. Award Asphalt Pad and Patch Tender

Committee was provided with a summary of the report and discussed Blair Asphalt Ltd.'s work history, its previous projects within the Township, and the minimum temperature requirements for asphalt delivery.

Moved by: C. Ward Seconded by: J. Martelle

That Committee recommends that Council award the Supply of Asphalt pad and patch tender to Blair Asphalt Ltd at the unit price of \$114.50 per MT to a maximum of \$469,450.00 excluding non-rebated HST.

Carried

i. Award Winter Sand Tender

The Committee received a summary of the report, which highlighted inflationary pressures on the current budget line and indicated that draws from reserves will likely approach \$100,000. It was also noted that a portion of the additional material purchased is expected to remain on hand and be categorized as inventory in 2026.

A suggestion was made to ensure salt deliveries are free of clumping to prevent damage to Township plow equipment.

Moved by: J. Martelle Seconded by: C. Ward

That Committee recommends that Council award the Supply of Winter Sand to Willis Kerr Contracting Ltd at the unit price of \$21.15 per MT to a maximum of \$80,370.00 excluding non-rebated HST.

Carried

## 9. Councillor Inquiries/Notices of Motion

None.

### 10. Member's Report

Member's reported on the following:

- A draft submission for the Kraft Hockeyville contest is in progress, targeting the January 2026 deadline.
- Attendance at the Prescott Family Health Team employee appreciation event.
- Upcoming Township events include the Firefighters' Pancake Breakfast, the SBCC Children's Easter Egg Hunt, and the Easter Breakfast at Spencercity Bar and Grill.

## 11. Question Period

None.

### 12. Closed Session

None.

### 13. Adjournment

Moved by: C. Ward Seconded by: W. Smail

COW - AO - April 14, 2025

That Committee does now adjourn at 8:37 p.m.

Carried

Chair

Deputy Clerk

## Corporation of the Township of Edwardsburgh/Cardinal ANALYSIS OF OPERATING SURPLUS

For the year ended December 31, 2024

	H	BUDGET		ACTUAL	I	/ARIANCE	1
		2024		2024		2024	
Revenue							
Taxation	\$	7,065,670	\$	7,110,089	\$	44,419	In line with budget
Fees and service charges		3,305,503		3,100,863		(204,640)	Less water and sewer fees of \$371K, higher permit fees by \$128K
Grants		759,107		837,601		78,494	Remaining Safe Restart grant of \$68K, higher recycling grant of \$12K
Investment income		315,800		324,142		8,342	In line with budget
Donations and other		20,500		244,090		223,590	Sale of excess property in the year
		11,466,580		11,616,785		150,205	
Expenditure							
General government		1,456,155		1,672,077		(215,922)	Higher consulting and IT services, higher salaries and benefits
Protection to persons and property		2,231,517		2,171,692		59,825	Less police charges, less wages, less repairs
Transportation services		2,262,218		2,397,956		(135,738)	Higher winter control, equipment repairs, wages and benefits
Environmental services		2,456,843		2,444,765		12,078	PSAB credit adj of \$35K for AROs, additional capital R&M of \$45K
Recreation and cultural services		2,153,867		2,402,926		(249,059)	Higher salaries and benefits, equipment repairs and minor capital
Planning and development		490,420		253,060		237,360	Savings in professional fees, drain maintenance, wages and benefits
		11,051,020		11,342,476	$\underline{\land}$	(291,456)	
Net revenue		415,560		274,309		(141,251)	
Financing, transfers and capital							
Transfer from (to) reserves/reserve funds		2,045,716	,	2,733,495		687,779	Net transfer of \$855K(1.885M & 1.03M below), less transfers used for capital
Tangible capital asset acquisitions		(4,544,309)		(6,786,379)		(2,242,070)	Industrial land purchase of \$1.885M, higher rec and roads capital of \$371K
Administration fees from the Port		1,000,000		1,000,000		-	In line with budget
Capital grants		1,332,068		1,437,820		105,752	Additional LCGC funding for County Rd 2 project, provincial grants
Proceeds from long-term debt				1,113,871		1,113,871	OILC loan of \$1.030M required for prior year W&S capital expenditures
Municipal debt repayments		(249,035)		(253,025)		(3,990)	In line with budget
Change in Amounts to be Recovered				(35,198)		(35,198)	Not budgeted for - PSAB items (change in AROs)
Library surplus adjustments				8,365		8,365	Not budgeted for
	, K	(415,560)		(781,051)		(365,491)	
Change in operating fund balance		-		(506,742)		(506.742)	
Water/Sewer deficit financed from reserv	ves	_		299,351		299.351	
Operating deficit financed from reserves		-		207,391		207,391	
Surplus for the year	\$	-	\$	-	\$	_	

Note: Schedule excludes amortization expense and interest earned in reserve funds



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December 31, 2024

December 31, 2024

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To the Members of Council, Inhabitants and Ratepayers of Corporation of the Township of Edwardsburgh/Cardinal:

#### Opinion

We have audited the consolidated financial statements of Corporation of the Township of Edwardsburgh/Cardinal (the "Township"), which comprise the consolidated statement of financial position as at December 31, 2024, and the consolidated statements of financial activities, change in net financial assets, cash flows and the related schedules for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Township as at December 31, 2024, and the results of its consolidated operations, changes in its net financial assets and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

#### **Basis for Opinion**

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the consolidated Financial Statements section of our report. We are independent of the Township in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

## Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Township's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Township or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Township's financial reporting process.

#### Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.



As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due
  to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence
  that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material
  misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion,
  forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Township's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based
  on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that
  may cast significant doubt on the Township's ability to continue as a going concern. If we conclude that a
  material uncertainty exists, we are required to draw attention in our auditor's report to the related
  disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our
  opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report.
  However, future events or conditions may cause the Township to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Plan and perform the group audit to obtain sufficient appropriate audit evidence regarding the financial information of the entities or business units within the Township as a basis for forming an opinion on the consolidated financial statements. We are responsible for the direction, supervision and review of the audit work performed for the purposes of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Cornwall, Ontario May 12, 2025

Chartered Professional Accountants

Licensed Public Accountants





## CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at December 31, 2024

	2024	2023
NET FINANCIAL ASSETS	$\langle \rangle$	
Assets		
Cash	<b>\$ 16,218,440</b> \$	9,116,747
Short-term investments	3,001,043	-
Taxes receivable	809,385	743,632
Accounts receivable	2,965,621	1,463,582
Land held for resale	159,084	159,084
Long-term receivable (Note 3)	225,000	225,000
Investment in Rideau St. Lawrence Holdings Inc. (Note 4)	731,372	708,724
Investment in Port of Johnstown (Note 5)	<u> </u>	52,278,708
	24,109,945	64,695,477
Liabilities	,	
Accounts payable	3,832,614	1,915,567
Accrued interest on municipal debt	59,248	59,248
Deferred revenue - obligatory reserve funds (Note 6)	11,674	318,164
Deterred revenue	123,/22	294,802
Asset retirement obligations (Note 9)	9,050,005	0,194,322
Asset retriement obligations (Note 7)	1,572,571	177,500
	14,425,654	8,959,891
Net Financial Assets	9,684,291	55,735,586
Non-Financial Assets (Liabilities)		
Tangible capital assets	122,858,348	41,494,996
Deferred capital contributions, Port of Johnstown (Note 7)	(29,570,015)	-
Inventory	159,677	158,843
Prepaid expenses	251,215	40,727
	93,699,225	41,694,566
Accumulated Surplus	\$   103.383.516   \$	97.430.152
		, , -

## CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES

For the year	ended	December	31,	2024
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		2024			
		BUDGET	2024		2023
		(Note 11)	ACTUAL	、 、	ACTUAL
				7	
DEVENITE					
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	Э	7,005,070	5 7,110,089	Ф	0,775,880
Fees and service charges		3,303,303	3,100,802		4,235,008
Grants		/59,10/	837,601		2,124,391
Investment income		315,800	628,609		1,233,728
Donations and sale of land		18,000	13,534		401,125
Port of Johnstown		11,018,095	<u> </u>		-
		22.482.175	23.482.607		14,770,192
			-) - )		, · · · , ·
EXPENSES		Y			
General government		1,484,540	1,702,261		1,384,719
Protection services		2,391,504	2,341,810		2,345,139
Transportation services	(	3,080,533	3,268,088		4,314,501
Environmental services		2,834,952	2,846,816		2,600,676
Recreation and cultural services		2,515,103	2,787,038		2,517,046
Planning and development	/	490,420	253,061		336,516
Port of Johnstown		5,315,089	6,548,358		-
		18,112,141	19,747,432		13,498,597
		270 150	<b>550 035</b>		270 150
Deferred revenue earned (Note 6)		2/8,158	558,025		2/8,158
Capital grants		1,053,910	879,795		1,806,498
Gain on disposal of tangible capital assets		2,500	230,556		/0,/63
Equity income from government business enterprises (Note 4, 5)		-	22,648		4,384,885
Amortization of deferred capital contributions (Note 7)		-	527,165		-
		1,334,568	2,218,189		6,540,304
À			, ,		
ANNUAL SURPLUS		5,704,602	5,953,364		7,811,899
ACCUMULATED SURPLUS, beginning of year		97,430,152	97,430,152		89,618,253
ACCUMULATED SURPLUS, end of year	\$	103,134,754	\$ 103,383,516	\$	97,430,152

## CORPORATION OF THE TOWNSHIP OF EDWARDSBURGH/CARDINAL CONSOLIDATED STATEMENT OF CHANGE IN NET FINANCIAL ASSETS

	2024 BUDGET (Note 11)	2024 ACTUAL	2023 ACTUAL
Surplus for the year Amortization of tangible capital assets Acquisition of tangible capital assets Proceeds on sale of tangible capital assets Deferred capital contributions received Amortization of deferred capital contributions Gain on disposal of tangible capital assets Change in inventory Change in prepaid expenses Reclassification of Port of Johnstown's non-financial assets	\$ 5,704,602 1,746,032 (9,247,315)	\$ 5,953,364 3,614,513 (16,641,606) 294,839 2,000,000 (527,165) (230,556) (834) (210,488) (40,303,362)	\$ 7,811,899 1,707,916 (5,236,356) 95,546 - (70,763) (33,834) (9,007)
(Decrease) increase in net financial assets	(1,796,681)	(46,051,295)	4,265,401
Net financial assets, beginning of year	55,735,586	55,735,586	51,470,185
Net financial assets, end of year	\$ 53,938,905	\$ 9,684,291	\$ 55,735,586
P.M. FOR			

## **CONSOLIDATED STATEMENT OF CASH FLOWS**

	2024	2023
CASH FROM OPERATING ACTIVITIES		
Surplus for the year	\$ 5.953.364	\$ 7.811.899
Items not affecting cash		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Amortization expense	3,614,513	1,707,916
Amortization of deferred capital contributions	(527,165)	-
Accretion of asset retirement obligations	34,937	-
Gain on disposal of tangible capital assets	(230,556)	(70,763)
Equity income from government business enterprises	(41,720)	(4,403,957)
	8,803,373	5,045,095
Changes in non-cash working capital balances		(124.504)
laxes receivable		(134,504)
Accounts receivable		(272,848)
Accounts payable	<b>y</b> 1,210,904	(1,506)
Deferred revenue	- (171.080)	(1,300)
Deferred revenue - obligatory reserve funds	(171,000) (306,490)	(31,079)
Asset retirement obligations	(35,197)	(31,079)
Inventory	(834)	(31,000) (33,834)
Prenaid expenses	(210 488)	(9,007)
Opening non-cash working capital balances from Port of Johnstown	698,349	-
	8,426,745	4,938,377
CASH FROM (USED IN) FINANCING ACTIVITIES		
Repayment of municipal debt	(347,748)	(1,102,847)
Proceeds from the issue of municipal debt	1,113,871	810,980
Capital contributions received	2,000,000	_
	2,766,123	(291,867)
CASH FROM INVESTING ACTIVITIES		
Dividends received from Rideau St. Lawrence Holdings Inc.	19,072	19,072
Change in short-term investments	611,241	_
Opening cash balance from Port of Johnstown	10,925,136	-
	11,555,449	19,072
CASH USED IN CAPITAL ACTIVITIES		
Proceeds on disposal of tangible capital assets	294,839	95,546
Acquisition of tangible capital assets (Page 5,6)	(15,941,463)	(5,658,978)
		(5,5(2,422))

For the year ended December 31, 2024

(15,646,624)

7,101,693

9,116,747

\$ 16,218,440

(5,563,432)

(897,850)

10,014,597

\$<u>9,116,747</u>

**INCREASE (DECREASE) IN CASH** 

CASH, beginning of year

CASH, end of year

## SCHEDULE OF TANGIBLE CAPITAL ASSETS

For the year ended December 31, 2024

	Land	Buildings	Vehicles and Equipment	Plants and Facilities	Roads and Bridges	Water and Sewer	Annex and Marine Terminal	2024	2023
Cost							N Fr		
Balance, beginning of year	\$ 757,874	\$12,251,514	\$ 9,516,367	\$17,382,488	\$29,492,054	\$13,774,218	s –	\$83,174,515	\$78,191,673
Additions during the year	1,915,535	3,563,559	7,818,095	-	3,266,686	77,731	-	16,641,606	5,236,356
Disposals during the year	64,283	4,017	-	-	-		-	68,300	253,514
Opening balance, Port of Johnstown	2,629,301	8,038,244	21,017,770	-	1,433,173		47,113,663	80,232,151	-
Balance, end of year	5,238,427	23,849,300	38,352,232	17,382,488	34,191,913	13,851,949	47,113,663	179,979,972	83,174,515
Accumulated Amortization									
Balance, beginning of year	-	4,980,223	5,196,770	8,649,171	18,074,867	4,778,488	-	41,679,519	40,200,334
Amortization during the year	22,794	535,613	929,841	152,194	975,524	243,689	754,858	3,614,513	1,707,916
Amortization on disposals	-	4,017	-	-	-	-	-	4,017	228,731
Opening balance, Port of Johnstown	74,839	1,141,723	4,261,993	$1 \sqrt{-}$	-	-	6,353,054	11,831,609	-
Balance, end of year	97,633	6,653,542	10,388,604	8,801,365	19,050,391	5,022,177	7,107,912	57,121,624	41,679,519
Net book value 2024	\$ 5,140,794	\$17,195,758	\$27,963,628	\$ 8,581,123	\$15,141,522	\$ 8,829,772	\$40,005,751	\$122,858,348	\$41,494,996
Net book value 2023	\$ 757,874	\$ 7,271,291	\$ 4,319,597	\$ 8,733,317	\$11,417,187	\$ 8,995,730	\$-	\$41,494,996	

Acquisitions of tangible capital assets include accounts payable of \$1,344,500 as at December 31, 2024 (2023 - \$644,356); these amounts are treated as a non-cash transactions for the purposes of the consolidated statement of cash flows.

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## SCHEDULE OF TANGIBLE CAPITAL ASSETS

For the year ended December 31, 2024

	General Government	Protection Services	Transportation Services	Environmental Services	Health, and Recreation	Port of Johnstown	2024	2023
Cost						J.F.		
Balance, beginning of year Additions during the year Disposals during the year Opening balance, Port of Johnstown	\$ 1,045,350 2,192,321 64,283	\$ 4,595,035 5,063 - -	\$32,490,241 3,826,593 -	\$33,255,748 290,424 - -	\$11,702,953 458, <b>5</b> 57	\$ 6,670,959 4,017 80,232,151	\$83,089,327 13,443,917 68,300 80,232,151	\$78,191,673 5,151,168 253,514
Assets in service, end of year	3,173,388	4,600,098	36,316,834	33,546,172	12,161,510	86,899,093	176,697,095	83,089,327
Assets under construction	-	-	162,891	-		3,119,986	3,282,877	85,188
Balance, end of year	3,173,388	4,600,098	36,479,725	33,546,172	12,161,510	90,019,079	179,979,972	83,174,515
Accumulated Amortization								
Balance, beginning of year Amortization during the year Amortization on disposals Opening balance, Port of Johnstown	533,117 30,183 -	2,654,261 170,118 -	20,002,252 870,132	14,130,340 402,051 -	4,359,549 384,111 - -	1,757,918 4,017 11,831,609	41,679,519 3,614,513 4,017 11,831,609	40,200,334 1,707,916 228,731
Balance, end of year	563,300	2,824,379	20,872,384	14,532,391	4,743,660	13,585,510	57,121,624	41,679,519
Net book value 2024	\$ 2,610,088	\$ 1,775,719	\$15,607,341	\$19,013,781	\$ 7,417,850	\$ 76,433,569	\$122,858,348	\$41,494,996
Net book value 2023	\$ 512,233	\$ 1,940,774	\$12,573,177	\$19,125,408	\$ 7,343,404	\$ -	\$41,494,996	

Acquisitions of tangible capital assets include accounts payable of \$1,344,500 as at December 31, 2024 (2023 - \$644,356); these amounts are treated as non-cash transactions for the purposes of the consolidated statement of cash flows.

## SCHEDULE OF ACCUMULATED SURPLUS

	2024	2023
Surpluses		
Operating surplus \$	- 🗼 🖇	5
Land inventory surplus	159,084	159,084
EMS building surplus	49,500	49,500
Library board (deficit) surplus	(8,396)	(36)
Port of Johnstown surplus	13.393.222	- ` `
Investment in Port of Johnstown	-	52.278.708
Capital (deficit) surplus	(258,898)	146.642
Investment in Rideau St. Lawrence Holdings Inc.	731.372	708,724
Unfunded liabilities to be recovered from future revenues		, ,
Accrued interest on municipal debt	(59,248)	(59,248)
Total surplus	14,006,636	53,283,379
Reserves and reserve funds	· · ·	
Reserves set aside for specific purposes by Council:		
Working capital	542.610	847 952
Capital expenditures	132,332	221 466
Tax stabilization	102,002	102 242
Flection and insurance	67 779	61 779
Fire	07,77	861 877
	951,077	110 715
	500 057	781.600
	590,957	/81,000
Environmental	058,802	033,862
Recreation	154,486	226,278
Planning	94,234	89,234
Total reserves	3,386,094	3,937,005
Reserve funds set aside for specific purpose by legislation, regulation or agreement	•	
OMF/OCIF reserves	7.262	236.219
Water and sewer	1.338.783	458 502
Subdivision	272.162	398 937
Industrial nark	(378,558)	873 097
Johnstown	60 436	57 986
Endowment	214 564	180 308
Industrial nonly	217,307	100,590
Dedicated capital	270	1 046 252
	205,195	1,040,233
	1,520,727	1,020,314
Total reserve funds	3,100,847	5,080,168
Total reserves and reserve funds	6,486,941	9,017,173
Invested in tangible capital assets		
Tangible capital assets	122,858,348	41,494,996
Less: Deferred capital contributions, Port of Johnstown	(29,570.015)	_
Less: Related municipal debt	(9.056.003)	(6.187.808)
Less: Asset retirement obligations	(1.342.391)	(177.588)
Invested in tencible conital essets	02 000 020	25 120 600
investeu in tangible capital assets	02,007,737	33,129,600
ACCUMULATED SURPLUS \$	103,383,516 \$	97,430,152

## SCHEDULE OF CHANGE IN ACCUMULATED SURPLUS

	Surpluses	Reserves and I Reserve Funds	nvested in Tangibl Capital Assets	e 2024	2023
Balance, beginning of year	\$ 53,283,379	\$ 9,017,173	\$ 35,129,600	\$ 97,430,152	\$ 89,618,253
Surplus for the year Reserve funds used for operations Funds transferred to reserves Reclassification of Port of Johnstown's investment	5,648,898 4,294,845 (1,460,147) (37,042,939)	304,466 (4,294,845) 1,460,147	37,042,939	5,953,364 - - -	7,811,899 - -
Current year funds used for tangible capital assets Amortization of tangible capital assets Disposal of tangible capital assets Capital deferred contributions received	(16,641,606) 3,614,513 64,283 2,000,000	TL tr	$16,641,606 \\ (3,614,513) \\ (64,283) \\ (2,000,000)$	- - -	- - -
Amortization of deferred capital contributions Proceeds received of municipal debt Repayment of municipal debt Net change in asset retirement obligations	(527,165) 1,113,871 (341)036) (260)	- - -	527,165 (1,113,871) 341,036 260		- - - -
Change in accumulated surplus	(39,276,743)	(2,530,232)	47,760,339	5,953,364	7,811,899
Balance, end of year	\$ 14,006,636	\$ 6,486,941	\$82,889,939	\$103,383,516	\$ 97,430,152
RAFT					

## SCHEDULE OF SEGMENTED DISCLOSURE

	General	Protection	Transportation	Environmental Services	Recreation and	Planning and	Port of	2024	2023
	Government	Bervices	Services	Services	Cultural Services	Development	Joinistown	2024	2023
REVENUE									
Taxation \$	44,418	\$ 2,278,717	\$ 2,398,430	\$ 431,303	\$ 1,622,143	\$ 335,078	\$ -	\$ 7,110,089	\$ 6,775,880
Fees and service charges	141,670	38,194	43,507	1,944,749	703,783	228,959	-	3,100,862	4,235,068
Grants	742,819	-	-	78,895	15,887		-	837,601	2,124,391
Investment income	625,924	-	-	1,676	1,009	$\mathbf{V}$	-	628,609	1,233,728
Donations and other revenues	-	-	-	-	13,534	· -	-	13,534	401,125
Port of Johnstown	-	-	-	-	-	-	11,791,912	11,791,912	-
	1,554,831	2,316,911	2,441,937	2,456,623	2,356,356	564,037	11,791,912	23,482,607	14,770,192
EVENADO									
EXPENSES Wesses and here fits	976 160	(09.175	021 400	720 120	1 246 292	101 445	2 0 ( 9 0 2 1	7 551 709	4.000.000
wages and benefits	8/0,109	008,175	821,480	/50,130	207.0(1	101,445	5,068,021	/,551,708	4,060,688
Materials and services	222,600	299	1 490 757	23,392	207,001	0,795	01,005	310,212 4 701 261	4 002 020
Contracted services	332,009	250,241	1,460,757	674 704	16 020	102,497	004,547 220,211	4,701,301	4,995,059
Insurance and financial costs	422,465	62 102	82 200	074,704	10,930	2 204	146 808	2,757,467	2,152,710
Amortization	24,471	170 118	870132	402.051	384 111	2,204	1 757 018	3 614 513	1 707 916
Amortization	50,185	170,110	870,132	402,031	504,111	-	1,757,910	5,014,515	1,707,910
	1,702,261	2,341,810	3,268,088	2,846,816	2,787,038	253,061	6,548,358	19,747,432	13,498,597
OTHER REVENUE									
Deferred revenue earned	-		558 025	_	_	_	_	558 025	278 158
Capital grants	-		879,795	-	-	-	-	879,795	1.806.493
Gain on disposal of tangible capital assets	230.556		-	-	-	-	-	230,556	70,763
Equity income from government business enterprise	es 22.648	· -	-	-	-	-	-	22,648	4.384.885
Amortization of deferred capital contributions		· -	-	-	-	-	527,165	527,165	-
							, i	, i	
	253,204	-	1,437,820	-	-	-	527,165	2,218,189	6,540,299
SURPLUS (DEFICIT) FOR THE VEAD	105 774	\$ (24,800)	\$ 611 660	\$ (390 103)	\$ (430.682)	\$ 310.976	\$ 5 770 719	\$ 5,053,364	\$ 7811804
SURI LUS (DEFICIT) FOR THE TEAR	103,774	φ (27,099)	φ 011,009	φ (370,193)	φ (+30,082)	φ 510,270	φ 3,770,719	φ 3,755,304	φ /,011,094
R									

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2024

#### 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The consolidated financial statements are prepared by management in accordance with Canadian public sector accounting standards and include the following significant accounting policies:

#### (a) Basis of consolidation

(i) Consolidated entities

These consolidated financial statements reflect the assets, liabilities, sources of financing and expenditures and include the activities of all committees of Council and the following local board:

Township of Edwardsburgh/Cardinal Library Board

Port of Johnstown

These consolidated financial statements reflect the investment in any government business enterprises and are consolidated using the modified equity method. Under the modified equity basis, the enterprises accounting principles are not adjusted to conform with those of the Township and intergovernmental transactions and balances are not eliminated. The following government business enterprises are consolidated based on the Township's share of ownership.

Rideau St. Lawrence Holdings Inc.

(ii) Non-consolidated entities

There are no non-consolidated entities.

(iii) Accounting for United Counties of Leeds and Grenville and school board transactions

The taxation, other revenues, expenditures, assets and liabilities with respect to the operations of the school boards, and the United Counties of Leeds and Grenville are not reflected in the municipal fund balances of these consolidated financial statements.

#### (b) Accrual basis of accounting

Revenues and expenditures are reported on the accrual basis of accounting. The accrual basis of accounting recognizes revenues as they become available and measurable; expenditures are recognized as they are incurred and measurable as a result of receipt of goods or services and the creation of a legal obligation to pay.

#### (c) Measurement uncertainty (use of estimates)

The preparation of consolidated financial statements in conformity with Canadian public sector accounting standards requires administration to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenditures during the current period. These estimates are reviewed periodically and adjustments are made to income as appropriate in the year they become known. Significant items subject to such estimates and assumptions include the estimated useful life of tangible capital assets, the valuation of allowances for doubtful taxes and accounts receivable, the valuation of inventories, and the estimated asset retirement obligations. Actual results could differ from these estimates.

#### (d) Cash and cash equivalents

Cash and cash equivalents is defined as cash on hand, cash on deposit and short term investments, which includes guaranteed investment certificates with maturities of three months or less.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2024

#### 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### (e) Taxation and related revenue

Property tax billings are issued by the Township based on assessment rolls prepared by the Municipal Property Assessment Corporation ("MPAC") and collects property tax revenue for municipal purposes, county taxes on behalf of the United Counties of Leeds and Grenville, provincial education taxes on behalf of the Province of Ontario, payment in lieu of taxation, local improvements and other charges. The authority to levy and collect property taxes is established under the *Municipal Act 2001*, the *Assessment Act*, the *Education Act* and other legalisation.

Taxation revenue consists of non-exchange transactions and is recognized in the period to which the assessment relates and a reasonable estimate of the amounts can be made. Annual taxation revenue also includes adjustments related to reassessments and appeals to prior years' assessments. The Township is entitled to collect interest and penalties on overdue taxes. These revenues are recorded in the period the interest and penalties are levied.

#### (f) Government grants and transfers

Government grants and transfers are the transfer of assets from other levels of government that are not the result of an exchange transaction, are not expected to be repaid in the future, or the result of a direct financial return. The Township recognizes a government grant or transfer as revenue when the transfer is authorized and all eligibility criteria, if any, have been met. A government grant or transfer with stipulations giving rise to an obligation that meets the definition of a liability is recognized as a liability. In such circumstances, the Township recognizes revenue as the liability is settled.

#### (g) Fees and service charges

Fees and service charges are recognized when the activity is performed or when the services are rendered. Examples include, but are not limited to, water and waste water charges, solid waste tipping fees, licensing fees, permits, and other fees from various recreation programs and facilities.

#### (h) Investment income

Investment income earned on surplus funds is reported as revenue in the period earned. Investment income earned on obligatory funds such as parkland allowances and gas tax funds is added to the associated funds and forms part of the respective deferred revenue, obligatory reserve fund balances.

#### (i) Reserves and reserve funds

Certain amounts, as approved by Council, are set aside in reserves and reserve funds for future operating and capital purposes. Transfers to and from reserves and reserve funds are an adjustment to the respective fund when approved.

#### (j) Deferred revenue

Deferred revenue represents government transfers that have been received for specific purposes, but the respective expenditures have not been incurred to date. These amounts will be recognized as revenues in the year the expenditures are incurred.

#### (k) Deferred capital contributions, Port of Johnstown

Deferred capital contributions represent amounts received and receivable from the Federal and Provincial governments in aid of purchasing capital assets in the year. The contributions are amortized into revenue in the statement of operations at the same rate as the underlying tangible capital assets are amortized into expenses.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2024

#### 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### (l) Asset retirement obligations

A liability for an asset retirement obligation is recognized at the best estimate of the amount required to retire a tangible capital asset at the financial statement date when there is a legal obligation for the Township to incur retirement costs in relation to a tangible capital asset, the past transaction or event giving rise to the liability has occurred, it is expected that future economic benefits will be given up, and a reasonable estimate of the amount can be made. The best estimate of the liability includes all costs directly attributable to asset retirement activities, based on information available at fiscal year and. The best estimate of an asset retirement obligation incorporates a present when the cash flows.

year-end. The best estimate of an asset retirement obligation incorporates a present value technique, when the cash flows required to settle or otherwise extinguish an asset retirement obligation are expected to occur over extended future periods.

When a liability for an asset retirement obligation is initially recognized, a corresponding asset retirement cost is capitalized to the carrying amount of the related tangible capital asset. The asset retirement cost is amortized over the useful life of the related asset.

At each financial reporting date, the Township reviews the carrying amount of the asset retirement obligation liability. The Township recognizes period-to-period changes to the liability due to the passage of time as accretion expense. Changes to the liability arising from revisions to either the timing, the amount of the original estimate of undiscounted cash flows or the discount rate are recognized as an increase or decrease to the carrying amount of the related tangible capital asset.

The Township continues to recognize the asset retirement obligation liability relating to the landfill post-closure costs until it is settled or otherwise extinguished. Disbursements made to settle the liability are deducted from the reported liability when they are made.

#### (m) Liability for contaminated sites

A liability for contaminated sites arises when contamination is being introduced into the air, soil, water or sediment of a chemical, organic or radioactive material or live organism that exceeds the maximum acceptable concentrations under an environmental standard. A liability for remediation of contaminated sites is recognized when all of the following criteria are met:

- (i) An environmental standard exists;
- (ii) Contamination exceeds the environmental standard;
- (iii) The Township is directly responsible, or accepts responsibility to remediate the site;
- (iv) The Township expects that future economic benefits will be given up; and
- (v) A reasonable estimate of the amount can be made.

Liabilities are accrued to record the estimated costs related to the management and remediation of contaminated sites. The liability estimate includes costs that are directly attributable to the remediation activities and includes integral postremediation operation, maintenance and monitoring costs that are a part of the remediation strategy for the contaminated site. The costs that would be included in a liability are:

- Costs directly attributable to remediation activities (for example, payroll and benefits, equipment and facilities, materials, and legal and other professional services); and
- Costs of tangible capital assets acquired as part of remediation activities to the extent they have no other alternative use.

The measurement of a liability is based on estimates and professional judgment. The liability is recorded net of any expected recoveries. The carrying amount of a liability is reviewed at each financial reporting date with any revisions to the amount previously recognized accounted for in the period in which revisions are made.

A contingency is disclosed if all of the above criteria are not met.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2024

#### 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### (n) Non-financial assets

Non-financial assets are not available to discharge existing liabilities and are held for use in the provision of services. They have useful lives extending beyond the current year, and are not intended for sale in the ordinary course of operations. The change in non-financial assets during the year, together with the excess of revenues over expenses, provides the change in net financial assets for the year.

#### (i) Tangible capital assets

Tangible capital assets are recorded at cost, which includes all amounts that are directly attributable to acquisition, construction, development or betterment of the asset. The cost, less residual value, of the tangible capital assets are amortized on a straight-line basis over their estimated useful lives as follows:

Land improvements	15 to 100 years
Buildings	5 to 50 years
Machinery and equipment	10 to 60 years
Vehicles	5 to 10 years
Computer hardware and software	5 to 10 years
Water and waste plants and networks	
underground networks	50 to 100 years
sewage treatment plants	50 to 75 years
water pumping stations and reservoirs	50 to 75 years
flood stations and other infrastructure	50 to 75 years
Transportation	
roads	10 to 50 years
bridges and structures	25 to 75 years
Leased assets	5 to 40 years
Annex and marine terminal	30 to 100 years

Full amortization is charged in the year of acquisition and none in the year of disposal. Assets under construction are not amortized until the asset is available for productive use, at which time they are capitalized.

Active landfills are amortized annually based on the remaining estimated useful life. The estimated costs to close and maintain currently active landfill sites are based on estimated future expenses in current dollars, adjusted for estimated inflation, and are capitalized as part of the landfill tangible capital asset cost.

The Township has a capitalization threshold of \$25,000 so that individual tangible capital assets of lesser value are expensed, unless they are pooled because, collectively, they have significant value, or for operational reasons. Examples of pooled assets are desktop computer systems, bunker gear and furniture.

(ii) Contributions of tangible capital assets

Tangible capital assets received as contributions are recorded at their fair value at the date of receipt, and that fair value is also recorded as revenue. Similarly, transfers of assets to third parties are recorded as an expense equal to the net book value of the asset as of the date of the transfer.

#### (iii) Leases

Leases are classified as capital or operating leases. Leases which transfer substantially all of the benefits and risks incidental to ownership of property are accounted for as capital leases. All other leases are accounted for as operating leases and the related lease payments are charged to expenses as incurred.

#### (iv) Inventory

Inventory held for consumption is recorded at the lower of cost or replacement cost.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2024

#### 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### (o) Employee benefits

Employee benefits include vacation entitlement and sick leave benefits. Vacation and sick leave benefits are accrued in accordance with the Township's policy. The Township accounts for its participation in the Ontario Municipal Employees Retirement System ("OMERS"), as a defined contribution plan.

#### (p) Segments

The Township conducts its operations through six reportable segments: general government, protection services, transportation services, environmental services, recreation and cultural services, and planning and development. These segments are established by senior management to facilitate the achievement of the Township's long-term objectives to aid in resource allocation decisions, and to assess operational performance.

#### (q) Financial instruments

The Township recognizes its financial instruments when the Township becomes party to the contractual provisions of the financial instrument. All financial instruments are initially recorded at their fair value.

At initial recognition, the Township may irrevocably elect to subsequently measure any financial instrument at fair value. The Township has made no such election during the year. The Township subsequently measures all its financial assets and liabilities at amortized cost.

The Township subsequently measures investments in equity instruments quoted in an active market and all derivative instruments, except those that are linked to, and must be settled by delivery of, unquoted equity instruments of another entity, at fair value. Fair value is determined by published price quotations. Transactions to purchase or sell these items are recorded on the trade date. Net gains and losses arising from changes in fair value are recognized in the consolidated statement of remeasurement gains and losses. The Township has not presented a consolidated statement of remeasurement gains and losses are it does not have any items giving rise to remeasurement gains (losses). Interest income is recognized in the consolidated statement of financial activities.

Investments in equity instruments not quoted in an active market and derivatives that are linked to, and must be settled by delivery of, unquoted equity instruments of another entity, are subsequently measured at cost. With the exception of those instruments designated at fair value, all other financial assets and liabilities are subsequently measured at amortized cost using the effective interest rate method.

Transaction costs directly attributable to the origination, acquisition, issuance or assumption of financial instruments subsequently measured at fair value are immediately recognized into income. Conversely, transaction costs are added to the carrying amount for those financial instruments subsequently measured at cost or amortized cost.

All financial assets except derivatives are tested annually for impairment. Management considers whether the investee has experienced continued losses for a period of years, recent collection experience for the loan, such as a default or delinquency in interest or principal payments in determining whether objective evidence of impairment exists. Any impairment, which is not considered temporary, is recorded in the consolidated statement of operations. Write-downs of financial assets measured at cost and/or amortized cost to reflect losses in value are not reversed for subsequent increases in value. Reversals of any net remeasurements of financial assets measured at fair value are reported in the consolidated statement of remeasurement gains and losses in the fiscal year it occurs.

## **CORPORATION OF THE TOWNSHIP OF EDWARDSBURGH/CARDINAL** NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2024

#### 2. CHANGE IN ACCOUNTING POLICIES

#### **Revenue recognition**

Effective January 1, 2024, the Township adopted the Public Sector Accounting Board's (PSAB) new standard for the recognition, measurement and disclosure of revenue under PS 3400 Revenue. The new standard establishes when to recognize and how to measure revenue and provides the related financial statement presentation and disclosure requirements. Pursuant to these recommendations, the change was applied retroactively, and prior periods have not been restated.

Under the new standard, revenue is differentiated between revenue arising from transactions that include performance obligations, referred to as "exchange transactions", and transactions that do not have performance obligations, referred to as "non-exchange transactions."

There was no material impact on the financial statements from the retroactive application of the new accounting recommendations.

#### **3. LONG-TERM RECEIVABLE**

The long-term receivable is due from Rideau St. Lawrence Holdings Inc., bears interest at 3.72%, paid quarterly, has no specific terms of repayment, and is unsecured.

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## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2024

## 4. INVESTMENT IN RIDEAU ST. LAWRENCE HOLDINGS INC.

	2024 2023	
Investment, beginning of year	<b>\$ 798,724 \$</b> 686,	,450
Share of net income for the year Dividends received	<b>41,720</b> 41, (19,072) (19,	,346 ,072)
Change for the year	<b>22,648</b> 22,	,274
Investment, end of year	<b>731,372</b> \$ 708,	,724

The Township of Edwardsburgh/Cardinal owns 11.92% of the outstanding share capital of Rideau St. Lawrence Holdings Inc.

The following table provides condensed supplementary financial information for Rideau St. Lawrence Holdings Inc.:

Financial Position		
	2024	2023
Current assets	\$ 5,196,653	\$ 5,196,653
Capital Regulatory assets	11,173,232 1,049,498	11,173,232 1,049,498
Total Assets	17,419,383	17,419,383
Current liabilities	6,616,568	6,616,568
Long-term debt	2,622,974	2,622,974
Contributions in aid of construction	1,745,545	1,745,545
Customer denosits	223 834	223 834
Regulatory liabilities	255,802	255,802
Total Liabilities	11,473,714	11,473,714
Net Assets	\$ 5,945,669	\$ 5,945,669
Financial Activities		
	2024	2023
Total Revenue	\$ 17,350,000	\$ 17,354,838
Total Expenses	17,000,000	17,007,975
Net Income	\$ 350,000	\$ 346,863
Township share of net income (11 92%)	\$ 41 720	\$ 41 346
	ψ τι,720	Ψ -1,540

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2024

#### 5. PORT OF JOHNSTOWN

Effective January 1, 2024, the Port of Johnstown (the "Port") was no longer considered a Government Business Enterprise but as a government unit of the Township. As a result, the Township changed the accounting treatment for the Port from the modified equity basis to a consolidation basis. This change in accounting policy was recorded prospectively.

The Port retroactively adopted Public Sector Accounting Board's (PSAB) from International Financial Reporting Standards (IFRS). There was not a material impact on the financial statements from the retroactive application of PSAB accounting standards, except for the adoption of Asset Retirement Obligations (AROs) PS3280, which became a new accounting standard effective January 1, 2023 and was applied on a modified retroactive basis.

The accounting policy change resulted in an increase to the Port's asset retirement obligations liability of \$1,131,129, an increase to tangible capital assets of \$636,500, an increase in expenses due to accretion expense of \$33,934 and a reduction to its accumulated surplus of \$528,563. This change reduced the Township's investment in the Port by \$528,563, applied retroactively, before the consolidation of the Port's net assets within these financial statements.

The change in investment is as follows:	<b>A</b>		
		2024	2023
Investment, beginning of year		\$ 52,278,708	\$ 47,916,097
Net income for the year Distribution of income Allocation of investment to net assets		- - (52,278,708)	4,926,022 (563,411)
Change for the year		(52,278,708)	4,362,611
Investment, end of year	$\mathbf{O}$	<b>\$</b> -	\$ 52,278,708

(a) The following table provides condensed supplementary financial information for Port of Johnstown:

	2024	2023
Cash	\$ 10,520,282	\$ 10,925,136
Investments	3,001,043	3,612,284
Accounts receivable	1,577,235	1,976,955
Inventory and prepaid expenses	183,852	159,032
Capital	76,433,569	68,400,542
Total Assets	91,715,981	85,073,949
Accounts payable	1,772,730	1,322,409
Deferred revenue	116,460	115,229
Long-term debt	2,007,349	2,095,360
Asset retirement obligations	1,200,000	1,165,063
Deferred contributions	29,570,015	28,097,180
Total Liabilities	34,666,554	32,795,241
Accumulated surplus	\$ 57,049,427	\$ 52,278,708

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2024

#### 5. PORT OF JOHNSTOWN (Continued)

(a) The following table provides condensed supplementary financial information for Port of Johnstown:

Financial Activities	
	2024 2023
Total revenue	<b>\$ 12,319,077 \$</b> 11,994,109
Total expenses	<b>6,548,358</b> 6,068,087
Total municipality administration fees	<b>1,000,000</b> 1,000,000
Net Income	<b>\$ 4,770,719 \$ 4,926,022</b>
	N'

## 6. DEFERRED REVENUE - OBLIGATORY RESERVE FUNDS

A requirement of Canadian public sector accounting standards is that obligatory reserve funds be reported as deferred revenue. This requirement is in place as provincial legislation restricts how these funds may be used and under certain circumstances these funds may possibly be refunded. The transactions in the federal gas tax and COVID-19 restart program obligatory reserve funds are summarized as follows:

			Federal	COVID-19		
			Gas Tax	Restart	2024	2023
Balance, beginning of year		\$	260,139	\$ 58,025	\$ 318,164	\$ 349,243
Grants received			239,463	-	239,463	234,736
Interest and other			12,072	-	12,072	12,343
Deferred revenue earned			(500,000)	(58,025)	(558,025)	(278,158)
Balance, end of year	Q	\$	11,674	\$ -	\$ 11,674	\$ 318,164
		<i>y</i>				

## 7. DEFERRED CAPITAL CONTRIBUTIONS, PORT OF JOHNSTOWN

Deferred revenue represents the unamortized amount of grants and funding received for the purchase of capital assets at the Port of Johnstown. The transactions in deferred capital contributions are summarized as follows:

		2024	2023
Balance, beginning of year	\$	-	\$ -
Allocation of deferred capital contributions	28	3,097,180	-
Contributions received during the year	2	2,000,000	-
Amortization of deterred capital contributions		(527,165)	-
Balance, end of year	\$ 29	9,570,015	\$ -

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2024

### 8. MUNICIPAL DEBT

		2024	2023
Loan payable, interest at 4.59%, payable in blended semi-annual payments of \$151,849, due October 2048	\$	4,390,040 \$	4,488,822
Loan payable, interest at 2.91%, payable in blended semi-annual payments of \$26,523, due July 2036	(	534,044	570,746
Loan payable, interest at 4.37%, payable in blended semi-annual payments		1,013,768	-
of \$38,890, due February 2044	$\mathbf{y}$		
Loan payable, interest 0%, payable in monthly payments of \$1,395,		82,326	-
due November 2029	*		
Loan payable, interest at 4.82%, payable in blended monthly payments of \$41,627, due August 2043		1,028,478	1,060,980
Mortgage payable, interest at 3.01%, payable in blended monthly payments of \$12,489, due February 2042, Port of Johnstown		2,007,349	-
Loan payable, payable in bi-weekly payments of \$476, matured in March 2024		-	2,382
Loan payable, interest at 1.73%, payable in blended monthly payments of \$8,563, matured in June 2024		-	51,075
Loan payable, interest at 2.88%, payable in blended monthly payments of \$7,052, matured in October 2024		-	13,805
Tile drainage loans, interest at 6%, repayable over a ten year period in blended payments ranging between \$2,568 and \$6,793, matured in 2024		-	6,712
	\$	9,056,005 \$	6,194,522
Principal payments, assuming the loans are renewed under the same terms and condi	tions,	are as follows:	
2025 2026 2027 2028 2029 Thereafter	\$	316,522 328,354 340,673 353,501 365,462 7,351,493	
	\$	9,056,005	

(b) Of the municipal debt reported, principal payments are payable from the following sources as follows:

	2025 - 2029	Thereafter
Taxation revenues Other revenues	\$ 755,009 949,504	\$ 6,753,184 598,308
	\$ 1,704,513	\$ 7,351,492

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2024

#### 9. ASSET RETIREMENT OBLIGATIONS

The Township's asset retirement obligations include one solid waste landfill site's post closure monitoring costs and the Port of Johnstown's future decommission of the salt retention pond and the removal of asbestosis from its buildings. The estimated future asset retirement obligations are \$1,342,391 of which have been adjusted by applying a discount rate of 3%, based on the Township's borrowing rate.

The landfill site reached its useful life and capping and monitoring procedures commenced in 2016. The landfill postclosure monitoring period is estimated for ten years. Total closure and post-closure costs were estimated to be \$372,880 in 2016. The remaining future asset retirement obligation relating to the landfill site is \$142,391 (2023 - \$177,588).

The reported liability is based on estimates and assumptions using the best information available at the end of the reporting period. Future events, such as changes to regulatory requirements, may result in significant changes to the estimated total liability and will be recognized prospectively, as a change in estimate, when applicable.

The change in asset retirement obligations for the year is as follows:

		2024	 2023
Balance, beginning of year Liabilities incurred Liabilities settled Accretion		\$ 177,588 1,165,063 (35,197) 34,937	\$ 208,654 (31,066)
Balance, end of year	.0	\$ 1,342,391	\$ 177,588

The remaining estimated liability is to be recovered from future taxation revenue, user fees and reserves.

#### **10. PENSION AGREEMENTS**

The Township is a member of the Ontario Municipal Employees Retirement System ("OMERS") which is a multiemployer retirement plan. The plan is a contributory defined benefit plan that specifies the amount of retirement benefit to be received by the employees based on the length of service and rates pay. Employers and employees contribute to the plan. Since any surpluses or deficits are a joint responsibility of all Ontario municipalities and their employees, the Township does not recognize any share of the OMERS pension deficit of \$2.9 billion (2023 - \$4.2 billion) in these consolidated financial statements.

The employer amount contributed to OMERS for 2024 was \$462,281 (2023 - \$421,735) for current service and is included as an expenditure on the consolidated statement of financial activities.

## **11. BUDGET FIGURES**

The 2024 budget amounts that were approved on February 26, 2024 were established for Capital, Reserves and Reserve Funds and are based on a project-oriented basis, the costs of which may be carried out over one or more years.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2024

#### **12. OPERATING EXPENDITURES BY OBJECT**

Municipal operating expenditures are summarized as follows:

	BUDGET	ACTUAL	ACTUAL
	2024	2024	2023
	(Note 11)		
Wages and benefits	\$ 7,560,436	\$ 7,551,708	\$ 4,060,688
Interest on long-term debt	252,483	316,212	227,571
Materials and services	5,081,780	4,701,361	4,993,039
Contracted services	2,684,717	2,757,487	2,152,710
Insurance and financial expenses	786,693	806,151	356,673
Amortization	1,746,032	3,614,513	1,707,916
	\$ 18,112,141	\$ 19,747,432	\$ 13,498,597

#### 13. OPERATING AND WATERWORKS AND SEWER OPERATIONS SURPLUSES AND DEFICITS

The operating deficit for the fiscal year ended December 31, 2024 was \$207,391 (2023 - surplus of \$97,952) of which the balance was transferred to the working capital reserve.

The waterworks and sewer operations' net deficit for the fiscal year ended December 31, 2024 was \$299,351 of which \$21,207 was transferred from the Spencerville wastewater reserve fund, \$33,871 was transferred from the Industrial Park water reserve fund, \$28,397 was transferred from the Industrial Park wastewater reserve fund, \$102,939 was transferred from the Cardinal wastewater reserve fund, \$124,791 was transferred from the Cardinal water reserve fund; whereas a surplus of \$11,853 was transferred to the low lift reserve fund.

	(Note 11) BUDGET 2024	ACTUAL 2024	ACTUAL 2023
Annual surplus, statement of operations	\$ 5,704,602	\$ 5,953,364	\$ 7,811,899
Funds transferred to reserves	(734,348)	(1,966,889)	(1,968,405)
Reserve funds used for operations and tangible capital assets	2,780,064	4,294,844	3,484,036
Reserve fund interest	-	(304,467)	(340,255)
Change in asset retirement obligations	-	(260)	(31,066)
Acquisition of tangible capital assets	(9,247,315)	(16,641,606)	(5,236,356)
Annual amortization expense	1,746,032	3,614,513	1,707,916
Loss on sale of tangible capital assets	-	(230,556)	(70,763)
Proceeds on sale of tangible capital assets	-	294,839	95,546
Change in accrued interest on municipal debt	-	_	(1,506)
Deferred capital contributions received	-	2,000,000	-
Amortization of deferred capital contributions	-	(527,165)	-
Change in capital surplus or capital deficit	-	405,540	(526,000)
Principal payments on municipal debt	(249,035)	(341,036)	(1,090,484)
Proceeds from municipal debt	-	1,113,871	810,980
Equity pick-up of Rideau St. Lawrence Holdings Inc.	-	(22,648)	(22,269)
Equity change in Port of Johnstown's	-	1,842,547	(4,362,611)
Library board operating deficit for the year	-	8,367	15,864
Operating surplus (deficit) for the year before year-end transfers	_	(506 742)	276 526
Transfer (to) water and sewer reserves	-	299.351	(178.574)
Transfer from (to) reserves	-	207,391	(97,952)
Operating surplus (deficit) for the year	\$ -	\$ -	\$ -

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2024

#### **14. SEGMENTED INFORMATION**

The Township is responsible for providing a range of services to its citizens. For management reporting purposes the Township's operations and activities are organized and reported by department. These departments are reported by functional area in the body of the consolidated financial statements similar to reporting reflected in the Ontario Financial Information Return. These functional areas represent segments for the Township of Edwardsburgh Cardinal and expended disclosure by object has been reflected in the schedule of segmented disclosure.

For each segment separately reported, the segment revenue and expenses represent both amounts that are directly attributable to the segment and amounts that are allocated on a reasonable basis. Therefore, certain allocation methodologies are employed in the preparation of segmented financial information.

The accounting policies used in these segments are consistent with those followed in the preparation of the consolidated financial statements as disclosed in Note 1.

A brief description of each segment follows:

(a) General government

General government includes corporate services and governance of the Township. Administration as a segment includes operating and maintaining municipal owned buildings, human resource management, legal, communications, information systems and technology, support to Council for policy development, by-law development in compliance with the *Ontario Municipal Act*, tax billing and collection responsibilities, financial management reporting, monitoring and overall budget status as well as frontline reception and customer service.

(b) Protection services

Protection services includes fire protection, conservation authority, protective inspection and control, and emergency measures. Fire protection includes inspection, extinguishing and suppression services, emergency medical first response, and prevention education and training programs. Inspection and control includes building inspection, by-law enforcement and dog control services.

(c) Transportation services

Transportation services includes administration and operation of traffic and parking services for the Township. In addition, services are provided for the winter and summer road maintenance along with the repair and construction of the municipal roads system including bridges and culverts, as well as operation and maintenance of a fleet of vehicles and equipment for use in providing services to the Township.

(d) Environmental services

Environmental services includes waste collection, disposal, recycling services and water and sewer services. Water and sewer services includes the operation of water and waste water facilities and infrastructure for the collection and distribution of both water and sewer services within the Township.

(e) Recreation and cultural services

Recreation and cultural services provides services that contribute to neighbourhood development and sustainability through the provision of recreation and leisure programs and facilities including community halls, libraries, parks, recreation fields, and arenas.

(f) Planning and development

Planning and development manages development for business interests, environmental concerns, heritage matters, local neighbourhoods and community development. It also facilitates economic development by providing services for the approval of all land development plans and the application and enforcement of the zoning by-law and official plan.
### **CORPORATION OF THE TOWNSHIP OF EDWARDSBURGH/CARDINAL**

### NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2024

### **15. SEGMENTED INFORMATION (Continued)**

(g) Port of Johnstown

The Port of Johnstown is a government organization which provides multi-modal transportation hub and seasonal river port services for dry bulk products. The Port's main functions include bulk cargo handling and storage, grain cleaning, and marine, rail and truck loading and unloading services.

### **16. FINANCIAL INSTRUMENTS**

The Township, as part of its operations, carries a number of financial instrument. It is management's opinion that the Township is not exposed to significant interest, currency, credit, liquidity or other price risks arising from these financial instruments except as otherwise disclosed.

#### Credit concentration

Financial instruments that potentially subject the Township to concentrations of credit risk consist primarily taxes and accounts receivable. However, credit exposure is limited due to the Township's large customer base.

#### Interest rate risk

Interest rate risk is the risk that the value of a financial instrument might be adversely affected by a change in the interest rates. Changes in market interest rates may have an effect on the cash flows associated with some financial assets and liabilities, known as cash flow risk, and on the fair value of other financial assets or liabilities, known as price risk.

The Port is exposed to interest rate cash flow risk with respect to long-term debt and short-term investments. However, the exposure is limited as long-term debt and short-term investments are at a fixed interest rate.

#### Liquidity risk

Liquidity risk is the risk that the Port will not be able to meet its financial obligations as they become due.

The Port manages liquidity risk by continually monitoring actual and forecasted cash flows from operations to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due.

### **17. COMPARATIVE FIGURES**

Certain comparative figures have been restated to conform with the current year's financial statement presentation.



### **CORPORATION OF THE TOWNSHIP OF EDWARDSBURGH/CARDINAL**

### FIVE YEAR FINANCIAL REVIEW

For the year ended December 31, 2024

### FINANCIAL ACTIVITIES (000's)

		2024		2023		2022		2021		2020
Revenues								*	<b>N</b>	
Taxation	\$	7,110	\$	6,776	\$	6,533	\$	6.172	\$	6,072
Fees and service charges	•	3,101	·	4,235		3,917		3,571		3,511
Grants		838		2,124		750		958		920
Investment income		629		1,234		951		183		209
Donations and other		13		401		41		23		40
Port of Johnstown	1	1,792		-		-		/		-
	2	23,483		14,770		12,192	イ	10,907		10,752
Fynenses						X	/			
General government		1 702		1 385		1 223		1 413		1 262
Protection to persons and property	7	2 342		2345	,	2 188		2 091		2,202
Transportation services		3 268		4 314		2 909		2,071		2,004
Environmental		2 847		2,514		2 421		2,012		2,001
Recreation and cultural services		2,787		2,517	$\sim$	2,121		1 873		1 845
Planning and development		253		337		240		227		291
Port of Johnstown		6,548		557 7	)	-		-		-
	1	19,747		/13,499		11,205		10,378		10,398
Other Devenue				$\overline{\langle}$						
Deformed revenue correct		550		270				442		260
Conital grants		220		278		-		44Z 192		200
Capital grants		000		1,800		44/		162		275
conital assets		220		71				74		26
Equity income		230		/ 1		2 8 1 /		2 161		20
A mortization of deferred capital		\$27	1	4,385		3,014		5,401		5,052
contributions	(	32/		-		-		-		-
Controlations		$ \rightarrow $								
	$\mathbf{X}$	2,218		6,540		4,261		4,159		4,191
Annual surplus	\$	5,954	\$	7,811	\$	5,248	\$	4,688	\$	4,545
Â.										
PROPERTY TAXES BILLED (00	)0's)									
		2024		2023		2022		2021		2020
Own purposes	\$	7 110	\$	6 776	\$	6 533	\$	6 172	\$	6 072
Upper-tier municipality	Ψ	3.986	Ψ	3.715	Ψ	3,426	Ψ	3.388	Ψ	3.301
School boards		2,296		2,264		2,306		2,234		2,443
	¢ 1	3 307	¢	12 755	¢	12 265	¢	11 704	¢	11.816
	φI	1,5,572	φ	14,133	φ	12,205	φ	11,/74	φ	11,010

### CORPORATION OF THE TOWNSHIP OF EDWARDSBURGH/CARDINAL

### FIVE YEAR FINANCIAL REVIEW

For the year ended December 31, 2024

### TAXABLE ASSESSMENT (000's)

	2024	2023	2022	2021	2020
Residential and farm Commercial and industrial	\$ 811,954 146,853	\$ 804,665 144,302	\$ 789,869 143,895	\$ 783,785 139,421	\$ 779,682 139,024
	958,807	948,967	933,764	923,206	918,706
Exempt	41,157	39,251	39,008	37,934	38,205
	\$ 999,964	\$ 988,218	\$ 972,772	\$ 961,140	\$ 956,911
Commercial and industrial	15.32%	15.21%	15.41%	15.10%	15.13%
FINANCIAL INDICATORS	2024	2023	2022	2021	2020
Tax arrears					
Percentage of own levy	11 %	11 %	9%	9 %	10 %
Percentage of total levy	6 %	6 %	5 %	5 %	5 %
Municipal debt	\$ 5,041,307	\$ 6,194,521	\$6,486,389	\$ 5,672,917	\$ 5,600,811
Municipal debt charges	\$ 663,960	\$ 1,330,418	\$ 500,849	\$ 478,299	\$ 373,087
Sustainability Financial assets to liabilities	1.67	7.22	6.57	7.59	7.00
Financial assets to liabilities excluding municipal debt	3.57	4.67	4.32	6.50	5.93
Municipal debt to tangible capital assets	19.61 %	15.02 %	17.07 %	15.93 %	15.84 %
Flexibility Debt charges to total operating revenue	2.83 %	9.01 %	4.11 %	4.37 %	3.47 %
Total operating revenue to taxable assessment	2.35 %	1.49 %	1.25 %	1.14 %	1.12 %
Vulnerability Operating grants to operating revenue	3.57 %	14.38 %	6.15 %	8.78 %	8.57 %
Total grants to total revenues	6.68 %	18.45 %	7.28 %	7.57 %	7.99 %
Reserve coverage Reserves and reserve funds	\$ 6,486,941	\$ 9,017,173	\$ 9,916,018	\$ 9,195,259	\$ 7,935,759
Reserves to operating expenses	s 33 %	67 %	88 %	89 %	76 %
Reserves to working capital	2.75	2.17	3.45	2.19	3.08



# Corporation of the Township of Edwardsburgh/Cardinal

2024 Audit Findings Report to Council December 31, 2024

H. James Pollock, CPA, CA, LPA T: 613.209.8253 E: jamie.pollock@mnp.ca



Wherever business takes you

MNP.ca

# Overview

We are pleased to submit to you this Audit Findings Report (the "Report") for discussion of our audit of the consolidated financial statements of Corporation of the Township of Edwardsburgh/Cardinal and its subsidiaries (the "Township") as at December 31, 2024 and for the year then ended. In this report we cover those significant matters which, in our opinion, you should be aware of as members of Council.

As auditors, we report to the Members of Council, Inhabitants and Ratepayers on the results of our examination of the consolidated financial statements of the Township as at and for the year ended December 31, 2024. The purpose of this Report is to assist you, as members of Council, in your review of the results of our audit.

This Report is intended solely for the information and use of Council and management and should not be distributed to or used by any other parties than these specified parties.

We appreciate having the opportunity to meet with you and to respond to any questions you may have about our audit, and to discuss any other matters that may be of interest to you.

### **Engagement Status**

We have completed our audit of the consolidated financial statements of the Township which has been carried out in accordance with Canadian generally accepted auditing standards and are prepared to sign our Independent Auditor's Report subsequent to completion of the following procedures:

- Receipt of the signed management representation letter;
- Approval of subsidiaries' 2024 financial statements by their respective board of directors; and
- Council's review and approval of the financial statements.

No significant limitations were placed on the scope or timing of our audit.

### **Independent Auditor's Report**

We expect to have the above procedures completed and to release our Independent Auditor's Report on May 12, 2025.

Unless unforeseen complications arise, our Independent Auditor's Report will provide an unmodified opinion to the Members of Council, Inhabitants and Ratepayers of the Township. A draft copy of our proposed Independent Auditor's Report has been included with this report. The matters disclosed in the Independent Auditor's Report are discussed further in the relevant sections of the Report.

# **Audit Reporting Matters**

Our audit was carried out in accordance with Canadian generally accepted auditing standards, and included a review of all significant accounting and management reporting systems, with each material year end balance, key transaction and other events considered significant to the financial statements considered separately.

### Significant Audit, Accounting and Reporting Matters

Area		Comments
	Changes from Audit Service Plan	There were no deviations from the Audit Service Plan previously presented to you.
	Final Materiality	Final materiality used for our audit was \$850,000 for December 31, 2024, and \$685,000 for December 31, 2023.
69	Identified or Suspected Fraud	While our audit cannot be relied upon to detect all instances of fraud, no incidents of fraud, or suspected fraud, came to our attention in the course of our audit.
	Identified or Suspected Non-Compliance with Laws and Regulations	Nothing has come to our attention that would suggest any non-compliance with laws and regulations that would have a material effect on the financial statements.
	Matters Arising in Connection with Related Parties	No significant matters arose during the course of our audit in connection with related parties of the Township.
	Auditor's Views of Significant Accounting Practices, Accounting Policies and Accounting Estimates	The application of Canadian public sector accounting standards allows and requires the Township to make accounting estimates and judgments regarding accounting policies and financial statement disclosures.
		As auditors, we are uniquely positioned to provide open and objective feedback regarding your Township's accounting practices. The accounting policies used by the Township are appropriate and have been consistently applied.

Area		Comments
		The most significant estimate relates to the landfill post-closure liability which is reported under asset retirement obligations. This has been determine by a specialist in 2016 and has been reduced over the years by actual amounts spent. There has been no change in circumstances in the year that would result in a change in estimate made. The estimate and related expense are properly disclosed in the consolidated financial statements.
	Financial Statement Disclosures	The disclosures made in the notes to the consolidated financial statements appear clear, neutral and consistent with our understanding of the entity and the amounts presented in the consolidated financial statements.
Ę	Significant Deficiencies in Internal Control	While our review of controls was not sufficient to express an opinion as to their effectiveness or efficiency, we have not detected significant deficiencies in internal controls.
	Matters Arising From Discussions with Management	There were no significant matters discussed, or subject to correspondence, with management that in our judgment need be brought to your attention.
	Port of Johnstown investment	Effective January 1, 2024, the Port of Johnstown (the "Port") was no longer considered a Government Business Enterprise but as a government unit of the Township. As a result, the Township changed the accounting treatment for the Port from the modified equity basis to a consolidation basis. This change in accounting policy was recorded prospectively.

## Significant Risk Areas and Responses

Significant Risk Area	Response and Conclusion
Management override of controls There is a presumed risk of management override of controls in all entities	MNP will test adjusting journal entries posted by management throughout the year based on criteria set by the audit engagement team.
Expenses and payables Expenses could be recorded in the wrong period	Test cut-off to gain a high degree of comfort over expenses being recorded in the proper period.

Significant Risk Area	Response and Conclusion
Revenues and receivables Revenues could be recorded in the wrong period	Test cut-off to gain a high degree of comfort over revenues being recorded in the proper period as well as testing adjusting journal entries posted by management with any unusual account combinations affecting revenue.

### **Higher Risk Areas and Responses**

Higher Risk Area	Response and Conclusion
Grants	
Grants subject to certain criteria might be recorded in revenue when such criteria is not yet met	Test grants at a low threshold and ensure they qualify for recognition as revenue in the year.

### **Other Areas**

Area	Comments
Auditor Independence	We confirm to Council that we are independent of the Township. Our letter to Council discussing our independence is included as part of the additional materials attached to this report.
Management Representations	We have requested certain written representations from management, which represent a confirmation of certain oral representations given to us during the course of our audit. This letter, provided by management, has been included as additional material to this report.
Summary of Significant Differences	A few significant differences were proposed to management with respect to the December 31, 2024 financial statements.

We appreciate having the opportunity to meet with you and respond to any questions you may have about our audit, and to discuss any other matters that may be of interest to you.

Sincerely,

MNPLLP

Chartered Professional Accountants Licensed Public Accountants encls



May 12, 2025

Members of Council Corporation of the Township of Edwardsburgh/Cardinal P.O. Box 129 18 Centre Street Spencerville, ON K0E 1X0

Dear Sirs/Mesdames:

We have been engaged to audit the financial statements of Corporation of the Township of Edwardsburgh/Cardinal (the "Municipality") as at December 31, 2024 and for the year then ended.

CAS 260 *Communication With Those Charged With Governance* requires that we communicate with you matters that are significant to our engagement. One such matter is relationships between the Municipality and its related entities or persons in financial reporting oversight roles at the Municipality and MNP LLP and any affiliates ("MNP") that, in our professional judgment, may reasonably be thought to bear on our independence. In determining which relationships to report, the Standard requires us to consider relevant rules and related interpretations prescribed by the appropriate professional accounting body and applicable legislation, covering such matters as:

- (a) Holding a financial interest, either directly or indirectly, in a client;
- (b) Holding a position, either directly or indirectly, that gives the right or responsibility to exert significant influence over the financial or accounting policies of a client or a related entity;
- (c) Personal or business relationships of immediate family, close relatives, partners or retired partners, either directly or indirectly, with a client or a related entity;
- (d) Economic dependence on a client; and
- (e) Provision of non-assurance services in addition to the audit engagement.

We are not aware of any relationship between the Municipality and MNP that, in our professional judgment, may reasonably be thought to bear on our independence, which have occurred from January 1, 2024 to May 12, 2025.

We hereby confirm that MNP is independent with respect to the Municipality within the meaning of the Code of Professional Conduct of the Chartered Professional Accountants of Ontario as of May 12, 2025.

This report is intended solely for the use of Members of Council, management and others within the Municipality and should not be used for any other purposes.

We look forward to discussing with you the matters addressed in this letter as well as other matters that may be of interest to you. We will be prepared to answer any questions you may have regarding our independence as well as other matters.

MNPLLP

Chartered Professional Accountants Licensed Public Accountants

T: 613.932.3610 F: 613.938.3215





May 12, 2025

Members of Council Corporation of the Township of Edwardsburgh/Cardinal P.O. Box 129 18 Centre Street Spencerville, ON K0E 1X0

Dear Members of Council:

### Re: Audit of December 31, 2024 Financial Statements

During the course of the audit of the financial statements for the year ended December 31, 2024, we identified some matters which may be of interest to Administration and Council. As a result of our observations, we have outlined below some suggestions for your consideration. This letter deals with the important matters that came to our attention during the audit. Minor matters were discussed verbally with your staff.

We have no recommendations from the 2024 audit that requires your attention.

### **RECOMMENDATIONS FROM PREVIOUS YEARS**

### **Review of outstanding taxes receivable**

Taxes receivable rose 22% between December 31, 2022 and December 31, 2023 while taxation revenues only rose by 4%. Administration is aware of this increase. Administration should consistently review their taxes receivables and to follow up on outstanding balances to ensure collection is still expected. Any tax arrears on properties that are older than two years should be registered for tax land sales.

Action Taken: Taxes receivable rose by 9% between December 31, 2023 and December 31, 2024 while taxation revenues rose by 5%.

We have discussed the matters in this report with your staff and received comments thereon. We now bring them to your attention. We would like to express our appreciation for the co-operation and assistance which we received from your Administration during the course of the audit.

We shall be pleased to discuss with you further any matters mentioned in this report at your convenience.

This communication is prepared solely for the information of Council and Administration and is not intended for any other purpose. We accept no responsibility to a third party who uses this communication.

Sincerely, MNP LLP

**Chartered Professional Accountants** Licensed Public Accountants

cc: Mr. Sean Nicholson, Chief Administrative Officer Ms. Jessica Crawford, Treasurer







# TOWNSHIP OF EDWARDSBURGH CARDINAL INFORMATION ITEM

**Committee:** Administration & Operations

Date: May 12, 2025

**Department:** Parks / Recreation & Facilities

Topic: 1st Quarter 2025 Facility Maintenance Report

**Background:** Below you find a list of work performed at Township facilities during the 1<sup>st</sup> quarter of 2025. These work orders are above the daily routines at our facilities.

### Ingredion Centre:

- (WO-5004) NO power to HVAC system repaired with new interface board
- (WO-5109) brine leak repair in compressor room
- (WO-5113) Replaced 4 exterior lights in parking lot ESA updated
- (WO-5113) replaced the boiler system for in-floor heating
- (WO-5123) tested & tagged all safety valves in compressor room
- (WO-5165) replaced Zamboni hot water tank
- (WO-5235) repaired gas valve on dehumidifier
- (WO-5278) plant shut down by Cimco for both rinks

### Spencerville Arena:

- (WO-5147) replaced safety valves in compressor room per Cimco recommendation
- (WO-3543) Electrical Safety Inspection

### Town Hall

- (WO-4994) installed mother board for the boiler system
- (WO-5206) replaced parts on water pump for furnace

**Facilities Manager** 



# TOWNSHIP OF EDWARDSBURGH CARDINAL INFORMATION ITEM

**Committee:** Administration & Operations

Date: May 12, 2025

Department: Parks / Recreation & Facilities

Topic: 1st Quarter Facility Stats Report 2025 Update

**Background:** Attached is the report for the period January to March 2025 for the following facilities.

- Ingredion Centre
- Port of Johnstown Meeting Room
- Spencerville Arena
- Spencerville Arena Meeting Room
- South Edwardsburgh Community Centre
- Townhall upstairs

### The Ingredion Meeting room have weekly & bi-weekly rentals for the following:

Foot Care Clinic (Every Second Wednesday 11 am – 4 pm)

Early On Drop in (Mondays 9-12 noon)

### Johnstown Hall & Townhall

Senior aerobics classes (Mondays & Thursday 9 am - 11am)

### FACILITIES MANAGER – STATISTICS REPORT 1<sup>st</sup> QUARTER January – March 2025

### January 2025

Facility	Available Hours	Hours Booked	Percentage
South Centre	360	64	17.7 %
Port of Johnstown Meeting Room	360	40	11.1 %
Spencerville Arena Hall	360	19	5.2 %
Townhall Upstairs	360	10	2.7 %

### February 2025

Facility	Available Hours	Hours Booked	Percentage
South Centre	336	56	16.6 %
Port of Johnstown Meeting Room	336	42	12.5 %
Spencerville Arena Hall	336	11	3.2 %
Townhall Upstairs	336	9	2.67 %

### March 2025

Facility	Available Hours	Hours Booked	Percentage
South Centre	360	55	15.2 %
Port of Johnstown Meeting Room	360	64	17.7 %

Spencerville Arena Hall	360	6	1.6 %
Townhall Upstairs	360	15	4.1 %

### **ICE RENTAL**

January 2025

Facility	Available Hours	Hours Booked	Percentage
Ingredion Centre	450	305	67.7 %
Spencerville Arena	450	274	60.8 %

### February 2025

Facility	Available Hours	Hours Booked	Percentage
Ingredion Centre	420	294	70.0 %
Spencerville Arena	420	251	59.7 %

### March 2025

Facility	Available Hours	Hours Booked	Percentage
Ingredion Centre	450	318	70.6 %
Spencerville Arena	345	251	72.7 %

Facilities Manager



# TOWNSHIP OF EDWARDSBURGH CARDINAL INFORMATION ITEM

Committee: Committee of the Whole - Administration & Operations

Date: May 12, 2025

Department: Building Department

**Topic:** Q1 Building Department

### Background:

The Building Department issued 17 permits during the first quarter of which 5 of these permits were started in 2024. Total permits issued were similar but two of the projects for which a permit was issued were of a higher value than normal for this period historically. This has allowed the department to start the year aggressively in terms of permit fees and revenue, but chances are that over the course of the year the fees will level out, so the department is expecting to remain within the budgeted revenue forecast. An update after the summer months will be more consequential as this is the more active time for permits.

In 2025 there are 17 permits with a construction value of \$2,904,500.00 and permit fees of \$24,127.00.

In 2024 there were 7 permits with a construction value of \$410,000.00 and permit fees of \$4,389.39.

See the attachment for additional information.

Shaw Monuman

Chief Building Official Shawn Merriman CBCO

	~**				1						2025 1st Q	uarter Building I	Report				1				1	
THE REAL PLAN		Resider	ntial	Com	mercial	-	Indus	trial		Service Service	Δστίσμ	tural	Demo	olitic	n	Othe	or *		Tota		N	ow Homos
* ~	Proiect	Value	Permit Fee	Project Value	Permit Fee	Pr	oject Value	Permi	it Fee	Proje	ct Value	Permit Fee	Project Value	Pe	ermit Fee	Project Value	Permit Fee		Project Value	Permit Fee	Number V	alue
Jan	Ś	2,500.00	\$ 275.00			Ś	5 12,000.00	\$	1,656.00	\$1	,500,000.00	\$ 13,500.00				1			\$ 1.514.500.00	\$ 15.431.00	1 \$	600,000,00
Feb								1				· · · · · · · · · · · · · · · · · · ·							\$ -	·/	0 \$	-
Mar	Ś 1	.360.000.00	\$ 8.055.00	30.000.00	641	.00													\$ 1.390.000.00	\$ 8.696.00	2 \$	900.000.00
Q1 Tota	\$ 1	.362.500.00	\$ 8.330.00	\$ 30,000.00	) \$ 641.	00 \$	12.000.00	Ś	1.656.00	\$1	,500,000,00	\$ 13,500.00	\$ -	4	5 -	\$ -	Ś	-	\$ 2,904,500,00	\$ 24,127,00	3 \$	1.500.000.00
Apr										-				1					\$ -	\$ -	4 \$	2.195.000.00
May																			\$ -	\$ -	0 \$	-
Jun														-					\$ -	· \$ -	3 \$	1,400,000,00
Q2 Tota	Ś	-	\$ -	\$ -	\$ -	\$	-	\$	-	\$	-	\$ -	\$ -	5	5 -	\$ -	\$	-	\$ -	\$ -	7 \$	3,595,000,00
Jul				-						-				-					\$ -	\$ -	3	1.700.000.00
Aug																			\$ -	\$ -	1	705,000.00
Sept																			\$ -	\$ -	1	799,000.00
Q3 Tota	Ś	-	\$ -	\$ -	\$ -	\$	-	\$	-	\$	-	\$ -	\$ -	5	5 -	\$ -	Ś	-	\$ -	\$ -	5 \$	3.204.000.00
Oct			•	-						-		-							\$ -	\$ -	0	
Nov														1					\$ -	\$ -	0	
Dec																			\$ -	\$ -	0	
Q4 Tota	Ś	-	\$ -	\$ -	\$ -	\$	-	\$	-	\$	-	\$ -	\$ -	4	5 -	\$ -	\$	-	\$ -	\$ -	0 \$	-
YTD To	\$ 1	.362.500.00	\$ 8,330.00	\$ 30,000.00	) \$ 641.	00 \$	12,000.00	\$	1,656.00	\$1	,500,000.00	\$ 13,500.00	\$ -	1	5 -	\$ -	\$	-	\$ 2,904,500,00	\$ 24.127.00	15 \$	8,299,000,00
	Proje	Reside	ntial Permit Fee	Com Project Value	nercial Permit Fee	Pr	Indus roject Value	strial Pern	nit Fee	Proj	Agricul ect Value	tural Permit Fee	Demo Project Value	oliti P	on ermit Fee	Othe Project Value	er * Permit Fe	e	Tota Project Value	l Permit Fee	Ne Number Va	w Homes
Jan	Ş	120,000,00	\$ 1,037.39											-					\$ 55,000.00	\$ 1,037.39	- 1 \$	600,000.00
Mar	ې د	118 200 00	\$ 1,410,00	62 000 00	558	00				¢	50,000,00	\$ 450.00	\$ 5,000,00	1	115.00		¢ 110	00	\$ 120,000.00	\$ 700.00	0 \$	
	⇒ ¢	202 200 00	\$ 1,410.00	\$ 62,000.00	) \$ 558	00 \$		¢		2 C	50,000.00	\$ 450.00	\$ 5,000.00		115.00	ć	\$ 115 ¢ 115	00	\$ 233,300.00	\$ 2,040.00	1 ¢	600.000.00
Apr	¢ 1	255,500.00	\$ 16 172 00	5 02,000.00	, <b>,</b> 550.	00 9		4		¢	25,000,00	\$ 1,036,00	\$ 5,000.00		, 115.00	7		.00	\$ 2385 500.00	\$ 4,383.39	I ¢	2 195 000 00
May	\$ 2	436 500.00	\$ 3,597,00	\$ 5,700,000,00	\$ 51.415	00				Ś	15,000,00	\$ 1,050.00	\$ 4500.00		230.00	\$ 1,200,00	\$ 230	00	\$ 6 157 200 00	\$ 56.541.00		2,155,000.00
lun	\$ 1	582 000 00	\$ 9,789,00	\$ 2,000,000,00	3 + 51,110	00				Ŷ	10,000.00	<i>ϕ</i> 1,000.00	\$ 120,000,00	<	5 170.00	\$ 1 300 000 00	\$ 11 700	00	\$ 3,002,000,00	\$ 39,659,00	3 4	1 400 000 00
O2 Tota	\$ 4	1 379.000.00	\$ 29,558.00	\$ 7,700,000,00	\$ 69.415.	00 \$	-	Ś	-	Ś	40.000.00	\$ 2,105.00	\$ 124,500.00	<	400.00	\$ 1,301,200.00	\$ 11,930	00	\$ 11 544 700 00	\$ 113 408 00	7 \$	3 595 000 00
Jul	1	.482.400.00	22.181.29	\$ 100.000.00	900.	00		-			50.000.00	2,700.00	+,	-		1	<i>\</i>		\$ 1,632,400.00	\$ 25,781,29	3	1,700,000,00
Aug	-	763.500.00	6,404.00	18.000.00	) 739.	20													\$ 781.500.00	\$ 7,143,20	1	705.000.00
Sept	2	2.050.000.00	15,831.20	65,000.00	) 495.	00					800,000.00	8,836.25							\$ 2.115.000.00	\$ 25,162,45	1	799.000.00
Q3 Tota	\$ 4	1,295,900.00	\$ 44,416.49	\$ 183,000.00	) \$ 2,134.	20 \$	-	\$	-	\$	850,000.00	\$ 11,536.25	\$ -	\$	- 5	\$ -	\$	-	\$ 4.528.900.00	\$ 58.086.94	5 \$	3.204.000.00
Oct		150,000.00	4,662.50	2,367,000.00	22,680.	00							10,000.00		115.00				\$ 2,517,000.00	\$ 27,457.50	0	
Nov		72,000.00	1,661.60	400,000.00	3,600.	00													\$ 72,000.00	\$ 5,261.60	0	
Dec		408,500.00	2,953.00	10,000.00	205.	00				1						8			\$ 418,500.00	\$ 3,158.00	0	
Q4 Tota	\$	630,500.00	\$ 9,277.10	\$ 2,777,000.00	\$ 26,485.	00 \$	-	\$	-	\$	-	\$ -	\$ 10,000.00	\$	115.00	\$ -	\$	_	\$ 3,007,500.00	\$ 35,877.10	0 \$	-
YTD To	t\$ 9	9,598,700.00	\$ 86,398.98	\$ 10,722,000.00	\$ 98,592.	20 \$	; -	\$	-	\$	940,000.00	\$ 14,091.25	\$ 139,500.00	\$	630.00	\$ 1,301,200.00	\$ 12,045	.00	\$ 19,491,400.00	\$ 211,757.43	13 \$	7,399,000.00
									210					T								
* Occasion	ally a pe	ermit is issued that	t is not captured w	ithin the regular catego	ries. Examples of th	is incluc	de permits for schoo	Is and I	fairs.													



# TOWNSHIP OF EDWARDSBURGH CARDINAL INFORMATION ITEM

Committee: Committee of the Whole - Administration and Operations

Date: May 12, 2025

**Department:** Finance

Topic: 2025 Q1 Treasury and Reserve Report

Background: The following reports are attached for Committee to review:

- 1. Financial Report as of March 31, 2025
- 2. Long Term Debt Schedule as of March 31, 2025
- 3. YTD 2025 Capital Status Report as of March 31, 2025
- 4. Pre-audit Reserve and Reserve Fund Report as of March 31, 2025. The 2024 water and sewer deficits/surpluses have been tentatively allocated but no entries have been made. January 2025 beginning balances will be adjusted after the audit is finalized and Council has apportioned the 2024 operating deficit which is currently **\$207,391** and tentatively allocated from the dedicated capital reserve.

Treasurer

CAO

#### Township of Edwardsburgh Cardinal Pre-Audit Financial Report As at March 31, 2025

	Prior	Current	Prior	Comparision to	
	Period	Year	Year	Last Year	Notes/Comments
	December 31, 2024	March 31, 2025	March 31, 2024	Balance	
Assets					
Cash and Bank Balances	1,708,902	3,489,710	5,340,629	(1,850,919)	Began the year with lower cash due to 2024 capital invoices
Taxes Receivable	620,678	1,821,810	1,590,735	231,074	increase of 14% year over year, will continue to monitor
Accounts Receivable	754,782	452,184	736,669	(284,485)	
Inventory (Including Land for Resale)	317,927	310,903	317,927	(7,024)	
Long Term Receivable	236,550	231,354	241,742	(10,389)	
Equity Investment In RSL	686,455	686,455	686,455	-	Adjustments will be made in Q3
Equity Investment In Port	48,410,726	48,410,726	48,410,726	-	Adjustments will be made in Q2
	52,736,018	55,403,142	57,324,883	(1,921,742)	
Liabilities					
Accounts Payable	(1,067,153)	(1,128,582)	(1,337,757)	209,175	
Planning & Drainage Accounts	501,424	502,300	481,977	20,324	
Long Term Debt	(7,224,671)	(7,252,145)	(7,224,671)	(27,474)	
Accrued Landfill Closure	(177,588)	(177,588)	(177,588)	-	
	(7,967,988)	(8,056,015)	(8,258,040)	202,025	
Tangible Capital Assets	42,923,055	45,945,438	41,236,968	4,708,469	Adjustments will be made in Q2
Reserve & Reserve Funds	7,013,109	7,031,719	10,807,620	(3,775,901)	Adjustments will be made in Q2

Prepared By: Jessica Crawford Treasurer

### TOWNSHIP OF EDWARDSBURGH/CARDINAL

SCHEDULE OF LONG TERM DEBT

	Lender	Project	Interest Rate	End Date		Balance Owing Dec 31/24	Balance Owing Mar 31/25	Balance Owing Jun 30/25	Balance Owing Sept 30/25	Balance Owing Dec 31/25	Annual Payments
1	Infrastructure Ontario	Cardinal Arena	4.59%	Oct-43		4,390,040	4,390,040				303,698
10	Infrastructure Ontario	2022 Johnstown Drainage	4.82%	Aug-43		1,028,478	1,011,637				83,255
11	Ford Credit Canada	Ford Canada	0.00%	Nov-29		82,326	78,140				16,744
	Township Total					5,418,518	5,401,677	0	0	0	531,989
9	Infrastructure Ontario	EMS Station	2.91%	Jul-36	Paid by UCLG	534,044	515,292				53,045
_10	Infrastructure Ontario	Cardinal Wastewater	4.37%	Feb-44	Paid by Cardinal WW users	1,013,768	997,029				77,781
	Supported Debt Total					1,547,812	1,512,321	0	0	0	130,826
	Grand Total					6,966,330	6,913,997	0	0	0	662,815

Prepared by: Jessica Crawford Treasurer

#### 2025 Final Capital Budget - Quarterly Analysis

		Approve	d Expense					Anal	ysis						
				Estimated									Ton	dor	
GL Code Department	Project	2025 Bu	daet	Completion	Q1 Actu	als	Q2 Actuals	Q3 Actuals	Q4 Actuals	Total Spe	nd	Remaining	Awa	rded	Comments
21-5950 Fire Department	Engineering and Design - Fire Station #2	\$	100,000	Q3	\$	10,125				s	10,125	\$ 89	875		Received updated drawings for review
17-5950 Administration	Website Revamp	\$	40,000	Q2						s	· -	\$ 40	000	N/A	Transition currently underway with go live of early June.
82-5950 Recreation	Parks - Picnic Tables/Garbage Cans - Replacement	\$	10,000	Q2						s	-	\$ 10	000	N/A	Completion for June
82-5950 Recreation	Spencerville Splash Pad	\$	400,000	2026						s	-	\$ 400	000	No	Ground work to be completed in-house and discussions with Fair Board on going. Meeting with Splash Pad consulting team on May 16th
82-5950 Recreation	Johnstown Play Structure	\$	80,000	Q3						s	-	\$ 80	000	Yes	Awarded to Playground Planners Inc.
82-5950 Recreation	Holiday Signade	s	15.000	Q3						s		\$ 15	000	N/A	Direction from Council by August as to which signage is requested
82-5950 Recreation	Cardinal Tennis/Pickle Ball Courts	ŝ	302.000	Q3	s	702				ŝ	702	\$ 301	298	Yes	Lighting and Resurfacing awarded
86-5950 Recreation	Spencerville Arena Dehumidifier	\$	50,000	Q3						ŝ	-	\$ 50	000	N/A	to be completed in September
85-5950 Recreation	Johnstown Pool Piping and Decking	s	277 765	Q2						s	-	\$ 277	765	Yes	to be completed late June
88-5950 Public Works	South Centre UV Ungrades	ŝ	15 000	03						ŝ	-	\$ 15	000	N/A	to be completed during off season to not distrupt summer camps
39-5950 Public Works	Tandem Axle Plow Truck	s	425 000	Q3						s	-	\$ 425	000	Yes	October 2025 possession - currently in Carleton Place
39-5950 Public Works	Roadside Mower	ŝ	25 000	02						ŝ	-	\$ 25	000	N/A	Ordered and will receive soon
31-5950 Public Works	Building Rehab	ŝ	150,000	02	s	7 318				š	7 318	\$ 142	682	Yes	Engineering and bracing of wall completed
39-5950 Public Works	Sidewalk Rebab	ŝ	134,000	03	Ŷ	1,010				ŝ	1,010	\$ 134	000	No	Removals completed in-house in June
39-5950 Public Works	Dedectrian Croceinge	ę	105,000	03	e	60 236				é	60 236	¢ 34	764	Vac	Links are completed in-rousing paeded
41-5668 Public Works - Roade	Connell Rd	ę	44 370	03	4	03,230				ŝ	03,200	\$ 50	370	No	Tender being prepared
41-3000 Public Works - Roads	Huday Rd	3 6	44,370 E0.160	43						\$	-	\$ 44	160	No	Tender being prepared
41-5710 Public Works - Roads	Coodin Rd	3 6	20,500	43						\$	-	a 35	590	No	Tender being prepared
41-5720 Public Works - Roads	Bourney ills Del Weet	\$	29,000	43						\$	-	φ <u>2</u> 8	000	NU NI-	Tender being prepared
41-5690 Public Works - Roads	Brouseville Rd West	\$	400,000	43		0.544				\$	-	\$ 400	450	NO No	Tender being prepared
41-5656 Public Works - Roads	vvaddell Daille Ch	\$	312,000	Q4	\$	2,544				\$	2,544	\$ 305	400	NO No	Tender being prepared
41-5681 Public Works - Roads	Relity St	\$	47,400	Q4	~	0.000				\$	-	\$ 4/	400	NO No	Tender being prepared
41-5831 Public Works - Roads	Henderson St	\$	46,180	Q4	\$	2,290				\$	2,290	\$ 43	890	NO No	Tender being prepared
41-5832 Public Works - Roads	South St	\$	235,050	Q4	\$	3,053				\$	3,053	\$ 231	997	NO	render being prepared
41-5833 Public Works - Roads	Water St	\$	125,052	Q4						\$	-	\$ 125	052	No	I ender being prepared
41-5763 Public Works - Roads	Cedar Grove (Fraser-Noe)	\$	200,000	Q4						\$	-	\$ 200	000	No	I ender being prepared
41-5851 Public Works - Roads	Pittston Rd E	\$	42,072	Q4						\$	-	\$ 42	072	No	I ender being prepared
41-5896 Public Works - Roads	Meadowland Drive	\$	140,000	Q4						\$	-	\$ 140	000	No	I ender being prepared
41-5897 Public Works - Roads	Legion Way	\$	40,000	Q4						\$	-	\$ 40	000	No	Tender being prepared
41-5898 Public Works - Roads	Dishaw	\$	275,000	Q4						\$	-	\$ 275	000	No	Tender being prepared
41-5685 Public Works - Roads	Hutton	\$	30,000	Q4						\$	-	\$ 30	000	No	Tender being prepared
41-5691 Public Works - Roads	Irving	\$	150,000	Q4						\$	-	\$ 150	000	No	Tender being prepared
41-5695 Public Works - Roads	Burchell	\$	170,000	Q4						\$	-	\$ 170	000	No	Tender being prepared
41-5702 Public Works - Roads	Windmill Point			Q4						\$	-	\$	-	No	Tender being prepared
	Total Levy Based Capital	\$	4,474,629		\$	95,268	\$-	ş -	\$-	\$	95,268	\$ 4,379	361		
								Anal	ysis						
				Estimated									Ten	der	
GL Code Department	Project	2025 Bu	daet	Completion	Q1 Actu	als	Q2 Actuals	Q3 Actuals	Q4 Actuals	Total Spe	nd	Remaining	Cor	plete	Comments
56-5950 Cardinal Wastewater	Dundas St W - Engineering	S	30.000	Q4/Q1 2026						S		\$ 30	000	ves	Completion late Q4 2025 with a chance it could run into Q1 of 2026
56-5950 Cardinal Wastewater	SCADA Workstation/Historian Upgrades (50%)	ŝ	30.000	Q4	s	12.680				ŝ	12.680	\$ 17	320	, - ves	Schneider Electric indicated project completion in Q4
56-5950 Cardinal Wastewater	Generator and Fuel System Repairs	ŝ	63,000	Completed	ŝ	62 922				ŝ	62 922	ŝ	78	, - N/A	
58-5950 Cardinal Water System	SCADA Workstation/Historian Upgrades (50%)	ŝ	30,000	04	ŝ	12 680				ŝ	12 680	\$ 17	320	ves	Schneider Electric indicated project completion in Q4
58-5950 Cardinal Water System	UV Replacements at Water Plant	ŝ	400,000	Q4/Q1 2026	ŝ	9 777				ŝ	9 777	\$ 390	223	ves	O4 with a chance of it extending into 2026. Depending on delivery of new UV systems
58-5950 Cardinal Water System	Dundas St W - Engineering	ŝ	30,000	04/01 2026	Ŧ	-,				ŝ	-,	\$ 30	000	ves	late Q4 2025 with a chance it could run into Q1 of 2026
58-5950 Cardinal Water System	Generator and Fuel System Repairs	ŝ	30,000	Completed	s	32,418				ŝ	32,418	\$ (2	418)	N/A	
,															

- \$

20,526 \$

40,848 \$

287,118 \$ 5,090,511

191,850 \$

30,000 (2,418) 229,474

(848) 711,150

yes N/A

Project completion should be in Q4 barring any unforeseen extended delays with the pumps or panel

Prepared by: Jessica Crawford Treasurer

51-5950 Spencerville Wastewater System

51-5950 Spencerville Wastewater System

Spencerville PS 1 Pump Upgrades

Generator and Fuel System Repairs Total Rate Based Capital

Total 2024 Capital Program

ŝ

\_

\$

\$

250,000

40,000

903,000

5,377,629

Q4

Completed

\$

\_ 5

32,418 20,526

40,848

s

- \$ - \$

s

\$ 191,850 \$

\$ 287,118 \$

						2025	2025	_	2025	2025
			Balance	2024 Year End	Balance	Transfers	S YTD	Tr	ansfers	YTD
	EARMARKED RESERVES		31/Dec/24	Adjustments	1/Jan/25	In	Interes	st 📃	Out	Balance
01-3511	Administration		132,331.89		132,331.89					132,331.89
01-3512	Tax Write Offs		102,242.36		102,242.36					102,242.36
01-3513	Election Reserve		12,000.00		12,000.00					12,000.00
01-3514	Fire Department - Vehicles		383,668.57		383,668.57					383,668.57
01-3515	Fire Department - Buildings		353,000.00		353,000.00					353,000.00
01-3516	Fire Department - Comm Equipment		195,208.34		195,208.34					195,208.34
01-3517	Policing Costs		110,715.00		110,715.00					110,715.00
01-3518	Cemeteries		20,753.60		20,753.60					20,753.60
01-3519	Building Dept Reserve		69,233.99		69,233.99					69,233.99
01-3520	Public Works		412,056.90		412,056.90					412,056.90
01-3521	Winter Control		178,900.24		178,900.24					178,900.24
01-3522	Environmental Services - Low Lift		95,821.56		95,821.56					95,821.56
01-3525	Environmental Services - Storm Sewers		457,040.01		457,040.01					457,040.01
01-3526	Landfill Closure Reserve		91,000.00		91,000.00					91,000.00
01-3527	Recreation		133,732.20		133,732.20					133,732.20
01-3528	Planning Reserve		25,000.00		25,000.00					25,000.00
01-3529	Twp Municipal Drain Reserve		15,000.00		15,000.00					15,000.00
01-3532	Insurance Reserve		55,778.71		55,778.71					55,778.71
			2,843,483.37	-	2,843,483.37	-		-	-	2,843,483.37
01-3540	Working Funds		750,000.00		750,000.00					750,000.00
		Total Reserves	3,593,483.37	-	3,593,483.37	-		-	-	3,593,483.37

					2025	2025	2025	2025
		Balance	2024 Year End	Balance	Transfers	YTD	Transfers	YTD
	RESERVE FUNDS	31/Dec/24	Adjustments	1/Jan/25	In	Interest	Out	Balance
98-3801	GIC Investment	1,320,726.75		1,320,726.75		1,608.87	(1,322,335.62)	-
98-3816	Industrial Park Investment- HISA account	275.87		275.87		2.56		278.43
98-3813	Industrial Park Land	(378,557.55)		(378,557.55)	1,322,335.62			943,778.07
98-3814	Raw Water Supply System	309,787.00	11,853.09	321,640.09		4,070.13		325,710.22
98-3803	Industrial Park Wastewater	60,734.46	(28,396.11)	32,338.35		409.22		32,747.57
98-3804	Industrial Park Water	248,837.26	(33,870.68)	214,966.58		2,720.26		217,686.84
98-3805	Johnstown Water Wells	60,436.41		60,436.41		764.78		61,201.19
98-3812	CCBF- Gas Tax Grant	11,673.45		11,673.45		147.72		11,821.17
98-3807	Cardinal Hydro	214,564.05		214,564.05		2,715.17		217,279.22
98-3806	Spencerville Wastewater	293,369.12	(21,206.83)	272,162.29		3,444.03		275,606.32
98-3808	Cardinal Wastewater	223,700.22	(147,598.30)	76,101.92		963.02		77,064.94
98-3811	Cardinal Water	774,359.31	(124,419.30)	649,940.01		8,224.55		658,164.56
98-3818	OCIF Formula Based Fund	7,261.83		7,261.83		91.89		7,353.72
98-3819	Dedicated Capital Reserve Fund (Port)	272,457.04	(207,391.00)	65,066.04		3,447.75		68,513.79
	Total Reserve Funds	3,419,625.22	(551,029.13)	2,868,596.09	1,322,335.62	28,609.95	(1,322,335.62)	2,897,206.04
	_							
	GRAND TOTAL	7,013,108.59	(551,029.13)	6,462,079.46	1,322,335.62	28,609.95	(1,322,335.62)	6,490,689.41

Prepared by: Jessica Crawford Treasurer



# TOWNSHIP OF EDWARDSBURGH CARDINAL INFORMATION ITEM

**Committee:** Committee of the Whole – Administration and Operations

Date: May 12, 2025

**Department:** Finance

**Topic:** 2025 Q1 Budget Variance Report

**Background:** The attached report is a summary of revenue and expenses for the period ending March 31, 2025 with comparison to the 1<sup>st</sup> quarter of 2024.

For this period, it is anticipated that expenses should be approximately 25% of the budget. During this period, there are certain expenses that are not incurred consistently every month and are instead incurred in full during the first quarter resulting in inflated expenses for certain departments. This is true for vehicle licensing, professional memberships and annual licenses and contracts.

The variance report shows that there is 85.36% of the budget remaining of the overall departmental revenue and operating expenses.

Some variances to note for revenue include:

- Fire Department received a fire protection grant
- Building permit revenue is 50% higher than Q1 in 2024
- Bylaw revenue for enforcement fees have reached 45% of budget

Some variances to note for expenses include:

- Administration includes costing for the asset management plan levels of service which will incur full cost by Q2, and professional association fees paid in full in Q1.
- Public Works includes vehicle licensing for the year and parts and supplies have incurred just over 40% of the budget, if this trend continues, we will see overages for the year.
- Winter control has 12.84% of the budget remaining, this is due to the amount of winter events in 2025 and the salt and sand materials. We will require a draw from the winter control reserves in 2025.

At this time, there are few capital costs incurred and transfers from reserves have not been recorded and will be completed once work on the projects have begun.

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Treasurer

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### **Quarterly Variance Report**

TWP

				EC EDWARD	SBURGH CARDINAL	I
Edwardsburgh Cardinal	For period end	ling March 31, 2025				<u> </u>
	Actuals	4 Council Approved	Actuals Txn	Budget Remaining	Percentage	
	2024	2025	2025		Remaining	
	March		March			
Revenues						
Taxation, Grants and Payments-In-Lieu						
Taxation Revenue	(6,324,166.47)	(7,179,595)	(6,640,772.44)	(538,823)	7.50%	
Penalty on Taxes	(17,792.88)	(90,000)	(21,276.98)	(68,723)	76.36%	
Grant in Lieu	224.63	(197,839)		(197,839)	100.00%	
Ontario Municipal Partnership Fund	(168,325.00)	(777,800)	(194,450.00)	(583,350)	75.00%	
Port of Johnstown	(250,000.00)	(3,200,000)	(250,000.00)	(2,950,000)	92.19%	
Total Taxation, Grants and Payments-In-Lieu:	(6,760,059.72)	(11,445,234)	(7,106,499.42)	(4,338,735)	37.91%	
Department Revenues						
Administration	(79,143.21)	(236,200)	(44,755.38)	(191,445)	81.05%	
Fire Department	(5,730.00)	(55,461)	(22,905.48)	(32,556)	58.70%	
Cemeteries	(26.57)	(100)	(38.97)	(61)	61.03%	
Protective Services	(2,755.00)	(4,800)	(2,410.00)	(2,390)	49.79%	
Building	(7,635.50)	(170,000)	(11,487.00)	(158,513)	93.24%	
By-Law Enforcement	(746.00)	(3,500)	(1,595.75)	(1,904)	54.41%	
Public Works	(5,997.38)	(41,920)	(1,233.00)	(40,687)	97.06%	
Waste Disposal & Transfer Site	(1,270.50)	(18,500)	(2,457.50)	(16,043)	86.72%	
Curbside Waste & Recycling	(64,455.81)	(297,111)	(42,897.25)	(254,214)	85.56%	
Parks & Recreation						
Parks		(151,000)	(125.00)	(150,875)	99.92%	
Ball Diamonds		(1,500)		(1,500)	100.00%	
Cardinal Pool		(5,000)	(5,000.00)			
Johnstown Pool/Summer Day Camp	(2,564.00)	(90,000)	(4,665.00)	(85,335)	94.82%	
Cardinal Arena	(70,600.75)	(285,500)	(92,234.21)	(193,266)	67.69%	
Spencerville Arena	(81,686.82)	(209,760)	(62,129.22)	(147,631)	70.38%	
Canteen	(28,265.68)	(110,000)	(29,333.08)	(80,667)	73.33%	
South Centre	(807.00)	(3,500)	(1,075.00)	(2,425)	69.29%	

	Quarterly V	ariance Rep	ort		RDSBURGH CARDINAL	
Edwardsburgh Cardinal	For period end	ding March 31 , 2025				
	Actuals	4 Council Approved	Actuals Txn	Budget Remaining	Percentage	
	2024	2025	2025		Remaining	
	March		March			
Sub-total Parks & Recreation	(183,924.25)	(856,260)	(194,561.51)	(661,698)	77.28%	
Planning	(1,000.00)	(9,000)	(3,300.00)	(5,700)	63.33%	
Economic Development	(59,230.07)	(25,000)		(25,000)	100.00%	
Agricultural Drainage		(2,500)		(2,500)	100.00%	
Total Department Revenue	(411,914.29)	(1,720,352)	(327,641.84)	(1,392,710)	80.95%	
Capital Revenues						
Administration		(40,000)		(40,000)	100.00%	
Fire Department		(102,500)		(102,500)	100.00%	
Public Works	(186,331.00)	(3,966,709)		(3,966,709)	100.00%	
Storm Water Management	(3,100.00)					
Recreation		(173,480)		(173,480)	100.00%	
Economic Development	(59,230.07)					
Total Capital Revenue	(248,661.07)	(4,282,689)		(4,282,689)	100.00%	
TOTAL REVENUES:	(7,420,635.08)	(17,448,275)	(7,434,141.26)	(10,014,134)	57.39%	
ODEDATING & CADITAL EVDENSES						
Denartment Operating Expenses						
	30.330.73	205.103	40.423.48	164.680	80.29%	
Administration	412,812.04	1,639,506	463,179.03	1,176,327	71.75%	
Fire Department	147,441.44	801,434	156,808.61	644,625	80.43%	
Police Services	93,771.92	1,158,559	189,311.71	969,247	83.66%	
Conservation Authority		65,618	21,872.00	43,746	66.67%	
Cemeteries		5,000		5,000	100.00%	
Protective Services	6,348.74	21,928	4,873.62	17,054	77.77%	
Building	65,716.79	230,913	33,784.32	197,129	85.37%	
Bylaw Enforcement	11,288.05	47,461	10,147.99	37,313	78.62%	
Public Works						

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				EC EDWAR	DSBURGH CARDINAL	
Edwardsburgh Cardinal	For period en	ding March 31, 2025		· · · · · · · · · · · · · · · · · · ·		
	Actuals	4 Council Approved	Actuals Txn	Budget Remaining	Percentage	
	2024	2025	2025		Remaining	
	March		March			
Overhead Expenses	229,352.13	813,042	228,574.32	584,468	71.89%	
Vehicle Expenses	114,176.84	390,325	81,264.98	309,060	79.18%	
Shop Expenses & Fuel	49,405.98	196,779	74,740.67	122,038	62.02%	
Bridges & Culverts	2,712.14	54,654	483.44	54,171	99.12%	
Safety Devices	5,232.62	40,342	6,122.06	34,220	84.82%	
Roadside Maintenance	11,648.73	140,658	10,262.78	130,395	92.70%	
Hardtop Maintenance	9,077.13	262,622	5,488.26	257,134	97.91%	
Loosetop Maintenance	5,959.85	250,701	4,384.11	246,317	98.25%	
Winter Control	148,205.55	383,400	334,176.54	49,223	12.84%	
Street Lighting	8,697.34	49,762	10,104.91	39,657	79.69%	
Sub-total Public Works						
Johnstown Water Wells	414.40	15,500	760.71	14,739	95.09%	
Storm Sewer System	55,655.44	220,769	56,195.34	164,574	74.55%	
Waste Disposal & Transfer Site	38,826.31	215,391	31,656.61	183,734	85.30%	
Curbside Waste & Recycling	108,461.13	436,700	112,629.22	324,071	74.21%	
Parks & Recreation						
Recreation Administration	84,493.69	319,110	80,921.28	238,189	74.64%	
Parks	16,793.62	261,167	8,651.14	252,516	96.69%	
Ball Diamonds	1,172.79	6,993	614.25	6,379	91.22%	
Cardinal Pool	8,065.33	35,926	1,893.62	34,032	94.73%	
Johnstown Pool/Day Camps	7,681.38	277,664	17,516.51	260,147	93.69%	
Cardinal Arena	192,406.58	830,792	204,416.37	626,376	75.40%	
Spencerville Arena	156,127.84	420,660	154,533.10	266,127	63.26%	
Canteen	28,399.37	95,165	19,352.85	75,812	79.66%	
South Centre	9,427.83	26,321	6,140.15	20,181	76.67%	
Sub-total Parks & Recreation	504,568.43	2,273,798	494,039.27	1,779,759	78.27%	
Libraries	39,756.87	176,650	39,572.27	137,078	77.60%	

		anance rrep	on	EC EDWARDS	SBURGH CARDINAL	
Edwardsburgh Cardinal	For period end	ling March 31, 2025		• 68		
	Actuals	4 Council Approved	Actuals Txn	Budget Remaining	Percentage	
	2024	2025	2025		Remaining	
	March		March			
Planning	33,515.48	145,539	39,447.51	106,091	72.90%	
Economic Development	46,877.94	189,604	50,257.49	139,347	73.49%	
Agricultural Drainage	5,701.77	91,645	11,116.17	80,529	87.87%	
Total Department Operating Expenses						
Transfers to Reserves						
Dedicated Capital Reserve Fund						
Transfer to Reserve Fund	60,415.00	2,200,000		2,200,000	100.00%	
Fire Department		75,000		75,000	100.00%	
Public Works		100,000		100,000	100.00%	
Storm Water Management		25,000		25,000	100.00%	
Recreation Department		15,000		15,000	100.00%	
Total Transfers to Reserves	60,415.00	2,415,000		2,415,000	100.00%	
Capital Expenses						
Administration	76,940.21	40,000		40,000	100.00%	
Fire Department		100,000	10,125.12	89,875	89.87%	
Public Works	307,776.35	3,184,954	62,673.83	3,122,280	98.03%	
Storm Water Management	(68,920.03)		(33,669.42)	33,669		
Recreation	55,898.02	1,149,765	3,220.70	1,146,544	99.72%	
Economic Development	(59,230.07)	30,000		30,000	100.00%	
Total Capital Expenses	312,464.48	4,504,719	42,350.23	4,462,369	99.06%	
Total OPERATING & CAPITAL EXPENSES:	2,558,835.27	17,448,275	2,554,027.65	14,894,247	85.36%	
SURPLUS (DEFICIT)	4,861,799.81	0	4,880,113.61	(4,880,114)		



# TOWNSHIP OF EDWARDSBURGH CARDINAL ACTION ITEM

**Committee:** Committee of the Whole – Administration and Operations

Date: May 12, 2025

**Department:** Finance

**Topic:** Selection of an Online Payment Processing Provider

**Purpose:** The purpose is to evaluate and recommend an online payment processing provider to enhance the efficiency, security, and accessibility of Township payments for residents.

**Background:** Staff identified the need to enhance service delivery through the implementation of an online payment processing system. This initiative aims to streamline the collection of fees and charges for municipal services, including property taxes, utilities, permits, licenses, and other items.

Staff reviewed demonstrations from two providers, below is the analysis and comparison:

Features	Paymentus	Access2Pay
Fee Structure	Election of either "Client	Fees charged to the
	Fee" or "User Fee". This is	municipality through
	very customizable based	Moneris.
	on payment type (credit,	
	debit, eCheck) and	
	Payment items (property	
	taxes, utilities, permits etc)	
Software Integration	Integrated via Customer	Requirement for manual
	Information File (CIF)	configuration to integrate
	automated flat file transfer	with Munisoft.
	to Munisoft.	
Security Compliance	Fully PCI-DSS complaint	Fully PCI-DSS compliant
User Interface	Modern, Mobile-friendly	Simplicity, straight-forward
	interface. Offers features	interface focusing on core
	such as account creation,	functionalities.
	recurring payments, and	
	customer portal.	
Support & Onboarding	24/7 client support;	Responsive support
	structured onboarding	

Reporting Tools	Comprehensive dashboard, daily	Standard reporting; may require custom formats.
	reconciliation.	
Experience	Widely used by municipalities across Canada.	Growing client base
License and Implementation costs	N/A	Annual License fee \$8,000 - \$15,000

Based on the evaluation, Paymentus is recommended as the preferred online payment processing provider. They offer superior integration capabilities, less manual configuration, detailed reporting, and proven track record with municipalities. These factors support long-term service delivery and financial oversight.

**Policy Implications:** Council shall authorize the execution of a Master Services Agreement.

**Strategic Plan Implications:** This initiative directly supports the strategic plan objective under good governance 2.3 ensure that services delivered are effective and efficient by enhancing accessibility by providing 24/7 access to payment services and reducing reliance on in-person visits.

**Financial Considerations:** Paymentus operates on the ability to choose user-pay model, meaning that the user covers the transaction costs. This is cost-neutral for the Township.

**Recommendation:** That Committee proceed with Paymentus as an online payment processing provider and direct staff to execute the required documentation.

Treasurer

CAO

### MASTER SERVICES AGREEMENT

Client:	Township of Edwardsburgh Cardinal
Client Address:	18 Centre Street, PO Box 129, Spencerville, ON K0E 1X0
Contact for Notices to Client:	Jessica Crawford
Estimated Number of Yearly Payments:	7,200

This Master Services Agreement ("**Agreement**") is entered into as of the Effective Date herein defined by and between the Client identified above and Paymentus (**Canada**) Corporation, ("**Paymentus**") a Nova Scotia unlimited liability company with a principal place of business at 1595 16th Avenue, Suite 700, Richmond Hill, Ontario L4B 3N9, Canada. Each of Client and Paymentus is also referred to as "**Party**" and collectively as the "**Parties**".

### STATEMENT OF PURPOSE

Paymentus desires to provide and Client desires to receive electronic bill payment services as more particularly described in this Agreement under the terms and conditions set forth herein.

#### AGREEMENT

In consideration of the mutual covenants hereinafter set forth, the receipt and sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, hereby covenant and agree as follows. This Agreement consists of the following documents:

(i) this signature page

- (ii) the General Terms and Conditions; and
- (iii) the following Schedules:
  Schedule A: Paymentus Service Fee Schedule
  Schedule B: Client Payment Data

This Agreement represents the entire agreement between the Parties with respect to its subject matter, supersedes all prior written or oral agreements or understandings related to the subject matter hereof, and may be changed only by agreements in writing signed by the authorized representatives of each of the Parties.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Agreement to be executed by their duly authorized representatives.

CLIENT	PAYMENTUS (CANADA) CORPORATION
Ву:	Ву:
NAME:	NAME:
TITLE:	TITLE:
DATE:	DATE:

### **Paymentus**

### **GENERAL TERMS AND CONDITIONS**

### BY AND BETWEEN PAYMENTUS (CANADA) CORPORATION AND TWP OF EDWARDSBURGH CARDINAL

### 1 <u>Definitions:</u>

For the purposes of the Agreement, the following terms and words have the meaning ascribed to them, unless the context clearly indicates otherwise.

- 1.1 **"Affiliates**" means (i) any entities that control, are controlled by, or are under common control with a Party.
- 1.2 **"Agent Dashboard**" means a web based portal that enables Client to manage and monitor its customers' payments and accounts including such features as the ability to add and manage users, look up payment schedules, make payments manually on behalf of the customers, and generate payment reports.
- 1.3 **"Agreement**" means the Master Services Agreement between the Parties, as amended from time to time, including the first page, the signature page, these General Terms and Conditions, and all Schedules.
- 1.4 **"Average Bill Amount**" means the total amount of Payments processed through Paymentus in a given month divided by the number of the Payments for the same month.
- 1.5 **"Custom Enhancement(s)**" means one or more enhancements to the Services which is either unique to Client, or which was expedited prior to being developed pursuant to a Statement of Work entered into by the Parties in which Client agrees to pay Professional Services Fees for the Work done in connection therewith if applicable.
- 1.6 **"Customer Information Files**" or "**CIF**" means a computerized file used by a company that stores all customer data such as the customer's personal and account information.
- 1.7 **"Custom Implementation**" means implementation of Client's Custom Integration and Custom Enhancements in accordance with the applicable Statement Of Work ("SOW").
- 1.8 **"Custom Integration**" means customization of the Platform to integrate with Client's billing

system using non-standard file specifications or application programming interfaces ("**APIs**") supported by Client's billing system

- 1.9 **"Effective Date**" is the date the last Party to execute the Agreement as indicated below the signature line, unless the Agreement is submitted to Client for acceptance in a manner that does not call for Paymentus to execute it, in which event the Effective Date shall be the date that Client executes the Agreement.
- 1.10 **"EFT**" means electronic funds transfer as used in **Canada** (e-check or ACH as referred to in the USA).
- 1.11 **"Excess Payment Amount"** means the Payment Amounts from Non-Qualified Transactions processed in a calendar month.
- 1.12 **"Fee Assumptions"** means information used to calculate the Paymentus Fee (as defined in Section 3.2) as provided by Client in good faith, including (i) the projected Average Bill Amount, and (ii) the projected payment method mix (credit vs debit vs EFT) of all card Payments processed that month.
- 1.13 **"IPN"** or **"Instant Payment Network"™** means the network developed by Paymentus to enable customer engagement, bill presentment and receipt of payments by businesses through multiple channels as enabled from time to time by Paymentus.
- 1.14 "Launch Date" means the later of the date on which Client completes the introduction to Users of all of the Services (i) set forth on Schedule A or (ii) in any applicable SOW as of the Effective Date of any applicable SOW.
- 1.15 "Minimum Monthly Commitment" means a fixed amount agreed to by the Parties that is based upon the expected number of transactions to occur each month during the Term times the Average Bill Amount, as set forth in Schedule A (Paymentus Service Fee Schedule).
- 1.16 **"Non-Qualified Transaction"** means any payment where the Paymentus Fee is lower

than the cost of processing such payment (including the cost of Third Party Fees).

- 1.17 **"Payment**" means payment by a User through the Platform for Client's services, Client's bills, or other amounts owed to Client.
- 1.18 **"Payment Amount"** means the amount of a Payment.
- 1.19 **"Paymentus Authorized Processor"** means a Paymentus authorized merchant account provider or payment processing intermediary or gateway.
- 1.20 **"Paymentus Fee"** is the amount charged for the Services as set forth on Schedule A.
- 1.21 "Platform" is defined in Section 2.1.
- 1.22 **"Professional Services**" means the work to be performed for Client by Paymentus as described in the Statement of Work, which may be changed from time to time in accordance with the Change Order process described in the SOW.
- 1.23 **"Professional Services Fees**" means the fees charged for the Professional Services described in a SOW.
- 1.24 "Reversed or Chargeback Transactions" means cancelled transactions due to User error, a User's challenge to Payment authenticity, or action by a financial institution or a Paymentus Authorized Processor (commonly referred to as EFT returns or credit/debit card chargebacks).
- 1.25 **"Services**" means the performance by Paymentus of the payment and related services selected by Client as set forth in Schedule A and as provided in Section 2.
- 1.26 **"Standard Implementation**" means (i) the initial integration between the information systems of both Parties so that Paymentus can receive Client's customer data to be used in the provision of the Services, and Client can receive payment and other related data from Paymentus, (ii) the setup of the payment processor and bank deposit accounts, (iii) the setup of the payment channels described on Schedule A to this Agreement and (iv) the

creation of business rules to be applied to the acceptance of payments, all as further described in the applicable SOW or Paymentus documentation. Any changes following the initial integration will be handled through the Change Order process.

- 1.27 **"Statement of Work**" or "**SOW**" means the statement of work entered into between the Parties if applicable.
- 1.28 **"System Availability**" means that date on which Paymentus notifies Client that the Platform is ready to process User data.
- 1.29 **"Term**" means the Initial Term and any renewal term as defined in Section 7.1 of this Agreement.
- 1.30 **"Third Party Fees**" is defined in Section 3.2.2 of this Agreement.
- 1.31 **"User**" means a Client customer who uses the Services to pay its Client bills.
- 1.32 **"Work"** or "**Work Product**" means the customizations that are performed by Paymentus as part of the Professional Services described in an applicable SOW.

### 2 Description of Services to be Performed

### 2.1 Scope of Services

When selected on Schedule A, Paymentus will provide Users the opportunity to view and receive bills, make Payments using the payment methods provided under Schedule A and other payment methods and wallets as offered by Paymentus from time to time. The payment methods and other services provided may be used within the channels described on Schedule A or on other websites or mobile/web apps or chatbots or voice assistants that are part of the Instant Payment Network, (collectively referred to as the "Platform"). Paymentus will provide a mechanism by which Client may select the channels and payment methods Client wishes to offer Users. Paymentus will be the exclusive provider to Client of all electronic bill payment and related services substantially similar to the Services.

### 2.2 Professionalism

Paymentus will perform the Services in a professional and commercially reasonable manner.

### 2.3 New or Enhanced Services

From time to time Paymentus may offer Client new or enhanced services, such as new functionality within the IPN, the ability to accept other payment methods, methods of bill presentment, the ability to access alternative payment processors or other service providers or Paymentus Authorized Processors or otherwise modify the terms and conditions under which the Services are provided ("Service Enhancements"). Paymentus will provide Client with notice through the Agent Dashboard disclosing the including anv contracts or contract terms. under which amendments. the Service Enhancements will be made available. If the Service Enhancements will result in additional fees to or impose additional material obligations on Client or Users, Client will have thirty (30) days after the date the notice is posted on the Agent Dashboard to optout of the Service Enhancements in the manner provided in the notice. If Client does not opt out in a timely manner, then when the Service Enhancements are introduced they will form part of the Services and Client will be bound by the additional terms as disclosed in the notice, and the Paymentus Service Fee (Schedule A) will be deemed amended to reflect changes in the Services and fees in connection with the Service Enhancements.

### 3 <u>Compensation and Payment Terms</u>

### 3.1 Implementation

- 3.1.1 <u>Charge for Standard Implementation</u>. Paymentus will charge the fees related to Standard Implementation that are set forth on an applicable Statement of Work.
- 3.1.2 <u>Custom Implementation</u>. If Client requests customizations during the implementation process, the SOW will contain an estimate of the amount of custom Work that will be required to be performed on a time and materials basis, which Work will be performed at a blended hourly rate set forth therein in accordance with the payment terms set forth in the SOW. If there are changes following the execution of the Statement of Work, the Parties will follow the change order process detailed in the SOW. Custom implementation shall be billed as set forth in an applicable SOW.

### 3.2 Paymentus Fee

- 3.2.1 <u>Party to be charged the Paymentus Fee</u>. The entity to be charged the Paymentus Fee is identified on Schedule A.
- 3.2.1.1 Where the "User paid fee" is selected on Schedule A, User will be charged the Paymentus Fee.
- 3.2.1.2 Where the "Absorbed" or "Client paid fee" is selected on Schedule A, Client will be charged the Paymentus Fee.
- 3.2.2 <u>Third Party Payments</u>. Paymentus will pay the corresponding processing and related fees to the applicable third parties out of the Paymentus Fee ("**Third Party Fees**"), except for fees related to Reversed or Chargeback Transactions.
- 3.2.3 <u>Adjustments to the Paymentus Fee</u>. The Paymentus Fee may be adjusted thirty (30) days following the date of delivery by Paymentus' of prior written notice to Client due to one of the following:
- 3.2.3.1 <u>Change in connection with the Fee</u> <u>Assumptions</u>. A change or mistake by either of the Parties with respect to the Fee Assumptions, including but not limited to changes in (a) the average Payment Amount made by the Users, (b) the mix of payment

methods utilized by the Users, or (c) the interchange rates applied to transactions.

- 3.2.3.2 <u>Charges for Non-qualified Transactions</u>. Client will be billed additional Paymentus Fees equal to 2.95% of the Excess Payment Amount for each month.
- 3.2.3.3 <u>Changes in Third Party Fees</u>. Changes in the card or payment system rules, changes in payment processing fees or other changes in Third Party Fees that are outside of Paymentus' control that increase Paymentus' cost of processing transactions.
- 3.2.3.4 <u>Changes due to increases in the Consumer</u> <u>Price Index</u>. Beginning on the first anniversary of the Effective Date of the Agreement, and continuing on each anniversary of the Effective Date thereafter during the Initial Term and any renewal terms, the Paymentus Fee may be increased annually by a percentage equal to the increase in the Consumer Price Index published by Statistics Canada as part of Table 18-10-0004-02, Consumer Price Index for Ontario, all-items, monthly, percentage change, not seasonally adjusted.

#### 3.3 Payment Terms

- 3.3.1 <u>User Paid Invoices</u>. When User pays the Paymentus Fees (as designated on Schedule A), User will pay the Paymentus Fees together with the corresponding Payment at the time of the transaction.
- 3.4 Client Paid Invoices. When Client is obligated to pay the Paymentus Fee (as shown on Schedule A), Paymentus will invoice Client promptly following the end of each full or partial calendar month during the Term and Client's bank account will be debited for Paymentus Fees. In addition, Client will be billed for applicable Professional Services Fees as described in the SOW in accordance with the terms set forth therein. Client shall notify Paymentus in writing of any alleged errors or discrepancies detected by Client in Paymentus' calculation of the Paymentus Fees, or Professional Services Fees contained in the applicable invoice(s) within thirty (30) days from the invoice date ("Due Date"). To the extent that any portion of an

invoice is disputed in good faith ("Disputed Amount"), Client shall timely pay on or prior to the Due Date the undisputed portion of any invoice, and promptly notify Paymentus in writing of the Disputed Amount, providing a reasonably detailed explanation for such ("Invoice Disputed Amount Dispute Notice"). Parties shall work together in good faith to resolve all issues identified in the Invoice Dispute Notice within ten (10) days of Paymentus' receipt thereof. Charges on invoices which are not disputed within thirty (30) days of the invoice date shall be deemed accepted and Paymentus shall have no obligation to correct any calculation errors identified after such period. Invoices that are not timely paid shall be subject to interest from the Due Date at the lower of 18% per annum or the then current maximum legal rate of interest.

### 4 Payment Processing

### 4.1 Integration with Client's Billing System

Paymentus will provide implementation services to Client.

### 4.2 PCI Compliance

To the extent that either Party receives payment card information subject to the Payment Card Industry Data Security Standards ("**PCI-DSS**") in connection with providing the Services, such Party will comply with all requirements of the PCI-DSS with respect to storage, transmission and disclosure of payment card information.

### 4.3 Explicit User Confirmation

Paymentus will electronically confirm to the User the dollar amount of all Payments, and when paid by the User, the corresponding Paymentus Fee to be charged for the transaction, and electronically obtain the User's approval of the charges prior to initiating payment authorizations transaction.

### 4.4 Merchant Account

If described as part of implementation services in the applicable SOW, Paymentus will assist Client in setting up a merchant account directly with the Paymentus Authorized Processor for processing and settlement of transactions.

### 4.5 Payment Authorization

For authorization purposes, Paymentus will electronically transmit all card or other payment transactions to the appropriate processing center, in real time as the transactions occur or as provided in applicable rules. In its sole discretion, Paymentus may refuse to process any transaction that it reasonably believes is (i) submitted in violation of its terms of use or (ii) necessary to protect Client, Users, itself or others from actual or potentially illegal, fraudulent or harmful activity.

### 4.6 Settlement

Paymentus together with a Paymentus Authorized Processor will forward the payment transactions, to the appropriate organizations for settlement directly to Client's depository bank account previously designated by Client ("Client Bank Account") as a positive amount of payment processing funds, net of any User paid Paymentus Fee and Reversed or Chargeback any Transactions (described below). When Client pays the Paymentus Fee, Paymentus will invoice Client and debit the fees from the Client Bank Account on a monthly basis.

Paymentus together with the Paymentus Authorized Processor will continuously review its settlement and direct debit processes for its simplicity and efficiencies. Client and Paymentus agree to fully cooperate with each other if Paymentus were to change its settlement and invoicing processes.

### 4.7 Reversed or Chargeback Transactions

With respect to all Reversed or Chargeback Transactions, Client authorizes Paymentus and Paymentus Authorized Processor (and/or the respective payment organizations) to debit the Client Bank Account for the Payment Amount and/or offset the Payment Amount against future payouts and Paymentus will refund the applicable amount to the payment organization for credit back to the User the corresponding Paymentus Fee, if any.

Paymentus together with Paymentus Authorized Processor will continuously review its processes for Reversed or Chargeback Transactions for simplicity and efficiencies. Client and Paymentus agree to fully cooperate with each other if Paymentus requires any change to its settlement and invoicing processes for these transactions.

### 5 <u>General Conditions of Services</u>

### 5.1 Service Reports

Paymentus will provide Client with reports summarizing use of the Services by Users for a given reporting period, which period shall be designated by Client during the Standard Implementation process. Such standard reports are available through the Agent Dashboard.

### 5.2 User Adoption Communication by Client

Client will prominently communicate the Services as a primary payment option to its customers wherever Client usually communicates its other payment options.

Client will make the Services known or available to its customers by different means of customer communication including (i) on the face of bills, invoices and other notices; (ii) on any marketing or advertising materials that include payment options; (iii) if direct payments have been activated, by providing Interactive Voice Response ("**IVR**") and Web payment details prominently on Client's website including a "Pay Now" or similar link on a mutually agreed prominent place on the web site; (iv) if IVR payments have been activated, through Client's general IVR/Phone system; and (v) other channels or means available to Client or reasonably suggested by Paymentus.

Paymentus will provide Client with logos, graphics and other marketing materials solely for Client's use in its communications with its customers regarding the Services and/or Paymentus..

### 5.3 Independent Contractor

Paymentus is an independent contractor. Paymentus is not acting as an agent or fiduciary of the Client or its Users.

### 5.4 Client's Responsibilities

In order for Paymentus to provide the Services, Client will fully cooperate with Paymentus by:

5.4.1 Entering into (and authorizing Paymentus to do so on its behalf) all applicable merchant processing, cash management, EFT origination, or kiosk agreements, provided that Client is given notice of and approves any additional fees associated with those agreements, and providing information and consents reasonably requested in connection with the agreements.

5.4.2 Maintaining throughout the duration of the Agreement during which direct payments via the web is activated, a bill payment link connecting to the Paymentus Platform at a prominent and mutually agreed location on Client's website. If the IVR channel is activated, the phone number for IVR payments will also be added to the web site and as an option as part of Client's general phone system.

5.4.3 Sharing User Adoption Communication as described in Section 5.2 (User Adoption Communication by Client).

5.4.4 Providing Customer Information to Paymentus. As part of the information transfer required for implementation, Client will provide Paymentus with CIF on all Client customers serviced by Client. The CIF shall also identify customers by payment type.

Launching the Service within 30 days of 5.4.5 System Availability. Paymentus will notify Client in writing of System Availability. Client will have ten (10) days following such notification to confirm that there are no material defects in the System ("Testing Period"). If material defects in the System are identified, Client shall provide reasonable detail to Paymentus about such defects, and the System Availability date will be extended until Paymentus notifies Client again of System Availability, and following an additional Testing Period, Client confirms there are no material defects in the System. If the Launch Date does not occur by the earlier of (i) thirty (30) days following final System Availability or (ii) 120 days following the Effective Date (as adjusted for any time required for Paymentus to cure applicable defects), Client shall be obligated to pay seventy-five percent (75%) of the Minimum Monthly Commitment Fees commencing the following month.

5.4.6 Dedicating sufficient properly trained and fully engaged personnel to support the implementation process and its use of the Services in compliance with all laws applicable to its use of the Services.

5.4.7 Providing Paymentus with the file format specification currently used to post payments to the billing system to allow Paymentus to provide Client with a posting file for posting to Client's billing system.

5.4.8 Fully cooperating with Paymentus and securing the cooperation of its software and service providers and providing the information required to integrate with Clients' billing systems.

5.4.9 Fully cooperating with Paymentus to integrate its systems with the Paymentus Platform through the use of Paymentus' APIs to enable Client's access to the IPN, if selected.

5.4.10 Promptly provide Paymentus notice within a reasonable time (not to exceed 48 hours) if Client encounters a cyber-incident or a data security breach which could reasonably be expected to compromise Paymentus data.

5.4.11 Providing Paymentus with designated test accounts or other data ("Test Data") to assess the functionality of the platform as part of any user acceptance testing process. Such Test Data shall not include any actual customer data.

### 6 Indemnification and Limitation of Liability

### 6.1 Paymentus Indemnification and Hold Harmless

Paymentus agrees to defend, hold harmless and indemnify Client and its directors, officers or governing officials, and employees (collectively, the "**Client Indemnitees**") from and against all liabilities, demands, losses, damages, costs or expenses (including legal fees and costs), incurred by any Client Indemnitee arising from a claim or demand brought by a third party to the extent the claim or demand alleges that the Services provided under this Agreement infringe the intellectual property rights of the third party.
#### 6.2 Client Indemnification and Hold Harmless

Client agrees to defend, hold harmless and indemnify Paymentus and its directors, officers, and employees (collectively, the "**Paymentus Indemnitees**") from and against all liabilities, demands, losses, damages, costs or expenses (including legal fees and costs), incurred by any Paymentus Indemnitee arising from a claim or demand brought by a third party to the extent the claim or demand relates to the underlying relationship or obligations of Client and its Users.

#### 6.3 Indemnification Procedure

The indemnified Party will give the indemnifying Party prompt written notice of any claim for which indemnification is sought. The indemnifying Party will have the right to control the defense and settlement of any claim, provided that any settlement that admits liability on behalf of the indemnified Party, or adversely affects the indemnified Party shall (i) require the indemnified Party's prior written consent, which consent will not be unreasonably conditioned, delayed or withheld and (ii) to the extent legally permitted, shall remain confidential.

#### 6.4 Warranty Disclaimer

EXCEPT AS EXPRESSLY SET FORTH IN THE AGREEMENT, PAYMENTUS MAKES NO OTHER REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED AND DISCLAIMS ALL OTHER REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, MADE TO CLIENT OR ANY OTHER PERSON, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING QUALITY, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE OF ANY SERVICES OR ANY GOOD PROVIDED INCIDENTAL TO THE SERVICES PROVIDED UNDER THE AGREEMENT.

#### 6.5 Limitation of Liability

NOTWITHSTANDING THE FOREGOING, PAYMENTUS WILL NOT BE LIABLE FOR ANY LOST PROFITS, LOST SAVINGS OR OTHER SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, EVEN IF IT HAS BEEN ADVISED OF OR COULD HAVE FORESEEN THE POSSIBILITY OF THESE DAMAGES. IN NO EVENT WILL PAYMENTUS BE LIABLE FOR ANY LOSSES OR DAMAGES RESULTING FROM THE ACTS, OMISSIONS OR ERRORS OF THIRD PARTIES OR OF CLIENT OR FOR PROVIDING AGREEMENTS. INSTRUCTIONS OR INFORMATION TO USERS AS **INSTRUCTED BY CLIENT. PAYMENTUS' TOTAL** LIABILITY FOR DAMAGES FOR ANY AND ALL ACTIONS ASSOCIATED WITH THE AGREEMENT OR THE SERVICES WILL IN NO EVENT EXCEED (i) FOR AN ERROR OR OTHER ACTION AFFECTING THE PROCESSING OF ONE OR MORE PAYMENTS, THE AMOUNT OF THE PAYMENTUS FEE ASSOCIATED WITH EACH PAYMENT, (ii) FOR ALL OTHER CLAIMS, THE AMOUNT OF THE PAYMENTUS FEE (NET OF DIRECT PROCESSING AND OTHER FEES PAID BY PAYMENTUS) PAID TO PAYMENTUS ("NET FEES") IN THE SIX (6) MONTHS BEFORE THE EVENTS GIVING RISE TO THE CLAIM OR CLAIMS ARISING FROM THE SAME CIRCUMSTANCES; AND (iii) IN NO EVENT, MORE THAN THE NET FEES RECEIVED IN THE LAST TWELVE (12) MONTH PERIOD UNDER THE AGREEMENT.

#### 7 <u>Term and Termination</u>

#### 7.1 Term

The term of the Agreement will commence on the Effective Date and continue for a period of 7 (seven) years ("**Initial Term**") from the Launch Date.

At the end of the Initial Term, the Agreement will automatically renew for successive three (3) year periods unless either Client or Paymentus provides the other Party with not less than 6 (six) months prior written notice before the automatic renewal date that it elects not to automatically renew the term of the Agreement.

#### 7.2 Breach

A breach of the Agreement that causes material harm will be cured within 90 (ninety) business days ("**Cure Period**") after a Party notifies the other in writing of the breach, in accordance with the Notice Provisions of this Agreement, that contain reasonable details of the material harm caused by the breach. In the event the breach has not been cured within the Cure Period, the non-breaching Party can terminate the Agreement by providing the other Party with a 30 business days' written notice.

#### 7.3 Upon Termination

Upon termination of the Agreement, the Parties agree to cooperate with one another to ensure that all

Payments are accounted for and all refundable transactions have been completed. During any period between the date of the notice of non-renewal or termination, if applicable, and the termination date set forth therein, Client shall maintain transaction volumes materially consistent with historical usage of Paymentus' Platform. Upon termination, Paymentus will cease all Services being provided hereunder unless otherwise agreed in writing.

#### 8 <u>Confidentiality</u>

#### 8.1 Compliance with Confidentiality Matters

The Parties agree that notwithstanding anything in this Agreement to the contrary, they will each abide by the terms of the Mutual Confidentiality Agreement or other mutual non-disclosure agreement signed by the Parties in connection with the commencement of the negotiation of this Agreement ("NDA"), which NDA shall be incorporated herein by reference, with the exception that the Term of the NDA shall be extended from the Effective Date of the NDA for three years following the termination or earlier expiration of this Agreement (the "Confidentiality Period"). Furthermore, during the Confidentiality Period, Client will not for any purpose inconsistent with the Agreement disclose to any third party or use any Paymentus confidential or proprietary non-public information that Client has obtained during the procurement process or during the term of the Agreement about Paymentus' business, including the terms of the Agreement, operations, financial condition, technology, systems, know-how, products, Services, suppliers, clients, marketing data, plans, and models, and personnel. Client acknowledges and agrees that this Agreement contains trade secret information including the contents of Schedule A (Fee Schedule).Except as required by law, Paymentus will not for any purpose inconsistent with the Agreement or its privacy policy in effect from time to time disclose to any third party or use any confidential User information it receives in connection with its performance of the Services other than as required in connection with the third parties described in Section 5.4.1 (applicable merchant processing, cash management, EFT origination, or kiosk agreements) above.

#### 8.2 Publicity; Public Statements

Except as provided in this Agreement, Client shall not issue any form of press release or make any public statement on its website, to the media, or otherwise regarding Paymentus, the Platform or the Services without the prior written consent of Paymentus, unless disclosure is required by law, and then (i) only to the minimum extent necessary to comply with any applicable law, rule or regulation; and (ii) only after consultation with Payments regarding the content of such release or statement.

#### 9. FOIA Requests

If a request for information is made to Client under any federal, provincial, municipal or other governmental freedom of information legislation or similar law, rule or regulation seeking disclosure of any of the confidential information of Paymentus, this Agreement, or other information provided to Client before and after the Effective Date in connection with or pursuant to this Agreement, Client shall (i) promptly provide Paymentus written notice of (email shall suffice) such request (along with a copy of the request) so that Paymentus may seek, at Paymentus' sole expense, a protective order or other appropriate remedy to protect the requested information to the extent legally permitted and (ii) provide reasonable cooperation (at Paymentus' request and sole expense, including but not limited to Client's legal fees reasonably incurred to protect the requested information) to resist or limit any disclosure pursuant to this paragraph.

#### 10 Intellectual Property

In order that Client may promote the Services and Paymentus' role in providing the Services, Paymentus grants to Client a revocable, nonexclusive, royalty-free, license to use Paymentus' logo and other service marks (the "Paymentus Marks") for this purpose only. Client does not have any right, title, license or interest, express or implied in and to any object code, software, hardware, trademarks, service mark, trade name, formula, system, know-how, telephone number, telephone line, domain name, URL, copyright image, text, script (including, without limitation, any script used by Paymentus on the IVR or the Website) or other intellectual property right of Paymentus ("Paymentus Intellectual Property"). All Paymentus Marks, Paymentus Intellectual Property, and the Platform and all rights therein (other than rights expressly granted herein) and goodwill pertain thereto belong exclusively to Paymentus.

#### 11 <u>Miscellaneous</u>

#### 11.1 Authorized Representative

Each Party will designate an individual to act as its representative, with the authority to transmit instructions and receive information. The Parties may from time to time designate and notify the other Party of other individuals or change the individuals.

#### 11.2 Notices

All notices of any type hereunder ("**Notices**") will be in writing and sent to the addresses indicated on the signature page and except as otherwise provided in this Agreement will be given by registered mail, a national courier or by hand delivery. Notices will be considered to have been given or received on the date the notice is physically received. A Party by giving notice in the manner set forth herein (or by electronic mail) may unilaterally change the name of the person to whom notice is to be given or the address at which the notice is to be received, by sending Notice to the other Party. Notices to Paymentus shall also be copied to the attention of the Legal Department at the Paymentus address.

#### 11.3 Interpretation

It is the intent of the Parties that no portion of the Agreement will be interpreted more harshly against either of the Parties as the drafter.

#### 11.4 Governing Law

The Agreement will be governed by the laws of the Province of Ontario and the applicable federal laws of Canada, without giving effect to any principles of conflicts of law.

#### 11.5 Severability

If a word, sentence or paragraph herein is declared illegal, unenforceable, or unconstitutional, that word, sentence or paragraph will be severed from the Agreement, and the Agreement will be read as if that word, sentence or paragraph did not exist.

#### 11.6 Legal Fees

Should any litigation or other dispute requiring the involvement of legal counsel arise between the Parties concerning the Agreement, each of the Parties agrees to bear its own costs and legal fees.

#### 11.7 Force Majeure

Each of the Parties will be excused from performing the Services or other non-monetary obligations to the extent such Party's performance is directly delayed, impaired or rendered impossible due to acts of God or other events that are beyond such Party's reasonable control and without its fault or judgment, including without limitation, natural disasters, war, terrorist acts, riots, acts of a governmental entity (in a sovereign or contractual capacity), fire, storms, floods, labor strikes, labor walk-outs, pandemics or other wide-scale heath crisis, quarantine and related restrictions, explosions, extra-ordinary loss of utilities (including telecommunications services), or external computer "hacker" attacks and/or delays of common carrier.

#### 11.8 No Third Party Beneficiaries.

Nothing in this Agreement, express or implied, is intended to confer rights, benefits, remedies, obligations or liabilities on any person (including Users or customers of the Parties) other than the Parties or their respective successors and permitted assigns.

#### **11.9 Entire Agreement**

The Agreement represents the entire agreement between the Parties with respect to its subject matter and supersedes all prior written or oral agreements or understandings related to its subject matter and except as provided in the Agreement may be changed only by agreements in writing signed by the authorized representatives of the Parties. Paymentus may amend this Agreement as reasonably necessary to comply with laws, regulations or rules applicable to the Services provided under this Agreement.

#### 11.9 Counterparts

The Agreement and any amendment or other document related to the Agreement may be executed in counterparts, each of which will constitute an original, and all of which will constitute one agreement. The Agreement and any amendment or other document related to the Agreement may be signed electronically. A photographic or facsimile copy of the signature evidencing a Party's execution of the Agreement will be effective as an original signature.

#### 11.10 Due Authorization and Enforceability.

Client has the full right, power and authority to enter into this Agreement and to perform and discharge its obligations hereunder; and this Agreement has been duly authorized, executed and delivered by the Client, and constitutes a valid, legal and binding obligation of the Client, enforceable against the Client in accordance with its terms.

#### Schedule A – Paymentus Service Fee Schedule

Client may elect to pay certain Payments Fees directly ("Client Fee"), or instruct Paymentus to collect the Paymentus Fee from the User (the "User Fee"). Client's initial designation of the fee model is set forth below:

Payment Methods & Channels	Paymentus Fee	Fee Model User or Client paid indicated below:
Instant Payment Network™		
All payment methods offered under IPN and digital wallets such as PayPal, Apple Pay, Google Pay, and others as offered by Paymentus	2.5% per payment	User Fee
Cradit, Dabit Cards	2.5% per payment – Credit	Liser Fee
	1.5% per payment - Debit	0361166
ACH/eCheck	\$1.00 per payment	User Fee

Average Bill Amount	Maximum Payment Amount
\$450.00	\$10,000.00

Note:

The Parties have agreed to the following:

- A. Multiple payments may be made. Paymentus may apply different limits per transaction for user adoption or to mitigate risks.
- B. Minimum Payment Fee is \$1.00 per non-ACH payments.
- C. Chargebacks and returned checks will be billed at \$9.95 per item.
- D. Implementation services include standard CIF integration with UniSoft (system of record).

#### Schedule B – Client Payment Data

- Average number of EFT (ACH) payments annually: 1,440
  Average number of card payments annually: 5,760



# TOWNSHIP OF EDWARDSBURGH CARDINAL ACTION ITEM

**Committee:** Committee of the Whole – Administration and Operations

Date: May 12, 2025

Department: CAO

**Topic:** 2025 Asset Management Plan

**Purpose:** To approve the 2025 Asset Management Plan (AMP) to be compliant with O. Reg 588/17.

**Background:** Ontario Regulation 588/17 requires all municipalities to have an updated Asset Management Plan for 2025 that includes all assets and proposed level of service targets.

Staff engaged Public Sector Digest (PSD) to prepare this asset management plan. PSD also prepared the reports for 2020 and 2024 so there were many synergies present to get the project completed quickly and on budget.

The asset management plan is a snapshot in time. The snapshot used was December 31, 2023, therefore the 2024 and 2025 capital items are not reflected in this report. This affects the road program that was completed in 2024 and 2025 plus the tandem axle plow trucks that were purchased by Public Works. However, the County Road 2 project and the Johnstown and Spencerville drainage projects are reflected, and the infrastructure gap is closed for those two assets.

Aside from the section added on proposed levels of service, the report is largely unchanged.

The two main areas of focus remain as roads and machinery/equipment. That has been the focus of the budgets for 2024 and 2025 so if progress and investment is continually made in those areas, progress will be reflected in future asset management plans.

The next update as per the regulation will be 2030.

**Policy Implications:** O. Reg 588/17 requires that all municipalities have an updated Asset Management Plan effective July 2025.

**Strategic Plan Implications:** This initiative aligns with the items in Pillar 4 – Infrastructure. The AMP ensures that the Township maintains our service levels, and our infrastructure is sustainable.

**Financial Considerations:** The outcomes of the AMP will have impact on the 2026 budget and all future budgets.

**Recommendation:** That Committee recommend that Council approve the 2025 Asset Management Plan as presented.

9A

CAO

# Asset Management Plan 2025

# Township of Edwardsburgh Cardinal

April 2025



Page 79 of 298

This Asset Management Plan was prepared by:



*Empowering your organization through advanced asset management, budgeting & GIS solutions* 

# **Key Statistics**

\$269m	2023 Replacement Cost of Asset Portfolio
\$82k	Replacement Cost of Infrastructure Per Household
62%	Percentage of Assets in Fair or Better Condition
61%	Percentage of Assets with Assessed Condition Data
<b>\$4.4</b> m	Annual Capital Infrastructure Deficit
15 Years	Recommended Timeframe for meeting Proposed Levels of Service
2.8%	Target Reinvestment Rate to meet Proposed Levels of Service
1.1%	Actual Reinvestment Rate

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# **1. Executive Summary**

Municipal infrastructure delivers critical services that are foundational to the economic, social, and environmental health and growth of a community. The goal of asset management is to enable infrastructure to deliver an adequate level of service in the most cost-effective manner. This involves the ongoing review and update of infrastructure information and data alongside the development and implementation of asset management strategies and long-term financial planning.

## 1.1 Scope

This Asset Management Plan (AMP) identifies the current practices and strategies that are in place to manage public infrastructure and makes recommendations where they can be further refined. Through the implementation of sound asset management strategies, the Township can ensure that public infrastructure is managed to support the sustainable delivery of municipal services.

This AMP includes the following asset categories:



Figure 1 Core and Non-Core Asset Categories

# 1.2 O. Reg. 588/17 Compliance

With the development of this AMP the Municipality has achieved compliance with July 1, 2025, requirements under O. Reg. 588/17. This includes requirements for proposed levels of service and inventory reporting for all asset categories. More detail on compliance can be found in section 2.5.1 O. Reg. 588/17 Compliance Review.

## **1.3 Findings**

The overall replacement cost of the asset categories included in this AMP totals \$269.5 million. 62% of all assets analyzed in this AMP are in fair or better condition and assessed condition data was available for 61% of assets. For the remaining 39% of assets, assessed condition data was unavailable, and asset age was used to approximate condition – a data gap that persists in most municipalities. Generally, age misstates the true condition of assets, making assessments essential to accurate asset management planning, and a recurring recommendation in this AMP.

The development of a long-term, sustainable financial plan requires an analysis of whole lifecycle costs. This AMP uses a combination of proactive lifecycle strategies (paved roads) and replacement only strategies (all other assets) to determine the lowest cost option to maintain the current level of service.

To meet capital replacement and rehabilitation needs for existing infrastructure , prevent infrastructure backlogs, achieve long-term sustainability, and reach the proposed levels of service, the Township's average annual capital requirement totals \$7.6 million. Based on a historical analysis of sustainable capital funding sources, the Township is committing approximately \$3.0 million towards capital projects or reserves per year. As a result, there is currently an annual funding gap of \$4.6 million.

It is important to note that this AMP represents a snapshot in time and is based on the best available processes, data, and information at the Township. Strategic asset management planning is an ongoing and dynamic process that requires continuous improvement and dedicated resources.

# **1.4 Recommendations**

A financial strategy was developed to address the annual capital funding gap and to meet the Township's desired proposed levels of service. The following graphic shows annual tax/rate change required to meet the proposed levels of service based on a 15-year plan:



Figure 2 Proposed Tax/Rate Changes

# 2. Introduction & Context

### 2.1 Community Profile

The Township of Edwardsburgh Cardinal is a lower-tier Township municipality in the United Counties of Leeds and Grenville. The Township is comprised of three main centers, Cardinal, Johnstown and Spencerville. The Township is located in the northeast section of Leeds and Grenville with the Saint Lawrence River serving as the Township's southern boundary.

The area is renowned for its beautiful countryside settings, quaint downtown districts, and historic sites. Residents and visitors alike can enjoy various recreational facilities, schools, and parks, all contributing to the welcoming quality of life in the Township.

The community offers a blend of rural charm and accessibility to urban amenities, making it an attractive place to live and visit. The historic sites provide a glimpse into the Township's rich past, while the recreational facilities and parks offer numerous opportunities for outdoor activities and relaxation. The presence of schools and churches enhances the community feel, ensuring a family-friendly environment.

The Township has experienced consistent year over year population growth. Over the past two census years (2016-2021), the Township saw a 6.1% increase in population. A significant portion of the population is made up of seniors, with 20% being 65 years or older. Many of the residents are working-age adults, ranging from 15 to 64 years old, accounting for 65.2% of the population. Meanwhile, children aged 0 to 14 years represent 14.7% of the community, highlighting a diverse age distribution across the Township.

Census Characteristic	Township of Edwardsburgh Cardinal	Ontario
Population 2021	7,505	14,223,942
Population Change 2016-2021	6.1%	5.8%
Total Private Dwellings	3,285	5,929,250
Population Density	24.2/km <sup>2</sup>	15.9/km <sup>2</sup>
Land Area	309.91 km <sup>2</sup>	892,411.76 km <sup>2</sup>

Table 1 Township of Edwardsburgh Cardinal Community Profile

# 2.2 Climate Change

Climate change can cause severe impacts on human and natural systems around the world. The effects of climate change include increasing temperatures, higher levels of precipitation, droughts, and extreme weather events. In 2019, Canada's Changing Climate Report (CCCR 2019) was released by Environment and Climate Change Canada (ECCC).

The report revealed that between 1948 and 2016, the average temperature increase across Canada was 1.7°C; moreover, during this time period, Northern Canada experienced a 2.3°C increase. The temperature increase in Canada has doubled that of the global average. If emissions are not significantly reduced, the temperature could increase by 6.3°C in Canada by the year 2100 compared to 2005 levels. Observed precipitation changes in Canada include an increase of approximately 20% between 1948 and 2012. By the late 21st century, the projected increase could reach an additional 24%. During the summer months, some regions in Southern Canada are expected to experience periods of drought at a higher rate. Extreme weather events and climate conditions are more common across Canada. Recorded events include droughts, flooding, cold extremes, warm extremes, wildfires, and record minimum arctic sea ice extent.

The changing climate poses a significant risk to the Canadian economy, society, environment, and infrastructure. The impacts on infrastructure are often a result of climate-related extremes such as droughts, floods, higher frequency of freeze-thaw cycles, extended periods of high temperatures, high winds, and wildfires. Physical infrastructure is vulnerable to damage and increased wear when exposed to these extreme events and climate variabilities. Canadian Municipalities are faced with the responsibility to protect their local economy, citizens, environment, and physical assets.

#### 2.2.1 Township of Edwardsburgh Cardinal Climate Profile

Edwardsburgh Cardinal is located in Ontario along the St. Lawerence River, within close proximity of Lake Ontario. The area is expected to experience notable effects of climate change which include higher average annual temperatures, an increase in total annual precipitation, and an increase in the frequency and severity of extreme events. According to Climatedata.ca – a collaboration supported by Environment and Climate Change Canada (ECCC) – the Township of Edwardsburgh Cardinal may experience the following trends:

#### Higher Average Annual Temperature

- Between the years 1971 and 2000 the annual average temperature was 6.5 °C
- Under a high emissions scenario, the annual average temperatures are projected to increase to 9.2 °C by the year 2050 and over 13.0 °C by the end of the century.

#### Increase in Total Annual Precipitation

• Under a high emissions scenario, Edwardsburgh Cardinal is projected to experience a 12% increase in precipitation by the year 2050 and a 17% increase by the end of the century.

#### Increase in Frequency of Extreme Weather Events

- It is expected that the frequency and severity of extreme weather events will change.
- In some areas, extreme weather events will occur with greater frequency and severity than others, especially those close to or on Lake Ontario.

#### 2.2.2 Integration of Climate Change and Asset Management

Asset management practices aim to deliver sustainable service delivery - the delivery of services to residents today without compromising the services and well-being of future residents. Climate change threatens sustainable service delivery by reducing the useful life of an asset and

increasing the risk of asset failure. Desired levels of service can be more difficult to achieve as a result of climate change impacts such as flooding, high heat, drought, and more frequent and intense storms.

In order to achieve the sustainable delivery of services, climate change considerations should be incorporated into asset management practices. The integration of asset management and climate change adaptation observes industry best practices and enables the development of a holistic approach to risk management.

### 2.3 Asset Management Overview

Municipalities are responsible for managing and maintaining a broad portfolio of infrastructure assets to deliver services to the community. The goal of asset management is to minimize the lifecycle costs of delivering infrastructure services, manage the associated risks, while maximizing the value ratepayers receive from the asset portfolio.

The acquisition of capital assets accounts for only 10-20% of their total cost of ownership. The remaining 80-90% comes from operations and maintenance. This AMP focuses its analysis on the capital costs to maintain, rehabilitate and replace existing municipal infrastructure assets.





These costs can span decades, requiring planning and foresight to ensure financial responsibility is spread equitably across generations. An asset management plan is critical to this planning, and an essential element of broader asset management program. The industry-standard approach and sequence to developing a practical asset management program begins with a Strategic Plan, followed by an Asset Management Policy and an Asset Management Strategy, concluding with an Asset Management Plan.

This industry standard, defined by the Institute of Asset Management (IAM), emphasizes the alignment between the corporate strategic plan and various asset management documents. The strategic plan has a direct, and cascading impact on asset management planning and reporting.

#### 2.3.1 Foundational Asset Management Documentation

The industry-standard approach and sequence to developing a practical asset management program begins with a Strategic Plan, followed by an Asset Management Policy and an Asset Management Strategy, concluding with an Asset Management Plan.



Figure 4 Foundational Asset Management Documents

This industry standard, defined by the Institute of Asset Management (IAM), emphasizes the alignment between the corporate strategic plan and various asset management documents. The strategic plan has a direct, and cascading impact on asset management planning and reporting.

#### Asset Management Policy

An asset management policy represents a statement of the principles guiding the Township's approach to asset management activities. It aligns with the organizational strategic plan and provides clear direction to municipal staff on their roles and responsibilities as part of the asset management program.

The Township adopted By-law No. 2018-47 "A By-law to Adopt an Asset Management Strategy Policy" on July 23<sup>rd</sup>, 2018 in accordance with Ontario Regulation 588/17.

The objectives of the policy include:

- Fiscal Responsibility
- Delivery of Services/Programs
- Public Input/Council Direction
- Risk/Impact Mitigation

#### Asset Management Strategy

An asset management strategy outlines the translation of organizational objectives into asset management objectives and provides a strategic overview of the activities required to meet these objectives. It provides greater detail than the policy on how the Township plans to achieve asset management objectives through planned activities and decision-making criteria.

The Township's Asset Management Policy contains many of the key components of an asset management strategy and may be expanded on in future revisions or as part of a separate strategic document.

#### Asset Management Plan

The asset management plan (AMP) presents the outcomes of the Township's asset management program and identifies the resource requirements needed to achieve a defined level of service. The AMP typically includes the following content:

- State of Infrastructure
- Asset Management Strategies
- Levels of Service
- Financial Strategies

The AMP is a living document that should be updated regularly as additional asset and financial data becomes available. This will allow the Township to re-evaluate the state of infrastructure and identify how the organization's asset management and financial strategies are progressing.

#### 2.3.2 Key Concepts in Asset Management

Effective asset management integrates several key components, including lifecycle management, risk & criticality, and levels of service. These concepts are applied throughout this asset management plan and are described below in greater detail.

#### Lifecycle Management Strategies

The condition or performance of most assets will deteriorate over time. This process is affected by a range of factors including an asset's characteristics, location, utilization, maintenance history and environment. Asset deterioration has a negative effect on the ability of an asset to fulfill its intended function, and may be characterized by increased cost, risk and even service disruption.

To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

There are several field intervention activities that are available to extend the life of an asset. These activities can be generally placed into one of three categories: maintenance, rehabilitation, and replacement. The following table provides a description of each type of activity and the general difference in cost.

Depending on initial lifecycle management strategies, asset performance can be sustained through a combination of maintenance and rehabilitation, but at some point, replacement is

required. Understanding what effect these activities will have on the lifecycle of an asset, and their cost, will enable staff to make better recommendations.

Lifecycle Activity	Cost	Typical Associated Risks
Maintenance		<ul> <li>Balancing limited resources between planned maintenance and reactive, emergency repairs and interventions;</li> </ul>
Activities that prevent defects or	\$	<ul> <li>Diminishing returns associated with excessive maintenance activities, despite added costs;</li> </ul>
occurring		<ul> <li>Intervention selected may not be optimal and may not extend the useful life as expected, leading to lower payoff and potential premature asset failure;</li> </ul>
Rehabilitation/		
Renewal		<ul> <li>Useful life may not be extended as expected;</li> </ul>
Activities that rectify defects or deficiencies	\$\$\$	<ul> <li>May be costlier in the long run when assessed against full reconstruction or replacement;</li> </ul>
that are already present and may be affecting asset performance		<ul> <li>Loss or disruption of service, particularly for underground assets;</li> </ul>
		<ul> <li>Incorrect or unsafe disposal of existing asset;</li> </ul>
Replacement/		<ul> <li>Costs associated with asset retirement obligations;</li> </ul>
<b>Reconstruction</b> Asset end-of-life	<b>\$\$</b> \$\$	<ul> <li>Substantial exposure to high inflation and cost overruns;</li> </ul>
activities that often involve the complete	<i>፝</i>	<ul> <li>Replacements may not meet capacity needs for a larger population;</li> </ul>
replacement of assets		<ul> <li>Loss or disruption of service, particularly for underground assets;</li> </ul>

#### Table 2 Lifecycle Management: Typical Lifecycle Interventions

The Township's approach to lifecycle management is described within each asset category outlined in this AMP. Staff will continue to evolve and innovate current practices for developing and implementing proactive lifecycle strategies to determine which activities to perform on an asset and when they should be performed to maximize useful life at the lowest total cost of ownership.

#### Risk & Criticality

Asset risk and criticality are essential building blocks of asset management, integral in prioritizing projects and distributing funds where they are needed most based on a variety of

factors. Assets in disrepair may fail to perform their intended function, pose substantial risk to the community, lead to unplanned expenditures, and create liability for the municipality. In addition, some assets are simply more important to the community than others, based on their financial significance, their role in delivering essential services, the impact of their failure on public health and safety, and the extent to which they support a high quality of life for community stakeholders.

Risk is a product of two variables: the probability that an asset will fail, and the resulting consequences of that failure event. It can be a qualitative measurement, (i.e. low, medium, high) or quantitative measurement (i.e. 1-5), that can be used to rank assets and projects, identify appropriate lifecycle strategies, optimize short- and long-term budgets, minimize service disruptions, and maintain public health and safety.

# Formula to Assess Risk of Assets



Figure 5 Risk Equations

The approach used in this AMP relies on a quantitative measurement of risk associated with each asset. The probability and consequence of failure are each scored from 1 to 5, producing a minimum risk index of 1 for the lowest risk assets, and a maximum risk index of 25 for the highest risk assets.

#### **Probability of Failure**

Several factors can help decision-makers estimate the probability or likelihood of an asset's failure, including its condition, age, previous performance history, and exposure to extreme weather events, such as flooding and ice jams—both a growing concern for municipalities in Canada.

#### **Consequence of Failure**

Estimating criticality also requires identifying the types of consequences that the organization and community may face from an asset's failure, and the magnitude of those consequences. Consequences of asset failure will vary across the infrastructure portfolio; the failure of some assets may result primarily in high direct financial cost but may pose limited risk to the community. Other assets may have a relatively minor financial value, but any downtime may pose significant health and safety hazards to residents. Table 3 illustrates the various types of consequences that can be integrated in developing risk and criticality models for each asset category and segments within. We note that these consequences are common, but not exhaustive.

Type of Consequence	Description
Direct Financial	Direct financial consequences are typically measured as the replacement costs of the asset(s) affected by the failure event, including interdependent infrastructure.
Economic	Economic impacts of asset failure may include disruption to local economic activity and commerce, business closures, service disruptions, etc. Whereas direct financial impacts can be seen immediately or estimated within hours or days, economic impacts can take weeks, months and years to emerge, and may persist for even longer.
Socio-political	Socio-political impacts are more difficult to quantify and may include inconvenience to the public and key community stakeholders, adverse media coverage, and reputational damage to the community and the Municipality.
Environmental	Environmental consequences can include pollution, erosion, sedimentation, habitat damage, etc.
Public Health and Safety	Adverse health and safety impacts may include injury or death, or impeded access to critical services.
Strategic	These include the effects of an asset's failure on the community's long-term strategic objectives, including economic development, business attraction, etc.

Table 3 Risk Analysis: Types of Consequences of Failure

This AMP includes a preliminary evaluation of asset risk and criticality. Each asset has been assigned a probability of failure score and consequence of failure score based on available asset data. These risk scores can be used to prioritize maintenance, rehabilitation, and replacement strategies for critical assets.

These models have been built in Citywide for continued review, updates, and refinements.

#### Levels of Service

A level of service (LOS) is a measure of the services that the Township is providing to the community and the nature and quality of those services. Within each asset category in this AMP, technical metrics and qualitative descriptions that measure both technical and community levels of service have been established and measured as data is available.

The Township measures the level of service provided at two levels: Community Levels of Service, and Technical Levels of Service. This AMP includes those LOS that are required under O. Reg. 588/17 as well as any additional metrics the Township wishes to track.

#### **Community Levels of Service**

Community levels of service are a simple, plain language description or measure of the service that the community receives. For core asset categories as applicable (Roads, Bridges & Culverts, Stormwater, Water, and Sanitary) the province, through O. Reg. 588/17, has provided qualitative descriptions that are required to be included in this AMP.

#### **Technical Levels of Service**

Technical levels of service are a measure of key technical attributes of the service being provided to the community. These include mostly quantitative measures and tend to reflect the impact of the Township's asset management strategies on the physical condition of assets or the quality/capacity of the services they provide.

For core asset categories as applicable (Roads, Bridges & Culverts, Stormwater, Water, and Sanitary) the province, through O. Reg. 588/17, has also provided technical metrics that are required to be included in this AMP.

#### **Current and Proposed Levels of Service**

Current LOS are the past performance metrics of an asset category up until present day. In contrast, Proposed LOS looks toward the municipality's goal for asset performance by a defined future date.

It is important to note that O. Reg 588/17 does not dictate which proposed LOS metrics municipality's need to strive for. A proposed LOS will be very specific to each community's resident desires, political goals, and financial capacity. This can range from increasing service levels and costs, to maintaining or even reducing current performance in order to mitigate future cost increases. Regardless of the proposed LOS chosen, O. Reg 588/17 requires municipalities to demonstrate the achievability of their selected metrics.

# 2.4 Scope & Methodology

#### 2.4.1 Asset Categories for this AMP

This asset management plan for the Township of Edwardsburgh Cardinal is produced in compliance with O. Reg. 588/17. The July 2025 deadline under the regulation—the third of three AMPs—requires analysis of core and non-core asset categories, as well as proposed service levels and how to fund them.

The AMP summarizes the state of the infrastructure for the Township's asset portfolio, establishes current levels of service and the associated technical and customer-oriented key metrics, outlines lifecycle strategies for optimal asset management and performance, and provides financial strategies to reach sustainability for the asset categories listed below.



Figure 6 Tax Funded and Rate Funded Asset Categories

#### 2.4.2 Data Effective Date

It is important to note that this plan is based on data as of **December 2023**; therefore, it represents a snapshot in time using the best available processes, data, and information at the Municipality. Strategic asset management planning is an ongoing and dynamic process that requires continuous data updates and dedicated data management resources.

#### 2.4.3 Deriving Replacement Costs

There are a range of methods to determine the replacement cost of an asset, and some are more accurate and reliable than others. This AMP relies on two methodologies:

#### **User-Defined Cost and Cost Per Unit**

Based on costs provided by municipal staff which could include average costs from recent contracts; data from engineering reports and assessments; staff estimates based on knowledge and experience.

#### Cost Inflation / CPI Tables

Historical costs of the assets are inflated based on Consumer Price Index or Non-Residential Building Construction Price Index.

User-defined costs based on reliable sources are a reasonably accurate and reliable way to determine asset replacement costs. Cost inflation is typically used in the absence of reliable replacement cost data. It is a reliable method for recently purchased and/or constructed assets where the total cost is reflective of the actual costs that the Township incurred. As assets age,

and new products and technologies become available, cost inflation becomes a less reliable method.

#### 2.4.4 Estimated Service Life & Service Life Remaining

The estimated useful life (EUL) of an asset is the period over which the Township expects the asset to be available for use and remain in service before requiring replacement or disposal. The EUL for each asset in this AMP was assigned according to the knowledge and expertise of municipal staff and supplemented by existing industry standards when necessary.

By using an asset's in-service data and its EUL, the Township can determine the service life remaining (SLR) for each asset. Using condition data and the asset's SLR, the Township can more accurately forecast when it will require replacement. The SLR is calculated as follows:



Figure 7 Service Life Remaining Calculation

#### 2.4.5 Reinvestment Rate

As assets age and deteriorate they require additional investment to maintain a state of good repair. The reinvestment of capital funds, through asset renewal or replacement, is necessary to sustain an adequate level of service. The reinvestment rate is a measurement of available or required funding relative to the total replacement cost.

By comparing the actual vs. target reinvestment rate the Township can determine the extent of any existing funding gap. The reinvestment rate is calculated as follows:



Figure 9 Actual Reinvestment Rate Calculation

#### 2.4.6 Deriving Asset Condition

An incomplete or limited understanding of asset condition can mislead long-term planning and decision-making. Accurate and reliable condition data helps to prevent premature and costly

rehabilitation or replacement and ensures that lifecycle activities occur at the right time to maximize asset value and useful life.

A condition assessment rating system provides a standardized descriptive framework that allows comparative benchmarking across the Township's asset portfolio. The table below outlines the condition rating system used in this AMP to determine asset condition. This rating system is aligned with the Canadian Core Public Infrastructure Survey which is used to develop the Canadian Infrastructure Report Card. When assessed condition data is not available, service life remaining is used to approximate asset condition.

Condition	Description	Criteria	Service Life Remaining (%)
Very Good	Fit for the future	Well maintained, good condition, new or recently rehabilitated	80-100
Good	Adequate for now	Acceptable, generally approaching mid- stage of expected service life	60-80
Fair	Requires attention	Signs of deterioration, some elements exhibit significant deficiencies	40-60
Poor	Increasing potential of affecting service	Approaching end of service life, condition below standard, large portion of system exhibits significant deterioration	20-40
Very Poor	Unfit for sustained service	Near or beyond expected service life, widespread signs of advanced deterioration, some assets may be unusable	0-20

#### Table 4 Standard Condition Rating Scale

The analysis in this AMP is based on assessed condition data only as available. In the absence of assessed condition data, asset age is used as a proxy to determine asset condition.

#### Condition vs. Suitability

It is important to note that condition is only one aspect of determining an asset's suitability to providing the service intended. Other factors, such as capacity, should be considered on a category level.

For example, a Town Hall Office Facility may be in good condition with sufficient service life remaining, but only has office space for 20 employees. If the municipality requires office space for 30 employees, solutions should be considered which may include replacement amongst other alternatives such as secondary office space, remote work options, etc. As these considerations

are nuanced for the specific asset, suitability factors may not be directly addressed as part of this Asset Management Plan.

# 2.5 Ontario Regulation 588/17

As part of the Infrastructure for Jobs and Prosperity Act, 2015, the Ontario government introduced Regulation 588/17 - Asset Management Planning for Municipal Infrastructure (O. Reg 588/17)<sup>1</sup>. Along with creating better performing organizations, more liveable and sustainable communities, the regulation is a key, mandated driver of asset management planning and reporting. It places substantial emphasis on current and proposed levels of service and the lifecycle costs incurred in delivering them.

Figure 10 below outlines key reporting requirements under O. Reg 588/17 and the associated timelines.



Figure 10 O. Reg. 588/17 Requirements and Reporting Deadlines

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<sup>&</sup>lt;sup>1</sup> O. Reg. 588/17: Asset Management Planning for Municipal Infrastructure https://www.ontario.ca/laws/regulation/170588

#### 2.5.1 O. Reg. 588/17 Compliance Review

Requirement	O. Reg. 588/17 Section	AMP Section Reference	Status
Summary of assets in each category	S.5(2), 3(i)	5.1 - 13.1	Complete
Replacement cost of assets in each category	S.5(2), 3(ii)	5.1 - 13.1	Complete
Average age of assets in each category	S.5(2), 3(iii)	5.3 - 13.3	Complete
Condition of core assets in each category	S.5(2), 3(iv)	5.2 - 13.2	Complete
Description of municipality's approach to assessing the condition of assets in each category	S.5(2), 3(v)	5.4 - 13.4	Complete
Current levels of service in each category	S.5(2), 1(i-ii)	5.7 - 13.7	Complete
Current performance measures in each category	S.5(2), 2	5.7 - 13.7	Complete
Lifecycle activities needed to maintain current levels of service for 10 years	S.5(2), 4	5.4 - 13.4	Complete
Costs of providing lifecycle activities for 10 years	S.5(2), 4	5.5 - 13.5	Complete
Growth considerations	S.6(1), 5	14.1 - 14.2	Complete
Proposed levels of service for each category for next 10 years	S.6(1), 1(i-ii)	5.8 - 13.8	Complete
Explanation of appropriateness of proposed levels of service	S.6(1), 2(i-iv)	4.2	Complete
Lifecycle management activities for proposed levels of service	S.6(1), 4(i)	4.2	Complete
10-year capital costs for proposed levels of service	S.6(1), 4(ii)	Appendix B	Complete
Annual funding availability projections	S.6(1), 4(iii)	4.2	Complete

Table 5 O. Reg. 588/17 Compliance Review

# **Portfolio Overview**

# 3. State of the Infrastructure

The state of the infrastructure (SOTI) summarizes the inventory, condition, age profiles, and other key performance indicators for the Township's infrastructure portfolio. These details are presented for all core and non-core asset categories.

# 3.1 Asset Hierarchy & Data Classification

Asset hierarchy explains the relationship between individual assets and their components, and a wider, more expansive network and system. How assets are grouped in a hierarchy structure can impact how data is interpreted. Assets were structured to support meaningful, efficient reporting and analysis. Key category details are summarized at asset segment level.



Figure 11 Asset Hierarchy and Data Classification 18

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# 3.2 Portfolio Overview

#### 3.2.1 Total Replacement Cost of Asset Portfolio

The nine asset categories analyzed in this Asset Management Plan have a total current replacement cost of \$269 million. This estimate was calculated using user-defined costing, as well as inflation of historical or original costs to current date. This estimate reflects replacement of historical assets with similar, not necessarily identical, assets available for procurement today. Figure 12 illustrates the replacement cost of each asset category; at 48% of the total portfolio, the road network forms the largest share of the Township's asset portfolio, followed by the water network at 17%.



#### Total Current Replacement Cost: \$269,469,000

#### 3.2.2 Target vs. Actual Reinvestment Rate

The graph below depicts funding gaps by comparing the target to the current reinvestment rate.

Note: The target reinvestment rate in this section is based on current lifecycle management approaches and does not consider proposed changes to service levels. For analysis of proposed levels of service, refer to Section 4.

To meet the proposed long-term capital requirements (at current service levels), the Township requires an annual capital investment of \$7.5 million, for a target portfolio reinvestment rate of 2.6%. Currently, the annual investment from sustainable revenue sources is \$3.0 million, for a current portfolio reinvestment rate of 1.1%. Target and current re-investment rates by asset category are detailed below.

Figure 12 Current Replacement Cost by Asset Category



Figure 13 Current Vs. Target Reinvestment Rate

#### 3.2.3 Condition of Asset Portfolio

Figure 14 and Figure 15 summarize asset condition at the portfolio and category levels, respectively. Based on both assessed condition and age-based analysis, 62% of the Township's infrastructure portfolio is in fair or better condition, with the remaining 38% in poor or worse condition. Typically, assets in poor or worse conditions may require replacement or major rehabilitation in the immediate or short-term. Targeted condition assessments may help further refine the list of assets that may be candidates for immediate intervention, including potential replacement or reconstruction.

Similarly, assets in fair condition should be monitored for disrepair over the medium term. Keeping assets in fair or better condition is typically more cost-effective than addressing assets needs when they enter the latter stages of their lifecycle or decline to a lower condition rating, e.g., poor or worse.

Condition data was available for majority of the road network and bridges & culverts. For all remaining assets, including major infrastructure such as storm mains and buildings, age was used as an approximation of condition for most of these assets. Age-based condition estimations can skew data and lead to potential under- or overstatement of asset needs.

Further, when assessed condition data was available, it was projected to current year (2023). This 'projected condition' can generate lower condition ratings than those established at the time of the condition assessment. The rate of this deterioration will also depend on lifecycle curves used to project conditions over time.



Figure 14 Asset Condition: Portfolio Overview

As further illustrated in Figure 15 at the category level, the majority of major, core infrastructure including roads, bridges, and structural culverts are in fair or better condition, based on in-field condition assessment data and age-based condition projections. See Table 6 for details on how condition data was derived for each asset segment.

_		Very	Good	Good	Fa	ir Poo	or <b>=</b> Ve	ry Poor
Water Network		\$20.0	m	\$5	.3m	\$7.9m	\$11.	1m
Vehicles	\$988k	\$1.0m	\$487k	\$1.1m		\$3.	.7m	
Stormwater Network		\$	51.5m			\$82	8k	\$311k
Sanitary Sewer Network	\$3	10.3m	<mark>\$2.</mark>	<mark>3m</mark> \$5.	5m	\$8.9	Əm	\$3.9m
Road Network \$	<mark>5.5</mark> m s	\$36.6m		\$35.6	m	\$25.3r	m \$2	5.3m
Machinery & Equipment	\$668k	<mark>\$718</mark>	3k \$625	5k		\$3.7m		
Land Improvements	\$38	33k		\$434k		\$286	k <mark>\$129</mark> l	k <mark>\$117k</mark>
Buildings & Facilities	\$	10.3m	\$ <mark>1</mark>	.6 <mark>m</mark>	\$8.7m		\$8.9n	n
Bridges & Culverts \$	<mark>1.0</mark> m			\$13.5m			\$	3.3m
0	%	25	%	50	1%	75	5%	100%

Value and Percentage of Assets by Replacement Cost

Figure 15 Asset Condition by Asset Category

Buildings and facilities are not componentized into their individual major elements and components. This limits the validity of current condition estimates as they are presented only at the 'parent' asset level, such as 'Fire Station #1', or 'Township Office'.

#### Source of Condition Data

This AMP relies on assessed condition for 61% of assets, based on and weighted by replacement cost. For the remaining assets, age is used as an approximation of condition. Assessed condition data is invaluable in asset management planning as it reflects the true condition of the asset and its ability to perform its functions. The table below identifies the source of condition data used throughout this AMP.

Asset Category	Asset Segment(s)	% of Assets with Assessed Conditions	Source of Condition Data		
	Paved Roads (HCB)	100%	2015 Road Needs Study (75%)		
Road Network	Paved Roads (LCB)		Staff Assessments (25%)		
	Sidewalks	97%	Staff Assessments		
Bridges & Culverts	Bridges	100%	2024 OSIM Report		
Druges & Curverts	Structural Culverts	100 /0			
Water Network	All	6%	Staff Assessments		
Sanitary Sewer Network	All	28%	Staff Assessments		
Stormwater Network	All	0%	N/A		
Buildings & Facilities	All	11%	Staff Assessments		
Land Improvements	All	24%	Staff Assessments		
Vehicles	All	17%	Staff Assessments		
Machinery & Equipment	All	41%	Staff Assessments		

Table 6 Source of Condition Data

#### 3.2.4 Service Life Remaining

Based on asset age, available assessed condition data and estimated useful life, 21% of the Township's assets will require replacement within the next 10 years (not accounting for asset replacement backlog). Buildings & Facilities assets were excluded from this analysis due to the nature of the assets. Building and Facilities have multiple components that have a very short service life. However, the buildings themselves are long-lasting. Details of the capital requirements are identified in each asset section.

#### 3.2.5 Risk Matrix

Using the risk equation and preliminary risk models, Figure 16 shows how assets across the different asset categories are stratified within a risk matrix.



Figure 16 Risk Matrix: All Assets

The analysis shows that based on current risk models, approximately 19% of the Township's assets, with a current replacement cost of approximately \$51 million, carry a risk rating of 15 or higher (red) out of 25. Assets in this group may have a high probability of failure based on available condition data and age-based estimates and were considered to be most essential to the Township.

As new asset attribute information and condition assessment data are integrated with the asset register, asset risk ratings will evolve, resulting in a redistribution of assets within the risk matrix. Staff should also continue to calibrate risk models.

We caution that since risk ratings rely on many factors beyond an asset's physical condition or age, assets in a state of disrepair can sometimes be classified as low risk, despite their poor condition rating. In such cases, although the probability of failure for these assets may be high, their consequences of failure ratings were determined to be low based on the attributes used and the data available.

Similarly, assets with very high condition ratings can receive a moderate to high-risk rating despite a low probability of failure. These assets may be deemed as highly critical to the Township based on their costs, economic importance, social significance, and other factors. Continued calibration of an asset's criticality and regular data updates are needed to ensure these models more accurately reflect an asset's actual risk profile.

#### 3.2.6 Forecasted Capital Requirements

Aging assets require maintenance, rehabilitation, and replacement. Figure 17 below illustrates the cyclical short-, medium- and long-term infrastructure replacement requirements for all asset categories analyzed in this AMP over a 150-year time horizon. On average, **\$7.5 million is required each year** to remain current with capital replacement needs for the Township's current lifecycle approach for the asset portfolio (\$37.3 million allocated to each 5-year time block), represented by the red dotted line.

#### These projections do not consider any changes from current service levels to proposed service levels.

Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise. This figure relies on age and available condition data.

The chart also illustrates a backlog of more than \$20 million, comprising assets that remain in service beyond their estimated useful life. It is unlikely that all such assets are in a state of disrepair, requiring immediate replacements. This makes continued and expanded targeted and consistent condition assessments integral. Risk frameworks, proactive lifecycle strategies, and levels of service targets can then be used to prioritize projects, continuously refine estimates for both backlogs and ongoing capital needs and help select the right treatment for each asset. In addition, more effective componentization of buildings will improve these projections, including backlog estimates.


Figure 17 Capital Replacement Needs: Portfolio Overview 2024-2163

# **Proposed Levels of Service**

## 4. Proposed Levels of Service Analysis

## 4.1 Overview

#### 4.1.1 O. Reg. 588/17 Proposed Levels of Service Requirements

The third iteration of municipal Asset Management Plans required under O. Reg. 588/17 requires the evaluation of levels of service (LOS) that includes:

- Proposed LOS options (i.e. increase, decrease, or maintain current LOS) and the risks associated with these options;
- How the proposed LOS may differ from current LOS;
- Whether the proposed LOS are achievable; and
- The municipality's ability to afford proposed LOS.

Additionally, a lifecycle management and financial strategy to support the proposed LOS must be identified for a period of 10 years with specific reporting on:

- Identification of lifecycle activities needed to provide the proposed LOS;
- Annual costs over the next 10 years to achieve the proposed LOS; and
- Identification of proposed funding projected to be available.

#### 4.1.2 Considerations

Proposed LOS for the Township of Edwardsburgh Cardinal have been developed through comprehensive engagement with Township staff. In order to achieve any target LOS goal, careful consideration of the following should be given to the following:

#### Financial Impact Assessments

- Assess historical expenditures/budget patterns to gauge feasibility of increasing budgets to achieve increased service levels
- Consider implications of LOS adjustments on other services and other infrastructure programs (i.e. trade-offs)

#### Infrastructure Condition Assessments

- Regularly assess the condition of critical infrastructure components
- Use standardized condition assessment protocols (where possible) to quantify the state of the infrastructure
- Identify non-critical components where maintenance could potentially be deferred without causing severe degradation
- Use current condition metrics as benchmarks to gauge feasibility of large adjustments to LOS

#### Service Metrics

 Measure user satisfaction, response times, and other relevant indicators for specific services

#### Service Impact Assessments

 Evaluate potential impacts on user satisfaction and service delivery due to changes in infrastructure condition

#### Key Lifecycle Activities

- Implement routine maintenance and inspections to ensure infrastructure reaches its optimal useful life
- Monitor and optimize operational processes for efficiency
- Regularly review and update preventive maintenance schedules
- Prioritize critical infrastructure components for maintenance
- Implement cost-saving measures without compromising safety or compliance
- Develop strategies for managing and communicating service impacts to stakeholders
- Invest in technology and process improvements to enhance maintenance efficiency
- Upgrade critical infrastructure components to improve overall reliability
- Explore opportunities for innovation and efficiency gains

#### Risk Management

- Identify potential risks to infrastructure and service quality resulting from adjusted service levels
- Develop contingency plans to address unforeseen challenges without compromising service quality
- Monitor performance closely to ensure that the target investment translates to the desired infrastructure condition

#### Infrastructure Condition Enhancements

 Identify areas for improvement and increased maintenance to enhance overall infrastructure condition

#### **Timelines**

- Although O. Reg. 588/17 requires evaluation of expenditures for a 10-year period in pursuit of proposed LOS, it does not require municipalities to achieve the LOS within this 10-year timeframe (ex. a municipality may have a goal to reach X% condition by 2050, the AMP is required to review the first 10 years of the strategy to reach this goal)
- Careful consideration should be given to setting realistic targets for when proposed service levels can be achieved.

#### Stakeholder Engagement

- It is recommended to ensure adjustments to LOS are not made in isolation and without consultation of various stakeholders. This could include, but is not limited to:
  - Department Heads/Infrastructure Managers
  - Residents
  - Service Users
  - Council
- Efforts should be made to communicate changes to LOS transparently to all affected stakeholders

#### Flexibility

- Priorities may change over time due to a variety of factors, such as:
  - Financial state of the municipality
  - Availability of grants
  - Significant increases or decreases in population
  - Changes in political priorities

- Changes in resident priorities
- New technologies
- Changes in legislation
- Any proposed changes to LOS should be flexible and able to adapt to changes listed above, and other unforeseen circumstances

## 4.2 **Proposed Levels of Service Scenarios**

The three scenarios outlined in the following section were analyzed as options for proposed service levels for all categories included in this Asset Management Plan.

While all three scenarios were reviewed, **the Township of Edwardsburgh Cardinal selected Scenario 3 as their preferred path forward regarding proposed levels of service**, which is reflected in the financial strategy and 10-year capital replacement forecasts.

#### 4.2.1 Scenario 1: Maintain Existing Funding

This scenario assumes no increases to taxes or rates for the purpose of increasing capital funding.

- Annual capital allocation for tax-funded assets: \$2.8m
- Annual capital allocation for water rate-funded assets: \$135k
- Annual capital allocation for sanitary rate-funded assets: \$125k

Note: any asset categories currently classified as 'over-funded' were reduced to the recommended target funding levels.

While this scenario was modelled for consideration, the Township of Edwardsburgh Cardinal did not elect to move forward with this scenario.

#### Lifecycle Changes Required for Scenario 1

For all asset classes, no changes to lifecycle strategies are required in order to achieve Scenario 1. With the lack of funding, although existing lifecycle strategies are modelled within the Township's asset management system, a significant number of lifecycle events will not have sufficient funds and will move from projected events into the infrastructure backlog.

#### Affordability/Achievability of Scenario 1

Of the three scenarios analyzed, Scenario 1 is the least expensive option. Maintaining existing funding levels would require no tax or rate increases. The available capital funding over the next 10 years for Scenario 1 would remain consistent as indicated in the table below:

Catagorias		Available Capital Funding									
Categories	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
Tax-Funded	\$2.78m	\$2.78m	\$2.78m	\$2.78m	\$2.78m	\$2.78m	\$2.78m	\$2.78m	\$2.78m	\$2.78m	
Rate- Funded (Water)	\$135k	\$135k	\$135k	\$135k	\$135k	\$135k	\$135k	\$135k	\$135k	\$135k	
Rate- Funded (Sanitary)	\$125k	\$125k	\$125k	\$125k	\$125k	\$125k	\$125k	\$125k	\$125k	\$125k	

#### Table 7 Scenario 1 Available Capital Funding Over Next 10 Years

It is important to note that an AMP is a dynamic document which should be reviewed regularly to ensure up-to-date information is incorporated including accurate replacement costs, changes in inventory, changes in available funding sources, and reflection on progress made on previous recommendations.

#### Risks Associated with Scenario 1

There are pros and cons associated with each scenario analyzed, and each benefit is counterbalanced with consequences. For Scenario 1, the following risks have been identified:

- Increased infrastructure backlog
  - While modelling no financial increases on residents and businesses, knowingly continuing with insufficient infrastructure funding the Township is committing to sub-optimal lifecycle management of its assets. Being unable to complete strategic lifecycle interventions and replacements may result in increased asset failures, reduced reliability, and the potential for costly unbudgeted repairs to maintain services.
  - The risks of maintaining a funding level of 41% of the recommendation, Scenario 1 increases the risk of services being impacted by deteriorating asset conditions.
- Reliance on Grants
  - As Scenario 1 maintains a position of 41% of recommended funding levels, the Township will be more reliant on conditional grants, as they become available. While these are beneficial to all municipalities to secure to reduce their tax/rate burden on residents, they are considered an unsustainable revenue source. The Township will be more vulnerable to changes in provincial and federal policy and funding programs.
- Missed opportunities for efficiencies
  - While analyzing Scenario 1, no alternative lifecycle strategies were proposed. Midlifecycle interventions, such as asphalt overlays and sewer lining, can result in extended lifespans of assets and reduced costs over the lifetime of the assets. By relying on existing lifecycle strategies, the Township risks paying more than necessary to maintain their asset inventory.

#### 4.2.2 Scenario 2: Achieving 100% of Target Funding in 15 Years

This scenario assumes gradual tax and rate increases, stabilizing at 100% funding in 15 years.

- Annual Tax Increase ~2.6%
- Annual Water Rate Increase ~5.8%
- Annual Wastewater Rate Increase ~3.8%

While this scenario was modelled for consideration, the Township of Edwardsburgh Cardinal did not elect to move forward with this scenario.

#### Lifecycle Changes Required for Scenario 2

For all asset classes, no changes to lifecycle strategies are required in order to achieve Scenario 2. In future iterations of the AMP, it is recommended to more closely analyze changes to lifecycle management strategies to find long-term cost savings and efficiencies.

#### Affordability/Achievability of Scenario 2

Of the three scenarios analyzed, Scenario 2 is the middle ground in terms of tax/rate increases, however, it is very similar (financially) to Scenario 3, which is condition target based. Reaching 100% of the recommended funding immediately would require an increase of 47% in tax revenue. This is not reasonable or realistic to achieve in a short period of time. With the recommended implementation timeframe of 15 years, tax revenue would be increased gradually from \$6.6 million to \$9.8 million, water revenue from \$568,000 to \$1.3 million, and wastewater revenue from \$727,000 to \$1.3 million. Based on these gradual proposed increases, while maintaining existing sustainable grant funding, the available **capital** funding over the next 10 years for Scenario 2 is indicated in the table below:

Catagorias		Available Capital Funding										
Categories	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035		
Tax- Funded	\$2.96m	\$3.14m	\$3.32m	\$3.51m	\$3.71m	\$3.91m	\$4.11m	\$4.32m	\$4.54m	\$4.76m		
Rate- Funded (Water)	\$168k	\$202k	\$239k	\$277k	\$318k	\$361k	\$406k	\$454k	\$505k	\$558k		
Rate- Funded (Sanitary)	\$152k	\$179k	\$208k	\$239k	\$270k	\$302k	\$336k	\$370k	\$407k	\$444k		

Table 8 Scenario 2 Available Capital Funding Over Next 10 Years

It is important to note that an AMP is a dynamic document which should be reviewed regularly to ensure up-to-date information is incorporated including accurate replacement costs, changes in inventory, changes in available funding sources, and reflection on progress made on previous recommendations.

## Risks Associated with Scenario 2

There are pros and cons associated with each scenario analyzed, and each benefit is counterbalanced with consequences. For Scenario 2, the following risks have been identified:

- Increased infrastructure backlog
  - While mitigating the impact of financial increases on residents and businesses, taking 15 years to reach the targeted funding levels means 15 years of sub-optimal lifecycle management of assets. Being unable to complete strategic lifecycle interventions and replacements may result in increased asset failures, reduced reliability, and the potential for costly unbudgeted repairs to maintain services.
- Missed opportunities for efficiencies
  - While analyzing Scenario 2, no alternative lifecycle strategies were proposed. Midlifecycle interventions, such as asphalt overlays and sewer lining, can result in extended lifespans of assets and reduced costs over the lifetime of the assets. By relying on existing lifecycle strategies, the Township risks paying more than necessary to maintain their asset inventory.

#### 4.2.3 Scenario 3: Targeted Conditions by Category

This scenario includes a combination of targeted conditions and recommended funding levels.

#### **Categories with Targeted Condition:**

- Road Network
  - HCB Target: 70%
  - LCB Target: 60%
  - Other Target: 50%
- Bridges & Culverts Target: 70%
- Buildings & Facilities Target: 50%
- Vehicles Target: 50%
- Machinery & Equipment Target: 50%

#### Lifecycle Changes Required for Scenario 3

For the majority of asset classes, no changes to lifecycle strategies were required in order to achieve Scenario 3 the PLOS target, relying solely on the increase in funding to transition from the norm of routine rehabilitation/replacements being deferred to having sufficient funding for the assets' lifecycle interventions. Specifically for bridges and culverts, the lifecycle strategy was adjusted slightly to trigger replacement at a condition of 15% rather than 0% to better reflect the criticality of bridge infrastructure regarding safety precautions.

In future iterations of the AMP, it is recommended to more closely analyze changes to lifecycle management strategies to find long-term cost savings and efficiencies.

### Affordability/Achievability of Scenario 3

Of the three scenarios analyzed, Scenario 3 is the most expensive option, surpassing Scenario 2 by only \$146,000/year. Reaching full funding immediately would require an increase of 50% in tax revenue. This is not reasonable or realistic to achieve in a short period of time. With the recommended implementation timeframe of 15 years, tax revenue would be increased gradually from \$6.6 million to \$9.9 million, water revenue from \$568,000 to \$1.3 million, and wastewater

#### **Categories with Targeted 100% Funding**

- Water Network
- Sanitary Sewer Network
- Stormwater Network
- Land Improvements

revenue from \$727,000 to \$1.3 million. Based on these gradual proposed increases, while maintaining existing sustainable grant funding, the available **capital** funding over the next 10 years for Scenario 3 is indicated in the table below:

Catagorias		Available Capital Funding										
Categories	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035		
Tax- Funded	\$3.0m	\$3.15m	\$3.34m	\$3.54m	\$3.74m	\$3.95m	\$4.17m	\$4.38m	\$4.61m	\$4.84m		
Rate- Funded (Water)	\$168k	\$202k	\$239k	\$277k	\$318k	\$361k	\$406k	\$454k	\$505k	\$558k		
Rate- Funded (Sanitary)	\$152k	\$179k	\$208k	\$239k	\$270k	\$302k	\$336k	\$370k	\$407k	\$444k		

Table 9 Scenario 3 Available Capital Funding Over Next 10 Years

The above table accounts for both current and future expenditures in order to achieve and maintain the proposed levels of service. This requires a combination of capital spending and saving (i.e. reserves) to ensure future large expenditures can be financed. As an example, Edwardsburgh Cardinal owns and maintains ten bridges and four structural culverts, each with an estimated useful life of approximately 40 years. Because of the long duration between replacements, and low quantity of assets, it is likely that there will be years with no capital expenditures relating to bridges, however, this does not mean that the Township should ignore the funding requirements in these years. Instead, annual funding should be set aside in the form of reserves to ensure funding for upcoming lifecycle events is available when required.

As the Township has selected Scenario 3 as their preferred proposed level of service, a further breakdown of projected capital expenditures by asset category can be found in Appendix B.

It is important to note that an AMP is a dynamic document which should be reviewed regularly to ensure up-to-date information is incorporated including accurate replacement costs, changes in inventory, changes in available funding sources, and reflection on progress made on previous recommendations.

#### Risks Associated with Scenario 3

There are pros and cons associated with each scenario analyzed, and each benefit is counterbalanced with consequences. For Scenario 3, the following risks have been identified:

- Increased infrastructure backlog
  - While mitigating the impact of financial increases on residents and businesses, taking 15 years to reach the targeted funding levels means 15 years of sub-optimal lifecycle management of assets. Being unable to complete strategic lifecycle interventions and replacements may result in increased asset failures, reduced reliability, and the potential for costly unbudgeted repairs to maintain services.
- Missed opportunities for efficiencies
  - While analyzing Scenario 3, no alternative lifecycle strategies were proposed. Midlifecycle interventions, such as asphalt overlays and sewer lining, can result in

extended lifespans of assets and reduced costs over the lifetime of the assets. By relying on existing lifecycle strategies, the Township risks paying more than necessary to maintain their asset inventory.

- Consistency of condition assessments
  - When selecting a scenario based on condition ratings, there is a risk of outdated or inconsistent assessments being performed which can skew the Township's progress. This can be mitigated by implementing a robust condition assessment protocol for each asset category, to be performed at regularly scheduled intervals.

#### Appropriateness of Scenario 3 to Meet the Township's Needs

Township staff emphasized the need to balance financial impacts on residents with the reality of the current state of infrastructure within the municipality. Upon review of all three scenarios, Scenario 3 was selected as the most appropriate option as an annual tax increase of 2.8% was determined to be subjectively manageable to implement, while creating a sustainable future for the Township's infrastructure.

## **Category Analysis: Core Assets**

## 5. Road Network

The Township's road network comprises the largest share of its infrastructure portfolio, with a current replacement cost of more than \$126 million. The Township also owns and manages other supporting infrastructure and capital assets, including sidewalks, road culverts, and streetlights.

## 5.1 Inventory & Valuation

Table 10 summarizes the quantity and current replacement cost of the Township's various road network assets as managed in its primary asset management register, Citywide.

Segment	t Quantity Unit Meas		Replacement Cost	Primary RC Method
Gravel Roads	104.7	Length (km)	Not Planned for	r Replacement
Paved Roads (HCB)	123.1	Length (km)	\$123,092,000	Cost per unit
Paved Roads (LCB)	23.5	Length (km)	\$3,033,000	Cost per unit
Road Culverts	2	Quantity	\$189,000	CPI
Sidewalks	9	Quantity	\$1,281,000	CPI
Streetlights	434	Quantity	\$761,000	CPI
TOTAL			\$128,356,000	





#### Figure 18 Portfolio Valuation: Road Network

## 5.2 Asset Condition

Figure 19 summarizes the replacement cost-weighted condition of the Township's road network. Based on a combination of field inspection data and age, 61% of assets are in fair or better

condition; the remaining 39% of assets are in poor to very poor condition. Condition assessments were available for 100% of roads and 97% of sidewalks, based on replacement cost. This condition data was projected from inspection date to current year to estimate their condition today. No condition data was available for the remaining asset types.

Assets in poor or worse condition may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition. As illustrated in Figure 19, the majority of the Township's road network assets are in fair or better condition.



Figure 19 Asset Condition: Road Network Overall

As illustrated in Figure 20, based on condition assessments, the majority of the Township's HCB paved road network is in fair or better condition; however, 90% of LCB roads are in poor or worse condition.



Figure 20 Asset Condition: Road Network by Segment

## 5.3 Age Profile

An asset's age profile comprises two key values: estimated useful life (EUL), or design life; and the percentage of EUL consumed. The EUL is the serviceable lifespan of an asset during which it can continue to fulfil its intended purpose and provide value to users, safely and efficiently. As assets age, their performance diminishes, often more rapidly as they approach the end of their design life.

In conjunction with condition data, an asset's age profile provides a more complete summary of the state of infrastructure. It can help identify assets that may be candidates for further review through condition assessment programs; inform the selection of optimal lifecycle strategies; and improve planning for potential long-term replacement spikes.

Figure 21 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.



Figure 21 Estimated Useful Life vs. Asset Age: Road Network

Age analysis shows that the majority of paved roads have surpassed their expected useful life, with an average age of 25.3 years against a design life of 25 years (HCB) and 22.6 years against a design life of 15 years (LCB). Road culverts, sidewalks, and streetlights are currently within their expected useful lives, with sidewalks quickly approaching their proposed end of life.

Although asset age is an important measurement for long-term planning, condition assessments provide a more accurate indication of actual asset needs. Further, useful life estimates established as part of the PSAB 3150 implementation may not be accurate and may not reflect in-field asset performance.

## **5.4 Current Approach to Lifecycle Management**

Event Name	Event Class Maintenance	Event Trigger
	Maintenance	
Crack Sealing		5 Years (Repeated)
Single Lift Re-surfacing	Rehabilitation	20 Years
Full Reconstruction	Replacement	40 Years
u u u u u u u u u u u u u u	15 20 25 Time (in Years)	Original. Projected

Table 11 Lifecycle Management Strategy: Road Network (HCB Roads)

The condition or performance of most assets will deteriorate over time. This process is affected by a range of factors including an asset's characteristics, location, utilization, maintenance history and environment.

The following lifecycle strategies have been developed as a proactive approach to managing the lifecycle of HCB and LCB roads. Instead of allowing the roads to deteriorate until replacement is required, strategic rehabilitation is expected to extend the service life of roads at a lower total cost.



Table 12 Lifecycle Management Strategy: Road Network (LCB Roads)

The following table expands on maintenance and inspection activities for road network assets.

Activity Type	Description of Current Strategy
	Pothole repairs are completed annually based on deficiencies identified through routine route patrols and feedback from the public
Maintenance	Summer maintenance activities include asphalt patching, sidewalk repairs, grading, re-gravelling, vegetation management, road sign installation/maintenance, and line painting
	Winter maintenance activities include snow plowing and snow removal
Transition	Road inspections are typically conducted monthly by internal staff and during routine route patrols to identify maintenance tasks
Inspection	Supporting infrastructure such as sidewalks and streetlights are assessed annually by external contractors

Table 13 Lifecycle Management Strategy: Road Network

## 5.5 Forecasted Long-Term Replacement Needs

Figure 22 illustrates the cyclical short-, medium- and long-term infrastructure rehabilitation and replacement requirements for the Township's road network. This analysis was run until 2088 to capture at least one iteration of replacement for the longest-lived asset in Citywide Assets, the Township's primary asset management system and asset register. The Township's average annual requirements (red dotted line) total **\$3.7 million per year** (\$18.4 million per 5-year bucket) for all assets in the road network. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise.

The chart illustrates substantial capital needs throughout the forecast period. It also shows a backlog \$13.9 million, dominated by HCB paved roads. These projections are based on asset replacement costs, age analysis, and condition data when available, as well as lifecycle modeling (roads only). They are designed to provide a long-term, portfolio-level overview of capital needs and should be used to support improved financial planning over several decades.



Figure 22 Forecasted Capital Replacement Needs: Road Network 2024-2088

Often, the magnitude of replacement needs is substantially higher than most municipalities can afford to fund. In addition, most assets may not need to be replaced. However, quantifying and monitoring these spikes is essential for long-term financial planning, including establishing dedicated reserves. Regular pavement condition assessments and a robust risk framework will ensure that high-criticality assets receive proper and timely lifecycle intervention, including replacements.

A detailed 10-year capital replacement forecast can be found in Appendix B – 10-Year Capital Requirements.

## 5.6 Risk Analysis

The risk matrix below is generated using available asset data, including condition, service life remaining, replacement costs, traffic data, and road class. The risk ratings for assets without useful attribute data were calculated using only condition, service life remaining, and their replacement costs.

The matrix stratifies assets based on their individual probability and consequence of failure, each scored from 1 to 5. Their product generates a risk index ranging from 1-25. Assets with the highest criticality and likelihood of failure receive a risk rating of 25; those with lowest probability of failure and lowest criticality carry a risk rating of 1. As new data and information is gathered, the Township may consider integrating relevant information that improves confidence in the criteria used to assess asset risk and criticality.

These risk models have been built into the Township's Asset Management Database (Citywide Assets). See *Risk & Criticality* section for further details on approach used to determine asset risk ratings and classifications.



Figure 23 Risk Matrix: Road Network

## **5.7 Current Levels of Service**

The tables that follow summarize the Municipality's current levels of service with respect to prescribed KPIs under Ontario Regulation 588/17, as well as any additional performance measures that the Township selected for this AMP.

Service Attribute	Qualitative Description	Current LOS (2023)
Scope	Description, which may include maps, of the road network in the municipality and its level of connectivity	An approximately 200 km road network spanning over 310 km <sup>2</sup> of area. Surface materials include gravel, LCB, and HCB paved roads. Major provincial highways (managed by others) within the Township include Highway 401 running along the southern boundary and Highway 416 running from north to south through the center of the Township. Refer to Appendix C for map references.
Quality	Description or images that illustrate the different levels of road class pavement condition	The Township completed a Road Management Study in October 2016 in coordination with BRG Project Management & Municipal Specialists. Every road section received a surface condition rating (1-10). (1-5) Road surface exhibits moderate to significant deterioration and requires renewal or full replacement within 1-5 years (6-10) Road surface is in good condition or has been recently re-surfaced. Renewal or reconstruction is not required for 6-10+ years

#### 5.7.1 **Community Levels of Service**

Table 14 O. Reg. 588/17 Community Levels of Service: Road Network

5.7.2 Tech	nical Levels of Service	
Service Attribute	Technical Metric	Current LOS (2023)
	Lane-km of arterial roads (MMS classes 1 and 2) per land area (km/km <sup>2</sup> )	0 km/km <sup>2</sup>
Scope	Lane-km of collector roads (MMS classes 3 and 4) per land area (km/km <sup>2</sup> )	0.40 km/km <sup>2</sup>
	Lane-km of local roads (MMS classes 5 and 6) per land area (km/km <sup>2</sup> ) <sup>2</sup>	1.23 km/km <sup>2</sup>
	Average pavement condition index for paved roads in	HCB Roads: 44%
Quality	the Township	LCB Roads: 29%
Quality	Average surface condition for unpaved roads in the Township (e.g. excellent, good, fair, poor)	Fair
Performance	Target vs. Actual capital reinvestment rate	2.9% vs. 0.5%

Table 15 O. Reg. 588/17 Technical Levels of Service: Road Network

<sup>&</sup>lt;sup>2</sup> Includes both paved and gravel roads.

## 5.8 Proposed Levels of Service

As per O. Reg. 588/17, by July 1, 2025, municipalities are required to consider proposed levels of service (PLOS), discuss the associated risks and long-term sustainability of these service levels, and explain the Township's ability to afford the PLOS.

The below tables and graphs explain the proposed levels of service scenarios that were analyzed for the road network. Further PLOS analysis at the portfolio level can be found in section *4. Proposed Level of Service Analysis.* 

Scenario	Description
Scenario 1: Maintain Current Funding Level	<ul> <li>This scenario maintains existing capital funding levels for those categories that are underfunded and reduces to the recommended funding level for those categories deemed to be 'over-funded'.</li> <li>Road Network capital funding maintained at \$637,000/year</li> </ul>
Scenario 2: Achieving 100% Target Funding in 15 Years	<ul> <li>This scenario assumes gradual tax increases of ~2.7%/year, stabilizing at 100% funding across all asset categories in 15 years.</li> <li>Road Network capital funding gradually increases from \$637,000/year to \$3.7m/year over a span of 15 years</li> </ul>
Scenario 3: Specific Condition Targets	<ul> <li>This scenario aims to maintain target conditions for different road network asset types:</li> <li>HCB Target Condition: 70%</li> <li>LCB Target Condition: 60%</li> <li>Other Target Condition: 50%</li> <li>No funding limitations were placed on this scenario.</li> </ul>

#### 5.8.1 PLOS Scenarios Analyzed

Table 16 Road Network PLOS Scenario Descriptions

## 5.8.2 Proposed Levels of Service Scenarios

Scenario	Technical LOS Outcomes	Initial Value (2025)	15 Year Projection (2039)	30 Year Projection (2054)	Comments
	Average Condition	58%	34%	13%	
Scopario 1	% Risk that is High and Very High	8%	21%	27%	
Scenario 1	Average Asset Risk	8.9	11.6	14.0	
Segments)	Annual Investment Required		\$367,000		This is the maintained parameter in this scenario
	Capital Reinvestment Rate		0.3%		
	Average Condition	58%	55%	42%	
	% Risk that is High and Very High	8%	15%	13%	
Scenario 2	Average Asset Risk	8.9	9.5	10.5	
(All Segments)	Annual Investment Required	(2023) $(2039)$ $(2)$ $(2039)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $(2)$ $($		This parameter is increased incrementally to reach a target portfolio investment of \$5.9M over 15 years	
	Capital Reinvestment Rate		2.9%		
Conneria 2	Average Condition	HCB – 62% LCB – 56% Other – 43%	HCB – 58% LCB – 58% Other – 76%	HCB – 65% LCB – 49% Other – 51%	HCB Target Condition: 70% LCB Target Condition: 60% Other Target Condition: 50%
Scenario 3	% Risk that is High and Very High	S Outcomes         Initial Value (2025)         15 Year Projection (2039)         30 Year Projection (2054)           tion         58%         34%         13%           High and Very High         8%         21%         27%           Risk         8.9         11.6         14.0           nent Required         \$367,000         13%           stment Rate         0.3%         13%           tion         58%         55%         42%           High and Very High         8%         15%         13%           stment Rate         0.3%         13%         13%           tion         58%         55%         42%           High and Very High         8%         15%         13%           stment Rate         2.9%         10.5         10.5           nent Required         \$3,682,000         10.5         10.5           stment Rate         2.9%         10.5         10.5           tion         LCB - 62%         HCB - 58%         HCB - 65%         10.5           tion         LCB - 56%         LCB - 58%         LCB - 49%         10.5           High and Very High         HCB - 19%         HCB - 37%         HCB - 24%         10%			

Scenario	Technical LOS Outcomes	Initial Value (2025)	15 Year Projection (2039)	30 Year Projection (2054)	Comments
		HCB – 8.6	HCB – 9.2	HCB – 8.1	
	Average Asset Risk	LCB – 6.1	LCB – 6.0	LCB – 6.0	
		Other – 5.1	Other – 2.8	Other – 3.8	
		H	CB - \$3,538,00	0	
	Appual Invoctment Required	l	LCB - \$118,000		
	Annual Investment Required	(	Other - \$66,000	)	
		ТО	TAL - \$3,723,0		
	Capital Reinvestment Rate		2.9%		

Table 17 Road Network PLOS Scenario Analysis



Figure 24 Road Network PLOS Scenario 1 & 2 Condition Results



Figure 25 Road Network PLOS Scenario 3 Condition Results

#### 5.8.3 **10-Year PLOS Financial Projections**

As outlined in Section 4. Proposed Levels of Service Analysis, the Township of Edwardsburgh Cardinal selected Scenario 3 as their preferred proposed levels of service. The main objective is to increase spending gradually to reach a more sustainable funding level to manage the Township's current inventory of assets. The following table outlines the funding trajectory over the next 10 years for the road network if the financial strategy for Scenario 3 is implemented.

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Targeted Capital Spending	\$3.72m									
Projected Capital Spending	\$1.34m	\$1.48m	\$1.63m	\$1.78m	\$1.93m	\$2.09m	\$2.26m	\$2.42m	\$2.60m	\$2.77m
Funding Deficit	\$2.38m	\$2.24m	\$2.09m	\$1.94m	\$1.89m	\$1.63m	\$1.47m	\$1.30m	\$1.13m	\$950k
Target Reinvestment Rate	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%
Projected Reinvestment Rate	1.0%	1.2%	1.3%	1.4%	1.5%	1.6%	1.8%	1.9%	2.0%	2.2%

Table 18 Road Network 10-Year PLOS Financial Projections

## 6. Bridges & Culverts

The Township's transportation network also includes bridges and structural culverts, with a current replacement cost of approximately \$18 million.

## 6.1 Inventory & Valuation

Table 19 summarizes the quantity and current replacement cost of bridges and culverts. The Township owns and manages 10 bridges and four structural culverts.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method	
Bridges	10	Quantity	\$15,654,000	User-defined	
Structural Culverts	4	Quantity	\$2,187,000	User-defined	
TOTAL			\$17,841,000		





Current Replacement Cost

*Figure 26 Portfolio Valuation: Bridges & Culverts* 

## 6.2 Asset Condition

Figure 27 summarizes the replacement cost-weighted condition of the Township's bridges and culverts. Based on the Township's recent Ontario Structures Inspection Manual (OSIM) assessments, 76% bridges and culverts are in fair or better condition. Some elements or components of these structures may be candidates for replacement or rehabilitation in the medium term and should be monitored for further degradation in condition. At 24% of the total bridges and culverts portfolio, assets in poor or worse condition may require replacement in the immediate or short term.



Figure 27 Asset Condition: Bridges & Culverts Overall

As further detailed in Figure 28, based on in-field condition assessments, 100% of bridge and culvert assets were identified in fair of better condition. As bridges and structures reach a poor or worse rating (i.e., a bridge condition index of less than 40), they are not necessarily unsafe for regular use, individual circumstances must be considered. The OSIM ratings are designed to identify repairs needed to elevate condition ratings to a fair or higher.



Figure 28 Asset Condition: Bridges & Culverts by Segment

## 6.3 Age Profile

An asset's age profile comprises two key values: estimated useful life (EUL), or design life; and the percentage of EUL consumed. The EUL is the serviceable lifespan of an asset during which it can continue to fulfil its intended purpose and provide value to users, safely and efficiently. As assets age, their performance diminishes, often more rapidly as they approach the end of their design life.

In conjunction with condition data, an asset's age profile provides a more complete summary of the state of infrastructure. It can help identify assets that may be candidates for further review

through condition assessment programs; inform the selection of optimal lifecycle strategies; and improve planning for potential replacement spikes.

Figure 29 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.



Figure 29 Estimated Useful Life vs. Asset Age: Bridges & Culverts

Age analysis reveals that on average, bridges have consumed virtually all of their estimated useful life, with an average age of 48.5 years against an average EUL of 42 years. On average, culverts are in moderate stages of their lifecycle, with an average age of 12.1 years, against an average EUL of 40 years. OSIM assessments should continue to be used in conjunction with age and asset criticality to prioritize capital and maintenance expenditures.

## 6.4 Current Approach to Lifecycle Management

The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

The following table outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy					
Maintenance	Typical maintenance includes: • Obstruction removal • Cleaning/sweeping • Erosion control • Brush/tree removal					
	Biennial OSIM inspection reports include a list of recommended maintenance activities that the Township considers and completes according to cost and urgency.					

Activity Type	Description of Current Strategy
Rehabilitation / Replacement	Biennial OSIM inspection reports include a Capital Needs List identifying recommended rehabilitation and replacement activities with estimated costs.
Inspection	The most recent Bridge and Culvert inspection reports were prepared in 2022 and 2024 by Keystone Bridge Management Corp.

Table 20 Lifecycle Management Strategy: Bridges & Culverts

## 6.5 Forecasted Long-Term Replacement Needs

Figure 30 illustrates the cyclical short-, medium- and long-term infrastructure rehabilitation and replacement requirements for the Township's bridges and culverts. This analysis was run until 2063 to capture at least one iteration of replacement for the longest-lived asset in Citywide Assets, the Township's primary asset management system and asset register. The Township's average annual requirements (red dotted line) for bridges and culverts total **\$446,000 per year** (\$2.2 million per 5-year bucket). Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise.

Although no major replacement spikes are anticipated for the next 25 years, capital needs will significantly rise between 2049 and 2058, and peak at \$9.9 million between 2049 and 2053 as assets reach the end of their useful life. These projections and estimates are based on asset replacement costs, age analysis, and condition data. They are designed to provide a long-term, portfolio-level overview of capital needs and should be used to support improved financial planning over several decades.



Figure 30 Forecasted Capital Replacement Needs: Bridges & Culverts 2024-2063

Often, the magnitude of replacement needs is substantially higher than most municipalities can afford to fund. In addition, most assets may not need to be replaced. However, quantifying and monitoring these spikes is essential for long-term financial planning, including establishing dedicated reserves. OSIM condition assessments and a robust risk framework will ensure that high-criticality assets receive proper and timely lifecycle intervention, including replacements.

A detailed 10-year capital replacement forecast can be found in Appendix B – 10-Year Capital Requirements.

## 6.6 Risk Analysis

The risk matrix below is generated using available asset data, including condition and replacement costs.

The matrix stratifies assets based on their individual probability and consequence of failure, each scored from 1 to 5. Their product generates a risk index ranging from 1-25. Assets with the highest criticality and likelihood of failure receive a risk rating of 25; those with lowest probability of failure and lowest criticality carry a risk rating of 1. As new data and information is gathered, the Township may consider integrating relevant information that improves confidence in the criteria used to assess asset risk and criticality.

These risk models have been built into the Township's Asset Management Database (Citywide Assets). See *Risk & Criticality* section for further details on approach used to determine asset risk ratings and classifications.



Figure 31 Risk Matrix: Bridges & Culverts

## 6.7 Levels of Service

The tables that follow summarize the Township's current levels of service with respect to prescribed KPIs under Ontario Regulation 588/17 as well as any additional performance measures that the Township has selected for this AMP.

#### 6.7.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2023)
Scope	Description of the traffic that is supported by municipal bridges (e.g., heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists)	Bridges and structural culverts are a key component of the municipal transportation network. None of the municipality's structures have loading or dimensional restrictions meaning that most types of vehicles, including heavy transport, motor vehicles, emergency vehicles and cyclists can cross them without restriction.
Quality	Description or images of the condition of bridges & culverts and how this would affect use of the bridges & culverts	See Appendix C

Table 21 O. Reg. 588/17 Community Levels of Service: Bridges & Culverts

#### 6.7.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2023)
Scope	% of bridges in the Township with loading or dimensional restrictions	0%
Quality	Average bridge condition index value for bridges in the Township	67%
	Average bridge condition index value for structural culverts in the Township	69%
Performance	Target vs. Actual capital reinvestment rate	2.5% vs. 2.9%

Table 22 O. Reg. 588/17 Technical Levels of Service: Bridges & Culverts

## 6.8 **Proposed Levels of Service**

As per O. Reg. 588/17, by July 1, 2025, municipalities are required to consider proposed levels of service (PLOS), discuss the associated risks and long-term sustainability of these service levels, and explain the Township's ability to afford the PLOS.

The below tables and graphs explain the proposed levels of service scenarios that were analyzed for bridges and culverts. Further PLOS analysis at the portfolio level can be found in section *4. Proposed Level of Service Analysis.* 

Scenario	Description
Scenario 1: Maintain Current Funding Level	This scenario maintains existing capital funding levels for those categories that are underfunded and reduces to the recommended funding level for those categories deemed to be 'over-funded'.
	<ul> <li>Bridges and culverts capital funding decreases from \$526,000/year to \$446,000/year</li> </ul>
Scenario 2: Achieving 100% Target Funding in 15 Years	<ul> <li>This scenario assumes gradual tax increases of ~2.7%/year, stabilizing at 100% funding across all asset categories in 15 years.</li> <li>Bridges and culverts capital funding decreases from \$526,000/year to \$446,000/year to have the additional funds reallocated to other asset categories.</li> </ul>
Scenario 3: Specific Condition Targets	<ul> <li>This scenario aims to maintain target conditions for bridges and culverts assets:</li> <li>Bridges Target Condition: 70%</li> <li>No funding limitations were placed on this scenario.</li> </ul>

#### 6.8.1 PLOS Scenarios Analyzed

Table 23 Bridges & Culverts PLOS Scenario Descriptions

#### 6.8.2 **Proposed Levels of Service Scenarios**

Scenario	Technical LOS Outcomes	Initial Value (2025)	15 Year Projection (2039)	30 Year Projection (2054)	Comments
	Average Condition				
	% Risk that is High and Very High				Bridges were 'over-funded' based on
Scenario 1	Average Asset Risk	Same as Scenario 2			average annual investments. Refer to
	Annual Investment Required				Scenario 2 for recommended spending.
	Capital Reinvestment Rate				
	Average Condition	68%	33%	60%	
	% Risk that is High and Very High	0%	71%	21%	
Scenario 2	Average Asset Risk	8.7	17.3	11.1	
	Annual Investment Required		\$446,000		This parameter was decreased to the recommended average annual spending.
	Capital Reinvestment Rate		2.5%		
					Target Condition of 70%
Scenario 3	Average Condition	68%	33%	78%	<ul> <li>Lifecycle Event Change: Trigger replacement when asset reaches 15% condition instead of 0%</li> </ul>
	% Risk that is High and Very High	0%	71%	7%	
	Average Asset Risk	8.7	17.3	6.5	
	Annual Investment Required		\$520,000		
	Capital Reinvestment Rate		2.9%		

Table 24 Bridges & Culverts PLOS Scenario Analysis



Figure 32 Bridges & Culverts PLOS Scenario Condition Results

#### 6.8.3 **10-Year PLOS Financial Projections**

As outlined in Section 4. Proposed Levels of Service Analysis, the Township of Edwardsburgh Cardinal selected Scenario 3 as their preferred proposed levels of service. The main objective is to increase spending gradually to reach a more sustainable funding level to manage the Township's current inventory of assets. The following table outlines the funding trajectory over the next 10 years for bridges and culverts if the financial strategy for Scenario 3 is implemented.

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Targeted Capital Spending	\$520k									
Projected Capital Spending	\$520k									
Funding Deficit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Target Reinvestment Rate	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%
Projected Reinvestment Rate	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%

Table 25 Bridges & Culverts 10-Year PLOS Financial Projections

## 7. Water Network

The Environmental Services department is responsible for overseeing the Township's water network with a total current replacement cost of approximately \$45 million. The department is responsible for the following:

- Cardinal Water Treatment Plant/Distribution System
- The Edwardsburgh Water Distribution System (to New Wexford and the Industrial Park)
- The Windmill Point low lift pumping station
- Five Small Water Systems under Ontario Regulation 319/08

## 7.1 Inventory & Valuation

Table 26 summarizes the quantity and current replacement cost of the Township's various water network assets as managed in its primary asset management register, Citywide.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method	
Water Buildings	4	Quantity	\$15,294,000	User-defined	
Water Equipment	39	Quantity	\$4,697,000	CPI	
Water Mains	18,399	Length (m)	\$25,110,000	Cost per unit	
TOTAL			\$45,101,000		

Table 26 Detailed Asset Inventory: Water Network



Current Replacement Cost

Figure 33 Portfolio Valuation: Water Network

## 7.2 Asset Condition

Figure 34 summarizes the replacement cost-weighted condition of the Township's water network. Based on a combination of field inspection data and age, 73% of assets are in fair or better condition; the remaining 27% of assets are in poor to very poor condition. Condition assessments were available for 15% of water buildings, and 3% of watermains, based on
replacement cost. This condition data was projected from inspection date to current year to estimate their condition today. No condition data was available for water equipment.

Assets in poor or worse condition may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition. As illustrated in Figure 34, the majority of the Township's water network assets are in fair or better condition.



Figure 34 Asset Condition: Water Network Overall

As illustrated in Figure 35, based on condition assessments and age-based conditions, the majority of the Township's water mains is in very good condition; however, 61% of water buildings are in poor or worse condition.



Figure 35 Asset Condition: Water Network by Segment

## 7.3 Age Profile

An asset's age profile comprises two key values: estimated useful life (EUL), or design life; and the percentage of EUL consumed. The EUL is the serviceable lifespan of an asset during which it can continue to fulfil its intended purpose and provide value to users, safely and efficiently. As assets age, their performance diminishes, often more rapidly as they approach the end of their design life.

In conjunction with condition data, an asset's age profile provides a more complete summary of the state of infrastructure. It can help identify assets that may be candidates for further review through condition assessment programs; inform the selection of optimal lifecycle strategies; and improve planning for potential long-term replacement spikes.

Figure 36 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.



Figure 36 Estimated Useful Life vs. Asset Age: Water Network

# 7.4 Current Approach to Lifecycle Management

The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

The following table outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
	Valves are operated annually as part of preventative maintenance to ensure they do not seize
Maintenance	Periodic pressure testing to identify deficiencies and potential leaks
	The entire network of mains and hydrants are flushed semi-annually
	Trenchless re-lining of water mains presents significant challenges and is not always a viable option
Rebabilitation/	In the absence of mid-lifecycle rehabilitative events, most mains are simply maintained with the goal of full replacement once it reaches its end-of-life
Replacement	Other replacement activities are identified based on an analysis of the main break rate, asset functionality and design capacity as well as any issues identified during regular maintenance activities
	Similar to other sub-surface infrastructure, Staff attempt to coordinate water reconstruction projects with road reconstruction project to produce cost efficiencies
Inspection	Hydrants are inspected using a standardized checklist semi-annually by internal Staff
	Table 27 Lifecycle Management Strategy: Water Network

## 7.5 Forecasted Long-Term Replacement Needs

Figure 37 illustrates the cyclical short-, medium- and long-term infrastructure rehabilitation and replacement requirements for the Township's water network. This analysis was run until 2093 to capture at least one iteration of replacement for the longest-lived asset in Citywide Assets, the Township's primary asset management system and asset register. The Township's average annual requirements (red dotted line) total **\$876,000 per year** (\$4.4 million per 5-year bucket) for all assets in the water network. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise.

The chart illustrates substantial capital needs throughout the forecast period. It also shows a backlog \$1.3 million, dominated by water mains. These projections are based on asset replacement costs, age analysis, and condition data when available. They are designed to provide a long-term, portfolio-level overview of capital needs and should be used to support improved financial planning over several decades.



Figure 37 Forecasted Capital Replacement Needs: Water Network 2024-2093

Often, the magnitude of replacement needs is substantially higher than most municipalities can afford to fund. In addition, most assets may not need to be replaced. However, quantifying and monitoring these spikes is essential for long-term financial planning, including establishing dedicated reserves. Regular condition assessments and a robust risk framework will ensure that high-criticality assets receive proper and timely lifecycle intervention, including replacements.

A detailed 10-year capital replacement forecast can be found in Appendix B – 10-Year Capital Requirements.

## 7.6 Risk Analysis

The risk matrix below is generated using available asset data, including condition, service life remaining, replacement costs, traffic data, and road class. The risk ratings for assets without useful attribute data were calculated using only condition, service life remaining, and their replacement costs.

The matrix stratifies assets based on their individual probability and consequence of failure, each scored from 1 to 5. Their product generates a risk index ranging from 1-25. Assets with the highest criticality and likelihood of failure receive a risk rating of 25; those with lowest probability of failure and lowest criticality carry a risk rating of 1. As new data and information is gathered, the Township may consider integrating relevant information that improves confidence in the criteria used to assess asset risk and criticality.

These risk models have been built into the Township's Asset Management Database (Citywide Assets). See *Risk & Criticality* section for further details on approach used to determine asset risk ratings and classifications.





## 7.7 Levels of Service

The tables that follow summarize the Township's current levels of service with respect to prescribed KPIs under Ontario Regulation 588/17 as well as any additional performance measures that the Township has selected for this AMP.

#### 7.7.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2023)	
Scope	Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal water system	See Appendix C	
	Description, which may include maps, of the user groups or areas of the municipality that have fire flow	See Appendix C	
Reliability	Description of boil water advisories and service interruptions	No boil water advisories were issued in 2023.	

Table 28 O. Reg. 588/17 Community Levels of Service: Water Network

Service Attribute	Technical Metric	Current LOS (2023)
Scono	% of properties connected to the municipal water system	21%
Scope	% of properties where fire flow is available	21%
Reliability	# of connection-days per year where a boil water advisory notice is in place compared to the total number of properties connected to the municipal water system	0
	# of connection-days per year where water is not available due to water main breaks compared to the total number of properties connected to the municipal water system	0
Quality	Average condition of Water network	59%
Performance	Target vs. Actual capital reinvestment rate	1.9% vs. 0.3%
Scope Reliability Quality Performance	% of properties connected to the municipal water system % of properties where fire flow is available # of connection-days per year where a boil water advisory notice is in place compared to the total number of properties connected to the municipal water system # of connection-days per year where water is not available due to water main breaks compared to the total number of properties connected to the municipal water system Average condition of Water network Target vs. Actual capital reinvestment rate	21% 21% 0 0 59% 1.9% vs. 0.3

#### 7.7.2 Technical Levels of Service

Table 29 O. Reg. 588/17 Technical Levels of Service: Water Network

## 7.8 Proposed Levels of Service

As per O. Reg. 588/17, by July 1, 2025, municipalities are required to consider proposed levels of service (PLOS), discuss the associated risks and long-term sustainability of these service levels, and explain the Township's ability to afford the PLOS.

The below tables and graphs explain the proposed levels of service scenarios that were analyzed for the water network. Further PLOS analysis at the portfolio level can be found in section *4. Proposed Level of Service Analysis.* 

#### 7.8.1 PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Maintain Current Funding Level	This scenario maintains existing capital funding levels for those categories that are underfunded and reduces to the recommended funding level for those categories deemed to be 'over-funded'.
	<ul> <li>Water Network capital funding maintained at \$135,000/year</li> </ul>
Scenario 2: Achieving 100% Target	This scenario assumes gradual water rate increases of ~5.8%/year, stabilizing at 100% funding in 15 years.
Funding in 15 Years	<ul> <li>Water network capital funding gradually increases from \$135,000/year to \$876,000/year over a span of 15 years</li> </ul>
Scenario 3:	The Township opted to only analyze two scenarios for the water
Not Applicable	network. Scenario 3 was selected to mirror Scenario 2.

Table 30 Water Network PLOS Scenario Description

#### 7.8.2 Proposed Levels of Service Scenarios

Scenario	Technical LOS Outcomes	Initial Value (2025)	15 Year Projection (2039)	30 Year Projection (2054)	Comments
	Average Condition	56%	39%	23%	
	% Risk that is High and Very High	16%	15%	19%	
Scenario 1	Average Asset Risk	10.8	12.7	13.6	
	Annual Investment Required		\$135,000		This is the maintained parameter in this scenario
	Capital Reinvestment Rate		0.3%		
	Average Condition	56%	46%	47%	
	% Risk that is High and Very High	16%	11%	7%	
	Average Asset Risk	10.8	12.3	10.5	
Scenario 2	Annual Investment Required		\$876,000		This parameter is based on water rates increasing 5.8% annually for 15 years
	Capital Reinvestment Rate		1.9%		
	Average Condition				
-	% Risk that is High and Very High	_			
Scenario 3	Average Asset Risk	 Same as Scenario 2			
-	Annual Investment Required	_			
	Capital Reinvestment Rate	_			

Table 31 Water Network PLOS Scenario Analysis



Figure 39 Water Network PLOS Scenario Condition Results

#### 7.8.3 **10-Year PLOS Financial Projections**

As outlined in Section *4. Proposed Levels of Service Analysis*, the Township of Edwardsburg Cardinal selected Scenario 3 as their preferred proposed levels of service. The main objective is to increase spending gradually to reach a more sustainable funding level to manage the Township's current inventory of assets. The following table outlines the funding trajectory over the next 10 years for the water network if the financial strategy for Scenario 3 is implemented.

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Targeted Capital Spending	\$876k									
Projected Capital Spending	\$168k	\$202k	\$239k	\$277k	\$318k	\$361k	\$406k	\$454k	\$505k	\$558k
Funding Deficit	\$708k	\$673k	\$637k	\$599k	\$558k	\$515k	\$470k	\$422k	\$371k	\$317k
Target Reinvestment Rate	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%
Projected Reinvestment Rate	0.4%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.1%	1.2%

Table 32 Water Network 10-Year PLOS Financial Projections

# 8. Sanitary Sewer Network

The Environmental Services department is responsible for overseeing the Township's sanitary sewer network with a total current replacement cost of approximately \$31 million. The department is responsible for the following:

- The Cardinal Wastewater Treatment Facility/Collection System
- The Spencerville Wastewater Collection System
- The Spencerville Lagoon stabilization ponds
- Seven Sewage Pumping Stations

#### 8.1 Inventory & Valuation

Table 33 summarizes the quantity and current replacement cost of the Township's various sanitary sewer network assets as managed in its primary asset management register, Citywide Assets.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method
Sanitary Buildings	14	Quantity	\$14,045,000	User-defined
Sanitary Equipment	44	Quantity	\$2,112,000	CPI
Sanitary Mains	14,833	Length (m)	\$14,815,000	Cost per unit
TOTAL			\$30,973,000	





Figure 40 Portfolio Valuation: Sanitary Sewer Network

#### 8.2 Asset Condition

Figure 41 summarizes the replacement cost-weighted condition of the Township's sanitary sewer network. Based on a combination of field inspection data and age, 59% of assets are in fair or better condition; the remaining 41% of assets are in poor to very poor condition. Condition

assessments were available for 24% of sanitary buildings, and 35% of sanitary mains, based on replacement cost. This condition data was projected from inspection date to current year to estimate their condition today. No condition data was available for sanitary equipment.

Assets in poor or worse condition may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition. As illustrated in Figure 41 the majority of the Township's sanitary sewer network assets are in fair or better condition.



Figure 41 Asset Condition: Sanitary Sewer Network Overall

As illustrated in Figure 42, based on condition assessments and age-based conditions, the majority of the Township's sanitary sewer mains are in very good condition however, 74% of sanitary buildings are in poor or worse condition.



Figure 42 Asset Condition: Sanitary Sewer Network by Segment

## 8.3 Age Profile

An asset's age profile comprises two key values: estimated useful life (EUL), or design life; and the percentage of EUL consumed. The EUL is the serviceable lifespan of an asset during which it can continue to fulfil its intended purpose and provide value to users, safely and efficiently. As assets age, their performance diminishes, often more rapidly as they approach the end of their design life.

In conjunction with condition data, an asset's age profile provides a more complete summary of the state of infrastructure. It can help identify assets that may be candidates for further review through condition assessment programs; inform the selection of optimal lifecycle strategies; and improve planning for potential long-term replacement spikes.

Figure 43 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.



Figure 43 Estimated Useful Life vs. Asset Age: Sanitary Sewer Network

## 8.4 Current Approach to Lifecycle Management

The condition or performance of most assets will deteriorate over time. This process is affected by a range of factors including an asset's characteristics, location, utilization, maintenance history and environment. The following lifecycle strategy has been developed as a proactive approach to managing the lifecycle of sanitary mains. A trenchless re-lining strategy is expected to extend the service life of sanitary mains at a lower total cost of ownership.



Table 34 Lifecycle Management Strategy: Sanitary Sewer Network (Sanitary Mains)

Activity Type	Description of Current Strategy
Maintenance	Annual mains maintenance consists of main flushing, rodding and inspections
	Annual maintenance of manholes that consists of manhole inspection, flushing/cleaning, and grouting
	Annual maintenance of pump stations include inspection and cleaning
Rehabilitation/ Replacement	In the absence of mid-lifecycle rehabilitative events (excluding those mains eligible for CIPP lining), mains are maintained with the goal of full replacement once it reaches its end-of-life
	Project prioritization is based on CCTV inspections, asset age, material, environmental risks, health and safety risks, and social impact. Additional considerations include asset functionality and design capacity.
	When mains are replaced, PVC pipe material is used
	Similar to other sub-surface infrastructure, staff coordinate sanitary reconstruction with road construction projects to produce cost efficiencies
Inspection	CCTV inspections of sanitary sewers are conducted annually
	Supporting infrastructure such as manholes and pump stations are inspected annually

Table 35 Lifecycle Management Strategy: Sanitary Sewer Network

## 8.5 Forecasted Long-Term Replacement Needs

Figure 44 illustrates the cyclical short-, medium- and long-term infrastructure rehabilitation and replacement requirements for the Township's sanitary sewer network. This analysis was run until 2168 to capture at least one iteration of replacement for the longest-lived asset in Citywide Assets, the Township's primary asset management system and asset register. The Township's average annual requirements (red dotted line) total **\$653,000 per year** (\$3.3 million per 5-year bucket) for all assets in the sanitary sewer network. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise.

The chart illustrates substantial capital needs throughout the forecast period. It also shows a backlog of \$858,000 split between sanitary sewer mains and sanitary equipment. These projections are based on asset replacement costs, age analysis, and condition data when available. They are designed to provide a long-term, portfolio-level overview of capital needs and should be used to support improved financial planning over several decades.



Figure 44 Forecasted Capital Replacement Needs: Sanitary Sewer Network 2024-2168

Often, the magnitude of replacement needs is substantially higher than most municipalities can afford to fund. In addition, most assets may not need to be replaced. However, quantifying and monitoring these spikes is essential for long-term financial planning, including establishing dedicated reserves. Regular condition assessments and a robust risk framework will ensure that high-criticality assets receive proper and timely lifecycle intervention, including replacements. A detailed 10-year capital replacement forecast can be found in Appendix B – 10-Year Capital Requirements.

## 8.6 Risk Analysis

The risk matrix below is generated using available asset data, including condition, service life remaining, replacement costs, traffic data, and road class. The risk ratings for assets without useful attribute data were calculated using only condition, service life remaining, and their replacement costs.

The matrix stratifies assets based on their individual probability and consequence of failure, each scored from 1 to 5. Their product generates a risk index ranging from 1-25. Assets with the highest criticality and likelihood of failure receive a risk rating of 25; those with lowest probability of failure and lowest criticality carry a risk rating of 1. As new data and information is gathered, the Township may consider integrating relevant information that improves confidence in the criteria used to assess asset risk and criticality.

These risk models have been built into the Township's Asset Management Database (Citywide Assets). See *Risk & Criticality* section for further details on approach used to determine asset risk ratings and classifications.



Figure 45 Risk Matrix: Sanitary Sewer Network

## 8.7 Levels of Service

The tables that follow summarize the Township's current levels of service with respect to prescribed KPIs under Ontario Regulation 588/17 as well as any additional performance measures that the Township has selected for this AMP.

#### 8.7.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2023)
Scope	Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal wastewater system	See Appendix C

Service Attribute	Qualitative Description	Current LOS (2023)
Reliability	Description of how combined sewers in the municipal wastewater system are designed with overflow structures in place which allow overflow during storm events to prevent backups into homes	The Township does not own any combined sewers
	Description of the frequency and volume of overflows in combined sewers in the municipal wastewater system that occur in habitable areas or beaches	The Township does not own any combined sewers
	Description of how stormwater can get into sanitary sewers in the municipal wastewater system, causing sewage to overflow into streets or backup into homes	Stormwater can enter into sanitary sewers due to cracks in sanitary mains or through indirect connections (e.g. weeping tiles). In the case of heavy rainfall events, sanitary sewers may experience a volume of water and sewage that exceeds its designed capacity. In some cases, this can cause water and/or sewage to overflow backup into homes. The disconnection of weeping tiles from sanitary mains and the use of sump pumps and pits directing storm water to the storm drain system can help to reduce the chance of this occurring.
	Description of how sanitary sewers in the municipal wastewater system are designed to be resilient to stormwater infiltration	The municipality follows a series of design standards that integrate servicing requirements and land use considerations when constructing or replacing sanitary sewers. These standards have been determined with consideration of the minimization of sewage overflows and backups.
	Description of the effluent that is discharged from sewage treatment plants in the municipal wastewater system	Effluent refers to water pollution that is discharged from a wastewater treatment plant, and may include suspended solids, total phosphorous and biological oxygen demand. The Environmental Compliance Approval (ECA) identifies the effluent criteria for municipal wastewater treatment plants.

Table 36 O. Reg. 588/17 Community Levels of Service: Sanitary Sewer Network

Service Attribute	Technical Metric	Current LOS (2023)
Scope	% of properties connected to the municipal wastewater system	24%
Reliability	# of events per year where combined sewer flow in the municipal wastewater system exceeds system capacity compared to the total number of properties connected to the municipal wastewater system	0
	# of connection-days per year having wastewater backups compared to the total number of properties connected to the municipal wastewater system	0
	# of effluent violations per year due to wastewater discharge compared to the total number of properties connected to the municipal wastewater system	0
Quality	Average condition of Sanitary Sewer Network	55%
Performance	Target vs. Actual capital reinvestment rate	2.1% vs. 0.4%

#### 8.7.2 Technical Levels of Service

Table 37 O. Reg. 588/17 Technical Levels of Service: Sanitary Sewer Network

## 8.8 Proposed Levels of Service

As per O. Reg. 588/17, by July 1, 2025, municipalities are required to consider proposed levels of service (PLOS), discuss the associated risks and long-term sustainability of these service levels, and explain the Township's ability to afford the PLOS.

The below tables and graphs explain the proposed levels of service scenarios that were analyzed for the sanitary sewer network. Further PLOS analysis at the portfolio level can be found in section *4. Proposed Level of Service Analysis*.

Scenario	Description		
Scenario 1: Maintain Current	This scenario maintains existing capital funding levels for those categories that are underfunded and reduces to the recommended funding level for those categories deemed to be 'over-funded'.		
Funding Level	<ul> <li>Sanitary sewer network capital funding maintained at \$125,000/year</li> </ul>		
Scenario 2:	This scenario assumes gradual sanitary rate increases of ~3.8%/year, stabilizing at 100% funding in 15 years.		
Funding in 15 Years	<ul> <li>Sanitary sewer network capital funding gradually increases from \$135,000/year to \$653,000/year over a span of 15 years</li> </ul>		
Scenario 3: Not Applicable	The Township opted to only analyze two scenarios for the water network. Scenario 3 was selected to mirror Scenario 2.		

#### 8.8.1 PLOS Scenarios Analyzed

Table 38 Sanitary Sewer Network PLOS Scenario Descriptions

#### 8.8.2 **Proposed Levels of Service Scenarios**

Scenario	Technical LOS Outcomes	Initial Value (2025)	15 Year Projection (2039)	30 Year Projection (2054)	Comments
	Average Condition	56%	38%	33%	
	% Risk that is High and Very High	4%	4%	14%	
Scenario 1	Average Asset Risk	10.5	13.2	13.6	
	Annual Investment Required		\$124,000		This is the maintained parameter in this scenario
	Capital Reinvestment Rate		0.4%		
	Average Condition	56%	46%	55%	
	% Risk that is High and Very High	4%	4%	2%	
	Average Asset Risk	10.5	12.3	10.4	
Scenario 2	Annual Investment Required		\$653,000		This parameter is based on sanitary rates increasing 3.8% annually for 15 years
	Capital Reinvestment Rate		2.1%		
	Average Condition				
	% Risk that is High and Very High				
Scenario 3	Average Asset Risk	Sa	ame as Scenari	o 2	
	Annual Investment Required				
	Capital Reinvestment Rate				

Table 39 Sanitary Sewer Network PLOS Scenario Analysis



Figure 46 Sanitary Sewer Network PLOS Scenario Condition Results

#### 8.8.3 **10-Year PLOS Financial Projections**

As outlined in Section 4. Proposed Levels of Service Analysis, the Township of Edwardsburgh Cardinal selected Scenario 3 as their preferred proposed levels of service. The main objective is to increase spending gradually to reach a more sustainable funding level to manage the Township's current inventory of assets. The following table outlines the funding trajectory over the next 10 years for the sanitary sewer network if the financial strategy for Scenario 3 is implemented.

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Targeted Capital Spending	\$653k									
Projected Capital Spending	\$152k	\$179k	\$208k	\$239k	\$270k	\$302k	\$336k	\$370k	\$407k	\$444k
Funding Deficit	\$502k	\$474k	\$445k	\$415k	\$384k	\$351k	\$318k	\$283k	\$247k	\$209k
Target Reinvestment Rate	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%
Projected Reinvestment Rate	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.1%	1.2%	1.3%	1.4%

Table 40 Sanitary Sewer Network 10-Year PLOS Financial Projections

# 9. Stormwater Network

The Township is responsible for owning and maintaining a stormwater network of an unknown length of storm sewer mains, catch basins and other supporting infrastructure. Staff are working towards improving the accuracy and reliability of their Stormwater Network inventory to assist with long-term asset management planning.

## 9.1 Inventory & Valuation

Table 41 summarizes the quantity and current replacement cost of all stormwater management assets available in the Township's asset register.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method	
Storm Sewer Mains	1,091	Length (m)	\$2,683,000	CPI	
TOTAL			\$2,683,000		



Figure 47 Portfolio Valuation: Stormwater Network

## 9.2 Asset Condition

Figure 48 summarizes the replacement cost-weighted condition of the Township's stormwater management assets. Based on age data only, approximately 12% of assets are in poor to very poor condition. These assets may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition.



Figure 48 Asset Condition: Stormwater Network Overall

Figure 49 summarizes the age-based condition of stormwater assets. The analysis illustrates that the majority of stormwater mains are in fair or better condition. However, 12% of mains, with a current replacement cost of \$311,000, are in poor or worse condition.





## 9.3 Age Profile

An asset's age profile comprises two key values: estimated useful life (EUL), or design life; and the percentage of EUL consumed. The EUL is the serviceable lifespan of an asset during which it can continue to fulfil its intended purpose and provide value to users, safely and efficiently. As assets age, their performance diminishes, often more rapidly as they approach the end of their design life.

In conjunction with condition data, an asset's age profile provides a more complete summary of the state of infrastructure. It can help identify assets that may be candidates for further review through condition assessment programs; inform the selection of optimal lifecycle strategies; and improve planning for potential replacement spikes. Figure 50 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.



■ Weighted Average Age □ Weighted Average EUL

#### Figure 50 Estimated Useful Life vs. Asset Age: Stormwater Network

Age analysis reveals that on average, storm mains in a moderate stage of their expected lifecycle. Age profiles and CCTV inspections will help to identify mains in need of replacements and/or upgrades. Extensions to EULs for mains may also be considered based on performance history to date.

#### 9.4 Current Approach to Lifecycle Management

The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

The following table outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance	Primary maintenance activities include catch basin cleaning and storm main flushing, but only a small percentage of the entire network is completed per year
	Flushing activities are usually completed alongside CCTV inspections
	Maintenance activities are completed to a lesser degree compared to other underground linear infrastructure
Rehabilitation	Trenchless re-lining has the potential to reduce total lifecycle costs but would require a formal condition assessment program to determine viability

Activity Type	Description of Current Strategy
Replacement	Without the availability of up-to-date condition assessment information replacement activities are purely reactive in nature
Inspection	CCTV inspections and cleaning is completed as budget becomes available and this information will be used to drive forward rehabilitation and replacement plans
	Supporting infrastructure such as catch basins and culverts are inspected internally with checklists to assess factors such as structural adequacy

Table 42 Lifecycle Management Strategy: Stormwater Network

It is worth noting that the Township is considering increasing their inspections to include ditch assessments to ensure comprehensive infrastructure management.

#### 9.5 Forecasted Long-Term Replacement Needs

Figure 51 illustrates the cyclical short-, medium- and long-term infrastructure replacement requirements for the Township's stormwater network assets. This analysis was run until 2098 to capture at least one iteration of replacement for the longest-lived asset in Citywide Assets, the Township's primary asset management system and asset register. The Township's average annual requirements (red dotted line) total **\$36,000 per year** (\$179,000 per 5-year bucket) for all assets in the stormwater network. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise.



Figure 51 Forecasted Capital Replacement Needs Stormwater Network 2024-2098

The chart illustrates no backlog for stormwater assets. The largest replacement spike is forecasted in 2034-2038 followed by 2069 and beyond as mains reach the end of their expected

design life. These projections and estimates are based on asset replacement costs and age analysis. They are designed to provide a long-term, portfolio-level overview of capital needs and should be used to support improved financial planning over several decades.

Often, the magnitude of replacement needs is substantially higher than most municipalities can afford to fund. In addition, most assets may not need to be replaced. However, quantifying and monitoring these spikes is essential for long-term financial planning, including establishing dedicated reserves. Forthcoming CCTV inspections may reveal a higher backlog. The inspections may also help reduce long-term projections by providing more accurate condition data for mains than age. In addition, a robust risk framework will ensure that high-criticality assets receive proper and timely lifecycle intervention, including replacements.

A detailed 10-year capital replacement forecast can be found in Appendix B – 10-Year Capital Requirements.

## 9.6 Risk Analysis

The risk matrix below is generated using available asset data, including condition, service life remaining, and replacement costs. As no attribute data was available for storm assets, the risk ratings for assets were calculated using only these required, minimum asset fields.

The matrix stratifies assets based on their individual probability and consequence of failure, each scored from 1 to 5. Their product generates a risk index ranging from 1-25. Assets with the highest criticality and likelihood of failure receive a risk rating of 25; those with lowest probability of failure and lowest criticality carry a risk rating of 1. As new data and information is gathered, the Township may consider integrating relevant information that improves confidence in the criteria used to assess asset risk and criticality.

These risk models have been built into the Township's Asset Management Database (Citywide Assets). See *Risk & Criticality* section for further details on approach used to determine asset risk ratings and classifications.



Figure 52 Risk Matrix: Stormwater Network

## 9.7 Levels of Service

The tables that follow summarize the Township's current levels of service with respect to prescribed KPIs under Ontario Regulation 588/17 as well as any additional performance measures that the Township has selected for this AMP.

#### 9.7.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2023)
Scope	Description, which may include map, of the user groups or areas of the Township that are protected from flooding, including the extent of protection provided by the municipal storm water network	See Appendix C

Table 43 O. Reg. 588/17 Community Levels of Service: Stormwater Network

#### 9.7.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2023)
Coope	% of properties in municipality designed to be resilient to a 100-year storm	TBD <sup>3</sup>
Scope	% of the municipal stormwater management system designed to be resilient to a 5-year storm	100% <sup>4</sup>
Quality	Average condition of Stormwater network	76%
Performance	Target vs. Actual capital reinvestment rate	1.3% vs. 19.1%

Table 44 O. Reg. 588/17 Technical Levels of Service: Stormwater Network

#### 9.8 **Proposed Levels of Service**

As per O. Reg. 588/17, by July 1, 2025, municipalities are required to consider proposed levels of service (PLOS), discuss the associated risks and long-term sustainability of these service levels, and explain the Township's ability to afford the PLOS.

The below tables and graphs explain the proposed levels of service scenarios that were analyzed for the stormwater network. Further PLOS analysis at the portfolio level can be found in section *4. Proposed Level of Service Analysis*.

<sup>&</sup>lt;sup>3</sup> The Township does not currently have data available to determine this technical metric. The rate of properties that are expected to be resilient to a 100-year storm is expected to be low.

<sup>&</sup>lt;sup>4</sup> This is based on the observations of municipal staff.

#### 9.8.1 PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Maintain Current	This scenario maintains existing capital funding levels for those categories that are underfunded and reduces to the recommended funding level for those categories deemed to be 'over-funded'.
Funding Level	<ul> <li>Stormwater network capital funding decreases from \$513,000/year to \$36,000/year</li> </ul>
Scenario 2:	This scenario assumes gradual tax increases of ~2.7%/year, stabilizing at 100% funding across all asset categories in 15 years.
Target Funding in 15 Years	<ul> <li>Stormwater network capital funding decreases from \$513,000/year to \$36,000/year to have the additional funds reallocated to other asset categories.</li> </ul>
Scenario 3: Not Applicable	The Township opted to only analyze two scenarios for the stormwater network. Scenario 3 was selected to mirror Scenario 2.

Table 45 Stormwater Network PLOS Scenario Descriptions

#### 9.8.2 **Proposed Levels of Service Scenarios**

Scenario	Technical LOS Outcomes	Initial Value (2025)	15 Year Projection (2039)	30 Year Projection (2054)	Comments
	Average Condition				
	% Risk that is High and Very High				Stormwater was 'over- funded' based on average
Scenario 1	Average Asset Risk		Same as Scenario 2		annual investments.
-	Annual Investment Required				Refer to Scenario 2 for recommended spending.
	Capital Reinvestment Rate				i ceciminena ca openangi
	Average Condition	74%	63%	55%	
	% Risk that is High and Very High	15%	8%	15%	
	Average Asset Risk	8.3	10.5	11.6	
Scenario 2	Annual Investment Required		\$36,000		This parameter was decreased to the recommended average annual spending.
	Capital Reinvestment Rate		1.3%		
	Average Condition				
Scenario	% Risk that is High and Very High				
	Average Asset Risk		Same as Scenario 2		
5	Annual Investment Required				
	Capital Reinvestment Rate				

Table 46 Stormwater Network PLOS Scenario Analysis



Figure 53 Stormwater Network PLOS Scenario Condition Results

#### 9.8.3 **10-Year PLOS Financial Projections**

As outlined in Section 4. Proposed Levels of Service Analysis, the Township of Edwardsburgh Cardinal selected Scenario 3 as their preferred proposed levels of service. The main objective is to increase spending gradually to reach a more sustainable funding level to manage the Township's current inventory of assets. The following table outlines the funding trajectory over the next 10 years for the stormwater network if the financial strategy for Scenario 3 is implemented.

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Targeted Capital Spending	\$36k									
Projected Capital Spending	\$36k									
Funding Deficit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Target Reinvestment Rate	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
Projected Reinvestment Rate	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%

Table 47 Stormwater Network 10-Year PLOS Financial Projections

# Category Analysis: Non-Core Assets

# **10. Buildings & Facilities**

The Township's buildings portfolio includes fire stations, various administrative and public works facilities, as well as public libraries and recreational assets. The total current replacement of buildings is estimated at approximately \$30 million.

## **10.1 Inventory & Valuation**

Table 48 summarizes the quantity and current replacement cost of all buildings assets available in the Municipality's asset register. Buildings and facilities assets are not componentized. The quantity listed represents the number of asset records currently available for each department.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method
Administration	3	Quantity	\$2,628,000	User-defined
Fire Department	3	Quantity	\$3,858,000	User-defined
Library	2	Quantity	\$1,027,000	User-defined
Public Works	5	Quantity	\$2,248,000	User-defined
Recreation	13	Quantity	\$19,937,000	User-defined
TOTAL			\$29,699,000	

Table 48 Detailed Asset Inventory: Buildings & Facilities



Figure 54 Portfolio Valuation: Buildings & Facilities

# **10.2 Asset Condition**

Figure 55 summarizes the replacement cost-weighted condition of the Township's buildings portfolio. Based mostly on age-based data, 41% of buildings assets are in fair or better condition; however, 59%, with a current replacement cost of more than \$17 million are in poor or worse condition. These assets may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should

be monitored for further degradation in condition. As buildings are not componentized, condition data is presented only at the site level, rather than at the individual element or component level within each building. This drawback is further compounded by the lack of assessed condition data, requiring the use of age-based estimates only.



#### Figure 55 Asset Condition: Buildings & Facilities Overall

Figure 56 summarizes the age-based condition of buildings by each department. A substantial portion of recreation assets and the majority of library, administration, and public works assets are in poor to worse condition. However, in the absence of componentization, this data has limited value. Componentization of assets and integration of condition assessments will provide a more accurate and reliable estimation of the condition of various facilities.



#### Figure 56 Asset Condition: Buildings & Facilities by Segment

Buildings and facilities assets are unique in that they rarely require the need for replacement based solely on condition. It is typical that, in addition to condition, other factors, such as capacity, will impact the asset's ability to serve the purpose originally intended.

For example, Fire Station 2 should be considered for upgrade or replacement based on the 2016 needs study completed by Eastern Engineering Group. While the overall condition of the facility was rated as fair, further commentary was provided indicating that numerous deficiencies that impact the facility's functionality (including lack of available space) resulted in a recommendation against the ongoing use of the existing facility as a fire station.

## **10.3 Age Profile**

An asset's age profile comprises two key values: estimated useful life (EUL), or design life; and the percentage of EUL consumed. The EUL is the serviceable lifespan of an asset during which it can continue to fulfil its intended purpose and provide value to users, safely and efficiently. As assets age, their performance diminishes, often more rapidly as they approach the end of their design life.

In conjunction with condition data, an asset's age profile provides a more complete summary of the state of infrastructure. It can help identify assets that may be candidates for further review through condition assessment programs; inform the selection of optimal lifecycle strategies; and improve planning for potential replacement spikes.

Figure 57 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.



#### ■ Weighted Average Age □ Weighted Average EUL

#### Figure 57 Estimated Useful Life vs. Asset Age: Buildings & Facilities

Age analysis reveals that, on average, buildings assets are in the earlier stages of their serviceable life. However, based on acquisition years, most library and recreation assets have consumed nearly 100% of their established useful life. Once again, this analysis presented only at the site level, rather than at the individual element or component level. Useful and meaningful age analysis for buildings is entirely predicated on effective componentization.

#### **10.4 Current Approach to Lifecycle Management**

The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

Table 49 outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
	Maintenance is triggered by inspections idenfifying safety, accessibility, functionality, and structural issues.
Maintenance	Critical buildings (Water Treatment Plant, Wastewater Treatment Plant, Fire Stations etc.) have a detailed maintenance and rehabilitation schedules, while the maintenance of other facilities are dealt with on a case-by-case basis
Rehabilitation/	Rehabilitations such as roof replacements or HVAC component replacements are considered on an as needed basis
Replacement	The primary considerations for asset replacement are asset failure, availability or grant funding, safety issues, volume of use, and recommendations from facility needs assessments
	Internal inspections are conducted monthly for health and safety requirements, as well as to identify any maintenance concerns
	HVAC systems are inspected bi-annually by an external contractor
Inspection	Facility Needs Assessment Studies are conducted by an external contractor approximately every 5 years
	Assessments are completed strategically as buildings approach their end- of-life to determine whether replacement or rehabilitation is appropriate

Table 49 Lifecycle Management Strategy: Buildings & Facilities

## **10.5 Forecasted Long-Term Replacement Needs**

Figure 58 illustrates the cyclical short-, medium- and long-term infrastructure replacement requirements for the Township's buildings portfolio. This analysis was run until 2058 to capture at least one iteration of replacement for the longest-lived asset in Citywide Assets, the Township's primary asset management system and asset register. The Township's average annual requirements (red dotted line) total **\$764,000 per year** (\$3.8 million per 5-year bucket) for all buildings. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise.

Replacement needs are forecasted to rise consistently over the next 20 years, reaching \$8.3 million between 2029 and 2033. The chart also illustrates a backlog of more than \$214,000 for recreation facilities and comprising assets that have reached the end of their useful life but still remain in operation. These projections and estimates are based on current asset records, their replacement costs, and age analysis. They are designed to provide a long-term, portfolio-level overview of capital needs and should be used to support improved financial planning over several decades.


Figure 58 Forecasted Capital Replacement Needs Buildings & Facilities 2024-2058

Often, the magnitude of replacement needs is substantially higher than most municipalities can afford to fund. In addition, most assets may not need to be replaced. However, quantifying and monitoring these spikes is essential for long-term financial planning, including establishing dedicated reserves. In addition, a robust risk framework will ensure that high-criticality assets receive proper and timely lifecycle intervention, including replacements. In the case of buildings and facilities, detailed componentization is necessary to develop more reliable lifecycle forecasts that reflect the needs of individual elements and components.

A detailed 10-year capital replacement forecast can be found in Appendix B – 10-Year Capital Requirements.

### **10.6 Risk Analysis**

The risk matrix below is generated using available asset data, including service life remaining, replacement costs, and building department. The risk ratings for assets without useful attribute data were calculated using only age, service life remaining, and their replacement costs.

The matrix classifies assets based on their individual probability and consequence of failure, each scored from 1 to 5. Their product generates a risk index ranging from 1-25. Assets with the highest criticality and likelihood of failure receive a risk rating of 25; those with lowest probability of failure and lowest criticality carry a risk rating of 1. As new data and information is gathered, the Township may consider integrating relevant information that improves confidence in the criteria used to assess asset risk and criticality.

These risk models have been built into the Township's Asset Management Database (Citywide Assets). See *Risk & Criticality* section for further details on approach used to determine asset risk ratings and classifications.





### **10.7 Levels of Service**

The tables that follow summarize the Township's current levels of service. There are no specifically prescribed KPIs under Ontario Regulation 588/17 for non-core assets, therefore the KPIs below represent performance measures that the Township has selected for this AMP.

#### **10.7.1** Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2023)
Scope	Description, which may include maps, of the types of facilities that the municipality operates and maintains	Facilities within Edwardsburgh Cardinal include those dedicated to administration, such as Township Hall and Libraries. Fire services are supported by two fire halls and an EMS station. Public works is supported by various equipment garages and salt/sand protection facilities. Recreation provides its services through a variety of facilities such as arenas, pools, and park facilities.
Accessibility	List of facilities that meet accessibility standards and description of any work that has been undertaken to achieve alignment	All publicly accessible buildings meet accessibility standards.

Table 50 Community Levels of Service: Buildings & Facilities

Service Attribute	Technical Metric	Current LOS (2023)
Quality	Average facility condition index value for facilities in the municipality	42%
Scope	Square meters of indoor recreation facilities per 1,000 households	1,9395
Performance	Target vs. Actual capital reinvestment rate	2.6% vs. 0.8%

#### **10.7.2** Technical Levels of Service

Table 51 Technical Levels of Service: Buildings & Facilities

#### **10.8 Proposed Levels of Service**

As per O. Reg. 588/17, by July 1, 2025, municipalities are required to consider proposed levels of service (PLOS), discuss the associated risks and long-term sustainability of these service levels, and explain the Township's ability to afford the PLOS.

The below tables and graphs explain the proposed levels of service scenarios that were analyzed for buildings and facilities. Further PLOS analysis at the portfolio level can be found in section 4. *Proposed Level of Service Analysis.* 

#### **10.8.1 PLOS Scenarios Analyzed**

Scenario	Description
Scenario 1: Maintain Current Funding Level	<ul> <li>This scenario maintains existing capital funding levels for those categories that are underfunded and reduces to the recommended funding level for those categories deemed to be 'over-funded'.</li> <li>Buildings capital funding maintained at \$232,000/year</li> </ul>
Scenario 2: Achieving 100% Target Funding in 15 Years	<ul> <li>This scenario assumes gradual tax increases of ~2.7%/year, stabilizing at 100% funding across all asset categories in 15 years.</li> <li>Buildings capital funding gradually increases from \$232,000/year to \$764,000/year over a span of 15 years</li> </ul>
Scenario 3: Specific Condition Targets	<ul> <li>This scenario aims to maintain target conditions for building assets:</li> <li>Buildings Target Condition: 50%</li> <li>No funding limitations were placed on this scenario.</li> </ul>

Table 52 Buildings & Facilities PLOS Scenario Descriptions

<sup>&</sup>lt;sup>5</sup> Spencerville Arena = 11,194 sq. ft. (1,040 m<sup>2</sup>); Ingredion Arena = 36,155 sq. ft. (3,359 m<sup>2</sup>)

#### **10.8.2** Proposed Levels of Service Scenarios

Scenario	Technical LOS Outcomes	Initial Value (2025)	15 Year Projection (2039)	30 Year Projection (2054)	Comments
	Average Condition	38%	19%	14%	
	% Risk that is High and Very High	35%	35%	22%	
Scenario 1	Average Asset Risk	14.0	17.1	17.6	
	Annual Investment Required		\$224,000		This is the maintained parameter in this scenario
	Capital Reinvestment Rate		0.8%		
Scenario 2	Average Condition	38%	32%	23%	
	% Risk that is High and Very High	35%	26%	17%	
	Average Asset Risk	14.0	15.0	16.4	
	Annual Investment Required		\$764,000		This parameter is increased incrementally to reach a target portfolio investment of \$5.9M over 15 years
	Capital Reinvestment Rate		2.6%		
	Average Condition	38%	51%	64%	Target Condition of 50%
	% Risk that is High and Very High	35%	26%	13%	
Scenario 3	Average Asset Risk	14.0	11.5	8.4	
5	Annual Investment Required		\$787,000		
	Capital Reinvestment Rate		2.6%		

Table 53 Buildings & Facilities PLOS Scenario Analysis

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Table 54 Buildings & Facilities PLOS Scenario Condition Results

#### **10.8.3 10-Year PLOS Financial Projections**

As outlined in Section 4. Proposed Levels of Service Analysis, the Township of Edwardsburgh Cardinal selected Scenario 3 as their preferred proposed levels of service. The main objective is to increase spending gradually to reach a more sustainable funding level to manage the Township's current inventory of assets. The following table outlines the funding trajectory over the next 10 years for buildings if the financial strategy for Scenario 3 is implemented.

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Targeted Capital Spending	\$787k									
Projected Capital Spending	\$358k	\$384k	\$410k	\$437k	\$465k	\$494k	\$523k	\$553k	\$584k	\$616k
Funding Deficit	\$429k	\$403k	\$377k	\$350k	\$322k	\$293k	\$264k	\$234k	\$203k	\$171k
Target Reinvestment Rate	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%
Projected Reinvestment Rate	1.2%	1.3%	1.4%	1.5%	1.6%	1.7%	1.8%	1.9%	2.0%	2.1%

Table 55 Buildings 10-Year PLOS Financial Projections

## **11. Land Improvements**

The Township's land improvements portfolio includes parking lots, fencing, signage and miscellaneous landscaping and other assets. The total current replacement of land improvements is estimated at approximately \$1.4 million.

### **11.1 Inventory & Valuation**

Table 56 summarizes the quantity and current replacement cost of all land improvements assets available in the Township's asset register. Miscellaneous land improvements (such as fishing docks and landscaping) and parking lots account for the majority of land improvement assets.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method
Fencing	8	Quantity	\$175,000	CPI
Miscellaneous	8	Quantity	\$530,000	CPI
Parking Lots	7	Quantity	\$498,000	CPI
Signage	47	Quantity	\$146,000	CPI
TOTAL			\$1,350,000	

Table 56 Detailed Asset Inventory: Land Improvements



Current Replacement Cost

### **11.2 Asset Condition**

Figure 61 summarizes the replacement cost-weighted condition of the Municipality's land improvement portfolio. Based mostly on age data, 82% of assets are in fair or better condition, the remaining 18% are in poor or worse condition. These assets may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition.

Figure 60 Portfolio Valuation: Land Improvements



Figure 61 Asset Condition: Land Improvements Overall

Figure 62 summarizes the age-based condition of land improvements by each department. Assets in poor or worse condition are primarily concentrated in signage and fencing.



Value and Percentage of Assets by Replacement Cost

Figure 62 Asset Condition: Land Improvements by Segment

### **11.3 Age Profile**

An asset's age profile comprises two key values: estimated useful life (EUL), or design life; and the percentage of EUL consumed. The EUL is the serviceable lifespan of an asset during which it can continue to fulfil its intended purpose and provide value to users, safely and efficiently. As assets age, their performance diminishes, often more rapidly as they approach the end of their design life. In conjunction with condition data, an asset's age profile provides a more complete summary of the state of infrastructure. It can help identify assets that may be candidates for further review through condition assessment programs; inform the selection of optimal lifecycle strategies; and improve planning for potential replacement spikes.

Figure 63 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.



Figure 63 Estimated Useful Life vs. Asset Age: Land Improvements

Age analysis reveals that, on average, most land improvement assets are in the moderate stages of their expected life.

### **11.4 Current Approach to Lifecycle Management**

The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

Table 57 outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance	Maintenance activities are completed on a reactive basis when operational issues are identified, through complaints, service requests, or ad-hoc inspections
Rehabilitation / Replacement	Without the availability of up-to-date condition assessment information replacement activities are purely reactive in nature
Inspections	Inspections are conducted on an ad-hoc basis

Table 57 Lifecycle Management Strategy: Land Improvements

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### **11.5 Forecasted Long-Term Replacement Needs**

Figure 64 illustrates the cyclical short-, medium- and long-term infrastructure replacement requirements for the Township's land improvements portfolio. This analysis was run until 2053 to capture at least one iteration of replacement for the longest-lived asset in Citywide Assets, the Municipality's primary asset management system and asset register. The Township's average annual requirements (red dotted line) total **\$71,000 per year** (\$356,000 per 5-year bucket) for all land improvements. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise.

Replacement needs are forecasted to remain relatively consistent over the next 20-year time horizon, peaking at \$636,000 between 2044 and 2048 as assets reach the end of their useful life. These projections and estimates are based on asset replacement costs and age analysis. They are designed to provide a long-term, portfolio-level overview of capital needs and should be used to support improved financial planning over several decades.



#### Figure 64 Forecasted Capital Replacement Needs: Land Improvements 2024-2053

Often, the magnitude of replacement needs is substantially higher than most municipalities can afford to fund. In addition, most assets may not need to be replaced. However, quantifying and monitoring these spikes is essential for long-term financial planning, including establishing dedicated reserves. In addition, a robust risk framework will ensure that high-criticality assets receive proper and timely lifecycle intervention, including replacements.

A detailed 10-year capital replacement forecast can be found in Appendix B – 10-Year Capital Requirements.

### **11.6 Risk Analysis**

The risk matrix below is generated using available asset data, including condition, service life remaining, and replacement costs. The risk ratings for assets without useful attribute data were calculated using only condition, service life remaining, and their replacement costs.

The matrix stratifies assets based on their individual probability and consequence of failure, each scored from 1 to 5. Their product generates a risk index ranging from 1-25. Assets with the highest criticality and likelihood of failure receive a risk rating of 25; those with lowest probability of failure and lowest criticality carry a risk rating of 1. As new data and information is gathered, the Township may consider integrating relevant information that improves confidence in the criteria used to assess asset risk and criticality.

These risk models have been built into the Township's Asset Management Database (Citywide Assets). See *Risk & Criticality* section for further details on approach used to determine asset risk ratings and classifications.



Figure 65 Risk Matrix: Land Improvements

### **11.7 Levels of Service**

The tables that follow summarize the Township's current levels of service. There are no specifically prescribed KPIs under Ontario Regulation 588/17 for non-core assets, therefore the KPIs below represent performance measures that the Township has selected for this AMP.

#### **11.7.1** Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2023)
Scope	Description, which may include maps, of the outdoor recreational facilities that the municipality operates and maintains	The Township operates a variety of outdoor supporting infrastructure such as parking lots, fencing, and recreational infrastructure (i.e. fishing docks).

Table 58 Community Levels of Service: Land Improvements

#### 11.7.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2023)
Quality	Average condition of land improvements in the municipality	60%
Performance	Target vs. Actual capital reinvestment rate	5.3% vs. 6.7%

Table 59 Technical Levels of Service: Land Improvements

### **11.8 Proposed Levels of Service**

As per O. Reg. 588/17, by July 1, 2025, municipalities are required to consider proposed levels of service (PLOS), discuss the associated risks and long-term sustainability of these service levels, and explain the Township's ability to afford the PLOS.

The below tables and graphs explain the proposed levels of service scenarios that were analyzed for land improvements. Further PLOS analysis at the portfolio level can be found in section *4. Proposed Level of Service Analysis*.

#### **11.8.1 PLOS Scenarios Analyzed**

Scenario	Description				
Scenario 1: Maintain Current	This scenario maintains existing capital funding levels for those categories that are underfunded and reduces to the recommended funding level for those categories deemed to be 'over-funded'.				
Funding Level	<ul> <li>Land improvement capital funding decreases from \$91,000/year to \$71,000/year</li> </ul>				
Scenario 2:	This scenario assumes gradual tax increases of ~2.7%/year, stabilizing at 100% funding across all asset categories in 15 years.				
Achieving 100% Target Funding in 15 Years	<ul> <li>Land improvement capital funding decreases from \$91,000/year to \$71,000/year to have the additional funds reallocated to other asset categories.</li> </ul>				
Scenario 3: Not Applicable	The Township opted to only analyze two scenarios for the stormwater network. Scenario 3 was selected to mirror Scenario 2.				

Table 60 Land Improvements PLOS Scenario Descriptions

#### **11.8.2** Proposed Levels of Service Scenarios

Scenario	Technical LOS Outcomes	Initial Value (2025)	15 Year Projection (2039)	30 Year Projection (2054)	Comments	
	Average Condition	_			Land Improvements were	
	% Risk that is High and Very High	_			`over-funded' based on	
Scenario 1	Average Asset Risk	Sa	ame as Scenario	2	average annual investments. Refer to Scenario 2 for	
	Annual Investment Required	_				
	Capital Reinvestment Rate	_			recommended spending.	
	Average Condition	57%	41%	53%		
	% Risk that is High and Very High	12%	24%	12%		
	Average Asset Risk	7.2	11.7	7.8		
Scenario 2	Annual Investment Required	\$71,000			This parameter was decreased to the recommended average annual spending.	
	Capital Reinvestment Rate		5.3%			
	Average Condition					
	% Risk that is High and Very High	_				
Scenario 3	Average Asset Risk	Sa	ame as Scenario 2	2		
	Annual Investment Required	_				
	Capital Reinvestment Rate	-				

Table 61 Land Improvements PLOS Scenario Analysis

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Figure 66 Land Improvements PLOS Scenario Condition Results

#### **11.8.3 10-Year PLOS Financial Projections**

As outlined in Section 4. Proposed Levels of Service Analysis, the Township of Edwardsburgh Cardinal selected Scenario 3 as their preferred proposed levels of service. The main objective is to increase spending gradually to reach a more sustainable funding level to manage the Township's current inventory of assets. The following table outlines the funding trajectory over the next 10 years for land improvements if the financial strategy for Scenario 3 is implemented.

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Targeted Capital Spending	\$71k									
Projected Capital Spending	\$71k									
Funding Deficit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Target Reinvestment Rate	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%
Projected Reinvestment Rate	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%

Table 62 Land Improvements 10-Year PLOS Financial Projections

# **12. Vehicles**

The Township's vehicles portfolio includes 28 assets that support a variety of general and essential services, including public works, environmental services, the fire department, and recreation. The total current replacement of vehicles is estimated at approximately \$7 million.

### **12.1 Inventory & Valuation**

Table 63 summarizes the quantity and current replacement cost of all vehicle assets available in the Township's asset register. Public works and the fire department account for the largest share of the vehicles portfolio.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method
Environmental Services	3	Quantity	\$175,000	User-defined
Fire Department	10	Quantity	\$4,706,000	CPI
Public Works	10	Quantity	\$2,093,000	CPI
Recreation	5	Quantity	\$292,000	User-defined
TOTAL			\$7,267,000	

Table 63 Detailed Asset Inventory: Vehicles



Current Replacement Cost

Figure 67 Portfolio Valuation: Vehicles

### **12.2 Asset Condition**

Figure 68 summarizes the replacement cost-weighted condition of the Township's vehicles portfolio. Based primarily on age-based data, 34% of vehicles are in fair or better condition, with the remaining 66% are in poor or worse condition. These assets may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or

replacement in the medium term and should be monitored for further degradation in condition. Condition data was available for 17% of vehicles, based on replacement costs; age was used to estimate condition for the remaining 83% of assets.



Figure 68 Asset Condition: Vehicles Overall

Figure 69 summarizes the condition of vehicles by each department. The majority of all vehicles across all asset segments are in poor or worse condition.



Figure 69 Asset Condition: Vehicles by Segment

### **12.3 Age Profile**

An asset's age profile comprises two key values: estimated useful life (EUL), or design life; and the percentage of EUL consumed. The EUL is the serviceable lifespan of an asset during which it can continue to fulfil its intended purpose and provide value to users, safely and efficiently. As

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assets age, their performance diminishes, often more rapidly as they approach the end of their design life.

In conjunction with condition data, an asset's age profile provides a more complete summary of the state of infrastructure. It can help identify assets that may be candidates for further review through condition assessment programs; inform the selection of optimal lifecycle strategies; and improve planning for potential replacement spikes.

Figure 70 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.



Figure 70 Estimated Useful Life vs. Asset Age: Vehicles

Age analysis reveals that, on average, most vehicles are in moderate stages of their expected life. Vehicles in environmental services remain in service beyond their established useful life.

### **12.4 Current Approach to Lifecycle Management**

The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

The following table outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance	Oil changes and routine maintenance is completed approximately every 10,000km
	All other maintenance activities are completed on a reactive basis when operational issues are identified (e.g., mechanical breakdown, deficiencies identified during daily inspections)
Replacement	Replacements are considered on an as-needed basis and when maintenance is no longer cost effective, as well as on a predetermined schedule for certain assets (e.g. snowplows are replaced every 12 years)
Inspection	Vehicles are inspected by the operator daily before use, however, these inspections identify deficiencies but do not provide overall condition ratings
	External contractors assess vehicles on a quarterly basis during preventative maintenance

Table 64 Lifecycle Management Strategy: Vehicles

#### **12.5 Forecasted Long-Term Replacement Needs**

Figure 71 illustrates the cyclical short-, medium- and long-term infrastructure replacement requirements for the Township's vehicles portfolio. This analysis was run until 2043 to capture at least one iteration of replacement for the longest-lived asset in Citywide Assets, the Township's primary asset management system and asset register. The Township's average annual requirements (red dotted line) total **\$487,000 per year** (\$2.4 million per 5-year bucket) for all vehicles. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise.

Replacement needs are forecasted to remain consistent in the current decade, with a slight peak of \$2.7 million between 2039 and 2043 as vehicles reach the end of their useful life. These projections and estimates are based on asset replacement costs and age analysis. They are designed to provide a long-term, portfolio-level overview of capital needs and should be used to support improved financial planning over several decades.



Figure 71 Forecasted Capital Replacement Needs: Vehicles 2024-2043

Often, the magnitude of replacement needs is substantially higher than most municipalities can afford to fund. In addition, most assets may not need to be replaced. However, quantifying and monitoring these spikes is essential for long-term financial planning, including establishing dedicated reserves. In addition, a robust risk framework will ensure that high-criticality assets receive proper and timely lifecycle intervention, including replacements.

A detailed 10-year capital replacement forecast can be found in Appendix B – 10-Year Capital Requirements.

### **12.6 Risk Analysis**

The risk matrix below is generated using available asset data, including condition, service life remaining, replacement costs, and department or service area. The risk ratings for assets without useful attribute data were calculated using only condition, service life remaining, and their replacement costs.

The matrix stratifies assets based on their individual probability and consequence of failure, each scored from 1 to 5. Their product generates a risk index ranging from 1-25. Assets with the highest criticality and likelihood of failure receive a risk rating of 25; those with lowest probability of failure and lowest criticality carry a risk rating of 1. As new data and information is gathered, the Municipality may consider integrating relevant information that improves confidence in the criteria used to assess asset risk and criticality.

These risk models have been built into the Township's Asset Management Database (Citywide Assets). See *Risk & Criticality* section for further details on approach used to determine asset risk ratings and classifications.



Figure 72 Risk Matrix: Vehicles

### **12.7 Levels of Service**

The tables that follow summarize the Township's current levels of service. There are no specifically prescribed KPIs under Ontario Regulation 588/17 for non-core assets, therefore the KPIs below represent performance measures that the Township has selected for this AMP.

#### **12.7.1** Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2023)
Scope	Description, which may include images, of the types of vehicles (i.e. light, medium, and heavy duty) that the municipality operates and the services that they help to provide to the community	Fire department vehicles include water tankers, pumpers, service trucks, and rescue trucks, ensuring readiness for emergency response. Recreation vehicles include light duty pick-up trucks for services such as park maintenance. Public Works vehicles include light and heavy duty trucks ranging from pick-up trucks to snow plows to ensure safe road conditions and managing infrastructure during inclement weather and construction projects. Environmental services vehicles include light duty pick-up trucks, to facilitate water and sanitary inspections and maintenance.

Table 65 Community Levels of Service: Vehicles

#### **12.7.2** Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2023)
Quality	Average condition of vehicles	32%
Performance	Target vs. Actual capital reinvestment rate	6.7% vs. 1.4%

Table 66 Technical Levels of Service: Vehicles

### **12.8 Proposed Levels of Service**

As per O. Reg. 588/17, by July 1, 2025, municipalities are required to consider proposed levels of service (PLOS), discuss the associated risks and long-term sustainability of these service levels, and explain the Township's ability to afford the PLOS.

The below tables and graphs explain the proposed levels of service scenarios that were analyzed for vehicles. Further PLOS analysis at the portfolio level can be found in section *4. Proposed Level of Service Analysis*.

#### **12.8.1 PLOS Scenarios Analyzed**

Scenario	Description
Scenario 1: Maintain Current Funding Level	This scenario maintains existing capital funding levels for those categories that are underfunded and reduces to the recommended funding level for those categories deemed to be 'over-funded'.
	<ul> <li>Vehicle capital funding maintained at \$100,000/year</li> </ul>
Scenario 2: Achieving 100% Target Funding in 15 Years	This scenario assumes gradual tax increases of ~2.7%/year, stabilizing at 100% funding across all asset categories in 15 years.
	<ul> <li>Vehicle capital funding gradually increases from \$100,000/year to \$487,000/year over a span of 15 years</li> </ul>
Comparia Da	This scenario aims to maintain target conditions for machinery and equipment assets:
Specific Condition Targets	<ul> <li>Vehicle Target Condition: 50%</li> </ul>
specific condition rargets	Annual maximum of \$600,000 to minimize spikes (permitted to carryover).

Table 67 Vehicles PLOS Scenario Descriptions

#### **12.8.2 Proposed Levels of Service Scenarios**

Scenario	Technical LOS Outcomes	Initial Value (2025)	15 Year Projection (2039)	30 Year Projection (2054)	Comments
	Average Condition	25%	5%	5%	
	% Risk that is High and Very High	72%	72%	69%	
Scenario 1	Average Asset Risk	17.0	20.3	20.2	
	Annual Investment Required		\$100,000		This is the maintained parameter in this scenario
	Capital Reinvestment Rate		1.4%		
Scenario 2	Average Condition	25%	29%	47%	
	% Risk that is High and Very High	72%	55%	52%	
	Average Asset Risk	17.0	16.3	12.4	
	Annual Investment Required		\$487,000		This parameter is increased incrementally to reach a target portfolio investment of \$5.9M over 15 years
	Capital Reinvestment Rate		6.7%		
	Average Condition	25%	46%	50%	Target Condition 50%
Scenario 3	% Risk that is High and Very High	72%	66%	48%	
	Average Asset Risk	17.0	12.9	12.6	
	Annual Investment Required		\$498,000		
	Capital Reinvestment Rate		6.9%		

Table 68 Vehicles PLOS Scenario Analysis

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Figure 73 Vehicles PLOS Scenario Condition Results

#### **12.8.3 10-Year PLOS Financial Projections**

As outlined in Section 4. Proposed Levels of Service Analysis, the Township of Edwardsburgh Cardinal selected Scenario 3 as their preferred proposed levels of service. The main objective is to increase spending gradually to reach a more sustainable funding level to manage the Township's current inventory of assets. The following table outlines the funding trajectory over the next 10 years for vehicles if the financial strategy for Scenario 3 is implemented.

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Targeted Capital Spending	\$498k									
Projected Capital Spending	\$191k	\$209k	\$228k	\$247k	\$267k	\$288k	\$309k	\$331k	\$353k	\$376k
Funding Deficit	\$307k	\$289k	\$270k	\$251k	\$231k	\$210k	\$189k	\$167k	\$145k	\$122k
Target Reinvestment Rate	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%
Projected Reinvestment Rate	2.6%	2.9%	3.1%	3.4%	3.7%	4.0%	4.3%	4.5%	4.9%	5.2%

Table 69 Vehicles 10-Year PLOS Financial Projections

# **13. Machinery & Equipment**

The Township's machinery and equipment portfolio includes a variety of assets that support a combination of general and essential services, including recreation and fire. The total current replacement of vehicles is estimated at approximately \$6 million.

### **13.1 Inventory & Valuation**

Table 70 summarizes the quantity and current replacement cost of all machinery & equipment assets available in the Township's asset register.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method
Administration	18	Quantity	\$44,000	CPI
Fire Department	55	Quantity	\$734,000	CPI
Library	5	Quantity	\$218,000	CPI
Public Works	21	Quantity	\$2,350,000	CPI
Recreation	37	Quantity	\$2,854,000	CPI
TOTAL			\$6,199,000	



Table 70 Detailed Asset Inventory: Machinery & Equipment

Figure 74 Portfolio Valuation: Machinery & Equipment

#### **13.2 Asset Condition**

Figure 75 summarizes the replacement cost-weighted condition of the Township's machinery and equipment portfolio. Based on a combination of assessed conditions and age data, 30% of assets are in fair or better condition; the remaining 70% are in poor or worse condition. These assets

may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition.



Figure 75 Asset Condition: Machinery & Equipment Overall

Figure 76 summarizes the age-based condition of machinery & equipment by each department. The majority of assets all assets are in poor or worse condition are concentrated primarily administration and the fire department.



Figure 76 Asset Condition: Machinery & Equipment by Segment

### **13.3 Age Profile**

An asset's age profile comprises two key values: estimated useful life (EUL), or design life; and the percentage of EUL consumed. The EUL is the serviceable lifespan of an asset during which it can continue to fulfil its intended purpose and provide value to users, safely and efficiently. As assets age, their performance diminishes, often more rapidly as they approach the end of their design life.

In conjunction with condition data, an asset's age profile provides a more complete summary of the state of infrastructure. It can help identify assets that may be candidates for further review through condition assessment programs; inform the selection of optimal lifecycle strategies; and improve planning for potential replacement spikes.

Figure 77 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.



■ Weighted Average Age □ Weighted Average EUL

#### Figure 77 Estimated Useful Life vs. Asset Age: Machinery & Equipment

Age analysis reveals that, on average, with the exception of the library, most machinery and equipment assets are beyond their expected life.

### **13.4 Current Approach to Lifecycle Management**

The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

The following table outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance	Maintenance activitied vary by department and are specific to each piece of equipment, but typically as per manufacturer recommendations
	Fire Protection Services equipment is subject to a much more rigorous inspection and maintenance program compared to most other departments
Replacement	The replacement of machinery & equipment depends on deficiencies identified by operators that may impact their ability to complete required tasks
Inspection	Specific machinery and equipment assets have set inspection schedules (e.g. compressor rooms in the Spencerville Arena and Ingredion Arena are inspected by external contractors semi-annually)

Table 71 Lifecycle Management Strategy: Machinery & Equipment

#### **13.5 Forecasted Long-Term Replacement Needs**

Figure 78 illustrates the cyclical short-, medium- and long-term infrastructure replacement requirements for the Township's machinery and equipment portfolio. This analysis was run until 2053 to capture at least one iteration of replacement for the longest-lived asset in Citywide Assets, the Township's primary asset management system and asset register. The Township's average annual requirements (red dotted line) total **\$453,000 per year** (\$2.3 million per 5-year bucket) for all machinery and equipment. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise.

Replacement needs are forecasted to fluctuate over the 30-year horizon, peaking at \$3.4 million between 2034 and 2038. These projections and estimates are based on asset replacement costs and age analysis. They are designed to provide a long-term, portfolio-level overview of capital needs and should be used to support improved financial planning over several decades.



#### Figure 78 Forecasted Capital Replacement Needs: Machinery & Equipment 2024-2053

Often, the magnitude of replacement needs is substantially higher than most municipalities can afford to fund. In addition, most assets may not need to be replaced. However, quantifying and monitoring these spikes is essential for long-term financial planning, including establishing dedicated reserves. In addition, a robust risk framework will ensure that high-criticality assets receive proper and timely lifecycle intervention, including replacements.

A detailed 10-year capital replacement forecast can be found in Appendix B – 10-Year Capital Requirements.

### 13.6 Risk Analysis

The risk matrix below is generated using available asset data, including condition, service life remaining, and replacement costs. The risk ratings for assets without useful attribute data were calculated using only condition, service life remaining, and their replacement costs.

The matrix stratifies assets based on their individual probability and consequence of failure, each scored from 1 to 5. Their product generates a risk index ranging from 1-25. Assets with the highest criticality and likelihood of failure receive a risk rating of 25; those with lowest probability of failure and lowest criticality carry a risk rating of 1. As new data and information is gathered, the Township may consider integrating relevant information that improves confidence in the criteria used to assess asset risk and criticality.

These risk models have been built into the Township's Asset Management Database (Citywide Assets). See *Risk & Criticality* section for further details on approach used to determine asset risk ratings and classifications.





### **13.7 Levels of Service**

The tables that follow summarize the Township's current levels of service. There are no specifically prescribed KPIs under Ontario Regulation 588/17 for non-core assets, therefore the KPIs below represent performance measures that the Township has selected for this AMP.

#### **13.7.1** Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2023)
Scope	Description, which may include images, of the types of equipment that the municipality operates and the services that they help to provide to the community	Administration is supported by equipment such as phone systems and software. Fire is supported by equipment such as thermal imaging cameras, SCBAs, and defibrillators. The library is supported by books and shelving. Recreation is supported by playground structures, ball diamonds, score clocks, and tractors. Public Works is supported by equipment such as graders, snowplows, trailers, mowers, and heavy equipment.

Table 72 Community Levels of Service: Machinery & Equipment

#### 13.7.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2023)
Quality	Average condition of equipment	25%
Performance	Target vs. Actual capital reinvestment rate	7.3% vs. 11.1%

Table 73 Technical Levels of Service: Machinery & Equipment

### **13.8 Proposed Levels of Service**

As per O. Reg. 588/17, by July 1, 2025, municipalities are required to consider proposed levels of service (PLOS), discuss the associated risks and long-term sustainability of these service levels, and explain the Township's ability to afford the PLOS.

The below tables and graphs explain the proposed levels of service scenarios that were analyzed for machinery and equipment. Further PLOS analysis at the portfolio level can be found in section *4. Proposed Level of Service Analysis*.

#### **13.8.1 PLOS Scenarios Analyzed**

Scenario	Description
Scenario 1: Maintain Current Funding Level	This scenario maintains existing capital funding levels for those categories that are underfunded and reduces to the recommended funding level for those categories deemed to be 'over-funded'.
	\$686,000/year to \$453,000/year
Scenario 2: Achieving 100% Target Funding in 15 Years	<ul> <li>This scenario assumes gradual tax increases of ~2.6%/year, stabilizing at 100% funding across all asset categories in 15 years.</li> <li>Machinery and equipment capital funding decreases from \$686,000/year to \$453,000/year to have the additional funds reallocated to other asset categories.</li> </ul>
Scenario 3:	This scenario aims to maintain target conditions for machinery and equipment assets:
Specific Condition Targets	<ul> <li>Equipment Target Condition: 50%</li> </ul>
	Annual maximum of \$500,000 to minimize spikes (permitted to carryover).

Table 74 Machinery & Equipment PLOS Scenario Descriptions

#### **13.8.2 Proposed Levels of Service Scenarios**

Scenario	Technical LOS Outcomes	Initial Value (2025)	15 Year Projection (2039)	30 Year Projection (2054)	Comments			
Scenario 1	Average Condition							
	% Risk that is High and Very High				Machinery was 'over-funded' based			
	Average Asset Risk	Sa	ame as Scenario	o 2	Refer to Scenario 2 for recommended spending.			
	Annual Investment Required							
	Capital Reinvestment Rate							
Scenario 2	Average Condition	25%	43%	44%				
	% Risk that is High and Very High	17%	13%	14%				
	Average Asset Risk	12.5	9.7	9.7				
	Annual Investment Required		\$453,000		This parameter was decreased to the recommended average annual spending.			
	Capital Reinvestment Rate		7.3%					
Scenario 3	Average Condition	25%	54%	48%	Target Condition 50%			
	% Risk that is High and Very High	17%	11%	11%				
	Average Asset Risk	12.5	7.3	9.3				
	Annual Investment Required		\$450,000					
	Capital Reinvestment Rate		7.2%					

Table 75 Machinery & Equipment PLOS Scenario Analysis

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Figure 80 Machinery & Equipment PLOS Scenario Condition Results

#### **13.8.3 10-Year PLOS Financial Projections**

As outlined in Section 4. Proposed Levels of Service Analysis, the Township of Edwardsburgh Cardinal selected Scenario 3 as their preferred proposed levels of service. The main objective is to increase spending gradually to reach a more sustainable funding level to manage the Township's current inventory of assets. The following table outlines the funding trajectory over the next 10 years for machinery and equipment if the financial strategy for Scenario 3 is implemented.

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Targeted Capital Spending	\$450k									
Projected Capital Spending	\$450k									
Funding Deficit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Target Reinvestment Rate	7.2%	7.2%	7.2%	7.2%	7.2%	7.2%	7.2%	7.2%	7.2%	7.2%
Projected Reinvestment Rate	7.2%	7.2%	7.2%	7.2%	7.2%	7.2%	7.2%	7.2%	7.2%	7.2%

Table 76 Machinery & Equipment 10-Year PLOS Financial Projections

# **Strategies**


## 14. Growth

The demand for infrastructure and services will change over time based on a combination of internal and external factors. Understanding the key drivers of growth and demand will allow the Township to plan for new infrastructure more effectively, and the upgrade or disposal of existing infrastructure. Increases or decreases in demand can affect what assets are needed and what level of service meets the needs of the community.

## **14.1 Township of Edwardsburgh Cardinal Official Plan**

Within its Official Plan, the Township of Edwardsburgh Cardinal aims to foster community growth and enhance quality of life by encouraging sustainable development and preserving its rural character. The plan emphasizes revitalizing commercial areas in the Village of Cardinal and the historic Village of Spencerville through sustainable practices, improved accessibility, and renovation incentives for building owners. The goal is to attract businesses, residents, and visitors, stimulating economic activity and creating a vibrant, sustainable community. Additionally, the plan seeks to ensure a diverse and affordable housing supply, setting a target for a quarter of new housing units to be affordable, and promoting options for seniors and those with special needs.

Edwardsburgh Cardinal anticipates growth driven by migration from larger urban areas, attracted by affordable housing and a high quality of life. Young homebuyers and older generations, transitioning second homes to permanent residences are key demographic trends expected to contribute to said growth. The Township's strategic location near major highways and urban centers like Ottawa, Kingston, and Cornwall positions it well to attract new residents. To accommodate this anticipated growth, the plan outlines the development of infrastructure and community services, including recreational facilities, parks, schools, and healthcare services, ensuring the needs of a growing and diverse population are met. Furthermore, the Official Plan stresses the importance of maintaining the Township's rural charm and natural beauty while promoting development, ensuring a balanced approach to growth that enhances the community's overall well-being.

## **14.2 United Counties of Leeds and Grenville Official Plan**

The Official Plan for the United Counties of Leeds and Grenville is designed to foster the creation of vibrant, complete communities while preserving natural and agricultural resources. A central focus is on directing growth towards existing settlement areas, ensuring they remain healthy and conducive to quality living. This strategy is complemented by a structured approach to managing growth over the planning horizon, which is closely aligned with local municipal Official Plans. Emphasis is placed on utilizing land, resources, and infrastructure efficiently through the promotion of compact urban forms, mixed-use developments, and appropriate population densities within these settlement areas.

The plan also encourages opportunities for redevelopment, revitalization, and intensification in appropriate locations, balancing economic development goals with the need to maintain community character and environmental integrity. Economic growth is further supported through the protection of designated employment areas and the promotion of water- and tourism-based

employment opportunities, such as those associated with the renowned Rideau Canal and other significant waterways in the region. Additionally, the plan strives to meet diverse housing needs by promoting a range of housing types that are affordable for residents, both now and in the future. By integrating these strategies, the plan aims to enhance overall quality of life for all residents while promoting sustainability and resilience in the face of future challenges.

## **14.3 Impact of Growth on Lifecycle Activities**

Planning for forecasted population growth may require the expansion of existing infrastructure and services. As growth-related assets are constructed or acquired, they should be integrated into the Township's AMP. While the addition of residential units will add to the existing assessment base and offset some of the costs associated with growth, the Town will need to review the lifecycle costs of growth-related infrastructure. These costs should be considered in long-term funding strategies that are designed to, at a minimum, maintain the current level of service.

For the near- to mid-term, the projected population growth in Edwardsburgh Cardinal is not expected to significantly impact the current portfolio of assets required by the Township to maintain acceptable service levels.

## **15. Financial Strategy**

For an asset management plan to be effective and meaningful, it must be integrated with financial planning and long-term budgeting. The development of a comprehensive financial plan will allow the Township of Edwardsburgh Cardinal to identify the financial resources required for sustainable asset management based on existing asset inventories, desired levels of service, and projected growth requirements.

This report develops such a financial plan by presenting several scenarios for consideration and culminating with final recommendations. As outlined below, the scenarios presented model different combinations of the following components:

- 1. The financial requirements for:
  - a. Existing assets
  - b. Existing service levels
  - c. Requirements of contemplated changes in service levels (*refer to Section 4. Proposed Levels of Service Analysis*)
  - d. Requirements of anticipated growth (none identified for this plan)
- 2. Use of traditional sources of municipal funds:
  - a. Tax levies
  - b. User fees
  - c. Debt
  - d. Development charges
- 3. Use of non-traditional sources of municipal funds:
  - a. Reallocated budgets
  - b. Partnerships
  - c. Procurement methods
- 4. Use of Senior Government Funds:
  - a. Canada Community-Building Fund (CCBF)
  - b. Annual grants

Note: Periodic grants are normally not included due to Provincial requirements for firm commitments. However, if moving a specific project forward is wholly dependent on receiving a one-time grant, the replacement cost included in the financial strategy is the net of such grant being received.

If the financial plan component results in a funding shortfall, the Province requires the inclusion of a specific plan as to how the impact of the shortfall will be managed. In determining the legitimacy of a funding shortfall, the Province may evaluate a Township's approach to the following:

- 1. In order to reduce financial requirements, consideration has been given to revising service levels downward.
- 2. All asset management and financial strategies have been considered. For example:
  - a. If a zero-debt policy is in place, is it warranted? If not the use of debt should be considered.

b. Do user fees reflect the cost of the applicable service? If not, increased user fees should be considered.

## **15.1 Annual Requirements & Capital Funding**

## **15.1.1** Annual Requirements

The annual requirements represent the amount the Township should allocate annually to each asset category to meet replacement needs as they arise, prevent infrastructure backlogs and achieve long-term sustainability based on the proposed levels of service outlined in Section 4. In total, the Township must allocate approximately \$7.6 million annually to address capital requirements for the assets included in this AMP.



## Total Average Annual Capital Requirements \$7,614,000

*Figure 81 Annual Capital Funding Requirements by Asset Category* 

For most asset categories the annual requirement has been calculated based on a "replacement only" scenario, in which capital costs are only incurred at the construction and replacement of each asset.

However, for the Road Network and Sanitary Sewer Network, lifecycle management strategies have been developed to identify capital costs that are realized through strategic rehabilitation and renewal of the Township's roads and sanitary sewer mains respectively. The development of these strategies allows for a comparison of potential cost avoidance if the strategies were to be implemented. The following table compares two scenarios for the Road Network and Sanitary Sewer Network:

 Replacement Only Scenario: Based on the assumption that assets deteriorate and – without regularly scheduled maintenance and rehabilitation – are replaced at the end of their service life. 2. **Lifecycle Strategy Scenario**: Based on the assumption that lifecycle activities are performed at strategic intervals to extend the service life of assets until replacement is required.

Asset Category	Annual Requirements (Replacement Only)	Annual Requirements (Lifecycle Strategy)	Difference
Road Network	\$5,195,000	\$3,723,000	\$1,472,000
Sanitary Sewer Network	\$714,000	\$653,000	\$61,000

## Table 77 Lifecycle Strategies Annual Savings

The implementation of a proactive lifecycle strategy for roads leads to a potential annual cost avoidance of \$1.5 million for the Road Network and \$61,000 for the Sanitary Sewer Network. This represents an overall reduction of the annual requirements for each category by 28% and 9% respectively. As the lifecycle strategy scenario represents significant cost savings for the Township, we have used these annual requirements in the development of the current and proposed levels of service, as well as the financial strategy.

## 15.1.2 Annual Funding Available

Based on a historical analysis of sustainable capital funding sources, the Township is committing approximately \$3.04 million towards capital projects per year. Given the annual capital requirement of \$7.61 million to meet the selected proposed levels of service, there is currently a funding gap of \$4.57 million annually.



Figure 82 Annual Requirements vs. Capital Funding Available

## **15.2 Funding Objective**

We have developed a scenario that would enable Edwardsburgh Cardinal to achieve their proposed levels of service within 15 years for the following assets:

- 1. **Tax Funded Assets:** Road Network, Stormwater Network, Bridges & Culverts, Buildings & Facilities, Machinery & Equipment, Land Improvements, Vehicles
- 2. Rate-Funded Assets: Water Network, Sanitary Sewer Network

Note: For the purposes of this AMP, we have excluded gravel roads since they are a perpetual maintenance asset and end of life replacement calculations do not normally apply. If gravel roads are maintained properly, they can theoretically have a limitless service life.

For each financial scenario developed we have included strategies, where applicable, regarding the use of cost containment and funding opportunities.

## **15.3 Financial Profile: Tax Funded Assets**

## 15.3.1 Current Funding Position

The following tables show, by asset category, Edwardsburgh Cardinal's average annual asset investment requirements, current funding positions, and funding increases required to achieve the proposed levels of service on assets funded by taxes.

	Avg.	Annual Funding Available					
Asset Category	Annual Require- ment	Taxes	CCBF	OCIF	Total Available	Annual Deficit	
Road Network	3,723,000	402,736	234,736	0	637,472	3,085,528	
Stormwater Network	36,000	512,795	0	0	512,795	-476,795	
Bridges & Culverts	520,000	39,656	0	486,079	525,735	-5,735	
Buildings	787,000	231,684	0	0	231,684	555,316	
Machinery & Equipment	450,000	685,930	0	0	685,930	-235,930	
Land Improve- ments	71,000	90,865	0	0	90,865	-19,865	
Vehicles	498,000	100,141	0	0	100,141	397,859	
Total	6,085,00 0	2,063,807	234,736	486,079	2,784,622	3,300,378	

Table 78 Annual Available Funding for Tax Funded Assets

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The average annual investment requirement for the above categories is \$6.09 million. Annual revenue currently allocated to these assets for capital purposes is \$2.78 million leaving an annual deficit of \$3.30 million. Put differently, these infrastructure categories are currently funded at 46% of their long-term requirements.

## **15.3.2** Proposed Levels of Service Funding Requirements

Averaging from 2021-2023, Edwardsburgh Cardinal has averaged annual tax revenues of approximately \$6.6 million per year. As illustrated in the following table, without consideration of any other sources of revenue or cost containment strategies, full funding of the proposed levels of service would require the following tax change over time:

Asset Category	Tax Change Required for Full Funding		
Road Network	46.7%		
Stormwater Network	-7.2%		
Bridges & Culverts	-0.1%		
Buildings	8.4%		
Machinery & Equipment	-3.6%		
Land Improvements	-0.3%		
Vehicles	6.0%		
Total	49.9%		

Table 79 Tax Increase Requirements for Proposed Levels of Service

	5 Years	10 Years	15 Years	20 Years
Infrastructure Deficit	3,300,378	3,300,378	3,300,378	3,300,378
Change in Debt Costs	N/A	N/A	N/A	N/A
Resulting Infrastructure Deficit:	3,300,378	3,300,378	3,300,378	3,300,378
Tax Increase Required	49.9%	49.9%	49.9%	49.9%
Annually:	8.5%	4.2%	2.8%	2.1%

Table 80 Tax Increase Options 5-20 Years

### **15.3.3** Financial Strategy Recommendations

Considering all the above information, we recommend the 15-year option. This involves full funding being achieved over 15 years by:

- a) increasing tax revenues by 2.8% each year for the next 15 years solely for the purpose of phasing in the proposed levels of service for asset categories covered in this section of the AMP.
- b) allocating the current CCBF and OCIF revenue as outlined previously.
- c) reallocating appropriate revenue from categories in a surplus position to those in a deficit position.
- d) increasing existing and future infrastructure budgets by the applicable inflation index on an annual basis in addition to the deficit phase-in.

#### Notes:

- As in the past, periodic senior government infrastructure funding will most likely be available during the phase-in period. By Provincial AMP rules, this periodic funding cannot be incorporated into an AMP unless there are firm commitments in place. We have included OCIF formula-based funding, if applicable, since this funding is a multi-year commitment<sup>6</sup>.
- 2. We realize that raising tax revenues by the amounts recommended above for infrastructure purposes will be very difficult to do. However, considering a longer phase-in window may have even greater consequences in terms of infrastructure failure.

Although this option achieves full funding of the proposed levels of service on an annual basis in 15 years, and provides financial sustainability over the period modeled, the recommendations do require prioritizing capital projects to fit the resulting annual funding available. Current data shows a pent-up investment demand of \$13.9 million for the Road Network, \$214,000 for Buildings & Facilities, \$41,000 for Land Improvements, \$2.9 million for Machinery & Equipment, and \$1.0 million for Vehicles.

Prioritizing future projects will require the current data to be replaced by condition-based data. Although our recommendations include no further use of debt, the results of the condition-based analysis may be required otherwise.

## **15.4 Financial Profile: Rate Funded Assets**

## **15.4.1 Current Funding Position**

The following tables show, by asset category, Edwardsburgh Cardinal's average annual asset investment requirements, current funding positions, and funding increases required to achieve proposed levels of service on assets funded by rates.

<sup>&</sup>lt;sup>6</sup> The Township should take advantage of all available grant funding programs and transfers from other levels of government. While OCIF has historically been considered a sustainable source of funding, the program is currently undergoing review by the provincial government. Depending on the outcome of this review, there may be changes that impact its availability.

Asset Category	Avg. Annual	Annual Funding Available				
	Require- ment	Rates	CCBF	OCIF	Total Available	Deficit
Water Network	876,000	135,321	0	0	135,321	740,679
Sanitary Sewer Network	653,000	124,549	0	0	124,549	528,451
Total	1,529,000	259,870	0	0	259,870	1,269,130

Table 81 Annual Available Funding for Rate Funded Assets

The average annual investment requirement for the above categories is \$1.53 million. Annual revenue currently allocated to these assets for capital purposes is \$256,000 leaving an annual deficit of \$1.27 million. Put differently, these infrastructure categories are currently funded at 17% of their long-term requirements.

## **15.4.2** Proposed Levels of Service Funding Requirements

Based on 2023 budgeted revenues, Edwardsburgh Cardinal had projected annual sanitary revenues of \$1.44m and projected annual water revenues of \$1.14m. As illustrated in the table below, without consideration of any other sources of revenue, the proposed levels of service would require the following changes over time:

Asset Category	Rate Change Required for Full Funding
Water Network	65.2%
Sanitary Sewer Network	36.7%

Table 82 Rate Increase Requirements for Full Funding

In the following tables, we have expanded the above scenario to present multiple options. Due to the significant increases required, we have provided phase-in options of up to 20 years:

	Water Network				
	5 Years	10 Years	15 Years	20 Years	
Infrastructure Deficit	740,679	740,679	740,679	740,679	
Rate Increase Required	65.2%	65.2%	65.2%	65.2%	
Annually:	10.6%	5.2%	3.5%	2.6%	

Table 83 Water Rate Increase Options 5-20 Years

	Sanitary Sewer Network						
	5 Years 10 Years 15 Years 20 Years						
Infrastructure Deficit	528,451	528,451	528,451	528,451			
Rate Increase Required	36.7%	36.7%	36.7%	36.7%			
Annually:	6.5%	3.2%	2.2%	1.6%			

Table 84 Sanitary Rate Increase Options 5-20 Years

## **15.4.3** Financial Strategy Recommendations

Considering all of the above information, we recommend the 15-year option. This involves the proposed levels of service being achieved over 15 years by:

- a) increasing rate revenues by 3.5% for water services and 2.2% for sanitary sewer services each year for the next 15 years solely for the purpose of phasing the proposed levels of service for asset categories covered in this section of the AMP.
- b) increasing existing and future infrastructure budgets by the applicable inflation index on an annual basis in addition to the deficit phase-in.

Notes:

- 1. As in the past, periodic senior government infrastructure funding will most likely be available during the phase-in period. This periodic funding should not be incorporated into an AMP unless there are firm commitments in place.
- 2. We realize that raising rate revenues for infrastructure purposes will be very difficult to do. However, considering a longer phase-in window may have even greater consequences in terms of infrastructure failure.
- 3. Any increase in rates required for operations would be in addition to the above recommendations.

Although this option achieves full funding of the proposed levels of service on an annual basis in 15 years and provides financial sustainability over the period modeled, the recommendations do require prioritizing capital projects to fit the resulting annual funding available. Current data shows a pent-up investment demand of \$1.3 million for the Water Network and \$858,000 for the Sanitary Sewer Network.

Prioritizing future projects will require the current data to be replaced by condition-based data. Although our recommendations include no further use of debt, the results of the condition-based analysis may require otherwise.

## **15.5 Use of Debt**

Debt can be strategically utilized as a funding source within the long-term financial plan. The benefits of leveraging debt for infrastructure planning include:

- a) the ability to stabilize tax & user rates when dealing with variable and sometimes uncontrollable factors
- b) equitable distribution of the cost/benefits of infrastructure over its useful life
- c) a secure source of funding
- d) flexibility in cash flow management

Debt management policies and procedures with limitations and monitoring practices should be considered when reviewing debt as a funding option. In efforts to mitigate increasing commodity prices and inflation, interest rates have been rising. Sustainable funding models that include debt need to incorporate the now current realized risk of rising interest rates. The following graph shows the historical changes to the lending rates:



Figure 83 Historical Prime Rate

A change in 15-year rates from 5% to 7% would change the premium from 45% to 65%. Such a change would have a significant impact on a financial plan.

The following tables outline how Edwardsburgh Cardinal has historically used debt for investing in the asset categories as listed. As of year-end 2023, there is currently \$5.6 million of debt outstanding for the assets covered by this AMP with corresponding principal and interest payments of \$357,000, well within its provincially prescribed maximum of \$3.6 million.

Accet Category	Current Debt	U	se of Deb	t in the La	st Five Ye	ars
Asset Category	Outstanding	2019	2020	2021	2022	2023
Road Network	0	0	0	0	0	0
Stormwater Network	1,060,980	0	0	0	0	1,060,980
Bridges & Culverts	0	0	0	0	0	0
Buildings	4,488,802	0	0	0	0	0
Machinery & Equipment	13,805	0	0	0	0	0
Land Improvements	0	0	0	0	0	0
Vehicles	0	0	0	0	0	0
Total Tax Funded	5,563,587	0	0	0	0	1,060,980
Water Network	0	0	0	0	0	0
Sanitary Sewer Network	0	0	0	0	0	0
Total Rate Funded	0	0	0	0	0	0

Table 85 Edwardsburgh Cardinal Use of Debt 2019-2023

Asset	Principal & Interest Payments in the Next Ten Years						
Category	2023	2024	2025	2026	2027	2028	2033
Road Network	0	0	0	0	0	0	0
Stormwater Network	0	83,254	83,254	83,254	83,254	83,254	83,254
Bridges & Culverts	0	0	0	0	0	0	0
Buildings	303,698	303,698	303,698	303,698	303,698	303,698	303,698
Machinery & Equipment	14,104	14,104	0	0	0	0	0
Land Improvements	0	0	0	0	0	0	0
Vehicles	0	0	0	0	0	0	0
Total Tax Funded	317,802	401,056	386,952	386,952	386,952	386,952	386,952
Water Network	0	0	0	0	0	0	0
Sanitary Sewer Network	38,890	77,780	77,780	77,780	77,780	77,780	77,780
Total Rate Funded	38,890	77,780	77,780	77,780	77,780	77,780	77,780

Table 86 Edwardsburgh Cardinal Principal and Interest Payments

The revenue options outlined in this plan allow Edwardsburgh Cardinal to fully fund its long-term infrastructure requirements without further use of debt.

## **15.6 Use of Reserves**

### 15.6.1 Available Reserves

Reserves play a critical role in long-term financial planning. The benefits of having reserves available for infrastructure planning include:

- a) the ability to stabilize tax rates when dealing with variable and sometimes uncontrollable factors
- b) financing one-time or short-term investments
- c) accumulating the funding for significant future infrastructure investments
- d) managing the use of debt
- e) normalizing infrastructure funding requirement

By asset category, the table below outlines the details of the reserves currently available to Edwardsburgh Cardinal.

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Asset Category	Balance at December 31, 2023
Road Network	1,046,253
Stormwater Network	432,040
Bridges & Culverts	0
Buildings	432,512
Machinery & Equipment	840,164
Land Improvements	2,701,611
Vehicles	340,162
Total Tax Funded:	5,792,742
Water Network	1,666,635
Sanitary Sewer Network	689,725
Total Rate Funded:	2,356,360

### Table 87 Edwardsburgh Cardinal Reserve Balances

There is considerable debate in the municipal sector as to the appropriate level of reserves that a Township should have on hand. There is no clear guideline that has gained wide acceptance. Factors that municipalities should take into account when determining their capital reserve requirements include:

- a) breadth of services provided
- b) age and condition of infrastructure
- c) use and level of debt
- d) economic conditions and outlook
- e) internal reserve and debt policies.

These reserves are available for use by applicable asset categories during the phase-in period to full funding. This coupled with Edwardsburgh Cardinal's judicious use of debt in the past, allows the scenarios to assume that, if required, available reserves and debt capacity can be used for high priority and emergency infrastructure investments in the short- to medium-term.

## **16.** Recommendations & Key Considerations

## **16.1 Financial Strategies**

- 1. Review the feasibility of adopting the funding required to meet the proposed levels of service for the asset categories analyzed. This includes:
  - a. Increasing taxes by 2.8% per year over a period of 15 years;
  - b. Increasing water rates by 3.5% per year over a period of 15 years; and
  - c. Increasing sanitary rates by 2.2% per year over a period of 15 years.
- 2. Continued allocation of OCIF and CCBF funding as previously outlined.
- 3. Reallocating appropriate revenue from categories in a surplus position to those in a deficit position.
- 4. Increasing existing and future infrastructure budgets by the applicable inflation index on an annual basis in addition to the deficit phase-in.
- 5. Continue to apply for project specific grant funding to supplement sustainable funding sources.

## 16.2 Asset Data

- 1. Continuously review, refine, and calibrate lifecycle and risk profiles to better reflect actual practices and improve capital projections. In particular:
  - a. the timing of various lifecycle events, the triggers for treatment, anticipated impacts of each treatment, and costs
  - b. the various attributes used to estimate the likelihood and consequence of asset failures, and their respective weightings
- 2. Asset management planning is highly sensitive to replacement costs. Periodically update replacement costs based on recent projects, invoices, or estimates, as well as condition assessments, or any other technical reports and studies. Material and labour costs can fluctuate due to local, regional, and broader market trends, and substantially so during major world events. Accurately estimating the replacement cost of like-for-like assets can be challenging. Ideally, several recent projects over multiple years should be used. Staff judgement and historical data can help attenuate extreme and temporary fluctuations in cost estimates and keep them realistic.
- 3. Like replacement costs, an asset's established serviceable life can have dramatic impacts on all projections and analyses, including condition, long-range forecasting, and financial recommendations. Periodically reviewing and updating these values to better reflect infield performance and staff judgement is recommended.

## **16.3 Risk & Levels of Service**

- Risk models and matrices can play an important role in identifying high-value assets, and developing an action plan which may include repair, rehabilitation, replacement, or further evaluation through condition assessments. As a result, project selection and the development of multi-year capital plans can become more strategic and objective. Initial models have been built into Citywide for all asset groups. These models reflect current data, which was limited. As the data evolves and new attribute information is obtained, these models should also be refined and updated.
- 2. Available data on current performance should be centralized and tracked to support any calibration of service levels for long-term tracking of O. Reg. 588's requirements on proposed levels of service.
- 3. Staff should monitor evolving local, regional, and environmental trends to identify factors that may shape the demand and delivery of infrastructure programs. These can include population growth, and the nature of population growth; climate change and extreme weather events; and economic conditions and the local tax base. This data can also be used to review service level targets.

# **Appendices**

- Appendix A Infrastructure Report Card
- Appendix B 10-Year Capital Requirements
- Appendix C Level of Service Maps
- Appendix D Risk Rating Criteria

## Appendix A – Infrastructure Report Card

Asset Category	Replacement Cost	Average Condition	Financial Cap (Based on Propo	acity sed LOS)	% Funded	
			Annual Requirement:	\$3,723,000		
Road Network	\$128.4 m	Fair	Funding Available:	\$637,000	17%	
			Annual Deficit:	\$3,086,000		
			Annual Requirement:	\$520,000		
Bridges & Culverts	<b>\$17.8 m</b>	Good	Funding Available:	\$526,000	101%	
			Annual Deficit:	(\$6,000)		
			Annual Requirement:	\$876,000		
Water Network	\$45.1 m	Fair	Funding Available:	\$135,000	15%	
Network			Annual Deficit:	<b>\$741,000</b>		
Sanitary	Sanitary		Annual Requirement:	\$653,000		
Sewer <b>\$31</b> Network	\$31.0 m	Fair	Funding Available:	\$125,000	19%	
			Annual Deficit:	\$528,000		
Charmanushar	\$2.7 m	Good	Annual Requirement:	\$36,000	1433% <sup>7</sup>	
Network			Funding Available:	\$513,000		
			Annual Deficit:	(\$477,000)		
Duildings 9			Annual Requirement:	\$787,000	29%	
Facilities	\$29.7 m	Fair	Funding Available:	\$232,000		
			Annual Deficit:	\$555,000		
Land			Annual Requirement:	\$71,000		
Improvements	<b>\$1.4 m</b>	Good	Funding Available:	\$91,000	128%	
			Annual Deficit:	(\$20,000)		
			Annual Requirement:	\$498,000		
Vehicles	\$7.3 m	Poor	Funding Available:	\$100,000	20%	
			Annual Deficit:	\$398,000		
Machinony 8			Annual Requirement:	\$450,000		
Equipment	\$ 6.2 m	Poor	Funding Available:	\$686,000	152%	
Equipment			Annual Deficit:	(\$236,000)		

<sup>&</sup>lt;sup>7</sup> Staff acknowledge that this is figure is exaggerated based on significant investment in recent years, and incomplete stormwater inventory.

## **Appendix B – 10-Year Capital Requirements**

## **Capital Requirements for Current Levels of Service (funding availability not considered)**

The tables below summarize the projected cost of lifecycle activities (rehabilitation and replacements) that may be undertaken over the next 10 years to support **current** levels of service. They do not consider any proposed levels of service, or available funding, and are projected based on ideal conditions.

These projections are generated in Citywide and rely on the data available in the asset register. Assessed condition data and replacement costs were used to assist in forecasting replacement needs for roads. For all remaining assets, only age was used to determine forthcoming replacement needs.

The projections can be different from actual capital forecasts. Consistent data updates, particularly condition, replacement costs, and regular upkeep of lifecycle models, will improve the alignment between the system generated expenditure requirements, and the Township's capital expenditure forecasts.

Road Metwork											
Segment	Back- log	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Paved Roads (HCB)	\$13.9m	\$10.4m	\$1.5m	\$0	\$11.8m	\$2.9m	\$88k	\$697k	\$2.3m	\$0	\$262k
Paved Roads (LCB)	\$0	\$0	\$0	\$84k	\$26k	\$890k	\$1.7m	\$72k	\$0	\$0	\$0
Road Culverts	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sidewalks	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100k	\$0
Streetlights	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$13.9m	<b>\$10.4</b> m	<b>\$1.5</b> m	\$84k	<b>\$11.9</b> m	\$3.8m	<b>\$1.8</b> m	\$769k	<b>\$2.3m</b>	<b>\$100</b> k	\$262k

#### **Road Network**

Table 88 System Generated 10-Year Capital Replacement Forecast: Road Network

#### **Bridges & Culverts**

Segment	Back- log	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Bridges	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Structural Culverts	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$0	\$0	<b>\$0</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Table 89 System Generated 10-Year Capital Replacement Forecast: Bridges & Culverts

#### Water Network **Back-**2024 Segment 2025 2026 2027 2028 2029 2030 2031 2032 2033 log Water \$0 \$0 \$0 \$0 \$0 \$0 \$9.4m \$0 \$0 \$0 \$0 Buildings Water \$379k \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$41k \$383k \$62k Equipment Water Mains \$914k \$0 \$0 \$0 \$0 \$825k \$0 \$0 \$254k \$0 \$434k Total \$1.3m **\$0 \$0 \$0** \$825k \$296k \$383k \$496k **\$0 \$9.4**m **\$0**

Table 90 System Generated 10-Year Capital Replacement Forecast: Water Network

#### **Sanitary Sewer Network Back-**2024 Segment 2025 2026 2027 2028 2029 2030 2031 2032 2033 log Sanitary \$0 \$0 \$0 \$0 \$0 \$0 \$34k \$2.1m \$0 \$0 \$276k Buildings Sanitary \$471k \$82k \$0 \$0 \$0 \$135k \$0 \$0 \$157k \$0 \$0 Equipment Sanitary \$387k \$30k \$991k \$0 \$0 \$0 \$386k \$0 \$0 \$0 \$0 Mains Total \$991k \$858k \$112k **\$0 \$0** \$135k \$420k \$2.1m \$157k **\$0** \$276k Table 91 System Generated 10-Year Capital Replacement Forecast: Sanitary Sewer Network Stormwater Network

Segment	Back- log	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Storm Sewer Mains	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$311k	\$0	\$0	\$0
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$311k	\$0	\$0	\$0

Table 92 System Generated 10-Year Capital Replacement Forecast: Stormwater Network

Segment	Back- log	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Administratio n	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$82k	\$0	\$0
Fire Department	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Library	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Public Works	\$0	\$0	\$0	\$39k	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Recreation	\$214k	\$489k	\$0	\$0	\$0	\$0	\$0	\$0	\$8.2m	\$0	\$0
Total	\$214k	\$489k	\$0	\$39k	\$0	\$0	\$0	\$0	\$8.3m	\$0	\$0

#### **Buildings & Facilities**

Table 93 System Generated 10-Year Capital Replacement Forecast: Buildings & Facilities

Note: These projections are generated in Citywide and rely on the data available in the asset register. As assessed condition data was not available for many buildings assets, age was used to determine forthcoming replacement needs. Buildings and facilities often contain thousands of assets, each with its own estimated useful life. Currently, however, as the Township's buildings are not fully componentized, there are only 26 assets in the register. Over time, with improved and effective componentization, the alignment between the system generated expenditure requirements, and the Township's capital expenditure forecasts will also increase.

#### Land Improvements

Segment	Back- log	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Fencing	\$0	\$17k	\$59k	\$0	\$0	\$0	\$0	\$0	\$59k	\$0	\$0
Miscellaneous	\$0	\$0	\$0	\$0	\$0	\$0	\$19k	\$55k	\$0	\$0	\$0
Parking Lots	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Signage	\$41k	\$0	\$70k	\$0	\$35k	\$0	\$0	\$0	\$0	\$41k	\$70k
Total	\$41k	\$17k	\$129k	\$0	\$35k	\$0	\$19k	\$55k	\$59k	\$41k	\$70k

Table 94 System Generated 10-Year Capital Replacement Forecast: Land Improvements

Vehicles											
Segment	Back- log	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Environmental Services	\$114k	\$0	\$61k	\$0	\$0	\$0	\$0	\$0	\$114k	\$61k	\$0
Fire Department	\$846k	\$576k	\$0	\$0	\$654k	\$0	\$0	\$615k	\$0	\$0	\$416k
Public Works	\$0	\$328k	\$265k	\$53k	\$103k	\$328k	\$60k	\$0	\$365k	\$592k	\$53k
Recreation	\$57k	\$0	\$57k	\$0	\$0	\$71k	\$57k	\$0	\$108k	\$57k	\$0
Total	<b>\$1.0</b> m	\$904k	\$383k	\$53k	\$757k	\$398k	\$117k	\$615k	\$587k	\$710k	\$469k

Table 95 System Generated 10-Year Capital Replacement Forecast: Vehicles

Segment	Back- log	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Administration	\$30k	\$14k	\$0	\$0	\$14k	\$0	\$0	\$44k	\$0	\$0	\$14k
Fire Department	\$242k	\$0	\$343k	\$78k	\$24k	\$0	\$24k	\$22k	\$0	\$0	\$0
Library	\$55k	\$28k	\$28k	\$25k	\$23k	\$23k	\$0	\$0	\$108k	\$28k	\$25k
Public Works	\$1.2m	\$35k	\$26k	\$0	\$189k	\$93k	\$0	\$0	\$275k	\$21k	\$48k
Recreation	\$1.4m	\$19k	\$0	\$0	\$23k	\$14k	\$48k	\$190k	\$22k	\$148k	\$44k
Total	<b>\$2.9</b> m	\$97k	\$398k	\$103k	\$273k	\$130k	\$72k	\$256k	\$405k	\$196k	\$130k

#### **Machinery & Equipment**

Table 96 System Generated 10-Year Capital Replacement Forecast: Machinery & Equipment

## **Capital Requirements for Proposed Levels of Service**

The following capital forecasts are based on the criteria outlined in each asset category's proposed levels of service section.

#### **Categories with Targeted Condition:**

- Road Network
  - HCB Target: 70%
  - LCB Target: 60%
  - Other Target: 50%
  - No financial limit
- Bridges & Culverts Target: 70%
  - No financial limit
- Buildings & Facilities Target: 50%
  - No financial limit
- Vehicles Target: 50%
  - \$500,000 annual maximum to minimize spikes
- Machinery & Equipment Target: 50%
  - \$600,000 annual maximum to minimize spikes

#### **Categories with Targeted 100% Funding**

- Water Network
  - Gradual funding increase over 15 years
- Sanitary Sewer Network
  - Gradual funding increase over 15 years
- Stormwater Network
  - Reduced to \$36,000 annual funding
- Land Improvements
  - Reduced to \$71,00 annual funding

Category	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Road Network	\$1.9m	\$47k	\$539k	\$2.9m	\$452k	\$697k	\$2.2m	\$128k	\$282k	\$213k
Bridges & Culverts	-	-	-	-	-	-	-	-	-	-
Water Network	\$126k	\$173k	\$191k	\$253k	\$277k	\$286k	\$383k	\$407k	\$451k	\$505k
Sanitary Sewer Network	\$119k	\$151k	\$173k	\$196k	\$264k	\$269k	\$55k	\$515k	\$276k	\$157k
Stormwater Network	-	-	-	-	-	-	-	-	\$311k	-
<b>Building &amp; Facilities</b>	\$702k	-	-	-	-	-	\$8.3m	-	-	\$2.5m
Land Improvements	\$17k	\$70k	\$77k	-	\$19k	\$55k	\$59k	-	-	\$182k
Vehicles	\$576k	\$607k	\$488k	\$663k	\$654k	\$515k	\$684k	\$567k	\$644k	\$602k
Machinery & Equipment	\$500k	\$498k	\$502k	\$496k	\$494k	\$501k	\$503k	\$90k	\$812k	\$251k
Total	\$4.0m	\$1.5m	\$2.0m	\$4.5m	\$2.2m	\$2.3m	\$12.2m	\$1.7m	\$2.8m	\$4.5m

Table 97 Proposed LOS 10-Year Capital Replacement Forecast

## **Appendix C – Level of Service Maps & Photos**

#### Road Network Map - Johnstown





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#### Road Network Map – Spencerville





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### Images of Bridge in Good Condition

Frederick Street Bridge

Inspected: May 15th, 2024





SW elevation

South approach

Image 52



Downstream channel east



North wall taken from east vantage

Image 54

Upstream channel west

South wall taken from east vantage

*Figure 86 Bridge Condition Examples: Good Condition* 

#### Images of Bridge in Fair Condition

Tuttle Point Culvert Inspected: May 9<sup>th</sup>, 2024





North elevation



East approach



Upstream channel north

West approach

mage 948



Downstream channel south

Through the east barrel from the north

### Figure 87 Bridge Condition Examples: Fair Condition



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### Stormwater Network Map (Cardinal)



Figure 88 Stormwater Network Map (Cardinal)

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#### Stormwater Network Map (Spencerville)



Figure 89 Stormwater Network Map (Spencerville)

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#### THE GREER GALLOWAY GROUN # # Mary Street Outfall LL EXCEMENT Mary Street THE HUST CHECK A \* A 12744 NO. 88 A A JOHNSTOWN DRAINAGE JOHNSTOWN, ON **Sophia Street Outfall** V DRAINAGE AREA PLAN CONTRACT AN inter 1 . E. P Sophia Street A. HICKS 12.205 ha **AREA 003** C = 0.240. CT 09/01/2020 19-5-5195 HORE SHOW C1-00

#### Stormwater Network Map (Johnstown)

Figure 90 Stormwater Network Map (Johnstown)

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#### Water Network Map – Part 1 (Cardinal)



Figure 91 Water Network Map (Cardinal)

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#### Water Network Map – Part 2 (New Wexford)



Figure 92 Water Network Map (New Wexford)

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## Sanitary Sewer Network (Cardinal)



Figure 93 Sanitary Sewer Network Map (Cardinal)

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## Appendix D – Risk Rating Criteria

## **Probability of Failure**

Asset Category	Risk Criteria	Criteria Weighting	Value/Range	Probability of Failure Score
			80-100	1
		-	60-79	2
	Condition	75%	40-59	3
		-	20-39	4
		-	0-19	5
Road Network (Roads)			0-99	1
		-	100-299	2
	Section AADT	15%	300-399	3
		-	400-699	4
		-	700+	5
	Surface	1.00/	HCB - Asphalt	2
	Material	10%	LCB - Surface Treatment	3
Bridges & Culverts			80-100	1
Stormwater Network		-	60-79	2
Buildings & Facilities	Condition	100%	40-59	3
		-	20-39	4
Land Improvements		_	0-19	5
			80-100	1
Sanitary Sewer Network (Mains)	Condition	70%	60-79	2
		-	40-59	3
		167		

Asset Category	Risk Criteria	Criteria Weighting	Value/Range	Probability of Failure Score
			20-39	4
			0-19	5
			PVC	2
	Pipe Material	30%	Vitrified Clay	3
			Cast Iron	4
			80-100	1
			60-79	2
	Condition	70%	40-59	3
			20-39	4
Water Network (Mains)			0-19	5
			PVC, HDPE	2
	Pipe Material	30%	Asbestos Cement, Copper, Riveted Steel	3
			Cast Iron, Ductile Iron	4

Table 98 Probability of Failure Risk Scores
#### Consequence **Risk Classification Risk Criteria** Value/Range **Asset Category** of Failure Score LCB 2 Economic Surface Material (70%) (100%)HCB 4 2 Local Road Design Class (20%) Collector 3 0-99 1 100-299 2 Road Network (Roads) Section AADT 3 300-399 Social (40%) (30%)400-699 4 700+ 5 6 2 MMS Class 5 3 (40%) 4 4 \$0-\$50,000 1 \$50,000-\$350,000 2 Economic **Replacement Cost** Bridges & Culverts \$350,000-\$1,000,000 3 (100%)(100%)\$1,000,000-\$2,000,000 4 \$2,000,000+ 5 \$0-\$50,000 1 \$50,000-\$150,000 2 Economic **Replacement Cost** Stormwater Network \$150,000-\$250,000 3 (100%)(100%)\$250,000-\$500,000 4 \$500,000+ 5 **Buildings & Facilities** Economic **Replacement Cost** \$0-\$200,000 1

### **Consequence of Failure**

Asset Category	<b>Risk Classification</b>	Risk Criteria	Value/Range	Consequence of Failure Score
	(70%)	(100%)	\$200,000-\$900,000	2
			\$900,000-\$1,750,000	3
			\$1,750,000-\$4,000,000	4
			\$4,000,000+	5
			Libraries	2
	Operational	Department	Public Works, Recreation / Facilities	3
	(30%)	(100%)	Protective Services, Administration	4
			Fire	5
			\$0-\$50,000	1
	Feenersie	Danla comont Cost	\$50,000-\$100,000	2
		(100%)	\$100,000-\$200,000	3
	(7070)	(100 /0)	\$200,000-\$500,000	4
			\$500,000+	5
			Signage	1
Machinery & Equipment	Operational	Equipment Type	Books & Periodicals, Library Equipment, Recreation Dept. Equipment, Recreation Tractors	2
	(30%)	(100%)	Administration Equip., Environ. Services Equip., Public Works Equip.	3
			Computers, Fire Department Equipment	4
Vehicles	Economic	Replacement Cost	\$0-\$25,000	1

Asset Category	<b>Risk Classification</b>	Risk Criteria	Value/Range	Consequence of Failure Score
	(70%)	(100%)	\$25,000-\$50,000	2
			\$50,000-\$150,000	3
			\$150,000-\$300,000	4
			\$300,000+	5
	Operational	Vehicles Type	Environmental Services Vehicles, Recreation Dept. Vehicles	2
	(30%)	(100%)	Public Works Vehicles	3
			Fire Department Vehicles	4
			\$0-\$25,000	1
	Feenemie	Deple comont Cost	\$25,000-\$50,000	2
Land Improvements		(100%)	\$50,000-\$100,000	3
	(10070)	(10070)	\$100,000-\$150,000	4
			\$150,000+	5
			0-25mm	1
	Francoic	Dina Diamatar	25-100mm	2
		(100%)	100-150mm	3
	(7070)	(10070)	150-250mm	4
Water Network			250mm+	5
(Water Mains)	Operational	Pipe Material	Cast Iron, Copper, Ductile Iron, HDPE, PVC	2
	(20%)	(100%)	Riveted Steel	3
			Asbestos Cement	4
	Social	# of Service	0-1	1
	(10%)	Connections	1-5	2

Asset Category	<b>Risk Classification</b>	Risk Criteria	Value/Range	Consequence of Failure Score
		(100%)	5-15	3
			15-50	4
			50+	5
			0-100mm	1
	Francis		100-250mm	2
		Pipe Diameter	250-375mm	3
	(7070)	(100%)	375-450mm	4
			450mm+	5
		Accot Sogmont	Cardinal Sanitary Mains	3
Sanitary Sewer Network	Operational	(50%)	Industrial Park Sanitary Mains	4
(Sanitary Mains)	(20%)	Dine Metaviel	PVC	2
		Pipe Material	Cast Iron, CIPP	3
		(3070)	Vitirifed Clay	4
			0-1	1
	Casial	# of Service	1-5	2
	Social (10%)	Connections	5-10	3
		(100%)	10-25	4
			25+	5

Table 99 Consequence of Failure Risk Scores



## TOWNSHIP OF EDWARDSBURGH CARDINAL ACTION ITEM

Committee: Committee of The Whole- Administration & Operations

Date: May 12, 2025

**Department:** Environmental Services

Topic: 2025 Spencerville Lagoon Discharge Report

**Purpose:** To receive and review the 2025 Spencerville Lagoon Discharge Report and seek direction to submit the report to the MECP prior to the June 30<sup>th</sup> due date.

### Background:

The effluent of the lagoons was discharged into the South Nation River over a 12-day period spanning from April 7 to April 19, 2025. The annual discharge window is between March 15 and April 21. The combined effluent volume of both cells was approximately 74,040 cubic meters or 64% of the 116,000 cubic meter capacity.

The report is attached for receipt and review

### **Policy Implications:**

Condition 6 of Environmental Compliance Approval (formerly Certificate of Approval) # 3-1377-87-896, requires the operating authority to report the results of the monitoring program described in Condition No. 5 and compliance with Condition # 2, including dates of discharge, to the District Officer for the Kingston District of the MECP by June 30 of each year.

### Strategic Plan Implications: Nil

### Financial Considerations: Nil

**Recommendation:** That Committee recommends Council receive and review the 2025 Spencerville Lagoon Discharge Report and direct staff to submit the report to the MECP prior to the June 30<sup>th</sup> due date.

Fri Wenerman

Chief Water/Sewer Operator

Director of Operations

# 2025

# Spencerville Lagoon Discharge Report



Prepared by: Eric Wemerman For: MECP and Council Date: April 28, 2025



P.O. Box 129, 18 Centre St. Spencerville, Ontario KOE 1X0

### 2025 Spencerville Lagoon Discharge Report

### Introduction

This report summarizes the 2025 lagoon discharge activities as required under Environmental Compliance Approval # 3-1377-87-896.

### Condition # 2

The contents of the lagoon were discharged into the South Nation River over a 12-day period between April 7 to 19<sup>th</sup>, 2025. The combined discharge effluent volume from both cells was approximately 74,040 cubic meters using the formula surface area x depth drop. Condition # 2 requires the discharge not to occur before March 15<sup>th</sup> nor after April 21<sup>st</sup>, over a minimum of 8 days and not to exceed 30 days. A discharge summary table has been included in Appendix A.

### Condition # 3 and # 6

Parameter	<u>Average Result</u> (mg/L)	Environmental Compliance Approval Limit (mg/L)
BOD₅	5.8	25
CBOD <sub>5</sub>	4.5	N/A
Total Suspended Solids	12.2	30
Total Phosphorus	0.15	1
Total Ammonia	6.1	20
Hydrogen Sulfide	0.03	5

Condition # 3 outlines the maximum average mean effluent concentrations allowed.

The sampling program results determined the effluent criteria was met as per condition 3 of Environmental Compliance Approval # 3-1377-87-896. Certificate of Analyses for all samples collected are included in Appendix B.



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P.O. Box 129, 18 Centre St. KOE 1XO

### Condition # 4

No exceedances of BOD<sub>5</sub>, Total Suspended Solids, Total Phosphorus, Total Ammonia and Hydrogen Sulfide occurred during the 2025 discharge.

### Condition # 5

The sampling program requires two effluent (either grab or composite) samples to be collected a week prior to discharge and two samples per week during the discharge. Sampling frequency exceeds the minimum requirements set out in condition 5 and consisted of the following:

- Four pre-discharge samples.
- Eight effluent discharge samples (four per cell).
- Eight upstream/downstream samples from the South Nation River (taken at the same time as effluent samples).

### Condition #7

Influent flow was diverted to the cell not being discharged as per condition # 7.



P.O. Box 129, 18 Centre St. Spencerville, Ontario KOE 1X0

### **Historical Trending**

Historical trending shows effluent results are remaining below compliance limits. Upstream and downstream sample results have remained consistent from 2012 to 2025.







P.O. Box 129, 18 Centre St. Spencerville, Ontario KOE 1X0





P.O. Box 129, 18 Centre St. Spencerville, Ontario KOE 1X0





EDWARDSBURGH CARDINAL

Phone: 613-658-3055 Fax: 613-658-3445 Toll Free: 866-848-9099 Spencerville, Ontario E-mail: mail@twpec.ca

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### **APPENDIX A**

## 2025 Spencerville Lagoon Discharge Table

Cell	Date	Start/Reset	# Valve turns open	Stop / Down Level	Drop (Inches)	Volume (m3)	Samples Taken	Pre-Discharge	Discharge	CBOD5	BOD	SS	ТР	Ammonia	H2S	Upstream	BOD	SS	TP	Ammonia	Downstream	BOD	SS	ТР	Ammonia		Depth Drop (m)	Volume Calculation (step 1)	Volume Calculation (step 2)
South	3/25/2025						X	Х	1	7	11	26	0.30	5.4	0		[	1		1		1	[			1	1		
South	4/2/2025						х	Х		7	12	15	0.18	8.7	0.5														
South	4/7/2025	37	4.0	32	5	4344	Х		х	6	7	13	0.21	8.88	0	Х	3	3	0.03	0.05	Х	3	3	0.03	0.06		0.13	34117.13	4344
South	4/8/2025	32	0.0	28	4	3478	Х		Х	5	7	15	0.21	8.54	0	Х	3	3	0.03	0.05	Х	3	3	0.03	0.08		0.10	34173.61	3478
South	4/9/2025	28	2.0	21	7	6072	Х		Х	5	7	11	0.2	8.73	0	Х	3	4	0.02	0.05	Х	3	3	0.02	0.06		0.18	34004.31	6072
South	4/10/2025	21	3.0	7	14	12074	Х		Х	6	7	13	0.18	8.55	0	Х	3	3	0.02	0.08	Х	3	4	0.03	0.1		0.36	33610.89	12074
South	4/11/2025	16	1.0	3	13	11221			Х						0	Х					Х						0.33	33666.95	11221
South	4/12/2025		Closed						Х						0														
			Total Cel	l Drop	43	37189																							
North	3/25/2025			1			X	X		3	4	18	0.1	1.6	0				1		[						<u> </u>	<u> </u>	
North	4/2/2025	20		00	0	0004	×	X	v	3	3	9	0.05	2.38	0	v					v						0.00	00047.07	0004
North	4/12/2025	30	3.0	22	Ö	6934	v			2	2		0.4	E 40	0	Ň	2	2	0.00	0.05		-	4	0.00	0.00		0.20	33947.97	6934
North	4/13/2025	35	0.0	28.5	6.5	5641	×		X	3	3	8	0.1	5.18	0	×	3	3	0.02	0.05	X	3	4	0.03	0.09		0.17	34032.50	5641
North	4/14/2025	34	1.5	25	9	7794	×		X	3	3	10	0.12	5.23	0	×	3	4	0.04	0.1	X	3	5	0.02	0.1		0.23	33891.67	7794
North	4/15/2025	29	2.0	21	8	6934	×		X	3	3	3	0.08	4.98	0	×	3	3	0.03	0.05	X	3	3	0.03	0.1		0.20	33947.97	6934
North	4/16/2025	27	0.0	19	8	6934	×		X	3	3	5	0.09	5.05	0	×	3	3	0.03	0.05	×	3	3	0.03	0.1		0.20	33947.97	6934
North	4/17/2025	19	0.0	17	2	1742			X						0												0.05	34286.71	1/42
North	4/18/2025	17	0.0	16	1	872			×					-	0				-					-			0.03	34343.33	872
North	19-Apr-25		Closed						^						0						-						+	╉─────┤	
			Total Call	Dron	40 F	26054	+	<u> </u>	<u> </u>																		+	╉────┤	
I	1	I	Total Cell		42.5	30031				4 F	<b>E</b> 0	12.2	0.45	6.4	0.02		2.00	2.25	0.02	0.00		2.00	2 50	0.02	0.00		2 17	╉────┤	
			Total	volum	Com	14040	AV	eid	ye.	4.3	25	20	1 1	20	5		3.00	3.23	0.03	0.00	ļ	3.00	3.50	0.03	0.09	I	2.17	↓↓	
					Com	phance				L	20	30		20	5	1													

### 2025 Spencerville Lagoon Discharge Table



EDWARDSBURGH CARDINAL

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### **APPENDIX B**

## 2025 Spencerville Lagoon Laboratory Results

**Final Report** 

REPORT No: 25-007402 - Rev. 0



Client committed. Quality assured. Proudly Canadian.

#### C.O.C.: G 27834

#### **Report To:**

Township of Edwardsburgh/Cardinal PO Box 129, 18 Centre Street Spencerville, ON K0E 1X0

#### **Attention: Eric Wemerman**

### **CADUCEON Environmental Laboratories** 2378 Holly Lane

Ottawa, ON K1V 7P1

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2025-Mar-25 2025-Apr-01 Waste Water		CUSTOMER PROJECT: 120002157-Lagoons P.O. NUMBER: Pre-Dis-SC-25-01							
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method			
BOD5 (Liquid)		1	KINGSTON	DCASSIDY	2025-Mar-26	BOD-001	SM 5210B			
CBOD5 (Liquid)		1	KINGSTON	DCASSIDY	2025-Mar-26	BOD-001	SM 5210B			
Ammonia (Liquid)		1	KINGSTON	KDIBBITS	2025-Mar-26	NH3-001	SM 4500NH3			
TP & TKN (Liquid)		1	KINGSTON	YLIEN	2025-Mar-27	TPTKN-001	MECP E3516.2			
TSS (Liquid)		1	KINGSTON	MCLOSS	2025-Mar-27	TSS-001	SM 2540D			

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an \*

	Cli	ent I.D.	South Cell Pre Discharge # 1
	Sam	ple I.D.	25-007402-1
	Date Co	llected	2025-03-23
Parameter	Units	R.L.	-
BOD5	mg/L	3	11
CBOD5	mg/L	3	7
Total Suspended Solids	mg/L	3	26
Phosphorus (Total)	mg/L	0.01	0.30
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	5.40

**Michelle Dubien Data Specialist** 

The analytical results reported herein refer to the samples as received and relate only to the items tested. Reproduction of this analytical report in full or in part is prohibited without prior consent from Caduceon Environmental Laboratories.  $Page_{ag} 65_o \rho f~298$ 

**Final Report** 

REPORT No: 25-007401 - Rev. 0



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#### C.O.C.: G 27830

#### **Report To:**

Township of Edwardsburgh/Cardinal PO Box 129, 18 Centre Street Spencerville, ON K0E 1X0

#### **Attention: Eric Wemerman**

### **CADUCEON Environmental Laboratories** 2378 Holly Lane

Ottawa, ON K1V 7P1

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2025-Mar-25 2025-Apr-01 Waste Water		CUSTOMER PROJECT: 120002157-Lagoons P.O. NUMBER: Pre-Dis-NC-25-01						
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method		
BOD5 (Liquid)		1	KINGSTON	DCASSIDY	2025-Mar-26	BOD-001	SM 5210B		
CBOD5 (Liquid)		1	KINGSTON	DCASSIDY	2025-Mar-26	BOD-001	SM 5210B		
Ammonia (Liquid)		1	KINGSTON	KDIBBITS	2025-Mar-26	NH3-001	SM 4500NH3		
TP & TKN (Liquid)		1	KINGSTON	YLIEN	2025-Mar-27	TPTKN-001	MECP E3516.2		
TSS (Liquid)		1	KINGSTON	MCLOSS	2025-Mar-27	TSS-001	SM 2540D		

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an \*

	Clie	ent I.D.	North Cell Pre Discharge # 1
	Sam	ple I.D.	25-007401-1
	Date Co	llected	2025-03-23
Parameter	Units	R.L.	-
BOD5	mg/L	3	4
CBOD5	mg/L	3	<3
Total Suspended Solids	mg/L	3	18
Phosphorus (Total)	mg/L	0.01	0.10
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	1.60

**Michelle Dubien Data Specialist** 

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**Final Report** 

REPORT No: 25-008219 - Rev. 0



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#### C.O.C.: G 27834

#### **Report To:**

Township of Edwardsburgh/Cardinal PO Box 129, 18 Centre Street Spencerville, ON K0E 1X0

#### **Attention: Eric Wemerman**

### **CADUCEON Environmental Laboratories** 2378 Holly Lane

Ottawa, ON K1V 7P1

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2025-Apr-02 2025-Apr-09 Waste Water	CUSTOMER PROJECT: 120002157-Lagoons P.O. NUMBER: Pre-Dis-SC-25-02							
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method		
BOD5 (Liquid)		1	KINGSTON	JWOLFE2	2025-Apr-03	BOD-001	SM 5210B		
CBOD5 (Liquid)		1	KINGSTON	JWOLFE2	2025-Apr-03	BOD-001	SM 5210B		
Ammonia (Liquid)		1	KINGSTON	VHAMMOND	2025-Apr-07	NH3-001	SM 4500NH3		
TP & TKN (Liquid)		1	KINGSTON	YLIEN	2025-Apr-04	TPTKN-001	MECP E3516.2		
TSS (Liquid)		1	KINGSTON	MCLOSS	2025-Apr-04	TSS-001	SM 2540D		

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an \*

	Clie	ent I.D.	South Cell Pre Discharge #2
	Sam	ple I.D.	25-008219-1
	Date Co	llected	2025-04-02
Parameter	Units	R.L.	-
BOD5	mg/L	3	12
CBOD5	mg/L	3	7
Total Suspended Solids	mg/L	3	15
Phosphorus (Total)	mg/L	0.01	0.18
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	8.70

**Michelle Dubien Data Specialist** 

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#### C.O.C.: G 27830

#### **Report To:**

Township of Edwardsburgh/Cardinal PO Box 129, 18 Centre Street Spencerville, ON K0E 1X0

#### Attention: Eric Wemerman

### CADUCEON Environmental Laboratories 2378 Holly Lane

Ottawa, ON K1V 7P1

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2025-Apr-02 2025-Apr-09 Waste Water		CUSTOMER PROJECT: 120002157-Lagoons P.O. NUMBER: Pre-Dis-NC-25-02								
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method				
BOD5 (Liquid)		1	KINGSTON	JWOLFE2	2025-Apr-03	BOD-001	SM 5210B				
CBOD5 (Liquid)		1	KINGSTON	JWOLFE2	2025-Apr-03	BOD-001	SM 5210B				
Ammonia (Liquid)		1	KINGSTON	VHAMMOND	2025-Apr-07	NH3-001	SM 4500NH3				
TP & TKN (Liquid)		1	KINGSTON	YLIEN	2025-Apr-04	TPTKN-001	MECP E3516.2				
TSS (Liquid)		1	KINGSTON	MCLOSS	2025-Apr-04	TSS-001	SM 2540D				

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an  $\,^{\star}$ 

	Clie	ent I.D.	North Cell Pre Discharge #2
	Sam	ple I.D.	25-008218-1
	Date Co	llected	2025-04-02
Parameter	Units	R.L.	-
BOD5	mg/L	3	3
CBOD5	mg/L	3	<3
Total Suspended Solids	mg/L	3	9
Phosphorus (Total)	mg/L	0.01	0.05
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	2.38

Michelle Dubien Data Specialist

Final Report

REPORT No: 25-008218 - Rev. 0



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#### C.O.C.: G 27835

#### **Report To:**

Township of Edwardsburgh/Cardinal PO Box 129, 18 Centre Street Spencerville, ON K0E 1X0

#### Attention: Eric Wemerman

### CADUCEON Environmental Laboratories 2378 Holly Lane

Ottawa, ON K1V 7P1

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2025-Apr-08 2025-Apr-15 Waste Water		CUSTOMER PROJECT: P.O. NUMBER:			120002157-Lagoons Dis-SC-25-01		
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method	
BOD5 (Liquid)		1	KINGSTON	JWOLFE2	2025-Apr-10	BOD-001	SM 5210B	
CBOD5 (Liquid)		1	KINGSTON	JWOLFE2	2025-Apr-10	BOD-001	SM 5210B	
Ammonia (Liquid)		1	KINGSTON	DCASSIDY	2025-Apr-11	NH3-001	SM 4500NH3	
TP & TKN (Liquid)		1	KINGSTON	YLIEN	2025-Apr-14	TPTKN-001	MECP E3516.2	
TSS (Liquid)		1	KINGSTON	MCLOSS	2025-Apr-10	TSS-001	SM 2540D	

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an  $\,^{\star}$ 

	Clie	ent I.D.	South Sample #1
	Sam	ple I.D.	25-008909-1
	Date Co	llected	2025-04-07
Parameter	Units	R.L.	-
BOD5	mg/L	3	7
CBOD5	mg/L	3	6
Total Suspended Solids	mg/L	3	13
Phosphorus (Total)	mg/L	0.01	0.21
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	8.88

Michelle Dubien Data Specialist

Final Report

REPORT No: 25-008909 - Rev. 0

**Final Report** 

REPORT No: 25-008910 - Rev. 0



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#### C.O.C.: G 27835

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#### **Attention: Eric Wemerman**

### **CADUCEON Environmental Laboratories** 2378 Holly Lane

Ottawa, ON K1V 7P1

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2025-Apr-08 2025-Apr-15 Surface Water		CUSTOMER PROJECT: P.O. NUMBER:		120002157-Lagoons Dis-SC-25-01		
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
BOD5 (Liquid)		2	KINGSTON	JWOLFE2	2025-Apr-10	BOD-001	SM 5210B
Ammonia (Liquid)		2	KINGSTON	DCASSIDY	2025-Apr-11	NH3-001	SM 4500NH3
TP & TKN (Liquid)		2	KINGSTON	YLIEN	2025-Apr-14	TPTKN-001	MECP E3516.2
TSS (Liquid)		2	KINGSTON	MCLOSS	2025-Apr-10	TSS-001	SM 2540D

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an \*

	Clie	ent I.D.	Upstream South Nation River	Downstream South Nation River
	Sam	ple I.D.	25-008910-1	25-008910-2
	Date Co	llected	2025-04-07	2025-04-07
Parameter	Units	R.L.	-	-
BOD5	mg/L	3	<3	<3
Total Suspended Solids	mg/L	3	<3	<3
Phosphorus (Total)	mg/L	0.01	0.03	0.03
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	<0.05	0.06



**Michelle Dubien Data Specialist** 

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#### C.O.C.: G 27836

#### **Report To:**

Township of Edwardsburgh/Cardinal PO Box 129, 18 Centre Street Spencerville, ON K0E 1X0

#### Attention: Eric Wemerman

### CADUCEON Environmental Laboratories 2378 Holly Lane

Ottawa, ON K1V 7P1

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2025-Apr-08 2025-Apr-15 Waste Water		CUSTOMER PROJECT: P.O. NUMBER:			120002157- Dis-SC-25-0	Lagoons )2
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
BOD5 (Liquid)		1	KINGSTON	JWOLFE2	2025-Apr-10	BOD-001	SM 5210B
CBOD5 (Liquid)		1	KINGSTON	JWOLFE2	2025-Apr-10	BOD-001	SM 5210B
Ammonia (Liquid)		1	KINGSTON	DCASSIDY	2025-Apr-11	NH3-001	SM 4500NH3
TP & TKN (Liquid)		1	KINGSTON	YLIEN	2025-Apr-14	TPTKN-001	MECP E3516.2
TSS (Liquid)		1	KINGSTON	MCLOSS	2025-Apr-10	TSS-001	SM 2540D

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an  $\,^{\star}$ 

	Clie	ent I.D.	South Sample #2
	Sam	ple I.D.	25-008913-1
	Date Co	llected	2025-04-08
Parameter	Units	R.L.	-
BOD5	mg/L	3	7
CBOD5	mg/L	3	5
Total Suspended Solids	mg/L	3	15
Phosphorus (Total)	mg/L	0.01	0.21
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	8.54

Michelle Dubien Data Specialist

Final Report

REPORT No: 25-008913 - Rev. 0



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#### **Report To:**

Township of Edwardsburgh/Cardinal PO Box 129, 18 Centre Street Spencerville, ON K0E 1X0

#### Attention: Eric Wemerman

### CADUCEON Environmental Laboratories 2378 Holly Lane

Ottawa, ON K1V 7P1

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2025-Apr-08 2025-Apr-15 Surface Water		CUSTOMER PROJECT: P.O. NUMBER:		120002157 Dis-SC-25-(	120002157-Lagoons Dis-SC-25-02		
		Otv	Site Analyzed	Authorized	Date Analyzed	Lah Method	Reference Method	
BOD5 (Liquid)		2	KINGSTON	JWOLFE2	2025-Apr-10	BOD-001	SM 5210B	
Ammonia (Liquid)		2	KINGSTON	DCASSIDY	2025-Apr-11	NH3-001	SM 4500NH3	
TP & TKN (Liquid)		2	KINGSTON	YLIEN	2025-Apr-14	TPTKN-001	MECP E3516.2	
TSS (Liquid)		2	KINGSTON	MCLOSS	2025-Apr-10	TSS-001	SM 2540D	

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an  $\,\,{}^{\star}$ 

	Clie	ent I.D.	Upstream South Nation River	Downstream South Nation River
	Sam	ple I.D.	25-008915-1	25-008915-2
	Date Co	llected	2025-04-08	2025-04-08
Parameter	Units	R.L.	-	-
BOD5	mg/L	3	<3	<3
Total Suspended Solids	mg/L	3	<3	<3
Phosphorus (Total)	mg/L	0.01	0.03	0.03
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	0.05	0.08

M. Duli

Michelle Dubien Data Specialist

**Final Report** 

REPORT No: 25-008915 - Rev. 0



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#### C.O.C.: G 27837

#### **Report To:**

Township of Edwardsburgh/Cardinal PO Box 129, 18 Centre Street Spencerville, ON K0E 1X0

#### Attention: Eric Wemerman

### CADUCEON Environmental Laboratories 2378 Holly Lane

Ottawa, ON K1V 7P1

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2025-Apr-10 2025-Apr-17 Waste Water		CUSTOMER PROJECT: P.O. NUMBER:			: 120002157 Dis-SC-25-(	120002157-Lagoons Dis-SC-25-03	
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method	
BOD5 (Liquid)		1	KINGSTON	JWOLFE2	2025-Apr-11	BOD-001	SM 5210B	
CBOD5 (Liquid)		1	KINGSTON	JWOLFE2	2025-Apr-11	BOD-001	SM 5210B	
Ammonia (Liquid)		1	KINGSTON	DCASSIDY	2025-Apr-16	NH3-001	SM 4500NH3	
TP & TKN (Liquid)		1	KINGSTON	YLIEN	2025-Apr-15	TPTKN-001	MECP E3516.2	
TSS (Liquid)		1	KINGSTON	MCLOSS	2025-Apr-14	TSS-001	SM 2540D	

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an  $\,^{*}$ 

	Clie	ent I.D.	South Sample #3
	Sam	ple I.D.	25-009307-1
	Date Co	llected	2025-04-09
Parameter	Units	R.L.	-
BOD5	mg/L	3	7
CBOD5	mg/L	3	5
Total Suspended Solids	mg/L	3	11
Phosphorus (Total)	mg/L	0.01	0.20
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	8.73

Michelle Dubien Data Specialist

**Final Report** 

REPORT No: 25-009307 - Rev. 0

**Final Report** 

REPORT No: 25-009308 - Rev. 0



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#### C.O.C.: G 27837

#### **Report To:**

Township of Edwardsburgh/Cardinal PO Box 129, 18 Centre Street Spencerville, ON K0E 1X0

#### **Attention: Eric Wemerman**

### **CADUCEON Environmental Laboratories** 2378 Holly Lane

Ottawa, ON K1V 7P1

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2025-Apr-10 2025-Apr-17 Surface Water		CUSTOMER PROJECT: P.O. NUMBER:			T: 120002157- Dis-SC-25-0	Lagoons )3
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
BOD5 (Liquid)		2	KINGSTON	JWOLFE2	2025-Apr-11	BOD-001	SM 5210B
Ammonia (Liquid)		2	KINGSTON	DCASSIDY	2025-Apr-16	NH3-001	SM 4500NH3
TP & TKN (Liquid)		2	KINGSTON	YLIEN	2025-Apr-15	TPTKN-001	MECP E3516.2
TSS (Liquid)		2	KINGSTON	MCLOSS	2025-Apr-14	TSS-001	SM 2540D

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an \*

	Clie	ent I.D.	Upstream South Nation River	Downstream South Nation River		
	Sam	ple I.D.	25-009308-1	25-009308-2		
	Date Co	llected	2025-04-09	2025-04-09		
Parameter	Units	R.L.	-	-		
BOD5	mg/L	3	<3	<3		
Total Suspended Solids	mg/L	3	4	<3		
Phosphorus (Total)	mg/L	0.01	0.02	0.02		
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	<0.05	0.06		

**Michelle Dubien Data Specialist** 

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#### C.O.C.: G 27838

#### **Report To:**

Township of Edwardsburgh/Cardinal PO Box 129, 18 Centre Street Spencerville, ON K0E 1X0

#### **Attention: Eric Wemerman**

### **CADUCEON Environmental Laboratories** 2378 Holly Lane

Ottawa, ON K1V 7P1

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2025-Apr-10 2025-Apr-17 Waste Water			CUSTOMER PROJECT: P.O. NUMBER:		: 120002157 Dis-SC-25-(	120002157-Lagoons Dis-SC-25-04	
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method	
BOD5 (Liquid)		1	KINGSTON	JWOLFE2	2025-Apr-11	BOD-001	SM 5210B	
CBOD5 (Liquid)		1	KINGSTON	JWOLFE2	2025-Apr-11	BOD-001	SM 5210B	
Ammonia (Liquid)		1	KINGSTON	DCASSIDY	2025-Apr-16	NH3-001	SM 4500NH3	
TP & TKN (Liquid)		1	KINGSTON	YLIEN	2025-Apr-15	TPTKN-001	MECP E3516.2	
TSS (Liquid)		1	KINGSTON	MCLOSS	2025-Apr-14	TSS-001	SM 2540D	

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an \*

	Clie	ent I.D.	South Sample #4
	Sam	ple I.D.	25-009309-1
	Date Co	llected	2025-04-10
Parameter	Units	R.L.	-
BOD5	mg/L	3	7
CBOD5	mg/L	3	6
Total Suspended Solids	mg/L	3	13
Phosphorus (Total)	mg/L	0.01	0.18
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	8.55

**Michelle Dubien Data Specialist** 

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### **Final Report**

REPORT No: 25-009309 - Rev. 0



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#### C.O.C.: G 27838

#### **Report To:**

Township of Edwardsburgh/Cardinal PO Box 129, 18 Centre Street Spencerville, ON K0E 1X0

#### **Attention: Eric Wemerman**

### **CADUCEON Environmental Laboratories** 2378 Holly Lane

DATE RECEIVED: DATE REPORTED:	2025-Apr-10 2025-Apr-17			CU P.C	STOMER PROJECT:	120002157-Lagoons Dis-SC-25-04	
SAMPLE MATRIX:	Surface Water		T.O. NOWBER.				-
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
BOD5 (Liquid)		2	KINGSTON	JWOLFE2	2025-Apr-11	BOD-001	SM 5210B
Ammonia (Liquid)		2	KINGSTON	DCASSIDY	2025-Apr-16	NH3-001	SM 4500NH3
TP & TKN (Liquid)		2	KINGSTON	YLIEN	2025-Apr-15	TPTKN-001	MECP E3516.2
TSS (Liquid)		2	KINGSTON	MCLOSS	2025-Apr-14	TSS-001	SM 2540D

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an  $\,^*$ 

	Clie	ent I.D.	Upstream South Nation River	Downstream South Nation River	
	Sam	ple I.D.	25-009310-1	25-009310-2	
	Date Co	llected	2025-04-10	2025-04-10	
Parameter	Units	R.L.	-	-	
BOD5	mg/L	3	<3	<3	
Total Suspended Solids	mg/L	3	<3	4	
Phosphorus (Total)	mg/L	0.01	0.02	0.03	
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	0.08	0.10	

**Michelle Dubien Data Specialist** 

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REPORT No: 25-009310 - Rev. 0

**Final Report** 

Ottawa, ON K1V 7P1

**Final Report** 

REPORT No: 25-009629 - Rev. 0



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#### C.O.C.: G 27831

#### **Report To:**

Township of Edwardsburgh/Cardinal PO Box 129, 18 Centre Street Spencerville, ON K0E 1X0

#### **Attention: Eric Wemerman**

### **CADUCEON Environmental Laboratories** 2378 Holly Lane

Ottawa, ON K1V 7P1

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2025-Apr-15 2025-Apr-22 Waste Water		CUSTOMER PROJECT: P.O. NUMBER:			T: 120002157- Dis-NC-25-(	120002157-Lagoons Dis-NC-25-01		
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method		
BOD5 (Liquid)		1	KINGSTON	DCASSIDY	2025-Apr-16	BOD-001	SM 5210B		
CBOD5 (Liquid)		1	KINGSTON	DCASSIDY	2025-Apr-16	BOD-001	SM 5210B		
Ammonia (Liquid)		1	KINGSTON	DCASSIDY	2025-Apr-17	NH3-001	SM 4500NH3		
TP & TKN (Liquid)		1	KINGSTON	YLIEN	2025-Apr-21	TPTKN-001	MECP E3516.2		
TSS (Liquid)		1	KINGSTON	MCLOSS	2025-Apr-16	TSS-001	SM 2540D		

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an \*

	Clie	ent I.D.	North Sample #1
	Sam	ple I.D.	25-009629-1
	Date Co	llected	2025-04-13
Parameter	Units	R.L.	-
BOD5	mg/L	3	<3
CBOD5	mg/L	3	<3
Total Suspended Solids	mg/L	3	8
Phosphorus (Total)	mg/L	0.01	0.10
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	5.18

**Michelle Dubien Data Specialist** 

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**Final Report** 

REPORT No: 25-009630 - Rev. 0



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#### C.O.C.: G 27831

#### **Report To:**

Township of Edwardsburgh/Cardinal PO Box 129, 18 Centre Street Spencerville, ON K0E 1X0

#### **Attention: Eric Wemerman**

### **CADUCEON Environmental Laboratories** 2378 Holly Lane

Ottawa, ON K1V 7P1

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2025-Apr-15 2025-Apr-22 Surface Water		CUSTOMER PROJECT: P.O. NUMBER:			T: 120002157- Dis-NC-25-0	120002157-Lagoons Dis-NC-25-01	
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method	
BOD5 (Liquid)		2	KINGSTON	DCASSIDY	2025-Apr-16	BOD-001	SM 5210B	
Ammonia (Liquid)		2	KINGSTON	DCASSIDY	2025-Apr-17	NH3-001	SM 4500NH3	
TP & TKN (Liquid)		2	KINGSTON	YLIEN	2025-Apr-21	TPTKN-001	MECP E3516.2	
TSS (Liquid)		2	KINGSTON	MCLOSS	2025-Apr-16	TSS-001	SM 2540D	

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an \*

	Clie	ent I.D.	Upstream South Nation River	Downstream South Nation River	
	Sam	ple I.D.	25-009630-1	25-009630-2	
	Date Co	llected	2025-04-13	2025-04-13	
Parameter	Units	R.L.	-	-	
BOD5	mg/L	3	<3	<3	
Total Suspended Solids	mg/L	3	3	4	
Phosphorus (Total)	mg/L	0.01	0.02	0.03	
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	0.05	0.09	

**Michelle Dubien Data Specialist** 

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**Final Report** 

REPORT No: 25-009631 - Rev. 0



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#### C.O.C.: G 27832

#### **Report To:**

Township of Edwardsburgh/Cardinal PO Box 129, 18 Centre Street Spencerville, ON K0E 1X0

#### **Attention: Eric Wemerman**

### **CADUCEON Environmental Laboratories** 2378 Holly Lane

Ottawa, ON K1V 7P1

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2025-Apr-15 2025-Apr-22 Waste Water		CUSTOMER PROJECT: P.O. NUMBER:		T: 120002157- Dis-NC-25-(	120002157-Lagoons Dis-NC-25-02	
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
BOD5 (Liquid)		1	KINGSTON	DCASSIDY	2025-Apr-16	BOD-001	SM 5210B
CBOD5 (Liquid)		1	KINGSTON	DCASSIDY	2025-Apr-16	BOD-001	SM 5210B
Ammonia (Liquid)		1	KINGSTON	DCASSIDY	2025-Apr-17	NH3-001	SM 4500NH3
TP & TKN (Liquid)		1	KINGSTON	YLIEN	2025-Apr-21	TPTKN-001	MECP E3516.2
TSS (Liquid)		1	KINGSTON	MCLOSS	2025-Apr-16	TSS-001	SM 2540D

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an \*

	Clie	ent I.D.	North Sample #2
	Sam	ple I.D.	25-009631-1
	Date Co	llected	2025-04-14
Parameter	Units	R.L.	-
BOD5	mg/L	3	3
CBOD5	mg/L	3	<3
Total Suspended Solids	mg/L	3	10
Phosphorus (Total)	mg/L	0.01	0.12
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	5.23

**Michelle Dubien Data Specialist** 

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**Final Report** 

REPORT No: 25-009632 - Rev. 0



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#### C.O.C.: G 27832

#### **Report To:**

Township of Edwardsburgh/Cardinal PO Box 129, 18 Centre Street Spencerville, ON K0E 1X0

#### **Attention: Eric Wemerman**

### **CADUCEON Environmental Laboratories** 2378 Holly Lane

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2025-Apr-15 2025-Apr-22 Surface Water		CUSTOMER PROJECT: P.O. NUMBER:		: 120002157- Dis-NC-25-0	120002157-Lagoons Dis-NC-25-02	
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
BOD5 (Liquid)		2	KINGSTON	DCASSIDY	2025-Apr-16	BOD-001	SM 5210B
Ammonia (Liquid)		2	KINGSTON	DCASSIDY	2025-Apr-17	NH3-001	SM 4500NH3
TP & TKN (Liquid)		2	KINGSTON	YLIEN	2025-Apr-21	TPTKN-001	MECP E3516.2
TSS (Liquid)		2	KINGSTON	MCLOSS	2025-Apr-16	TSS-001	SM 2540D

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an \*

	Clie	ent I.D.	Upstream South Nation River	Downstream South Nation River
	Sam	ple I.D.	25-009632-1	25-009632-2
	Date Co	llected	2025-04-14	2025-04-14
Parameter	Units	R.L.	-	-
BOD5	mg/L	3	<3	<3
Total Suspended Solids	mg/L	3	4	5
Phosphorus (Total)	mg/L	0.01	0.04	0.02
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	0.10	0.10

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**Michelle Dubien Data Specialist** 



Ottawa, ON K1V 7P1

**Final Report** 

REPORT No: 25-009987 - Rev. 0



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#### C.O.C.: G27833

#### **Report To:**

Township of Edwardsburgh/Cardinal PO Box 129, 18 Centre Street Spencerville, ON K0E 1X0

#### **Attention: Eric Wemerman**

**CADUCEON Environmental Laboratories** 285 Dalton Ave

Kingston, ON K7K 6Z1

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2025-Apr-16 2025-Apr-25 Waste Water		CUSTOMER PROJECT: P.O. NUMBER:				120002157-Lagoons PO#Dis-NC-25-03	
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method	
BOD5 (Liquid)		1	KINGSTON	JWOLFE2	2025-Apr-17	BOD-001	SM 5210B	
CBOD5 (Liquid)		1	KINGSTON	JWOLFE2	2025-Apr-17	BOD-001	SM 5210B	
Ammonia (Liquid)		1	KINGSTON	DCASSIDY	2025-Apr-24	NH3-001	SM 4500NH3	
TP & TKN (Liquid)		1	KINGSTON	YLIEN	2025-Apr-24	TPTKN-001	MECP E3516.2	
TSS (Liquid)		1	KINGSTON	MCLOSS	2025-Apr-17	TSS-001	SM 2540D	

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an  $\,^{*}$ 

	Clie	ent I.D.	North Sample #3
	Sam	ple I.D.	25-009987-1
	Date Co	llected	2025-04-15
Parameter	Units	R.L.	-
BOD5	mg/L	3	<3
CBOD5	mg/L	3	<3
Total Suspended Solids	mg/L	3	<3
Phosphorus (Total)	mg/L	0.01	0.08
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	4.98

**Michelle Dubien Data Specialist** 

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#### C.O.C.: G27833

#### **Report To:**

Township of Edwardsburgh/Cardinal PO Box 129, 18 Centre Street Spencerville, ON K0E 1X0

#### **Attention: Eric Wemerman**

**CADUCEON Environmental Laboratories** 285 Dalton Ave

Kingston, ON K7K 6Z1

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2025-Apr-16 2025-Apr-25 Surface Water		CUSTOMER PROJECT: P.O. NUMBER:			120002157-Lagoons PO#Dis-NC-25-03	
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
BOD5 (Liquid)		2	KINGSTON	JWOLFE2	2025-Apr-17	BOD-001	SM 5210B
Ammonia (Liquid)		2	KINGSTON	DCASSIDY	2025-Apr-24	NH3-001	SM 4500NH3
TP & TKN (Liquid)		2	KINGSTON	YLIEN	2025-Apr-24	TPTKN-001	MECP E3516.2
TSS (Liquid)		2	KINGSTON	MCLOSS	2025-Apr-21	TSS-001	SM 2540D

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an \*

	Clie	ent I.D.	Upstream South National River	Downstream South National River
	Sam	ple I.D.	25-009991-1	25-009991-2
	Date Co	llected	2025-04-15	2025-04-15
Parameter	Units	R.L.	-	-
BOD5	mg/L	3	<3	<3
Total Suspended Solids	mg/L	3	3	<3
Phosphorus (Total)	mg/L	0.01	0.03	0.03
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	0.05	0.10

**Michelle Dubien Data Specialist** 

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### **Final Report**

REPORT No: 25-009991 - Rev. 0



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#### C.O.C.: G27834

#### **Report To:**

Township of Edwardsburgh/Cardinal PO Box 129, 18 Centre Street Spencerville, ON K0E 1X0

#### **Attention: Eric Wemerman**

**CADUCEON Environmental Laboratories** 285 Dalton Ave

Kingston, ON K7K 6Z1

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2025-Apr-16 2025-Apr-25 Waste Water		CUSTOMER PROJECT: 12000215 P.O. NUMBER: PO#Dis-N				-Lagoons 25-04
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
BOD5 (Liquid)		1	KINGSTON	JWOLFE2	2025-Apr-17	BOD-001	SM 5210B
CBOD5 (Liquid)		1	KINGSTON	JWOLFE2	2025-Apr-17	BOD-001	SM 5210B
Ammonia (Liquid)		1	KINGSTON	DCASSIDY	2025-Apr-24	NH3-001	SM 4500NH3
TP & TKN (Liquid)		1	KINGSTON	YLIEN	2025-Apr-24	TPTKN-001	MECP E3516.2
TSS (Liquid)		1	KINGSTON	MCLOSS	2025-Apr-21	TSS-001	SM 2540D

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an  $\,^{\star}$ 

	Clie	ent I.D.	North Sample #4
	Sam	ple I.D.	25-009994-1
	Date Co	llected	2025-04-16
Parameter	Units	R.L.	-
BOD5	mg/L	3	3
CBOD5	mg/L	3	<3
Total Suspended Solids	mg/L	3	5
Phosphorus (Total)	mg/L	0.01	0.09
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	5.05

**Michelle Dubien Data Specialist** 

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### **Final Report**

REPORT No: 25-009994 - Rev. 0



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#### C.O.C.: G27834

#### **Report To:**

Township of Edwardsburgh/Cardinal PO Box 129, 18 Centre Street Spencerville, ON K0E 1X0

#### **Attention: Eric Wemerman**

**CADUCEON Environmental Laboratories** 285 Dalton Ave

Kingston, ON K7K 6Z1

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2025-Apr-16 2025-Apr-25 Surface Water		CUSTOMER PROJECT: 1 P.O. NUMBER: F				120002157-Lagoons PO#Dis-NC-25-04	
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method	
BOD5 (Liquid)		2	KINGSTON	JWOLFE2	2025-Apr-17	BOD-001	SM 5210B	
Ammonia (Liquid)		2	KINGSTON	DCASSIDY	2025-Apr-24	NH3-001	SM 4500NH3	
TP & TKN (Liquid)		2	KINGSTON	YLIEN	2025-Apr-24	TPTKN-001	MECP E3516.2	
TSS (Liquid)		2	KINGSTON	MCLOSS	2025-Apr-17	TSS-001	SM 2540D	

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an \*

	Clie	ent I.D.	Upstream South Nation River	Downstream South Nation River
	Sam	ple I.D.	25-009995-1	25-009995-2
	Date Co	llected	2025-04-16	2025-04-16
Parameter	Units	R.L.	-	-
BOD5	mg/L	3	<3	<3
Total Suspended Solids	mg/L	3	<3	<3
Phosphorus (Total)	mg/L	0.01	0.03	0.03
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	<0.05	0.10

**Michelle Dubien Data Specialist** 

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### **Final Report**

REPORT No: 25-009995 - Rev. 0



## TOWNSHIP OF EDWARDSBURGH CARDINAL ACTION ITEM

Committee: Committee of the Whole- Administration & Operations

Date: May 12, 2025

**Department:** Environmental Services

Topic: 2025 Spencerville System Funding Option

**Purpose:** To advise on financing options to complete the 2025 Spencerville capital program, specifically the pump replacement.

**Background:** The submission for the primary 2025 capital project on the Spencerville wastewater system came in substantially higher than the engineered estimate.

The resulting reality is insufficient revenue capacity to fund the projects that need to move forward from our reserve funds.

**Policy Implications:** By-law 2023-51 establishes policies with respect to the procurement of goods and services. It states that all expenditures shall be within the current approved budget or within approved estimates, otherwise, prior approval of Council is required. In addition, expenditures above \$75,000 require approval of Council.

Bylaw 2023-24 requires the reserve fund balance for the Spencerville Wastewater be not less than 25% of the annual operating expenditures.

**Strategic Plan Implications:** The 2025 capital program aligns with section 4.4, "maintaining good infrastructure".

**Financial Considerations:** There are initial steps underway to help bridge the projected shortfall. First, staff have revisited the operational budgets and reduced expenses in Spencerville wastewater by \$10,000.00. Second, user rate increases are in effect January 1, 2025.

**Recommended Financing Option:** Obtaining a short-term loan of \$400,000 from Infrastructure Ontario to fund the pump replacement. Below is a table showing the current loan rates. The remainder of the 2025 capital program will be funded from reserves.

Infrastructure Ontario Loan Rates						
Construc	tion	3.16%				
Amortiz	ing	Serial				
5Y	3.26%	3.25%				
10Y	3.84%	3.80%				
15Y	4.30%	4.23%				
20Y	4.60%	4.50%				
25Y	4.76%	4.65%				
30Y	4.84%	4.73%				

**Recommendation:** That Committee recommend that Council direct staff to obtain a debenture for \$400,000 from Infrastructure Ontario to fund the 2025 Capital program with the balance funded from the Spencerville Wastewater Reserve account 98-3806.

Eni Wenerman

DelSat

Chief Water/Sewer Operator

**Director of Operations**


# TOWNSHIP OF EDWARDSBURGH CARDINAL ACTION ITEM

Committee: Committee of the Whole- Administration and Operations

Date: May 12, 2025

**Department:** Environmental Services

**Topic:** Tender Award: Dundas Street Engineering and Design

**Purpose:** To award the Dundas Street Engineering and Design Project.

### Background:

On December 9, 2024, Municipal Council approved the engineering design project for Dundas Street, to a maximum budget of \$60,000. This initiative, in collaboration with the United Counties of Leeds & Grenville, is to complete a feasibility study, develop engineering design drawings, and provide budgetary estimates for the replacement of water, sanitary, storm mains, as well as the reconstruction of the roadway. The Request for Proposals (RFP) was issued on March 7, invitations were extended to twenty-three qualified firms, published on the Township's website with a deadline date of April 8, 2025.

The United Counties of Leeds & Grenville have expressed interest in assessing, replacing and upgrading stormwater infrastructure along Dundas Street West, while also undertaking necessary roadwork rehabilitation. Aging water and sanitary mains, from the 1950's era are in service. This project is an excellent opportunity to collaborate with the United Counties, upgrade aging infrastructure, improve stormwater management and reconstruct the road at the same time. Completing engineering design is the first stage of this project.

	Bidder	<u>Subtotal</u> (Excluding HST)
1	Greer Galloway	\$ 62,000.00
2	Acadia Engineering	\$ 64,670.00
3	Jewell Engineering	\$ 81,735.52
4	In Engineering	\$ 104,390.00
5	JL Richards	\$ 134,387.00
6	Nova Tech	\$ 175,958.00

The following qualified companies submitted proposals before the April 8<sup>th</sup> deadline.

All proposals were reviewed by Township and County staff.

The design and engineering project is expected to be completed in 2025 for project readiness in 2026.

**Policy Implications:** By-law 2023-51 establishes policies with respect to the procurement of goods and services. It states that all expenditures shall be within the current approved budget or within approved estimates, otherwise, prior approval of Council is required. In addition, expenditures above \$75,000 require approval of Council.

**Strategic Plan Implications:** This project aligns with sections 4.4 "Maintaining good infrastructure", 4.6 "Sustainability of water and stormwater infrastructure and 4.7 "Maintain Road Infrastructure" of the Strategic Plan.

**Financial Considerations:** The lowest financials for this project was submitted by Greer Galloway amounting to \$62,000. Staff evaluated all proposals and created a scoring matrix for each submission. Jewell Engineering's proposal stood out as the most favorable by the Township and United Counties of Leeds & Grenville. Their comprehension of the project objectives, in-depth familiarity with existing infrastructure in the area and limitations, relevant work experience and proposed project schedule align with our needs.

The proposed funding source for this project was reserves however we will present a funding strategy for all 2025 capital projects.

Staff met with the United Counties of Leeds & Grenville on April 28 to discuss a cost sharing agreement based on the scope of the project.

The proposed agreement would include a UCLG contribution of \$37,397.84 and the remaining balance of \$44,337.68 by the Township. The differences in contribution amounts can be attributed to the completion of a sanitary main re-routing study as part of the project.

**Option 1**: Award project to Jewell Engineering at a tender cost of \$ 81,735.52 plus non-rebated HST.

**Option 2**: Delay project and potentially lose an opportunity to collaborate on a project with the United Counties of Leeds & Grenville.

**Recommendation:** That Committee recommends Council award the Dundas Street Engineering project to Jewell Engineering at a cost of \$81,735.52 plus non-rebated HST and direct staff to execute the required documents with Jewell Engineering.

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Chief Water/Sewer Operator

**Director of Operations** 



# TOWNSHIP OF EDWARDSBURGH CARDINAL ACTION ITEM

**Committee:** Committee of the Whole Administration and Operations

Date: May 12, 2025

## **Department:** Fire

**Topic:** Fireworks Bylaw Update

**Purpose:** To provide education and enforceable guidelines on the safe sale and use of consumer and display fireworks through updated municipal bylaw and permit system.

**Background:** At the April Committee of the Whole (COW) meeting, the committee reviewed the current fireworks bylaw and discussed several key issues including:

- Limiting the days fireworks may be sold and discharged
- The authority of the Fire Chief and By-law Enforcement Officers (BLEOs) to enforce restrictions
- Potential exemption options
- Oversight practices in neighbouring municipalities
- The feasibility of integrating fireworks permits into the existing burn permit system

A jurisdictional review revealed that approaches to fireworks regulation vary significantly, with some municipalities including fireworks under their noise bylaws.

Municipality	Firework Sales	Consumer Fireworks	Display Fireworks
Ottawa	7 days prior to	Canada Day &	Application 30 days
	Canada & Victoria	Victoria Day (day	prior. \$5,000,000
	Day	before & day after)	Insurance
Hawkesbury	7-days prior to authorized days	Victoria Day, St. Jean Baptist Day, Canada Day (day before & day after)	Application 30 days prior. \$5,000,000 Insurance
Prescott	Bylaw dept notification required along with posting of fireworks bylaw.	Must not create a nuisance to any person or property.	Council approval required on public land.

Merrickville	No restrictions specified	Permission of the fire chief required in noise bylaw.	(approval of AHJ in Explosives Act)
Elizabethtown Kitley	No restrictions specified	Fireworks permit needed. Inspection required.	Fireworks permit needed. Inspection required.
Augusta	No restrictions specified	Prohibited between the hours of 11:00 pm – 08:00 am. In noise bylaw	(approval of AHJ in Explosives Act)
Carleton Place	7-days prior to authorized days	Canada Day & Victoria Day (day before & day after)	(approval of AHJ in Explosives Act)

Based on committee feedback, the previously authorized days for the discharge of fireworks have been replaced with a requirement for a permit. Additionally, the authorized days for the sale of consumer fireworks have been replaced with a requirement for approval from the fire chief.

The permit system infrastructure is already in place and can be adapted for fireworks with minimal adjustments. Permit applicants will be required to acknowledge and agree to the specified safety requirements and setbacks as a condition of approval. This approach maintains public safety while streamlining administrative processes.

Enforcement of the fireworks bylaw is expected to be driven primarily through education and public awareness. The updated bylaw provides staff with the necessary authority to respond to fireworks-related complaints and concerns.

**Policy Implications:** The Municipal Act permits a municipality to pass bylaws prohibiting and regulating the sale and the discharge of fireworks. This enables municipalities to choose the holidays that residents may discharge consumer fireworks and conditions for retail sales.

**Strategic Plan Implications:** Aligns with the goal of fostering a safe and healthy community through responsible regulation.

Financial Considerations: None anticipated at this time.

**Recommendation:** That Committee recommends that Council approve the updated Fireworks Bylaw attached to this report.

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Fire Chief

# THE CORPERATION OF THE

### TOWNSHIP OF EDWARDSBURGH CARDINAL

#### BY-LAW NO. 2025-

**WHEREAS** Section 121, Subsection (a) of the Municipal Act, 2001, S.O. 2001, c. 25, as amended, provides that a local municipality may prohibit and regulate the sale of fireworks and the discharge of fireworks;

**WHEREAS** Section 121, Subsection (b) of the Municipal Act, 2001, S.0. 2001, c. 25, as amended, provides that a local municipality may prohibit the sale of fireworks and discharge of fireworks unless a permit is obtained from the municipality for those activities and may impose conditions for obtaining, continuing to hold and renewing the permit, including requiring the submission of plans;

**NOW THEREFORE** the Council for The Corporation of the Township of Edwardsburgh Cardinal hereby enacts as follows:

#### 1. **DEFINITIONS**

For the purposes of this By-law:

"discharge"- means to fire, ignite, explode, set off or cause to be fired, ignited, exploded or set off and the words "discharged" and "discharging" have similar meaning;

"Firecracker"- means any class of fireworks that explodes when ignited and does not make any significant display or visible effect after the explosions, and includes the device commonly known as Chinese firecracker but does not include caps for toy guns.

"Fireworks"- shall include the following devices:

"Consumer Fireworks"- means explosives classified F.1 by regulation to the Explosives Act, R.S.C., 1985, c. E-17 and generally described as low-hazard firework articles designed for recreational use by the public including items such as roman candles, sparklers, fountains, volcanoes, mines, and snakes.

"Display Fireworks"- means explosives classified F.2 by regulation to the Explosives Act, R.S.C., 1985, c. E-17 and generally described as high-hazard firework articles designed for use by professionals holding a Fireworks Operator Certificate including items such as aerial shells, cakes, waterfalls, lances and wheels, rockets, serpents, shells, bombshells, tourbillions, maroons, large wheels, bouquets, barrages, bombardos, waterfalls, fountains, batteries illumination, set pieces, pigeons, and firecrackers. "Explosive"- means anything that is made, manufactured, or used to produce an explosion or a detonation or pyrotechnic effect, and includes anything prescribed to be an explosive by the regulation to the Explosives Act, R.S.C. 1985, c. E-17, but does not include gases, organic peroxides or anything prescribed not to be an explosive by the regulations.

"Prohibited Fireworks" - includes, but is not limited to, flying lanterns, cigarette loads, or pings, exploding matches, electric matches, sparkling matches, ammunition tie clips, cufflink or key chain pistols, cherry bombs, M-80, flash crackers, throw down torpedoes and crackling balls, exploding golf balls, stink bombs, smoke bombs, tear gas pens and launchers, patty peppers, table bombs, table rockets, battle sky rockets, fake firecrackers, Sprite bombs, party snaps and other similar types of novelty items and other trick devices or practical jokes as included on the most recent list of prohibited fireworks as published by the Explosives Act, R.S.C. 1985, c. E-17 from time to time.

"flying lantern"- means a product resembling a small translucent hot-air balloon fueled by an open flame, also having other product names including Sky Lantern, Chinese Lantern and Kongming Lantern.

"Officer"- means a Police Officer, Fire Marshal, Chief Fire Official, Fire Inspector, Fire Prevention Officer or Municipal Law Enforcement Officer.

"special effect pyrotechnics" - means, in addition to any explosive classified as type F.3, by regulation to the Explosives Act, R.S.C., 1985, c. E-17, the following types of explosives, if it will be used to produce a special effect in a film, television production or a performance before a live audience:

(a) fireworks accessories (type F.4);

(b) black powder and hazard category PE 1 black powder substitutes (type P.1);

(c) smokeless powder and hazard category PE 3 black powder substitutes (type P.2);

(d) initiation systems (type I) (for example, blasting accessories);

(e) detonating cord (type E.1); and

(f) low-hazard special purpose explosives (Type S.1) and high-hazard special purpose explosives (Type S.2).

#### 2. AUTHORIZED DAYS AND TIMES

#### 3. GENERAL PROVISIONS

- 3.1 No person shall discharge Fireworks in a manner that might create a danger or nuisance to any person, animal or property.
- 3.2 No person shall permit or cause any debris or matter from Fireworks to land on any building, fence, hedge, tree, highway, public or private property other than the property where the Fireworks are being discharged.
- 3.3 Every person who discharges or is responsible for the discharging of Fireworks shall provide and maintain fully operational fire extinguishing equipment, including but not limited to portable fire extinguishers or a water supply, ready for immediate use and present at all times and for at least thirty (30) minutes after the discharging of the Fireworks has terminated.
- 3.4 No Person shall cause or permit the storage, use, discharge, sale or offer for sale, of any Prohibited Fireworks.
- 3.5 No person shall cause or permit the storage, use, discharge, sale or offer for sale of Firecrackers.
- 3.6 No person shall possess or discharge any fireworks not authorized by the Explosives Regulatory Division (ERD) of the Government of Canada.
- 3.7 No Person shall cause or permit to sell or offer for sale Fireworks to any person less than eighteen (18) years of age.
- 3.8 No Person shall cause or permit the discharge of Fireworks during a Fire Ban.
- 3.9 No person shall ignite and/or release or permit the ignition and/or releasing of a product commonly referred to as a flying lantern as defined herein.

#### 4. EXEMPTIONS

- 4.1 This Bylaw shall apply to all persons and all uses of Fireworks in the Township except the use of Fireworks for occupational purposes by trained personnel following all applicable standards, acts, and regulations including:
  - 4.1.1 emergency warning or signaling an actual or simulated emergency
  - 4.1.2 wildlife management
  - 4.1.3 testing and disposal of products by a manufacturer

#### 5. CONSUMER FIREWORKS

5.1 <u>No person shall discharge consumer fireworks without first obtaining a</u> <u>fireworks permit from the fire department.</u>

<u>No person shall display, offer for sale or sell Consumer Fireworks</u> except for seven (7) calendar days immediately preceding authorized days in subsection 2.1.

- 5.2 No person shall display, offer for sale or sell Consumer Fireworks without the approval of the Fire Chief.
- 5.3 The storage, sale and handling of Fireworks shall be in accordance with the Ontario Fire Code, the Explosives Act R.S.C., 1985, c. E-17, as amended, and Explosives Regulations 2013 SOR/2013-211, as amended, and all other applicable legislation.
- 5.4 No Person under the age of eighteen (18) shall be permitted to handle or use Consumer Fireworks unless under the direct supervision and control of a person eighteen (18) years of age or older.
- 5.55 No person being the parent or guardian of any child under the age of eighteen (18) years shall permit said child to use Consumer Fireworks except when such parent or guardian or some other responsible person of at least eighteen (18) years of age is in direct supervision and control.
- 5.6 No Person shall discharge Consumer Fireworks in the following areas:
  - 5.6.1 On land owned or operated by the Township, its boards, or agencies, without written consent from the Township;
  - 5.6.2 within 50 metres of a hospital, nursing home, long term care facility, retirement home, licensed group home, school, educational facility, daycare, childcare facility, or religious institution, without the written consent of the owner of such facility;
  - 5.6.3 within 50 metres of a place where explosives, gasoline or other highly flammable substances are commercially manufactured, stored or sold.
- 5.7 No person shall discharge or cause or permit the discharge of Consumer Fireworks on any land except on land belonging to the person using the fireworks, or on other privately owned land where written consent of the owner has been obtained.

#### 6. DISPLAY FIREWORKS AND SPECIAL EFFECTS

- 6.1 No person shall discharge, cause or permit to be discharged, Display Fireworks or Special Effects at any time without first having obtained approval by the Township.
- 6.2 Every person applying for approval under subsection 6.1 shall file with the Fire Chief, a completed application in the form prescribed by the Township at least 14 days prior to the fireworks event taking place including a certificate of insurance in the amount of five million dollars (\$5,000,000) liability with a cross-liability clause and naming the Township as an additional insured.
- 6.3 No person shall use, cause or permit to be used, Display Fireworks/Special Effects in a manner contrary to the provisions of a permit issued under subsection 6.1.
- 6.4 No person shall use, or cause or permit to be used, Display Fireworks/Special Effects at any time as follows:
  - 6.4.1 At a location, site, date or time, other than as specified in the permit, as issued;
  - 6.4.2 outside the site boundaries as specified in the permit, as issued;
  - 6.4.3 on any land or site that is not owned by him or her, unless the prior written permission has been obtained from the owner, and the date is clearly specified in the written permission;
  - 6.4.4 into, in or on any highway, street, lane, square or other public place, which the public or any member thereof has access to, may have access to, uses or may use;
  - 6.4.5 within three hundred (300) metres of any premises or place where explosives, gasoline or other highly flammable liquid or gas substances or compounds are manufactured or stored in bulk;
  - 6.4.6 within three hundred (300) metres of a hospital, nursing home, home for the aged, church or school without the written consent of the owner of the facility.

#### 7. OFFENCES AND ENFORCEMENT

- 7.1 Any person who contravenes any portion of this Bylaw is guilty of an offence and upon conviction is liable to a penalty as provided for in the Provincial Offences Act, R.S.O. 1990, c.P.33, as amended, and to any other applicable penalties.
- 7.2 Each day of contravention shall be a separate offence.

- 7.3 Upon conviction, the Court in which the conviction has been entered and any Court of competent jurisdiction thereafter, may make an order prohibiting the continuation or repetition of the offence by the person convicted.
- 7.4 This Bylaw shall be enforced by any Officer as defined in this bylaw.
- 7.5 Any Officer may enter private property at any time for the purposes of upholding the provisions of this Bylaw in accordance with applicable legislations, Acts, and regulations.

#### 8. CONFLICT

- 8.1 In the event that a provision of this Bylaw respecting the keeping and manufacturing of explosives is inconsistent with a provision of Part IV of the Fire Prevention and Protection Act, 1997, S.O. 1997, c. 4, as amended, the provision that is the most restrictive prevails.
- 8.2 In the event that a provision of this Bylaw is inconsistent with the Explosives Act R.S.C., 1985, c. E-17, as amended, or the Municipal Act, 2001, S.O. 2001, c. 25, as amended, their Regulations or any other Act or Regulation, the provision of the Act or Regulation shall prevail.

#### 9. VALIDITY AND SEVERABILITY

- 9.1 If any section , subsection, clause, paragraph or provision of this by-law or parts thereof are declared by a court of competent jurisdiction to be invalid, unenforceable, illegal or beyond the powers of Municipal Council to enact, such section, subsection, clause, paragraph, provision or parts thereof shall be deemed to be severable and shall not affect the validity or enforceability of any other provisions of the bylaw as a whole or part thereof and all other sections of the by-law shall be deemed to be separate and independent there from and enacted as such.
- 9.2 Whenever any reference is made under this by-law to a statute or regulation of the Province of Ontario, such reference shall be deemed to include all subsequent amendments to such statute or regulation and all successor legislation to such legislation.
- 9.3 Nothing in this policy takes precedence over any bylaws, resolutions, plans or agreements of the Township or other legislation.

#### 10. EFFECTIVE DATE AND REPEALS

10.1 This Bylaw shall come into force and take effect on the date of passing.

10.2 All bylaws existing on the Effective Date of this Bylaw that are inconsistent with this Bylaw are hereby repealed and are of no further force and effect. (Cardinal bylaw 548 -1961, Edwardsburgh bylaw 1401 – 1965)

#### 11. GENERAL

11.1 That the following Schedule attached shall form and constitute part of this by-law: Schedule "A" - Display Fireworks/Special Effects Approval Form

Schedule A

# Display Fireworks/Special Effects Approval Form

Name of applicant (print):	
Address:	
Telephone:	E-mail:
Supervisors certificate number:	Expiry date:
Company (if applicable):	
Address:	
Telephone:	E-mail:
Sponsoring organization (if applicable):	
Telephone:	E-mail:
Event date:	Time:
Location:	
<ul> <li>Copy of Display Supervisor certificate</li> <li>Certificate of liability Insurance in the a</li> <li>Written permission of registered proper</li> <li>Site plan in accordance with the MNR I</li> <li>Event description in accordance with the</li> </ul>	mount of 5 million dollars ty owner or municipal council Display Fireworks Manual ne MNR Display Fireworks Manual
Display Supervisor:	Date:
Permission of Authority Having Jurisdi	iction
Name (print):	Title:
Township of Edwardsburgh Cardinal, 18 C	Centre Street, Spencerville, ON K0E1X0
Telephone:	E-mail:
Signature:	Date:
Comments:	