Staff Report for Committee of the Whole Meeting

Date of Meeting: November 6, 2024
Report Number: SRCFS.24.50

Department: Corporate and Financial Services
Division: Financial Services

Subject: SRCFS.24.50 – 2024 Stormwater Management Financial Plan

Purpose:

To present for Council's approval, the City of Richmond Hill Stormwater Management Financial Plan which was developed in partnership with Watson & Associates Economists Ltd. The plan provides a guiding document that sets financial goals to make informed decisions to achieve long-term financial sustainability.

Recommendations:

a) That staff report SRCFS.25.40 – 2024 Stormwater Management Financial Plan be received;

b) That to address the anticipated deficit balance in the stormwater management capital funding availability, Council approve the 2025 Stormwater Management Financial Plan as detailed in Appendix A;

c) That Council approve the recovery of all stormwater management costs through full cost recovery rates:

   i) That Council approve the Scenario 2 option for funding the City's ten-year stormwater management capital program, where $3 million in Canada Community Building Fund funding will be used annually for the first five years and $22 million of debt will be issued to smooth the rate increases;

   ii) That staff be directed to provide a report to Council on the debt issuance process and plan before June 2025;

   iii) That Council approve in principle, the timing and funding of the ten-year stormwater management capital plan as provided in Appendix A, Table 2.1; and

   iv) That Council consider the stormwater rates provided in Appendix A, Table B-8 related to Scenario 2 in future years' budget deliberations.

Contact Persons:

- Lisa Chen, Manager, Fiscal Planning & Analysis, Extension 6311
- Gigi Li, Director Financial Services and Treasurer, Extension 6435
- Sherry Adams, Commissioners Corporate and Financial Services, Extension 2521

Report Approval:

All reports are electronically reviewed and/or approved by the Division Director, Treasurer (as required), City Solicitor (as required), Commissioner, and City Manager. Details of the reports approval are attached.

Key Messages:

- Rate increases and funding have not kept pace with the growing needs of stormwater infrastructure. Based on the 2013 approved Stormwater Management Financial Plan, the 2024 forecasted stormwater rate would have generated $18 million in 2024 compared to the actual $5.8 million that was collected.

- Due to the deferral of required rate increases in previous budget cycles, essential infrastructure projects have been delayed. This postponement has led to substantial capital needs accumulating over the next five years, heightening the risk of system failures, escalating maintenance costs, and creating additional pressure for sharp rate increases in the future. Staff engaged Watson & Associates Economists Ltd. to update the Stormwater Management Financial Plan. After deferring some capital projects, analysis indicates if the City relied solely on user rate increases, the annual stormwater management user fees for an average residential property (0.16 acres) is expected to increase from $77 in 2024 to $311 in 2027.

- Staff recommend that the capital infrastructure needs (2025 to 2034) be funded by a combination of user fee increases, $3 million annual funding from the Canada Community Building Fund for the next five years, and $22 million debt issuance to smooth rate increases. Under this scenario, the annual stormwater management user fees for an average residential property (0.16 acres) is expected to increase from $77 in 2024 to $286 in 2034.

- The recommendation provides the greatest balance between affordability, and risk mitigations to ensure the long-term financial sustainability of stormwater infrastructure and associated services.

Background:

Stormwater, which is rainwater, snowmelt, or other forms of precipitation, must be managed within a municipality to prevent and or mitigate flooding and related issues. As development occurs in a municipality, higher amounts of impervious surfaces develop which increases both the amount of stormwater runoff, and the rate at which the runoff is transported off the surfaces.

Stormwater management (SWM) is the application of practices that are designed to provide protection from flooding, erosion, and protect and maintain the water quality of rivers and streams. In Ontario, municipalities are responsible for stormwater management for more localized storm related surface water. This can be provided through streams, rivers, creeks, or through City-wide municipal infrastructure.

City-wide infrastructure, such as stormwater mains in urban areas, outfalls, ditching along-side roads, etc. are all maintained and funded by the City. Increases in the amount of hard surfaces results in increased pressure on existing infrastructure as the assets need to deal with greater runoff volumes.

The City owns, operates, and maintains an extensive SWM asset inventory that forms part of a larger system, including:

- 540 km of storm sewers
- 18,000 catchbasins
- 95 storm ponds
- 115 sedimentation and filtration manufactured treatment devices
- 1,100 culverts/road crossings
- 45 low impact development (LID) infrastructure systems
- 150 km of streams

It is anticipated that the Water Quality Protection Reserve Fund, which funds Stormwater Management (SWM) asset lifecycle requirements, will be depleted in 2025. In 2022, Council directed staff to report back on a Stormwater Rate Structure Review and a Stormwater Management Financial Plan. Staff undertook the project in a two-phase approach with staff presenting the first phase, the recommendations of *SRCFS.23.45 - Stormwater Rate Structure Review*, at the November 16, 2023, Committee of the Whole meeting, and committing to Council to report back on the second phase, Stormwater Management Financial Plan, by the third quarter of 2024.

This report completes the second phase of the 2022 Council direction and recommends a financial plan for the long-term financial sustainability of SWM infrastructure and services.

Discussion:

The City retained Watson & Associates Economists Ltd. in early 2024 to undertake both the Water and Wastewater, and SWM Financial Plans. Both plans were presented to the Executive Leadership Team in May 2024, and the Water and Wastewater Financial Plan was approved by Council on June 5, 2024. The SWM Financial Plan was put on hold while staff re-evaluated the capital needs in the ten-year forecast as part of the annual capital budget process.

The SWM analysis was recently updated and the SWM Financial Plan Report as attached to Appendix A of the staff report provides recommendations based on the revised capital forecast. The full report details are summarized below.

Stormwater Management Rate History

A review of the history of the stormwater management rate is required to understand the current analysis and recommendations.

The fee was implemented in 2013, removing the costs from the tax supported operating budget, and shifting it to the dedicated new fee. Based on the 2013 approved SWM Financial Plan, the rate recovery forecasted for 2024 should have been $18 million compared to the 2024 budget of $5.8 million. Figure 1 and Figure 2 show the difference between the Actual and Planned recoveries and rates since 2013.

Figure 1: Historic Stormwater Billing Recovery – Actual Versus Planned

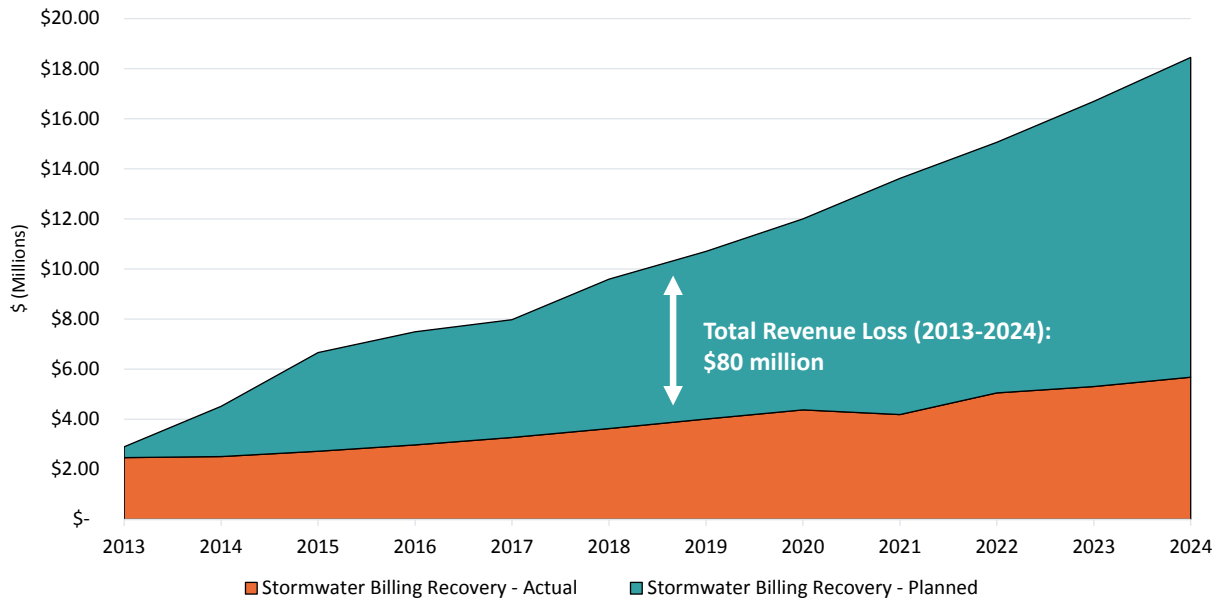


Figure 2: Historic Stormwater Rate Increases – Actual Versus Planned

Percentage Increases	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total 2014-2024 Increase
Planned	56%	47%	13%	6%	20%	12%	12%	14%	11%	11%	10%	537%
Actual	2%	9%	9%	10%	11%	11%	9%	-4%	21%	5%	7%	131%

As shown in Figure 2, the 2014 to 2024 planned cumulative rate increase was 537% compared to the actual cumulative rate increase of 131%, as a direct result of previous years' required rate increases not implemented through annual budget deliberations. Consequently, capital projects had been deferred, resulting in significant capital needs over the next five years, and creating pressure on future stormwater management rate increases.

Stormwater Management Financial Plan Report (Appendix A)

Taking into consideration the SWM operating and draft capital budget requirements over the next ten years (2025 to 2034), prepared as of September 13, 2024, the annual SWM rate increases required to fully recover costs far exceed what can be reasonably passed on to the end user. Relying solely on user rates, the SWM residential rate per 1,000 square feet increases from $11.02 in 2024 to $44.33 by 2027, and gradually decreases to $30.97 by 2034. The rate is directly impacted by the timing and fluctuations in capital project requirements as funding would be raised based on pay-as-you-go every year, with the Water Quality Protection Reserve Fund depleted by the end of 2025. Three funding scenarios were considered and staff recommend that debt issuance provides the greatest balance between affordability, financial sustainability, maintaining service levels and providing protection from stormwater management related risks

A review of the financial plan assumptions provide greater insight into the staff recommendations.

A. Financial Plan – Operating Forecast

Annual day-to-day operating expenditures over the forecast period are estimated based on the 2024 operating budget along with a detailed analysis undertaken by City staff.

Major expenditures related to the stormwater system include:

- All costs related to existing and projected contracts, materials, and supplies for operating the network. Operating expenditures are shared between stormwater management and water/wastewater for items such as wages for operations staff, vehicle rentals, uniforms, and emergency repair contracts. The portion of stormwater management-related costs is transferred from the stormwater management budget to the water/wastewater budget via the "Transfer to Water Fund" line item in the operating budget.

- In the City's main Operating Fund (tax-supported budget), staff allocate time to stormwater management-related activities. Personnel costs include current staffing and four anticipated new positions over the forecast period. Non-personnel costs, such as IT applications and facility usage, also support stormwater management operations. The City calculates a cost recovery amount charged to the stormwater management fund, reflected as a "Transfer to Operating Fund" in the rate calculations.

- The majority of the expenses are consistent over the ten-year forecast period, with the exception of the annual capital reserve fund (Water Quality Protection Reserve Fund) contributions. The annual Stormwater Management operating budget contributes $1.3 million to the reserve fund in 2024. The capital reserve fund has no excess balance other than the annual contribution. This amount is projected to increase significantly over the forecast period and further details will be described under the Funding Sources section of this report.

B. Financial Plan – Capital Infrastructure Needs

The draft 2025 to 2034 Capital Forecast for growth and maintaining state of good repair of the stormwater management system is presented in detail in Appendix A, Table 2.1 (draft as of September 13, 2024). The forecast was revisited as part of this analysis to assist in smoothing the capital program and the resulting impact to the rates over the 2025 to 2034 period. The total forecast is $148 million in 2024 dollars (uninflated) or $161 million inflated.

The stormwater management capital infrastructure needs and timing are currently determined by Provincial regulations, infrastructure monitoring and inspection programs, the 2024 Asset Management Plan and analysis from the City's SWM computer model to develop the SWM ten-year capital forecast.

The capital infrastructure needs are also influenced by York Region and third-party projects that benefit the City. The capital forecast includes $18.5 million in 2029 for such projects, funded by development charges and the rate-supported capital reserve fund (Water Quality Protection Reserve Fund). This amount represents the City's share of the Elgin Mills Culvert reconstruction, aimed at reducing surface flooding in the Yonge Street and Elgin Mills Road area along German Mills Creek. The project is planned to be designed and built by the Region as part of the Elgin Mills Grade Separation project.

Regulations

Municipal Consolidated Linear Infrastructure Environmental Compliance Approval (CLI ECA)

Stormwater infrastructure is primarily regulated by Provincial agencies under the Ontario Water Resources Act, with specific operational and maintenance requirements for municipalities. The City manages its stormwater system under a

system-wide Consolidated Linear Infrastructure Environmental Compliance Approval (CLI ECA), requiring regular inspections, monitoring, maintenance, and reporting to the Province to ensure compliance. The approval mandates proper operation, maintenance, and "adequate funding" for the stormwater system.

Municipalities must annually report the system's status and plans to address deficiencies. The City has $65 million in pond improvements scheduled between 2025 and 2034, including but not limited to Newman, Driftwood, Verdi, and Solmar Ponds.

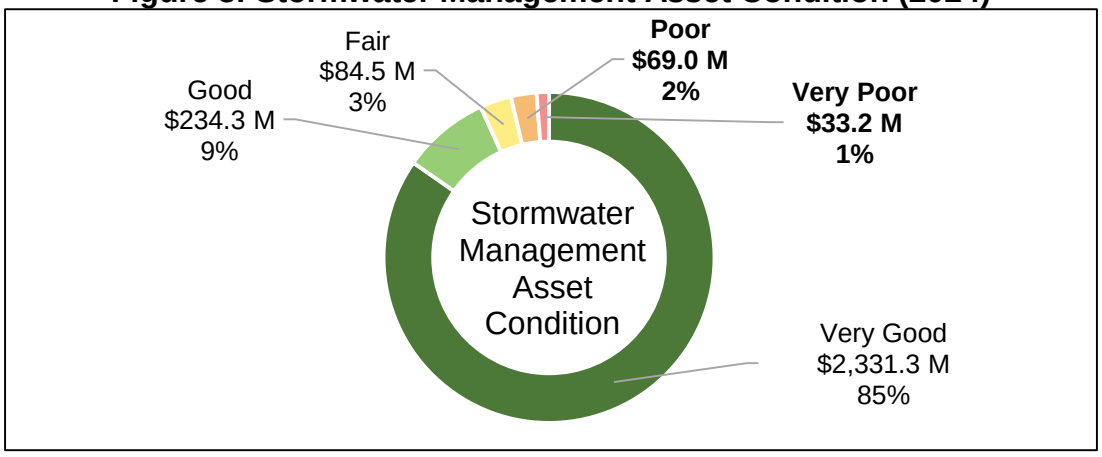
Asset Management Planning for Municipal Infrastructure Regulation O. Reg. 588/17

In many parts of Ontario, existing infrastructure is degrading faster than it is being repaired or replaced, putting services at risk. To help address this issue, the Province implemented the Asset Management Planning for Municipal Infrastructure Regulation, O. Reg. 588/17 requiring municipalities to implement and regularly update asset management plans for their infrastructure. Under this regulation these plans must include current service levels and necessary lifecycle activities. The City met the first phase by July 1, 2022, and presented an updated plan to Council in June 2024. As part of the last phase, the City will need to identify a financial strategy to fund the future infrastructure replacement needs through the dedicated stormwater rate. This will be due in July 2025, and the Stormwater Management Financial Plan presented today will inform those requirements.

2024 Asset Management Plan

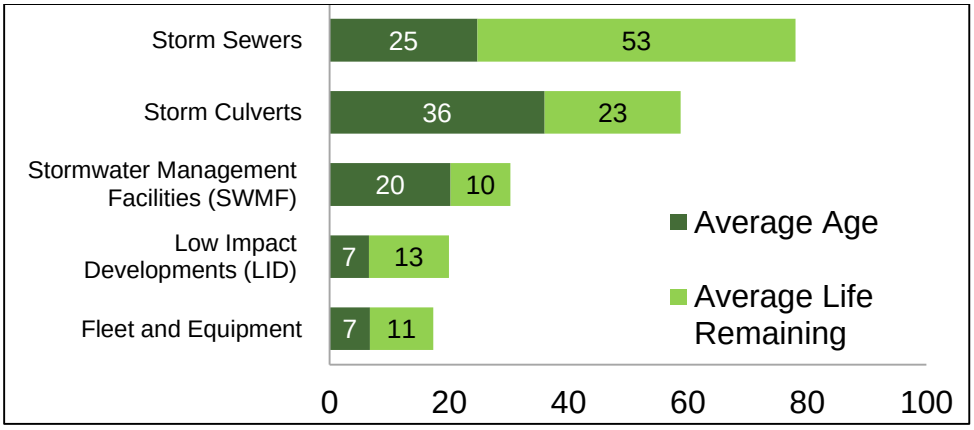
The 2024 Asset Management Plan estimates the replacement and maintenance cost to maintain a state of good repair of current SWM assets at $2.75 billion, with $102 million (3%) in poor or very poor condition, as shown in Figure 3 below.

Figure 3: Stormwater Management Asset Condition (2024)



While no assets are at high risk of failure, about $110 million are at medium risk, and the remaining $2.64 billion are at low or very low risk. As shown in Figure 4, most of the assets needing interventions are stormwater management facilities (ponds), averaging 20 years old, with a typical lifespan of 30 years before remediation is needed, within the timing of the ten-year forecast.

Figure 4: Stormwater Management Asset Average Age versus Average Remaining Life (2024)



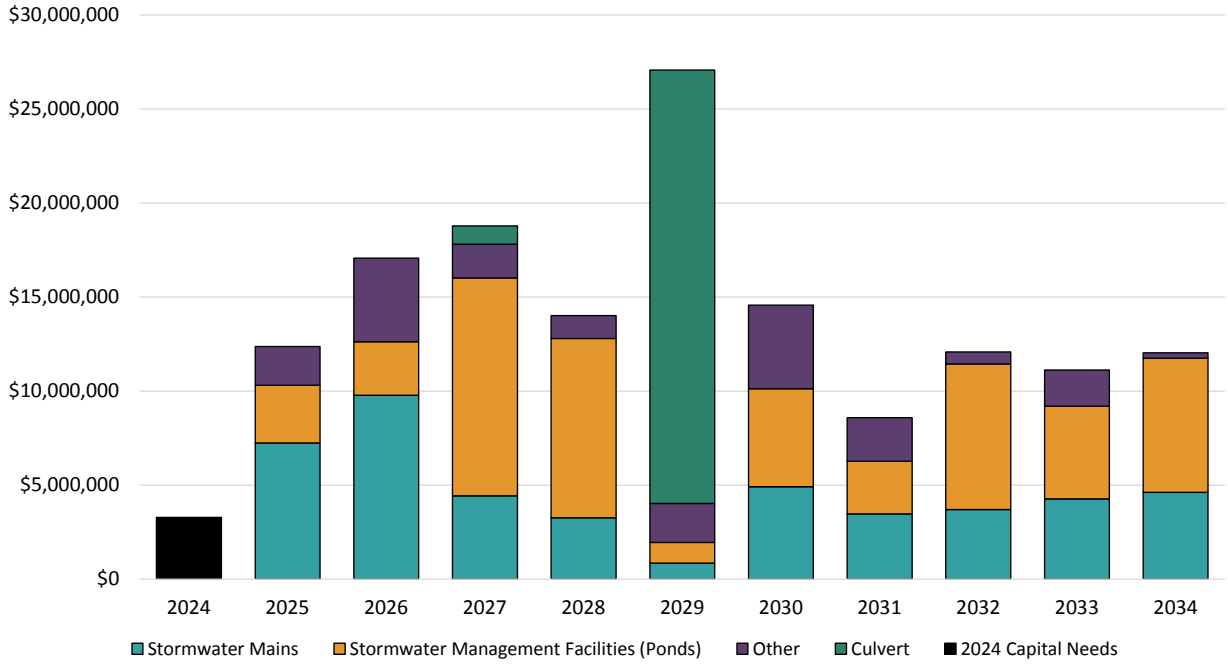
SWM Computer Model and Master Plan

The City's SWM computer model informs on capacity deficiencies of the stormwater system today and in the future. These models are required for regulatory compliance with Provincial legislation (CLI ECA) and allows for the right infrastructure to be upgraded at the right time to minimize costs while achieving maximum benefits, as well as minimizing flood related risks and impacts to the environment.

The 2025 capital budget includes a SWM Master Plan project to identify and prioritize capital projects that are required to address the capacity deficiencies identified though the City's SWM computer model and growth projected for the City through the Official Plan. Initial estimates indicate approximately $45 million of additional new or upgraded stormwater infrastructure will be needed during the forecast period for reconstruction projects aimed at increasing capacity and reducing flood risks. This estimate will be refined through the completion of this Master Plan.

Figure 5 provides the breakdown of the $148 million (uninflated) ten-year capital program by asset type.

Figure 5: 2024 to 2034 Capital Infrastructure Needs by Asset Type



The capital needs outlined in the forecast account for both asset management and anticipated growth requirements as of today. Staff have reviewed the forecast to align stormwater management projects with road reconstruction projects, maximizing efficiency. The City will be developing a stormwater management master plan, and upon completion in 2026, may reveal additional capital needs or changes in project timing and prioritization. Any significant updates from these planning efforts will require a future reassessment of the rate analysis presented.

The graph indicates a substantial increase in capital needs compared to the approved 2024 amount. As mentioned, the City has not implemented the necessary forecasted rate increases to fund the capital program over the past 10 years, as a result:

1. Deferred capital projects increased pressure on maintaining capital infrastructure.
2. The amount available from the operating budget to transfer and fund the capital program is only $1.3 million in 2024, and will remain the same in the future unless the rate increases, as recommended in this report.
3. The annual capital program uses the Water Quality Protection Reserve Fund to finance stormwater capital expenditures, which will be depleted by the 2025 budget.

C. Financial Plan – Funding Sources

Adjusted for inflation, the capital infrastructure needs for 2025 to 2034 totals $161 million. This forecast is funded through the Water Quality Protection Reserve Fund, development charges, the Canada Community Building Fund, and other grants. The City may also consider debt financing (internal or external).

According to the current Development Charges By-Law Study assumptions, there will be enough funds to cover growth-related projects. However, changes to the contributions to the Water Quality Protection Reserve Fund are necessary. The forecast requires $134 million from this reserve fund, but if the 2024 contribution levels remain unchanged, only $13 million (10%) will be available.

Given the significant capital needs over the forecast period, there is an anticipated funding gap through the stormwater rate and funding that will be required to maintain existing and future assets. Figure 6 summarizes three funding scenarios considered:

- **Scenario 1:** no debt will be issued, and stormwater rates will be increased to raise the required amounts to fund the annual capital spending needs.

- **Scenario 2:** assume $3 million in Canada Community Building Fund (CCBF) funding will be used annually for the first five years, and $22 million debt issuance.

- **Scenario 3:** further deferral of the capital forecast, assume $3 million in CCBF funding annually over the first five years, and no debt issuance. Staff had already revised the capital forecast in Scenarios 1 and 2 to defer certain projects to later years. Scenario 3 provides for further revised timing of these works and requires further capital project deferrals and increases the associated asset management risks.

Figure 6: Capital Infrastructure Needs – Funding Sources by Scenario

Description	2025 to 2034 (Inflated $)		
	Scenario 1	Scenario 2	Scenario 3
Capital Financing - Inflated $			
Grant Funding	1,176,000	1,176,000	1,176,000
Development Charges Reserve Fund - Engineering	19,299,000	19,299,000	19,299,000
Development Charges Reserve Fund - Other [1]	1,480,000	1,480,000	1,480,000
Canada Community Building Fund	1,561,000	16,561,000	16,561,000
Non-Growth Related Debenture Requirements	-	22,136,487	-
Growth Related Debenture Requirements	-	-	-
Operating Contributions	-	-	-
S.37 Community Benefits	1,268,000	1,268,000	1,268,000
Other Tax-Supported Reserves	275,000	275,000	275,000
Sanitary Repair and Replacement Reserve [2]	1,180,000	1,180,000	1,180,000
Water Quality Protection Reserve	134,306,000	97,169,513	121,925,961
Total [3]	**160,545,000**	**160,545,000**	**163,164,961**

[1] For works to be funded from public works or growth studies D.C. reserve funds
[2] For component of works that are related to sanitary sewers
[3] Note: totals are slightly different for Scenario 3 given the difference in the timing of works and the relative impact of the inflationary factor applied in each year

D. Financial Plan – Forecasted Stormwater Management Rates

Based on the three funding scenarios above, the residential rate impact per 1,000 square feet is described below:

- **Scenario 1:** no debt will be issued and stormwater rates will be increased to raise the required amounts to fund the annual capital spending needs – **the rate increases from $11.02 in 2024 to $44.33 by 2027, and gradually decreases to $30.97 by 2034.**

- **Scenario 2:** assume $3 million in Canada Community Building Fund (CCBF) funding will be used annually for the first five years, and $22 million debt issuance – **the rate increases from $11.02 in 2024 to $27.29 by 2027 and increases gradually to $40.75 by 2034.**

- **Scenario 3**: further revised (deferred) timing of the capital forecast, assume $3 million in annual CCBF funding over the first five years, and no debt issuance – **the rate increases from $11.02 in 2024 to $21.51 by 2027 and increases to $51.09 by 2034.**

Figure 7 compares the annual financial impact of the three scenarios to a single detached residential property averaging 0.16 acres.

Figure 7: Annual Stormwater Rate Impact – Average Residential Property (Single Detached – 0.16 acres)

Scenario	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Scenario 1	$77	$210	$283	$311	$296	$281	$267	$254	$241	$229	$218
$ Change		**$133**	**$73**	**$28**	**($15)**	**($15)**	**($14)**	**($13)**	**($13)**	**($12)**	**($11)**
Scenario 2	$77	$116	$174	$192	$211	$232	$255	$262	$270	$278	$286
$ Change		**$39**	**$58**	**$17**	**$19**	**$21**	**$23**	**$6**	**$8**	**$8**	**$8**
Scenario 3	$77	$97	$121	$151	$189	$236	$295	$310	$325	$342	$359
$ Change		**$19**	**$24**	**$30**	**$38**	**$47**	**$59**	**$15**	**$15**	**$16**	**$17**

Financial Implications:

Scenario 2 is recommended for Council's consideration. Historically, the stormwater management system has been underfunded as a result of unimplemented recommended rate increases since the implementation of the 2013 Stormwater Management Financial Plan. This postponement has led to substantial capital needs accumulating over time, heightening the risk of system failures, escalating maintenance costs, and creating additional pressure for sharp rate increases in the future. Deferrals, inflation, updated asset assessments and climate change have further exacerbated capital needs.

The current funding to the Water Quality Protection Reserve Fund is unsustainable, requiring rate increases to support the capital program. Approving these recommendations represents Council’s support for staff to follow this as the budgetary strategy in future budget deliberations with respect to stormwater management operations. The actual figures may differ as assumptions and new information becomes available; however, Council will commit to the overall funding strategy.

Scenario 2 fully funds the program based on engineering timelines, with debt issuance helping to reduce rate increases compared to Scenario 1. While Scenario 3 offers lower rate increases initially, it defers critical capital projects, risking a decline in service levels. Therefore, Scenario 2's rate forecast is recommended for implementation, with debentures used to help finance large expenditures.

Based on this discussion, it is recommended that the rate forecast presented in Scenario 2 be considered for implementation. Although it is not a direct method of minimizing the overall cost to the ratepayer, debentures are used by municipalities to assist in cash flowing large capital expenditures.

The Ministry of Municipal Affairs regulates municipal debt in Ontario under the Municipal Act, with Ontario Regulation 403/02 setting the rules. Municipalities can allocate up to 25% of their revenue to debt servicing. Richmond Hill's 2024 debt capacity allows for an estimated annual repayment limit of $67.13 million, translating to about $836.56 million in available debt at a 5.0% interest rate over 20 years.

Scenario 2 proposes issuing $22 million in debt, well within the city's debt capacity. The payments will extend beyond the forecast period. The total interest costs over the full term of the debt (i.e. 2025-2050) equates to $11.31 million or $5.66 million within the forecast period (2026-2034).The stormwater rate forecast in Scenario 2 will guide future budget decisions. Figures 8 and 9 illustrate rate impacts on residential and commercial/industrial properties respectively.

Figure 8: Rate Impact on Average and Largest Residential Properties

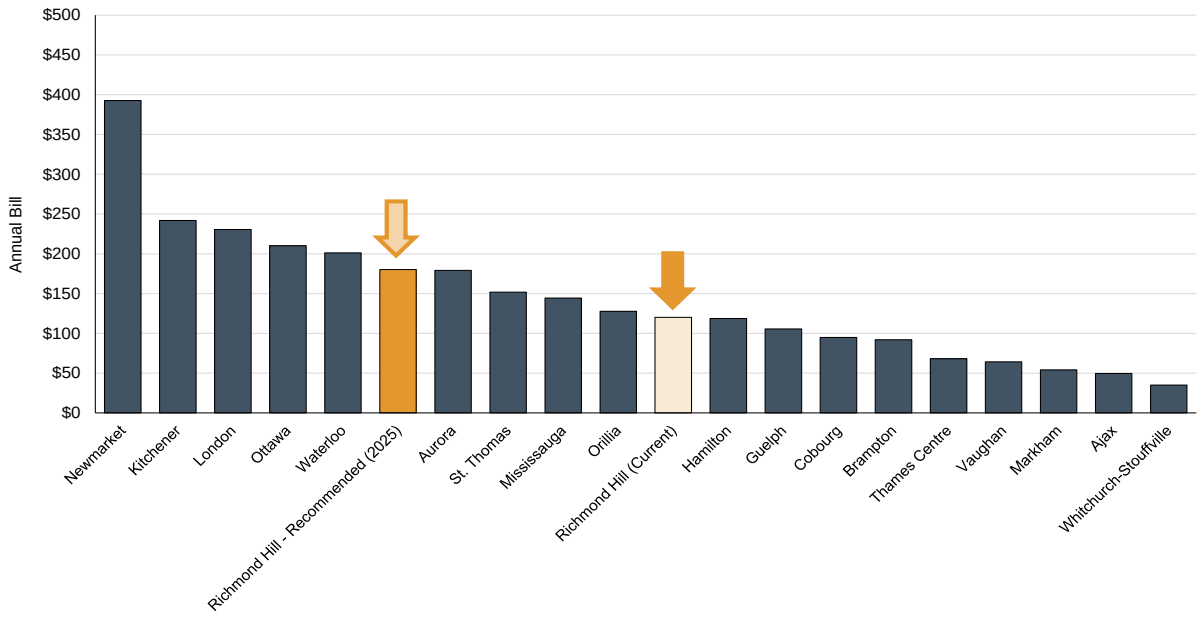
Residential Properties	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Average Residential Property (0.16 acres)	$77	$116	$174	$192	$211	$232	$255	$262	$270	$278	$286
$ Change		**$39**	**$58**	**$17**	**$19**	**$21**	**$23**	**$6**	**$8**	**$8**	**$8**
Largest Residential Property (11 acres)	$1,344	$2,018	$3,025	$3,329	$3,659	$4,025	$4,428	$4,542	$4,684	$4,825	$4,970
$ Change		**$674**	**$1,008**	**$304**	**$330**	**$366**	**$402**	**$115**	**$141**	**$141**	**$145**

Figure 9: Rate Impact on Average and Largest Industrial/Commercial Properties

Non-Residential Properties	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Average Industrial/Commercial Property (2.1 acres)	$1,926	$2,890	$4,337	$4,770	$5,246	$5,770	$6,346	$6,507	$6,712	$6,917	$7,124
$ Change		**$964**	**$1,447**	**$433**	**$476**	**$524**	**$576**	**$161**	**$205**	**$204**	**$207**
Largest Industrial/Commercial Property (46 acres)	$41,723	$62,593	$93,940	$103,325	$113,628	$124,987	$137,462	$140,949	$145,393	$149,817	$154,301
$ Change		**$20,870**	**$31,346**	**$9,386**	**$10,303**	**$11,359**	**$12,475**	**$3,487**	**$4,444**	**$4,424**	**$4,484**

If Scenario 2 is adopted, the potential new rates in comparison to other municipalities is provided in Figure 10.

Figure 10: Municipal Comparison of the 2024 Stormwater (Average Residential Annual Bill – based on 0.25 acre property)



Relationship to Strategic Plan 2024-2027:

Completing the Stormwater Management Financial Plan provides guiding principles for future stormwater rate increases, and relates to Pillar 3, Strengthening our Foundations, specifically Priority 1, make decisions that are evidence-based and data-driven to enable the City's long term financial sustainability, as well as social, environmental and economic sustainability, and Priority Action b) make capital investments within the context of financial sustainability and based on best practices in asset management planning.

Attachments:

The following attached documents may include scanned images of appendixes, maps and photographs. All attachments have been reviewed and made accessible. If you require an alternative format please call the contact person listed in this document.

- Appendix A – Stormwater Management Financial Plan Report

Report Approval Details

Document Title:	SRCFS.24.050 - 2024 Stormwater Management Financial Plan.docx
Attachments:	- Stormwater Management Financial Plan.pdf
Final Approval Date:	Oct 30, 2024

This report and all of its attachments were approved and signed as outlined below:

Gigi Li - Oct 28, 2024 - 6:23 PM

Paolo Masaro - Oct 29, 2024 - 8:53 AM

Sherry Adams - Oct 29, 2024 - 1:51 PM

Darlene Joslin - Oct 30, 2024 - 10:31 AM