Stormwater Management Financial Plan

City of Richmond Hill

For Council Consideration

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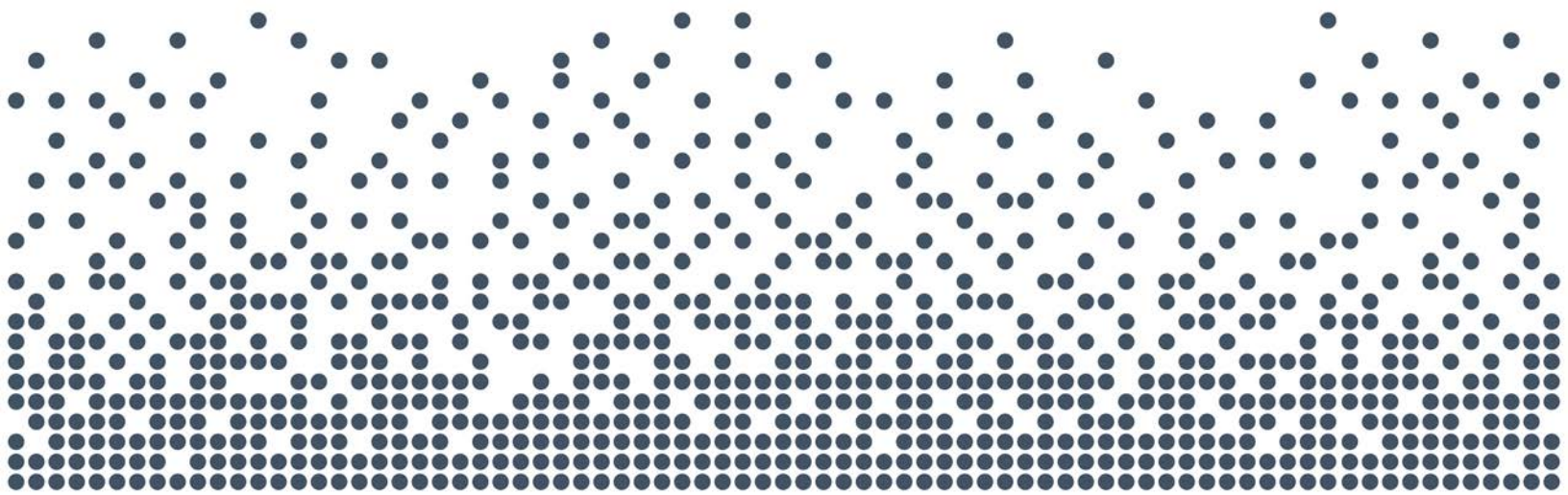
List of Acronyms and Abbreviations

Acronym	Full Description of Acronym
C.C.B.F.	Canada Community Building Fund
D.C.	Development charge
D.C.A.	*Development Charges Act*
E.C.A.	Environmental compliance approval
H.E.W.S.	Housing-Enabling Water Systems Fund
I.J.P.A.	*Infrastructure for Jobs and Prosperity Act*
L.I.D.	Low impact development
LPAT	Local Planning Appeal Tribunal
OLT	Ontario Land Tribunal
O.Reg.	Ontario Regulation
O.S.I.F.A.	Ontario Strategic Infrastructure Financing Authority
Sq.ft.	square foot
S.W.M.	Stormwater management
S.W.S.S.A.	*Sustainable Water and Sewage Systems Act*



Executive Summary

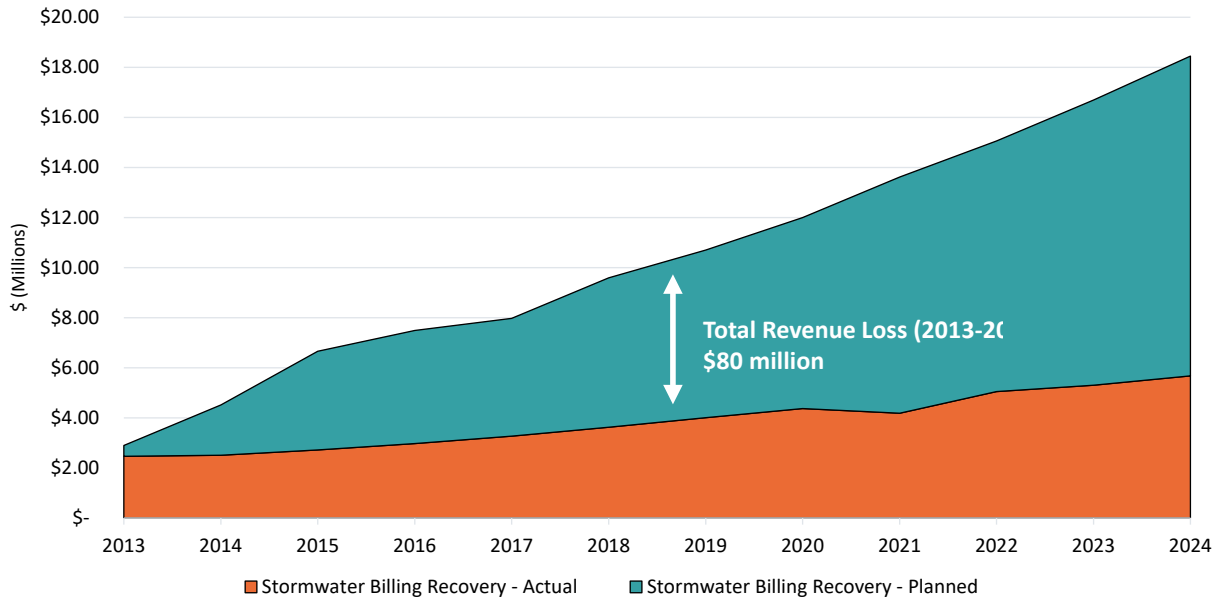
Executive Summary

The City of Richmond Hill retained Watson & Associates Economists Ltd. (Watson) to undertake a stormwater financial plan and rate analysis. This study undertakes an analysis to update the City's stormwater rate forecast based on current capital and operating forecasts. The results of this analysis provide updated stormwater rates for properties within the City of Richmond Hill. The rate analysis contained herein provides fiscally responsible practices that align with current provincial legislation.

Stormwater Rate History

Figure ES-1 provides a comparison of the historic stormwater billing recovery relative to the planned recoveries based on the 2013 Council approved Stormwater Management Financial Plan:

Figure ES-1
City of Richmond Hill
Historic Stormwater Billing Recovery – Actual Versus Planned



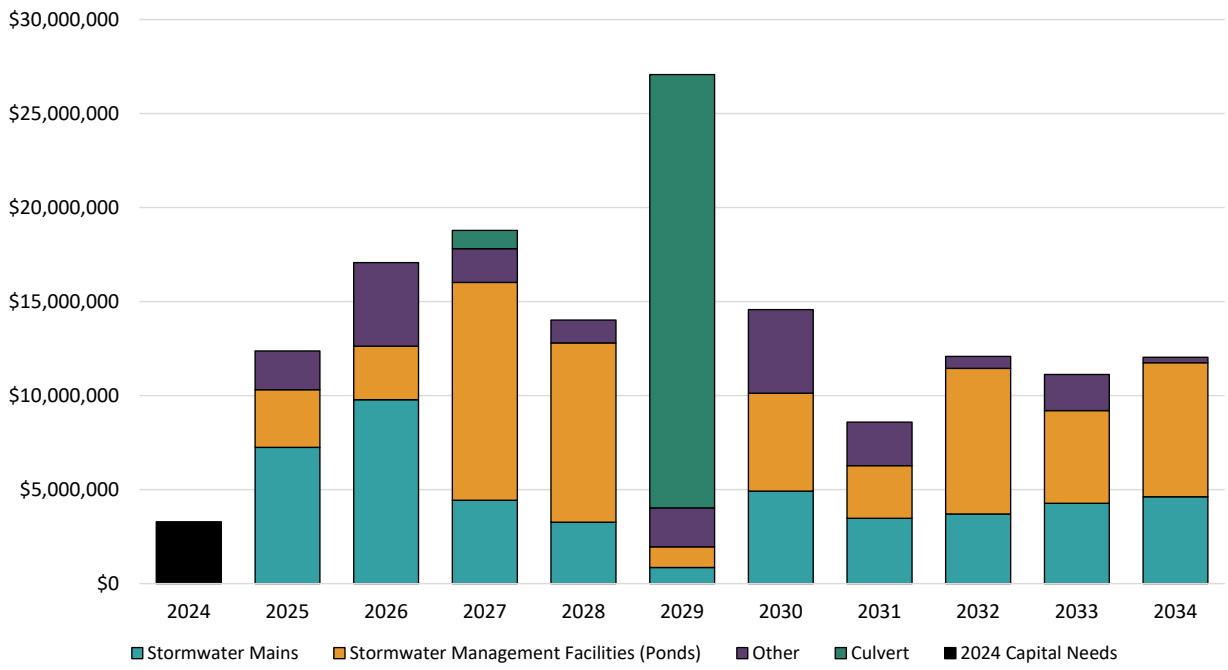
As presented on the above graph, the forecasted recovery identified for 2024 based on stormwater needs and the Council approved 2013 Stormwater Management Financial Plan would have been $18 million, however, the actual recovery for 2024 is $5.8 million.

Historic forecasted rate increases were not implemented through annual budget deliberations and as a result, the forecasted capital program was reduced by deferring many of the capital projects. Consequently, the capital needs over the next five to ten years are significant.

Capital Forecast

The graph in Figure ES-2 provides for the 10-year capital program by asset type.

Figure ES-2
City of Richmond Hill
Capital Needs by Asset Type (2024$)



The capital needs presented in the forecast reflect asset management requirements as well as growth-related requirements anticipated over the forecast period. City staff have reviewed the forecast in order to align stormwater projects with road projects where possible to create efficiencies. It is noted that the City is undertaking stormwater management master plans over the near term which may identify further capital needs and/or updated timing/prioritization of projects. The rate analysis herein would need to be revisited if significant changes are provided through these master planning exercises.

Although the needs are highest in 2029, this is mainly driven by the Elgin Mills Culvert project (timing based on the Region's estimated timing), of which a large portion of the funding is to be provided through development charges and does not impact the stormwater rates.

Based on the graph above, there is a significant increase in the capital needs relative to the approved 2024 amount. As noted above, the City did not implement the required forecasted rate increases to fund the capital program over the last 10 years. As a result,

1. the City has been deferring capital projects providing increased pressure on maintaining capital infrastructure.

2. the amount available from the operating budget to transfer and fund the capital program is only $1.43 million in 2024.

3. the capital program which was approved utilized the Water Quality Protection Reserve Fund to fund stormwater capital expenditures. This reserve fund will be exhausted during the 2025 budget.

Given the significant capital needs over the forecast period, there is an anticipated gap in the funding currently available through the stormwater rate and the funding that will be required to maintain existing and future assets.

Scenario Analysis

To address the funding of the 10-year capital program, three (3) rate scenarios were developed for staff and Council's consideration. These scenarios are presented in this analysis as follows:

- Scenario 1: based on the City's 10-year capital forecast; 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: based on the City's 10-year capital forecast; it is assumed that $3 million in additional Canada Community Building Fund (C.C.B.F.) funding will be used for the first five (5) years and $22 million of debt will be issued; and
- Scenario 3: provides for further revised (deferred) timing of the City's 10-year capital forecast; assumes $3 million in additional C.C.B.F. funding over the first

five (5) years and no debt issuance. It is noted that staff have 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.

Table ES-1 provides a summary of the three (3) scenarios analyzed in this report.

Table ES-1
City of Richmond Hill
Summary of Rate Scenarios

Component of Calculation	Scenario 1	Scenario 2	Scenario 3
Modifications to Capital Forecast	None	None	Revised timing of works to smooth rate increases. All works identified in the 10-year capital forecast are included in this scenario.
Debt Issuance	None	$22 million over 10 years	None
Additional C.C.B.F. Funding*	None	$3 million annually over first five (5) years of forecast	$3 million annually over first five (5) years of forecast

*Note: $1.56 million in C.C.B.F. funding has already been identified in the capital forecast. The additional funding assumed in Scenarios 2 and 3 is incremental to this amount.

Operating Budget

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 that are related to operating the network. In addition, operating expenditures are shared between stormwater and water/wastewater related to items such as

wages for operations staff, vehicle rentals, uniforms, contracts for emergency repairs, etc. The portion of operating costs related to stormwater are transferred from the stormwater budget to the water budget through the "Transfer to Water Fund" line item in the operating budget.

- Within the City's main Operating Fund (i.e. tax-supported budget), there are a number of personnel who allocate a portion of time towards working on stormwater-related activities. The personnel-related costs account for the current staffing allocation in addition to anticipated new staffing requests over the forecast period. There are also many non-personnel costs in the tax-supported budget related to stormwater, such as IT applications and facility usage. As a result, the City calculates a cost recovery amount to be charged back to the stormwater fund. This is provided as a "Transfer to Operating Fund" in the rate calculations

The following graphs provide the overall operating budget forecast for stormwater for each of the three scenarios:

Figure ES-3
City of Richmond Hill
Operating Budget Forecast – Stormwater (Scenario 1)

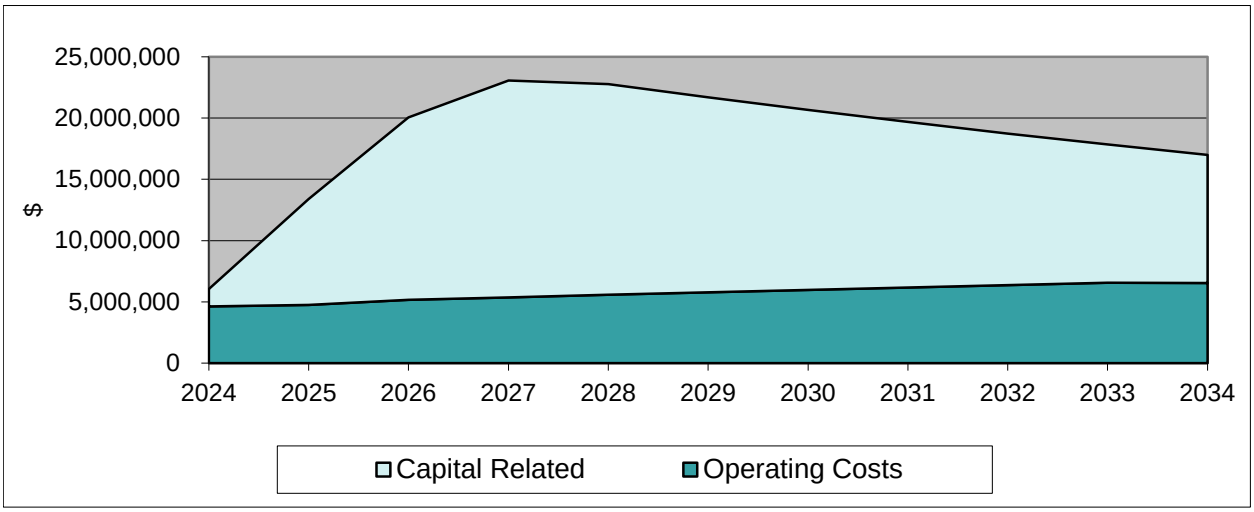


Figure ES-4
City of Richmond Hill
Operating Budget Forecast – Stormwater (Scenario 2)

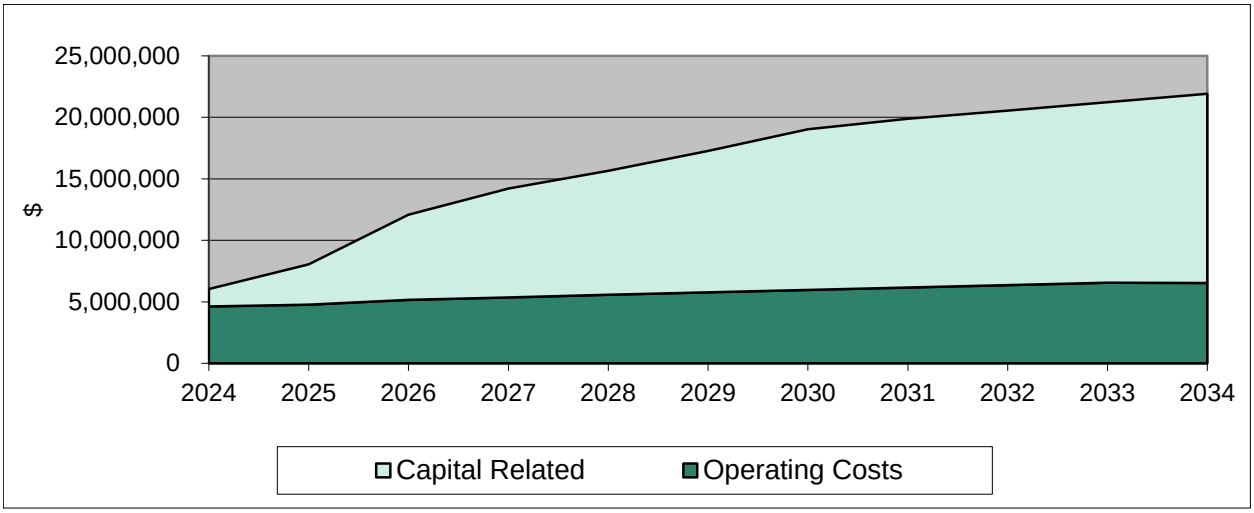
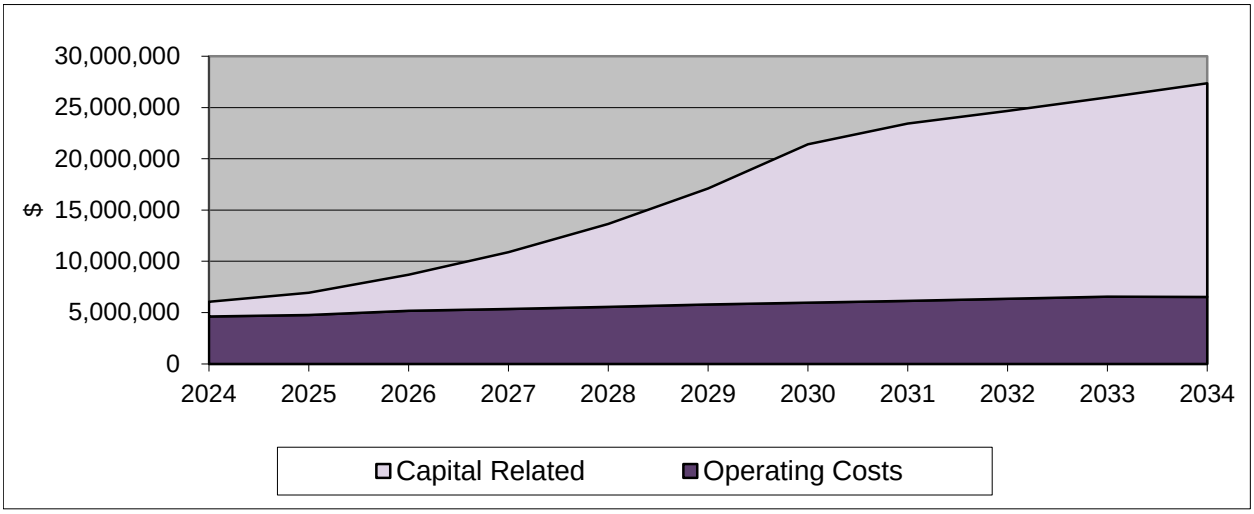


Figure ES-5
City of Richmond Hill
Operating Budget Forecast – Stormwater (Scenario 3)



Rate Forecast

Based on the above information, rate increases by property type for each of the three (3) scenarios are provided in the tables below.

Table ES-2
City of Richmond Hill
Annual Stormwater Rate Forecast – Scenario 1

Annual Rate per 1,000 sq.ft. ($)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Residential	11.02	29.96	40.31	44.33	42.15	40.04	38.04	36.14	34.32	32.59	30.97
Town/ Row House	15.43	41.95	56.43	62.06	59.01	56.05	53.25	50.59	48.05	45.62	43.35
Semi-detached/ Link House	12.12	32.96	44.34	48.76	46.37	44.04	41.84	39.75	37.75	35.85	34.06
Commercial/Industrial	20.94	56.93	76.59	84.23	80.09	76.07	72.27	68.66	65.21	61.92	58.83
Multi-Residential	18.73	50.94	68.53	75.36	71.66	68.07	64.66	61.43	58.35	55.40	52.64
Agricultural Land/Farm	2.20	5.99	8.06	8.87	8.43	8.01	7.61	7.23	6.86	6.52	6.19
Golf Course Structures	19.84	53.94	72.56	79.79	75.87	72.07	68.46	65.05	61.78	58.66	55.74
Golf Courses - Playing Area	3.31	8.99	12.09	13.30	12.65	12.01	11.41	10.84	10.30	9.78	9.29
Vacant Land	2.20	5.99	8.06	8.87	8.43	8.01	7.61	7.23	6.86	6.52	6.19
Institutional	15.43	41.95	56.43	62.06	59.01	56.05	53.25	50.59	48.05	45.62	43.35
Annual Change in Residential Rate ($)		**18.94**	**10.35**	**4.02**	**(2.18)**	**(2.11)**	**(2.00)**	**(1.90)**	**(1.82)**	**(1.73)**	**(1.62)**

Table ES-3
City of Richmond Hill
Annual Stormwater Rate Forecast – Scenario 2

Annual Rate per 1,000 sq.ft. ($)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Residential	11.02	16.53	24.81	27.29	30.01	33.01	36.31	37.23	38.40	39.57	40.75
Town/ Row House	15.43	23.15	34.73	38.20	42.01	46.22	50.83	52.12	53.76	55.40	57.05
Semi-detached/ Link House	12.12	18.19	27.29	30.02	33.01	36.31	39.94	40.95	42.24	43.53	44.83
Commercial/Industrial	20.94	31.41	47.14	51.85	57.02	62.72	68.98	70.73	72.96	75.18	77.43
Multi-Residential	18.73	28.11	42.17	46.39	51.02	56.12	61.72	63.28	65.28	67.27	69.28
Agricultural Land/Farm	2.20	3.31	4.96	5.46	6.00	6.60	7.26	7.45	7.68	7.91	8.15
Golf Course Structures	19.84	29.76	44.65	49.12	54.02	59.42	65.35	67.01	69.12	71.22	73.35
Golf Courses - Playing Area	3.31	4.96	7.44	8.19	9.00	9.90	10.89	11.17	11.52	11.87	12.23
Vacant Land	2.20	3.31	4.96	5.46	6.00	6.60	7.26	7.45	7.68	7.91	8.15
Institutional	15.43	23.15	34.73	38.20	42.01	46.22	50.83	52.12	53.76	55.40	57.05
Annual Change in Residential Rate ($)		**5.51**	**8.28**	**2.48**	**2.72**	**3.00**	**3.30**	**0.92**	**1.17**	**1.17**	**1.18**

Table ES-4
City of Richmond Hill
Stormwater Rate Forecast – Scenario 3

Annual Rate per 1,000 sq.ft. ($)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Residential	11.02	13.77	17.21	21.51	26.89	33.61	42.01	44.12	46.32	48.65	51.09
Town/ Row House	15.43	19.28	24.10	30.11	37.64	47.06	58.82	61.77	64.85	68.10	71.52
Semi-detached/ Link House	12.12	15.15	18.93	23.66	29.58	36.97	46.21	48.54	50.95	53.51	56.20
Commercial/Industrial	20.94	26.17	32.70	40.86	51.09	63.86	79.82	83.83	88.01	92.43	97.07
Multi-Residential	18.73	23.41	29.26	36.56	45.71	57.14	71.42	75.01	78.75	82.70	86.85
Agricultural Land/Farm	2.20	2.75	3.44	4.30	5.38	6.72	8.40	8.82	9.26	9.73	10.22
Golf Course Structures	19.84	24.79	30.98	38.71	48.40	60.50	75.62	79.42	83.38	87.56	91.96
Golf Courses - Playing Area	3.31	4.13	5.16	6.45	8.07	10.08	12.60	13.24	13.90	14.59	15.33
Vacant Land	2.20	2.75	3.44	4.30	5.38	6.72	8.40	8.82	9.26	9.73	10.22
Institutional	15.43	19.28	24.10	30.11	37.64	47.06	58.82	61.77	64.85	68.10	71.52
Annual Change in Residential Rate ($)		**2.75**	**3.44**	**4.30**	**5.38**	**6.72**	**8.40**	**2.11**	**2.20**	**2.33**	**2.44**

The following tables provide for the stormwater rate impact on the average residential and commercial/industry property within the City:

Table ES-5
City of Richmond Hill
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**

Table ES-6
City of Richmond Hill
Annual Stormwater Rate Impact – Average Commercial/Industrial Property
(2.1 acres)

Scenario	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Scenario 1	$1,926	$5,238	$7,046	$7,749	$7,368	$6,998	$6,649	$6,317	$5,999	$5,697	$5,412
$ Change		**$3,311**	**$1,809**	**$703**	**($381)**	**($370)**	**($350)**	**($332)**	**($317)**	**($303)**	**($284)**
Scenario 2	$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**
Scenario 3	$1,926	$2,408	$3,008	$3,759	$4,700	$5,875	$7,343	$7,712	$8,097	$8,504	$8,930
$ Change		**$481**	**$601**	**$751**	**$941**	**$1,175**	**$1,468**	**$369**	**$385**	**$407**	**$427**

Based on a review of the scenarios with City staff, Scenario 2 is recommended for Council's consideration for implementation. Scenario 2 provides for the full funding of the capital program, with the timing identified by the City's engineering staff. Interim financing through debt issuance assists in lowering the required rate increases relative to Scenario 1.

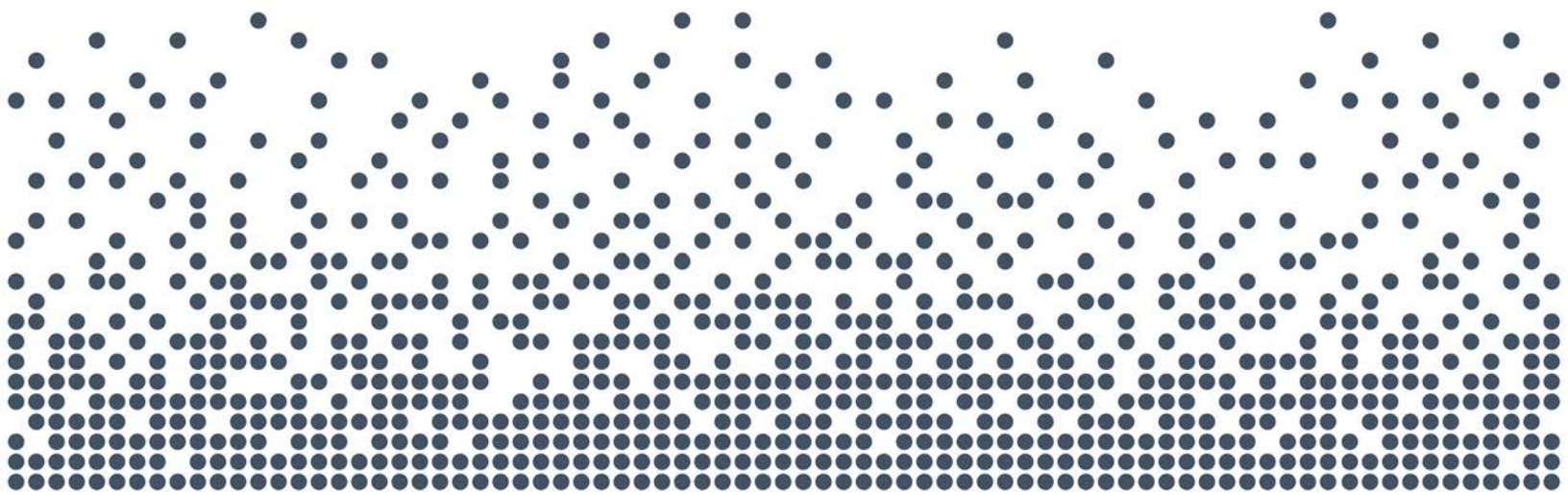
Note that for Scenario 2, based on the total debt issuance of $22 million, Table ES-7 provides the annual principal and interest payments over the forecast period. The term of 20 years has been assumed for the purposes of the calculations, and as such, the payments will extend beyond the forecast period. The total interest costs over the full term of the debt (i.e. 2025-2050) equates to $11.31 million.

Table ES-7
City of Richmond Hill
Annual Debt Payments (2025-2034)

Year	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Debt Issuance (Principal Amount)	**2,363,599**	**5,139,788**	**6,240,930**	**2,317,554**	**3,030,163**	**3,044,453**	**-**	**-**	**-**	**-**
Annual Principal Payment	-	76,934	247,541	461,325	556,598	679,162	807,462	842,183	878,397	916,168
Annual Interest Payment	-	101,635	319,337	577,053	656,871	763,234	864,942	830,221	794,007	756,236
Total Annual Payment	**-**	**178,569**	**566,878**	**1,038,378**	**1,213,469**	**1,442,396**	**1,672,404**	**1,672,404**	**1,672,404**	**1,672,404**

Although Scenario 3 provides for the lowest rate increases over the first three (3) years, capital works would be deferred in this scenario. The City has reviewed the stormwater capital forecast in detail and many of the works identified in the first three (3) years are critical in maintaining existing service levels. If works are deferred to the latter half of the forecast period, there may be a decline in service levels.

Based on this discussion, it is recommended that the rate forecast presented in Scenario 2 be considered for implementation by Council.



Report

Chapter 1
Introduction

1. Introduction

1.1 Stormwater Management Overview

Stormwater, which is rainwater, snowmelt, or other forms of precipitation, must be managed within a municipality to prevent 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 (S.W.M.) 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.

Stormwater is generally managed through the following controls:

- Source control: low impact development for groundwater recharge and reduced runoff generation into the stormwater system;
- Conveyance control: storm sewer pipes and ditches moving large water volumes away efficiently to reduce flooding; and
- End-of-pipe control: holding back or storing water to prevent downstream flooding and erosion, and to remove contamination from the water (e.g. stormwater ponds).

All of the above controls are used together to varying degrees to provide for a "treatment train" approach for the holistic management of stormwater.

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.

It is acknowledged that every property in the City of Richmond Hill (City) contributes runoff to the stormwater infrastructure system, even if this is limited to public roads,

catch basins, culverts, and ditches that lead into infrastructure that is owned and maintained by the City.

The City owns, operates, and maintains an extensive S.W.M. asset inventory that forms part of a larger system. This includes over:

- 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 (L.I.D.) infrastructure systems; and
- 150 km of streams

Based on the City's Asset Management Plan, the total replacement value of these assets is estimated at approximately $2.75 billion (2024$). Under Provincial legislation (*Infrastructure for Jobs and Prosperity Act, 2015)*, discussed further in Section 1.3.2, the City is obligated to address its asset management needs. Stormwater management systems will also face future pressure arising from climate change and future regulatory requirements and will likely require strategic and timely capital investments to maintain required levels of service. Across Ontario, Canada, and North America, municipalities facing these funding pressures for infrastructure management have adopted funding models/rates that provide a dedicated funding source for their stormwater infrastructure. The benefits of a dedicated rate for S.W.M. includes:

- Providing a dedicated funding source for all expenditures of the S.W.M. system; and
- Increased fairness and equity through the adoption of a rate structure which reflects the property type and overall contribution to stormwater runoff. This is in contrast to recovering costs through the tax rate, which is based on a property's assessed value, and does not have a clear link to stormwater runoff.

1.2 Study Purpose

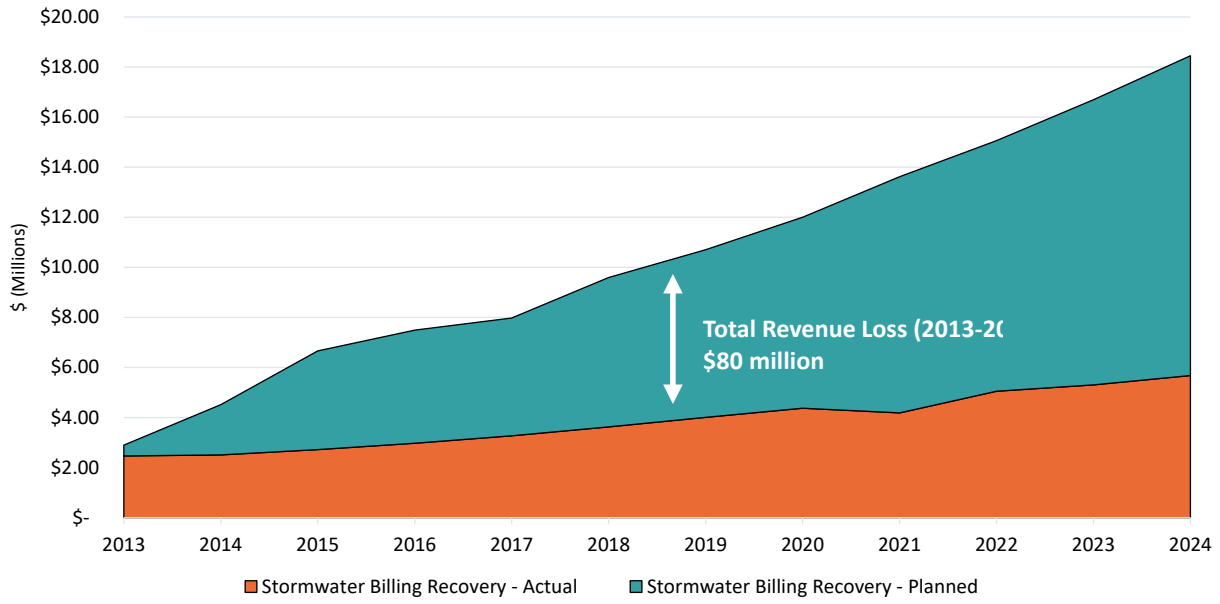
The City of Richmond Hill has had a dedicated stormwater rate in place to fund operating and infrastructure costs since 2013, however, shortfalls in funding and the need to improve equity and fairness led the City to adopt an updated rate structure in

2022. Due to certain inquiries and feedback received from Council and residents, the City retained Watson & Associates Economists Ltd. (Watson) and WSP Inc. (WSP) in 2023 to refine the current rate structure to improve equity while fully funding current and future infrastructure needs (note: details on the City's current rate structure are provided in Section 1.4 of this report).

Since the City implemented a stormwater rate in 2013, the required rate increases that were necessary to achieve financial sustainability were not implemented. The forecasted capital was deferred which has led to increasing pressure on maintaining the existing capital infrastructure and will continue to impact the state of good repair as the City's asset base grows.

Figure 1-1 below provides a comparison of the historic stormwater billing recovery relative to the planned recoveries based on the 2013 Council approved Stormwater Management Financial Plan:

Figure ES-1
City of Richmond Hill
Historic Stormwater Billing Recovery – Actual Versus Planned



Based on the above graph, the recovery identified for 2024 based on stormwater needs should have been $18 million, however, the actual recovery for 2024 is $5.8 million.

Historic required rate increases were not implemented through annual budget deliberations and capital projects have been deferred. As a result, the capital needs over the next five (5) years are significant.

The capital and operating costs required to maintain the stormwater system are currently funded through the stormwater rate, however, given the historical underfunding noted above, there is an anticipated gap in the funding currently available through the stormwater rate and the funding that will be required to maintain existing and future assets. Along with the backlog of works that have been deferred over the previous 10 years, the City has also recently undertaken an Asset Management Plan that has identified significant expenditures for stormwater capital works. The City is required to undertake these capital works over the 10-year forecast period to maintain service levels, and as such, the City has retained Watson to undertake a Stormwater Management Financial Plan (rate analysis). This study was undertaken to evaluate various rate scenarios and their ability to address funding of stormwater infrastructure in a way that does not unduly burden the ratepayer through significant rate increases. The rates provided herein reflect the full cost of delivering stormwater services; including funding of all capital and operating costs.

The report herein provides an overview of the legislation, the capital infrastructure needs over the 2025-2034 forecast period, an analysis of operating costs, a review of potential rate scenarios, the preferred rate scenario, and final recommendations for the City's consideration.

1.3 Regulatory Requirements for S.W.M.

Resulting from the water crisis in Walkerton, significant regulatory changes have been made in Ontario which impact water, wastewater and stormwater services. Many of these changes have arisen as a result of the Walkerton Commission and the 93 recommendations made by the Walkerton Inquiry Part II report. Areas of recommendation include:

- watershed management and source protection;
- quality management;
- preventative maintenance;
- research and development;

- new performance standards;
- sustainable asset management; and
- lifecycle costing.

The legislation which would have most impacted municipal water, wastewater and stormwater rates was the Sustainable Water and Sewage Systems Act (S.W.S.S.A.) which would have required municipalities to implement full cost pricing. The legislation was enacted in 2002, however, it had not been implemented pending the approval of its regulations. The Act was repealed as of January 1, 2013. It is expected that the provisions of the Water Opportunities Act will implement the fundamental requirements of S.W.S.S.A.

1.3.1 Water Opportunities Act, 2010

As noted, since Walkerton, refinements to various legislation have been introduced which may impact stormwater services. Some of these Bills have found their way into law, while others have not been approved. Bill 72, the *Water Opportunities Act, 2010*, was introduced into legislation on May 18, 2010, and received Royal Assent on November 29, 2010.

The Act provides for the following elements for Stormwater:

- The fostering of innovative water, wastewater and stormwater technologies, services and practices in the private and public sectors;
- Preparation of sustainability plans for municipal water services, municipal wastewater services and municipal stormwater services.

Regarding the sustainability plans:

- The Act requires a detailed review of a financial plan for water, wastewater, and stormwater services; and
- Regulations will provide performance targets for each service – these targets may vary based on the jurisdiction of the regulated entity or the class of entity.

The financial plan shall include (note, financial plan is only required for water at this time):

- An asset management plan for the physical infrastructure;

- A financial plan;
- For water, a water conservation plan;
- An assessment of risks that may interfere with the future delivery of the municipal service, including, if required by the regulations, the risks posed by climate change and a plan to deal with those risks; and
- Strategies for maintaining and improving the municipal service, including strategies to ensure the municipal service can satisfy future demand, consider technologies, services and practices that promote the efficient use of water and reduce negative impacts on Ontario's water resources, and increase co-operation with other municipal service providers.

Performance indicators will be established by service, with the following considerations:

- May relate to the financing, operation, or maintenance of a municipal service or to any other matter in respect of what information may be required to be included in a plan;
- May be different for different municipal service providers or for municipal services in different areas of the Province.

Regulations will prescribe:

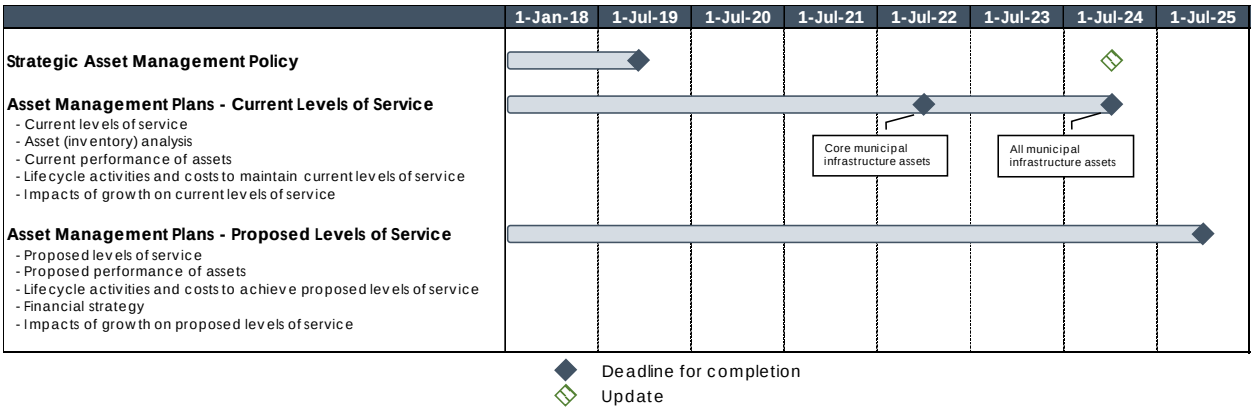
- Timing;
- Contents of the plans;
- Which identified portions of the plan will require certification;
- Public consultation process; and
- Limitations, updates, refinements, etc.

As noted earlier, it is expected that this Act will implement the principles of the S.W.S.S.A. once all regulations are put in place.

1.3.2 Infrastructure for Jobs and Prosperity Act, 2015 (I.J.P.A.)

On June 4, 2015, the Province of Ontario passed the I.J.P.A. which, over time, will require municipalities to undertake and implement asset management plans for all infrastructure they own. On December 27, 2017, the Province released Ontario Regulation 588/17 under the I.J.P.A. which has three (3) phases that municipalities must meet:

Table 1-1
City of Richmond Hill
Timeline for I.J.P.A. Implementation



Note: On March 15, 2021, the Province filed Regulation 193/21 to extend all of the timelines of Regulation 588/17 by one year.

Every municipality in Ontario was to have prepared a strategic asset management policy by July 1, 2019. Municipalities will be required to review their strategic asset management policies at least every five years and make updates as necessary. The subsequent phases are as follows:

- Phase 1 – Asset Management Plan (by July 1, 2022):
    - For core assets, municipalities must have the following:
        - Inventory of assets;
        - Current levels of service measured by standard metrics; and
        - Costs to maintain levels of service.
- Phase 2 – Asset Management Plan (by July 1, 2024):
    - Same steps as Phase 1 but for all assets.
- Phase 3 – Asset Management Plan (by July 1, 2025):
    - Builds on Phase 1 and 2 by adding:
        - Proposed levels of service; and
        - Lifecycle management and financial strategy.

In relation to stormwater (which is considered a core asset), municipalities needed to have an asset management plan that addresses the related infrastructure by July 1,

2022 (Phase 1). O. Reg. 588/17 specifies that the municipality's asset management plan must include the following for each asset category:

- The current levels of service being provided, determined in accordance with the following qualitative descriptions and technical metrics and based on data from at most the two calendar years prior to the year in which all information required under this section is included in the asset management plan;
- The current performance of each asset category, including:
    - a summary of the assets in the category;
    - the replacement cost of the assets in the category;
    - the average age of the assets in the category, determined by assessing the average age of the components of the assets;
    - the information available on the condition of the assets in the category;
    - a description of the municipality's approach to assessing the condition of the assets in the category, based on recognized and generally accepted good engineering practices where appropriate; and
- The lifecycle activities that would need to be undertaken to maintain the current levels of service.

The City recently undertook its Asset Management Plan that identified key stormwater infrastructure works. As part of Phase 3 of I.J.P.A., the City will need to identify a financial strategy to fund future infrastructure replacement needs through the dedicated stormwater rate.

1.3.3 Municipal Consolidated Linear Infrastructure Environmental Compliance Approval (C.L.I.E.C.A.)

Stormwater infrastructure is predominately approved by Provincial agencies under the Ontario Water Resources Act as an E.C.A. The Province has specific requirements and expectations of municipalities on how stormwater infrastructure is operated and maintained. To comply with the Provincial legislation, the City manages its stormwater infrastructure under a system-wide C.L.I.E.C.A. that requires regular inspections, monitoring, maintenance and reporting to the Province the status of its entire stormwater system to demonstrate it is functioning properly and is in compliance with Provincial approvals. The E.C.A. requires that the stormwater system is properly operated and maintained with a specific reference to "adequate funding".

1.4 Current Rate Structure

The City's current rate structure incorporates the impervious areas[1] of each property type and then considers site areas for the charge; hence the rate for each property is based on individual property size and type.

"i" factors have been utilized as a proxy for impervious areas of different property types. These percentages reflect the average imperviousness of different property types such that property types with a higher runoff percentage contribute more stormwater runoff. This is reflected in the table below indicating that a commercial/industrial property would contribute more runoff than vacant or agricultural land.

Table 1-2
City of Richmond Hill
Runoff Percentages Utilized in Current Rate Structure

Property Type	"i" Factor
Residential (up to one acre)*	50%
Residential (greater than one acre and less than 10 acres)*	10%
Residential – Semi Detached/Link Home	55%
Residential – Row/Town Home	70%
Commercial/Industrial	95%
Institutional	70%
Multi-Residential	85%
Vacant Land (up to 10-acre cap)	10%
Farmland (up to 10-acre cap)	10%
Golf Course – Playing area and cart paths (up to 10-acre cap)	15%
Golf Course – Club house, parking, driveway, pro shop	90%

*Note: for residential properties greater than 1 acre, the area up to 1 acre has an "i" factor of 50% whereas the land area greater than 1 acre but less than 10 acres has an "i" factor of 10%. The rate is capped at 10 acres.

[1] An impervious area is a hard surface, such as a roadway or roof, that allows little or no stormwater infiltration into the ground. Stormwater that falls on an impervious service washes off during a rain event instead of being retained on site.

As an example, a percentage of 10% indicates that on average, 10% of stormwater would run off the property and into the City's system, whereas 90% would be absorbed by the property or removed through evaporation. These percentages are based on averages across the entire property classification. The above runoff rates are based on engineering standards utilized in Ontario and throughout Canada.

The total revenue requirement was distributed by using the total area of the City and applying the runoff percentage by property type to derive a stormwater rate per 1,000 square feet as follows:

Table 2-2
City of Richmond Hill
Current Rate per 1,000 sq.ft. of Property Size

Property Type	Rate per 1,000 sq.ft.
Residential (up to one acre)*	$11.02
Residential (greater than one acre and less than 10 acres)*	$2.20
Residential – Semi Detached/Link Home	$12.13
Residential – Row/Town Home	$15.43
Commercial/Industrial	$20.94
Institutional	$15.43
Multi-Residential	$18.74
Vacant Land (up to 10-acre cap)	$2.20
Farmland (up to 10-acre cap)	$2.20
Golf Course – Playing area and cart paths (up to 10-acre cap)	$3.31
Golf Course – Club house, parking, driveway, pro shop	$19.84

Further details on the current rate structure are provided in the Watson and WSP report titled "Stormwater Rate Structure Review (November 2023)". For the purposes of this financial plan and rate analysis, no changes have been made to the existing rate structure.

1.5 Forecast Growth and Servicing Requirements

The rate calculation utilizes the total area within the City weighted by the “i" factor for each property type. To develop a 10-year forecast of rates, an assumption on the conversion of vacant and agricultural land into residential and non-residential property types needs to be made.

Based on anticipated growth and discussions with City staff, the analysis assumes that 20% of the existing vacant land would be converted into another property use by 2034. For the purposes of the rate calculation, it is assumed that this conversion would take place evenly over the next 10 years. To determine how the vacant land would be converted, the City reviewed 2020 to 2022 building permits converted to occupancy permits. It is assumed that a similar development pattern would occur over the next 10 years as follows:

Table 2-3
City of Richmond Hill
Proportionate Share of Vacant Land Development

Property Development	Proportionate Share of Vacant Land Development
Single Family Detached	38.9%
Semi-detached	8.9%
Row/Town Home	34.7%
Multi-Residential	17.0%
Commercial/Industrial	0.5%

Utilizing these shares, a forecast of property areas by type has been developed for the 2025 to 2034 forecast period in Table 2-4. Note that the total area is decreasing over the forecast given the assumption that chargeable land area will decrease through the land conversion process (i.e. conversion of vacant land to roads, sidewalks, etc. which are not included in the stormwater rate calculation).

These areas are then weighted by the “i” factor to determine the total weighted area forecast over the 10 years (Table 2-5). This total weighted area is utilized in the denominator of the stormwater rate calculation.

Table 2-4
City of Richmond Hill
Total Area Forecast by Property Type

Total Area (sq.ft.)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Residential	278,740,069	279,251,844	279,763,619	280,275,395	280,787,170	281,298,945	281,810,720	282,322,495	282,834,270	283,346,045	283,857,821
Town/ Row House	28,558,959	29,015,336	29,471,713	29,928,090	30,384,466	30,840,843	31,297,220	31,753,597	32,209,974	32,666,350	33,122,727
Semi-detached/ Link House	14,154,563	14,271,955	14,389,347	14,506,739	14,624,130	14,741,522	14,858,914	14,976,305	15,093,697	15,211,089	15,328,481
Commercial/Industrial	76,828,530	76,835,125	76,841,720	76,848,315	76,854,910	76,861,505	76,868,100	76,874,695	76,881,290	76,887,885	76,894,480
Multi-Residential	11,242,726	11,466,957	11,691,188	11,915,420	12,139,651	12,363,882	12,588,114	12,812,345	13,036,577	13,260,808	13,485,039
Agricultural Land/Farm	22,737,375	22,737,375	22,737,375	22,737,375	22,737,375	22,737,375	22,737,375	22,737,375	22,737,375	22,737,375	22,737,375
Golf Course Structures	882,635	882,635	882,635	882,635	882,635	882,635	882,635	882,635	882,635	882,635	882,635
Golf Courses - Playing Area	2,178,000	2,178,000	2,178,000	2,178,000	2,178,000	2,178,000	2,178,000	2,178,000	2,178,000	2,178,000	2,178,000
Vacant Land	82,438,003	80,789,243	79,140,483	77,491,723	75,842,963	74,194,203	72,545,443	70,896,683	69,247,922	67,599,162	65,950,402
Institutional	4,305,549	4,305,549	4,305,549	4,305,549	4,305,549	4,305,549	4,305,549	4,305,549	4,305,549	4,305,549	4,305,549
Total Area	**522,066,409**	**521,734,019**	**521,401,629**	**521,069,240**	**520,736,850**	**520,404,460**	**520,072,070**	**519,739,680**	**519,407,290**	**519,074,900**	**518,742,510**

Table 2-5
City of Richmond Hill
Total Weighted Area Forecast by Property Type

Total Weighted Area (Weighted sq.ft.)	"i" Factor	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Residential	**50%**	139,625,922	139,881,810	140,137,697	140,393,585	140,649,472	140,905,360	141,161,248	141,417,135	141,673,023	141,928,910
Town/ Row House	**70%**	20,310,735	20,630,199	20,949,663	21,269,127	21,588,590	21,908,054	22,227,518	22,546,982	22,866,445	23,185,909
Semi-detached/ Link House	**55%**	7,849,575	7,914,141	7,978,706	8,043,272	8,107,837	8,172,403	8,236,968	8,301,533	8,366,099	8,430,664
Commercial/Industrial	**95%**	72,993,369	72,999,634	73,005,899	73,012,165	73,018,430	73,024,695	73,030,961	73,037,226	73,043,491	73,049,756
Multi-Residential	**85%**	9,746,913	9,937,510	10,128,107	10,318,703	10,509,300	10,699,897	10,890,493	11,081,090	11,271,687	11,462,283
Agricultural Land/Farm	**10%**	2,273,737	2,273,737	2,273,737	2,273,737	2,273,737	2,273,737	2,273,737	2,273,737	2,273,737	2,273,737
Golf Course Structures	**90%**	794,372	794,372	794,372	794,372	794,372	794,372	794,372	794,372	794,372	794,372
Golf Courses - Playing Area	**15%**	326,700	326,700	326,700	326,700	326,700	326,700	326,700	326,700	326,700	326,700
Vacant Land	**10%**	8,078,924	7,914,048	7,749,172	7,584,296	7,419,420	7,254,544	7,089,668	6,924,792	6,759,916	6,595,040
Institutional	**70%**	3,013,884	3,013,884	3,013,884	3,013,884	3,013,884	3,013,884	3,013,884	3,013,884	3,013,884	3,013,884
Total Weighted Area		**265,014,133**	**265,686,036**	**266,357,938**	**267,029,841**	**267,701,744**	**268,373,647**	**269,045,549**	**269,717,452**	**270,389,355**	**271,061,257**

Chapter 2
Capital Infrastructure Needs

2. Capital Infrastructure Needs

2.1 Capital Forecast

The capital forecast has been provided for the stormwater system and is presented in Table 2-1 (note: the costs have been provided in uninflated dollars). The basis for this forecast is the City's capital forecast, however, it is noted that the capital forecast was revisited as part of this analysis to assist in smoothing the program over the 2025 to 2034 period. The capital plan addresses both growth and replacement projects.

A summary of the capital works related to stormwater services is provided in the following table:

Table 2-1
City of Richmond Hill
2025 to 2034 Stormwater Capital Forecast Summary (Uninflated $)

Description	Total 2025 to 2034	Years Undertaken
Capital Expenditures		
19th Avenue Watebody Decommissioning	1,190,200	2031, 2033
Ada MacKenzie Pond (22-1) Retrofit	1,750,676	2029, 2031, 2033
Annual Drainage Investigations	1,268,750	2025-2034
Arnold Crescent Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	13,741	2025
Arnold Crescent Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth Related Component)	1,176,459	2025
Aubrey Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	186,645	2026
Aubrey Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	746,580	2026
Aztec Pond (16-10) Sediment Removal	1,020,326	2032
Bayview Hill Pond (22-2) Retrofit	398,176	2033
Beaufort Hills Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	360,306	2026, 2028-2029, 2031
Beaufort Hills Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,780,199	2026, 2028-2029, 2031
Beaver Woodland Pond (27-2) Post-construction 10-Year Monitoring	304,500	2025
Bentony Pond (8-6) Sediment Removal	704,382	2029
Beverly Acres valleyland rehabilitation - TRCA	757,400	2025-2026
Black Willow Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	146,070	2029, 2031
Black Willow Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	584,280	2029, 2031
Capelle Street Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	48,690	2027
Capelle Street Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	194,760	2027

Table 2-1 (Cont'd)
2025 to 2034 Stormwater Capital Forecast Summary (Uninflated $)

Description	Total 2025 to 2034	Years Undertaken
Cheval Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	97,380	2026, 2028
Cheval Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	24,345	2026, 2028
Coons Road and Cynthia Crescent Drainage Study (TENTATIVE)	270,500	2025
Coons Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	656,098	2026, 2028, 2030
Coons Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,548,110	2026, 2030
Country Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	58,428	2029, 2031
Country Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	233,712	2029, 2031
Craigleith Pond (2-4) Retrofit	773,630	2032, 2034
Cynthia Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	416,786	2028, 2030
Cynthia Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,667,146	2028, 2030
Doncrest Pond (27-1) Retrofit	3,644,176	2030, 2034
Driftwood Pond (8-2) Retrofit	2,055,800	2026, 2028
East Beaver Creek Secondary Plan Computer Model Analysis	279,125	2026
Elgin Mills Culvert (York Region) (Non-Growth-Related Component)	3,657,517	2029
Elgin Mills Culvert (York Region) (Growth-Related Component)	11,816,147	2029
Elgin Mills Road W Recon (York Region)	324,600	2026
Elm Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	284,025	2032
Elm Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,136,100	2032
Elm Grove Drainage Study (TENTATIVE)	216,400	2025
Enford Road Rehabilitation - (Road, Watermain, Sanitary, Storm)	1,623,000	2026
Fergus Ave Moray Ave Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	328,658	2027
Fergus Ave Moray Ave Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,314,630	2027
Fern Avenue Drainage Study	270,500	2028
Fleet and Operational Equipment	109,256	2026-2032
Gallacher Avenue Blyth Street Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	214,236	2029, 2031
Gallacher Avenue Blyth Street Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,100,394	2029, 2031
George Street Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	856,944	2028, 2030
George Street Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	214,236	2028, 2030
George Street Reconstruction (Road, Watermain, Sanitary, Storm)	-	
Glouster Court Reconstruction (Road, Sanitary, Storm)	407,341	2030, 2032
Gormley Road West Drainage Study	270,500	2028
Harding East Pond (23-2) Sediment Removal	1,003,014	2027
Harding West Pond (23-1) Sediment Removal	940,258	2027

Table 2-1 (Cont'd)
2025 to 2034 Stormwater Capital Forecast Summary (Uninflated $)

Description	Total 2025 to 2034	Years Undertaken
Headford West Pond (21-2) Sediment Removal	1,552,670	2033
Heron Pond (19-1) Sediment Removal	1,294,072	2028
Highland Lane Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	86,560	2025
Highland Lane Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	346,240	2025
Humber Flats Culvert and Pond Retrofit	5,842,800	2027, 2029
Hwy 7 to Castleridge (GM1) Valleyland Rehabilitation (CCBF Funded Component)	100,000	2025
Hwy 7 to Castleridge (GM1) Valleyland Rehabilitation	162,300	2025
Industrial Road Rehabilitation (Road, Watermain, Sanitary, Storm)	2,142,360	2026
Kerrybrook and East Don River Valleyland Rehabilitation	511,786	2030, 2032
Lake Wilcox Management Plan Update (TENTATIVE)	659,750	2030
Lake Wilcox Outlet Channel Sediment Removal	919,700	2028
Lawnwood Court Reconstruction (Road, Watermain, Sanitary, Storm)	193,653	2032
Licensed Equipment Replacement	1,123	2029, 2031, 2032
Luba Pond (15-4) Retrofit	944,586	2031, 2033
Maple Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (CCBF Funded Component)	1,460,700	2025
Maple Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	627,560	2025
Maple Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,049,540	2025
Marchwood Crescent Reconstruction (Road, Storm)	1,045,926	2030, 2032
Mill Pond Park Revitalization	8,656,000	2025, 2027-2028
Mill Street Altamira Ave Drainage Works (Storm)	2,164,000	2025
Monitoring equipment and station installation (Monitoring Reserve)	105,306	2025-2034
Monitoring equipment and station installation	44,406	2025-2034
Mural North Pond (28-3) Sediment Removal	2,022,258	2031
Newman Pond (2-11) Retrofit	2,596,800	2025, 2027
Ohio Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	60,863	2026
Ohio Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	243,450	2026
Olde Bayview Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	194,760	2027
Olde Bayview Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	779,040	2027
Orchard Pond (19-4) Sediment Removal	1,891,336	2026
Ozark Pond (7-4) Sediment Removal	541,000	2028
Penny Place Reconstruction (Road, Watermain, Sanitary, Storm) (Growth Related Component)	63,297	2028, 2030
Penny Place Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	253,188	2028, 2030
Pioneer Pond (17-2) Sediment Removal	-	
Pomona Creek - Garden Ave Valleyland Rehabilitation (TENTATIVE)	3,570,600	2028, 2030
Prince Arthur Avenue Drainage Study	270,500	2029
Princeton Pond (19-5) Sediment Removal	1,997,372	2030
Redstone Pond (19-6) Sediment Removal	2,470,206	2032
Regent Street to Oxford (UED10) Valleyland Rehabilitation	1,250,792	2029, 2031
Richmond Centre Pond (26-1) Sediment Removal	2,570,832	2034
Richmond Green West Pond (14-3) Sediment Removal	784,450	2033
Rockport Crescent Drainage Study	216,400	2026

Table 2-1 (Cont'd)
2025 to 2034 Stormwater Capital Forecast Summary (Uninflated $)

Description	Total 2025 to 2034	Years Undertaken
Rockport Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	535,590	2031, 2033
Rockport Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,142,360	2031, 2033
Rouge River - Toporowski Ave Valleyland Rehabilitation (TRCA)	1,082,000	2026
Rumble Ave and Chassie Court Drainage Study	270,500	2026
Sandbanks Pond (7-3) Sediment Removal	667,594	2032
Schomberg Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth Related Component)	370,585	2026
Schomberg Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,482,340	2026
Shelley Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	44,633	2032, 2034
Shelley Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	178,530	2032, 2034
Snively Wetland Outlet Reconstruction	1,623,000	2027, 2029
Snow Storage Pond (14-7) Sediment Removal	680,578	2033
Solmar Pond (15-5) Sediment Removal	690,316	2025-2026
South Richvale Valleyland Sewer Protection (Sanitary Sewer Component)	669,325	2026
South Richvale Valleyland Sewer Protection	446,217	2026
Storm Pond Phosphorus Trench Rehabilitation	757,400	2027
Stormwater Growth Vehicle and Equipment (Growth-Related Comonent)	560,280	2025-2034
Stormwater Master Plan (TENTATIVE) (Growth-Related Component)	560,000	2025, 2030
Stormwater Master Plan (TENTATIVE) (Non-Growth-Related Component)	560,000	2025, 2030
Sugar Maple Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	335,961	2027, 2032
Sugar Maple Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,343,844	2027, 2032
Toll Bar Pond (16-7) Retrofit	3,051,240	2027-2028, 2030
Town Park Revitalization and Unity Park Repair and Replacement	969,472	2025, 2027
Unity Park Storm System Improvements	2,705,000	2025, 2027
Valleyland Rehabilitation Master Plan (TENTATIVE)	746,025	2026, 2031
Vehicle Replacements	101,718	2026-2033
Verdi Pond (1-1) Sediment Removal	443,620	2025
Wastewater and Stormwater Model Monitoring	450,000	2026-2034
Wastewater and Stormwater Model Monitoring (Sanitary Sewer Component)	450,000	2026-2034
Webster Park North Trail (Local Trail Priority no. 9)	1,224,200	2026-2027
Webster Park Watebody Decommissioning	1,190,200	2031, 2033
Weldrick Road East Rehabilitation (Road)	243,450	2027, 2029
Wendy Way Reconstruction (Road, Watermain, Sanitary, Storm) (Growth Related Component)	24,345	2025, 2028, 2030
Wendy Way Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	97,380	2025, 2028, 2030
Westwood Lane Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	107,118	2032, 2034
Westwood Lane Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	428,472	2032, 2034
Wood Rim Pond (2-9) Sediment Removal	875,338	2034
Zippora Pond (15-6) Retrofit	4,293,376	2028, 2030, 2032
Elgin Mills Culvert (York Region)	2,705,000	2029

Table 2-1 (Cont'd)
2025 to 2034 Stormwater Capital Forecast Summary (Uninflated $)

Description	Total 2025 to 2034	Years Undertaken
Road Rehabilitation and Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	605,920	2028, 2030-2031, 2034
Road Rehabilitation and Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,347,940	2028, 2030-2031, 2034
Road Rehabilitation and Reconstruction - Urbanized (Road, Watermain, Sanitary, Storm)	5,507,380	2026-2034
Total Capital Expenditures	**147,701,558**	

It is noted that through this rate analysis, a number of scenarios were reviewed related to the capital forecast and associated financing. These scenarios are discussed in more detail in Section 3.8 of this report.

Chapter 3
Capital Cost Financing Options

3. Capital Cost Financing Options

3.1 Summary of Capital Cost Financing Alternatives

Historically, the powers that municipalities had to raise alternative revenues to taxation to fund capital services have been restrictive. Over the past decade, legislative reforms have been introduced. Some of these have expanded municipal powers (e.g. Bill 26 introduced in 1996 to provide for expanded powers for imposing fees and charges), while others appear to restrict them (e.g. Bill 98 in 1997 and Bill 23 in 2022 providing amendments to the D.C.A.).

The Province passed the current *Municipal Act* which came into force on January 1, 2003. Part XII of the Act and O. Reg. 584/06 govern a municipality's ability to impose fees and charges. In contrast to the previous *Municipal Act*, this Act provides municipalities with broadly defined powers and does not differentiate between fees for operating and capital purposes. It is anticipated that the powers to recover capital costs under the previous *Municipal Act* will continue within the new Statutes and Regulations, as indicated by s.9(2) and s.452 of the new *Municipal Act*.

Under s.484 of *Municipal Act, 2001*, the *Local Improvement Act* was repealed with the in-force date of the *Municipal Act* (January 1, 2003). The municipal powers granted under the *Local Improvement Act* now fall under the jurisdiction of the *Municipal Act*. To this end, on December 20, 2002, O. Reg. 390/02 was filed, which allowed for the *Local Improvement Act* to be deemed to remain in force until April 1, 2003. O. Reg. 119/03 was enacted on April 19, 2003, which restored many of the previous *Local Improvement Act* provisions; however, the authority is now provided under the *Municipal Act*.

The methods of capital cost recovery available to municipalities are provided as follows:

Recovery Methods	Section Reference
• *Development Charges Act, 1997*	3.2
• *Municipal Act*	3.3
o Fees and Charges	
o Stormwater Area Charges	
o Connection Fees	
o Local Improvements	

Recovery Methods	Section Reference
• Historical Grant Funding Availability	3.4
• Existing Reserves/Reserve Funds	3.5
• Debenture Financing	3.6
• Infrastructure Ontario	3.7

3.2 Development Charges Act, 1997

Development charges are a revenue tool used by municipalities to recover the capital costs associated with new development and redevelopment. These costs are in addition to what a developer/builder normally constructs as part of their subdivision (i.e. Local Services). Empowered by the *Development Charges Act, 1997*, municipalities may pass by-laws to impose charges to recover the capital costs associated with development and redevelopment.

The City currently imposes Development Charges related to stormwater through By-law 6-2024, as amended, for Engineering Services. Stormwater capital projects associated with new development were included in the City's background study. To the extent these projects are growth-related, this financial plan has identified Development Charges as the funding source.

Since the inception of the revised *Development Charges Act*, in 1997, the province has expanded the number of mandatory exemptions and discounts required for new development. Should the mandatory exemptions and discounts continue to change with new legislation, the City may need to reexamine timing of capital projects to ensure adequate funding is available.

3.3 Municipal Act

Part XII of the *Municipal Act* provides municipalities with broad powers to impose fees and charges via passage of a by-law. These powers, as presented in s.391(1), include imposing fees or charges:

- "for services or activities provided or done by or on behalf of it;
- for costs payable by it for services or activities provided or done by or on behalf of any other municipality or local board; and

- for the use of its property including property under its control."

Restrictions are provided to ensure that the form of the charge is not akin to a poll tax. Any charges not paid under this authority may be added to the tax roll and collected in a like manner. The fees and charges imposed under this part are not appealable to the Ontario Land Tribunal ((OLT) formerly Local Planning Appeal Tribunal (LPAT).

Section 221 of the previous *Municipal Act* permitted municipalities to impose charges, by by-law, on owners or occupants of land who would or might derive benefit from the construction of sewage (storm and sanitary) or water works being authorized (in a specific benefit area). For a by-law imposed under this section of the previous Act:

- A variety of different means could be used to establish the rate and recovery of the costs and could be imposed by a number of methods at the discretion of Council (i.e. lot size, frontage, number of benefiting properties, etc.);
- Rates could be imposed with respect to costs of major capital works, even though an immediate benefit was not enjoyed;
- Non-abutting owners could be charged;
- Recovery was authorized against existing works, where a new water or sewer main was added to such works, "notwithstanding that the capital costs of existing works has in whole or in part been paid;"
- Charges on individual parcels could be deferred;
- Exemptions could be established;
- Repayment was secured; and
- OLT approval was not required.

While under the new *Municipal Act* no provisions are provided specific to the previous s.221, the intent to allow capital cost recovery through fees and charges is embraced within s.391. The new *Municipal Act* also maintains the ability of municipalities to impose capital charges for services on landowners not receiving an immediate benefit from the works. Under s.391(2) of the Act, "a fee or charge imposed under subsection (1) for capital costs related to services or activities may be imposed on persons not receiving an immediate benefit from the services or activities but who will receive a benefit at some later point in time." Also, capital charges imposed under s.391 are not appealable to the OLT on the grounds that the charges are "unfair or unjust."

Under the previous *Local Improvement Act*:

- A variety of different types of works could be undertaken, such as watermain, storm and sanitary sewer projects, supply of electrical light or power, bridge construction, sidewalks, road widening and paving;
- Council could pass a by-law for undertaking such work on petition of a majority of benefiting taxpayers, on a 2/3 vote of Council and on sanitary grounds, based on the recommendation of the Minister of Health. The by-law was required to go to the OLT, which might hold hearings and alter the by-law, particularly if there were objections;
- The entire cost of a work was assessed only upon the lots abutting directly on the work, according to the extent of their respective frontages, using an equal special rate per metre of frontage; and
- As noted, this Act was repealed as of April 1, 2003; however, O. Reg. 119/03 was enacted on April 19, 2003 which restores many of the previous *Local Improvement Act* provisions; however, the authority is now provided under the *Municipal Act*.

3.4 Grant Funding Availability

Infrastructure Funding Programs

Various infrastructure funding programs are made available to municipalities on an application basis by both the Federal and Provincial Government, including those made available through associations such as the Federation of Canadian Municipalities. These programs include the Investing in Canada Infrastructure Program (I.C.I.P.), the Public Transit Infrastructure Fund (P.T.I.F.), the Green Municipal Fund, etc. Funding applications are often required in order to secure funding through these programs.

Canada Community Building Fund (formerly Federal Gas Tax program)

The Canada Community Building Fund (C.C.B.F.) is a permanent source of funding provided up front, twice-a-year, to Provinces and Territories, who in turn flow this funding to their municipalities to support local infrastructure priorities. Municipalities can pool, bank, and borrow against this funding, providing financial flexibility. Every year, the federal C.C.B.F. provides over $2 billion and supports approximately 4,000 projects in communities across Canada. Each municipality selects how best to direct the funds

with the flexibility provided to make strategic investments across the various project categories. It is noted that stormwater management infrastructure is an eligible project category for C.C.B.F. funding.

Housing-Enabling Water Systems Fund

The Housing-Enabling Water Systems Fund (H.E.W.S.) helps municipalities develop, repair, rehabilitate, and expand critical drinking water, wastewater and stormwater infrastructure. The projects funded through this program aim to support housing opportunities, protect communities and enhance economic growth. Although the focus of this funding program is mainly on housing, projects related to industrial development would also be considered under this grant program given that employment growth helps drive economic growth. The first application intake closed on April 19, 2024, with a total investment of $970 million in 54 water infrastructure projects. The second intake of applications is currently open, with a deadline of November 1, 2024 and with additional funding of $250 million available to Ontario municipalities.

3.5 Existing Reserves/Reserve Funds

The City has established a Water Quality Protection Reserve Fund for stormwater costs. In addition, the City has an Engineering D.C. Reserve Fund from which growth-related stormwater works are funded. The following table summarizes these reserve funds utilized in this analysis and their respective balances at December 31, 2023:

Table 3-1
Stormwater Related Reserve Funds
As of December 31, 2023

Reserve	Dec. 31 2023
Water Quality Protection Reserve Fund	2,404,924
City-wide Engineering D.C. Reserve Fund	44,571,664

Staff have noted to Council that the Water Quality Protection Reserve Fund will be depleted in 2025 without a corresponding rate increase, based on the capital needs identified.

3.6 Debenture Financing

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 the level of debt incurred by Ontario municipalities, through its powers established under the *Municipal Act*. Ontario Regulation 403/02 provides the current rules respecting municipal debt and financial obligations. Through the rules established under these regulations, a municipality's debt capacity is capped at a level where no more than 25% of the municipality's own purpose revenue may be allotted for servicing the debt (i.e. debt charges). The City of Richmond Hill's 2024 calculation on Debt Capacity is shown on Schedule 81 of the City's most recent Financial Information Return (F.I.R.). This calculation provides the City's estimated annual repayment limit of approximately $67.13 million. Based upon 20-year financing at an assumed rate of 5.0%, the available debt for the City is approximately $836.56 million. It is noted that the City does not currently have any debt payments outstanding for any of the services provided.

As part of this analysis, three (3) rate scenarios were developed for Council's consideration. Scenarios 1 and 3 do not assume any debt financing, however Scenario 2 assumed $22 million in debt financing (discussed further in Section 3.8).

3.7 Infrastructure Ontario

Infrastructure Ontario (I.O.) is an arms-length crown corporation, which has been set up as a tool to offer low-cost and longer-term financing to assist municipalities in renewing their infrastructure (this corporation has merged the former Ontario Strategic Infrastructure Financing Authority (O.S.I.F.A.)into its operations). I.O. combines the infrastructure renewal needs of municipalities into an infrastructure investment "pool." I.O. will raise investment capital to finance loans to the public sector by selling a new investment product called Infrastructure Renewal Bonds to individual and institutional investors.

I.O. provides access to infrastructure capital that would not otherwise be available to smaller borrowers. Larger borrowers receive a longer term on their loans than they

could obtain in the financial markets, and can also benefit from significant savings on transaction costs such as legal costs and underwriting commissions. Under the I.O. approach, all borrowers receive the same low interest rate. I.O. will enter into a financial agreement with each municipality subject to technical and credit reviews, for a loan up to the maximum amount of the loan request.

The first round of the former O.S.I.F.A.'s 2004/2005 infrastructure renewal program was focused on municipal priorities of clean water infrastructure, sewage treatment facilities, municipal roads and bridges, public transit and waste management infrastructure. The focus of the program was expanded in 2005/2006 to include:

- clean water infrastructure;
- sewage infrastructure;
- waste management infrastructure;
- municipal roads and bridges;
- public transit;
- municipal long-term care homes;
- renewal of municipal social housing and culture; and
- tourism and recreation infrastructure.

With the merging of O.S.I.F.A. and I.O., the program was broadened in late 2006 to also include municipal administrative buildings, local police and fire stations, emergency vehicles and equipment, ferries, docks and municipal airports.

To be eligible to receive these loans, municipalities must submit a formal application along with pertinent financial information. Allotments are prioritized and distributed based upon the Province's assessment of need.

3.8 Recommended Capital Financing Approach

Three (3) rate scenarios are presented in this analysis as follows:

- Scenario 1: based on the City's 10-year capital forecast; 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: based on the City's 10-year capital forecast; it is assumed that $3 million in additional Canada Community Building Fund (C.C.B.F.) funding will be used for the first five (5) years and $22 million of debt will be issued; and
- Scenario 3: provides for a revised (deferred) timing of the City's 10-year capital forecast; assumes $3 million in additional C.C.B.F. funding over the first five (5) years and no debt issuance.

These scenarios are also summarized in the table below:

Table 3-2
City of Richmond Hill
Summary of Rate Scenarios

Component of Calculation	Scenario 1	Scenario 2	Scenario 3
Modifications to Capital Forecast	None	None	Revised timing of works to smooth rate increases. All works identified in the 10-year capital forecast are included in this scenario.
Debt Issuance	None	$22 million over 10 years	None
Additional C.C.B.F. Funding*	None	$3 million annually over first five (5) years of forecast	$3 million annually over first five (5) years of forecast

*Note: $1.56 million in C.C.B.F. funding has already been identified in the capital forecast. The additional funding assumed in Scenarios 2 and 3 is incremental to this amount.

Of the various financing alternatives provided in this section, the following are recommended for further consideration by the City of Richmond Hill for the capital expenditures (inflated) provided in Chapter 2 for each of the above scenarios:

Table 3-3
City of Richmond Hill
Capital Forecast – Financing Sources by Scenario
Inflated $

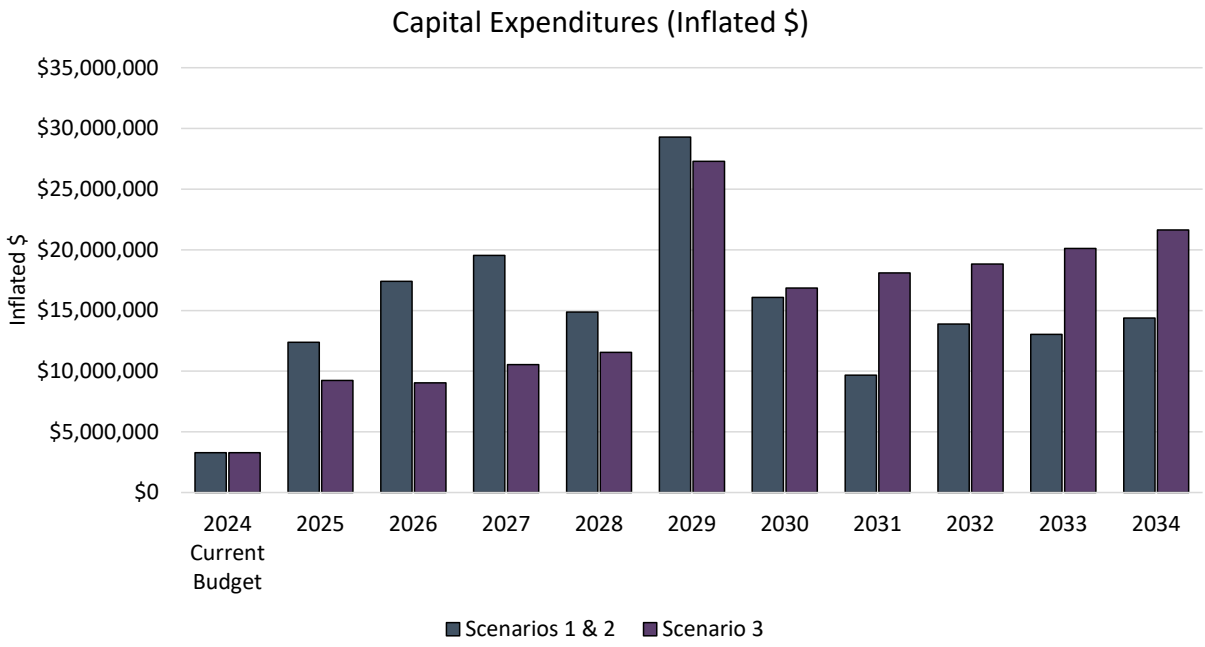
Description	2025 to 2034 (Inflated $)		
	Scenario 1	Scenario 2	Scenario 3
Capital Financing - Inflated $			
Grant Funding	1,176,000	1,176,000	1,176,000
Development Charges Reserve Fund - Engineering	19,299,000	19,299,000	19,299,000
Development Charges Reserve Fund - Other [1]	1,480,000	1,480,000	1,480,000
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

Figure 3-1 below provides for the annualized capital expenditures in inflated dollars. Note that the capital forecast for scenarios 1 and 2 are the same.

The detailed annualized capital expenditures and associated funding sources for each of the three scenarios are provided in the appendices to this report.

Figure 3-1
City of Richmond Hill
Annual Stormwater Capital Expenditures (Inflated $)



Chapter 4
Overview of Operating Expenditures

4. Overview of Operating Expenditures

4.1 Operating Expenditures

The forecast stormwater operating budget figures (2025 to 2034) are based on a detailed analysis undertaken by staff on future operating costs.

Operating Costs

Stormwater operating expenditures include all costs related to existing and projected contracts, materials and supplies that are related to operating the network. In addition, operating expenditures are shared between stormwater and water/wastewater related to items such as wages for operations staff, vehicle rentals, uniforms, contracts for emergency repairs, etc. The portion of operating costs related to stormwater are transferred from the stormwater budget to the water budget through the "Transfer to Water Fund" line item in the operating budget.

Further, a chargeback approach is utilized by the City to ensure that all costs related to an activity are recovered from the appropriate budget. As part of the tax-supported budget, there are City staff/resources that allocate a portion of time to stormwater operations, either directly or indirectly. The City estimates a percentage of staff time and resources related to stormwater activities to calculate an amount to allocate to the stormwater budget. This is identified as a "Transfer to Operating Fund" expenditure within the stormwater budget to provide for a chargeback to reimburse the tax-supported budget for costs related to stormwater.

Capital Related Costs

Annual contributions have been provided to the Water Quality Protection Reserve Fund over the forecast period to fund the capital program. These transfers vary based on the rate scenario under consideration. The transfer to fund capital in 2024 was $1.3 million, however, based on the capital needs presented in Chapter 2, required capital expenditures are significantly higher over the forecast period.

In addition, scenario 2 provides for debt financing to fund a portion of the capital program. Principal and interest charges for this debt have been included in the capital related expenditures for recovery through the stormwater rate.

Tables 4-1, 4-2 and 4-3 provide for the operating budget for the stormwater system under Scenarios 1, 2, and 3. Note that the operating related expenditures do not vary between the scenarios, however, the capital-related transfers and debt charges do vary between the three scenarios based on the assumptions noted in Section 3.8.

Table 4-1
City of Richmond Hill
Operating Budget Forecast – Stormwater (Inflated $)
Scenario 1

Description	Forecast									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Expenditures										
Operating Costs										
Transfer to Water Fund	223,776	261,054	298,757	335,590	378,612	397,178	412,324	432,207	452,818	231,770
Contracts	860,000	921,000	954,100	988,500	1,024,200	1,061,400	1,100,000	1,140,100	1,181,800	1,225,100
Materials/Supplies	97,900	100,800	103,800	106,900	110,100	113,400	116,800	120,300	123,900	127,700
Transfer to Operating Fund	3,578,194	3,883,818	4,005,103	4,139,973	4,273,143	4,398,726	4,528,138	4,661,653	4,799,458	4,941,502
Sub Total Operating	**4,759,870**	**5,166,672**	**5,361,760**	**5,570,963**	**5,786,055**	**5,970,704**	**6,157,262**	**6,354,260**	**6,557,976**	**6,526,072**
Capital-Related										
Existing Debt (Principal) - Growth Related										
Existing Debt (Interest) - Growth Related										
New Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related										
Existing Debt (Interest) - Non-Growth Related										
New Non-Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-
Transfer to Water Quality Protection Reserve	8,642,575	14,887,000	17,712,118	17,215,447	15,915,873	14,696,466	13,527,291	12,391,693	11,284,488	10,467,215
Sub Total Capital Related	**8,642,575**	**14,887,000**	**17,712,118**	**17,215,447**	**15,915,873**	**14,696,466**	**13,527,291**	**12,391,693**	**11,284,488**	**10,467,215**
Total Expenditures	**13,402,445**	**20,053,672**	**23,073,878**	**22,786,410**	**21,701,928**	**20,667,170**	**19,684,553**	**18,745,953**	**17,842,464**	**16,993,287**
Revenues										
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Stormwater Billing Recovery - Total	**13,402,445**	**20,053,672**	**23,073,878**	**22,786,410**	**21,701,928**	**20,667,170**	**19,684,553**	**18,745,953**	**17,842,464**	**16,993,287**

Table 4-2
City of Richmond Hill
Operating Budget Forecast – Stormwater (Inflated $)
Scenario 2

Description	Forecast									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Expenditures										
Operating Costs										
Transfer to Water Fund	223,776	261,054	298,757	335,590	378,612	397,178	412,324	432,207	452,818	231,770
Contracts	860,000	921,000	954,100	988,500	1,024,200	1,061,400	1,100,000	1,140,100	1,181,800	1,225,100
Materials/Supplies	97,900	100,800	103,800	106,900	110,100	113,400	116,800	120,300	123,900	127,700
Transfer to Operating Fund	3,578,194	3,883,818	4,005,103	4,139,973	4,273,143	4,398,726	4,528,138	4,661,653	4,799,458	4,941,502
Sub Total Operating	**4,759,870**	**5,166,672**	**5,361,760**	**5,570,963**	**5,786,055**	**5,970,704**	**6,157,262**	**6,354,260**	**6,557,976**	**6,526,072**
Capital-Related										
Existing Debt (Principal) - Growth Related										
Existing Debt (Interest) - Growth Related										
New Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related										
Existing Debt (Interest) - Non-Growth Related										
New Non-Growth Related Debt (Principal)	-	76,934	247,541	461,325	556,598	679,162	807,462	842,183	878,397	916,168
New Non-Growth Related Debt (Interest)	-	101,635	319,337	577,053	656,871	763,234	864,942	830,221	794,007	756,236
Transfer to Capital	-	-	-	-	-	-	-	-	-	-
Transfer to Water Quality Protection Reserve	3,278,976	6,747,212	8,274,070	9,047,446	10,268,838	11,627,547	12,067,253	12,518,793	12,999,246	13,722,216
Sub Total Capital Related	**3,278,976**	**6,925,781**	**8,840,948**	**10,085,824**	**11,482,306**	**13,069,943**	**13,739,657**	**14,191,197**	**14,671,650**	**15,394,620**
Total Expenditures	**8,038,846**	**12,092,453**	**14,202,708**	**15,656,787**	**17,268,362**	**19,040,647**	**19,896,918**	**20,545,456**	**21,229,626**	**21,920,692**
Revenues										
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Stormwater Billing Recovery - Total	**8,038,846**	**12,092,453**	**14,202,708**	**15,656,787**	**17,268,362**	**19,040,647**	**19,896,918**	**20,545,456**	**21,229,626**	**21,920,692**

Table 4-3
City of Richmond Hill
Operating Budget Forecast – Stormwater (Inflated $)
Scenario 3

Description	Forecast									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Expenditures										
Operating Costs										
Transfer to Water Fund	223,776	261,054	298,757	335,590	378,612	397,178	412,324	432,207	452,818	231,770
Contracts	860,000	921,000	954,100	988,500	1,024,200	1,061,400	1,100,000	1,140,100	1,181,800	1,225,100
Materials/Supplies	97,900	100,800	103,800	106,900	110,100	113,400	116,800	120,300	123,900	127,700
Transfer to Operating Fund	3,578,194	3,883,818	4,005,103	4,139,973	4,273,143	4,398,726	4,528,138	4,661,653	4,799,458	4,941,502
Sub Total Operating	**4,759,870**	**5,166,672**	**5,361,760**	**5,570,963**	**5,786,055**	**5,970,704**	**6,157,262**	**6,354,260**	**6,557,976**	**6,526,072**
Capital-Related										
Existing Debt (Principal) - Growth Related										
Existing Debt (Interest) - Growth Related										
New Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related										
Existing Debt (Interest) - Non-Growth Related										
New Non-Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-
Transfer to Water Quality Protection Reserve	2,176,272	3,523,366	5,525,352	8,067,239	11,313,972	15,455,538	17,290,864	18,322,957	19,423,200	20,827,202
Sub Total Capital Related	**2,176,272**	**3,523,366**	**5,525,352**	**8,067,239**	**11,313,972**	**15,455,538**	**17,290,864**	**18,322,957**	**19,423,200**	**20,827,202**
Total Expenditures	**6,936,142**	**8,690,038**	**10,887,111**	**13,638,202**	**17,100,027**	**21,426,241**	**23,448,126**	**24,677,217**	**25,981,176**	**27,353,274**
Revenues										
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Stormwater Billing Recovery - Total	**6,936,142**	**8,690,038**	**10,887,111**	**13,638,202**	**17,100,027**	**21,426,241**	**23,448,126**	**24,677,217**	**25,981,176**	**27,353,274**

Chapter 5
Analysis of Stormwater Rates

5. Analysis of Stormwater Rates

5.1 Introduction

To summarize the analysis undertaken thus far, Chapter 2 reviewed capital-related expenditures and the proposed capital program. Chapter 3 provided a review of capital financing options to which reserve contributions will be the predominant basis for financing future capital costs. Chapter 4 established the 10-year operating forecast of expenditures including annual reserve fund contributions. This chapter will provide for the calculation of the stormwater rates over the forecast period for each of the three (3) scenarios under consideration. These calculations will be based on the net operating expenditures (the variable costs) provided in Chapter 4, divided by the weighted area forecast provided in section 1.5.

Given that the City recently undertook a detailed investigation into the rate structure, the current structure is maintained for the rate calculation and forecast.

5.2 Scenario 1 Rate Calculations

This scenario provides for the rate calculations based on the City's 10-year capital forecast and does not assume any debt financing. The majority of the stormwater capital costs are required in the first half of the forecast period. As noted previously, the City's Water Quality Protection Reserve Fund will be depleted in 2025. As such, higher rate increases are required in the first three (3) years of the forecast to fund the capital needs. From 2028 onwards, the rate forecast provides for a decrease given that the rate is at a sufficient level to provide funding for the required capital needs.

It is noted that rate decreases are provided for 2028 to 2034, however, the rate could be maintained with 0% increases annually. The additional funds received through rate revenues can be transferred to the reserve fund to provide savings/funding for future needs.

The forecasted rates are presented in Table 5-1 for this scenario. Detailed calculations of the rates are provided in Appendix A.

Table 5-1
City of Richmond Hill
Annual Stormwater Rate Forecast – Scenario 1

Annual Rate per 1,000 sq.ft. ($)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Residential	11.02	29.96	40.31	44.33	42.15	40.04	38.04	36.14	34.32	32.59	30.97
Town/ Row House	15.43	41.95	56.43	62.06	59.01	56.05	53.25	50.59	48.05	45.62	43.35
Semi-detached/ Link House	12.12	32.96	44.34	48.76	46.37	44.04	41.84	39.75	37.75	35.85	34.06
Commercial/Industrial	20.94	56.93	76.59	84.23	80.09	76.07	72.27	68.66	65.21	61.92	58.83
Multi-Residential	18.73	50.94	68.53	75.36	71.66	68.07	64.66	61.43	58.35	55.40	52.64
Agricultural Land/Farm	2.20	5.99	8.06	8.87	8.43	8.01	7.61	7.23	6.86	6.52	6.19
Golf Course Structures	19.84	53.94	72.56	79.79	75.87	72.07	68.46	65.05	61.78	58.66	55.74
Golf Courses - Playing Area	3.31	8.99	12.09	13.30	12.65	12.01	11.41	10.84	10.30	9.78	9.29
Vacant Land	2.20	5.99	8.06	8.87	8.43	8.01	7.61	7.23	6.86	6.52	6.19
Institutional	15.43	41.95	56.43	62.06	59.01	56.05	53.25	50.59	48.05	45.62	43.35
Annual Change in Residential Rate ($)		**18.94**	**10.35**	**4.02**	**(2.18)**	**(2.11)**	**(2.00)**	**(1.90)**	**(1.82)**	**(1.73)**	**(1.62)**

5.3 Scenario 2 Rate Calculations

Given the higher rate increases required in the first half of the forecast period, scenario 2 assumes that $3 million in incremental C.C.B.F. funding would be utilized to fund capital on an annual basis over the first five (5) years. In addition, debt issuances of $22 million have been assumed over the first six (6) years to smooth rate increases. Although using debt will allow for lower rates in the interim, additional costs to the system will be incurred (interest costs). Based on these assumptions, rate increases are lower for the first three (3) years of the forecast. Subsequently, rate increases have been smoothed from 2028 to 2034 to provide funding for the capital program in addition to the debt charges.

Table 5-2 provides for the rate forecast by property type for this scenario:

Table 5-2
City of Richmond Hill
Annual Stormwater Rate Forecast – Scenario 2

Annual Rate per 1,000 sq.ft. ($)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Residential	11.02	16.53	24.81	27.29	30.01	33.01	36.31	37.23	38.40	39.57	40.75
Town/ Row House	15.43	23.15	34.73	38.20	42.01	46.22	50.83	52.12	53.76	55.40	57.05
Semi-detached/ Link House	12.12	18.19	27.29	30.02	33.01	36.31	39.94	40.95	42.24	43.53	44.83
Commercial/Industrial	20.94	31.41	47.14	51.85	57.02	62.72	68.98	70.73	72.96	75.18	77.43
Multi-Residential	18.73	28.11	42.17	46.39	51.02	56.12	61.72	63.28	65.28	67.27	69.28
Agricultural Land/Farm	2.20	3.31	4.96	5.46	6.00	6.60	7.26	7.45	7.68	7.91	8.15
Golf Course Structures	19.84	29.76	44.65	49.12	54.02	59.42	65.35	67.01	69.12	71.22	73.35
Golf Courses - Playing Area	3.31	4.96	7.44	8.19	9.00	9.90	10.89	11.17	11.52	11.87	12.23
Vacant Land	2.20	3.31	4.96	5.46	6.00	6.60	7.26	7.45	7.68	7.91	8.15
Institutional	15.43	23.15	34.73	38.20	42.01	46.22	50.83	52.12	53.76	55.40	57.05
Annual Change in Residential Rate ($)		**5.51**	**8.28**	**2.48**	**2.72**	**3.00**	**3.30**	**0.92**	**1.17**	**1.17**	**1.18**

Based on the total debt issuance of $22 million, Table 5-3 provides the annual principal and interest payments over the forecast period. It is noted that the debt is assumed over a term of 20 years, and as such, 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.

Table 5-3
City of Richmond Hill
Annual Debt Payments (2025-2034)

Year	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Debt Issuance (Principal Amount)	**2,363,599**	**5,139,788**	**6,240,930**	**2,317,554**	**3,030,163**	**3,044,453**	**-**	**-**	**-**	**-**
Annual Principal Payment	-	76,934	247,541	461,325	556,598	679,162	807,462	842,183	878,397	916,168
Annual Interest Payment	-	101,635	319,337	577,053	656,871	763,234	864,942	830,221	794,007	756,236
Total Annual Payment	**-**	**178,569**	**566,878**	**1,038,378**	**1,213,469**	**1,442,396**	**1,672,404**	**1,672,404**	**1,672,404**	**1,672,404**

5.4 Scenario 3 Rate Calculations

This scenario provides for an adjustment to the timing of the overall capital program to smooth out rate increases. Given that capital needs and the associated required rate increases are higher in the first half of the forecast period in Scenarios 1 and 2, this scenario provides for an adjustment to the timing of the capital needs by gradually increasing the capital funding envelope on an annual basis. This scenario provides for a more gradual increase in the rate over the 10-year forecast period, relative to scenarios 1 and 2. It is noted that debt financing has not been assumed in this scenario, however $3 million in incremental C.C.B.F. funding in the first five (5) years has been factored into the analysis.

Note that the specific projects that would need to be adjusted for timing have not been considered as part of this rate analysis. If this scenario is chosen as the preferred option by Council, staff would need to determine which projects can be deferred to later years of the forecast period.

The rate forecast by property type is provided in Table 5-4 below:

Table 5-4
City of Richmond Hill
Stormwater Rate Forecast – Scenario 3

Annual Rate per 1,000 sq.ft. ($)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Residential	11.02	13.77	17.21	21.51	26.89	33.61	42.01	44.12	46.32	48.65	51.09
Town/ Row House	15.43	19.28	24.10	30.11	37.64	47.06	58.82	61.77	64.85	68.10	71.52
Semi-detached/ Link House	12.12	15.15	18.93	23.66	29.58	36.97	46.21	48.54	50.95	53.51	56.20
Commercial/Industrial	20.94	26.17	32.70	40.86	51.09	63.86	79.82	83.83	88.01	92.43	97.07
Multi-Residential	18.73	23.41	29.26	36.56	45.71	57.14	71.42	75.01	78.75	82.70	86.85
Agricultural Land/Farm	2.20	2.75	3.44	4.30	5.38	6.72	8.40	8.82	9.26	9.73	10.22
Golf Course Structures	19.84	24.79	30.98	38.71	48.40	60.50	75.62	79.42	83.38	87.56	91.96
Golf Courses - Playing Area	3.31	4.13	5.16	6.45	8.07	10.08	12.60	13.24	13.90	14.59	15.33
Vacant Land	2.20	2.75	3.44	4.30	5.38	6.72	8.40	8.82	9.26	9.73	10.22
Institutional	15.43	19.28	24.10	30.11	37.64	47.06	58.82	61.77	64.85	68.10	71.52
Annual Change in Residential Rate ($)		**2.75**	**3.44**	**4.30**	**5.38**	**6.72**	**8.40**	**2.11**	**2.20**	**2.33**	**2.44**

5.5 Comparison of Scenarios – Rate Impact

The following table provides a comparison of the rate impacts of the various scenarios on the average and largest residential properties in the City:

Table 5-5
City of Richmond Hill
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**

Table 5-6
City of Richmond Hill
Annual Stormwater Rate Impact – Largest Residential Property (Single Detached – 11 acres)

Scenario	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Scenario 1	$1,344	$3,653	$4,916	$5,408	$5,141	$4,884	$4,640	$4,409	$4,184	$3,976	$3,776
$ Change		**$2,309**	**$1,262**	**$493**	**($267)**	**($257)**	**($244)**	**($232)**	**($224)**	**($209)**	**($200)**
Scenario 2	$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**
Scenario 3	$1,344	$1,678	$2,098	$2,623	$3,281	$4,099	$5,123	$5,380	$5,648	$5,934	$6,232
$ Change		**$334**	**$420**	**$524**	**$658**	**$818**	**$1,025**	**$257**	**$268**	**$286**	**$298**

Note: residential areas up to 1 acre are charged the residential rate as provided in Tables 5-1, 5-2, and 5-4. Areas between 1 acre and 10 acres are charged the vacant land rate. The rate is capped at 10 acres such that any land in excess of 10 acres is not subject to the charge.

Similarly, a rate impact on the average and largest commercial/industrial properties in the City are provided below:

Table 5-7
City of Richmond Hill
Annual Stormwater Rate Impact – Average Commercial/Industrial Property (2.1 acres)

Scenario	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Scenario 1	$1,926	$5,238	$7,046	$7,749	$7,368	$6,998	$6,649	$6,317	$5,999	$5,697	$5,412
$ Change		**$3,311**	**$1,809**	**$703**	**($381)**	**($370)**	**($350)**	**($332)**	**($317)**	**($303)**	**($284)**
Scenario 2	$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**
Scenario 3	$1,926	$2,408	$3,008	$3,759	$4,700	$5,875	$7,343	$7,712	$8,097	$8,504	$8,930
$ Change		**$481**	**$601**	**$751**	**$941**	**$1,175**	**$1,468**	**$369**	**$385**	**$407**	**$427**

Table 5-8
City of Richmond Hill
Stormwater Rate Impact – Largest Commercial/Industrial Property (46 acres)

Scenario	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Scenario 1	$41,723	$113,449	$152,627	$167,852	$159,602	$151,591	$144,018	$136,824	$129,949	$123,393	$117,235
$ Change		**$71,726**	**$39,178**	**$15,225**	**($8,250)**	**($8,011)**	**($7,573)**	**($7,194)**	**($6,875)**	**($6,556)**	**($6,158)**
Scenario 2	$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**
Scenario 3	$41,723	$52,151	$65,164	$81,425	$101,811	$127,259	$159,063	$167,054	$175,384	$184,192	$193,439
$ Change		**$10,428**	**$13,013**	**$16,261**	**$20,386**	**$25,448**	**$31,805**	**$7,991**	**$8,330**	**$8,808**	**$9,246**

5.6 Recommended Scenario

Based on a review of the scenarios by City staff, Scenario 2 is recommended for Council's consideration for implementation. As noted in the introduction of this report, the stormwater system has been historically underfunded as forecasted rate increases identified in the 2013 Council approved Stormwater Management Financial Plan were not implemented. In addition, atypical inflationary pressures and updated asset condition assessments, as provided through the City's asset management work, have led to capital needs that are significantly higher than past years. The current funding to the Water Quality Protection Reserve Fund is unsustainable, and as such, rate increases are required to fund the capital program.

Scenario 2 provides for the full funding of the capital program, with the timing identified by the City's engineering staff. Interim financing through debt issuance assists in lowering the required rate increases relative to Scenario 1.

Although Scenario 3 provides for the lowest rate increases over the first three (3) years, capital works are being deferred in this scenario. The City has reviewed the stormwater capital forecast in detail and many of the works identified in the first three (3) years are critical in maintaining existing service levels. If works are deferred to the latter half of the forecast period, there may be a decline in service levels.

Based on this discussion, it is recommended that the rate forecast presented in Scenario 2 be considered for implementation.

Chapter 6
Recommendations

6. Recommendations

As presented within this report, capital and operating expenditures have been identified and forecast over a ten-year period for stormwater management services.

Based upon the foregoing, the following recommendations are identified for consideration by City Council:

1. That Council provide for the recovery of all stormwater costs through full cost recovery rates.

2. That Council consider Scenario 2 as the staff recommended option for funding the capital program.

3. That Council consider the Capital Plan for stormwater management as provided in Table 2-1 and the associated Capital Financing Plan as set out in Table 4-2 for Scenario 2.

4. That Council consider the stormwater rates provided in Table 5-2 related to Scenario 2.

Appendices

Appendix A
Detailed Stormwater Rate Calculations – Scenario 1

Appendix A: Detailed Stormwater Rate Calculations – Scenario 1

Table A-1
City of Richmond Hill
Capital Budget Forecast (Uninflated $) – Scenario 1

Description	Total 2025 to 2034	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures											
19th Avenue Waterbody Decommissioning	1,190,200							378,700		811,500	
Ada MacKenzie Pond (22-1) Retrofit	1,750,676					398,176		270,500		1,082,000	
Albright Pond (9-10) Sediment Removal	-										
Annual Drainage Investigations	1,268,750	126,875	126,875	126,875	126,875	126,875	126,875	126,875	126,875	126,875	126,875
Arnold Crescent Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	13,741	13,741									
Arnold Crescent Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth Related Component)	1,176,459	1,176,459									
Ashfield Pond (2-2) Sediment Removal	-										
Aubrey Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	186,645		186,645								
Aubrey Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	746,580		746,580								
Aztec Pond (16-10) Sediment Removal	1,020,326								1,020,326		
Bayview Hill Pond (22-2) Retrofit	398,176									398,176	
Beaufort Hills Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	360,306		25,427		203,416	14,607		116,856			
Beaufort Hills Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,780,199		250,483		2,003,864	58,428		467,424			
Beaver Woodland Pond (27-2) Post-construction 10-Year Monitoring	304,500	304,500									
Bentony Pond (8-6) Sediment Removal	704,382					704,382					
Beverly Acres valleyland rehabilitation - TRCA	757,400	324,600	432,800								
Black Willow Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	146,070					16,230		129,840			
Black Willow Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	584,280					64,920		519,360			
Capelle Street Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	48,690			48,690							
Capelle Street Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	194,760			194,760							
Cheval Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	97,380		10,820		86,560						
Cheval Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	24,345		2,705		21,640						
Coons Road and Cynthia Crescent Drainage Study (TENTATIVE)	270,500	270,500									
Coons Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	656,098		446,325		19,070		190,703				
Coons Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,548,110		1,785,300				762,810				
Country Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	58,428					6,492		51,936			

Table A-1 (Cont'd)
Capital Budget Forecast (Uninflated $) – Scenario 1

Description	Total 2025 to 2034	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Country Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	233,712					25,968		207,744			
Craigleith Pond (2-4) Retrofit	773,630								340,830		432,800
Cynthia Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	416,786				27,266		389,520				
Cynthia Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,667,146				109,066		1,558,080				
Doncrest Pond (27-1) Retrofit	3,644,176						398,176				3,246,000
Driftwood Pond (8-2) Retrofit	2,055,800		432,800		1,623,000						
East Beaver Creek Secondary Plan Computer Model Analysis	279,125		279,125								
Elgin Mills Culvert (York Region) (Non-Growth-Related Component)	3,657,517					3,657,517					
Elgin Mills Culvert (York Region) (Growth-Related Component)	11,816,147					11,816,147					
Elgin Mills Road W Recon (York Region)	324,600		324,600								
Elm Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	284,025								284,025		
Elm Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,136,100								1,136,100		
Elm Grove Drainage Study (TENTATIVE)	216,400	216,400									
Enford Road Rehabilitation - (Road, Watermain, Sanitary, Storm)	1,623,000		1,623,000								
Fergus Ave Moray Ave Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	328,658			328,658							
Fergus Ave Moray Ave Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,314,630			1,314,630							
Fern Avenue Drainage Study	270,500				270,500						
Fleet and Operational Equipment	109,256		1,726	2,436		21,491		81,192	2,412		
Gallacher Avenue Blyth Street Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	214,236					23,804		190,432			
Gallacher Avenue Blyth Street Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,100,394					122,266		978,128			
George Street Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	856,944				95,216		761,728				
George Street Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	214,236				23,804		190,432				
George Street Reconstruction (Road, Watermain, Sanitary, Storm)	-										
Glouster Court Reconstruction (Road, Sanitary, Storm)	407,341						57,281		350,059		
Gormley Road West Drainage Study	270,500				270,500						
Harding East Pond (23-2) Sediment Removal	1,003,014			1,003,014							
Harding West Pond (23-1) Sediment Removal	940,258			940,258							
Headford West Pond (21-2) Sediment Removal	1,552,670									1,552,670	
Heron Pond (19-1) Sediment Removal	1,294,072				1,294,072						
Highland Lane Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	86,560	86,560									
Highland Lane Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	346,240	346,240									
Humber Flats Culvert and Pond Retrofit	5,842,800			973,800		4,869,000					
Hwy 7 to Castleridge (GM1) Valleyland Rehabilitation (CCBF Funded	100,000	100,000									
Hwy 7 to Castleridge (GM1) Valleyland Rehabilitation	162,300	162,300									
Industrial Road Rehabilitation (Road, Watermain, Sanitary, Storm)	2,142,360		2,142,360								
Kerrybrook and East Don River Valleyland Rehabilitation	511,786						170,956		340,830		

Table A-1 (Cont'd)
Capital Budget Forecast (Uninflated $) – Scenario 1

Description	Total 2025 to 2034	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Lake Wilcox Management Plan Update (TENTATIVE)	659,750	355,250					304,500				
Lake Wilcox Outlet Channel Sediment Removal	919,700				919,700						
Lawnwood Court Reconstruction (Road, Watermain, Sanitary, Storm)	193,653								193,653		
Licensed Equipment Replacement	1,123					292		538	292		
Luba Pond (15-4) Retrofit	944,586							511,786		432,800	
Maple Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (CCBF Funded Component)	1,460,700	1,460,700									
Maple Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	627,560	627,560									
Maple Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,049,540	1,049,540									
Marchwood Crescent Reconstruction (Road, Storm)	1,045,926						144,263		901,663		
Mill Pond Park Revitalization	8,656,000	1,082,000		3,246,000	4,328,000						
Mill Street Altamira Ave Drainage Works (Storm)	2,164,000	2,164,000									
Monitoring equipment and station installation (Monitoring Reserve)	105,306	8,881	5,075	30,450	30,450	5,075	5,075	5,075	5,075	5,075	5,075
Monitoring equipment and station installation	44,406	8,881	5,075			5,075	5,075	5,075	5,075	5,075	5,075
Mural North Pond (28-3) Sediment Removal	2,022,258							2,022,258			
Newman Pond (2-11) Retrofit	2,596,800	432,800		2,164,000							
Ohio Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	60,863		60,863								
Ohio Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	243,450		243,450								
Olde Bayview Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	194,760			194,760							
Olde Bayview Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	779,040			779,040							
Orchard Pond (19-4) Sediment Removal	1,891,336		1,891,336								
Ozark Pond (7-4) Sediment Removal	541,000				541,000						
Penny Place Reconstruction (Road, Watermain, Sanitary, Storm) (Growth Related Component)	63,297				7,033		56,264				
Penny Place Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	253,188				28,132		225,056				
Pioneer Pond (17-2) Sediment Removal	-										
Pomona Creek - Garden Ave Valleyland Rehabilitation (TENTATIVE)	3,570,600				324,600		3,246,000				
Prince Arthur Avenue Drainage Study	270,500					270,500					
Princeton Pond (19-5) Sediment Removal	1,997,372						1,997,372				
Redstone Pond (19-6) Sediment Removal	2,470,206								2,470,206		
Regent Street to Oxford (UED10) Valleyland Rehabilitation	1,250,792					398,176		852,616			
Richmond Centre Pond (26-1) Sediment Removal	2,570,832										2,570,832
Richmond Green West Pond (14-3) Sediment Removal	784,450									784,450	
Rockport Crescent Drainage Study	216,400		216,400								
Rockport Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	535,590							59,510		476,080	
Rockport Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,142,360							238,040		1,904,320	
Rouge River - Toporowski Ave Valleyland Rehabilitation (TRCA)	1,082,000		1,082,000								
Rumble Ave and Chassie Court Drainage Study	270,500		270,500								
Sandbanks Pond (7-3) Sediment Removal	667,594								667,594		
Schomberg Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth Related Component)	370,585		370,585								

Table A-1 (Cont'd)
Capital Budget Forecast (Uninflated $) – Scenario 1

Description	Total 2025 to 2034	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Schomberg Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,482,340		1,482,340								
Shelley Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	44,633								4,058		40,575
Shelley Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	178,530								16,230		162,300
Snively Wetland Outlet Reconstruction	1,623,000			541,000		1,082,000					
Snow Storage Pond (14-7) Sediment Removal	680,578									680,578	
Solmar Pond (15-5) Sediment Removal	690,316	162,300	528,016								
South Richvale Valleyland Sewer Protection (Sanitary Sewer	669,325		669,325								
South Richvale Valleyland Sewer Protection	446,217		446,217								
Storm Pond Phosphorus Trench Rehabilitation	757,400			757,400							
Stormwater Growth Vehicle and Equipment (Growth-Related	560,280	56,028	56,028	56,028	56,028	56,028	56,028	56,028	56,028	56,028	56,028
Stormwater Master Plan (TENTATIVE) (Growth-Related Component)	560,000	350,000					210,000				
Stormwater Master Plan (TENTATIVE) (Non-Growth-Related	560,000	350,000					210,000				
Sugar Maple Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	335,961			298,632					37,329		
Sugar Maple Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,343,844			1,194,528					149,316		
Toll Bar Pond (16-7) Retrofit	3,051,240			454,440	432,800		2,164,000				
Town Park Revitalization and Unity Park Repair and Replacement	969,472	103,872		865,600							
Unity Park Storm System Improvements	2,705,000	541,000		2,164,000							
Valleyland Rehabilitation Master Plan (TENTATIVE)	746,025		426,300					319,725			
Vehicle Replacements	101,718		21,544	10,236	40,140		2,519	11,201	5,413	10,665	
Verdi Pond (1-1) Sediment Removal	443,620	443,620									
Wastewater and Stormwater Model Monitoring	450,000		50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Wastewater and Stormwater Model Monitoring (Sanitary Sewer	450,000		50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Webster Park North Trail (Local Trail Priority no. 9)	1,224,200		304,500	919,700							
Webster Park Watebody Decommissioning	1,190,200							378,700		811,500	
Weldrick Road East Rehabilitation (Road)	243,450			27,050		216,400					
Wendy Way Reconstruction (Road, Watermain, Sanitary, Storm) (Growth Related Component)	24,345	9,738			1,623		12,984				
Wendy Way Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	97,380	38,952			6,492		51,936				
Westwood Lane Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	107,118								9,738		97,380
Westwood Lane Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	428,472								38,952		389,520
Wood Rim Pond (2-9) Sediment Removal	875,338										875,338
Zippora Pond (15-6) Retrofit	4,293,376				398,176		649,200		3,246,000		
Elgin Mills Culvert (York Region)	2,705,000					2,705,000					
Road Rehabilitation and Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	605,920				21,640		97,380	54,100			432,800
Road Rehabilitation and Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,347,940				54,100		378,700	216,400			1,698,740
Road Rehabilitation and Reconstruction - Urbanized (Road, Watermain, Sanitary, Storm)	5,507,380		75,740	43,280	551,820	302,960	43,280	238,040	573,460	1,882,680	1,796,120
Total Capital Expenditures	**147,701,558**	**12,373,298**	**17,072,864**	**18,779,265**	**14,016,583**	**27,067,808**	**14,566,193**	**8,588,078**	**12,081,539**	**11,120,472**	**12,035,458**

Table A-2
City of Richmond Hill
Capital Budget Forecast (Inflated $) – Scenario 1

Description	Total	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures											
19th Avenue Waterbody Decommissioning	1,377,000	-	-	-	-	-	-	426,000	-	951,000	-
Ada MacKenzie Pond (22-1) Retrofit	2,004,000	-	-	-	-	431,000	-	305,000	-	1,268,000	-
Annual Drainage Investigations	1,390,000	127,000	129,000	132,000	135,000	137,000	140,000	143,000	146,000	149,000	152,000
Arnold Crescent Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	14,000	14,000	-	-	-	-	-	-	-	-	-
Arnold Crescent Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth Related Component)	1,176,000	1,176,000	-	-	-	-	-	-	-	-	-
Aubrey Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	190,000	-	190,000	-	-	-	-	-	-	-	-
Aubrey Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	762,000	-	762,000	-	-	-	-	-	-	-	-
Aztec Pond (16-10) Sediment Removal	1,172,000	-	-	-	-	-	-	-	1,172,000	-	-
Bayview Hill Pond (22-2) Retrofit	467,000	-	-	-	-	-	-	-	-	467,000	-
Beaufort Hills Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	390,000	-	26,000	-	216,000	16,000	-	132,000	-	-	-
Beaufort Hills Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,971,000	-	255,000	-	2,127,000	63,000	-	526,000	-	-	-
Beaver Woodland Pond (27-2) Post-construction 10-Year Monitoring	305,000	305,000	-	-	-	-	-	-	-	-	-
Bentony Pond (8-6) Sediment Removal	762,000	-	-	-	-	762,000	-	-	-	-	-
Beverly Acres valleyland rehabilitation - TRCA	766,000	325,000	441,000	-	-	-	-	-	-	-	-
Black Willow Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	164,000	-	-	-	-	18,000	-	146,000	-	-	-
Black Willow Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	655,000	-	-	-	-	70,000	-	585,000	-	-	-
Capelle Street Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	51,000	-	-	51,000	-	-	-	-	-	-	-
Capelle Street Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	203,000	-	-	203,000	-	-	-	-	-	-	-
Cheval Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	103,000	-	11,000	-	92,000	-	-	-	-	-	-
Cheval Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	26,000	-	3,000	-	23,000	-	-	-	-	-	-
Coons Road and Cynthia Crescent Drainage Study (TENTATIVE)	271,000	271,000	-	-	-	-	-	-	-	-	-
Coons Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	686,000	-	455,000	-	20,000	-	211,000	-	-	-	-
Coons Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,663,000	-	1,821,000	-	-	-	842,000	-	-	-	-
Country Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	65,000	-	-	-	-	7,000	-	58,000	-	-	-
Country Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	262,000	-	-	-	-	28,000	-	234,000	-	-	-

Table A-2 (Cont'd)
Capital Budget Forecast (Inflated $) – Scenario 1

Description	Total	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Craigleith Pond (2-4) Retrofit	909,000	-	-	-	-	-	-	-	392,000	-	517,000
Cynthia Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	459,000	-	-	-	29,000	-	430,000	-	-	-	-
Cynthia Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,836,000	-	-	-	116,000	-	1,720,000	-	-	-	-
Doncrest Pond (27-1) Retrofit	4,319,000	-	-	-	-	-	440,000	-	-	-	3,879,000
Driftwood Pond (8-2) Retrofit	2,163,000	-	441,000	-	1,722,000	-	-	-	-	-	-
East Beaver Creek Secondary Plan Computer Model Analysis	285,000	-	285,000	-	-	-	-	-	-	-	-
Elgin Mills Culvert (York Region) (Non-Growth-Related Component)	3,959,000	-	-	-	-	3,959,000	-	-	-	-	-
Elgin Mills Culvert (York Region) (Growth-Related Component)	12,790,000	-	-	-	-	12,790,000	-	-	-	-	-
Elgin Mills Road W Recon (York Region)	331,000	-	331,000	-	-	-	-	-	-	-	-
Elm Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	326,000	-	-	-	-	-	-	-	326,000	-	-
Elm Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,305,000	-	-	-	-	-	-	-	1,305,000	-	-
Elm Grove Drainage Study (TENTATIVE)	216,000	216,000	-	-	-	-	-	-	-	-	-
Enford Road Rehabilitation - (Road, Watermain, Sanitary, Storm)	1,655,000	-	1,655,000	-	-	-	-	-	-	-	-
Fergus Ave Moray Ave Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	342,000	-	-	342,000	-	-	-	-	-	-	-
Fergus Ave Moray Ave Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,368,000	-	-	1,368,000	-	-	-	-	-	-	-
Fern Avenue Drainage Study	287,000	-	-	-	287,000	-	-	-	-	-	-
Fleet and Operational Equipment	122,000	-	2,000	3,000	-	23,000	-	91,000	3,000	-	-
Gallacher Avenue Blyth Street Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	240,000	-	-	-	-	26,000	-	214,000	-	-	-
Gallacher Avenue Blyth Street Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,234,000	-	-	-	-	132,000	-	1,102,000	-	-	-
George Street Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	942,000	-	-	-	101,000	-	841,000	-	-	-	-
George Street Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	235,000	-	-	-	25,000	-	210,000	-	-	-	-
Glouster Court Reconstruction (Road, Sanitary, Storm)	465,000	-	-	-	-	-	63,000	-	402,000	-	-
Gormley Road West Drainage Study	287,000	-	-	-	287,000	-	-	-	-	-	-
Harding East Pond (23-2) Sediment Removal	1,044,000	-	-	1,044,000	-	-	-	-	-	-	-
Harding West Pond (23-1) Sediment Removal	978,000	-	-	978,000	-	-	-	-	-	-	-
Headford West Pond (21-2) Sediment Removal	1,819,000	-	-	-	-	-	-	-	-	1,819,000	-
Heron Pond (19-1) Sediment Removal	1,373,000	-	-	-	1,373,000	-	-	-	-	-	-
Highland Lane Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	87,000	87,000	-	-	-	-	-	-	-	-	-

Table A-2 (Cont'd)
Capital Budget Forecast (Inflated $) – Scenario 1

Description	Total	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Highland Lane Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	346,000	346,000	-	-	-	-	-	-	-	-	-
Humber Flats Culvert and Pond Retrofit	6,283,000	-	-	1,013,000	-	5,270,000	-	-	-	-	-
Hwy 7 to Castleridge (GM1) Valleyland Rehabilitation (CCBF Funded Component)	100,000	100,000	-	-	-	-	-	-	-	-	-
Hwy 7 to Castleridge (GM1) Valleyland Rehabilitation	162,000	162,000	-	-	-	-	-	-	-	-	-
Industrial Road Rehabilitation (Road, Watermain, Sanitary, Storm)	2,185,000	-	2,185,000	-	-	-	-	-	-	-	-
Kerrybrook and East Don River Valleyland Rehabilitation	581,000	-	-	-	-	-	189,000	-	392,000	-	-
Lake Wilcox Management Plan Update (TENTATIVE)	691,000	355,000	-	-	-	-	336,000	-	-	-	-
Lake Wilcox Outlet Channel Sediment Removal	976,000	-	-	-	976,000	-	-	-	-	-	-
Lawnwood Court Reconstruction (Road, Watermain, Sanitary, Storm)	222,000	-	-	-	-	-	-	-	222,000	-	-
Licensed Equipment Replacement	1,000	-	-	-	-	-	-	1,000	-	-	-
Luba Pond (15-4) Retrofit	1,083,000	-	-	-	-	-	-	576,000	-	507,000	-
Maple Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (CCBF Funded Component)	1,461,000	1,461,000	-	-	-	-	-	-	-	-	-
Maple Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	628,000	628,000	-	-	-	-	-	-	-	-	-
Maple Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,050,000	1,050,000	-	-	-	-	-	-	-	-	-
Marchwood Crescent Reconstruction (Road, Storm)	1,195,000	-	-	-	-	-	159,000	-	1,036,000	-	-
Mill Pond Park Revitalization	9,052,000	1,082,000	-	3,377,000	4,593,000	-	-	-	-	-	-
Mill Street Altamira Ave Drainage Works (Storm)	2,164,000	2,164,000	-	-	-	-	-	-	-	-	-
Monitoring equipment and station installation (Monitoring Reserve)	113,000	9,000	5,000	32,000	32,000	5,000	6,000	6,000	6,000	6,000	6,000
Monitoring equipment and station installation	49,000	9,000	5,000	-	-	5,000	6,000	6,000	6,000	6,000	6,000
Mural North Pond (28-3) Sediment Removal	2,277,000	-	-	-	-	-	-	2,277,000	-	-	-
Newman Pond (2-11) Retrofit	2,684,000	433,000	-	2,251,000	-	-	-	-	-	-	-
Ohio Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	62,000	-	62,000	-	-	-	-	-	-	-	-
Ohio Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	248,000	-	248,000	-	-	-	-	-	-	-	-
Olde Bayview Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	203,000	-	-	203,000	-	-	-	-	-	-	-
Olde Bayview Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	811,000	-	-	811,000	-	-	-	-	-	-	-
Orchard Pond (19-4) Sediment Removal	1,929,000	-	1,929,000	-	-	-	-	-	-	-	-
Ozark Pond (7-4) Sediment Removal	574,000	-	-	-	574,000	-	-	-	-	-	-
Penny Place Reconstruction (Road, Watermain, Sanitary, Storm) (Growth Related Component)	69,000	-	-	-	7,000	-	62,000	-	-	-	-
Penny Place Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	278,000	-	-	-	30,000	-	248,000	-	-	-	-
Pomona Creek - Garden Ave Valleyland Rehabilitation (TENTATIVE)	3,928,000	-	-	-	344,000	-	3,584,000	-	-	-	-
Prince Arthur Avenue Drainage Study	293,000	-	-	-	-	293,000	-	-	-	-	-

Table A-2 (Cont'd)
Capital Budget Forecast (Inflated $) – Scenario 1

Description	Total	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Princeton Pond (19-5) Sediment Removal	2,205,000	-	-	-	-	-	2,205,000	-	-	-	-
Redstone Pond (19-6) Sediment Removal	2,837,000	-	-	-	-	-	-	-	2,837,000	-	-
Regent Street to Oxford (UED10) Valleyland Rehabilitation	1,391,000	-	-	-	-	431,000	-	960,000	-	-	-
Richmond Centre Pond (26-1) Sediment Removal	3,072,000	-	-	-	-	-	-	-	-	-	3,072,000
Richmond Green West Pond (14-3) Sediment Removal	919,000	-	-	-	-	-	-	-	-	919,000	-
Rockport Crescent Drainage Study	221,000	-	221,000	-	-	-	-	-	-	-	-
Rockport Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	625,000	-	-	-	-	-	-	67,000	-	558,000	-
Rockport Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,499,000	-	-	-	-	-	-	268,000	-	2,231,000	-
Rouge River - Toporowski Ave Valleyland Rehabilitation (TRCA)	1,104,000	-	1,104,000	-	-	-	-	-	-	-	-
Rumble Ave and Chassie Court Drainage Study	276,000	-	276,000	-	-	-	-	-	-	-	-
Sandbanks Pond (7-3) Sediment Removal	767,000	-	-	-	-	-	-	-	767,000	-	-
Schomberg Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth Related Component)	378,000	-	378,000	-	-	-	-	-	-	-	-
Schomberg Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,512,000	-	1,512,000	-	-	-	-	-	-	-	-
Shelley Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	53,000	-	-	-	-	-	-	-	5,000	-	48,000
Shelley Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	213,000	-	-	-	-	-	-	-	19,000	-	194,000
Snively Wetland Outlet Reconstruction	1,734,000	-	-	563,000	-	1,171,000	-	-	-	-	-
Snow Storage Pond (14-7) Sediment Removal	797,000	-	-	-	-	-	-	-	-	797,000	-
Solmar Pond (15-5) Sediment Removal	701,000	162,000	539,000	-	-	-	-	-	-	-	-
South Richvale Valleyland Sewer Protection (Sanitary Sewer Component)	683,000	-	683,000	-	-	-	-	-	-	-	-
South Richvale Valleyland Sewer Protection	455,000	-	455,000	-	-	-	-	-	-	-	-
Storm Pond Phosphorus Trench Rehabilitation	788,000	-	-	788,000	-	-	-	-	-	-	-
Stormwater Growth Vehicle and Equipment (Growth-Related Comonent)	613,000	56,000	57,000	58,000	59,000	61,000	62,000	63,000	64,000	66,000	67,000
Stormwater Master Plan (TENTATIVE) (Growth-Related Component)	582,000	350,000	-	-	-	-	232,000	-	-	-	-
Stormwater Master Plan (TENTATIVE) (Non-Growth-Related Component)	582,000	350,000	-	-	-	-	232,000	-	-	-	-
Sugar Maple Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	354,000	-	-	311,000	-	-	-	-	43,000	-	-
Sugar Maple Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,415,000	-	-	1,243,000	-	-	-	-	172,000	-	-
Toll Bar Pond (16-7) Retrofit	3,321,000	-	-	473,000	459,000	-	2,389,000	-	-	-	-
Town Park Revitalization and Unity Park Repair and Replacement	1,005,000	104,000	-	901,000	-	-	-	-	-	-	-
Unity Park Storm System Improvements	2,792,000	541,000	-	2,251,000	-	-	-	-	-	-	-
Valleyland Rehabilitation Master Plan (TENTATIVE)	795,000	-	435,000	-	-	-	-	360,000	-	-	-
Vehicle Replacements	110,000	-	22,000	11,000	43,000	-	3,000	13,000	6,000	12,000	-
Verdi Pond (1-1) Sediment Removal	444,000	444,000	-	-	-	-	-	-	-	-	-
Wastewater and Stormwater Model Monitoring	497,000	-	51,000	52,000	53,000	54,000	55,000	56,000	57,000	59,000	60,000

Table A-2 (Cont'd)
Capital Budget Forecast (Inflated $) – Scenario 1

Description	Total	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Wastewater and Stormwater Model Monitoring (Sanitary Sewer Component)	497,000	-	51,000	52,000	53,000	54,000	55,000	56,000	57,000	59,000	60,000
Webster Park North Trail (Local Trail Priority no. 9)	1,268,000	-	311,000	957,000	-	-	-	-	-	-	-
Webster Park Watebody Decommissioning	1,377,000	-	-	-	-	-	-	426,000	-	951,000	-
Weldrick Road East Rehabilitation (Road)	262,000	-	-	28,000	-	234,000	-	-	-	-	-
Wendy Way Reconstruction (Road, Watermain, Sanitary, Storm) (Growth Related Component)	26,000	10,000	-	-	2,000	-	14,000	-	-	-	-
Wendy Way Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	103,000	39,000	-	-	7,000	-	57,000	-	-	-	-
Westwood Lane Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	127,000	-	-	-	-	-	-	-	11,000	-	116,000
Westwood Lane Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	511,000	-	-	-	-	-	-	-	45,000	-	466,000
Wood Rim Pond (2-9) Sediment Removal	1,046,000	-	-	-	-	-	-	-	-	-	1,046,000
Zippora Pond (15-6) Retrofit	4,869,000	-	-	-	423,000	-	717,000	-	3,729,000	-	-
Elgin Mills Culvert (York Region)	2,928,000	-	-	-	-	2,928,000	-	-	-	-	-
Road Rehabilitation and Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	709,000	-	-	-	23,000	-	108,000	61,000	-	-	517,000
Road Rehabilitation and Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,749,000	-	-	-	57,000	-	418,000	244,000	-	-	2,030,000
Road Rehabilitation and Reconstruction - Urbanized (Road, Watermain, Sanitary, Storm)	6,364,000	-	77,000	45,000	586,000	328,000	48,000	268,000	659,000	2,206,000	2,147,000
Total Capital Expenditures	**160,545,000**	**12,376,000**	**17,413,000**	**19,541,000**	**14,874,000**	**29,296,000**	**16,082,000**	**9,670,000**	**13,879,000**	**13,031,000**	**14,383,000**
Capital Financing											
Provincial/Federal Grants	1,176,000	1,176,000	-	-	-	-	-	-	-	-	-
Development Charges Reserve Fund - Engineering	19,299,000	739,000	1,114,000	907,000	345,000	12,857,000	1,035,000	678,000	385,000	558,000	681,000
Development Charges Reserve Fund - Other	1,480,000	406,000	342,000	58,000	59,000	61,000	294,000	63,000	64,000	66,000	67,000
Canada Community Building Fund Reserve Fund	1,561,000	1,561,000	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-
S.37 Community Benefits	1,268,000	-	311,000	957,000	-	-	-	-	-	-	-
Other Tax-Supported Reserves	275,000	171,000	5,000	32,000	32,000	5,000	6,000	6,000	6,000	6,000	6,000
Sanitary Repair and Replacement Reserve	1,180,000	-	734,000	52,000	53,000	54,000	55,000	56,000	57,000	59,000	60,000
Water Quality Protection Reserve	134,306,000	8,323,000	14,907,000	17,535,000	14,385,000	16,319,000	14,692,000	8,867,000	13,367,000	12,342,000	13,569,000
Total Capital Financing	**160,545,000**	**12,376,000**	**17,413,000**	**19,541,000**	**14,874,000**	**29,296,000**	**16,082,000**	**9,670,000**	**13,879,000**	**13,031,000**	**14,383,000**

Table A-3
City of Richmond Hill
Schedule of Non-Growth-Related Debenture Repayments – Scenario 1

Debenture Year	Principal (Inflated)	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025	-		-	-	-	-	-	-	-	-	-
2026	-			-	-	-	-	-	-	-	-
2027	-				-	-	-	-	-	-	-
2028	-					-	-	-	-	-	-
2029	-						-	-	-	-	-
2030	-							-	-	-	-
2031	-								-	-	-
2032	-									-	-
2033	-										-
2034	-										
Total Annual Debt Charges	**-**	-	-	-	-	-	-	-	-	-	-

Table A-4
City of Richmond Hill
Schedule of Growth-Related Debenture Repayments – Scenario 1

Debenture Year	Principal (Inflated)	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025	-		-	-	-	-	-	-	-	-	-
2026	-			-	-	-	-	-	-	-	-
2027	-				-	-	-	-	-	-	-
2028	-					-	-	-	-	-	-
2029	-						-	-	-	-	-
2030	-							-	-	-	-
2031	-								-	-	-
2032	-									-	-
2033	-										-
2034	-										
Total Annual Debt Charges	**-**	-	-	-	-	-	-	-	-	-	-

Table A-5
City of Richmond Hill
Water Quality Protection Reserve Fund Continuity (Inflated $) – Scenario 1

Description	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	680,425	1,020,000	1,020,000	1,221,060	4,132,538	3,803,999	3,884,634	8,715,824	7,895,327	6,974,571
Transfer from Operating	8,642,575	14,887,000	17,712,118	17,215,447	15,915,873	14,696,466	13,527,291	12,391,693	11,284,488	10,467,215
Transfer to Capital	8,323,000	14,907,000	17,535,000	14,385,000	16,319,000	14,692,000	8,867,000	13,367,000	12,342,000	13,569,000
Transfer to Operating	-	-	-	-	-	-	-	-	-	-
Closing Balance	**1,000,000**	**1,000,000**	**1,197,118**	**4,051,508**	**3,729,410**	**3,808,465**	**8,544,925**	**7,740,517**	**6,837,815**	**3,872,786**
Interest	20,000	20,000	23,942	81,030	74,588	76,169	170,899	154,810	136,756	77,456

Table A-6
City of Richmond Hill
Engineering Development Charges Reserve Fund Continuity (Inflated $) – Scenario 1

Description	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	45,702,194	32,884,384	18,387,507	21,270,815	(546,103)	(4,743,046)	7,874,162	1,900,615	13,678,894	26,868,126
Development Charge Proceeds	12,319,769	12,998,554	14,040,521	15,082,488	15,082,488	15,082,488	15,082,488	15,082,488	15,082,488	15,082,488
Transfer to Capital - Water	2,138,000	816,000	5,426,000	849,000	866,000	884,000	901,000	919,000	938,000	-
Transfer to Capital - Wastewater	3,132,000	444,000	453,000	462,000	471,000	480,000	490,000	500,000	510,000	-
Transfer to Capital - Stormwater	739,000	1,114,000	907,000	345,000	12,857,000	1,035,000	678,000	385,000	558,000	681,000
Transfer to Capital - Roads	19,773,371	25,481,971	4,788,288	35,232,698	4,992,430	220,674	19,024,302	1,768,422	414,081	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-
Closing Balance	**32,239,592**	**18,026,967**	**20,853,740**	**(535,395)**	**(4,650,045)**	**7,719,767**	**1,863,348**	**13,410,680**	**26,341,300**	**41,950,614**
Interest	644,792	360,539	417,075	(10,708)	(93,001)	154,395	37,267	268,214	526,826	839,012
Required from Development Charges	739,000	1,114,000	907,000	345,000	12,857,000	1,035,000	678,000	385,000	558,000	681,000

Table A-7
City of Richmond Hill
Operating Budget Forecast (Inflated $) – Scenario 1

Description	Forecast									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Expenditures										
Operating Costs										
Transfer to Water Fund	223,776	261,054	298,757	335,590	378,612	397,178	412,324	432,207	452,818	231,770
Contracts	860,000	921,000	954,100	988,500	1,024,200	1,061,400	1,100,000	1,140,100	1,181,800	1,225,100
Materials/Supplies	97,900	100,800	103,800	106,900	110,100	113,400	116,800	120,300	123,900	127,700
Transfer to Operating Fund	3,578,194	3,883,818	4,005,103	4,139,973	4,273,143	4,398,726	4,528,138	4,661,653	4,799,458	4,941,502
Sub Total Operating	**4,759,870**	**5,166,672**	**5,361,760**	**5,570,963**	**5,786,055**	**5,970,704**	**6,157,262**	**6,354,260**	**6,557,976**	**6,526,072**
Capital-Related										
Existing Debt (Principal) - Growth Related										
Existing Debt (Interest) - Growth Related										
New Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related										
Existing Debt (Interest) - Non-Growth Related										
New Non-Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-
Transfer to Water Quality Protection Reserve	8,642,575	14,887,000	17,712,118	17,215,447	15,915,873	14,696,466	13,527,291	12,391,693	11,284,488	10,467,215
Sub Total Capital Related	**8,642,575**	**14,887,000**	**17,712,118**	**17,215,447**	**15,915,873**	**14,696,466**	**13,527,291**	**12,391,693**	**11,284,488**	**10,467,215**
Total Expenditures	**13,402,445**	**20,053,672**	**23,073,878**	**22,786,410**	**21,701,928**	**20,667,170**	**19,684,553**	**18,745,953**	**17,842,464**	**16,993,287**
Revenues										
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Stormwater Billing Recovery - Total	**13,402,445**	**20,053,672**	**23,073,878**	**22,786,410**	**21,701,928**	**20,667,170**	**19,684,553**	**18,745,953**	**17,842,464**	**16,993,287**

Table A-8
City of Richmond Hill
Stormwater Rate Forecast (Inflated $) – Scenario 1

Description	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Total Stormwater Billing Recovery	13,402,445	20,053,672	23,073,878	22,786,410	21,701,928	20,667,170	19,684,553	18,745,953	17,842,464	16,993,287
Total Weighted Area	265,014,133	265,686,036	266,357,938	267,029,841	267,701,744	268,373,647	269,045,549	269,717,452	270,389,355	271,061,257
Rate per 1,000 sq.ft.										
Residential	29.96	40.31	44.33	42.15	40.04	38.04	36.14	34.32	32.59	30.97
Town/ Row House	41.95	56.43	62.06	59.01	56.05	53.25	50.59	48.05	45.62	43.35
Semi-detached/ Link House	32.96	44.34	48.76	46.37	44.04	41.84	39.75	37.75	35.85	34.06
Commercial/Industrial	56.93	76.59	84.23	80.09	76.07	72.27	68.66	65.21	61.92	58.83
Multi-Residential	50.94	68.53	75.36	71.66	68.07	64.66	61.43	58.35	55.40	52.64
Agricultural Land/Farm	5.99	8.06	8.87	8.43	8.01	7.61	7.23	6.86	6.52	6.19
Golf Course Structures	53.94	72.56	79.79	75.87	72.07	68.46	65.05	61.78	58.66	55.74
Golf Courses - Playing Area	8.99	12.09	13.30	12.65	12.01	11.41	10.84	10.30	9.78	9.29
Vacant Land	5.99	8.06	8.87	8.43	8.01	7.61	7.23	6.86	6.52	6.19
Institutional	41.95	56.43	62.06	59.01	56.05	53.25	50.59	48.05	45.62	43.35
Change in Residential Rate ($)	**18.94**	**10.35**	**4.02**	**(2.18)**	**(2.11)**	**(2.00)**	**(1.90)**	**(1.82)**	**(1.73)**	**(1.62)**

Appendix B
Detailed Stormwater Rate Calculations – Scenario 2

Appendix B: Detailed Stormwater Rate Calculations – Scenario 2

Table B-1
City of Richmond Hill
Capital Budget Forecast (Uninflated $) – Scenario 2

Description	Total 2025 to 2034	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures											
19th Avenue Waterbody Decommissioning	1,190,200							378,700		811,500	
Ada MacKenzie Pond (22-1) Retrofit	1,750,676					398,176		270,500		1,082,000	
Albright Pond (9-10) Sediment Removal	-										
Annual Drainage Investigations	1,268,750	126,875	126,875	126,875	126,875	126,875	126,875	126,875	126,875	126,875	126,875
Arnold Crescent Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	13,741	13,741									
Arnold Crescent Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth Related Component)	1,176,459	1,176,459									
Ashfield Pond (2-2) Sediment Removal	-										
Aubrey Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	186,645		186,645								
Aubrey Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	746,580		746,580								
Aztec Pond (16-10) Sediment Removal	1,020,326								1,020,326		
Bayview Hill Pond (22-2) Retrofit	398,176									398,176	
Beaufort Hills Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	360,306		25,427		203,416	14,607		116,856			
Beaufort Hills Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,780,199		250,483		2,003,864	58,428		467,424			
Beaver Woodland Pond (27-2) Post-construction 10-Year Monitoring	304,500	304,500									
Bentony Pond (8-6) Sediment Removal	704,382					704,382					
Beverly Acres valleyland rehabilitation - TRCA	757,400	324,600	432,800								
Black Willow Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	146,070					16,230		129,840			
Black Willow Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	584,280					64,920		519,360			
Capelle Street Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	48,690			48,690							
Capelle Street Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	194,760			194,760							
Cheval Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	97,380		10,820		86,560						
Cheval Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	24,345		2,705		21,640						
Coons Road and Cynthia Crescent Drainage Study (TENTATIVE)	270,500	270,500									
Coons Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	656,098		446,325		19,070		190,703				
Coons Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,548,110		1,785,300				762,810				
Country Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	58,428					6,492		51,936			

Table B-1 (Cont'd)
Capital Budget Forecast (Uninflated $) – Scenario 2

Description	Total 2025 to 2034	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Country Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	233,712					25,968		207,744			
Craigleith Pond (2-4) Retrofit	773,630								340,830		432,800
Cynthia Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	416,786				27,266		389,520				
Cynthia Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,667,146				109,066		1,558,080				
Doncrest Pond (27-1) Retrofit	3,644,176						398,176				3,246,000
Driftwood Pond (8-2) Retrofit	2,055,800		432,800		1,623,000						
East Beaver Creek Secondary Plan Computer Model Analysis	279,125		279,125								
Elgin Mills Culvert (York Region) (Non-Growth-Related Component)	3,657,517					3,657,517					
Elgin Mills Culvert (York Region) (Growth-Related Component)	11,816,147					11,816,147					
Elgin Mills Road W Recon (York Region)	324,600		324,600								
Elm Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	284,025								284,025		
Elm Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,136,100								1,136,100		
Elm Grove Drainage Study (TENTATIVE)	216,400	216,400									
Enford Road Rehabilitation - (Road, Watermain, Sanitary, Storm)	1,623,000		1,623,000								
Fergus Ave Moray Ave Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	328,658			328,658							
Fergus Ave Moray Ave Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,314,630			1,314,630							
Fern Avenue Drainage Study	270,500				270,500						
Fleet and Operational Equipment	109,256		1,726	2,436		21,491		81,192	2,412		
Gallacher Avenue Blyth Street Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	214,236					23,804		190,432			
Gallacher Avenue Blyth Street Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,100,394					122,266		978,128			
George Street Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	856,944				95,216		761,728				
George Street Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	214,236				23,804		190,432				
George Street Reconstruction (Road, Watermain, Sanitary, Storm)	-										
Glouster Court Reconstruction (Road, Sanitary, Storm)	407,341						57,281		350,059		
Gormley Road West Drainage Study	270,500				270,500						
Harding East Pond (23-2) Sediment Removal	1,003,014			1,003,014							
Harding West Pond (23-1) Sediment Removal	940,258			940,258							
Headford West Pond (21-2) Sediment Removal	1,552,670									1,552,670	
Heron Pond (19-1) Sediment Removal	1,294,072				1,294,072						
Highland Lane Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	86,560	86,560									
Highland Lane Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	346,240	346,240									
Humber Flats Culvert and Pond Retrofit	5,842,800			973,800		4,869,000					
Hwy 7 to Castleridge (GM1) Valleyland Rehabilitation (CCBF Funded	100,000	100,000									
Hwy 7 to Castleridge (GM1) Valleyland Rehabilitation	162,300	162,300									
Industrial Road Rehabilitation (Road, Watermain, Sanitary, Storm)	2,142,360		2,142,360								
Kerrybrook and East Don River Valleyland Rehabilitation	511,786						170,956		340,830		

Table B-1 (Cont'd)
Capital Budget Forecast (Uninflated $) – Scenario 2

Description	Total 2025 to 2034	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Lake Wilcox Management Plan Update (TENTATIVE)	659,750	355,250					304,500				
Lake Wilcox Outlet Channel Sediment Removal	919,700				919,700						
Lawnwood Court Reconstruction (Road, Watermain, Sanitary, Storm)	193,653								193,653		
Licensed Equipment Replacement	1,123					292		538	292		
Luba Pond (15-4) Retrofit	944,586							511,786		432,800	
Maple Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (CCBF Funded Component)	1,460,700	1,460,700									
Maple Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	627,560	627,560									
Maple Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,049,540	1,049,540									
Marchwood Crescent Reconstruction (Road, Storm)	1,045,926						144,263		901,663		
Mill Pond Park Revitalization	8,656,000	1,082,000		3,246,000	4,328,000						
Mill Street Altamira Ave Drainage Works (Storm)	2,164,000	2,164,000									
Monitoring equipment and station installation (Monitoring Reserve)	105,306	8,881	5,075	30,450	30,450	5,075	5,075	5,075	5,075	5,075	5,075
Monitoring equipment and station installation	44,406	8,881	5,075			5,075	5,075	5,075	5,075	5,075	5,075
Mural North Pond (28-3) Sediment Removal	2,022,258							2,022,258			
Newman Pond (2-11) Retrofit	2,596,800	432,800		2,164,000							
Ohio Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	60,863		60,863								
Ohio Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	243,450		243,450								
Olde Bayview Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	194,760			194,760							
Olde Bayview Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	779,040			779,040							
Orchard Pond (19-4) Sediment Removal	1,891,336		1,891,336								
Ozark Pond (7-4) Sediment Removal	541,000				541,000						
Penny Place Reconstruction (Road, Watermain, Sanitary, Storm) (Growth Related Component)	63,297				7,033		56,264				
Penny Place Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	253,188				28,132		225,056				
Pioneer Pond (17-2) Sediment Removal	-										
Pomona Creek - Garden Ave Valleyland Rehabilitation (TENTATIVE)	3,570,600				324,600		3,246,000				
Prince Arthur Avenue Drainage Study	270,500					270,500					
Princeton Pond (19-5) Sediment Removal	1,997,372						1,997,372				
Redstone Pond (19-6) Sediment Removal	2,470,206								2,470,206		
Regent Street to Oxford (UED10) Valleyland Rehabilitation	1,250,792					398,176		852,616			
Richmond Centre Pond (26-1) Sediment Removal	2,570,832										2,570,832
Richmond Green West Pond (14-3) Sediment Removal	784,450									784,450	
Rockport Crescent Drainage Study	216,400		216,400								
Rockport Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	535,590							59,510		476,080	
Rockport Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,142,360							238,040		1,904,320	
Rouge River - Toporowski Ave Valleyland Rehabilitation (TRCA)	1,082,000		1,082,000								
Rumble Ave and Chassie Court Drainage Study	270,500		270,500								
Sandbanks Pond (7-3) Sediment Removal	667,594								667,594		
Schomberg Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth Related Component)	370,585		370,585								

Table B-1 (Cont'd)
Capital Budget Forecast (Uninflated $) – Scenario 2

Description	Total 2025 to 2034	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Schomberg Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,482,340		1,482,340								
Shelley Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	44,633								4,058		40,575
Shelley Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	178,530								16,230		162,300
Snively Wetland Outlet Reconstruction	1,623,000			541,000		1,082,000					
Snow Storage Pond (14-7) Sediment Removal	680,578									680,578	
Solmar Pond (15-5) Sediment Removal	690,316	162,300	528,016								
South Richvale Valleyland Sewer Protection (Sanitary Sewer	669,325		669,325								
South Richvale Valleyland Sewer Protection	446,217		446,217								
Storm Pond Phosphorus Trench Rehabilitation	757,400			757,400							
Stormwater Growth Vehicle and Equipment (Growth-Related	560,280	56,028	56,028	56,028	56,028	56,028	56,028	56,028	56,028	56,028	56,028
Stormwater Master Plan (TENTATIVE) (Growth-Related Component)	560,000	350,000					210,000				
Stormwater Master Plan (TENTATIVE) (Non-Growth-Related	560,000	350,000					210,000				
Sugar Maple Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	335,961			298,632					37,329		
Sugar Maple Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,343,844			1,194,528					149,316		
Toll Bar Pond (16-7) Retrofit	3,051,240			454,440	432,800		2,164,000				
Town Park Revitalization and Unity Park Repair and Replacement	969,472	103,872		865,600							
Unity Park Storm System Improvements	2,705,000	541,000		2,164,000							
Valleyland Rehabilitation Master Plan (TENTATIVE)	746,025		426,300					319,725			
Vehicle Replacements	101,718		21,544	10,236	40,140		2,519	11,201	5,413	10,665	
Verdi Pond (1-1) Sediment Removal	443,620	443,620									
Wastewater and Stormwater Model Monitoring	450,000		50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Wastewater and Stormwater Model Monitoring (Sanitary Sewer	450,000		50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Webster Park North Trail (Local Trail Priority no. 9)	1,224,200		304,500	919,700							
Webster Park Watebody Decommissioning	1,190,200							378,700		811,500	
Weldrick Road East Rehabilitation (Road)	243,450			27,050		216,400					
Wendy Way Reconstruction (Road, Watermain, Sanitary, Storm) (Growth Related Component)	24,345	9,738			1,623		12,984				
Wendy Way Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	97,380	38,952			6,492		51,936				
Westwood Lane Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	107,118								9,738		97,380
Westwood Lane Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	428,472								38,952		389,520
Wood Rim Pond (2-9) Sediment Removal	875,338										875,338
Zippora Pond (15-6) Retrofit	4,293,376				398,176		649,200		3,246,000		
Elgin Mills Culvert (York Region)	2,705,000					2,705,000					
Road Rehabilitation and Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	605,920				21,640		97,380	54,100			432,800
Road Rehabilitation and Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,347,940				54,100		378,700	216,400			1,698,740
Road Rehabilitation and Reconstruction - Urbanized (Road, Watermain, Sanitary, Storm)	5,507,380		75,740	43,280	551,820	302,960	43,280	238,040	573,460	1,882,680	1,796,120
Total Capital Expenditures	**147,701,558**	**12,373,298**	**17,072,864**	**18,779,265**	**14,016,583**	**27,067,808**	**14,566,193**	**8,588,078**	**12,081,539**	**11,120,472**	**12,035,458**

Table B-2
City of Richmond Hill
Capital Budget Forecast (Inflated $) – Scenario 2

Description	Total	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures											
19th Avenue Waterbody Decommissioning	1,377,000	-	-	-	-	-	-	426,000	-	951,000	-
Ada MacKenzie Pond (22-1) Retrofit	2,004,000	-	-	-	-	431,000	-	305,000	-	1,268,000	-
Annual Drainage Investigations	1,390,000	127,000	129,000	132,000	135,000	137,000	140,000	143,000	146,000	149,000	152,000
Arnold Crescent Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	14,000	14,000	-	-	-	-	-	-	-	-	-
Arnold Crescent Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth Related Component)	1,176,000	1,176,000	-	-	-	-	-	-	-	-	-
Aubrey Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	190,000	-	190,000	-	-	-	-	-	-	-	-
Aubrey Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	762,000	-	762,000	-	-	-	-	-	-	-	-
Aztec Pond (16-10) Sediment Removal	1,172,000	-	-	-	-	-	-	-	1,172,000	-	-
Bayview Hill Pond (22-2) Retrofit	467,000	-	-	-	-	-	-	-	-	467,000	-
Beaufort Hills Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	390,000	-	26,000	-	216,000	16,000	-	132,000	-	-	-
Beaufort Hills Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,971,000	-	255,000	-	2,127,000	63,000	-	526,000	-	-	-
Beaver Woodland Pond (27-2) Post-construction 10-Year Monitoring	305,000	305,000	-	-	-	-	-	-	-	-	-
Bentony Pond (8-6) Sediment Removal	762,000	-	-	-	-	762,000	-	-	-	-	-
Beverly Acres valleyland rehabilitation - TRCA	766,000	325,000	441,000	-	-	-	-	-	-	-	-
Black Willow Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	164,000	-	-	-	-	18,000	-	146,000	-	-	-
Black Willow Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	655,000	-	-	-	-	70,000	-	585,000	-	-	-
Capelle Street Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	51,000	-	-	51,000	-	-	-	-	-	-	-
Capelle Street Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	203,000	-	-	203,000	-	-	-	-	-	-	-
Cheval Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	103,000	-	11,000	-	92,000	-	-	-	-	-	-
Cheval Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	26,000	-	3,000	-	23,000	-	-	-	-	-	-
Coons Road and Cynthia Crescent Drainage Study (TENTATIVE)	271,000	271,000	-	-	-	-	-	-	-	-	-
Coons Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	686,000	-	455,000	-	20,000	-	211,000	-	-	-	-
Coons Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,663,000	-	1,821,000	-	-	-	842,000	-	-	-	-
Country Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	65,000	-	-	-	-	7,000	-	58,000	-	-	-
Country Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	262,000	-	-	-	-	28,000	-	234,000	-	-	-

Table B-2 (Cont'd)
Capital Budget Forecast (Inflated $) – Scenario 2

Description	Total	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Craigleith Pond (2-4) Retrofit	909,000	-	-	-	-	-	-	-	392,000	-	517,000
Cynthia Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	459,000	-	-	-	29,000	-	430,000	-	-	-	-
Cynthia Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,836,000	-	-	-	116,000	-	1,720,000	-	-	-	-
Doncrest Pond (27-1) Retrofit	4,319,000	-	-	-	-	-	440,000	-	-	-	3,879,000
Driftwood Pond (8-2) Retrofit	2,163,000	-	441,000	-	1,722,000	-	-	-	-	-	-
East Beaver Creek Secondary Plan Computer Model Analysis	285,000	-	285,000	-	-	-	-	-	-	-	-
Elgin Mills Culvert (York Region) (Non-Growth-Related Component)	3,959,000	-	-	-	-	3,959,000	-	-	-	-	-
Elgin Mills Culvert (York Region) (Growth-Related Component)	12,790,000	-	-	-	-	12,790,000	-	-	-	-	-
Elgin Mills Road W Recon (York Region)	331,000	-	331,000	-	-	-	-	-	-	-	-
Elm Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	326,000	-	-	-	-	-	-	-	326,000	-	-
Elm Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,305,000	-	-	-	-	-	-	-	1,305,000	-	-
Elm Grove Drainage Study (TENTATIVE)	216,000	216,000	-	-	-	-	-	-	-	-	-
Enford Road Rehabilitation - (Road, Watermain, Sanitary, Storm)	1,655,000	-	1,655,000	-	-	-	-	-	-	-	-
Fergus Ave Moray Ave Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	342,000	-	-	342,000	-	-	-	-	-	-	-
Fergus Ave Moray Ave Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,368,000	-	-	1,368,000	-	-	-	-	-	-	-
Fern Avenue Drainage Study	287,000	-	-	-	287,000	-	-	-	-	-	-
Fleet and Operational Equipment	122,000	-	2,000	3,000	-	23,000	-	91,000	3,000	-	-
Gallacher Avenue Blyth Street Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	240,000	-	-	-	-	26,000	-	214,000	-	-	-
Gallacher Avenue Blyth Street Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,234,000	-	-	-	-	132,000	-	1,102,000	-	-	-
George Street Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	942,000	-	-	-	101,000	-	841,000	-	-	-	-
George Street Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	235,000	-	-	-	25,000	-	210,000	-	-	-	-
Glouster Court Reconstruction (Road, Sanitary, Storm)	465,000	-	-	-	-	-	63,000	-	402,000	-	-
Gormley Road West Drainage Study	287,000	-	-	-	287,000	-	-	-	-	-	-
Harding East Pond (23-2) Sediment Removal	1,044,000	-	-	1,044,000	-	-	-	-	-	-	-
Harding West Pond (23-1) Sediment Removal	978,000	-	-	978,000	-	-	-	-	-	-	-
Headford West Pond (21-2) Sediment Removal	1,819,000	-	-	-	-	-	-	-	-	1,819,000	-
Heron Pond (19-1) Sediment Removal	1,373,000	-	-	-	1,373,000	-	-	-	-	-	-
Highland Lane Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	87,000	87,000	-	-	-	-	-	-	-	-	-

Table B-2 (Cont'd)
Capital Budget Forecast (Inflated $) – Scenario 2

Description	Total	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Highland Lane Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	346,000	346,000	-	-	-	-	-	-	-	-	-
Humber Flats Culvert and Pond Retrofit	6,283,000	-	-	1,013,000	-	5,270,000	-	-	-	-	-
Hwy 7 to Castleridge (GM1) Valleyland Rehabilitation (CCBF Funded Component)	100,000	100,000	-	-	-	-	-	-	-	-	-
Hwy 7 to Castleridge (GM1) Valleyland Rehabilitation	162,000	162,000	-	-	-	-	-	-	-	-	-
Industrial Road Rehabilitation (Road, Watermain, Sanitary, Storm)	2,185,000	-	2,185,000	-	-	-	-	-	-	-	-
Kerrybrook and East Don River Valleyland Rehabilitation	581,000	-	-	-	-	-	189,000	-	392,000	-	-
Lake Wilcox Management Plan Update (TENTATIVE)	691,000	355,000	-	-	-	-	336,000	-	-	-	-
Lake Wilcox Outlet Channel Sediment Removal	976,000	-	-	-	976,000	-	-	-	-	-	-
Lawnwood Court Reconstruction (Road, Watermain, Sanitary, Storm)	222,000	-	-	-	-	-	-	-	222,000	-	-
Licensed Equipment Replacement	1,000	-	-	-	-	-	-	1,000	-	-	-
Luba Pond (15-4) Retrofit	1,083,000	-	-	-	-	-	-	576,000	-	507,000	-
Maple Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (CCBF Funded Component)	1,461,000	1,461,000	-	-	-	-	-	-	-	-	-
Maple Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	628,000	628,000	-	-	-	-	-	-	-	-	-
Maple Grove Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,050,000	1,050,000	-	-	-	-	-	-	-	-	-
Marchwood Crescent Reconstruction (Road, Storm)	1,195,000	-	-	-	-	-	159,000	-	1,036,000	-	-
Mill Pond Park Revitalization	9,052,000	1,082,000	-	3,377,000	4,593,000	-	-	-	-	-	-
Mill Street Altamira Ave Drainage Works (Storm)	2,164,000	2,164,000	-	-	-	-	-	-	-	-	-
Monitoring equipment and station installation (Monitoring Reserve)	113,000	9,000	5,000	32,000	32,000	5,000	6,000	6,000	6,000	6,000	6,000
Monitoring equipment and station installation	49,000	9,000	5,000	-	-	5,000	6,000	6,000	6,000	6,000	6,000
Mural North Pond (28-3) Sediment Removal	2,277,000	-	-	-	-	-	-	2,277,000	-	-	-
Newman Pond (2-11) Retrofit	2,684,000	433,000	-	2,251,000	-	-	-	-	-	-	-
Ohio Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	62,000	-	62,000	-	-	-	-	-	-	-	-
Ohio Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	248,000	-	248,000	-	-	-	-	-	-	-	-
Olde Bayview Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	203,000	-	-	203,000	-	-	-	-	-	-	-
Olde Bayview Avenue Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	811,000	-	-	811,000	-	-	-	-	-	-	-
Orchard Pond (19-4) Sediment Removal	1,929,000	-	1,929,000	-	-	-	-	-	-	-	-
Ozark Pond (7-4) Sediment Removal	574,000	-	-	-	574,000	-	-	-	-	-	-
Penny Place Reconstruction (Road, Watermain, Sanitary, Storm) (Growth Related Component)	69,000	-	-	-	7,000	-	62,000	-	-	-	-
Penny Place Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	278,000	-	-	-	30,000	-	248,000	-	-	-	-
Pomona Creek - Garden Ave Valleyland Rehabilitation (TENTATIVE)	3,928,000	-	-	-	344,000	-	3,584,000	-	-	-	-
Prince Arthur Avenue Drainage Study	293,000	-	-	-	-	293,000	-	-	-	-	-

Table B-2 (Cont'd)
Capital Budget Forecast (Inflated $) – Scenario 2

Description	Total	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Princeton Pond (19-5) Sediment Removal	2,205,000	-	-	-	-	-	2,205,000	-	-	-	-
Redstone Pond (19-6) Sediment Removal	2,837,000	-	-	-	-	-	-	-	2,837,000	-	-
Regent Street to Oxford (UED10) Valleyland Rehabilitation	1,391,000	-	-	-	-	431,000	-	960,000	-	-	-
Richmond Centre Pond (26-1) Sediment Removal	3,072,000	-	-	-	-	-	-	-	-	-	3,072,000
Richmond Green West Pond (14-3) Sediment Removal	919,000	-	-	-	-	-	-	-	-	919,000	-
Rockport Crescent Drainage Study	221,000	-	221,000	-	-	-	-	-	-	-	-
Rockport Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	625,000	-	-	-	-	-	-	67,000	-	558,000	-
Rockport Crescent Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,499,000	-	-	-	-	-	-	268,000	-	2,231,000	-
Rouge River - Toporowski Ave Valleyland Rehabilitation (TRCA)	1,104,000	-	1,104,000	-	-	-	-	-	-	-	-
Rumble Ave and Chassie Court Drainage Study	276,000	-	276,000	-	-	-	-	-	-	-	-
Sandbanks Pond (7-3) Sediment Removal	767,000	-	-	-	-	-	-	-	767,000	-	-
Schomberg Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth Related Component)	378,000	-	378,000	-	-	-	-	-	-	-	-
Schomberg Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,512,000	-	1,512,000	-	-	-	-	-	-	-	-
Shelley Road Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	53,000	-	-	-	-	-	-	-	5,000	-	48,000
Shelley Road Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	213,000	-	-	-	-	-	-	-	19,000	-	194,000
Snively Wetland Outlet Reconstruction	1,734,000	-	-	563,000	-	1,171,000	-	-	-	-	-
Snow Storage Pond (14-7) Sediment Removal	797,000	-	-	-	-	-	-	-	-	797,000	-
Solmar Pond (15-5) Sediment Removal	701,000	162,000	539,000	-	-	-	-	-	-	-	-
South Richvale Valleyland Sewer Protection (Sanitary Sewer Component)	683,000	-	683,000	-	-	-	-	-	-	-	-
South Richvale Valleyland Sewer Protection	455,000	-	455,000	-	-	-	-	-	-	-	-
Storm Pond Phosphorus Trench Rehabilitation	788,000	-	-	788,000	-	-	-	-	-	-	-
Stormwater Growth Vehicle and Equipment (Growth-Related Comonent)	613,000	56,000	57,000	58,000	59,000	61,000	62,000	63,000	64,000	66,000	67,000
Stormwater Master Plan (TENTATIVE) (Growth-Related Component)	582,000	350,000	-	-	-	-	232,000	-	-	-	-
Stormwater Master Plan (TENTATIVE) (Non-Growth-Related Component)	582,000	350,000	-	-	-	-	232,000	-	-	-	-
Sugar Maple Court Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	354,000	-	-	311,000	-	-	-	-	43,000	-	-
Sugar Maple Court Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	1,415,000	-	-	1,243,000	-	-	-	-	172,000	-	-
Toll Bar Pond (16-7) Retrofit	3,321,000	-	-	473,000	459,000	-	2,389,000	-	-	-	-
Town Park Revitalization and Unity Park Repair and Replacement	1,005,000	104,000	-	901,000	-	-	-	-	-	-	-
Unity Park Storm System Improvements	2,792,000	541,000	-	2,251,000	-	-	-	-	-	-	-
Valleyland Rehabilitation Master Plan (TENTATIVE)	795,000	-	435,000	-	-	-	-	360,000	-	-	-
Vehicle Replacements	110,000	-	22,000	11,000	43,000	-	3,000	13,000	6,000	12,000	-
Verdi Pond (1-1) Sediment Removal	444,000	444,000	-	-	-	-	-	-	-	-	-
Wastewater and Stormwater Model Monitoring	497,000	-	51,000	52,000	53,000	54,000	55,000	56,000	57,000	59,000	60,000

Table B-2 (Cont'd)
Capital Budget Forecast (Inflated $) – Scenario 2

Description	Total	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Wastewater and Stormwater Model Monitoring (Sanitary Sewer Component)	497,000	-	51,000	52,000	53,000	54,000	55,000	56,000	57,000	59,000	60,000
Webster Park North Trail (Local Trail Priority no. 9)	1,268,000	-	311,000	957,000	-	-	-	-	-	-	-
Webster Park Watebody Decommissioning	1,377,000	-	-	-	-	-	-	426,000	-	951,000	-
Weldrick Road East Rehabilitation (Road)	262,000	-	-	28,000	-	234,000	-	-	-	-	-
Wendy Way Reconstruction (Road, Watermain, Sanitary, Storm) (Growth Related Component)	26,000	10,000	-	-	2,000	-	14,000	-	-	-	-
Wendy Way Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	103,000	39,000	-	-	7,000	-	57,000	-	-	-	-
Westwood Lane Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	127,000	-	-	-	-	-	-	-	11,000	-	116,000
Westwood Lane Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	511,000	-	-	-	-	-	-	-	45,000	-	466,000
Wood Rim Pond (2-9) Sediment Removal	1,046,000	-	-	-	-	-	-	-	-	-	1,046,000
Zippora Pond (15-6) Retrofit	4,869,000	-	-	-	423,000	-	717,000	-	3,729,000	-	-
Elgin Mills Culvert (York Region)	2,928,000	-	-	-	-	2,928,000	-	-	-	-	-
Road Rehabilitation and Reconstruction (Road, Watermain, Sanitary, Storm) (Growth-Related Component)	709,000	-	-	-	23,000	-	108,000	61,000	-	-	517,000
Road Rehabilitation and Reconstruction (Road, Watermain, Sanitary, Storm) (Non-Growth-Related Component)	2,749,000	-	-	-	57,000	-	418,000	244,000	-	-	2,030,000
Road Rehabilitation and Reconstruction - Urbanized (Road, Watermain, Sanitary, Storm)	6,364,000	-	77,000	45,000	586,000	328,000	48,000	268,000	659,000	2,206,000	2,147,000
Total Capital Expenditures	**160,545,000**	**12,376,000**	**17,413,000**	**19,541,000**	**14,874,000**	**29,296,000**	**16,082,000**	**9,670,000**	**13,879,000**	**13,031,000**	**14,383,000**
Capital Financing											
Provincial/Federal Grants	1,176,000	1,176,000	-	-	-	-	-	-	-	-	-
Development Charges Reserve Fund - Engineering	19,299,000	739,000	1,114,000	907,000	345,000	12,857,000	1,035,000	678,000	385,000	558,000	681,000
Development Charges Reserve Fund - Other	1,480,000	406,000	342,000	58,000	59,000	61,000	294,000	63,000	64,000	66,000	67,000
Canada Community Building Fund Reserve Fund	16,561,000	4,561,000	3,000,000	3,000,000	3,000,000	3,000,000					
Non-Growth Related Debenture Requirements	22,136,487	2,363,599	5,139,788	6,240,930	2,317,554	3,030,163	3,044,453	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-
S.37 Community Benefits	1,268,000	-	311,000	957,000	-	-	-	-	-	-	-
Other Tax-Supported Reserves	275,000	171,000	5,000	32,000	32,000	5,000	6,000	6,000	6,000	6,000	6,000
Sanitary Repair and Replacement Reserve	1,180,000	-	734,000	52,000	53,000	54,000	55,000	56,000	57,000	59,000	60,000
Water Quality Protection Reserve	97,169,513	2,959,401	6,767,212	8,294,070	9,067,446	10,288,837	11,647,547	8,867,000	13,367,000	12,342,000	13,569,000
Total Capital Financing	**160,545,000**	**12,376,000**	**17,413,000**	**19,541,000**	**14,874,000**	**29,296,000**	**16,082,000**	**9,670,000**	**13,879,000**	**13,031,000**	**14,383,000**

Table B-3
City of Richmond Hill
Schedule of Non-Growth-Related Debenture Repayments – Scenario 2

Debenture Year	Principal (Inflated)	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025	2,363,599		178,569	178,569	178,569	178,569	178,569	178,569	178,569	178,569	178,569
2026	5,139,788			388,309	388,309	388,309	388,309	388,309	388,309	388,309	388,309
2027	6,240,930				471,500	471,500	471,500	471,500	471,500	471,500	471,500
2028	2,317,554					175,090	175,090	175,090	175,090	175,090	175,090
2029	3,030,163						228,928	228,928	228,928	228,928	228,928
2030	3,044,453							230,007	230,007	230,007	230,007
2031	-								-	-	-
2032	-									-	-
2033	-										-
2034	-										
Total Annual Debt Charges	**22,136,487**	-	178,569	566,878	1,038,378	1,213,469	1,442,396	1,672,404	1,672,404	1,672,404	1,672,404

Table B-4
City of Richmond Hill
Schedule of Growth-Related Debenture Repayments – Scenario 2

Debenture Year	Principal (Inflated)	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025	-		-	-	-	-	-	-	-	-	-
2026	-			-	-	-	-	-	-	-	-
2027	-				-	-	-	-	-	-	-
2028	-					-	-	-	-	-	-
2029	-						-	-	-	-	-
2030	-							-	-	-	-
2031	-								-	-	-
2032	-									-	-
2033	-										-
2034	-										
Total Annual Debt Charges	**-**	-	-	-	-	-	-	-	-	-	-

Table B-5
City of Richmond Hill
Water Quality Protection Reserve Fund Continuity (Inflated $) – Scenario 2

Description	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	680,425	1,020,000	1,020,000	1,020,000	1,020,000	1,020,000	1,020,000	4,304,658	3,525,580	4,266,482
Transfer from Operating	3,278,976	6,747,212	8,274,070	9,047,446	10,268,838	11,627,547	12,067,253	12,518,793	12,999,246	13,722,216
Transfer to Capital	2,959,401	6,767,212	8,294,070	9,067,446	10,288,837	11,647,547	8,867,000	13,367,000	12,342,000	13,569,000
Transfer to Operating	-	-	-	-	-	-	-	-	-	-
Closing Balance	**1,000,000**	**1,000,000**	**1,000,000**	**1,000,000**	**1,000,000**	**1,000,000**	**4,220,253**	**3,456,451**	**4,182,826**	**4,419,699**
Interest	20,000	20,000	20,000	20,000	20,000	20,000	84,405	69,129	83,657	88,394

Table B-6
City of Richmond Hill
Engineering Development Charges Reserve Fund Continuity (Inflated $) – Scenario 2

Description	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	45,702,194	32,884,384	18,387,507	21,270,815	(546,103)	(4,743,046)	7,874,162	1,900,615	13,678,894	26,868,126
Development Charge Proceeds	12,319,769	12,998,554	14,040,521	15,082,488	15,082,488	15,082,488	15,082,488	15,082,488	15,082,488	15,082,488
Transfer to Capital - Water	2,138,000	816,000	5,426,000	849,000	866,000	884,000	901,000	919,000	938,000	-
Transfer to Capital - Wastewater	3,132,000	444,000	453,000	462,000	471,000	480,000	490,000	500,000	510,000	-
Transfer to Capital - Stormwater	739,000	1,114,000	907,000	345,000	12,857,000	1,035,000	678,000	385,000	558,000	681,000
Transfer to Capital - Roads	19,773,371	25,481,971	4,788,288	35,232,698	4,992,430	220,674	19,024,302	1,768,422	414,081	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-
Closing Balance	**32,239,592**	**18,026,967**	**20,853,740**	**(535,395)**	**(4,650,045)**	**7,719,767**	**1,863,348**	**13,410,680**	**26,341,300**	**41,950,614**
Interest	644,792	360,539	417,075	(10,708)	(93,001)	154,395	37,267	268,214	526,826	839,012
Required from Development Charges	739,000	1,114,000	907,000	345,000	12,857,000	1,035,000	678,000	385,000	558,000	681,000

Table B-7
City of Richmond Hill
Operating Budget Forecast (Inflated $) – Scenario 2

Description	Forecast									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Expenditures										
Operating Costs										
Transfer to Water Fund	223,776	261,054	298,757	335,590	378,612	397,178	412,324	432,207	452,818	231,770
Contracts	860,000	921,000	954,100	988,500	1,024,200	1,061,400	1,100,000	1,140,100	1,181,800	1,225,100
Materials/Supplies	97,900	100,800	103,800	106,900	110,100	113,400	116,800	120,300	123,900	127,700
Transfer to Operating Fund	3,578,194	3,883,818	4,005,103	4,139,973	4,273,143	4,398,726	4,528,138	4,661,653	4,799,458	4,941,502
Sub Total Operating	**4,759,870**	**5,166,672**	**5,361,760**	**5,570,963**	**5,786,055**	**5,970,704**	**6,157,262**	**6,354,260**	**6,557,976**	**6,526,072**
Capital-Related										
Existing Debt (Principal) - Growth Related										
Existing Debt (Interest) - Growth Related										
New Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related										
Existing Debt (Interest) - Non-Growth Related										
New Non-Growth Related Debt (Principal)	-	76,934	247,541	461,325	556,598	679,162	807,462	842,183	878,397	916,168
New Non-Growth Related Debt (Interest)	-	101,635	319,337	577,053	656,871	763,234	864,942	830,221	794,007	756,236
Transfer to Capital	-	-	-	-	-	-	-	-	-	-
Transfer to Water Quality Protection Reserve	3,278,976	6,747,212	8,274,070	9,047,446	10,268,838	11,627,547	12,067,253	12,518,793	12,999,246	13,722,216
Sub Total Capital Related	**3,278,976**	**6,925,781**	**8,840,948**	**10,085,824**	**11,482,306**	**13,069,943**	**13,739,657**	**14,191,197**	**14,671,650**	**15,394,620**
Total Expenditures	**8,038,846**	**12,092,453**	**14,202,708**	**15,656,787**	**17,268,362**	**19,040,647**	**19,896,918**	**20,545,456**	**21,229,626**	**21,920,692**
Revenues										
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Stormwater Billing Recovery - Total	**8,038,846**	**12,092,453**	**14,202,708**	**15,656,787**	**17,268,362**	**19,040,647**	**19,896,918**	**20,545,456**	**21,229,626**	**21,920,692**

Table B-8
City of Richmond Hill
Stormwater Rate Forecast (Inflated $) – Scenario 2

Description	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Total Stormwater Billing Recovery	8,038,846	12,092,453	14,202,708	15,656,787	17,268,362	19,040,647	19,896,918	20,545,456	21,229,626	21,920,692
Total Weighted Area	265,014,133	265,686,036	266,357,938	267,029,841	267,701,744	268,373,647	269,045,549	269,717,452	270,389,355	271,061,257
Rate per 1,000 sq.ft.										
Residential	16.53	24.81	27.29	30.01	33.01	36.31	37.23	38.40	39.57	40.75
Town/ Row House	23.15	34.73	38.20	42.01	46.22	50.83	52.12	53.76	55.40	57.05
Semi-detached/ Link House	18.19	27.29	30.02	33.01	36.31	39.94	40.95	42.24	43.53	44.83
Commercial/Industrial	31.41	47.14	51.85	57.02	62.72	68.98	70.73	72.96	75.18	77.43
Multi-Residential	28.11	42.17	46.39	51.02	56.12	61.72	63.28	65.28	67.27	69.28
Agricultural Land/Farm	3.31	4.96	5.46	6.00	6.60	7.26	7.45	7.68	7.91	8.15
Golf Course Structures	29.76	44.65	49.12	54.02	59.42	65.35	67.01	69.12	71.22	73.35
Golf Courses - Playing Area	4.96	7.44	8.19	9.00	9.90	10.89	11.17	11.52	11.87	12.23
Vacant Land	3.31	4.96	5.46	6.00	6.60	7.26	7.45	7.68	7.91	8.15
Institutional	23.15	34.73	38.20	42.01	46.22	50.83	52.12	53.76	55.40	57.05
Change in Residential Rate ($)	5.51	8.28	2.48	2.72	3.00	3.30	0.92	1.17	1.17	1.18

Appendix C
Detailed Stormwater Rate Calculations – Scenario 3

Appendix C: Detailed Stormwater Rate Calculations – Scenario 3

Table C-1
City of Richmond Hill
Capital Budget Forecast (Uninflated $) – Scenario 3

Description	Total	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures											
Growth Related Capital (Assumed same as Scenarios 1 and 2)	19,225,968	1,145,000	1,427,451	927,528	380,698	11,934,235	1,203,716	657,987	390,882	532,578	625,893
Other Funding Sources (Assumed same as Scenarios 1 and 2)	3,787,445	1,347,000	1,029,412	1,000,577	80,097	54,507	55,250	55,054	54,845	55,477	55,226
Capital to be Funded Through CCBF	15,984,186	4,561,000	2,941,176	2,883,506	2,826,967	2,771,536	-	-	-	-	-
Capital to be Funded Through Rate	108,304,019	2,176,272	3,454,281	5,310,796	7,601,939	10,452,361	13,998,557	15,353,793	15,951,237	16,577,514	17,427,271
Total Capital Expenditures	**147,301,618**	**9,229,272**	**8,852,320**	**10,122,407**	**10,889,702**	**25,212,640**	**15,257,522**	**16,066,834**	**16,396,964**	**17,165,569**	**18,108,389**

Table C-2
City of Richmond Hill
Capital Budget Forecast (Inflated $) – Scenario 3

Description	Total	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures											
Growth Related Capital (Assumed same as Scenarios 1 and 2)	20,779,000	1,145,000	1,456,000	965,000	404,000	12,918,000	1,329,000	741,000	449,000	624,000	748,000
Other Funding Sources (Assumed same as Scenarios 1 and 2)	3,899,000	1,347,000	1,050,000	1,041,000	85,000	59,000	61,000	62,000	63,000	65,000	66,000
Capital to be Funded Through CCBF	16,561,000	4,561,000	3,000,000	3,000,000	3,000,000	3,000,000	-	-	-	-	-
Capital to be Funded Through Rate	121,925,961	2,176,272	3,523,366	5,525,352	8,067,239	11,313,972	15,455,538	17,290,864	18,322,957	19,423,200	20,827,202
Total Capital Expenditures	**163,164,961**	**9,229,272**	**9,029,366**	**10,531,352**	**11,556,239**	**27,290,972**	**16,845,538**	**18,093,864**	**18,834,957**	**20,112,200**	**21,641,202**
Capital Financing											
Provincial/Federal Grants	1,176,000	1,176,000	-	-	-	-	-	-	-	-	-
Development Charges Reserve Fund - Engineering	19,299,000	739,000	1,114,000	907,000	345,000	12,857,000	1,035,000	678,000	385,000	558,000	681,000
Development Charges Reserve Fund - Other	1,480,000	406,000	342,000	58,000	59,000	61,000	294,000	63,000	64,000	66,000	67,000
Canada Community Building Fund Reserve Fund	16,561,000	4,561,000	3,000,000	3,000,000	3,000,000	3,000,000					
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-
S.37 Community Benefits	1,268,000	-	311,000	957,000	-	-	-	-	-	-	-
Other Funding Sources	275,000	171,000	5,000	32,000	32,000	5,000	6,000	6,000	6,000	6,000	6,000
Sanitary Repair and Replacement Reserves	1,180,000	-	734,000	52,000	53,000	54,000	55,000	56,000	57,000	59,000	60,000
Water Quality Protection Reserve	121,925,961	2,176,272	3,523,366	5,525,352	8,067,239	11,313,972	15,455,538	17,290,864	18,322,957	19,423,200	20,827,202
Total Capital Financing	**163,164,961**	**9,229,272**	**9,029,366**	**10,531,352**	**11,556,239**	**27,290,972**	**16,845,538**	**18,093,864**	**18,834,957**	**20,112,200**	**21,641,202**

Table C-3
City of Richmond Hill
Schedule of Non-Growth-Related Debenture Repayments – Scenario 3

Debenture Year	Principal (Inflated)	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025	-		-	-	-	-	-	-	-	-	-
2026	-			-	-	-	-	-	-	-	-
2027	-				-	-	-	-	-	-	-
2028	-					-	-	-	-	-	-
2029	-						-	-	-	-	-
2030	-							-	-	-	-
2031	-								-	-	-
2032	-									-	-
2033	-										-
2034	-										
Total Annual Debt Charges	**-**	-	-	-	-	-	-	-	-	-	-

Table C-4
City of Richmond Hill
Schedule of Growth-Related Debenture Repayments – Scenario 3

Debenture Year	Principal (Inflated)	Forecast									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025	-		-	-	-	-	-	-	-	-	-
2026	-			-	-	-	-	-	-	-	-
2027	-				-	-	-	-	-	-	-
2028	-					-	-	-	-	-	-
2029	-						-	-	-	-	-
2030	-							-	-	-	-
2031	-								-	-	-
2032	-									-	-
2033	-										-
2034	-										
Total Annual Debt Charges	**-**	-	-	-	-	-	-	-	-	-	-

Table C-5
City of Richmond Hill
Water Quality Protection Reserve Fund Continuity (Inflated $) – Scenario 3

Description	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	680,425	694,033	707,914	722,072	736,514	751,244	766,269	781,594	797,226	813,171
Transfer from Operating	2,176,272	3,523,366	5,525,352	8,067,239	11,313,972	15,455,538	17,290,864	18,322,957	19,423,200	20,827,202
Transfer to Capital	2,176,272	3,523,366	5,525,352	8,067,239	11,313,972	15,455,538	17,290,864	18,322,957	19,423,200	20,827,202
Transfer to Operating	-	-	-	-	-	-	-	-	-	-
Closing Balance	**680,425**	**694,033**	**707,914**	**722,072**	**736,514**	**751,244**	**766,269**	**781,594**	**797,226**	**813,171**
Interest	13,608	13,881	14,158	14,441	14,730	15,025	15,325	15,632	15,945	16,263

Table B-6
City of Richmond Hill
Engineering Development Charges Reserve Fund Continuity (Inflated $) – Scenario 2

Description	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	45,702,194	32,884,384	18,387,507	21,270,815	(546,103)	(4,743,046)	7,874,162	1,900,615	13,678,894	26,868,126
Development Charge Proceeds	12,319,769	12,998,554	14,040,521	15,082,488	15,082,488	15,082,488	15,082,488	15,082,488	15,082,488	15,082,488
Transfer to Capital - Water	2,138,000	816,000	5,426,000	849,000	866,000	884,000	901,000	919,000	938,000	-
Transfer to Capital - Wastewater	3,132,000	444,000	453,000	462,000	471,000	480,000	490,000	500,000	510,000	-
Transfer to Capital - Stormwater	739,000	1,114,000	907,000	345,000	12,857,000	1,035,000	678,000	385,000	558,000	681,000
Transfer to Capital - Roads	19,773,371	25,481,971	4,788,288	35,232,698	4,992,430	220,674	19,024,302	1,768,422	414,081	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-
Closing Balance	**32,239,592**	**18,026,967**	**20,853,740**	**(535,395)**	**(4,650,045)**	**7,719,767**	**1,863,348**	**13,410,680**	**26,341,300**	**41,950,614**
Interest	644,792	360,539	417,075	(10,708)	(93,001)	154,395	37,267	268,214	526,826	839,012

Table C-7
City of Richmond Hill
Operating Budget Forecast (Inflated $) – Scenario 3

Description	Forecast									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Expenditures										
Operating Costs										
Transfer to Water Fund	223,776	261,054	298,757	335,590	378,612	397,178	412,324	432,207	452,818	231,770
Contracts	860,000	921,000	954,100	988,500	1,024,200	1,061,400	1,100,000	1,140,100	1,181,800	1,225,100
Materials/Supplies	97,900	100,800	103,800	106,900	110,100	113,400	116,800	120,300	123,900	127,700
Transfer to Operating Fund	3,578,194	3,883,818	4,005,103	4,139,973	4,273,143	4,398,726	4,528,138	4,661,653	4,799,458	4,941,502
Sub Total Operating	**4,759,870**	**5,166,672**	**5,361,760**	**5,570,963**	**5,786,055**	**5,970,704**	**6,157,262**	**6,354,260**	**6,557,976**	**6,526,072**
Capital-Related										
Existing Debt (Principal) - Growth Related										
Existing Debt (Interest) - Growth Related										
New Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related										
Existing Debt (Interest) - Non-Growth Related										
New Non-Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-
Transfer to Water Quality Protection Reserve	2,176,272	3,523,366	5,525,352	8,067,239	11,313,972	15,455,538	17,290,864	18,322,957	19,423,200	20,827,202
Sub Total Capital Related	**2,176,272**	**3,523,366**	**5,525,352**	**8,067,239**	**11,313,972**	**15,455,538**	**17,290,864**	**18,322,957**	**19,423,200**	**20,827,202**
Total Expenditures	**6,936,142**	**8,690,038**	**10,887,111**	**13,638,202**	**17,100,027**	**21,426,241**	**23,448,126**	**24,677,217**	**25,981,176**	**27,353,274**
Revenues										
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Stormwater Billing Recovery - Total	**6,936,142**	**8,690,038**	**10,887,111**	**13,638,202**	**17,100,027**	**21,426,241**	**23,448,126**	**24,677,217**	**25,981,176**	**27,353,274**

Table C-8
City of Richmond Hill
Stormwater Rate Forecast (Inflated $) – Scenario 3

Description	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Total Stormwater Billing Recovery	6,936,142	8,690,038	10,887,111	13,638,202	17,100,027	21,426,241	23,448,126	24,677,217	25,981,176	27,353,274
Total Weighted Area	265,014,133	265,686,036	266,357,938	267,029,841	267,701,744	268,373,647	269,045,549	269,717,452	270,389,355	271,061,257
Rate per 1,000 sq.ft.										
Residential	13.77	17.21	21.51	26.89	33.61	42.01	44.12	46.32	48.65	51.09
Town/ Row House	19.28	24.10	30.11	37.64	47.06	58.82	61.77	64.85	68.10	71.52
Semi-detached/ Link House	15.15	18.93	23.66	29.58	36.97	46.21	48.54	50.95	53.51	56.20
Commercial/Industrial	26.17	32.70	40.86	51.09	63.86	79.82	83.83	88.01	92.43	97.07
Multi-Residential	23.41	29.26	36.56	45.71	57.14	71.42	75.01	78.75	82.70	86.85
Agricultural Land/Farm	2.75	3.44	4.30	5.38	6.72	8.40	8.82	9.26	9.73	10.22
Golf Course Structures	24.79	30.98	38.71	48.40	60.50	75.62	79.42	83.38	87.56	91.96
Golf Courses - Playing Area	4.13	5.16	6.45	8.07	10.08	12.60	13.24	13.90	14.59	15.33
Vacant Land	2.75	3.44	4.30	5.38	6.72	8.40	8.82	9.26	9.73	10.22
Institutional	19.28	24.10	30.11	37.64	47.06	58.82	61.77	64.85	68.10	71.52
Change in Residential Rate ($)	**2.75**	**3.44**	**4.30**	**5.38**	**6.72**	**8.40**	**2.11**	**2.20**	**2.33**	**2.44**