



## **Staff Report for Council Meeting**

**Date of Meeting:** December 7, 2022

**Report Number:** SRCFS.22.040

**Department:** Corporate and Financial Services

**Division:** Financial Services

**Subject:** **SRCFS.22.040 – Response to September 14, 2022 Member Motion – Regarding Stormwater Fairness**

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### **Purpose:**

To report back to Council with a review of the Member Motion brought forward and adopted at the September 14, 2022 Council Meeting entitled Stormwater Fairness.

Recommendation(s):

- a) That Staff Report SRCFS.22.040 – Response to September 14, 2022 Member Motion – Regarding Stormwater Fairness be received;
- b) That Council authorize a maximum property area of ten acres (435,600 square feet) to levy a stormwater management fee effective April 1, 2022 on farm land, vacant land and golf course property types as prescribed by Assessment Act R.S.O. 1990 Section 7;
- c) That Council authorize a maximum property area of one acre (43,560 square feet) to levy a stormwater management fee effective April 1, 2022 on residential properties as prescribed by Assessment Act R,S,O, 1990 Section 7;
- d) That Staff be directed to cancel and adjust the 2022 stormwater management fee billings for property types described in b) and c);
- e) That Staff be directed to undertake a comprehensive stormwater management funding and rate structure review and report back to Council in the 3<sup>rd</sup> quarter of 2023;
- f) That Staff be directed to include the budget for the stormwater management funding and rate structure review in the 2023 Draft Operating Budget;
- g) That a credit / subsidy system for managing runoff on one's property, once established and approved by Council as part of the 2023 stormwater management funding and rate structure review be retroactive to April 1, 2022;
- h) That draft By-law 148-22, Appendix B to staff report SRCFS.22.040, be enacted to adopt the 2022 Stormwater Management Rate maximum land area.

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### **Contact Person:**

Paolo Masaro, Executive Director, Infrastructure and Engineering Services, Ext. 6540  
Gigi Li, Director, Financial Services and Treasurer, Ext. 6435

### **Report Approval:**

**Submitted by:** Sherry Adams, Commissioner, Corporate and Financial Services

**Approved by:** Darlene Joslin, Interim City Manager

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

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### Background:

At the September 14, 2022 Council Meeting, a [Member Motion \(14.6\)](#) was brought forward and adopted by Council in regards to Stormwater Fairness.

*“That the Member Motion submitted by Councillor Muench regarding Stormwater Fairness, be referred to staff for a report back to Council on all aspects of the stormwater management fee including matters raised at the Sept 14, 2022 Council meeting.”*

This staff report is in response to Council’s direction for staff to report back and provide information on the Motion and the comments raised by Council.

On November 23, 2022 a Special Council Education and Training Meeting was delivered to Members of Council with the objective to provide essential background on the City’s stormwater management system, the history of the stormwater management fee and the current challenge with specific focus on agriculture land/farm, golf course and vacant land as they have been the subject of delegations and concerns known to Council and Staff.

### Stormwater Management (SWM) in the City of Richmond Hill

**Stormwater is managed as part of a large system throughout the entire City to reduce the risks of flooding, stream erosion, and to protect the water quality of the environment for the benefit of all property owners in Richmond Hill**

Stormwater is managed through the application of infrastructure and naturally designed systems to prevent excess runoff from rainfall, snowmelt as well as human activities that change runoff patterns from land use changes through development and intensification.

Increases in the amount of hard surfaces from human activities can dramatically disrupt the natural water balance of a site by increasing the amount of rainwater that turns into overland runoff instead of it infiltrating into the ground. These changes to the land, combined with more frequent high intensity and short duration rainfalls, results in increased pressure on existing infrastructure because the stormwater management assets need to deal with greater runoff volumes.

Stormwater in Ontario is managed in what is commonly referred to as a holistic “treatment train” system through a network of on-site control measures, municipal infrastructure and existing natural features where multiple SWM techniques are implemented one after the other for a given area. In Richmond Hill, these different techniques are implemented on a site-by-site basis and designed based on the optimal combination of source control, water conveyance systems and end-of-pipe facilities that provide flood control, water treatment and erosion control. An expansion of these and

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other details on the City's approach to stormwater management practices was brought forward to council on October 2021 as part of [SRPI.21.065](#).

### **Stormwater practices in Ontario are legislated**

Stormwater infrastructure is predominately approved by Provincial agencies under the Ontario Water Resources Act as an Environmental Compliance Approval known as an "ECA". 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 ECA 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. Stormwater infrastructure is also identified as a "core asset" under Provincial legislation O.Reg 588/17 for Asset Management which requires municipalities to manage and make investments in its infrastructure to meet service levels so they do not fail prematurely and continue to perform well throughout their estimated life.

### **The City is developing a Stormwater Management Computer Model which will allow for a better understanding of how the system works holistically and to achieve best value for the investments made in stormwater infrastructure**

To prepare for the expected impacts of intensification and climate change, the City is developing a *Stormwater Management Computer Model* for the entire municipality which will allow for a better understanding of how the system works holistically. The tool will help guide development to ensure new assets fit well with the City's existing system and will assist in designing infrastructure today for the weather patterns and challenges of tomorrow. In addition, using the computer model will allow the City to be able to direct funds to the most needed areas in order to achieve the maximum benefits and best value for the investments made in stormwater infrastructure.

### **Richmond Hill owns and operates a \$2B inventory of SWM infrastructure that requires regular financial investment to ensure system functionality and compliance with Provincial approvals**

Richmond Hill owns and operates an extensive inventory of SWM infrastructure that plays an important role in protecting the environment from flooding and erosion, and by treating the quality of water before it is released back into the natural environment such as streams and rivers. The Regional Municipality of York also manages its stormwater system within the City, while smaller in magnitude, is primarily within their road allowance and is funded through the municipal tax levy uploaded to York Region. The majority of the regional system at some point discharges into the 150+ km of streams and valleyland areas within Richmond Hill of which approximately half is city-owned.

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The total estimated value of the City's stormwater infrastructure is \$2.0 billion. The average condition of these assets is considered "Very Good" according to the City's council approved [2021 Asset Management Plan](#). Figures 1-4 below provides a summary of the City's storm inventory based on condition distribution and its valuation as well as average service life and overall condition profile.

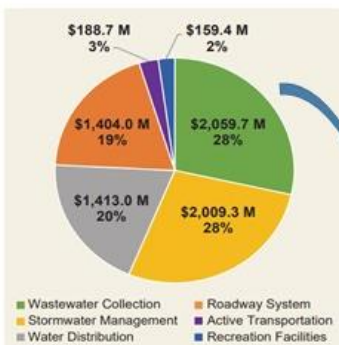


Fig. 1 Asset Value by Sub-Service (\$B)



Fig. 2 Asset Condition Distribution and Valuation

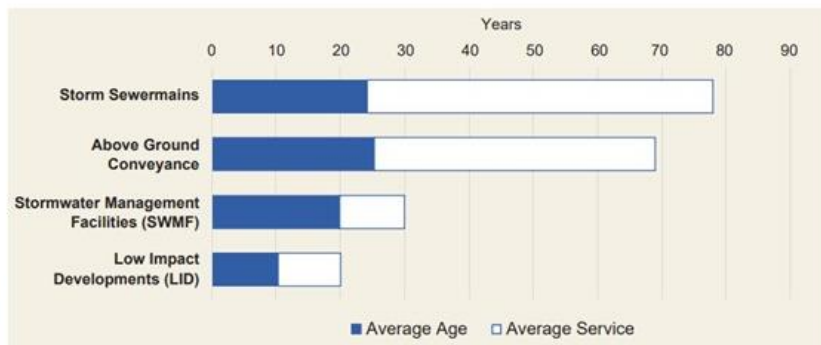


Fig. 3 Average Asset Age vs. Average Service Life for SWM



Fig. 4 Condition Profile for SWM

Fiscally sustainable asset management over the long-term is imperative considering the sizeable valuation of the City's SWM infrastructure and the multiple decades over which the lifecycle of these assets will span.

### **Stormwater is a service that is provided differently than water and wastewater services and therefore funded separately**

As part of "matters raised at the Sept 14, 2022 Council meeting", how stormwater infrastructure services are funded and charged for as compared to water and wastewater/sewer services was deliberated and inaccurately linked together.

Potable water is delivered to a property where it is consumed. The service charged for is the treatment and delivery of the product (water) and property owners are charged by the amount of water consumed. Similarly, sewage waste generated is discharged to the municipal wastewater system before discharging to a regional transmission system for treatment at a wastewater treatment plant. The users are charged by the amount of sewage waste they are estimated to have generated that leaves their property. The City

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is charged by York Region for water and wastewater services, and in turn the City charges property owners.

For stormwater services, property owners are charged a rate based on their property characteristics (area, property type) as an estimate of the amount of runoff that the property type would typically generate. The rate that a property is charged is for their runoff contribution towards the City-owned stormwater infrastructure system (including the City's valleyland system) that manages this runoff and supports associated City infrastructure (such as a culvert under a City road). Whether a property has a wastewater sewer or water connection is completely independent as to whether a property contributes runoff to the City's stormwater management system.

### **The Stormwater Management Fee is the revenue source that provides the funding for the service of managing stormwater for all property owners**

The strategic level of service for stormwater management is to plan for, build and maintain sustainable stormwater infrastructure that improves water quality, provides erosion and flood protection; reduces environmental, property and human risks; and complements the community.

Every property in Richmond Hill contributes runoff to the City's stormwater infrastructure system, even if limited onto public roads, catch basins or culverts and ditches, that leads into part of the 150+ km streams and valleyland areas within Richmond Hill of which half are City-owned and requires upkeep.

Similarly, a portion of property tax is leveraged to maintain the road network in a state of good repair and to maintain public safety. A significant portion of the storm water network resides within the public road allowance that if not all, then most property owners are users of and contribute taxes towards. The charge for stormwater has the same intent to recover costs associated with maintaining the stormwater system.

Other examples may include fire, library or education services that every property owner contributes towards. The charges for these services are applied towards staffing, and maintenance of related assets so they can be leveraged as needed.

### **Financial Sustainability for Stormwater Management and Implementation of a More Equitable Rate Structure**

**Richmond Hill was one of the first municipalities in Ontario and Canada to adopt a dedicated Stormwater Management (SWM) fee to fund current operating and infrastructure costs with a rate-based charge.**

The City of Richmond Hill recognized a number of years ago that its historical practice of funding SWM infrastructure is not sustainable. In 2006, the City began to develop a priority rating system for its municipal SWM ponds. This process led to a ten-year capital program for SWM ponds that was adopted by Council in 2008 utilizing the

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“Water Quality Protection Reserve Fund”, which was established by Council through the proceeds of the sale of Richmond Hill Hydro to fund the rehabilitation of SWM facilities.

While the ten-year capital plan for SWM ponds was a good start in that some portion of the SWM infrastructure system was partially funded, it became apparent that the funds set aside for ongoing SWM would be inadequate with respect to the City’s ability to operate and maintain its SWM infrastructure in the future. Council recognized that the SWM infrastructure as a whole was underfunded. In order to close this gap, in 2008 Council requested staff to “report back to Committee of the Whole on long term funding options” for those projects which fell beyond the ten-year capital plan.

In 2011, the services of Watson & Associates Economists Ltd. were retained to lead a review that considered the existing funding model, current and anticipated legislative requirements and future financial implications with the goal to establish appropriate and sustainable funding mechanisms to support the stormwater management infrastructure, well into the future.

The review resulted in the Stormwater Management Financing Feasibility Study staff report SRCFS.13.007 see Appendix A; and Council’s approval of By-law 25-13 that allowed for the implementation of a two-tier flat rate structure with low administration costs based on the identified gap in funding for City-owned stormwater management infrastructure that was known at the time.

In 2013, the City was one of the first municipalities to adopt a dedicated SWM fee to fund current operating and infrastructure costs with a rate-based charge to ensure that fiscal resources would be available to manage this infrastructure over the long-term.

Prior to the dedicated SWM fee, operational stormwater management services were funded from the property tax rate, including minor contributions toward storm sewer replacement as part of the roads program. In 2013, property owners transitioned from paying for SWM services as part of their property taxes, to the dedicated SWM fee.

The benefits of shifting to the dedicated SWM fee approach included:

- **Dedicated funding source for all expenditures of the stormwater management system:** recovering both operating and capital infrastructure costs allowing for sustainability, flexibility and adaptability to respond to related issues and legislative requirements.
- **More fair and equitable:** based on the property type and how it is connected to the overall stormwater management system as opposed to the tax rate, which is based on the property’s assessed value which does not have a link to stormwater runoff.

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- **Phased-In approach for lifecycle reserve contribution:** systematic increases in the funds transferred from the operating budget gradually building up the Water Quality Protection Reserve Fund over time.
- **Two-tier flat rate structure:** differentiates residential and non-residential properties and their contribution to the stormwater management system.

From an administrative perspective, a flat rate approach is quite inexpensive, as each year the number of properties would simply be adjusted for any development that takes place. However, this type of funding structure has a weaker link between the amount paid and the connection to and impact on the City's stormwater system, as it captures few property characteristics or and simply treats every property in each tier the same regardless of the wide-ranging differences.

### **Council approved and updated a more equitable stormwater management rate structure in 2020 to address the growing financial pressures of managing stormwater infrastructure and to reach fiscal sustainability into the future**

Fiscal sustainability has always been a key consideration for the City with respect to the ongoing management of stormwater.

The SWM fee was developed and implemented in 2013, using assumptions and information known at the time with the goal to achieve a balance between financial sustainability and cost of administration. However, significant changes and new knowledge have emerged since the adoption of the Fee that impacted the lifespan of the Water Quality Protection Reserve Fund and the long-term financial sustainability of stormwater management services and infrastructure:

- **Two-tier flat rate structure did not adequately account for urban runoff created by higher density and non-residential (e.g. commercial/industrial) developments:** an equitable rate structure should reflect the appropriate allocation of the rate burden between rate payers considering contribution of runoff.
- **Actual approved rate increases in the years following By-law adoption were much lower than originally planned:** the forecast provided to Council at the time of approval was for an average annual rate increase of 25% for the first few years, with Years 1 and 2 having increases of 52% and 44%, respectively to achieve sustainability within ten years. In actuality, the approved increases to the rate were much lower than the original phase-in strategy, with 0% and 10% being approved in the first and second year, and 9% being approved the following three years mirroring the water and wastewater retail rate increases.

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- **Multi-residential buildings are billed on bulk metering (one bill), much like single family homes:** development shifted to higher density (large number of residential condominiums) resulting in more impervious areas. Multi-residential buildings are billed on bulk metering (one bill), much like single family homes. This has resulted in lower revenue per household in multi-residential buildings, despite significant stormwater contribution.
- **New stormwater infrastructure has been steadily assumed through the development process:** adding financial pressure in the form of operating, maintenance, and lifecycle costs.
- **Aging stormwater management infrastructure:** requires maintenance activities such as pond sediment removal, and a capital program to protect City infrastructure from erosion in valleylands.

The interacting factors identified above contributed to the impending depletion of the reserve fund as a result of lower than necessary revenues and higher expenditures. Deriving a more equitable rate structure and developing a funding mechanism to sustainably recover costs related to the management of City-owned SWM infrastructure is an important priority for the City's long-term capital sustainability.

### **The improved rate structure approved in 2020 takes into account property area and property type which are the primary parameters in the creation of runoff**

Staff explored a number of rate options to improve equity and fairness, from the two-tier flat rate model to considering various factors including property size, property type and contribution to stormwater runoff, all while minimizing the administration burden and costs. Staff also considered the experiences in other municipalities (Markham, Vaughan, Newmarket, Mississauga and Waterloo) with dedicated stormwater billing at the time.

The new rate structure recommended by staff distributes the total revenue requirement to recover stormwater related costs by using the total area of the City (excluding exempt land such as public roads schools and places of worships) and applying the runoff by property type to derive a stormwater rate per square foot. The individual property annual stormwater charge is then calculated by multiplying the rate per square foot and the site area of the respective property.

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The unit rate per square foot was derived with consideration to the average runoff percentage of different property types as shown in the table below.

Property Type	Runoff %
Residential	50%
Commercial/Industrial	95%
Multi-Residential	95%
Agricultural/Farm Land	10%
Golf Course	15%
Vacant Land	10%

This rate structure would group properties into property types (e.g. residential, commercial/industrial, etc.) and subsequently the runoff factors would be applied to the land area within each property type to create an estimate of the proportionate land area within each property type, and within the City as a whole. The relative share of total land would drive the share of the SWM costs that are attributed to each property type. The share of costs attributed to a property type would then be spread evenly over the number of properties within it. As such, all properties within a single property type would pay the same rate, but this amount would be different from the amount paid by other property types. This approach recognizes that there are distinct physical differences between different types of development and land use. There is an improvement of the linkage between costs and benefits as compared to the previous two-tier flat rate structure and a more progressive approach based on benefits received.

Site area data needed for this type of calculation is generally available from the City's tax and G.I.S. databases, although the calculations are considered somewhat more difficult, since land area needs to be calculated for each property type. Administratively it becomes more difficult and expensive to maintain such a funding structure when compared to the two-tiered structure, because the relative distribution of costs between property types would need to be recalculated with regular frequency to account for the effects of continued development in the City. Property type is generally based on primary use, a small percentage of properties are assigned two or more property types. For example a property with residential and commercial use. SWM fees for multi-use properties are pro-rated.

The runoff rate applied reduces the total land effective area for calculation of SWM fees. Runoff rates used by the City are based on standard values that are a stormwater engineering standard in Ontario and throughout Canada.

As an example to illustrate the City SWM rate formula, the 10% runoff rate for farm and vacant land means just 10% of rainfall and snowmelt runs off the property, the property absorbs 90%. The City formula recognizes the runoff percentage by effectively reducing a fifty acre farm down to five acres for SWM fee calculation purposes.

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**In order to strive towards a fully sustainable SWM funding model, Council approved in 2020 an increase to the revenue generated from the SWM fee to support the necessary expenditures and funding for the future.**

Several costing assumptions have changed since the SWM fee was implemented in 2013 which led to the stormwater rate review and an Activity Based Costing (ABC) exercise that was undertaken to examine all known expenditures contributing to the delivery of SWM related services. The review identified a significant shortfall in funding for both operating and capital activities as a result of the impact of full cost recovery. i.e., the alignment of resource efforts to stormwater activities, contribution to asset lifecycle replacements and new capital projects.

The City was recovering revenue from the SWM fee, largely to offset the operating costs but also to contribute toward future SWM infrastructure replacement. Based on the forecast at the time, operating and lifecycle expenditures (full requirement) for 2019 to 2029 was a total of \$196.6 million, of which 75% (\$147.2 million) related to the contributions to fund for future repair and replacement of SWM infrastructure. The average annual operating expenditures and lifecycle contributions of \$17.9 million, was substantially higher than the recovery from the revenue generated from the SWM fee of \$4.4 million.

While it was necessary to increase the revenues, it was unrealistic to implement large fee increases to meet full provision targets. As an interim measure, Council approved the strategy to increase the lifecycle contribution more slowly to a level that will extend the life of the reserve fund that was depleting, from 2021 to 2029.

In order to minimize the impact to residents and property owners during the rate transition, Council approved the continuation of the flat rate structure and funding approach for 2020 and 2021 with the increase in contribution to reduce the funding gap effective 2022 as part of the implementation of the new rate structure.

The new SWM rate structure approved by Council in 2020 achieved a more equitable rate structure, by improving the residential/non-residential split. Shifting revenue burden from the previously 94% residential to less than 65% residential, to the more impervious land uses, resulting in a majority of residential properties receiving a lesser charge, and non-residential properties an increase based on land uses with higher impervious areas.

The rate structure was also a more sustainable funding approach as it was recognized that the SWM infrastructure has been chronically underfunded and the reserve fund was depleting. Council approved an increase to the overall revenue to be generated from the SWM fee in order to provide for lifecycle replacement and extend the life of the reserve fund.

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A more customized type of rate structure and charge equation would have increased the administration costs at the City which would in turn increase the rates. A balance between a more equitable rate structure and cost effectiveness was also achieved.

### **Implementation Challenge and Other Considerations**

**Richmond Hill has issued over 135,000 bills to 53,000 accounts since the implementation of the new SWM rate structure in April.**

The implementation of a new SWM rate structure took effect April 1, 2022, based on property area and runoff as described in staff report [SRCFS.20.001](#).

Water bills issued from April 2022 for residential (quarterly), commercial, industrial and multi-residential properties (bi-monthly), include annual SWM charges at the new rate structure pro-rated to the billing period, on average, covering 91 days. SWM charges on water bills are shown separately from water consumption charges. The City included inserts with water bills issued October 2021 through March 2022 advising of new rates and, illustrating with examples, the formula to calculate the 2022 SWM charge.

Stormwater only bills are issued to accounts for properties not billed for metered water consumption. Property types receiving stormwater bills include, vacant land, house on well, golf course and farm land. Stormwater only bills issued to date in 2022, are for five months ending May 31, including 61 days at the new rate structure.

### **Most inquiries received since implementation of new fee structure have been resolved**

Staff received approximately 100 inquiries since April for SWM charges pertaining to the new rate structure on accounts for residential, commercial and industrial properties, most of which are resolved. Frequently asked questions include:

- Clarification on how SWM Rate is calculated.
- Amount of SWM fee billed.
- “Water” bill received on properties without connection to City water
- SWM bills for properties with low impervious areas

Staff and previous Council, received inquiries from owners or representatives of farm, vacant land and golf course properties in September 2022. Two delegations attended September 14, 2022 Council, to share concerns about SWM charges on vacant and farm land. A representative of a Richmond Hill golf course contacted staff concerning the SWM fee. Concerns included the increase in annual SWM charges arising from the new rate formula. The increase, significant for some vacant land, farm and golf course properties, was a result of large total land area.

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### **Since September 14, 2022 Council, the City has placed a hold on collection activity on outstanding SWM only bills and has paused billing pending response to the Council referral motion**

The City has received payment for a majority of SWM only bills issued for the five months ending May 31.

The City has not issued reminder or other overdue payment notices, or applied late payment or administrative charges, for SWM only bills remaining as a receivable. A SWM bill for annual SWM charges for the period June 1 through December 31 has not been issued, for vacant land, house on well, golf course and farm land properties.

The City stopped collection and generation of remaining SWM bills effective September 2022, as a step to avoid compounding concerns, while staff worked to respond to the Council referral motion.

### **Benchmarking demonstrates that rate structures vary across municipalities based on each jurisdiction's unique characteristics and challenges, and that there is no standard approach or best practice.**

In October 2022, sixty-two Canadian municipalities were identified as having implemented a dedicated SWM rate structure. In Ontario we identified eighteen municipalities with a SWM fee, an additional three have fees pending approval and implementation. Staff reviewed SWM rate structure approaches at over twenty Canadian municipalities focusing on rate formula, property type grouping, subsidies, treatment of golf course, farm and vacant land, and credit programs. Review work included municipal or utility websites, online video content, staff reports, presentations by engineering consultants and municipal by-laws. In addition, staff reviewed industry survey and, met with Watson & Associates regarding their recent work for the City of Cambridge.

SWM rate structure approaches vary throughout municipalities, and there is no one standard approach or best practice. The benchmarking of SWM rates is not recommended because SWM management practices may vary between municipalities based on the unique challenges each one faces. Richmond Hill funds its entire SWM system from the SWM fee while others may only be funding partially of their SWM system such as flood control upgrades from their fee. Other municipalities fund their SWM ponds, sediment removal and valleyland projects from an alternate funding source such as property tax. The size and complexity of different municipalities also vary greatly in Ontario and Canada.

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Richmond Hill's formula of land parcel total area, with a runoff percentage by property type, is also used by Regina, Newmarket and Cobourg, and is currently under consideration by Cambridge. The billing of SWM charges at other Ontario municipalities is usually administered by including the charge with a water bill or utility bill. The generation of a SWM only bill for properties not receiving a water bill is a practice used by many municipalities as well. Mississauga, Halifax and Ottawa are among some municipalities with refined rate structures and SWM fees post-implementation.

### **Benchmarking on farm land, golf courses and vacant land identified a hybrid approach for the impervious area and application of a total area cap**

Municipalities are not always transparent on approach or, eligibility for SWM rates on farm land, golf course and vacant land.

Findings did identify golf courses charged at a commercial rate for impervious area measurement of buildings, parking areas, cart paths and driving range pads. Charging a SWM fee for the golf playing area, was not identified in a comparable. The application of SWM fees to farm or vacant land may be for measured impervious areas only. Impervious area includes paved or hard surfaces, building rooftops, compacted gravel, artificial turf, and other surfaces that increase stormwater runoff. The impervious area on a property is directly correlated with the amount of stormwater runoff it contributes to the system. An alternative to measurement of impervious area is the application of a cap on total area for SWM rate calculation purposes. Charging for dedicated crop area was not identified in a comparable.

The City's application of a runoff rate by property type to parcels measuring in some instances more than one million square feet, still resulted in an annual charge that does not compare well with other municipalities.

### **The City's SWM rate structure for residential properties compare well to other municipalities for over 90% of accounts**

SWM rate structure approach varies throughout the industry, some are more equitable and more resource intensive, others less equitable and easier to administer. Findings identify single or two-tier flat rates similar to the rate structure previously used at the City, are the common approach because of ease of administration however, the lack of equity or relationship to stormwater runoff is a drawback. Multi-tier structure of small, medium, large and extra large effectively places an area cap on larger properties. More sophisticated municipal SWM rate structures include measuring actual impervious area by property, measuring a sample of residential properties to establish an equivalent residential unit (ERU), using median or percentile with an ERU unit and applying runoff

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by actual land area, and the current rate structure used by the City. The City rate structure of actual land area with an average property type runoff estimate results in a fee that compares well to other municipalities with the exception of the largest land area residential properties. A cap on the outlier properties at the high end of the area range, is a recommended refinement to a structure with balance of equity and administrative effort.

### **More sophisticated approaches including individual property impervious area measurements may be considered in the future for Commercial, Industrial and Multi-Residential properties**

The City is billing stormwater charges for 53,813 properties, of those 903 are in the Commercial, Industrial or Multi-Residential property types. The larger land parcels in the City's Commercial and Industrial property group include three large retail sites. Identified strategies for stormwater billing of these property types include, property assessment, single and multi-tier flat rate, an ERU applied to impervious area and the approach of the City – total property area and a runoff percentage of 95%. The more sophisticated approaches include individual property impervious area measurement. A review of the SWM rate structure approach by a consulting firm is recommended for these property types to identify potential refinements.

### **A two-phase plan is recommended to address the current issue and refine Richmond Hill's SWM rate structure.**

The City's SWM rate structure formula although not perfect, compares favorably to those of other municipalities for over 90% of accounts. The runoff percentage assigned to a property type is overall relatively accurate for the vast majority of the average properties in that property type, with the acknowledgement that there will be outliers on both extremes where the assigned runoff percentage would be a slight over or under estimation for those few properties. Although a customized approach may be more accurate, dedicated resources will be required to conduct the initial analysis and ongoing inspections and tracking will be needed to ensure the correct data is applied. This will in turn increase the costs to be recovered from the rates and may outweigh the benefits.

The challenge with the City's SWM rate structure is properties at the high end of the total land area range. As a result, capping billable area is a good interim measure until the rate structure is reviewed and updated.

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The table below shows the number of the accounts by property type and the quantity of properties to be capped.

Property Type	Number of Accounts	% of Total Accounts	% of Total Land Area	Area Range (sq.ft)	Area Median (sq.ft)	# of Proposed Capped Properties	% of Proposed Capped Properties
Residential	51,145	95.0%	52.6%	186 - 1,051,732	4,866	410	0.8%
Commercial/Industrial	792	1.5%	12.2%				
Multi-Residential	111	0.2%	1.5%				
Agricultural/Farm Land	59	0.1%	14.0%	44,853 - 4,660,048	1,101,950	50	84.7%
Golf Course	6	0.0%	5.8%	707,874 - 11,392,517	5,162,330	6	100.0%
Vacant Land	1,700	3.2%	13.9%	105 - 4,364,697	6,083	38	2.2%
	<b>53,813</b>	<b>100.0%</b>	<b>100.0%</b>			<b>504</b>	<b>0.9%</b>

Staff recommend a two-phase plan to address the current issue and refine Richmond Hill's SWM rate structure. The initial step is establishing a maximum land area cap for farm land, golf course, vacant land and residential property.

### Phase One: First Quarter 2023

The maximum area for farm and vacant land as well as golf courses is proposed to be capped at ten acres (435,600 square feet). The land area for this purpose excludes commercial property, such as a club house on a golf course as an example. The cap will be on the golf course playing area.

The maximum area for residential properties with a home to be capped at one acre (43,560 square feet).

Stormwater charges from April 1, 2022 will be cancelled and recalculated on bills for capped properties. An insert will be included with reissued bills with content explaining the cancellation, recalculation and rebilling of 2022 SWM fees. The layout and content of the SWM only bills will be improved to better communicate its purpose.

### Phase Two: Second & Third Quarter 2023

A consulting firm will be retained to:

- Review the stormwater funding and rate structure.
- Investigate options for a subsidy or credit program.

Upon completion of the two-phase plan, Staff will report on the Review and recommendations for Council's consideration as part of the 2024 Stormwater Management Services Budget and for billing implementation effective 2024.

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The City website and social media content will be reviewed and updated for stormwater management and funding. Enhancements to City stormwater management fee communication to include use of online videos to explain asset requirements, funding and SWM billing. Access to detail stormwater rate calculation by property will be provided, through the water bill portal which is targeted for launch in 2023.

### Financial/Staffing/Other Implications:

A total land area cap of ten acres (435,600 square feet) on farm land, golf course and vacant land, will provide SWM fee relief to 94 properties. A total land area cap of one acre (43,560 square feet) on residential properties with a residence will provide SWM fee relief to 410 properties.

The table below shows the SWM fees for capped properties and the 2022 revenue impact.

Property Type	# of Proposed Capped Properties	Annual Max SWM Fee ( April 1, 2022 to March 31, 2023)	2022 SWM Fee (April 1 to Dec 31, 2022)	2022 Revenue Impact
Agricultural/Farm Land $\geq 10$ acres	50	\$ 1,394	\$ 1,050	\$ 161,000
Golf Course $\geq 10$ acres	6	\$ 1,851	\$ 1,395	\$ 111,200
Vacant Land $\geq 10$ acres	38	\$ 1,394	\$ 1,050	\$ 93,200
	<b>94</b>			<b>\$ 365,400</b>
Residential $\geq 1$ acre	<b>410</b>	\$ 416	\$ 313	<b>\$ 129,600</b>
	<b>504</b>			<b>\$ 495,000</b>

A sustainable funding approach is required for the ongoing management of stormwater management services, which has been historically underfunded. Acknowledging the current challenge of the City's SWM rate structure for properties at the higher end of the total land area range for the more pervious property types, an interim solution provides relief to these properties with capping the maximum land area applicable resulting in a lower SWM fee in 2022.

The interim solution is consistent with the principle that the SWM fee is a share and contribution model into funding of the overall City SWM system.

Council approved an increase to the overall revenue to be generated from the SWM fee in 2022 in order to provide for lifecycle replacement and extend the life of the reserve fund. The revenue impact identified for the capped properties will be reported as part of the 2022 year-end variance.

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### **Relationship to Council's Strategic Priorities:**

The discussion in this staff report about the City's stormwater management infrastructure and the rate structure that provides funding for it directly supports two Council Strategic Priorities (2020-2022) as described below.

- **Balancing Growth and Green:** Stormwater management infrastructure, including LID, is a required measure that facilitates new development in Richmond Hill while protecting or enhancing the natural environment that can allow for a balance between development and continued environment sustainability.
- **Fiscal Responsibility:** The Stormwater Management Fee and rate structure relate to the financial sustainability of the City's stormwater management system, and sound management and design of this infrastructure translates to fiscal responsibility.

### **Climate Change Considerations:**

Climate change is expected to impact the City's stormwater management system in a number of different ways in the future. This staff report provides background information on Richmond Hill's SWM infrastructure and some details between these expected impacts and the connections to the City's infrastructure. The comments on the connection of the Member Motion to climate change has also been discussed in this report. There are references to adaption of climate change related to these subjects in this document.

### **Conclusion:**

This staff report has been prepared in response to the Member Motion brought forward at the September 14, 2022 Council meeting regarding "Stormwater Fairness". Richmond Hill was one of the first municipalities in Ontario and Canada to adopt a dedicated SWM fee to fund current operating and lifecycle infrastructure costs. The City's SWM rate structure although not perfect, compares favorably to those of other municipalities for over 90% of accounts. The two-phase plan to address the current challenge is a commitment that the City will continue to refine and evolve the rate structure, making improvements where necessary to ensure overall equity under the rate structure and funding towards stormwater management infrastructure in a financially sustainable manner, well into the future.

### **Attachments:**

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

Appendix A - SRCFS.13.007 Stormwater Management Financing Feasibility Study

Appendix B - By-law 148-22 – A By-Law to amend the 2022 Stormwater Management Rate with a Maximum Land Area



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### Report Approval Details

Document Title:	SRCFS.22.040 Response to Member Motion – Regarding Stormwater Fairness.docx
Attachments:	- SRCFS.22.040 Appendix A -SRCFS.13.007 Stormwater Management Financing Feasibility Study.pdf - SRCFS.20.040 Appendix B - By-law 148-22 – A By-Law to amend the 2022 Stormwater Management Rate with a Maximum Land Area.docx
Final Approval Date:	Dec 2, 2022

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

**Paolo Masaro - Dec 1, 2022 - 4:28 PM**

**Gigi Li - Dec 1, 2022 - 4:33 PM**

**Sherry Adams - Dec 1, 2022 - 7:11 PM**

**Darlene Joslin - Dec 2, 2022 - 8:52 AM**