

**TO:** CHAIR AND MEMBERS FINANCE  
MANAGEMENT COMMITTEE

**DATE:** 2020 October 06

**FROM:** DIRECTOR ENGINEERING

**FILE:** 31000-15

**SUBJECT: STORM SEWER EXTENSION CONTRIBUTION AND FEE BYLAW –  
FUNDING OPTIONS**

**PURPOSE:** To seek Council authority to update the *Storm Sewer Extension Contribution and Fee Bylaw 2017*.

---

## RECOMMENDATIONS:

1. **THAT** the Financial Management Committee recommend Council authorize the City Solicitor to bring forward a bylaw amendment to the *Storm Sewer Extension Contribution and Fee Bylaw 2017*, approving a 50% cost-share, fixed interest, and beneficiary options as outlined in Sections 4.1, 4.2 (Option ii) and 4.3 of this report.
2. **THAT** the Financial Management Committee recommend Council authorize partial refunds for properties that have already paid contributions and fees under the *Storm Sewer Extension Contribution and Fee Bylaw 2017*, as outlined in Section 4.4 of this report.

## REPORT

### 1.0 INTRODUCTION

The City has now completed Integrated Stormwater Management Plans (ISMP) for all the catchment areas within the City and has implemented some priority recommendations. The Plans are reviewed and updated periodically to include up to date climate action strategies and reflect recent improvement projects. A key element of the plans is to manage stormwater runoff at source on properties as much as possible and to mitigate off-site stormwater impacts from new development. Source controls are a requirement of development approvals for all major development projects and staff are working towards presenting options for on-site stormwater management requirements for single family developments. Even with aggressive source control, every property still requires a connection to suitable stormwater infrastructure to manage peak run-off and avoid negative stormwater impacts on neighbouring properties. A gravity connection from a property to an appropriately designed stormwater system (whether piped or open flow) is still the most reliable solution to reliable stormwater management.

To: Chair and Members Financial Management  
Committee  
From: Director Engineering  
Re: Storm Sewer Extension Contribution and Fee  
Bylaw – Funding Options  
2020 October 06 .....Page 2

Approximately eighty percent of existing residential lots in Burnaby have a gravity storm service to appropriate public stormwater infrastructure. The public stormwater infrastructure was typically built as a condition of original subdivision approval as is the case in most municipalities. Where the original subdivision was completed to rural standards, stormwater infrastructure was provided as part of street upgrades with the Local Area Service Program (LASP). The City often contributed a share of the capital costs in these cases.

The remaining approximately twenty percent of existing residential lots (6,000 of 30,000 lots) have no existing gravity storm service to appropriate stormwater infrastructure. In these instances the existing house and property storm drainage is provided through on-site rock pits or connections to ditches with varying, but typically poor performance. In order to allow these properties to redevelop, acceptable off-site drainage infrastructure needs to be provided. Most of these 6,000 under serviced properties (approximately 75%) have access to a storm sewer in the street. However, the low point for these properties is in the lane, where there is not currently appropriate stormwater infrastructure. Upon redevelopment, the property owner is offered a service to the 'higher' City storm sewer in the street through a pumped private connection. While this might present the lowest initial cost, most builders and owners do not prefer this option, due to the higher risk of private property flooding should the private pump fail.

The *Storm Sewer Extension Contribution and Fee Bylaw 2017* was adopted on 2017 March 06 to provide a mechanism to enable redevelopment on these under-serviced properties. The alternative to allow redevelopment often involved high costs to the builder as providing appropriate stormwater infrastructure to the closest connection point to City infrastructure could range from \$25,000 to more than \$200,000. This cost proved to be prohibitive for single and two-family developers, and the new stormwater infrastructure provides a benefit to some intervening private properties. The *Storm Sewer Extension Contribution and Fee Bylaw 2017* provides an ability to allow redevelopment while distributing the cost among all benefitting owners (to later also allow for their redevelopment), instead of requiring the initiating developer to pay the entire cost.

The *Storm Sewer Extension Contribution and Fee Bylaw 2017* is not applied to multi-family or commercial rezoning applications. In these scenarios, the developer is required to design and construct extended stormwater infrastructure to provide appropriate storm service to their property (and often intervening properties), entirely at their cost, regardless the length, as a condition of rezoning approval.

## **2.0 POLICY SECTION**

The *Storm Sewer Extension Contribution and Fee Bylaw 2017* is aligned with the City of Burnaby's Corporate Strategic Plan by supporting the following goals and sub-goals of the Plan.

To: Chair and Members Financial Management  
Committee  
From: Director Engineering  
Re: Storm Sewer Extension Contribution and Fee  
Bylaw – Funding Options  
2020 October 06 .....Page 3

## Goal

- A Dynamic Community
  - City facilities and infrastructure –  
Build and maintain infrastructure that meets the needs of our growing community
- A Thriving Organization
  - Financial viability –  
Maintain a financially sustainable City for the provision, renewal and enhancement of City services, facilities and assets

## 3.0 DISCUSSION

Within the context of completed ISMP's and climate action strategies, a gravity connection from a property to appropriate public stormwater infrastructure is the preferred option for allowing redevelopment of a new home, as this provides the most reliable service with the least risk of flooding. The *Storm Sewer Extension Contribution and Fee Bylaw 2017* provides a mechanism to enable orderly single family property redevelopment while distributing the cost appropriately among all benefitting owners instead of requiring the initiating developer to pay the entire cost. Upon receipt of a subdivision or building permit application worth more than \$250 000, the City receives a deposit from the initiating developer/builder for their share of the project cost (based on the area of their property). The City manages the design and construction of the off-site stormwater infrastructure and finances the remaining costs. The City collects the remaining costs from the benefitting properties when these benefitting properties subdivide or submit building permits valued at more than \$250,000. The benefitting properties are listed and updated annually via the *Storm Sewer Extension Contribution and Fee Bylaw 2017*. This bylaw provides the authority to collect from the benefitting properties should they wish to redevelop a single family home or connect to the new infrastructure due to failure of existing on-site stormwater management systems (pumps or rock pits). In the event that a property does not redevelop (or otherwise wish to connect to the new infrastructure), property owners do not owe the City any money in relation to the extended stormwater infrastructure.

Every application is reviewed and designed to consider the best stormwater management option for each neighbourhood, considering best management practices and green infrastructure. Where space permits, the existing ditches are maintained for lane drainage, and the new storm main is used for peak property drainage. This reduces the likelihood of flooding and erosion of the ditches, and allows the ditches to provide valuable stormwater management flow attenuation and volume reduction. This principle of managing flow was also applied on a larger scale to Burnaby's award-winning John Matthews Creek restoration project, where the creek was eroding due to significant peak flows. In that instance a diversion pipe was installed underneath the creek, allowing the

To: Chair and Members Financial Management  
Committee  
From: Director Engineering  
Re: Storm Sewer Extension Contribution and Fee  
Bylaw – Funding Options  
2020 October 06 .....Page 4

natural creek to be restored and protected. This project won the Award of Excellence in the 'Natural Resource and Habitat' category from the Association of Consulting Engineering Companies of British Columbia.

Larger development projects are also required to reduce off-site peak flow and improve runoff water quality through on-site source controls (such as detention tanks, absorbent landscaping, and rain gardens) and the construction of off-site measures like rainwater management amenities and permeable cycle tracks. In time, through policy development and public consultation, similar on and off-site measures will be considered for single family redevelopments. Burnaby is also actively reviewing the standard street and boulevard cross-section to incorporate appropriate new stormwater management features.

Since the implementation of the *Storm Sewer Extension Contribution and Fee Bylaw 2017* some owners/developers have expressed concerns regarding the costs allocated to larger properties. In response, the City has updated the bylaw to allow installment payments where the fee is greater than \$25,000 and also reduced the interest rate calculation to match the City's investment portfolio yield rate.

Thus far, over 75 extension projects have been completed or are underway, with improved drainage service now available to over 550 previously under-served properties. The last two years have added almost 200 new connections each year. While this rate of new stormwater infrastructure construction will decrease over time, appropriate stormwater connections are anticipated to be extended to most of the remaining 5500 properties within 30-40 years.



To: Chair and Members Financial Management  
Committee  
From: Director Engineering  
Re: Storm Sewer Extension Contribution and Fee  
Bylaw – Funding Options  
2020 October 06 .....Page 5

## 4.0 FINANCIAL IMPLICATIONS AND OPTIONS

The total cost to extend stormwater infrastructure to enable redevelopment of the currently under-served properties is estimated at approximately \$150 to 200 million. Since the adoption of the *Storm Sewer Extension Contribution and Fee Bylaw 2017*, the City has had to raise \$1 to 4 million per year to finance these projects in order to allow about 100 properties to redevelop. This annual financing commitment is dependent upon the number of relevant applications received each year. The City has received more than \$2.5 million from initiating and benefitting property owners during the same period and has spent or committed about \$15 million in aggregate. The current bylaw targets 100% cost recovery from all of the benefitting properties, including the initial construction cost and interest calculated to account for foregone investment income from the City reserves.

As a result of receiving many comments from property owners/developers regarding the affordability of the storm sewer extension program, Engineering is reviewing the bylaw and there are three main financial considerations regarding storm sewer extension funding should the City be willing to share in the costs of providing storm infrastructure to enable single family property redevelopment:

- **Initial Construction Cost** – hard costs to build the storm extensions
- **Capital Financing Cost (interest charges)** – to account for project financing costs (currently reflective of foregone income from City reserve investment earnings due to borrowing from the reserves to finance the construction cost)
- **Beneficiary Options** – to facilitate choices for home builders/owners regarding appropriate on-site stormwater management options and associated costs
- **Partial Refunds for Completed Projects** – to facilitate refunds should bylaw changes be adopted that reduce the owner/builder share of project costs

### 4.1 Initial Construction Cost

Since the bylaw was adopted in 2017, the City has initiated 75 projects involving about 550 properties with an average cost (before financing costs) of \$22,000 per property. The City continues to receive comments indicating that single family property owners/developers feel that this storm extension service cost is still too high.

After a thorough review and evaluation of options, an equitable solution to making costs more affordable for owners/builders that redevelop single family properties would be a cost sharing model where the City funds 50% of the total project cost (including engineering and financing costs). This approach balances the key considerations of current cost equity (owners pay for their share of the project cost based on the size of their property, the main factor influencing the volume of contributing flow) and historic cost equity (original storm main construction was typically funded as a condition of original subdivision or cost-shared through the LASP). This proposed cost sharing model is in line with past practice where the City typically shares in the cost of approved LASP projects to make projects more affordable for single family properties.

To: Chair and Members Financial Management  
Committee  
From: Director Engineering  
Re: Storm Sewer Extension Contribution and Fee  
Bylaw – Funding Options  
2020 October 06 .....Page 6

## 4.2 Capital Financing Cost (Interest)

The second financial consideration is the capital financing cost. For Burnaby, this traditionally reflects the foregone investment income from City capital reserves used to finance the initial construction cost. This approach takes into account the fact that cost recovery from benefitting properties is delayed until the individual properties subdivide or undertake construction valued at more than \$250,000 (or otherwise trigger a connection to the stormwater infrastructure). Under the current bylaw, for all benefitting properties, their share of the cost is updated on an annual basis at simple interest, based on the prior year City investment portfolio yield rate. Some property owners have expressed concern about the growing amount due upon redevelopment (although inflation will neutralize much of this increase) and annual updates to the bylaw involve administrative effort and cost. In response, there are three main options for the capital financing cost which applies to beneficiaries:

i. **Status Quo**

The fee or amount owing is updated annually at simple interest, based on the prior year City investment portfolio yield rate. Under this scenario, interest is charged specifically to each property depending on the time of payment or redevelopment.

ii. **Fixed Interest**

To best reflect the desired 50% cost share between the City and benefitting properties, the cost to finance capital projects could be included in the total project costs before the costs are shared 50/50 with property owners. The recommended financing cost model is based on a fixed interest rate over a 15-year amortization period as this accurately reflects the financing costs should the capital be borrowed versus being financed from city reserves.

Using this financing cost model, the amount paid by benefitting property owners would include a fixed interest charge proportionally shared by all properties and the City. The interest charge would be calculated based on a 3-year rolling average of City investment yield rates at the time of project completion, and based on a 15-year repayment term, which is aligned with the longest repayment period for the Local Area Service Program. Discounts would be offered if payment occurs before 15 years. Discounts would be applied as follows, with the total amounts owing reflected in the bylaw:

- Years 1 - 5 = 75% discount on fixed interest
- Years 6 - 10 = 50% discount on fixed interest
- Years 11 - 15 = 25% discount on fixed interest
- Years 16+ = 0% discount on fixed interest

For context, the City would not likely recover full costs from all benefitting owners for more than 40 years, as not all the benefitting properties are expected to fully redevelop within 40 years.

To: Chair and Members Financial Management  
Committee  
From: Director Engineering  
Re: Storm Sewer Extension Contribution and Fee  
Bylaw – Funding Options  
2020 October 06 .....Page 7

iii. **No Interest**

If interest charges were not considered, the City would effectively be increasing the proportion of the total project capital cost paid by the City, and decreasing the amount recovered from property owners.

#### **4.3 Beneficiary Options**

The *Storm Sewer Extension Contribution and Fee Bylaw 2017* currently requires properties that benefit from a completed storm sewer extension to pay the required fee, plus accrued interest, at the time of subdivision approval or building permit issuance for any construction value exceeding \$250,000. Although not typical, there have been requests by benefitting property owners to connect to the storm sewer extension earlier than redevelopment of their property or to use another storm sewer system (such as pumping to a higher street sewer main or draining to a rock pit with acceptable percolation rates).

In order to provide more options for property owners/developers, the following options are proposed for benefitting properties:

- A choice to connect to and use the storm sewer extension prior to subdivision approval or building permit exceeding \$250,000 construction value; or,
- Reliance on an alternate storm sewer system capable of managing runoff generated on-site to the satisfaction of the Director Engineering

It is anticipated that most benefitting property owners would connect to the storm sewer extension as a gravity connection provides the most reliable service with the least risk of flooding to the owner's property.

#### **4.4 Refunds for Collected Storm Sewer Extension Contributions and Fees**

The final significant financial consideration related to any potential bylaw change is refunds to property owners who have previously paid toward a storm extension under the *Storm Sewer Extension Contribution and Fee Bylaw 2017*.

If Council accepts the recommendation to amend the bylaw to reflect cost sharing with City funds, the City is not required to refund property owners who have paid under the existing *Storm Sewer Extension Contribution and Fee Bylaw 2017*. However, the City could choose to offer full or partial refunds and establish criteria determining how much and who to refund. The current value of refunds would be approximately \$1.25 Million (taking into account the 50/50 cost share and interest recommendations under sections 4.1 and 4.2 of this report).

To: Chair and Members Financial Management  
Committee  
From: Director Engineering  
Re: Storm Sewer Extension Contribution and Fee  
Bylaw – Funding Options  
2020 October 06 .....Page 8

When refunds are provided, City policy is to provide the refunds to the original person or organization from whom the payment was received and through the original source of payment. However, if the property owner has changed since the storm extension was completed, staff would review which person or organization should receive the refund. An initial analysis indicates that about 100 properties, including approximately 50 for storm sewer extensions that are not yet completed, would be issued partial refunds if the recommendations in this report are approved.

In order to provide equity for the properties that have paid contributions and fees under the *Storm Sewer Extension Contribution and Fee Bylaw 2017*, it is recommended that partial refunds be provided. Generally the refund would be the difference between the amount paid for the property under the current bylaw provision and the proposed cost share model in the amended bylaw.

## 5.0 CONCLUSION AND RECOMMENDATIONS

This report provides further background on drainage servicing in Burnaby, the *Storm Sewer Extension Contribution and Fee Bylaw 2017*, and an alternative funding option.

As discussed in sections 4.1, 4.2 and 4.3 of this report, a cost-sharing (50/50) funding methodology with a fixed interest calculation based on a 15-year term (Option ii) and options for benefitting properties are recommended as the alternative to the current requirements under the *Storm Sewer Extension Contribution and Fee Bylaw 2017*. This approach balances cost recovery, considers current and historic cost equity, improves transparency and certainty, and reduces the overall administrative effort. Staff also recommend that proportionate refunds are provided to those who previously paid as a condition of the current bylaw.



Leon A. Gous, P.Eng., MBA  
DIRECTOR ENGINEERING

JWH:ac

Copied to: City Manager  
City Solicitor  
Director Finance  
Director Planning & Building