MOTION

UB1. Options for an Accelerated 10-year Timeline for Addressing Vancouver's Combined Sewer Overflows

At the Regular Council meeting on July 23, 2019, Council postponed the following motion to the Regular Council meeting following the Standing Committee on City Finance and Services meeting on July 24, 2019, to continue debate on an amendment.

Submitted by: Councillor Kirby-Yung

WHEREAS

1. As with many cities around the world, Vancouver has aging infrastructure that has been deteriorating at a rate more rapid than renewal investment, while pressures this aging infrastructure, combined with increased population density and development intensity, climate change and sea level rise, and increased regulations around environmental water quality, are having particularly significant impacts on the City's water, sewer, and drainage utility infrastructure;

2. The waterworks and sewer infrastructure of cities play an important role in ensuring sustainability and resiliency by using water efficiently, by being aware of what goes into the sewers, and by recognizing how local waterways can be affected by sewage and storm water overflows;

3. The City of Vancouver's Greenest City Action Plan, among others, embodies the City's aspiration to be on the leading edge of urban sustainability and resiliency through a set of measurable and attainable targets;

4. The City of Vancouver has 2,117 km of sewer and drainage mains, as well as 24 pump stations, approximately 90,000 sewer connections, 45,000 catch basins, and roughly 200 green infrastructure features, with an estimated replacement value of $6.1 billion;

5. The bulk of Vancouver's original wastewater and rainwater systems, which date to the late 19th and early 20th centuries, were built with combined sewer pipes that channel a mixture of rainwater, groundwater, and sewage through a single sewer pipe;

6. Combined sewer pipes cannot handle all storm water runoff during periods of prolonged or heavy rain, resulting in sewers that overflow and discharge raw sewage into local waterways such as Burrard Inlet, English Bay, and the Fraser River from a network of combined sewer outfalls along the city's shorelines;

7. Raw sewage from combined sewer overflows, system cross-connections, sewage discharge from boats and other sources are a major contributor to E.coli and fecal contamination of public waterways;

8. The City of Vancouver has an on-going, multi-decade sewer capital program to replace its combined sewer pipes with separated sewer pipes as part of renewal and/or growth-triggered upgrades, which, in conjunction with targeted green infrastructure, aims to reduce combined sewer overflows into Vancouver's local waterways, such as Burrard Inlet, English Bay, False Creek, and the Fraser River, during heavy rain events, while providing increased sanitary capacity to the sewer system to accommodate growth and directing rainwater to receiving bodies that help reduce flooding concerns;

9. The City of Vancouver currently has both combined and separated areas in its sewer systems. Some areas, such as Downtown, Still Creek and in the False Creek Flats have the highest level of sewer separation;

10. Currently, Provincial Government regulations through the Integrated Liquid Waste and Resource Management Plan requires the City of Vancouver to eliminate combined sewer overflows by 2050 within a target rainfall event (1 in 5 year event);

11. In the 10 years from 2009 to 2018, the City of Vancouver reportedly replaced 83 km of combined sewers with 166 km of separated sewer mains, with separation projects on major arterials such as Burrard, West 4th, Alma, Southwest Marine, Dunbar, Nanaimo, and King Edward, as well as approximately 10,000 associated sewer connections and replacement / refurbishment of 5 sewer pump stations;

12. As noted in the City of Vancouver 2019-2022 Capital Plan, over the past 10 years, sewer mains have been replaced at an annual rate of 0.6 percent of the system, with approximately 50 percent of the combined sewer system now replaced and separated;

13. On June 29, 2019, Sunset Beach was closed to swimming on the recommendation of Vancouver Coastal Health due to high E.coli levels. It is not clear which factors contributed to the high levels and such factors may or may not have been combined sewer overflows, system cross-connections, boaters discharging waste or other sources;

14. According to recent reports, almost 674,000 cubic metres of raw sewage and runoff drained into False Creek last year from just one of the five False Creek combined sewer overflow outfalls;

15. On May 30, 2017, the City of Vancouver established a waterfront initiative for major natural waterways such as Burrard Inlet, False Creek, Lost Lagoon, the Fraser River and Trout Lake, with improving water quality in False Creek as an initial area of focus under the City's waterfront initiative;

16. On November 1, 2017, the City of Vancouver adopted the Rain City Strategy vision and goals, which includes improving water quality and reducing pollutants discharged in to our local waters from combined

sewer overflows and rainwater run-off through the implementation of green rainwater infrastructure;

17. In 2019, the City plans to advance the development of a hydraulic model of the False Creek Basin to better understand its complex nature, including flow dynamics, contaminant fate and water quality performance to assist the City in identifying action priorities and evaluating potential benefits and continue to work with First Nations and regional and senior governments to advance additional action initiatives, including supporting the development of emerging technologies and techniques to better identify the primary sources of fecal contamination in False Creek;

18. Metro Vancouver's Liquid Waste Services division, which provides wastewater collection and treatment services and administers the region's Integrated Liquid Waste and Resource Management Plan (ILWRMP), under the Greater Vancouver Sewerage & Drainage District (GVS&DD), lists "commencing work with the Cities of Burnaby, New Westminster and Vancouver to identify options and strategies to cost effectively eliminate combined sewer overflows and separate combined sewers" as key action items for 2019;

19. According to Metro Vancouver, the 4-year average annual combined sewer overflow volume for the region from 2013 to 2016 was 27,300 megalitres (from combined sewers in Vancouver, Burnaby, and New Westminster), while in 2017 Metro Vancouver's combined sewer overflow volume was 33,300 megalitres and in 2018 it was 41,300 megalitres – with a 2019 target of 28,500 megalitres;

20. The 5-year average for the number of annual wet-weather related sanitary sewer overflow (SSO) events from Metro Vancouver sewers from 2012 t0 2016 was 20 events and 39 events were reported in 2017;

21. The City of Vancouver's $1.5 billion Operating Budget and Fiscal Plan for 2019 includes a sewer utility rate increase of 11.0% to (1) meet the increase in Metro Vancouver (regional) rates, including costs for site preparation for secondary treatment at Iona Island Wastewater Treatment Plant, (2) provide funding for sewer capital projects, as outlined in the approved 2019-2022 Capital Plan, (3) cover debt-servicing costs to support the replacement and separation of sewer infrastructure to support the City's goal to eliminate combined sewer overflows by 2050, and (4) allow for investments in flood mitigation and facility maintenance;

22. Metro Vancouver's regional population growth estimates to the year 2050, based on a base population of 2,570,000 in 2016, is anticipated to increase by about 1 million to 3,600,000 by the year 2050, with a corresponding increase in the population of the City of Vancouver and similarly increased demands on the City's sewer systems and discharges of raw sewage into the city's waterways.

THEREFORE BE IT RESOLVED THAT Vancouver City Council direct staff to explore an accelerated timeline for addressing the City's combined sewer

overflows, including (but not limited to) potential costs, potential infrastructure funding partnerships and programs (i.e., federal, provincial, regional, and/or in conjunction with other nearby municipalities), potential pathways to cost-effectively achieve accelerated water quality outcomes related to combined sewer overflow events by 2029, the potential impact of accelerating combined sewer overflow mitigation on other City of Vancouver budget priorities, and any foreseeable obstacles, and for staff to report back to Council in 2020 with options for an accelerated combined sewer overflow mitigation program;

FURTHER THAT Council direct staff to report back on next steps for Combined Sewer Overflow mitigation plans as part of the Rain City Strategy in the fall of 2019.

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