VANCOUVER BOARD OF PARKS AND RECREATION

September 16, 2022

MEMO TO : Park Board Commissioners

FROM : Donnie Rosa - General Manager, Parks and Recreation

SUBJECT : **Charleson Park Water Feature Update - Board Briefing Memo**

Dear Commissioners,

This memo provides an update on some of the challenges facing the Charleson Park water feature. While water has long been an integral part of park experience, it is critical that this resource is managed carefully for the sustained benefit of all.

Staff sought and received an exemption to have water flowing from the Charleson Park waterfall, but with limited hours and water flow volume to recognize the by-law direction. The basis of the water flow restrictions was due to water usage concerns stemming from the first holding pond's liner having failed, and that water is flowing out along the trench line of the water service. Some of the major risks and concerns identified were:

- That the outlet from the waterfall risked chlorinated water discharge into False Creek.
- A risk of sinkholes as ongoing leaks of this nature cause the water to saturate a layer of soil. When this water evaporates, it creates an empty space to be formed underground causing instability in the ground above it – a sinkhole.
- That previous or future sinkholes may have been caused by the underground water flow: the concern surrounds the entire system being unlined.
- That as the water 'moves' through the park it finds a path of least resistance, which includes infiltration into surrounding areas.
- When the system was using 50,000L per day to maintain levels that can be viewed as losing 50,000L /per day of potable water into the ground.

Background

Extreme heat events like the July 2015 Lower Mainland drought and the Summer 2021 heat dome are becoming more common due to climate change. Together with a rapidly growing population, it is becoming increasingly important to preserve water for drinking, cooling, and fire prevention.

Metro Vancouver's Drinking Water Conservation Plan (DWCP) is a regional policy developed with local governments and other stakeholders to manage the use of drinking water during periods of high demand, mostly during late spring to early fall, and during periods of water shortages and emergencies. The DWCP prohibits topping-up or filling any aesthetic water feature at Stage 2, 3, and 4 water restrictions. In alignment with the DWCP, the City of Vancouver enacted the Drinking Water Conservation By-law 12086, which includes the same restrictions regarding aesthetic water

features. Additionally, the City of Vancouver Water Works By-law 4848 prohibits the use of drinking water in water features that do not re-circulate water.

The DWCP also requires government and park spaces to follow a prescriptive irrigation schedule. Exceptions to the schedule are allowed in cases where operational constraints exist and a water use agreement has been established. For example, there are irrigation exemptions for areas of Stanley Park, VanDusen Botanical Garden, and Queen Elizabeth Park, and for Brock House and Dr. Sun Yat-Sen where there are no automatic irrigation systems.

Additionally, both Park Board and privately owned golf courses adhere to an annually established Water Management Plan and assigned "water budget". This allows for flexibility in irrigation schedules, improves efficiency, and eliminates water wastage due to the varying maintenance requirements of the turf throughout the golf season.

Next Steps

Staff expect the water feature inventory and condition assessment to be complete in early 2023 and will present an update to the Board at that time, including a recommendation for prioritization of investment. This assessment will also help inform the Water Conservation / Priority Plan update, also expected to be presented to the Board in 2023.

Regards,

Donnie Rosa *(they/she)*
General Manager - Parks and Recreation

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PB Communications