

From: **"Mochrie, Paul"**

To: **"Direct to Mayor and Council - DL"**

Date: 2024-04-17 12:44:18 PM

Subject: Council Memo - Report Back - Water Works By-law Exemptions and/or Viable Exceptions for Notable Decorative City Water Features RTS# 15747

Attachments: ENG - WD - RTS 15750 - Memo to Council re By-Law Exception for Certain Park Decorative Water Fountains - April 2024 - GM signed.pdf

Dear Mayor and Council,

Please find attached a memo regarding an update on the 2023 **By-law Exception for Certain Park Decorative Water Fountains**, as requested by Council in follow up to VBPR receiving report **Water Features Condition Assessment and Rehabilitation Planning** and the status of excepted decorative water fountains from Lon LaClaire. A short summary of the memo is as follows:

- On May 31, 2023, Council approved amendments to except five Vancouver Board of Parks and Recreation (VBPR) decorative water features from Water Works By-law (No. 4848) and Drinking Water Conservation By-law (No. 12086) recirculation requirements, to allow operation until such time that VBPR can retrofit the features to recirculate or repurpose to eliminate drinking water use.
- VBPR commissioned an asset inventory, completed in 2023, to identify and assess existing park water features in order to plan, prioritize, budget for and implement retrofits and/or other modifications or improvements; the report was presented to the Board on December 11, 2023 with \$2.225M capital funds allocated to works outlined in investment Option 2.
- To date, no works have been completed to retrofit the excepted fountains towards recirculation; the five excepted fountains are not included in Option 2, and currently do not have funding in place for VBPR to retrofit or repurpose.
- VBPR staff plan to operate the excepted fountains, currently winterized, in May 2024.

If you have any questions, please feel free to contact Lon LaClaire at 604-873-7336 or lon.laclaire@vancouver.ca.

Best,
Paul

Paul Mochrie (he/him)
City Manager
City of Vancouver



The City of Vancouver acknowledges that it is situated on the unceded traditional territories of the x̱m̱əθḵʷəy̱əm (Musqueam), Sḵwx̱wú7mesh (Squamish), and səlilwətał (Tsleil-Waututh) Nations.

MEMORANDUM

April 12, 2024

TO: Mayor and Council

CC: Paul Mochrie, City Manager
Armin Amrolia, Deputy City Manager
Karen Levitt, Deputy City Manager
Sandra Singh, Deputy City Manager
Katrina Leckovic, City Clerk
Maria Pontikis, Chief Communications Officer, CEC
Teresa Jong, Administration Services Manager, City Manager's Office
Mellisa Morphy, Director of Policy, Mayor's Office
Trevor Ford, Chief of Staff, Mayor's Office

FROM: Lon LaClaire
General Manager, Engineering Services

SUBJECT: REPORT BACK - Water Works By-law Exemptions and/or Viable Exceptions for Notable Decorative City Water Features (related to RTS 15747)

RTS #: 15750

This memo provides an update in response to the [Council Motion](#), "Water Works By-law Exemptions and/or Viable Exceptions for Notable Decorative City Water Features" approved by Council on April 26, 2023.

By-law Exemptions for Certain Decorative Water Features

On May 31, 2023, Council approved amendments to except five¹ Vancouver Board of Parks and Recreation (VBPR) decorative water features from Water Works By-law (No. 4848) and Drinking Water Conservation By-law (No. 12086) prohibition of water wastage clauses and recirculation requirements, to allow operation until such time that VBPR can retrofit the features to recirculate or repurpose to eliminate drinking water use.

City and VBPR staff collaborated to ensure excepted fountains operated in 2023, until August 4, 2023, when Stage 2 water use restrictions were implemented across Metro Vancouver. Under Stage 2 water use restrictions, all aesthetic water features that utilize drinking water must be turned off.

¹ Included in the exception: Barclay Heritage Square Fountain, Davis Fountain, Bute & Haro Street Fountain, Helmcken Park Fountain, and Laurel Street Landbridge Fountain.

Park Water Assets Condition Assessment and Rehabilitation Planning Report

In 2022, VBPR commissioned an asset inventory to identify and assess existing park water features in order to plan, prioritize, budget for and implement retrofits and/or other modifications or improvements. The "Water Features Condition Assessment and Rehabilitation Planning" report was presented to the Park Board on December 11, 2023, within Appendix B of the [Vancouver Park Board Water Priority Action Plan](#).

The report assessed 64 park water feature assets, including decorative fountains, ponds, wading pools and spray parks, with total replacement value of \$54M (2023 dollars). Two (2) of the 64 water features are assessed to be in good operational condition; twenty-two (22) assets classified as decorative fountains received condition scores ranging from fair to very poor, and thirteen (13) assets were deemed to be not operational². Repair and rehabilitation costs for the 22 decorative fountains are estimated at \$7.6M³, and for many features, the cost to retrofit to recirculating is greater than the current estimated replacement value. Specific to the five (5) excepted non-recirculating decorative fountains, \$2.225M is required to rehabilitate these features to recirculating, as outlined in Table 1.

Table 1: Asset Summary for Excepted Fountains

Decorative Water Fountain	Current Condition	Average Water Use*	Annual Utility Costs* (2023 Rates)	Rehabilitation Cost (2023 Dollars)
Barclay Heritage Square	Very Poor	1,000,000 L/year	\$3,100	\$475,000
Davis (Jervis & Pacific)	Fair	2,600,000 L/year	\$8,000	\$475,000
Bute & Haro Street	Fair	4,300,000 L/year	\$13,200	\$400,000
Helmcken Park	Fair	1,050,000 L/year	\$3,200	\$475,000
Laurel St Landbridge	Poor	2,500,000 L/year	\$7,700	\$400,000
TOTAL		11,450,000 L/year	\$35,200	\$2,225,000

*Water and sewer utility costs, operating in current condition as a non-recirculating water feature.

Water consumption data for the full inventory of park water feature assets is variable. Water meters are not installed on all water features and where meters exist, they are often measuring multiple demands such as irrigation and washroom facilities in addition to the water feature. Annual consumption rates can vary due to hours of operation, pressure regulating valve settings, throttling levels (how far the tap is opened) and leaks or system breaks.

As detailed within the report, evaluation of several important criteria relating to public and environmental health were included in the assessment of assets. Vulnerability to climate change, water quality and impact to receiving waters, physical safety of assets, equity initiative zones and accessibility to individuals with divergent abilities, access via various transportation and mobility options, promotion of physical health, community sustaining or building, and socialization opportunities were evaluated. Mental health benefits were also considered; however, an objective relationship was not able to be quantified.

VBPR Capital Allocation and Board Direction

The 2023-2026 Capital Plan allocates \$2.6M in funding for capital maintenance and upgrades of park decorative water features. VBPR staff presented four (4) options to the Park Board on

² The feature cannot be turned on, even at a reduced level of service; doing so is either operationally not possible or would further damage the feature.

³ Estimate does not include staff project management costs or overhead.

December 11, 2023, to prioritize the available \$2.6M capital funding. Each investment option is detailed within Appendix C of the Water Priority Action Plan, with Option 4 focusing on the rehabilitation of excepted fountains.

The Park Board unanimously approved **Option 2** to allow for the greatest number of features to be rehabilitated with the available funding (Appendix A). The five excepted fountains are not included in this option, and currently do not have funding in place for VBPR to retrofit or repurpose.

Public Funding Donation Options

Council directed staff to enquire with VBPR whether retrofit of decorative water features could be a suitable focus for private donations and/or a fundraising campaign under the Parks and Recreation Foundation. VBPR staff have confirmed that the foundation has not been operationalized and there are no future plans to operationalize.

The public continues to have the option to make tax deductible donations designated to an area of their choice; however, the Park Board can only accept donations that support pre-approved work due to the availability of staff resources which are fully allocated to current city-funded projects. At this time, only features identified in Appendix A within Option 2 would qualify for public donations.

Status of Excepted Decorative Water Features

To date, no works have been completed to retrofit the excepted fountains towards recirculation, as these features were not selected by Park Board for priority rehabilitation investment. The by-law exceptions were not given a time constraint, and therefore, remain in place although there are no plans to retrofit the specified features. Water features are currently winterized, with operation planned for spring 2024.

If you have any questions, please contact me directly.

A handwritten signature in blue ink, appearing to read 'Lon LaClaire'.

Lon LaClaire, M.Eng., P.Eng.
General Manager, Engineering Services

604.873.7336 | lon.laclaire@vancouver.ca

APPENDIX A - Park Board Approved Option 2

Option 2: Greatest Number of Rehabilitated Features

	Cost Est.	Feature	Rehabilitation Scope
A	\$ 850,000	QE Park Dancing Waters Fountain*	Repair leaks; new membrane; mechanical & electrical repairs. Project is tender-ready
B	\$ 350,000	QE Park Waterfall	Install recirculating system with water filtration & disinfection; inspect and repair supply line.
C	\$ 400,000	Memorial South Park Pond	Install pond liner to retain water; water balance assessment; water meter repairs; water treatment program
D	\$ 300,000	David Lam Fountain*	Redirect site drainage to sanitary network; replace pumps; inspect and replace waterproofing membrane; repair paving stones.
E	\$ 80,000	Granville Loop Park Fountain*	Repair drainage issues; replace feature lighting; concrete repairs.
F	\$ 70,000	Emery Barnes Park Fountain*	Replace filter pump motor; replace feature lighting; concrete repairs.
G	\$ 260,000	Marina Square Fountain*	Redirect site drainage to sanitary network; inspect and repair leaks; replace process controls; replace feature lighting.
H	\$ 45,000	VanDusen Gardens Rectangular Pond*	Replace corroded valves; detailed inspection; install level control system; install safety fence.
I	\$ 150,000	Cardero Park Fountain*	Redirect site drainage to sanitary network; inspection to determine source of leaks; rebuild waterfall piping.
J	\$ 40,000	Nelson Park Fountain*	Inspection of pond structure; inspect and repair gate valve; replace level control system.
K	\$ 55,000	Cathedral Square Park Fountain*	Fountain structure repairs; repair facility sump and drainage systems.
	\$ 2,600,000	Total	
Order of Magnitude Water Savings: 20 – 50 Million Litres per year			
Approximate Annual Operating & Maintenance Cost: \$185,000 plus water consumption charges			

Option 2 focusses on rehabilitating the greatest number of amenities, thereby providing the greatest number of functional, compliant decorative water features. The greatest number of projects is achieved within the fixed budget by prioritizing the delivery of the lowest cost projects. Since the installation of new recirculating systems is typically quite costly, the lowest cost projects frequently relate to features where a recirculating system is already in place, but may require relatively minor enhancements or upgrades to structural or electrical components. Accordingly, 8 of the features listed in this Option are already recirculating features.

* denotes feature has an existing recirculation system