



# DUNBAR PUMP STATION REPLACEMENT PROJECT IN MUSQUEAM PARK

Park Board Committee Meeting  
Monday, July 18, 2022

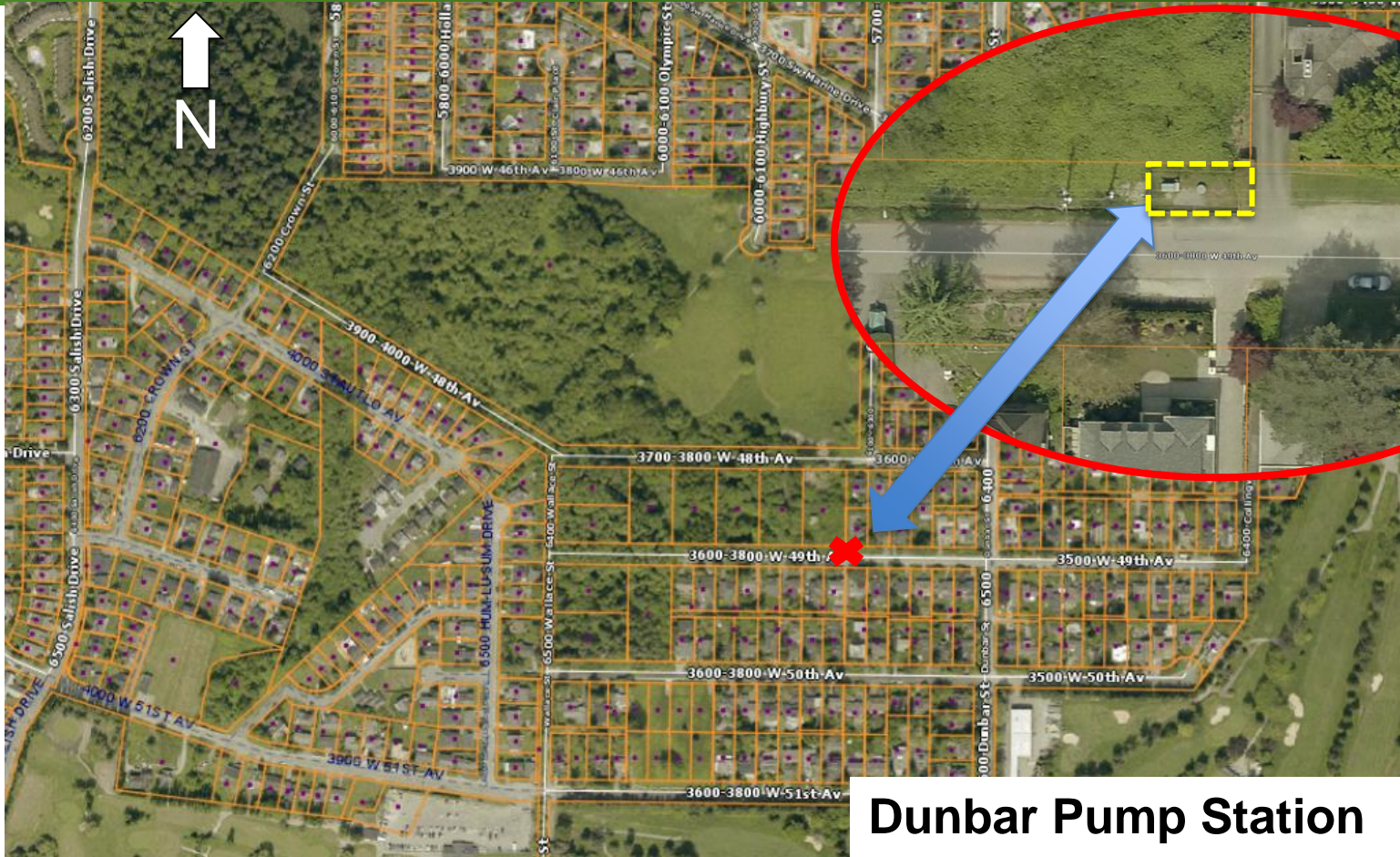


The purpose of the presentation is to inform the Park Board on the replacement of the existing below ground - Dunbar Pump Station and seek decision on the recommendations.

# Dunbar Pump Station



# Existing Conditions of Dunbar Pump Station



**Dunbar Pump Station**

# Dunbar Pump Station - Background

- Located to the west of Dunbar Street on the north side of W 49<sup>th</sup> Avenue, adjacent to Musqueam Park.
- New PS located is located in an area surrounded by invasive species.
- The existing pump station is an underground pump station.



## Reasons for replacement the existing Pump Station:

- **Exceeded service life:** Built in 1967, the existing pump station is 55 years old and has reached the end of its useful service life.
- **Pump Station Failure:** Replacement of the pump station will minimize the risk and impacts of sewage spills into the local environment.
- **Health and Safety:** The pump station at its current state does not meet WorkSafeBC requirements major repairs (Confined Space Regulations).
- **Repair difficulties and long lead time for replacement components:** The current pump station is a Smith & Loveless type station with non-standard, proprietary components, and will be difficult to repair when components fail.
- **Resilience:** Replacing the station is an important part of ensuring Vancouver's infrastructure is well-managed and resilient (i.e. Improved resiliency including seismic design, back-up generator, and flood protection).

# Construction Considerations

The new above ground pump station will be constructed in the lands that make up Musqueam Park, moved from the City's street right of way.

Relocation is to:

- meet the flood construction level of 4.6m, outlined in the Vancouver Building bylaw
- ensure PS can continue to operate after a flood.
- Allow for better access during emergency situations.
- Better integration and fit to the growing neighbourhood.



The Dunbar Pump Station project includes:

- Removal of invasive species in Musqueam Park, up to the tree line, for an area in the park of approximately 30m x 30m, 0.45m into the ground for Park Board to reclaim this area for native planting, wetland and forest enhancement work.
- Temporary bypass pumping installation.
- Deconstruction of the existing pump station.
- Construction of a new above ground pump station that will meet the latest safety and building code standards.

A Traffic Management Plan will be prepared by the contractor and approved by the City of Vancouver before commencement of work to address and minimize the traffic impact during construction.



- **Blend the pump station into the look of the neighbourhood:** Various additions including, but not limited to, screens, wraps, and hedges may be implemented.
- **Removal of invasive species:** Invasive species will be removed up to the tree line, approximately 30m x 30m, 0.45m into the ground, in Musqueam Park for Park Board to reclaim this area for native planting, wetland and forest enhancement work.
- **Sustainability and storm water management:** Possible additions may include redirecting runoff from the roof and impervious surface into the natural area and using permeable pavement in place of the standard asphalt.
- **Architectural design:** The aesthetics of the new above-ground pump station will be designed to integrate and fit in with the surrounding environment.

- City of Vancouver engineering sewer funding sources have been allocated for the replacement of the three pump station projects (Raymur, **Dunbar** and Jericho).
- Funding has been sourced from the 2019-2022 Capital Plan, under the Upgrade and Replace Pump Stations Program.
- Engineering Services will be providing \$ 150,000 funding to Park Board for wetland and forest enhancement work in Musqueam Park. The enhancement works are not included within this project and will be managed separately by Park Board staff.
- No capital expenditures are required from Board of Parks and Recreation.
- Engineering Services will operate and maintain the new pump station once the construction works are completed.



# Engagement Process





- Project team presented project to Musqueam, Squamish and Tsleil-Waututh (MST) on February 18, 2020.
- Progress reports submitted to MST on September 9, 2020, June 9, 2021 and April 21, 2022.
- The First Nations has not expressed any major concerns.
- The Project Team is in continuous communication with First Nations Representative to monitor feedback from First Nations.

- Notification letter distributed to local residents on June 8, 2021, within a 2 block boundary from the site.
- No major concerns were identified through the notification process
- The project team will continue to monitor comments from the residents and address concerns where possible.

## Preliminary Schedule

The Dunbar Pump Station construction will take approximately 18-20 months.

- Construction to start in Q2 2023 until end of Q2 2024
- Total completion in Q3 2024

2022				2023				2024			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Design				Procurement	Construction				Restoration		

- A. THAT the Vancouver Park Board approve the replacement of the below ground Dunbar Pump Station with a new above ground pump station in Musqueam Park as described in this report; and
- B. FURTHER THAT the Board authorize the establishment of a right of way agreement for the development and operations of the new pump station facility and other sewage infrastructure in form and content satisfactory to the Park Board General Manager, City Engineer, and Director of Legal Services.

