



July 11, 2022

TO: Park Board Chair and Commissioners
FROM: General Manager – Vancouver Board of Parks and Recreation
SUBJECT: Jericho Pump Station Replacement Project in Jericho Beach Park

RECOMMENDATION

- A. THAT the Vancouver Park Board approve the replacement of the below ground Jericho Pump Station with a new above ground pump station and building in Jericho Beach 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.

REPORT SUMMARY

As part of a city-wide Pump Station Replacement Program, the City of Vancouver is requesting Park Board approval to replace the Jericho Sewage Pump Station located in Jericho Beach Park with a new, larger-capacity pump station. Replacing this pump station is integral to ensuring Vancouver's infrastructure is well-managed and resilient while minimizing the risk of sewage spills into the environment.

Located on the east side of Jericho Beach Park at W 2nd Avenue (as shown in Figure 1), this project includes the deconstruction of the existing pump station and the planning, design, and construction of a new above ground pump station. Existing site conditions at the project site are shown in Appendix A.

The City of Vancouver Engineering Services project team has been working closely with Park Board staff and have engaged with local First Nations, key stakeholders, and the public to understand and mitigate public issues and potential impacts.



Figure 1 – Jericho Pump Station

The immediate need for replacement of the Jericho Pump Station is summarized as follows:

- **Exceeded service life:** Built in 1977, the existing pump station is 45 years old and has reached the end of its useful service life.
- **Pump station failure:** Replacement of the pump station will minimize the risk of sewage spills into the Burrard Inlet and impacts to the local environment.
- **Health and safety:** The pump station at its current state does not meet WorkSafeBC requirements (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.

BOARD AUTHORITY / PREVIOUS UPDATES

As per the [Vancouver Charter](#), the Park Board has exclusive jurisdiction and control over all areas designated as permanent and temporary parks in the City of Vancouver, including any structures, programs and activities, fees, and improvements that occur within those parks.

On September 12, 2019, a Board briefing memo titled "[Pump Stations Replacement Project – Public Engagement & Next Steps](#)" provided an overview of the plans to replace three existing sewage pump stations located in or adjacent to existing parks, including the Jericho Pump Station located in Jericho Beach Park.

On February 8, 2022, a Board briefing memo titled "[Raymur Pump Station Replacement Project in Strathcona Park](#)" provided an overview of the plans to replace the Raymur Pump Station, one of the three existing sewage pump stations outlined in the Pump Stations Replacement Project. The replacement of the Raymur Pump Station was subsequently approved by the Board.

BACKGROUND

Pump stations are critical pieces of infrastructure that protect public health and the environment. These stations collect and convey sewage from low points in the sewer system that would otherwise flow directly into water bodies around Metro Vancouver. These stations are an important part of the city's vast sewer system, protecting water quality and enabling the recreational use of water bodies.

The Jericho, Raymur, and Dunbar Pump Stations have reached the end of their service lives and need to be replaced. These three stations are within or directly adjacent to existing parks. The parks include Jericho Beach Park, Strathcona Park, and Musqueam Park (see Figure 2).

The Pump Station Replacement Program involves replacement of stations that have reached the end of their useful service life. This includes the recently completed Glen Pump Station located at China Creek North Park and the upcoming Jericho Pump Station, Raymur Pump Station and Dunbar Pump Station projects.

DISCUSSION

As a result of internal engagement with the City's Green Infrastructure Branch several potential additions have been recommended, such as a bio-retention system, which have been relayed to the project consultant to determine feasibility.

The Engineering Services Department is seeking to establish a right of way agreement for the development and operation of the pump station. The establishment of utility right of way agreements are standard practice for this type of infrastructure and are required to ensure that utility owners have necessary rights to use the land for the utility infrastructure, and to enter the land to perform maintenance on the utility infrastructure and so that owners can outline terms and

conditions for facility access. The utility right of way agreement will be in form and content satisfactory to the Park Board General Manager, the City Engineer and the Director of Legal Services and will be consistent with other utility right of way agreements in parks, which require repair of above ground features to existing or better conditions.

MST Consultation

Given the project's location in Jericho Beach Park, the Engineering project team met with the Musqueam, Squamish and Tseil-Waututh Governments (MST) on February 18, 2020, to present background information on the project. Updates on the project's schedule and progress have been submitted to MST on September 9, 2020, June 9, 2021 and April 21, 2022. Following an Intergovernmental Relations (IGR) meeting held at the City of Vancouver, MST did not express any major concerns with this project. The project team is in regular communication with MST representatives and continue to monitor their feedback.

Engagement

The Engineering project team also worked closely with staff from the Vancouver Board of Parks and Recreation, and Civic Engagement and Communications, to develop public engagement strategies for this project. This section outlines the steps taken by the project team and Park Board staff to ensure that the input and/or concerns from key stakeholder groups, and the public are addressed in the project's development.

Point Grey Residents

The Engineering project team posted informational signage and distributed a project information letter to the residents in the neighbourhood on March 31, 2022. The project team heard from one resident on behalf of the West Point Grey Residents Association who inquired about the location of the pump station. The project team did not receive any major concerns from the residents. The active engagement with the residents closed on May 13, 2022. The project team will continue to monitor feedback and provide updates to the residents.

Archaeology

Engineering project team recognizes the significant importance of the area to our MST partners. The project team obtained Golder Associates Ltd. as the archaeological consultant, who completed an Archaeological Overview Assessment on May 25, 2020 and will be overseeing the construction work and provide archaeological services in conjunction with MST archaeologists. Golder will obtain an HCA Permit and respective First Nation Permits in advance of construction. As a precautionary measure, Golder along with Engineering's archaeologist will provide the *General City of Vancouver Guidelines for Archeological Chance Find Management (CFM)* to the contractors for implementation prior to undertaking ground altering activities in the area. Park Board archaeologist and Engineering archaeologist are also providing project oversight.

Construction Considerations

The new above ground pump station will be constructed at the southwest corner of the Jericho Beach East parking lot. Impacts to the park green space will be reduced and more flexible usage of the space will be provided for the public.

Mitigation to minimize the noise, dust, vibration, stormwater runoff, and public inconvenience are measures that will be addressed in the construction contract. Most of the construction impacts are temporary in nature. While the exact schedule will be prepared by the contractor, the anticipated approach would involve construction in these steps:

- removal of one Red Alder tree in fair condition near the southwest corner of the Jericho Beach East parking lot to allow for excavation and construction (extent of tree removal and replacement to be determined with construction plan and will be coordinated with Park Board staff);
- removal of 10 to 13 parking stalls in Jericho Beach East parking lot – 6 to 8 permanent removals and 4 to 5 temporary removals during pump station construction.
- clear construction limits to allow for construction, excavation and staging;
- temporary bypass system setup.

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. The Contractor will maintain parking lot entrance from W 2nd Avenue for the public.

Public Benefits

The project team has consulted Park Board Planning and Park Development staff to determine possible benefits to the public and potential park users. Public benefit additions will include:

- An educational panel on the building, similar to the installation at Glen Pump Station in China Creek Park North.
- A \$50,000 financial contribution towards improvements to the Seaside Greenway termination in Jericho Beach Park. The Seaside Greenway improvement will be managed separately by Park Board staff.
- Electric vehicle charging stations, subject to overcoming technical electrical and pump station resiliency concerns. If incorporating the charging stations proves unfeasible, the Engineering project team will work with Park Board staff to deliver alternate public benefit additions of equivalent value.

The project team has also consulted with the City of Vancouver Green Infrastructure Branch for opportunities to improve sustainability and storm water management. Possible additions are subject to design compatibility and budget, and may include a bio-retention garden to capture runoff from the building and from the parking lot.

FINANCIAL AND OTHER CONSIDERATIONS

City of Vancouver Engineering Services sewer funding sources have been allocated for the replacement of the three pump station projects (Raymur, Dunbar and Jericho), and have been sourced from the 2019-2022 Capital Plan under the Upgrade and Replace Pump Stations Program. No capital expenditures are required from the Park Board.

Engineering Services will operate and maintain the new pump station once the construction works are completed. There are no ongoing operating expenses required from the Park Board.

NEXT STEPS / PROJECT TIMELINE

As shown in the project timeline in Figure 3, the Jericho Pump Station project is currently in the detailed design phase. The Consultant submitted the 75% detailed design drawings in September 2021. The Project Team is liaising with Park Board staff to provide comments and feedback on the design.

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

Figure 3 – Jericho Pump Station Replacement Project Timeline

The upcoming deliverables for this project include:

- continue working with the Consultant and Park Board staff on the detailed design, contract administration (Design);
- working with the Consultant to retain a contractor for construction (Procurement);
- decommissioning of existing pump station and construction of new pump station including site restoration works (Construction/Restoration).

CONCLUSION

Replacing the City's pump stations is an important part of protecting the environment and ensuring Vancouver's infrastructure is well-managed and resilient. The project team will continue working closely with Park Board staff to mitigate environmental, reputational, and safety risks, and implement engagement strategies with local First Nations, public and stakeholders.

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Jericho Pump Station (Jericho Beach Park) – Existing Site Conditions



Jericho Pump Station (Jericho Beach Park) – Rendering of Preliminary Design



Jericho Pump Station (Jericho Beach Park) – Rendering of Preliminary Design

