



November 5, 2021

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

RECOMMENDATION

- A. THAT the Vancouver Park Board approve the replacement of the below ground Raymur Pump Station with a new above-ground pump station and building in Strathcona Park as described in this report; and
- B. FURTHER THAT the Board authorize the modification of the existing right of way agreements as required for the development and operations of the new pump station facility and other sewerage 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 Project, the City of Vancouver is requesting Park Board approval to replace the Raymur Sewage Pump Station located in Strathcona 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. As the proposed new pump station is above-ground, an amendment to the existing right-of-way in Strathcona Park may be required.

Located in a Statutory Utility Right-Of-Way in Strathcona Park and surrounded by Cottonwood Community Garden (as shown in Figure 1), this project includes the deconstruction of the existing pump station and the planning, design, and construction of a new 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.

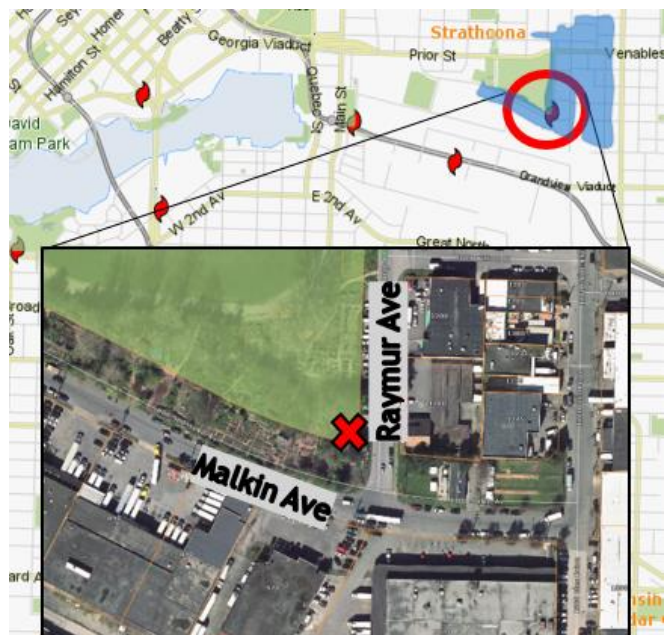


Figure 1 – Raymur Pump Station Site

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

- **Exceeded service life:** Built in 1962, the existing pump station is 60 years old and has reached the end of its useful service life; it is among the highest risk/highest consequence sewer assets due for immediate replacement.
- **Pump station failure:** Replacement of the pump station will minimize the risk of sewage spills into False Creek 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 stations 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 Raymur Pump Station located in Strathcona Park.

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 and water 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 Project 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 Raymur Pump Station, Jericho Pump Station and Dunbar Pump Station projects. At 60 years old, Raymur Pump Station is the oldest of all three stations and has a higher replacement priority due to a higher risk of failure.



Figure 2 - Pump Station Replacement Project Sites (Raymur, Dunbar and Jericho)

DISCUSSION

The Raymur Pump Station replacement project includes the deconstruction of the existing pump station and the planning, design, and construction of a new above ground pump station that will meet the latest safety and building code standards. The project will involve deep excavations by the contractor to remove the existing underground pump station within the construction footprint. Preliminary concept images for the proposed new pump station are shown in Appendix B.

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

Statutory Right Of Way (SROW)

The Engineering Services Department is seeking to determine whether an amendment is required to the existing SROW to allow the construction of a new above ground pump station. Staff will work together with the City's Legal Services Department, and if needed, modify the exiting SROW agreement to allow the proposed above ground structure to be constructed and maintained within the existing boundaries of the SROW.

Engagement

Given the project's location in Strathcona Park, the Project Team has worked closely with staff from the Vancouver Board of Parks and Recreation, Civic Engagement and Communications, and Arts, Culture and Community Services 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 the local First Nations, key stakeholder groups, and the public are addressed in the project's development.

Cottonwood Community Garden

Since April 2021, the project team and Park Board staff have been working with the Cottonwood Community Garden and their user groups, the Environmental Youth Alliance (EYA) and Watari, virtually and on-site. The garden users understand the project's necessity and expressed willingness to work with the project team and Park Board to minimize environmental and space impacts to the existing garden space by the construction laydown area.

In May 2021, the project team met on-site with Cottonwood Community Garden and discussed the impact during and after the construction phase including tree removal. The gardeners requested an understanding of the construction footprint and laydown area. As a result, the project team and Park Board staff coordinated with the Consultant to provide the gardeners with the preliminary construction laydown area and identify potential trees to be removed/relocated.

During this process, it was identified that Cottonwood Community Garden's planter boxes would be directly impacted by construction. The project team is working with staff to determine temporary locations for the garden bed within Strathcona Park during construction to minimize impact to this group. The project team plans to continue to coordinate with the gardeners throughout the detailed design and construction phases to identify needs and mitigate impacts to the garden.

First Nations

The project team met with the Musqueam, Squamish and Tseil-Waututh Nations (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 and June 9, 2021. Following an Intergovernmental Relations (IGR) meeting held at the City of Vancouver, the MST did not express any major concerns with this project. The project team is in regular communication with the First Nations Representative and continue to monitor their feedback.

Strathcona Residents

The project team distributed a project information letter to the residents in the neighbourhood on July 13, 2021. The project team heard from one resident on behalf of the Strathcona Residents Association who inquired about potential opportunities for amenities. In response, the project team notified the resident that they are continuously coordinating with Park Board staff to determine new opportunities that best fit the need of the park and the neighborhood. The project team will relay their recommendation to the Consultant and will continue to monitor comments from the residents.

Construction Laydown Area

The new above ground pump station will be constructed within the existing ROW. The plan of the preliminary construction laydown area is shown on Appendix C. The extent of the laydown area will be confirmed by the contractor prior to commencement of work and will be coordinated with Park Board staff and the Cottonwood Community Garden.

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, a logical approach would involve construction in these steps:

- remove trees within the utility ROW and construction staging area 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 and the Cottonwood Community Garden);
- remove garden boxes within construction laydown area and temporarily relocate into Strathcona Park during construction period;
- clear utility ROW and construction limit to allow for construction, excavation and staging;
- temporarily remove 4-5 parking stalls on Raymur during construction.
- temporarily bypass system setup.

Engineering will be working with Park Board staff, the Community Garden Association, and the Watari group to develop a plan to restore the construction laydown area. 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.

Public Benefits

The project team has consulted Park Board Planning and Park Development staff to determine possible benefits to the public, potential park users, and users of the Cottonwood Gardens. The aesthetics of the new above-ground pump station will be designed to integrate and fit in with the surrounding environment. Various additions including, but not limited to, decorative fences, screens, wraps, and hedges may be implemented to blend the pump station into the look of the neighborhood.

Accommodation may be made for the gardeners at Cottonwood to relocate planter boxes and garden beds that are impacted by the construction footprint. The project team and Park Board staff will continue to communicate with Cottonwood Community Garden representatives to determine possible areas of relocation.

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 rain barrel collection for the Cottonwood Garden to intercept runoff from the roof. Another addition may include a bio-retention garden to capture runoff from the roof and from Raymur Street.

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 Raymur Pump Station project is currently in the detailed design phase. The Consultant submitted the 70% detailed design drawings in September 2021. The Project Team is liaising with Park Board staff to provide comments and feedback on the design.

2021	2022				2023			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Design	Procurement	Construction					Restoration	

Figure 3 – Raymur 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 and Park Board staff to retain a contractor for construction (Procurement);
- deconstruction of existing pump station and construction of new pump station including site restoration works (Construction/Restoration).

The Jericho Pump Station and Dunbar Pump Station project updates will be presented at a future Park Board meeting. Engineering Services will be seeking SROW to support the construction of new pump stations.

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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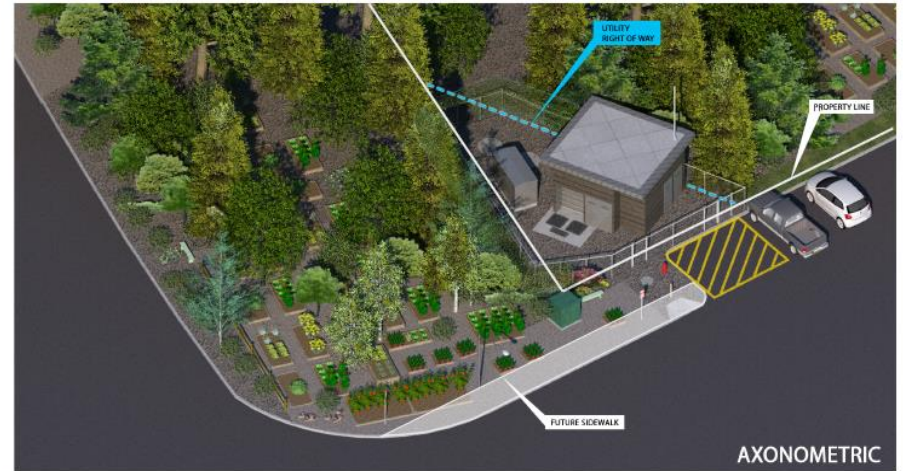
Raymur Pump Station (Strathcona Park) – Existing Site Conditions



Raymur Pump Station (Strathcona Park) – Rendering of Preliminary Design



SITE LOCATION



AXONOMETRIC



AXONOMETRIC



STREET VIEW

Raymur Pump Station (Strathcona Park) – Plan of Preliminary Construction Laydown Area

