

DATE: December 1, 2022**FILE:** 5330-20/SSCP**TO:** Chair and Members
Sewage Commission**FROM:** Russell Dyson
Chief Administrative OfficerSupported by Russell Dyson
Chief Administrative Officer*R. Dyson***RE: Sewer System Conveyance Project Update****Purpose**

To provide a description of the Sewer System Conveyance Project (SSCP), an update on the project status and a recommendation to apply for grant funding.

Recommendation from the Chief Administrative Officer:

THAT staff submit a grant funding application to the Investing in Canada Infrastructure Program – Adaption, Resilience and Disaster (Green ARDM) Stream for replacement of the Courtenay Pump Station as part of the Comox Valley Regional District’s Sewer System Conveyance Project;

AND FINALLY THAT the total estimate for the Courtenay Pump Station replacement is \$13,367,138 and the Sewage Commission commits to its share of the remaining Courtenay Pump Station replacement costs after 73.33 per cent grant funding is applied, estimated at \$3,565,016, as part of the Sewer System Conveyance Project, as well as cost overruns.

Executive Summary

The SSCP is a \$101 million, multi-year construction project that will replace the pipes and upgrade the pump stations that move more than 14,000 cubic metres of raw sewage each day to the Comox Valley Water Pollution Control Centre on Brent Road. This new system will route sewer pipes further inland where they will no longer be vulnerable to damage by waves, rocks and logs.

The SSCP is highly complex in the number of jurisdictions/agencies, property owners, rights holders and regulatory requirements involved. Strong partnerships have progressed through the evolution of project planning, including specifically with the K’ómoks First Nation (K’ómoks) and Town of Comox (Comox). A high level summary of the project scope is provided below, and attached as Appendix A to this report is the project dashboard that provides an update on key milestones, overall project schedule, upcoming activities and permit status.

- **New Courtenay Pump Station (CPS):** The new CPS will be located on the north side of Comox Road across from the existing CPS. In October 2022, staff identified a grant funding opportunity for the new CPS scope and have since made an application; the recommendation included within this report is required for the application to be considered complete.
- **Alternate Alignment from CPS to K’ómoks IR#1:** To protect cultural and archaeological interests, and minimize traffic impacts an alternate alignment from Urquhart Creek to K’ómoks IR#1 was developed. The alternate alignment was developed with input from Dr. Jesse Morin and Baseline Archaeological Services, and includes installation of the forcemain along Farmview Road and through farmers’ fields to limit impacts to known high-potential archaeological areas along Comox Road. Approval from the Agricultural Land Commission

for this route has been received and acquisition of the necessary statutory rights-of-way over private property are underway.

- **Upgrades to the Existing K'omoks First Nation Pump Station:** Minor mechanical upgrades will occur at the existing facility to continue use. A new return forcemain from the K'omoks pump station to the CPS will be installed in the same trench as the new larger forcemain to reduce operational risks associated with the pump station.
- **Alternate Installation Methodology within K'omoks IR#1:** Also considering archaeological risks, the new forcemain through IR#1 will be installed in the existing forcemain trench. Use of a temporary bypass is required to accommodate this construction. Comox Valley Regional District (CVRD) staff are working closely with K'omoks Chief and Council on this matter.
- **Town of Comox Installation and Comox Infrastructure Improvements:** The project includes 3.5km of cut and cover forcemain installation through Town of Comox streets. A project agreement has been signed to ensure smooth and efficient delivery of the project, and to mitigate the impacts that Comox and its residents and business community experience during SSCP construction. In addition, delivery of a number of Town of Comox surface improvements and utility replacements will be completed at the same time as the SSCP.
- **Upgrades to the Existing Comox Pump Station:** Electrical and mechanical upgrades are required at the existing Comox Pump Station to be able to increase the hydraulic capacity of the station and deliver the higher discharge pressures required to meet the increased pressure as a result of the new forcemain alignment.
- **Lazo Hill Horizontal Directional Drilled (HDD) Alignment:** 1,200m of the pipe will be installed using horizontal direction drilling through Lazo Hill. The alignment includes a minimum 20-metre offset from all deep groundwater wells within the Lazo Hill area as recommended by CVRD's hydrogeology consultant, GW Solutions.
- **Lazo Marsh Crossing:** Further consideration and review of non-HDD options for crossing Lazo Marsh are ongoing. The area surrounding the marsh has been identified as a unique location in the aquifer where installation via HDD would be problematic. Review of alternate options and discussions with Ministry are ongoing.
- **Fiber Optic:** To facilitate communication between critical sewer infrastructure, a fiber optic line will be installed in the common trench along the entire SSCP alignment. For the HDD section, the fiber optic will be installed in a separate trench along Lazo and Morland Roads.

Ongoing planning and project refinement over the coming weeks and months means that project elements, such as traffic mitigation strategies, permitting and public engagement, will result in project delivery that achieves stated goals to resolve environmental risk and increase sewer system resilience. As the project continues to progress, updated project dashboards will be provided to the Sewage Commission regularly to keep the commission informed of upcoming activities and associated timing.

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Attachments: Appendix A – Sewer System Conveyance Project Dashboard



COMOX VALLEY SEWER CONVEYANCE PROJECT

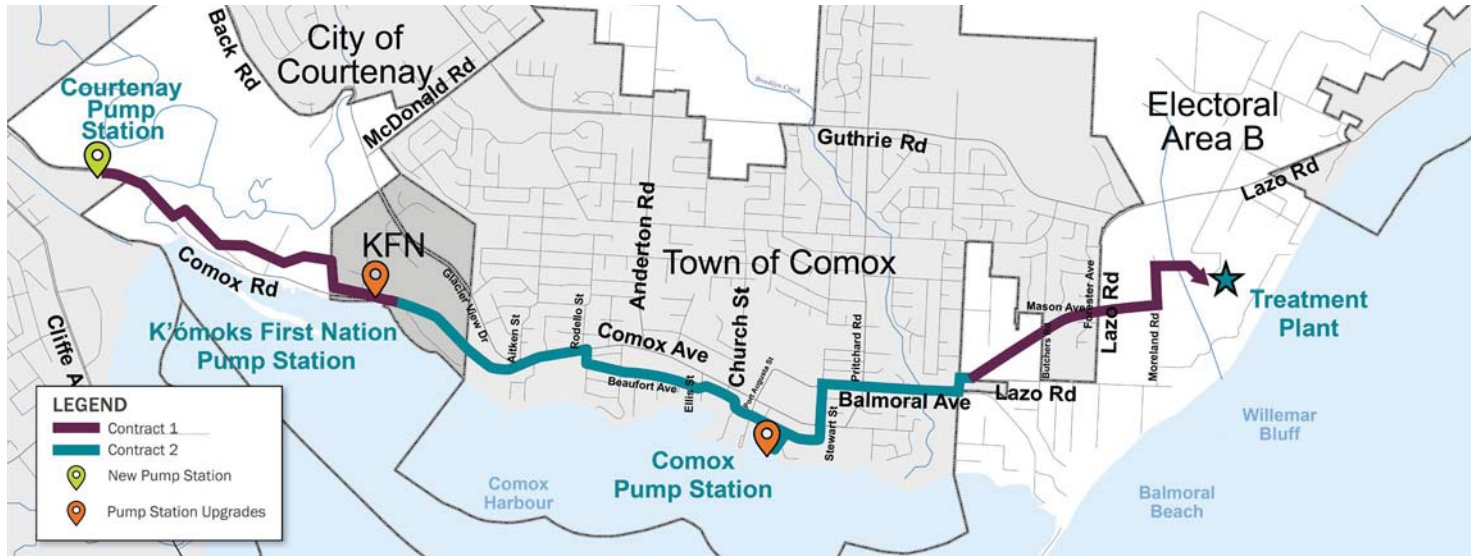
Protecting our ocean with a new route for the sewer conveyance pipe

December 2022

The Comox Valley Sewer Conveyance Project is a multi-year construction project that will replace the conveyance pipe and upgrade the pump stations that move more than 14,000 cubic metres of raw sewage each day to the sewage treatment plant on Brent Road. This new system will route sewer pipes further inland where they will no longer be vulnerable to damage by waves, rocks and logs.

Before construction begins in mid-2023, a monthly update to the Sewage Commission will provide key project elements as well as a summary of recent activities and highlights for upcoming tasks.

The project elements below are simplified and high level, summarizing key components of the large and complex conveyance project. More information is available on the project page at www.comoxvalleyrd.ca/LWMP.



NOTE:
 Contract 1 - Design Build contract for pump stations and forcemain through CVRD and K'ómoks First Nation lands.
 Contract 2 - Design Bid Build contract for forcemain and amenities through Town of Comox.

PROJECT ELEMENT	INITIATED	IN PROGRESS	NEARING COMPLETION	DATE COMPLETE
Contract 1 scope and overall project budget finalized	ON TRACK	ON TRACK	ON TRACK	August 2022
K'ómoks and CVRD community benefit agreement amended	ON TRACK	ON TRACK	ON TRACK	October 2022
Town of Comox project agreement approved	ON TRACK	ON TRACK	ON TRACK	September 2022
Contract 1 request for proposals issued	ON TRACK	ON TRACK	ON TRACK	August 2022
Traffic impact mitigation strategy developed	ON TRACK	ON TRACK		December 2022
Contract 1 contract awarded	ON TRACK	RISK/DELAY IDENTIFIED		March 2023
Contract 2 detail design completed (Town of Comox)	ON TRACK	ON TRACK		February 2022
Contract 2 contract tender issued				
Contract 2 contract awarded				
Contract 1 construction initiated				
Contract 2 construction initiated				

ON TRACK RISK/DELAY IDENTIFIED



SUMMARY OF HIGHLIGHTS

- Two collaborative meetings with remaining shortlisted design-build proponents in September and October
- K'omoks First Nation community meeting held on October 13
- Public and stakeholder engagement related to construction impacts completed in November
- Town of Comox project agreement completed



UPCOMING ACTIVITIES

- Phase 1 Archaeological Investigations to be completed along majority of the alignment in December/ January using auger machine. Engagement plan under development.
- Closing of design-build (Contract 1) Request for Proposals delayed to March 2023.
- 90% design for Town of Comox (Contract 2) scope complete in December



PERMIT STATUS

AGENCY	PERMIT	STATUS
Ministry of Forests, Lands, Natural Resource Operations & Rural Development	Archaeology Branch - HCA Site Alteration and Heritage Inspection Permits	COMPLETE
	Crown Land Tenure for Lazo Marsh	Submitted Fall 2021 further investigations and discussions with the Ministry are underway.
K'omoks First Nation	Cultural Heritage Investigation Permit	COMPLETE
Agricultural Land Commission	Transportation, Utility and Recreation Trail Use Permit	COMPLETE
Private Property	Statutory rights-of-way for private properties	Lazo HDD Section 1/15 Complete Agricultural Land Reserve Open Cut Section 3/7 Complete
	Temporary Workspace Agreements for HDD Entry/ Exit Pit	COMPLETE



PUBLIC ENGAGEMENT

INITIATIVE	STATUS
Fall open houses (construction/traffic) for K'omoks band members	Complete October 2022
Fall open houses (construction/traffic) for Courtenay/Comox/Area B residents	Complete November 2022
Engagement report with public feedback to Sewage Commission	Drafting- Anticipated January 2023
Engagement for Phase 1 Archaeological Investigations	Planning Phase