

DATE: June 12, 2020**FILE:** 5340-02**TO:** Chair and Members
Comox Valley Sewage Commission**FROM:** Russell Dyson
Chief Administrative OfficerSupported by Russell Dyson
Chief Administrative Officer*R. Dyson***RE: CFB Pump Station Upgrade Budget Amendment****Purpose**

To provide the Comox Valley Sewage Commission with an update on the CFB Pump Station Upgrade project and to put forward an amendment to the 2020 – 2024 financial plan for the Comox Valley Sewerage Service in order to accommodate a separated valve chamber for increasing worker safety and equipment longevity.

Recommendation from the Chief Administrative Officer:

THAT the 2020 – 2024 financial plan and capital expenditure program for the Comox Valley Sewerage Service, function 335, be amended by increasing sewer infrastructure expenses in 2020 for the CFB Pump Station upgrade project #1075 by \$300,000 funded from an increased transfer of capital works reserves to accommodate a separated valve chamber for enhanced worker safety and equipment longevity.

Executive Summary

- The CFB Pump Station project was approved in the 2020 – 2024 financial plan with a minimized scope focusing on replacing the pumps and valves which are long past their service life expectancy, as well as upgrading instrumentation and controls.
- The project is on track to be completed this fall, with pumps ordered and detail design underway.
- Through the detail design it has been identified that adding a separated valve chamber and new header, which would bring the pump station in line with industry standard, would have significant benefits, including:
 - Eliminating hazardous confined space entry and increasing accessibility for operation and maintenance tasks, significantly increasing the safety of our operators as well as reducing manpower requirements.
 - Eliminating exposure of valves to the corrosive atmosphere within the wet well, significantly increasing their service life and reducing replacement costs.
 - Reducing the scope of the construction project within the wet well, reducing construction cost risk.
 - Reducing the cost of the future forcemain replacement project.
- The additional cost of the external valve chamber and new header is estimated at \$300,000. Staff recommend that the project budget is increased accordingly such that Comox Valley Regional District (CVRD) can proceed with the detail design for the project, including implementation of the external valve chamber.
- Additional funding for this change will come from a \$300,000 increase in the transfer from capital reserves

Prepared by:

Concurrence:

Concurrence:

C. Makinson***C. Gore******K. La Rose******M. Rutten***Cole Makinson, P.Eng
Engineering AnalystCharlie Gore, P.Eng
Manager of Capital
ProjectsKris La Rose, P.Eng
Senior Manager of
Water & WastewaterMarc Rutten, P. Eng
General Manager of
Engineering Services**Background/Current Situation**

CFB Pump Station is located at the end of Brent Road in the Sandpines subdivision in Area B of the CVRD.

The station was constructed in 1984 based on 50 year flow projections, with pumps installed for 25 year flow projections, to pump the sewage collected from gravity mains at CFB Comox to the Comox Valley Water Pollution Control Centre. Additional sewage inputs from the Hudson Trunk, Greenwood Trunk, Kye Bay and Connemara are now also gravity fed to the pump station which has increased the projected future flow to this pump station. The current pumps are past expected end of life and are needing replacement. Given the anticipated additional flows from the Hudson and Greenwood Trunks, the pumping capacity and associated functions are requiring upgrading.

McElhanney was awarded the contract in late 2019 for the calculation of future flow projections for the CFB Pump Station catchment area, and detailed design of the required upgrades. McElhanney's study on future flow projections has been shared with the Sewage Advisory Committee and their comments have been incorporated into the results. The upgrades are focussed on the most cost effective equipment to handle the expected flows over the next 25 years.

Policy Analysis

Amendments to the financial plan are approved by CVRD Board resolution during the year and compiled into a financial plan amendment bylaw to be adopted by the Board later in the year.

Options

Options for this project include:

1. Do not adjust the scope or budget of the project.
2. Amend the project budget to add the additional scope of a separated valve chamber and new header.

Due to the safety, operational, and life expectancy benefits, Option No. 2 is recommended.

Financial Factors

The supplemental cost for the separated valve chamber and headworks for the additional scope is estimated at \$300,000. The funding for the revised project scope would be as follows:

	2020 Approved Financial Plan	2020 Option 2
CFB Pump Station Upgrade Project including separated value chamber and headworks	\$830,000	\$1,130,000
Funding Sources:		
Development Cost Charge Reserves	\$100,000	\$100,000
Capital Works Reserves	\$730,000	\$1,030,000
Total Funding	\$830,000	\$1,130,000

Legal Factors

Not relevant.

Regional Growth Strategy Implications

The upgrades of the CFB Pumps Station due to aging infrastructure and increased flow projections is supported by *Objective 5-D: “Encourage sewage management approaches and technologies that respond to public health needs and maximize existing infrastructure”*.

Intergovernmental Factors

McElhanney has worked closely with the Town of Comox and City of Courtenay for future flow projections to the CFB Pump Station, to maximize the use of existing infrastructure.

Interdepartmental Involvement

Budgeting and procurement will be supported by the Financial Services Department. Project Management and execution will be coordinated through the Engineering Services Department.

Citizen/Public Relations

None.