

DATE: December 4, 2019**FILE:** 5340-03**TO:** Chair and Directors
Electoral Areas Services Committee**FROM:** Russell Dyson
Chief Administrative OfficerSupported by Russell Dyson
Chief Administrative Officer**R. Dyson****RE: King Coho Wastewater Service – Capital Improvements Update****Purpose**

To provide an update regarding capital improvements being made to the King Coho wastewater treatment plant, to seek approval for additional funds to complete the required upgrades, and to request approval for a parcel tax bylaw amendment and a proposed future expenditure reserve fund bylaw.

Recommendations from the Chief Administrative Officer:

1. THAT the 2020 – 2024 financial plan commit \$135,000 of Electoral Area B community works funds towards the remaining capital upgrades in 2020 to the wastewater treatment infrastructure for the King Coho wastewater service, function 331.
2. THAT the King Coho Wastewater Service Parcel Tax Bylaw No. 563, 2018, be amended to reflect a parcel tax of \$1,388.06 per strata lot to be levied in 2020.
3. THAT the board give readings to the proposed King Coho Wastewater Service Future Expenditure Reserve Fund Establishment Bylaw as outlined in Appendix A of the staff report dated December 4, 2019.

Executive Summary

In November 2017, \$50,000 of Electoral Area B community works funds was allocated to the King Coho wastewater system with an additional \$100,000 in capital improvement charges collected through the 2019 parcel tax to address a 2017 condition assessment.

The King Coho wastewater treatment plant (WWTP) operates under a provincial waste management permit for the on-site treatment and marine discharge of wastewater. The 2017 assessment found the plant has long been out of compliance with permit requirements, including five-day biochemical oxygen demand, total suspended solids and fecal coliform effluent quality parameters. This is a violation of the BC *Environmental Management Act* (EMA), and could put the Comox Valley Regional District (CVRD) at risk of regulatory action.

While many of the recommended system upgrades have been completed, the recommendation of converting the existing emergency storage tank to an equalization tank remains. It is expected that this conversion will enable the WWTP to operate in a manner such that the waste management permit requirements can be met consistently. ISL Engineering and Land Services has confirmed the feasibility of this conversion, and provided a cost estimate of \$182,400. Additional funding of \$135,000 is required to complete the conversion, which is recommended to be drawn from Electoral Area B community works funds.

- The King Coho WWTP is a domestic sewage treatment facility servicing three freehold strata corporations with a combined total of 37 units.
- The King Coho wastewater service was established on January 23, 2018, and the full transfer was completed in October 2018.
- An amendment to the parcel tax bylaw is recommended, to set out a 2020 parcel tax amount of \$1,388.06 for each of the 37 strata units.
- To assist with unanticipated operational costs in future years, a future expenditure reserve fund establishment bylaw has been prepared.

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Background/Current Situation

The King Coho WWTP is a domestic sewage treatment facility servicing three freehold condominium strata corporations located near the Little River ferry terminal. The WWTP is composed of a rotating biological contactor (RBC) package plant, and associated piping, pumps and valves. The plant operates under BC Ministry of Environment and Climate Change Strategy Permit PE-13155 issued in February 1998 for the on-site treatment and marine discharge of wastewater. There are a total of 37 individual strata units connected to the system.

After a successful petition by the strata owners and subsequent CVRD board adoption of Bylaw No. 495 being “King Coho Wastewater Service Establishment Bylaw No. 495, 2017” on January 23, 2018, CVRD wastewater staff started operating the plant in February 2018 under contract with the strata. Ownership of the King Coho wastewater system was fully transferred to the CVRD in October 2018. 2019 has been the first full year of CVRD operations.

To explore the feasibility of the transfer of the utility to a CVRD service, a condition assessment and operational review was completed by McElhaney Consulting Services Ltd. (MCSL) in February 2017. The assessment found that the King Coho WWTP was not functioning efficiently and was out of compliance with several conditions of its operating permit, such as effluent quality parameters including fecal coliforms, and five-day biochemical oxygen demand (CBOD₅) and total suspended solids (TSS) as illustrated below in Figure 1.

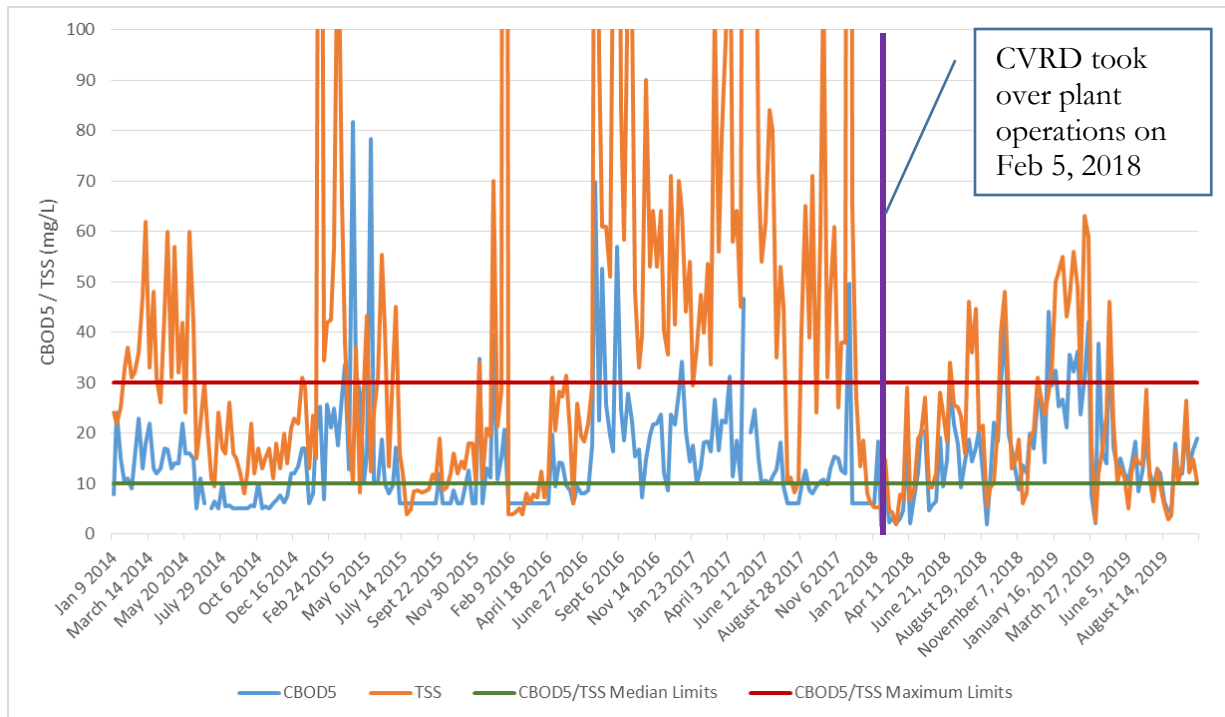


Figure 1 – King Coho WWTP effluent CBOD5/TSS levels, January 2014 – October 2019

The MCSL report provided an estimated total capital cost of \$129,500 for the necessary upgrades to bring the system back within permit parameters. This included both upgrades to the system controls and process upgrades to convert the existing emergency storage tank into an equalization tank to buffer peak inflows into the RBC. In November 2017, the CVRD Board approved the allocation of \$50,000 in Electoral Area B community works funds towards the upgrades. A further \$100,000 was collected from the 37 strata unit owners through the 2019 parcel tax.

Following the transfer of the service to the CVRD, the controls upgrades were completed as well as some minor works to improve operational challenges with the treatment process. The cost of this work came in under McElhanney's estimated cost for the system controls upgrades as much of the work was able to be completed by CVRD staff.

The upgrades and operational changes made since CVRD staff started operating the plant in early 2018 have resulted in improvements to effluent quality as can be seen in Figure 1; however, the permit requirements are quite strict, and consistently achieving the required limits continues to be a challenge.

The remaining upgrade to be implemented is the conversion of the existing emergency storage tank to an equalization tank. In 2019 the CVRD hired ISL Engineering and Land Services to confirm the feasibility of this conversion, and to complete a design. The conversion will allow for primary solids to settle out in the equalization tank, and therefore significantly reduce the solids loading into the RBC, while delivering wastewater to the RBC at a consistent flow rate. It is expected that these two factors will result in effluent quality that consistently meets permit requirements. ISL has provided a capital cost estimate of \$182,400 to complete this project. This amount is well in excess of the original budgeted value for this upgrade.

Policy Analysis

Bylaw No. 495 being "King Coho Wastewater Service Establishment Bylaw No. 495, 2017" established the King Coho Wastewater Service for the purpose of sewage conveyance, treatment and disposal.

Bylaw No. 563 being “King Coho Wastewater Service Parcel Tax Bylaw No. 563, 2018” set out the 2019 parcel tax rate for the wastewater services provided by the regional district, and can be amended to set out parcel tax rates for future years.

Options

In relation to the remaining capital upgrades, staff have identified the following options for consideration:

1. Completely fund the additional capital upgrade costs with Electoral Area B community works funds (CWF).
2. Fund the additional capital upgrade costs with 50 per cent CWF and 50 per cent short-term borrowing, to be repaid by increased parcel taxes for five years.
3. Fund the additional capital upgrade costs 100 per cent short-term borrowing, to be repaid by increased parcel taxes for five years.

Table 1 includes a breakdown of capital upgrade cost contributions and potential parcel tax implications for each of these options.

Table 1: Cost Comparison of Capital Upgrade Options

Option	Prior CWF grant funding	2019 parcel tax capital improvement charge	Additional CWF grant funding	Short-term borrowing	Grant %	Tax %	Estimated Annual parcel tax impact 2020 – 2024 FP	Estimated 2020 parcel tax
1	\$50,000	\$100,000	\$135,000	N/A	65%	35%	\$0	\$1,388.06
2	\$50,000	\$100,000	\$67,500	\$67,500	41%	59%	\$398.35	\$1,786.41
3	\$50,000	\$100,000	N/A	\$135,000	17%	83%	\$796.70	\$2,184.76

The capital improvements to the King Coho wastewater plant will result in improved water quality in the receiving environment, and reduced risk to the CVRD of enforcement actions due to permit non-compliance.

The 2019 parcel tax collected \$100,000 directly from the strata owners towards this project (approximately \$2,700 from each of the 37 units). Collecting further parcel tax funds towards the capital upgrades could create financial difficulties for some individual strata unit owners.

As discussed in the Financial Factors section of the report, a larger asset management reserve contribution is being considered for future years, which may also impact the parcel tax rate within the five year debt repayment window.

With these factors under consideration, funding the full amount of additional capital upgrade costs with Electoral Area B community works funds provides for a reasonable split of grant funding and parcel tax contribution towards the overall capital upgrades, while mitigating financial impacts to individual strata unit owners and improving water quality in the receiving environment. For these reasons, Option 1 is recommended by staff.

Financial Factors

The 2019 capital works budget for the King Coho wastewater service had \$106,856 available for the remaining capital upgrades. Approximately \$43,000 of this allocation was spent in 2019 to complete the controls upgrade and the design for the emergency storage tank conversion, leaving

approximately \$63,856 available to implement the conversion in 2020. ISL has provided a cost estimate of \$182,400 to complete the upgrade. Adding to this an allowance for construction management the total project cost is estimated at \$199,000. Therefore, additional capital funding of \$135,000 is required in order to complete the upgrade.

Staff have also found other costs coming in higher than the figures provided in the 2017 condition assessment and operational review. For instance, the cost to complete the outfall inspection was more than double the estimate provided in 2017. This illustrates that even with the information gathered during the utility transfer process, unforeseen costs do come to light as the CVRD becomes more familiar with the needs of this service. To mitigate the impacts of unforeseen operational expenses in future budget years and balance biannual expenses like the outfall inspection over the budget period, a draft King Coho Wastewater Service Future Expenditure Reserve Fund Establishment Bylaw has been developed, and is attached for consideration as Appendix A.

Increased operational costs have resulted in a decrease in the capital works reserve contribution for the service. Staff have reviewed the asset management plan for this service, and identified the need for a larger capital works reserve contribution than is currently able to be provided at existing parcel tax rates. Staff plan to re-evaluate asset management needs following the completion of the system upgrades, and will engage with residents early, if a parcel tax increase is required in future years.

For 2020, staff are recommending a parcel tax rate of \$1,388.06, which includes a two per cent increase above the 2019 rate. An amendment to “King Coho Wastewater Service Parcel Tax Bylaw No. 563, 2018” is recommended to reflect this parcel tax rate.

Legal Factors

Provincial permit PE-13155 for the marine discharge of effluent from the King Coho WWTP was transferred to the CVRD in September 2018. Contravention of the permit conditions, including effluent quality requirements, is considered a violation of the *Environmental Management Act*. Continued violation of the EMA could put the CVRD at risk of compliance enforcement actions, ranging from a written advisory, an administrative monetary penalty or ultimately cancellation of the permit.

Regional Growth Strategy Implications

Provision of the King Coho wastewater service aligns with the goals and objectives of the Comox Valley Regional Growth Strategy to “provide affordable, effective and efficient services and infrastructure that conserves land, water and energy resources.”

Intergovernmental Factors

The provincial Ministry of Environment and Climate Change Strategy administers permit PE-13155 for effluent discharge from the King Coho wastewater treatment plant to the marine environment. Sampling of effluent and provision of sampling results is done in accordance with permit requirements.

Interdepartmental Involvement

This project is being led by Engineering Services staff, in coordination with Legislative and Financial services staff.

Citizen/Public Relations

The CVRD has undertaken significant communications with King Coho strata owners regarding the wastewater services now provided by the CVRD. In February 2019, a series of parcel tax questions and answers was distributed in response to numerous questions about the 2019 parcel tax rate,

particularly related to the capital improvement charge included in the 2019 parcel tax. CVRD staff continue to field King Coho parcel tax related calls on a regular basis.

The emergency storage tank conversion project will impact King Coho strata owners. There will be some disruption due to construction activity in the area of the WWTP, and, dependent upon the funding option chosen by the committee, there may be an additional impact on the 2020-2024 budget to include short-term borrowing costs. A communications plan will be developed to keep the strata owners informed during the conversion project and, if short-term borrowing is required, during the 2020-2024 budget process.

Attachments: Appendix A – “King Coho Wastewater Service Future Expenditure Reserve Fund Establishment Bylaw”

COMOX VALLEY REGIONAL DISTRICT

BYLAW NO. XXX

A bylaw to establish a future expenditure reserve fund for the King Coho Wastewater Service

WHEREAS the King Coho Wastewater Service was created by the adoption of Bylaw No. 495 being “King Coho Wastewater Service Establishment Bylaw, 2017” on the 23rd day of January, 2018;

AND WHEREAS pursuant to section 188 of the *Community Charter [SBC 2003] c.26* applicable to regional districts by section 377(2) of the *Local Government Act [RSBC 2015] c.1*, a regional district may, by bylaw, establish a reserve fund for a specified purpose and direct that money to be placed to the credit of that reserve fund;

AND WHEREAS the board of the Comox Valley Regional District wishes to establish a reserve fund to provide for future expenditures;

NOW THEREFORE the board of the Comox Valley Regional District in open meeting assembled enacts as follows:

Reserve fund establishment

1. There is hereby established a reserve fund to be known as the King Coho Wastewater Service Future Expenditure Reserve Fund.

Reserve fund purpose

2. The purpose of the reserve fund is to provide a reserve to pay the future costs associated with the King Coho Wastewater Service, including, but not limited to, costs associated with claims against the regional district, its officers, or its directors, arising from the provision of the service including the deductible amount payable under a policy of insurance and legal defence costs.

Citation

This Bylaw No. XXX may be cited as “King Coho Wastewater Service Future Expenditure Reserve Fund Establishment Bylaw No. XXX”.

Read a first and second time this **day of** **December** **2019.**

Read a third time this **day of** **December** **2019.**

Adopted this **day of** **January** **2020.**

Chair

Corporate Legislative Officer

I hereby certify the foregoing to be a true and correct copy of Bylaw No. XXX being “King Coho Wastewater Service Future Expenditure Reserve Fund Establishment Bylaw No. XXX” as adopted by the board of the Comox Valley Regional District on the XX day of January 2020.

Corporate Legislative Officer