BRITISH COLUMBIA

Reference: 346397

FEB 26 2020

Diane Langman, Chair
and Directors
Regional District of Kootenay Boundary
202 – 843 Rossland Avenue
Trail BC V1R 4S8
Sent via email: administration@rdkb.com

Dear Chair Langman and Directors:

I am writing in response the May 9, 2019 submission of the Regional District of Kootenay Boundary (RDKB) Liquid Waste Management Plan (LWMP).

I am satisfied that the LWMP submitted by RDKB, along with the public and First Nation consultation, meets the requirements of the Ministry of Environment and Climate Change Strategy. Pursuant to Section 24(5) of the *Environmental Management Act*, I hereby approve your LWMP.

I commend RDKB on the completion of your LWMP and progress towards achieving secondary treatment and addressing biosolids quality to ensure beneficial reuse in the future. I appreciate that the RDKB is implementing a Plan Monitoring Committee to ensure commitments in the LWMP proceed, as they represent the wishes of the electors.

Approval of the LWMP does not authorize entry upon, crossing over or use for any purposes of private or crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority shall rest with the local government. This LWMP is approved pursuant to the provisions of the *Environmental Management Act*, which asserts it is an offence to discharge waste without proper authorization. It is also RDKB's responsibility to ensure that all activities conducted under this LWMP are carried out with respect to the rights of third parties and comply with other applicable legislation that may be in force.

Thank you again for your submission.

Sincerely,

George Heyman
Minister

cc: Mark Andison, CAO, Regional District of Kootenay Boundary
Goran Denkovski, Manager of Infrastructure and Sustainability, Regional District of Kootenay Boundary

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1. Executive Summary

The Regional District of Kootenay Boundary (RDKB) owns the Columbia Pollution Control System, a sewerage system that provides regional wastewater collection, treatment and disposal for the municipalities of Trail, Rossland, Warfield and Electoral Area B, as well as the smaller adjacent communities of Oasis and Rivervale. The Columbia Pollution Control Centre (CPCC) is a primary treatment plant discharging disinfected effluent to the Columbia River. Provincial and federal regulations require a minimum of secondary treatment for wastewater treatment plants discharging to the environment.

The RDKB began preparation of a Liquid Waste Management Plan (LWMP) to identify appropriate and cost-effective pollution prevention options within the service area of the Columbia Pollution Control System in 2006. Stage 1 of the LWMP identified options for upgrading or replacing the CPCC and was completed and approved by the Ministry of Environment and Climate Change Strategy (MOE) in 2008. Stage 2 confirmed that the existing CPCC would be upgraded to secondary treatment at its current location and was completed in 2016 and approved by the MOE in 2017. This Stage 3 LWMP report provides a summary of Stages 1 and 2, documents the Stage 3 process, provides updated costs for the CPCC upgrade and outlines a schedule of commitments made during the Stages 1 and 2 processes.

The LWMP process was focused on the following objectives:

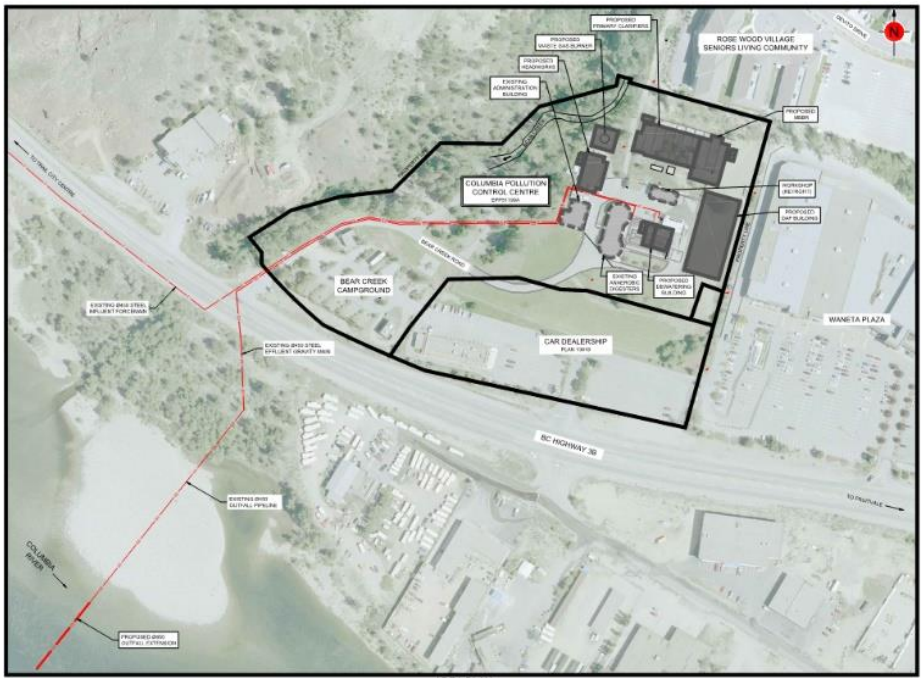
- Finalizing the location and treatment criteria for the upgraded CPCC;
- Developing Class B capital and O&M cost estimates for the upgraded infrastructure;
- Developing commitments to address source control, wastewater volume reduction and stormwater management;
- Identifying funding and implementation strategies for the proposed works.

This Stage 3 LWMP describes the decision-making process and the outcome of the process:

- The existing CPCC will be upgraded to meet secondary treatment standards for the build-out population, with considerations for future expansion, to service the City of Trail, Rossland, Warfield, Electoral Area B and the communities of Oasis and Rivervale.
- The upgraded CPCC will produce effluent to meet provincial and federal regulatory standards and recreational standards for faecal coliforms at the edge of the initial dilution zone (IDZ).
- The existing outfall in the Columbia River will be extended to deeper water to meet provincial regulatory standards and improve dilution and mixing.
- Residual solids produced at the CPCC will continue to be sent to landfill since they do not meet OMRR criteria for beneficial reuse.
- Source control, wastewater volume reduction and stormwater management commitments will require coordination by the RDKB and participation by the municipalities.
- Commitments to address inflow & infiltration and other non-point source pollution will be addressed after the CPCC upgrades have been completed.

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The proposed CPCC layout is shown below.



Proposed Upgraded Columbia Pollution Control Centre

Capital and operations & maintenance cost estimates were developed for the proposed upgraded CPCC. The per user costs for upgrade of the CPCC to secondary treatment were presented to the public based on Class B cost estimates and the following assumptions:

- Project capital cost estimate: $52,000,000
- 73% federal/provincial grant: ~$38,000,000
- 27% debt: ~$14,000,000
- Annual debt servicing with grant: ~$740,000
- Annual debt servicing without a grant: ~$3,000,000
- 30-year debt interest rate: 3.15%
- Annual O&M cost estimate: ~$595,000

The increase to requisitions shown in ES-1 are current estimates based on the flow contribution to the CPCC as measured by flow meters measuring Rossland's, Warfield's and Trail's wastewater flow to the plant. Cost estimates for households and businesses are based on the Class B 2018 $CAD cost estimates, 2017 flow-based cost apportionment, interest rates of 3.15%, current District policy and overall property assessments.

Per user costs for residents and businesses were developed by the respective municipalities based on the increase to requisition from the Regional District and are shown in Section 6 of this report. These per user costs were presented at a series of public Open Houses through March 2019.

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ES 1 - Regional District Increase to Requisition

	2017 FLOW FRACTION	ANNUAL INCREASE TO THE REQUISITION *WITH* GRANT	ANNUAL INCREASE TO THE REQUISITION *WITHOUT* GRANT
City of Trail	68.06%	$ 907,240	$ 2,445,396
City of Rossland	20.04%	$ 267,133	$ 720,037
Village of Warfield	11.20%	$ 149,296	$ 402,416
Electoral Area 'B' / Lower Columbia Old Glory	0.70%	$ 9,331	$ 25,151

A list of the commitments made during Stage 1 and Stage 2 LWMP are shown in Table ES-2 along with budget amounts, fund sources and schedule for each line item. It is recommended that the commitments be reviewed and updated every 5 years.

ES 2 - LWMP Financial Commitments and Schedule

ITEM NO.	LWMP COMPONENT	BUDGET AMOUNT	FUNDING SOURCE	SCHEDULE
1	**Monitor and Update LWMP**			
1.1	Review LWMP progress, update, and revise as required.	~$15,000	RDKB	Every 5 years
2	**Wastewater Treatment Infrastructure Upgrades**			
2.1	Design of CPCC upgrades to secondary treatment and outfall upgrades	$1,572,000	50% federal 33% provincial 17% RDKB	In progress 2017-2019
2.2	Construction of CPCC and outfall upgrade [1]	$52,000,000	40% federal 33% provincial 27% local government	Future 2019-2020
3	**Wastewater Collection and Conveyance Infrastructure Upgrades**			
3.1	Replacement of forcemain river crossing on Old Trail Bridge	~$6,000,000	RDKB City of Trail	Complete, 2017
3.2	Murray Park Pump Station and Forcemain Upgrade [2]	~$2,300,000	RDKB	2025-2030
3.3	Glenmerry Pump Station and Forcemain Upgrade [2]	~$4,480,000	RDKB	2030-2035
3.4	Existing Gravity Sewer Upgrades [2]	$12,584,000	RDKB	2030 and as determined by asset management
4	**Environmental Monitoring**			
4.1	A receiving environment monitoring program after the secondary treatment upgrade commissioning to confirm the EIS results.	~$20,000	RDKB	Following plant commissioning
5	**Source Control**			

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ITEM NO.	LWMP COMPONENT	BUDGET AMOUNT	FUNDING SOURCE	SCHEDULE
5.1	RDKB to support and coordinate source control initiatives by participating municipalities	TBD	RDKB	Ongoing
5.2	Develop a source control bylaw and bylaw enforcement program	TBD	RDKB	2020
5.3	Ongoing monitoring and enforcement of source control bylaw	TBD	RDKB	Ongoing after 2020
5.4	Develop a source control and water conservation education program	TBD	RDKB	2019-2020
6	**Wastewater Volume Reduction**			
6.1	RDKB to support and coordinate water conservation initiatives by participating municipalities	TBD	RDKB	Ongoing
6.2	Participating municipalities to develop water conservation bylaws	TBD	Participating Municipalities	Village of Warfield to develop plan
6.3	RDKB to support and coordinate I&I reduction initiatives among participating municipalities	TBD	RDKB	Ongoing
6.4	RDKB and participating municipalities to develop an I&I reduction plan.	TBD	RDKB	2025
7	**Stormwater Management**			
7.1	Participating municipalties to develop storm drainage bylaws	TBD	Participating Municipalities	2025
8	**Biosolids Management**			
8.1	Routine testing of biosolids produced at the Columbia PCC to monitor metals content and identify metals of concern	TBD	RDKB	Ongoing
8.2	Develop a long-term biosolids management plan	~$100,000	RDKB	In process
9	**Resource Recovery**			
9.1	Maintain and expand use of biogas for in-plant heating at the upgraded CPCC	TBD	RDKB	2030
9.2	Implement a reclaimed water system for non-potable applications at the upgraded CPCC	Included in Item 2.2	40% federal 33% provincial 27% local government	2020
9.3	Implement an effluent heat recovery system for in-plant heating at the upgraded CPCC	Included in Item 2.2	40% federal 33% provincial 27% local government	2020

1 Based on August 2018 Class B estimates.
2 Based on Class D cost estimates last updated in 2015. Cost estimates to be updated at pre-design stage.

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Resolutions are included endorsing the Stage 3 LWMP and a draft Operational Certificate for the upgraded Columbia Pollution Control Centre is also included to go into effect once secondary treatment is implemented.

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