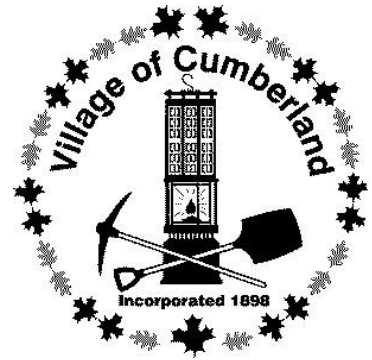


COUNCIL REPORT



REPORT DATE: October 17, 2024

MEETING DATE: October 28, 2024

File No. 5340-10

TO: Mayor and Councillors

FROM: Rob Crisfield, Director of Engineering and Public Works

SUBJECT: Liquid Waste Management Plan Update Presentation

RECOMMENDATION

- I. THAT Council receive the Liquid Waste Management Plan Update Presentation from Paul Nash, Liquid Waste Management Plan Coordinator.
- II. THAT Council approve an additional expenditure for up to an additional \$300,000 to complete both the Stage-3 Liquid Waste Management Plan and other ministry requirements to be reallocated from the Phase-2 wastewater project budget and funding.
- III. THAT Council authorize the sole source of McElhanney Consulting Services for up to \$60,000 for the Stage 3 LWMP.
- IV. THAT Council authorize the sole source of McElhanney Consulting Services for up to \$50,000 for assistance in developing the Operational Certificate.
- V. THAT Council Authorize the increase in contract value to Ecofish Research Ltd. from \$101,162.42 to \$249,342.90.
- VI. THAT Council authorize staff to execute the contracts and/or change orders with the various stakeholders.

PURPOSE

To provide Council with an update on the Liquid Waste Management plan (LWMP) progress including an update on the budget and to seek authorization for additional procurement related to the project.

PREVIOUS COUNCIL DIRECTION

Date	Resolution
May 27, 2024	THAT Council provide authorization to sole-source consulting work to Zinc Communications, Integrated Sustainability (Troy Vassos) and EcoFish for the Stage 3 LWMP; THAT Council direct staff to publish a notice of intent to sole-source consulting work to EcoFish for the Stage 3 LWMP for a value of up to \$90,000;

	THAT Council provide authorization to staff to allocate the approved budget of up to \$203,400 amongst the consultants to be hired for the Stage 3 LWMP; and THAT Council provide authorization to Village staff to allocate the budget to, and execute contracts with, the various consultants as appropriate.
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BACKGROUND

The attached memo from Paul Nash explains some of the details and complexities related to the Village's Liquid Waste Management Planning process. Further to this, there is an update on the work required by the ministry and the costs associated with this work, some of which are more than originally anticipated. Staff is seeking approval to increase both scope of work for existing consultants and to sole source the existing wastewater project engineer to assist with some of these requirements. It is recommended to use some of the anticipated remaining costs from the Phase-2 Wastewater Project budget as much of this LWMP work is related to the discharge and receiving environment.

As reported to Council on May 27th, the Village committed in the 2019 provincial consent order, to the completion of the Stage-3 of the LWMP and to submit it to the Ministry of Environment by the end of 2024. Some confusion around consent order deadlines and possible extension led Village staff to believe the LWMP had to be completed by the end of 2025. Work is in progress to complete the plan but unfortunately is not achievable by the end of the year. As a result, staff have reached out to the Compliance and Enforcement Branch of the Ministry of Environment and Climate Change to seek a resolution to this matter, with a notification of a 3-month delay in submitting the Stage LWMP to March 31, 2025.

The Consent Order does not have specific provision for a delayed submission, but it does have a specific date for the issuance of the LWMP Operational Certificate of Dec 31, 2025. This provided for a twelve-month review period by the Ministry, but the delayed submission will only leave them with nine months, and they might not complete their process within this reduced time. However, the Consent Order states that an extension to this date may be sought if the delay is affected by a material change in circumstances **not caused by or contributed to by the appellant** [Cumberland]; IF a delay is likely, the Village can apply for the extension, but there is a risk that it may not be approved by the Compliance and Enforcement branch. If the extension is not approved, the deadline remains on December 31, 2025, and if the Ministry staff takes longer than nine months (twelve months is typical) to approve Stage 3 of the LWMP, the Village will be out of compliance with the Consent Order and is subject to the \$40,000 penalty payment that was withheld for the duration of the Consent Order.

ALTERNATIVES

1. Due to the requirement to complete the Stage-3 LWMP, and the work involved to achieve this objective, there are no other alternatives for recommendation.

STRATEGIC OBJECTIVE

- ☐ Diverse and Healthy Community
- ☒ Sustainable Service Delivery and Asset Management
- ☐ Community Planning

FINANCIAL IMPLICATIONS

Currently \$203,400 is included in the approved 2024 budget for the Stage-3 LWMP. Staff are recommending that the additional \$300,000 estimated budget to complete the EIS work including the expanded scope of work to Ecofish and the proposed work for McElhanney support related to both the LWMP and the Operational Certificate come from the Phase-2 Wastewater Project budget.

OPERATIONAL IMPLICATIONS

While the LWMP is consuming a considerable amount of staff time, it is recognized that this is a Council priority and regulatory mandate, and staff will continue to prioritize this project in conjunction with the wastewater project and masterplan updates over other less critical work priorities.

CLIMATE CHANGE IMPLICATIONS

There is no climate change implications specifically related to this report.

ATTACHMENTS

1. Memorandum from Paul Nash, LWMP Coordinator – Liquid Waste Management Plan Project Memo #3
2. Environmental Appeal Board Consent Order

CONCURRENCE

Annie Berard, Director of Corporate Services **AB**

Respectfully submitted,

R. Crisfield

Rob Crisfield
Director of Engineering and Public Works

M. Mason

Michelle Mason
Chief Administrative Officer

Liquid Waste Management Plan Project Memo #3

DATE: 17 Oct 2024
TO: Rob Crisfield, Annie Berard
FROM: Paul Nash, Project Coordinator, Liquid Waste
SUBJECT: Progress, Budget and Procurement Update for Stage 3 Liquid Waste Management Plan

1 Purpose

The third and final Stage of the Liquid Waste Management Plan (LWMP) commenced in May 2024, with Council authorization for a budget of \$203,400 and consulting team procurement plan provided on 27 May.

The purpose of this memo is to:

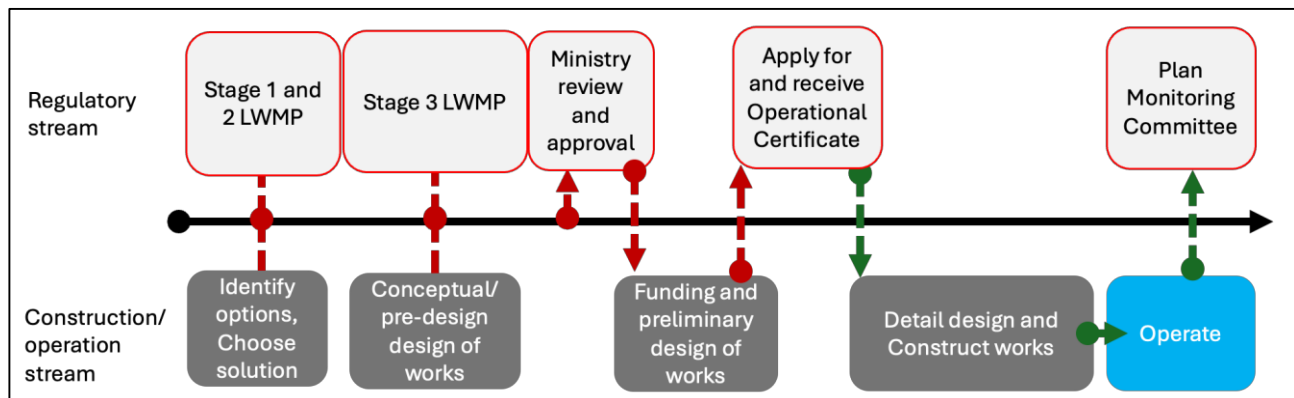
1. Provide an update on progress
2. Provide an update on budget
3. Seek authorization for additional procurement related to the LWMP.

2 LWMP Process, Progress and Delay

The objective of the LWMP is to create a:

- Long term plan for management of wastewater (and other waters)
- Plan for required upgrade works
- A financing plan and borrowing bylaw to funds the upgrade works
- A regulatory authorization – called an Operational Certificate (OC) that governs the operation of the works

It is a three stage process and the normal progression of the LWMP is shown below:



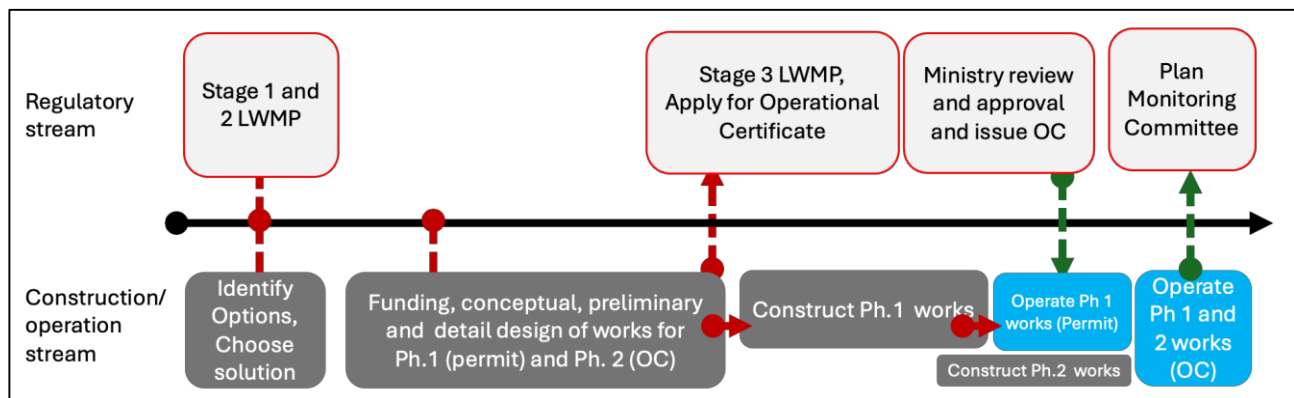
Cumberland's case is unusual in that the major wastewater treatment works (Phase 1 works) are being constructed now even though Stage 3 LWMP has not been completed. This is because Cumberland is out of compliance with the existing Permit (and has been since 1999) and was assigned an Administrative Penalty in 2019, which led to the Consent Order in 2020.

The Consent Order is attached to this report and the relevant conditions to the LWMP are summarized :

- That Cumberland commits to having the authorized works [for Permit compliance] completed by the end of 2024.
- That Cumberland commits to having the Stage 3 LWMP Report completed and submitted by the end of 2024.
- (Order #3) If an Operational Certificate under an approved LWMP is not complete (i.e. issued) by Dec 31, 2025, (unless the delay is not caused by Cumberland) , then Cumberland shall pay an additional \$40k fine.
- (Order #4) If the OC is not going to be issued by Dec 31, 2025, and the delay was not caused by Cumberland, then Cumberland can ask for an extension of up to one year.

The submission of the Stage 3 LWMP would lead to the issuance of an Operational Certificate that would authorize the Phase 2 treatment works and the new discharge location to the wetlands.

But in Cumberland's case, in constructing the minimum works necessary for Permit compliance, we are also constructing the works expected to be required for LWMP/OC (operational Certificate) compliance (e.g. tertiary filtration) to avoid doing two separate construction projects and to get the highest quality treatment as fast as possible. So, the Cumberland progression sees construction happening before and in parallel with the LWMP process:



This unusual situation has led to some conflicts:

- The Consent Order requires us to design, construct and operate the Phase 1 works as soon as possible.
- We have to design some of the Ph2 works with the Ph1 works, as they are intimately related.
- We have had significant design challenges, changes and delays relating to both phases.

- We are required to submit the phase 3 LWMP and the OC application at the same time.
- The OC application requires the final design and all the Operating Plans for the works to be completed before submission.
- We are supposed to build the Ph1 works before the LWMP/OC is submitted but are **not** supposed to build the Ph2 works until after the OC is issued (typically at least a year).
- We **cannot** discharge to the wetland (Ph2 discharge location) until the OC is received.

All of this adds up to make the level of detail work required for the enhanced EIS and the technical reports for the OC submission such that we cannot complete them before the end of 2024.

We will not be able to make the Consent Order commitment for the completion of the Stage 3 LWMP by the end of 2024.

Neither will we be able to meet the commitment for the construction of the (Ph 1) upgrade works).

The expected completion for the Stage 3 LWMP is end of March 2025 and construction of the Phase 1 works is now Dec 2025. Cumberland staff have notified the Environmental Appeal Board and the Compliance and Environmental Enforcement Branch of the Ministry of Environment of this.

2.1 Reasons for the delay

The major reasons why the Stage 3 LWMP has and will run behind are as follows:

- Delays in design of the project (for various reasons). This has led to an ever-changing project, with the design still being finalized as of Oct 2024.
- Additional and unexpected study requirements for the enhanced EIS from the Ministry of Environment, particularly relating to the wetlands, nutrient budgeting and streamflow measurements.
- Change in disinfection method from Chlorine Dioxide to UV. While chlorine dioxide was the best choice for a chemical disinfection agent, it became apparent that the lack of familiarity with it by all stakeholders (Min of Env, Health, K'omoks First Nation) meant that there would need to be a lot of additional predictive EIS work to study potential effects of CLO2 and potential disinfection byproducts. The change to UV has avoided doing this work, and simplified the EIS fieldwork, but still this could not be completed until summer/fall 2024, as the change to UV was only made in spring 2024.
- Delay by the Project Coordinator in re-engaging with the Ministry on the restart of Stage 3 LWMP. The intention was to wait until the design was finalized so that it would be known precisely what the EIS was studying for in terms of the discharge location(s) effluent quality and disinfection byproducts. A restart in 2023 instead of 2024 would have provided an earlier start for the EIS, but the 2024 change in disinfection from chlorine dioxide to UV would have required a subsequent change in the EIS and completion would still be occurring in late 2024.

- The level of detail required for the OC application is such that it can't be completed until after the project detail design is completed. The OC requirements include numerous Management Plans (Commissioning Plan, Operating Plan, Contingency Plan, Construction Environmental Plan, Discharge Monitoring Plan, Overflow Elimination Plan) The Information Requirements Table for the OC, that lists the various documents, is included as an attachment to this report. Completing these Plans would normally be a part of the Project and done after the completion of the Stage 3 LWMP. As with the EIS, ongoing design changes in the project related to UV and wet weather flow handling have precluded work on these various plans.
- Delay in restarting the public process (the advisory committee). This delay is also related to the change in the project (to UV) so that what is being presented to the committee and written up in the report represents the final shape of the project.

Overall, while the LWMP and subsequent parts could have been started earlier, the completion of them could not have been earlier, as it is contingent upon the final design of the project. The changes made in 2024 – particularly to UV disinfection – represent a substantial improvement to the project, but they have certainly caused further delay to the completion of the project and the LWMP process.

2.2 Implications of the delay

The intention of the Consent Order is that the Stage 3LWMP would be submitted at the end of 2024, allowing the Ministry up to one year for processing before the Dec 31, 2025 deadline (order #3). The intention of the possible one year extension (order #4) is in the event that Ministry takes longer to complete the processing, it is not intended to cover a delay caused by Cumberland.

With the delayed submission of the LWMP to March, 2024, the processing time for the Ministry to meet the Dec 2025 date is reduced from twelve to nine months. ***IF the Ministry does not meet that date, then Cumberland is at risk for the \$40k fine, as the delay could be deemed to be caused by Cumberland.***

At this point in time, we cannot have the LWMP (and OC and EIS) completed by the end of 2024, and are targeting end of March 2025. All we can do at this stage to reduce the risk of processing delay is ensure that the LWMP and associated documents are the best they can be and have completely fulfilled the Ministry's specified scope of work.

3 Project Schedule

The revised schedule for completing the LWMP as follows, with delayed components in orange.

Activity	May-June	July-Aug-Sep	Oct-Nov-Dec	Jan Feb Mar 2025
Scope setting				
Receiving environment EIS Field work				
EIS analysis				

Other technical work (updating community growth projections, storm and sanitary master plans, etc)						
Public engagement						
First Nations consultation						
Draft Stage 3 report						
EIS and Report Review with Ministry						
Report completion and submission						
OC completion and submission						

Once submitted, the Ministry typically takes 1 year to review and approve the LWMP.

The revised schedule represents the fastest that the LWMP process can be completed to meet all the Ministry's scope, consultation and documentation requirements.

4 Project Team

For the execution of Stage 3, it was proposed in May (and approved) to continue to use all the consultants that have been involved in Stage 1 and 2, the current upgrade project, or are currently working for Cumberland on related civil work (storm and sanitary sewer planning).

However, one change to the team is proposed. McElhanney Consulting Services is now the Engineer of Record for the treatment upgrade project, and it is proposed to also have them as the Qualified Professional for the Stage 3 LWMP report and Operational Certificate.

They have not been involved in Stage 1 and 2, but given they are finalizing the design of the project they are in the best position to finalize the OC documentation. And in doing that they gain the knowledge need to author the LWMP report itself. McElhanney has recently completed LWMP's for Revelstoke and Naramata Bench (Okanagan) and are well familiar with the process.

The proposed team and scope areas are:

LWMP Scope Area	Consultant	Rationale
Coordination, support & First Nation consultation	Alpine Water and Energy (Paul Nash)	Led LWMP since 2016 and current upgrade project (under contract for LWMP project coordination)
Public engagement	Zinc Strategies	Led 2018 borrowing referendum and communications on WWTP project 2021-24
LWMP Regulatory Advisor	Integrated Sustainability (Troy Vassos)	Technical Consultant on LWMP and regulatory since 2016
LWMP Qualified Professional (Technical Consultant)	McElhanney Consulting Services	Designer of WWTP project

EIS	EcoFish Research	Has done all the habitat assessment work on wetlands and EIS baseline on MLC/Trent in 2020-2022
Storm and sanitary Master Plans	ISL Engineering	Already in place as general civil consultant for Cumberland (per 2022 competitive procurement – 3 year agreement)

5 Budget

The Stage 3 LWMP had a budget of \$203,400 approved in May 2024. This was based on a “normal” Stage 3 process – to complete the consultation processes, updated the technical information and do a standard EIS and produce the summary report

An example of such a report is the Revelstoke Stage 3 LWMP of 2021 (hyperlink <https://talkrevelstoke.ca/liquid-waste-management-plan>), which had a nominal budget of \$97k (though it did not include an EIS)

This May budget for Cumberland included a standard EIS but not ancillary Plans such as the updated Storm and Sanitary master plans, nor all the additional OC documentation. The OC requirements also include numerous Management Plans (Operating Plan, Contingency Plan, Construction Environmental Plan, Discharge Monitoring Plan) that are not directly part of the Stage 3 LWMP – and thus not part of its budget. The Information Requirements Table for the OC, that lists the various documents, is included as an attachment to this report. Completing these plans would normally be a part of the Project, not the Stage 3 LWMP.

The infrastructure budget for the storm and sanitary systems includes updating their respective master plans, so while they are required (at a conceptual level of detail) for the LWMP, they are not included in the LWMP budget.

The terms of reference in going from a standard to an Enhanced EIS have required a significant scope expansion to this work, with a significant additional summer fieldwork program in the wetlands and creek that was not anticipated previously. This has increased the budgeted cost to fulfill the required scope has gone from \$90k to \$250k. The reasoning from EcoFish is included as an attachment to this report.

The costs for these two items (OC documentation and enhanced EIS) are proposed to be drawn from the Phase 2 Wastewater Project budget, as these are both necessary precursor items for the completion and operation of Phase 2, and specifically the permanent relocation of the treated water discharge from the creek to the wetlands. Environmental study and permitting are both eligible costs for the purposes of grant funding recovery.

Costs for the LWMP consultants are also increased because of the increase time span (extra three months) for the process.

The updated budget allocations are shown in the table below.

LWMP Scope Area	Consultant	Original Budget (May 2024)	Revised Budget (Oct 2024)
Coordination, support, public & First Nation consultation	Alpine Water and Energy (Paul Nash)	\$40k	\$50k
Public engagement	Zinc Strategies	\$20k	\$25k
LWMP Regulatory Advisor	Troy Vassos (Integrated Sustainability)	\$50k	\$20k
LWMP Technical Consultant	McElhanney		\$60k*
<i>Standard EIS</i>	EcoFish Research	\$90k	\$0
Contingency for liaison with Ministry		\$3.4	\$48.3k
<i>LWMP Budget Subtotal</i>		<i>\$203.4k</i>	<i>\$203.4k</i>
Operational Certificate Technical Reports and Management Plans	McElhanney	-	\$50k*
<i>Enhanced EIS (Includes standard EIS)</i>	EcoFish Research	-	\$250k
<i>Phase 2 Lagoon Project Budget Subtotal</i>			<i>\$300k</i>
<i>LWMP Grand Total</i>		<i>\$203.4k</i>	<i>\$503.4k</i>

*Placeholders as these are being finalized with McElhanney, but are considered sufficient.

6 Phase 2 Budget

Environmental study and operational plans (the OC documents) are *eligible* costs for grant funding purposes, though they are not *required* to be included (can be funded from other sources). Thus the EIS and Operational Certificate work both represent Eligible Costs for the Phase 2 work. For the Phase 1 project, the baseline environmental study in 2020-21 -which will form part of the enhanced EIS – was included as an Eligible Cost.

To consider adding these two costs of combined value \$300k into the Phase 2 budget requires consideration of that budget.

In the design process over the last two years, the change of the permanent discharge location to the wetlands (as requested by the Ministry), and the EIS field work of Aug-Sep 2024 have allowed a re-evaluation of the works needed to achieve the desired outcomes for Phase 2.

Specifically, the hydraulic works required to move water to the reed bed, between the wetland ponds and wetlands, and the length of new channel and channel infill – have been optimized and minimized. As has the size of the reed bed itself.

This results in a reduced scope of work compared to achieve the outcomes of the original funding application.

Item	Original scope for funding application	Current scope	Timing for completion
Tertiary Filtration	Tertiary Filtration for 3600m3/day	Tertiary Filtration for 7200 m3/day	Equipment bought, install Q3 2025
Stormwater Treatment Wetland	Drainage works and connection to MLC	Collection ditch to ponds required, connection to MLC not required	Q3 2025
Reed bed	2000sq.m	~1500sq.m	Q3 2025 or 2026
Wetland Augmentation by reclaimed water	Effluent distribution and conveyance works for wetland areas	No works required - will use new stormwater ditch for conveyance	Can't start discharging to wetland until LWMP OC is issued
Habitat enhancement	Plantings of trees and shrubs over area up to 3ha	Environmental study is suggesting minimal plantings needed	Q4 2025
Walking trails	Construct 1200m of trail along new ditch and channel works	~300m of trail in wetland area	Q4 2025
Construct new MLC Channel	700 linear m	290 linear m	Q4 2025, but might be 2026
Infill MLC Channel	700 linear m	230 linear m	Q4 2025, but might be 2026
Maple Lake Creek	Installation of two weirs/fishways in MLC	Installation of two weirs/ fishways in MLC	Q4 2025, but might be 2026

The reduced amount of work required for the wetland and creek works has created some space with the Phase 2 budget, which can be used to accommodate this study work. And the EIS field work itself has informed some of these scope reductions, so it is already contributing value to Phase 2.

Item	Description	Construction Period	Original Budget	Revised Budget
2A	Biochar media reed bed and wetland augmentation	2025	1520	800
2A-1	Permitting - Enhanced EIS and OC documentation	2024-25	0	300
2B	Tertiary filtration	2024-25	730	730
2C	MLC new channel, stormwater treatment wetland, habitat enhancement plantings, recreational access trail	2025-26	1570	1570
2D	Infill the existing Maple Lake Creek channel adjacent to lagoon east berm	2025-26	540	540
	Total		4360	3940

With the reduced scope of work for the reed bed and wetland augmentation, the permitting and OC documentation costs can fit in within the 2A scope item. The costs for phase 2C and 2D are yet to be confirmed but with the reduced scope of works for each, it is expected that the costs will decrease.

A full project and budget update on Phase 2 will come to Council at a future meeting.

7 Procurement

To retain the project team as proposed will require Council to approve sole-sourcing for McElhanney and changes to the contract values for the other consultants. In particular, to increase the value of the Ecofish work from \$90k to \$250k

Sole-sourcing is contemplated in the Village of Cumberland Purchasing Management Services Policy 3.3 (2017), section 5.9 (x):

Where previous work of a supplier or contractor has resulted in that supplier or contractor having a unique understanding and knowledge of local systems and circumstances; and where the awarding of a contract to another supplier or contractor would cause the Village to incur additional expense because of their lack of this understanding and knowledge; the locally experienced and knowledgeable supplier or contractor may be used as the sole supplier of related goods and services upon the approval of Council.

In the case of the LWMP, the proposed consultants are in this position of having unique understanding of the LWMP project, since they have either participated in it to date, or (for McElhanney) in the design of the treatment works.

Accordingly, it is requested:

- *That Council provide authorization to sole-source McElhanney Consulting Services for up to \$60,000 for the Stage 3 LWMP*
- *That Council provide authorization to sole-source McElhanney Consulting Services for up to \$50,000 for the and Operational Certificate*
- *And Council provide authorization to increase the contract value of EcoFish Research Ltd from \$90,000 to \$250,000 for the Enhanced EIS for the Stage 3 LWMP.*
- *And that Council approve the inclusion of the \$300,000 for the Enhanced EIS and Operational Certificate Documentation as part of the Phase 2 Wastewater Upgrades project.*
- *That Council provide authorization to Village staff to allocate the Stage 3 LWMP budget to, and execute contracts with, the various stakeholders as appropriate.*

This team provides the best means for the fastest completion of the expanded scope of the Stage 3 LWMP and Operational Certificate process.

Respectfully submitted,

P. Nash

Paul Nash

Project Coordinator, Liquid Waste

Attachments (3)

EcoFish Commentary on Scope and Costs

Consent Order

Operational Certificate Information Requirements Table

Ecofish Commentary on Scope and Costs:

- Initial funds would have been sufficient to complete an aquatic EIS based on existing data.
- The **Terms of Reference** submitted to VOC on May 31, 2024 by the Ministry required a substantial summer 2024 field program which consumed all of the \$100K funds initially estimated (field program described in more detail below)
- The \$148K for the enhanced EIS accounts for both wetlands and streams effects assessment, and is designed to account for all foreseeable work (e.g., First Nations engagement) such that no additional scope changes are requested.

Rationale for additional field work:

- Summer 2024 field program was extensive to meet data needs for 1) enhanced EIS requirements for beneficial water reuse, 2) nutrient evaluation given phosphorus will exceed 0.005 mg/L, and 3) wetland assessment. Field program therefore included:
 - i. Groundwater
 - ii. Soils
 - iii. Water quality
- **Nutrient Budget Field Program.** Additional field data required to meet the TOR:
 8. If the phosphorus concentration of the effluent is likely to exceed 0.005 mg/L, develop a nutrient budget for phosphorus, taking into consideration existing and proposed discharges and land uses both upstream and downstream of the affected area. The nutrient budget should evaluate the generation, movement, absorption and transfer of nutrients through the soil and surface waters. See ENV (2014) for more information.
- **Hydrology Field Program.** Summer 2024 hydrology field program was required to inform the nutrient budget, dilution capacity assumptions, and beneficial use analysis.
- **Effluent and stream characterization.** Additional lab analysis for additional parameters described in the TOR.



Environmental Appeal Board

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Decision No. 2019-EMA-014(a)

ENVIRONMENTAL APPEAL BOARD
IN THE MATTER OF THE *ENVIRONMENTAL MANAGEMENT ACT*
S.B.C. 2003, C. 53

BETWEEN:

THE CORPORATION OF THE VILLAGE OF CUMBERLAND

APPELLANT

AND:

DELEGATE OF THE DIRECTOR,
ENVIRONMENTAL MANAGEMENT ACT

RESPONDENT

CONSENT ORDER

The Ministry of Environment and Climate Change Strategy (ENV) acknowledges that the Village of Cumberland in a show of willingness to comply with sections 1.1.2, 1.1.3, 1.1.4 of permit 197 commits to submitting a final application for registration under the Municipal Wastewater Regulation or a Stage 3 Liquid Waste Management Plan Report and construction of authorized works for their wastewater discharge by December 31, 2024.

As per Chapter 4, Section 4.0 of the ENV Compliance and Enforcement Policy and Procedure and including but not limited to Section 7 of the Administrative Penalties (*Environmental Management Act*) Regulation, ENV will use the above information as a factor taken into consideration of future compliance assessments and enforcement actions.

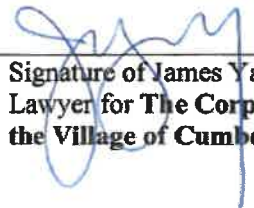
ON THE APPLICATION of the parties, without a hearing and by consent:

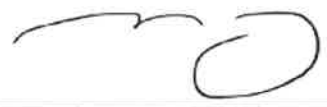
THE BOARD ORDERS under section 17(2) of the *Administrative Tribunals Act*, S.B.C. 2004, c. 45, that the Appellant's Appeal No. 2019-EMA-014 of the July 18, 2019 \$85,800 administrative penalty (the "Penalty") for non-compliance with its permit to discharge treated effluent (the "Permit") is dismissed on the following terms, which represent an agreement between the parties under section 115(4) of the *Environmental Management Act*:

1. The Appellant shall within four (4) weeks of the entry of this order pay \$15,000 to the Minister of Finance representing a portion of the Penalty;

2. The Appellant shall apply \$40,000 representing the remaining portion of the Penalty to complete the Authorized Works as that term is defined in the Permit;
3. If the registration under the Municipal Wastewater Regulation or an Operational Certificate under an approved Liquid Waste Management Plan is not complete by December 31, 2025, unless any delay beyond that date is affected by a material change in circumstances not caused or contributed to by the appellant, \$40,000 shall forthwith be paid to the Minister of Finance;
4. If the registration under the Municipal Wastewater Regulation or an Operational Certificate under an approved Liquid Waste management Plan is delayed beyond December 31, 2025 and that delay is affected by a material change in circumstances not caused or contributed to by the appellant, the appellant may seek to vary the completion date set out in paragraph (3) of this Order to a date no later than December 31, 2026 by application to the Director, *Environmental Management Act*, no later than November 1, 2025. The Director, *Environmental Management Act*, will vary the completion date set out in paragraph (3) of this Order as requested, provided the requirements of this paragraph have been met. The Director, *Environmental Management Act*, will provide a response before December 31, 2025. For certainty, the Parties expressly agree that the appellant's appeal is dismissed and that a new right of appeal will exist in respect of the decision from the Director, *Environmental Management Act*'s decision, if the director concludes that the appellant has not performed the terms and conditions of this agreement and that the \$40,000 sum described in paragraph 3 is payable, or the completion date will not be varied, or both; and
5. Each party shall bear their own costs.

THE FOLLOWING PARTIES APPROVE THE FORM OF THIS ORDER AND CONSENT TO EACH OF THE ORDERS NOTED ABOVE ON THIS 18th DAY OF SEPTEMBER, 2020:


 Signature of James Yardley
 Lawyer for The Corporation of
 the Village of Cumberland


 Signature of Stephen E.
 King Lawyer for the
 DIRECTOR


 Darrell LeHouillier, Chair
 Environmental Appeal Board

Information Requirements Table for MWR Registrations & OCs

Application Tracking Number: Pre-Authorization Number: 112204
The Corporation of the Village of Cumberland

Applicant Summary	
Application Tracking #	436025
Pre-Authorization #	OC-112204
Applicant / Facility Name	The Corporation of the Village of Cumberland

Ministry of Environment and Climate Change Strategy	
Prepared by:	L. Archibald
Title	Section head, Community Liquid Waste Management
Date	May 31, 2024

The *Information Requirements Table (IRT) for Municipal Wastewater Regulation (MWR) Registrations and Operational Certificates* is a tool used by Ministry of Environment and Climate Change Strategy (ENV) staff to document specific guidance and instructions given to an applicant pursuing an exemption from sections 6(2) and (3) of the *Environmental Management Act* (EMA) to discharge municipal effluent or provide reclaimed water in accordance with the MWR or a **liquid waste management plan approved by the minister**.

As part of the Preliminary Application Phase or Stage 3 Liquid Waste Management Planning, ENV will discuss with the applicant the items listed in this table to determine what will be required in support of their final application. A tick mark in the "Required" column of the table indicates an information item to be included into the application package as agreed to by both parties or as directed by ENV. Should it be determined, that specific methods will be used to derive this information, this will be specified with a tick mark in the "Methods" box and specific details in the "Comments" column. Specific methods may not be necessary for applications that will not require a subject matter expert review. In cases where complex impact assessments are to be undertaken, agreement on the methods used will be required. For simple methods, the methods used could be discussed with the applicant in a meeting and noted as agreed to in the "Comments" column. For more complex methods, the applicant may be required to submit a "Methods Package" by an agreed date for ENV review, comment, and acceptance. Once methods are accepted by ENV they should be either described in the "Comments" column and/or a reference made to the document describing the Methods Package.

If required, this document will form part of an Application Instruction Document (AID) which documents application submission requirements for the applicant. The AID is issued by the Director after a preliminary application meeting has occurred.

The Ministry of Environment and Climate Change Strategy will be assessing this application against this table and it is expected that the applicant does the same prior to any preliminary meetings and/or prior to any final submissions.

Information Requirements Table for MWR Registrations & OCs

Application Tracking Number: Pre-Authorization Number: 112204
The Corporation of the Village of Cumberland

Information	Requirements	Comments	Location in Final Application
1 TECHNICAL ASSESSMENT REPORT			
Describe the project including the source of municipal wastewater and stormwater, the type of treatment, applicable effluent quality requirements or reclaimed water category and discharge or reuse location.	Required ☒	Municipal Wastewater Regulation MWR Reference: [12]	
Provide a detailed map of the project location including the treatment works, discharge location and surrounding land and water uses and potential environmental receptors.	Required ☒	MWR Reference: [13(d)]	
Provide full characterization of the influent and any source control measures.	Required ☒	MWR Reference: [7]	
Provide the maximum daily flow calculation and average dry weather flow calculation, if applicable.	Required ☒	MWR Reference: [2, 45 (b)(i)]	
Treatment			
Provide a process flow diagram for the wastewater facility	Required ☒		
Specify the treatment design criteria including treatment capacity, retention times, and input and output water quantity and quality. Include a description of the method of disinfection and the treatment of flows above 2xADWF, if applicable.	Required ☒	MWR Reference: [51-52, 69, 77, Table 3, 94-98, Table 9-11, 104, 107, 113, Table 13] Design drawings for the wastewater treatment facility signed by a suitably qualified professional that includes the volume and flow capacities of each component to confirm compliance with the reliability requirements of the MWR and establish the proposed method of treatment and discharge that will be registered under the MWR.	
Provide treatment system detailed design drawings including discharge works, certified, signed and stamped by a qualified professional.	Required ☒		
Provide rationale for expected treatment effectiveness (e.g., examples with similar conditions, bench scale test, pilot tests), including an evaluation of effectiveness under potential variable operating conditions (e.g., flood or storm events).	Required ☒		
Describe how the design of the wastewater facility meets component and reliability requirements including pumping facilities.	Required ☒	MWR Reference: [34-37 & Table 1]	
Describe whether the discharge will require advanced treatment based on its total nitrogen content and the discharge area.	Required ☐	MWR Reference: [77]	
Discharge to Water:			
Identify whether the MWR requires advanced treatment (nutrient removal) for the proposed receiving environment.	Required ☒	MWR Reference: [97]	



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Identify whether the MWR requires an enhanced EIS for the proposed receiving environment. If so, Terms of Reference for the EIS need approval by ENV.	Required ☒	MWR Reference: [98] See recommended Terms of Reference for the Enhanced Environmental Impact Study prepared by ENV	
Provide a hydrometric monitoring program prepared by a suitably qualified professional that meets all Grade B or better criteria listed in Table 1-1 of the Manual of British Columbia Hydrometric Standards	Required ☒		
Reclaimed Water:			
Provide a site plan to scale showing all the reclaimed water use locations and all sensitive receptors identified in the EIS. If irrigating, impounding, enhancing wetland reclaimed water, include distance to nearest water well or in-ground reservoir used for domestic supply.	Required ☒	MWR Reference: [109(2)]	
Provide reason for proposed reclaimed water category based on the EIS, design, use and likelihood of exposure.	Required ☒	MWR Reference: [104]	
Include information and communication materials for users.	Required ☒	MWR Reference: [109(6)]	
For Greater Exposure Potential or higher, describe method of virus removal.	Required ☒	MWR Reference: [110]	
Describe the alternate disposal and storage system.	Required ☒	MWR Reference: [114]	
To assess the feasibility of using a constructed wetland for treatment and discharging to a wetland for enhancement, hydrological/hydrogeological modelling is required to understand the capacity for wastewater capacity and the expected rate of percolation into groundwater and/or direct discharge back into Maple Lake Creek. Additional information on the size, construction materials, soil type, discharge rate and location, and wetland aquatic plants utilized is also required. The effluent discharge to and from the wetland(s) will need to be further characterized/predicted.	Required ☒		
Trial to determine the effectiveness of the constructed wetland for effluent treatment will likely be required.	Required ☒		
2 ENVIRONMENTAL IMPACT STUDIES			
Construction			
Description of site work, including location of roads, buildings, ditches or drainage, pipelines, excavation, berms and related issues such as slope stability, rainwater management, and erosion control measures.	Required ☒		
Do an assessment of potential impacts on terrestrial and aquatic vegetation, benthic invertebrates, fish and wildlife.	Required ☒		
Assess potential impact on sensitive habitats (e.g. ecosystems at risk, fish spawning/rearing habitats).	Required ☒		



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Assess impact on quality of surface water and groundwater.	Required ☒		
Assess potential impacts on traffic patterns.	Required ☒		
Assess potential impacts of noise and air quality.	Required ☒		
Do an archaeological impact assessment	Required ☒		
Overflow			
Quantify overflow events based on 5-year return period precipitation.	Required ☒		
Establish receiving water beneficial uses and sensitive receptors.	Required ☒		
Determine guidelines, referencing BC Approved Water Quality Guidelines (WQG), to protect beneficial uses and sensitive receptors.	Required ☒		
Discharge to Surface Water			
Characterize the Receiving Environment	Required ☒	* Please Refer to ENV Recommendations on terms of reference for Enhanced Environmental impact study & receiving environment monitoring program	
Characterize the pre-discharge environmental baseline conditions:	Required ☒	* Please Refer to ENV Recommendations on terms of reference for Enhanced Environmental impact study & receiving environment monitoring program	
Impact Assessment	Required ☒	* Please Refer to ENV Recommendations on terms of reference for Enhanced Environmental impact study & receiving environment monitoring program	
Cumulative Effects	Required ☒	* Please Refer to ENV Recommendations on terms of reference for Enhanced Environmental impact study & receiving environment monitoring program	
Based on the EIS, determine which reliability category applies to the proposed wastewater facility.	Required ☒		
3 RECEIVING ENVIRONMENT MONITORING PROGRAM * PLEASE REFER TO ENV RECOMMENDATIONS ON TERMS OF REFERENCE FOR ENHANCED ENVIRONMENTAL IMPACT STUDY & RECEIVING ENVIRONMENT MONITORING PROGRAM			
4 MANAGEMENT PLANS			
Operating Plan:	Required ☒	MWR Reference: [19; 20; 23; 53-60; 62; 63-67; 102]	
Describe the proper operation, maintenance and monitoring of the wastewater facility, including lift stations.	Required ☒		
Include outfall inspections requirements and septic pump out requirements if applicable.	Required ☒		
Include a detailed description of the monitoring program for the discharge and the receiving environment including monitoring schedule, methods and data analysis, quality controls, and reporting requirements.	Required ☒		
Also provide response actions in the event of effluent quality or quantity exceedances and toxicity failures (if applicable).	Required ☒		
Commissioning Plan:	Required ☒	MWR Reference: [24]	



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Include the operational procedures required to commission the wastewater facility and the monitoring required to demonstrate that no adverse environmental impacts will result from commissioning.	Required ☒		
Construction Environmental Protection Plan:	Required ☒	MWR Reference: [19]	
Contractor's plan to enact recommendations from the Construction Environmental Impact Study.	Required ☒		
Contingency Plan:	Required ☒		
Describe the emergency procedures to be followed if the wastewater facility or lift stations experience disruption including when to notify the health officer and when to report a spill.	Required ☒		
If reclaimed water is used, procedures for immediate diversion of the effluent to the alternate method of disposal or storage if effluent quality requirements are not met and conditions under which the reclaimed water can be redirected back to the reclaimed water use.	Required ☒		
Reclaimed Water Plan: Includes a component dedicated to a stream augmentation plan Includes a component dedicated to a restoration plan for the wetland(s)	Required ☒		
Describe the appropriate use of reclaimed water including time of use, method of distribution, maximum discharge rates, discharge plan for optimal beneficial use for enhanced wetland and stream augmentation, Unless a director provides otherwise under Section 8, IDZ are not applicable to reclaimed water used for Stream augmentation, creating impoundments, Maintaining wetlands or marshes	Required ☒		
Inflow and Infiltration Reduction Plan:	Required ☒	MWR Reference: [44]	
If inflow and infiltration occurs such that the maximum average daily flow exceeds 2 times the ADWF at the treatment plant during a storm or snowmelt events with a less than 5-year return period, develop and implement, as part of a LWMP or a study, measures to reduce inflow and infiltration.	Required ☒		
Overflow Elimination Plan:	Required ☒	MWR Reference: [21, 42]	
If overflows occur during storm or snowmelt events with a less than 5-year return period, develop and implement, as part of a LWMP or a study, measures to eventually eliminate overflows.	Required ☒		
Discharge Monitoring Plan Provide a discharge monitoring plan that describes how effluent quality and quantity will be monitored evaluated and reported in accordance with the MWR requirements. Include:	Required ☒	MWR Reference: [51-60, 66, 67, 94, 95, 96, 97, 103]	
Discharge monitoring locations, parameters to be monitored and frequency	Required ☒		



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Sampling methods, equipment, quality control and quality assurance methods	Required ☒		
Applicable effluent quality requirements	Required ☒	MWR Reference: (S. 94)	
Confirm if toxicity monitoring requirements apply to the municipal effluent discharge. If so, provide a sampling plan to monitor effluent toxicity as per MWR S. 58 to 60.	Required ☒	MWR Reference (S. 58 to 60)	
Methods of evaluating and reporting effluent quality and quantity	Required ☒	MWR Reference: [55, 66, 67]	



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Guidance Documents:

1. [Municipal Wastewater Regulation](#)
2. [Environmental Impact Study Guideline - A Companion Document to the Municipal Sewage Regulation](#)
3. [Guidance on Applications for Permits Under the Environmental Management Act – Technical Assessment, BC Ministry of Environment, September 10, 2010](#)
4. [Reclaimed Water Guidelines: A Companion Document to the Municipal Wastewater Regulation 2013](#)
5. [BC EAO \(2013\) Guideline for the Selection of Valued Components and Assessment of Potential Effects](#)
6. [Approved Water Quality Guidelines](#)
7. [Contaminated Sites Regulation Numerical Water Standards](#)
8. [Water and Air Baseline Monitoring Guidance Document for Mine Proponents and Operators, BC Ministry of Environment, October 9, 2012](#)
9. [British Columbia Field Sampling Manual for Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples, BC Ministry of Water, Land and Air Protection, 2013](#)
10. [BC Environmental Laboratory Manual](#)

1

[1http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/87_2012](http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/87_2012)

<https://www2.gov.bc.ca/assets/gov/environment/waste-management/sewage/eisguidelinedec2000.pdf>

<https://www2.gov.bc.ca/gov/content/environment/research-monitoring-reporting/monitoring/laboratory-standards-quality-assurance/bc-field-sampling-manual>

<https://www2.gov.bc.ca/assets/gov/environment/waste-management/waste-discharge-authorization/guides/assessment.pdf>

<https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/environmental-assessments/guidance-documents/eao-guidance-selection-of-valued-components.pdf>

<https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/water-quality-guidelines/approved-water-quality-guidelines>

http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/375_96_08#Schedule3.2

https://www2.gov.bc.ca/assets/gov/environment/waste-management/industrial-waste/industrial-waste/water_air_baseline_monitoring.pdf

<https://www2.gov.bc.ca/gov/content/environment/research-monitoring-reporting/monitoring/laboratory-standards-quality-assurance/bc-environmental-laboratory-manual>