



Agenda Liquid Waste Monitoring Committee

Monday, May 5, 2025

Council Chambers - City Hall
413 Fourth Street, Kaslo

Page

1. CALL TO ORDER

We respect and recognize the First Nations within whose unceded lands the Village of Kaslo is situated, including the Ktunaxa, Sinixt, and Sylix People, and the Indigenous and Metis Residents of our community.

The meeting is called to order at _____ p.m.

2. ADOPTION OF THE AGENDA

2.1 Addition of late items

2.2 Adoption of the agenda

Recommendation:

THAT the agenda for the May 5, 2025 Liquid Waste Monitoring Committee Meeting be adopted as presented.

3. ADOPTION OF THE MINUTES

4 - 6

[Liquid Waste Monitoring Committee - Jan 28 2025 - Minutes - DRAFT.pdf](#) 

Recommendation:

THAT the minutes of the January 28, 2025 Liquid Waste Monitoring Committee Meeting be adopted as presented.

4. DELEGATIONS

None

5. INFORMATION ITEMS

5.1 Member Reports


5.2 Correspondence

- 5.3 Advancing Long Term Community Goals
 - Source Control Bylaw - Update from Robert Baker, CAO
- 5.4 Project Cost Recovery
 - Parcel Taxes - Update from Robert Baker, CAO
- 5.5 Monitoring & Sampling of the Receiving Environment
Update from Geoff Scott, Public Works Foreman
- 5.6 Monitoring & Documentation of Private Septic System Performance 7 - 11
 - Lake Water Quality Monitoring Successful Grant Application - Update from Geoff Scott, Public Works Foreman
 - [Staff Report - Grant Application - Lake Water Quality Monitoring.pdf](#) 
 - [72644 Village of Kaslo IPG250070 - Approval Letter.pdf](#) 
 - IHA Lists - Update from Geoff Scott, Public Works Foreman
 - [SewerageSystemMap2025.pdf](#) 
- 5.7 Incremental Expansion of the System and Service Areas
 - Sewer Treatment Plant upgrades plan - Ian Dunlop, Manager of Strategic Initiatives
- 5.8 Assisting with Public Initiatives and Public Education
Update from Robert Baker, CAO

6. QUESTION PERIOD

An opportunity for members of the public to ask questions or make comments regarding items on the agenda.

7. BUSINESS

- 7.1 Liquid Waste Management Plan 5-Year Review 12 - 26
To conduct and report on a Liquid Waste Management Plan 5-Year Review.
[Staff Report 2025.05.05 LWMP 5-Year Review.pdf](#) 

Recommendation:

THAT the committee recommend to Council that the Liquid Waste Management Plan 5-Year Review be approved and a copy submitted to the Ministry of Environment and Parks.

8. LATE ITEMS

None

9. Next Meeting

Unless otherwise specified the next meeting will be held at the call of the Chair.

10. ADJOURNMENT

Recommendation:

THAT the meeting be adjourned at _____ p.m.



Liquid Waste Monitoring Committee - Jan 28 2025

Minutes

Tuesday, January 28, 2025 at 4:00 PM

Council Chambers - City Hall 413 Fourth Street, Kaslo

Chair: Mayor Hewat

Members Present: Anne Malik, Lynn Van Deursen, David Russell

Regrets: Councillor Lang

Staff: CAO Baker, CO Allaway, Ian Dunlop, Geoff Scott

Public: 0

1. CALL TO ORDER

The meeting was called to order at 4:07 p.m.

2. ADOPTION OF THE AGENDA

2.1 Addition of late items

2.2 Adoption of the agenda

THAT the agenda for the 2025.01.28 Liquid Waste Monitoring Committee Meeting be adopted as amended to include the following late item:

- Sewer Treatment Plant Expansion

CARRIED

3. ADOPTION OF THE MINUTES

THAT the minutes of the 2024.10.21 Liquid Waste Monitoring Committee Meeting be adopted as presented.

CARRIED

4. DELEGATIONS

None

5. INFORMATION ITEMS

5.1 Review of Terms of Reference

Ms. Malik inquired about the timing for developing a source control bylaw, and changes to the Sewer Specified Area bylaw and Parcel Tax bylaw.

5.2 Member Reports

1. Report from A Malik

Ms. Malik asked questions of staff regarding the amount of campground sewer fees and the sewer connections to the SS Moyie.

6. QUESTION PERIOD

None

7. BUSINESS

7.1 Review of Liquid Waste Monitoring Plan

THAT the committee recommend to Council that staff be directed to report back on the Liquid Waste Management Plan 5-Year Review with recommended updates or amendments to the plan within three months; and,

THAT the committee recommend to Council that a qualified consultant be engaged to work with staff to update the plan's cost estimates and identify any relevant changes to technologies, regulations and standards cited in the plan.

CARRIED

8. LATE ITEMS

8.1 Sewer Treatment Plant Upgrades

Upgrades to the sewer treatment plant were discussed earlier in the meeting.

9. Next Meeting

The next meeting will be held at 4:00 p.m. on Monday, May 5, 2025

10. ADJOURNMENT

THAT the meeting be adjourned at 4:45 p.m.

CARRIED

Corporate Officer

Mayor

DATE: November 6, 2024

FILE NUMBER: 1855-03-24

TO: Mayor and Council

FROM: Robert Baker, Chief Administrative Officer

SUBJECT: Grant Application - Lake Water Quality Monitoring

1.0 PURPOSE

To consider a recommendation from the Liquid Waste Monitoring Committee that the Village apply for grant funding for lake water quality monitoring.

2.0 RECOMMENDATION

THAT the Village applies to the Province of BC's Infrastructure Planning Grant Program for funding to conduct lake water quality monitoring as described in the Staff Report titled Grant Application - Lake Water Quality Monitoring dated November 6, 2024; AND if successful with its grant application,

THAT the Village conduct lake water quality monitoring in accordance with its Liquid Waste Monitoring Plan.

3.0 BACKGROUND

The Village operates and maintains a wastewater collection and treatment system [sewer/liquid waste]. The Environmental Management Act (EMA) allows local governments to develop a Liquid Waste Management Plan (LWMP) for approval by the Minister of Environment (MoE). The approved LWMP authorizes a local government, in accordance with operational certificates, to proceed with measures in the plan to accommodate existing or future development with a strategy to ensure the management, resource recovery, and disposal of treated waste occurs in a manner that sufficiently protects public health and the environment. The Village voluntarily developed a LWMP in 2012 and attained MoE approval in 2014, followed by updates to the LWMP as recently as 2018 with MoE approval in 2020. Approval was given on the condition that a Monitoring Committee be established to oversee and evaluate implementation of the LWMP.

In accordance with conditions of the LWMP approval, the Village established a Monitoring Committee whose Mandate includes:

- Advancing long term community goals
- Project cost recovery
- Monitoring & sampling of the receiving environment
- Monitoring & documentation of private septic system performance
- Incremental expansion of the system and service areas
- Assisting with public initiatives and public education

The LWMP suggests that when planning for future incremental sewer expansion, the Village should consider monitoring and documentation that includes sampling of the receiving environment. This could

include lake water quality monitoring along the foreshore, as well as installation of groundwater monitoring wells, if needed, for areas of specific interest.

Accordingly, the Liquid Waste Monitoring Committee passed a recommendation at their October 21, 2024 meeting requesting the Village apply for grant funding that would enable lake water quality monitoring to proceed. The purpose of this Staff Report is to provide supplemental information regarding the Committee's recommendation.

4.0 DISCUSSION

The LWMP Monitoring Committee's recommendation is within the scope of its Mandate and would support implementation of the LWMP. Grant funding for lake water quality monitoring would offset contractor costs, and any staff time spent administering the contract could be afforded within the Village's operating budget. For these reasons, it makes good sense for the Village to apply for grant funding and, if successful, proceed with lake water quality monitoring.

5.0 OPTIONS

[Recommendation is indicated in **bold**. Implications are in *italics*.]

1. **The Village may apply for grant funding to enable lake water quality monitoring, and if its application is successful then the Village would hire a contractor to perform the work.** *Staff will notify the LWMP Monitoring Committee of Council's decision, apply for grant funding, notify Council and the LWMP Monitoring Committee if the grant application is successful, and then perform lake water quality monitoring in accordance with the LWMP.*
2. Council provides direction to staff for further review and report.

6.0 FINANCIAL CONSIDERATIONS

Municipalities can apply for grants that support projects related to the development of sustainable community infrastructure through the Province of BC's Infrastructure Planning Grant Program. The program is open for applications year-round and the next processing deadline is December 11, 2024. Grants of up to \$10,000 are available to help local governments develop or improve long-term comprehensive plans including, and not limited to:

- Asset management plans
- Integrated stormwater management plans
- Water master plans
- Liquid waste management plans

Grants can be used for a range of activities related to assessing the technical, environmental and/or economic feasibility of local government infrastructure projects.

More specifically, the Grant Program will contribute 100% of the first \$5,000 in approved eligible project costs. Eligible costs that exceed \$5,000 are funded at 50% up to a maximum total grant amount of \$10,000. Staff have received an estimate from a qualified contractor for lake water quality monitoring in the amount of \$10,000. In addition to this cost, the Village would incur administrative expenses of up to \$5,000 which can be afforded within the Village's operating budget. The total project budget is estimated at \$15,000.

7.0 LEGISLATION, POLICY, BYLAW CONSIDERATIONS

Legislation

The Ministry of Environment and Climate Change Strategy has approved the Village's LWMP pursuant to the Environmental Management Act section 24(5).

Policy

The Village's Procurement and Asset Disposal policy shall be adhered to when awarding contracts.

8.0 STRATEGIC PRIORITIES

Council has recently considered its Strategic Priorities through 2025 and indicated that design for the expansion of the wastewater treatment plant is a high priority. Gathering data from lake water quality monitoring may influence the plant's design, and could bolster an application for major grant funding if Council chooses to proceed with expansion.

9.0 OTHER CONSIDERATIONS

Nothing to report.

RESPECTFULLY SUBMITTED



Robert Baker, Chief Administrative Officer



March 31, 2025

Reference: 72644

Her Worship Suzan Hewat
Village of Kaslo
Box 576
Kaslo, BC V0G 1M0

Dear Mayor Hewat and Councillors:

On behalf of the Province of British Columbia (province), I am pleased to advise you that your application under the *Local Government Grants Act* for an infrastructure planning grant has been conditionally approved for the following project:

Grant Description	Amount
Kootenay Lake Testing for Ground Infiltrated Wastewater	\$9,850

Details of the terms and conditions attached to this grant will be dealt with in an agreement that will be forwarded to you by Ministry of Housing and Municipal Affairs' staff. This agreement must be signed and returned to the Ministry, indicating your acceptance of the terms and conditions. For questions related to this funding, please contact infra@gov.bc.ca.

The province welcomes the opportunity to support planning in the Village of Kaslo. We believe that early and ongoing planning is the best way to ensure that the environmental, social, and economic needs of your community will continue to be met in the years ahead.

Through your planning efforts, the province encourages you to find ways to use new technology to promote environmental excellence and sustainable service delivery.

Congratulations on your successful application and my best wishes with your infrastructure study.

Sincerely,

Ravi Kahlon
Minister of Housing and Municipal Affairs

- Sewerage Type 1
- Sewerage Type 2
- Sewerage Type 3
-

10 of 11

DATE: May 5, 2025

FILE NUMBER:

TO: Liquid Waste Monitoring Committee

FROM: Ian Dunlop, Manager of Strategic Initiatives

SUBJECT: Liquid Waste Management Plan 5-Year Review

1.0 PURPOSE

To conduct and report on a Liquid Waste Management Plan 5-Year Review.

2.0 RECOMMENDATION

THAT the committee recommend to Council that the Liquid Waste Management Plan 5-Year Review be approved and a copy submitted to the Ministry of Environment and Parks.

3.0 BACKGROUND

The Liquid Waste Management Plan (LWMP) was approved by the Minister of Environment on January 27, 2020. A condition of approval is that the plan be reviewed in 5 years and the ministry is informed of the outcome of the review within 6 months of the review being completed. Other conditions of the letter are to implement a receiving environment monitoring program and establish a plan monitoring committee (this committee).

The Ministry of Environment published a guide for preparing LWMPs, which includes a section on the requirements for the plan review and amendment process:

6.3 Plan Review and Amendment Process

Local governments must review the progress and status of LWMPs every 5 to 10 years, or more frequently during times of significant inflation or when circumstances have changed significantly from when the original plan was developed. The LWMP review will determine whether or not an amendment or update is required.

During the review, the cost estimates for capital expenditure and operations and maintenance costs should be updated to ensure costs are current. If a significant time elapses between plan development and implementation, an amendment should be undertaken. The following should be reviewed to ensure the plan is still relevant and current:

- Cost estimates;
- Objectives and outcomes;
- Approach and technologies;
- Regulations and standards;
- Official Community Plan and Regional Growth Strategy; and
- Public support for the plan.

While a full amendment may address all of the above, an update to the plan could be undertaken to revise cost estimates. The public should be made aware of a revision to cost estimates through advertisement, press coverage or other communications. If a full amendment of the plan is undertaken, more extensive public consultation should be part of the process.

Local governments that propose to amend or update an approved LWMP shall notify the director in writing of the reasons for the proposed amendment or update. Local governments should discuss requirements for plan updates and amendments with the director and will be required to undergo a consultation process unless deemed unnecessary.

Following the last meeting of the committee, correspondence with a representative of the Ministry of Environment and Parks provided clarity on the content and requirements of the 5-year review. There is no standard template to follow, nor need to have the findings endorsed by a professional engineer. What is required is to show that progress is being made on the objectives of the LWMP and that the plan continues to be kept in mind in the municipality's operations, financial plan and strategic priorities.

The final LWMP was issued on September 19, 2018, following an over 6-year process to evaluate the community's existing and future wastewater needs. The plan includes cost estimates for sewer system operations, capital projects, and revenue. The 5-year review must update these costs to include inflationary factors and consider any changes to technologies, regulations and standards that have occurred since the plan was written. Amendment of the plan is not necessary but might be required if a proposed new approach, objective or outcome materially changes the intent of the plan.

4.0 DISCUSSION

This section provides the analysis and outcome of the Kaslo LWMP 5-year review. Once the review is approved by Council, a copy will be forwarded to the Ministry to fulfil the reporting requirement. First, let's consider the achievements attained since the plan was approved, which are listed below.

Achievements

1. Sewer Specified Area Bylaw passed (map)
2. Wastewater Treatment Plant upgrade project planning
3. Wastewater Collection Expansion to SSA3 planning
4. Sewer Expansion Phase 1 project (SSA2) completion
5. Highway 31 Sewermain crossing at D Ave for future SSA3 expansion
6. Sewer Parcel Tax implementation
7. User Fees based on LWMP structure
8. Restaurant grease trap inspection program
9. Asset management and GIS mapping
10. Wastewater collection and treatment plant Phase 2 expansion planning
11. Receiving Environment Monitoring
12. Kootenay Lake Water Quality Monitoring

The following table provides a status report on the high-level outcomes envisioned in the LWMP. The LWMP Summary of Outcomes can be found in Section 9 of the Stage 3 document. This table was presented to the committee in January 2025, at the start of the 5-year review process.

Outcome	Status	Comment
1. The Liquid Waste Management Plan considers options for providing community sewers and increasing the capacity of the wastewater treatment system to accommodate more of Kaslo into the municipal collection system.	Done	The LWMP was approved, and the plan's implementation is an ongoing process.
2. Sewer expansion is envisioned to prioritize the Lower Kaslo area, with sewerage projects occurring incrementally with time. Sewerage projects would be triggered by factors including: <ul style="list-style-type: none"> Long term community goals per the Integrated Community Sustainability Plan and the Official Community Plan. Project cost and resulting cost per property. Monitoring and documentation of septic system performance. Public initiatives. 	In progress Done Update Needs work	Pursuing sewer expansion is a policy enshrined in the 2022 Official Community Plan. The construction of a sewer highway crossing at D Avenue during Kaslo River Bridge replacement is an example of forward-thinking to help reduce the cost of future expansion of the system. Project costs need to be updated. Monitoring and documentation need further investigation through asset management and research. Interior Health sewerage records are incomplete. Funding is being sought to implement a nearshore lakewater sampling program to test for seepage from private systems.
3. Without grants, capital construction costs of the Village-owned infrastructure (not including service pipes on private property) are anticipated to be around \$15,500 per property for sewerage plus approximately \$5,500 per property for future treatment upgrades. To maintain a reasonable cost to the community, the Village will aspire to limit borrowing to 33% of projects over \$250,000, and \$1.5M on an ongoing basis.	In progress	The Village applied for a grant towards funding WWTP improvements and system expansion to most of Lower Kaslo. The grant was denied, but Council reaffirmed their commitment to expansion in their recent strategic plan and to continue pursuing new grant opportunities.
4. Funding sources for the LWMP implementation are proposed to include: <ul style="list-style-type: none"> Parcel tax including a community-wide contribution for sewage education and monitoring. Parcel tax on all sewerage areas for future sewage treatment upgrades. Parcel tax on all sewerage areas for reserve funding Implementation of a capital charge as a contribution to sewage treatment reserves by future services and future redeveloped properties for wastewater treatment capacity User fees on all sewerage areas for annual operating costs. 	In progress Not done Not done Done Done Done	Parcel taxation for reserve funding and user fees towards operating costs are implemented for sewerage areas. Council has not implemented parcel taxation for education, monitoring and expansion. Updates needed for expansion costs. Implementation of asset management to confirm operating and renewal costs is in progress.

5. Funding structure for sewer expansions are proposed to include: <ul style="list-style-type: none"> • Common reserve funding structure across all sewer areas • Common user fee structure across all sewer areas 	In progress	Updates needed for expansion costs. Implementation of asset management to confirm operating and renewal costs is in progress.
6. Additional administrative and governance changes associated with LWMP implementation include: <ul style="list-style-type: none"> • Payments in lieu of taxes are to be made for 'tax exempt' properties within all sewer areas • Restructure of the sewer user fees • Restructure of the sewage regulation bylaw, and enhance the source control for higher strength industrial discharges as well as commercial kitchens 	In progress Done Done Not Done	Updating the sewer specified area bylaw was completed. Restructure of the sewage regulation bylaw and source control remains outstanding due to strategic priorities and staff capacity. Sewer user fees and categories updated in the Fees & Charges Bylaw.

Sewer Expansion Plan

The LWMP envisions incremental expansion of the sewer system over 10 to 20 years. This timeframe remains relevant, as the planning for expansion continues to progress. Since the plan was adopted in 2018, the Phase 1 construction was completed in 2019, as part of the envisioned Lower Kaslo expansion. The Village applied for infrastructure grants to further expand the collection system in 2020, and again in 2022 for treatment plant upgrades.

A new sewer Highway 31 (4th St) crossing was installed between C and D Avenues in conjunction with the Ministry of Transportation's replacement of the Kaslo River Bridge to accommodate further expansion in Lower Kaslo. Taking advantage of this construction opportunity reduces the cost of future construction. It is estimated that the cost of constructing the highway crossing would be at least triple the cost paid and require separate permits and a willingness from the Ministry to do an open cut in the recently reconstructed roadway.

Map 1 provides an update to the Lower Kaslo expansion plan. This map was prepared for the 2020 application to the Investing in Canada Infrastructure Program for Phase 2 expansion. The grant was turned down, but the work towards the grant application led to the decision to construct the highway crossing at C and D Avenue, with confidence that the project will go ahead as soon as funding is secured.

Map 2 shows the current extent of the wastewater collection system and the Specified Service Areas (SSA) that are designated under Bylaw 1289, passed in 2023. The designation of SSAs enables the possibility of levying different forms of taxation or fees to raise funds for capital asset maintenance and expansion. SSA1 was also expanded to include the properties between the Kaslo Victorian Hospital and JV Humphries School, which were previously omitted yet could easily access the sewer fronting their properties. These properties are also now subject to parcel taxation.

Updated costs for the expansion plan are included in the next section.

Financial Update

The updated LWMP capital costs and revenue suggestions are shown in the tables below. Each of the financial tables in this report have a column for the original estimate from the 2018 report and an updated estimate for 2025. Certain tables from more recent Project Briefs that were prepared for grant applications have the year of the report and update to 2025.

The updated dollar amount is based on the change in the consumer price index (CPI) over the period sourced from the Bank of Canada to represent inflation. The rate used is indicated at the top of the 2025 column. A caution with these numbers is the CPI is based on inflation of consumer goods, which does not necessarily correspond to inflation related to capital infrastructure construction and material costs. A spike in inflationary factors after the pandemic was noted when the Project Briefs were prepared, so those expansion costs will be more accurately carried forward than the ones in the original LWMP.

Updated construction cost tables from the LWMP:

	2018	2025 23%
Lower Kaslo Sewer Construction Costs (Class 'C' Estimate)		
Sewer Construction	\$2,830,000	\$3,480,900
Lift Stations	\$650,000	\$799,500
Watermain Relocation*	\$120,000	\$147,600
Roadworks and Restoration	\$1,050,000	\$1,291,500
TOTAL PROJECT (c/w rounding)	\$4,650,000	\$5,719,500

	2018	2025 23%
Upper Kaslo Sewer Construction Costs (Class 'D' Estimate)		
Sewer Construction	\$5,500,000	\$6,765,000
Lift Stations	\$420,000	\$516,600
Roadworks and Restoration	\$2,300,000	\$2,829,000
TOTAL PROJECT (c/w rounding)	\$8,220,000	\$10,110,600

	2018	2025 23%
Table 4-1: Short Term Upgrade (Phase 1)		
Primary Treatment	\$360,000	\$442,800
Sludge Dewatering Relocation	\$30,000	\$36,900
Buildings	\$270,000	\$332,100
Electrical	\$90,000	\$110,700
TOTAL PROJECT (c/w rounding)	\$750,000	\$922,500

	2018	2025 23%
Table 4-1: Long Term Upgrade (Phase 2)		
Rotating Biological Contactor	\$740,000	\$910,200
Clarifier	\$180,000	\$221,400
Effluent Filtration	\$400,000	\$492,000
Influent / Effluent Pump Stations	\$130,000	\$159,900
Electrical	\$300,000	\$369,000
TOTAL PROJECT (c/w rounding)	\$1,750,000	\$2,152,500

The cost summaries from the Project Briefs for the Sewer Collection System Expansion proposal prepared in 2020 and the Wastewater Treatment Plant Upgrades in 2022 are included below:

WWTP Upgrade – Project Brief Wastewater Treatment Plant Upgrades (Class ‘C’)	2022	2025 10%
Construction		
- General	\$85,000	\$93,500
- Process Mechanical	\$850,500	\$935,550
- Civil and Buildings	\$696,900	\$766,590
- Electrical	\$426,000	\$468,600
Subtotal Construction	\$2,058,400	\$2,264,240
Design (5% of construction cost)	\$102,920	\$113,212
Project management / engineering (10% of construction cost)	\$205,840	\$226,424
Environmental and archaeological work	\$30,000	\$33,000
Contingency (30%)	\$719,148	\$791,063
Total Cost Estimate	\$3,116,300	\$3,427,930

Sanitary Sewer System Expansion Phase 2 – Project Brief Part B: Sewer Collection System Extension (Class ‘B’)	2020	2025 20%
General Requirements (mob/de-mob, survey layout, traffic control)	\$95,000	\$114,000
Concrete (restoration of curbs and sidewalks)	\$40,375	\$48,450
Electrical (temporary fibre servicing on 3rd Street)	\$12,460	\$14,952
Earthwork (removals, oversized rock allowance, reinstatements)	\$261,970	\$314,364
Roads and Site Improvements (road gravel, asphalt, line painting, topsoil and seed)	\$565,670	\$678,804
Utilities (sewermain, manholes, service connections)	\$977,965	\$1,173,558
Subtotal Construction	\$1,953,440	\$2,344,128
Engineering (15% of Construction)	\$293,016	\$351,619
Contingency (20%)	\$449,291	\$539,149
Total Part B Cost Estimate (not including GST)	\$2,695,747	\$3,234,896

For the Wastewater Treatment Plant Upgrades, note that the LWMP estimate included installation of a second rotating biological contactor (RBC), while the 2022 Project Brief did not. The updated estimated cost for plant upgrades based on the 2018 LWMP was \$3,075,000 (sum of tables 4-1). The revised cost without the second RBC from the 2022 Project Brief is \$3,428,000. However, the LWMP figures did not include a contingency amount.

Wastewater Treatment Plant Upgrades

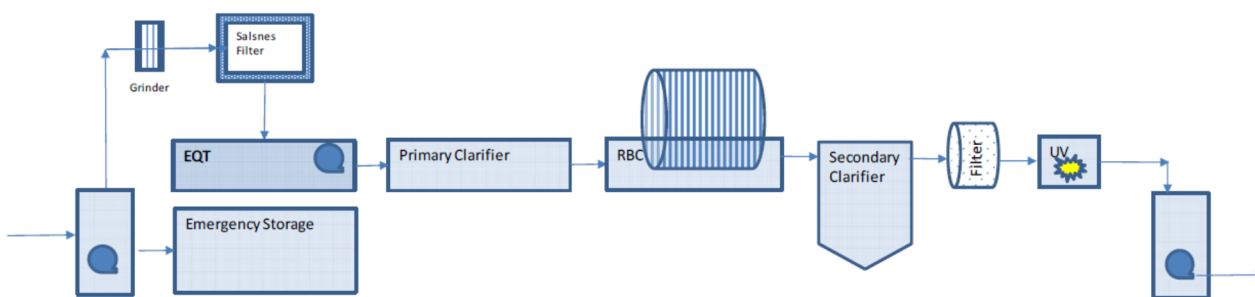
Upgrading the treatment plant is a priority so that the system can run more efficiently and handle varying flows and concentrations of wastewater throughout the day. A Project Brief for plant upgrades was prepared in 2022 for a grant application to the Strategic Priorities Fund. The grant was turned down, as the program was oversubscribed by 9 times the total amount of funding available. If it was successful, it would

have provided 100% funding for the upgrades. Other funding programs usually require matching funds from the municipality, meaning that the Village would need to commit around \$1 million towards the project through a combination of reserve withdrawal and municipal financing. The LWMP provides various scenarios for funding expansion through a capital charge (parcel tax).

The 2022 Project Brief envisioned a balancing tank that would enable dosing the RBC over a 24-hour period, rather than being subjected to highly fluctuating flows throughout the day. This component is critical to ensure the plant has the capacity to handle an expanded wastewater collection system serving more of Lower Kaslo and increased residential density to align with the recent provincial housing mandate.

A second RBC was deemed less critical because it mainly provides system redundancy rather than expansion potential. The proposed flow diagram with the equalization tank is shown below.

Process Flow Diagram for Proposed Design

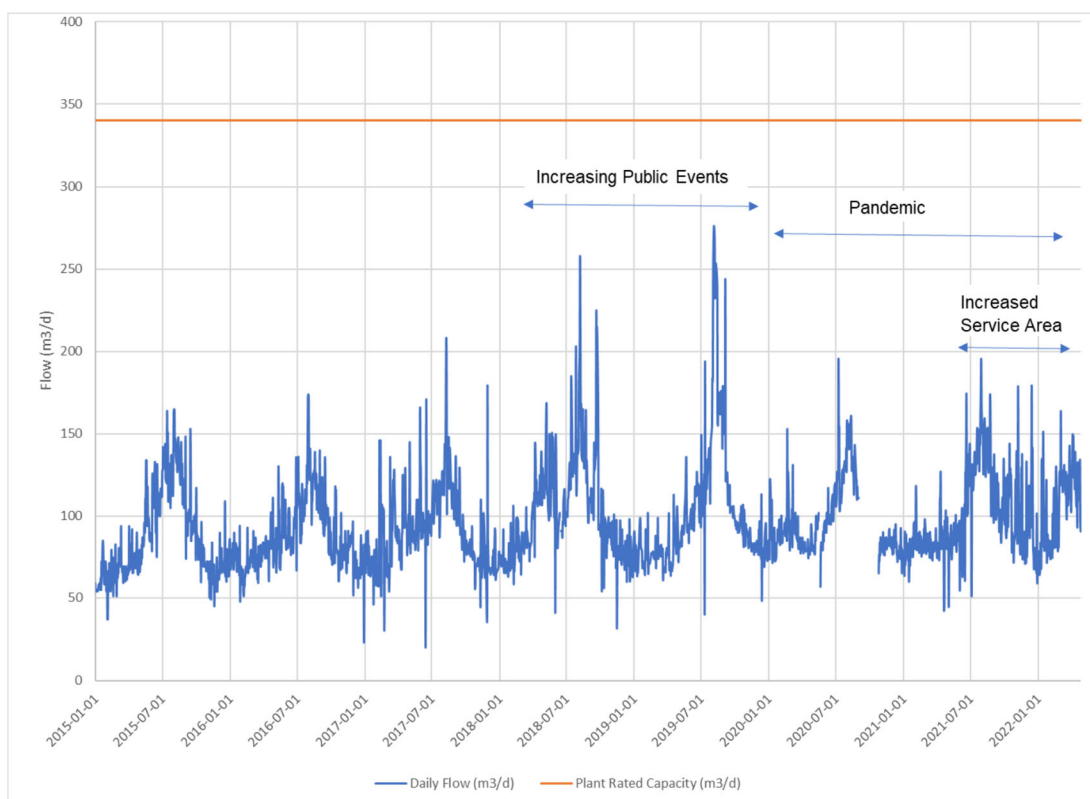


Other components of the upgrade include pretreatment and sludge dewatering. Dewatering is currently housed outside the plant in a shipping container. Expanding the plant to accommodate this function will enable year-round sludge processing, reduce odour, improve public works crew health and safety, and aesthetics of the facility to the general public. The Village will continue to pursue funding for this expansion project. Funds are allocated in the 2025 budget to prepare tender-ready plans in preparation for the next funding opportunity.

Wastewater Treatment Plant Operation

Daily wastewater flows were analyzed for the 2022 Project Brief. The figure on the next page also shows the effect of the pandemic on daily flows into the plant and the reduction in large summertime events and the impact of phase 1 expansion. Phase 1 expansion had a lesser effect on plant inflows than large summertime events.

The allocated plant capacity cited in the LWMP is 367m³ per day. The observed peak flow during the 2019 Jazzfest weekend was 276m³, which would require a plant capacity of 462m³ per day to serve such an event and the flow allocated SSA1 and SSA2 once fully developed. Therefore, load balancing is essential to enable the plant to handle event-related fluctuations during peak periods. Jazzfest has scaled back their event since resuming after the pandemic.



Funding Sewer Operation and Capital Costs

LWMP Table 7-4 is updated, below, to adjust operating costs to 2025 based on inflation. The actual state of operating costs for SSA1 and SSA2, the parts of the system currently in operation, is also shown in the right column. The operating cost and user fees are in line with the originally estimated values.

Table 7-4: Estimated Average Sewer Contributing Properties	2018		2025 23%		Actual 2025	
	System Operating Cost	Annual User Fee	System Operating Cost	Annual User Fee	System Operating Cost	Annual User Fee
Existing SSA-1 (148 folios)	\$110,000	\$750 per folio (on average)	\$135,300	\$922 per folio (on average)		
SSA-1 and SSA-2 (207 folios total)	\$125,000	\$610 per folio (on average)	\$153,750	\$750 per folio (on average)		
SSA-1 and SSA-2, plus Phase 1 Treatment Upgrades (207 folios total)	\$130,000	\$630 per folio (on average)	\$159,900	\$774 per folio (on average)		
SSA-1 and all of Lower Kaslo, plus Phase 1 and 2 Treatment Upgrades (330 folios total)	\$185,000	\$560 per folio (on average)	\$227,550	\$688 per folio (on average)		
SSA-1 and all of Lower and Upper Kaslo, plus Phase 1 and 2 Treatment Upgrades	\$240,000	\$440 per folio (on average)	\$295,200	\$541 per folio (on average)		
					\$148,626 (2025 Budget)	\$701 per folio (on average, 212 folios)

The initial connection costs for a typical residential property are shown in Table 7-7 of the LWMP. The updated costs are shown below. The current Capital Charge for new connection is \$4,717 (Bylaw 1300, 2024) and applies to new connection in both SSA1 and SSA2 towards asset renewal costs.

Table 7-7 Initial Sewer Connection Costs (one-time costs)

	2018		2025 23%	
	SSA-1	SSA-2	SSA-1	SSA-2
Capital Charge (for wastewater treatment reserves)	\$0	\$3,475	\$0	\$4,274
Septic system decommissioning	\$2,500	\$2,500	\$3,075	\$3,075
Building sewer pipe from home to property line (edge of road/lane)	\$2,000	\$2,000	\$2460	\$2460
Initial Sewer Connection Costs (approximate)	\$4,500	\$8,000	\$5,535	\$9,809

The proposed user fees and taxation for sewerage education and capital renewal funding from Table 7-8 are updated below. The Sewage Education and Monitoring charge was not implemented. The current User Fee for a residential dwelling is \$453 (Bylaw 1300, 2024). The average User Fee is \$702 per folio. The current Renewal Reserve Funding cost is \$1.58 per foot of frontage (Bylaw 1313, 2025), which works out to an average of \$104 per parcel. The rate will increase to \$3.29 per foot in 2029, or \$204 per parcel, to be more in line with the amounts proposed in this table.

Table 7-8 Proposed Annual Sewer Costs for a Residential Property

	2018			2025 23%		
	SSA-1	SSA-2	Remainder of Village	SSA-1	SSA-2	Remainder of Village
Sewage Education and Monitoring	\$25	\$25	\$25	\$31	\$31	\$31
User Fees (Operating Charges)	\$425	\$425	\$0	\$523	\$523	\$0
Renewal Reserve Funding						
- Sewage Collection	\$90	\$90	\$0	\$111	\$111	\$0
- Sewage Treatment	\$60	\$60	\$0	\$74	\$74	\$0
Proposed Annual Sewer Costs	\$600/yr	\$600/yr	\$25/yr	\$738/yr	\$738/yr	\$30/yr

Suggested user fees are listed in table 7-5 of the LWMP. Updated fees are shown below, along with the current fee. The current rates (Bylaw 1300, 2024) do not correspond directly to the example user fees and some fee categories are not applicable in Kaslo. The rate for "Vacant lot with service available" is for commercial parcels. The rate for vacant residential is the same as residential unit.

Amendment

An amendment to the plan is not necessary, as the plan still reflects the aspirations of the Village for liquid waste management. This 5-year review report will become an addendum to the plan, once approved by Council, to provide a financial and progress update. As we saw in Table 7-4, the revenue collected from the current user fee structure is sufficient to meet the operating budget, so no change to this approach is needed.

Table 7-5: Example User Fee Structure for Operating Costs

	2018	2025 23%	Current
Type of Use	Annual User Fee	Annual User Fee	Annual User Fee
Residential			
Single family	\$425.00	\$522.75	\$453.00
Multi-family (per unit)	\$425.00	\$522.75	\$453.00
Townhouse	\$425.00	\$522.75	\$453.00
Mobile Home	\$425.00	\$522.75	n/a
Hairdressing , barber shops, beauty parlours and pet grooming	\$425.00	\$522.75	\$453.00
Coffee Shop /Restaurant /Dining	\$900.00	\$1107.00	\$907.00
Food / beverage production facilities, take-out establishments			
<i>No seating</i>	\$800.00	\$984.00	\$680.00
<i>With seating</i>	\$900.00	\$1107.00	\$907.00
<i>Brewery (with or without seating)</i>	\$1,500.00	\$1845.00	\$1,699.00
Service stations	\$700.00	\$861.00	\$453.00
Car Wash (per bay)	\$400.00	\$492.00	\$680.00
Laundries			
<i>For the first machine</i>	\$250.00	\$307.50	\$227.00
<i>For each additional machine</i>	\$150.00	\$184.50	\$227.00
Motel units and/or tourist cabins			
<i>For the first unit (Note: Current rate is for first 4 units)</i>	\$350.00	\$430.50	\$907.00
<i>For each additional unit</i>	\$180.00	\$221.40	\$113.00
Hotels			
<i>For each unit (Current rate is for first 4 units)</i>	\$180.00	\$221.40	\$907.00
<i>Café, pub lounge or dining room</i>	\$900.00	\$1107.00	\$907.00
Short Term Rental Accommodations			
<i>Up to 4 bedrooms</i>	\$720.00	\$885.60	\$907.00
<i>For each additional bedroom thereafter</i>	\$180.00	\$221.40	\$113.00
<i>Strata unit</i>	\$425.00	\$522.75	\$453.00
Retail stores, public halls	\$400.00	\$492.00	\$453.00
Offices, with use of washroom facility	\$400.00	\$492.00	\$453.00
School (all uses)	\$10,000.00	\$12,300.00	\$10,000.00
Hospital (all uses)	\$5,000.00	\$6,150.00	\$5,000.00
Commercial work/ maintenance yards	\$300.00	\$369.00	n/a
Large Grocer	\$1,100.00	\$1,353.00	\$1,360.00
Industrial sites	\$1,500.00	\$1,845.00	n/a
Commercial Swimming Pools	\$1,500.00	\$1,845.00	n/a
For any use not identified in this table (<i>per washroom</i>)	\$180.00	\$221.40	\$227.00
Vacant lot with service available ³	\$600.00	\$738.00	\$680.00
Existing improvements on property choosing not to connect ⁴	\$50.00	\$61.50	\$113.00

Financing Future Expansion

Large infrastructure grant opportunities seem to be becoming scarcer and most require some level of matching funds from the municipality. As the sewer reserve balance is insufficient to fund a large expansion project, borrowing may be necessary.

Kaslo's liability servicing limit is \$529,117 (2023, Source https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/local-governments/finance/local-government-statistics/schedule602_1_2023.xlsx). The liability servicing is the amount that would need to be raised annually through additional taxation and user fees to pay off capital financing. The maximum debt that can be serviced by this limit is approximately \$7 million over a 20-year term at an interest rate of 4.5%. Kaslo currently has no debt.

However, if the debt is levied only on the benefiting properties within the SSA through a parcel tax, the burden of a large debt becomes much more onerous on an individual folio basis. This will have to be considered, and further, taking on long-term debt requires elector approval.

5.0 OPTIONS

If the committee is satisfied with this 5-year review, the committee should recommend to Council that it be adopted and a copy forwarded to the Ministry of Environment and Parks. If the committee feels anything is lacking, staff may continue working on the review to address the deficiencies identified.

- 1. THAT the committee recommend to Council that the Liquid Waste Management Plan 5-Year Review be approved and a copy submitted to the Ministry of Environment and Parks.**

6.0 FINANCIAL CONSIDERATIONS

Financial considerations have been outlined throughout the discussion section of this report.

7.0 LEGISLATION, POLICY, BYLAW CONSIDERATIONS

Legislation

Section 24(5) of the Environmental Management Act

Policy

Liquid Waste Management Plan

Bylaw

1300 Fees & Charges

1288 Sewer System Capital Parcel Tax

1289 Sewer Service Area

1280 Official Community Plan

1121 Sewer Regulation

8.0 STRATEGIC PRIORITIES

Wastewater Treatment Plant Expansion Design and developing an Asset Management Program are a NOW priority in Council's 2025-2026 Strategic Priorities.

9.0 OTHER CONSIDERATIONS

Nil.

RESPECTFULLY SUBMITTED

A handwritten signature in black ink, appearing to read 'Ian Dunlop', written over a horizontal line.

Ian Dunlop, Manager of Strategic Initiatives

CAO COMMENTS:

CAO COMMENTS:

APPROVED FOR SUBMISSION TO COUNCIL:

Robert Baker, Chief Administrative Officer

Date

Kaslo Wastewater System 2025

Wastewater Pipe

- Transmission Force Main
- Transmission Gravity Main
- Service Connection
- Other

SewerSpecifiedArea

- 1
- 2
- 3

Wastewater Treatment

Wastewater Manhole Cover

