



**SOLID WASTE MANAGEMENT PLAN
PUBLIC & TECHNICAL ADVISORY COMMITTEE**
Wednesday, April 17th, 2024
1975 Field Road, Sechelt, B.C.

AGENDA

CALL TO ORDER 2:00 p.m.		
AGENDA		
1.	Adoption of Agenda	
MINUTES		
2.	Adoption of the Meeting Minutes from March 6, 2023	Annex A Pages 2-4
PRESENTATIONS AND DELEGATIONS		
BUSINESS ARISING FROM MINUTES AND UNFINISHED BUSINESS Review last survey/feedback results and a recap on priorities and comments received at the last meeting. <i>Morrison Hershfield</i>		Verbal
REPORTS		
3.	Memo: Future Disposal Options <i>Marc Sole</i>	Annex B Pages 5-23
COMMUNICATIONS		
4.	Memo: Potential strategies to consider for Solid Waste System Financing <i>Morrison Hershfield</i>	Annex C Pages 24-40
NEXT MEETING: June 2024		
ADJOURNMENT: 5:00 p.m.		

SUNSHINE COAST REGIONAL DISTRICT SOLID WASTE MANAGEMENT PLAN PUBLIC AND TECHNICAL ADVISORY COMMITTEE

Wednesday, March 6, 2024

RECOMMENDATIONS FROM THE SOLID WASTE MANAGEMENT PLAN PUBLIC AND TECHNICAL ADVISORY COMMITTEE MEETING HELD IN THE CEDAR ROOM, 1975 FIELD ROAD, SECHELT, BC

PRESENT:

(Voting Members)

Chair
Vice Chair
Members

Director, Mayor of Gibsons

J. Sutherland
D. Reeve
J. Walton
N. Brenchley
P. Robson
S. Van Poppelen
M. Ernst
S. White

ALSO PRESENT:

(Non-Voting)

Manager, Solid Waste Services
Solid Waste Operations Coordinator
Recorder
Director, Electoral Area E
Director, Electoral Area D

M. Sole
A. Patrao
R. Newland
D. McMahon
K. Backs

REGRETS:

Members

A. Joe
E. Machado
S. Selzer

CALL TO ORDER

3:31 p.m.

AGENDA

The agenda was adopted as amended.

MINUTES

The minutes of the November 21, 2023, Solid Waste Management Plan Public and Technical Advisory Committee meeting were accepted as circulated.

REPORTS

Potential Strategies to Consider for Management of Residual Waste Memo.

COMMUNICATIONS

Potential Strategies to Consider for Management of Residual Waste.

Veronica Bartlett, representative of Morrison Hershfield, provided a presentation on the *Waste Potential Strategies to Consider for Management of Residual Waste*, which included the following:

- Reviewed the feedback from the last meeting (Strategies 7-12)
 - Some comments in the feedback survey were not entirely clear, please send comments or questions with specific details to Veronica Barlett.
 - Comments on Strategy 10A: Establish an Illegal Dumping Task Force and develop an Illegal Dumping Strategy aimed to improve tracking and reduce the number of illegal dumping incidents and 10B: Develop an education and awareness campaign around illegal dumping.
 - More signage on common backroad dump site with information on disposal options.
 - More partnerships/collaboration.
 - PTAC committee members expressed interest in programs that work to deconstruct and move old homes in an effort to reduce construction waste.
 - Sunshine Coast Tourism Update from Michael Ernst:
 - They have a sustainable tourism initiative with some disposal information.
 - PTAC supports sharing educational materials with visitors.
- Strategy 13: Assess potential for recovery of energy from residual (non-recyclable) waste.
 - Chair discussed waste to energy options, and Salish Soils working to collect more construction waste.
 - Small scale recovery options, for materials currently being landfilled.
 - Large scale waste to energy was deemed cost-prohibitive in 2021 study.
- Strategy 14: Improve invasive species disposal.
 - Work to develop regional program for education and disposal of invasive plants.
 - Example of qathet Regional District Invasive Plant Management Strategy shown.
- Strategy 15: Improve debris waste management.
 - Develop a debris waste management plan and emergency response plans for SCRD facilities to manage unpredictable surges in waste materials from natural disasters.
 - Discussion regarding supporting residents through covering tipping fees and available provincial funding supports during a natural disaster.

PTAC Open Discussion

- PTAC was lead in a small group discussion and then in a full group interactive exercise to evaluate the presented strategies.
 - Ideas Discussed:
 - Concerns Regarding Dock Management Plan Discussed as a potential issue for landfill space.
 - Creosote wood not accepted at Salish Soils.
 - Landfill Options Report by Sperling Hansen Discussed as PTAC felt more options are still needed.
 - Construction waste tracking.
 - More repurposing waste items.
 - Education materials in hotels, B&B's etc.
 - Encouraging pet waste alternatives like cat litter pellets.
- Top Strategies prioritized by PTAC:
 - 4A - Encourage and support local businesses to reduce food waste.
 - 9B - Encourage organizations, such as BC Ferries, to avoid sending waste for

- landfilling to the Sunshine Coast, where other disposal locations are available.
- 1B - Harmonize waste collection bylaws to effectively encourage waste diversion across the Region.
 - 2A - Re-assess curbside recycling costs and provide better access to curbside recycling collection, if deemed desirable by residents.
 - 6C - increase enforcement capacity beyond current 2023 levels.
 - 7D - Investigate feasibility of recycling additional C&D materials such as carpets and implement pilot when deemed feasible.
 - 10A - Establish an illegal dumping task force and develop an illegal dumping strategy aimed to improve tracking and reduce the number of illegal dumping incidents.

NEXT MEETING April 17, 2024

ADJOURNMENT 5:34 p.m.

DRAFT

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Public and Technical Advisory Committee – April 17, 2024

AUTHOR: Marc Sole, Manager, Solid Waste Services

SUBJECT: FUTURE LONG-TERM SOLID WASTE DISPOSAL OPTIONS – PROJECT UPDATE

RECOMMENDATION

(1) THAT the report titled Future Long-Term Solid Waste Disposal Options – Project Update be received for information;

BACKGROUND

Staff presented the attached report, “Future Long-Term Solid Waste Disposal Options – Project Update” to the Committee of the Whole on January 25th 2024, which included multiple capital project options for long-term waste disposal. The following recommendations were approved by the Board on February 8, 2024 (in part):

AND THAT as part of the next steps for the Future Long-Term Solid Waste Disposal Options project:

- a. staff undertake a detailed feasibility study for exporting waste; and,
- b. staff engage with Sunshine Coast local governments, First Nations, interested parties and residents on the feasibility of future solid waste disposal options in support of the Solid Waste Management Plan Update process and the future of solid waste management on the Sunshine Coast

The January 25 report included information on historical studies and recent analysis of waste disposal options on the Coast, from 2020 to now, and summarized the potential capital projects that could extend the life of the Sechelt Landfill or be long-term waste disposal options. These capital projects were brought forward in the 2024 budget process.

This report looks to summarize the direction given by the Board as it relates to the update of the SCRD Solid Waste Management Plan.

DISCUSSION

Extending the Life of the Sechelt Landfill - Capacity Expansion

During the 2024 Budget process, the following short term expansion projects to extend the life of the Sechelt Landfill were approved:

- Construction funding for the relocation of the contact water pond
- Feasibility study and engineering for a vertical expansion within the existing Sechelt Landfill property.

The following table summarizes the timing, approved budget and estimated landfill life extended in years.

Table 1 – Waste disposal projects for existing landfill life extension

Capital Project	Estimated Years Extended	Estimated Completion	Status	Budget
Relocation of contact water pond	5 years	Q4 2024	Budget approved for construction phase. RFP to be issued Q2 2024	\$520,000 for construction
Vertical expansion within Sechelt Landfill property	7+ years	Feasibility Study: Q4 2024 Engineering, permitting and construction: 2025-2030	Budget approved for the feasibility study. RFP to be issued Q2 2024.	\$165,000 for feasibility study and engineering TBD for engineering, permitting and construction costs

Long-term Waste Disposal

As the projects for increasing the capacity of the current Sechelt Landfill are not guaranteed to address the long-term need for a waste disposal option, further work is required to confirm the options for this. At the February 8, 2024, Board meeting, the Board directed staff to undertake a detailed feasibility study for exporting waste off-Coast, and engage with First Nations, local governments, interested parties and residents on other potential long-term waste disposal options including lateral expansion and or a new landfill sited elsewhere in the Region. Results from the feasibility study and engagement on long-term waste options are not part of this Solid Waste Management Plan Update, but will come forward in future updates or amendments.

The SCR D is proposing to host “Solid Waste Summits” which will include governing authorities with interests in long-term waste disposal on the Sunshine Coast. The objective of these Summits is to create a shared understanding of the feasibility of different long-term waste disposal options. These summits will provide an opportunity for staff and elected officials of the invited parties to share knowledge and views on the pros and cons of different long-term waste disposal options.

Table 2 – Long-term waste disposal options for consideration

Capital Project	Estimated Years Extended	Estimated Completion	Status	Est. Budget
Waste Export (Feasibility Study)	0 years	Q4 2024	Budget approved. RFP to be issued Q2 2024	TBD for feasibility study and potential development costs
Sechelt Landfill Lateral Expansion	50-60 years	7-10 years	Solid Waste Summits to discuss option	Approximately \$26.6 million*

New Landfill Location	Dependent on location	10+ years	Solid Waste Summits to discuss option	Approximately \$40-60 million
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**Sperling Hansen Associates, 2023.*

Diversion Options

As part of the Solid Waste Management Plan Update, strategies for increased diversion can extend the life of the Sechelt Landfill and any future disposal options. For example, the Ocean Plastics Depot at the landfill saves approximately nine days of landfill life per year by diverting large voluminous amounts of dock foam.

NEXT STEPS

Solid Waste Management Plan Update

The Solid Waste Management Plan Update that is currently being developed to include the proposed disposal options for the life-span of the plan (10 years). The current 2011 Solid Waste Management Plan outlines two options the SCRD has for waste disposal, the Sechelt Landfill and waste export. Staff are currently considering including the two waste disposal capital projects for extending the life of the Sechelt Landfill for the short term into the plan update: the contact water pond relocation project at a cost of approximately \$570,000, and a vertical expansion at an as yet undetermined cost to be established during the feasibility study planned for 2024. Once a long-term disposal option is confirmed by the SCRD Board, the Solid Waste Management Plan will be amended accordingly. If such a confirmation predates the completion of the updated Solid Waste Management Plan, this will be included in a new plan.

The BC Ministry of Environment and Climate Change Strategy (the MOE) expects a SWMP to outline financial and administrative implications from all planned strategies, initiatives, policies, and solid waste management facilities. If a capital budget is allocated in a new SWMP, this gives a regional district the ability to borrow capital funding without having to go to a referendum.

CONCLUSION

On February 8 2024, the Board approved two projects, which directed staff to complete a capital project, feasibility study, and engineering to extend the life of the current landfill. Staff were also directed to complete a feasibility study for exporting waste off-Coast, and to continue communication with local governments, First Nations, interested parties and residents on long-term waste disposal options, including a lateral expansion or siting of a new landfill.

The proposed disposal options for the life-span of the Solid Waste Management Plan must be incorporated into the Solid Waste Management Plan Update.

ATTACHMENTS

Attachment A: January 25, 2024, Staff Report

Attachment A

Annex B

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Committee of the Whole – January 25, 2024

AUTHOR: Marc Sole, Manager, Solid Waste Services
Remko Rosenboom, General Manager, Infrastructure Services

SUBJECT: FUTURE LONG-TERM SOLID WASTE DISPOSAL OPTIONS – PROJECT UPDATE

RECOMMENDATION(S)

- (1) THAT the report titled Future Long-Term Solid Waste Disposal Options – Project Update be received for information;**
 - (2) AND THAT as part of the next steps for the Future Long-Term Solid Waste Disposal Options project:**
 - a. staff undertake a detailed feasibility study for exporting waste; and,**
 - b. staff engage with Sunshine Coast local governments, First Nations, interested parties and residents on the feasibility of future solid waste disposal options in support of the Solid Waste Management Plan Update process and the future of solid waste management on the Sunshine Coast.**
-

BACKGROUND

In 2020, the Sunshine Coast Regional District (SCRD) initiated a Future Waste Disposal Options Analysis Study to help direct long-term planning for waste disposal in the region beyond the lifespan of the Sechelt Landfill, which is expected to reach capacity by mid-2026. The scope included a demand analysis, feasibility study, and a conceptual design for feasible options.

The options included (Option 1) siting a new landfill, (Option 2) disposal at a third-party facility, (Option 3) development of a waste to energy facility, and (Option 4) landfill expansion. The findings were presented to the SCRD Board in January 2021 (available [here](#)). At this meeting, the Board directed staff to conduct a more detailed analysis of the most viable options, which included the feasibility of siting a new landfill and a transfer station to support waste export.

In July 2021, the findings of the more detailed analysis were presented to the Board for consideration (available [here](#)). The findings included three preliminary new landfill locations in Halfmoon Bay and a transfer station for waste export at the Hillside Industrial Park in Port Mellon. At this meeting, the Board directed staff to seek a second opinion on the results of the detailed analysis related to the potential landfill locations.

DISCUSSION

Second opinion findings

The assessment of potential locations with which to site a new landfill on the Sunshine Coast determined that several of the options previously reviewed do not meet the provincial Landfill Criteria Guidelines. Two of the sites that could potentially be developed into a new landfill have significant technical challenges that would need to be overcome related to the Agricultural Land Reserve and federally protected species habitat issues. More details about this second opinion are included in the presentation by Sperling Hansen Associates (SHA) that's also part of this Committee's agenda and in Attachment A.

All three previously proposed locations also have significant operational concerns that would result in an increase in operational costs and a reduced service level, including extended landfill closures.

Current efforts to increase landfill life of Sechelt Landfill

In 2020 the Sechelt Landfill was expected to reach its maximum capacity in 2025. At that time the Board initiated a process to amend the Solid Waste Management Plan (SWMP) to allow for the export of waste as an interim measure if a permanent solid waste disposal option was not developed in time. The SWMP update process is underway and expected to be completed later this year. Following a public consultation process and engagement with the First Nations and the partnering local governments, the Board approved the application for the current SWMP amendment to be submitted to the Province in 2022. The Province has since approved this amendment. The next step in this process would be for the Board to formally adopt the amended SWMP.

While this SWMP amendment process was ongoing, SCRD staff identified an opportunity to increase the lifespan of the Sechelt Landfill by relocating the contact water pond, which manages stormwater that comes into contact with solid waste. This project is expected to extend the life of the landfill until 2030. This project would allow for the disposal of solid waste at less than half the cost of exporting waste for disposal off Coast.

If the Board approves the 2024 budget proposal for the relocation of the contact water pond, there will be no need to formally adopt to the SWMP amendment as approved by the Province to allow for waste to be exported as an interim measure.

Horizontal expansion of Sechelt Landfill

Since early 2022 the SCRD and SHA, have been working on confirming the feasibility of a horizontal extension to the current Sechelt Landfill into land owned by the shíshálh Nation and is part of the Heidelberg gravel mine.

The proposed concept was to explore mining an area which could then be developed as a landfill using the most modern design and engineering. This concept could allow the continued use of the recently reconstructed public drop-off area at the current Sechelt Landfill site. While the development of such a landfill would be extremely expensive, the lifetime costs would be significantly lower than the costs associated with exporting waste or the development of a new landfill elsewhere on the Sunshine Coast. This concept was considered as a high potential

concept based on cost, limited transportation of solid waste, and lower greenhouse gas emissions compared to any other option assessed.

Following a meeting with staff from the shíshálh Nation to introduce this option, the SCRD received a letter from the shíshálh Nation in August 2023 expressing their concerns regarding both horizontal and vertical expansion of the Sechelt Landfill (Attachment B). While the letter opposes the development of a landfill within the current Heidelberg mine site, it confirms the Nation's intent to continue collaboration to confirm a long-term solid waste disposal option.

The letter also indicates shishalh Nation opposition a vertical expansion option presented. It should be noted that vertical landfill expansion option discussed in the following section is a different proposal than the option referred to in the letter received and could be constructed within the current landfill parcel.

Vertical landfill expansion opportunities

During the investigation, an additional opportunity was identified to increase the lifespan of the Sechelt Landfill by constructing a vertical expansion. Unlike a lateral expansion, a vertical expansion at the Sechelt Landfill would not extend beyond the current limit of waste at the site or the property line.

Depending on the desired project budget and the complexity of the design challenges there are two options for vertical expansion at the site along the south and west slopes of the landfill. One option is to raise the perimeter road with a berm, which could extend the lifespan of the landfill by up to ten additional years. Another option is to construct a retaining wall, similar to the vertical expansion undertaken at the Squamish Landfill, which could extend the lifespan of the landfill by up to ten additional years. Further engineering work is needed to determine the costs of each option, design challenges, and a more accurate estimate of airspace generated.

Similar to the contact water pond relocation project, a vertical expansion is expected to be considerably cheaper than waste export off-coast. A Budget Proposal to confirm the feasibility of vertical expansion options is being presented as part of the 2024 budget process. In order to have a vertical expansion option in place by 2030, work would need to begin in 2024.

Other related work underway or recently completed

In addition to the work underway to extend the lifespan of the Sechelt Landfill, staff are actively exploring opportunities to divert more waste through bylaw changes, new diversion programs, and enhancements to existing diversion programs. A Waste Composition Study conducted in 2022 determined that 46% of materials entering the landfill are items that can be diverted (available [here](#)). Also in 2022, the SCRD updated *Sanitary Landfill Site Bylaw No. 405* to include a tipping fee surcharge for loads with more than 5% food waste and implemented food waste collection at the Pender Harbour Transfer Station. In 2023 the SCRD established an Ocean Plastic Depot at the landfill to divert dock foam and other marine cleanup debris, which is expected to save approximately nine days of landfill life per year.

The SCRD is also updating the Solid Waste Management Plan. Work began in 2022 and the plan is expected to be complete in early 2025. The new Solid Waste Management Plan is expected to contain initiatives focusing on extending the life of the Sechelt Landfill, such as increased education, enforcement, and additional diversion programs.

Proposed next steps

Staff are presenting budget proposals for the extension of landfill life at Round 2 Budget on February 5th, 2024.

As the development of a new landfill or transfer station can take a minimum of 7-10 years to complete, staff are suggesting that multiple options for a future long-term solid waste disposal option are pursued in parallel (listed in no particular order):

- 1) Further engagement with the shíshálh Nation on the concerns raised about the development of a new landfill adjacent to the current Sechelt Landfill on Nation owned land.
- 2) Undertake a more detailed feasibility study for exporting solid waste off Coast, including the development of a transfer station in the Hillside Industrial Park. This would include engagement with the relevant First Nations and other interested parties.
- 3) Undertake a feasibility study for a vertical expansion of the existing Sechelt Landfill. This would include engagement with the shíshálh Nation and the Province.
- 4) Engage with the community on the above listed options in support of the Solid Waste Management Plan Update process that is currently underway.

In support of the listed activities and the process that is underway to update the Solid Waste Management Plan, staff is proposing to engage with Sunshine Coast local governments, First Nations, interested parties and residents on the feasibility of future solid waste disposal options in support of the Solid Waste Management Plan Update process and the future of solid waste management on the Sunshine Coast. If there is interest, this engagement could potentially include the organization of a series of Solid Waste Summits. These summits would build on the success of the Water Summits that were held in 2023.

Organizational and Intergovernmental Implications

Confirming and developing a new long-term solid waste disposal option requires collaboration with all First Nations and local governments, both at the staff and elected level. The proposed activities are intended to support such collaboration.

Given that the proposed activities involve a lot of engagement with other organizations at a senior-staff or elected level, most of the work will be completed by management staff within the SCRD Infrastructure Services Department and the Office of the CAO.

The proposed public engagement would be aligned with the public engagement undertaking in support of the update to the Solid Waste Management Plan.

Any proposed technical work will be conducted by a yet to be retained qualified consultant.

Financial Implications

The remaining project budget is expected to be sufficient to undertake the detailed feasibility study for exporting solid waste off-Coast and to support engagement with the community on future waste disposal options.

As part of the 2024 budget process the Board is considering a proposal to complete the proposed feasibility study for a vertical expansion of the existing Sechelt Landfill.

Timeline for next steps

Pending the approval of the project budget, staff will work with the SCRD's landfill engineer, XCG Consulting Ltd., to undertake the vertical expansion study for the Sechelt Landfill. The study results are to be expected in early 2025.

While the public engagement on the future waste disposal options will take place in Q2 and Q3 2024, the detailed timing will be aligned with the public engagement process of the SWMP update project.

Communications Strategy

This work will inform the Solid Waste Management Plan Update which has a significant public engagement component, as per the requirements in the provincial "A Guide to Solid Waste Management Planning". Staff have contracted Morrison Hershfield to support the Solid Waste Management Plan Update, including the development of a comprehensive communications and engagement plan.

The proposed engagement with the community on the future waste disposal options would include a presentation to the SWMP Public Technical Advisory Committee (PTAC), one or more public engagement sessions, and a Let's Talk page.

STRATEGIC PLAN AND RELATED POLICIES

Confirming a long-term disposal option for solid waste is one of the actions in support of the Strategic Focus Area Solid Waste Solutions in the Board's 2023-2027 strategic plan.

CONCLUSION

The feasibility of options to expand the current Sechelt Landfill horizontally or vertically need to be further assessed in 2024. Staff recommend that parallel to those activities a detailed feasibility study on the option to export waste off-coast should be undertaken.

ATTACHMENTS:

Attachment A: Sunshine Coast Regional District Landfill Siting Assessment Report, dated March 21, 2023

Attachment B: Correspondence from shíshálh Nation, regarding SNR21127.01-Sunshine Coast Regional District Future Waste Disposal Options Analysis - Part 3, dated August 28, 2023

Reviewed by:			
Manager		CFO/Finance	X – T. Perreault
GM	X – R. Rosenboom	Legislative	X – S. Reid
CAO	X – D. McKinley	Other	



**SPERLING
HANSEN
ASSOCIATES**

- Landfill Engineering
- Solid Waste Planning
- Environmental Monitoring
- Landfill Fire Control

March 21, 2023

PRJ22056

Remko Rosenboom
General Manager Infrastructure Services
Sunshine Coast Regional District
1975 Field Road, Sechelt, BC V7Z 0A8

Re: Sunshine Coast Regional District Landfill Siting Assessment Report

Dear Mr. Rosenboom,

Sperling Hansen Associates (SHA) were retained by the Sunshine Coast Regional District (SCRD) to conduct a landfill siting feasibility study on potential new landfill locations within the SCRD, develop a ranking system for potential sites and to recommend the highest ranked location for additional review. The potential locations included some previously selected and reviewed by Tetra Tech, as well as new locations identified by SHA. Tetra Tech conducted a desk top review of four locations and an in-person field review of three of those locations. SHA included two locations, as well as two potential expansion options of the existing Sechelt Landfill, a westward expansion and a southward expansion combined with a vertical expansion (Figure 1: Reviewed Landfill Locations).

SHA developed the decision matrix attached to compare and rank each prospective location. For consistency, the evaluation criteria utilized by Tetra Tech was included in the matrix along with the British Columbia Landfill Criteria (BCLFC) and some SHA criteria. The desktop study information was collected using iMapBC. SHA used 23 criteria in the initial review, with the total potential rankings ranging from 23 to 92 points.

During a site reconnaissance by Tetra Tech, it was determined that their TT1 location may potentially contain karst geology. The presence of karst in an area is not compliant with the BCLFC, as it may present unstable ground. As a result, the TT1 site was not further reviewed.

The Tetra Tech's TT2 site is the furthest north and located about 14.5 km from the Sunshine Coast Highway. This site would likely require access road improvements and require ongoing maintenance costs. Some sections of the access roads have a grade steeper than the preferred 8% and the site is within 100 m of Federally protected Habitat for Marbled Murrelet, which is non-compliant with the BCLFC minimum 100 m buffer. The site is also within an area of recreational interest including, hiking trails and a lake. The nearest Phase 3 power source is over 6.5 km away. The site is situated within the Agricultural Land Reserve, and it may not be possible to

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change the land use. TT2 is the largest of the sites at 18.7 hectares. TT2 scored 55 out of a potential 92 points and ranked fourth out of the final four locations ranked.

Tetra Tech's TT3 site is located near the Sunshine Coast Highway which reduces road maintenance requirements and is the closest to Phase 3 power. The access road grade is less than 8%. The site is located near community recreation including Trout Lake, Big Tree Rec Site, hiking trails and three confirmed archaeological sites. The site also overlaps with a designated community watershed, natural gas tenure and hydro tenure. The site was originally assessed at a potential 12.5 hectares and after adjusting the footprint to accommodate the required buffers, the site size is reduced to in the order of 8 hectares. With TT3 being less than the preferred minimum 10 Ha size for a new landfill used in the decision matrix, the site has not been ranked under the decision matrix.

Tetra Tech's TT4 site is located within the Halfmoon Bay area and 5.3 km from the Sunshine Coast Highway and Phase 3 power. This site is near recreation hiking trails, overlaps an existing trapline, and is 120 m away from Halfmoon Creek, a Coho fish bearing stream. The area is located within the Agricultural Land Reserve and could potentially be difficult to change the land use. The potential footprint for this location is 12.8 hectares. This location scored 58 out of 92 points and ranked third out of the final four locations ranked.

SHA proposed two locations for the review. SHA1 is located approximately 1.5 km off the Sunshine Coast Highway. SHA1 scored as the highest ranked location prior to an in-person field visit conducted by Tony Sperling of SHA and SCR D staff Alana Wittman, Marc Sole, and Corrina Suveges. During the field visit, two watercourses that were not shown on iMapBC were discovered that flowed through the proposed footprint. The BCLFC states that a landfill shall not be within 100 m of surface water. The watercourse buffer that would be required to satisfy the BCLFC for watercourses, has resulted in a reduced footprint size making SHA1 no longer viable as a potential new landfill location. As a result, SHA1 was not ranked within the decision matrix.

SHA2 is situated slightly eastward of Tetra Tech location TT3, however it is still in proximity to the three confirmed archaeological sites. During the site visit a watercourse was discovered within the proposed footprint that was not noted on iMapBC. The proximity to the archaeological locations and reduced footprint to allow the necessary watercourse buffers has resulted in the site being no longer viable as a new landfill location. As a result, SHA2 was not ranked within the decision matrix.

A desktop review was conducted on two possible Sechelt landfill expansion locations which concluded both expansion possibilities are suitable candidates under the evaluation. The westward expansion area is located on property owned by the Sechelt First Nation and is currently slated for inclusion into the surrounding mining operation. The SCR D will need a property agreement with the Sechelt First Nation Government and a collaborative plan for



operation of the westward Property with Lehigh Hanson, which manages the adjacent mining operation. Expansion details can be found in the SHA Draft Sechelt Landfill Expansion Feasibility Report dated, August 2022. The westward expansion scored 75 out of a possible 93 points on the decision matrix and scored highest in the review ahead of the southward with vertical expansion option.

The southward with vertical expansion option includes an approximate 40 m lateral expansion south of the existing Sechelt Landfill property boundary. An engineered vertical wall would be constructed along 100 m of the property, east to west. This would increase the landfill footprint slightly and allow for landfilling to occur on top of the existing landfill (Figure 2: Plan). It is anticipated that this expansion will provide less than one hectare of new landfill footprint resulting in approximately 419,000 m³ of landfill space, which is equivalent to approximately 12 years of landfilling. This design would allow for Lehigh Hanson to stockpile additional mining overburden to the property line as the area of the property to the south of the landfill is currently utilized as overburden storage (Figure 3: Section). This design is seen as a mutually beneficial collaboration if an agreement with the Sechelt First Nation and Lehigh Hanson was established for this work. Permission in the form of a variance with the Ministry of Environment and Climate Change Strategy (ENV) would also be required to address the 50 m landfill site boundary and the 30 m natural screening buffers required under the BCLFC.

An archaeological review has been conducted for the existing Sechelt landfill property. Although the review did not identify any archaeology concerns, chance find procedures should be followed if the expansion occurs. SHA is recommending drilling to confirm groundwater depth in the proposed expansion areas. Drilling would also provide some geotechnical information to assist with the engineering suitability of the proposed vertical wall. SHA is also recommending stakeholder engagement in the form of notification for both potential expansion options. With the land already considered a brownfield site, stakeholder interest in the site can be assumed as low.

Following the in-person site reconnaissance, the revised ranking resulted in the westward expansion option ranking the highest at 75 points. The southward with vertical expansion ranked second with 73 points, followed by TT4 with 58 points. The final scoring of the eight locations is shown in Table 1.

SHA recommends conducting an economic review of the southward with vertical expansion for capital and operational costs. Economic information is available in the SHA westward expansion report. A comparison of the two possible expansion options should be completed looking at initial capital cost and expected closure costs with consideration to available lifespan. The volume of leachate that will be generated with an expanded landfill will require leachate treatment upgrades and the available footprint for treatment will likely present challenges. A solution for disposal of treated leachate will also need to be determined.



Table 1: Final Decision Matrix Scoring

Proposed Location		Matrix Score
1.	Westward Expansion	75
2.	Southward with Vertical Expansion	73
3.	TT4	58
4.	TT2	55
	SHA1	*Not ranked
	SHA2	*Not ranked
	TT3	*Not ranked
	TT1	Not Reviewed

*Determined as not viable for a new landfill location during on-site review and based on final available area for landfill site

Discussions with ENV will need to take place for both expansion options regarding a variance for the proximity to the Sechelt airport along with the Harbour Air and Sunshine Coast Air Seaplanes if a variance has not already been approved, as this distance is not compliant with the BCLFC.

Due to the proximity of the Sechelt landfill to the Community Watershed, SHA is recommending additional engineering safety measures for both expansion options including engineered liner; a vertical liner for the proposed engineered wall; leachate collection; upgrades to the current leachate treatment system including treated leachate disposal; early indicator groundwater wells to be installed to the south and southeast perimeter of the site; stormwater management; and, progressive landfill closure to be carried out in conjunction with expansion.

Yours truly

SPERLING HANSEN ASSOCIATES

Dr. Tony Sperling, P.Eng.
President
B.C. P.Eng. Licence 17,621
SHA Permit to Practice 1003066



MARCH 21, 2023

Table 1. Landfill Site Options Evaluation Matrix

Item #	Initial Evaluation Criteria	Title Ranking				Prospective Landfill Locations						Expansion of Sechelt Landfill	
		Very Low	Low	Medium	High	TT1	TT2	TT3	TT 4	SHA1	SHA 2	Lateral Westward Expansion	Southward with Vertical Expansion
	Matrix Scoring	4 points	3 points	2 points	1 point								
	Desktop Review - iMapBC Study												
1	Total hauling distance from Sechelt city centre assumes self-hauls - Sechelt used for reference, all community distances should be considered	<5 km	5-10 Km	10-20 km	> 20 km		21.1 (14.5 km to Hwy)	11.5 km (11 km to Hwy)	19.8 (14.5 km to Hwy)	20.2 km (19.0 km to Hwy) Option 2 Access - 19.8 km 18 Hwy	11.5 km (11 km to Hwy)	4 km to Sechelt center	4 km Sechelt center
2	Estimated Haul Distance off of Hwy - (regular maintenance and upkeep required snow removal and grading, post closure costs) Active industry use or not.	<1 km	1-3 km	3-5 km	>5+km		6.6 km	500 m	5.3 km	1.2 km Option 2 Access (1.8 km)	500 m		
3	Suitability for haul trucks and travel time (Grade, alignment and curvature of FSR)	Suitable			Low suitability		Grades between 12% and 17%, measurements from SCRD maps and from iMapBC	Measurements from iMapBC	Grades between 12% and 17%, measurements from SCRD maps and from iMapBC	Option 1 - Some grades up to 10%, measurements taken from iMapBC Options 2 - grades around 8%	Measurements from iMapBC		
4	Hwy and other road upgrades - such as left turn lane and FSR upgrades (additional assessment under in-person field investigation). Active industry use or not.	\$100K	\$100-250k	\$250k - \$1 million	\$1mil+		May require left turn lane May require right turn lane At the start of double lane eastward	May require left turn lane May require right turn lane	May require left turn lane May require right turn lane At the start of double lane eastward	May require left turn lane Two possible options for access	May require left turn lane May require right turn lane		
5	Hauling through off-hwy residential neighbourhood	None	Some	Moderate	Significant								
6	General safety of users accessing the site - assuming self haul (Turning off and on Hwy, grade, alignment and curvature of FSR)	No risk			High risk		Steep road grade, iMapBC measurement		Steep road grade, iMapBC measurement	Steep road grade, iMapBC measurement			
7	Distance to known critical habitat for Federally listed Species at Risk Habitat - Based on iMapBC data	>500 m	200-500 m	100-200 m	<100 m		Marbled Murrelet Access road is within PT region	200 m from Painted Turtle	400 m from Marbled Murrelet Access road is within Painted Turtle region	260 m from Marbled Murrelet	200 m from Painted Turtle	500 m from Marbled Murrelet	400 m from Marbled Murrelet
8	Proximity of Electric Power Connection (3 Phase) - Based on iMapBC data, confirmation from BC Hydro required - Measured from Proposed Locations to known 3 Phase power line	<500 m	500 m-1 Km	1-3 km	>3 km		6.6 km	500 m	5.3 km	1.2 km	500 m	1.5 km	1.5 km
9	Existing and planned land use (stakeholder interest) in proximity, for example: Parks, hiking trails, other recreation, forestry, traplines (additional engagement required)	2km	1km	500 m	300 m		Overlap- Hiking trails, trapline, Chinook Business area	Overlap hiking trail, near designated park zoning (P42)	Overlap- Hiking trails, trapline, 50 m from Woodfibre tenure	Trails in area, and recreation4 km area, based on site recon	Overlap hiking trail, near designated park zoning (P42)		
10	Site Topography/ Terrain	Flat or Gentle Terrain<10:1	Rolling Terrain <8:1	Valley or Side Hill <6:1	Steep Side Slope >3:1		iMapBC measurement	iMapBC measurement	iMapBC measurement	iMapBC measurement	Footprint on sidehill, limiting room for expansion, iMapBC measurement	Southward expansion land is flat, existing landfill for vertical is already 3:1	
11	Geological Bedrock - iMapBC data						Dioritic intrusive rocks	Dioritic intrusive rocks	Dioritic intrusive rocks	Dioritic intrusive rocks	Dioritic intrusive rocks	Granodioritic intrusive rocks	Granodioritic intrusive rocks
12	Stakeholder Interest in the Area (Desktop study iMapBC, direct engagement required)	No known interest	Low Interest expected	Some Interest expected	High Interest expected		Proximity to Wormy Lake, Hiking trails	Proximity to Trout Lake, and Big Tree Rec site, hiking trails	Hiking trails	Trails, camping	Proximity to Trout Lake, and Big Tree Rec site, hiking trails		
13	First Nation Treaty Information and Interests (based on iMapBC, direct engagement required)	No known interest	Low Interest expected	Some Interest expected	High Interest expected		Sechelt First Nation Shishahh Territory (cultural significance)	Sechelt First Nation Shishahh Territory (cultural significance)	Sechelt First Nation Shishahh Territory (cultural significance)	Sechelt First Nation Shishahh Territory (cultural significance) Within Te'mexw Treaty Association	Sechelt First Nation Shishahh Territory (cultural significance) Near border of Within Te'mexw Treaty Association	Sechelt Band owns some of the land , but opportunity for partnership, agreement or sale	Sechelt Band owns some of the land , but opportunity for partnership, agreement or sale
14	Proximity to Surface Water Receptors/ Community Watersheds	>500 m	200 m - 500 m	100 m -200 m	<100 m		Wormy Lake	Community WS overlap	120 m Halfmoon Creek	Two Watercourses within proposed footprint, based on site recon	Community WS 250 m away Watercourse within footprint, based on site recon	500 m to Watershed 100 m to Irgens Creek	Approximately 140 m to community watershed
15	Proximity to water supply groundwater wells	>1 km	1 km - 500 m	500 m-300m	<300 m								
16	Nearest residential development	>1 km	1 km - 500 m	500 m-100m	<100 m								
17	Nearest Commercial / Industrial Development or Industrial Zoning	>500 m	200 m - 500 m	100 m - 200 m	<100 m							Within industrial area, potential mining area	Within industrial area, but not restricting development
18	Conflict with Official Community Plan and future development	None	Low	Some	High		AGR/2 AG Zone agriculture Agricultural land reserve	RU2 Near Community Recreation and Conservation zone	AGR/2 AG Zone agriculture Agricultural land reserve	RU2 Near community trails	RU2 Near Community Recreation and Conservation zone	Planned use is Gravel pit	Existing landfill, and overburden storage area
19	Potential footprint size (ha)	>20 Ha	15-20 Ha	10-15 Ha	<10 Ha			8 Ha 42.6-Ha Adjusted to allow for WS, and hydro and gas buffer	12.8 Ha	9 Ha - Restricted footprint based on watercourses, observed during site recon	8 Ha - Restricted footprint based proximity to First Nation Arch site and proximity to watercourses, observed during site recon	15.4 Ha	0.4 Ha Based on linear footprint, not including verticle expansion
20	Land type - previous use	Brownfield Site	Logged, not yet vegetated	Logged, replanted 5-10 year tree growth	Greenfield Old growth					Logged and replanted	10 year old growth, based on site recon		
21	Proximity to airport, as well as any commercial Sea Plane locations	>8 km away			<8 km away							Can apply for variance	Can apply for variance
22	Other Landfill Criteria - floodplains, shorelines, faults and unstable areas, buffers, gullies and depressions	Meets Criteria			Does not meet criteria	Suspected to be on Karst							No 50 and 30 m buffers
23	Mapped Arch Sites based on BC Remote Access to Archeological Data - confirmation with shishahh Nation and other neighbouring First Nation communities to confirm if unmapped sites within area	>500 m	300 m - 500 m	300 m - 100 m	<100 m		3 nearby sites based on RAAD				3 nearby sites based on RAAD		
Desktop Review score							55	Not scored, not viable for new location	58	Not scored, not viable for new location	Not scored, not viable for new location	75	73



Figure 1: Reviewed
Landfill Locations

Legend

FWA - Named Point Feature

FWA - Stream Network - Lin
EDGE_TYPE

- Stream - Main Flow
- Stream - Secondary Flow
- Wetland - Main Flow
- Wetland - Secondary Flow
- Lake Skeleton - Main Flow
- Lake Arm Skeleton - Secondary
- River Skeleton - Main Flow
- River Skeleton - Secondary Flow
- Flow Connector
- Isolated Waterbody Skeleton - M
- Underground Connector - Main
- Inferred Connector
- Manmade - Main Flow
- Manmade - Secondary Flow
- Flow Connector - Outside BC

FWA - Stream Network - Lat

Critical Habitat for Federally-
Risk - Posted - Colour Them
CRITICAL_HABITAT_STATUS

- Final
- Proposed
- Community Watersheds



1: 72,224

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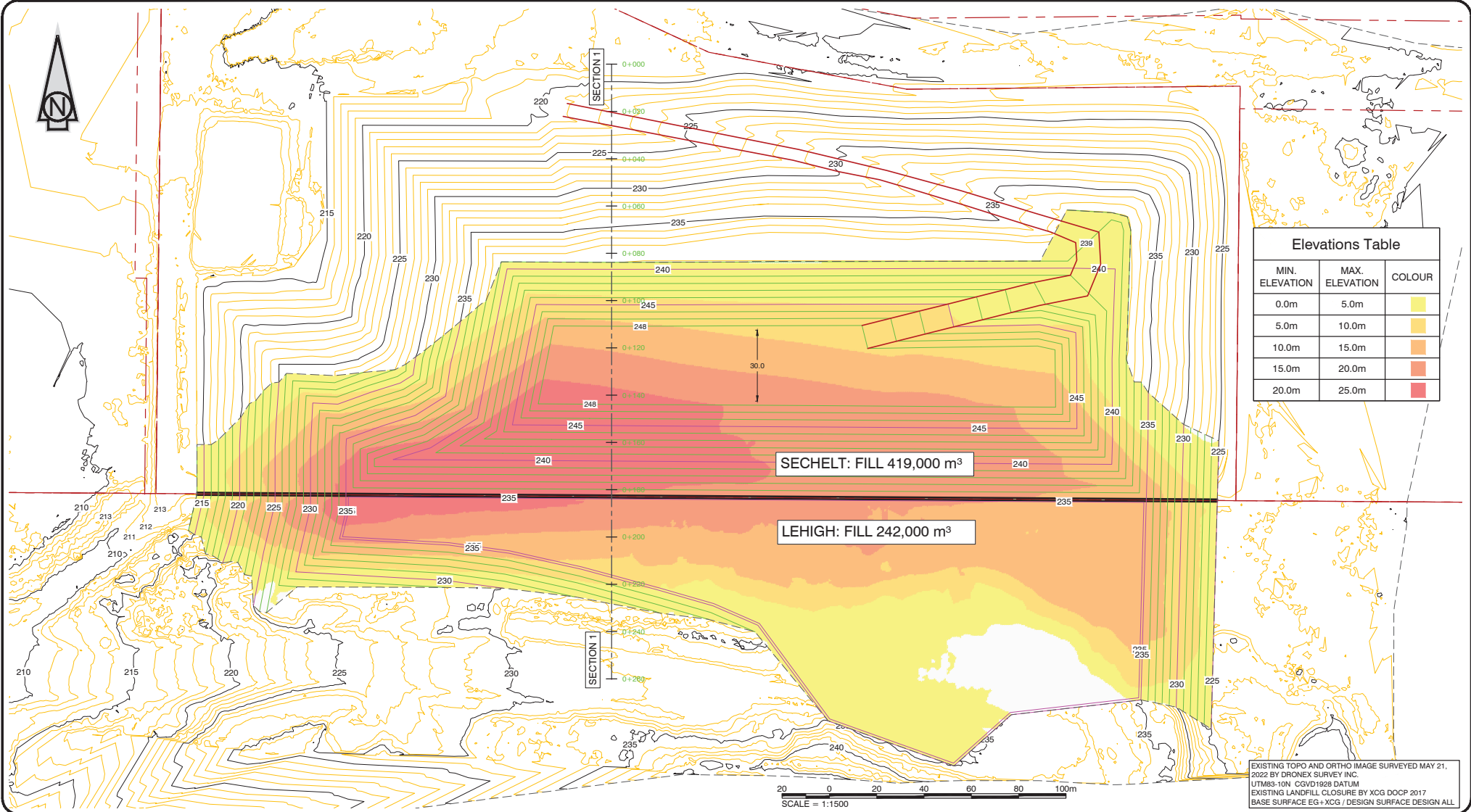
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Key Map of British Columbia



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 **SPEARLING
HANSEN
ASSOCIATES**

• Landfill Siting
• Design & Operations Plans
• Landfill Closure
• Environmental Monitoring

#8 - 1225 Keith Road East
North Vancouver, B.C. V7J 1J3
Phone: (604) 966-7723

LEGEND:

- 5m LANDFILL CONTOUR
- 1m LANDFILL CONTOUR
- 5m DESIGN CONTOUR
- 1m DESIGN CONTOUR
- STORM DITCH
- CULVERT & HEADWALL
- CREEK
- CREEK 100m OFFSET
- PROPERTY LINE

CLIENT:

 **Sunshine Coast
Regional District**

PROJECT:

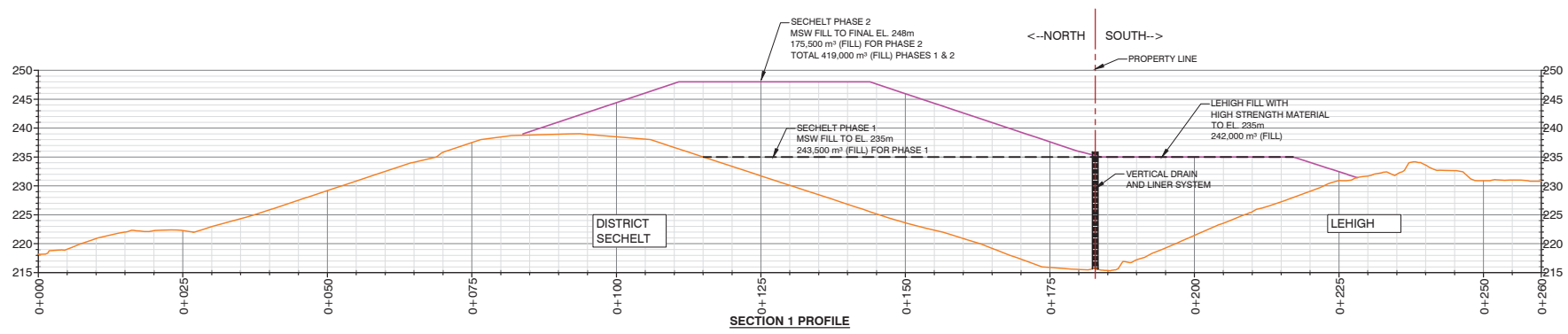
SCRD LANDFILL SITING ASSESSMENT

TITLE:

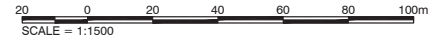
PLAN

SCALE: 1:1500	DATE: 2023/03/21 yyyymmdd	PROJECT NO: PRJ 22056
DESIGNED TS	DRAWING NO: FIGURE 2	
DRAWN NL		
CHECKED TS		

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SECTION 1 PROFILE



• Landfill Siting
• Design & Operations Plans
• Landfill Closure
• Environmental Monitoring

#8 - 1225 Keith Road East
North Vancouver, B.C. V7J 1J3
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- LEGEND:
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 - CULVERT & HEADWALL
 - CREEK
 - CREEK 100m OFFSET
- PROPERTY LINE



PROJECT:
SCRD LANDFILL SITING ASSESSMENT

TITLE:
SECTION

SCALE: 1:750	DATE: 2023/03/21 yyyy/mm/dd	PROJECT NO: PRJ 22056
DESIGNED TS	DRAWING NO: FIGURE 3	
DRAWN NL		
CHECKED TS		



shíshálh
NATION

sN File: SNR21127.01

August 28, 2023

Via: Dean.McKinley@scrd.ca

Dean McKinley
Chief Administrative Office
Sunshine Coast Regional District
1975 Field Road
Sechelt, BC
V7Z 0A8

Dear Mr. McKinley,

Re: SNR21127.01 – Sunshine Coast Regional District Future Waste Disposal Options Analysis – Part 3

We are writing to you today in response to the Sunshine Coast Regional Districts (SCRD) proposed Future Waste Disposal Options Analysis – Part 3.

This project overlaps with the shíshálh Nation swiya (world, birthplace, “Territory”). The shíshálh Nation have Aboriginal Title and exercise Aboriginal Rights throughout our swiya. In the past, present, and future we have and will continue to use and occupy our swiya, including relying upon the lands, waters, and resources of our swiya to sustain us. Our Aboriginal Title to our swiya includes the right to choose the use to which the land, water, and resources are put, and the right to benefit from such use. Our Title and Rights also include a stewardship responsibility.

We would like to refer you to the shíshálh Nation Declaration. It states that “the shíshálh Nation, openly and publicly declares that we have Aboriginal Title and Aboriginal Rights to our territory (the Territory), including the lands, waters and resources that have been ours since time immemorial. We have been given the responsibility from the Creator to care for our Territory. Our Territory sustains our people, maintains our indigenous way of life, and is integral to our identity as shíshálh. We have always governed ourselves and our Territory and have never relinquished our authority or jurisdiction over such. We have our collective right to live as a distinct people.”

Our declaration further states, “We have and continue to hold Aboriginal Title and Aboriginal Rights to the Territory, and we have the right to own, use, occupy, develop and control the lands, waters, air space and resources of the Territory in accordance with shíshálh laws, customs, traditions, needs and aspirations.”

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We would like to reiterate that we continue to have our authority over all of the land and water throughout the swiya. The development of our land and resources shall only proceed when the risks of impacts on our swiya are well understood and accepted by the shíshálh Nation. Development of our lands and resources requires our consent as articulated in Article 32 of the United Nations Declaration of the Rights of Indigenous People, which contains principles of consultation, cooperation, and consent.

In the decision of the Supreme Court of Canada in the Tsilhqot'in case, the Court stated that Aboriginal title confers:

. . . the right to decide how the land will be used; the right of enjoyment and occupancy of the land; the right to possess the land; the right to the economic benefits of the land; and the right to pro-actively use and manage the land. (at para. 73)

The Tsilhqot'in decision affirms the perspectives articulated in our Declaration. Aboriginal Title is real and meaningful, is Territorial in nature, and means that First Nation consent is required for use of our Title lands and resources.

We take our responsibility to steward our swiya, for the benefit of both current and future generations of our people, very seriously. The lands and resources within our swiya are to be strategically and thoughtfully managed to ensure future generations are afforded stability in livelihood.

In May 2023 the SCRD reinitiated discussions regarding this project with shíshálh Nation Government District (sNGD). The ability to review the analysis in full set forth a project that, through inadequate engagement with shíshálh Nation, outlines assumptions the SCRD has made regarding end land use for a parcel within the Heidelberg Materials Sechelt Mine site and owned by the Nation.

The proposed plan describes options to expand the footprint of the current SCRD landfill to the west or to the south.

The West option presents the following constraints and assumptions:

- The west option is on land owned by a shíshálh Nation company (Kwikwil Developments Ltd.) and is included in Heidelberg Materials mine plan.
- The west option is not feasible as it contains sand and gravel resources which will be mined within the next few years, for which then a large, permanent overburden/interburden stockpile is built to house waste material from Heidelberg's mining operations. There will be no room for a landfill within the area west of the landfill.

The South option presents the following constraints and assumptions:

- The south option incorrectly assumes that the current stockpile of waste material from the Heidelberg mine will remain in place so engineered fill material can be placed against it to fortify (buttress) the foundation of a new southern landfill berm.

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- The Heidelberg waste stockpile will be removed, and the area underneath mined for its sand and gravel resources. This precludes the ability of the SCR D to build a higher berm as it will have no material to build against.

The proposed landfill expansion would have significant impacts on shíshálh Nation and is not in alignment with the Relationship Agreement with Heidelberg. These are not feasible options for a landfill on the Coast.

Stewardship and Territorial Land Management (STLM) has undertaken significant previous engagement with the SCR D on future landfill sites in the past. Any further work should continue those collaborative efforts. It is most efficient when we work together. Exploring options that do not align with the values or desires of the shíshálh Nation ultimately wastes time and limits progress. This is why all are encouraged to engage early and often with the Nation.

We look forward to recommencing collaborative efforts to locate a new landfill site for the betterment of the entire Sunshine Coast.

Yours truly,

shíshálh Nation Council


Ihe hīwus Lenora Joe


hewhiwus Shain Jackson


hewhiwus Raquel Joe


hewhiwus Rochelle Jones


hewhiwus Philip Paul

CC: Sean Maloney, shíshálh Nation Chief Administrative Officer
shíshálh Nation Chief and Council

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MEMORANDUM

TO: Marc Sole

FROM: Veronica Bartlett, Morrison
Hershfield (now Stantec)

Sunshine Coast Regional District

PROJECT No.: 220277800

RE: Potential Strategies to consider for Solid
Waste System Financing

DATE: April 9, 2024

X:\PROJ\2022\220277800-SCRD SWMP REVIEW AND UPDATE\08. WORKING\SYSTEM FUNDING MEMO 4 AND DISPOSAL OPTIONS\2024-04-09_MEM_SCRD DRAFT
OPTIONS_SYSTEM COSTS_FINANCING OPTIONS SCRD FINAL.DOCX

This Memorandum (Memo) discusses strategies to ensure that the solid waste management system on the Sunshine Coast is financially sustainable and resilient as part of the implementation of a new solid waste management plan (SWMP). This Memo summarizes current system funding and expenditures including anticipated cost increases, as well as potential strategies the Sunshine Coast Regional District (SCRD) may want to take to consider as part of the SWMP implementation. This memo includes background information (Section 1 and 2), potential strategies (Section 3), potential impacts from strategies (Section 4), and next steps (Section 5).

1 BACKGROUND

Under the *BC Environmental Management Act*, regional districts are required to have a solid waste management plan (SWMP), which must be developed following the solid waste management planning guidelines provided by the BC Ministry of Environment and Climate Change Strategy (the MOE) for content and process.

The SCRD is updating the region's SWMP and commissioned Morrison Hershfield (MH, now part of Stantec) to support the planning process. MH is developing a series of technical memos to seek feedback from the Public and Technical Advisory Committee (PTAC).

MH presented the first Memo titled, "Current System Review" to the PTAC at its April 25, 2023, meeting. Many emerging issues and opportunities were identified by PTAC members and are reflected in this Memo. The SCRD has also gathered feedback from the public and interested parties via an online feedback form on key priorities and topics to cover in the SWMP update during Engagement Period 1.

A combined list of issues and opportunities is summarized in the Memo titled, "What we heard on Guiding Principles and emerging issues and opportunities during Engagement Period 1 of the SWMP update", dated August 25, 2023, that will be considered as part of the SWMP update.

The series of technical memos focus on the following solid waste topics:

- Potential waste prevention and diversion strategies to consider for the residential and Industrial, Commercial, and Institutional (ICI) sectors, which was presented to the PTAC on October 24, 2023.
- Construction, demolition & renovation sectors, and non-sector-specific issues presented to PTAC on November 21, 2023.

- Potential strategies to consider for management of residual waste, presented to PTAC on March 6, 2024.
- Disposal options prepared by SCRD staff dated April 17, 2024, and
- System financing, covered by this memo.

The disposal options and system financing will be discussed at the PTAC meeting on April 17, 2024.

Feedback on all Memos will be considered as MH develops a final Memo outlining “Preferred Strategies” that will support the SWMP update which will be brought back to the public for engagement.

2 CONTEXT – FINANCE & ADMINISTRATION

MH's Current System Review provided high-level information on system revenues and costs. This memo provides additional information on the SCRD's finance and administration for waste management.

The SCRD's solid waste management services are funded through:

- Tax requisition
- User fees and service charges (e.g., tipping fees at the landfill or curbside collection service charges)
- Sale of recyclables (e.g., scrap metal)
- Financial incentives paid by stewardship organizations (e.g., Recycle BC)
- Grants for capital expenditures (occasionally)
- Reserves
- Borrowing

2.1 How Much Does It Cost to Manage Recyclables & Waste?

The Province of BC requires that municipalities and regional districts must annually adopt, by bylaw, a five-year financial plan that includes operating and capital expenditures. The 2024 financial plan (2024 – 2028) was adopted in February 2024.

The finances discussed in this section only include SCRD revenues and costs associated with waste management. These finances should not be considered the complete waste management system costs and revenues, as they do not include revenues and costs of member municipalities.

2.1.1 Regional Solid Waste Service (function 350)

Table 1 below shows 2019 - 2023 historical revenues and expenditures for the Regional Solid Waste Service. This table illustrates that revenues and expenditures associated with operating, capital and debt repayment have been increasing over the last five years.

With respect to revenue sources, the portion of revenue generated from taxes increased by 138% over this five-year period. Revenues from tipping fees (user fees and service charges)

remained stable with a small decrease of 1% and revenue from other sources such as grants increased significantly.

With respect to historical expenditures, operating expenses increased by 27% over the five-year period. Trends associated with other expenditures such as capital, landfill closure and post-closure, transfer to reserves and debt repayment are more difficult to analyze however it is important to note that historical expenditures did not include any contributions to closure reserves or future capital projects.

Table 1: 2019 – 2023 Historical Revenues and Expenditures for SCRD's Regional Solid Waste 350

Regional Solid Waste 5-Year Historical	2019	2020	2021	2022	2023
Revenues					
Tax Requisitions	\$2,036,407	\$2,775,569	\$3,668,016	\$3,593,433	\$4,846,479
User Fees and Service Charges	\$2,782,014	\$2,873,802	\$2,881,118	\$2,911,133	\$2,751,288
Other	\$218,128	\$316,302	\$442,317	\$635,344	\$930,367
Total Revenues	\$5,036,549	\$5,965,673	\$6,991,451	\$7,139,910	\$8,528,134
Operating Expenditures					
Administration	\$414,997	\$423,667	\$565,998	\$605,086	\$673,861
Wages & Benefits	\$1,038,238	\$1,082,270	\$1,242,133	\$1,255,437	\$1,351,726
Operating	\$3,546,028	\$4,111,351	\$4,300,585	\$3,830,207	\$4,332,766
Debt Charges - Interest	\$-	\$-	\$-		
Amortization of Tangible Assets	\$54,262	\$51,083	\$52,697	\$86,413	\$86,728
Total Expenses	\$5,053,525	\$5,668,371	\$6,161,413	\$5,777,143	\$6,445,081
Other					
Capital Expenditures	\$561	\$-	\$1,581,400	\$86,271	\$37,847
Landfill Closure & Post Closure	\$-	\$-	\$-	\$-	\$-
Proceeds from Sale of TCA	\$-	(\$501)	\$-	(\$775)	\$-
Proceeds from Long-Term Debt	\$-	\$-	\$-	(\$1,563,198)	(\$29,633)
Debt Principal Repayment	\$-	\$-	\$-	\$156,320	\$319,225
Transfer to (from) Reserves	\$37,929	\$126,235	\$410,404	(\$77,025)	(\$157,362)
Transfer to (from) Appropriated Surplus	\$-	\$-	\$-	\$140,515	\$89,159
Transfer to (from) Other Funds	\$-	(\$54,594)	(\$1,522,756)	\$1,529,828	(\$98,499)

Regional Solid Waste 5-Year Historical	2019	2020	2021	2022	2023
Transfer to (from) Accumulated Surplus	\$-	\$501	(\$96,626)	(\$1,750)	\$-
Prior Year (surplus)/Deficit	\$-	\$-	\$93,594	(\$195,547)	\$-
Unfunded Amortization	(\$54,262)	(\$51,083)	(\$52,697)	(\$86,413)	(\$86,728)
Transfer to (from) Unfunded Liability	(\$24,021)	\$350,553	\$101,173	\$1,004,534	\$1,159,377
Total Other	(\$39,793)	\$371,111	\$514,492	\$992,760	\$1,233,386
Regional Solid Waste Surplus/(Deficit)	\$22,817	(\$73,809)	\$315,546	\$370,007	\$849,667

For 2023 operating revenues were raised primarily through tax requisition (57% of total revenue) user fees and service charges (32%), and other revenue (11%). An analysis of the user fees collected in 2023 identified that approximately 26% of the 2023 revenue came from recycling fees, 13% from organics tipping fees and 61% from tipping fees for landfill disposal.

Based on a review of 2023 approved budgeted expenditures (as opposed to actuals), operating expenses consisted of costs related to recycling (30%), organics (22%) and waste disposal (48%).

Recycling Costs

The recycling depots in the region are privately owned. The Regional District holds contracts with three of the depots to collect household printed paper and packaging recycling. This is partially funded by Recycle BC through financial incentives and by taxation.

The funding models for other recyclables (e.g., paint or electronics recycling) collected at the privately owned depots, were not analyzed. They may or may not be funded fully by the stewardship agency responsible for the recyclable. These are a private arrangement between each depot and the stewardship program and the SCRD is not privy to this information.

In general, the costs associated with providing recycling and organics collection and drop-off services are not fully funded by the fees charged for these services, or by the financial incentives paid by stewardship organizations for their Extended Producer Responsibility (EPR) materials. In 2023, the EPR financial incentives is estimated to only have covered 50% of the cost of managing these drop-off services and varied between EPR programs provided at depots or at Regional District facilities.

Landfill & Transfer Station Costs

The SCRD has generally experienced relatively low operating and capital expenditures associated with the Sechelt Landfill, partially because the landfill was constructed when it was not a provincial requirement to line the landfill. New regulatory standards in the updated Landfill Criteria for Solid Waste issued in 2016 require new landfills to be lined.

The Sechelt Landfill is not lined and does not have an engineered leachate collection and treatment system to maintain. Operating and capital expenditures would be higher at a lined landfill with leachate collection and treatment systems. As emphasized in the January 26, 2024 SCRD staff report to the Committee of the Whole on Future Long-Term Solid Waste Disposal Options, going forward, the SCRD will need to anticipate and plan for significant operating and capital cost increases associated with either constructing a new lined landfill or exporting waste out of region to a landfill that meets the new Landfill Criteria.

The SCRD's 2024 Service Plan articulated two strategies to secure a long-term waste disposal option:

1. Confirm feasibility of extending the useful life of the Sechelt Landfill, and
2. Further assess waste disposal options after the Sechelt Landfill has reached maximum capacity.

During the 2024 budget process for the financial plan, the following short term expansion projects were approved to extend the life of the Sechelt Landfill:

- Construction funding for the relocation of the contact water pond,
- Feasibility study and engineering for a vertical expansion within the existing Sechelt Landfill property.

Refer to SCRD's staff report on Disposal Options dated April 17 for further details on the approved budgets and estimated landfill life saved in years.

Table 2 below shows the 2024-2028 financial plan adopted in February 2024 for the SCRD Regional Solid Waste Service (function 350), which consists of the revenues and expenses associated with the Sechelt Landfill and Pender Harbor Transfer Station.

Table 2: 2024 – 2028 Financial Plan with Revenues and Expenditures for SCRD's Regional Solid Waste 350

Budget Regional Solid Waste 350	2024	2025	2026	2027	2028
Revenues					
Tax Requisitions	\$5,376,484	\$5,209,704	\$5,271,189	\$5,035,349	\$4,849,879
User Fees and Service Charges	\$2,771,538	\$ 2,751,288	\$2,751,288	\$2,751,288	\$2,751,288
Other	\$462,121	\$462,121	\$462,121	\$462,121	\$462,121
Total Revenues	\$8,610,143	\$8,423,113	\$8,484,598	\$8,248,758	\$8,063,288
Operating Expenditures					
Administration	\$810,637	\$810,637	\$810,637	\$810,637	\$810,637
Wages & Benefits	\$1,497,820	\$1,596,853	\$1,640,262	\$1,662,127	\$1,662,127
Operating	\$5,330,596	\$4,458,982	\$4,404,592	\$4,398,831	\$4,401,957

Budget Regional Solid Waste 350	2024	2025	2026	2027	2028
Debt Charges - Interest	\$12,323	\$9,862	\$7,470	\$5,078	\$2,696
Amortization of Tangible Assets	\$86,728	\$86,728	\$86,728	\$86,728	\$86,728
Subtotal	\$7,738,104	\$6,963,062	\$6,949,689	\$6,963,401	\$6,964,145
Capital Asset Expenditures					
Capital Expenditures (Excluding Wages)	\$1,984,293	\$99,140	\$133,742	\$17,201	\$17,201
Landfill Closure & Post Closure	\$3,219,886	\$31,024	\$-	\$-	\$-
Debt Principal Repayment	\$344,170	\$532,025	\$532,025	\$399,014	\$212,800
Transfer (from)/to Reserves	(\$594,744)	\$55,870	\$55,870	\$55,870	\$55,870
Transfer from Appropriated Surplus	(\$585,000)	\$-	\$-	\$-	\$-
Transfer from Other Funds	(\$25,952)	(\$40,256)	\$-	\$-	\$-
Unfunded Amortization	(\$86,728)	(\$86,728)	(\$86,728)	(\$86,728)	(\$86,728)
Transfer to (from) Unfunded Liability	(\$2,319,886)	\$868,976	\$900,000	\$900,000	\$900,000
Proceeds from Long-Term Debt	(\$1,064,000)	\$-	\$-	\$-	\$-
Net Capital Assets Funded from Operating Revenue	\$872,039	\$1,460,051	\$1,534,909	\$1,285,357	\$1,099,143
Total Operating and Capital Expenses	\$8,610,143	\$8,423,113	\$8,484,598	\$8,248,758	\$8,063,288
Regional Solid Waste (Surplus)/Deficit	\$-	\$-	\$-	\$-	\$-

The following are highlights from the 2024 – 2028 Financial Plan in Table 2:

- Taxes increased by 11% from 2023 with no increase in tipping fees.
- Capital expenditures includes power supply system replacement costs, traffic control lights at Pender Harbour Transfer Station, several site improvements, a feasibility study of vertical expansion opportunities at the Sechelt Landfill, and the Sechelt Landfill contact water pond relocation project.
- The 2024 - 2028 Financial Plan only included capital expenditures approved for 2024. The potential long-term expenditures associated with either waste export, constructing a

vertical expansion at the Sechelt Landfill, or constructing a new lined landfill or lined lateral expansion of the Sechelt Landfill, are not included in this five-year financial plan.

- Major landfill closure costs in 2024 relates to the Sechelt Landfill.
- The financial plan includes contributions to closure reserves (shown as transfer to (from) unfunded liability) of approximately \$900,000 per year going forward from 2025 onwards.

2.1.2 Refuse Collection Service (Function 355)

Table 3 shows the 2024 – 2028 financial plan for the Refuse Collection Service (function 355).

Table 3: 2024 – 2028 Financial Plan with Revenues and Expenditures for SCRD's Refuse Collection Service (355)

Refuse Collection Service (355) Approved Budget	2024	2025	2026	2027	2028
Revenues					
User Fees and Service Charges and Recycling Revenues	\$1,244,679	\$1,249,040	\$1,250,864	\$1,252,228	\$1,252,228
Total Revenues	\$1,244,679	\$1,249,040	\$1,250,864	\$1,252,228	\$1,252,228
Expenses					
Administration	\$113,030	\$113,030	\$113,030	\$113,030	\$113,030
Wages & Benefits	\$61,987	\$66,348	\$68,172	\$69,536	\$69,536
Operating	\$1,096,662	\$1,069,662	\$1,069,662	\$1,069,662	\$1,069,662
Amortization of Tangible Assets	\$9,684	\$9,684	\$9,684	\$9,684	\$9,684
Total Expenses	\$1,281,363	\$1,258,724	\$1,260,548	\$1,261,912	\$1,261,912
Other					
Transfer to (from) Reserves	(\$27,000)	\$-	\$-	\$-	\$-
Unfunded Amortization	(\$9,684)	(\$9,684)	(\$9,684)	(\$9,684)	(\$9,684)
Refuse Collection (Surplus)/ Deficit	\$-	\$-	\$-	\$-	\$-

The 2024 Financial Plan for refuse collection is funded entirely through user fees. There are no direct capital expenditures since this is a contracted service.

2.2 SCRD Staffing to Maintain the Region's Solid Waste System

The current staffing structure consists of 8.10 managerial, technical, strategic, or supervisory full-time equivalents (FTE), and approximately 4.80 FTEs associated with site attendants at the Sechelt Landfill and Pender Harbour Transfer Station.

Although the operations of Sechelt Landfill and Pender Harbour Transfer Station are contracted services, the SCR D provides a Site Supervisor to oversee site operations and site attendants to operate the scale house and public drop-off area.

The figure below shows the SCR D staffing to administer the SCR D solid waste system. The chart is limited to SCR D staff and does not present municipal staff involved with curbside collection or bylaw education and enforcement.

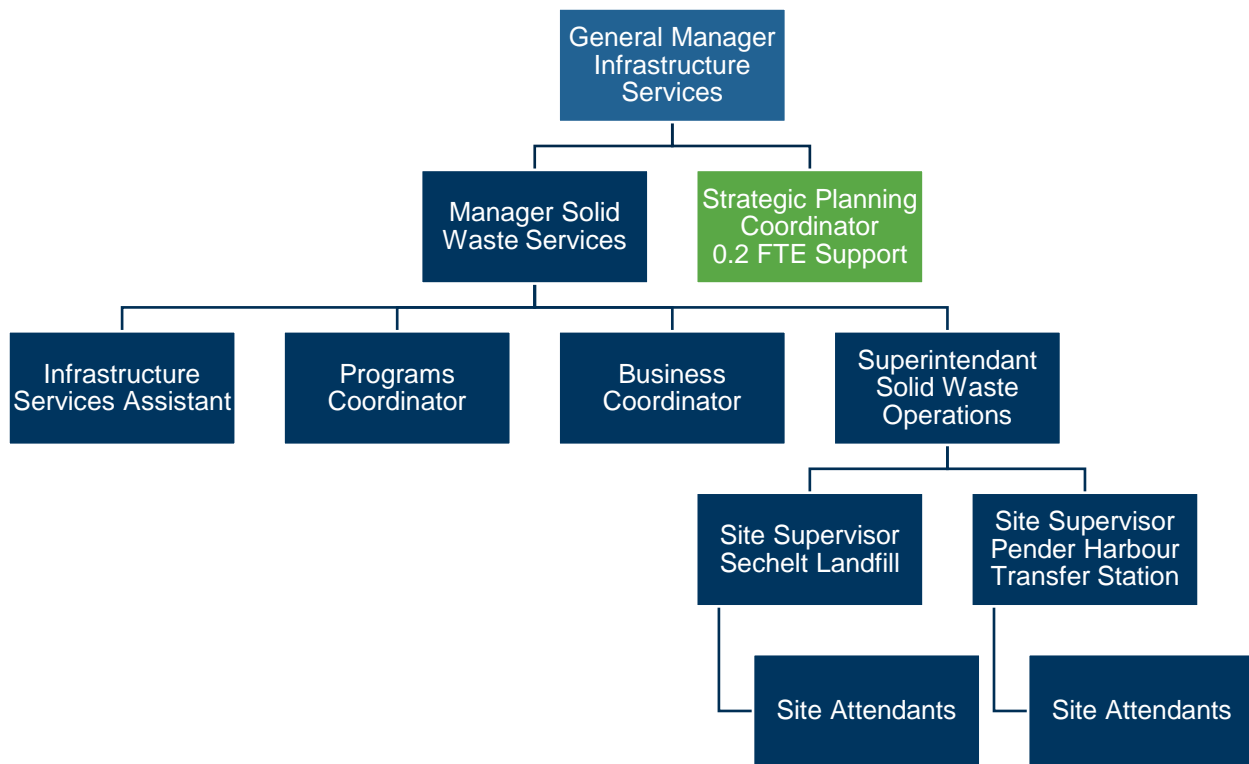


Figure 1: SCR D Solid Waste Services Organization Chart

Staff are distributed between the following functions: 0.98 FTE related to Refuse Collection (Service function 355), 13.05 FTE related to Regional Solid Waste (Service functions 350, 351, 352).

The Solid Waste Services function also provides funding to the Strategic Initiatives section of the Infrastructure Services department to support long-term policy and planning, for example, bylaw updates, SWMP, and associated engagement.

All new strategies and actions associated with the new SWMP will require additional staff resources to implement. Impacts on staffing will be identified once preferred strategies and actions are determined.

3 POTENTIAL FINANCING STRATEGIES & INITIATIVES

Many emerging issues and opportunities were identified in the Current System Review undertaken by MH, by the PTAC and the public. The first 15 potential strategies for waste prevention and diversion and for some aspects of residual waste management were discussed at three PTAC meetings in October and November of 2023 and March of 2024.

Figure 2 presents two potential strategies that relate to solid waste management funding and system efficiency and cost effectiveness. These are discussed in this memo (Strategies 16 -17). The strategy numbering builds on numbering in the previous memos.

Each potential strategy is discussed in terms of the following questions. Why is this issue important? Are there relevant examples of successful strategies/actions from elsewhere? What would the strategy involve?

The potential impacts of each strategy are identified at a high-level in Section 4.

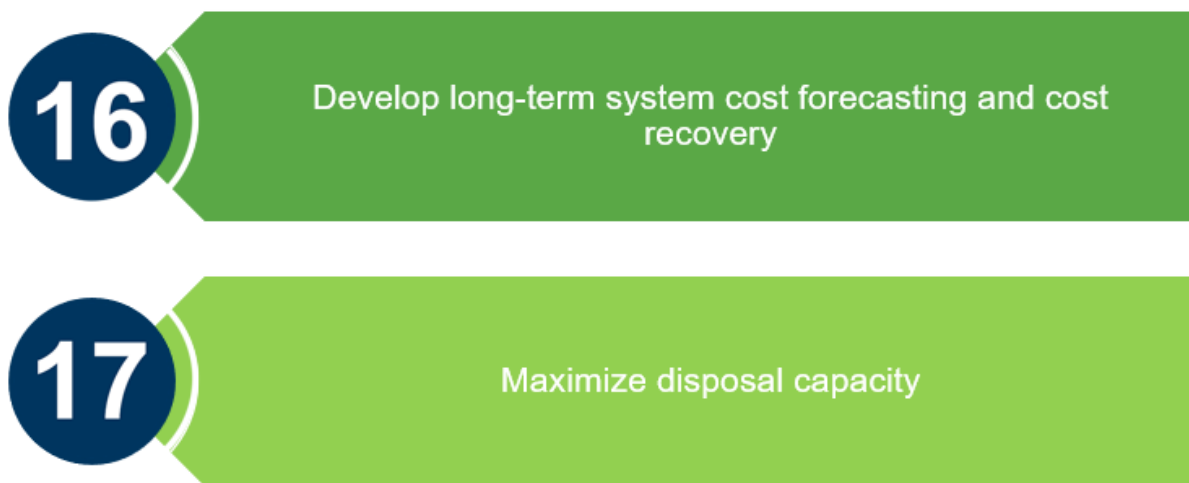


Figure 2: Overview of Potential Strategies for Solid Waste System Financing

Strategy 16: Develop Long-Term System Cost Forecasting & Cost Recovery

The SCRD has some significant future costs associated with the Sechelt Landfill related to liabilities and closure, and the development of future disposal options. As outlined in Section 2.1.1, there are some immediate expenditures required to secure additional landfill capacity at the Sechelt Landfill. In addition, the SCRD will need to plan for closure costs as part of the necessary liability costs.

In 2023, XCG reported on the Sechelt Landfill Closure Liability and noted that the cost estimate of landfill and post closure liability is significant. The SCRD has so far allocated approximately \$900,000 per year in funding for ongoing closure costs (additional to costs with new disposal options, such as a new landfill). The current unfunded liability is \$2.7M, and future contributions

and interest income are expected to reduce the liability further. However, overall, the SCRD will require additional funding to fully close the landfill based on current estimates of unfunded liability.

The MOE's 2016 solid waste management planning guidelines recommend that regional districts prepare 10-year operating and capital plans to ensure sustainable system funding. This recommendation came as regional districts have been facing significant costs associated with meeting new regulatory standards for solid waste disposal included in the updated Landfill Criteria for Solid Waste issued in 2016.

The SCRD's future costs related to landfill liabilities and closure, and the development of future disposal options will result in a significant funding gap that cannot be filled by current reserves. Given this funding gap over the next 5-10 years, it is imperative that the SCRD undertakes an in-depth review of solid waste system funding. The Regional District will either need to lower its costs and/or increase the revenue to fund the future waste management system.

The MOE expects a SWMP to outline financial and administrative implications from all planned strategies, initiatives, policies, and solid waste management facilities. If a capital budget is allocated in a new SWMP, this gives a regional district the ability to borrow capital funding without having to go to a referendum.

The SCRD needs to develop a ten-year financial plan in the new SWMP that shows both current and proposed capital and operating expenditures, funding gaps, and any increases to taxes or tipping fees required to implement the plan. Tipping fees should also be set in a way that drives waste diversion.

Opportunity to Reduce Landfill Operating Costs

The SCRD may want to review the cost-benefit of operating Sechelt Landfill using all in-house staff instead of contractors. The review would include the need to purchase heavy equipment, where these are currently provided by the contractor.

Some of the potential benefits and risks associated with moving to an in-house delivery model include:

PROS

- Greater flexibility to modify facility services to accept additional waste materials as needed.
- Greater control over operational efficiencies.
- Reduced reliance on limited pool of on-coast contractors and difficulties in sourcing off-coast contractors.

CONS

- Risk of higher administrative, management, coordination costs compared to current contracted delivery model due to additional staff and resources to manage.
- High initial capital investment to purchase equipment.
- Additional staff required – greater risk due to labour market conditions and availability.
- Exposure to greater liability through additional high-risk operations.

Opportunity to Reduce Service-Related Operating Costs

The SCRD may also want to investigate options for services provided by the SCRD where the regional district could divest their involvement where private sector solutions exist or could be facilitated. This could involve a cost-benefit or business case analysis of services provided to seek out opportunities to reduce operating costs.

Opportunity to Increase Revenue via Tipping Fees (User Fees) or Taxation

Tipping fees can be used as an effective means to encourage waste diversion when bylaws are effectively communicated and enforced.

The figure below shows a comparison of the tipping fees for municipal solid waste set by the SCRD and other coastal jurisdictions including Metro Vancouver (MV), Mount Waddington (RDMW), Alberni-Clayoquot (ACRD), Nanaimo (RDN), Capital (CRD), Comox Strathcona Waste Management Service (CSWM), Cowichan Valley (CVRD), District of Squamish (DoS), and qathet (qRD). The SCRD has lower tipping fee than the qRD, where the tipping fee is \$245 per tonne due to waste export costs.



Figure 3: Tipping Fee Comparison Amongst Coastal Jurisdictions

The SCRD's tipping fees will be influenced by the remaining useful life of the current landfill and the selected long-term waste disposal option. As mentioned previously, unlined landfills are less costly to maintain and jurisdictions with lined landfills typically set higher tipping fees to cover costs.

Taxation vs. Tipping Fees

MH has reviewed the funding mix used by other coastal regional districts. The figure below shows a comparison between the SCRD's 2023 funding mix and those of other regional districts. User fees includes revenues from tipping fees for organics and waste for landfill disposal. Other revenue sources were not considered for easy comparison.

The SCRD is the regional district with the highest tax contribution (63%) while the CRD is fully funded by tipping fees. The ACRD has a similar population to the SCRD with solid waste services that are mostly funded by tipping fees (94%). Cost recovery policy varies between

regional districts due to differences in population, economies, and environmental standards at receiving landfills.

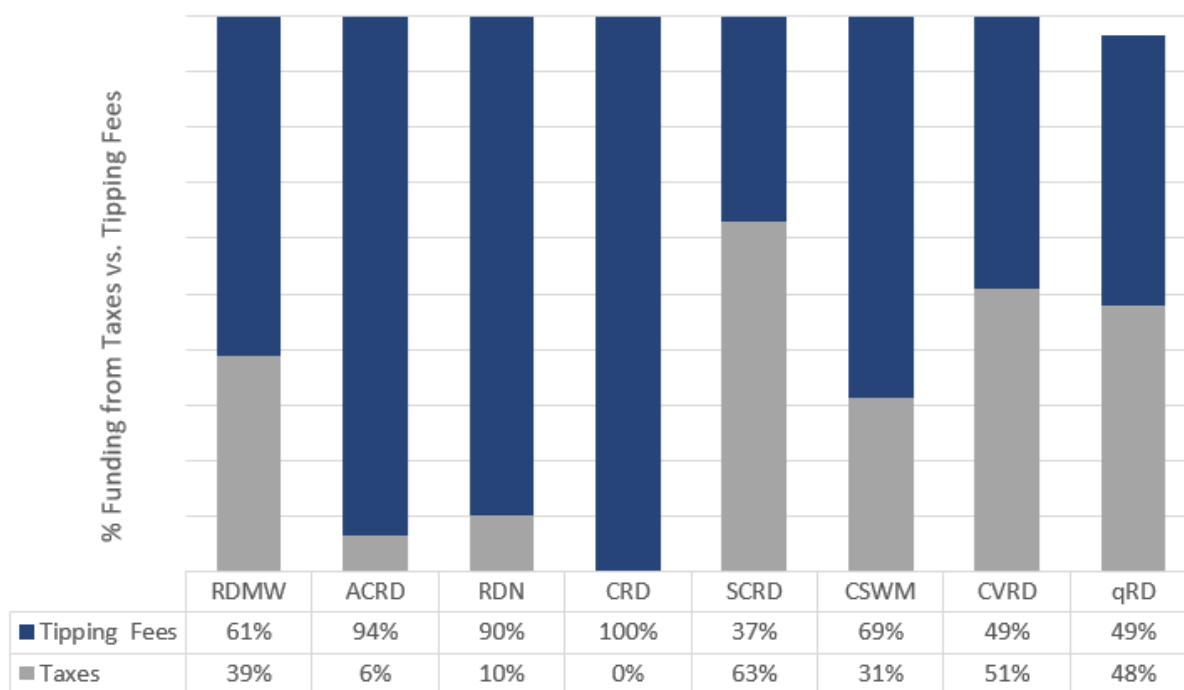


Figure 4: Cost Recovery Models for Coastal Regional Districts 2023

The implementation of potential strategies and actions identified in a new SWMP will result in increases to operational and capital costs. These additional costs will need to be recovered through increases in taxation or tipping fees. The SCRd may want to assess its long-term cost recovery model for solid waste management. This should be part of 10-year capital and operating plan development but could also be a project arising from the new SWMP. Similar initiatives were included in the SWMPs of the Regional District of Central Kootenay, the Regional District of Kitimat Stikine, and the Peace River Regional District.

If solid waste services are mainly funded via tipping fees, increased waste diversion can result in increased costs and decreased revenues, which results in a long-term financial shortfall.

Many regional districts have been in this position. After the Comox Strathcona Waste Management Service (CSWM) updated its SWMP in 2012 for the regional districts of Comox Valley and Strathcona, there were questions about how new initiatives, such as necessary landfill upgrades, on-going landfill closures and a new composting facility would be paid for.

A financial model was developed to determine long term costs and assess whether current revenues would be enough to pay for the system over time. The result of the analysis was to increase tipping fees substantially and establish a new tax for all residents to fully fund the system. There were also some minor cuts to programs to reduce costs as well. The CSWM reviewed these rates annually to assess if they are sufficient.

The Capital Regional District also faced similar challenges – additional waste reduction and diversion initiatives resulting in higher costs and lower revenue from tipping fees. Long term financial modeling was used to inform the necessary tipping rates sufficient to pay for the solid waste system over time.

Potential Action
16A: Assess the cost-benefit of using contractor vs. in-house staff to operate the Sechelt Landfill, and transition to in-house service if determined to be beneficial.
16B: Assess the cost-benefit of options that can reduce service-related operating costs, where private sector solutions exist or could be facilitated.
16C: Assess cost recovery model to implement tipping fees and taxation that fully funds the solid waste management system.

Strategy 17: Maximize Disposal Capacity

The Sechelt Landfill operates as an active landfill site for commercial haulers and as a public tipping site for residents of the Sunshine Coast. SCRD staff operate the scale house and public drop-off area, and an SCRD superintendent coordinates and oversees the overall running of the site. Site operation services are provided by a contractor and include maintenance of the active face, cover placement, waste compaction, surface water control and site drainage, maintenance of access roads and tipping pad, snow removal, fire control, litter control, handling and disposal of controlled waste, and maintenance of the public drop-off areas. These services are all required for the safe and effective operation of the landfill site.

Costs to operate the Sechelt Landfill have increased significantly in recent years. The value of the 2022 landfill operations contract was approximately \$780,000, which was more than double the previous contracted value prior to 2022.

One of the guiding principles for the new SWMP is to “Explore options that promote cost-effective waste management” by which the SCRD emphasizes the focus on finding cost-effective solutions, such as operational and management improvements.

In 2019, the SCRD undertook a feasibility study to understand the use of a waste shredder and/or baler to extend the Sechelt Landfill. The conclusion of this study was that processing waste in this way would require the SCRD to alter the landfill lay-out and process. The study also concluded that it would result in uneven settlement of the landfill, and result in increased maintenance efforts and operating costs. Additional constraints noted were insufficient space on the property, amendments needed to the Design, Operations and Closure Plan for Sechelt Landfill, and increased capital costs.

The SCRD can help to maximize the disposal capacity by enforcing existing bylaws aimed to control the waste disposed, maximize waste prevention and diversion, and minimize unnecessary airspace consumption. This aligns with initiatives discussed as part of Memo on Potential Waste Prevention and Diversion Strategies to consider for the Residential and ICI

sector (Strategy 1: Improve Regulatory Requirements to Enhance Waste Diversion & Strategy 6: Improve Waste Diversion Through Education and Enforcement).

The SCRD can reconsider the incentives set out in its contract to maximize disposal capacity and enhance waste diversion.

Potential Action

17A: Review options to incentivize facility contractors to divert waste and implement if deemed feasible.

4 POTENTIAL IMPACTS FROM STRATEGIES

Evaluation criteria were agreed upon with PTAC members on June 8, 2023. The criteria was set to better compare how the strategies perform (financially, environmentally and in relation to their community impact).

At this preliminary stage, the relative performance of each strategy is simply highlighted in Table 4 below with the anticipated impacts if the strategies are implemented. Impacts have not been quantified and are simply rated as low, medium, and high impacts. A more detailed analysis of the impacts will be presented to PTAC later when preferred strategies and actions are determined.

Impacts from strategies for system funding and efficiency are limited compared to some of the strategies specific to other aspects, such as waste diversion.

Staffing impacts on the SCRD depend on which specific actions are taken. If landfill operations are brought in-house based on overall identified cost savings, the shift in delivery model would significantly increase SCRD staffing needs.

If higher tipping fees is part of improving system funding, it will help to encourage waste diversion. Increased taxation would have little impact on diversion.

More emphasis on waste control and better enforcement can increase waste diversion.

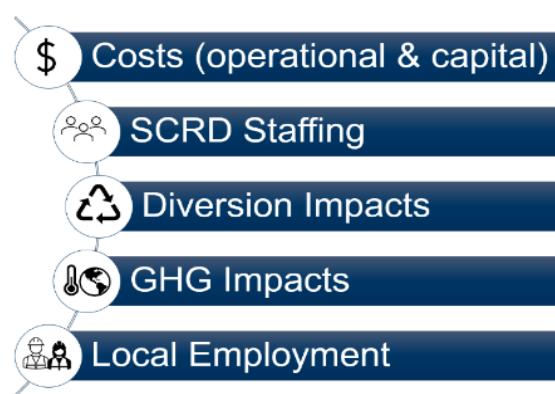


Table 4: Anticipated Impact Related to the Identified Strategies

#	Strategy	Potential Actions	Costs	Staffing	Diversion Potential	Waste Hierarchy	GHG Reduction	Local Employment
16	Develop Long-Term System Cost Forecasting and Cost Recovery	<p>16A: Assess the cost-benefit of using contractor vs. in-house staff to operate the Sechelt Landfill, and transition to in-house service if determined to be beneficial.</p> <p>16B: Assess the cost-benefit of options that can reduce service-related operating costs, where private sector solutions exist or could be facilitated.</p> <p>16C: Assess cost recovery model to implement tipping fees and taxation that fully funds the solid waste management system.</p>	Low – Medium (Beneficial)	Low-High	NA	NA	NA	NA
17	Maximize Disposal Capacity	17A: Review options to incentivize facility contractors to divert waste and implement if deemed feasible.	Low - Medium (Beneficial)	Low	Low-Medium	Recycling & Residual Management	Low-Medium	Low- Medium

5 NEXT STEPS

At the PTAC meeting on April 17, 2024, MH will present on the context and potential strategies that are highlighted in this Memo. We will discuss the suitability of these potential strategies with PTAC members and provide the opportunity to give feedback to ensure that all feasible options have been explored.

Upcoming Meetings

- Preferred Strategies in a Draft SWMP (summer, 2024)

The strategies that are favoured by PTAC will be part of a final memo of all Preferred Strategies, which will be considered by the same committee during summer 2024. Committee members will then have another chance to review the list of preferred strategies. This process will inform the content of the updated Draft SWMP, which will be brought to the public for consultation in Fall 2024.

6 CLOSING

The Sunshine Coast Regional District retained Morrison Hershfield to conduct the work described in this report, and this report has been prepared solely for this purpose.

This document, the information it contains, the information and basis on which it relies, and factors associated with implementation of suggestions contained in this report are subject to changes that are beyond the control of the author. The information provided by others is believed to be accurate and may not have been verified.

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We trust the information presented in this report meets Sunshine Coast Regional District's needs. If you have any questions or need additional details, please do not hesitate to contact one of the undersigned.

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