Comox Strathcona Waste Management

Minutes

REGIONAL SOLID WASTE ADVISORY COMMITTEE

Minutes from the meeting held on September 19, 2024, in the CVRD Civic Room at 770 Harmston Ave, Courtenay and via Zoom commencing at 10:00 am

PRESENT:

D. Baar	Campbell River
D. Birtch	Campbell River
W. Semmelink	Comox
R. Rowe	CVRD Area B
R. Telegus	Denman Island
K. Lukinuk	Hornby Island
A. Gaylor, Director of Community Planning	City of Campbell River
C. Thompson, Manager of Solid Waste Services	City of Courtenay
C. Perry, Engineering Manager	Town of Comox
R. Crisfield, Manager of Operations	Village of Cumberland
S. Fisher, Engineering Services Coordinator	SRD
A. Milwid, First Nations Liaison	SRD
V. Schau, Senior Manager of CSWM Services	CVRD
S. Willie, Manager of Solid Waste Planning & Policy Development	CVRD
J. Sexton, Financial Planning Analyst	CVRD
B. Meagher, Branch Assistant	CVRD
T. Willard-Stepan, Community Educator	Consultant
Todd Baker, Consultant	Stantec Engineering
Wajeeha Anum Qazi, Consultant	Stantec Engineering
Curtis Jung, Consultant	Stantec Engineering

ITEMS:

1. Review of Agenda and Minutes

S. Willie acknowledged that the meeting is being hosted on the traditional unceded territory of the K'ómoks First Nation, and the Comox Strathcona Waste Management (CSWM) service area is located in the Coast Salish, Kwakwaka'wakw, and Nuu-chah-nulth territories.

The committee reviewed the minutes of the June 27, 2024, Regional Solid Waste Advisory Committee (RSWAC) meeting and no errors or omissions were noted. The advisory committee adopted the September 19, 2024, meeting agenda.

2. Summer Engagement Highlights

Sarah reported on summer open houses. There were conversations with residents about the future of landfills and waste disposal, education initiatives, local needs and solutions, cost forecasting, accessibility, and trends in waste generation. A series of rural engagement events were held in Union Bay, Fanny Bay, Huband (Area B), Black Creek (Area C), Campbell River (Area D), Quadra, and Cortes with a good turnout. The community educator has continued conversations at other events in our service area.

Eight municipalities in the CSWM service area have received SWMP in-person presentations, with the last municipality scheduled in September. Elected officials have engaged positively with the presentations.

The Landfill Open House on September 14 included an electric truck from Emterra, and representatives from Connected by Water and Ocean Legacy. David Baar was on-site for Repair Café information. We had 136 attendees on four tours. Online engagement received 70 contributors. People have until September 25 to comment. People can vote on comments.

The Organics Facility Open House on September 21 is at maximum registration capacity for the first public tour. Three tours are scheduled with 25 people each. Participants will receive a free compost sample to take home.

Advisory comments:

R. Telegus – L. Eason was on Denman Island. The kiosk was well designed with demo materials and very effective.

D. Baar – Repair Café booth was well attended with good questions. Most people knew about repair cafés but weren't sure how often they occur. They would like more information. Also, the Landfill Tour gave participants an appreciation of the scale of the landfill.

T. Willard-Stepan – Standing in the bottom of the landfill and understanding the scope makes a big difference. Participants see a large pile of garbage made in a short period of time.

R. Rowe – I saw a little about the events on Facebook, which only feeds you what you're looking for. It can be challenging to get broad distribution on social media, because they only target people fitting the algorithm.

3. Multi-Family Policies

Pilot Project

S. Willie highlighted pilot project findings. MF is a growing sector with the housing shortage. Waste collection is generally privately contracted and combined with ICI collection, making it challenging to collect data. Estimation of MF waste based on population is 2,000 tonnes per year. Contacting residents in MF dwellings is challenging without a central mailbox. We sent an information letter and met with property managers and stratas. We provided some education at meetings.

Waste audits were conducted at three of four buildings in the pilot, followed by recommendations. Building 1 (CVRD), Building 2 (Courtenay), Building 3 (Comox), and Building 4 (Comox) participated. Participants varied with Building 4 being the newest and Building 3 having the most occupants at 100. Buildings had a mix of owners and renters, with some buildings being self-managed. Frequency of waste collection varied significantly. Two of four buildings had on-site recycling. None had organics collection. Landscaping was typically managed by a company. Common challenges were finding a safe place for bins, the need for private collection, limited space for outdoor bins, and reluctance to spend money on waste diversion.

Waste audits found many recyclable containers and organic materials. An estimated 71 per cent of garbage could be diverted. Greater MF participation in waste diversion provides opportunities. Common recommendations included providing education materials, attending meetings, providing options for recycling and organics collection, and exploring a change in pickup frequencies. The Earth Warriors compost service will focus on education first. Building 2 was provided with kitchen bins and invested in an on-site composter. They also added additional recycling bins. Building 3 received a 25L organic toter for the Earth Warriors to pick up and kitchen bins. We're still exploring options to provide space for the organics toter and recycling bins. Building 4 has four 25L organics toters for the Earth Warriors composting service and residents have kitchen bins. We achieved a range outcomes for the various buildings.

Next steps are to provide a toolkit for MF buildings to support diversion, work with stratas/residents to set up better systems, and work with haulers to provide more service opportunities.

Advisory comments:

S. Fisher – MF waste diversion and collection initiatives are noticeably labour and time intensive.

C. Thompson – The City of Courtenay moved away from MF collection due to the administrative burden. The side effect is increased contamination.

C. Perry – The two Comox properties may already pay the Town of Comox for waste collection through Emterra. Our container collection contract includes some MF properties ineligible for curbside collection. There are opportunities for MF properties to customize their collection contract with Emterra. Also, we're requiring all new developments to have room in their solid waste enclosure for organics collection as we look at options for both MF and ICI. Our waste collection contract and requirements are very different from the City of Courtenay. We still oversee ICI and MF. There are options for ICI and MF to opt out of our program if they want to go to a private hauler. They must submit an application form to the Town of Comox. I'll contact S. Willie by email for further discussion on this topic.

S. Willie – So they're receiving garbage and recycling services, but they're not receiving any Recycle BC funding for recycling.

C. Perry – We don't have an agreement with Recycle BC for MF properties. Emterra discussed approaching Recycle BC themselves, but the Town of Comox is not willing to enter into an agreement with Recycle BC at this time.

S. Willie – It might get easier for Emterra in future. Recycle BC is discussing the possibility of providing funding for comingled ICI routes.

C. Perry – I have some concerns about how to audit a comingled route. How do you trace contamination back to a single user?

S. Willie – It would be comingled ICI and MF, not single family.

C. Perry – Emterra has an agreement with Recycle BC for collection in North Vancouver already.

S. Willie – I believe the contractor in Campbell River is signed up to receive funding as well. I'll discuss it with A. Gaylor to understand the details better. Let's have further discussion in light of the residents' lack of awareness about the Town of Comox services to see if we need to make adjustments.

C. Perry – In the transition from the old system to the automated system, there were discussions with stratas about why they weren't eligible. It raised a lot of awareness about the requirements and how Emterra could help with them.

D. Baar – It'll be interesting to see how things have changed six months from now with those MF buildings.

S. Willie – We can support following up with them.

D. Birtch – Is there a dollar savings for buildings opting into waste diversion services? Many stratas make financially driven decisions. If we show they can save money by separating their waste, more people may opt in. You could identify a few haulers who provide these services.

S. Willie – A huge part of the cost is frequency of pickup rather than tip fee. Some policy strategies we discussed for incentivizing haulers to divert may help.

R. Telegus – How do we get people involved with Recycle BC and track where recyclables go if they're not part of Recycle BC?

S. Willie – Recycle BC may have thought more MF service providers would come on board. There are challenges with jurisdictions managing MF waste collection. Recycle BC recognizes these routes are done in a way where haulers combine collection with commercial routes. They're looking to find ways to provide funding back to the haulers.

C. Perry – Recycle BC funding provides help with advertising and reducing program costs. It's taking the money from EPR programs to encourage more people to recycle. Part of the problem with MF is the limit on contamination. Recycle BC audits materials. It's easy to track single family curbside collection. It's much more difficult with MF locations. There are financial penalties if we don't hit targets and expectations around staff time to address contamination. It's not cost effective to enter into a contract with Recycle BC in terms of the required staff time and penalties if we can't get contamination down. It's not staff who do the collection. A private contractor does the collection; they could enter into a contract with Recycle BC.

S. Willie – Haulers don't provide much public education to reduce contamination. It would fall on local governments to educate. Strategies we're suggesting include Waste Generator Source Separation to have three streams of waste separated on site. This would incentivize haulers to offer that level of service.

Strategy 7a: Planning Departments

New MF developments could be required to provide waste diversion infrastructure. The positive benefit will compound over time. Diversion impact is low with only new builds involved, estimated at 16 tonnes per year. Operational impact is low with majority of work involving consultation with planning staff and municipalities. Financial impacts are low with the strategy being implemented with existing CSWM resources.

Strategy 7b: Education and Outreach

Education and outreach initiatives are impactful yet expensive. The strategy proposes to assist an estimated 200 buildings or 1000 dwellings per year. It involves communicating with property management, conducting audits, educating residents, and support with organizing waste collection areas. Diversion impact is low, estimated at 1,000 tonnes per year after five years. Operational impact is low with 300 hours required annually to work directly with buildings. Financial implications are low to medium with a cost estimate of $25,000 per year.

Strategy 7c: Organics Expansion

Work with private haulers and processing facilities to accept organics from MF homes. Allow for some use of compostable plastic bin liners. We could support haulers with collecting organic waste and hauling it south. Diversion impact is low, estimated at less than 400 tonnes per year. Operational impact is medium with increased operations, outreach and compliance enforcement. Financial implications are medium with an estimated annual cost of $50,000 and an additional 0.25 FTE at the landfill.

S. Fisher – Would you please provide some context for what 400 tonnes per year looks like as part of the total waste? For instance, how much is received by the landfill in a day?

S. Willie and V. Schau – We receive 65,000 tonnes per year, so it's a small percentage. This strategy also reduces methane.

C. Perry – It works out to approximately 180 tonnes per day.

S. Willie – Importantly, it's 400 methane-producing tonnes.

R. Rowe – Are there any plans to facilitate compostable bags and liners here?

S. Willie – Nanaimo's facility has a higher throughput so they can manage the materials from compostable bags. They're expanding to receive up to 65,000 tonnes and we're at 14,000 tonnes. They constructed their facility with this capacity in mind. We would need to invest millions of dollars in capital to expand.

V. Schau – Convertus has a high level of overs not acceptable under OMRR. They spent close to a million dollars to dispose of it. The updated OMRR has language around emerging contaminants. PFAS in compost would likely originate from compostable bags and takeout containers. There's no real standard for what compostable bags contain. We chose not to accept them as a new facility. We could

choose to accept them if we knew we were receiving uniform material we were able to process.

S. Willie – The risk is producing a compost people don't want. Being able to physically move compost off site is expensive and it's worth maintaining a quality product.

R. Rowe – Will private services be the only option for MF residences?

S. Willie – The private hauler would provide collection services with either the local government or the hauler coordinating services. It's a matter of managing ICI and MF waste together. We want to expand our program but also maintain quality of compost product.

W. Semmelink - Thanks for the feedback on PFAS in compostable bags. Once again, there's poor regulation on this class of chemicals. Leachate should be checked for PFAS/PFOS if we take our goal of a circular economy seriously. Methane production contributing to global warming is extremely worrisome. I would be glad to know the plans to utilize the captured methane.

4. Remote Landfill Closures

V. Schau presented on the closure of Northern Landfills in Tahsis, Zeballos and Gold River to meet regulatory requirements and reduce GHG emissions. The Environmental Management Act mandates their closure to meeting current standards. These old attenuating landfills no longer meet regulatory standards. We previously agreed to closure in the 2012 SWMP. Non-compliance poses a regulatory risk.

We've deferred the landfill closures to the latter half of the decade to build reserves and ensure we can build transfer stations (Zeballos 2027/2028, Tahsis 2029/2030, Gold River 2029). We need to carefully plan multiyear phased landfill closures while constructing transfer stations to allow communities to transition. Gold River is a little different because it already has a transfer station. We'll work with the Village to ensure the transfer station can accommodate the required materials and provide adequate oversight.

Landfills emit significant amounts of methane. Extensive studies were done to evaluate options for landfill replacement systems. Building a transfer station and consolidating waste to truck down to the CVWMC came out as the top option. It will reduce GHG from the three sites from a total of 2,567 tonnes of carbon dioxide equivalent (tCO2e) to 155 tCO2e.

S. Fisher – Would the waste not still emit GHG at the new location?

S. Willie – There will be GHG collection at the new location.

R. Rebecca – There would also be a leachate component being addressed.

S. Willie – There's a requirement for water monitoring at all locations. There would be a reduction in leachate and also in monitoring costs.

V. Schau – Smaller landfills fall below the threshold required for GHG collection, which is very expensive. GHG could be captured once waste is brought to CVWMC. We want to show landfill operations as the biggest source of emissions. This data highlights the need to close landfills to comply with regulations and reduce GHG emissions. In 2021, we came up with some rough numbers. This summer, our co-op student put together a costing estimate. She mapped out and looked at each landfill's cell design. The final numbers are $2.21 million for Gold River, $2.39 million for Tahsis, and $1.57 million for Zeballos, for a total cost of $6.17 million.

A. Milwid – How are the costs determined for each community? Is it based on the size of community?

S. Willie – The landfill footprint would probably be the biggest factor. The cover would be larger if there's a greater surface area. Gold River hasn't been used in a long time. Tahsis is tallest. Zeballos is large in area. Costs also depends on how long communities have been using the landfills. Some had industries using landfills.

V. Schau – Funding the project is expensive. When we updated the closure costs in 2021, the projected costs were $4.69 million. The updated costing estimate is projecting $6.2 million. Based on our current budget, there's a funding gap of $900,000. The action required is to look at increasing the reserve contribution to meet future obligations.

S. Fisher – Are the costs escalated to 2028 or is it in today's dollars?

V. Schau – There is anticipation of cost escalation. We'll have to continue updating these numbers.

V. Schau – The next step is projecting transfer station costs. What should they look like and what kind of service levels are expected? What types of materials should be accepted? Zeballos is slated to close in 2027, so it's the most urgent. Funding has been secured for a C2C meeting with local First Nation communities in April 2025.

Advisory comments:

R. Telegus – Will the transfer stations be staffed? I was involved with the closure of the Brooks, AB, landfill and chose local plants for the cover. The landfill here has Scotch Broom. I urge you to consider indigenous plants.

V. Schau – The intention would be to staff the transfer stations. We haven't honed this aspect yet. The landfills are staffed. We're looking at getting grass species native to the area. Broom is quite invasive with deep roots. We also need to plant things that with roots that don't interfere with the cover system.

D. Baar – One of the essentials does seem to be monitoring with good security cameras.

V. Schau – There's incredible technology available. We're using monitoring technology at the CVWMC. We want to increase diversion in these communities. The transportation costs for materials included in EPRs are covered by these programs.

R. Crisfield – Are there other viable options to the bin wall, since the waste will be transferred by truck? Is it the most practical and cost-effective?

S. Willie – The analysis indicated the use of on-site compactor bins.

R. Rowe – Is there any intent for people to pay to access the site? How would it work with staffing and license plate scanning to monitor contamination rates?

S. Willie – Gold River already has a user-pay system. It would be up to the municipalities about whether they want to fund the system through taxes or tipping fees. Some locations may have lodges with summer guests generating a large amount of waste. The fee analysis will be part of the conversation with local governments. We've had discussions with Cortes and Quadra about centralized waste collection and staffing. The challenge is balancing staffing costs with days/operating hours where a transfer station is open for accessibility.

S. Fisher – Lifting waste into bins may be an accessibility issue for some people.

S. Willie – The gates are designed so you can put waste under them.

A. Milwid – I want to comment on the comparison of GHG emissions for landfills versus transfer stations. People are visual learners. Presenting information with imagery is helpful, rather than numbers alone. It's important to point out the benefits to land and water.

V. Schau – That's valuable feedback. It's helpful to present these concepts with real life examples to help quantify these ideas for consultations.

5. LUNCH BREAK

6. GHG Emission Inventory:

Presented by Morrison Hershfield (now Stantec) staff members Todd Baker, Curtis Jung and Wajeeha Qazi via Zoom. They looked at current GHG emissions, possible strategies, and the specific impact of alternatives such as rural collection, organics collection, and alternative vehicles. Attention was paid to the scale of emissions when comparing options.

Background – Part 1: Establish 2022 Baseline of Emissions

Stantec presented a 2022 baseline emission inventory of CSWM facilities including the CVWMC, CRWMC and remote community landfills. They focused on Scope 1, 2 and limited Scope 3 emissions.

Scope 1 emissions include landfilled waste, flaring, operation of leachate treatment plant (LTP), equipment operation and transfer of garbage, organics and recyclables between CSWM sites. Scope 2 emissions focused on usage of sourced electricity. There were no Scope 3 emissions found within the boundary of analysis.

Landfill gas generation is highest at CVWMC because of the high amount of waste deposited there. There has been a large reduction in emissions due to the landfill gas capture system. CRWMC has the second highest landfill gas generation. Small amounts of landfill gas were generated at remote landfill sites.

Total fugitive GHG emissions are estimated to be 39,409 tCO2e. Transportation emissions totaled 417 tCO2e per year, much lower than landfill emissions. Facility emissions mostly comprised of the operation of on-site equipment, including mobile equipment, the boiler and the LTP. Total GHG emissions were estimated to be 40,672 tCO2e per year with 97 per cent from the landfill, two per cent from facility operations, and one per cent from transportation of waste and recyclables. Transportation emissions from remote sites are much lower than landfill emissions.

Advisory Comments:

R. Telegus – You said electricity at the site was incorporated into the analysis?

Stantec – It was. Electricity is produced off-site.

K. Lukinuk – The electricity emissions are from hydroelectric dams? Or on-site generation?

S. Willie – We don't have on-site generation.

Stantec – We use metrics based on the buying and selling of electricity in BC.

R. Rowe – Is natural gas used at any of the facilities?

S. Willie – There's propane at the leachate plant as a backup source if they can't access the gas captured at the landfill. We don't generally heat facilities. If we do, it's electric.

D. Baar – I'm interested in fugitive gas emissions numbers. How were they obtained?

Stantec – We used modelling based on the amount of waste disposed.

D. Baar – So it's not done directly.

Stantec – We use the models to estimate because they are accurate on a big picture scale. They are based on assumptions to provide a rough estimate.

Background – Part 3: Assess Impacts of Specific Initiatives (Part 2 presented after Part 3)

Stantec presented an assessment of initiatives such as repair and reuse, alternative vehicles, rural waste collection, and organics diversion.

Repair and reuse

Repair and reuse initiatives are estimated to reduce emissions by 33 tCO_2e for textiles and 37 tCO_2e for electronics

Waste delivery emissions

Waste delivery emissions were compared for three scenarios. Scenario 1: Self-hauling creates an estimated 355 tCO_2e. Scenario 2: A combination of self-hauling and private collection creates an estimated 254 tCO_2e. Scenario 3: Private collection only creates an estimated 198 tCO_2e. Residents haul one load to a facility per month on average. Five hundred households still self-haul, creating higher emissions. Private haulers only collect garbage. If all households had private collection of recyclables, we'd have lower emissions. Looking at the scale of numbers for these three scenarios, we see relatively minor impacts compared to landfill gas emissions.

S. Willie – There's much conversation about whether it makes sense to have a lot of garbage trucks driving around creating emissions. We want to validate the claim that

having a consolidated service might reduce emissions compared to having individual households self-hauling to a facility.

K. Lukinuk – Were you basing the numbers on that graph on a community of 1,500 homes?

S. Willie – We'll send a report out after the meeting detailing the methodology in this presentation.

Organics Diversions Emissions

Organics diversion reduces emissions by approximately 468 tCO2e overall. Emissions from the Comox Valley Waste Management Centre are reduced, because organics are diverted from the landfill.

Alternative Fuel Vehicles

The report looked primarily at excavators and loaders. A move towards electric vehicles and away from diesel reduces emissions by an estimated 89.5 tCO2e for excavators and 70 tCO2e for loaders.

Capital Project Emissions:

Transporting the topsoil, sand and gravel required for landfill closures from the Campbell River area produces an estimated 46 tCO2e for Gold River, 129.6 tCO2e for Tahsis, and 139.7 tCO2e for Zeballos.

Advisory comments:

S. Fisher – I'm having trouble figuring out what we'll be using these numbers for. Can we take a few moments to frame what we'll be doing with this information?

S. Willie – We want to include GHG emissions in the analysis of some of our strategies, such as the diversion benefits of reduce and repair, and bring the net benefit into context. We've had conversations at the Board level about replacing heavy equipment with electric. It's helpful to examine pickup versus self-haul emissions when considering rural collection. Currently, residents self-haul and three different waste collection companies drive around. The excavation of Cell 2 at the CVWMC involved a tremendous amount of vehicle usage and fuel consumption; Should we be accounting for these capital project emissions and should we be asking contractors to report on emissions?

Background – Part 2: Short- and Long-Term GHG Emission Reduction Strategies

Stantec presented on short-term (3 to 5 years) and long-term (over the next 20 years) GHG emission reduction strategies. Medium to high impacts strategies include diverting organic waste from the ICI sector, enforcing organics diversion in

residential homes, and installing biocover systems for small landfill closures and parts of the CVWMC. Low impact strategies include ensuring efficient transport of waste products, using alternative vehicles, and using landfill gas within facilities or in partnership with third-party utility companies. GHG emissions are significantly lowered with a landfill gas collection system. The CVWMC has a robust system.

When we talk about high and medium strategies, we're mainly talking about organics. Most GHG is related to organics. At smaller sites where organics can't be collected, you're getting the full impact of GHG emissions. You can look at biocovers or diverting organics to composting facilities. This is where you may want to devote the most energy and resources.

Advisory Comments:
R. Telegus – I'm assuming GHG emissions are lower at composting facilities than landfills because it's aerobic rather than anaerobic?

Stantec – You'll get more emissions from anaerobic decomposition. Composting facilities still generate some emissions. We're making a comparison using the CVWMC where there's a good GHG capture system. It's different for landfills with no GHG capture. You can also miss out the piece where once you put compost on the ground, there's a carbon sequestration factor.

S. Willie – One piece we may be missing from this conversation is the avoided facility emissions. Compost facility emissions must be looked at in terms of the emissions created if the waste is taken to a landfill instead.

Stantec – There's also the factor of transporting organics to a different facility. These emissions are small in comparison.

R. Rowe – I'm assuming you're removing kitchen waste organics. Is there a factor to add in with pet waste, which ends up in the landfill?

S. Willie – It's the feedstock being considered, rather than all the organic waste.

K. Lukinuk – There's savings by extending the lifespan of the landfill.

Stantec – Airspace is valuable. Taxpayers benefit by taking organics out of the landfill.

S. Fisher – The numbers would be more relevant if framed with the outcomes at the start. You mentioned there are assumptions in the models. What would happen to the figures if we changed the assumptions?

Stantec – With any modelling exercise, you need to check and re-check assumptions. We could change our assumptions with organics diversion. The change in numbers wouldn't be significant. The same goes for bigger numbers such as landfill gas. The overall results about major impacts and benefits will be the same.

S. Fisher – It would be helpful to include that blurb in your presentation to lend validity to the numbers.

S. Willie – The numbers are generated to help the Board make decisions. What's the benefit if we spend more money to reduce emissions at the landfill, if we spend money on an electric loader, or if we invest in repair cafés?

D. Baar – You can cross-check facilities with capture to give real data on what emissions are like. This analysis shows where efforts should be concentrated.

Stantec – Empirical data on landfill gas generation is another layer where you dive into more detail. There are different reasons for doing this. Modelling provides the answers we need from a big picture perspective to figure out where to focus. You could dig deeper.

D. Baar – It's worth looking at how places that capture still have fugitive emissions higher than transportation emissions. It shows where our focus should be.

S. Willie – With our drone, our environmental technician is gathering data on landfill gas emissions.

7. Regional Landfill Capacity

S. Willie presented on regional landfill capacity. How we approach our waste disposal options and incorporate them into the SWMP impacts the lifespan of the landfill. Our permit requires annual reports and was last updated in 2016. It includes the lined landfill and leachate management system. It lays out the physical area in which we can place waste. The tonnage per year is set at 65,000. In 2022, we asked to increase it to 80,000 tonnes due to population growth and the closure of the Campbell River landfill.

We needed to add a second leachate pond with a cover due to receiving more rainfall in winter. We asked for permission to increase our leachate limit overall. We're still undergoing this amendment with the Ministry. The Design, Operations and Closure Report (DCOP) will be updated in 2025. The SWMP is more aspirational in scope. If anything deviates from the Landfill Criteria, it needs to be reflected in the DCOP, which gets updated every 5 years or whenever there are significant changes. It was last updated in 2016 and requires updating with further public consultation.

We initially planned to use Cell 1 until the end of 2023; it'll be used until the end of 2024. We started using Cell 2 in August 2023. It has gained additional capacity while maintaining separation from groundwater. Current design height is 185m above sea level (only 20m higher than the berm). Capacity is estimated to be reached in 2037. We'd like to be further along with Cell 2, because Cell 1 is almost full. We've extended the lifespan of Cell 1. We changed the bottom of the slope of Cell 2 for groundwater flow direction. AECOM prepared three conceptual options for landfill expansion beyond the engineered Cell 3. Some of the options assumed significant diversion by 2022. They estimated 19 additional years of airspace with the proposed landfill expansion areas if we achieve 70 per cent diversion. A significant increase in MSW is forecasted with projected population growth.

Considerations for expansion include maintaining buffer zones for visual and nuisance barriers, faults and unstable zones, and environmentally sensitive areas such as wetlands. We have a site map showing the cells and highlighting the high-risk zone due to earthquake faults. Cells weren't constructed right next to the original cell to work around fault lines. The map shows proposed locations for Cells 4 and 5. Property boundaries have changed due to purchasing land to extend the buffer. The capacity of proposed Cell 5a is 6 to 8.5 years. The second proposal requires a new entrance. Cell 5b has an estimated 9.5 to 13 years of capacity and might involve movement of waste from the sawmill landfill in order to install a liner. The current height of 185m above sea level could be increased up to 205m to 212m for greater financial benefits. Considerations include effective leachate collection, geotechnical stability, and visibility from neighbouring communities. Cells 1 to 3 are currently approved. We'll do further geotechnical and environmental work to propose future permitting for Cells 4 and 5. We are estimated to reach capacity in 2043 with Cell 3 at 185m and the same diversion rate.

K. Lukinuk – Would the lifespan increase with the removal of compostables?

S. Willie – Yes. Construction waste would also need to be reduced to achieve 70 per cent diversion. If we divert more, we get more years of capacity.

K. Lukinuk – Is there a designated site for the compostables?

S. Willie – They go to the Campbell River Composting Facility, transferred from the CVWMC.

S. Willie – With regard to saving space for the future, our masterplan looks at the composting facility and a landfill gas end use facility we've been working on with Fortis BC. We also looked at the possibility of a waste-to-energy facility. What else

might we want to consider for creating space in the future? Could we send the mattress tower to a processing facility? What about a waste facility such as Pacific Wood Waste? How do we incentivize these facilities? Do we have a repair mall or a free store? What are the best uses of land to achieve diversion and reduce reliance on landfills?

R. Telegus – Would a waste-to-energy facility include incineration?

S. Willie – Yes. It's part of the conversation. There are some communities in support of incineration.

K. Lukinuk – Has the CVRD reached out to other places in the world doing waste-to-energy projects?

S. Willie – Morrison Hershfield have looked into evaluating waste-to-energy options. It's a challenging area. We keep in tune with what's happening and work with other local governments to look at options. Generally, it's been found not to be more cost effective at this time.

V. Schau – Through working on the last SWMP and subsequent conversations about the Sustane waste-to-energy company, we've found there's still residual waste for disposal. It's not a replacement for a landfill. It's a supplement.

S. Willie – The work we're doing with Finance will help us evaluate these options. If we gave all our waste to a private company, we would have reduced tipping fee revenue. We'd lose the tip fee revenue we use to fund our recycling programs and other diversion and education programs. Two-thirds of the tip fee revenue goes towards other parts of our service. It doesn't just go to the cost of disposing of the waste. We don't oppose waste-to-energy. We spent a significant amount of money investigating this option.

K. Lukinuk – The equipment for clean incineration is very costly to maintain.

V. Schau – The technology isn't there yet for waste-to-energy. With MSW, the feedstock is not homogeneous. However, creating space for a new landfill is likely not possible and we'll need to look at other options. The Chester facility is not quite off the ground at full scale. Mass burning would go against some of our guiding principles. We can't consider waste energy until we hit 75 per cent diversion.

S. Fisher – Is there any value in creating our own MERFs (materials recovery facilities) on-site?

S. Willie – Ontario moved to 100 per cent producer-funded MERFs. They're deciding whether they want to pass the operation on to private companies. It's a more competitive space where they have multiple Recycle BCs. MERFs were a valuable commodity when we started. Our Cumberland MERF used to run a sorting line and now they don't. The volume of recyclables under the control of Recycle BC is significant. If there are other ways to support ICI diversion, we could look at that. Nanaimo encouraged small businesses to bring in recyclables and then stopped. You may end up baling it yourself and selling it to a private hauler. It makes it hard for small haulers to find places to sell their materials.

R. Telegus – One of our main goals is environmental protection.

S. Willie – Could we create a recycling service for businesses? It's helpful to have these ideas brought to the table.

8. Wrap up and Meeting Adjournment

Materials will be sent out for review and feedback in the next two weeks.

GENERAL:

The next Regional Solid Waste Advisory Committee is scheduled for October 17, 2024, at 10:00 am.

TERMINATION:

S. Willie adjourned the meeting at 2:53 pm.

Recorded by:	Certified correct:
B. Meagher	***S. Willie***
Bridget Meagher Branch Assistant – Engineering Services	Sarah Willie Manager of Solid Waste Planning and Policy Development