



ALBERNI-CLAYOQUOT
REGIONAL DISTRICT

West Coast Landfill

2021 ANNUAL REPORT

Submitted to: British Columbia Ministry of Environment
& Climate Change Strategy

Prepared by the ACRD Community Services Department

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PERMIT TO PRACTICE
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Report Summary

Reporting Year 2021		Unit
Waste Tonnage Disposed at WCL	6,632	t
Landfill Airspace Consumed	12,130	m ³
Landfill Airspace Remaining	700,114	m ³
Anticipated Closure Date at Current Fill Rate/Density	Approx. 2070	
Waste in Place at Landfill	163,077	t
Leachate Generated & Treated	Not measured	m ³
Landfill Gas Management	Trial Monitoring Completed (2020)	
Closure Works Undertaken	none	
Inspection Works	Review undertaken	
Changes from Approved Plans	None	
Ministry Non-Compliances	None	
Progress on Non-Compliances	N/A	
Projects Completed in 2021	Future Projects Proposed	
Environmental Monitoring Program Improvements Leachate Treatment Upgrades Preliminary Design Ocean Debris Clean-Up Organics Composting Facility Design Preliminary layout design for public drop-off area	Organics Curbside Collection (2022) WC Solid Waste Collection Bylaw (2022) LF Upgrades/Organics Composting Facility (2022-2023) Leachate Treatment Facility (2023-2024) Waste Reduction Education (2022) Waste Resource Centers in Ucluelet and Tofino (TBD) Additional Diversion Opportunities Clear Bag Program Investigation Expansion of Curbside to Tla-o-qui-aht First nation and Yuułu?i?path Government (2022) Design Operation and Closure Plan Update (2023-2024) Landfill Contract Renewal (2022) Rope and Netting Project Installation of Flow Monitoring	
	Target	Actual
1 - Waste Disposal Rate	< 400 kg/capita	559 kg/capita
2- Diversion of Waste	>50%	22%
3 - Airspace Consumption Ratio	>750 kg/m ³	547 kg/m ³
4 – Capital Contributions	>\$70,000/year	\$90,000/year
5 – Water Quality	Meet FWAL	Not met
6 – Landfill Gas Generation	<1000 tonnes CH ₄ /year	Est. 339 tonnes CH ₄ /year

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Background

The Alberni-Clayoquot Regional District (ACRD) operates the West Coast Landfill (WCL) under the British Columbia Waste Management Act Operational Certificate Number OC-5634, issued April 12, 2005. The “waste shed” for municipal solid waste destined for the WCL includes the District of Tofino, District of Ucluelet, Parks Canada, ACRD Electoral District C - Long Beach, Millstream and Port Albion and the First Nations communities of the Toquaht, Yuułuʔiłʔatḥ, Ahousaht, Tla-o-qui-aht, and Hesquiaht. The WCL is located approximately 9 km northwest of the Tofino-Ucluelet junction, on the east side of the highway, along Alaska Pine Road. The WCL has been operational since 1980.

This report was prepared by staff at the ACRD to satisfy the annual reporting requirements for the WCL, as required by the Operational Certificate and the 2016 Landfill Criteria for Municipal Solid Waste published by BC Ministry of Environment and Climate Change Strategy (MOECCS). The report has been reviewed by solid waste engineers from Tetra Tech Canada Inc. that are familiar with the facility and operations. The content of the Annual Report and supporting materials were reviewed by Tetra Tech Canada Inc. in conjunction with the ACRD staff prior to the report being finalized.

Mission Statement

“To protect human health and the environment and maximize value of service by effectively managing the region’s solid waste in an environmentally, socially and economically responsible manner.”

Waste Quantification

Landfilled

In 2021, the WCL accepted 6,632 tonnes of municipal solid waste (MSW) and construction and demolition (C&D) waste as shown in Table 1. The cumulative waste in place at the WCL as of the end of 2021 is 163,077 tonnes.

Table 1 - Waste disposed in 2021

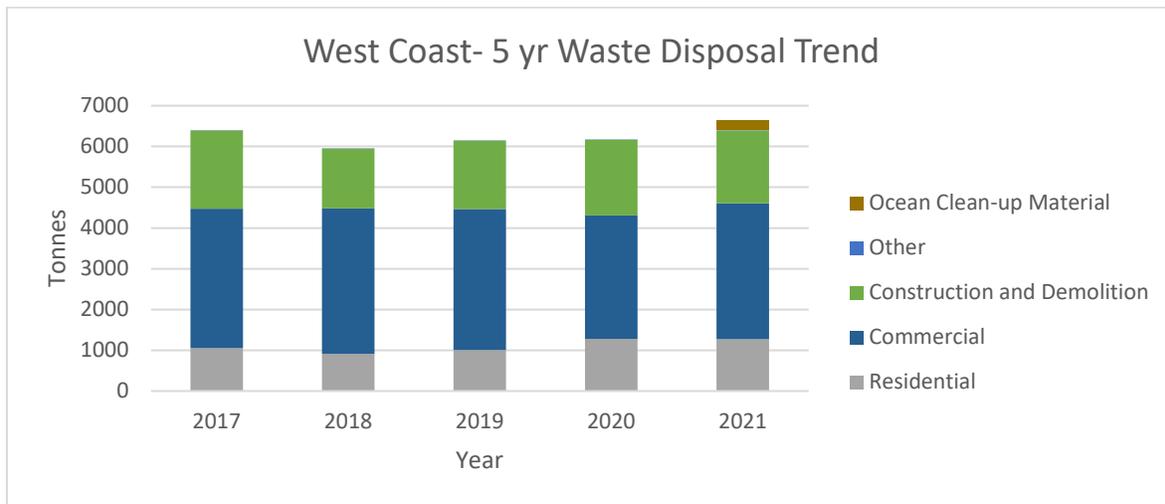
Waste Breakdown	Tonnes	Percentage
Residential Garbage	1,268	19%
Commercial Garbage	3,333	50%
Construction and Demolition	1,793	27%
Other Garbage	4	0%
Asbestos (ACM)	0	0%
Ocean Clean-up Material	237	4%
TOTAL	6,632	100%

The single largest source of the solid waste disposed on the West Coast is collected from the commercial sector. This sector includes resorts, hotels, restaurants, retail and other businesses and it makes up 50% of all waste that is landfilled. The residential sector produces 19% of the waste which includes materials collected at the curbside and materials self-hauled by residents to the landfill. Construction and demolition waste makes up a relatively large portion of the waste stream at 27% (close to the Alberni Valley Landfill rate of 25%) which includes roofing, drywall, and wood materials. A year over year

comparison of waste processed through the WCL was compiled over a five-year period (Chart 1 below). The key trends are:

- The quantity of residential waste disposed has increased slightly the last five years.
- Commercial and Construction/Demo waste (combined) saw a dip in 2020, likely due to the pandemic and slowdown in the economy but has since picked back up to pre-pandemic levels.
- Ocean Clean-Up waste is now being tracked separately (in 2021 237 tonnes was disposed). This will be closely tracked as these numbers are expected to climb in future years.

Chart 1 – 5 Year Waste Disposal Trend on the West Coast



The permanent population served by the landfill based on 2021 census information is estimated to be 6,834. However, the West Coast has a significantly higher equivalent population due to the tourism sector. Equivalent population estimates put the total population 40% higher; 11,445 in 2021. This results in a disposal rate of 559 kg/capita per year, down slightly from 2020 (562 kg/capita). This is still well in excess of the target of 400 kg/capita.

Chart 2- Waste Disposal 2021

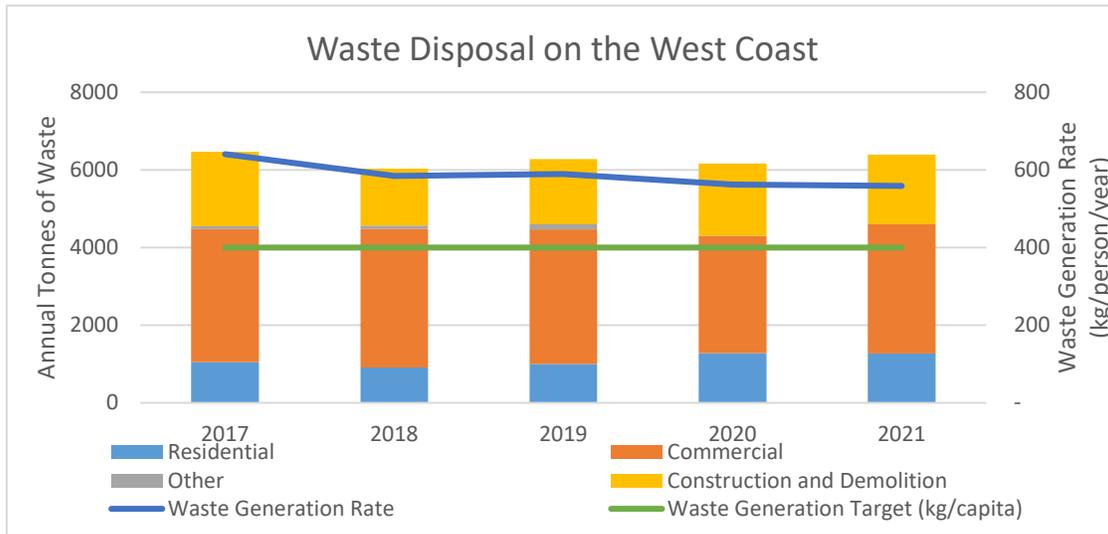


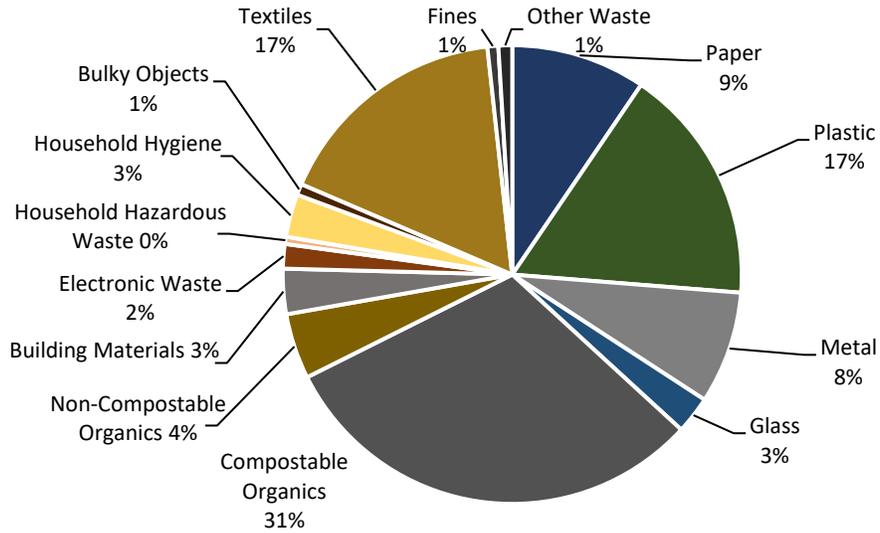
Chart 2 shows that the tonnage of wastes disposed from the residential stream has remained relatively static, with a slight increase in 2020 and 2021. There has been a noticeable increase in disposal tonnages from Commercial and C&D waste (combined) since 2017. This is representative of a general building boom seen in the region. In 2020 we found that whilst the commercial waste quantities decreased, residential waste quantities increased. Both changes reflect a change in customer patterns due to COVID-19 also seen elsewhere, the former pattern may resume when more normal conditions return.

Target-1 - Reduce waste disposal to less than 400 kg/capita

In the spring of 2019, the ACRD conducted a Waste Composition Study at the West Coast Landfill to gain a better understanding of the quantity of organics, recyclables and Extended Producer Responsibility (EPR) materials in the garbage streams for curbside residential, self-haul and commercial waste.

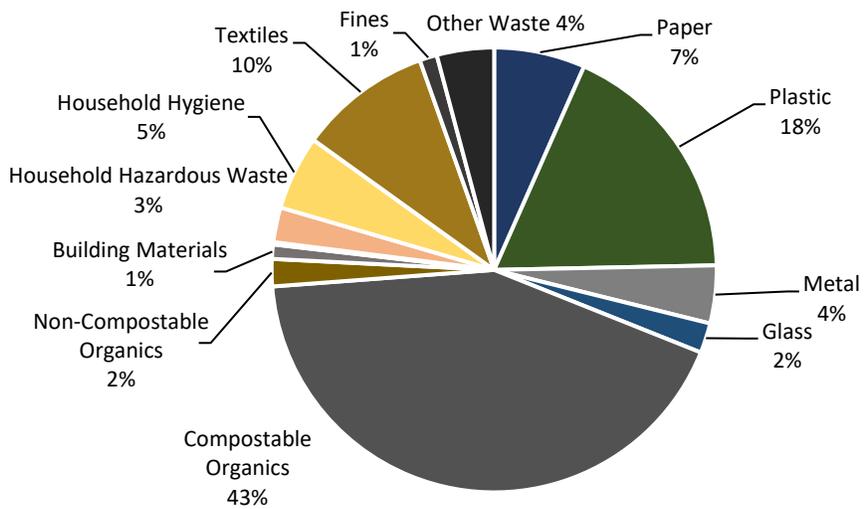
As shown in Chart 3, the commercial waste stream was found to have an average composition of 31% compostable materials and 29% recyclable materials that made up the majority of the following categories; plastic (17%), paper (9%), metal (8%), glass (3%), electronic waste (2%) which were further divided into whether the material could have been recycled or not as judged against available programs. The large portion of waste classified as textiles in the commercial waste stream (17%) was rope and netting. This was being landfilled at the time of the study. During the study, it was also noted that 2 of 7 commercial loads audited contained bags of separated recyclables within the garbage bags. This indicated that resort staff are separating recyclables responsibly, but the material is still entering the stream for disposal.

Chart 3 - WCL Commercial Waste Composition 2019



The residential curbside waste stream shown in Chart 4 consisted of approximately 43% compostable and 21% recyclable material. Garbage that was self-hauled by residents had a much lower percentage of organic material. However very few people self-haul their waste to the West Coast Landfill and this lower percentage may reflect these visits were made with the specific purpose of disposing of bulky items such as furniture.

Chart 4 - WCL Residential Curbside Waste Composition 2019



Based on the data from the waste composition study, we can project that there were an estimated 2,944 tonnes of material landfilled in 2021 that was available to be diverted from the residential and commercial waste streams through recycling and composting as shown in Table 2.

Table 2 - WCL Divertible Portion of Waste Landfilled in 2021

	Landfilled	Recyclable Portion	Compostable Portion	Total Potential Divertible
<i>Residential Garbage</i>	1,268	266	545	811
<i>Commercial Garbage</i>	3,333	700	1433	2,133
<i>Other Garbage</i>	0			
<i>Construction and Demolition</i>	1,793			
Total	6,395	1,166	1,978	2,944

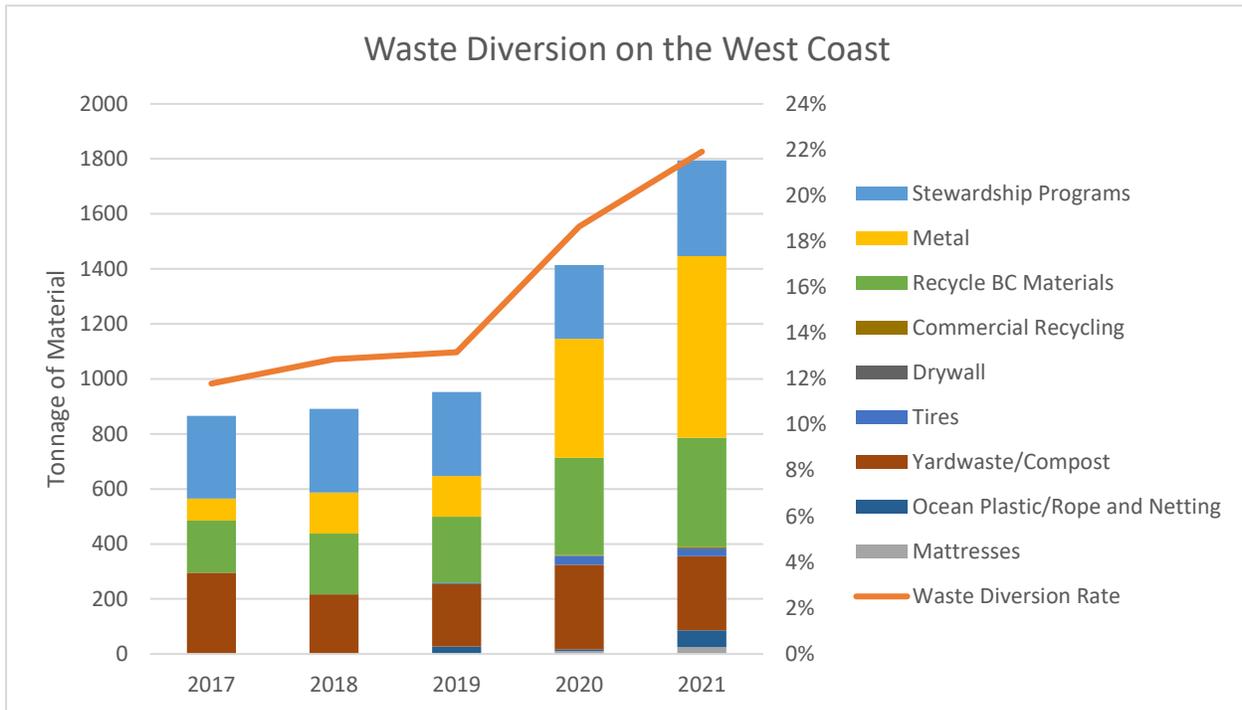
Diverted

In 2021 good progress was made in improving the diversion of wastes from disposal. This progress was made largely outside the EPR programs. The quantity of materials measured as being diverted from landfilling in 2021 was 1,795 tonnes of which 1,050 tonnes was collected directly at the landfill. The diversion rate is influenced by both the amount of materials collected through recycling programs and the amount of waste going to landfill, as shown in Chart 5(next page).

Key takeaways include:

- A significant increase in the metal tonnage collected in 2020 and 2021, resulting from consolidation of metal recycling at the landfill not previously tracked due to collection by private haulers prior to 2020.
- Increase in the Recycle BC materials volumes collected in 2021, likely due to increased quantities of cardboard generated through online shopping.
- A slight increase overall in stewardship items collected.

Chart 5 - Annual Waste Diversion Rates 2021



Expanded waste diversion programs also contributed to the trends shown above. In partnership with the ACRD, the Ocean Legacy Foundation began accepting ocean plastics as well as rope and netting in 2020, These were then recycled into feedstock for new products. Additionally, the Surfrider Foundation continued their work in collecting these materials from coastline clean-up events, feeding this material through the WCL for diversion to Ocean Legacy for final processing. As a result of these efforts:

- Ocean plastics collection increased to 13.7 tonnes in 2021, compared to 1.35 tonnes in 2020;
- Rope and netting diversion increased to 47.5 tonnes in 2021, compared to 4.75 tonnes in 2020

Mattress recycling, begun in mid-2020, saw 25 tonnes of mattresses diverted from landfilling in 2021, compared to 10 tonnes the previous year. This diversion is important not only for environmental reasons, but mattresses are also difficult to manage in disposal. So, this is an important success.

Bicycles are also diverted for reuse. A dedicated storage shed is provided so that bikes may be reused or whole or in part. The tonnages are small, but it is an important statement that they may be reused and are not disposable items.

The ACRD contracts the WCL waste reduction education services to Surfrider Pacific Rim Chapter which is present in both Tofino and Ucluelet. The waste reduction education program run by Surfrider has three main thrusts:

1. eliminating single-use and unnecessary plastics;
2. materializing a localized circular economy; and
3. engaging youth, businesses, the public and all levels of government in ocean-friendly initiatives.

These additional diversion efforts have resulted in a diversion rate of approximately 22%, up from 19% in 2020. This diversion rate is still low compared to the target set in the solid waste management plan of 50%.

Target 2 - Increase Diversion of Waste to 50%

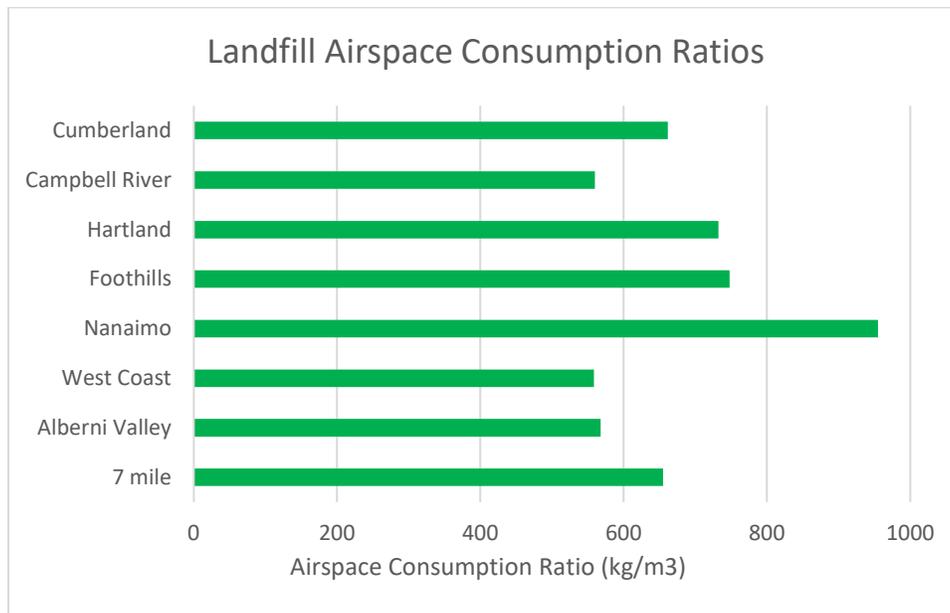
The two largest potential diversion opportunities on the West Coast are organics and improved commercial recycling. Other opportunities for diversion streams on the west coast could include drywall, and other construction waste materials.

Landfill Capacity

Airspace Utilization

In 2021 the WCL consumed 12,130 m³ of airspace based on the annual topographical survey completed at year end. With a total tonnage disposed of 6,632 tonnes, that results in an airspace consumption ratio of 547 kg/m³. This is consistent with the five-year average of 490 kg/m³. This is a relatively low ratio in comparison to neighboring landfills that average 730 kg/m³. The chart below (Chart 6) compares the landfill airspace consumption ratios from comparable landfills in the region. Smaller landfills will typically have lower airspace consumption ratios.

Chart 6 Airspace Consumption Ratios at Comparable Landfills



The volume of cover material used in 2021 was estimated at 4,381 m³, a significant reduction in airspace consumption from 2020 (6,180 m³). The operations contractor has been investigating innovative approaches to minimize cover and increase compaction at the Alberni Valley Landfill (AVL) by surveying monthly surveys of test waste cells. Similar methodology is being applied to the West Coast Landfill as it provides a more accurate measure of cover material usage by calculating unity factors. As cover

thickness at the WCL is comparable to the AVL, the same unity factors have been utilized in the calculation:

- Cover material airspace (per cell) = 155.2 m³
- Cover material tonnage (per cell) = 280 tonnes
- Average cover density = 1.8 tonnes/m³

The resulting cover material airspace used in 2021 was calculated using these factors in comparison with total tonnage of cover material used (7,886 tonnes). The reduction in airspace consumption is likely due to this new method of calculation but continued surveys in 2022 will further refine these factors. Operationally, the landfill contractor continues to work on restricting cover use which will not only reduce the costs of providing cover material but also preserve airspace and ultimately extend the life of the landfill.

Target 3 – Minimum Airspace Consumption Ratio of 600 kg/m³

Remaining Life

Based on the airspace consumed in 2021, there is an estimated 700,114 m³ remaining of airspace at the WCL at the beginning of 2021 based on the landfill's current Design, Operations, and Closure Plan (2012). Based on the current population growth rate of 3%, waste generation of 559 kg/capita and airspace consumption ratio of 547 kg/m³, the landfill will reach capacity near 2055. However, if the targets for reducing waste disposal to 400 kg/person and minimum airspace consumption ratios are met, the landfill lifespan has the potential to extend to approximately 2070 and beyond.

Operations

Variations from DOCP

The last Design, Operations and Closure Plan (DOCP) was completed in 2012 by McGill and Associates Engineering and requires an update.

Exceptions from the 2012 plan include overflow ("decant") events from the leachate holding lagoon. The current system was designed to capture the leachate generated on site. That leachate is then applied to an irrigation field. In 2015 Solinst Levelloggers were installed in the overflow pipes from the leachate lagoon to record overflow events. In 2021 there were 11 decant events as detailed in the Environmental Monitoring completed by Piteau and Associates. This is down from 19 events in 2020, and 17 events in 2019. The overflow events in all these years occurred during the winter months following winter storms. The pumping system has not had sufficient capacity to discharge the lagoon to accommodate the inflow of leachate.

Surface water discharged at the time of the decant events was sampled and analyzed as part of the environmental monitoring program as discussed in the 2021 Monitoring Report West Coast Landfill.

Conformance to SWMP

The most recently adopted Solid Waste Management Plan (SWMP) from 2008¹, listed several initiatives to meet the first two targets in the report; reduce per capita waste generation to 400 kg/person; and

¹ Reviewed in 2014 and 2017.

increase diversion to 50%. The majority of these initiatives were implemented; however, the one major outstanding action item is the implementation of an organics diversion program.

The plan also indicated that the future of waste disposal at the WCL was going to be reviewed. It raised the prospect that the WCL might be closed and converted to a transfer station, with landfilling of waste at the Alberni Valley Landfill instead. A review of the leachate system was completed in 2019 and an assessment to compare the economic and environmental costs of transferring versus operating was undertaken in 2020. This Lifecycle Cost Assessment was conducted by Sperling Hansen Associates and it found that upgrading the leachate system and continuing to landfill at the WCL provided the most economical solution for the ACRD.

Compliance Resolutions

The WCL has not had a compliance issue raised by the Ministry of Environment since 2018, which identified late annual reporting. That has been resolved with annual reports being submitted by June 1st of each subsequent year. A Ministry site inspection is being scheduled for early 2022 as one has not been completed since 2009.

Complaints

The ACRD did not receive any documented community complaints regarding the operation of the landfill in 2020. It is beneficial that the landfill is located a significant distance from any residential communities. Typical complaints associated with other landfills are mainly due to odor, and noise but these are not an issue at the WCL. A formal complaint tracking system is in place to ensure that all complaints are documented and followed up on appropriately.

Inspections

The WCL did not have a regular inspection program in place until the end of 2021. Regular site inspections and reporting requirements are being incorporated as part of landfill operations and will form part of the new landfill operations contract when the current contract expires in 2023. The newly expanded Solid Waste team began regular visits to the site in 2021, primarily for capital planning as well as oversight inspections to ensure compliance with the contract, operations certificate and ministry requirements.

Finances

Operating Expenses

In 2021, the operating expenses for the WCL were:

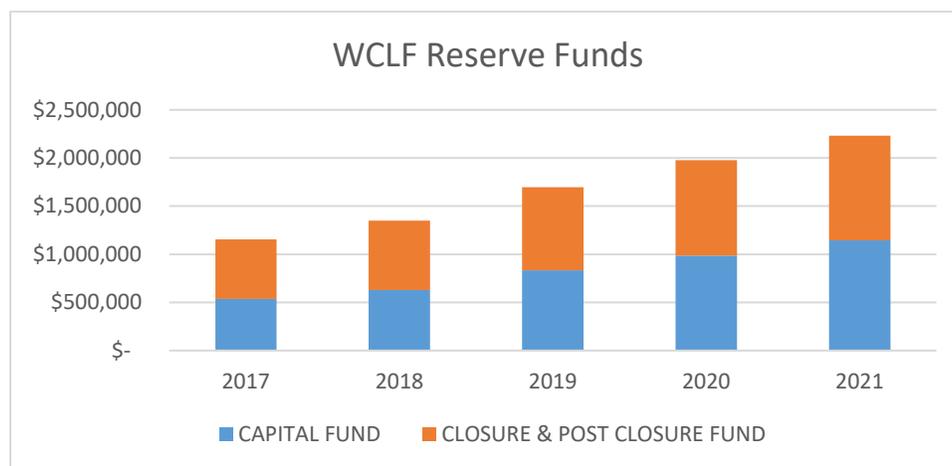
Table 3 - Operating Expenses

	2021
LANDFILL OPERATING COSTS	\$ 975,874
ADMIN & EDUCATION COSTS	\$ 169,369
RECYCLING	\$ 86,540
TOTAL COSTS	\$ 1,231,450
RECOVERIES	\$ 321,703
NET COST	\$ 909,747
RESERVE FUNDS ALLOCATION	\$ 340,070

Capital and Closure Funding

The most recent West Coast Landfill Design, Operations and Closure Report identified the need for \$5,600,000 for the closure and post-closure activities. There was \$1,086,766 in the closure and post closure reserve fund at the end of 2021. Contributions to this fund have exceeded the recommended minimum contribution of \$70,000 in each of the past four years.

Chart 7 - Capital Reserve Funds



Target 4 – Annual Capital Contributions meet Funding Requirements

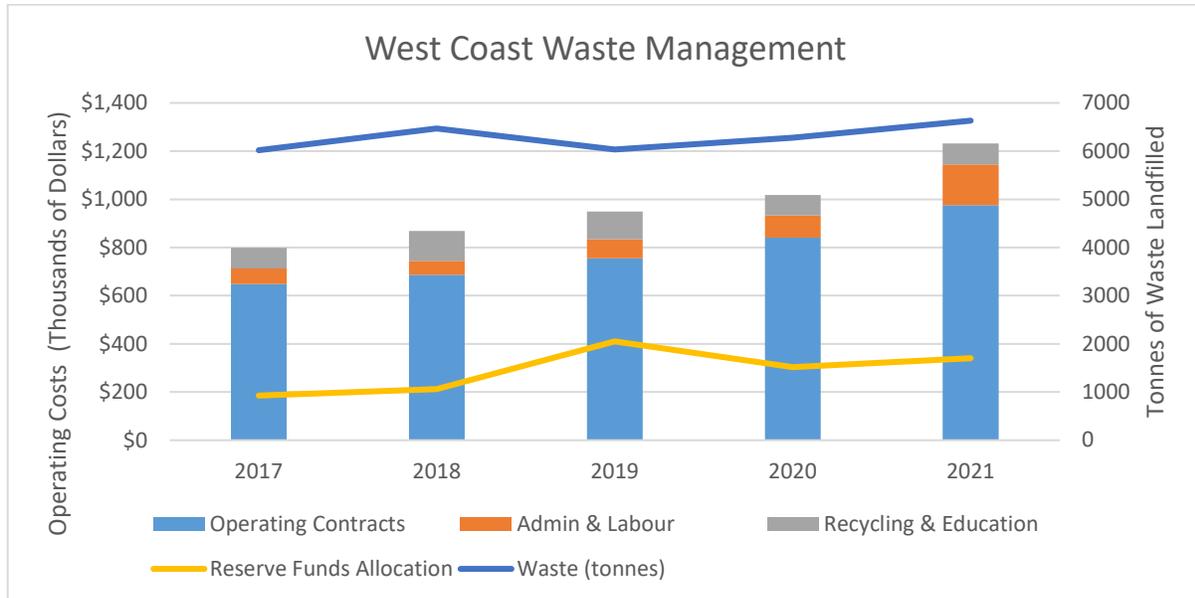
The 2012 DOCP assumed an estimated lifespan of 50 years and the potential to extend to 75-80 years with improved diversion and operation, the annual contribution should be between \$65,000 to \$115,000 per year. When the DOCP is updated, it will include a review of capital requirements and closure costs to provide an updated estimate of reserve fund requirements. Until the DOCP is finalized, the contribution to closure/post closure will be kept at least \$90,000 to continue building reserves.

Operational Efficiency

Chart 8 below shows the total operating costs including contracts, administration, and support to manage solid waste on the west coast. It covers operation of the WCL, the curbside collection program

and education programs. The costs are influenced by inflation and directly influenced by the volume of material landfilled and diverted.

Chart 8 - Annual Costs and Tonnages



Inflation from operating contracts, increased education efforts, expansion of the Solid Waste Team and improving landfill operations to meet regulatory criteria have all contributed to increasing costs but have also resulted in increased diversion of materials from the waste stream.

Environmental Monitoring

Leachate Monitoring

Leachate is generated when rain falls on the waste mound and comes in contact with the buried waste. The leachate is contained within the waste mound because of the low hydraulic conductivity of the marine clay foundation soils. The leachate is collected by ditches located at the perimeter of the waste mound. These ditches collect leachate that seeps from the edges of the landfill and transport it to a lagoon located on the southwest side of the property. The contents of the lagoon are pumped to the north of the landfill to a spray irrigation field. This field is designed to allow the leachate contaminants to attenuate prior to entering the eventual receiving waters of Sandhill Creek.

The ACRD monitors multiple sites in the leachate collection and irrigation field as well as background locations. The samples were analyzed by an independent laboratory for metals, VOCs, inorganic compounds, pH levels, conductivity, and other water quality parameters from the FWAL (Fresh-Water Aquatic Life) protection criteria. All monitoring data is directly reported to our environmental consultants, Piteau Associates Consulting, for their review and reporting to MOECCS. The Piteau report (2021 Monitoring Report West Coast Landfill) accompanies this report.

Leachate Pond Overflow Monitoring

The west coast of Vancouver Island receives some of the largest recorded annual rainfall in Canada. Much of this precipitation occurs during winter storms. The leachate pond is subject to overflowing during, and immediately following, these intense winter storm events. When this occurs, the lagoon decants to the north through pipes installed for that purpose but bypassing the irrigation field. Information from dataloggers that are downloaded twice per year record the number of overflow events and the duration. Some of the decant events in 2021 were due to above-average rainfall received in the 4th quarter (1,100 mm in November (new record) and 550 mm in December). The management of leachate is the focus of the design project for the proposed enhanced leachate management system.

Overview of the Monitoring Program

Target 5 – Confirm all water leaving the site meets the FWAL criteria

Detailed analysis of monitoring data (provided in the 2021 Monitoring Report West Coast Landfill, Piteau and Associates) concludes that there is a continuing slight leachate effect to receiving waters in the vicinity of the West Coast Landfill. However, there are no long-term increasing trends apparent that would suggest the effects of the landfill are increasing over time. This means that the target for having all water leaving the site meet the FWAL criteria was not met. The report recommends continuing the environmental monitoring program with some minor adjustments, as described, and to continue the present approach to monitoring overflow events.

The design objective of the new leachate treatment project is that all water leaving the site meet the FWAL criteria. The recommendations of the monitoring report regarding flow gauging will be reviewed jointly with the project design team. The outcome of those discussions will be incorporated into the project which is being designed to ensure that this target will be met once the new system is commissioned.

The Piteau report also notes that partial capping would reduce leachate quantity, the frequency of overflow events and impacts to the receiving waters. The DOCP is to be updated after the completion of the upgrade of the leachate management capability. Capping design would be incorporated into the updated DOCP as part of an overall hydrological review and design.

Landfill Gas Monitoring

Target 6 - Landfill Gas Generation Less than 1,000 tonnes/year of methane

The engineering firm McGill and Associates completed a Landfill Gas Assessment Report in 2018. Using the required provincial model, the report estimated that the WCL would be producing 339 tonnes of methane in 2020. In the absence of the actual landfill composition data, this report used the average rural waste characterization data in the Landfill Gas Assessment Tool to calculate these volumes. A waste characterization study completed in the spring of 2019 showed that the WCL waste composition has a lower organic content than was assumed in the previous gas calculations. This predicted reduction

will be updated and confirmed in the next Landfill Gas Supplementary Report which will be required in 2023 as per Section 15 of the Landfill Gas Management Regulation.

Other Greenhouse Gas Emissions

Landfilling operations require the use of motorized equipment including small machinery such as power washers, small utility vehicles (ATVs), and pickup trucks, as well as heavy duty machinery such as compactors, graders, and excavators. The fuel used for this equipment is primarily diesel. In 2021, the contractor burned approximately 12,213 liters of diesel in the operation of the landfill which produced the equivalent of 32.2 metric tonnes of CO₂.

Illegal Dumping

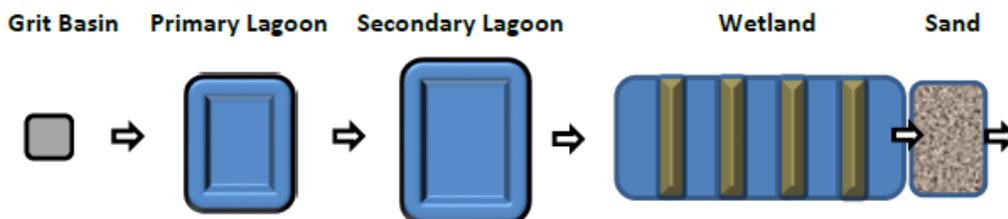
The west coast has experienced illegal dumping with many different types of wastes including yard waste such as leaves and branches as well as household wastes. These items are often found on logging roads surrounding the communities. In 2021 the WCL received 16.9 tonnes of illegally dumped wastes that were collected at community clean-up events. Community clean-up programs will be expanded in 2022 with financial support from the ACRD and other community sponsors.

Projects Completed In 2021

Environmental Monitoring Program Improvements - In 2021, an opportunity was created to cross-train ACRD's certified water operations staff to conduct the field sampling process under the guidance of Piteau. Piteau personnel trained ACRD to conduct this field sampling as per Ministry sampling guidelines. Additionally, Piteau and ACRD staff worked together to compile field procedures documentation with default data collection sheets. The team successfully tested the new procedures during 3rd and 4th quarter of 2021.



Leachate Treatment Upgrades Preliminary Design – Sperling Hansen and Weaver Technical worked with staff to complete and present a conceptual design of an upgraded leachate treatment system, which utilizes existing infrastructure and incorporates a new secondary settling pond, followed by an engineered wetland that completes leachate treatment prior to discharge to the surrounding environment. Excerpts of the conceptual design are provided below.



Organics Composting Facility Design –Tetra Tech Canada Inc. was awarded engineering and detailed design of a public drop-off area/transfer station upgrades to accept organics; as well as a new commercial organics processing facility capable of processing peak quantities of collected food waste and area biosolids.

Ocean Debris Clean-Up – In April 2021, the Board approved the creation of a pilot project to support coastal clean-up efforts and removal of derelict vessels in the Alberni, Barkley and Nootka Sound, in an effort to develop appropriate processes to support and effectively manage coastal clean-up material at the Alberni Valley & West Coast landfills for the future. The pilot consisted of partnering with the Coastal Restoration Society (CRS) to dispose of or divert these materials collected from coastal clean-up events. As part of this project, 237 tonnes of this material were captured on the West Coast in 2021.

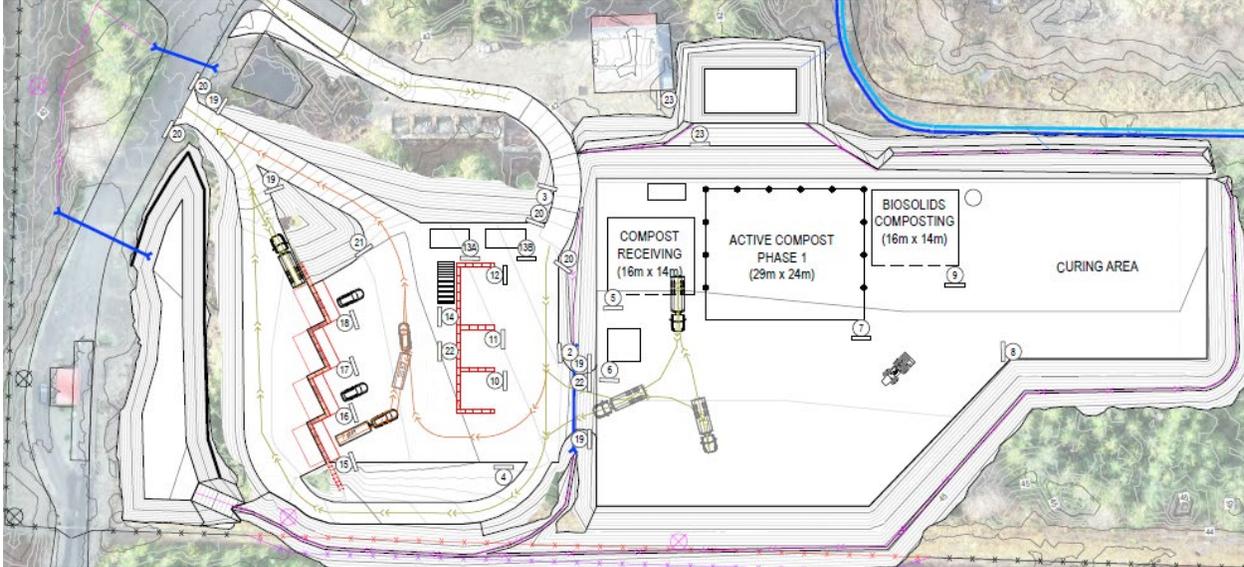


Projects Upcoming

Organics Curbside Collection – staff will complete public engagement to educate and prepare residents for three-stream curbside collection (garbage, recycling, and organics) via a new automated collection vehicle. This will also require the purchasing and delivery of bins to all residents and post implementation auditing and education to ensure successful implementation of the program.

WC Solid Waste Collection Bylaw – This bylaw is intended to regulate three-stream (organics, recycling, and garbage) automatic cart collection system, on the West Coast. This bylaw will include the existing collection service area, provide for service collection fees, include language around securing waste to prevent human-wildlife conflicts and allow for the ability to expand collection where practicable.

Landfill Upgrades/Organics Composting Facility – The ACRD will be issuing a tender for constructing a new and improved public drop area/tipping wall in conjunction with the new organics processing facility. The facility is expected to be completed in late 2022, in conjunction with the rollout of three-stream collection on the West Coast. An excerpt of the design drawings is provided below:



Despite the rising costs of construction and the limited building window, the establishment of the organics program on the West Coast allows the ACRD to achieve diversion of organics, extension of landfill life and protection of the environment.

Leachate Treatment Facility – Given the limited construction window on the West Coast, finalization of the detailed design of the leachate treatment facility, followed by tendering and construction, will be done over the 2023/2024 season, upon completion of the aforementioned organics projects.

Waste Reduction Education Program – Surfrider will continue to provide waste reduction education through social media campaigns, information hand-outs for residents and businesses, community events and school education. The program will also include conducting commercial waste audits at resorts and other businesses to assist in increasing the diversion of recyclable materials.

Waste Resource Centers in Ucluelet and Tofino – Staff will be investigating the potential of establishing resource recovery centers in Tofino and Ucluelet. The objective would be to provide long-term security for recycling drop-off in locations more convenient than the WCL, as well as expansion of diversion streams available to residents. These centers could provide enhanced resource recovery opportunities such as, re-use stores, repair centers, and other circular economy initiatives.

Additional Diversion Opportunities – Staff will be investigating additional diversion opportunities for the WCL including drywall, shingles and other construction waste.

Clear Bag Program Investigation - This will detail the requirements to implement a ban on the use of opaque garbage bags. Clear bag programs have been found to be effective in other Canadian municipalities as it encourages use of existing recycling and composting programs. This program could be implemented in conjunction with 3-stream curbside collection and enhance diversion rates.

Expansion of Curbside to Tla-o-qui-aht First nation and Yuułuʔiłʔatḥ Government - Staff previously worked with Recycle BC to change the existing curbside collection agreements to allow for the expansion to these two communities. Both governments have confirmed their interest this path forward in early 2022 and staff will work on service agreements as well as collaborate to provide education and resources to residents prior to implementation of these programs.

Design Operation and Closure Plan Update – The current DOCP was created in 2012 and requires updating to address the leachate system operation, cover usage concerns and generally provide enhanced direction for the development of the landfill. The Province has created new landfill criteria and there are several areas identified that need to be improved to meet the new criteria. An important part of the new DOCP will look at runoff diversion with the completion of each stage of final cover as well as the addition of contact water from the Organics facility. The Water Balance Report estimates that the impact of precipitation on leachate generation will be significantly reduced when portions of the landfill are capped. The DOCP is scheduled for updating once the organics program has been completed, ideally in 2023-2024. This allows time to establish good baseline data for tonnage of organics received along with accurate costing of operating the organics program.

Landfill Contract Renewal – The operations contract for this site will be ending June 30, 2023. As such, an RFP will be issued by the end of 2022.

Rope and Netting Project – Continuation of a 5-year pilot project with Ocean Legacy to sort and ship out rope and netting for recycling. This project is intended to establish an effective diversion system for these materials that can be used as a template for other coastal landfills in BC.

Installation of Flow Monitoring - A cumulative flow meter will be installed on the leachate irrigation system to measure flows from the leachate lagoon during normal operation. Readings will be recorded monthly. A data logger for pond level will also be reinstalled in the leachate pond. The data will be used to provide notice for decant event sampling of a representative number of events.