ALBERNI-CLAYOQUOT REGIONAL DISTRICT

2024 – 2027 Strategic Plan

West Coast Committee Meeting
Wednesday, February 21, 2024

Zoom/Tofino Council Chambers (Hybrid) – 380 Campbell Street, Tofino, BC
10:00am

Regular Agenda

Watch the meeting live at: https://www.acrd.bc.ca/events/21-2-2024/

Register to participate via Zoom Webinar at: https://acrd-bc-ca.zoom.us/webinar/register/WN_sgi2tsEFQr2ETooe7UY9yQ#/registration

PAGE #

1. CALL TO ORDER

Recognition of Territories.

Notice to attendees and delegates that this meeting is being recorded and livestreamed to YouTube on the Regional District Website.

Introductions - Committee Members and Staff present in the Boardroom and via Zoom.

2. ELECTION OF CHAIRPERSON/VICE-CHAIRPERSON FOR 2024

3. APPROVAL OF AGENDA
(motion to approve, including late items requires 2/3 majority vote)

4. MINUTES

a. **West Coast Committee Meeting – December 6, 2023** **4-7**

THAT the minutes of the West Coast Committee meeting held on December 6, 2023 be received.

5. PETITIONS, DELEGATIONS & PRESENTATIONS (10 minute maximum)

6. CORRESPONDENCE

7. REQUEST FOR DECISIONS

a. REQUEST FOR DECISION **8-12**

Annual Review – West Coast Committee Terms of Reference, 2024

THAT the West Coast Committee re-confirm their Terms of Reference for 2024 as presented.

b. REQUEST FOR DECISION **13-15**
R1033-6 West Coast Landfill Tipping Fee Bylaw Amendment

THAT the West Coast Committee recommend that the ACRD Board of Directors support the adoption of an amendment of Bylaw R1033, West Coast Landfill Tipping Fee and Regulation to increase tipping fees for weighed garbage and construction/demolition waste.

c. REQUEST FOR DECISION **16-30**
2024-2028 Draft Financial Plan – West Coast Services

THAT the West Coast Committee recommend the Long Beach Airport proposed budget, as presented, be included in the first reading of the 2024-2028 Alberni-Clayoquot Regional District Financial Plan bylaw.

THAT the West Coast Committee recommend the West Coast Emergency Coordination – proposed service budget, as presented, be included in the first reading of the 2024-2028 Alberni-Clayoquot Regional District Financial Plan bylaw.

THAT the West Coast Committee recommend the West Coast Multiplex Service proposed budget, as presented, be included in the first reading of the 2024-2028 Alberni-Clayoquot Regional District Financial Plan bylaw.

THAT the West Coast Committee recommend the West Coast Waste Management service proposed budget, as presented, be included in the first reading of the 2024-2028 Alberni-Clayoquot Regional District Financial Plan bylaw.

8. REPORTS

a. **Ex-Offico Member Updates**

- Pacific Rim National Park Update
- Ahousaht First Nation Update
- Tla-o-qui-aht First Nation Update
- Hesquiaht First Nation Update

THAT the West Coast Committee receive the verbal reports.

b. **Reports for Information** **31-84**
2023 Landfill Waste Composition Study

THAT the West Coast Committee receive the report 'Alberni-Clayoquot Regional District 2023 Waste Composition Study' for information.

9. LATE BUSINESS

10. QUESTION PERIOD

Questions/Comments from the public:

- **Participating in Person in the Board Room**
- **Participating in the Zoom meeting**
- **Emailed to the ACRD at responses@acrd.bc.ca**

11. ADJOURN

Alberni-Clayoquot Regional District

MINUTES OF THE WEST COAST COMMITTEE MEETING
HELD ON WEDNESDAY, DECEMBER 6, 2023

Hybrid - Zoom/Tofino Council Chambers (Hybrid) – 380 Campbell Street, Tofino, BC

MEMBERS PRESENT:
Tom Stere, Councillor, District of Tofino, Chair
Marilyn McEwen, Mayor, District of Ucluelet
Kel Roberts, Alternate Director, Electoral Area "C" (Long Beach)
Kirsten Johnsen, Member of Council, Toquaht Nation
Dave Tovell, Acting Park Superintendent, Pacific Rim National Park

REGRETS:
Vaida Siga, Director, Electoral Area "C" (Long Beach)
Levana Mastrangelo, Executive Legislator, Yuułuʔiłʔatḥ Government
John Rampanen, Chief Councillor, Ahousaht First Nation
Jim Chisholm, Administrator, Tla-o-qui-aht First Nation
Bob Anderson, Administrator, Hesquiaht First Nation

STAFF PRESENT:
Daniel Sailland, Chief Administrative Officer
Jenny Brunn, General Manager of Community Services
Wendy Thomson, General Manager of Administrative Services
Heather Zenner, Manager of Administrative Services
Janice Hill, Executive Assistant
Alisha Feser, Airport Projects Planner

OTHERS PRESENT: Dan Law, Mayor, District of Tofino

The meeting can be viewed on the Alberni-Clayoquot Regional District website at https://www.acrd.bc.ca/events/6-12-2023/

1. CALL TO ORDER

The Chairperson called the meeting to order at 10:05am.

The Chairperson recognized this meeting is being held throughout the Nuu-chah-nulth territories.

The Chairperson reported this meeting is being recorded and livestreamed to YouTube on the Regional District website.

Introductions – Committee Members and Staff present in the Tofino Council Chambers and via Zoom.

2. APPROVAL OF AGENDA

MOVED: *Director Roberts*

SECONDED: Director McEwen

THAT the agenda be approved as circulated.

CARRIED

3. MINUTES

a. **West Coast Committee Meeting Minutes – October 4, 2023**

MOVED: Director McEwen
SECONDED: Director Roberts

THAT the minutes of the West Coast Committee meeting held on October 4, 2023 be received.

CARRIED

4. PETITIONS, DELEGATIONS & PRESENTATIONS

a. Janessa Dornstauder, Conservation Partnerships Coordinator, Clayoquot Biosphere Trust presenting Clayoquot Biosphere Trust's 2023 Vital Signs Report.

Director Johnson joined the meeting at 10:14 am.

b. Shilpa Panicker, Watt Consulting Group, update on West Coast Transit Implementation.

c. Bob Hansen, Community Coordinator, WildSafe BC Pacific Rim, presenting a season overview on human-wildlife co-existence challenges in the Pacific Rim region, summary of program activities to prevent/resolve human-wildlife conflicts, and a roadmap for moving forward to help keep wildlife wild and west coast communities safe.

5. REQUESTS FOR DECISION

a. **REQUEST FOR DECISION**
Regarding LBA (CYAZ) Lease Application – Long Beach Golf Course & Campground (Long Beach Recreation Cooperative)

MOVED: Director Roberts
SECONDED: Director McEwen

THAT the West Coast Committee recommend that the Alberni-Clayoquot Regional District Board of Directors approve entering into a 10-year lease

agreement with the Long Beach Golf Course and Campground (Long Beach Recreational Cooperative) for lease lot LS-L2024001 at market rate, which is $56,300 per year, effective 1st, April 2024, and authorize the CAO to negotiate and execute the LS-L2024001 lease on behalf of the Regional District.

CARRIED

6. REPORTS

a. **West Coast Sort'nGo Three Stream Waste Collection Program – 1 Year Update (J. Frank)**

b. **Ex-Offico Member Updates**

- Pacific Rim National Park Update

A new Field Unit Superintendent (Vancouver Island/Lower Mainland area) has been hired and the new Pacific Rim National Parks Superintendent has also been hired, official communication will come out on December 6th. Promoting Coastal Safety and expanding on Coast Smart Initiatives, a lot of interest in promoting safe water activities. Getting partners together to discuss regional approach. Excited for Regional Transit on the West Coast.

- Ahousaht First Nation Update – No report.
- Tla-o-qui-aht First Nation Update – No report.
- Hesquiaht First Nation Update – No report.

MOVED: Director Stere
SECONDED: Director McEwen

THAT the West Coast Committee receive reports a-b.

CARRIED

8. QUESTION PERIOD

Questions/Comments from the public. The Manager of Administrative Services advised there were no questions or comments respecting an agenda topic from public:

- Participating in Person in the Tofino Council Chambers
- Participating in the Zoom webinar
- Submissions received by email at responses@acrd.bc.ca.

9. IN-CAMERA

MOVED: Director Stere
SECONDED: Director McEwen

THAT the meeting be closed to the public as per the Community Charter, section(s):

i. 90 (1) (j) Information that is prohibited, or information that if it were presented in a document would be prohibited, from disclosure under section 21 of the Freedom of Information and Protection of Privacy Act; ii. 21 (1) (a) (ii) of FOIPPA: commercial, financial, labour relations, scientific or technical information of or about a third party.

CARRIED

The meeting was closed to the public at 11:21 am.

The meeting was re-opened to the public at 11:52 am.

10. REPORT OUT – RECOMMENDATIONS FROM IN-CAMERA

11. ADJOURN

MOVED: Director Stere
SECONDED: Director McEwen

THAT this meeting be adjourned 11:52 am.

CARRIED

Certified Correct:

Tom Stere
Tom Stere,
Chairperson

Heather Zenner
Heather Zenner,
Manager of Administrative Services

ALBERNI-CLAYOQUOT REGIONAL DISTRICT

REQUEST FOR DECISION

To: West Coast Committee

From: Heather Zenner, Manager of Administrative Services

Meeting Date: February 21, 2024

Subject: Annual Review – West Coast Committee Terms of Reference, 2024

Recommendation:

THAT the West Coast Committee re-confirm their Terms of Reference for 2024 as presented.

Desired Outcome:

To review and re-confirm the terms of reference for the West Coast Committee for 2024.

Background:

The *Local Government Act* enables Regional District's to establish and appoint members to standing committees to deal with matters the Board considers would be better dealt with by a Committee.

The West Coast Committee is a standing committee of the Alberni-Clayoquot Regional District (ACRD) that assists the ACRD Board of Directors with decision making including budget, policy, infrastructure needs and other issues related to West Coast services including: West Coast Waste Management, Long Beach Airport, Long Beach Emergency Planning, Long Beach Bike Path, West Coast Multiplex, West Coast Health Services and West Coast Transit.

At the first Committee meeting each year, all ACRD Committee's review their terms of reference and consider any amendments. All amendments to a Committee's terms of reference require approval by the ACRD Board of Directors.

Time Requirements – Staff & Elected Officials:

Less than one hour of staff time to review the Terms of Reference.

Financial:

N/A

Strategic Plan Implications:

N/A

Policy or Legislation:

Local Government Act and ACRD Procedures Bylaw applies.

Submitted by: Heather Zenner
Heather Zenner, MA, RPF, Manager of Administrative Services

Approved by: Cynthia Dick
Cynthia Dick, General Manager of Administrative Services

Alberni-Clayoquot Regional District

Terms of Reference
West Coast Committee

1. Purpose

1.1 The West Coast Committee has been established to consider issues and to make recommendations to the Alberni-Clayoquot Regional District (ACRD) Board pertaining to services paid for by one or more of the following areas within the region: District of Tofino, District of Ucluelet, Long Beach, Yuułuʔiłʔatḥ Government and Toquaht Nation.

2. Duties/Mandate

2.1 The West Coast Committee is a standing committee of the Board that will assist the Board with decision making including budget, policy, infrastructure needs and any other issues relating to the following services:

- West Coast Waste Management
- Long Beach Airport
- Long Beach Emergency Planning
- Long Beach Bike Path
- West Coast Multiplex
- West Coast Health Services
- West Coast Transit Service

2.2 The Committee will explore, consider and make recommendations to the Board on possible future services within the areas defined in section 1.1. Committee deliberations and recommendations to the ACRD Board of Directors will be guided by the ACRD's Strategic Plan.

2.3 The Committee will provide the Board with regular, ongoing advice on different activities and services with the areas defined in section 1.1

2.4 The Committee will be a forum for dialogue among the communities of the West Coast. The agenda will include a round table for community updates.

3. Membership

3.1 Membership on the Committee is as follows:

- One (1) Director elected to the Board representing Electoral Area "C" Long Beach, or his/her alternate
- One (1) Director appointed to the Board from the District of Tofino, or his/her alternate
- One (1) Director appointed to the Board from the District of Ucluelet, or his/her alternate
- One (1) Director appointed to the Board from the Yuułuʔiłʔatḥ Government, or his/her alternate
- One (1) Director appointed to the Board from the Toquaht Nation, or his/her alternate
- Non-voting ex-officio Members – One (1) each representative the following organizations:
    1. Pacific Rim National Park
    2. Tla-o-qui-aht First Nation
    3. Ahousaht First Nation
    4. Hesquiaht First Nation

4. Appointment and Term

4.1 The appointment and term of Committee Members coincides with the Directors appointment or elected term on the ACRD Board of Directors.

4.2 Committee appointments are confirmed by the Chair of the Board at the Regular ACRD Board of Directors Meeting in January of each year.

4.3 The Chair of the Board may appoint persons who are not Directors of the ACRD Board to the Committee as ex-officio non-voting Members. These Members sit without remuneration. The ACRD Board may consider reimbursement for travel expenses for ex-officio non-voting Members upon recommendation from the Committee.

4.4 The Chair of the Board will confirm appointments from the non-voting ex-officio Members with their organizations in January of each year.

5. Committee Chair

5.1 The Committee will elect a Chair and Vice-Chair from amongst its Members at the first meeting of each year.

5.2 The Committee Chair and Vice-Chair must be a Director of the Alberni-Clayoquot Regional District Board of Directors.

6. Meeting Procedures

6.1 Meetings of the Committee shall be held quarterly or at the call of the Committee Chairperson. The yearly Committee meeting schedule will be developed and approved by the Board at the first Board meeting in January of each year.

6.2 A quorum for a meeting of the Committee shall be the majority of the voting Members of the Committee.

6.3 Meetings of the Committee shall be conducted and held in accordance with the Regional District's Procedure Bylaw.

7. Reporting to the Board

7.1 The Committee Chair will report to the ACRD Board on the activities of the Committee.

7.2 Recommendations from the Committee to the Board must be adopted by the Committee prior to presentation to the ACRD Board.

7.3 All new Committee direction requiring staff resources must be forwarded by resolution to the ACRD Board for approval.

8. Resources

8.1 On behalf of the Committee, the CAO or his/her designate will provide advice and professional assistance to the Committee including writing letters, preparing reports to the ACRD Board.

8.2 ACRD Administrative staff will provide support to the Committee including preparing agendas, recording the minutes of meetings and ensuring Committee agenda's, minutes etc. are circulated electronically to all Members.

Approved by the ACRD Board:	May 27, 2015
Revisions Adopted by the ACRD Board:	January 25, 2017, January 27, 2021

ALBERNI-CLAYOQUOT REGIONAL DISTRICT

REQUEST FOR DECISION

To: West Coast Committee

From: Paulo Eichelberger – Solid Waste Manager

Meeting Date: February 21, 2024

Subject: **R1033-6 West Coast Landfill Tipping Fee Bylaw Amendment**

Recommendation:

THAT the West Coast Committee recommend that the ACRD Board of Directors support the adoption of an amendment of Bylaw R1033, West Coast Landfill Tipping Fee and Regulation to increase tipping fees for weighed garbage and construction/demolition waste.

Desired Outcome:

To amend tipping fees and the structure to encourage waste diversion and ensure that adequate funding is available to sustainably manage the region's waste footprint.

Summary:

Staff reviewed the fees for weighed garbage and construction/demolition waste and are recommending the following rate adjustments:

Solid Waste	**Current Tipping Fee**	**Recommended Tipping Fee July 1, 2024**	**Recommended Tipping Fee January 1, 2025**
Loads of 83 kg or greater	$140 per tonne / $15 min.	$145 per tonne / $15 min.	$150 per tonne / $15 min.
Controlled Waste	**Current Tipping Fee**	**Recommended Tipping Fee July 1, 2024**	**Recommended Tipping Fee January 1, 2025**
Construction Demolition	$175 per tonne / $15 min.	$180 per tonne / $15 min.	$185 per tonne / $15 min.

This recommended tipping fee adjustment will not result in an increase in the 3-stream collection fees for serviced premises. Bylaw R1036 'West Coast Waste Materials Regulation and Charges' will remain unchanged for 2024.

Background:

The intention of this report is to propose an increase to tipping fees for weighed garbage and construction demolition waste in the West Coast Waste Management service.

Several factors contribute to this proposal:

1. 2023 saw an increase in operational costs and a drop in revenue. This was due primarily to

inflation in contractor/maintenance costs and a reduction in tipping fee revenue due to the drop in summer tourism and resulting from the temporary closure of Hwy 4 in 2023.

2. A waste composition study[1] completed in 2023 concluded that self-hauled waste contains a significant amount of organics and recyclables [paper, plastic, glass, metal, stewardship items] which are not being diverted:
    - Self-hauled garbage - 38% compostable organics/ 21% recyclables
    - Industrial, Commercial, and Institutional (ICI) garbage – 45% compostable organics/ 35% recyclables
3. Both construction demolition waste and weighed garbage rates have not been updated since 2019.

In considering the above factors, staff compared our rates to neighbouring regional districts:

Regional District	$ Garbage/tonne	Construction Demolition/tonne	Date
Nanaimo	$145	$155 + $100 (license fee)= $255	April 1, 2024
Comox Valley	$155	$155 (clean) and $365 (mixed loads)	Jan 1, 2024
Cowichan Valley	$204	$204 (painted wood/roofing)	Jan 1, 2024
ACRD Weighed	$140	$175	September 1, 2020

Given the above factors, staff are proposing a $10 increase in tipping fees which would represent a 2-3% increase in line with inflation over the last 3 years. The increase in fees would be done in two steps, as shown below:

Category	Current Rate	Step 1 (July 1st, 2024)	Step 2 (January 1st, 2025)
Weighed Garbage	**$145/tonne**	**$150/tonne**	**$155/tonne**
Construction Demolition Waste	**$175/tonne**	**$180/tonne**	**$185/tonne**

Staff will be recommending the same increase to tipping fees for the Alberni Valley and Bamfield Waste Management service.

Options Considered:

Generating revenue to support solid waste services can also be done by:

- raising taxation instead of tipping fees or:
- raising taxation as well as tipping fees

While an increase in taxation does support an increase in revenue, it may dis-incentivize waste diversion as opposed to our current model of User-Pay (the less you throw away, the less you pay). Staff does not recommend this approach until the update of the Solid Waste Management Plan (Plan) is completed.

Time Requirements – Staff & Elected Officials:

If the Committee and Board supports this bylaw amendment, staff will update the website and provide notice to the community of the changes to the rates in early Spring prior to their effective date of July 1, 2024. Approximately 10 hours of staff time is expected to prepare operators, issue communications to the public and implement the bylaw amendment.

Financial:

[1] To be reviewed in a separate report.

Efficient landfill operations demand a balanced approach to costs, revenues, and community impact. Managing landfill costs, including capital and closure expenses, is essential for long-term sustainability. Revenues from the landfill not only support daily operations but also fund community diversion efforts including education and 3-stream collection.

Strategic Plan Implications:

This change in tipping fees aligns with Strategic Priority 2. to maintain high levels of service and support the Solid Waste Management Plan objective to discourage waste and increase diversion.

Policy or Legislation:

As per the Solid Waste Management Plan and Bylaw No. R1033 West Coast Landfill Tipping Fee and Regulation Amendment, 2024.

Submitted by: Paulo Eichelberger
Paulo Eichelberger, Solid Waste Manager

Reviewed by: Teri Fong
Teri Fong, CPA, CGA, Chief Financial Officer

Approved by: Cynthia Dick
Cynthia Dick, General Manager of Administrative Services

ALBERNI-CLAYOQUOT REGIONAL DISTRICT

REQUEST FOR DECISION

To: West Coast Committee

From: Teri Fong, CPA, CGA, Chief Financial Officer

Meeting Date: February 21, 2024

Subject: 2024-2028 Draft Financial Plan – West Coast Services

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Recommendation:

THAT the West Coast Committee recommend the Long Beach Airport proposed budget, as presented, be included in the first reading of the 2024-2028 Alberni-Clayoquot Regional District Financial Plan bylaw.

THAT the West Coast Committee recommend the West Coast Emergency Coordination - proposed service budget, as presented, be included in the first reading of the 2024-2028 Alberni-Clayoquot Regional District Financial Plan bylaw.

THAT the West Coast Committee recommend the West Coast Multiplex Service proposed budget, as presented, be included in the first reading of the 2024-2028 Alberni-Clayoquot Regional District Financial Plan bylaw.

THAT the West Coast Committee recommend the West Coast Waste Management service proposed budget, as presented, be included in the first reading of the 2024-2028 Alberni-Clayoquot Regional District Financial Plan bylaw.

Desired Outcome:

To provide an opportunity for the West Coast Directors to ask questions and then confirm support for West Coast sub-regional services for inclusion in the first reading of the 2024-2028 ACRD Financial Plan bylaw.

Summary:

Staff presented an overview of the 2024-2028 Draft ACRD Financial Plan to the Committee of the Whole on February 14, 2024. At that meeting all services were discussed though in-depth questions were asked to be held to these later meetings to provide an opportunity for service participants to learn more about the draft plan. This meeting provides an opportunity for Directors to ask more service specific questions, request further information and make changes prior to the drafting of the bylaw. The West Coast section of the draft financial plan has been extracted from the overall plan and is included as part

of this report. Each service will be discussed independently and then at the conclusion of each discussion staff will be requesting the Directors confirm that the service budget is ready for the draft bylaw. This report is to further the discussion regarding the following services:

- Long Beach Airport
- West Coast Emergency Coordination – Proposed Service
- West Coast Multiplex Service
- West Coast Waste Management including Proposed Initiative Case (PIC) 17 – WildSafeBC Full-time Bear- Aware Contractor

The West Coast Transit service budget will be discussed at the February 28, 2024, West Coast Committee meeting following a presentation from Watt Consulting regarding the service implementation.

Financial:

The overall financial implications of the draft plan including the components discussed in this report can be found on the ACRD's website using the following link: 2024-2028 Draft Financial Plan.

Strategic Plan Implications:

The services discussed today align with the 2024-2027 Strategic Plan, specifically to the following strategies:

- 1.3 Viable and responsive transportation services
- 1.5 Leverage grants toward creating regional and community benefit
- 2.2 Solid Waste Management Plan
- 3.1 First Nations protocol agreements

Policy or Legislation:

The *Local Government Act* requires that the Regional District annually adopt a five-year financial plan by March 31st following a public consultation process.

Options Considered:

If the Committee wishes to amend any of these services prior to directing staff to incorporate them into the first reading of 2024-2028 ACRD Financial Plan Bylaw, then the following motion template is recommended:

That the West Coast Committee amend the _____ service, to be included in the 2024-2028 Alberni-Clayoquot Regional District Financial Plan, as follows: _____.

Submitted by: Teri Fong
Teri Fong, CPA, CGA, Chief Financial Officer

Approved by: Cynthia Dick
Cynthia Dick, General Manager of Administrative Services

Long Beach Airport

Budget Highlights

The Long Beach Airport (LBA) budget has, historically, been quite challenging to plan as the service is very expensive to manage due to the high number of assets, age of the infrastructure, and Transport Canada's regulations. In 2023, an increase to the tax requisition was supported to close the asset management funding gap and build the capital reserve. Due to the available surplus, increased revenue from lease rate adjustments, and the start of the west coast transit service, a lower tax requisition for 2024 is proposed. The available contribution to capital will continue to be reassessed in future years to ensure that the service has matching funds for grant programs that allow for infrastructure renewal and replacement. The higher-than-normal surplus was a result of maintenance program initiatives that were unable to be completed either due to permitting or supply chain issues. Additional revenue was also present from log sale from the Hurricane Road development.

The airport saw a 33% increase in passenger activity through the terminal building in 2023. A terminal building expansion options report was undertaken and will provide guidance and cost estimates for upgrading the current facility. The ACRD also worked closely with Tla-o-qui-aht First Nation on the development of a Memorandum of Understanding to establish a partnership related to airport land management.

Key projects and Capital Work to be undertaken in 2024 include:

- Creation of a Master Land Use and Development Plan for the Airport (grant application submitted).
- Continued development of land adjacent to Apron II, Hurricane Road, to support expanded lease lots for air-related activities.

Other capital projects planned for 2024 include vegetation management, OLS clearing, Runway line painting and Runway crack sealing. Projects that are in the Capital Plan but would require grant funding in order to proceed (currently unsecured) include paving of the access road, runway approach lighting, terminal building upgrades and decommissioning of the numerous war time structures remaining.

Grants

Articulated Loader – The ACRD has applied for a 100% ACAP grant for the purchase of a loader and accessories necessary to maintain the airfield. This equipment will only be purchased if funding is secured.

Loader/snow blower – The ACRD has received a $533,631 ACAP for 100% of the costs associated with purchasing this equipment.

Long Beach Airport Land Use and Development Plan – A grant application has been submitted to the provincial Forest Impact Transition fund of the Rural Economic Diversification and Infrastructure Program and, if successful, will offset costs budgeted in 2024 to work on this project.

Perimeter Wildlife Fence - In 2023, the LBA received 100% Federal Airport Capital Assistance Program (ACAP) funding for the airfield wildlife perimeter fence. The project is currently under construction with a completion date scheduled for April 2024.

Growing Community Fund (GCF) Septic System Upgrade – The ACRD has allocated $200,000 of GCF funds to the upgrade of the existing septic system that provides service to the terminal building.

Water Distribution System – This is a three phased project including the following:

- Phase 1 - Distribution system upgrade was completed with 60% BC Air Access Program (BCAAP) funding in 2022.
- Phase 2 - Fire flow pump house construction and treatment system upgrades are currently underway with 60% grant support again from BCAAP.
- Phase 3 - Water system and fire suppression back up generator. This last phase of the project has been submitted to BCAAP for consideration of 60% grant funding.

Winter Maintenance Equipment Building - The ACRD had received 50% Federal Airport Capital Assistance Program (ACAP) funding for this project in 2022/23 but high tender pricing has resulted in the project being deferred with funding to be returned to Transport Canada.

Financial Summary

2023 Requisition	2024 Requisition	Change $	Change %
$609,360	$545,000	-$64,360	-10.56%

The requisition limit for this service is $0.22 per $1,000 of assessed value. The estimated requisition maximum for 2024 is $833,513.

Overview

The Purpose of this service is to operate and maintain the Long Beach / Tofino (CYAZ) Airport to a certified standard as per the Canadian Aviation Regulations.

Legislation

This service was established with Bylaw No. E1005 in 1996 and amended with Bylaw No. E1005-1 in 2005.

Participants

District of Tofino, District of Ucluelet, Electoral Area C

Operating Budget

Service	Account Type	GLCategory	2023 Actual	2023 Budget	2024 Budget	2025 Budget	2026 Budget	2027 Budget	2028 Budget
059 - Long Beach Airport	Revenues	103 - Conditional Grant	($3,051,015)	($4,497,618)	($2,155,073)	($809,364)	($6,188,551)	($609,742)	($1,510,034)
		121 - Other Sources	($102,013)	($100,000)	($48,300)	($6,100)	($1,700)	($40,200)	($600)
		124 - Fees & Charges	($367,438)	($305,600)	($360,700)	($376,864)	($463,061)	($483,292)	($503,935)
		126 - Surplus (Deficit) from Prior Years	($194,866)	($194,866)	($420,768)				
		127 - Tax Requisition	($609,360)	($609,360)	($545,000)	($559,100)	($573,623)	($588,582)	($603,989)
		Total	($4,324,692)	($5,707,444)	($3,529,841)	($1,751,428)	($7,226,935)	($1,721,815)	($2,618,558)
	Expenses	202 - Engagement	$2,010	$10,000	$2,000	$2,000	$2,000	$2,000	$2,000
		216 - Committee Expenses	$51	$3,000	$3,060	$3,121	$3,184	$3,312	$3,412
		218 - Consultant Costs	$58,711	$208,886	$83,157	$41,335	$36,970	$42,618	$52,746
		220 - Contribution to Capital Fund	$3,146,300	$4,582,940	$1,922,313	$864,829	$6,266,440	$782,095	$1,652,990
		227 - Emergency Planning Costs	$173	$2,000	$2,000	$2,000	$2,000	$2,040	$2,101
		245 - Insurance	$15,999	$13,000	$10,000	$10,300	$10,609	$10,927	$11,255
		247 - Labour & Benefits	$419,070	$473,105	$536,874	$477,752	$486,188	$502,071	$518,522
		250 - Legal Costs	$10,650	$10,000	$10,612	$10,824	$11,041	$11,262	$11,599
		256 - Office Operations	$31,103	$40,100	$36,660	$37,393	$40,541	$41,351	$42,592
		257 - Operating Costs	$121,280	$141,266	$164,068	$171,667	$174,332	$159,626	$163,783
		260 - Project Expenses			$385,921				
		266 - Repairs & Maintenance	$98,578	$223,147	$373,176	$130,205	$193,630	$164,512	$157,557
		Total	$3,903,924	$5,707,444	$3,529,841	$1,751,428	$7,226,935	$1,721,815	$2,618,558
	Total		($420,768)						

CAPITAL FUND	2023 Actual	2023 Budget	2024 Budget	2025 Budget	2026 Budget	2027 Budget	2028 Budget
Balance, beginning of year	$ 817,697	$ 810,047	$ 786,017	$ 299,937	$ 114,766	$ 2,206	$ 14,301
Contribution from operating fund	94,322	94,322	125,141	58,729	85,740	181,895	152,391
Grants & other contributions	2,834,819	4,488,618	1,783,872	800,000	6,179,000	600,000	1,500,000
Community Works Fund transfer	-	107,963	107,963	-	-	-	-
Growing Communities Fund transfer	15,400	-	184,600	-	-	-	-
Interest earnings	12,289	4,600	13,300	6,100	1,700	200	600
Less - capital expenditures							
Access road upgrade (grant dependent)	-	-	-	-	-	600,000	-
Apron 2 future wastewater septic system	-	-	-	-	-	-	60,000
Fire suppression upgrade phase 3 (eligible for BCAAP)	-	-	418,000	-	-	-	-
Fire suppression pumps (BCAAP grant)	165,311	1,176,000	1,010,689	-	-	-	-
House renovation	972	50,000	40,000	-	-	-	-
Hurricane Road connector	-	-	-	50,000	-	-	-
Loader snow blower (ACAP grant)	-	450,000	533,631	-	-	-	-
Maintenance building upgrades (ACAP partial grant required)	-	-	-	-	500,000	-	-
Parks Canada roof replacement	-	-	-	-	-	80,000	-
Parking lot upgrades	-	10,000	-	-	-	20,000	-
Perimeter fencing (ACAP grant)	2,712,735	2,988,118	353,073	-	-	-	-
Runway approach lighting (eligible for partial BCAAP)	-	-	-	-	-	20,000	1,500,000
Septic system upgrades (GCF grant)	-	-	184,600				
Snow blower skid pack (eligible for ACAP)	-	-	-	300,000			
Terminal building replacement design (grant dependent)	-	-	-	500,000	-	-	-
Vegetation management - outside boundary	94,091	50,000	50,000	-	-	50,000	-
Vehicle - used from BCWS	-	5,000	3,000	-	-	-	-
Vehicle replacement (shared with AVRA)	-	-	-	50,000	-	-	-
Wastewater replacement & expansion (grant dependent)	15,400	200,000	-	-	5,879,000	-	-
Water - system upgrades (CCBF grant)	-	107,963	107,963	-	-	-	80,000
Weather station upgrades	-	45,000	-	150,000	-	-	-
Total capital expenditures	2,988,509	5,082,081	2,700,956	1,050,000	6,379,000	770,000	1,640,000
BALANCE, END OF YEAR	**$ 786,017**	**$ 423,469**	**$ 299,937**	**$ 114,766**	**$ 2,206**	**$ 14,301**	**$ 27,292**

West Coast Emergency Coordination – Proposed

Budget Highlights

A need for emergency coordination on the West Coast was identified in 2016. Previous discussions included what the mechanism would be available to deliver this coordination, considering the multiple jurisdictions (five First Nations, two municipalities, and ACRD) that have their own emergency programs. An option could include creating a Regional District service with paying participants; however, consideration could be given to other models that meet the needs of the participants. In 2017 potential service participants were each asked to contribute $1,000 each, with the Toquaht Nation, District of Tofino, District of Ucluelet, and the Long Beach Electoral Area contributing, and remains unspent. There is no financial contribution to this service in 2024. The province modernized emergency management legislation in late 2023 and includes some regionalization aspects that requires local governments and First Nations to co-manage emergency management at a regional level. ACRD staff will be reviewing new legislation with counterparts on the west coast and will bring forward a report to the Board with options for complying with the legislation in 2024.

Financial Summary

2023 Requisition	2024 Requisition	Change $	Change %
$0	$0	$0	0.00%

There is no requisition limit on this service, however only the feasibility of the service can be investigated without an establishing bylaw.

Legislation

Local Government Act and Community Charter would govern this proposed service. An establishing bylaw would be required if the Board decides to implement this coordination service.

Participants

Potential participants: Tofino, Ucluelet, Yuułuʔiłʔatḥ, Toquaht, and Electoral Area C – Long Beach

Operating Budget

Service	Account Type	GLCategory	2023 Actual	2023 Budget	2024 Budget	2025 Budget	2026 Budget	2027 Budget	2028 Budget
135 - WC Emergency Coordination - Proposed	Revenues	126 - Surplus (Deficit) from Prior Years	($9,400)	($9,400)	($9,400)				
		127 - Tax Requisition							
		Total	($9,400)	($9,400)	($9,400)				
	Expenses	284 - Unallocated per Budget		$9,400	$9,400				
		Total		$9,400	$9,400				
	Total		($9,400)						

West Coast Multiplex Service

Budget Highlights

The West Coast Multiplex continues to raise funds for the construction of a multiplex facility on the west coast. There is an operating budget of $16,402 available to cover any administrative costs associated with this service if a grant is successful during the year.

Financial Summary

2023 Requisition	2024 Requisition	Change $	Change %
$0	$0	$0	0.00%

The requisition limit for this service is $0.335 per $1,000 of assessed value. The estimated requisition maximum for 2024 is $1,269,213.

Overview

The ACRD established this service for the operation of a recreational multiplex facility on the west coast. The West Coast Multiplex Society has committed to raise all the funds necessary to construct the facility. This service is currently relatively inactive until the funding for the facility is secured.

Legislation

This service was established with Bylaw No. E1056 in 2012 and amended with Bylaw No. E1056-1 in 2017.

Participants

District of Tofino, District of Ucluelet, Electoral Area C & Toquaht First Nation

Operating Budget

Service	Account Type	GLCategory	2023 Actual	2023 Budget	2024 Budget	2025 Budget	2026 Budget	2027 Budget	2028 Budget
123 - West Coast Multiplex	Revenues	126 - Surplus (Deficit) from Prior Years	($21,389)	($21,389)	($21,389)				
		Total	($21,389)	($21,389)	($21,389)				
	Expenses	247 - Labour & Benefits		$4,987					
		257 - Operating Costs		$16,402	$21,389				
		Total		$21,389	$21,389				
	Total		($21,389)						

West Coast Waste Management

Budget Highlights

The overall cost of this service will continue to increase to due the need to meet environmental and legislative requirements, achieve the diversion targets of the Solid Waste Management Plan, increases in levels of service (such as with compost operations), and inflationary pressures. This service is mostly funded through tipping fees and charges, sales of recovered materials and a small tax requisition. 2023 saw higher than budgeted costs and reduced revenue from tipping fees. This is attributed to higher operating costs and reduced tourism during the Highway 4 closure.

Proposed tipping fee increase- While the addition of composting sales will create new revenue, operating costs are expected to continue to increase due to inflation and will result in future deficit without increased tipping fees or tax requisitions. To encourage diversion and support a user-pay system, increased tipping fees for weighed garbage and construction/demolition waste is proposed with an additional $5/tonne beginning July 1, 2024, followed by a second $5/tonne increase on January 1, 2025. This tipping fee increase will be discussed at the committee level in Spring 2024.

3-Stream Curbside Program and Organics Diversion – The new 3-stream service on the West Coast in Ucluelet, Esowista, TyHistanis, Hitacu and Tofino increased in 2023 from 1,700 to 1,870 homes. The new service saw increased time and effort to perform cart maintenance to address wildlife conflicts through work with WildSafe BC. Captured within operating costs, the budget reflects this increase in effort to deliver the service. As a result of these efforts, the new program was successful in both a reduction in bear encounters as well as diverting 300 tonnes of residential organics in its first year.

Waste Education and Engagement –2023 actuals reflect reduced costs as an in-person waste educator was unable to be located, which hindered capacity and effort to provide in-person education services to support the roll-out of the new 3-stream curbside collection program. In 2024, an experienced waste education group, Let's Talk Trash, will be onboarded to work with staff and provide a combination of remote and in-person waste education, coupled with mentoring of community champions. Work in 2024 will focus on communications support; community awareness and outreach campaigns; work with School District 70; curbside waste assessments; tourism and engagement at local recycling depots. In addition, conversion from seasonal to full-time contract with WildSafe BC has been proposed to support year-round engagement efforts and has been included in the draft budget.

Consulting Projects - 2024 will focus on permitting, surveys and 3-phase power upgrades to the landfill site. However, 2025-2026 will see increases in consulting costs as the Design Operations and Closure Plan for West Coast Landfill will be updated.

West Coast Landfill Upgrades (Phase 2) – With the upgraded tipping wall and organics facility commissioned last year, 2024 will see installation of additional cover structures to increase efficiency of the compost process and establish a protected area to load and sell Class A compost the public.

Solid Waste Management Plan (Plan) –In 2023, work included the establishment of the Solid Waste Management Plan Advisory Committee (Committee), followed by kick-off of comprehensive engagement with communities to gain input on our current solid waste systems and a landfill waste composition audit. In 2024, additional Committee work as well as concurrent engagement sessions will lead to a draft of the new revised Plan which will include updated strategies that build on our continuing success in reducing waste going to landfill sites. Costs for this work have been captured in the Project Expense and Professional Fees lines.

Financial Summary

2023 Requisition	2024 Requisition	Change $	Change %
$135,000	$137,700	$2,700	2.00%

The requisition limit for this service is $1.50 per $1,000 of assessed value. The estimated requisition maximum for 2024 is $1,780,687.

Overview

The purpose of this service is to fund the West Coast Landfill Operations, and west coast curbside collection service. This service also funds general solid waste management activities including planning, regulatory compliance, diversion initiatives, and reporting requirements. This service receives its revenues from taxation, service fees, tipping fees, Recycle BC revenues and from the sale of recovered resources (e.g. Scrap metal & electronics).

Legislation

This service was established with Bylaw No. 669 in 1990.

Participants

District of Tofino, District of Ucluelet, Electoral Area C

Operating Budget

Service	Account Type	GLCategory	2023 Actual	2023 Budget	2024 Budget	2025 Budget	2026 Budget	2027 Budget	2028 Budget
065 - West Coast Landfill	Revenues	103 - Conditional Grant	($2,509)	($2,000)	($2,040)	($2,081)	($2,208)	($2,252)	($2,320)
		106 - Contracts with Other Governments	($46,120)		($44,655)	($44,655)	($44,655)	($44,655)	($44,655)
		121 - Other Sources	($138,788)	($46,000)	($108,450)	($111,018)	($115,077)	($116,331)	($118,983)
		124 - Fees & Charges	($1,412,270)	($1,587,700)	($1,453,622)	($1,496,472)	($1,517,446)	($1,770,367)	($1,822,968)
		126 - Surplus (Deficit) from Prior Years	($26,084)	($26,084)	($24,130)				
		127 - Tax Requisition	($135,000)	($135,000)	($137,700)	($140,454)	($143,263)	($146,128)	($150,512)
		Total	($1,760,770)	($1,796,784)	($1,770,597)	($1,794,680)	($1,822,649)	($2,079,734)	($2,139,438)
	Expenses	202 - Engagement	$37,772	$72,121	$28,860	$29,726	$30,618	$31,536	$32,482
		215 - Closure & Post Closure Fund Contribution	$100,000	$128,520	$100,000	$103,000	$106,090	$109,273	$112,551
		218 - Consultant Costs	$3,516	$39,620	$25,000	$45,100	$46,500	$26,630	$26,829
		220 - Contribution to Capital Fund	$96,756	$75,101	$59,626	$10,348	$40,612	$42,833	$73,499
		245 - Insurance	$189	$208	$212	$216	$221	$225	$232
		247 - Labour & Benefits	$164,003	$221,620	$201,094	$208,446	$217,310	$224,711	$232,408
		250 - Legal Costs	$236	$1,000	$1,000	$1,000	$1,020	$1,020	$1,020
		256 - Office Operations	$15,192	$13,902	$14,536	$14,912	$15,366	$15,764	$16,237
		257 - Operating Costs	$1,188,125	$1,068,885	$1,250,668	$1,306,576	$1,289,258	$1,345,943	$1,360,056
		259 - Professional Fees	$51,031	$95,000	$24,800	$9,019	$7,745	$7,977	$8,216
		260 - Project Expenses	$56,435	$40,808	$24,000	$24,720	$25,462	$26,225	$27,012
		266 - Repairs & Maintenance	$23,385	$40,000	$40,800	$41,616	$42,448	$43,297	$44,596
		281 - Debt Repayment - Interest						$107,300	$107,300
		282 - Debt Repayment - Principal						$97,000	$97,000
		Total	$1,736,640	$1,796,784	$1,770,597	$1,794,680	$1,822,649	$2,079,734	$2,139,438
	Total		($24,130)						

Capital Budget

CAPITAL FUND	2023 Actual	2023 Budget	2024 Budget	2025 Budget	2026 Budget	2027 Budget	2028 Budget
Balance, beginning of year	$ 831,408	$ 825,944	$ 228,880	$ 68,806	$ 65,054	$ 63,066	$ 4,399
Contribution from operating fund	75,101	75,101	55,526	6,748	36,112	40,333	71,699
Contribution from grants	-	-	-	-	-	-	-
MFA borrowing	-	-	-	-	-	1,600,000	-
Interest earnings	21,654	3,100	4,400	2,000	1,900	1,000	1,200
Less - capital expenditures							
Generator (transfer from BCWS)	4,819	5,000	-	-	-	-	-
Leachate collection system	-	-	-	-	40,000	1,600,000	-
Organics diversion project	463,019	600,000	-	-	-	-	-
Paving of access road	-	-	-	-	-	100,000	-
Three stream collection carts	43,075	-	40,000	12,500	-	-	-
Tipping area upgrades	188,370	295,000	180,000	-	-	-	-
Vehicle purchase (split with AVLF)	-	-	-	-	-	-	-
Total capital expenditures	699,283	900,000	220,000	12,500	40,000	1,700,000	-
BALANCE, END OF YEAR	**$ 228,880**	**$ 4,145**	**$ 68,806**	**$ 65,054**	**$ 63,066**	**$ 4,399**	**$ 77,298**

CLOSURE & POST CLOSURE FUND	2023 Actual	2023 Budget	2024 Budget	2025 Budget	2026 Budget	2027 Budget	2028 Budget
Balance, beginning of year	$ 1,236,227	$ 1,236,228	$ 1,388,393	$ 1,531,593	$ 1,682,093	$ 1,840,283	$ 2,006,356
Contribution from operating fund	100,000	126,000	100,000	103,000	106,090	109,273	112,551
Interest earnings	52,166	9,700	43,200	47,500	52,100	56,800	61,900
Less - closure costs	-	-	-	-	-	-	-
BALANCE, END OF YEAR	$ 1,388,393	$ 1,371,928	$ 1,531,593	$ 1,682,093	$ 1,840,283	$ 2,006,356	$ 2,180,807

Proposed Case Initiative (PIC)

Service Area: West Coast Waste Management (Service #065)

Initiative Name: 17 – WildSafeBC Full-time Bear-Aware Contractor

Implementation Year: 2024

Status: For Board Consideration

Project Description:

To change the Pacific Rim WildSafeBC Coordinator from a seasonal position to a year-round contractor position. This would be a change in level of service.

Organizational Problem or Opportunity:

The ACRD provides funding to WildSafe BC annually for a 6–8-month period of time to provide outreach and workshops for our west coast communities. It has been challenging to find people willing to fill the coordinator position part-time, due to limited housing options on the west coast and the temporary nature of the seasonal work. To address this, WildSafeBC is proposing a full-time contractor coordinator position for the West Coast. This would provide steady employment based in the West Coast community to provide year-round educational outreach and provide continuous program improvement.

Strategic Alignment:

Focus Area 3: Partnerships and Communications.

Financial Impacts and/or Opportunities:

The existing part-time contract costs are $40,000 of which the ACRD currently funds $20,808. An increase to full-time is proposed to be jointly funded by the province, District of Tofino, District of Ucluelet and the ACRD. The cost for a full-time coordinator is $81,000, of which the ACRD is requested to fund $24,000, a total increase from previous funding levels of $3,192.

Risk Evaluation:

Without a permanent presence, there is a risk that we may not find an individual fill the seasonal role, resulting in a possible increase in adverse wildlife encounters with residents.

Alternative Options:

Continue to fund under the current seasonal model (in 2024, contribution will be $21,224).

ALBERNI-CLAYOQUOT REGIONAL DISTRICT

REPORT FOR INFORMATION

To: West Coast Committee

From: Paulo Eichelberger – Solid Waste Manager

Meeting Date: February 21, 2024

Subject: **2023 Landfill Waste Composition Study**

Recommendation:

THAT the West Coast Committee receive the report 'Alberni-Clayoquot Regional District 2023 Waste Composition Study' for information.

Desired Outcome:

To review the results of the landfill waste composition study completed in 2023 and that the ACRD continue taking steps to increase waste diversion in support of the Solid Waste Management Plan.

Summary:

Since the last waste composition audit in 2019, waste generation rates on the West Coast have dropped from 600kg/capita to 540 kg/capita(2023). The introduction of 3-stream collection; organics processing capacity, coupled with expansion of other programs and waste education, have increased access to diversion of recyclables and organics contributed to this reduction and boosted just the residential waste diversion rate from 34% to 52%. However, a recent waste composition study shows avoidable compostable organics is still a large component of the waste stream. Generally the waste shed shows that landfilled waste contains up to 66% of divertible materials (41% compostable organics and 25% recyclable plastic and paper). The results of this audit will be used as a focus of both our waste education efforts and our Solid Waste Management Plan (Plan) update in 2024.

Background:

Waste production on the West Coast is similar to the Alberni Valley at 540kg/capita[1], as of 2023. While improved since the last waste composition study, this is still high compared to neighbouring regional districts on the island.

ACRD	ComoxVRD	RDN	CVRD	CRD
540	510-543	347	464	400

In 2023 a waste composition study (report attached) was completed to assess the make-up of landfill garbage coming from within the region and highlight where diversion efforts and waste education must be focused. The study looked at waste from the entire region, separating it into the two major waste

[1] For context, our target is 400kg/capita.

sheds, the West Coast and the Alberni Valley. For each waste shed, it is further separated by commercial (ICI), residential curbside from single-family homes (SF) and self-hauled waste (SH). The composition is further broken down into multiple materials which are generally grouped as:

- Recycling (from curbside or drop-off)
- Compostable (organics from curbside or drop-off)
- Product stewardship (divertible materials under extended producer responsibility (EPR) programs)
- Reuse (divertible materials such as textiles and furniture)
- Garbage

The West Coast is unique in that impact from tourism creates a different waste landscape than in other areas as shown in the results. Key takeaways from the study include:

- the top category of landfilled waste included 41% compostable organics (45% from the commercial (i.e. tourism) sector; 38% curbside; and 17% from self-haul).
- Plastics and paper made up the next highest divertible materials (16% and 9%, respectively).
- Total diversion potential of 70% of the waste stream (Organics – 40%; Recycling – 13%; Reuse – 9% and EPR 8%.
- The highest diversion potential is compostable organics, made up of food and food-soiled material and recyclables(plastic/paper/metal):
    - Single Family curbside (Organics – 38%; Recycling – 26%)[2]
    - ICI (Organics – 45%; Recycling – 29%)
    - Self-hauled waste (Organics – 17%; Recycling – 14%)

While we recognize that this audit is a snapshot in time, projecting the waste material being landfilled (4,400 tonnes annually over 5 years), show avoidable organics and recyclables make up 62% or 2,730 tonnes (majority of this organic waste), highlighting targets for diversion. Residential curbside is high though, mitigating factors include the annual waste tonnage is one third the amount compared to the commercial sector (1,250 tonnes) as well as a jump in organics diversion in 2023 of 300 tonnes.

Conclusion:

It appears that the new 3-stream system and onboarding of organics capacity is having a positive effect in pushing diversion. However, it is clear that increased waste education and incentivizing diversion through tipping fee increases will be required to hit our disposal and diversion targets.

Additional Considerations:

It should be noted that two key initiatives are underway to assist with our solid waste goals:

- The Solid Waste Management Plan is being updated through 2024, which will be driven by waste diversion and reduction. The results of the audit are being factored into the Plan update.
- Staff are proposing a tipping fee increase of $5/tonne for weighed garbage and commercial demolition waste in 2024, then again in 2025 (this is covered in a separate report).

Financial:

[2] 3-stream collection was introduced in 2023, showing that these numbers are in flux and represent a snapshot in time. Preliminary annual reporting numbers show increases in organics diversion and recycling (65% and 25%, respectively)

Efficient landfill operations demand a balanced approach to costs, revenues, and community impact. Managing landfill costs, including capital and closure expenses, is essential for long-term sustainability. Revenues from the landfill not only support daily operations but also fund community diversion efforts including education and 3-stream collection.

Submitted by: Paulo Eichelberger
Paulo Eichelberger, Solid Waste Manager

Reviewed by: Teri Fong
Teri Fong, CPA, CGA, Chief Financial Officer

Approved by: Cynthia Dick
Cynthia Dick, General Manager of Administrative Services

TETRA TECH

Alberni-Clayoquot Regional District
2023 Waste Composition Study



PRESENTED TO
Alberni-Clayoquot Regional District

JANUARY 8, 2024
ISSUED FOR USE
FILE: 704-SWM.PLAN03294-01

Tetra Tech Canada Inc.
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ACRONYMS & ABBREVIATIONS

Acronyms/Abbreviations	Definition
ACRD	Alberni-Clayoquot Regional District
CCME	Canadian Council of Ministers of the Environment
ICI	Industrial, Commercial, and Institutional
MSW	Municipal solid waste
SF	Single family
Tetra Tech	Tetra Tech Canada Inc.

LIMITATIONS OF REPORT

This report and its contents are intended for the sole use of Alberni-Clayoquot Regional District and their agents. Tetra Tech Canada Inc. (Tetra Tech) does not accept any responsibility for the accuracy of any of the data, the analysis, or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than Alberni-Clayoquot Regional District, or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this document is subject to the Limitations on the Use of this Document attached in the Appendix or Contractual Terms and Conditions executed by both parties.

NOTE TO THE READER

The samples collected and characterized for this study are “snapshots” in time, meaning the reported quantities are estimates and only represent the conditions for the period in which they were collected. Annual variability, weather, and other factors can affect the amount and composition of waste and recyclables generated by the various sectors at any given time. Even with combined educational, regulatory, and financial initiatives the reader should not assume that it is necessarily easy, practical, or economical to recover a substantial portion of a disposed material from a mixed waste stream or at its source.

1.0 INTRODUCTION

Tetra Tech Canada Inc. (Tetra Tech) was retained by the Alberni-Clayoquot Regional District (ACRD) to conduct a waste composition study across various streams and sectors, as the ACRD prepares to update their Solid Waste Management Plan. This study updates the municipal solid waste (MSW), also known as garbage, composition for materials disposed at the Alberni Valley Sort'nGo Centre (formerly known as the Alberni Valley Landfill) and West Coast Landfill. Previously, a waste composition study was conducted in 2019.

Field work for the waste composition study took place from August 23 to August 25, 2023, at the West Coast Landfill and August 28 to August 30, 2023, at the Alberni Valley Sort'nGo Centre. MSW was sorted by hand from single family (SF) residential and industrial, commercial, and institutional (ICI) sectors. Residential self-haul MSW was characterized with either hand sorting techniques or visual estimate approaches.

2.0 METHODOLOGY

This section outlines how Tetra Tech selected and sorted the collected MSW samples. Tetra Tech's sampling methodology is based on the Canadian Council of Ministers of the Environment's (CCME) Recommended Waste Characterization Methodology for Direct Waste Analysis Studies in Canada.[1] The fieldwork was conducted by Tetra Tech's field team who were trained on proper safety and material sorting procedures. Photos were taken to provide visual records of the activities that occurred during the waste composition study. Appendix B includes selected photographs from the sorting event.

2.1 Sampling Plan

A sampling plan was developed in conjunction with the ACRD to obtain a representative distribution of the different types of communities and sectors, as defined below:

- **Single family:** Waste from detached homes that have curbside collection services. These collection services are provided by the ACRD for homes in municipalities and by private haulers for homes in electoral areas.
- **Industrial, commercial, and institutional:** Waste from businesses, institutions, and multi-family residential buildings. Waste from these areas is collected together in the same type of collection trucks. Waste from tourist destinations such as national parks and resorts are also included in this sector.
- **Self-haul:** Waste that is delivered to disposal sites or transfer stations by residents. This includes a broad range of materials such as bagged residential MSW (typical of SF waste) to bulky items such as building materials and furniture.

[1] Canadian Council of Ministers of the Environment. 1999. *Recommended Waste Characterization Methodology for Direct Waste Analysis Studies in Canada*. Prepared under contract by SENES Consultants Limited.

The total number of samples characterized by sector and sampling location during this sorting event is summarized in Table 2-1.

Table 2-1: Total Number of Samples Characterized

Facility	SF	ICI	Self-Haul (Hand Sort)	Self-Haul (Visual)	Total
Alberni Valley Sort'nGo Centre	6	5	2	1	14
West Coast Landfill	3	7	1	2	13
Total	**9**	**12**	**3**	**3**	**27**

2.2 Sample Collection

Tetra Tech's field lead worked with each facility's staff to identify loads for sampling. As selected loads arrived at the facility, Tetra Tech's field lead would communicate with the loader operator to collect a portion of the target load for sampling. A loader bucket of material would be collected and taken to the designated sorting area for characterization. For SF and ICI samples, Tetra Tech staff collected approximately 100 kg of material from random parts of the load (Figure 2-1).

For self-haul samples, Tetra Tech's field lead would assess the load to determine whether it would be hand-sorted or visually estimated. If bagged materials appeared to comprise more than 30% of the load volume, then a sample would be collected with the loader bucket for hand-sorting. Otherwise, a volume-based visual estimate would be conducted.

Figure 2-1: Sample Collection

2.3 Sorting Procedures

Materials placed on the sorting table are sorted into their respective categories. Categories are selected and approved by the ACRD. Samples were categorized into 12 primary categories, which are further divided into 38 secondary categories for hand-sorted samples and 39 secondary categories for visually estimated samples. The additional secondary category for the visually estimated samples was for bagged garbage, which was left unsorted. The primary categories included the following:

- Paper.
- Glass.
- Construction and Demolition Material (non-wood).
- Plastic.
- Compostable Organics.
- Electronic Waste.
- Metal.
- Non-Compostable Organics.
- Household Hazardous Waste.
- Household Hygiene.
- Bulky Objects.
- Other Waste

A detailed list of the primary categories, secondary categories, descriptions, and diversion potential is included in Appendix C. Note that construction and demolition material (non-wood) and household hygiene were not further subdivided into secondary categories.

Hand-sorted samples are weighed before sorting to confirm that at least 100 kg was obtained. Materials are then sorted into their secondary categories and each material category is weighed. Weights are recorded electronically in a data template.

Visually estimated samples are assessed by teams of two sorters. Each sorter walked around the load to first conduct a volume estimate of primary categories individually. The two sorters then compared their results and entered the average into the data template. The same process was then repeated for secondary categories within each primary category, whereby the estimates are made individually and then averaged.

2.4 Data Analysis

Data was compiled from individual field data records into one database for analysis. The composition of each sample is calculated by weight. Averages for each sector by facility are calculated based on the weight-based composition. Scale data from 2022 was used to estimate the annual quantity of material disposed by category. The percent composition from each sector and facility is multiplied by the tonnage of material disposed.

2.5 Project Limitations

Waste composition data provides a snapshot of the waste stream during each sampling period and may not account for variances in composition over the course of the year. For example, disposal habits tend to vary in different seasons due to high and low tourism activity.

Limitation of this dataset includes the following:

- During the sorting event, materials being delivered by Berry and Vale from transfer stations were typically mixed from multiple sources. Due to the collection and co-mingling of material, ACRD and Tetra Tech staff were not able to separate and determine the source of the residential self-haul material.
- Landfill traffic and disposal patterns were affected due to the highway closures during the sorting event.

- Due to the location of the sorting area where the Tetra Tech field staff were located and where garbage was unloaded, staff were unable to directly communicate with the truck drivers to collect information regarding the load source, and origin of material. Information regarding the materials collected was provided by the loader operator, the scale house attendant, and scale tickets.
- During the field dates at the West Coast Landfill, the garbage collection schedule for single family residential was every other week. This affected sampling from Ucluelet, Millstream, Port Albion, and hitacu (Yuulu?il?ath Government) which received weekly organics collection on Mondays, garbage collection which occurs every other week on Thursday and recycling on the alternate Wednesday of the week of the 21st. Garbage collection occurred on Thursday, August 24.

3.0 WASTE COMPOSITION RESULTS

The following section summarizes the waste composition results which are presented by primary category and weight-based percentages. Details of the waste composition results are attached in Appendix D.

The waste composition results also include a diversion potential assessment which estimates the proportion of the waste stream that could theoretically be diverted through recycling, composting, product stewardship programs, and reuse. Details of the divertible materials (which is based on secondary categories) are listed in Appendix C. The diversion potential is calculated based on an ideal scenario. This is the theoretical maximum and represents the upper boundary of what is possible given the current waste composition.

Diversion potential of materials in the waste stream was divided into five options:

- **Recycling**: materials acceptable in curbside collection services (or at drop-off points for residents without curbside service).
- **Compostable**: materials acceptable in the curbside organics stream (or at drop-off points for residents without curbside service).
- **Product Stewardship**: divertible materials managed by product stewardship programs (excluding Recycle BC materials).
- **Reuse**: divertible materials that have high reuse potential (textiles, furniture).
- **Garbage**: materials that do not fall within the above diversion options and would be landfilled.

3.1 Alberni Valley Sort'nGo Centre Waste Composition Results

The following summarizes the waste composition results for samples sorted at the Alberni Valley Sort'nGo Centre. Results are presented by primary category for each sector and the overall composition.

3.1.1 Single Family

Figure 3-1 represents the SF composition for garbage delivered to the Alberni Valley Sort'nGo Centre. It primarily consisted of compostable organics (32%), household hygiene (19%), plastics (19%), and non-compostable organics (10%). These four primary categories represent 80% of the materials.

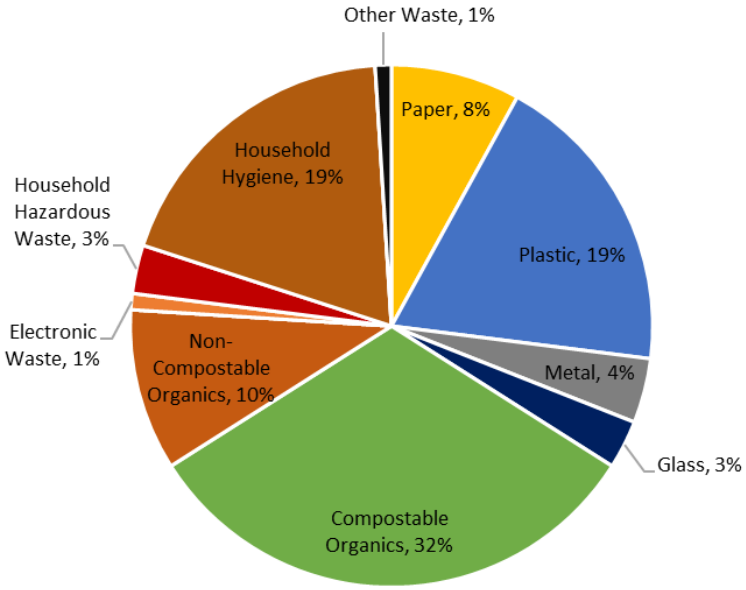

Figure 3-1: Alberni Valley Sort'nGo Centre Single Family Waste Composition

The compostable organics category was primarily composed of food waste – avoidable or donatable (16%), compostable and food-soiled paper (7%), and food waste – unavoidable (5%).

The household hygiene category was not subdivided into secondary categories but was observed to contain diapers, hygiene products, personal care products, and pet waste.

The plastics category was primarily composed of film packaging (7%), film product (4%), rigid recyclable packaging (3%), and durable products (3%).

Non-compostable organics was primarily composed of textiles (6%) and dirty/treated wood (3%).

Diversion Potential

Figure 3-2 summarizes the diversion potential for the SF waste stream that goes to Alberni Valley Sort'nGo Centre. This represents the percentage of materials that could be diverted through composting, recycling, product stewardship programs, and reuse. The total diversion potential was estimated to be 62% and this consists of 32% compostable, 14% recycling, 10% product stewardship, and 6% reuse materials.

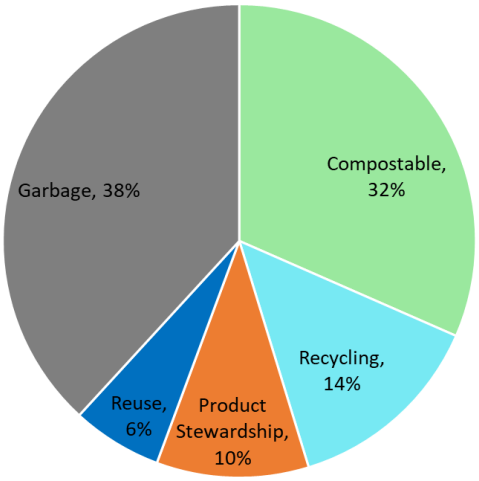

Figure 3-2: Alberni Valley Sort'nGo Centre Single Family Waste Diversion Potential

3.1.2 Industrial, Commercial, and Institutional

Figure 3-3 represents the ICI waste composition for waste delivered to Alberni Valley Sortn'Go Centre. The ICI waste stream was primarily composed of construction and demolition material (non-wood) (25%), compostable organics (21%), paper (17%), plastic (15%), and non-compostable organics (11%). These four primary categories represent 89% of the materials.

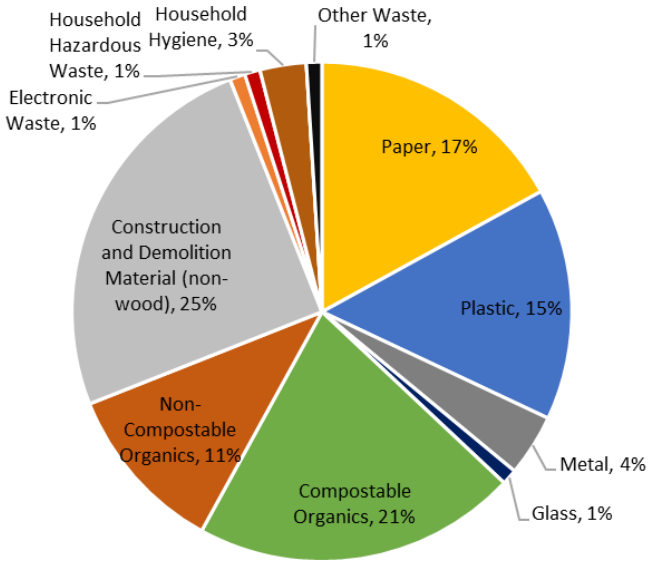

Figure 3-3: Alberni Valley Sort'nGo Centre ICI Waste Composition

The construction and demolition material (non-wood) category was not subdivided into secondary categories but was observed to contain concrete bags, drywall, and fiberglass insulation.

The compostable organics category was primarily composed of food waste – avoidable or donatable (9%), compostable and food-soiled paper (5%), and yard and garden materials (4%).

The paper category was primarily composed of cardboard (7%), recyclable paper (5%), and other non-recyclable paper (5%).

The plastic category was primarily composed of film packaging (4%), durable products (4%), film product (3%), and rigid recyclable packaging (3%).

Diversion Potential

Figure 3-4 summarizes the diversion potential for ICI materials entering the Alberni Valley Sortn'Go Centre. This represents the percentage of materials that could be diverted through composting, recycling, product stewardship, and reuse programs. The total diversion potential was estimated to be 51% and consisted of 21% compostable, 17% recycling, 6% product stewardship, and 7% reuse materials.

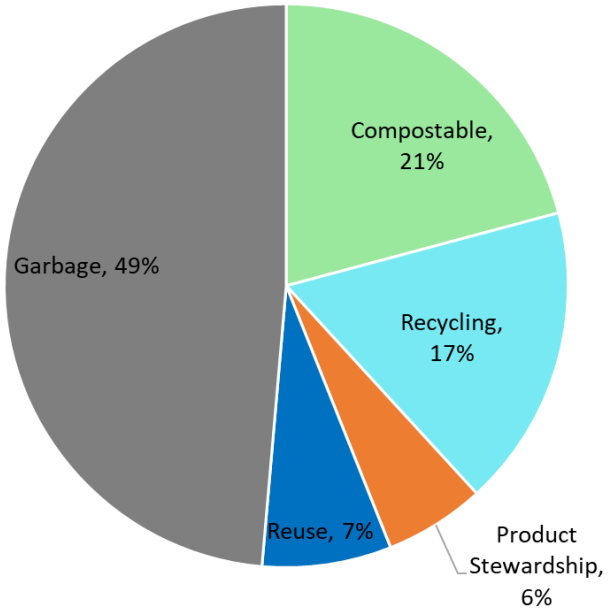

Figure 3-4: Alberni Valley Sort'nGo Centre ICI Waste Diversion Potential

3.1.3 Self-Haul

Figure 3-5 represents the self-haul waste composition for materials delivered to Alberni Valley Sortn'Go Centre. Self haul materials were primarily composed of non-compostable organics (44%), construction and demolition material (non-wood) (17%), plastic (10%), and paper (9%). These four primary categories represent 80% of the materials.

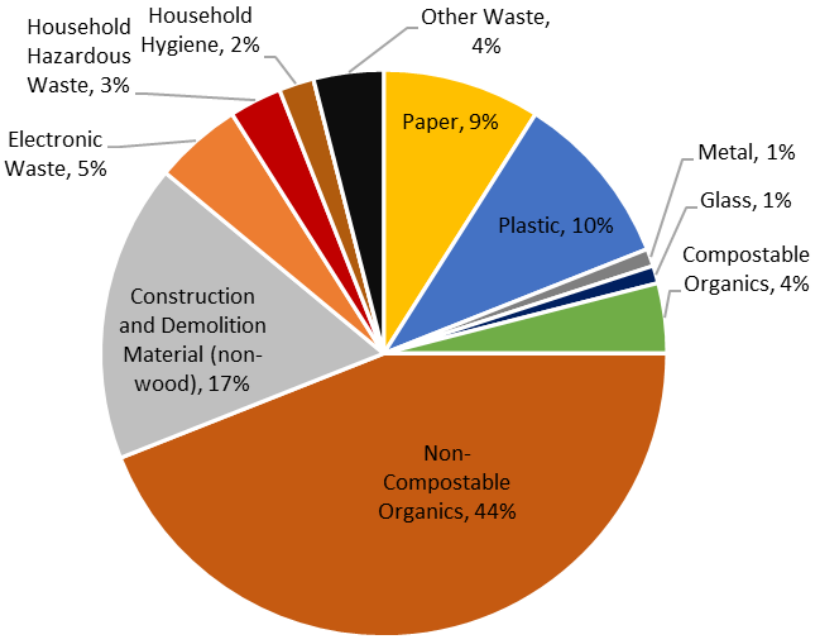

Figure 3-5: Alberni Valley Sort'nGo Centre Self-Haul Residential Waste Composition

The non-compostable organics category was primarily composed of textiles (22%) and dirty/treated wood (21%).

The construction and demolition material (non-wood) category was not subdivided into secondary categories but was observed to contain a toilet, carpet and carpet underlay, and insulation.

The plastic category was primarily composed of durable products (8%).

The paper category was primarily composed of cardboard (4%), other non-recyclable paper (3%), and recyclable paper (2%).

Diversion Potential

Figure 3-6 summarizes the diversion potential, which represents the percentage of materials that could be diverted through composting, recycling, product stewardship, and reuse programs. The total diversion potential was 41% and consisted of 22% reuse, 8% recycling, 7% product stewardship, and 4% compostable materials.

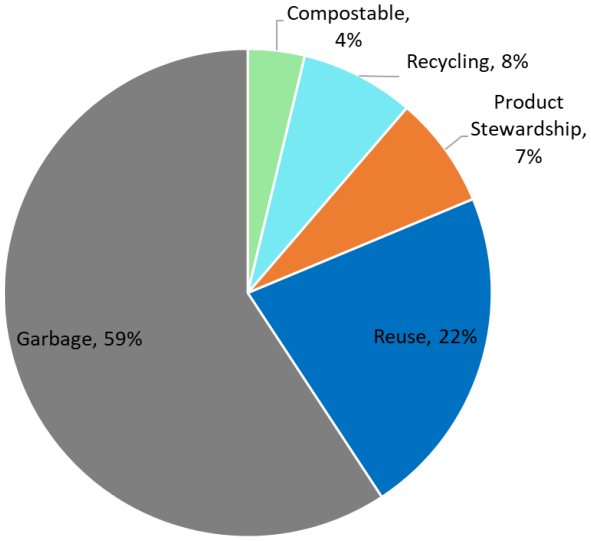

Figure 3-6: Alberni Valley Sort'nGo Centre Self-Haul Residential Waste Diversion Potential

3.1.4 Alberni Valley Sort'nGo Centre Overall Waste Composition

Figure 3-7 represents the weighted average waste composition for the Alberni Valley Sort'nGo Centre with the sectors combined. Weighted averages were calculated using the waste composition results for each sector and the amount of waste from each sector. The overall results were primarily composed of compostable organics (20%), non-compostable organics (19%), construction and demolition material (non-wood) (16%), plastic (15%), and paper (12%). These five primary categories represent 82%% of the materials.

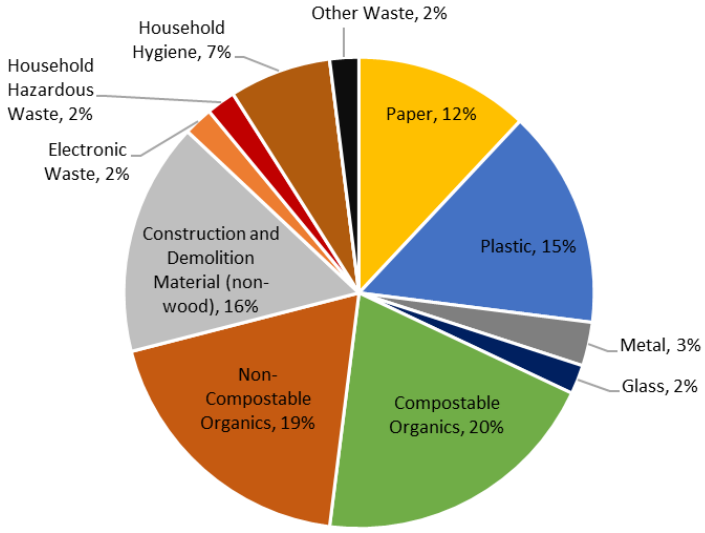

Figure 3-7: Alberni Valley Sort'nGo Centre Combined Waste Composition

The compostable organics category was primarily composed of food waste – avoidable or donatable (9%), compostable and food-soiled paper (4%), and food waste – unavoidable (3%).

The non-compostable organics category was primarily composed of textiles (11%) and dirty/treated wood (8%).

The plastic category was primarily composed of durable products (5%), film packaging (4%), and rigid recyclable packaging (3%).

The paper category was primarily composed of old corrugated cardboard (4.4%), recyclable paper (4.4%), and other non-recyclable paper (3.4%).

Diversion Potential

Figure 3-8 summarizes the diversion potential, which represents the percentage of materials that could be diverted through composting, recycling, product stewardship, and reuse programs. The total diversion potential was 52% and consisted of 20% compostable, 14% recycling, 11% reuse, and 7% product stewardship.

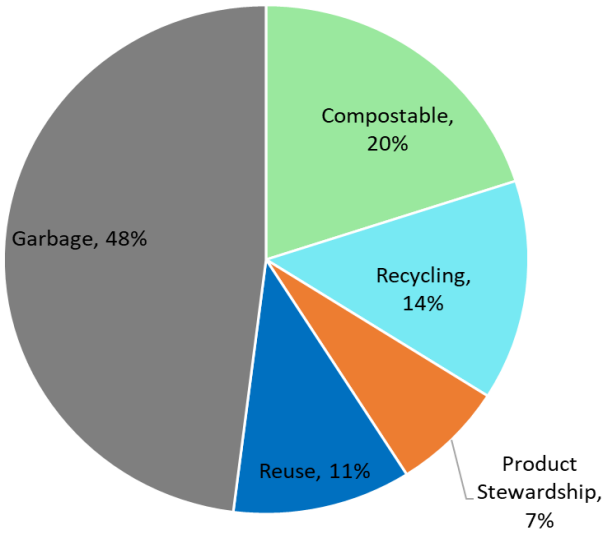

Figure 3-8: Alberni Valley Sort'nGo Centre Combined Waste Diversion Potential

3.2 West Coast Landfill Waste Composition Results

The following section summarizes the waste composition results for materials that went to the West Coast Landfill. Results are presented by primary category for each sector and the overall weighted composition.

3.2.1 Single Family

Figure 3-9 represents the average SF waste composition for materials delivered to the West Coast Landfill. SF waste was primarily composed of compostable organics (38%), household hygiene (16%), plastic (15%), paper (7%), and non-compostable organics (7%). These five primary categories represent 83% of the materials.

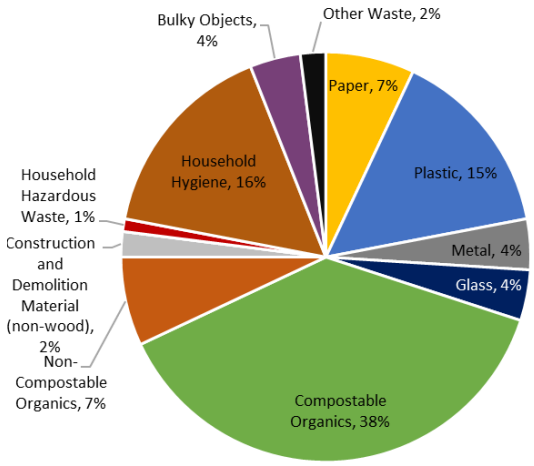

Figure 3-9: West Coast Landfill Single Family Waste Composition

The compostable organics category was primarily composed of food waste – avoidable or donatable (22%), compostable and food-soiled paper (8%), and food waste – unavoidable (6%).

The household hygiene category was not subdivided into secondary categories was observed to contain diapers, hygiene products, personal care products, and pet waste.

The plastic category was primarily composed of film packaging (8%), recyclable rigid packaging (3%), and film product (2%).

The paper category was primarily composed of recyclable paper (5%).

Non-compostable organics was primarily composed of textiles (6%).

Diversion Potential

Figure 3-10 summarizes the diversion potential, which represents the percentage of materials that could be diverted through composting, recycling, product stewardship, and reuse programs. The total diversion potential was 69% and consisted of 38% compostable, 12% recycling, 9% product stewardship, and 10% reuse materials.

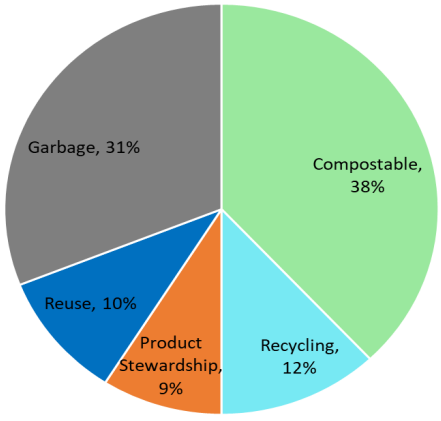

Figure 3-10: West Coast Landfill Single Family Waste Diversion Potential

3.2.2 Industrial, Commercial, and Institutional

Figure 3-11 represents the ICI waste composition for materials taken to West Coast Landfill. ICI waste was primarily composed of compostable organics (45%), plastic (18%), paper (11%), and non-compostable organics (7%). These four primary categories represent 81% of the materials.

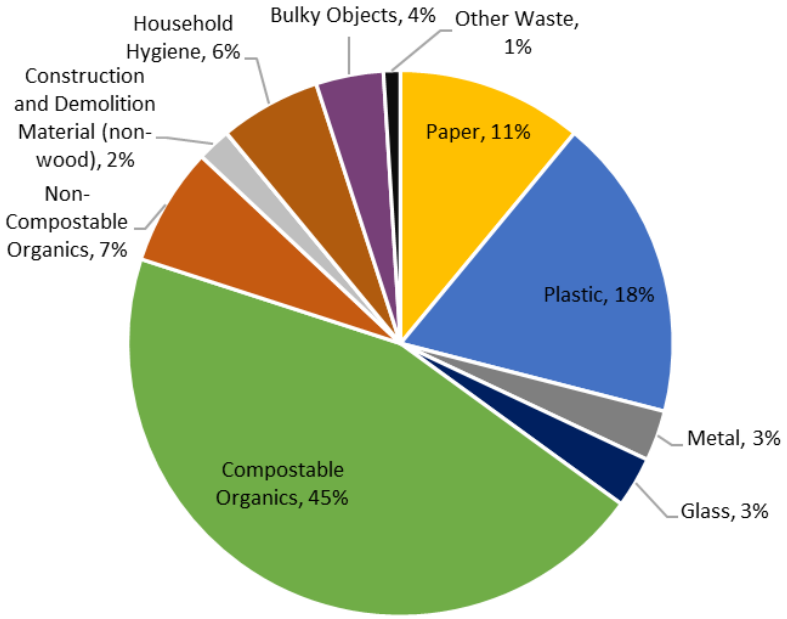

Figure 3-11: West Coast Landfill ICI Waste Composition

The compostable organics category was primarily composed of food waste – avoidable or donatable (24%), compostable and food-soiled paper (9%), and food waste – unavoidable (9%).

The plastic category was primarily composed of film product (5%), film packaging (5%), and durable products (4%).

The paper category was primarily composed of recyclable paper (6%), cardboard (2%), and other non-recyclable paper (2%).

The non-compostable organics category was primarily composed of textiles (3%) and dirty/treated wood (2%).

Diversion Potential

Figure 3-12 summarizes the diversion potential, which represents the percentage of materials that could be diverted through composting, recycling, product stewardship, and reuse programs. The total diversion potential was 74% and consisted of 45% compostable, 14% recycling, 8% product stewardship materials, and 7% reuse.

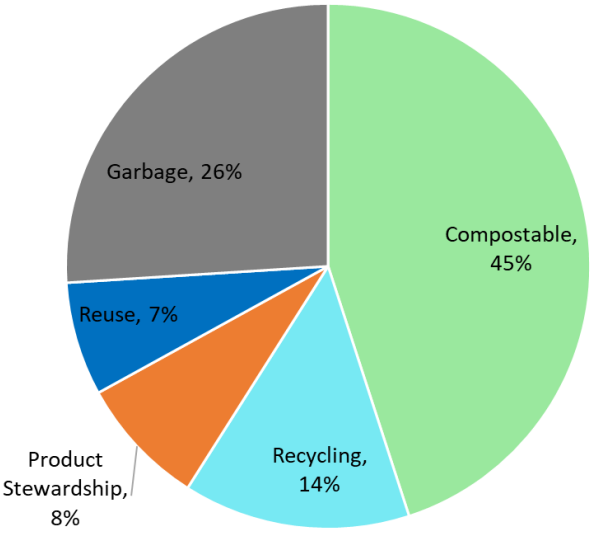

Figure 3-12: West Coast Landfill ICI Waste Diversion Potential

3.2.3 Self-Haul

Figure 3-13 represents the self-haul waste composition for West Coast Landfill. It was primarily composed of non-compostable organics (28%), bulky objects (17%), compostable organics (17%), and plastic (9%). These four primary categories represent 71% of the materials.

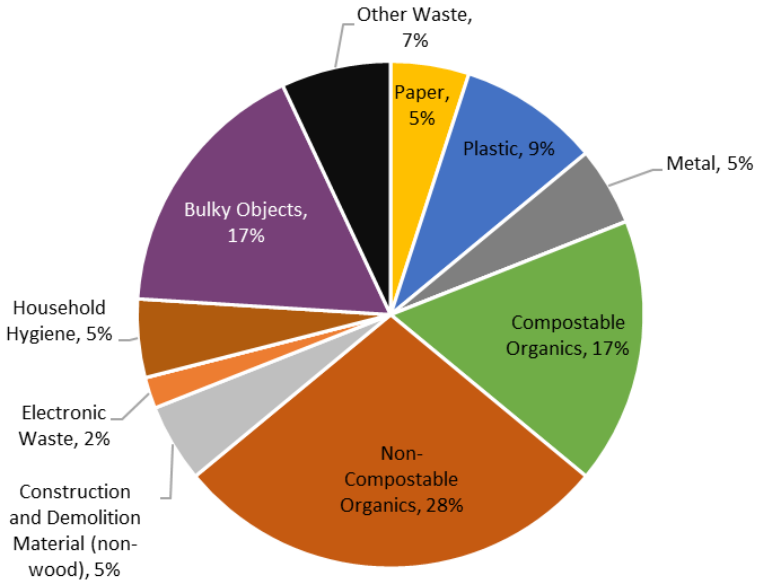

Figure 3-13: West Coast Landfill Self-Haul Residential Waste Composition

The non-compostable organics category was primarily composed of dirty/treated wood (27%).

Bulky objects were primarily composed of furniture (17%).

The compostable organics category was primarily composed of food waste – avoidable or donatable (7%) and yard and garden materials (6%).

The plastic category was primarily composed of durable products (6%).

Diversion Potential

Figure 3-14 summarizes the diversion potential, which represents the percentage of materials that could be diverted through composting, recycling, product stewardship, and reuse programs. The total diversion potential was 43% and consisted of 18% reuse, 16% compostable, 6% recycling, and 3% product stewardship.

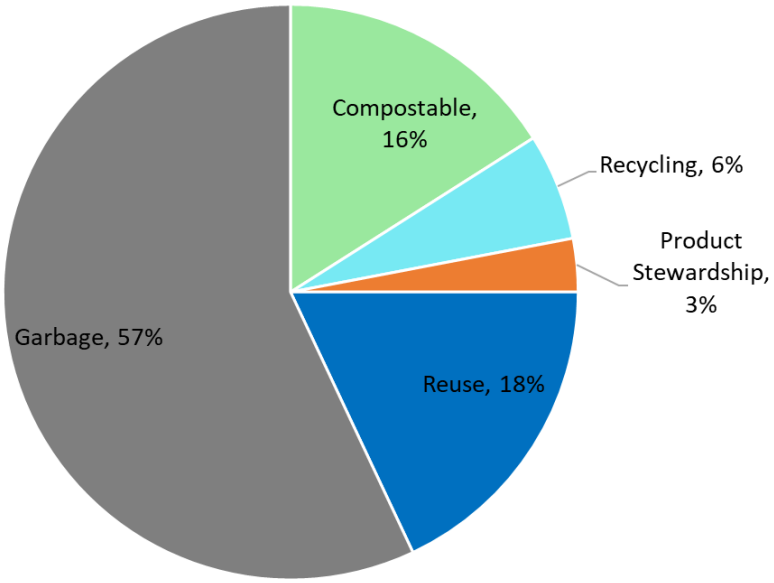

Figure 3-14: West Coast Landfill Self-Haul Residential Waste Diversion Potential

3.2.4 West Coast Landfill Overall Waste Composition

Figure 3-15 represents the weighted average waste composition for the West Coast Landfill. Overall, the materials that ended up at the West Coast Landfill consisted of compostable organics (41%), plastic (16%), paper (9%), and non-compostable organics (9%). These four primary categories represent 75% of the waste stream.

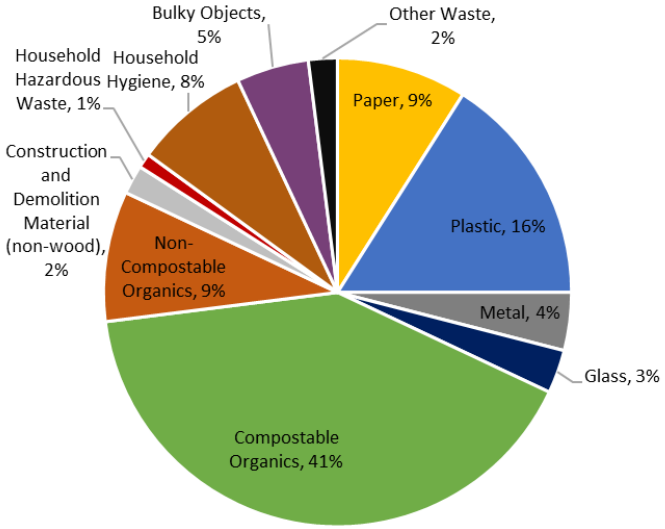

Figure 3-15: West Coast Landfill Combined Waste Composition

The compostable organics category was primarily composed of food waste – avoidable or donatable (21%), compostable and food-soiled paper (8%), and food waste – unavoidable (8%).

The plastic category was primarily composed of film packaging (5%), durable products (4%), and film product (4%).

The paper category was primarily composed of recyclable paper (5%), cardboard (2%), and non-recyclable paper (2%).

The non-compostable organics category was primarily composed of dirty/treated wood (5%) and textiles (4%).

Diversion Potential

Figure 3-16 summarizes the diversion potential, which represents the percentage of materials that could be diverted through composting, recycling, product stewardship, and reuse programs. The total diversion potential was 70% and consisted of 40% compostable, 13% recycling, 9% reuse, and 8% product stewardship materials.

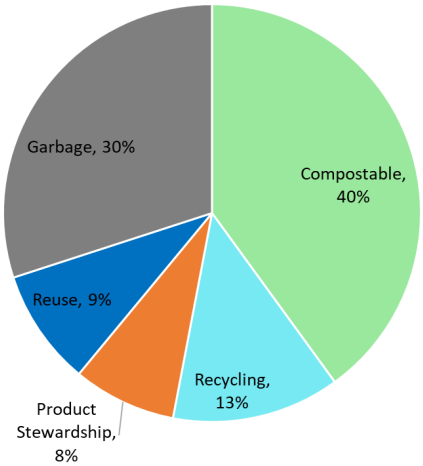

Figure 3-16: West Coast Landfill Combined Waste Diversion Potential

3.3 Regional Waste Composition Results

The following sections summarizes the waste composition results for the ACRD. Results are first presented by sector and weighted based on the amount of waste disposed from each sector.

3.3.1 Single Family

Figure 3-17 represents the regional SF waste composition. It consists primarily of compostable organics (33%), household hygiene (18%), plastic (18%), non-compostable organics (9%), and paper (8%). These five primary categories represent 86% of the materials disposed from SF households.

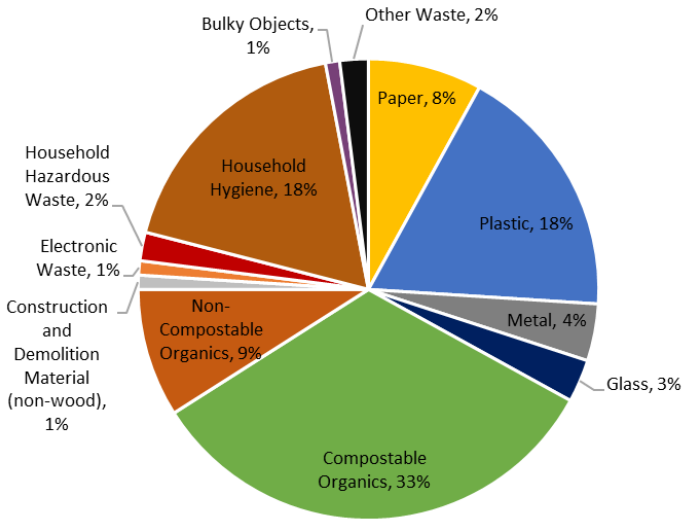

Figure 3-17: Regional Single Family Waste Composition

The compostable organics category was primarily composed of food waste – avoidable or donatable (17%), compostable and food-soiled paper (7%), and food waste – unavoidable (6%).

The household hygiene category was not subdivided into secondary categories but was observed to contain diapers, hygiene products, personal care products, and pet waste.

The plastic category was primarily composed of film packaging (7%), rigid recyclable packaging (3%), durable products (3%), and film product (3%).

Non-compostable organics was primarily composed of textiles (6%).

The paper category was primarily composted of recyclable paper (4.7%), old corrugated cardboard (3.7%), and other non-recyclable paper (2.9%).

Diversion Potential

Figure 3-18 summarizes the diversion potential, which represents the percentage of materials that could be diverted through composting, recycling, product stewardship, and reuse programs. The total diversion potential was 63% and consisted of 33% compostable, 13% recycling, 10% product stewardship materials, and 7% reuse.

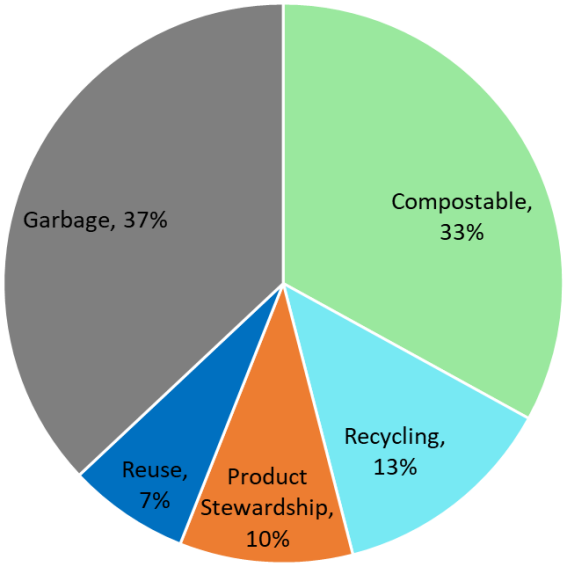

Figure 3-18: Regional Single Family Waste Diversion Potential

3.3.2 Industrial, Commercial, and Institutional

Figure 3-19 represents the regional ICI waste composition. It consists primarily of compostable organics (30%), plastic (16%), construction and demolition material (non-wood) (16%), and paper (15%). These four primary categories represent 77% of the materials.

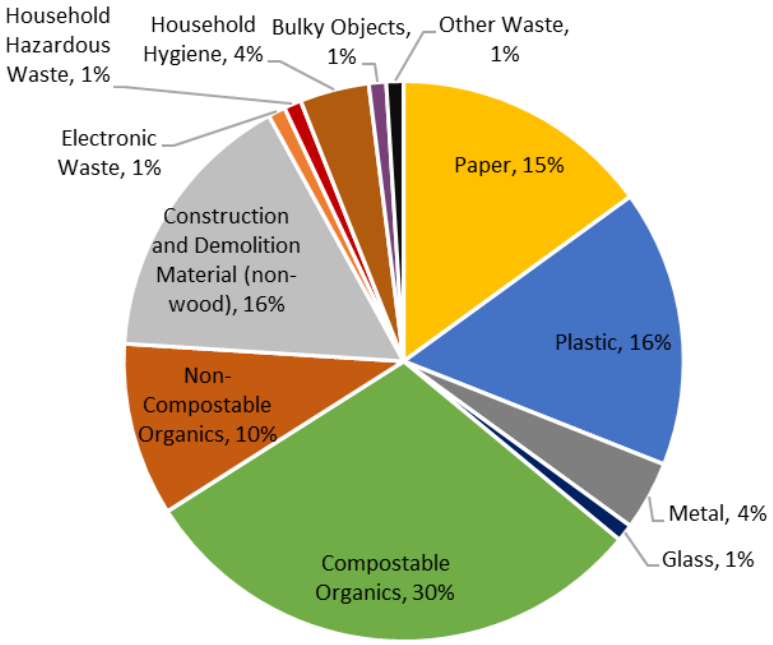

Figure 3-19: Regional ICI Waste Composition

The compostable organics category was primarily composed of food waste – avoidable or donatable (15%), compostable and food-soiled paper (6%), and food waste – unavoidable (5%).

The plastic category was primarily composed of film product (4%), film packaging (4%), and durable products (4%).

The paper category was primarily composed of recyclable paper (5%), cardboard (5%), and other non-recyclable paper (4%).

Diversion Potential

Figure 3-20 summarizes the diversion potential, which represents the percentage of materials that could be diverted through composting, recycling, product stewardship, and reuse programs. The total diversion potential was 60% and consisted of 30% compostable, 16% recycling, 7% product stewardship materials, and 7% reuse.

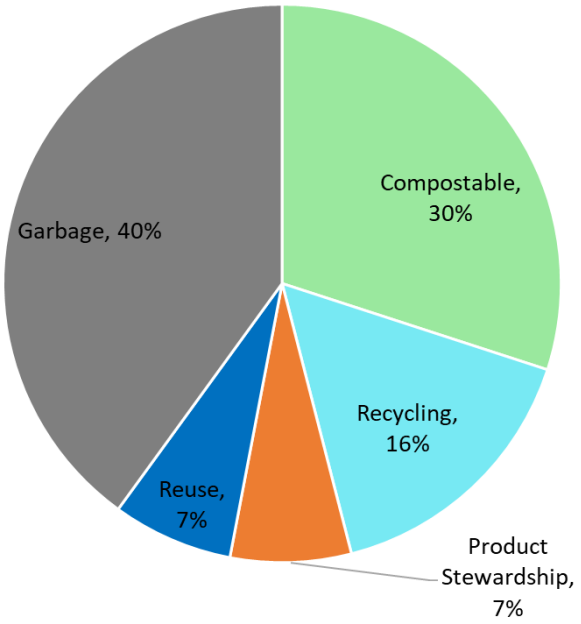

Figure 3-20: Regional ICI Waste Diversion Potential

3.3.3 Self-Haul

Figure 3-21 represents the regional self-haul waste composition. It was primarily composed of non-compostable organics (42%), construction and demolition material (non-wood) (15%), plastic (10%), and paper (9%). These four primary categories represent 76% of the materials.

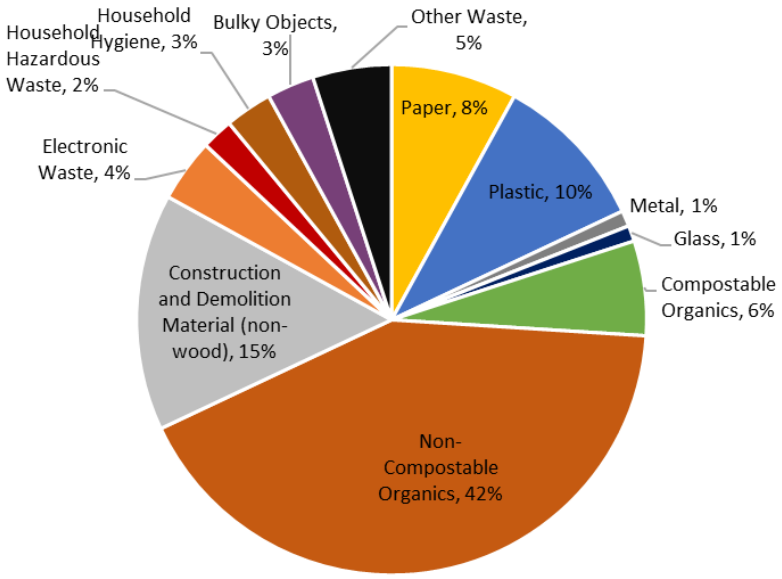

Figure 3-21: Regional Self-Haul Residential Waste Composition

The non-compostable organics category was primarily composed of dirty/treated wood (22%) and textiles (19%).

The construction and demolition material (non-wood) category was not subdivided into secondary categories but was observed to contain drywall, carpet, and carpet underlay.

The plastic category was primarily composed of durable products (8%).

The paper category was primarily composed of cardboard (4%) and other non-recyclable paper (3%).

Diversion Potential

Figure 3-22 summarizes the diversion potential, which represents the percentage of materials that could be diverted through composting, recycling, product stewardship, and reuse programs. The total diversion potential was 41% and consisted of 21% reuse, 7% recycling, 7% product stewardship, and 6% compostable.

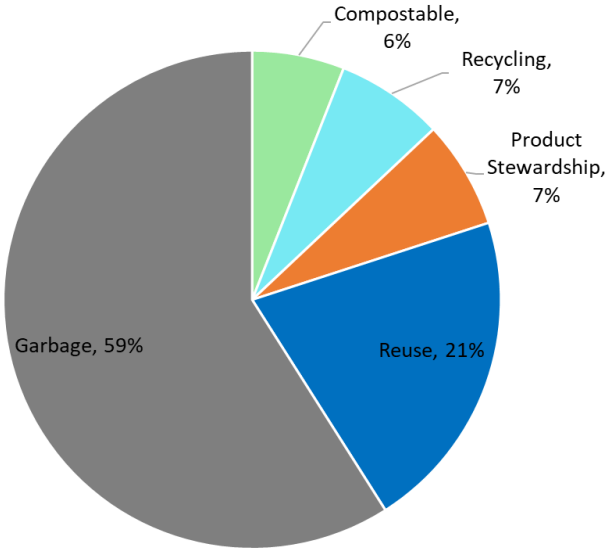

Figure 3-22: Regional Self-Haul Residential Waste Diversion Potential

3.3.4 Overall Regional Waste Composition

Figure 3-23 represents the regional waste composition of waste disposed in the ACRD. It was determined that the regional waste composition was composed of compostable organics (26%), non-compostable organics (16%), plastic (16%), construction and demolition material (non-wood) (12%), and paper (11%). These five primary categories represent 81% of the materials.

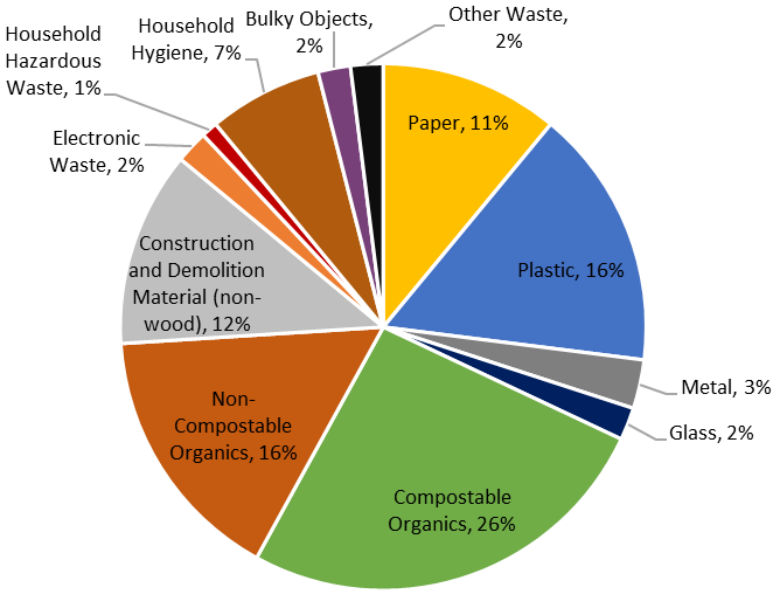

Figure 3-23: Combined Waste Composition

The compostable organics category was primarily composed of food waste – avoidable or donatable (13%), compostable and food-soiled paper (5%), and food waste – unavoidable (4%).

The non-compostable organics category was primarily composed of textiles (9%) and dirty/treated wood (7%).

The plastic category was primarily composed of durable products (5%), film packaging (4%), film product (3%), and rigid recyclable packaging (3%).

The construction and demolition material (non-wood) category was not subdivided into secondary categories.

The paper category was primarily composed of recyclable paper (5%) and cardboard (4%).

Diversion Potential

Figure 3-24 summarizes the diversion potential, which represents the percentage of materials that could be diverted through composting, recycling, product stewardship programs, and reuse. The total diversion potential was 57% and consisted of 26% compostable, 13% recycling, 10% reuse, and 8% product stewardship.

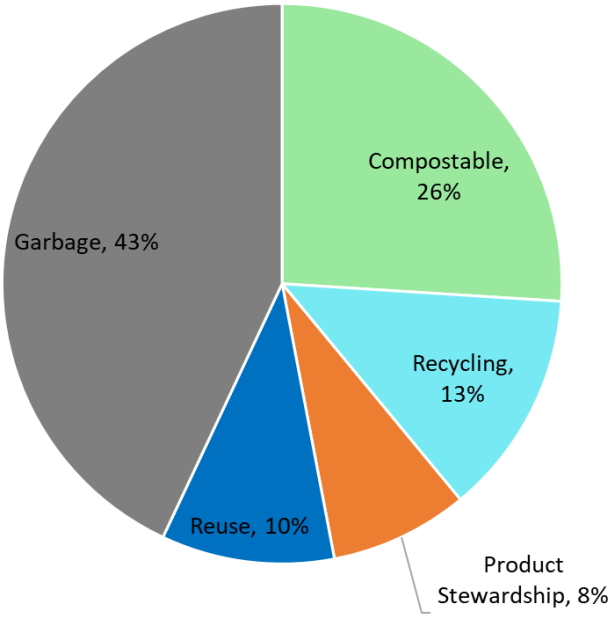

Figure 3-24: Combined Waste Diversion Potential

4.0 ESTIMATED ANNUAL QUANTITIES

Estimated annual quantities of materials disposed by primary category are summarized in Table 4-1 for the Alberni Valley Sort'nGo Centre, Table 4-2 for the West Coast Landfill, and Table 4-3 for ACRD as a whole. These estimates are based on the scaled weights of disposed materials in 2022.

Table 4-1: Alberni Valley Sort'nGo Centre Estimated Annual Quantities by Primary Category (tonnes/year)

Primary Category	SF	ICI	Self-Haul Residential	Total
Paper	254	850	258	1,362
Plastic	633	770	292	1,695
Metal	139	190	20	348
Glass	102	40	20	162
Compostable Organics	1,046	1,040	107	2,192
Non-Compostable Organics	323	570	1,237	2,131
Construction and Demolition Material (non-wood)	13	1,235	471	1,719
Electronic Waste	43	65	123	231
Household Hazardous Waste	89	30	81	200
Household Hygiene	617	135	65	816
Bulky Objects	0	0	8	8
Other Waste	43	70	123	236
Total	**3,302**	**4,994**	**2,806**	**11,102**

Table 4-2: West Coast Landfill Estimated Annual Quantities by Primary Category (tonnes/year)

Primary Category	SF	ICI	Self-Haul Residential	Total
Paper	70	349	24	443
Plastic	143	572	45	760
Metal	37	110	27	173
Glass	38	87	3	128
Compostable Organics	368	1,463	83	1,914
Non-Compostable Organics	71	232	141	444
Construction and Demolition Material (non-wood)	13	65	27	105
Electronic Waste	3	13	8	23
Household Hazardous Waste	9	16	3	27
Household Hygiene	155	181	23	359
Bulky Objects	37	129	84	250
Other Waste	17	19	36	73
Total	**961**	**3,235**	**504**	**4,700**

Table 4-3: ACRD Estimated Annual Quantities by Primary Category (tonnes/year)

Primary Category	Alberni Valley Sort'nGo Centre	West Coast Landfill	Total
Paper	1,362	443	1,805
Plastic	1,695	760	2,455
Metal	348	173	522
Glass	162	128	290
Compostable Organics	2,192	1,914	4,106
Non-Compostable Organics	2,131	444	2,575
Construction and Demolition Material (non-wood)	1,719	105	1,825
Electronic Waste	231	23	255
Household Hazardous Waste	200	27	228
Household Hygiene	816	359	1,175
Bulky Objects	8	250	258
Other Waste	236	73	309
Total	**11,102**	**4,700**	**15,802**

5.0 CLOSURE

We trust this document meets your present requirements. If you have any questions or comments, please contact the undersigned.

Respectfully submitted,
Tetra Tech Canada Inc.

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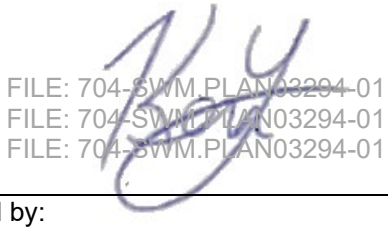

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APPENDIX A

TETRA TECH'S LIMITATIONS ON THE USE OF THIS DOCUMENT

LIMITATIONS ON USE OF THIS DOCUMENT

GEOENVIRONMENTAL

1.1 USE OF DOCUMENT AND OWNERSHIP

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The Client acknowledges that it has fully cooperated with TETRA TECH with respect to the provision of all available information on the past, present, and proposed conditions on the site, including historical information respecting the use of the site. The Client further acknowledges that in order for TETRA TECH to properly provide the services contracted for in the Contract, TETRA TECH has relied upon the Client with respect to both the full disclosure and accuracy of any such information.

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1.7 NOTIFICATION OF AUTHORITIES

In certain instances, the discovery of hazardous substances or conditions and materials may require that regulatory agencies and other persons be informed and the client agrees that notification to such bodies or persons as required may be done by TETRA TECH in its reasonably exercised discretion.

APPENDIX B

SELECTED PHOTOGRAPHS

Photo 1: Tetra Tech Field Staff Collecting a Sample

Photo 2: Tetra Tech Field Staff Sorting a Sample

Photo 3: Example of a 100 kg Sample for Sorting by Hand

Photo 4: Example of a Sample for a Visual Estimate

Photo 5: Example of Recyclable Paper

Photo 6: Example of Film Packaging

Photo 7: Example of Film Product

Photo 8: Example of Food Waste – Avoidable or Donatable

Photo 9: Example of Compostable Paper

Photo 10: Example of Textiles

Photo 11: Example of Household Hygiene

Photo 12: Example of Furniture

APPENDIX C

MATERIAL CATEGORIES

Table C-1: Material Categories

#	Category	Description and/or Examples	Potential Diversion	Density (kg/yd^3)
1	**Paper & Paperboard**			
01	Recyclable Paper	Office paper, newspaper, coffee cups, magazines, fine paper, gable top cartons and aseptic boxes (non-beverage, non-deposit), brown kraft paper bags	Recycling	146.82
02	Cardboard	Corrugated cardboard, boxboard	Recycling	33.88
03	Other Non-Recyclable Paper	Paper products not accepted by Recycle BC – books, tar paper, composites	Garbage	146.82
04	Paper Beverage Containers – Deposit	Gable top cartons – juice, pop, milk and plant-based substitutes, etc. Aseptic boxes – juice, pop, milk and plant-based substitutes, etc.	Product Stewardship	22.73
2	**Plastics**			
05	Plastic Beverage Containers – Deposit	#1 – refundable plastic bottles #2 High Density Polyethylene – milk jugs Other refundable plastic bottles/jugs	Product Stewardship	18.36
06	Rigid Recyclable Packaging	#1 – dish soap, cooking oil, etc. #2 – shampoo, etc. #3 – lotions, soap, etc. #4,5,7 – ketchup, etc.	Recycling	15.91
07	Durable Products	Non-packaging plastics	Garbage	15.91
08	Styrofoam	Expanded polystyrene #6 foam packaging – meat trays etc.	Product Stewardship	14.55
09	Hot and Cold Beverage Containers (Polycoat)	Polycoated drink cups – coffee cups, cold drink cups, etc.	Recycling	22.73
10	Film Packaging	Plastic bags and film packaging accepted by Recycle BC – retail bags, plastic overwrap, Ziploc bags, food packaging, etc.	Product Stewardship	15.91
11	Film Product	Film not accepted by Recycle BC – garbage bags, tarps, 6-pack rings.	Garbage	15.91
12	Compostable Plastics	Plastic marked "compostable" or "biodegradable"	Garbage	15.91
3	**Metals**			
13	Metal Beverage Containers – Deposit	Refundable metal beverage containers – alcoholic and non-alcoholic	Product Stewardship	20.91
14	Recyclable Metal	Recyclable metal – soup cans, aluminum foil and trays, food cans, pet food containers, etc.	Recycling	20.91
15	Other Metal	Metal objects not accepted under Recycle BC – scrap metal, pots and pans, coat hangers, keys, etc.	Garbage	102.27

4	**Glass**			
16	Glass Beverage Containers – Deposit	Refundable glass beverage bottles – alcoholic and non-alcoholic	Product Stewardship	172.73
17	Recyclable Glass	Recyclable glass containers – food and product containers	Recycling	172.73
18	Other Glass	Non-Recycle BC products – mirrors, windows, ceramic plates and cups, glass drinking cups, etc.	Garbage	172.73
5	**Compostable Organics**			
19	Food Waste – Unavoidable	Waste from food/drink preparation that is not edible – bones, cartilage, inedible fruit peels and seeds, etc.	Compostable	210.45
20	Food Waste – Avoidable or Donatable	Leftovers, plate scrapings, industrial, commercial and institutional food waste that is not past the expiration date, unused ready-made food, whole meats/fish, baked goods, liquids	Compostable	210.45
21	Food Waste – Fats, Oils and Grease	Brown and yellow fats, oils, and grease	Compostable	571.07
22	Yard and Garden	Yard trimmings, branches, manure	Compostable	113.64
23	Compostable and Food-Soiled Paper	Tissue paper, paper towels, napkins, pizza boxes	Compostable	210.45
24	Clean Wood	Pallets, plywood (without paint, treatment or glue), chopsticks, wooden cutlery	Compostable	76.82
25	Other Organics Waste	Other organic waste – animal carcasses, soil, soot/ash	Garbage	210.45
6	**Non-Compostable Organics**			
26	Dirty/Treated Wood	Plywood, flakeboard, stained or painted wood, treated wood	Garbage	76.82
27	Other Non-Compostable Organics	Leather, rubber, wax (non-clothing)	Garbage	125.00
28	Textiles	Clothing, linens, bags, shoes, accessories, dryer sheets, lint	Reuse	125.00
7	**Construction and Demolition Material (non-wood)**			
29	Building Material	Carpet, gypsum, asphalt, insulation, aggregate	Garbage	189.55
8	**Electronic Waste**			
30	Extended Producer Responsibility (EPR)	Anything with a cord or battery operated that is accepted under a product stewardship program – e.g., television and audio/video equipment, computers and peripherals, telephones and answer machines, cell phones, small appliances, outdoor power equipment, toys	Product Stewardship	199.09
31	Non-EPR	Anything with a cord or battery operated that is not accepted under any product stewardship programs – e.g., vapes, paper shredders, ink cartridges	Garbage	199.09

9	**Household Hazardous Waste (HHW)**			
32	EPR	HHW that is accepted under a product stewardship program – e.g., batteries, paints, motor oil, pesticides and fertilizers, pharmaceuticals, solvents, mercury containing thermostats	Product Stewardship	125.00
33	Non-EPR	HHW that is not accepted under any product stewardship programs – e.g., sharps, glue, caulk, household cleaners, craft paint	Garbage	125.00
10	**Household Hygiene**			
34	Household Hygiene	Diapers, hygiene products, personal care products, pet waste	Garbage	125.00
11	**Bulky Objects**			
35	Furniture	Couches, mattresses, chairs, desks	Reuse	65.91
36	White Goods	Stove, fridge, other items accepted under the Major Appliance Recycling Roundtable program	Product Stewardship	65.91
12	**Other Waste**			
37	Other Waste	All other waste	Garbage	125.00
38	Fines	Fines less than one inch in size	Garbage	125.00
39	Bagged Garbage	Bagged garbage (self-haul only, left unsorted)	Garbage	125.00

APPENDIX D

WASTE COMPOSITION RESULTS

Table D-1: Alberni Valley Sort'nGo Cente Waste Composition Results

Material Category	SF	ICI	DO	Combined
01 Recyclable Paper	5.4%	4.9%	2.2%	4.4%
02 Cardboard	0.5%	7.2%	4.0%	4.4%
03 Other Non-Recyclable Paper	1.6%	4.8%	2.9%	3.4%
04 Paper Beverage Containers – Deposit	0.2%	0.1%	0.0%	0.1%
05 Plastic Beverage Containers – Deposit	0.4%	0.3%	0.0%	0.2%
06 Rigid Recyclable Packaging	3.5%	3.2%	1.0%	2.7%
07 Durable Products	3.2%	4.2%	8.3%	4.9%
08 Styrofoam	0.7%	0.2%	0.0%	0.3%
09 Hot and Cold Beverage Containers (Polycoat)	1.1%	1.1%	0.1%	0.9%
10 Film Packaging	6.6%	3.6%	0.6%	3.7%
11 Film Product	3.6%	2.9%	0.3%	2.4%
12 Compostable Plastics	0.1%	0.0%	0.0%	0.1%
13 Metal Beverage Containers – Deposit	0.4%	0.1%	0.0%	0.2%
14 Recyclable Metal	1.7%	0.7%	0.2%	0.9%
15 Other Metal	2.1%	2.9%	0.5%	2.1%
16 Glass Beverage Containers – Deposit	0.0%	0.1%	0.0%	0.1%
17 Recyclable Glass	1.5%	0.3%	0.0%	0.6%
18 Other Glass	1.5%	0.5%	0.7%	0.8%
19 Food Waste – Unavoidable	5.4%	3.2%	0.2%	3.1%
20 Food Waste – Avoidable or Donatable	15.5%	8.8%	2.6%	9.2%
21 Food Waste – Fats, Oils, and Grease	1.5%	0.3%	0.0%	0.6%
22 Yard and Garden	2.2%	3.8%	0.2%	2.4%
23 Compostable and Food-Soiled Paper	6.8%	4.6%	0.7%	4.2%
24 Clean Wood	0.2%	0.1%	0.0%	0.1%
25 Other Organics Waste	0.1%	0.0%	0.0%	0.1%
26 Dirty/Treated Wood	2.8%	3.7%	21.4%	7.9%
27 Other Non-Compostable Organics	0.8%	0.4%	1.0%	0.6%
28 Textiles	6.2%	7.4%	21.7%	10.7%
29 Building Material	0.4%	24.7%	16.8%	15.5%
30 Electronic Waste – EPR	1.1%	1.2%	4.4%	2.0%
31 Electronic Waste – Non-EPR	0.2%	0.2%	0.0%	0.1%
32 HHW – EPR	1.0%	0.2%	2.3%	1.0%

Material Category	SF	ICI	DO	Combined
33 HHW – Non-EPR	1.7%	0.3%	0.6%	0.8%
34 Household Hygiene	18.7%	2.7%	2.3%	7.4%
35 Furniture	0.0%	0.0%	0.3%	0.1%
36 White Goods	0.0%	0.0%	0.0%	0.0%
37 Other Waste	0.0%	1.0%	4.2%	1.5%
38 Fines	1.3%	0.4%	0.2%	0.6%
39 Bagged Garbage	N/A	N/A	0.0%	0.0%

Notes:
DO – Drop-off.
EPR – Extended Producer Responsibility.
HHW – Household Hazardous Waste.
ICI – Industrial, Commercial, and Institutional.
SF – Single Family.

Table D-2: West Coast Landfill Waste Composition Results

Material Category	SF	ICI	DO	Combined
01 Recyclable Paper	4.7%	6.2%	1.3%	5.4%
02 Cardboard	0.8%	2.2%	2.9%	2.0%
03 Other Non-Recyclable Paper	1.8%	2.0%	0.5%	1.8%
04 Paper Beverage Containers – Deposit	0.1%	0.3%	0.1%	0.2%
05 Plastic Beverage Containers – Deposit	0.2%	0.6%	0.1%	0.5%
06 Rigid Recyclable Packaging	2.6%	2.7%	0.7%	2.5%
07 Durable Products	1.4%	4.0%	5.7%	3.6%
08 Styrofoam	0.7%	0.4%	0.2%	0.5%
09 Hot and Cold Beverage Containers (Polycoat)	0.2%	0.5%	0.1%	0.4%
10 Film Packaging	7.7%	4.6%	1.1%	4.8%
11 Film Product	2.0%	4.6%	1.2%	3.7%
12 Compostable Plastics	0.1%	0.2%	0.0%	0.2%
13 Metal Beverage Containers – Deposit	0.1%	0.5%	0.1%	0.4%
14 Recyclable Metal	1.8%	1.2%	0.6%	1.2%
15 Other Metal	1.9%	1.7%	4.8%	2.1%
16 Glass Beverage Containers – Deposit	0.1%	1.1%	0.0%	0.7%
17 Recyclable Glass	1.6%	1.1%	0.3%	1.1%
18 Other Glass	2.3%	0.5%	0.2%	0.9%
19 Food Waste – Unavoidable	6.3%	9.1%	1.4%	7.7%
20 Food Waste – Avoidable or Donatable	22.0%	23.6%	6.6%	21.5%
21 Food Waste – Fats, Oils, and Grease	0.0%	0.0%	0.1%	0.0%
22 Yard and Garden	1.3%	2.9%	5.9%	2.9%
23 Compostable and Food-Soiled Paper	8.4%	8.8%	2.1%	8.0%
24 Clean Wood	0.1%	0.5%	0.3%	0.4%
25 Other Organics Waste	0.2%	0.4%	0.0%	0.3%
26 Dirty/Treated Wood	0.1%	2.5%	26.5%	4.6%
27 Other Non-Compostable Organics	0.9%	1.5%	0.6%	1.2%
28 Textiles	6.4%	3.3%	0.9%	3.7%
29 Building Material	1.4%	2.0%	5.4%	2.2%
30 Electronic Waste – EPR	0.2%	0.3%	1.4%	0.4%
31 Electronic Waste – Non-EPR	0.1%	0.1%	0.1%	0.1%

Material Category	SF	ICI	DO	Combined
32 HHW – EPR	0.4%	0.2%	0.1%	0.2%
33 HHW – Non-EPR	0.6%	0.3%	0.4%	0.3%
34 Household Hygiene	16.1%	5.6%	4.6%	7.6%
35 Furniture	3.8%	4.0%	16.7%	5.3%
36 White Goods	0.0%	0.0%	0.0%	0.0%
37 Other Waste	0.0%	0.0%	0.1%	0.0%
38 Fines	1.8%	0.6%	0.4%	0.8%
39 Bagged Garbage	N/A	N/A	6.7%	0.7%

Notes:
DO – Drop-off.
EPR – Extended Producer Responsibility.
HHW – Household Hazardous Waste.
ICI – Industrial, Commercial, and Institutional.
SF – Single Family.

Table D-3: Overall Waste Composition Results

Material Category	SF	ICI	DO	Combined
01 Recyclable Paper	5.3%	5.4%	2.1%	4.7%
02 Cardboard	0.6%	5.2%	3.8%	3.7%
03 Other Non-Recyclable Paper	1.6%	3.7%	2.6%	2.9%
04 Paper Beverage Containers – Deposit	0.2%	0.2%	0.0%	0.2%
05 Plastic Beverage Containers – Deposit	0.3%	0.4%	0.0%	0.3%
06 Rigid Recyclable Packaging	3.3%	3.0%	1.0%	2.6%
07 Durable Products	2.8%	4.1%	7.9%	4.6%
08 Styrofoam	0.7%	0.3%	0.1%	0.3%
09 Hot and Cold Beverage Containers (Polycoat)	0.9%	0.9%	0.1%	0.7%
10 Film Packaging	6.9%	4.0%	0.6%	4.1%
11 Film Product	3.2%	3.5%	0.5%	2.8%
12 Compostable Plastics	0.1%	0.1%	0.0%	0.1%
13 Metal Beverage Containers – Deposit	0.3%	0.3%	0.0%	0.2%
14 Recyclable Metal	1.7%	0.9%	0.2%	1.0%
15 Other Metal	2.0%	2.5%	1.1%	2.1%
16 Glass Beverage Containers – Deposit	0.1%	0.5%	0.0%	0.3%
17 Recyclable Glass	1.5%	0.6%	0.0%	0.7%
18 Other Glass	1.7%	0.5%	0.6%	0.8%
19 Food Waste – Unavoidable	5.6%	5.5%	0.4%	4.5%
20 Food Waste – Avoidable or Donatable	17.0%	14.6%	3.2%	12.9%
21 Food Waste – Fats, Oils, and Grease	1.1%	0.2%	0.0%	0.4%
22 Yard and Garden	2.0%	3.4%	1.1%	2.6%
23 Compostable and Food-Soiled Paper	7.1%	6.2%	0.9%	5.4%
24 Clean Wood	0.2%	0.3%	0.1%	0.2%
25 Other Organics Waste	0.2%	0.1%	0.0%	0.1%
26 Dirty/Treated Wood	2.2%	3.2%	22.2%	6.9%
27 Other Non-Compostable Organics	0.8%	0.8%	0.9%	0.8%
28 Textiles	6.2%	5.8%	18.5%	8.6%
29 Building Material	0.6%	15.8%	15.1%	11.5%
30 Electronic Waste – EPR	0.9%	0.8%	4.0%	1.5%
31 Electronic Waste – Non-EPR	0.2%	0.1%	0.0%	0.1%

Material Category	SF	ICI	DO	Combined
32 HHW – EPR	0.8%	0.2%	2.0%	0.7%
33 HHW – Non-EPR	1.5%	0.3%	0.6%	0.7%
34 Household Hygiene	18.1%	3.8%	2.6%	7.4%
35 Furniture	0.9%	1.6%	2.8%	1.6%
36 White Goods	0.0%	0.0%	0.0%	0.0%
37 Other Waste	0.0%	0.6%	3.6%	1.1%
38 Fines	1.4%	0.5%	0.3%	0.7%
39 Bagged Garbage	N/A	N/A	1.0%	0.2%

Notes:
DO – Drop-off.
EPR – Extended Producer Responsibility.
HHW – Household Hazardous Waste.
ICI – Industrial, Commercial, and Institutional.
SF – Single Family.