Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Notice of Meeting and Meeting Agenda
Port Renfrew Utility Services Committee

Tuesday, November 10, 2026 | **2:00 PM** | **Goldstream Conference Room, 479 Island Hwy, Victoria BC V9B 1H7**

Members of the public can view the live meeting via MS Teams link: **Click here**
Alternatively, to hear the meeting via telephone: Call: 1-877-567-6843 and enter the Participant Conference ID: 346 653 085#

W. Forsberg (Chair), C. Wilkinson (Vice Chair), C. Carlsen, K. Gatzke, A. Wickheim (EA Director)

The Capital Regional District strives to be a place where inclusion is paramount and all people are treated with dignity. We pledge to make our meetings a place where all feel welcome and respected.

1. Territorial Acknowledgement

2. Approval of Agenda

3. Adoption of Minutes

3.1. 26-1144 Minutes of the Port Renfrew Utility Services Committee Meeting of July 14, 2026

Recommendation: That the minutes of the Port Renfrew Utility Services Committee meeting of July 14, 2026 be adopted as circulated.

Attachments: Minutes: July 14, 2026

4. Chair's Remarks

5. Presentations/Delegations

The public are welcome to attend CRD meetings in-person.

Delegations will have the option to participate electronically. Please complete the online application at www.crd.ca/address no later than 4:30 pm two days before the meeting and staff will respond with details.

Alternatively, you may email your comments on an agenda item to the Committee at legserv@crd.bc.ca.

6. Commission Business

6.1. 26-1145 Senior Manager's Verbal Update - November 2026

Recommendation: There is no recommendation. This verbal update is for information only.

6.2. 26-0894 Port Renfrew Utility Services 2027 Operating and Capital Budget

Recommendation: The Port Renfrew Utility Services Committee recommends the Electoral Areas Committee recommend to the Capital Regional District Board:
1. That the 2027 Operating and Capital Budget and the Five-Year Financial Plan for the Port Renfrew Street Lighting Service be approved as presented;
2. That the 2027 Operating and Capital Budget and the Five-Year Financial Plan for the Port Renfrew Refuse Disposal Service be approved as presented;
3. That the 2027 Operating and Capital Budget and the Five-Year Financial Plan for the Port Renfrew Water Service be approved as presented; and
4. That the 2027 Operating and Capital Budget and the Five-Year Financial Plan for the Port Renfrew Sewer Service be approved as presented.

Attachments:
Staff Report: PRUSC 2027 Operating & Capital Budget Report
Appendix A: 2027 Budget Port Renfrew Street Lighting
Appendix B: 2027 Budget Port Renfrew Refuse Disposal
Appendix C: 2027 Budget Port Renfrew Water
Appendix D: 2027 Budget Port Renfrew Sewer

6.3. 26-1151 Port Renfrew Transfer Station - Feasibility Study Results

Recommendation: That the Port Renfrew Utility Services Committee direct staff to:
1. Review cost recovery mechanisms for the 2027 budget year;
2. Evaluate and report back to the Committee on user-pay options that better align the demand for service with Port Renfrew's waste generator categories for the 2028 budget year; and
3. Investigate and report back to the Committee on source separation options, including:
    a) clear garbage bag requirement;
    b) updated signage and material-separation guidance;
    c) targeted education for user groups with high quantities of divertible material;
    d) home-based organics processing; and
    e) enhanced monitoring and enforcement of disposal restrictions.

Attachments:
Staff Report: Port Renfrew Transfer Station Feasibility Study Results
Appendix A: SJE Port Renfrew Transfer Station Feasibility Study Results
Presentation: Port Renfrew Garbage & Recycling Depot Feasibility Study Result

7. Notice(s) of Motion

8. New Business

9. Adjournment

There are no more scheduled meetings for 2026.

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Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Meeting Minutes

Port Renfrew Utility Services Committee

Tuesday, July 14, 2026 | **2:00 PM** | **Goldstream Conference Room, 479 Island Hwy, Victoria BC V9B 1H7**

PRESENT
W. Forsberg (Chair), C. Wilkinson (Vice Chair), C. Carlsen, A. Wickheim (EA Director)

STAFF: S. Henderson, General Manager, Electoral Area Services; J. Dales, Senior Manager, Wastewater Infrastructure Operations; I. Lawrence, Senior Manager, Juan de Fuca Administration; L. Novy, Manager, Solid Waste Operations (EP); N. Tokogoz, Manager, Wastewater Engineering and Planning (EP); M. Miklea, Deputy Corporate Officer/Manager, Legislative Services (EP); J. Rennie Committee Clerk (Recorder)

EP - Electronic Participation

Regrets: K. Gatzke

The meeting was called to order at 2:00 pm.

1. Territorial Acknowledgement

Chair Forsberg provided a Territorial Acknowledgement.

2. Approval of Agenda

MOVED by C. Carlsen, SECONDED by A. Wickheim,
That the agenda for the Port Renfrew Utility Services Committee meeting of July 14, 2026 be approved as amended by adding the following item under 8. New Business:
- 8.1. Alternative Routing for Solid Waste Transportation
CARRIED

3. Adoption of Minutes

3.1. 26-0819 Minutes of the Port Renfrew Utility Services Committee Meeting of May 28, 2026

MOVED by W. Forsberg, SECONDED by A. Wickheim,
That the minutes of the Port Renfrew Utility Services Committee meeting of May 28, 2026 be adopted as circulated.
CARRIED

4. Chair's Remarks

There were no Chair's Remarks.

5. Presentations/Delegations

There were no presentations or delegations.

6. Commission Business

6.1. 26-0818 Senior Manager's Verbal Update - July 2026

I. Lawrence stated that there were no updates at this time.

6.2. 26-0563 Covenant Release from Lot 1, Section 97, Renfrew District, Plan EPP138131 - 17118 Parkinson Road

I. Lawrence spoke to Item 6.2.

Discussion ensued on the following:
- precedent and framework for release of Section 219 covenants
- long-term master plan studies and re-establishing fairness
- no requests for additional capacity and current system usages
- no legal or administrative risks deemed
- government agency zoning and parcel inclusions

MOVED by C. Wilkinson, SECONDED by C. Carlsen,
The Port Renfrew Utility Services Committee recommends to the Electoral Areas Committee: That the Canadian Coast Guard's request for release of covenant CA9549686, as described in the letter addressed to the Port Renfrew Utility Services Committee, dated March 13, 2026, be approved.
CARRIED

6.3. 26-0614 Port Renfrew Utility Services Mid-Year Capital Projects and Operational Update

I. Lawrence spoke to Item 6.3.

Discussion ensued on the following:
- disposal services, feasibility study and potential site relocation
- waste reduction and elevated short term rentals
- commercial and property zoning assessments
- recycling metrics and transfer station reserves
- supply main break and master plan renewal
- optimization of wastewater treatment plant and aging components
- reservoir security, vandalism and fall risks
- septic system jurisdiction and status of systems
- community association and bear signage
- leak detection efforts and water consumption, quality and meters
- master plan funding and potential federal grant opportunities

7. Notice(s) of Motion

There were no notice(s) of motion.

8. New Business

8.1. Alternative Routing for Solid Waste Transportation

A. Wickheim spoke about the feasibility of using Highway 18 during construction operations on West Coast Road.

Discussion ensued on the following:
- operations and delays on Highway 14 and potential collaboration with contractor
- compactor processes and how bins are transported for disposal
- staff to provide an update at the next committee meeting

9. Adjournment

MOVED by C. Carlsen, SECONDED by C. Wilkinson,
That the Port Renfrew Utility Services Committee meeting of July 14, 2026 be adjourned at 3:36 pm
CARRIED

_____
CHAIR

_____
RECORDER

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REPORT TO PORT RENFREW UTILITY SERVICES COMMITTEE
MEETING OF NOVEMBER 10, 2026

SUBJECT **Port Renfrew Utility Services 2027 Operating and Capital Budget**

ISSUE SUMMARY

To present the 2027 Operating and Capital Budget for Committee review and recommendation for the approval of the Capital Regional District (CRD) Board and for the inclusion in the CRD Five-Year Financial Plan, in accordance with Bylaw No. 3281, "Port Renfrew Utility Services Committee Bylaw No. 1, 2005".

BACKGROUND

The CRD is required by legislation under the *Local Government Act* (LGA) to prepare an annual Operating and Capital Budget and a five-year financial plan including Operating Budgets and Capital Expenditure Plans annually. CRD staff have prepared the financial plan shown in appendices A to D for the following Port Renfrew services.

A. Street Lighting Local Service – pertains to the operation of streetlights for the service area.
B. Refuse Disposal Local Service – pertains to the operation and capital plan for the refuse service area.
C. Water Local Service – pertains to the operation and capital plan for the entire water service area.
D. Sewer Local Service – pertains to the operation and capital plan for the sewer service area.

The Operating Budget includes the regular annual costs to operate the services. The Capital Expenditure Plan shows the anticipated expenditure for capital additions. These may include purchases of new assets or infrastructure as well as upgrades or improvements to existing assets.

In preparing the Operating Budget, CRD staff considered:

- Actual expenditures incurred between 2024 and 2026.
- Anticipated changes in level of service (if any).
- Maximum allowable tax requisition.
- Annual cost per taxable folio and per single family equivalent (SFE).

Factors considered in the preparation of the Capital Expenditure Plan included:

- Available funds on hand.
- Projects already in progress.
- Condition of existing assets and infrastructure.
- Regulatory, environmental, and health and safety factors.

Adjustments for surpluses or deficits from 2026 may be made in January 2027. The CRD Board will give final approval to the budget and financial plan in March 2027.

The Financial Plan for the years 2028 to 2031 may be changed in future years.

BUDGET OVERVIEW

Port Renfrew Street Lighting Local Service (Appendix A)

Operating Budget

It is projected that operating expenses in 2026 will be $5,345 under budget due to unspent contingency funds and savings in electricity costs. It is projected that the 2026 operating revenue will be $108 over budget.

As a result, there is an overall operating surplus of approximately $5,453 at the time of forecast in the mid-year. To balance the operating budget at year end, the actual surplus from 2026 will be carried forward into the 2027 operating budget.

Contingency funds have been included in the operating budget in recent years to fund possible increases in the cost of electricity. CRD staff recommend the contingency funds be set at $5,859 for 2027. Operating costs for 2027 have increased by $1,623 (12.5%) compared to 2026. The increase is primarily to account for inflation.

Currently there is no capital plan, reserve, or debt for this service.

User Charge and Parcel Tax

The service is funded by parcel tax and user charges on residential properties. All properties within the local service area are responsible for the user charge and parcel tax. Table 1 below summarizes the 2027 over 2026 changes for parcel tax and user charges.

Table 1 – User Charge and Parcel Tax Summary

Budget Year	Parcel Tax	Taxable Folios Numbers	Parcel Tax per Folio*	User Charge	SFE Numbers	User Charge per SFE	Parcel Tax & User Charge
2026	$4,220	88	$50.47	$4,390	90	$48.78	**$99.25**
2027	$4,310	88	$51.55	$4,480	90	$49.78	**$101.33**
Change ($)	$90	0	$1.08	$90	0	$1.00	**$2.08**
Change (%)	2.13%	0.00%	2.14%	2.05%	0.00%	2.05%	**2.10%**

* Includes the 5.25% collection fee charged by the Ministry of Finance (not CRD revenue)

The 2027 fixed user charge per SFE based on the budget recommended will be included in the fees and charges bylaw for approval by the CRD Board to be effective January 2027.

Port Renfrew Refuse Disposal Local Service (Appendix B)

Operating Budget

It is projected that 2026 operating expenses will be approximately $69,697 over budget. Factors contributing to the operating overage are primarily due to another busy summer tourist season with high waste volumes being received at the depot. This resulted in increased staffing costs to operate the depot seven days a week and additional bin servicing and tipping fee charges to dispose of increasing volumes of waste at Hartland Landfill.

It is projected that the 2026 operating revenues for 2026 will be $2,919 under budget as a result of lower recyclable metal sales.

As a result, there is an overall operating deficit of approximately $72,616 at the time of this forecast. To balance the operating budget at the end of year, the actual deficit will be carried forward into the 2027 operating budget. The deficit must immediately be included as an expenditure to be recovered from revenue in the 2027 financial plan as required by the *LGA* Section 374(11).

Operating costs for 2027 have increased by $87,071 (55.7%) compared to 2026. This increase is a result of aligning the 2027 forecast with the actual 2026 operating costs described above.

Currently there is no debt or operating reserve for this service.

Capital Reserve Fund
The CRF is to be used to pay for capital expenditures that are not funded by other sources such as grants, operating funds or debt.

The CRF transfers planned in the budget are evaluated and influenced by the funding required to support the five-year capital expenditure plan and emergency responses to infrastructure failures, also guided by the CRD Capital Reserve Funding Guidelines endorsed by the CRD Board. The target balance for the service to be maintained is approximately $60,000.

It is proposed that the budgeted transfer to the CRF be set at $22,880 in 2027. The capital reserve balance at the end of 2026 is projected to be $17,879.

Equipment Replacement Fund
The ERF is used to fund the replacement of assets such as fencing, pavement, and bins. It is proposed that the transfer to the ERF be increased to $4,230 in 2027. The balance of the ERF at the end of 2026 is projected to be $46,422. As the service undertakes the next phase of planning for the five-year capital plan, including site efficiency upgrades, it is anticipated that associated equipment upgrades will be identified and funded in future years through the ERF.

Capital Expenditure Plan
The five-year capital plan includes approximately $50,000 of expenditures to implement ongoing site upgrades that will improve site security and capacity. This capital plan will be funded by the service's capital on hand ($50,000) in 2027.

Capital Projects Fund
As specific capital projects are approved, the funding revenues for them are transferred into the Capital Projects Fund from multiple funding sources if applicable, including CRF, grant funding, external contributions and debt. Any funds remaining upon completion of a project will be transferred back to its original funding source(s).

Cost per Average Household
The cost per average household is based on the total requisition and assessment values in the service area, the actual tax rate for residents will vary depending on their individual assessment values. The 2027 preliminary requisition impact shown in Table 2 reflects the 2026 assessment values from BC Assessment. New assessment information will be incorporated in the final budget when revised data is released by BC Assessment in early February 2027.

Table 2 – Requisition and Cost Per Average Household Summary

Budget Year	Requisition	Cost per Avg. Residential Assessment
2026	$65,047	$160.69
2027	$145,813	$360.07
Change ($)	$80,766	$199.38
Change (%)	124.17%	124.08%

Port Renfrew Water Local Service (Appendix C)

Operating Budget
It is projected that the total operating expenses in 2026 will be approximately $9,030 over budget due to unexpected maintenance repairs. These repairs include multiple water leaks and repairs to the system.

It is projected that the 2026 operating revenue will be $216 under budget.

As a result, there is an overall operating deficit of approximately $9,246 at the time of this forecast. To balance the operating budget at the end of year, the actual deficit will be carried forward into the 2027 operating budget. The deficit must immediately be included as expenditure to be recovered from revenue in 2027 financial plan as required by the *LGA* Section 374(11).

Operating costs for 2027 (excluding one-time cyclical program funded by the ORF in 2027 for reservoir cleaning in the amount of $10,000) have been increased by $4,014 (2.5%) compared to 2026. The increase is primarily to account for inflation, repairs and electricity.

Currently, there is no debt for this service.

Operating Reserve Fund
The ORF is used to fund cyclical maintenance activities, equipment, and supply purchases that typically do not occur on an annual basis to mitigate the swings in expense and revenue requirement year over year. Typical maintenance activities include hydrant/standpipe maintenance, reservoir cleaning and inspection, and ground water well servicing. The ORF is also used to respond to unforeseen events and operating emergencies.

The ORF transfers planned in the budget are evaluated and guided by the CRD Operating Reserve Guidelines endorsed by the CRD Board. The target balance for the service ranges from $24,000 to $55,000.

It is proposed that 2027 transfers to the ORF be set at $15,000. The ORF balance at the end of 2026 is projected to be $10,242.

Capital Reserve Fund
The CRF is to be used to pay for capital expenditures that are not funded by other sources such as grants, operating budget, or debt.

The CRF transfers planned in the budget are evaluated and influenced by the funding required to support the five-year capital expenditure plan and the emergency response to infrastructure

failures, also guided by the CRD Capital Reserve Funding Guidelines endorsed by the CRD Board. The target balance for the service to be maintained is approximately $228,000.

It is proposed that the budgeted transfer to the CRF be set at $27,894 in 2027. The balance of the reserve fund at the end of 2026 is projected to be approximately $64,342.

Capital Expenditure Plan

The five-year plan includes $3,245,000 expenditures to be funded by a combination of the service's CRF, capital on hand, grants and new debt.

The Water Master Plan Study (24-01) was initiated in 2024 funded through a combination of Growing Communities Fund (GCF) and Community Works Fund (CWF) and will continue into 2027. The completion of the Master Plan will better inform future projects. Any Petition or Alternative Approval Process (22-01) to approve borrowing to fund resulting projects will progress only after the Master Plan is complete and incorporated into capital planning. As outlined in Appendix C, some capital projects identified for 2028 and beyond have been allocated placeholder budgets to support alignment with the outcomes of the Master Plan. These projects and costs will be reassessed and prioritized following completion of the Master Plan. In addition, other smaller capital projects have been included to address required works expected to proceed in 2027.

Table 3 below provides the future debt servicing cost simulation for analytical purposes only with the indicative interest rate provided by the Municipal Finance Authority (MFA) at the time of simulation.

Table 3 – Future New Debt Simulation

	Term	Borrowing Year	Retirement Year	Estimated Interest Rate	Principal	Principal Payment	Interest Payment	Total Annual Debt Cost
Future Borrowing(s) Estimation	25	2028	2053	4.90%	$840,000	$21,423	$41,160	$62,583
	25	2029	2054	4.90%	$690,000	$17,598	$33,810	$51,408
	25	2030	2055	4.90%	$240,000	$6,121	$11,760	$17,881
Total					**$1,770,000**	**$45,142**	**$86,730**	**$131,872**

At the commencement of each loan, 1% of the gross amount borrowed is withheld and retained by MFA as Debt Reserve Fund (DRF). To provide the full amount to fund the capital project, this 1% DRF amount is budgeted in the operating budget in the year of borrowing. However, there is no principal payment required in the year of borrowing. The estimated debt servicing cost of $131,872 equates to approximately $483.05 per parcel.

Capital Projects Fund

As specific capital projects are approved, the funding revenues for them are transferred into the Capital Projects Fund from multiple funding sources if applicable, including the CRF, grant funding, external contributions, and debt. Any funds remaining upon completion of a project will be transferred back to its original funding source(s).

User Charge and Parcel Tax

This service is funded through user charge and parcel tax. Properties connected to the water system pay the annual user charge and all properties within the local service area pay the parcel tax. Table 4 below summarizes the 2027 over 2026 changes for parcel tax and user charge.

Table 4 – User Charge and Parcel Tax Summary

Budget Year	*Parcel Tax*	*Taxable Folios Numbers*	*Parcel Tax per Folio**	*User Charge*	*SFE Numbers*	*User Charge per SFE*	*Parcel Tax & User Charge*
2026	$92,477	257	$378.72	$96,118	336	$286.43	**$665.15**
2027	$106,350	273	$410.01	$110,540	336	$328.99	**$739.00**
Change ($)	$13,873	16	$31.29	$14,422	0	$42.56	**$73.85**
Change (%)	15.00%	6.23%	8.26%	15.00%	0.00%	14.86%	**11.10%**

* Includes the 5.25% admin fee charged by the Ministry of Finance (not CRD revenue)

The 2027 fixed user charge per SFE based on the budget recommended will be included in the fees and charges bylaw for approval by the CRD Board to be effective January 2027.

Port Renfrew Sewer Local Service (Appendix D)

Operating Budget
It is projected that the 2026 operating expenses will be $1,346 under budget. This is primarily due to savings in telecom, electricity and operating supplies.

It is projected that the 2026 operating revenues will be $350 over budget. As a result, there is an overall surplus of approximately $1,696 at the time of this mid-year forecast. To balance the operating budget at the end of year, the actual surplus will be balanced with 2026 reserve fund transfers, namely the CRF and/or ORF. Should the service instead incur a deficit that cannot be fully addressed through 2026 reserve transfer options, the remaining deficit must be carried forward and recovered from revenue in the 2027 financial plan as an expenditure, in accordance with the LGA Section 374(11).

Operating costs for 2027 (excluding one-time cyclical program funded by the ORF for sludge removal for $10,000 in 2027) have increased by $5,896 (4.8%) compared to 2026. The increase is primarily to account for core inflation

Currently there is no debt for this service.

Operating Reserve Fund
The ORF is used to fund cyclical maintenance activities, equipment, and supplies purchases that typically do not occur on an annual basis to mitigate the swings in expense and revenue requirement year over year. Typical maintenance activities include treatment facility tank draining/cleaning/inspection, backup power generator load testing, collection system, etc. Additionally, the ORF is also used to respond to unforeseen events and operating emergencies.

The ORF transfers planned in the budget are evaluated and guided by the CRD Operating Reserve Guidelines endorsed by the CRD Board. The target balance for the service ranges from $23,000 to $52,000.

It is proposed that transfers to the operating reserve be set at $7,000 in 2027. The Operating Reserve Fund balance at the end of 2026 is projected to be approximately $19,421.

Capital Reserve Fund
The CRF is to be used to pay for capital expenditures that are not funded by other sources such as grants, operating budget, or debt.

The CRF transfers planned in the budget are evaluated and influenced by the funding required to support the five-year capital expenditure plan and the emergency response to infrastructure failures, also guided by the CRD Capital Reserve Funding Guidelines endorsed by the CRD Board. The target balance for the service to be maintained is approximately $166,000.

It is proposed that the budgeted transfer to the CRF be set at $23,913 in 2027. The balance of this reserve at the end of 2026 is projected to be approximately $69,417.

Capital Expenditure Plan

The five-year plan includes $565,000 of expenditures to be funded by a combination of the service's CRF, capital funds on hand and new debt.

The Sewer and Water Master Plan Study (24-01) was initiated in 2024 funded through a combination of the GCF and CWF and will continue into 2027. Completion of the Sewer and Water Master Plan will better inform future projects and thus the Petition or AAP (22-02) will progress only after the Master Plan is complete and incorporated into capital planning. As outlined in Appendix D, some capital projects identified for 2028 and beyond have been allocated placeholder budgets to support alignment with the outcomes of the Master Plan. These projects and costs will be reassessed and prioritized following completion of the Master Plan. In addition, other capital projects have been included to address required works expected to proceed in 2027.

Table 5 below provides the future debt servicing cost simulation for analytical purposes only with the indicative interest rate provided by MFA at the time of simulation. The debt servicing is for System Renewal Project (28-01) for a total budget of $500,000. Please refer to the 2027 to 2030 Five-Year Capital Plan for details on this project.

Table 5 – Future New Debt Simulation

Future Borrowing(s) Estimation	*Term*	*Borrowing Year*	*Retirement Year*	*Estimated Interest Rate*	*Principal*	*Principal Payment*	*Interest Payment*	*Total Annual Debt Cost*
	25	2028	2053	4.90%	$200,000	$5,100	$9,800	$14,900
	25	2029	2054	4.90%	$300,000	$7,650	$14,700	$22,350
Total					**$500,000**	**$12,750**	**$24,500**	**$37,250**

At the commencement of each loan, 1% of the gross amount borrowed is withheld and retained by the MFA as a DRF. To provide the full amount to fund the capital project, this 1% DRF amount is budgeted in the operating budget in the year of borrowing. However, there is no principal payment required in the year of borrowing. The estimated debt servicing cost of $37,250 equates to approximately $423.30 cost per parcel.

Capital Projects Fund

As specific capital projects are approved, the funding revenues for them are transferred into this Capital Projects Fund from multiple funding sources if applicable, including the CRF, grant funding, external contributions, and debt. Any funds remaining upon completion of a project will be transferred back to its original funding source(s).

User Charge and Parcel Tax

This service is funded through user charge and parcel tax. Properties connected to the sewer system pay the annual user charge and all properties within the local service area pay the parcel tax. Table 6 below summarizes the 2027 over 2026 changes for parcel tax and user charge.

Table 6 – Parcel Tax and User Charge Summary

Budget Year	Parcel Tax	Taxable Folios Numbers	Parcel Tax per Folio*	User Charge	SFE Numbers	User Charge per SFE	Parcel Tax & User Charge
2026	$73,890	88	$883.74	$73,871	98	$755.55	**$1,639.29**
2027	$79,435	88	$950.06	$79,415	98	$812.27	**$1,762.33**
Change ($)	$5,545	0	$66.32	$5,544	0	$56.72	**$123.04**
Change (%)	7.50%	0.00%	7.50%	7.50%	0.00%	7.51%	**7.51%**

* Includes the 5.25% admin fee charged by the Ministry of Finance (not CRD revenue)

The 2027 fixed user charge per SFE based on the budget recommended will be included in the fees and charges bylaw for approval by the CRD Board to be effective January 2027.

ALTERNATIVES

Alternative 1
That the Port Renfrew Utility Services Committee recommends the Electoral Areas Committee recommend to the Capital Regional District Board:

1. Approve the Port Renfrew Street Lighting Service 2027 Operating and Capital Budget and the five-year Financial Plan as presented;
2. Approve the Port Renfrew Refuse Disposal Service 2027 Operating and Capital Budget and the five-year Financial Plan as presented;
3. Approve the Port Renfrew Water Service 2027 Operating and Capital Budget and the five-year Financial Plan as presented; and
4. Approve the Port Renfrew Sewer Service 2027 Operating and Capital Budget and the five-year Financial Plan as presented.

Alternative 2
That the Port Renfrew Utility Services Committee recommends the Electoral Areas Committee recommend to the Capital Regional District Board:

1. Approve the Port Renfrew Street Lighting Service 2027 Operating and Capital Budget and the five-year Financial Plan as amended;
2. Approve the Port Renfrew Refuse Disposal Service 2027 Operating and Capital Budget and the five-year Financial Plan as amended;
3. Approve the Port Renfrew Water Service 2027 Operating and Capital Budget and the five-year Financial Plan as amended; and
4. Approve the Port Renfrew Sewer Service 2027 Operating and Capital Budget and the five-year Financial Plan as amended.

RECOMMENDATIONS

That the Port Renfrew Utility Services Committee recommends the Electoral Areas Committee recommend to the Capital Regional District Board:

1. Approve the Port Renfrew Street Lighting Service 2027 Operating and Capital Budget and the five-year Financial Plan as presented;
2. Approve the Port Renfrew Refuse Disposal Service 2027 Operating and Capital Budget and the five-year Financial Plan as presented;
3. Approve the Port Renfrew Water Service 2027 Operating and Capital Budget and the five-year Financial Plan as presented; and
4. Approve the Port Renfrew Sewer Service 2027 Operating and Capital Budget and the five-year Financial Plan as presented.

Submitted by:	Iain Lawrence, MCIP, RPP, Senior Manager, Juan de Fuca Administration
Concurrence:	Nelson Chan, MBA, FCPA, FCMA, Chief Financial Officer & General Manager, Finance & Technology
Concurrence:	Rory Tooke, Ph.D., Acting General Manager, Parks, Recreation & Environmental Services
Concurrence:	Jared Kelly, P.Eng., Acting General Manager, Infrastructure & Water Services
Concurrence:	Stephen Henderson, General Manager, Electoral Area Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENT(S)

Appendix A: 2027 Budget Port Renfrew Street Lighting
Appendix B: 2027 Budget Port Renfrew Refuse Disposal
Appendix C: 2027 Budget Port Renfrew Water
Appendix D: 2027 Budget Port Renfrew Sewer

CAPITAL REGIONAL DISTRICT

2027 Budget

Port Renfrew Street Lighting

Commission Review

NOVEMBER 2026

Service: 1.232 Port Renfrew Street Lighting **Committee: Electoral Areas**

DEFINITION:

To provide, operate and maintain street lighting for the Port Renfrew Street Lighting Local Service Area.
Bylaw No. 1746, November 8, 1989; Bylaw No. 1986, January 29, 1992; Bylaw No. 3861, January 9, 2013.

PARTICIPATION:

Port Renfrew Local Service Area # 4, D-762.

MAXIMUM LEVY:

Greater of $7,500 or $3.42 / $1,000 of actual assessed value of land and improvements.

MAXIMUM CAPITAL DEBT:

N/A

COMMITTEE:

Port Renfrew Utility Services Committee (Juan de Fuca EA) established by Bylaw No. 3281 (September 14, 2005).

USER CHARGE:

50% of operating cost to be imposed as an annual user fee to each connected property.

PARCEL TAX:

50% of operating costs are collected as a parcel tax to be charged to every parcel within the Local Service Area.

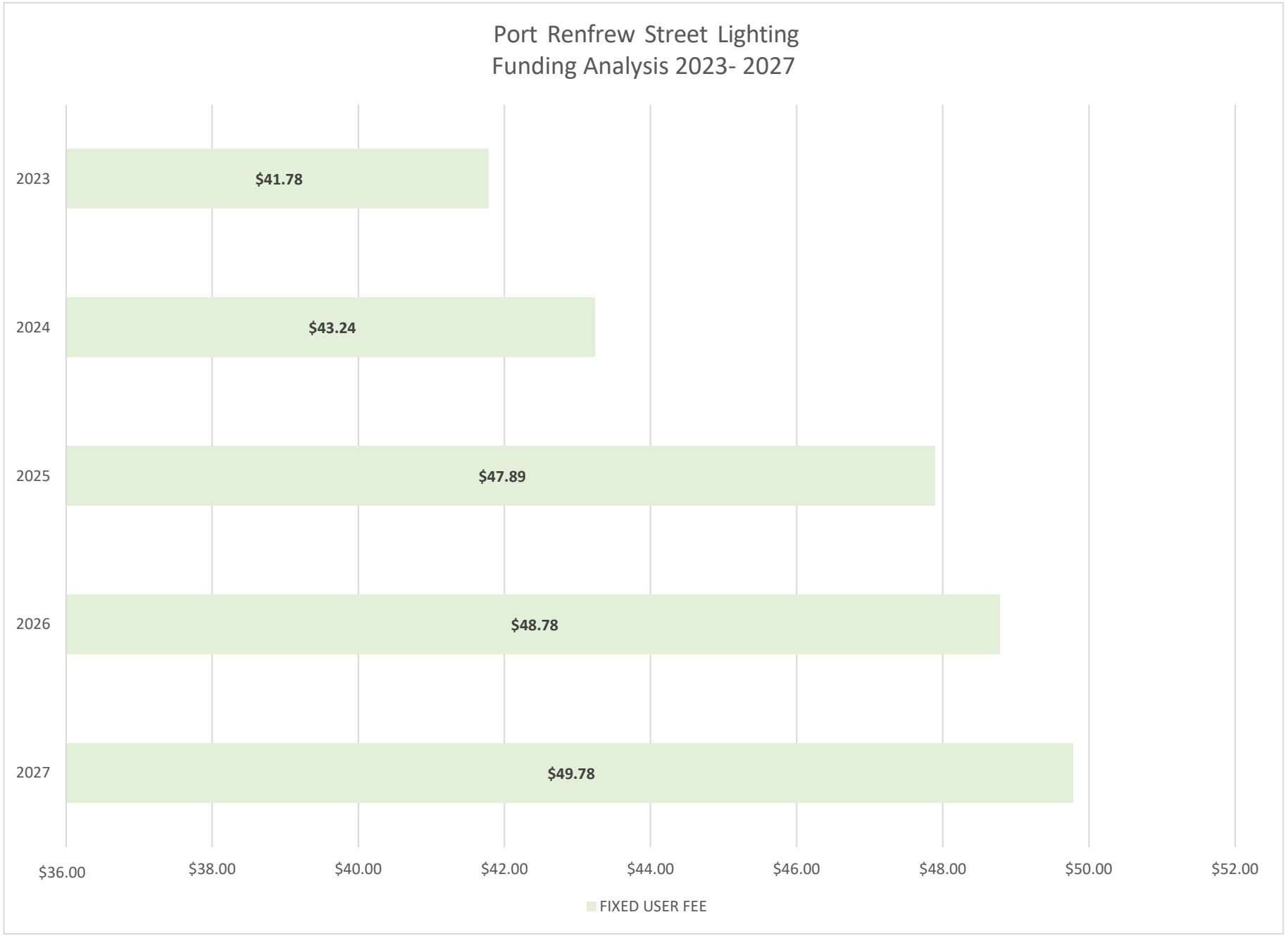
APPENDIX A

1.232 - Port Renfrew Street Lighting	2026 BOARD BUDGET	2026 ESTIMATED ACTUAL	BUDGET REQUEST 2027 CORE BUDGET	BUDGET REQUEST 2027 ONGOING	BUDGET REQUEST 2027 ONE-TIME	BUDGET REQUEST 2027 TOTAL	FUTURE PROJECTIONS 2028	FUTURE PROJECTIONS 2029	FUTURE PROJECTIONS 2030	FUTURE PROJECTIONS 2031
OPERATING COSTS										
Electricity	8,100	7,020	8,000	-	-	8,000	8,160	8,320	8,490	8,660
Allocations	555	555	649	-	-	649	663	676	690	703
Contingency	4,230	-	1,110	-	4,749	5,859	1,130	1,150	1,170	1,190
Other Operating Expenses	100	65	100	-	-	100	100	100	100	100
TOTAL COSTS	**12,985**	**7,640**	**9,859**	**-**	**4,749**	**14,608**	**10,053**	**10,246**	**10,450**	**10,653**
*Percentage Increase over prior year			-24.1%		36.6%	12.5%	-31.2%	1.9%	2.0%	1.9%
FUNDING SOURCES (REVENUE)										
Estimated Balance c/fwd from 2026 to 2027	-	5,453	(704)	-	(4,749)	(5,453)	-	-	-	-
Balance c/fwd from 2025 to 2026	(4,015)	(4,015)	-	-	-	-	-	-	-	-
User Charges	(4,390)	(4,390)	(4,480)	-	-	(4,480)	(4,570)	(4,660)	(4,750)	(4,850)
Grants in Lieu of Taxes	(80)	(94)	(80)	-	-	(80)	(80)	(80)	(80)	(80)
Revenue - Other	(280)	(374)	(285)	-	-	(285)	(290)	(300)	(310)	(320)
TOTAL REVENUE	**(8,765)**	**(3,420)**	**(5,549)**	**-**	**(4,749)**	**(10,298)**	**(4,940)**	**(5,040)**	**(5,140)**	**(5,250)**
REQUISITION - PARCEL TAX	**(4,220)**	**(4,220)**	**(4,310)**	**-**	**-**	**(4,310)**	**(5,113)**	**(5,206)**	**(5,310)**	**(5,403)**
*Percentage increase over prior year										
User Fee			2.1%			2.1%	2.0%	2.0%	1.9%	2.1%
Requisition			2.1%			2.1%	18.6%	1.8%	2.0%	1.8%
Combined			**2.1%**			**2.1%**	**10.2%**	**1.9%**	**2.0%**	**1.9%**

Service:	1.232	Port Renfrew Street Lighting	Committee: Electoral Area

Year	Taxable Folios	Parcel Tax Per Folio	SFE's	User Charge Per Folio	Total Tax & Charges	Bylaw	Actual Assessments $(000's)
2023	88	$42.93	90	$41.78	**$84.71**	4524	$48,391.50
2024	88	$44.52	90	$43.24	**$87.76**	4587	$51,718.30
2025	88	$49.61	90	$47.89	**$97.50**	4649	$51,363.90
2026	88	$50.47	90	$48.78	**$99.25**	4736	$49,295.60
2027	88	$51.55	90	$49.78	**$101.33**		
Change from 2026 to 2027							
		$1.08		*$1.00*	*$2.08*		
		2.14%		*2.05%*	*2.09%*		

APPENDIX A


Port Renfrew Street Lighting
Funding Analysis 2023- 2027
2023
$41.78
2024
$43.24
2025
$47.89
2026
$48.78
2027
$49.78
$36.00
$38.00
$40.00
$42.00
$44.00
$46.00
$48.00
$50.00
$52.00
FIXED USER FEE

CAPITAL REGIONAL DISTRICT

2027 Budget

Port Renfrew Refuse Disposal

Commission Review

NOVEMBER 2026

Service: 1.523 Port Renfrew Refuse Disposal **Committee: Electoral Areas**

DEFINITION:

To provide, maintain, operate and regulate disposal facilities. Local Service Bylaw No. 1745 (November 8, 1989), latest amendment 3357 (February 19, 2007).

SERVICE DESCRIPTION:

Provision of recycling and solid waste transfer station operations in Port Renfrew.

PARTICIPATION:

Local Service Area #3 of the Electoral Area of Sooke B(762)

MAXIMUM LEVY:

$15.18 / $1,000 on actual assessed value of land and improvements.

MAXIMUM CAPITAL DEBT:

N/A

COMMISSION:

Bylaw No. 3280, continues Port Renfrew Local Services Committee (September 14, 2005).
Bylaw No. 3707, discontinues Local Services Committee (June 9, 2010).
Bylaw No. 3745, continues under Port Renfrew Utility Committee (December 8, 2010).

RESERVE FUND:

Bylaw No. 2665 - Port Renfrew Solid Waste Removal and Disposal Capital Reserve Fund.

APPENDIX B

1.523 - Port Renfrew Refuse Disposal	2026 BOARD BUDGET	2026 ESTIMATED ACTUAL	BUDGET REQUEST 2027 CORE BUDGET	BUDGET REQUEST 2027 ONGOING	BUDGET REQUEST 2027 ONE-TIME	BUDGET REQUEST 2027 TOTAL	FUTURE PROJECTIONS 2028	FUTURE PROJECTIONS 2029	FUTURE PROJECTIONS 2030	FUTURE PROJECTIONS 2031
OPERATING COSTS										
Salaries and Wages	50,000	85,429	74,941	-	-	74,941	78,601	81,787	83,430	85,106
Contract for Services	94,680	126,693	152,071	-	-	152,071	155,110	158,210	161,370	164,600
Allocations	7,339	7,339	7,814	-	-	7,814	7,979	8,138	8,301	8,467
Electricity	1,290	120	132	-	-	132	130	130	130	130
Other Operating Expenses	2,980	6,405	8,402	-	-	8,402	8,574	8,744	8,924	9,112
TOTAL OPERATING COSTS	**156,289**	**225,986**	**243,360**	**-**	**-**	**243,360**	**250,394**	**257,009**	**262,155**	**267,415**
*Percentage Increase over prior year			55.7%			55.7%	2.9%	2.6%	2.0%	2.0%
CAPITAL / RESERVES										
Transfer to Equipment Replacement Fund	4,227	4,227	4,230	-	-	4,230	4,310	4,400	4,490	4,580
Transfer to Capital Reserve Fund	22,880	22,880	22,880	-	-	22,880	23,340	23,810	24,290	24,780
Transfer to Operating Reserve Fund			-	-	-	-	10,680	12,900	10,410	11,080
TOTAL CAPITAL / RESERVES	**27,107**	**27,107**	**27,110**	**-**	**-**	**27,110**	**38,330**	**41,110**	**39,190**	**40,440**
TOTAL COSTS	**183,396**	**253,093**	**270,470**	**-**	**-**	**270,470**	**288,724**	**298,119**	**301,345**	**307,855**
*Percentage Increase over prior year			47.5%			47.5%	6.7%	3.3%	1.1%	2.2%
Internal Recovery	(44,516)	(44,516)	(45,451)	-	-	(45,451)	(46,814)	(48,219)	(49,665)	(51,155)
NET COSTS	**138,880**	**208,577**	**225,019**	**-**	**-**	**225,019**	**241,910**	**249,900**	**251,680**	**256,700**
FUNDING SOURCES (REVENUE)										
Estimated Balance c/fwd from 2026 to 2027	-	(72,616)	-	-	72,616	72,616	-	-	-	-
Sale - Recyclables	(8,140)	(4,000)	(5,350)	-	-	(5,350)	(5,460)	(5,570)	(5,680)	(5,790)
Recovery Cost	(65,046)	(66,268)	(109,504)	-	(36,308)	(145,812)	(117,885)	(120,245)	(122,650)	(125,100)
Grants in Lieu of Taxes	(597)	(597)	(610)	-	-	(610)	(620)	(630)	(640)	(650)
Licencing Fees	-	-	-	-	-	-	-	(3,150)	-	-
Other Revenue	(50)	(49)	(50)	-	-	(50)	(50)	(50)	(50)	(50)
TOTAL REVENUE	**(73,833)**	**(143,530)**	**(115,514)**	**-**	**36,308**	**(79,206)**	**(124,015)**	**(129,645)**	**(129,020)**	**(131,590)**
REQUISITION	**(65,047)**	**(65,047)**	**(109,505)**	**-**	**(36,308)**	**(145,813)**	**(117,895)**	**(120,255)**	**(122,660)**	**(125,110)**
*Percentage increase over prior year Requisition			68.3%		55.8%	124.2%	-19.1%	2.0%	2.0%	2.0%

Port Renfrew Refuse Disposal
Reserve Summary Schedule
2027 - 2031 Financial Plan

Reserve/Fund Summary

	Estimated	Budget				
	2026	2027	2028	2029	2030	2031
Capital Reserve Fund	17,879	40,759	64,099	87,909	112,199	136,979
Equipment Replacement Fund	46,422	50,652	54,962	59,362	63,852	68,432
Operating Reserve Fund	-	-	10,680	23,580	33,990	45,070
Total	**64,301**	**91,411**	**129,741**	**170,851**	**210,041**	**250,481**

Reserve Schedule

Reserve Fund: 1.523 Port Renfrew Refuse Disposal - Capital Reserve Fund - Bylaw 2665

The capital Reserve Fund established to provide for capital expenditures for or in respect of capital projects and land, machinery or equipment necessary for them, and extension or renewal of existing capital works.
Surplus monies from the operation of the solid waste removal and disposal service may be paid from time to time into this reserve fund.

Reserve Cash Flow

Fund:	1021	Estimated	Budget				
Fund Centre:	101365	2026	2027	2028	2029	2030	2031
Beginning Balance		21,799	17,879	40,759	64,099	87,909	112,199
Transfer from Ops Budget		22,880	22,880	23,340	23,810	24,290	24,780
Transfer from Cap Fund		-					
Transfer to Cap Fund		(27,500)	-	-	-	-	-
Interest Income*		700					
Ending Balance $		**17,879**	**40,759**	**64,099**	**87,909**	**112,199**	**136,979**

Assumptions/Background:
*Interest in planning years nets against inflation which is not included.

Reserve Schedule

Reserve Fund: 1.523 Port Renfrew Refuse Disposal - Equipment Replacement Fund

The Equipment Replacement Fund established for the purpose of vehicle and equipment replacement.
Surplus monies from the operation of the solid waste removal and disposal service may be paid from time to time into this reserve fund.
ERF Group: PTRENREF.ERF

Reserve Cash Flow

Fund:	1022	Estimated	Budget				
Fund Centre:	101448	2026	2027	2028	2029	2030	2031
Beginning Balance		42,195	46,422	50,652	54,962	59,362	63,852
Transfer from Ops Budget		4,227	4,230	4,310	4,400	4,490	4,580
Transfer from Cap Fund		-					
Interest Income		-					
Ending Balance $		**46,422**	**50,652**	**54,962**	**59,362**	**63,852**	**68,432**

APPENDIX B

Reserve Schedule

Reserve Fund: 1.523 Port Renfrew Refuse Disposal - Operating Reserve Fund Fund

Reserve Cash Flow

Fund:	TBD	Estimated	Budget				
Fund Centre:	TBD	2026	2027	2028	2029	2030	2031
Beginning Balance			-	-	10,680	23,580	33,990
Transfer from Ops Budget			-	10,680	12,900	10,410	11,080
Transfer to Ops Budget		-					
		-					
Interest Income*		-					
Ending Balance $		**-**	**-**	**10,680**	**23,580**	**33,990**	**45,070**

Assumptions/Background:

*Interest in planning years nets against inflation which is not included.

CAPITAL REGIONAL DISTRICT

FIVE YEAR CAPITAL EXPENDITURE PLAN SUMMARY - 2027 to 2031

Service No.	1.523 Port Renfrew Refuse Disposal	Carry Forward from 2026	2027	2028	2029	2030	2031	TOTAL
EXPENDITURE								
Buildings		$0	$0	$0	$0	$0	$0	$0
Equipment		$0	$0	$0	$0	$0	$0	$0
Land		$0	$0	$0	$0	$0	$0	$0
Engineered Structures		$50,000	$50,000	$0	$0	$0	$0	$50,000
Vehicles		$0	$0	$0	$0	$0	$0	$0
		$50,000	**$50,000**	**$0**	**$0**	**$0**	**$0**	**$50,000**
SOURCE OF FUNDS								
Capital Funds on Hand		$50,000	$50,000	$0	$0	$0	$0	$50,000
Debenture Debt (New Debt Only)		$0	$0	$0	$0	$0	$0	$0
Equipment Replacement Fund		$0	$0	$0	$0	$0	$0	$0
Grants (Federal, Provincial)		$0	$0	$0	$0	$0	$0	$0
Donations / Third Party Funding		$0	$0	$0	$0	$0	$0	$0
Reserve Fund		$0	$0	$0	$0	$0	$0	$0
		$50,000	**$50,000**	**$0**	**$0**	**$0**	**$0**	**$50,000**

Definitions for the 5-year Capital Plan

Asset Class	Asset class is used to classify assets for financial reporting in accordance with the Public Sector Accounting Board (PSAB) 3150. **L** - Land **S** - Engineering Structure **B** - Buildings **V** - Vehicles **E** - Equipment
Capital Expenditure Type	Capital expenditure type is used for reporting on asset investments and may be used to justify operational needs for a service. **Study** - Expenditure for feasibility and business case report. **New** - Expenditure for new asset only **Renewal** - Expenditure upgrades an existing asset and extends the service ability or enhances technology in delivering that service **Replacement** - Expenditure replaces an existing asset
Carryforward	Represents the carryforward amount from the prior year capital plan that is remaining to be spent. Forecast this spending over the next 5 years.
Funding Source	**Debt** - Debenture Debt (new debt only) **ERF** - Equipment Replacement Fund **Grant** - Grants (Federal, Provincial) **Cap** - Capital Funds on Hand **Other** - Donations / Third Party Funding **Res** - Reserve Fund **WU** - Water Utility If there is more than one funding source, additional rows are shown for the project.

CAPITAL REGIONAL DISTRICT

5 YEAR CAPITAL PLAN

2027 - 2031

Service #: 1.523

Service Name: Port Renfrew Refuse Disposal

PROJECT DESCRIPTION				PROJECT BUDGET & SCHEDULE									
Project Number	Capital Expenditure Type	Capital Project Title	Capital Project Description	Total Project Budget	Asset Class	Funding Source	Carryforward	2027	2028	2029	2030	2031	5 - Year Total auto-populates
24-01	New	Site efficiency upgrades	Costs for site upgrades funded through the growing communities fund including: two refuse compactors and compactor continers, electrical upgrades, construction of operator shed and entrance culvert. These upgrades will increase the volume of material receivable at site and reduce transportation costs of materials by up to 75%. ($262,500 - GCF; $30,000 - CWF)	$ 350,000	S	Cap	$ 50,000	$ 50,000	$ -	$ -	$ -	$ -	$ 50,000
													$ -
													$ -
													$ -
													$ -
			Grand Total	**$ 350,000**				**$ 50,000.00**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 50,000.00**

Service:	1.523	Port Renfrew Refuse Disposal

Project Number	24-01	Capital Project Title	Site efficiency upgrades	Capital Project Description	Costs for site upgrades funded through the growing communities fund including: two refuse compactors and compactor continers, electrical upgrades, construction of operator shed and entrance culvert. These upgrades
Project Rationale					

1.523 - Port Renfrew Refuse Disposal

Capital Projects Fund

Updated @ Oct 15, 2026

Year	Project#	Capital Plan#	Status	Capital Project Description	Total Project Budget	Spending		Total Funding in Place
						Expenditure Actuals	Remaining Spending	
2024	CE.872.4001	24-01	Open	Port Renfrew Transfer Station Upgrades	350,000	322,457	27,543	350,000
2025	CE.432.2002.66	23-01	Open	Covered Recyclables Storage	12,000	11,940	61	12,000
				Total	**362,000**	**334,396**	**27,604**	**362,000**

CAPITAL REGIONAL DISTRICT

2027 Budget

Port Renfrew Water

Commission Review

NOVEMBER 2026

Service: 2.650 Port Renfrew Water **Committee: Electoral Areas**

DEFINITION:

To establish, acquire, operate and maintain a water supply system for the Port Renfrew Water Area. The service is to supply, treat, convey, store and distribute water. Local Service Area Bylaw No.1747 (Nov 8, 1989). Amended Bylaw No. 1960 (Jan. 29, 1992)

PARTICIPATION:

Local Service Area #5, E(762)

MAXIMUM LEVY:

Greater of $40,000 or $18.28 / $1,000 of actual assessed value of land and improvements.

COMMITTEE:

Port Renfrew Local Service Committee established by Bylaw No. 1770 (November 22, 1989).
Port Renfrew Utility Services Committee (Juan de Fucan EA) established by Bylaw No. 3281 (September 14, 2005)

FUNDING:

User Charge:
50% of operating cost to be collected by an annual user fee to be charged per single family equivalency actually connected to the system

Parcel Tax:
50% of operating costs are collected as a parcel tax to be charged to every parcel within the local service area.

Connection Charges:
At cost - Bylaw No. 1803 (amended Bylaw 3892).

RESERVE FUND:

Approved by Bylaw No. 2138 (June 23, 1993); amended to sewer and water reserve fund by Bylaw No. 2577 (December 1997)

APPENDIX C

2.650 - Port Renfrew Water	2026 BOARD BUDGET	2026 ESTIMATED ACTUAL	BUDGET REQUEST 2027 CORE BUDGET	2027 ONGOING	2027 ONE-TIME	2027 TOTAL	FUTURE PROJECTIONS 2028	2029	2030	2031
OPERATING COSTS										
Repairs & Maintenance	17,030	14,290	16,800	-	10,000	26,800	17,130	17,460	17,800	18,160
Allocations - Operations	94,277	103,307	100,391	-	-	100,391	102,400	104,450	106,540	108,670
Allocations - Other	11,389	11,389	12,384	-	-	12,384	12,665	12,948	13,237	13,532
Electricity	6,110	7,149	8,000	-	-	8,000	8,160	8,320	8,490	8,660
Supplies	15,350	14,984	15,230	-	-	15,230	15,530	15,840	16,150	16,470
Water Testing	3,640	6,677	3,775	-	-	3,775	3,878	3,983	4,091	4,200
Other Operating Expenses	14,260	13,290	9,490	-	-	9,490	24,733	10,280	10,542	25,810
TOTAL OPERATING COSTS	**162,056**	**171,086**	**166,070**	**-**	**10,000**	**176,070**	**184,496**	**173,281**	**176,850**	**195,502**
*Percentage Increase over prior year			2.5%		6.2%	8.6%	4.8%	-6.1%	2.1%	10.5%
DEBT / RESERVES										
Transfer to Operating Reserve Fund	15,000	15,000	15,000	-	-	15,000	15,300	15,610	15,920	16,240
Transfer to Capital Reserve Fund	20,829	20,829	27,894	-	-	27,894	48,624	65,523	79,759	114,486
MFA Debt Reserve Fund - Planned	-	-	-	-	-	-	8,400	6,900	2,400	-
Interest Payments - Planned	-	-	-	-	-	-	10,290	49,613	80,850	86,730
Principal Payments - Planned	-	-	-	-	-	-	-	21,423	39,021	45,142
TOTAL DEBT / RESERVES	**35,829**	**35,829**	**42,894**	**-**	**-**	**42,894**	**82,614**	**159,069**	**217,950**	**262,598**
TOTAL COSTS	**197,885**	**206,915**	**208,964**	**-**	**10,000**	**218,964**	**267,110**	**332,350**	**394,800**	**458,100**
*Percentage Increase over prior year			5.6%		5.1%	10.7%	22.0%	24.4%	18.8%	16.0%
FUNDING SOURCES (REVENUE)										
Estimated Balance c/fwd from 2026 to 2027	-	(9,246)	9,246	-	-	9,246				
Balance c/fwd from 2025 to 2026	-	-	-	-	-	-	-	-	-	-
Transfer from Operating Reserve Fund	(8,000)	(8,000)	-	-	(10,000)	(10,000)	(15,000)	-	-	(15,000)
User Charges	(96,118)	(96,118)	(110,540)	-	-	(110,540)	(118,280)	(126,560)	(135,420)	(144,900)
Other Revenue	(1,290)	(1,074)	(1,320)	-	-	(1,320)	(1,350)	(1,420)	(1,490)	(1,610)
TOTAL REVENUE	**(105,408)**	**(114,438)**	**(102,614)**	**-**	**(10,000)**	**(112,614)**	**(134,630)**	**(127,980)**	**(136,910)**	**(161,510)**
REQUISITION - PARCEL TAX	**(92,477)**	**(92,477)**	**(106,350)**	**-**	**-**	**(106,350)**	**(132,480)**	**(204,370)**	**(257,890)**	**(296,590)**
*Percentage increase over prior year										
User Fees			15.0%			15.0%	7.0%	7.0%	7.0%	7.0%
Requisition			15.0%			15.0%	24.6%	54.3%	26.2%	15.0%
Combined			**15.0%**			**15.0%**	**15.6%**	**32.0%**	**18.8%**	**12.2%**

Port Renfrew Water
Reserve Summary Schedule
2027 - 2031 Financial Plan

Reserve/Fund Summary

	Estimated	Budget				
	2026	2027	2028	2029	2030	2031
Operating Reserve Fund	10,242	15,242	15,542	31,152	47,072	48,312
Capital Reserve Fund	64,342	24,736	73,360	138,883	218,642	283,128
Total	**74,584**	**39,978**	**88,902**	**170,035**	**265,714**	**331,440**

Reserve Schedule

Reserve Fund: 2.650 Port Renfrew Water - Operating Reserve Fund - Bylaw 4242

The Operating Reserve Fund is used to undertake maintenance activities that typically do not occur on an annual basis.

Reserve Cash Flow

Fund: 1500	**Estimated**	**Budget**				
Fund Centre: 105536	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Beginning Balance	3,142	10,242	15,242	15,542	31,152	47,072
Transfer from Ops Budget	15,000	15,000	15,300	15,610	15,920	16,240
Expenditures	(8,000)	(10,000)	(15,000)	-	-	(15,000)
Planned Maintenance Activity		Reservoir Cleaning	Tree clearing for high voltage hydro lines			Tree clearing for high voltage hydro lines
Deficit Recovery	-					
Interest Income*	100					
Ending Balance $	**10,242**	**15,242**	**15,542**	**31,152**	**47,072**	**48,312**

Assumptions/Background:

* Interest in planning years nets against inflation which is not included.

Reserve Schedule

Reserve Fund: 2.650 Port Renfrew Water - Capital Reserve Fund - Bylaw 2577

The Capital Reserve Fund established for general capital services and facilities in the Port Renfrew Water Supply to be used for capital expenditures for the utilities, and redemption of debentures issued for the utilities.

Reserve Cash Flow

Fund:	1026	Estimated	Budget				
Fund Centre:	101370	2026	2027	2028	2029	2030	2031
Beginning Balance		68,809	64,342	24,736	73,360	138,883	218,642
Transfer from Ops Budget		20,829	27,894	48,624	65,523	79,759	114,486
Transfer from Cap Fund		-					
Transfer to Cap Fund		(27,500)	(67,500)	-	-	-	(50,000)
Interest Income*		2,204					
Ending Balance $		**64,342**	**24,736**	**73,360**	**138,883**	**218,642**	**283,128**

Assumptions/Background:

-Transfer as much as operating budget will allow.

7

CAPITAL REGIONAL DISTRICT

FIVE YEAR CAPITAL EXPENDITURE PLAN SUMMARY - 2027 to 2031

Service No. 2.650 Port Renfrew Water	Carry Forward from 2026	2027	2028	2029	2030	2031	TOTAL
EXPENDITURE							
Buildings	$0	$0	$0	$0	$0	$0	$0
Equipment	$0	$0	$250,000	$0	$0	$0	$250,000
Land	$0	$0	$0	$0	$0	$0	$0
Engineered Structures	$60,000	$1,425,000	$590,000	$690,000	$240,000	$50,000	$2,995,000
Vehicles	$0	$0	$0	$0	$0	$0	$0
	$60,000	**$1,425,000**	**$840,000**	**$690,000**	**$240,000**	**$50,000**	**$3,245,000**
SOURCE OF FUNDS							
Capital Funds on Hand	$15,000	$15,000	$0	$0	$0	$0	$15,000
Debenture Debt (New Debt Only)	$0	$0	$840,000	$690,000	$240,000	$0	$1,770,000
Equipment Replacement Fund	$0	$0	$0	$0	$0	$0	$0
Grants (Federal, Provincial)	$0	$1,342,500	$0	$0	$0	$0	$1,342,500
Donations / Third Party Funding	$0	$0	$0	$0	$0	$0	$0
Reserve Fund	$45,000	$67,500	$0	$0	$0	$50,000	$117,500
	$60,000	**$1,425,000**	**$840,000**	**$690,000**	**$240,000**	**$50,000**	**$3,245,000**

Definitions for the 5-year Capital Plan

Asset Class	Asset class is used to classify assets for financial reporting in accordance with the Public Sector Accounting Board (PSAB) 3150. **L** - Land **S** - Engineering Structure **B** - Buildings **V** - Vehicles **E** - Equipment
Capital Expenditure Type	Capital expenditure type is used for reporting on asset investments and may be used to justify operational needs for a service. **Study** - Expenditure for feasibility and business case report. **New** - Expenditure for new asset only **Renewal** - Expenditure upgrades an existing asset and extends the service ability or enhances technology in delivering that service **Replacement** - Expenditure replaces an existing asset
Carryforward	Represents the carryforward amount from the prior year capital plan that is remaining to be spent. Forecast this spending over the next 5 years.
Funding Source	**Debt** - Debenture Debt (new debt only) **ERF** - Equipment Replacement Fund **Grant** - Grants (Federal, Provincial) **Cap** - Capital Funds on Hand **Other** - Donations / Third Party Funding **Res** - Reserve Fund **WU** - Water Utility If there is more than one funding source, additional rows are shown for the project.

APPENDIX C

CAPITAL REGIONAL DISTRICT

5 YEAR CAPITAL PLAN

2027 - 2031

Service #: 2.650

Service Name: Port Renfrew Water

PROJECT DESCRIPTION				PROJECT BUDGET & SCHEDULE									
Project Number	Capital Expenditure Type	Capital Project Title	Capital Project Description	Total Project Budget	Asset Class	Funding Source	Carryforward	2027	2028	2029	2030	2031	5 - Year Total auto-populates
22-01	Replacement	Petition or Alternative Approval Process	Carry out an alternative approval process in order to borrow funds for required system renewal (one or multiple phases) to fund large scale capital works, including those identified in the Water Master Plan.	$ 20,000	S	Res	$ 20,000	$ 20,000	$ -	$ -	$ -	$ -	$ 20,000
23-01	Replacement	Supply System Replacement	Replacement of the remainder of the asbestos cement supply system is required to maintain level of service.	$ 1,900,000	S	Grant	$ -	$ 1,330,000	$ -	$ -	$ -	$ -	$ 1,330,000
23-01	Replacement	Supply System Replacement	Replacement of the remainder of the asbestos cement supply system is required to maintain level of service.		S	Debt	$ -	$ -	$ 190,000	$ 190,000	$ 190,000	$ -	$ 570,000
23-02	Replacement	AC Pipe Replacement Program	Frequent asbestos cement distribution pipe failures necessitate their replacement to maintain the level of service.	$ 450,000	S	Debt	$ -	$ -	$ 200,000	$ 200,000	$ 50,000	$ -	$ 450,000
23-03	Replacement	Miscellaneous Repairs & Replacements	Replacement of SCADA equipment before equipment failure, and replacement of the water treatment roof	$ 250,000	E	Debt	$ -	$ -	$ 250,000	$ -	$ -	$ -	$ 250,000
24-01	Study	Water Master Plan Study	Master Planning study for the Port Renfrew service area - existing, future and inclusion of Pacheedaht First Nation to be delivered in parallel with Sewer Master Plan Study. (25% CWF, 75% GCF)	$ 175,000	S	Cap	$ 15,000	$ 15,000	$ -	$ -	$ -	$ -	$ 15,000
25-01	Replacement	Service Line Replacements	Initial budget for replacement of problem service lines	$ 25,000	S	Res	$ 25,000	$ 25,000	$ -	$ -	$ -	$ -	$ 25,000
27-01	Study	Tank Condition Assessment	Assess condition of original water tank.	$ 50,000	S	Res	$ -	$ -	$ -	$ -	$ -	$ 50,000	$ 50,000
27-02	New	Water Tank Fencing	Install fencing around two water supply tanks on Beachview Rise	$ 25,000	S	Res	$ -	$ 12,500	$ -	$ -	$ -	$ -	$ 12,500
27-02	New	Water Tank Fencing	Install fencing around two water supply tanks on Beachview Rise		S	Grant	$ -	$ 12,500	$ -	$ -	$ -	$ -	$ 12,500
27-03	Study	Asset Management Study	Budget for asset management assessment to support petition process	$ 10,000	S	Res	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ 10,000
28-01	Study	System Renewal	Design Process for Facility system upgrades resulting from Master Plan recommendations. Placeholder budget while awaiting Master Plan completion and further study.	$ 500,000	S	Debt	$ -	$ -	$ 200,000	$ 300,000	$ -	$ -	$ 500,000
													$ -
													$ -
													$ -
			Grand Total	**$ 3,405,000**				**$ 1,425,000**	**$ 840,000**	**$ 690,000**	**$ 240,000**	**$ 50,000**	**$ 3,245,000**

Service:	2.650	Port Renfrew Water

Project Number	22-01	**Capital Project Title**	Petition or Alternative Approval Process	**Capital Project Description**	Carry out an alternative approval process in order to borrow funds for required system renewal (one or multiple phases) to fund large scale capital works, including those identified in the Water Master Plan
Project Rationale	Public engagement for authorization to develop a loan authorization bylaw.				

Project Number	23-01	**Capital Project Title**	Supply System Replacement	**Capital Project Description**	Replacement of the remainder of the asbestos cement supply system is required to maintain level of service.
Project Rationale	The 2017 project to replace a section of the aging asbestos supply pipe from the water treatment plant to the distribution system was complete. Funds are required to replace the remaining approximately 1.4 km of pipe so that service is maintained.				

Project Number	23-02	**Capital Project Title**	AC Pipe Replacement Program	**Capital Project Description**	Frequent asbestos cement distribution pipe failures necessitate their replacement to maintain the level of service.
Project Rationale	There have been frequent pipe breaks with the existing asbestos cement pipe, replacement is required to maintain the level of service. Funds are requried to design and develop a replacement program and replace priority pipe, starting with pipe in the Beach Camp area and Queesto Drv and Tsonoqua Drv, approximately 1 km of pipe.				

Project Number	23-03	**Capital Project Title**	Miscellaneous Repairs & Replacements	**Capital Project Description**	Replacement of SCADA equipment before equipment failure, and replacement of the water treatment roof
Project Rationale	The SCADA equipment is nearing its end of life and requires replacement before the equipment fails.The water treatment roof has had some minor repairs to address leaks, but requires replacement.				

Service:	2.650	Port Renfrew Water

Project Number	25-01	**Capital Project Title**	Service Line Replacements	**Capital Project Description**	Initial budget for replacement of problem service lines
Project Rationale	Water service lines are beginning to show signs of concern. This initial budget is meant to assess and replace service lines that are demonstrating problems.				

Project Number	27-01	**Capital Project Title**	Tank Condition Assessment	**Capital Project Description**	Assess condition of original water tank.
Project Rationale	Condition assessment necessary to assess service condition/life of the asset.				

Project Number	27-02	**Capital Project Title**	Water Tank Fencing	**Capital Project Description**	Install fencing around two water supply tanks on Beachview Rise
Project Rationale	Increased security and asset protection.				

Project Number	27-03	**Capital Project Title**	Asset Management Study	**Capital Project Description**	Budget for asset management assessment to support petition process
Project Rationale	Asset Management Planning necessary to effectively manage asset life cycles and plan for future improvement works.				

Service:	2.650	Port Renfrew Water

Project Number	28-01	**Capital Project Title**	System Renewal	**Capital Project Description**	Design Process for Facility system upgrades resulting from Master Plan recommendations. Placeholder budget while awaiting Master Plan completion and further study.
Project Rationale	Design Process for Facility system upgrades resulting from Master Plan recommendations. Placeholder budget while awaiting Master Plan completion and further study.				

Project Number	24-01	**Capital Project Title**	Water Master Plan Study	**Capital Project Description**	Master Planning study for the Port Renfrew service area - existing, future and inclusion of Pacheedaht First Nation to be delivered in parallel with Sewer Master Plan Study. (25% CWF, 75% GCF)
Project Rationale					

2.650 - Port Renfrew Water

Capital Projects

Updated @ *Oct 15, 2026*

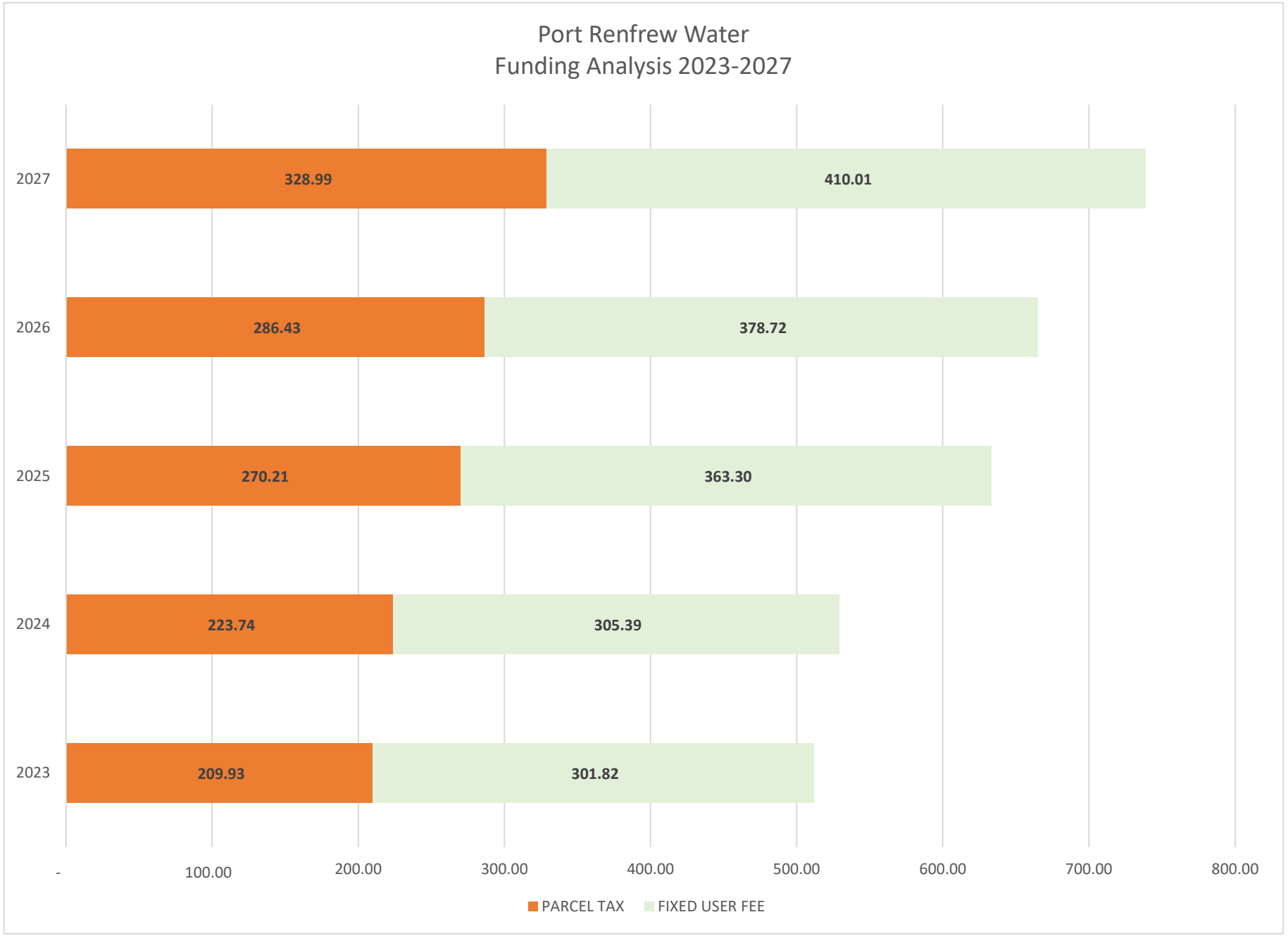
Year	Project#	Status	Capital Project Description	Total Project Budget	Spending		Total Funding in Place
					Expenditure Actuals	Remaining Spending	
2024	CE.868.4501	Open	Water Master Plan Study	175,000	136,351	38,649	175,000
			Totals	**175,000**	**136,351**	**38,649**	**175,000**

APPENDIX C

Service:	2.650	Port Renfrew Water	Committee: Electoral Area

Year	Taxable Folios	Parcel Tax per Folio	SFE's	User Charge per SFE	Total Tax & Charges	Bylaw	Actual Assessments $(000's)
2012	163	$320.86	244	$203.38	**$524.24**	3847	$39,733
2013	172	$313.09	242	$211.15	**$524.24**	3892	$28,108
2014	172	$313.74	243	$210.71	**$524.45**	3924	$37,379
2015	172	$317.95	243	$213.54	**$531.49**	3987	$47,246
2016	194	$288.95	265	$207.33	**$496.28**	4074	$50,619
2017	198	$280.35	269	$197.71	**$478.06**	4170	$55,762
2018	198	$283.11	269	$204.25	**$487.36**	4233	$64,050
2019	211	$277.19	286	$195.50	**$472.69**	4274	$72,817
2020	223	$275.29	308	$189.65	**$464.94**	4337	$83,581
2021	223	$283.26	315	$190.76	**$474.02**	4389	$92,094
2022	223	$304.46	316	$204.41	**$508.87**	4471	$134,102
2023	231	$301.82	316	$209.93	**$511.75**	4524	$148,001
2024	249	$305.39	317	$223.74	**$529.13**	4587	$157,298
2025	253	$363.30	317	$270.21	**$633.51**	4649	$160,588
2026	257	$378.72	336	$286.43	**$665.15**	4736	$164,135
2027	273	$410.01	336	$328.99	**$739.00**		
Change from 2026 to 2027		*$31.29*		*$42.56*	*$73.85*		
		8.26%		*14.86%*	*11.10%*		

APPENDIX C


Port Renfrew Water
Funding Analysis 2023-2027
2027
328.99
410.01
2026
286.43
378.72
2025
270.21
363.30
2024
223.74
305.39
2023
209.93
301.82
-
100.00
200.00
300.00
400.00
500.00
600.00
700.00
800.00
PARCEL TAX
FIXED USER FEE

CAPITAL REGIONAL DISTRICT

2027 Budget

Port Renfrew Sewer

Commission Review

NOVEMBER 2026

Service: 3.850 Port Renfrew Sewer **Committee: Electoral Areas**

DEFINITION:

To provide, operate and maintain sewage collection and disposal facilities for the Port Renfrew Sewerage System Specified Area - Bylaw No.1744, November 8, 1989. Amended Bylaw No. 1961, January 29, 1992.

PARTICIPATION:

Local Service Area C(762) LSA#2.

MAXIMUM LEVY:

Greater of $40,000 or $18.28 / $1,000 on actual assessed value of land and improvements.

MAXIMUM CAPITAL DEBT:

Nil

COMMISSION:

Port Renfrew Local Services Committee established by Bylaw No. 1770, November 22, 1989.
Port Renfrew Utility Services Committee (Juan de Fucan EA) established by Bylaw No. 3281 (September 14, 2005)

FUNDING:

User Charge:	50% of operating cost to be imposed as an annual user fee to each connected property.
Parcel Tax:	50% of operating costs are collected as a parcel tax to be charged to every parcel within the local service area.
Connection Charge:	Based on actual cost.

RESERVE FUND:

Port Renfrew Sewer System Capital Reserve Fund, Bylaw No. 2139 (June 23, 1993).

3.850 - Port Renfrew Sewer	2026 BOARD BUDGET	2026 ESTIMATED ACTUAL	BUDGET REQUEST 2027 CORE BUDGET	2027 ONGOING	2027 ONE-TIME	2027 TOTAL	FUTURE PROJECTIONS 2028	2029	2030	2031
OPERATING COSTS										
Grit Disposal	11,850	12,000	12,000	-	-	12,000	12,240	12,480	12,730	12,980
Electricity	7,660	7,200	7,660	-	-	7,660	7,810	7,970	8,130	8,290
Supplies	2,890	2,080	2,890	-	-	2,890	2,950	3,010	3,070	3,130
Allocations - Operations	69,218	69,218	73,678	-	-	73,678	75,150	76,650	78,190	79,760
Allocations - Other	19,313	19,313	20,079	-	-	20,079	24,323	21,092	21,614	22,157
Other Operating Expenses	12,860	12,634	13,380	-	10,000	23,380	13,660	13,942	14,237	14,544
TOTAL OPERATING COSTS	**123,791**	**122,445**	**129,687**	**-**	**10,000**	**139,687**	**136,133**	**135,144**	**137,971**	**140,861**
*Percentage Increase over prior year			4.8%		8.1%	12.8%	-2.5%	-0.7%	2.1%	2.1%
DEBT / RESERVES										
Transfer to Capital Reserve	20,689	22,385	23,913	-	-	23,913	24,817	21,371	16,509	28,299
Transfer to Operating Reserve	5,000	5,000	7,000	-	-	7,000	7,140	7,280	7,430	7,580
MFA Debt Reserve Fund	-	-	-	-	-	-	2,000	3,000	-	-
MFA Debt Principal	-	-	-	-	-	-	-	5,100	12,750	12,750
MFA Debt Interest	-	-	-	-	-	-	2,450	13,475	24,500	24,500
TOTAL DEBT / RESERVES	**25,689**	**27,385**	**30,913**	**-**	**-**	**30,913**	**36,407**	**50,226**	**61,189**	**73,129**
TOTAL COSTS	**149,480**	**149,830**	**160,600**	**-**	**10,000**	**170,600**	**172,540**	**185,370**	**199,160**	**213,990**
*Percentage Increase over prior year			7.4%		6.7%	14.1%	1.1%	7.4%	7.4%	7.4%
FUNDING SOURCES (REVENUE)										
Transfer from Operating Reserve Fund	-	-	-	-	(10,000)	(10,000)	-	-	-	-
User Charges	(73,871)	(73,467)	(79,415)	-	-	(79,415)	(85,370)	(91,770)	(98,650)	(106,050)
Grants in Lieu of Taxes	(1,619)	(1,619)	(1,650)	-	-	(1,650)	(1,680)	(1,710)	(1,740)	(1,770)
Other Revenue	(100)	(854)	(100)	-	-	(100)	(100)	(100)	(100)	(100)
TOTAL REVENUE	**(75,590)**	**(75,940)**	**(81,165)**	**-**	**(10,000)**	**(91,165)**	**(87,150)**	**(93,580)**	**(100,490)**	**(107,920)**
REQUISITION - PARCEL TAX	**(73,890)**	**(73,890)**	**(79,435)**	**-**	**-**	**(79,435)**	**(85,390)**	**(91,790)**	**(98,670)**	**(106,070)**
*Percentage increase over prior year										
User Fees			7.5%			7.5%	7.5%	7.5%	7.5%	7.5%
Requisition			7.5%			7.5%	7.5%	7.5%	7.5%	7.5%
Combined			**7.5%**			**7.5%**	**7.5%**	**7.5%**	**7.5%**	**7.5%**

Port Renfrew Sewer
Reserve Summary Schedule
2027 - 2031 Financial Plan

Reserve/Fund Summary

	Estimated	Budget				
	2026	**2027**	**2028**	**2029**	**2030**	**2031**
Operating Reserve Fund	19,421	16,421	23,561	30,841	38,271	45,851
Capital Reserve Fund	69,417	43,330	68,147	89,518	106,027	134,326
Total	**88,838**	**59,751**	**91,708**	**120,359**	**144,298**	**180,177**

Reserve Schedule

Reserve Fund: 3.850 Port Renfrew Sewer - Operating Reserve Fund - Bylaw 4242

The Operating Reserve Fund is used to undertake maintenance activities that typically do not occur on an annual basis.

Reserve Cash Flow

Fund:	**1500**	**Estimated**	**Budget**				
Fund Centre:	**105537**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Beginning Balance		13,973	19,421	16,421	23,561	30,841	38,271
Transfer from Ops Budget		5,000	7,000	7,140	7,280	7,430	7,580
Transfer to Ops Budget		-	(10,000)	-	-	-	-
Interest Income*		448					
Ending Balance $		**19,421**	**16,421**	**23,561**	**30,841**	**38,271**	**45,851**

Assumptions/Background:

* Interest in planning years nets against inflation which is not included.

Reserve Schedule

Reserve Fund: 3.850 Port Renfrew Sewer - Capital Reserve Fund - Bylaw 2139

Surplus money from the operation of the sewer system may be paid from time to time into the reserve fund.

Reserve Cash Flow

Fund:	1044	Estimated	Budget				
Fund Centre:	101388	2026	2027	2028	2029	2030	2031
Beginning Balance		47,216	69,417	43,330	68,147	89,518	106,027
Transfer from Ops Budget		20,689	23,913	24,817	21,371	16,509	28,299
Transfer from Cap Fund		-					
Transfer to Cap Fund		-	(50,000)	-	-	-	-
Interest Income*		1,512					
Ending Balance $		**69,417**	**43,330**	**68,147**	**89,518**	**106,027**	**134,326**

Assumptions/Background:

Transfer as much as operating budget will allow.

* Interest in planning years nets against inflation which is not included.

CAPITAL REGIONAL DISTRICT

FIVE YEAR CAPITAL EXPENDITURE PLAN SUMMARY - 2027 to 2031

Service No.	3.850 Port Renfrew Sewer	Carry Forward from 2026	2027	2028	2029	2030	2031	TOTAL
EXPENDITURE								
Buildings		$0	$0	$0	$0	$0	$0	$0
Equipment		$0	$0	$0	$0	$0	$0	$0
Land		$0	$0	$0	$0	$0	$0	$0
Engineered Structures		$45,000	$65,000	$200,000	$300,000	$0	$0	$565,000
Vehicles		$0	$0	$0	$0	$0	$0	$0
		$45,000	**$65,000**	**$200,000**	**$300,000**	**$0**	**$0**	**$565,000**
SOURCE OF FUNDS								
Capital Funds on Hand		$15,000	$15,000	$0	$0	$0	$0	$15,000
Debenture Debt (New Debt Only)		$0	$0	$200,000	$300,000	$0	$0	$500,000
Equipment Replacement Fund		$0	$0	$0	$0	$0	$0	$0
Grants (Federal, Provincial)		$0	$0	$0	$0	$0	$0	$0
Donations / Third Party Funding		$0	$0	$0	$0	$0	$0	$0
Reserve Fund		$30,000	$50,000	$0	$0	$0	$0	$50,000
		$45,000	**$65,000**	**$200,000**	**$300,000**	**$0**	**$0**	**$565,000**

Definitions for the 5-year Capital Plan

Asset Class	Asset class is used to classify assets for financial reporting in accordance with the Public Sector Accounting Board (PSAB) 3150. **L** - Land **S** - Engineering Structure **B** - Buildings **V** - Vehicles **E** - Equipment
Capital Expenditure Type	Capital expenditure type is used for reporting on asset investments and may be used to justify operational needs for a service. **Study** - Expenditure for feasibility and business case report. **New** - Expenditure for new asset only **Renewal** - Expenditure upgrades an existing asset and extends the service ability or enhances technology in delivering that service **Replacement** - Expenditure replaces an existing asset
Carryforward	Represents the carryforward amount from the prior year capital plan that is remaining to be spent. Forecast this spending over the next 5 years.
Funding Source	**Debt** - Debenture Debt (new debt only) **ERF** - Equipment Replacement Fund **Grant** - Grants (Federal, Provincial) **Cap** - Capital Funds on Hand **Other** - Donations / Third Party Funding **Res** - Reserve Fund **WU** - Water Utility If there is more than one funding source, additional rows are shown for the project.

APPENDIX D

CAPITAL REGIONAL DISTRICT

5 YEAR CAPITAL PLAN

2027 - 2031

Service #: 3.850

Service Name: Port Renfrew Sewer

				PROJECT BUDGET & SCHEDULE									
Project Number	Capital Expenditure Type	Capital Project Title	Capital Project Description	Total Project Budget	Asset Class	Funding Source	Carryforward	2027	2028	2029	2030	2031	5 - Year Total auto-populates
22-02	Renewal	Petition or Alternative Approval Process	Carry out an alternative approval process in order to borrow funds for required system renewal (one or multiple phases) to fund works identified in the Sewer Master Plan.	$ 20,000	S	Res	$ 20,000	$ 20,000	$ -	$ -	$ -	$ -	$ 20,000
24-01	Study	Sewer Master Plan Study	Master Planning study for the Port Renfrew service area - existing, future and inclusion of Pacheedaht First Nation to be delivered in parallel with Water Master Plan Study. (25% CWF, 75% GCF)	$ 175,000	S	Cap	$ 15,000	$ 15,000	$ -	$ -	$ -	$ -	$ 15,000
27-01	Renewal	Sewer Outfall Repairs	Periodic inspections and repairs to extend the life of the WWTP Outfall.	$ 20,000	S	Res	$ -	$ 20,000	$ -	$ -	$ -	$ -	$ 20,000
27-02	Study	Asset Management Study	Budget for asset management assessment to support petition process	$ 10,000	S	Res	$ 10,000	$ 10,000	$ -	$ -	$ -	$ -	$ 10,000
28-01	Study	System Renewal	Design Process for new Wastewater Treatment Plant, Pump Station and Outfall. Placeholder budget while awaiting Master Plan completion and further study.	$ 500,000	S	Debt	$ -	$ -	$ 200,000	$ 300,000	$ -	$ -	$ 500,000
													$ -
													$ -
													$ -
													$ -
													$ -
													$ -
													$ -
													$ -
													$ -
													$ -
			Grand Total	**$ 725,000**				**$ 65,000**	**$ 200,000**	**$ 300,000**	**$ -**	**$ -**	**$ 565,000**

Service:	3.850	Port Renfrew Sewer

Project Number	22-02	**Capital Project Title**	Petition or Alternative Approval Process	**Capital Project Description**	Carry out an alternative approval process in order to borrow funds for required system renewal (one or multiple phases) to fund works identified in the Sewer Master Plan.
Project Rationale	Public engagement for authorization to develop a loan authorization bylaw.				

Project Number	27-01	**Capital Project Title**	Sewer Outfall Repairs	**Capital Project Description**	Periodic inspections and repairs to extend the life of the WWTP Outfall.
Project Rationale	Failure of the outfall occurred in 2024, requiring operation mobilization and repairs. Issues expected to continue until permanent replacement can be done. This budget is for ongoing interim repairs.				

Project Number	27-02	**Capital Project Title**	Asset Management Study	**Capital Project Description**	Budget for asset management assessment to support petition process
Project Rationale	Asset Management Planning necessary to effectively manage asset life cycles and plan for future improvement works.				

Project Number	28-01	**Capital Project Title**	System Renewal	**Capital Project Description**	Design Process for new Wastewater Treatment Plant, Pump Station and Outfall. Placeholder budget while awaiting Master Plan completion and further study.
Project Rationale	Design Process for new Wastewater Treatment Plant, Pump Station and Outfall. Placeholder budget while awaiting Master Plan completion and further study.				

Service:	**3.850**	**Port Renfrew Sewer**

Project Number	24-01	**Capital Project Title**	Sewer Master Plan Study	**Capital Project Description**	Master Planning study for the Port Renfrew service area - existing, future and inclusion of Pacheedaht First Nation to be delivered in parallel with Water Master Plan Study. (25% CWF, 75% GCF)
Project Rationale					

3.850 - Port Renfrew Sewer

Capital Projects

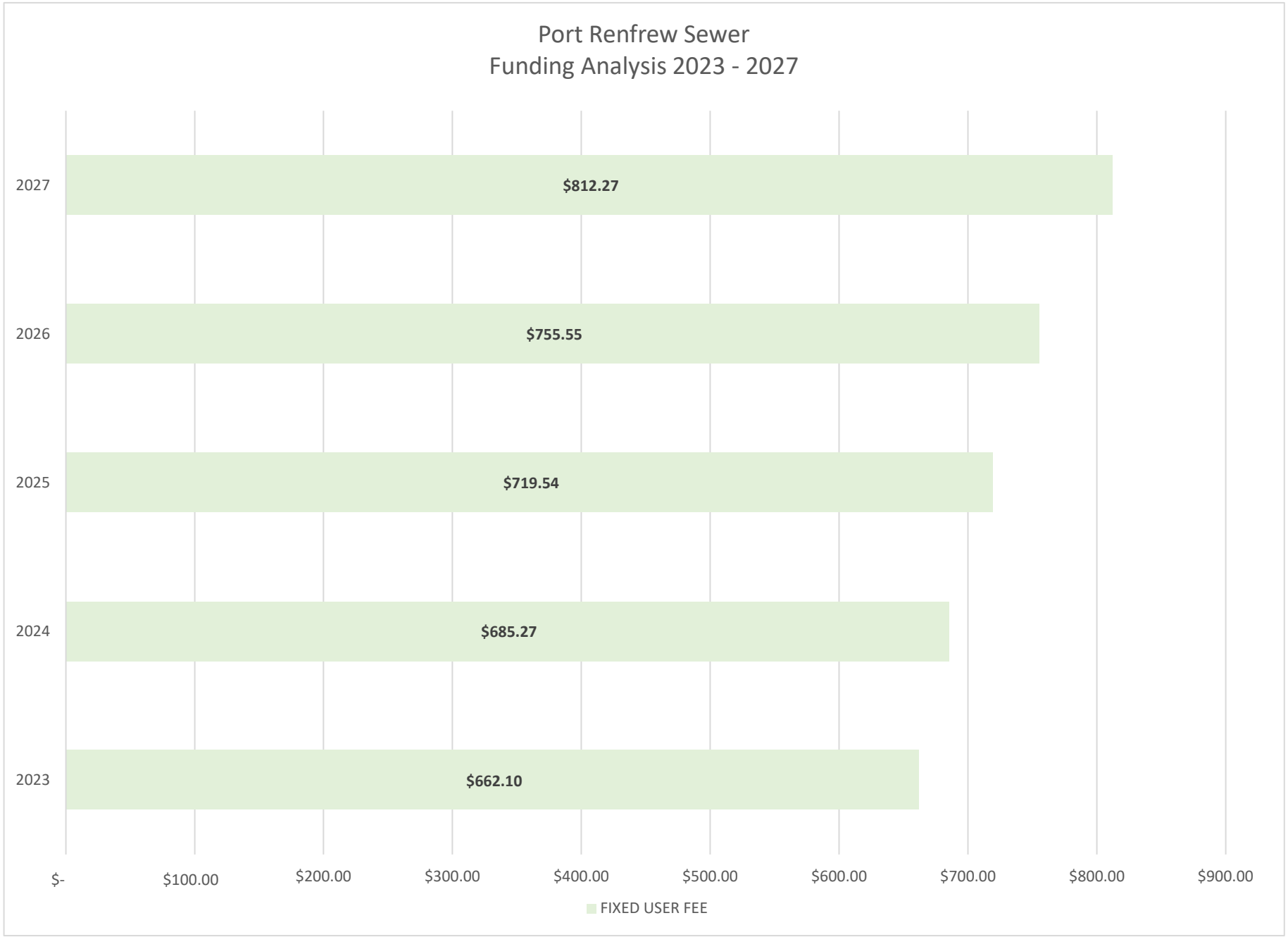
Updated @ Oct 15, 2026

Year	Project#	Capital Plan#	Status	Capital Project Description	Total Project Budget	Spending		Total Funding in Place
						Expenditure Actuals	Remaining Spending	
2024	CE.869.4501	24-01	Open	Water Plan Master Study	175,000	130,305	44,695	175,000
				Totals	**175,000**	**130,305**	**44,695**	**175,000**

Service: **3.850** **Port Renfrew Sewer** **Committee: Electoral Area**

Year	Taxable Folios	Parcel Tax per Folio	SFE's	User Charge per SFE	Total Tax & Charges	Bylaw	Actual Assessments $(000's)
2023	88	$774.42	97.77	$662.10	**$1,436.52**	4524	$48,391.50
2024	88	$801.56	97.77	$685.27	**$1,486.83**	4587	$51,718.30
2025	88	$841.63	97.77	$719.54	**$1,561.17**	4649	$51,363.90
2026	88	$883.74	97.77	$755.55	**$1,639.29**	4736	$49,295.60
2027	88	$950.06	97.77	$812.27	**$1,762.33**		
Change from 2026 to 2027		*$66.32*		*$56.72*	*$123.04*		
		7.50%		*7.51%*	*7.51%*		

APPENDIX D


Port Renfrew Sewer
Funding Analysis 2023 - 2027
2027
$812.27
2026
$755.55
2025
$719.54
2024
$685.27
2023
$662.10
$-
$100.00
$200.00
$300.00
$400.00
$500.00
$600.00
$700.00
$800.00
$900.00
FIXED USER FEE

Making a difference...together

REPORT TO PORT RENFREW UTILITY SERVICES COMMITTEE
MEETING OF TUESDAY, NOVEMBER 10, 2026

SUBJECT **Port Renfrew Transfer Station — Feasibility Study Results**

ISSUE SUMMARY

To present the findings of the Port Renfrew Transfer Station (the "Depot") Feasibility Study and recommend review of the service's funding framework.

BACKGROUND

The Port Renfrew transfer station, established as a service under Capital Regional District (CRD) Bylaw No. 1745, provides a drop-off facility for waste generated by Port Renfrew and Pacheedaht First Nation (PFN) community members.

In 2023, the CRD received a grant from the Growing Communities Fund to support capital improvements to the depot and a feasibility study. Site improvements included the installation of a garbage compactor and operator shed, electrical and gate upgrades, and covered storage for recyclable materials.

Following these improvements, staff retained Steller's Jay Engineering to assess the depot's use by sector, waste stream composition, diversion opportunities, funding options, and potential future service needs and deliverables that are aligned with waste reduction objectives in the CRD's Solid Waste Management Plan (SWMP).

The Port Renfrew transfer station service is primarily funded through four revenue sources:

- **Utility requisition** from residential and commercial property owners within Port Renfrew's local service area (currently 42.5% of the 2027 service revenue)
- **Fee-for-service payments** from PFN that fund their residential and commercial use of the depot (currently 42.5% of the 2027 service revenue)
- **Annual allocations** from the CRD's solid waste service that mirror the approximately $105/household funding contribution provided to recycling depots in each of the region's electoral areas (currently 13.2% of the 2027 service revenue)
- The **sale of recyclable materials** (currently 1.8% of the 2027 service revenue)

The current revenue model was intended to approximate a user-pay model but was not previously analyzed in relation to the depot's use by sector. In its current application, this framework does not incentivize the reduction of garbage, motivate the use of available on-site recycling programs or prevent users from outside the service area to transfer their waste at the depot.

The Feasibility Study included two four-day sampling periods in May and July 2026 to capture low and high-season conditions. Findings suggested that the current operating model generally provides an adequate level of service and that the site attendant plays an important role in directing users, supporting proper material separation and resolving emerging concerns. The garbage compactor, commissioned in 2026, has increased load density and reduced material transportation costs.

Service Use

- Total trips for all depot users increased by 51% between the low and high-season sampling periods, driven largely by residential and short-term accommodation use.
- Port Renfrew commercial users generated 32% of the waste across both sampling periods.
- Three commercial users accounted for 85% of waste from commercial sources and 28% of all waste sampled.
- Short-term vacation rental users generated 10% of the waste across both sampling periods.
- Sampled garbage from both residential and commercial PFN sources comprised 26% of the waste in both sampling periods.

Contaminated Waste Streams

- Organic material represented 43.5% of the total garbage sampled and was the largest category of divertible material for all user groups.
- There is currently no on-site disposal option for separated organic waste.
- The study estimated that up to 66 tonnes of food waste could be diverted annually.
- Recyclable materials represented 29.3% of the garbage sampled—including mixed containers (5.8%), glass (1.6%), cardboard (4.6%) and paper (1.0%)—despite the availability of segregated recycling programs at the depot.
- Commercial users had comparatively high quantities of cardboard in their garbage.

Site Flow and Operations

- The existing transfer station can accommodate projected garbage quantities over the 20-year planning horizon.
- Site constraints may create queuing and parking challenges during peak periods and limit the addition of collection receptacles for emerging recyclable materials.
- Illegal after-hours dumping and poor sightlines between the attendant shed and the main drop-off area are ongoing operational challenges.

ALTERNATIVES

Alternative 1

That the Port Renfrew Utility Services Committee direct staff to:

1. Review cost recovery mechanisms for the 2027 budget year;
2. Evaluate and report back to the Committee on user-pay options that better align the demand for service with Port Renfrew's waste generator categories for the 2028 budget year; and
3. Investigate and report back to the Committee on source separation options, including:
    a) clear garbage bag requirement;
    b) updated signage and material-separation guidance;
    c) targeted education for user groups with high quantities of divertible material;
    d) home-based organics processing; and
    e) enhanced monitoring and enforcement of disposal restrictions.

Alternative 2

That this report be referred back to staff for additional information.

IMPLICATIONS

Financial Implications

As some commercial generators' use of the transfer station has increased in recent years, PFN's share of the total waste transferred at the Port Renfrew depot has decreased. In response to these shifts, staff recommend evaluation of cost recovery models for 2027 that better align the demand for the service and that consider commercial and external waste generators. Staff would also report back on long-term user-pay options for Port Renfrew's residential and commercial generators for the 2028 budget year.

Service Delivery Implications

To help meet the CRD's SWMP objectives, staff will develop potential on-site collection options for organics that consider available site space, hauling frequency, contamination controls, the minimization of wildlife attractants, and operational costs.

Other source separation measures that could be explored in 2027 include a clear garbage bag requirement; updated signage and material-separation guidance; targeted education for user groups with high quantities of divertible material; home-based organics processing options; and enhanced monitoring and enforcement of disposal restrictions.

Low-cost operational improvements will continue through annual capital planning activities, with an emphasis on site safety. Such improvements may include designated unloading areas, traffic flow controls, updated signage, and improved site security.

First Nations Implications

Future changes affecting funding or waste-management requirements will be developed in collaboration with PFN.

Environmental Implications

The CRD's SWMP aims to reduce how much material is sent to Hartland Landfill and guide how the region's solid waste is managed. A future user-pay model that incentivizes waste diversion would align with the SWMP objectives.

CONCLUSION

The Port Renfrew Transfer Station Feasibility Study found that the existing facility can accommodate the community's projected growth, but that the current funding framework does not align with each generator's actual service use. A future user-pay model would improve cost recovery from residential and commercial service users. The study also found that organics and other recyclable materials comprise a large proportion of the depot's general refuse stream, creating an opportunity for staff to redevelop on-site organics collection and other source-separation measures.

RECOMMENDATION

That the Port Renfrew Utility Services Committee direct staff to:
1. Review cost recovery mechanisms for the 2027 budget year;
2. Evaluate and report back to the Committee on user-pay options that better align the demand for service with Port Renfrew's waste generator categories for the 2028 budget year; and
3. Investigate and report back to the Committee on source separation options, including:
    a) clear garbage bag requirement;
    b) updated signage and material-separation guidance;
    c) targeted education for user groups with high quantities of divertible material;
    d) home-based organics processing; and
    e) enhanced monitoring and enforcement of disposal restrictions.

Submitted by:	Iain Lawrence, MCIP, RPP, Senior Manager, Juan de Fuca Administration, Electoral Area Services
Concurrence:	Rory Tooke, Ph.D., Acting General Manager, Parks, Recreation & Environmental Services
Concurrence:	Stephen Henderson, MBA, P.G.Dip.Eng, BSc, General Manager, Electoral Area Services

ATTACHMENT(S)

Appendix A: SJE Port Renfrew Transfer Station Feasibility Study Results
Presentation: Port Renfrew Garbage & Recycling Depot Feasibility Study Results

STELLERS JAY ENGINEERING

REPORT

Port Renfrew Transfer Station Feasibility Study



Prepared for:
Capital Regional District
Prepared by:
Stellers Jay Engineering

Date:
October 6, 2026
Project Number:
2026015

Stellers Jay Engineering humbly acknowledges that the land on which the Port Renfrew Transfer Station is located on is within the traditional territory of the Paa?čiid?atx̣ Nation, whose connection to the land spans countless generations.

Executive Summary

Stellers Jay Engineering (SJE) was retained by the Capital Regional District (CRD) to complete a feasibility study of the Port Renfrew Transfer Station located at 17055 Parkinson Road, Port Renfrew, BC. The objective of the feasibility study was to assess how the Port Renfrew Transfer Station can continue to meet current and future service needs.

Waste composition studies were completed in the low season and high season to assess the waste composition, facility usage, and waste contribution from seven user groups: Port Renfrew (residential and commercial), Pacheedaht First Nation (residential and commercial), short-term accommodations, and outside users (residential and commercial). A summary of the garbage stream composition for all user groups during the low and high seasons is shown in **Figures 1 and 2** below. The annual waste composition (combined low and high seasons) for the seven user groups is presented in **Table 1** below.

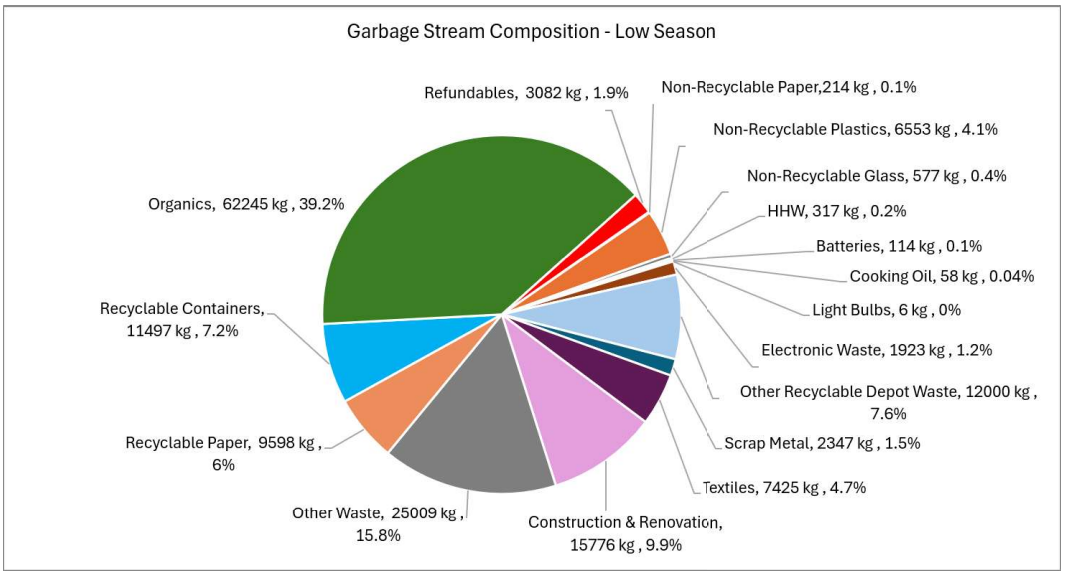


Figure 1: Low Season Garbage Composition - All User Groups

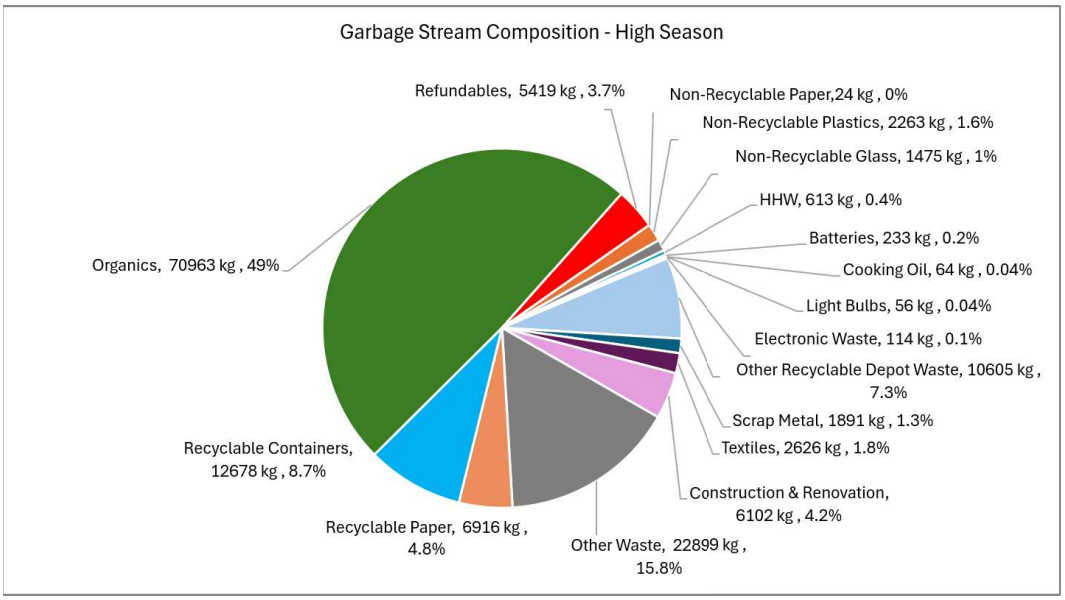


Figure 2: High Season Garbage Composition - All User Groups

Table 1: Annual Waste Composition by Major Material Categories - All User Groups

		Port Renfrew			Pacheedaht First Nation		Outside	
All Sources	Overall	Short-Term Rental	Commercial	Residential	Commercial	Residential	Commercial	Residential
Total Recyclable (Curbside)	13.4%	10.0%	18.6%	9.7%	13.0%	12.7%	12.8%	8.4%
Total Organic Materials	43.5%	52.7%	38.8%	41.3%	50.1%	47.7%	13.2%	45.9%
Total Recyclable (Depot)	16.4%	11.8%	18.6%	13.1%	14.7%	14.5%	56.5%	33.2%
Total Residual Waste	26.6%	25.5%	24.0%	35.9%	22.2%	25.1%	17.5%	12.5%
Total Waste	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Organic material was the largest fraction of divertible material in the garbage and accounted for 39.2% of the garbage stream in the low season and 49.0% of the garbage stream in the high season. The total fraction of divertible material (organics and recyclables) in the low and high season garbage streams was 69.6% and 77.4% respectively. Waste composition varied between each user group between seasons however the following observations were consistent among all user groups:

- Organic material was the largest fraction of the garbage stream for all user groups (43.5% on an annual basis). The fraction of organics increased for all user groups in the high season, with the exception of outside users (commercial and residential).
- Following organics, recyclables were the next largest categories with diversion potential in the garbage stream including cardboard/boxboard, flexible plastics, and textiles. The overall fraction of recyclables in the garbage remained fairly consistent between the low and high seasons.

Waste contribution was estimated based on recorded trip counts and bag weights for each user group. A summary of the estimated waste contribution from each user group is summarized in the tables below.

Table 2: Estimated Waste Contribution - Low and High Seasons

User Group	% Contribution Low Season May 8 11, 2026	% Contribution High Season July 10 13, 2026	Average Contribution
Short-term accommodations	7%	13%	10%
Port Renfrew - Commercial	31%	33%	32%
Port Renfrew - Residential	24%	30%	27%
Pacheedaht FN - Commercial	23%	13%	18%
Pacheedaht FN - Residential	9%	6%	8%
Outside - Commercial	1%	1%	1%
Outside - Residential	3%	4%	3%

Table 3: Estimated Waste Contribution - Low and High Seasons - Combined

User Group	% Contribution Low Season May 8 11, 2026	% Contribution Low Season July 10 13, 2026	Average Contribution
Short-term accommodations	7.3%	12.8%	10.0%
Port Renfrew Commercial + Residential	55.4%	63.0%	59.2%
Pacheedaht First Nation Commercial + Residential	32.8%	19.4%	26.1%
Outside Users Commercial + Residential	4.5%	4.8%	4.6%

The largest contribution is from businesses operating within Port Renfrew, followed by Port Renfrew residents. The next largest contributor was Pacheedaht First Nation commercial, with the majority of the commercial waste originating from the Pacheedaht Campground. There was a significant variation in the estimated contribution from Pacheedaht First Nation commercial between the low and high season, whereas the residential contribution from Pacheedaht First Nation did not change significantly between seasons. Short-term accommodations within Port Renfrew accounted for approximately 10% of the waste contribution, with waste contribution seeing a 75% relative increase (from 7.3% to 12.8%) between the low and high seasons. Outside user contribution (residential and commercial) remained fairly constant between both seasons at around 5% of the total waste received at the transfer station.

Combining the estimated percent contribution and waste composition results from the seven user groups, the annual contribution for each primary material category from each user group was estimated using the most recent year of data (2025). A waste profile showing the estimated annual tonnage contribution from each user group is summarized in the table and figure below.

Table 4: Annual and Seasonal Tonnage by Each User Group

User Group	% Contribution	Annual Tonnage Yr 2025 (kg)	% of Total Tonnage Low Season	Total Tonnage (kg) Low Season	Percent of Total Tonnage High Season	Total Tonnage (kg) High Season
Short-term Accommodations	9.9%	30070	7.3%	11559	12.8%	18511
Port Renfrew - Commercial	32.1%	97631	31.2%	49593	33.1%	48038
Port Renfrew - Residential	26.9%	81662	24.2%	38353	29.9%	43309
Pacheedaht FN - Commercial	18.6%	56364	23.4%	37181	13.2%	19182
Pacheedaht FN - Residential	7.8%	23832	9.4%	14862	6.2%	8970
Outside - Commercial	1.3%	3845	1.4%	2291	1.1%	1554
Outside - Residential	3.4%	10276	3.1%	4901	3.7%	5375
Total	**100%**	**303680**	**100.0%**	**158740**	**100.0%**	**144940**

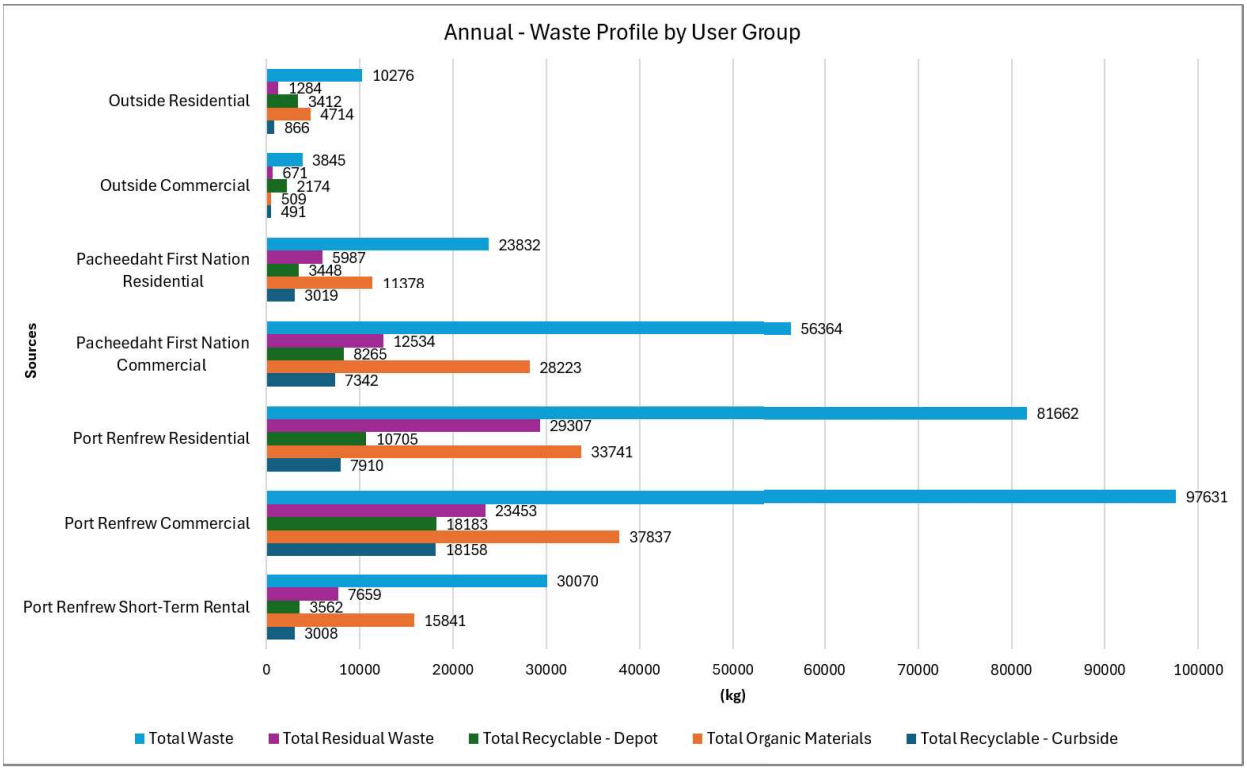


Figure 3: Annual Waste Profile by User Group – Estimated Contribution

Annually, Port Renfrew Commercial is the largest waste contributor, followed by Port Renfrew Residential and Pacheedaht First Nation Commercial. These three user groups also contribute the highest quantities of divertible material (organics and recyclables). Based on absolute contribution over the year (combined low and high season), Port Renfrew Commercial generated the largest amount of landfilled organic material (37,837 kg), followed by Port Renfrew Residential (33,741 kg) and Pacheedaht First Nation Commercial (28,223 kg). Annually, Recyclable-Curbside material represented 13.4% of the overall garbage disposed. Port Renfrew Commercial has the largest contribution of recyclable materials (18,158 kg), followed by Port Renfrew Residential (7,910 kg) and Pacheedaht First Nation Commercial (7,342 kg).

Considering organics represent the largest opportunity to increase waste diversion and reduce waste sent to landfill, a high-level assessment was completed to assess the costs of collecting food waste at the PRTS. In addition to financial considerations, diverting organics within the community has other environmental benefits including reduced landfill airspace consumption and landfill gas generation. It would also support the CRD Solid Waste Management Plan goals to reduce per capita disposal and to extend the life of the Hartland Landfill to 2100 by minimizing disposal and maximizing waste diversion.

The focus of the assessment was on food waste collection since it represented over 95% of the organics found in the garbage stream through the two waste composition studies. A summary of this high-level financial assessment is provided in **Tables 5 and 6** below.

Table 5: High-Level Financial Assessment of Organics Collection – Status Quo Costs

Status Quo – Organics in Garbage Stream	Cost
Hauling costs (as garbage)	$7,600

Tipping fees (as garbage)	$10,600
Subtotal – status quo costs	$18,200
Banned material surcharge (assume 100% surcharge)	$10,600
Value of airspace consumed (based on refuse tipping fee)	$10,600
Total – status quo costs + surcharge + airspace	**$39,400**

Table 6: High-Level Financial Assessment of Organics Collection – Additional Organics Hauling and Processing

Organics Collection	Cost – Low Range	Cost – High Range
Hauling costs (as organics)	$11,300	$33,300
Tipping fees (organics)	$6,600	$6,600
Total – hauling + processing	$17,900	$40,000

The simplified financial analysis demonstrates that if only the reduction in garbage hauling costs and tipping fees are considered compared to the additional costs to collect, haul and process the diverted organics, the overall facility operating costs may increase. However, if considering banned material surcharges (due to landfilled organics) and assigning a value to the airspace consumed, there may be a net reduction in overall costs. There are several key variables that affect the costs of organics collection that are currently unknown at this time, including the collection container size, the hauling frequency and rate, the processing facility and associated organics tipping fee. The implementation of organics collection at the transfer station will need to be supported with targeted education and outreach to specific user groups where high fractions of divertible material were found in the garbage stream.

Considering the hauling cost is expected to be the most significant cost to manage this material stream, options to divert and process organics within the community should be explored, including a cost-benefit analysis of processing organics locally compared to hauling organics out of the community. Due to the low economies of scale, the installed cost for a small-scale organics processing unit (including planning, design, and site preparation) can be expected to be in the $CAD 4,000-7,000/tonne organics range. We recommend preliminary quotations and more detailed cost estimates be obtained as part of a more detailed feasibility assessment.

An operational assessment was completed to assess existing site conditions, infrastructure, and operations. From an operational perspective, the Port Renfrew Transfer Station is well run, which we attributed to a diligent and experienced site attendant maintaining good relations with the transfer station users. These relations were noted to be valuable in supporting the day-to-day operations and helpful when resolving user concerns and/or conflicts. One of the primary challenges is that the Port Renfrew Transfer Station is operating on a small, constrained site with limited space. The constrained site is a contributing factor to several of the operational challenges observed during our site visit, including traffic congestion and queuing onto Parkinson Road, limited space for bin placement and user circulation, materials stored on unpaved and uneven ground in the northeast area with limited containment and cover, and limited sightlines and access between the site attendant hut and the main drop-off loop.

A core objective of this study was to assess if the Port Renfrew Transfer Station has the capacity to meet current and future demands, considering current and projected growth in waste and facility usage. Based on the demand forecast, the facility has the capacity to manage the forecasted quantities of garbage over the short (< 5 years), medium term (5-10 years), and long term (10-20 years). The estimated facility usage (user trips) is also expected to be manageable over the short and medium term. In the long term, one of the main capacity constraints with the current site is the anticipated peak traffic volumes and limited queuing and parking spots on site. Furthermore, while garbage tonnages are expected to be manageable with the new compactor bin over the 20-year planning horizon, there may be inadequate space to accept additional recyclable material categories in the future. Because the PRTS has limited space, it will be important that the available footprint be utilized as efficiently as possible and that the site attendant continue to provide guidance to facility users to ensure efficient traffic flow and proper waste placement at the site.

Options were developed to address current operational challenges and future growth constraints. Options were categorized into three tiers: Tier 1 (minor operational modifications), Tier 2 (minor capital improvements), and Tier 3 (major site redesign) and assessed following an evaluation framework using nine evaluation criteria. The evaluation criteria included an assessment of the impacts to site users and operations, capital and operating costs, implementation timeline, and potential waste diversion outcomes.

The options developed to address the operational challenges and growth constraints are summarized in **Table 7** below.

Table 7: Summary of Tier 1, 2, 3 Improvement Options

Tier 1	• Establish designated areas for waste unloading (parking areas) outside of main driving loop • Add material category signs with larger font and material graphics in front of recyclable material dropoff areas • Provide feedback to hauling contractor to minimize gap between metals bin and wall • Implement additional illegal dumping deterrents at site entrance such as cameras or additional signage • Implement bin hauling procedure requiring driver to place 4 ft high delineator post adjacent to gate post before bins are loaded • Implement routine litter cleanup program, including area under metals bin
Tier 2	• Add lockable gates at both site entrances and establish fencing along property line to improve site security • Install electric bear fencing on perimeter fencing • Redesign central compactor bin gate to prevent damage to hinges. • Relocate attendant shed to lower area in current location of Sea Can (adjacent to metal bin) • Install baler for cardboard • Establish separate bins for residential and commercial cardboard • Add permanent guardrail at metals bin • Modify compactor bin gate hinges to reduce exposed section, or relocate gates to reduce likelihood of bin contact

Tier 3	• To accommodate additional recyclables, expand footprint of upper recycling area by clearing vegetation and creating level gravel area to establish cleared buffer between materials and forested area. Consider adding 1-2 covered canopies or Sea Can containers. • Redesign site to create separate garbage and recycling areas, increasing storage space and queuing distance on site • Assess organics diversion options (e.g., collect organics on site, review alternate organics collection locations, encourage backyard composting, etc.) and explore local processing options

Key features of the proposed Tier 3 site expansion include separate traffic loops for garbage and recycling drop-off, an increased site footprint to accommodate additional recyclable materials, a relocated attendant shed to improve sight lines and supervision, and additional parking and queuing space on site.

A high-level financial review of the facility operating costs and revenues was completed. The primary focus of the analysis was a review of the primary operating costs (staff salaries and hauling costs) to assess where potential improvements to operations could result in cost efficiency. Maximizing load weights and reducing the number of haul trips was identified as a significant opportunity to reduce facility operating costs.

The cost per tonne to haul garbage, cardboard and metals from 2023 to 2025 is presented in **Figure 4** below.

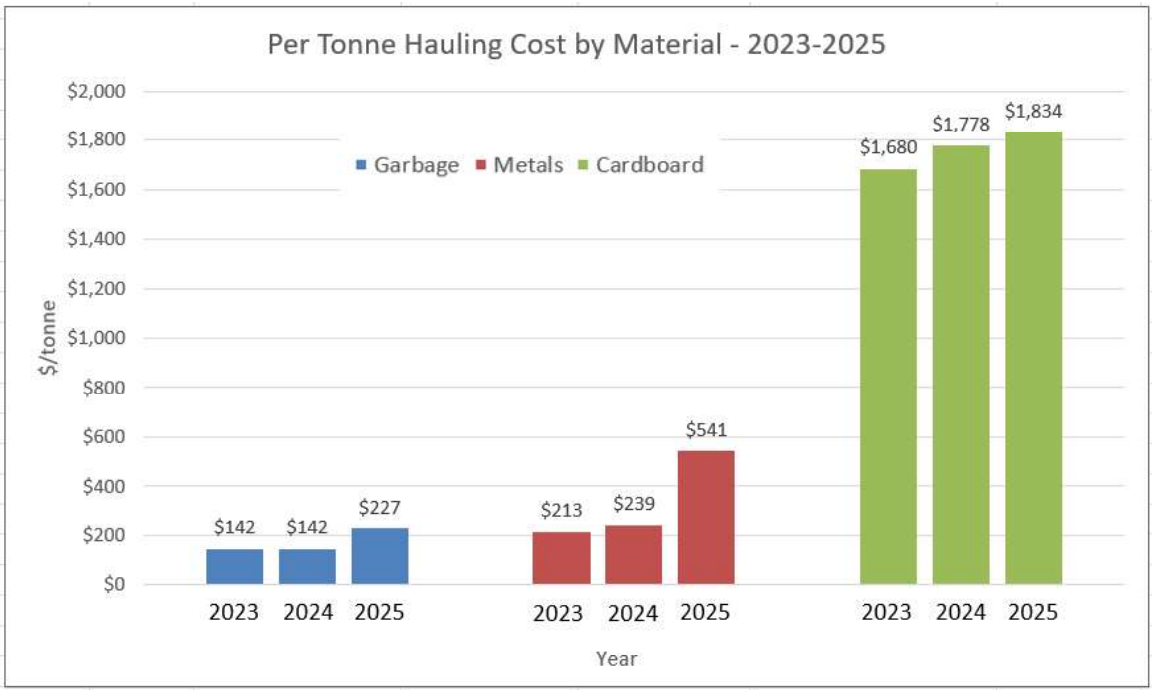


Figure 4: Hauling Cost per Tonne for Garbage, Cardboard, Metals – 2023 to 2025

To reduce the cardboard hauling costs, we recommend the CRD prioritize the installation of a baler for cardboard. Cardboard hauling costs have historically been one of the most significant costs associated with the operation of the transfer station and increasing the density of cardboard would result in significant cost savings due to reduced haul trips. To inform future program changes, we recommend the CRD start tracking commercial and residential cardboard separately. Options to collect and fund commercial cardboard separately should be considered. We recommend that the CRD continue to use the garbage compactor bin and work with the site attendant to maximize the load weight of each bin. Options to increase the metal bin size and load weights

should be explored, however this should be considered a lower priority compared to maximizing the garbage and cardboard load weights.

The Port Renfrew Transfer Station is currently funded through tax requisition and an annual contribution from Pacheedaht First Nation. Annual operating costs have been increasing by an average 23% per year since 2023 which has been primarily driven by increasing hauling rates combined with an increase in waste received at the facility. Meanwhile, the population of Port Renfrew and Pacheedaht First Nation has remained relatively stable. In 2025, the annual facility operating costs were approximately $211,934 or just under $700 per tonne of garbage received at the facility.

Under the current funding model, users do not pay a fee proportional to the amount of waste they dispose at the facility. For Port Renfrew residential and commercial users, the fees paid are proportional to the assessed property value which does not reflect the waste contribution to the facility. Furthermore, the current funding model does not incentivize waste reduction and diversion – users pay the same amount regardless of how much they dispose at the facility. This funding model has resulted in the largest commercial users of the facility underpaying for their use of the facility. Through the waste composition studies and contribution estimates, we estimate that the largest three Port Renfrew commercial users contribute approximately 28% of the total garbage received at the facility.

Three alternative user-pay funding models are proposed to create more sustainable and equitable funding streams that better reflect each user's waste contribution to the facility and that provide a financial incentive to reduce and divert waste. The three funding models are as follows:

1. Option 1 – user-pay system for large commercial users:
    a. Focus on largest commercial users contributing the most waste by introducing commercial accounts billed monthly based on volume dropped off at the facility. No additional fees for residential users. Introduce volume-based fees for outside users.
2. Options 2a and 2b - user-pay system for all users:
    a. Commercial accounts for commercial users and introduce a pre-paid punch card or electronic card system for residential users. Introduce volume-based fees for outside users.
3. Option 3 - closure of the facility to commercial users, user-pay for residential users:
    a. Closure of the facility to commercial users, except those covered through the Pacheedaht First Nation service agreement.
    b. Introduce a pre-paid punch card or electronic card system for residential users.

Under these alternative funding models, tax requisition would continue to fund a portion of the facility operating costs (tax requisition on users allowed access to the facility) while the revenue recovered through user fees would cover any revenue shortfalls and would provide a more sustainable funding model that scales as waste volumes grow and that introduces an incentive for waste reduction and diversion. The introduction of user fees could support the implementation of food waste collection at the PRTS where differential fees could encourage organics diversion (lower fees for food waste dropoff compared to garbage).

REVISION LOG

Revision Number	Document Release Date	Issued By	Reviewed By	Document / Revision Description
0.0	August 13, 2026	CJ	HC	Draft 1 report issued for review
1.0	September 23, 2026	CJ	HC	Draft 2 report issued for review
2.0	October 6, 2026	CJ	HC	Final report issued

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Appendices

Appendix A: Operational Assessment Memo

Appendix B: Waste Composition Study Report

Appendix C: User Intake Questionnaire and Log Form

Appendix D: Waste Contribution Analysis – Low and High Season Memos

Appendix E: Site Expansion Conceptual Sketch (Tier 3 Option)

1. Introduction

Stellers Jay Engineering (SJE) was retained by the Capital Regional District (CRD) to complete a feasibility study of the Port Renfrew Transfer Station located at 17055 Parkinson Road, Port Renfrew, BC. The overall objective of the feasibility study was to assess how the existing Port Renfrew Transfer Station can continue to meet current and future service needs.

The study included an operational assessment (existing conditions assessment) completed in May 2026, and waste composition studies completed in May and July 2026. The primary goals of the study were to:

1. Assess facility usage and waste contribution from the various user groups;
2. Review operations and assess short- and long-term infrastructure needs;
3. Identify and evaluate potential facility upgrades and operational improvements.

The results of the operational assessment and waste composition studies are reported separately. The reports are included in **Appendix A and B.**

This Feasibility Study Report provides a summary of analysis completed for this project including the following key elements:

1. Existing conditions assessment;
2. User group contribution analysis and waste composition results;
3. Demand forecast and service model over a 20-year planning horizon;
4. Development and evaluation of site improvement concept options; and
5. High-level financial analysis

2. Background and Context

2.1 Community and Setting

Port Renfrew is an unincorporated rural community located approximately 100 km west of Victoria along Highway 14, on the southern tip of Vancouver Island within the Juan de Fuca Electoral Area of the CRD. The community occupies lands at the confluence of the San Juan River and Port San Juan Harbour. The Port Renfrew transfer station is located within the traditional territory of the Pacheedaht First Nation, who have occupied their territory since time immemorial.

Today, Port Renfrew is a small but thriving coastal community of about 262 residents (2021 Census). Visitors come for sport fishing, kayaking, surfing, hiking trails like the Juan de Fuca and West Coast Trail, and exploring old-growth forests. The local economy now relies heavily on adventure tourism, vacation rentals, eco-lodges, small businesses, and two annual music festivals.

Seasonal tourism creates a spike in waste generation and facility use from approximately May through September, with summer weekends representing peak demand on all community infrastructure. The completion of the Pacific Marine Circle Loop (road upgrades from Cowichan to Port Renfrew), combined with cell service installation along the Sooke–Port Renfrew corridor in 2023, has significantly increased visitor access and is expected to sustain or accelerate tourism growth (and related waste generation within the area).

2.2 Facility Overview, Operational History, Policy Context

The Port Renfrew Transfer Station (also referred to as the Port Renfrew Garbage and Recycling Depot) is owned and operated by the CRD under the Port Renfrew Refuse Disposal Local Service. The facility is located at 17055 Parkinson Road in Port Renfrew and was established in the mid to late 2000s.

The facility accepts garbage and recyclables from the local service area and from visitors. All garbage and recyclables are transferred to the Victoria area for further processing or disposal. Garbage is disposed at the Hartland Landfill. The PRTS is currently the only recycling and disposal facility in the area.

Historically, a single long-term caretaker operated the depot. In fall 2024, the facility transitioned to a staffed operator model with seasonally adjusted hours of operation. Recent service enhancement and upgrades at the facility (completed in 2024 and 2025) included a new compactor bin and electrical upgrades, an electric gate winch, a new operator shed, and repairs to the entrance gate and culvert. The site has also added several material-specific storage and handling upgrades, largely tied to third-party recycling and stewardship contracts.

The facility is funded through Port Renfrew property taxes and through a cost-sharing agreement with Pacheedaht First Nation.

In 2024, the CRD and Pacheedaht First Nation signed a Memorandum of Understanding (MOU) which identified solid waste management as a priority area. The CRD and Pacheedaht First Nation are jointly updating the Port Renfrew Official Community Plan (OCP), which is currently in draft. Objectives and policies identified in the draft OCP that are relevant to the PRTS include the following:

1. *Improve waste management and recycling capacity to meet environmental standards and reduce local impacts.*

2. *Improve local waste management and recycling systems to reduce environmental impacts and support circular economy practices.*

3. Data Quality and Limitations

The calculations and estimates presented in this report assume that the bags selected during the four-day sampling periods during the low season (May 8-11, 2026) and high season (July 10-13, 2026) are representative of the composition of waste generated by each user group over the course of the year. The estimates are derived only from the composition results of the two audits and should be considered snapshots in time. They may not fully reflect seasonal or other fluctuations in waste composition over the course of the year.

During the low season audit, Port Renfrew short-term rental waste was included with Port Renfrew residential waste; however, these sources were sorted separately during the high season audit. Similarly, during the low season audit, Pacheedaht First Nation residential and commercial waste were combined, while these sources were sorted separately during the high season audit. A combined waste composition was initially assumed to be sufficient for these user groups however in order to collect more granular data and better understand the waste composition specific to each user group, separate sub-samples and waste composition data was collected separately during the high season study. The low season waste composition results for the combined user groups (for example, Pacheedaht First Nation residential and commercial) should be considered an average composition from both user groups and cannot be compared directly to the high season waste composition results where these user groups were audited separately.

Other key differences in methodology between the low season and high season study were:

- During the low season study, short-term rental trips were initially counted with Port Renfrew residential trips (for days 1-3), however on day 4 short-term rental trips were recorded separately. The short-term rental trips over days 1-3 were retrospectively estimated (a portion of Port Renfrew trips reclassified) through discussions with the site attendant. Therefore, the short-term rental and Port Renfrew trips recorded during the low season should be considered estimates only. During the high season, all short-term rental trips were counted separately.
- During the low season study, bag weights were only collected for approximately 20% of trips whereas during the high season bag weights were collected for approximately 94% of trips. For the waste contribution estimates, the average bag weights collected during the high season were used to estimate the contribution in both seasons since the data set was considered more complete. However, similar to the waste composition results, the bag weights should be considered snapshots in time and may not reflect seasonal fluctuations in the bag weights over the year. This assumption is considered reasonable for the purpose of this study.

Data that was measured directly in the field is shown on the user intake forms (waste origin) and collection logs and includes the number of bags, bag weights, and trip classification (waste source and sector). Results that were estimated includes the waste contribution estimates (over the audit period and over the year) and all waste, trip and hauling projections.

Confidence in the source-contribution estimates varies by user group, primarily as a function of sample size. Port Renfrew Commercial and Port Renfrew Residential were the most consistently and frequently observed user groups across both low and high season studies, and the resulting contribution estimates for these groups are considered to carry moderate-to-good confidence. Pacheedaht First Nation Commercial and Residential trips were less frequent (between 7-12 trips per user group per study period), and Outside Commercial and Outside Residential trips were infrequent in both audits (between 2–6 trips per user group per study period). For these user groups with relatively low trip counts, a single unusually large or small load (or missed loads) can shift the estimated contribution percentage materially, and the resulting estimates should be treated with lower confidence.

4. Existing Conditions Assessment

An existing conditions assessment, also referred to as an operational assessment, was completed as part of the May 2026 site visit. Preliminary recommendations were included in the operational assessment to address shorter term site improvements. The results of the operational assessment are included in the memo provided in **Appendix A**.

The following was reviewed during the operational assessment:

- recent facility upgrades, including new compactor bin, fencing, and canopies;
- user access and traffic patterns, vehicle queuing, unloading behaviour, commercial hauler activity, waste and recyclable materials accepted, and operational challenges;
- condition and effectiveness of existing infrastructure, including bins, fences, pavement, canopies and other structures, signage, concrete retaining walls;
- environmental features, including site drainage, vegetation, environmental controls (berms, curbs, procedures for spill containment, ditches, etc.), containment structures and storage practices for higher risk material (used oils, household hazardous waste, etc.); and
- Health and safety infrastructure and practices.

A key focus of the operational assessment was to meet with the site attendant to discuss day-to-day operational challenges, opportunities for improvement, and to better understand what is currently working well at the site.

The observations and feedback obtained during the site visit formed the basis for the recommendations provided in this report. A summary of the operational challenges and opportunities for improvement are summarized below:

- The site has minimal queuing distance which results in vehicles backing up onto Parkinson Road if users block the main driving route.
- Facility users expressed confusion about where material should be placed which required additional guidance from the site attendant.
- Significant fall hazard observed at the metals bin, most significant when the bin is not placed directly against the wall (on its rails) creating a 40 cm gap between the bin and wall.
- Users bypass the main entrance gate by entering the site and disposing of waste using the second gravel entrance without a gate to the east on TELUS property.
- Users access the site after hours by entering unlocked main gate.
- Illegal dumping occurs after hours in front of the main entrance gate.
- Rolloff trucks damage the compactor gate hinges due to exposed hinges.
- The site attendant office is located far from the main drop-off area which results in obstructed site lines and minimal staff oversight/supervision during busy periods.
- Recyclable materials are stored on unpaved and uneven ground in the eastern area with limited containment and cover, and with limited buffer from the forested area.
- The site attendant struggles with moving material around site (loose, in containers/totes, in mega bags, and on pallets). They currently have a pallet jack which doesn’t work well on the unlevel gravel ground

surface. The site attendant expressed interest in using a small skid steer to help move materials around site.

4.1 Recent Site Upgrades and Operating Model Changes

Several upgrades were completed at the PRTS in recent years (from 2024 to 2026), funded in part through the Growing Communities Fund. These upgrades, including our high-level assessment, are summarized in the table below.

Table 8: Summary of Recent Infrastructure Upgrades at the PRTS

Upgrade	Description	Assessment
Compactor bins & electrical upgrade	The existing bin (50 cu. yd. roll-off bin) used for garbage was replaced with a compactor bin to reduce the hauling frequency of garbage. The project included associated electrical and structural upgrades. The compactor bin is used in one of two bays (other bay used for cardboard). The compactor was commissioned and became operational in May 2026.	The compactor had been operating for approximately two months at the time of the high season site visit. The site attendant reported that the new compactor bin is working well and has resulted in garbage being more contained (compared to previous open topped 50 cubic yard bin). The site attendant reported a few overweight bins (above legal road limit) were picked up however using the three-quarter full indicator on the bin has allowed the attendant to optimize bin weights. The new compactor bin appears to be helping with operational efficiency as it reduces the number of bin pickups required, provides a more ergonomic dropoff configuration for site users, and reduces the likelihood of litter around the bin. Based on available compactor hauling data, the compactor bin has increased waste densities by three times (214% increase from approximately 110 kg/m^3 uncompacted to 350 kg/m^3 compacted) and increased load weights by approximately 70%). The main operational issue that was noted is that the wider compactor bin (at the base) and requirement to align it with rails close to the retaining wall is resulting in the bin frequently damaging the gate post hinges when it is being loaded/unloaded. Options to address this issue are presented in Section 8.
Entrance culvert repair	Damaged sections of the steel pipe culvert at the site entrance were repaired in 2025.	The steel pipe culvert, concrete manhole and headwall was observed at the site entrance during the site visit however a detailed review or performance assessment was not completed. The culvert captures runoff that has collected in the drainage ditch running along Parkinson Road at the site entrance. The damaged sections on the east and west sides of the road appear to be replaced. The culvert appears to be a 300 mm diameter corrugated steel pipe culvert with a manhole connection and headwall at the west side of the site entrance, as indicated on the site drawings (dated November 2025). There was no flow of water in the ditch or culvert at the time of the site visits. The site attendant reported that occasional flooding occurs at the west side of the site entrance along the road during rain events. However, generally, the area is reported to drain sufficiently.
Front gate repair	Gate repaired; an electric winch has been added to aid in opening the	The front gate is difficult to open without the electric winch because it is installed on a slope and not on a level surface. The attendant is required to push the

	gate. Repairs completed in June 2026.	gate uphill in order to open it. While the electric winch is an improvement over the status quo, the configuration of the entrance gate is still not ideal as without the winch (which may not be available during power loss or due to technical issues) opening the gate can be a barrier to many people not physically able to push the gate with enough force to open it. Having the gate installed on a slope makes it more susceptible to damage and increases long-term maintenance requirements. The site attendant and site manager reported that the front gate needed to be repaired again in September 2026 and is now being upgraded. The entrance gate appears to be an ongoing challenge for the site and the effectiveness of the winch should be assessed over the winter months.
New operator shed	Installation of a new shed for the site attendant, completed in 2024.	The new attendant shed provides shelter for the site attendant and the structure itself is effective at protecting the site attendant from the weather and improving working conditions. It also provides a space for the site attendant to store personal items and complete basic administrative tasks. The operator shed has an electrical connection for light and heating and it is understood that the current location was selected based on a power connection already available in that location. The primary operational challenge associated with the new operator shed is its location on site relative to the site entrance and main garbage drop-off area. As noted above, the operator shed is located far from the main drop-off area which results in obstructed site lines and minimal staff oversight/supervision during busy periods. Options to address this issue are presented in Section 8.

In addition to the infrastructure upgrades summarized above, the following containers and storage structures were recently added to improve the management of the following materials managed under various Stewardship programs:

Table 9: Recyclable Material and Storage Structure

Material	Stewardship Program	Storage Structure
Refundable Beverage Containers	Encorp Pacific (Canada)	Sea-can (shipping container)
E-waste (electronics and small appliances)	Encorp Pacific (Canada)	Prefabricated steel canopy shelter
Used motor oil and antifreeze	Interchange Recycling	Modified sea-can (shipping container)
Sorting shed shelter	Encorp Pacific (Canada)	Prefabricated steel canopy shelter
Bear-proof cooking oil bins	Redux (West Coast Reduction Ltd.)	Steel storage tank

The addition of the storage structures (sea-can containers and steel canopy structure) for the recyclable materials is a significant improvement over the previous site conditions. The new storage structures protect the materials from the weather, help keep the site tidy and materials contained in one location, reduce the environmental risk, and reduce the safety risk for the attendant. The new storage structures are functioning as intended, however the main challenge observed in the southeast upper corner (where the structures are located) is that space is very limited which has resulted in the structure and excess material placed against the vegetated

areas. Furthermore, while efforts have been made to level this area, it is still uneven and unpaved. The site attendant reports that it is challenging to move materials on pallets and canvas bags in this area due to the uneven surface and due to a lack of appropriate equipment. Options to improve this area are presented in Section 8.

4.2 Operating Model

The site has transitioned from a live-in caretaker model to a staffed model operated by Capital Regional District (CRD) employees. The current model is staffed by two auxiliary CRD employees reporting to the Operations Manager within the ERM Division.

The facility has low season and high season hours of operations as follows:

- Low season (October to May) – Friday to Tuesday from 10 AM-2 PM (closed Wednesday-Thursday)
    - 1 site attendant for 5 days per week (Friday to Tuesday)
- High season (June to September) - Friday–Tuesday 9am–5pm & Wednesday-Thursday 10am–4pm
    - 1 site attendant for 5 days per week (Friday to Tuesday)
    - 1 other site attendant for 2 days per week (Wednesday to Thursday)

From an operational perspective, the new staffed operating model appears to be working well based on the following observations and discussions (with the site attendant and site users):

- The current low season and high season hours of operation appear to provide a sufficient level of service to local residents and businesses, providing them with enough time to drop off their waste materials.
- The facility is staffed by an experienced site attendant who maintains good relations with the transfer station users. These relations were noted to be valuable in supporting the day-to-day operations and helpful when resolving user concerns and/or conflicts.
- User perception and feedback of the facility was generally positive. Most users seemed to be generally satisfied with the level of service offered at the facility. A detailed survey of user satisfaction was not completed.
- The site attendant played a key role in educating and provided guidance to site users on proper waste placement and sorting requirements.

A challenge that was noted during both low and high season audits was waste left in front of the site entrance gate before opening hours or after closing hours. The reduced hours of operation (compared to the previous caretaker model) could be a contributing factor to the illegal dumping. Options to address the after-hours illegal dumping are presented in Section 8.

5. Waste Composition Studies

Low and high season waste composition studies were completed over four days between May 8-11, 2026 and July 10-13, 2026, respectively.

The results of the waste composition studies are included in the report provided as **Appendix B**.

6. Source Contribution Analysis

The purpose of the source contribution analysis was to determine the waste contribution from each user group based on trip counts and recorded bag weights. This data was collected over the low and high season waste composition studies.

6.1 User Group Definitions

For the purposes of this study, users of the PRTS were grouped into the following seven categories:

1. Port Renfrew – Residential
2. Port Renfrew – Commercial
3. Port Renfrew – Short-Term Rental
4. Pacheedaht First Nation – Residential
5. Pacheedaht First Nation – Commercial
6. Outside User – Residential
7. Outside User – Commercial

Definitions of these categories are provided in the table below. During the waste composition study, data was only collected for garbage in bags, not including recycling or C&D waste. Users were asked where the waste originated from, and based on their response, the trip was recorded under one of the seven categories. The site attendant, who has worked at the PRTS for several years and recognizes most users, was helpful in accurately classifying the facility users and verifying responses. Refer to **Appendix C** for the user intake questionnaire and log form used during the waste studies.

The classification category is based on the origin of the waste and is not based on the origin of the user dropping off the waste. For example, trips from a Port Renfrew resident or cleaning business dropping off waste from a short-term rental would be counted as short-term rental.

Table 10: User Group Definitions

Category	Definition
Port Renfrew – Residential	A person with a permanent residence living in Port Renfrew.
Port Renfrew – Commercial	A commercial business operating in Port Renfrew, including resorts, campgrounds, marina, restaurants/food trucks, ambulance station, library, stores, dance and art studios, construction businesses, tourism related businesses (e.g., fishing).
Port Renfrew – Short-Term Rental	Short-term rental businesses operating within Port Renfrew, including Airbnb and Vrbo. Waste may be dropped off by the resident operating the short-term rental or by the cleaning company. Trip is counted in this category as long as the waste originated from the short-term rental operation.
Pacheedaht First Nation – Residential	A Pacheedaht First Nation community member.
Pacheedaht First Nation – Commercial	A commercial business operated by a Pacheedaht First Nation community member. Includes Pacheedaht

	Campground, Band office, medical office and Seafoam Seafood.
Outside User – Residential	An individual dropping off waste from outside Port Renfrew, included a resident from a neighbouring community (such as Jordan River) or a tourist.
Outside User – Commercial	Waste originating from outside Port Renfrew from a commercial business, including campground waste (e.g., Sombrio Beach campground) and short-term rentals located outside of Port Renfrew.

6.2 Trip Data

The user intake questionnaire and collection log were used to record the number of trips from each user group over the low season and high season waste composition studies. Trips were only recorded for users dropping off garbage in bags (and combined garbage and recycling drop-offs); users that only dropped off recyclable materials or C&D waste were not counted. Based on observations during the studies, it is estimated that site visits with garbage made up approximately 90% of the total facility trips (the majority of transfer station users were dropping off garbage). For the facility usage trip projections (refer to Section 7), an adjustment factor was applied to garbage trips to account for the recycling only trips that were not counted during the studies.

The trip data (garbage drop offs) collected during the low and high season studies is presented in **Tables 11 to 13** below.

Table 11:Trip Data from May 8-11, 2026 (Low Season Study)

		Port Renfrew			Pacheedaht First Nation		Outside	
Date	Overall	Short Term Accommodations	Commercial	Residential	Commercial	Residential	Commercial	Residential
08-May	59	13	8	29	6	1	1	1
09-May	46	11	6	26		2		1
10-May	59	13	9	29		7	1	
11-May	45	11	4	25	1	2		2
Total	**209**	**48**	**27**	**109**	**7**	**12**	**2**	**4**

Table 12: Trip Data from July 10-13, 2026 (High Season Study)

		Port Renfrew			Pacheedaht First Nation		Outside	
Date	Overall	Short Term Accommodations	Commercial	Residential	Commercial	Residential	Commercial	Residential
10-Jul	75	21	11	39	1	1	1	1
11-Jul	71	15	7	43	3	3		
12-Jul	94	34	9	41	3	2	4	1
13-Jul	75	30	6	30	2	4	1	2
Total	315	100	33	153	9	10	6	4

Table 13: Comparison of Trips between Low Season and High Season Studies

		Port Renfrew			Pacheedaht First Nation		Outside	
Date	Total Trips	Short Term Accommodations	Commercial	Residential	Commercial	Residential	Commercial	Residential
Low season May 8-11, 2026	209	48	27	109	7	12	2	4
High season July 10-13, 2026	315	100	33	153	9	10	6	4
% Difference	**+51%**	**+108%**	**+22%**	**+40%**	**+29%**	**–17%**	**+200%**	**0%**

During the low season study, daily trips ranged from 45 to 59 trips per day, whereas during the high season study, daily trips ranged between 71 to 94 trips per day. As shown above, there was a 51% relative increase in total trips counted over the four-day study during the high season study compared to the low season study (from 209 in low season to 315 in high season study). The number of trips from short-term accommodations increased the most (108% relative increase) followed by Port Renfrew Residential trips (40% relative increase). There was also a significant increase in outside commercial trips (from 2 to 6 trips) which was primarily due to additional trips from neighbouring campsites.

6.3 Waste Contribution Estimates

The waste contribution from each user group was estimated based on the number of trips, bag counts, and bag weights recorded during the two waste studies. The results of these estimates and a description of the calculation methodology are provided in SJE's memos dated June 15, 2026 (low season study) and July 21, 2026 (high season study). These memos are provided as **Appendix D**.

The results of the waste contribution estimates are summarized in **Tables 14 to 18** below.

Table 14: Estimated Total Quantity of Waste Dropped Off by Each User Group – May 8-11, 2026

User Group	Avg bag weight (kg)	Avg bags per trip (bags/trip)	Avg weight per trip (kg/trip)	# of Trips	Estimated Total Waste Dropped off May 8 11, 2026 (kg)	Percent of Total Estimated Tonnage May 8 11, 2026
Short-term accommodations	2.8	1.6	5	48	217	7.3%
Port Renfrew - Commercial	6.2	5.6	34	27	931	31.2%
Port Renfrew - Residential	4.2	1.6	7	109	720	24.2%
Pacheedaht FN - Commercial	5.8	17.3	100	7	698	23.4%
Pacheedaht FN - Residential	6.2	3.7	23	12	279	9.4%
Outside - Commercial	4.3	5.0	21	2	43	1.4%

Outside - Residential	6.3	3.7	23	4	92	3.1%
			TOTALS	**209**	**2979**	

Between May 8 to 11, 2026, we estimate that approximately 2,979 kg of material was dropped off as garbage/general refuse (not including recyclable materials or C&D waste) by all user groups. The average load size for Port Renfrew residents and short-term accommodations ranged between 1-2 bags per trip. The average load size for Pacheedaht First Nation residential loads and outside residential loads was approximately 4 bags per trip. Port Renfrew commercial and outside commercial loads averaged 5-6 bags per load, while the average size of Pacheedaht First Nation commercial loads was estimated at approximately 17 bags per load. There was a large range in the size of Port Renfrew commercial loads with larger businesses (such as the resorts) dropping off up to 20 bags per trip whereas smaller businesses dropped off as little as a single bag. All Pacheedaht First Nation commercial loads were larger loads originating from the Pacheedaht Campground.

Table 15: Estimated Total Quantity of Waste Dropped Off by Each User Group – July 10-13, 2026

User Group	Avg bag weight (kg)	Avg bags per trip (bags/trip)	Avg weight per trip (kg/trip)	# of Trips	Estimated Total Waste Dropped off July 10 13, 2026 (kg)	Percent of Total Estimated Tonnage July 10 13, 2026
Short-term accommodations	2.8	1.7	4	100	448	12.8%
Port Renfrew - Commercial	6.2	5.2	35	33	1162	33.1%
Port Renfrew - Residential	4.2	1.6	8	138	1047	29.9%
Pacheedaht FN - Commercial	5.8	5.9	52	9	464	13.2%
Pacheedaht FN - Residential	6.2	3.3	22	10	217	6.2%
Outside - Commercial	4.3	1.3	6	6	38	1.1%
Outside - Residential	6.3	4.3	32	4	130	3.7%
			TOTALS	**300**	**3505**	**100%**

*Fifteen "irregular" trips from inside Port Renfrew (e.g. spring cleanout, estate cleanout) are NOT included in this table

Between July 10 to 13, 2026 (four days), we estimate that approximately 3,505 kg of material was dropped off as garbage/general refuse (not including recyclable materials or C&D waste) by all user groups. Short-term accommodations had the smallest average load size at 4 kg per trip, followed by outside commercial and Port-Renfrew residential at 6 kg and 8 kg per trip, respectively. The estimated weight of Pacheedaht First Nation residential loads was similar to the low season study and was estimated to be 22 kg per trip. Port Renfrew commercial and Pacheedaht First Nation commercial loads were the largest loads estimated at 35 kg per trip and 52 kg per trip, respectively.

Similar to the low season study, there was a large range in the size of Port Renfrew commercial loads with larger businesses (such as the resorts) dropping off up to 21 bags per trip, whereas smaller businesses dropped off as little as a single bag. The majority of Pacheedaht First Nation commercial waste originated from Pacheedaht Campground; however, smaller commercial trips also originated from the Pacheedaht First Nation Band office, medical office, and Seafoam Seafoods.

Outside commercial trips originated from Lizard Lake campground, Fairy Lake campground, and Sombrio Beach. Outside residential trips originated from Jordan River.

A comparison of the total waste contribution (in kg) and percent contribution is provided in **Tables 16 to 18** below.

Table 16: Comparison of Estimated Weights by User Group

User Group	Estimated Total Waste Dropped off May 8 11, 2026 (kg)	Estimated Total Waste Dropped off July 10 13, 2026 (kg)	Relative % Change
Short-term accommodations	217	448	107%
Port Renfrew - Commercial	931	1162	25%
Port Renfrew - Residential	720	1047	45%
Pacheedaht FN - Commercial	698	464	-34%
Pacheedaht FN - Residential	279	217	-22%
Outside - Commercial	43	38	-12%
Outside - Residential	92	130	41%
	2979	**3505**	**18%**

Table 17: Comparison of Percent Contribution by User Group

User Group	% Contribution May 8 11, 2026	% Contribution July 10 13, 2026	Relative % Change
Short-term accommodations	7%	13%	76%
Port Renfrew - Commercial	31%	33%	6%
Port Renfrew - Residential	24%	30%	24%
Pacheedaht FN - Commercial	23%	13%	-44%
Pacheedaht FN - Residential	9%	6%	-34%
Outside - Commercial	1%	1%	-25%
Outside - Residential	3%	4%	20%
	100%	**100%**	

Table 18: Comparison of Percent Contribution by User Group – Combined

User Group	% Contribution May 8 11, 2026	% Contribution July 10 13, 2026	Relative % Change
Short-term accommodations	7.3%	12.8%	76%
Port Renfrew Commercial + Residential	55.4%	63.0%	14%
Pacheedaht First Nation Commercial + Residential	32.8%	19.4%	-41%
Outside Users Commercial + Residential	4.5%	4.8%	6%

The percent contribution from short-term accommodations and Port Renfrew (commercial and residential) increased in the high season compared to the low season study, representing 12.8% and 63.0% of the waste contribution, respectively. The percent contribution from Pacheedaht First Nation (commercial and residential)

decreased by 41% (relative decrease) from 32.8% in the low season to 19.4% in the high season study. This decrease is largely attributed to a decrease in the contribution from Pacheedaht First Nation commercial users. The percent contribution from outside users (commercial and residential) remained relatively unchanged at approximately 5% of the total estimated waste contribution.

6.4 Commercial Sector Users

The commercial trips (Port Renfrew, Pacheedaht First Nation, Outside) summarized above in **Tables 14 and 15** represents the total trips counted and categorized as a commercial user over the study period. Several larger commercial users visited the transfer station multiple times over the four-day study period, and each trip was counted and included in the total trips presented in **Tables 14 and 15**. The individual commercial users that were observed during the low season and high season studies are summarized in **Table 19** below.

Table 19: Summary of Commercial Users

Port Renfrew	Pacheedaht First Nation	Outside
1. Wild Renfrew (including Renfrew Pub) 2. Wild Coast Wilderness Resort 3. Port Renfrew Marina and RV Park 4. Haliwoods Fish & Chips 5. Beach Camp Coffee Co. 6. Coho Catering Company 7. First Light Bites 8. Port Renfrew Water Service (CRD) 9. Handsome Dan's Port Renfrew 10. Port Renfrew General Store 11. BC Ambulance Station 12. Port Renfrew Fire Hall 13. Port Renfrew Elementary School	1. Pacheedaht Campground 2. Pacheedaht Band Office (Administration) 3. Pacheedaht Health Centre 4. Pacheedaht Gas Bar (Pacheedaht Pitstop) 5. Pacheedaht Saw Mill 6. Seafoam Seafoods	1. Lizard Lake campground 2. Fairy Lake campground 3. Sombrio Beach campground

The largest generators of Port Renfrew commercial waste are Wild Renfrew, Wild Coast Wilderness Resort, and the Port Renfrew Marina and RV Park. Combined, these three commercial users generated approximately 85% of the Port Renfrew commercial waste in the high season, or approximately 28% of the total waste disposed in the high season.

The largest generator of Pacheedaht First Nation commercial waste is Pacheedaht Campground, accounting for approximately 84% of the total Pacheedaht First Nation commercial waste in the high season, or approximately 11% of the total waste disposed in the high season.

6.5 Waste Managed Outside PRTS

It is expected that the majority of the waste generated in Port Renfrew is managed at the Port Renfrew Transfer Station for the following reasons:

- Since users can dispose of waste at the PRTS free of charge, there is little financial incentive for users to haul waste outside of the community for disposal. Waste "leakage" (waste leaving the community) is often observed in areas where there is a financial incentive for waste to be hauled out of the region (i.e. lower tipping fees in neighbouring regions).
- Based on discussion with the site attendant (a local resident), there is no curbside collection service currently provided within the community – all waste must be self-hauled to a transfer station or disposal facility.
- Pacheedaht First Nation does not currently operate their own depot or landfill.

A few scenarios have been identified where waste may bypass the PRTS, however the total waste in these instances is expected to be a very small fraction of the waste generated within the community:

- Some property owners manage multiple vacation homes across the region (including outside Port Renfrew) and the waste generated from the properties within Port Renfrew may be hauled outside the community as part of their cleaning routes.
- Some outside users unfamiliar with the PRTS may haul their waste outside the community when they leave.
- Pacheedaht First Nation occasionally rents a bin for larger loads/clean ups or renovation materials, and this material would be hauled directly to a disposal site.

7. Demand Forecast and Service Model

The purpose of the demand forecast was to estimate the waste that will be received at the PRTS over a 20-year planning horizon, and to assess the adequacy of the existing infrastructure to manage the forecasted waste tonnages.

7.1 Population Projections

To assess the potential growth in waste over the 20-year planning horizon, historic and projected population growth in Port Renfrew was reviewed. Population projections were obtained from the draft Port Renfrew OCP, which is based on BC Stats projections for the Juan de Fuca Coast Community Health Services Area. Port Renfrew's population is expected to experience gradual growth over the next two decades, with an average growth rate of 0.9% per year. The population projection is presented in **Table 20** below.

Table 20: Port Renfrew Population Projections

Year	Port Renfrew Population	Annual Growth (%)
2021	262*	
2025	272	0.95%
2030	277	0.37%
2035	291	1.01%
2040	308	1.17%
2045	323	0.97%

*Population according to the 2021 census profile for Port Renfrew.

7.2 Garbage Projections

Data on historic garbage tonnages received at the Port Renfrew Transfer Station was reviewed. Data was available starting in 2006. Between 2006 and 2019, garbage tonnages (not including recyclable materials or C&D waste) were fairly stable and ranged between 148 and 179 tonnes per year. While there were minor fluctuations between years, there was no major trends in growth during this 14 year period. Starting in 2020, waste received at the transfer started to increase significantly. From 2019 to 2022, waste received at the transfer station increased by 75% (from 176 to 307 tonnes), with an average annual growth rate over the three-year period of approximately 20% per year. This increase is suspected to be largely driven by increased camping and tourism related to COVID-19 pandemic. In 2021-2022 Parks Canada recorded a record number of camping nights[1].

Waste quantities decreased in 2023 (a 21% decrease from 2022) and remained stable in 2024 before increasing to the previous high point (around 300 tonnes per year) seen in 2023. These historic trends are shown in **Figure 5** below.

Partial tonnage data from January to June 2026 indicates a continued trend in waste growth, with quantities over this six-month period about 11% greater than the previous year (January to June 2025).

Using the Port Renfrew population projections as a basis for projecting waste growth was not considered representative, as historic data suggests that while the population has generally been constant with very minor growth, waste data is much more volatile and has increased significantly over the same time period that the Port Renfrew resident population has remained relatively unchanged. This indicates waste received at the PRTS is largely influenced by tourism, commercial activities within Port Renfrew, and outside users.

[1] https://parks.canada.ca/agence-agency/bib-lib/rapports-reports/rmr-dpr/03312022

Considering the historic trends in garbage growth, two garbage growth scenarios were developed:

- Low growth scenario – based on linear projection of waste over last 20 years – average annual growth rate of 2.5% per year – 500 tonnes per year by 2045
- High growth scenario - based on linear projection of waste over last 8 years – average annual growth rate of 4.2% per year – 700 tonnes per year by 2045

The garbage projections are shown in **Table 21** and **Figure 5** below.

Figure 5 also shows the population projection and normalized Juan de Fuca visitor count data. As shown, Port Renfrew population growth is projected to grow at a lower rate compared to waste growth. Note that the Juan de Fuca Park was officially closed for COVID during 2020-2021.

Table 21: Port Renfrew Transfer Station Garbage Projections – Low and High Growth Scenarios

Year	Low Growth (tonnes)	High Growth (tonnes)
2021	240	240
2025	304	304
2030	353	403
2035	402	502
2040	451	601
2045	500	700

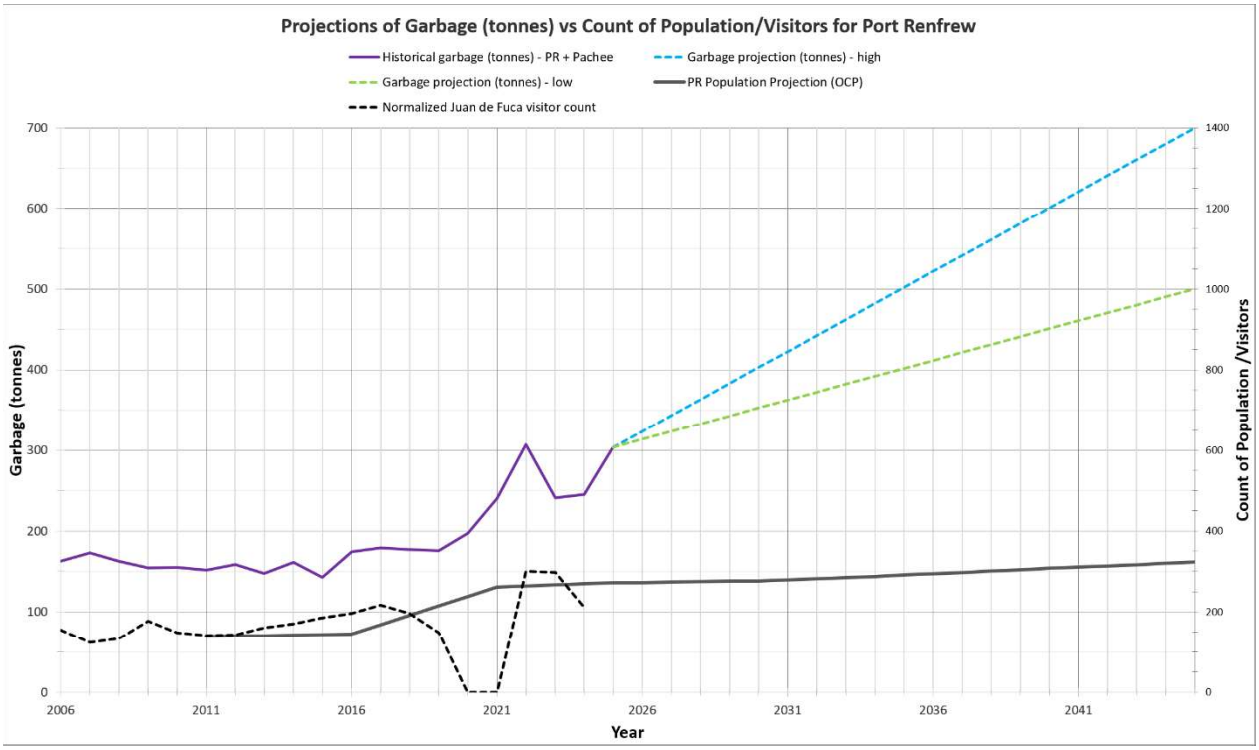


Figure 5: Historical and Projected Garbage Quantities, including Population Projections

In addition to garbage, historic recyclable tonnages were reviewed to assess the potential growth of these material streams. Tonnage data was available for metals, white goods, TVs, cardboard, mixed paper, and mixed containers. Metal and cardboard tonnages and hauling costs were reviewed in greater detail, as these material

streams represent the majority of the recyclables tonnages and recyclable hauling costs borne by the CRD. Metals have been accepted at the facility since 2007. The annual quantity of metals received peaked in 2016 at 43 tonnes per year and since then have been declining with approximately 20 tonnes of metals received in 2025. There appears to be a downward trend in metals received at the PRTS. Data on cardboard is available starting in 2014; however, there are limited quantities reported in 2014 and 2015 (less than one tonne per year) and no data from 2016 to 2019. It appears collection at the PRTS was not fully implemented until 2020. Reported cardboard tonnages were approximately 12 tonnes in 2020 and increased to approximately 26 tonnes per year in 2023 and 2024. Cardboard tonnages then decreased to approximately 16 tonnes per year in 2025. Additional data will be required to assess any trends in cardboard tonnages received at the PRTS.

7.3 Trip Projections

Using the trip data collected during the low season and high season studies, trips were estimated and forecasted over the 20-year projection period. An adjustment factor was applied to garbage trips to account for the recycling only trips that were not directly counted during the study. The estimated non-garbage trips during the low season was 1-2 visits per hours and in the high season was 1 visit per hour.

An annual trip distribution was estimated, based on the seasonal distribution of garbage received at the transfer station from 2023 to 2025. The estimated annual trip distribution for 2026 is presented in **Figure 6** below. Forecasted annual trips are shown in **Figures 7,** projected based on the annual growth rates for the low and high waste growth scenarios.

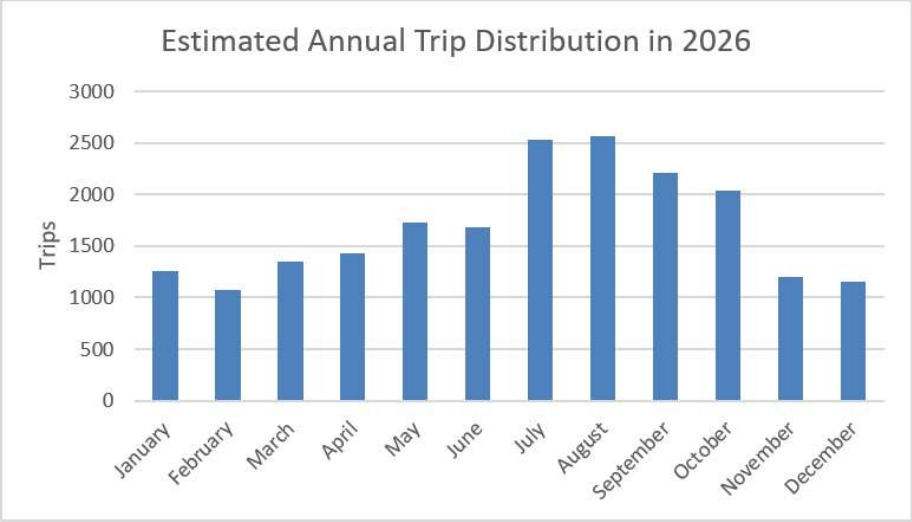


Figure 6: Estimated Annual Trip Distribution in 2026

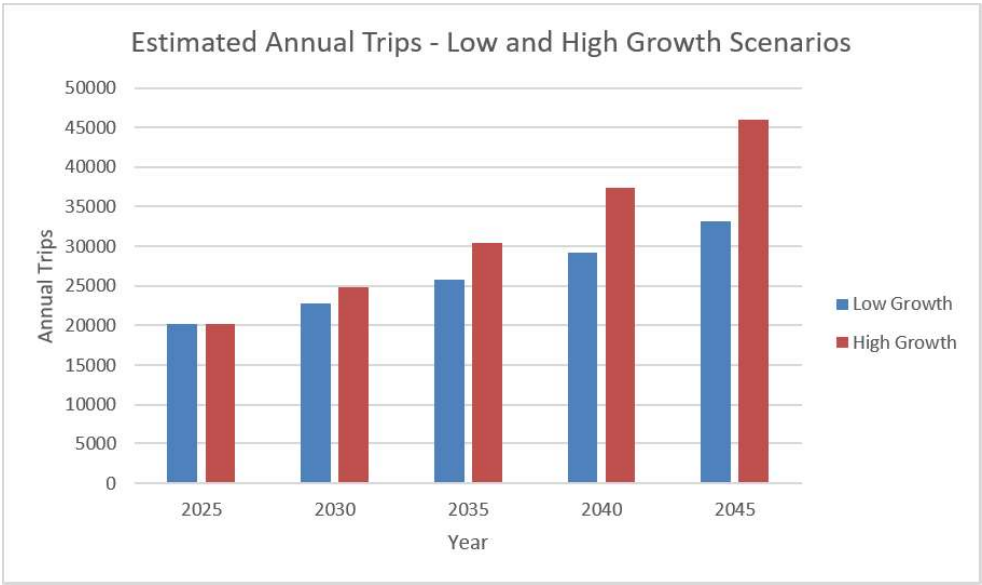


Figure 7: Annual Trip Growth Projection - Low and High Growth Scenarios

While annual trips are an indicator of overall facility usage, it is often more useful from a design perspective to consider the peak trips (within 15 minutes and 60 minutes) when assessing the demand on the facility. Estimated 15-minute peak and average hourly demand estimates for both growth scenario are summarized in **Table 22** below. Peak traffic estimates are based on traffic counts and observations obtained during the low and high season studies.

The analysis assumes the current hours of operation stay the same:

- Low season (October to May) – 4 hours per day – Friday to Tuesday from 10 AM-2 PM (closed Wednesday-Thursday)
- High season (June to September) – 8 hours and 6 hours per day - Friday–Tuesday 9am–5pm & Wednesday-Thursday 10am–4pm

An even trip distribution over the operating day is also assumed in the analysis.

Table 22: Hourly Trip Demand Summary - Low and High Growth Scenarios

Year	Low Growth Scenario					High Growth Scenario				
	Annual Trips	High Season		Low Season		Annual Trips	High Season		Low Season	
		Average Hourly	Peak 15 Minute	Average Hourly	Peak 15 Minute		Average Hourly	Peak 15 Minute	Average Hourly	Peak 15 Minute
2025	20,192	13	8	16	10	20,192	13	8	16	10
2030	22,845	14	9	18	11	24,804	16	10	20	12
2035	25,847	16	10	21	13	30,469	19	12	25	15
2040	29,244	18	12	24	14	37,428	24	15	30	19
2045	33,087	21	13	27	16	45,976	29	18	37	23

We have also assumed trip growth will increase by the same rate in the low and high seasons (same growth factor applied to trips in the low season and high season). A review of monthly tonnage data from 2019 to 2025 indicates the growth in waste tonnages in the low season and high season were approximately the same. Based on this data, it was also assumed the growth in trips over the low and high seasons would be the same.

As shown in **Table 22**, average hourly trips are projected to be higher in the low season which is due to the shorter operating hours. While there were about 50% more trips recorded during the high season study, the longer operating hours during the high season (8 hours vs. 4 hours) resulted in less trips per hour. Increasing the hours of operation in the low season may partially address the average hourly demand on the facility; however, additional data should be collected to understand the trip distribution throughout the day because the times of peak demand may remain the same even with longer operating hours.

The main traffic issues currently observed on site is occasional queuing of traffic onto Parkinson Road which was only observed during the low season study and caused by facility users stopping at the first bin instead of puling all the way into the site. In the short and medium term, these traffic issues can be mitigated by implementing no stop zones, establishing parking areas, additional signage supplemented by direction from the site attendant. We estimated that the main traffic loop can accommodate up to 12 standard sized vehicles (both queuing and parked) and peak traffic flow in the short and medium term can be accommodated without significant queuing issues. In the long term (15+ years), traffic impacts during peak periods may become unacceptable due to queuing onto Parkinson Road over extended periods. We recommend that traffic impacts continue to be monitored. As part of the long-term site plans, any site redesign should increase the available queueing and parking areas on site.

7.4 Hauling Analysis and Projections

Monthly garbage tonnage and hauling data was reviewed to assess the seasonal fluctuations in waste received at the transfer station (not including recyclable materials or C&D waste). **Tables 23 and 24** and **Figures 8 and 9** below shows the monthly garbage tonnage and haul trips from the transfer station from 2023 to 2025.

Table 23: Annual and Monthly Garbage Tonnages - 2023 to 2025

Month	2025	2024	2023
Jan	13.39	14.54	19.92
Feb	18.53	10.96	12.78
Mar	16.41	12.96	22.5
Apr	21.8	12.08	22.1
May	22.52	14.6	29.78
Jun	24.46	18.63	22.54
Jul	44.86	29.83	25.53
Aug	34.31	36.95	28.17
Sep	41.31	24.89	21.74
Oct	27.03	35.23	16.68
Nov	17.51	19.62	9.86
Dec	21.55	14.92	9.58
TOTAL	**303.68**	**245.21**	**241.18***

*Garbage tonnages were reported separately for Pacheedaht First Nation from October 2022 to July 2023. It is assumed that this garbage was received at the PRTS and the monthly tonnages have been included in the 2023 data presented above.

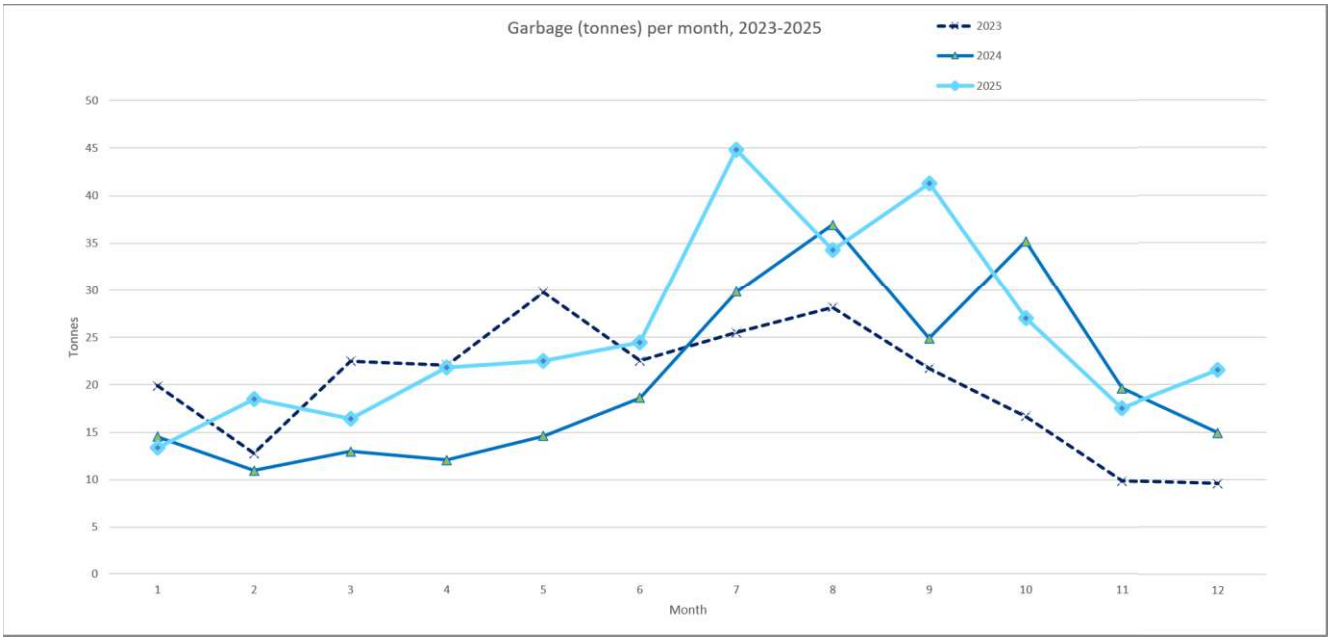


Figure 8: Monthly Garbage Hauled from the PRTS from 2023 to 2025

The data shows a high season from July to October, where waste volumes increased by up to triple compared to the lowest tonnage months.

Table 24: Annual and Monthly Garbage Bin Hauls - 2023 to 2025*

Month	2025	2024	2023
Jan	3	3	4
Feb	5	2	2
Mar	5	3	4
Apr	6	3	3
May	7	3	5
Jun	7	4	4
Jul	11	7	5
Aug	9	9	9
Sep	10	8	5
Oct	7	7	4
Nov	4	7	2
Dec	6	3	2
TOTAL	**80**	**59**	**49**

* this table does not include Half-hauls and Hourly truck rentals
this table only includes Garbage hauls, not Recyclables hauls

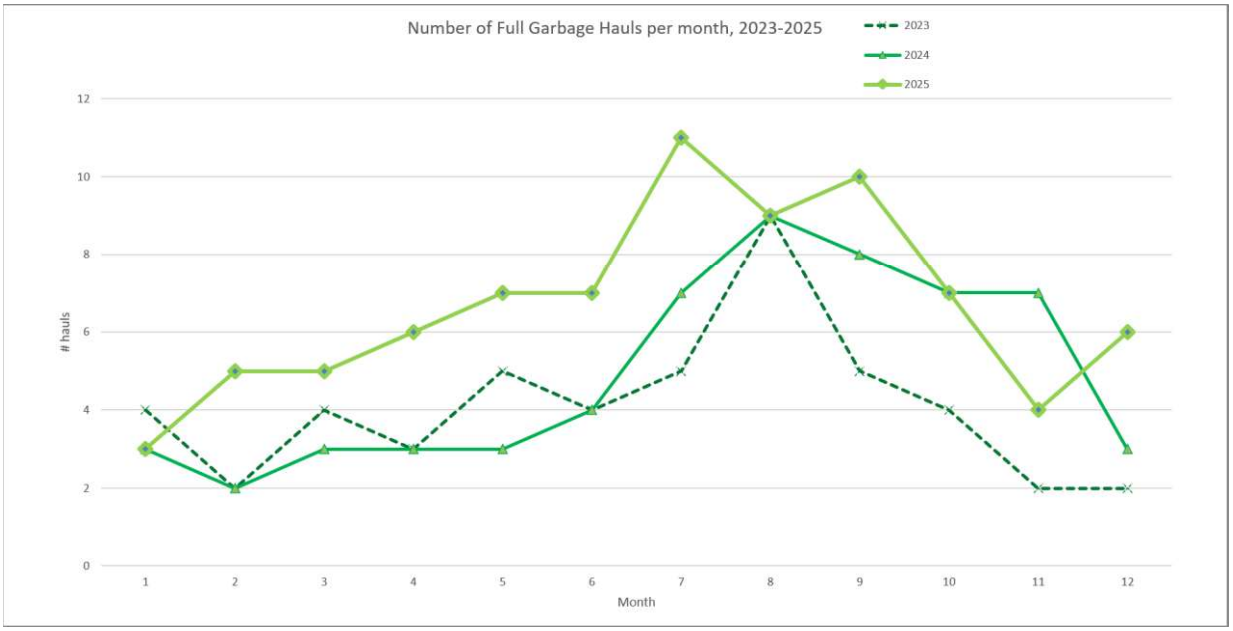


Figure 9: Number of Full Garbage Hauls per Month - 2023 to 2025 (Uncompacted – 50 cu. yd bin)

In June 2026, the CRD started using a 28 cubic yard compactor bin (compactor roll off combination) to receive garbage (implemented as part of Community Grant Project). Previously, garbage was received and hauled uncompacted using a 50 cubic yard roll off bin. Based on available compactor hauling data (9 hauls from the end of June to early July 2026), the compactor bin has increased waste densities by three times (214% increase from approximately 110 kg/m^3 uncompacted to 350 kg/m3 compacted) and increased load weights by approximately 70%). It is assumed that the compactor bin will be used for garbage going forward.

Garbage hauling requirements in peak months (July and August) were assessed over the projection period and are summarized below.

Table 25: Projected Monthly Hauling Requirements (Garbage) using 28 cu. yd Compactor Bin - Peak Month

	Low Growth		High Growth	
Year	Peak month tonnage	# Hauls	Peak month tonnage	# Hauls
2026	45	6	45	6
2030	51	7	55	7
2035	57	8	68	9
2040	65	9	83	11
2045	74	10	102	14

Using the compactor bin is expected to reduce the monthly frequency compared to using the 50 cubic yard roll off bin. In the low growth scenario, the peak monthly hauling frequency in 2045 is estimated to be 10 hauls per month (2-3 hauls per week) which is assumed to be manageable for site operations considering monthly hauling frequency reached 11 hauls per month in July 2025. In the high growth scenario, the peak monthly hauling frequency in 2045 is estimated to be 14 hauls per month (3-4 hauls per week). This is also assumed to be manageable considering it is slightly more than the peak months in 2025. An additional waste compactor could be implemented in the short to medium-term as a contingency to reduce the load on the single compactor.

7.5 Proposed Service Thresholds

Table 26 identifies service thresholds that can be used as a general guide to help identify when conditions have changed enough to warrant an additional review and increase in service levels. These service thresholds should not be considered rules or firm requirements – they are provided as general guidance for planning purposes only. Reaching a service threshold does not necessarily require immediate action, but should prompt the CRD to reassess the relevant parameter against current site conditions. We recommend ongoing discussion with site operations as the first check to verify if current conditions require an operational modification.

Table 26: Thresholds for Reconsidering Service Levels

Parameter	Current Condition	Service Threshold	Recommended Response
Operating hours	Low season: 4 hrs/day, 5 days/week. High season: 6–8 hrs/day, 7 days/week.	Sustained average hourly and 15-minute peak trip demand during low-season hours doubles (32 trips per hour or 20 vehicles in 15 minutes).	Assess extending low-season hours; confirm via a short trip-count monitoring period. Implement Tier 1 queuing controls (designated parking, no-stop zones, signage) if not already in place; treat recurring queuing despite Tier 1 measures as a trigger for Tier 2/3 planning.
Staffing	1 attendant (low season); 1 attendant + 1 additional attendant 2 days/week (high season).	The site attendant's supervisory/oversight role becomes unsustainable during peak periods.	Reassess high season staffing levels/days; consider whether a second attendant is needed more days per week during peak season.
Haul capacity (garbage)	28 cu. yd compactor bin; low growth reaches 10 hauls/month by 2045, high growth reaches 14 hauls/month by 2045.	Peak-month haul frequency sustains at or above ~10–12 hauls/month (2–3 hauls/week).	Initiate planning for implementation of a second compactor
Queuing / parking	Main loop accommodates up to 12 standard vehicles queuing and parked. Queuing onto Parkinson Road occurs occasionally when vehicles don't pull all the way through.	Peak 15-minute trip demand sustains in the range of 15-20 vehicles, or queuing onto Parkinson Road is observed consistently outside of isolated incidents.	Implement Tier 1 queuing controls (designated parking, no-stop zones, signage) if not already in place; treat recurring queuing despite Tier 1 measures as a trigger for Tier 2/3 planning.
Site expansion	Current footprint limits additional recyclable material categories and bin placement (estimated space available for a maximum of 2 additional bins).	Any of: (a) queuing/parking capacity exceeded despite Tier 1/2 mitigations; (b) a new material stream (e.g., organics) cannot be accommodated within the available space; (c) Recycle BC or another stewardship program requires additional segregated storage.	Advance Tier 3 site redesign planning; initiate property line survey and TELUS coordination.

8. Options and Evaluation

8.1 Options Development

Options were developed to address operational challenges and to address the projected long-term service demands. The objectives of the options are to improve operational efficiency and safety, promote waste diversion and facilitate proper sorting, and to optimize cost efficiency of the operations.

The options were categorized into the following three tiers:

- Tier 1 — Operational Optimization: Operational changes that require minimal to no capital investment and that can be implemented using current infrastructure on site. These options generally have a short implementation timeline (less than one month).
- Tier 2 - Minor Capital Works: Targeted infrastructure improvements within the existing site footprint. These options will require investment in new infrastructure; however, can generally be implemented while maintaining current site operations. Minor operational impacts would be expected during implementation. Implementation could be expected within one year of starting the planning process.
- Tier 3 – Site Reconfiguration and Major Capital Works: Reconfiguration of the existing site, including expansion beyond the existing footprint within the CRD's property limits. These options include more significant layout changes, additional structures, and/or expanded recycling/diversion infrastructure. Temporary drop-off facilities will need to be established during the implementation of these options. A longer implementation timeline should be expected (greater than one year) due to significant planning, engineering, and construction.

8.2 Evaluation Framework

All options were evaluated using the following qualitative evaluation criteria:

Table 27: Options Evaluation Criteria

Evaluation Criteria	Description	Definitions
Service Adequacy	How does the option address the current and 20-year projected demand from residential users, commercial users, and outside visitors, including demand during the high season?	Neutral - option provides no change or minimal impacts compared to status quo. Evaluation criteria not addressed. Improved – option provides an improvement over the status quo
Waste Diversion Outcomes	Does the option encourage waste diversion from residential and commercial users?	See above definitions.
Commercial Sector Impact	Does the option affect commercial user access and level of service, improve commercial material segregation from residential streams, and diversion outcomes?	See above definitions.
Capital Cost	High-level cost range or relative costs for comparison purposes. Cost estimates are considered Class D cost estimates for preliminary budgeting purposes as defined by the Association of Consulting Engineers or Canada (ACEC) and Engineers and Geoscientists BC (EGBC).	Low – less than $10,000 Medium – between $10,000-$100,000 High – greater than $100,000

Operating Cost	High-level cost range or relative costs for comparison purposes	Low – less than 5% change to current operating costs Medium – between 5-25% change to current operating costs High – greater than 25% change to current operating costs
Implementation Risk	Potential permitting, site, community acceptance, and operational transition risks with proposed options, including an assessment of how the options may impact illegal dumping.	Neutral - option provides no change or minimal impacts compared to status quo. Low – minimal impacts or risks expected as a result of the option. Users and/or site attendant would not notice significant changes. Moderate – potential risks / impacts that will have a minor impact on users requiring additional education (users) and training (site attendant)
Impacts to Public/Users	How will facility users be impacted by the proposed option? This includes impacts during the implementation stage (i.e., construction) and potential impacts (for example, changes to service levels) after implementation.	See above definitions.
Impacts to Operations	How will the site attendant be impacted by the proposed site modifications? Will additional training be required? Will additional staffing be required? This includes impacts during the implementation stage (i.e., construction) and potential impacts after implementation.	See above definitions.
Impacts to other stakeholders	Will other stakeholders be impacted by the proposed options? Other stakeholders include TELUS, haulers, recycling stewardship programs, and other Port Renfrew and Pacheedaht First Nation community members.	See above definitions.
Implementation Timeline	Estimated time from decision to operational implementation, including planning, design, procurement, construction, and training.	Short – Less than 1 month from planning, design, implementation Medium – 1 – 12 months from planning, design, implementation Long – Greater than one year from planning, design, implementation

8.3 Proposed Options and Evaluation

A summary of the proposed Tier 1, 2, and 3, options is provided in **Table 28**. The options were assessed against the evaluation criteria and the results are presented in **Tables 29 to 31.**

Table 28: Summary of Proposed Tier 1,2,3 Improvement Options

Tier 1	• Establish designated areas for waste unloading (parking areas) outside of main driving loop • Add material category signs with larger font and material graphics in front of recyclable material dropoff areas • Provide feedback to hauling contractor to minimize gap between metals bin and wall

	• Implement additional illegal dumping deterrents at site entrance such as cameras or additional signage • Implement bin hauling procedure requiring driver to place 4 ft high delineator post adjacent to gate post before bins are loaded • Implement routine litter cleanup program, including area under metals bin
Tier 2	• Add lockable gates at both site entrances and establish fencing along property line to improve site security • Install electric bear fencing on perimeter fencing • Redesign central compactor bin gate to prevent damage to hinges. • Relocate attendant shed to lower area in current location of Sea Can (adjacent to metal bin) • Install compactor baler • Establish separate bins for residential and commercial cardboard • Add permanent guardrail at metals bin • Modify compactor bin gate hinges to reduce exposed section, or relocate gates to reduce likelihood of bin contact
Tier 3	• To accommodate additional recyclables, expand footprint of upper recycling area by clearing vegetation and creating level gravel area to establish cleared buffer between materials and forested area. Consider adding 1-2 covered canopies or Sea Can containers. • Redesign site to create separate garbage and recycling areas, increasing storage space and queuing distance on site • Assess organics diversion options (e.g., collect organics on site, review alternate organics collection locations, encourage backyard composting, etc.) and explore local processing options

A sketch of the proposed Tier 3 conceptual site expansion is provided as **Appendix E**. Key features of the proposed site expansion are:

- Separate recycling and garbage drop-off areas (two separate clockwise loops). East side of site cleared and regraded to match existing elevation of west side of site.
- Garbage compactor bin and metals bin remain in current location. Additional paper and cardboard compactor adjacent to garbage compactor.
- Fully fenced site including chain-link and electric fencing. Full separation from TELUS property along property line with retaining wall or slope (to be determined).
- Relocated attendant shed near the site entrance.
- Additional parking areas on the south side of the site.

In addition to the facility specific recommendations provided above, we recommend the CRD consider targeted education and outreach to specific user groups where high fractions of divertible material were found in the

garbage stream. For example, the highest fraction of cardboard was found in the Port Renfrew commercial user group.

Table 29: Tier 1 Options Evaluation

Evaluation Criteria	Tier 1 Options					
Description	**Establish designated areas for waste unloading (parking area) outside of main driving loop**	**Add material category signs with larger font and material graphics**	**Provide feedback to hauling contractor to minimize gap between bin and wall**	**Implement additional illegal dumping deterrents at site entrance such as cameras or additional signage**	**Implement bin hauling procedure requiring cone to be placed adjacent to gate before bins are loaded**	**Implement routine litter cleanup program, including area under metals bin**
Service Adequacy	Improved	Improved	Neutral	Neutral	Neutral	Neutral
Waste Diversion Outcomes	Neutral	Improved	Neutral	Neutral	Neutral	Neutral
Commercial Sector Impact	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
Capital Cost	Low	Low	Neutral	Low	Neutral	Neutral
Operating Cost	Neutral	Neutral	Neutral	Low	Neutral	Low
Implementation Risk	Low	Low	Neutral	Low	Neutral	Low
Impacts to Public/Users	Low	Low	Improved	Neutral	Neutral	Improved
Impacts to Operations	Improved	Improved	Neutral	Neutral	Low	Low
Impacts to other stakeholders	Neutral	Neutral	Neutral	Neutral	Low	Neutral
Implementation Timeline	Short	Short	Short	Short	Short	Short
Other considerations and additional description	- Add up to four angled parking stalls at end of main drive loop, numbered 1-4 east to west - Add two large "Do Not Block Driveway" signs or "Pull Through to Parking Spots – Do Not Stop" - one at the site entrance and one approaching the south end of the loop. - Add cross hatched line painting designating no stop zones. - Option expected to increase combined queuing and vehicle parking capacity to up to 12 small vehicles					- Litter observed under metals bin during both site visits

APPENDIX A

Table 30:Tier 2 Options Evaluation

Evaluation Criteria	Tier 2 Options						
Description	**Add lockable gates at both site entrances and establish fencing along property line to improve site security**	**Install electric bear fencing on perimeter fencing**	**Redesign central compactor bin gate to prevent damage to hinges**	**Relocate attendant shed to lower area in current location of Sea Can (adjacent to metal bin)**	**Install second compactor bin for cardboard**	**Establish separate bins for residential and commercial cardboard**	**Add permanent guardrail at metals bin**
Service Adequacy	Improved	Improved	Neutral	Improved	Improved	Improved	Neutral
Waste Diversion Outcomes	Neutral	Neutral	Neutral	Improved	Improved	Improved	Neutral
Commercial Sector Impact	Neutral	Neutral	Neutral	Improved	Improved	Improved	Neutral
Capital Cost (Class D Estimate)	Medium ($35,000 ± 25%)	Low ($7,000 ± 25%)	Low-medium ($1,000-10,000 ± 25%)	Medium ($15,000 ± 25%)	High ($140,000 ± 25%)	Medium ($10,000 ± 25%)	Low ($7,500 ± 25%)
Operating Cost	Neutral	Medium	Low (cost savings – reduced maintenance)	Neutral	Medium-high (cost savings – reduced hauling)	Medium	Neutral
Implementation Risk	Moderate	Low	Low	Low	Low	Low	Moderate
Impacts to Public/Users	Low	Low	Neutral	Improved	Improved	Improved	Moderate
Impacts to Operations	Moderate	Moderate	Improved	Improved	Improved	Moderate	Low
Impacts to other stakeholders	Moderate	Low	Improved	Neutral	Neutral	Low	Neutral
Implementation Timeline	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Other considerations and additional description	Consultation and coordination with TELUS will be required. Material currently stored on or adjacent to TELUS property may need to be relocated.		Options include: 1) Remove gate, posts, and hinges 2) Rotate hinges to move hinges and gate closer to wall in open position, providing 2-3 inches of additional clearance from bin. Adjust gate latching mechanism as needed (when gate in closed position). 3) Raise gates 1-2 feet to provide clearance from compactor bin corner. Add rubber flap to bottom of gate as needed. Consider adding concrete curb adjacent to wall to act as a guide for the bin and to protect the gate post. Adjust gate latching mechanism (when gate in open position) as needed.	- Relocate Sea-Can (currently being used for storage) to upper area and use to store material that is currently uncovered (paint cans, propane, tanks, light bulbs, fire extinguishers) - Requires relocation of electrical connection to attendant shed - Assumes Porta Potty would remain in its current location - Increased site attendant oversight will result in improved user education and support their safety	- Requires new structural foundations and electrical connection - Additional electrical and maintenance costs however cost savings due to reduced hauling	Capital costs would be higher if additional compactor bin added	
Asset Life / Replacement Timing	20-25 years	10-15 years	15-20 years (depends on selected option)	20-25 years	10-15 years	10-15 years	25+ years

APPENDIX A

Table 31: Tier 3 Options Evaluation

Evaluation Criteria	Tier 3 Options		
Description	**Expand footprint of upper recycling area by clearing vegetation and establish level gravel area to establish cleared buffer between materials and forested area. Consider adding 1-2 covered canopies or Sea-Can containers.**	**Redesign entire site to create separate garbage and recycling areas, increasing storage space and queuing distance on site. Add 2 new Sea-Can containers. Includes new chain and electric fencing.**	**Assess organics diversion options (e.g., collect organics on site, review alternate organics collection locations, encourage backyard composting, etc.) and explore local processing options**
Service Adequacy	Improved	Improved	Improved
Waste Diversion Outcomes	Improved	Improved	Improved
Commercial Sector Impact	Improved	Improved	Improved
Capital Cost	Medium ($60,000 ± 25%)	High ($320,000 ± 25%)	To be determined
Operating Cost	Low	Medium	To be determined
Implementation Risk	Medium	Medium	To be determined
Impacts to Public/Users	Medium	Medium	To be determined
Impacts to Operations	Medium	Medium	To be determined
Impacts to other stakeholders	Medium	Medium	To be determined
Implementation Timeline	Long	Long	Long
Other considerations	Consultation and coordination with TELUS will be required. Material currently stored on or adjacent to TELUS property may need to be relocated.	Refer to concept sketch provided as Appendix E.	To be determined
Asset Life / Replacement Timing	5-10 years (gravel surface before major regrade) 20-25 years (structures)	5-10 years (gravel surface before major regrade) 20-25 years (structures)	To be determined

APPENDIX A

9. Financial Analysis

A high-level financial review was completed focusing on an assessment of historic hauling costs. CRD budgets from 2021 to 2026 for the Port Renfrew Refuse Disposal were also reviewed to understand the PRTS' primary operating costs and revenues. A summary of our assessment is provided in this section.

9.1 Funding Model

The Port Renfrew Refuse Disposal Service is funded primarily through tax requisition and an annual contribution from Pacheedaht First Nation. These revenue streams do not fully cover the cost of the service. Therefore, the CRD's Environmental Resource Management (ERM) division provides the Port Renfrew Refuse Disposal Service with an annual contribution to address the funding shortfall. Since 2021, the annual contribution from ERM has represented approximately 20% of the total revenues of the service. As shown in **Figure 10** below, ERM's contribution represented approximately 40% of the service's total revenue in 2025.

The primary operating costs are auxiliary staff wages (site attendants) and contracted services (hauling and processing costs). A breakdown of these costs based on 2025 data is presented in **Figure 11** below.

In 2024, facility operations transitioned from a long-term caretaker model (the caretaker lived on site and the depot was open 24/7) to a staffed model with 2 auxiliary CRD employees (site attendants). This change shifted one of the primary operating costs from the caretaker operations contract to auxiliary staff salaries.

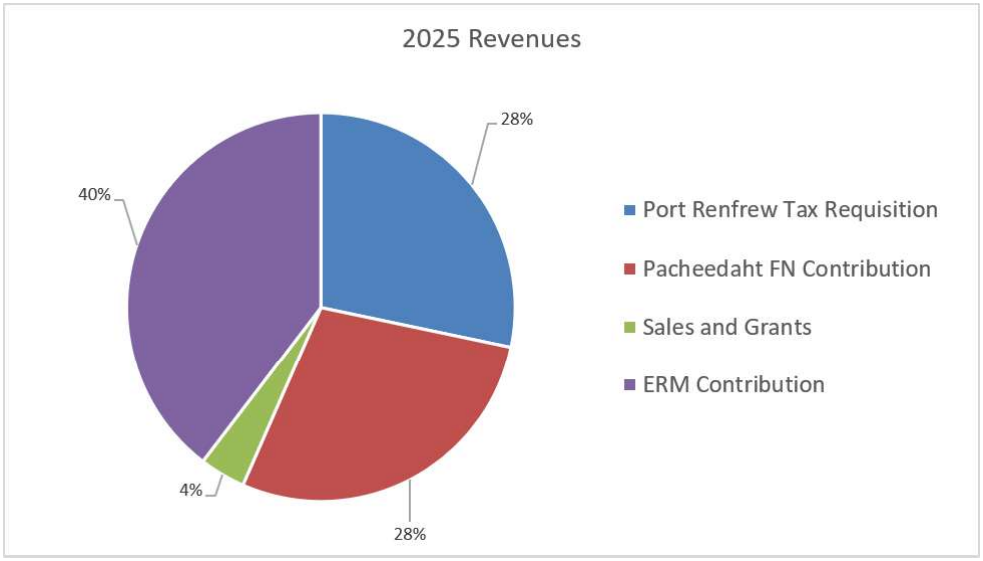


Figure 10: Port Renfrew Refuse Disposal Service – Allocation of 2025 Revenues

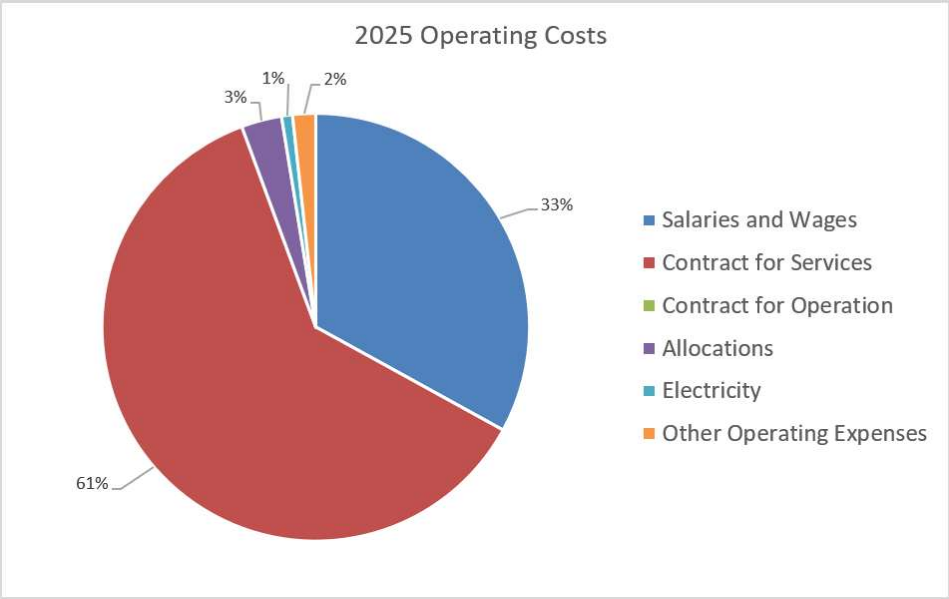


Figure 11: Port Renfrew Refuse Disposal Service – Allocation of 2025 Operating Costs

The scope of the financial analysis completed for this project did not include a detailed analysis of all cost and revenue items, a comprehensive funding model review, or cash flow projections. The primary focus of the analysis was a review of the primary operating costs (auxiliary staff wages and hauling costs) to assess where potential improvements to operations could result in cost efficiencies. In 2025, approximately 61% of operating costs were related to contract service (material hauling and processing) and 33% were for auxiliary staff wages.

Challenges with the current funding model and alternative funding models are presented in Section 9.4.

9.2 Hauling Costs

Hauling costs make up over 60% of the facility operating costs. A breakdown of the facility hauling costs for garbage, cardboard, and metals over three years from 2023 to 2025 is presented in the figures below.

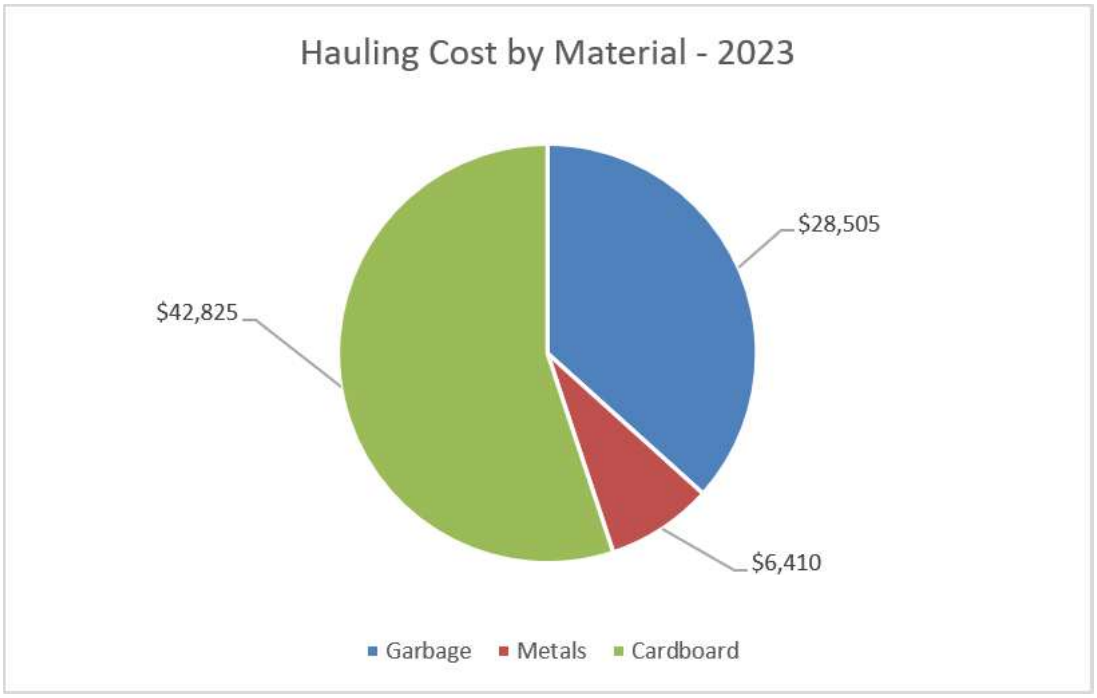


Figure 12: 2023 Hauling Costs for Garbage, Cardboard, Metals

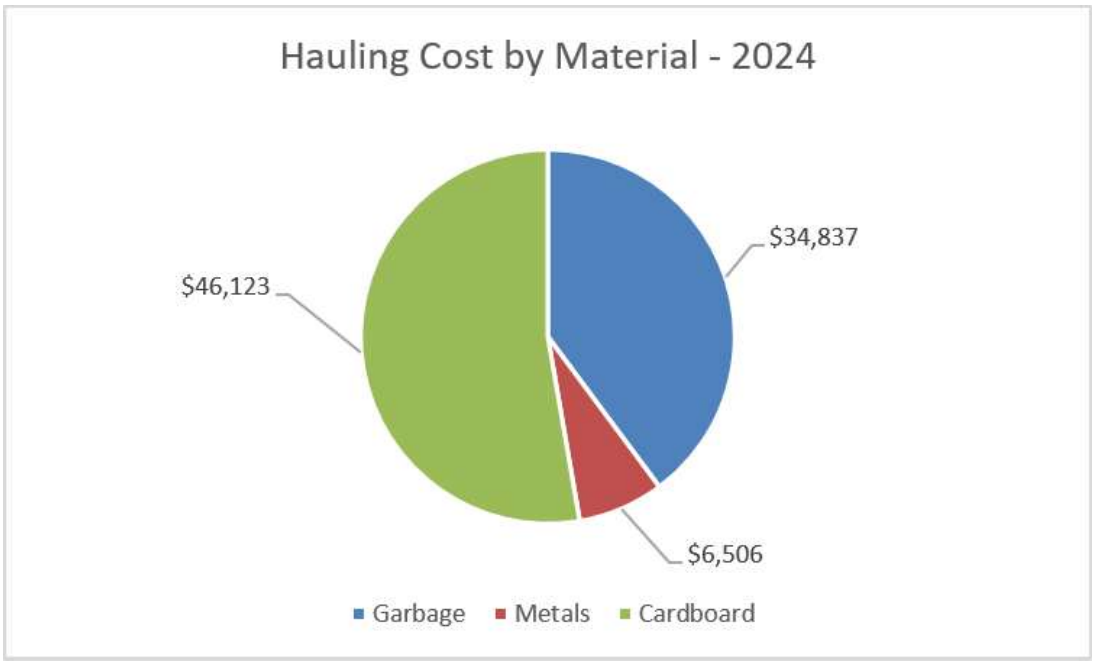


Figure 13: 2024 Hauling Costs for Garbage, Cardboard, Metals

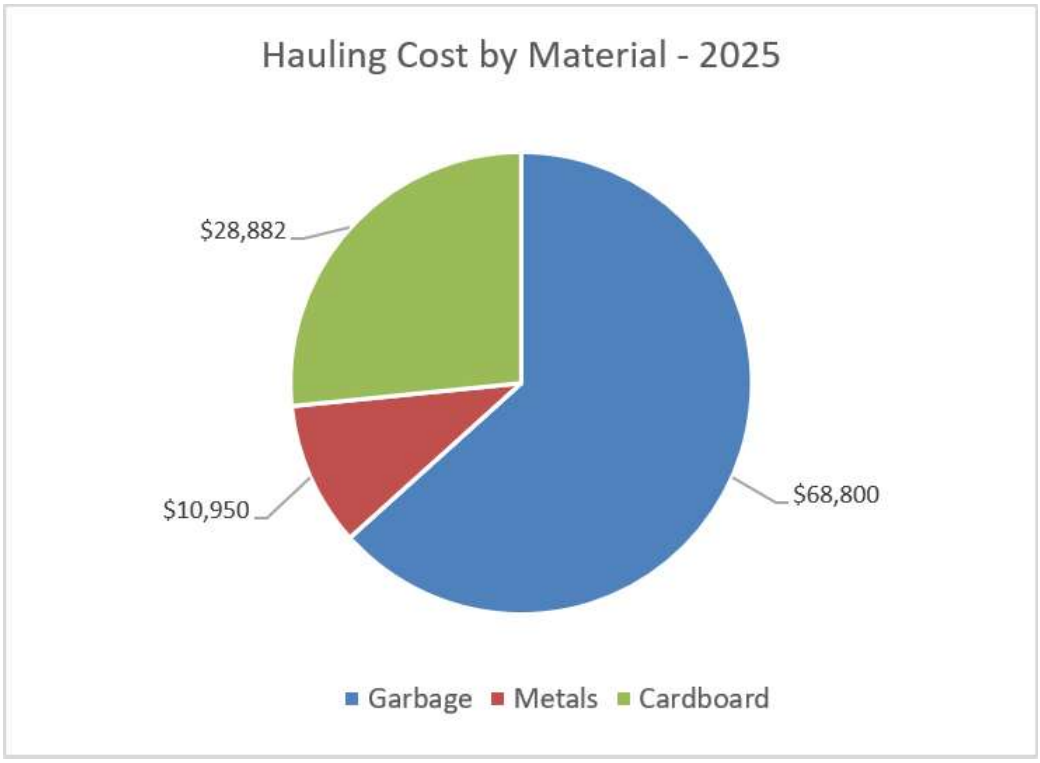


Figure 14: 2025 Hauling Costs for Garbage, Cardboard, Metals

As shown in the figures above, cardboard hauling costs made up just over 50% of the total hauling costs in 2023 and 2024. However, in 2025, cardboard hauling costs decreased substantially (37% reduction from previous two years) whereas garbage hauling costs increased significantly (approximately doubled).

The cost per tonne to haul these three material streams from 2023 to 2025 is presented in **Figure 15** below.

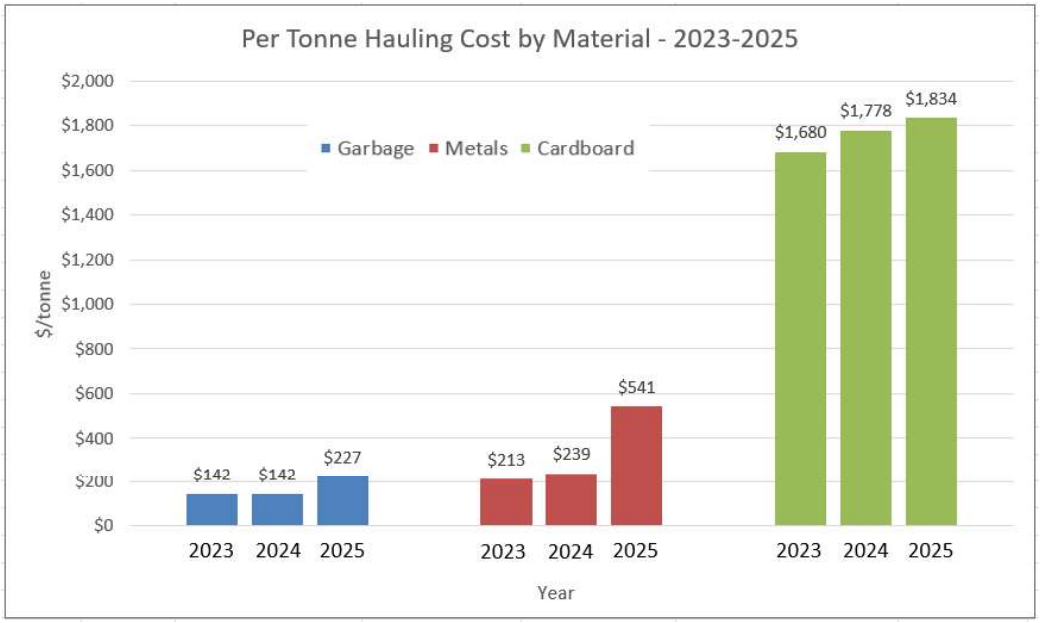


Figure 15: Hauling Cost per Tonne for Garbage, Cardboard, Metals – 2023 to 2025

In 2023 and 2024, the per tonne hauling costs for garbage and metals remained fairly consistent. However, in 2025, the per tonne hauling cost increased substantially (60% increase for garbage and 126% for metals). The

per tonne hauling costs for cardboard are significantly higher than the other two materials however have only seen modest annual increases over the past three years (less than 6% increase per year).

Under the current hauling contract, the CRD pays a flat rate per bin haul for garbage and metals. In 2026, the flat rates were $872.90 and $740.95 for garbage and scrap metal, respectively. Cardboard is hauled on an hourly rate of $142.50 per hour. Assuming a 6.5 hour trip (typically 6-7 hours), the cardboard hauling cost per trip is approximately $930 per haul.

Cardboard hauling costs are high relative to garbage and metals because the weight of cardboard per haul is low. Cardboard is hauled from the PRTS uncompacted in roll off bins.

9.3 Discussion

Reducing hauling costs is one of the biggest opportunities to reduce overall facility operating costs. Hauling costs are often impacted by market conditions (fuel costs, contractor availability, etc.) however per tonne costs can be reduced by maximizing the haul weight, within the legal road limit.

The estimated average bin haul weights for garbage, metals, and cardboard from 2023 to 2025 is summarized in **Table 32** below.

Table 32: Average Bin Haul Weights - Garbage, Metals, Cardboard (2023 to 2025)

Year	Garbage (tonnes)	Metals (tonnes)	Cardboard (tonnes)
2023	4.9	2.1	0.62
2024	4.2	1.9	0.55
2025	3.8	1.3	0.58

The implementation of the compactor in June 2026 is expected to increase garbage densities and haul weights while reducing the per tonne hauling cost (assuming flat rate haul rates do not increase substantially). Based on available compactor hauling data (9 hauls from the end of June to early July 2026), the compactor bin has increased waste densities by three times (215% increase from approximately 112 kg/m^3 uncompacted to 353 kg/m^3 compacted) and increased load weights by approximately 76%. The site attendant appears to be diligent in maximizing the bin weight before it is picked up by using the three-quarter full bin indicator as a gauge to call for a bin pickup. The per tonne garbage hauling cost should be assessed after more data is available on garbage compactor bin weights and costs.

Metals Management

Metal hauling costs make up about 10% of overall hauling costs; they saw a 126% increase in per-tonne hauling costs in 2025 compared to 2024. This increase is due to a significant increase in the metal haul rate (57% increase from $464.73 to $730 per haul), combined with a decrease in average haul weights (a 31% decrease from 1.9 tonnes to 1.3 tonnes per haul). The bin currently being used to collect metals appears to be a 40 cubic yard roll off bin. The CRD could explore the option of using a larger bin (for example, a 50 cubic yard bin, similar to the bin currently being used to collect cardboard). However, the larger bin will likely be taller than the current bin and the ability for users to place material into the bin at the top of the wall will need to be considered. If a larger bin is used, the grades at the bottom of the wall may need to be lowered to accommodate the larger bin. Considering metal hauling costs only make up about 10% of the overall hauling costs, we recommend prioritizing maximizing cardboard and garbage weights before metal. The weight of a full metal bin is highly variable and generally cannot be compacted, unlike garbage and cardboard.

Cardboard Management

Based on the number of roll off truck rental hours (adjusted proportionally based on cardboard tonnages) and an assumed round trip haul time, the number of cardboard bin hauls was estimated. Dividing the total tonnage of

cardboard reported from 2023 to 2025 by the estimated number of bin hauls, we estimate that each bin weighed approximately 0.6 tonnes. Assuming a 20 cubic yard bin has historically been used to collect cardboard (observed on site during the May 2026 site visit), cardboard densities are estimated at approximately 38 kg/m^3. For reference, a cardboard baler can achieve densities up to 500 kg/m^3. Assuming a second compactor (or baler) with a 28 cubic yard capacity is installed (similar to the compactor currently being used for garbage) and achieves a similar density to the garbage densities observed to date (350 kg/m^3), we estimate the number of haul trips could be reduced from the estimated 30-40 trips per year to less than 5 trips per year. Assuming each trip is approximately $1000 per haul, this could result in cost savings of at least $25,000 per year. Based on the recent garbage compactor supply and installation costs (~$230,000, including foundations and associated electrical upgrades) and assuming average annual maintenance costs of $1,000 per year, the simplified payback period for a cardboard compactor is conservatively estimated at just under 10 years. The recent compactor installation costs included significant site electrical upgrades (3-phase power). Assuming no further site electrical upgrades will be required (since the site now has a 3-phase power connection) and removing these costs from the future baler installation cost (assume electrical connection will be required for a new baler but not site power upgrades), the simplified payback period is reduced to approximately 6 years. These high-level estimates are intended to demonstrate the potential benefit of installing a baler for cardboard however we recommend a more detailed business case be completed, based on an actual quote for supply and installation of a new cardboard baler, as well as based on confirmed cardboard tonnages anticipated to be managed at the site. We understand the CRD is currently in discussions with Recycle BC to manage cardboard on site, and the cardboard tonnages that the CRD may be required to manage are unknown at this time. The potential GHG emission savings should also be considered in the cardboard compactor business case.

Organics Management

Organic materials make up approximately 43.5% of the garbage stream currently being landfilled, with the majority of the organics determined to be food waste (over 95% of organics in garbage stream was food waste, with less than 5% consisting of yard waste). Organic material was found to be the most landfilled material by all user groups over both seasons and is the material stream with the largest opportunity to increase waste diversion. Based on the waste composition results and a realistic food waste capture rate, we estimate that up to 70 tonnes of food waste per year could be diverted within Port Renfrew.

A high-level financial analysis was completed to assess the impact of implementing an organics diversion program (food waste) at the Port Renfrew Transfer Station. Several assumptions were made in completing the high-level analysis presented in this section. The key assumptions are as follows:

- The available food waste available for diversion is based on the waste composition determined through the low and high season waste composition studies.
- A 50% average food waste recovery rate is assumed (i.e., of the total amount of the food waste estimated to be in the garbage stream based on the audit results, 50% of that material could be recovered from all user groups through the implementation of organics diversion programs). Actual recovery rates will depend on several factors including education and outreach, user participation in the diversion program, and collection infrastructure availability.
- Density of loose, uncompacted food waste for hauling is 0.25 tonnes/m^3
- There is space available on-site for additional organics (food waste) collection container(s)
- Hourly haul rate for organics is $142.5/hour (based on current hourly haul rate for cardboard/paper and mixed containers.
- Nearest authorized food waste composting facility is South Island Organics in Cobble Hill, BC. A round trip haul from the Port Renfrew Transfer Station including loading and unloading is 4.5 hours.

- Tipping fees and surcharges:
    - General refuse (garbage - $160/tonne)
    - Surcharge for banned organics – assume 100% surcharge (i.e., $160/tonne on top of general refuse tipping fee)
    - Organics tipping fee at processing facility - $100/tonne
- Value of landfill airspace - $160/tonne

It is understood that organics were collected at the transfer station from 2014 to 2018, and there is now interest in reestablishing an organics collection program at the PRTS. Any lessons learned from that period should be reviewed and mitigation strategies implemented. We understand that one reason the organics bins were removed were due to them being a bear attractant.

A summary of the key considerations that should be assessed with the implementation of organics collection at the PRTS are identified in **Table 33** below. The analysis presented in this report was limited to a simplified financial analysis. Greenhouse gas impacts, environmental, operational social impacts were not analyzed in detail.

Table 33: Summary of Key Considerations with Organics Collection at PRTS

Financial / Economic	Environmental	Social / Political	Operational
• Hauling costs (increased organics hauling, decreased garbage hauling) • Tipping fees and surcharges (additional organics processing costs, reduced landfill tipping fees and banned material surcharges) • Reduced landfill airspace consumption • Additional operating facility operating costs (collection bin maintenance, cleanup, staffing, vector and wildlife control) • Capital costs for collection bins and supporting infrastructure (i.e., cleared pad, signage, fencing, etc.)	• Net GHG impacts from hauling (additional organics hauls, reduced garbage hauls) • Reduced landfill gas generation from reduced organics landfilled • Additional vector and wildlife attractant risk at PRTS • Additional litter and contamination risk at PRTS	• Alignment with Solid Waste Management Plan and diversion and disposal targets • Alignment with kitchen scraps landfill ban • Community and political support for organics collection and diversion within Port Renfrew • Policy options to recover costs for organics collection service	• Additional staff resources dedicated to organics collection area (customer education, cleanup, bin pickup coordination, etc.)

Based on 2025 tonnage data (total 304 tonnes disposed in 2025), the estimated food waste that can be recovered from the garbage stream is 66 tonnes. Based on the densities and payloads achieved using the new garbage compactor, the reduction in garbage hauls is estimated to be 9 hauls per year, which is equivalent to approximately $7,600 in annual savings related to garbage hauling.

The savings in garbage (general refuse) tipping fees at the Hartland Landfill due to the diversion of the food waste (assuming a $160/tonne general refuse tipping fee) is approximately $10,600.

Two additional costs related to organics disposal at the Hartland Landfill were considered in this analysis:

- Banned material surcharge (assumed to be a 100% surcharge)
- Value of landfill airspace consumed (assumed to be valued based on the current refuse tipping fee)

The banned material surcharge and value of landfill airspace consumed were estimated at $10,600 and $10,600, respectively.

To estimate the additional operational costs to collect organics, hauling and processing costs were considered. Similar to other material streams collected at the transfer station, hauling costs are expected to be the most significant cost associated with managing organics. Two hauling scenarios were assessed:

- Lower cost scenario – organics collected in 20 cubic yard (15 m^3) roll-off container on site and only hauled out when full. The total number of annual hauls is estimated at 18 hauls per year, or an average of one haul every three weeks.
- Higher cost scenario – organics collected in 6.5 cubic yard (5 m^3) dumpster-style container on site and hauled out every week. The total number of annual hauls is estimated at 52 hauls per year.

The lower cost scenario is based on an option where the number of hauls are minimized using a larger collection bin whereas the higher cost scenario considers the need to haul out organics more frequently (weekly) to minimize the wildlife and vector attractants on site. The feasibility of both hauling scenarios should be assessed once the operational preference and container size is known.

It was assumed that organics would be hauled and processed at the South Island Organics facility in Cobble Hill. The assumed organics processing tipping fee was $100 per tonne.

A summary of this high-level financial assessment is provided in **Table 34 and 35** below.

Table 34: Summary of High-Level Financial Assessment of Organics Collection – Status Quo Costs

Status Quo – Organics in Garbage Stream	Cost
Hauling costs (as garbage)	$7,600
Tipping fees (as garbage)	$10,600
Subtotal – status quo costs	$18,200
Banned material surcharge (assume 100% surcharge)	$10,600

Value of airspace consumed (based on refuse tipping fee)	$10,600
Total – status quo costs + surcharge + airspace)	$39,400

Table 35: Summary of High-Level Financial Assessment of Organics Collection – Additional Organics Hauling and Processing

Organics Collection	Cost – Low Range	Cost – High Range
Hauling costs (as organics)	$11,300	$33,300
Tipping fees (organics)	$6,600	$6,600
Total – hauling + processing	$17,900	$40,000

As shown in **Tables 34** and **35**, the cost difference between the status quo scenario (organics in garbage) and implementing organics collection will depend on several factors including the extent of banned surcharges applied to garbage loads in the future as well as organics hauling and processing costs (organics tipping fee) which depend on the processing facility. The preliminary analysis presented above is intended to demonstrate the key variables that influence the cost of implementing organics collection at the PRTS. The scenario above is based on the assumption that organics would be processed at the South Island Organics facility in Cobble Hill. Another option that was not assessed was the scenario where organics are hauled separately to the Hartland Landfill where they are transferred at the existing kitchen scraps transfer station and then hauled with the rest of the organics to the Convertus Composting Facility in Nanaimo. We understand the CRD has a long-term kitchen scraps hauling and processing contract with Convertus. There may be cost efficiencies if the additional organics from the PRTS can be managed within the existing contract.

Considering the hauling cost is expected to be the most significant cost to manage this material stream, options to divert and process organics within the community should be explored, including a cost-benefit analysis of processing organics locally compared to hauling organics out of the community. In addition to the facility specific recommendations provided above, we recommend the CRD consider targeted education and outreach to specific user groups where high fractions of divertible material were found in the garbage stream.

A review of potential technologies to process organics on-site is outside the scope of this study. However, an example within the CRD of a small scale organics processing facility managing similar tonnages (less than 100 tonnes per year) is on Salt Spring Island. If organics are processed on site, additional space will likely be required which may trigger one of the Tier 3 upgrades. Due to the low economies of scale, the installed cost for a small-scale organics processing unit (including planning, design, and site preparation) can be expected to be in the $CAD 4,000-7,000/tonne organics range. We recommend preliminary quotations and more detailed cost estimates be obtained as part of a more detailed feasibility assessment.

9.4 Alternative Funding Models and Policy Options

The Port Renfrew Transfer Station's current funding model does not reflect each user's actual usage (i.e., waste contribution) of the facility. Best practice is to recover costs based on a user-pay model, which is a funding model where facility users pay proportional to the amount of waste they dispose at the facility, rather than through a flat fee bundled into property taxes or a fixed utility charge.

A user-pay model can provide the following benefits:

- It creates a direct financial incentive to reduce waste, divert recycling and organics, and avoid contamination, since diversion streams are typically priced lower or free.
- It shifts cost recovery toward those who generate more waste, which is seen as more equitable than a flat tax-funded system where light and heavy waste generators pay the same.

Common user-pay models include the following:

- Weight-based billing: vehicles are weighed using scales at the point of drop-off and a tipping fee is charged based on the actual weight of waste disposed.
- Volume-based billing: users are charged based on bag count and size of bags (small, medium, large).
- Variable can/cart size (for curbside collection service): households choose a bin size (e.g., 80L, 120L, 240L), and a flat fee is charged based on the size selected. Smaller carts cost less.
- Pre-paid credit programs (bag, tag, stickers): residents must use pre-purchased credits displayed through either pre-purchased bags, tag (attached to each bag), stickers or a punch card that is used during each drop-off event. Cost is typically per unit of waste.

Challenges with Current Funding Model

The current funding model is a flat fee system where users pay a flat fee included in property taxes (Port Renfrew residential and commercial customers) or a flat fee included in an annual contribution (Pacheedaht First Nation residential and commercial customers). Outside users do not pay to use of the facility. Under the current funding model, users do not pay a fee proportional to the amount of waste they dispose at the facility. Furthermore, the service is currently subsidized by the CRD's ERM division because tax requisition and the annual contribution from Pacheedaht First Nation are insufficient for covering the full cost of delivering the service.

Because the PRTS is remote and serves a small community, the operating costs on a per tonne basis are high. Based on the 2025 operating cost of approximately $211,934 and 304 tonnes of garbage accepted, the estimated operating cost is just under $700 per tonne garbage accepted. This is a common challenge for small, remote transfer stations where hauling costs are high and low annual tonnages do not allow the facility to achieve the economies of scale that larger more centralized facilities benefit from. Under a 100% user pay model, tipping fees alone would cover the full costs to operate the facility. However, for smaller facilities such as the PRTS, a hybrid funding model may be the most feasible option recognizing tipping fees can only be increased to a certain limit before the risk of waste leakage and/or illegal dumping increases (e.g., waste bypassing the PRTS due to lower tipping fees outside the region).

A detailed review of tax requisition amounts was not completed for this project however based on a preliminary assessment of commercial tax requisition amounts, the largest commercial users are underpaying relative to their actual use of the facility. This conclusion is based on the following assumptions:

- The three largest Port Renfrew commercial users are estimated to contribute 28% of the total waste to the facility.
- Based on the 2025 operating cost of $211,934, the annual tipping fees required from these three generators under a 100% full cost recovery user pay model would be approximately $59,300.
- Based on 2025 garbage tonnages of 304 tonnes, the estimated contribution from these three generators is 85 tonnes. Applying the general refuse tipping fee of $160 per tonne, required tipping fees would be $13,600.

- The combined 2025 assessed property values for these three properties obtained from BC Assessment is approximately $7,800,000. Applying the 2025 commercial business tax rate of 0.76810 per $1000 of assessed value (as provided by the CRD for property class 06 (Business / Other) for Port Renfrew refuse disposal), the estimated tax requisition amount for the refuse disposal service for the top three Port Renfrew commercial waste generators is $6,000.
- There is a $53,300 difference between the tipping fees required under a 100% user pay cost recover model compared to the estimated 2025 tax requisition amounts.

A summary of this analysis is presented in **Table 36** below.

Table 36: Estimated Financial Contribution in 2025 from Top Three Port Renfrew Commercial Users

Financial contribution based on tax requisition	Required financial contribution based on $160/tonne tipping fee	Required financial contribution based on 100% full cost recovery user pay model
$6,000	$13,600	$59,300

We recommend the CRD verify and update the analysis above based on actual tax requisition amounts. The high-level analysis presented above is intended to demonstrate the significant funding gap under the current tax requisition model on larger commercial users compared the tipping fees that would be required by these users under a 100% user-pay model.

Alternative Funding Models

Alternative funding models were assessed considering the following constraints and assumptions:

- No significant infrastructure upgrades will be implemented on site. Options that would require a complete site redesign including new scales were not considered feasible. Minor site upgrades (for example, electrical and structural upgrades to install an automated transaction systems such as electronic pass cards) were considered feasible.
- The site has limited cellphone service. Options that included electronic payment on site and that rely on data connectivity were considered however additional connectivity upgrades may be required (for example, a satellite connection).
- Cash handling and storage on site is not preferred, given existing site security challenges.

Considering the above constraints, alternative hybrid funding models that include fee collection based on the user-pay principle are proposed. Tax requisition would continue to fund a portion of the facility operating costs (tax requisition on users allowed access to the facility), however the revenue recovered through the options described below would cover any revenue shortfalls (including contributions currently provided by ERM) and would provide a more sustainable funding model that scales as waste volumes grow and that introduces an incentive for waste reduction and diversion.

Considering the limited infrastructure on site and limited staff capacity for additional tasks and oversight, we recommend an approach that minimizes payment or transactions on site. For all options, we recommend the CRD consider establishing separate pricing and account registration for larger commercial accounts that meet a certain threshold (for example, over four visits per week). Punch card and pass card systems with separate commercial account fees have been implemented in several other BC regional districts including Thompson-Nicola RD, the Peace River RD, Columbia Shuswap RD, the Peace River RD.

All options could support the implementation of organics collection at the transfer station. We recommend fees be established to provide a financial incentive to divert organics (higher fees to dispose of garbage, lower fees or no fees for organics dropoff).

Fee collection from Pacheedaht First Nation residential and commercial users would be captured under their annual lump sum contribution, which we understand is currently under review. The fee collection options presented below could also be applied to Pacheedaht First Nation residential and commercial users. If fee collection continues to be based on an annual contribution, a sticker system may assist the site attendant with identifying users covered under the annual contribution. As part of the annual contribution review, we recommend the CRD consider tying the annual contribution amount to organics and recyclables diversion targets.

Table 37: User Fee Collection Options

	Option 1 – Commercial Accounts	Option 2a – commercial accounts + punch cards for residents	Option 2b – commercial accounts + reloadable cards for residents
Description	Require large commercial users to register for a credit account. Usage would be recorded by site attendant (based on estimated volume) and invoices would be sent to the business afterwards on a monthly basis for payment.	Option 1 + pre-issued punch cards with fixed number of punches required by residential users to dispose of garbage	Similar to Option 2a, however reloadable electronic cards used instead of punch cards. Additional card reader kiosk installed at site entrance.
Residential customer impacts	No change.	Residents required to purchase punch cards in advance and show punch cards during each visit	Residents required to purchase electronic cards in advance and show cards during each visit. Residents required to load cards online in advance.
Commercial customer impacts	Users required to register for credit account, and pay on a monthly basis.	Same as Option 1	Same as Option 1
Pros	No transactions on site. Requires minimal additional staff time – additional logging required for customer invoicing. Creates incentive for waste diversion from commercial users. No impacts to residential users.	Introduces financial incentive to all user groups to reduce and divert waste Requires minimal infrastructure upgrades on site. No cash transaction on site.	Introduces financial incentive to all user groups to reduce and divert waste Reduces attendant transaction time and captures usage data automatically.
Cons	Residents continue to pay a flat fee through property	Additional oversight and effort required by site	Capital investment for card readers (upgrades include

	taxes only – minimal incentive for additional waste diversion from residential users.	attendant to interact with every user entering site. Residents may lose or forget cards – backup fee collection system required.	electrical and structural) and cards. Higher operating costs including kiosk maintenance and card replacement, including software subscription. Residents may lose or forget cards – backup fee collection system required.
Outside Users	Fees collected on volume basis (bags). Card system preferred over cash.	Same as Option 1.	Same as Option 1.
Organics diversion considerations	Both garbage and organics drop off volumes will need to be tracked by site attendant. Different fees applied to each material stream.	Same as Option 1 for commercial users. Consider offering organics drop off at no additional fee for residents (punch cards required for garbage only).	Same as Option 2a.
Policy considerations	Amendment to Bylaw No. 2583 under Port Renfrew Local Disposal Service required to define additional fee collection mechanism and rates. Outreach and engagement with commercial users required.	Same as Option 1. Additional outreach and engagement with residential users required.	Same as Option 2a.

Increasing the tax requisition specifically for Port Renfrew commercial users was considered as an option; however, it is not recommended as the primary cost recovery approach. A tax-based approach, even if differentiated by property class, does not create a direct cost signal tied to the volume of waste a business generates — a business that reduces or diverts waste would be taxed at the same rate as one that doesn't, removing the incentive to divert waste that a user-pay model is intended to create. Increasing taxes is expected to require a longer implementation timeline compared to a bylaw amendment.

A third option (Option 3), involving closure of the facility to commercial users, except those covered through the Pacheedaht First Nation service agreement, was also considered. Under this option, the facility would only be open to Port Renfrew residents and Pacheedaht First Nation (residential and commercial). User fees would be introduced for Port Renfrew residential customers only (refer to Options 2a and 2b). This option was considered a more stringent alternative to introducing user fees for commercial users. If the CRD closes the facility to commercial users, these users will need to find alternative disposal options provided by private waste collection contractors currently servicing the Port Renfrew area. A detailed financial assessment was not completed for this option.

10. Conclusions and Recommendations

Through two waste composition studies completed in May and July 2026, the waste composition and contribution from seven user groups using the Port Renfrew Transfer Station was determined. Compostable organic material represents over 40% of the material in the garbage and represents the greatest opportunity to increase diversion rates from all user groups. Recyclable materials, including containers and paper as well as construction and demolition waste, was approximately 30% of the material in the garbage. While there was some seasonal variability in the waste composition between the seven user groups (for example, compostable organics material in the garbage increased in the high season), generally the overall fraction of divertible materials from each user group remained consistent between both seasons. Sector specific results indicate that the Port Renfrew and Pacheedaht First Nation commercial sectors had the highest fractions of cardboard in the garbage stream whereas the residential sectors (Port Renfrew and Pacheedaht First Nation) generally had a higher fraction of organic material in their garbage. Notably, short-term rentals in the high season had the highest fraction of organics in the garbage stream compared to all other user groups.

The waste contribution estimates show that all user groups contribute different amounts of waste to the transfer station. Over the year, the largest waste contributor is Port Renfrew Commercial (approximately 32%). We estimate that the three largest commercial businesses in Port Renfrew contributed approximately 28% of the total waste received in the high season. The next largest waste contributor is Port Renfrew residential (27%), followed by Pacheedaht First Nation commercial (19%), Port Renfrew short-term rentals (10%) and Pacheedaht First Nation residential (8%). Outside waste accounted for approximately 5% of the garbage received at the transfer station, with residential sources making up the majority of outside waste (3.4%). Considering seasonal variability in contribution, the total waste contribution from short-term accommodations increased the most (on a relative basis) in the high season compared to the low season (approximately 100% relative increase in high season), followed by Port Renfrew residential (45% relative increase in high season). The total amount of garbage contributed by Pacheedaht First Nation (commercial and residential) decreased in the high seasons compared to the low season (approximately 34% and 22% relative decrease, respectively).

From an operational perspective, the Port Renfrew Transfer Station is well run, which we attributed to a diligent and experienced site attendant who maintains good relations with the transfer station users. These relations were noted to be valuable in supporting the day-to-day operations and helpful when resolving user concerns and/or conflicts. One of the primary challenges for operations is a constrained site with a relatively small site footprint. The site operates in two separate areas without direct sightlines which makes it challenging for the site attendant to supervise and oversee facility users. Furthermore, the attendant shed is located relatively far from the main garbage and recycling dropoff area, which makes it challenging for the site attendant to inspect all incoming loads. To improve oversight and supervision, we recommend the CRD consider relocating the attendant shed to the lower main garbage and dropoff area.

In the short term, we recommend the CRD implement minor operational modifications and capital improvements to improve traffic flow and mitigate queuing onto Parkinson Road, protect site infrastructure (compactor bin gate), and to address fall risks identified at the metal bin. Other minor operational capital improvements are recommended to improve site cleanliness, site security, prevent after-hours access, and to discourage illegal dumping at the site entrance. Having a secure site will be critical for supporting any future user pay systems.

In the long term, we recommend the CRD consider a larger site expansion and redesign to meet the projected growth in facility usage and waste material quantities. A priority of the site expansion should be to increase the available queuing distance and parking spots. We recommend two separate areas be established for garbage and recycling. The expanded site should facilitate inspections of incoming loads, provide good sightlines from the attendant shed, provide contingency storage capacity, and provide sufficient space for the future expansion of existing and additional recyclable material categories. We also recommend that the PRTS be considered in the CRD's regional disaster debris management planning efforts. Contingency plans should be in place that

outline how waste will continue to be managed at the PRTS in the event of service interruptions and/or in the event of natural disasters that impact the community.

A core objective of this study was to assess if the Port Renfrew Transfer Station has the capacity to meet current and future demands, considering current and projected growth in waste and facility usage. Based on the demand forecast, the facility has the capacity to manage the forecasted quantities of garbage over the short (< 5 years), medium term (5-10 years), and long term (10-20 years). The estimated facility usage (user trips) is also expected to be manageable over the short and medium term. In the long term, one of the main capacity constraints with the current site is the anticipated peak traffic volumes and limited queuing and parking spots on site. Furthermore, while garbage tonnages are expected to be manageable with the new compactor bin over the 20-year planning horizon, there may be inadequate space to accept additional recyclable material categories in the future. Because the PRTS has limited space, it will be important that the available footprint be utilized as efficiently as possible and that the site attendant continue to provide guidance to facility users to ensure efficient traffic flow and proper waste placement at the site.

The current funding model relies on revenue streams (tax requisition and an annual contribution from Pacheedaht First Nation) that are insufficient for covering the full cost of delivering the service. We recommend the CRD transition to a hybrid funding model at the PRTS where user fees are introduced to provide a more sustainable and equitable funding stream, and to provide a financial incentive for waste diversion. The three alternative funding models recommended for further consideration are summarized as follows:

1. Option 1 – user-pay system for large commercial users.
2. Options 2a and 2b - user-pay system for all users.
3. Option 3 - closure of the facility to commercial users, user-pay for residential users.

If introduced in a phased approach, the initial priority should be introducing user fees for commercial customers who contribute the most waste to the facility. A pre-paid punch card or electronic pass card system is recommended for residential users. Key considerations with introducing any user pay system includes the operational impacts at the facility and additional effort required by the site attendant to estimate load sizes and complete transactions, the additional administrative effort required to administer and enforce fee collection, upfront capital investment (for example, card readers if electronic cards are used), and user engagement and education efforts required for successful implementation. The introduction of user fees could support the implementation of organics (food waste) collection at the PRTS where differential fees could encourage organics diversion (lower fees for organics dropoff compared to garbage).

Based on a high-level review of the facility's operating costs and revenues, we recommend the CRD prioritize the installation of a cardboard baler to reduce cardboard hauling costs. Cardboard hauling costs have historically been one of the most significant costs associated with the operation of the transfer station and increasing the density of cardboard would result in significant cost savings due to reduced haul trips. To inform future program changes, we recommend the CRD start tracking commercial and residential cardboard separately. Options to collect and fund commercial cardboard separately should be considered. We recommend that the CRD continue to use the garbage compactor bin and work with the site attendant to maximize the load weight of each bin. Options to increase the metal bin size and load weights should be explored, however this should be considered a lower priority compared to maximizing the garbage and cardboard load weights.

The estimated waste disposal rate in Port Renfrew (estimated at 770 kg/person in 2025) is well above the average for the entire CRD region (330 kg/person in 2025). Commercial businesses are the largest generator of waste received at the transfer station and are the user group where additional diversion would have the greatest impact. Organic material is the most landfilled material by all user groups over both seasons and is the material stream with the largest opportunity to increase waste diversion. Based on the waste composition results and a realistic food waste capture rate, we estimate that up to 66 tonnes of food waste per year could be diverted

within Port Renfrew. Benefits to diverting food waste within the community includes reduced landfill airspace consumption and landfill gas generation. It also supports the CRD Solid Waste Management Plan goals to reduce per capita disposal, to extend the life of the Hartland Landfill to 2100, and aligns with the CRD's kitchen scraps ban at the Hartland Landfill. There is currently a high level of uncertainty on the operational costs associated with implementing food waste collection at the PRTS as several factors are unknown at this time including the organics collection method, hauling costs and rates, and processing facility including tipping fees. A high-level financial assessment indicates that the business case for organics collection at the PRTS is improved when the costs of an organics surcharge and value of landfill airspace is considered in the costs of the status quo scenario (no diversion of organics). We recommend the CRD complete a more detailed assessment once the collection method, processing facility, and hauling costs are confirmed. Options to divert and process organics within the community should be explored, including a cost-benefit analysis of processing organics locally compared to hauling organics out of the community. In addition to the facility specific recommendations provided above, we recommend the CRD consider targeted education and outreach to specific user groups where high fractions of divertible material were found in the garbage stream.

10.1 Recommended Priorities

This report presents both operational and policy recommendations for the Port Renfrew Transfer Station. **Table 38** below summarizes all recommendations and options together, organized by anticipated implementation timeline. Dependencies between recommendations are noted where relevant.

The proposed priority list is intended to provide general guidance to the CRD. It should be reviewed and updated annually as recommendations are completed and progress is made towards longer-term priorities.

Table 38: Recommended Priorities

Priority	Recommendation	Type	Notes
Near-term (0-6 months)	Implement Tier 1 upgrades	Operational	Address immediate safety concerns and operational challenges on site.
Near-term (0-6 months)	Initiate discussions with TELUS regarding short-term issues (site security) and long-term plans (site expansion and redesign).	Policy / Planning	Confirm exact location of property line (legal survey)
Near-term (0-6 months)	Confirm preferred alternative funding model (from Options 1, 2a/2b, 3) and initiate Bylaw 2583 amendment process, including engagement with residential users	Policy / Planning	Consider activating existing fee provision under Bylaw 2583 for outside users Consider incorporating enforcement mechanism in bylaw (penalties, fines and/or surcharges) Alternative funding models to be advanced for further considerations: • Option 1 – user-pay system for large commercial users • Options 2a and 2b - user-pay system for all users

			• Option 3 - closure of the facility to commercial users, user-pay for residential users
Near-term (0-6 months)	Develop engagement plan for commercial waste generators	Policy / Planning	Include proposed bylaw changes, new tipping fees and how it will impact them, planned organics collection Preferred alternative funding model (Options 1, 2a/2b, 3) needs to be confirmed first as each option will have different impacts to commercial users (for example, Option 3 will require commercial users to seek alternative waste collection and disposal services).
Near-term (0-6 months)	Complete additional analysis to support organics collection implementation, including review of collection locations on site.	Policy / Planning	Confirm processing facility and tipping fees, hauling rates, collection method. Update financial analysis. Confirm space availability on site once collection method confirmed
Medium-term (6–18 months)	Implement Tier 2 upgrades	Operational	Note adding lockable gate and fencing on TELUS property requires input and agreement from TELUS Installation of compactor baler and separation of residential and commercial cardboard depends on outcome of ongoing discussions with Recycle BC. Note that main entrance gate and compactor bin gate upgrades are ongoing. Note relocation of the attendant shed is considered necessary to support the preferred fee collection system (allowing site attendant to complete transactions and load volume estimates at site entrance)
Medium-term (6–18 months)	Amend Bylaw 2583 to establish a general fee schedule for all user groups	Policy / Planning	Include fee collection mechanism in bylaw, based on selected alternative funding model (Options 1, 2a/2b, 3)
Medium-term (6–18 months)	Complete site upgrades and procurement to support preferred fee collection method	Operational / Capital	Includes electrical and structural upgrades on site if electronic card system selected. Capital budget approval may be required Procurement includes pass cards, point-of-sale fee collection system, security upgrades on site (if cash collected), load volume collection logs.

Medium-term (6–18 months)	Complete site attendant training and engagement to support fee collection implementation	Operational	Early engagement with site attendant to assess feasibility of fee collection options is recommended
Medium-term (6–18 months)	Develop residential and commercial user engagement, education and outreach plan	Policy / Planning	Include timeline and impacts of new fee collection system. Include details of new organics collection program including fees and requirements
Medium-term (6–18 months)	Complete site upgrades and procurement to support organics collection	Operational	Includes additional bins, site preparation, site security, and containment measures, additional chain-link and electric bear fencing
Medium-term (6–18 months)	Establish registered commercial accounts with credit terms	Policy / Planning	Depends on fee bylaw being in place first
Long-term (18+ months)	Implement Tier 3 site expansion	Operational / Capital	Capital budget approval required. Site expansion upgrades may be implemented in a phased manner (medium term) to support fee collection. Site redesign to create separate garbage and recycling areas will support implementation of fee collection. Fencing around entire site will help minimize bear conflict risks created by organics collection.

11. Closure

The Capital Regional District retained Stellers Jay Engineering to conduct the work described in this report, and this report has been prepared solely for this purpose.

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

Stellers Jay Engineering does not accept responsibility for the use of this report for any purpose other than that stated above and does not accept responsibility to any third party for the use, in whole or in part, of the contents of this document. This report should be understood in its entirety, since sections taken out of context could lead to misinterpretation.

We trust the information presented in this report meets Client's requirements. If you have any questions or need addition details, please do not hesitate to contact one of the undersigned.

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APPENDIX A: Operational Assessment Memo

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Technical Memorandum

To	Alex Berthin, Solid Waste Analyst, Capital Regional District	Page	1 of 14
CC	-		
Project	Port Renfrew Transfer Station Feasibility Study		
Subject	Operational Assessment – May 2026 Low-Season Site Visit		
Site Address	17055 Parkinson Road, Port Renfrew		
Prepared by:	Humphrey Chou, EIT		
Reviewed by:	Curtis Jung, P.Eng.		
Date	June 8, 2026	Project Number	2026015

1. Introduction and Scope

Stellers Jay Engineering (SJE) was retained by the Capital Regional District (CRD) to complete a feasibility study of the Port Renfrew Transfer Station located at 17055 Parkinson Road, Port Renfrew, BC. The overall objective of the feasibility study is to assess how the existing Port Renfrew Transfer Station can continue to meet current and future service needs.

The purpose of this memo is to summarize our observations and discussions during our site visit completed between May 8-11, 2026. The site visit was completed by Humphrey Chou, EIT (SJE) and Naushef Kotadia (AET Group), with Simon Kess (CRD Site Attendant) present throughout. Curtis Jung, P.Eng. (SJE) visited the site on May 8, 2026. Alex Berthin (CRD) and Tom Watkins (CRD) visited the site on May 11, 2026.

The site visit had two primary objectives: (1) an operational assessment of the existing site conditions, infrastructure, and operations; and (2) a low season waste composition audit. This memo covers the operational assessment component. A separate waste composition audit memo summarizing the preliminary audit findings has been prepared and is provided as Appendix A.

Site visit observations and discussions are organized below by topic area. Site record drawings and a simplified site plan markup are provided in Appendix B, and a photo log is provided in Appendix C.

2. Site Visit Observations

2.1 General Site Observations

2.1.1 Materials accepted list

The following materials are currently accepted at the PRTS:

General waste stream:

- Garbage (general refuse)

Household recyclables:

- Paper and cardboard
- Plastic and metal containers
- Refundable containers (glass and plastic)

Hazardous and special materials:

- Used oil and antifreeze
- Used cooking oil
- Paint
- Propane and butane tanks
- Small electronics
- Batteries (household and vehicle)
- Light bulbs
- Smoke detectors
- Thermostats
- Fire extinguishers
- Electronics

Large items and bulky waste:

- Scrap metal
- White goods (large appliances)
- Fridges and freezers
- Furniture and bulky items
- Tires

Donation/reuse:

- Donated items (free for pickup)

2.1.2 Site Design and Sizing Considerations

A core objective of any transfer station design is to provide a site layout and infrastructure that supports safe and efficient operations. A well-planned site layout facilitates efficient and safe traffic flow and provides sufficient queueing space and parking to minimize conflicts between users of the facility and operations. Site sizing is a key design consideration – the site needs adequate space to operate efficiently. The overall size of the site is determined based on the space needed for safe and efficient traffic flow, parking, queuing, material storage and collection (considering current and future material types and quantities), site administrative functions (site office), contingency storage requirements, future expansion, environment controls, and site security.

Based on historic scale data and record drawings, we understand the PRTS was established in the mid to late-2000s. The quantity of waste and types of recyclable materials has significantly increased since the facility opened. The PRTS occupies a relatively small footprint for the range of materials currently accepted at the site. The footprint of the main transfer station area (paved area) is approximately 0.08 ha (800 sq. m) with the gravel area located to the east of the main transfer building occupying a footprint of approximately 0.05 ha (500 sq. m).

The constrained site is a contributing factor to several of the operational challenges observed during our site visit and described in this memo, including traffic congestion and queuing onto Parkinson Road, limited space for bin placement and user circulation, materials stored on unpaved and uneven ground in the northeast area with limited containment and cover, and limited sightlines and access between the site attendant hut and the main drop-off loop. The site also has limited room for future expansion, for the addition of new material categories, and for contingency storage capacity in the event of service interruptions or in the event of an emergency/disaster.

For reference, new rural transfer station sites accepting similar waste tonnages and recyclable materials that we have recently designed have generally been in the 0.4-0.5 ha (4000-5000 sq. m) range. While facility sizing is site-specific and is determined based on several factors, it is important to note that the need to accept a range of recyclable material often significantly increases the space requirements for smaller, rural transfer stations compared to if only garbage was accepted. Recyclables generally require dedicated, enclosed, and often covered storage spaces separate from the main garbage collection areas.

The impacts of inadequate space at transfer station sites include reduced operational efficiency, increased safety risks (e.g., increased vehicle conflicts, traffic impacts, etc.), increased contamination (e.g., due to improper sorting, storage or oversight), increased environmental risks, regulatory non-compliance, and a decrease in staff moral and public perception of the facility.

An assessment of the current and future site space requirements is outside the scope of this memo, however will be considered as part of the Feasibility Study.

2.1.3 User Access, Traffic Patterns and Operational Bottlenecks

Traffic flow at the PRTS follows a counterclockwise loop. A directional arrow is painted at the site entrance to indicate the intended direction of travel. During the first three days of the site visit the arrow was worn and faint; on May 11 the site attendant repainted it in bright pink spray paint using a stencil, which took under five minutes on a dry day. Only one user went the wrong way around the loop over the four-day visit.

The primary traffic issue observed is congestion caused by users stopping at the center-west bin or the southwest recyclables area rather than pulling further into the southernmost part of the loop. The south end of the loop is wide enough to accommodate two vehicles parked along the south wall while allowing other traffic to pass - however few users recognized this without prompting. During the low season visit, backups onto Parkinson Road occurred approximately one to two times per day, with typical user stays lasting one to three minutes.

Some users, particularly older or less mobile residents, preferred to stop partway up the slope near the bins rather than pulling to the south end of the loop. This behaviour contributed to traffic blockages.

A small number of users drove directly up the northeast gravel road to drop off large items, paper/cardboard, or bottles and exited via the east road rather than completing the loop. This means these users bypass the main site area entirely, which has implications for oversight and load tracking, and would pose challenges for any future fee collection or access control system.

2.2 Existing Infrastructure Condition and Effectiveness

2.2.1 Garbage bins and compactor

At the time of the site visit (May 8-11, 2026), the center-west bin was designated for garbage (50 cu. yard roll off bin). This bin was hauled out on May 12 and replaced with an empty bin now designated for paper and cardboard – this change to the site layout is described further under Section 2.2 below. The compactor bin (center-east) has a low chute at approximately waist-to-chest height and users generally had no difficulty loading it. The fence doors on either side of the compactor open to approximately 45 degrees, slightly narrowing the driveway - this was not identified as a significant issue by the site attendant.

The compactor was recently commissioned and the CRD was in the process of transitioning to its use during the site visit. Prior to commissioning, garbage was deposited directly into the center-west bin (50 cu. yard roll off bin). As of the last day of the site visit (May 11), users were depositing garbage into both the center-west bin and the newly operational compactor bin.

2.2.2 Paper and cardboard bin

During the site visit, the paper and cardboard bin was located on the northeast side of the site which was not clearly visible from the southwest recyclables area. Most visitors and Airbnb guests did not know it was there and needed to be directed by the site attendant or site visitors. Long-time residents generally knew its location.

As noted above, this bin was relocated to the center-west position immediately following the site visit, replacing the garbage bin. In its new location, it is the first bin users see on their left upon entering the site and is highly visible. Bin identification signage on the fence doors was being updated accordingly at the time of this memo.

2.2.3 Scrap metal bin (northwest side)

The scrap metal bin is located on the northwest side of the site adjacent to the donations area. A walking platform allows users to deposit items into the bin. During the site visit, the gap between the platform edge (concrete block retaining wall) and the bin was measured at approximately 40 cm. This occurred because the driver replacing the bin, reported to be operating alone at approximately 4-5 AM without guidance, placed the bin without aligning it on its rails. The site attendant confirmed this is an uncommon occurrence as regular drivers know the proper procedure.

Despite being an infrequent occurrence, the 40 cm gap presents a trip and fall hazard, particularly for users carrying or pushing heavy items. Chains are in place across the gap however users occasionally removed the chains to facilitate depositing heavy items. The top of the bin sits about 2 feet above the top of the concrete block wall.

Litter observed on the ground around the scrap metal bin was noted to require cleaning; the site attendant has indicated this will be addressed.

2.2.4 Donations area (northwest side)

Donated items are currently stored adjacent to the scrap metal bin on the northwest side of the site. During the site visit, the presence of SJE equipment partially blocked access to the scrap metal bin pathway – however, the site attendant confirmed that under normal operating conditions this pathway is generally clear.

The donation area was noted to be moderately cluttered during the site visit. The site attendant indicated the area is manageable under current volumes and is checked several times daily. However, if donation volumes increase, items could partially obstruct the walking path to the scrap metal bin, creating a potential tripping hazard.

2.2.5 Recyclables area (southwest side)

Many users, including long-time residents, were unclear about which recycling bin to use for which material. This was attributed to a combination of changing bin designations over time and signs that, while present, were not sufficiently large or bright to be effective at a glance for all users. Nearly all users during the site visit asked the site attendant or SJE staff for guidance on where to deposit materials.

2.2.6 Northeast area (large items, appliances, paint, propane, bottle return)

The northeast area, located up the gravel slope from the main loop, receives large items, appliances, paint tanks, propane tanks, and bottle return. Our key observations are summarized below:

- Propane tanks are stored on pallets at the edge of the forested area. They are currently not covered or enclosed.
- Paint containers are stored in larger plastic tubs on an uneven gravel surface at the forest edge. The plastic tubs had covers that appeared to be used at the time of the site visit. The paint tanks are managed by a forklift contractor approximately once per year.
- Glass bottle return containers are stored in FIBC bulk bags on relatively flat ground with rubber mats. Large batteries and electronics are also collected in this area.
- Plastic and mixed-material return containers are stored in FIBC bulk bags in the sea canister in this area.
- Based on discussions with the site attendant, we understand that TELUS is installing a new fence on their adjacent property, and has requested that tires and furniture currently stored in a bin on TELUS property be removed.

2.2.7 Site attendant hut and access

The site attendant's hut is a small, prefabricated metal shed located above the main loop on the northeast side of the site. The approximate dimensions are 8’ x 8’, and it has electrical access (lighting, heating) and water access. The hut provides a general overview of the site from its elevated position, however it is separated from the main drop-off loop by a steep rock face largely covered in vegetation. To move between the hut and the drop-off loop, the site attendant must walk the full length of the gravel

slope and around, losing sightlines due to trees and shrubs. This impacts site attendant's ability to supervise the main drop-off area, particularly during busy periods.

The adequacy of the current hut location, size, and access will be assessed as part of the options development phase of the Feasibility Study.

2.2.8 Road Surface

The main vehicle loop is paved with asphalt, connecting directly to Parkinson Road. Concrete retaining walls are present adjacent to the scrap metal bin platform and surrounding the center-west bin and center-east compactor areas. Gravel surfacing fills the areas between the paved loop and the center bin structures, and between the loop and the outer site boundaries, which consist of short rock outcroppings. The east area and its access road are all surfaced with gravel.

2.3 Discussions with Site Attendant - Operations, Seasonal Patterns and User Behaviour

The site attendant, Simon Kess, has been at the PRTS since November 2024 and knows most local residents by sight; he was able to identify whether users were Port Renfrew residents, Pacheedaht First Nation members, or visitors from outside the area - which was valuable for the waste composition audit. Key points from discussions with Simon over the four-day visit are listed below.

2.3.1 Seasonal patterns and operating hours

High season (June-September) typically brings two to two-and-a-half times the daily user volumes observed during the low season visit. The site is currently operating on winter hours (10 AM - 2 PM), five days a week. Seven-day operations begins in June. The site attendant noted ongoing challenges with users arriving before or after opening hours - sometimes by only a few minutes - who either deposit waste at the gate or enter the unlocked site to dispose of waste unsupervised. This was observed on three of the four site visit days.

2.3.2 Users and commercial sector

The majority of users ((approximately 76% of trips recorded during the site visit) are Port Renfrew residents and Airbnb/short-term rental guests. Approximately 13% of total trips were commercial drop-offs, including resorts, restaurants, the local school, and the hospital. The proportion of residential and short-term rental users is expected to increase during high season as short-term rental occupancy rises. The proportion of commercial users (hospitality, tourism) is expected to increase as well.

Outside users, primarily from Jordan River, accounted for 5 trips over the four-day site visit. The site attendant estimates approximately 10 drop-offs per week from outside Port Renfrew during low season, and approximately 20 per week during high season.

Several residents and commercial users expressed concern during the visit about what they perceived to be disproportionately large volumes of waste being deposited by outside users, and expressed appreciation for the study - noting they hoped it would inform changes to the fee structure or access

policies. It should be noted that outside user trips recorded during the site visit were relatively limited in number; however, individual loads from outside users were observed to be larger on average than typical resident loads.

2.3.3 Fee structure and access

The PRTS can currently be accessed and used by all users free of charge. Users include Port Renfrew residents and commercial businesses, Pacheedaht First Nation residents and commercial businesses, and outside users (observed to be primarily short-term rentals and visitors).

Potential alternate cost recovery models were discussed with CRD staff on site. The options included a pass or sticker system, with separate fee collection for non-pass holders.

A review of cost recovery and funding models is outside the scope of this memo and will be addressed in the options development phase of the feasibility study.

2.3.4 Illegal dumping and after-hours access

Both entrances to the PRTS are currently unsecured after hours – at the time of the site visit, the main gate did not have a lock, and the east road has no gate or barrier. Illegal dumping and unsupervised after-hours access are ongoing issues noted by the site attendant. Litter resulting from unsupervised access is discussed in Section 2.4. The option of adding locked gates to both entrances were discussed with CRD staff.

Having a secure site will be critical in supporting the implementation of a cost recovery system in the future.

2.3.5 Wildlife

No bears were observed on site during the May 2026 site visit. The site attendant reports that the last recorded sighting was in summer or fall 2025. Current practices for bear-proofing bins includes having small openings and heavy or locked doors. The site is not fully fenced and no electric bear fencing is in place. The site attendant noted that during high season, organic and food waste volumes are significantly higher, representing a more significant bear attractant risk. No separate organics collection is currently in place at the PRTS.

2.3.6 Organics diversion

Several users (i.e., Port Renfrew residents) expressed interest in a dedicated organics drop-off option at the PRTS. Organics diversion options will be considered in the options development phase.

2.4 Environmental Considerations

2.4.1 Litter



Photo 1: Litter accumulated to the left of the scrap metal bin in blue.

Litter management in the low season appeared to be generally adequate across most of the site. An accumulation of litter was observed between the scrap metal bin and the adjacent wall (see Photo 1 above); the site attendant noted this is an intermittent cleaning task that he attends to regularly and plans to address soon.

2.4.2 Site drainage and spill containment

The main site area is paved, which limits infiltration and directs runoff towards the edges of the site or towards the site entrance. A drainage ditch runs along west, south, and east perimeter of the main paved drop-off area. Based on site observations and a review of the 2009 site plan, runoff from the main paved area drains northward toward Parkinson Road, where it is collected by a roadside ditch and culvert system. A drainage pipe is present on the west boundary of the site, behind the recyclables area, draining northward. A manhole is shown on the site plan at the west edge of the north entrance, connecting to a 400 mm culvert that discharges north of Parkinson Road (according to the Record Drawings). The ultimate discharge point of the culvert was not confirmed during the site visit however

is assumed to discharge toward the forested area north of Parkinson Road. Roadside ditches on the south side of Parkinson Road appeared to be present but were largely overgrown with vegetation.

The site attendant noted that during heavy rainfall, water pools at the main entrance on the south side of Parkinson Road. The site attendant manages this by using a shovel to direct pooled water into the grass or culvert on either side of the entrance, which he noted is easily accomplished.

A gravel-filled ditch was observed at the toe of the rock face along the south and east sides of the main loop, forming part of the gravel shoulder between the rock outcropping and the paved loop surface. This feature appears to serve as a drainage collection point for runoff from the surrounding rock faces before it reaches the paved loop. No evidence of blockage, sediment buildup, or standing water was observed during the site visit; however, conditions were dry at the time and drainage capacity under rainfall conditions was not assessed.

In the event of a spill on the paved area, runoff containing contaminants could reach the roadside ditch and culvert system without treatment.

In the northeast area, paint tanks and other materials are stored on uneven gravel and forest soil without an impermeable ground surface or cover from the elements. Potential improvements to storage conditions for materials in the northeast area will be considered in the options development phase.

Spill response equipment is available on site: an oil spill kit is stored in the shed behind the Interchange Recycling sea canister, and a mercury spill kit is stored in the site attendant hut.

2.4.3 Used oil collection

Used oil and antifreeze collection is in place under the Interchange Recycling program, using a standard depot setup with appropriate primary and secondary containment infrastructure and user-facing signage (see Photo 2 below). The depot uses a sea canister with a metal grate floor and an absorbent-filled reservoir beneath, providing appropriate secondary containment for collected liquids.



Photo 2: View of signage inside door of Interchange Recycling used oil collection depot.

2.5 Health and Safety Observations

Standard PPE was worn by all site visitors throughout the visit (steel-toed boots, high-visibility vests, eye protection). Hard hats were not required. Bear spray and airhorns were on hand throughout the visit. No wildlife incidents occurred.

Notable health and safety concerns observed during the visit are:

- The gap between the scrap metal bin and the walking platform (described in Section 2.2.3) represents the most significant trip and fall risk observed on site.
- Fluorescent paint marking of walking area edges at the center-west bin and center-east compactor is planned by Jason Oulton (CRD) for completion by end of May 2026. This is to improve the visibility of the edges as they are considered a tripping hazard.

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3. Preliminary Recommendations

Based on our observations and discussions during the low season site visit, the following preliminary short-term recommendations are provided for the CRD's consideration. More comprehensive options and medium and longer-term recommendations will be developed as part of the full feasibility study report, which may include the preliminary recommendations provided below.

3.1 Parking Spaces and Traffic Signage

To address the traffic congestion and vehicle queueing that backs up onto Parkinson Road, the CRD could consider implementing the following:

- Add up to four angled parking spaces at the southernmost end of the loop (see photo 15 in Appendix C), numbered 1-4 from east to west, with stenciled markings on the ground. Numbering is intended to encourage users to pull all the way into the first available space. The site attendant has indicated they could complete this painting themself using stencils.
- Install two large "Do Not Block Driveway" signs (or signs with similar messaging intended to encourage users to keep driving past the bin opening) - one at the site entrance and one approaching the south end of the loop. Signs should be large and clearly visible to users as they enter and navigate the loop.

3.2 Site Orientation Map and Improved Signage

To address the wayfinding difficulties observed during the site visit - particularly for first-time users and visitors unfamiliar with the site layout - we recommend additional colour coded signage be added which includes graphics and text indicating the appropriate location for each material accepted at the transfer station.

The option of preparing and installing a large, laminated site map was discussed with the site attendant. This site map could be installed at the south end of the loop on the fence between the center-west bin and center-east compactor, facing south so it is visible from the parking spaces. The map would show a top-down view of the site with each bin and drop-off area clearly labeled using the same colour-codes as above, and text indicating the appropriate location for each accepted material.

In our experience, large colour-coded signs with text and graphics indicating the material collected and location are the simplest and most effective signs.

3.3 Fall Hazard at Scrap Metal Bin

The large gap between the scrap metal bin and the concrete block wall as well as the inconsistent use of the chain creates a significant fall hazard.

While effective at delineating the edge of the wall when it is in place, the chain alone is not adequate for fall protection and does not function as a guardrail (as defined by the BC Building Code).

The large gap between the bin and wall is the result of the bin being placed farther from the wall than intended. As noted above, we understand this occurred because the driver placed the bin without

aligning it on its rails. We recommend this feedback (i.e., expectation that the gap between the wall and bin be minimized) be communicated to the current hauling contactor to address this issue as soon as possible. The CRD could also consider adding a bin placement standard to the hauling contract, requiring the bin to be positioned within a defined maximum distance from the walking platform edge.

The site attendant should oversee scrap metal bin drop-offs, particularly when users are depositing large or heavy items. Based on observations during the site visit, users generally managed the drop-off safely and independently; however, site attendant presence is beneficial for initial screening and assisting the user if needed. However, users should not rely on the site attendant to use the scrap metal drop-off area.

To address the fall hazard, the CRD should consider installing a permanent guard rail to replace the section currently occupied by the chain. The guardrail should be designed to meet minimum BC Building Code requirements (including height and spacing requirements). The new guardrail would significantly reduce the fall hazard in this section. While this may create a minor inconvenience for some site users, the new guardrail would still allow users to deposit material over the railing into the bin. A permanent guardrail in front of the metals bin is common practice at many transfer stations in BC and is an effective fall protection measure.

Other options (including engineering, administrative, and/or operational controls) to mitigate the fall hazard will be assessed in the Feasibility Assessment, which will be developed in consultation with CRD staff.

3.4 Material Storage in Northeast Area

As noted in Section 2.4, materials including paint tanks and vehicle batteries in the northeast area are currently stored on uneven ground (gravel) and uncovered. Some materials are also stored directly against the forested area and not contained (for example, tires and cooking oil containers). It is best practice to store these materials in a covered area on an impermeable surface or contained within an enclosed structure to protect them from contaminating or littering the environment. At a minimum, a cleared buffer should be established around all material storage areas which helps the site attendant keep the space organized and clean.

While efforts were made to store these materials off the ground (for example, propane tanks placed on pallets and fire extinguishers placed in recycling bins), we recommend the CRD assess longer term storage options for these materials (such as fully enclosed containers or bunkers). Potential storage options will be presented as part of the Feasibility Assessment report.

3.5 Visitor Tracking

To assist with understanding trends in the facility usage, the CRD should consider implementing a formal process to track visitor usage (such as using the visitor tracking log used during the waste audit). This visitor usage data could be collected annually over one week in the high season and one week in the low season. This information would be useful for validating facility growth projections.

3.6 Site Security

As summarized in this memo, the site is only partially fenced (along Parkinson Road) and the main gate that provides access to the main drop-off area remains unlocked. Options to improve site security to mitigate unauthorized site access after-hours, discourage illegal dumping, and to mitigate wildlife conflicts (for example, installing electric bear fencing around the site) will be assessed in the main Feasibility Assessment report. Controlling user access will be critical to support the implementation of future cost recovery measures.

4. Closure

Stellers Jay Engineering was retained by the Capital Regional District to conduct the work described in this memorandum, and this memorandum has been prepared solely for this purpose.

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

Stellers Jay Engineering does not accept responsibility for the use of this memorandum for any purpose other than that stated above and does not accept responsibility to any third party for the use, in whole or in part, of the contents of this document. This memorandum should be understood in its entirety, since sections taken out of context could lead to misinterpretation.

The information contained in this memorandum is based on observations and discussions from the low season site visit completed on May 8-11, 2026, and is intended to inform the ongoing feasibility study. It is not a comprehensive assessment of all site conditions or risks.

We trust the information presented in this memorandum meets the CRD's requirements. If you have any questions or require additional details, please do not hesitate to contact the undersigned.

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Appendices:
Appendix A – Low Season (May 2026) Preliminary Waste Audit Memo
Appendix B – Simplified Site Layout and Record Drawings
Appendix C – Photo Log

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Attachments

- Appendix A – Low Season (May 2026) Preliminary Waste Audit Memo

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AET Group Inc. was contracted by Stellers Jay Engineering to conduct a waste composition study for the Capital Regional District, BC, at the Port Renfrew Transfer Station. Primary objectives of the study were to quantify the different users of the facility including identifying instances of outside sources using the transfer station and to assess the overall composition of incoming waste. The garbage was categorized into seven source groups: Short Term Accommodations, Port Renfrew Residential, Port Renfrew Commercial, Pacheedaht First Nation Residential, Pacheedaht First Nation Commercial, Outside Residential, and Outside Commercial.

The off-season audit was conducted from May 8th to May 11th, 2026. During this period, seven source groups were observed at the transfer facility. During the low-season, short-term accommodations were initially classified as residential. Campgrounds from Pacheedaht First Nation were sorted with Residential material for the low-season audit. AET is estimating that 30% of Port Renfrew residential loads were attributable to short-term accommodation (e.g., Airbnb), and these loads were subsequently reallocated from the residential category as a separate source for analysis.

		Port Renfrew			Pacheedaht First Nation		Outside	
Date	Overall	Short Term Accomodations	Commercial	Residential	Commercial	Residential	Commercial	Residential
08-May	59	13	8	29	6	1	1	1
09-May	46	11	6	26		2		1
10-May	59	13	9	29		7	1	
11-May	45	11	4	25	1	2		2
Total	**209**	**48**	**27**	**109**	**7**	**12**	**2**	**4**

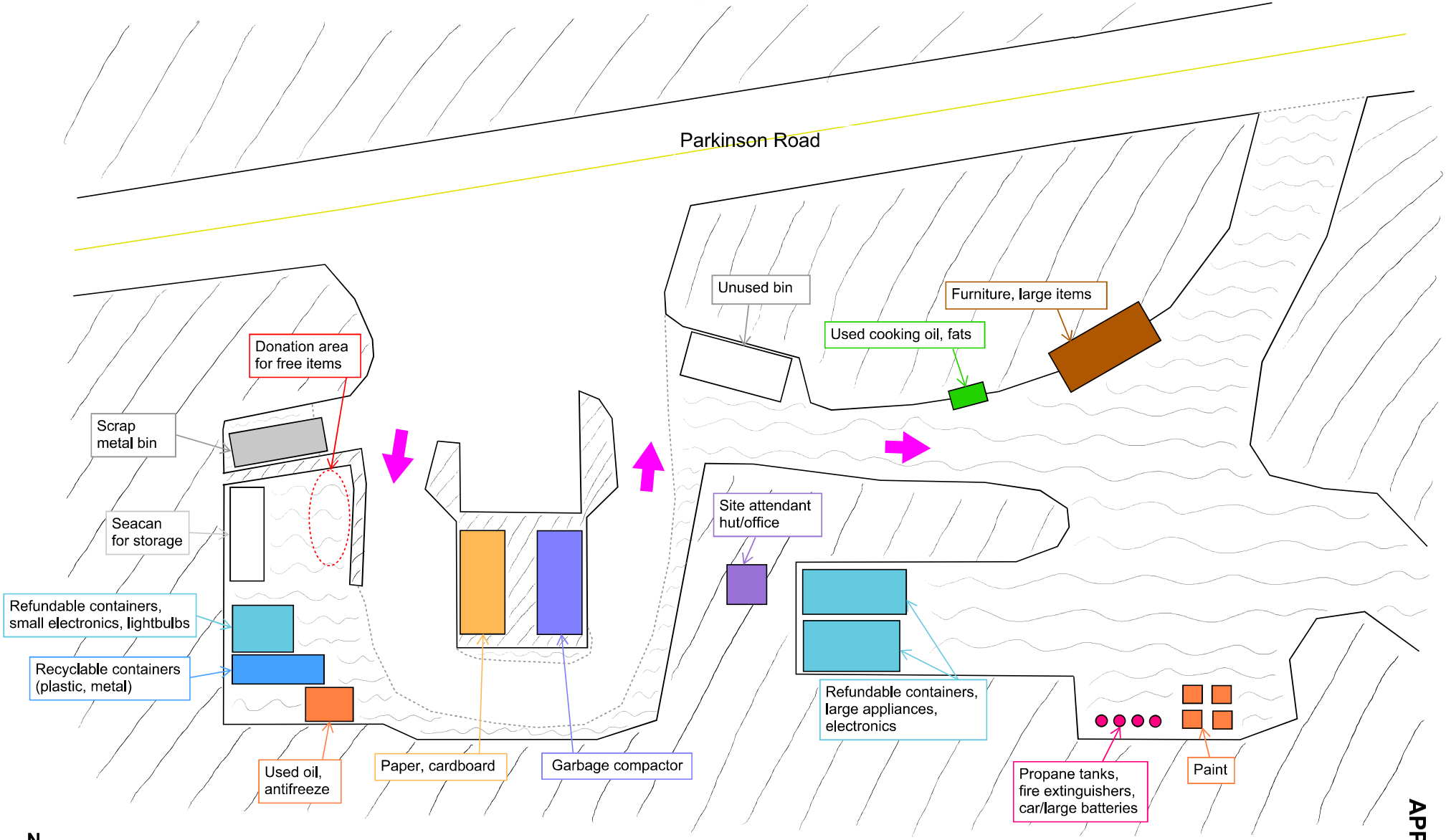
During the four-day sampling period, a total of 209 visits were recorded on the collection log. Of these, only 3% were attributed to outside sources. Approximately 509 kg of garbage was sorted across four source groups to determine the waste composition.

		Port Renfrew		Pacheedaht First Nation	Outside
All Sources	Overall	Commercial	Residential	Residential/ Commercial	Residential/ Commercial
Total Recyclable Materials	12.95%	17.41%	10.19%	13.03%	8.21%
Total Organic Materials	37.83%	35.13%	32.32%	47.48%	55.40%
Total Special Waste Materials	15.47%	18.69%	13.84%	13.33%	14.88%
Total Refundable Containers	1.93%	2.02%	1.28%	2.19%	4.22%
Total Other waste	31.82%	26.75%	42.37%	23.97%	17.30%
Total	100.00%	100.00%	100.00%	100.00%	100.00%

As shown in the table above, 68.18% of the total material was identified as divertible, meaning there are existing programs for diverting these materials from landfill disposal. Recyclable materials accounted for 12.95% of the total sample, while organics accounted for 37.83%. The highest proportion of organics was found in Outside Residential/Commercial (55.40%) and Pacheedaht First Nation Residential/Commercial (47.48%) garbage samples. The highest proportion of recyclable material was found in Port Renfrew Commercial (17.41%) and Pacheedaht First Nation Residential/Commercial (13.03%).

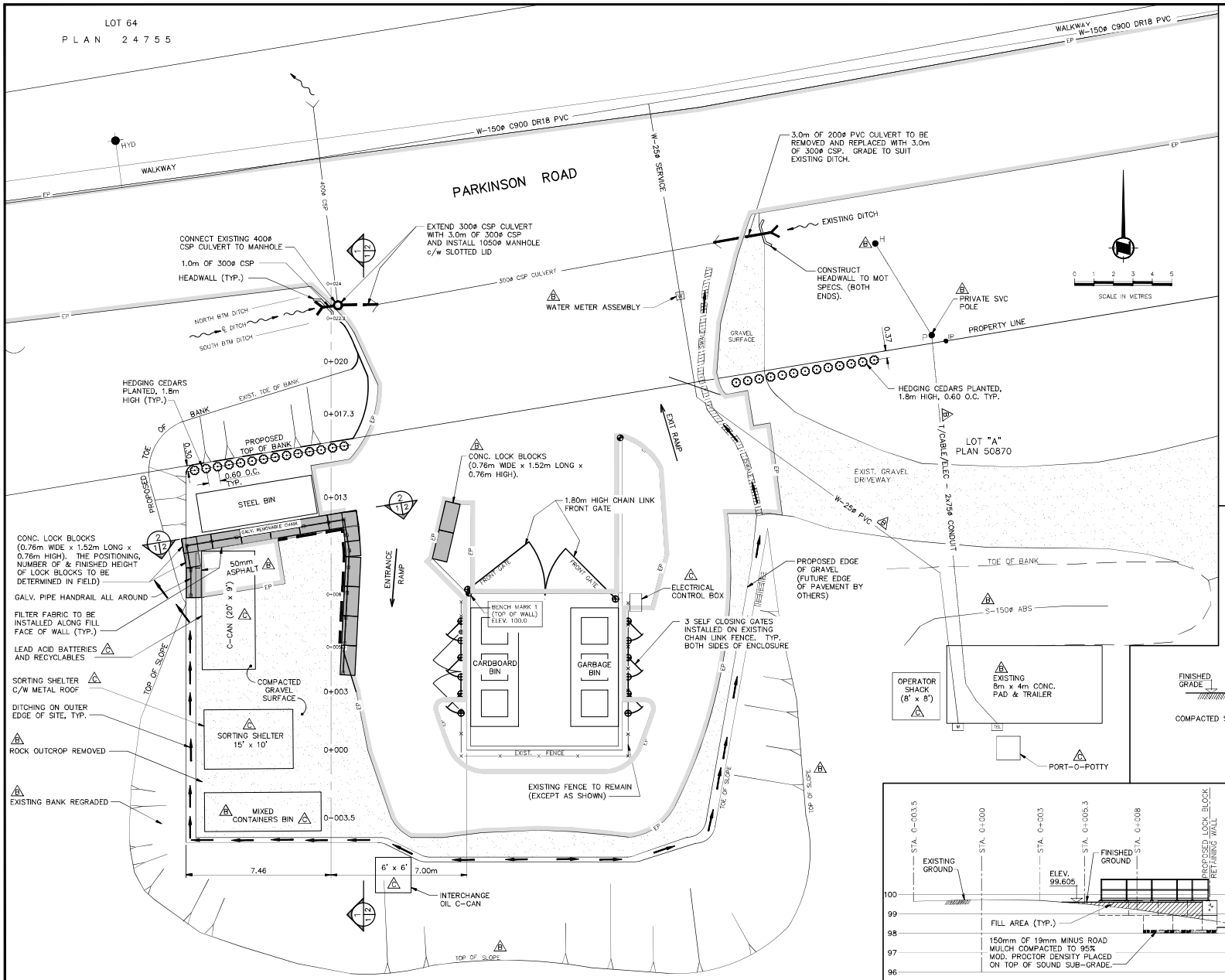
Attachments

- Appendix B – Simplified Site Layout and Record Drawings



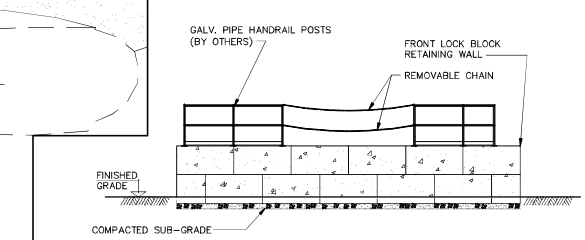
APPENDIX A

Simplified Layout Drawing for CRD Port Renfrew Transfer Station	Created by SJE on June 8, 2026



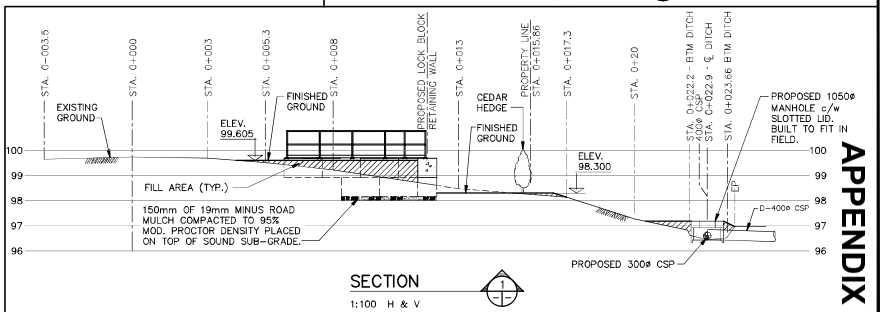
SITE PLAN
1:100

LEGEND		
EXISTING	DESCRIPTION	AS CONSTRUCTED B
W	WATER	
	MANHOLE	
	CULVERT	
IP	IRON PIN	
	FENCE	
EP	PAVEMENT	
	DITCH	
	GRAVEL	
	ROCK	
	CEDAR HEDGE	
	BENCH MARK	BM #3



FRONT ELEVATION

SECTION
NTS



SECTION
1:100 H & V

APPENDIX A

No.	DATE	ISSUE
4	21/11/25	FOR REVISION C
3	15/12/09	FOR REVISION B
2	30/04/09	FOR REVISION A
1	08/04/09	FOR CONSTRUCTION

BY	DATE	No.	REVISION	ENG.
H.L.	21/11/25	C	BINS AND BUILDINGS UPDATE	
L.N.	12/15/09	B	AS CONSTRUCTED	G.P.
L.N.	30/04/09	A	GENERAL REVISION	

SEAL

CAPITAL REGIONAL DISTRICT
Environmental Services

DESIGNED	G.P./M.C.	SURVEYED	
DRAWN	L.N.	DATE	01/04/09
SCALE HORIZONTAL	AS SHOWN	CHECKED	G.P.
SCALE VERTICAL		APPROVED	M.C.

PORT RENFREW SOLID WASTE TRANSFER STATION

2009 UPGRADE
SITE PLAN, SECTIONS & LEGEND

CONTRACT NUMBER	DRAWING NUMBER	ISSUE	SHT. No. OF
	20-W105-1	4	1 OF 1

Attachments

- Appendix C – Photo Log

Photo 1: Front view of the Port Renfrew Transfer Station on Parkinson Rd. Note the compactor in the center (dark blue), scrap metal bin on the right (light blue), and the gravel path going uphill to the left, by the yellow bin.



Photo 2: Traffic flows counter-clockwise as shown by the newly-painted arrows. Site attendant hut on the upper left overlooks the site. Paper/cardboard bin and garbage compactor are in the center of the image. Recycling, scrap metal, and donation areas are on the right.



Photo 3: Garbage compactor in the centre island.



Photo 4: Electrical box (right) and controls (left) for the garbage compactor.



Photo 5: Paper/cardboard bin, which was previously the garbage bin until May 11, the last day of the Low Season Site Visit.



Photo 6: Recycling area at the southwest corner of the site. From left to right, there are drop-off areas for: used oil and antifreeze (blue); plastic and metal containers (green); refundable containers, small electronics and batteries, and light bulbs (metal shed).



Photo 7: View inside the recycling shed. Electronics and light bulbs on the left, batteries at the back, and refundable containers in the blue bins on the right.



Photo 8: View of signage inside the door of the Interchange Recycling used oil and antifreeze depot.



Photo 9: Donation area for free items on the West side of site, near the Scrap metal bin.

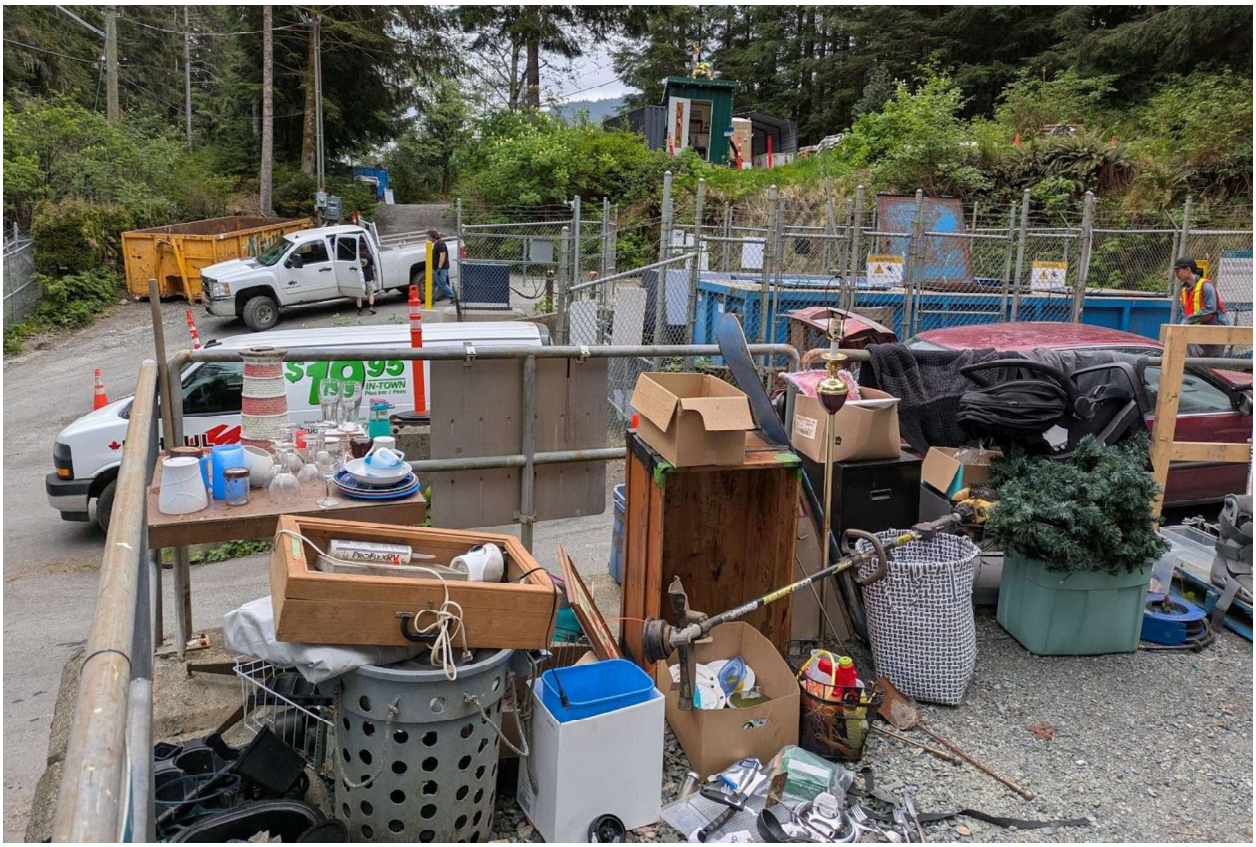


Photo 10: Scrap metal bin at the Northwest corner of site, with a chain at waist height. Note the gap between the edge of the concrete blocks and the bin.



Photo 11: A gap of 41cm was noted between the concrete block wall and the bin. Accumulated litter is observed at the base of the wall.



Photo 12: Another view of the 41cm gap between the bin and the wall, and accumulated litter. The bin was not properly seated on the rail, which it typically rests upon.



Photo 13: Waste composition study in progress, with sorting table and bins.

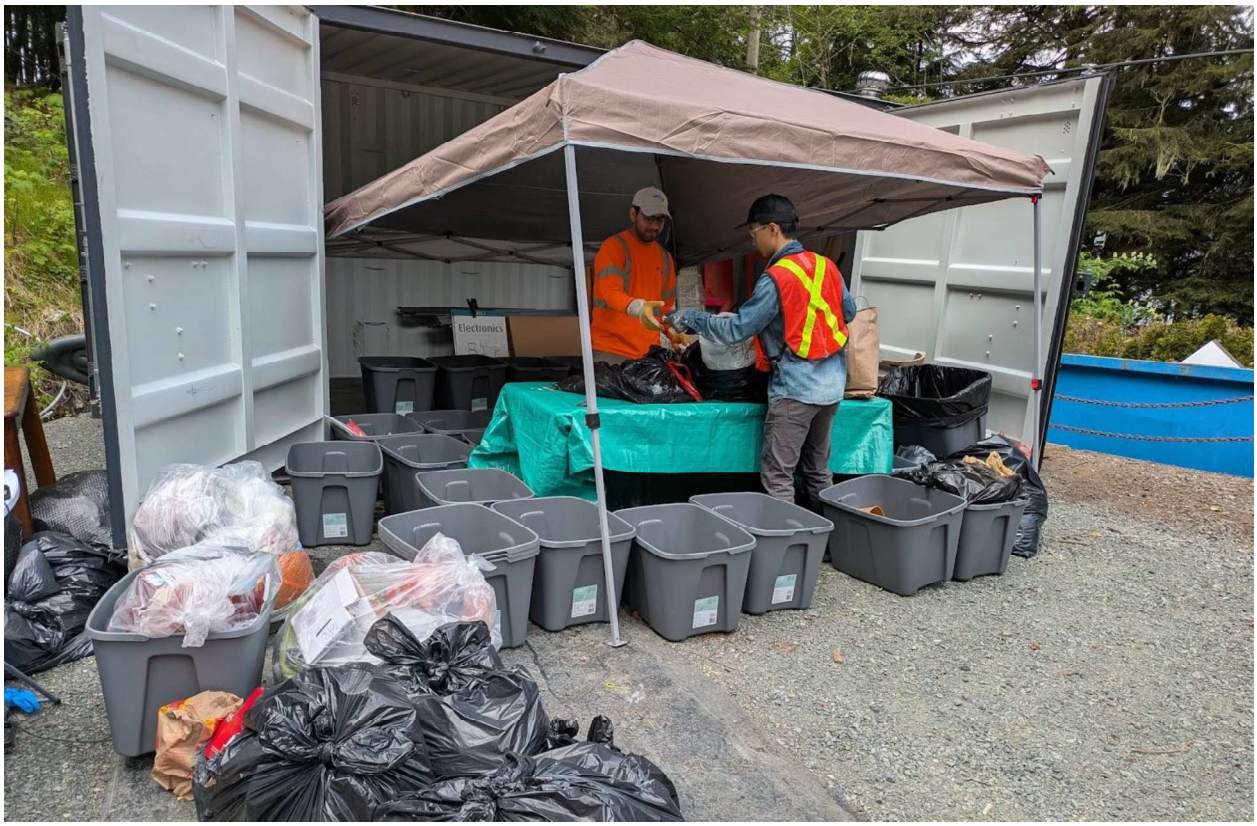


Photo 14: View of the east side of site. Yellow bin collected paper/cardboard until May 11, after which this bin was no longer used. Gravel road leads up a hill to the northeast collection area, which is unpaved and surfaced with gravel.



Photo 15: South end of the vehicle loop. The road widens sufficiently for vehicles to park on the right side, while other vehicles pass on the left. Driving loop is paved with concrete in good condition (no large cracks, holes, spalling). The road shoulder is surfaced with gravel, and a ditch is observed at the toe of the slope surrounding the road.



Photo 16: Top of the gravel road – wood pallets and blue bin for bulky items on the left, and a new fence being built on the right for TELUS, which is further up the road to the right.



Photo 17: Storage area for car tires, wood pallets, and bulky items (furniture) in blue bin.



Photo 18: Collection boxes for used cooking oil, next to the tires and pallets.



Photo 19: Close-up of the used cooking oil collection boxes.



Photo 20: Close-up of the fence being built for TELUS, which is behind the barbed wire fence.



Photo 21: To the right of the TELUS fence, these containers hold paint, which are removed by forklift once full, approximately once per year.



Photo 22: To the right of the paint containers, fire extinguishers, propane tanks, and batteries are stored on wood pallets at the edge of the forest.



Photo 23: Refundable glass containers are stored in FIBC bulk bags (foreground). Other refundable containers are stored in the sea canister (right). Electronics and small appliances are stored under the metal storage shed (back left).



Photo 24: Close-up of refundable glass containers, stored in FIBC bulk bags.



Photo 25: Extra storage shed, next to refundable container bins, for small appliances and electronics, on a rubber mat. Surface slopes slightly towards the west.

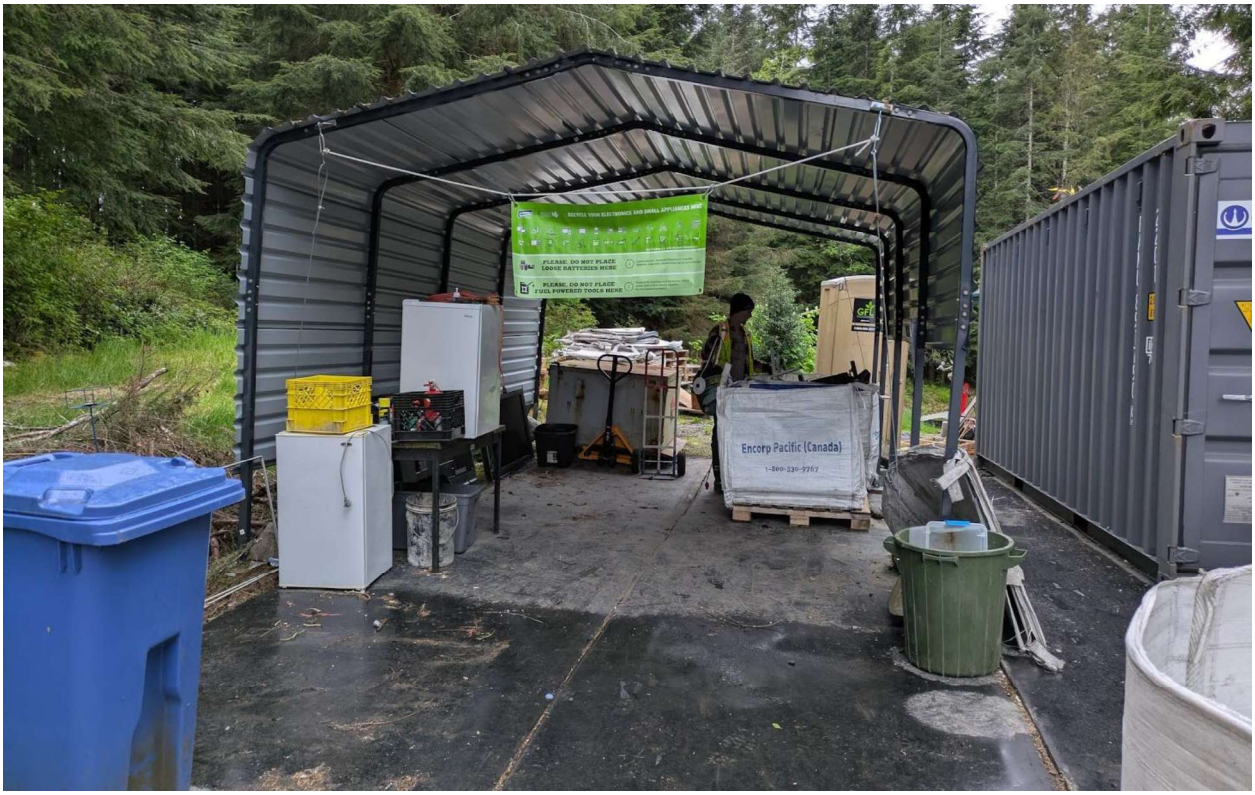


Photo 26: Site overview, from the east side of the transfer station. The driving loop from Parkinson Rd is paved, sloping down towards Parkinson Rd, while the shoulder is surfaced with gravel. The upper east area, where this photo is taken from, is also surfaced with gravel.



Photo 27: An example of traffic buildup, affecting traffic flow on Parkinson Road.



APPENDIX B: Waste Composition Study Report

APPENDIX A

Capital Regional District

Port Renfrew Transfer Station Feasibility Study

Prepared for

Capital Regional District (CRD)

Prepared by

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August 12th, 2026

AET File No. CRD_WA2526_101

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APPENDIX A: Low Season Sort Results

APPENDIX B: High Season Sort Results

APPENDIX C: Waste Audit Category Definitions

EXECUTIVE SUMMARY

AET Group Inc. was contracted by Stellers Jay Engineering (SJE) to conduct a waste composition study for the Capital Regional District (CRD), BC, at the Port Renfrew Transfer Station. Primary objectives of the study were to quantify the different users of the facility including identifying instances of outside sources using the transfer station and to assess the overall composition of incoming waste. The garbage was categorized into seven source groups: Port Renfrew Residential, Port Renfrew Short Term Rental, Port Renfrew Commercial, Pacheedaht First Nation Residential, Pacheedaht First Nation Commercial, Outside Residential, and Outside Commercial.

The low season audit was conducted from May 8th to May 11th, 2026. The high season audit was conducted from July 10th to July 13th, 2026. During the low season audit, 209 visits were recorded at the transfer station over four days. During high season, 314 visits were recorded over four days. Over both the seasons combined, 915 kg of garbage was collected and sorted to determine the composition of garbage collected from each group.

Using 2025 tonnage data provided by the CRD and based on the estimated trips made by each user group and the average bag weight, the total garbage disposed of at the transfer station during the low season (October to May) and high season (June to September) was estimated to be 158,740 kg and 144,940 kg, respectively.

Organic material remained the most landfilled material in both seasons, increasing from 39.2% in the low season to 49.0% in the high season. On the contrary, the proportion of recyclable material decreased from 30.5% to 28.4%. Similarly, residual waste material decreased from 30.3% to 22.6%. During the low season, the Outside Residential user group had the highest fraction of divertible material in the garbage (82.7%), however the Port Renfrew Short Term Rental user group had the highest fraction of divertible waste material during the high season (85.1%).

Based on the trip data and estimated bag weights collected during the two waste audits, Port Renfrew-Commercial accounts for 32.1% of the total garbage disposed at the transfer station followed by Port Renfrew-Residential at 26.9%, Pacheedaht First Nation Commercial at 18.6%, Port Renfrew Short Term Rental at 9.9%, Pacheedaht First Nation Residential at 7.8%, Outside Residential at 3.4%, Outside Commercial at 1.3%. The annual garbage tonnage estimated for each user group is shown in the table below.

Table 1 Annual and Seasonal Estimated Tonnage by Each User Group

User Group	%	Annual Tonnage Yr 2025 (kg)	Percent of Total Tonnage - Low-Season	Total Tonnage (kg) - Low-Season	Percent of Total Tonnage - High-Season	Total Tonnage (kg) - High-Season
Short-term accomodations	9.9%	30070	7.3%	11559	12.8%	18511
Port Renfrew - Commercial	32.1%	97631	31.2%	49593	33.1%	48038
Port Renfrew - Residential	26.9%	81662	24.2%	38353	29.9%	43309
Pacheedaht FN - Commercial	18.6%	56364	23.4%	37181	13.2%	19182
Pacheedaht FN - Residential	7.8%	23832	9.4%	14862	6.2%	8970
Outside - Commercial	1.3%	3845	1.4%	2291	1.1%	1554
Outside - Residential	3.4%	10276	3.1%	4901	3.7%	5375
Total	**100%**	**303680**	**100.0%**	**158740**	**100.0%**	**144940**

1.0 INTRODUCTION

1.1 Definitions

Construction and Renovation:	Residual materials resulting from the construction, renovation, or demolition of all or part of a building or structure that are not suitable for reuse, recycling, or recovery and are therefore designated for disposal as refuse at designated disposal facility, in accordance with applicable waste diversion and disposal regulations. Defined as prohibited waste in CRD Bylaw No. 3881.
Disposed Divertible Material:	This term refers to both recyclable and organic items being disposed of in the garbage or showing up as contamination in the wrong diversion program (where there is an existing diversion program in place). For example, recyclable plastic packaging placed into the garbage or organic streams.
Garbage Stream:	Material that is collected for disposal rather than diversion. It includes divertible material where the diversion programs are not operating across the region.
High Season:	The period from June through September characterized by peak tourism activity. During this time, the community experiences a substantial increase in population due to visitors, seasonal residents, and recreational users.
Household Hazardous Waste (HHW):	Household Hazardous Waste is material that is potentially harmful to the environment and should be disposed of through special handlers. Household hazardous waste includes residential quantities of products that are marked flammable, corrosive, explosive or poisonous. Common examples are pesticides, varnishes, paints, cleaners, and batteries.
Low Season:	The period from October through May characterized by reduced tourism activity, with most waste generated by permanent residents, local businesses, and community services. Population levels during this period are relatively stable and reflect the local resident base rather than seasonal visitor fluctuations.
Organic Material:	Organics are materials that break down naturally and can be turned into compost. This includes items such as food waste, tissue/toweling, compostable paper and yard waste. Includes kitchen scraps and yard and garden material, as defined in CRD Bylaw No. 3881.
Other Waste:	Non-divertible materials not classified elsewhere, wooden baskets, wax candles, pet waste, diapers, wooden cutlery, Swiffer's, cigarettes, meat pads, wipes, coffee pods, personal care products
Non-Recyclable material:	Paper, plastic, metal, and glass, that are unmarketable or are not accepted in the current recycling programs are therefore managed as **Refuse** and disposed of at a landfill.

Recyclable Curbside:	Material that is diverted from the garbage stream in a recycling program. Includes Extended Producer Responsibility products and Recyclable Materials, as defined in CRD Bylaw No. 3881. Does not include organic materials (defined separately above). All fibres (newspaper, mixed fine paper, corrugated cardboard, boxboard/cores, etc.) and containers (#1 PET bottles & packaging, #2 HDPE bottles, tubs & lids, aluminum containers, steel containers, glass bottles milk cartons/juice boxes, etc.) are collected in separate bins available at the transfer station.
Recyclable Depot:	Material that is diverted from the garbage stream through multiple diversion programs available at Port Renfrew Transfer Station for users. Defined as prohibited waste and mandatory recyclable material in CRD Bylaw No. 3881.
Refundable:	Beverage containers that carry a deposit (refund) which consumers can reclaim by returning the empty container to an authorized depot or retailer. Materials accepted under Return-It program.
Residual waste/refuse	Non-recyclable materials that do not fall into the above categories (recycling and organics), where no existing diversion program exists, and that would be landfilled. Defined as refuse in CRD Bylaw No. 3881.
Waste:	Refers to materials from all three waste streams (the garbage stream, the recycling stream (Blue Box) and the organics stream (Green Cart)) represented as a single entity.

1.2 Study Background

AET Group Inc. (AET) was contracted by Stellers Jay Engineering (SJE) to conduct a waste composition study for the Capital Regional District, BC, at the Port Renfrew Transfer Station.

The waste audit had the following objectives:

- quantify the different users of the facility;
- identify instances of outside sources using the transfer station; and
- assess the overall composition of incoming waste by each user group.

The audit took place over the course of two seasons running between May 8th to May 11th, 2026 and July 10th to July 13th, 2026. The audit assessed garbage streams only collected by AET.

1.3 Scope of Study

The Capital Regional District (CRD) requested a study to gather quantitative data on the contribution and composition of the garbage stream from seven user groups. The study determined the composition of waste for each user group, as well as the estimated contribution from each user group.

AET was responsible for collecting garbage samples during the audit. As users arrived at the Port Renfrew Transfer Station to dispose of their garbage bags, the AET and SJE crew randomly collected the bags for sorting. The collected material was sorted at the Port Renfrew Transfer Station, located at 17055 Parkinson Road, Port Renfrew, BC.

1.4 Waste Sort Data and Waste Source Collection

A Waste Sort Log was used to record weight information and notes on the sorted materials during the study. The data fields on the sort-log include:

- Sample Area
- Waste Stream
- Collection Date
- Sort Team Supervisor
- Sorting Team
- Material Category
- Net Weight
- Notes

All weight measurements were recorded by sample area and waste stream in kilograms, expressed accurately to 10 grams (0.01 kg).

In addition to the Waste Sort Log, the audit team used a User Intake Form to record the origin of the waste (waste source and waste sector categorized in one of the seven user groups). Each user dropping off garbage was asked where the waste originated from and this information was recorded on the User Intake Form.

1.5 Sampling and Sorting Methodology

As each user arrived, the collection team recorded the user group, number of bags received and weighed each bag individually to determine the average weight per drop-off and the average weight of each bag. The team randomly selected bags from the incoming drop-off and set them aside for sorting. Once enough representative samples had been collected, the team began the sorting process.

AET and SJE staff sorted garbage. The garbage from each user group was sorted separately into major groups and into individual categories. The major waste groups focused on garbage that could potentially enter the landfill, recyclables, organics, and other divertible materials that are or should be captured in current waste diversion programs.

After all of the waste was sorted, the weight of each category was measured using an electronic scale, with precision to the nearest 0.01kg. The weight was recorded on a hard copy sort log and then transferred to an Excel spreadsheet after audit completion. These spreadsheets were used to compile and analyze the data.

1.6 Assumptions & Calculations

Assumptions and Limitations

For this project, the term "audit" is used interchangeably with the term "study".

This audit assumes that the bags selected during the collection period are representative of the composition of waste generated by each user source. These estimates are derived only from the composition results of the two audits and may not fully reflect seasonal or other fluctuations in waste composition over the course of the year.

During the low season audit, Port Renfrew short-term rental waste was included with Port Renfrew residential waste; however, these sources were sorted separately during the high season audit. Similarly, during the low season audit, Pacheedaht First Nation residential and commercial waste were combined, while these sources were sorted separately during the high season audit.

Calculations

The calculations used to analyze the waste audit results can be seen below.

Overall Waste Composition Calculations:

$$\textbf{Percentage Composition} = \frac{\text{Weight of material category}}{\text{Total weight of sorted sub-sample}} \times 100\%$$

Extrapolation of Sub-Sample Weight to Net Weight of Load:

Net Weight **= Percentage composition × Net weight of entire load**

Tonnage for User Group **= Percent of Total Estimated Tonnage × Annual Tonnage**

2.0 RESULTS

This section details a summary of the waste composition results.

2.1 Garbage Stream Composition – Low Season

Figure 1 illustrates the garbage stream composition for all user groups combined during the low season (October to May). Based on the 2025 low season tonnage provided, 158,740 kg of garbage was disposed of at the transfer station during the low season. Curbside recyclable material made up 13.3% of the material that could have been diverted through the recycling program. Organic material accounted for 39.2% of the garbage stream. Other Non-Divertible Material (residual waste/refuse)(30.3%) consisted of non-recyclable materials, construction and renovation waste, and items not accounted for in other categories: meat pads, swiffer, pet waste, diapers, cigarettes buds, sanitary products, etc. The total Recyclable - Depot Waste (such as HHW, batteries, scrap metals, light bulbs, electronics, cooking oil, refundable, etc.) accounts for 17.2% of the total waste despite diversion programs for these materials being available at the transfer station.

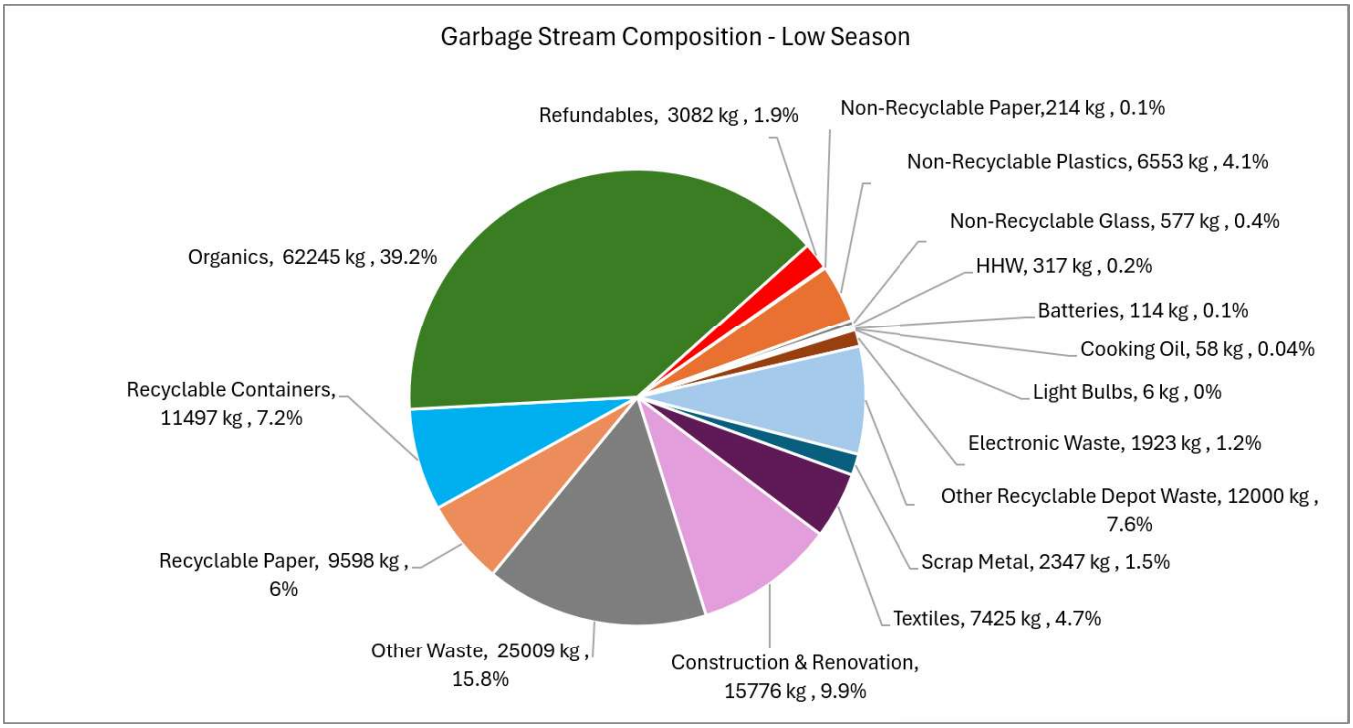


Figure 1 Low Season Garbage Stream Composition

2.2 Garbage Stream Composition – High Season

Figure 2 illustrates the garbage stream composition for all user groups combined during the high season (June to September). Based on the 2025 high season tonnage provided, 144,940 kg of garbage was disposed of at the transfer station. Of that quantity, 13.5% consisted of curbside recyclable material that could have been diverted through the recycling program. Organic material accounted for 49.0% of the garbage stream. Other Non-Divertible Material (22.6%) consisted of non-recyclable materials, construction and renovation waste, and items not accounted for in other categories: meat pads, swiffer, pet waste, diapers, cigarettes butts, sanitary products, etc. The total Recyclable - Depot Waste (such as HHW, batteries, scrap metals, light bulbs, electronics, cooking oil, refundable, etc.) accounts for 14.9% of the total waste despite diversion programs for these materials being available at the transfer station.

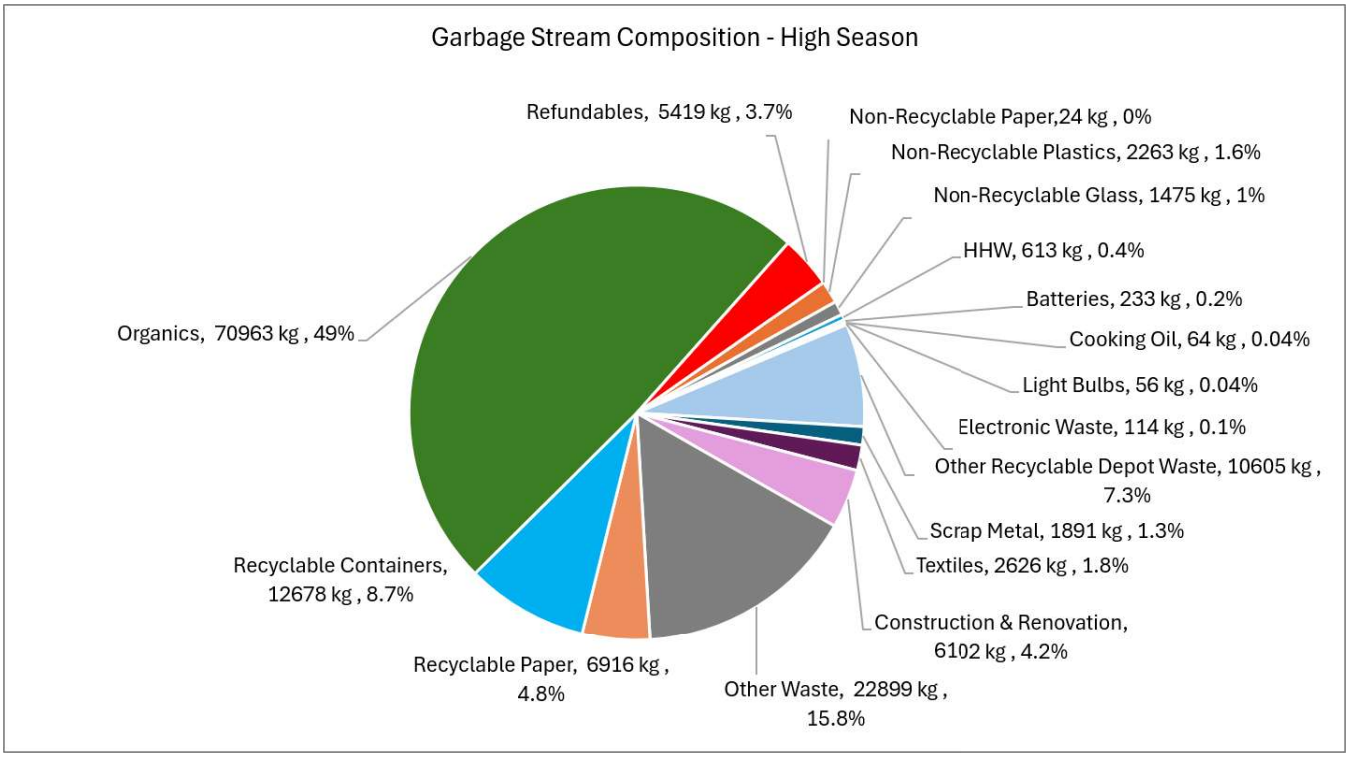


Figure 2 High Season Garbage Stream Composition

2.3 Comparison between Low Season and High Season

This section compares the low season (October to May) and high season (June to September) audit results. During the high season, visits from Port Renfrew Residential, Port Renfrew Commercial, and Port Renfrew Short-Term Rental users increased by 5.7%, 1.9%, and 5.5%, respectively. Other user group showed a decline in visits during the high season compared to the low season.

The low season composition by each user group is summarized in Table 2, while Figure 3 illustrates the estimated weight of each material category by user group based on the composition data and tonnage (estimated contribution). Overall, organic materials represented 39.2% of the total garbage disposed of during the low season audit period. On a proportional (percentage) basis, Outside Residential**,** Pacheedaht First Nation Commercial/Residential, and Port Renfrew Commercial had the highest composition of organics in the garbage stream, accounting for 55.4%**,** 47.5%**,** and 35.1% of their respective disposed waste. Based on total quantities

(absolute contribution) estimated to be disposed during the low season, Pacheedaht First Nation Commercial generated the largest amount of landfilled organic material (17,652 kg), followed by Port Renfrew Commercial (17,421 kg) and Port Renfrew Residential (12,396 kg).

Similarly, during the low season, Recyclable – Curbside material represented 13.3% of the overall garbage disposed. Port Renfrew Commercial has the largest contribution of recyclable materials (8,636 kg), followed by Pacheedaht First Nation Commercial (4,846 kg) and Port Renfrew Residential (3,908 kg). Within these user groups, recyclable materials accounted for 17.4%, 13.0% and 10.2% of the total garbage disposed, respectively.

Table 2 Low Season Composition Summary for Each User Group

		Port Renfrew			Pacheedaht First Nation		Outside	
	Overall	Short-Term Rental*	Commercial	Residential*	Commercial*	Residential*	Commercial**	Residential
Total Recyclable - Curbside	13.3%	10.2%	17.4%	10.2%	13.0%	13.0%	12.8%	8.2%
Total Organic Materials	39.2%	32.3%	35.1%	32.3%	47.5%	47.5%	13.2%	55.4%
Total Recyclable - Depot	17.2%	15.1%	20.7%	15.1%	15.5%	15.5%	56.5%	19.1%
Total Residual Waste	30.3%	42.4%	26.8%	42.4%	24.0%	24.0%	17.5%	17.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

*During the low-season, Pacheedaht First Nation Residential and Pacheedaht First Nation Commercial were combined; therefore, the composition remains consistent.
*During the low-season, Port Renfrew Residential and Port Renfrew Short-Term Rental were combined; therefore, the composition remains consistent.
**The high-season Outside Commercial composition was applied for the low-season, as no Outside Commercial visits were recorded during low-season.

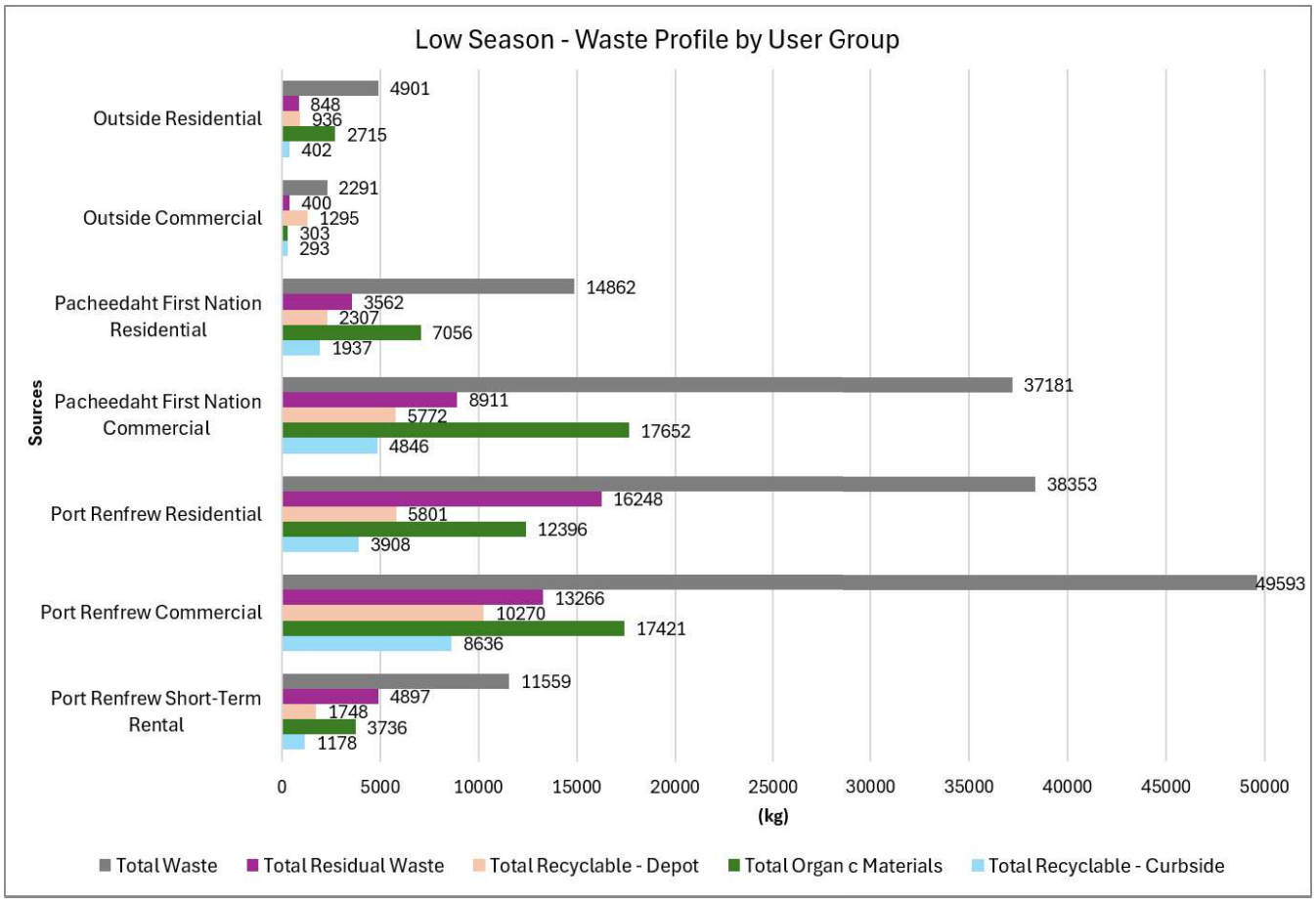


Figure 3 Low Season Waste Profile by User Group – Estimated Contribution

The high season composition by each user group is summarized in Table 3, while Figure 4 illustrates the estimated weight of each material category by user group based on the composition data and tonnage (estimated contribution). Overall, organic materials represented 49.0% of the total garbage disposed of during the high season audit period. On a proportional (percentage) basis, Port Renfrew Short Term Rental**,** Pacheedaht First Nation Commercial, and Port Renfrew Residential exhibited the highest composition of organics in the garbage stream, accounting for 65.4%**,** 55.1%**,** and 49.3% of their respective disposed waste. Based on total quantities (absolute contribution) during the high season, Port Renfrew Residential generated the largest amount of landfilled organic material (21,345 kg), followed by Port Renfrew Commercial (20,416 kg) and Port Renfrew Short Term Rental (12,105 kg).

Similarly, during the high season, Recyclable – Curbside material represented 13.5% of the overall garbage disposed. Port Renfrew Commercial has the largest contribution of recyclable materials (9,522 kg), followed by Port Renfrew Residential (4,002 kg) and Pacheedaht First Nation Commercial (2,496 kg). Within these user groups, recyclable materials accounted for 19.8%, 9.2% and 13.0% of the total garbage disposed, respectively.

Table 3 High Season Composition Summary for Each User Group

		Port Renfrew			Pacheedaht First Nation		Outside	
All Sources	Overall	Short-Term Renta	Commercial	Residential	Commercial	Residential	Commercial	Residential
Total Recyclable - Curbside	13.5%	9.9%	19.8%	9.2%	13.0%	12.1%	12.8%	8.6%
Total Organic Materials	49.0%	65.4%	42.5%	49.3%	55.1%	48.2%	13.2%	37.2%
Total Recyclable - Depot	14.9%	9.8%	16.5%	11.3%	13.0%	12.7%	56.5%	46.1%
Total Residual Waste	22.6%	14.9%	21.2%	30.2%	18.9%	27.0%	17.5%	8.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

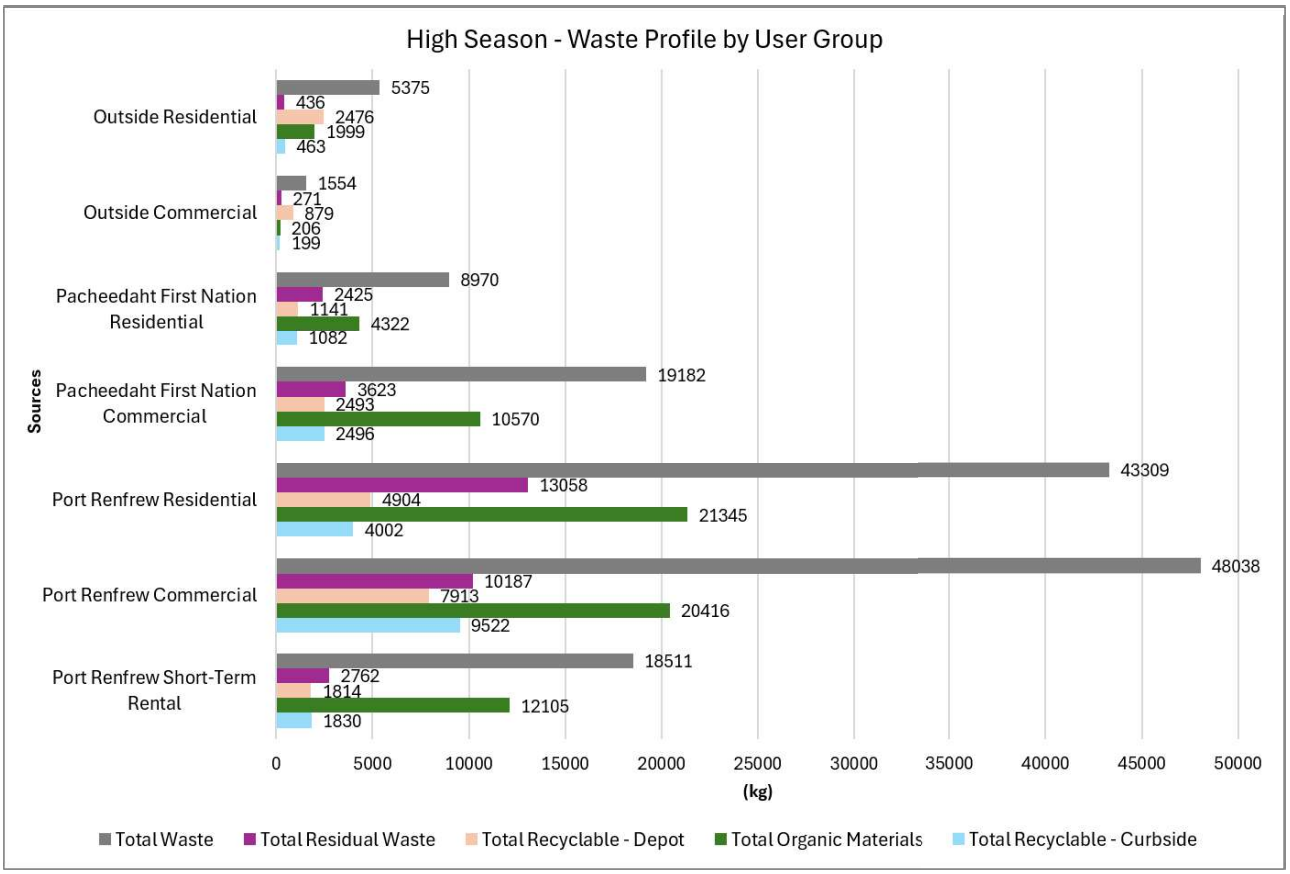


Figure 4 High Season Waste Profile by User Group – Estimated Contribution

The overall quantity of Recyclable – Depot material decreased from the low season to the high season by 2.3%. The highest quantity of Recyclable – Depot material during the low season was found in Port Renfrew Commercial (10,270 kg) followed by Port Renfrew Residential (5,801 kg) and Pacheedaht First Nation Commercial (5,772 kg).

During the high season, the largest quantity of Recyclable – Depot material was found in Port Renfrew Commercial (7,913 kg) followed by Port Renfrew Residential (4,904 kg), and Pacheedaht First Nation Commercial (2,493 kg).

The estimated annual composition by each user group is summarized in Table 4, while Figure 5 illustrates the estimated weight of each material category by user group based on the composition data and tonnage (estimated annual contribution). Overall, organic materials represent 43.5% of the total garbage disposed of during the year.

Port Renfrew Short Term Rental**,** Pacheedaht First Nation Commercial, and Pacheedaht First Nation Residential exhibited the highest fraction of organics in the garbage stream, accounting for 52.7%**,** 50.1%**,** and 47.7% of their respective disposed waste. Based on absolute contribution over the year (combined low and high season), Port Renfrew Commercial generated the largest amount of landfilled organic material (37,837 kg), followed by Port Renfrew Residential (33,741 kg) and Pacheedaht First Nation Commercial (28,223 kg).

Annually, Recyclable – Curbside material represented 13.4% of the overall garbage disposed. Port Renfrew Commercial has the largest contribution of recyclable materials (18,158 kg), followed by Port Renfrew Residential (7,910 kg) and Pacheedaht First Nation Commercial (7,342 kg). Within these user groups, recyclable materials accounted for 18.6%, 9.7% and 13.0% of the total garbage disposed, respectively.

The largest quantity of Recyclable – Depot material was found in Port Renfrew Commercial (18,183 kg) followed by Port Renfrew Residential (10,705 kg), and Pacheedaht First Nation Commercial (8,265 kg).

Table 4 Annual Composition Summary for Each User Group

		Port Renfrew			Pacheedaht First Nation		Outside	
All Sources	Overall	Short-Term Rental	Commercial	Residential	Commercial	Residential	Commercial	Residential
Total Recyclable - Curbside	13.4%	10.0%	18.6%	9.7%	13.0%	12.7%	12.8%	8.4%
Total Organic Materials	43.5%	52.7%	38.8%	41.3%	50.1%	47.7%	13.2%	45.9%
Total Recyclable - Depot	16.4%	11.8%	18.6%	13.1%	14.7%	14.5%	56.5%	33.2%
Total Residual Waste	26.6%	25.5%	24.0%	35.9%	22.2%	25.1%	17.5%	12.5%
Total Waste	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

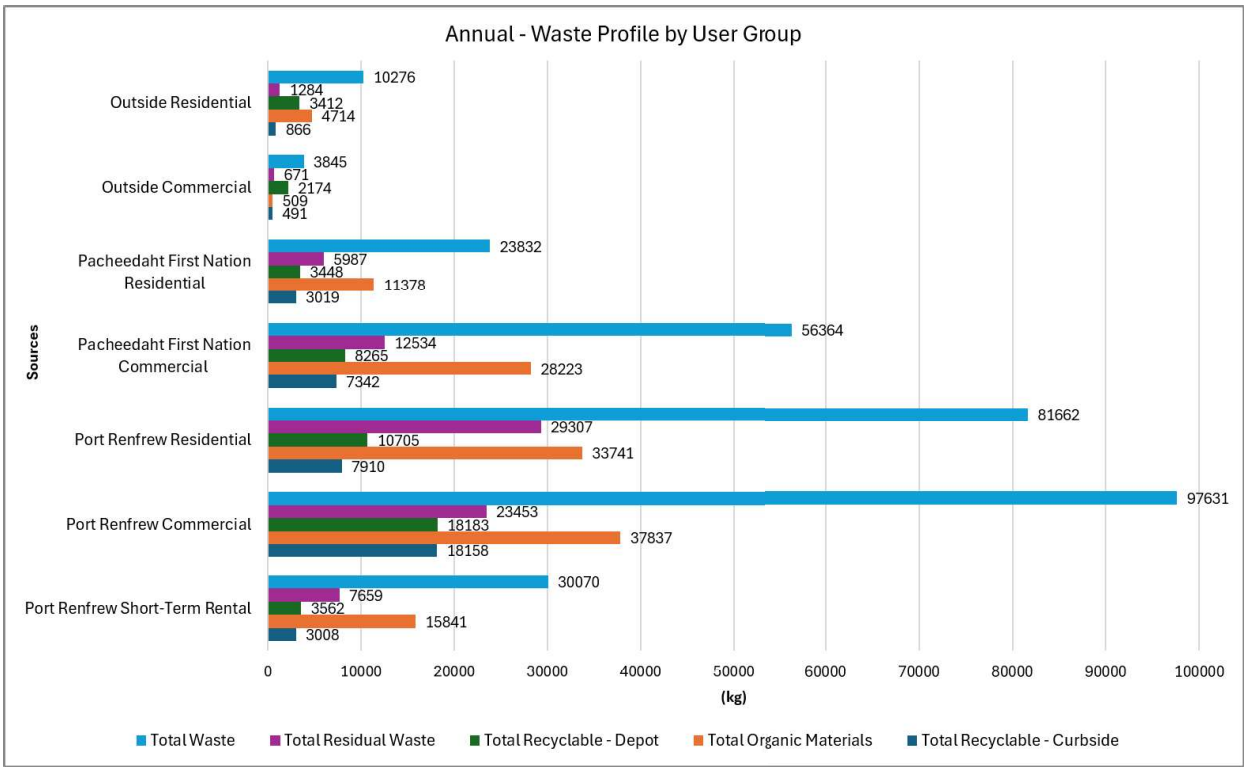


Figure 5 Annual Waste Profile by User Group – Estimated Contribution

CONCLUSION

AET Group Inc. was contracted by Stellers Jay Engineering to conduct a waste composition study for the Capital Regional District, BC, at the Port Renfrew Transfer Station. Primary objectives of the study were to quantify the different users of the facility including identifying instances of outside sources using the transfer station and to assess the overall composition of incoming waste. The garbage was categorized into seven source groups: Port Renfrew Residential, Port Renfrew Short Term Rental, Port Renfrew Commercial, Pacheedaht First Nation Residential, Pacheedaht First Nation Commercial, Outside Residential, and Outside Commercial.

The low season audit was conducted from May 8th to May 11th, 2026. The high season audit was conducted from July 10th to July 13th, 2026. During the low season, 209 visits were recorded at the transfer station over the four-day audit. During the high season, 314 visits were recorded over the four-day audit. Over both the seasons combined, 915 kg of garbage was collected and sorted to determine the composition of garbage collected from each group.

The total estimated garbage disposed of at the transfer station during the low season (October to May) was 158,740 kg and 144,940 kg during high season (June to September). The low season and high season tonnages were calculated using the 2025 tonnage data provided by the CRD and based on the estimated trips made by each user group.

Organic material remained the most landfilled material in both the seasons, increasing from 39.2% in the low season to 49.0% in the high season. On the contrary, the proportion of recyclable material decreased from 30.5% to 28.4%. Similarly, residual waste material decreased from 30.3% to 22.6% from the low to high season. Annually, Port Renfrew Commercial is the largest waste contributor, followed by Port Renfrew Residential and Pacheedaht First Nation Commercial. These three user groups also contribute the highest quantities of divertible material (organics and recyclables).

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Stellers Jay Engineering and AET Group Inc. make no warranty and assumes no liability for the information contained in this report outlining the Port Renfrew Transfer Station waste audit results. These results reflect measurements made over two 4-day sample periods (one in the low season and one in the high season), as described in the methodology. As such, waste generation measurements should be considered snapshots and may not reflect actual conditions. These reported generation rates more accurately reflect the quantity of each material generated over the study period and have been extrapolated into the annual tonnages based on the waste hauler records provided.

APPENDIX A

Low Season Sort Results

CRD-Port Renfrew Transfer Station Feasebility Study Low Season		Sample	Port Renfrew	Port Renfrew	Port Renfrew	Port Renfrew	Pacheedaht First Nation	Outside	OVERALL	OVERALL
		Date:	26-05-08	26-05-10	26-05-09	26-05-11	26-05-09	26-05-11		
		Source	Commercial #1	Commercial #2	Residential #1	Residential #2	Commercial/ Residential	Residential #1		
		Waste Stream:	Garbage	Garbage	Garbage	Garbage	Garbage	Garbage		
		Notes:			46 kg of C&D			Jordan River		
Material Category	(R=Recyclable, O=Organic, G=Garbage, OTHER)	Material Type	Net Weight (kg)	Net Weight (kg)	Net Weight (kg)	Net Weight (kg)	Net Weight (kg)	Net Weight (kg)	Net Weight (kg)	Composition (%)
Mixed paper	R	Paper	0.77	0.35	3.81	0.16	0.70	0.46	6.25	1.23%
Corrugated Cardboard (OCC) + Boxboard	R	Paper	14.14	2.05	3.98	2.31	2.32	1.58	26.38	5.18%
Polycoat Cups/Containers	R	Paper	0.78	0.59	0.55	0.22	0.58	0.12	2.84	0.56%
Spiral wound containers	R	Paper	0.09	0.00	0.05	0.00	0.04	0.07	0.25	0.05%
Paper laminate packaging	G	Garbage	0.11	2.86	0.57	0.07	0.16	0.29	4.06	0.80%
#1 PET containers, bottles and jars	R	Plastics	1.24	1.01	1.43	0.16	1.78	0.08	5.70	1.12%
#2 HDPE bottles and containers	R	Plastics	0.11	0.50	0.43	0.34	0.87	0.10	2.35	0.46%
#4 & #7 – other rigid plastics	R	Plastics	0.29	0.52	0.28	0.29	0.37	0.52	2.27	0.45%
#5 PP- bottles and containers	R	Plastics	0.80	1.09	0.75	0.11	0.72	0.24	3.71	0.73%
#6 PS	R	Plastics	0.02	0.01	0.04	0.00	0.07	0.00	0.14	0.03%
#6 PS Foam Styrofoam	OTHER	Special	3.14	0.02	0.28	0.46	0.07	0.40	4.37	0.86%
HDPE & LDPE- Flexible film plastics, plastic laminates	OTHER	Special	9.60	7.38	6.84	3.72	4.46	4.26	36.26	7.11%
Aluminum	R	Metals	0.52	0.12	0.39	0.19	0.18	0.05	1.45	0.28%
Aerosol containers	R	Metals	0.00	0.64	0.00	0.00	0.00	0.18	0.82	0.16%
Steel	R	Metals	0.38	0.64	1.30	0.46	1.43	0.06	4.27	0.84%
Glass bottles and jars	R	Glass	1.22	1.89	1.67	2.18	2.61	0.00	9.57	1.88%
Hazardous waste items	OTHER	Special	0.39	0.00	0.00	0.00	0.35	0.00	0.74	0.15%
Batteries	OTHER	Special	0.06	0.00	0.11	0.19	0.03	0.04	0.43	0.08%
Tires	OTHER	Special	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%
White goods/Appliances	OTHER	Special	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%
Cooking oil	OTHER	Special	0.00	0.00	0.24	0.00	0.00	0.00	0.24	0.05%
Light bulb	OTHER	Special	0.02	0.00	0.00	0.00	0.00	0.00	0.02	0.00%
Vehicle maintenance and gas cylinders	OTHER	Special	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%
Biomedical waste	OTHER	Special	0.00	0.01	0.01	0.00	0.00	0.00	0.02	0.00%
Electronic waste	OTHER	Electronics	1.45	0.04	0.42	3.64	0.69	0.65	6.89	1.35%
Scrap metal	OTHER	Special	0.15	0.70	6.38	0.55	0.64	0.34	8.76	1.72%
Textiles	OTHER	Special	4.63	4.36	1.74	4.09	5.70	0.58	21.10	4.14%
Tissue/paper towelling	O	Organics	4.73	5.27	5.98	2.28	4.23	0.71	23.20	4.55%
Food Soiled Paper	O	Organics	1.70	1.21	1.26	0.33	2.07	0.26	6.83	1.34%
Unavoidable food waste	O	Organics	7.26	14.48	16.40	10.77	13.13	4.14	66.18	12.98%
Avoidable food waste	O	Organics	10.61	12.36	16.57	6.81	23.04	8.22	77.61	15.23%
Yard waste and grass clippings	O	Organics	2.10	0.14	0.01	6.33	0.00	0.02	8.60	1.69%
Other organic waste	O	Organics	0.11	0.08	0.15	0.04	0.04	10.00	10.42	2.04%
Non- Alcohol Beverage Containers	Refund It	Special	1.70	1.16	1.87	0.08	1.30	0.15	6.26	1.23%
Alcoholic Beverage Containers	Refund It	Special	0.24	0.35	0.09	0.61	0.66	1.63	3.58	0.70%
Other glass- not accepted	G	Garbage	0.00	0.00	0.61	0.72	0.28	0.55	2.16	0.42%
Non-Recyclable Papers	G	Garbage	0.00	0.00	0.37	0.00	0.10	0.39	0.86	0.17%
Non-recyclable Plastics	G	Garbage	3.80	2.41	6.30	1.93	4.46	1.03	19.93	3.91%
Construction and renovation	G	Garbage	3.36	5.98	46.44	7.77	0.00	0.00	63.55	12.47%
Other waste	G	Garbage	16.73	10.48	9.06	13.89	16.46	5.03	71.65	14.06%
Total Recyclable - Curbside	R		20.36	9.41	14.68	6.42	11.67	3.46	66.00	12.95%
Total Organic Materials	O		26.51	33.54	40.37	26.56	42.51	23.35	192.84	37.83%
Total Recyclable - Depot	OTHER		19.44	12.51	16.02	12.65	11.94	6.27	78.83	15.47%
Total Recyclable - Depot (Refundable)	Refund It		1.94	1.51	1.96	0.69	1.96	1.78	9.84	1.93%
Total Residual Waste	G		24.00	21.73	63.35	24.38	21.46	7.29	162.21	31.82%
Total All Materials			92.25	78.70	136.38	70.70	89.54	42.15	509.72	100.00%

APPENDIX A

APPENDIX B

High Season Sort Results

CRD-Port Renfrew Transfer Station Feasebility Study High Season		Sample	Port Renfrew	Port Renfrew	Port Renfrew	Pacheedaht First Nation	Pacheedaht First Nation	Pacheedaht First Nation	Pacheedaht First Nation	Outside	Outside	OVERALL	OVERALL
		Date:	26-07-11	26-07-10	26-07-10	26-07-12	26-07-13	26-07-14	26-07-11	26-07-12	26-07-12		
		Source	Commercial	Residential	Airbnb	Commercial #1	Campground	Commercial	Residential	Commercial	Residential		
		Waste Stream:	Garbage	Garbage	Garbage	Garbage	Garbage	Garbage	Garbage	Garbage	Garbage		
		Notes:	14 bags	19 bags sorted	20 bags	4	8 bags		8 bags	4 bags, mostly from campground and beach	4 bags, Jordan River		
Material Category	(R=Recyclable, O=Organic, G=Garbage, OTHER)	Material Type	Net Weight (kg)	Net Weight (kg)	Net Weight (kg)	Net Weight (kg)	Net Weight (kg)	Net Weight (kg)	Net Weight (kg)	Net Weight (kg)	Net Weight (kg)	Net Weight (kg)	Composition (%)
Mixed paper	R	Paper	1.18	0.52	0.07	0.47	0.43	0.90	0.17	0.03	0.10	2.97	0.73%
Corrugated Cardboard (OCC) + Boxboard	R	Paper	3.10	2.85	2.11	0.80	2.26	3.06	2.48	1.27	0.68	15.55	3.84%
Polycoat Cups/Containers	R	Paper	1.03	0.61	0.25	0.57	1.03	1.60	0.61	0.09	0.10	4.29	1.06%
Spiral wound containers	R	Paper	0.00	0.00	0.12	0.00	0.07	0.07	0.00	0.00	0.00	0.19	0.05%
Paper laminate packaging	G	Garbage	1.27	0.96	1.57	0.37	0.69	1.06	0.55	0.00	0.20	5.61	1.38%
#1 PET containers, bottles and jars	R	Plastics	0.92	1.05	1.04	0.24	0.50	0.74	1.12	0.12	0.15	5.14	1.27%
#2 HDPE bottles and containers	R	Plastics	1.55	0.40	0.11	0.00	0.46	0.46	0.48	0.00	0.00	3.00	0.74%
#4 & #7 – other rigid plastics	R	Plastics	2.35	0.23	0.18	0.04	0.23	0.27	0.09	0.02	0.09	3.23	0.80%
#5 PP- bottles and containers	R	Plastics	1.03	0.24	0.68	0.19	1.01	1.20	0.55	0.04	0.11	3.85	0.95%
#6 PS	R	Plastics	0.02	0.00	0.08	0.00	0.01	0.01	0.00	0.00	0.04	0.15	0.04%
#6 PS Foam Styrofoam	OTHER	Special	0.07	0.28	0.39	0.00	0.05	0.05	0.08	0.14	0.21	1.22	0.30%
HDPE & LDPE- Flexible film plastics, plastic laminates	OTHER	Special	5.68	5.53	4.88	1.27	3.09	4.36	1.78	5.21	1.40	28.84	7.11%
Aluminum	R	Metals	0.02	0.75	1.51	0.17	0.14	0.31	0.08	0.15	0.02	2.84	0.70%
Aerosol containers	R	Metals	0.00	0.00	0.00	0.00	0.10	0.10	0.00	0.00	0.03	0.13	0.03%
Steel	R	Metals	0.64	0.50	0.36	0.75	0.20	0.95	0.19	0.49	0.05	3.18	0.78%
Glass bottles and jars	R	Glass	1.48	1.63	1.25	0.00	0.27	0.27	0.88	0.00	0.00	5.51	1.36%
Hazardous waste items	OTHER	Special	0.50	0.00	0.00	0.00	0.83	0.83	0.25	0.00	0.02	1.60	0.39%
Batteries	OTHER	Special	0.29	0.04	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.36	0.09%
Tires	OTHER	Special	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%
White goods/Appliances	OTHER	Special	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%
Cooking oil	OTHER	Special	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.02%
Light bulbs	OTHER	Special	0.04	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.21	0.05%
Vehicle maintenance and gas cylinders	OTHER	Special	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.05%
Biomedical waste	OTHER	Special	0.00	0.00	0.00	0.07	0.00	0.07	0.00	0.00	0.00	0.07	0.02%
Electronic waste	OTHER	Electronics	0.10	0.00	0.00	0.00	0.09	0.09	0.12	0.00	0.00	0.31	0.08%
Scrap metal	OTHER	Special	1.55	0.34	0.00	0.00	0.28	0.28	0.23	3.49	0.61	6.50	1.60%
Textiles	OTHER	Special	0.83	0.96	0.00	0.52	1.06	1.58	0.85	0.05	3.12	7.39	1.82%
Tissue/paper towelling	O	Organics	5.83	3.39	5.89	2.01	5.19	7.20	0.58	0.24	0.81	23.94	5.91%
Food Soiled Paper	O	Organics	1.10	0.94	1.44	0.23	3.38	3.61	0.57	0.03	0.06	7.75	1.91%
Unavoidable food waste	O	Organics	9.28	10.64	18.42	2.79	12.83	15.62	3.01	1.19	2.65	60.81	15.00%
Avoidable food waste	O	Organics	12.30	31.43	25.57	5.03	10.64	15.67	22.37	0.83	2.36	110.53	27.26%
Yard waste and grass clippings	O	Organics	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.01%
Other organic waste	O	Organics	0.02	0.40	0.00	0.00	0.00	0.00	0.03	0.00	0.03	0.48	0.12%
Non- Alcohol Beverage Containers	Refund It	Special	1.29	1.50	1.49	0.29	1.59	1.88	1.96	0.10	0.35	8.57	2.11%
Alcoholic Beverage Containers	Refund It	Special	0.42	2.11	0.93	0.00	0.76	0.76	1.57	0.79	1.61	8.19	2.02%
Other glass- not accepted	G	Garbage	1.87	0.21	0.00	0.04	0.00	0.04	0.20	0.00	0.00	2.32	0.57%
Non-Recyclable Papers	G	Garbage	0.00	0.00	0.06	0.00	0.04	0.04	0.00	0.00	0.00	0.10	0.02%
Non-recyclable Plastics	G	Garbage	1.51	0.47	0.57	0.11	1.01	1.12	2.57	0.04	0.39	6.67	1.65%
Construction and renovation	G	Garbage	2.00	10.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.25	3.02%
Other waste	G	Garbage	7.60	16.76	9.51	1.03	11.14	12.17	11.58	2.98	0.70	61.30	15.12%
Total Recyclable - Curbside	**R**		**13.32**	**8.78**	**7.76**	**3.23**	**6.71**	**9.94**	**6.65**	**2.21**	**1.37**	**50.03**	**12.34%**
Total Organic Materials	**O**		**28.56**	**46.83**	**51.32**	**10.06**	**32.04**	**42.10**	**26.56**	**2.29**	**5.91**	**203.57**	**50.21%**
Total Recyclable - Depot	**OTHER**		**9.36**	**7.15**	**5.27**	**1.89**	**5.40**	**7.29**	**3.48**	**8.69**	**5.36**	**46.80**	**11.54%**
Total Recyclable - Depot (Refundable)	**Refund It**		**1.71**	**3.61**	**2.42**	**0.29**	**2.35**	**2.64**	**3.53**	**0.89**	**1.96**	**16.76**	**4.13%**
Total Residual Waste	**G**		**14.25**	**28.65**	**11.71**	**1.55**	**12.88**	**14.43**	**14.90**	**3.02**	**1.29**	**88.25**	**21.77%**
Total All Materials			**67.20**	**95.02**	**78.48**	**17.02**	**59.38**	**76.40**	**55.12**	**17.30**	**15.89**	**405.41**	**100.00%**

APPENDIX A

APPENDIX C

Waste Audit Category Definitions

APPENDIX A

Material Type	Description/Examples	Correct Stream (G, R, O, OTHER, Drop Off)
Paper and Paper Packaging		
Mixed paper	Daily and weekly newspapers, magazines and catalogues, telephone books and other directories, fine household paper, printer paper, mail, construction paper, bills and statements. Shredded paper.	R
Corrugated Cardboard (OCC) + Boxboard	Pizza boxes, moving boxes, cereal boxes, cores from toilet paper or paper towel. Molded pulp such as egg cartons, drink trays. Includes brown and white kraft paper and bags. Excludes paper with bonded plastic or foil layers.	R
Polycoat Cups/Containers	Polycoat beverage and food containers including milk and milk alternatives, juice, soup, sauces, sugar and molasses containers. Hot and Cold Cups	R
Spiral wound containers	Frozen juice, Pringles	R
Paper laminate packaging	Paper bonded with plastic and/or aluminum foil, including microwave popcorn bags, laminated pet food bags, laminated paper bags, and food service bags.	G
Plastic Packaging		
#1 PET containers, bottles and jars	Mouthwash, dish soap, salad dressing bottles. Egg cartons, fruit clamshells, molded protective packaging including thermoform. Black PET #1 plastics bottles for food, shampoos, cooking oils. Microwavable trays and other consumer products, including black thermoform.	R
#2 HDPE bottles and containers	Windshield washer fluid, laundry detergent, bleach, vinegar, shampoo, conditioner, margarine, yogurt containers. Black #2 HDPE plastic bottles, jugs and containers.	R
#4 & #7 – other rigid plastics	Plant pots, trays, pails other tubs and lids	R
#5 PP- bottles and containers	Margarine, ketchup, cottage cheese, yogurt containers; rigid polypropylene tubs, lids and containers made from #5 PP.	R
#6 PS	Non-expanded polystyrene clear clamshell containers such as muffin containers, opaque clamshell yogurt containers, small milk or cream containers, and cold drink cups	R
#6 PS Foam Styrofoam	Expanded polystyrene. Meat trays, peanuts, packaging. Black foam takeout containers, foam drink cups, meat trays, black rigid trays, and containers.	Drop Off
HDPE & LDPE- Flexible film plastics, plastic laminates	HDPE & LDPE film, dry cleaning bags, bread bags, frozen food bags, toilet paper/ paper towel wrapping, lawn seed bags, grocery and retail carry bags, kitchen catchers, sandwich and freezer bags, leaf bags. Plastics laminates such as, vacuum sealed bags, cereal liners, pasta bags, including black HDPE &LDPE and laminate films. Chip bags, wrappers, pet food bags, plastics food pouches with residue.	Drop Off
Metals		
Aluminum	Pet food cans, baking aluminum foil sheets, used aluminum foil. Aluminum siding, baking trays.	R
Aerosol containers	Food spray, hairspray, air fresheners, shaving cream, deodorant. Empty, lids on. Does not include HSW products.	R
Steel	Pie plates, peaches, beans, soup cans.	R
Glass		
Glass bottles and jars	Glass food and beverage containers, pasta jars, jam jars, pickles jars, salsa jars, cosmetic containers.	R
Municipal Special Programs		
Hazardous waste items	Paint and stains, cleaning products, gardening chemicals, "flammable", "poison," "dangerous" liquid, compact fluorescent lights, other HSW liquids.	OTHER
Batteries	Batteries include all single-use and button or coin cell batteries and battery packs, as well as all rechargeable types including nickel cadmium (NiCd), nickel-metal hydride (NiMH), lithium or lithium ion, nickel zinc, sealed lead, alkaline-manganese, zinc-carbon, zinc-air, silver oxide, and vehicle batteries such as lead-acid and AGM.	OTHER
Tires	Tire or rubber materials	OTHER
White goods/Appliances	Large domestic applinaces, refrigerator, washer, dryer, oven.	OTHER
Cooking oil	Kitchen cooking oil	OTHER
Light bulbs	CFL and non CFL bulbs	OTHER
Vehicle maintenance and gas cylinders	Automotive oils such as engine oil, hydraulic oil, and gear oil; used oil filters; antifreeze/coolant liquids; empty containers for oil, antifreeze, and lubricants; and cylinders for compressed gases, including propane tanks.	OTHER

APPENDIX A

Material Type	Description/Examples	Correct Stream (G, R, O, OTHER, Drop Off)
Biomedical waste	Sharps, medical syringes, medical waste pharmaceutical, drug products.	OTHER
Electronic waste	Televisions, laptops, computer monitors, printer, copier, phone, cell phone, keyboards, modems, video gaming devices, blender, toaster, coffee machine, sewing machines other electronic waste items.	OTHER
Scrap metal	Ferrous and non-ferrous metal items not classified as packaging materials and not accepted in the Blue Box program, such as pots, pans, tools, hardware, pipes, and small appliances. Excludes beverage cans, food tins, and electronics.	OTHER
Textiles	Shoes, clothing, etc.	OTHER
Organic Waste		
Tissue/paper toweling	Tissues, napkins, paper towels (wet/dry)	O
Food Soiled Paper	Paper bags with food waste, greasy pizza boxes, coated paper take-out containers, waxed cardboard, uncoated paper cups, plates and carry-out trays.	O
Unavoidable food waste	Vegetable and fruit peelings and trimmings; meat, poultry, fish bones and trimmings; shellfish shells, eggshells, nut shells, coffee grounds, filters, tea bags, leftovers and plate waste (table scraps and plate scrapings).	O
Avoidable food waste	Meat, poultry, fish, seafood, cheese and dairy products, fruits and vegetables, other fresh food items. Bread, muffin, cakes, cereal, pasta, rice, beans, jam, honey, and other food items.	O
Yard waste and grass clippings	Trimmings from houseplants, flowers, branches, wood chips, grass clippings.	O
Other organic waste	butcher paper, dryer lint, liners, hair, nails.	O
Refundable Containers		
Non- Alcohol Beverage Containers	All refundable non-alcohol containers, Pop and Juices, regardless of their make. Part of Refund It program	OTHER
Alcoholic Beverage Containers	All alcohol containers, wine, beer, spirits, regardless of their make. Part of Refund It program	OTHER
Other (Non-Divertible) Materials		
Other glass- not accepted	Dishes, housewares, ceramic, window glass.	G
Non-Recyclable Papers	Photographs, Hard cover and Soft cover books	G
Non-recyclable Plastics	#PVC, and Durable products; Toys, food storage containers and other ineligible plastic products	G
Construction and renovation	Lumber, drywall, ceramic tile, plaster, Wood. Carpet and carpeting mats.	G
Other waste	Materials not classified elsewhere, wooden baskets, wax candles, pet waste	G

APPENDIX C: User Intake Questionnaire and Log Form

CRD Port Renfrew Transfer Station:

User Intake Form for July 2026 High Season Waste Audit

Date and Time: _____

This form will help the Capital Regional District (CRD) better understand who uses the Port Renfrew Transfer Station and what types of waste are being dropped off. This information will help to improve services at the facility.

No personal information will be collected.

Where is this waste coming from?

☐ **Port Renfrew –** short-term rental (e.g. Airbnb)

☐ **Port Renfrew** - local resident

☐ **Port Renfrew –** business/commercial

☐ **Pacheedaht First Nation –** local resident

☐ **Pacheedaht First Nation –** business/commercial

☐ **Outside source –** local resident

☐ **Outside source –** business/commercial

Waste Sector:

AirBnB - waste from a short-term rental, such as AirBnB

Residential - waste from a household (e.g. household garbage, recyclables, yard waste)

ICI - waste from an Industrial, Commercial or Institutional activity (e.g. restaurant, lodge, fishing operation, construction project, hospital, school)

Port Renfrew Transfer Station – Waste Composition Study

Staff: _____ Year: _____

Date	Waste Source			Waste Sector			# of bags	Bag Weights / Notes
	Port Renfrew	Pacheedaht First Nation	Outside	AirBnB	Residential	ICI		

APPENDIX A

APPENDIX D: Waste Contribution Analysis – Low and High Season Memos

Stellers Jay Engineering
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Burnaby, BC, Canada V5C 5Z2
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Technical Memorandum

To	Alex Berthin, Solid Waste Analyst, Capital Regional District	Page	1 of 3
CC	-		
Project	Port Renfrew Transfer Station Feasibility Study		
Subject	May 2026 Low Season Audit – Additional Analysis on Estimated Tonnages		
Site Address	17055 Parkinson Road, Port Renfrew		
Prepared by:	Humphrey Chou, EIT		
Reviewed by:	Curtis Jung, P.Eng.		
Date	June 15, 2026	Project Number	2026015

1. Introduction and Scope

Stellers Jay Engineering (SJE) was retained by the Capital Regional District (CRD) to complete a feasibility study of the Port Renfrew Transfer Station located at 17055 Parkinson Road, Port Renfrew, BC. The overall objective of the feasibility study is to assess how the existing Port Renfrew Transfer Station can continue to meet current and future service needs.

The purpose of this memo is to summarize additional analysis completed to estimate the waste contribution from each user group, based on the preliminary audit results presented in the AET Group memo, dated June 10, 2026.

2. Results

An average residential and commercial sector bag weight was determined based the total weight of the bags recorded to create each sub sample during the audit and the number of bags recorded. The estimated average bag weights are as follows:

- Residential – 4.48 kg per bag
- Commercial – 7.06 kg per bag

By reviewing trip and bag count data, the average number of bags dropped off from each user group per trip was estimated. The average number of bags was multiplied by the average bag weights to estimate an average weight per trip. The average weight per trip was then multiplied by the total number of trips to estimate the total weight of material dropped off from each user group during the study period from May 8-11, 2026. The results are summarized in Table 1 below.

Table 1: Estimated Total Quantity of Waste Dropped Off by Each User Group

User Group	Avg bag weight (kg)	Avg bags per trip (bags/trip)	Avg weight per trip (kg/trip)	# of Trips	Estimated Total Waste Dropped off May 8-11, 2026 (kg)	Percent of Total Estimated Tonnage May 8-11, 2026
Short-term accomodations	4.48	1.6	7	48	349	10.4%
Port Renfrew - Commercial	7.06	5.6	39	27	1066	31.8%
Port Renfrew - Residential	4.48	1.6	7	109	775	23.1%
Pacheedaht FN - Commercial	7.06	17.3	122	7	854	25.5%
Pacheedaht FN - Residential	4.48	3.7	17	12	201	6.0%
Outside - Commercial	4.48	5.0	22	2	45	1.3%
Outside - Residential	4.48	3.7	16	4	66	2.0%

Between May 8 to 11, 2026, we estimate that approximately 3,354 kg of material was dropped off as general refuse by all user groups. The average load size for Port Renfrew residents and short-term accommodations ranged between 1-2 bags per trip. The average load size for Pacheedaht First Nation residential loads and outside residential loads was approximately 4 bags per trip. Port Renfrew commercial and outside commercial loads averaged 5-6 bags per load, while the average size of Pacheedaht First Nation commercial loads was estimated at approximately 17 bags per load. There was a large range in the size of Port Renfrew commercial loads with larger businesses (such as the resorts) dropping off up to 20 bags per trip whereas smaller businesses dropped off as little as a single bag. All Pacheedaht First Nation commercial loads were larger loads originating from the Pacheedaht Campground.

Combining commercial and residential loads, the estimated contribution from each user group is as follows:

- Port Renfrew (residential + commercial) – 54.9%
- Pacheedaht First Nation (residential + commercial) – 31.5%
- Short-term accommodations – 10.4%
- Outside users (residential + commercial) – 3.3%

3. Assumptions and Limitations

The analysis presented in this memo is based on a limited sample size collected between May 8-11, 2026. In particular, there was a relatively small amount of trips from Pacheedaht First Nation and outside users. Therefore, we recommend the assumptions used to calculate the average load size (average bag weight and number of bags per trip) be updated after additional data is collected during the high season audit. Where practical, we also recommend additional data on the actual total load weights be collected during the high season audit (the total weight of all bags from each trip be weighed and recorded) to validate the estimates presented above.

4. Closure

Stellers Jay Engineering was retained by the Capital Regional District to conduct the work described in this memorandum, and this memorandum has been prepared solely for this purpose.

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

Stellers Jay Engineering does not accept responsibility for the use of this memorandum for any purpose other than that stated above and does not accept responsibility to any third party for the use, in whole or in part, of the contents of this document. This memorandum should be understood in its entirety, since sections taken out of context could lead to misinterpretation.

The information contained in this memorandum is based on observations and discussions from the low season site visit completed on May 8-11, 2026, and is intended to inform the ongoing feasibility study. It is not a comprehensive assessment of all site conditions or risks.

We trust the information presented in this memorandum meets the CRD's requirements. If you have any questions or require additional details, please do not hesitate to contact the undersigned.

Stellers Jay Engineering Ltd.

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Reviewed by:



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Appendices:
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Technical Memorandum

To	Alex Berthin, Solid Waste Analyst, Capital Regional District	Page	1 of 6
CC	-		
Project	Port Renfrew Transfer Station Feasibility Study		
Subject	July 2026 High Season Audit – Analysis on Estimated Waste Contribution		
Site Address	17055 Parkinson Road, Port Renfrew		
Prepared by:	Humphrey Chou, EIT		
Reviewed by:	Curtis Jung, P.Eng.		
Date	July 21, 2026	Project Number	2026015

1. Introduction and Scope

Stellers Jay Engineering (SJE) was retained by the Capital Regional District (CRD) to complete a feasibility study of the Port Renfrew Transfer Station located at 17055 Parkinson Road, Port Renfrew, BC. The overall objective of the feasibility study is to assess how the existing Port Renfrew Transfer Station can continue to meet current and future service needs.

The purpose of this memo is to summarize the estimates of the waste contribution from each user group, based on the high season audit completed over four days from July 10-13, 2026. A similar memo was prepared for the low season audit (refer to SJE memo dated June 15, 2026).

The waste composition results will be presented in a separate memo.

2. Results

2.1 Trip Data

Over the four-day audit from July 10-13, 2026, 315 trips were recorded. A summary of the trip data is presented in Table 1 below. Daily trip counts ranged between 75 to 94 trips per day.

Table 1: Trip Data from July 10-13, 2026

		Port Renfrew			Pacheedaht First Nation		Outside	
Date	Overall	Short Term Accomodations	Commercial	Residential	Commercial	Residential	Commercial	Residential
10-Jul	75	21	11	39	1	1	1	1
11-Jul	71	15	7	43	3	3		
12-Jul	94	34	9	41	3	2	4	1
13-Jul	75	30	6	30	2	4	1	2
Total	315	100	33	153	9	10	6	4

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2.2 Weight Contribution Estimates – July 10-13, 2026

During the high season audit, bag weights were recorded for approximately 94% of the trips. Based on the recorded bag weights, an average bag weight was calculated for each of the seven user groups.

The average bag weights are presented in Table 2 below.

Table 2: Estimated Average Bag Weights by User Group

User Group	Avg bag weight (kg)
Short-term accommodations	2.79
Port Renfrew - Commercial	6.16
Port Renfrew - Residential	4.17
Pacheedaht FN - Commercial	5.77
Pacheedaht FN - Residential	6.24
Outside - Commercial	4.26
Outside - Residential	6.26

The methodology to estimate the average bag weights differed from the low season audit, where only two average bag weights were assumed (average residential and commercial bag weights). This approach was taken for the low season estimates because bag weights were collected for only about 20% of trips, and two representative bag weights for residential and commercial users was considered reasonable, given the limitations in data for the low season audit.

In addition to the bag weights, the number of bags dropped off was recorded for each trip. The number of bags was multiplied by the average bag weights to estimate an average weight per trip. The average weight per trip was then multiplied by the total number of trips to estimate the total weight of material dropped off from each user group during the audit period from July 10-13, 2026. The results are summarized in Table 3 below.

Table 3: Estimated Total Quantity of Waste Dropped Off by Each User Group – July 10-13, 2026

User Group	Avg bag weight (kg)	Avg bags per trip (bags/trip)	Avg weight per trip (kg/trip)	# of Trips	Estimated Total Waste Dropped off July 10-13, 2026 (kg)	Percent of Total Estimated Tonnage July 10-13, 2026
Short-term accomodations	2.8	1.7	4	100	448	12.8%
Port Renfrew - Commercial	6.2	5.2	35	33	1162	33.1%
Port Renfrew - Residential	4.2	1.6	8	138	1047	29.9%
Pacheedaht FN - Commercial	5.8	5.9	52	9	464	13.2%
Pacheedaht FN - Residential	6.2	3.3	22	10	217	6.2%
Outside - Commercial	4.3	1.3	6	6	38	1.1%
Outside - Residential	6.3	4.3	32	4	130	3.7%
			TOTALS	**300**	**3505**	**100%**

**Fifteen "irregular" trips from inside Port Renfrew (e.g. spring cleanout, estate cleanout) are NOT included in this table*

Between July 10 to 13, 2026 (four days), we estimate that approximately 3,505 kg of material was dropped off as general refuse by all user groups. Short-term accommodations had the smallest

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average load size at 4 kg per trip, followed by outside commercial and Port-Renfrew residential at 6 kg and 8 kg per trip, respectively. The estimated weight of Pacheedaht First Nation residential loads was similar to the low season audit and was estimated to be 22 kg per trip. Port Renfrew commercial and Pacheedaht First Nation commercial loads were the largest loads estimated at 35 kg per trip and 52 kg per trip, respectively.

Similar to the low season audit, there was a large range in the size of Port Renfrew commercial loads with larger businesses (such as the resorts) dropping off up to 21 bags per trip whereas smaller businesses dropped off as little as a single bag. The majority of Pacheedaht First Nation commercial waste originated from Pacheedaht Campground, however smaller commercial trips also originated from the Pacheedaht First Nation Band office, medical office, and Seafoam Seafood.

Outside commercial trips originated from Lizard Lake campground, Fairy Lake campground, and Sombrio Beach. Outside residential trips originated from Jordan River.

Combining commercial and residential loads, the estimated contribution from each user group is as follows:

- Port Renfrew (residential + commercial) – 63.0%
- Pacheedaht First Nation (residential + commercial) – 19.4%
- Short-term accommodations – 12.8%
- Outside users (residential + commercial) – 4.8%

2.3 Weight Contribution Estimates – Adjusted May 8-11, 2026 Estimates

As noted above, the waste contribution estimates for the low season audit were based on two assumed bag weights (commercial and residential) estimated based on weight data from approximately 20% of trips recorded during the low season audit. With a more complete dataset on bag weights collected from about 94% of trips from the high season audit, the low season waste contribution estimates were updated. The updated estimates are presented in Table 4 below.

Table 4: Estimated Total Quantity of Waste Dropped Off by Each User Group – May 8-11, 2026 (revised based on latest bag weights)

User Group	Avg bag weight (kg)	Avg bags per trip (bags/trip)	Avg weight per trip (kg/trip)	# of Trips	Estimated Total Waste Dropped off May 8-11, 2026 (kg)	Percent of Total Estimated Tonnage May 8-11, 2026
Short-term accomodations	2.8	1.6	5	48	217	7.3%
Port Renfrew - Commercial	6.2	5.6	34	27	931	31.2%
Port Renfrew - Residential	4.2	1.6	7	109	720	24.2%
Pacheedaht FN - Commercial	5.8	17.3	100	7	698	23.4%
Pacheedaht FN - Residential	6.2	3.7	23	12	279	9.4%
Outside - Commercial	4.3	5.0	21	2	43	1.4%
Outside - Residential	6.3	3.7	23	4	92	3.1%
			TOTALS	**209**	**2979**	

Compared to the previous low season waste contribution estimates, the total estimated waste dropped off decreased from 3354 kg to 2979 kg which is largely attributed to the more detailed bag size assumptions. However, there were only minor changes (less than 1.5% change) to the estimated percent waste contribution from each user group. The primary change was the estimated contribution from short-term accommodations which decreased from 10.4% to 7.3%.

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2.4 Discussion and Seasonal Variation Comparison

There was a 51% increase in total trips counted over the four-day audit compared to the low season audit (from 209 in low season to 315 in high season audit). Table 5 below provides a comparison of the total trips recorded between the low season and high season audits.

Table 5: Comparison of Trips between Low Season and High Season Audits

		Port Renfrew			Pacheedaht First Nation		Outside	
Date	Total Trips	Short Term Accomodations	Commercial	Residential	Commercial	Residential	Commercial	Residential
Low season May 8-11, 2026	209	48	27	109	7	12	2	4
High season July 10-13, 2026	315	100	33	153	9	10	6	4
% Difference	*+51%*	*+108%*	*+22%*	*+40%*	*+29%*	*-17%*	*+200%*	*0%*

A comparison of the total waste contribution (in kg) and percent contribution is provided in Tables 6-8 below.

Table 6: Comparison of Estimated Weights by User Group

User Group	Estimated Total Waste Dropped off May 8-11, 2026 (kg)	Estimated Total Waste Dropped off July 10-13, 2026 (kg)	% Change
Short-term accomodations	217	448	107%
Port Renfrew - Commercial	931	1162	25%
Port Renfrew - Residential	720	1047	45%
Pacheedaht FN - Commercial	698	464	-34%
Pacheedaht FN - Residential	279	217	-22%
Outside - Commercial	43	38	-12%
Outside - Residential	92	130	41%
	2979	**3505**	**18%**

Table 7: Comparison of Percent Contribution by User Group

User Group	% Contribution May 8-11, 2026	% Contribution July 10-13, 2026	Increase of Decrease
Short-term accomodations	7%	13%	5%
Port Renfrew - Commercial	31%	33%	2%
Port Renfrew - Residential	24%	30%	6%
Pacheedaht FN - Commercial	23%	13%	-10%
Pacheedaht FN - Residential	9%	6%	-3%
Outside - Commercial	1%	1%	0%
Outside - Residential	3%	4%	1%
	100%	**100%**	

Table 8: Comparison of Percent Contribution by User Group - Combined

User Group	% Contribution May 8-11, 2026	% Contribution July 10-13, 2026	Increase or Decrease
Short-term accomodations	7.3%	12.8%	5.5%
Port Renfrew Commercial + Residential	55.4%	63.0%	7.6%
Pacheedaht First Nation Commercial + Residential	32.8%	19.4%	-13.4%
Outside Users Commercial + Residential	4.5%	4.8%	0.3%

The percent contribution from short-term accommodations and Port Renfrew (commercial and residential) increased compared to the low season audit, representing 12.8% and 63% of the waste contribution, respectively. The percent contribution from Pacheedaht First Nation (commercial and residential) decreased by 13.4% from 32.8% in the low season to 19.4% in the high season audit. The percent contribution from outside users (commercial and residential) remained relatively unchanged at approximately 5% of the total estimated waste contribution.

3. Assumptions and Limitations

The analysis presented in this memo is based on a limited sample size collected between May 8-11 and July 10-13, 2026. The estimated waste contribution for the low season audit is based on average bag weights collected during the high season audit. While we believe the bag weights to be generally representative and applicable between both seasons, minor differences in bag weights should be expected.

We recommend additional audits be completed in the future to validate the assumptions presented in this memo, including the assumed load weights and user counts. Week-to-week fluctuations in user traffic should be expected within each season; therefore, we recommend additional traffic counts be completed by the CRD to provide a more comprehensive data set.

4. Closure

Stellers Jay Engineering was retained by the Capital Regional District to conduct the work described in this memorandum, and this memorandum has been prepared solely for this purpose.

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

Stellers Jay Engineering does not accept responsibility for the use of this memorandum for any purpose other than that stated above and does not accept responsibility to any third party for the use, in whole or in part, of the contents of this document. This memorandum should be understood in its entirety, since sections taken out of context could lead to misinterpretation.

The information contained in this memorandum is based on observations and discussions collected during site visits completed on May 8-11, 2026 and July 10-13, 2026, and is intended to inform the ongoing feasibility study. It is not a comprehensive assessment of all site conditions or risks.

We trust the information presented in this memorandum meets the CRD's requirements. If you have any questions or require additional details, please do not hesitate to contact the undersigned.

Stellers Jay Engineering Ltd.

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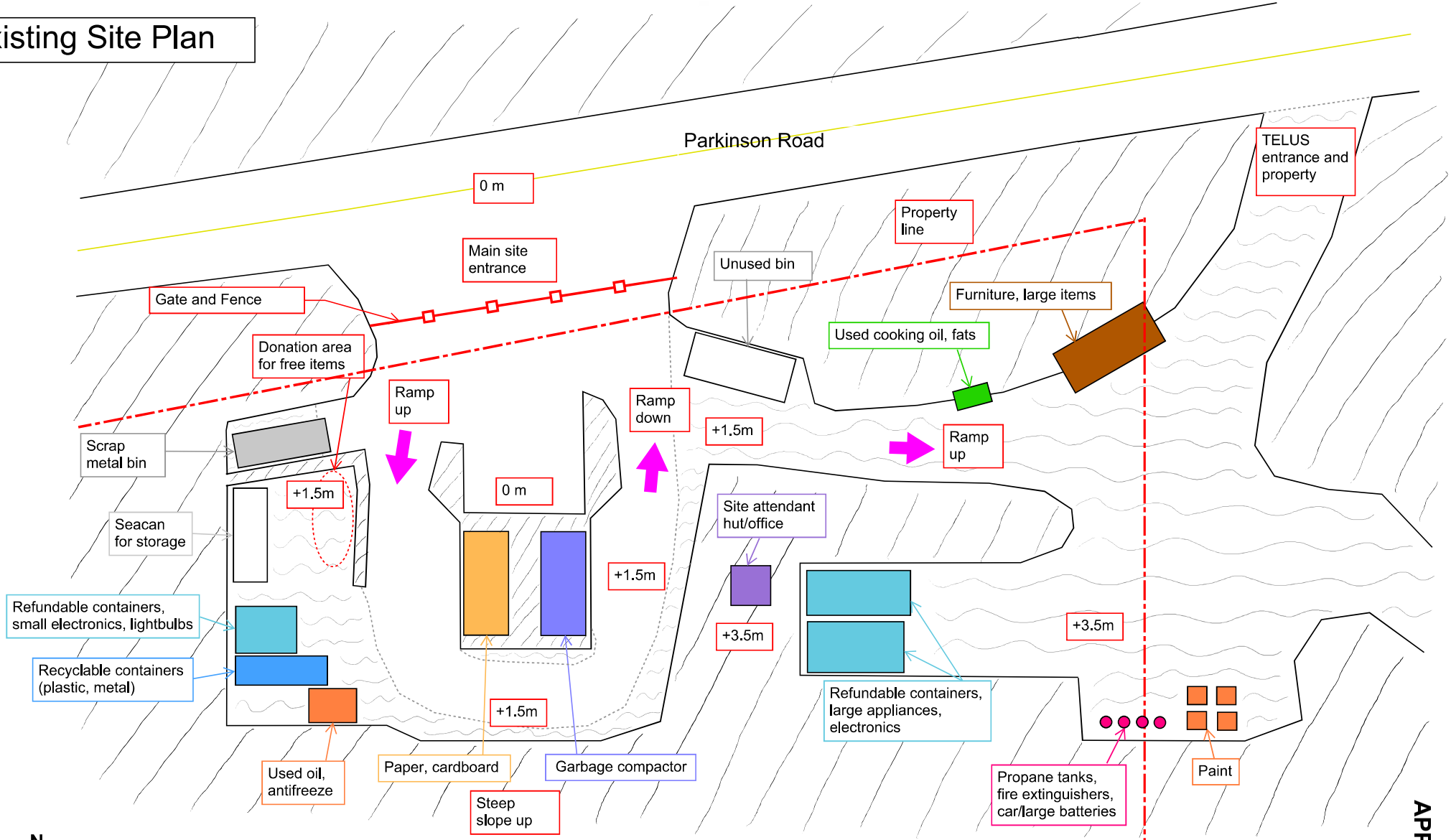


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Appendices:
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APPENDIX E: Site Expansion Conceptual Sketch (Tier 3 Option)

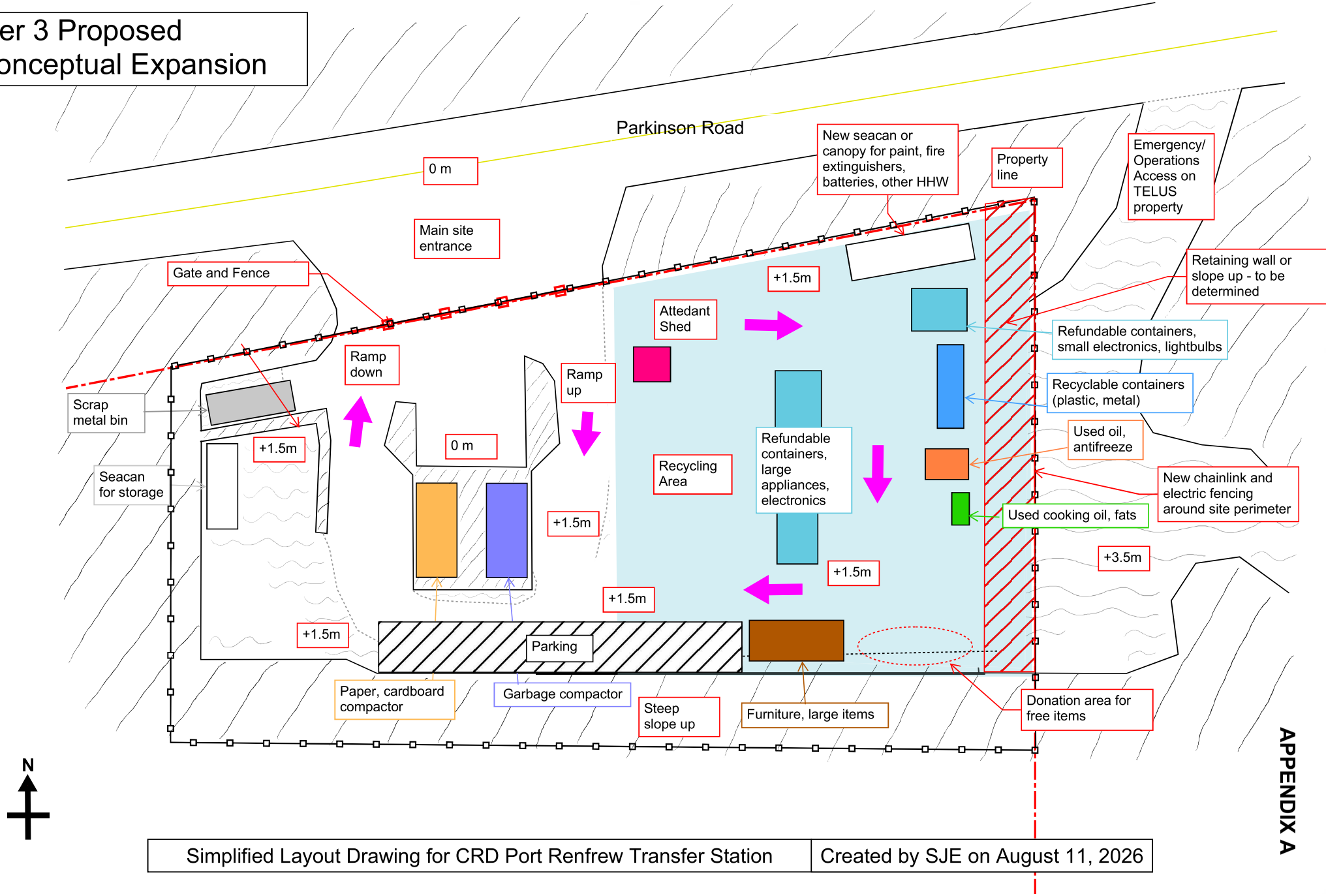
Existing Site Plan



APPENDIX A

Simplified Layout Drawing for CRD Port Renfrew Transfer Station	Created by SJE on August 11, 2026

Tier 3 Proposed Conceptual Expansion



APPENDIX A

Simplified Layout Drawing for CRD Port Renfrew Transfer Station	Created by SJE on August 11, 2026



Port Renfrew Garbage & Recycling Depot:
Feasibility study results

Port Renfrew Utility Services Committee
November 10, 2026

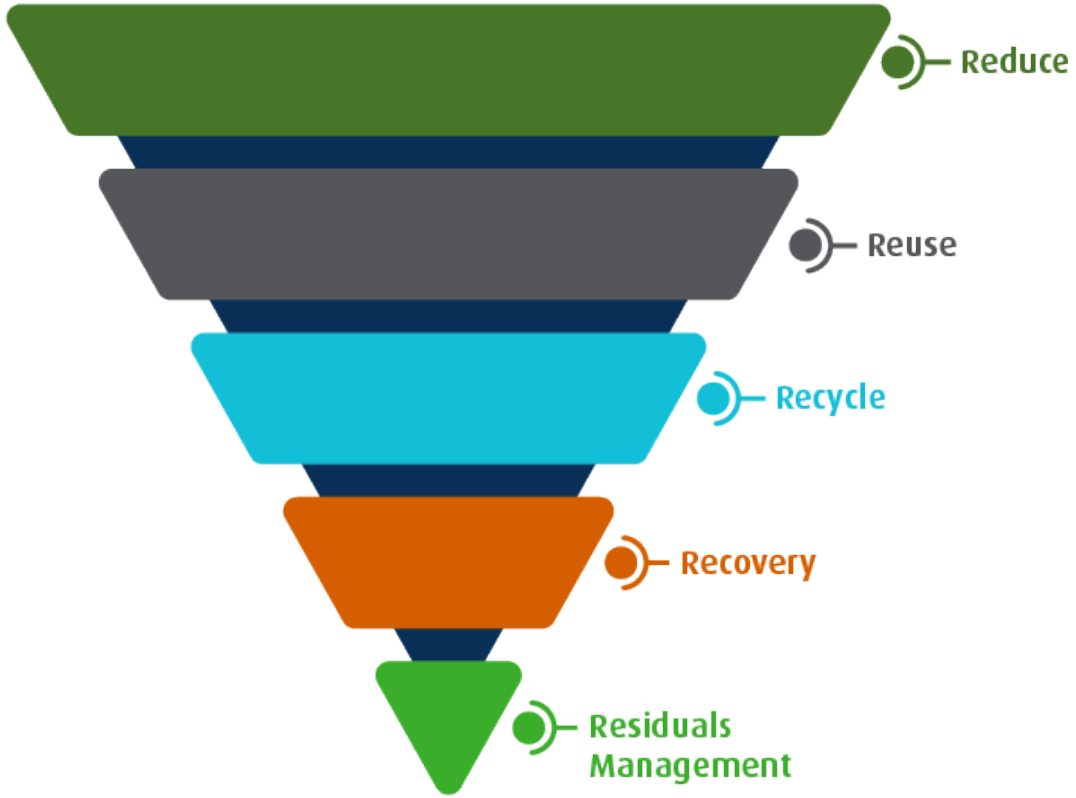
For discussion today

1. Project overview
2. Service funding
3. Study findings
4. Recommended next steps

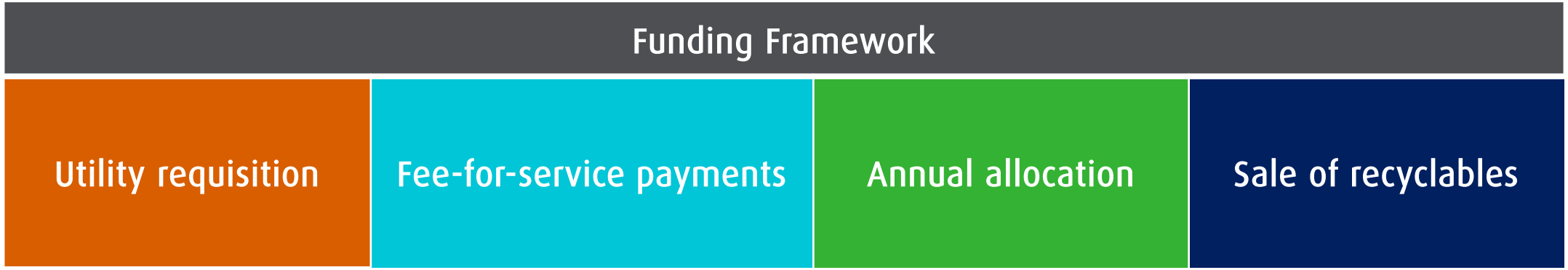


Project overview

- Feasibility study was a deliverable for Growing Communities grant
- Two four-day sampling periods to address low- and high-season variation
- Study looked at depot's use by sector, waste stream composition, diversion opportunities and potential future service needs



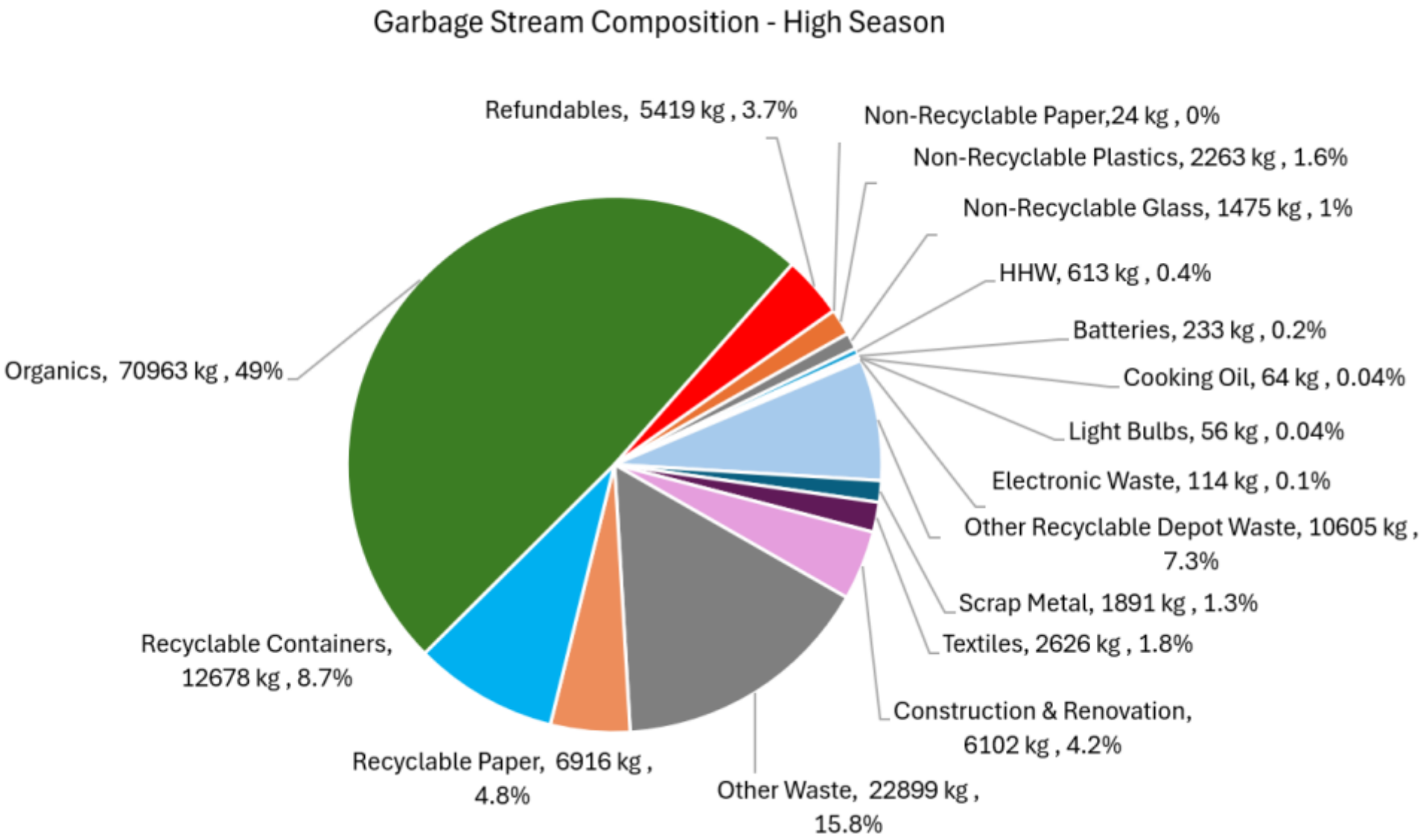
Service funding



Service use

- Total trips for all depot users **increased by 51%** between low- and high-season
- Commercial users generated **32%** of all waste across both sampling periods
- **Three commercial users accounted for 85% of waste** from commercial sources and **28%** of all waste sampled
- Short-term vacation rental users generated **10%** of the waste across both sampling periods
- Sampled garbage from all PFN sources comprised **26%** of the waste in both sampling periods




Garbage Stream Composition - High Season
Refundables, 5419 kg , 3.7%
Non-Recyclable Paper,24 kg , 0%
Non-Recyclable Plastics, 2263 kg , 1.6%
Non-Recyclable Glass, 1475 kg , 1%
HHW, 613 kg , 0.4%
Batteries, 233 kg , 0.2%
Cooking Oil, 64 kg , 0.04%
Light Bulbs, 56 kg , 0.04%
Electronic Waste, 114 kg , 0.1%
Other Recyclable Depot Waste, 10605 kg , 7.3%
Scrap Metal, 1891 kg , 1.3%
Textiles, 2626 kg , 1.8%
Construction & Renovation, 6102 kg , 4.2%
Other Waste, 22899 kg , 15.8%
Recyclable Paper, 6916 kg , 4.8%
Recyclable Containers, 12678 kg , 8.7%
Organics, 70963 kg , 49%

Site flow and operations

- Current site can accommodate projected garbage quantities for 20+ years
- Site constraints create queuing/parking challenges during peak periods and limit ability to collect emerging recyclables
- Illegal after-hours dumping and poor sightlines are ongoing challenges



Operational recommendations

- Tier 1
  - Designate areas for waste unloading outside of main loop
  - Add material category signs in front of bins for recyclables
  - Ask hauler to minimize gap between metals bin and wall
  - Implement additional illegal dumping deterrents
  - Implement bin hauling procedure requiring a delineator post
  - Implement routine litter clean up
- Tier 2
  - Add lockable gates at both site entrances
  - Install electric bear fencing
  - Redesign compactor bin gate
  - Relocate attendant shed
  - Add permanent guardrails at metals bin

Short-term steps

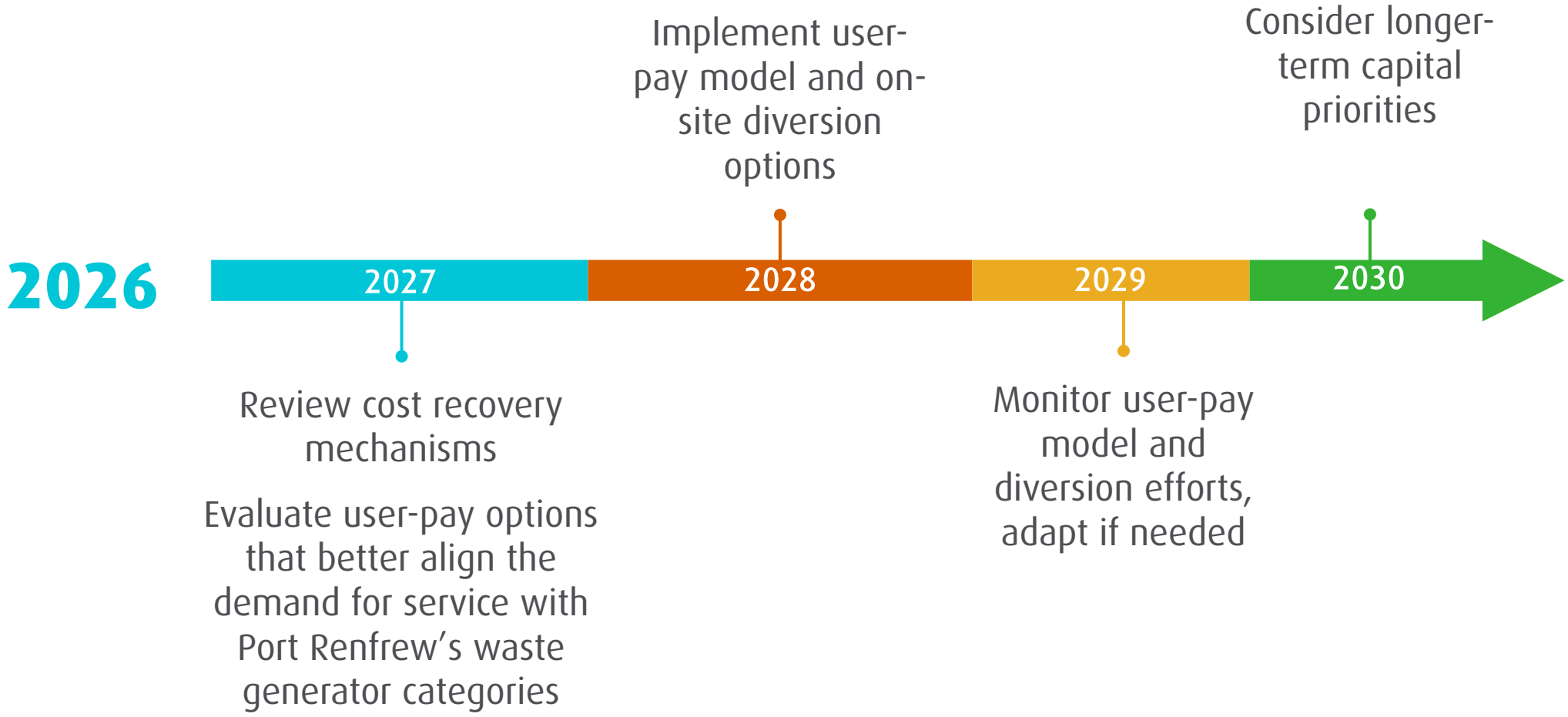
- Install guardrail on metal bin
- Update signage
- Improve site security
- Develop on-site options for organics collection
- Assess community interest in home-based organics options
- Develop pay-as-you go options for all service users



Recommendations

1. Review cost recovery mechanisms for the 2027 budget year;
2. Evaluate and report back to the Committee on user-pay options that better align the demand for service with Port Renfrew's waste generator categories for the 2028 budget year; and
3. Investigate and report back to the Committee on source separation options, including:
   a) clear garbage bag requirement;
   b) updated signage and material-separation guidance;
   c) targeted education for user groups with high quantities of divertible material;
   d) enhanced monitoring and enforcement of disposal restrictions; and
   e) home-based organics processing.

Planning over the next five years





Thank you

Capital Regional District

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