Bow Valley Waste Management Commission






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Construction, Renovation, and Demolition Waste Implementation Plan for the Bow Valley

August 2025

Executive Summary

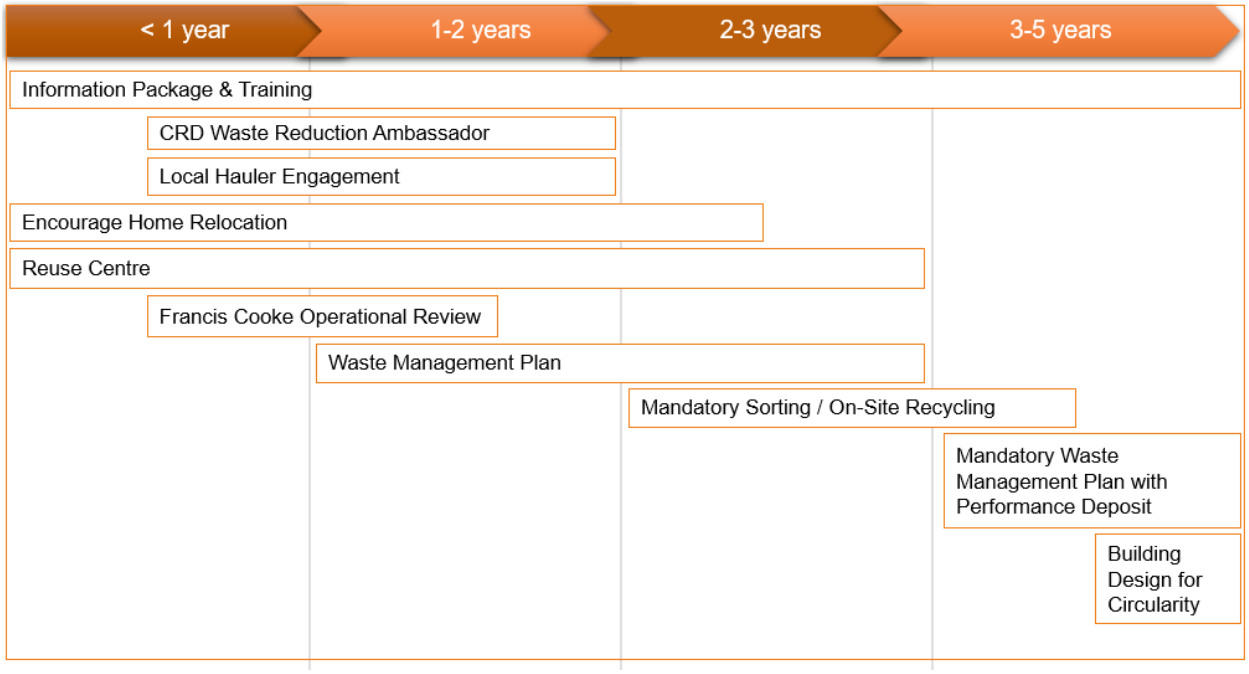
The Bow Valley Waste Management Commission (BVWMC), in partnership with the Towns of Canmore and Banff, and the Municipal District of Bighorn No.8 has commissioned the development of a regional implementation plan to reduce the amount of landfilled Construction, Renovation, and Demolition (CRD) waste. The CRD waste implementation Plan's approach aims to provide a clear, consistent, and effective regional implementation plan across the three municipalities in the region.

The approach used to develop the plan included:

1. A review of best practices for reducing CRD waste in Alberta.
2. Engagement of relevant interest holders in the region to share information and obtain feedback. Workshops were held with municipalities and industry, individual industry meetings were held with various companies / organizations and the Bow Valley Builders and Developers Association (BOWDA) Sustainability Committee, while First Nations received an engagement invitation.
3. Based on the results of this research and engagement with interest holders, an actionable suite of tools and programming options was developed as the basis of a regional implementation plan as follows:

Information Package & Training	CRD waste diversion opportunities information package and associated training, such as deconstruction.
CRD Waste Reduction Ambassador	A BVWMC staff member that can educate and encourage CRD waste diversion regionally.
Local Hauler Engagement	Inform and educate local waste haulers on CRD waste diversion opportunities in the region.
Encourage Home Relocation	Promote home relocation, rather than demolition, within the region through an improved demolition permit process and incentives.
Reuse Centre	Regional facility where material can be donated and salvage opportunities exist.
Francis Cooke Operational Review	Higher standards and financial incentives to further encourage properly source separated loads of divertible and/or reusable materials.
Waste Management Plan	Builders must complete a plan that demonstrates how CRD waste is going to be managed and diverted throughout the duration of construction.
Mandatory Sorting / "On-site" Recycling	CRD materials must be source separated on-site, or mixed loads sent for sorting, for recycling or reuse.
Performance Deposit Option	Building on the Waste Management Plan, a refundable deposit is required to incentivize compliance and reporting.
Building Design for Circularity	Educate and promote building design for future circularity and reuse

The proposed timeline for this plan, with vertical order of options reflecting programming prioritization, follows:



Measurement and monitoring will be required to track project performance and progress, using both quantitative and qualitative measures, with metrics such as:

Qualitative:

- Culture shift
- Participation
- Collaboration

Quantitative:

- Waste generation
- Waste diversion
- Cost
- Compliance

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1 Understanding of Requirements / Background

The Bow Valley Waste Management Commission (BVWMC), in partnership with the Towns of Canmore and Banff, and the Municipal District of Bighorn No.8, commissioned sonnevera to develop a regional implementation plan to reduce the amount of landfilled Construction, Renovation, and Demolition (CRD) waste.

The Bow Valley is arguably one of the more progressive regions in the province regarding CRD waste diversion. Policy and goal setting has been established in the communities of Banff and Canmore, and the regional Francis Cooke Landfill and Resource Recovery Centre has been on the leading edge of CRD waste diversion and sustainability for over two decades.

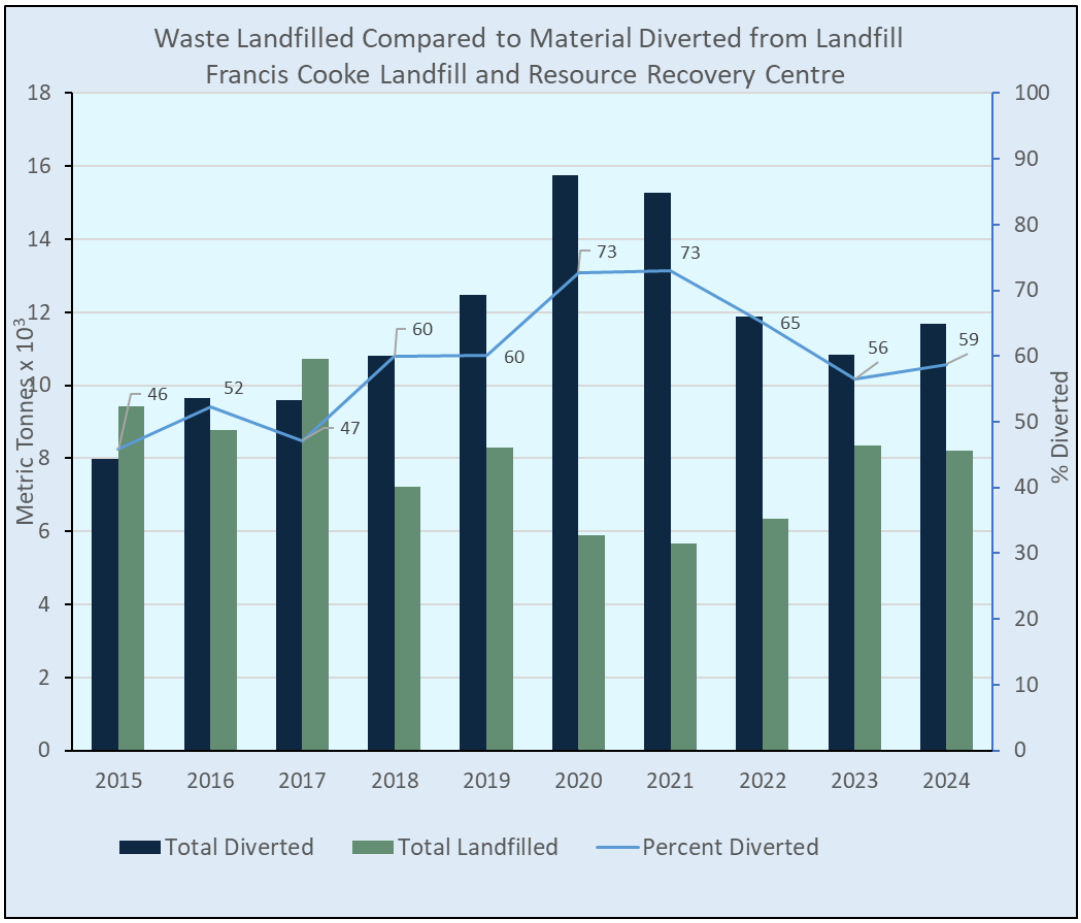


Figure 1: Francis Cooke Diversion Trend (2024 numbers not finalized)[1]

Figure 1 shows the amounts of waste material diverted and landfilled since 2015, showing a strong focus on diversion.

[1] Bow Valley Waste Management Commission 2025.

Local examples of progressive policy in the region include:

- Within a community goal to send zero waste to landfill by 2050, Banff requires all projects that require a building permit to adhere to strict zero waste requirements, following deconstruction or green demolition principles, such as separating all recoverable materials for reuse or recycling. Specific requirements include submitting a waste management form as part of construction site plans with any Development Permit, indicating how and where materials generated by the project will be reused or recycled. The Town is also introducing a performance bond that will be refunded if at least 70% of materials are reused or recycled.
- The Bow Valley Waste Management Commission sees itself as a steward of sustainable waste recovery and toward zero waste champion that encourages a circular economy, managing 80% of the waste generated in the Bow Valley through the Francis Cooke Landfill and Resource Recovery Centre. This Facility serves as a recycling drop-off for 20 different material categories and more than 15 useful materials that are expected to be separated from loads of waste delivered for burial at the facility.

There is also a strong presence of local organizations in the area advocating for increased sustainability and diversion policy. Specifically, the Biosphere Institute of the Bow Valley implemented a CRD waste diversion pilot project in the region, focusing on providing bins to facilitate segregation of CRD materials, education, and follow-up with site supervisors.

With these advanced policies and strong community advocates for CRD diversion, implementing a regional CRD waste plan is a logical next step.

With substantial work having been completed by Alexandra Mills through the Sustainability Scholars program in 2023, there is a clear understanding of best practices in the area of CRD that could be applicable to the Bow Valley. Therefore, the region is now ready to engage with stakeholders and potential partners to support BVWMC's strategic goal to maintain "regional CRD diversion rates to consistently over 70% with a long-term goal of achieving zero CRD waste".

As stated in the Sustainability Scholars Final CRD Report (author Alexandra Mills) commissioned by the Town of Canmore, "partnership is a foundational success factor" and initiatives will be "most effective as a part of a thoughtful and integrated regional waste management system". This exemplifies the need for meaningful and dedicated interest holder engagement to help develop the final implementation plan.

A regional CRD waste management approach can address high level concerns like conservation of landfill space and resource conservation, as well as industry concerns such as cost and equitable accessible service, while also helping mitigate climate change and increase community resiliency.

This plan has an actionable suite of implementation tools that are practical, innovative, and effective on a regional level at reducing CRD waste.

2 Plan Considerations

The CRD waste implementation Plan's approach aims to provide a clear, consistent, and effective regional implementation plan across the three municipalities in the region. The Plan includes short-term actions to reduce waste as well as longer-term strategies to move towards a more circular economy. Following the recommendations of Mills (2023), the implementation plan contains the following key elements:

1. "Begin with waste in mind" – waste needs to be defined as a resource and have an economic value associated with it
2. "Lead by example" – regional partners will need to set the standard and implement sustainable practices at the municipal level
3. "Balance your policy levers" – the implementable suite of tools must be balanced across the industry and include initiatives that are either educational, provide an incentive, or are enforceable (regulations).
4. "Ensure defensibility and measurability" – alignment with current policy in the region and a linkage to other related goals such as climate, emissions, and equity.
5. "Keep timelines in mind" – the implementation plan should consider short and long-term items that are actionable
6. "Stay consistent" – stay on track with agreed-upon actions and plans.
7. "Support the transition" – the region should consider supporting industry with implementation through incentives, subsidies, or investment.

Consideration of macroeconomic factors (adapted from Mills 2023) is also an important element to the overall plan for being able to implement time-based and specific actions for regional partners, including the following:

- Market readiness and conditions
- Regional equipment and infrastructure
- Stakeholder buy-in and participation
- Funding and investment
- Policy and program integration
- Regional capacity
- Provincial and Federal policy direction

2.1 CRD Materials

It is estimated that 3.4 million tonnes of construction waste is sent to landfills in Canada every year[2].

The causes of waste in the construction industry are outlined in Table 1. Waste can be mitigated based on the stage of the supply chain where generation occurs, starting with design and material procurement, followed by production, distribution and disposal practices. Moving intervention up the supply chain is the most effective and environmentally impactful approach reducing CRD waste.

[2] Circular Economy Solution Series 2021. Circular Economy & the Built Environment Sector in Canada.

Table 1: Potential Causes of Construction Waste[3]

		Causes of Construction Waste
Point Along the Supply Chain Where Waste is Generated	Design & Specification	• Errors in contract documents • Contract document incomplete at commencement of construction • Design changes • Design and construction detail errors • Unclear and unsuitable specification • Poor coordination and communication (late information, last minute client requirements, slow drafting revision and distribution) • Bespoke designs that don't allow for some level of standardization
	Procurement/Material Feedstock	• Ordering errors • Excess material ordering • Supplier errors • Inappropriate site storage/improper storage methods leading to damage or deterioration • Materials stored far away from the point of use • Packaging waste • Damage of materials during transport and unloading • Only using virgin materials
	Production	• Lack of on-site waste management plans • Lack of on-site material control • Lack of supervision • Accidents due to negligence • Unused materials and products • Equipment malfunction • Poor craftsmanship • Use of wrong materials resulting in their disposal • Time pressure
	Distribution and Retail	• Sale of only pre-cut and pre-formed quantities and sizes of materials
	Demand and Use Management	• Buildings not designed to be retrofitted or upgraded
	Recovery & Extension	• Demolition and disposal of materials during renovations • Demolition and disposal of end of use/life buildings

CRD projects generate a wide variety of waste materials, and the type and volume of waste vary depending on the phase of the project. The most commonly diverted CRD materials in Alberta include:

- Clean wood waste (lumber, dimensional wood)
- Concrete and masonry materials
- Metal components
- Gypsum drywall
- Asphalt materials

The options for managing waste materials varies based on type of material. Phases and associated wastes to consider include:

[3] National Zero Waste Council 2021. Waste Prevention: The Environmental and Economic Benefits for Canada.

Site Preparation & Excavation

Vegetation, excavated soil, rocks, and mixed demolition debris (concrete, bricks, wood, glass, metals).

Foundation and Structural Work

Concrete, timber and metal forms, reinforcement steel offcuts, masonry scrap (bricks, stone, mortar waste).

Construction

Framing (Structure Construction)

- **Wood waste** is the primary material generated at this stage (e.g., cut-offs, miscuts, damaged or surplus lumber, pallets).

Enclosure & Roofing

- **Shingles** (tear-offs), house wraps, insulation scraps, and flashing offcuts.

Interior Work

- **Drywall waste**, insulation offcuts, vapor barrier material.

Mechanical, Electrical, and Plumbing Systems

- Wire and cable offcuts, pipe segments (PVC, copper, steel), fittings and connectors, packaging from components and fixtures.

Interior Finishing

- Carpet remnants, hardwood offcuts, paint cans, caulk tubes, flooring scraps, baseboards, and hardware packaging.

Renovation or Remodeling

- Removed fixtures and finishes: cabinetry, flooring, windows, doors
- Hazardous materials: lead-based paint, asbestos-containing materials, moldy drywall
- Mixed debris: plaster, wiring, plumbing components

Demolition

- Structural materials: concrete, bricks, steel, wood framing
- Roofing materials: asphalt shingles, tar paper
- Interior finishes: drywall, insulation, flooring, ceiling tiles
- Mechanical systems: HVAC units, ductwork, piping, electrical wiring
- Hazardous waste: asbestos, mercury from thermostats, refrigerants

Post-Construction Cleanup

- Leftover materials: paint, sealants, adhesives
- General debris: dust, sweepings, broken tools or equipment
- Temporary structures: scaffolding parts, formwork, fencing

General Construction Waste

Throughout all phases, projects generate cardboard and plastic packaging, wooden pallets and crates, metal banding and strapping, and protective materials like plastic sheeting. There is also general employee waste such as coffee and drink cups, and food waste.

Awareness of the type of materials produced at different phases allows for staging of collection containers to target specific materials for separation and collection at each phase, resulting in more efficient and focused material diversion throughout a project.

2.2 Approach

2.2.1 Best Practices

A review was undertaken of best practices for reducing CRD waste in Alberta. Best practices are determined by project type, such as construction, demolition, or renovation, since materials originating from these different types of projects will have variations of lifecycles and ability to divert. For example, in a demolition, materials are often mixed together and will require a unique policy approach to targeting materials for diversion compared to a construction or renovation project.

Best practices were used to develop the proposed program framework within the Construction, Renovation and Demolition Waste Materials: Opportunities for Waste Reduction and Diversion report developed by sonnevera for Alberta Environment in 2006.

These were used together with research conducted by Alexandra Mills in the Sustainability Scholars Final CRD Report, and additional desktop research, to develop a primary list of best practice options applicable to this project. Some key aspects were:

- Implement waste management plans at the project planning stage
- Imbed waste diversion goals within construction permitting process[4]
- Establish on-site sorting and storage areas for different material streams
- Introduce disposal bans and surcharges[4]
- Establish a CRD Environment Fund utilizing unredeemed deposits and surcharges[4]
- Separate materials at the job site rather than at disposal facilities, which increases recovery rates and material quality[5]
- Improve building design to minimize environmental impacts[4]
- Consider deconstruction rather than demolition where feasible
- Track and report diversion rates to improve performance over time

[4] Alberta Government 2006. Construction, renovation and demolition waste materials: opportunities for waste reduction and diversion.
[5] University of British Columbia 2013. Best practice diversion and end use options for construction, demolition and renovation clean wood waste - UBC Library Open Collections.

2.2.2 Interest Holder Engagement

Relevant interest holders in the region were identified, considering all lifecycles of a structure (pre-construction & planning, construction, renovation & maintenance, and demolition). To start the engagement process, sonnevera engaged with relevant Environment and Planning departments in each of the municipalities on an individual basis. This helped set the project context and understanding of each community's unique needs and expectations, while identifying any potential risks such as political sensitivities and municipal history with external stakeholders.

The subsequent list of engagement activities utilized to communicate and obtain feedback from interest holders included:

- In-Person Workshops for Municipalities: February 19th and June 4th
- In-Person Workshops for Industry: February 20th and April 30th
- Virtual Meetings with BOWDA Sustainability Committee: May 21st and 27th
- Attendance at BOWDA Luncheon: February 13th
- First Nations Engagement Invitation through Town of Canmore
- Individual Industry Meetings with various companies: ISL Engineering, Ashton Construction, Habitat for Humanity, Biosphere Institute

Separate workshops were held with municipalities and industry. This was to ensure participants feel the ability to truly express opinions without worrying about potential political sensitivities. Separate workshops also helped to avoid conflict between industry and municipalities which could interfere with fruitful discussions.

Based on the collected feedback from industry, it was concluded that there are ample opportunities for encouraging and incentivizing additional CRD waste diversion in the region, although industry showed a desire to prioritize education and incentives over regulation and penalties. Generally, industry is supportive of the concept of CRD waste reduction and diversion, and willing to play its part using a voluntary approach, while options that require additional time or financial investment from industry were not as positively received.

Municipal participants assessed the effort and resources required to implement different options, and their resulting impact on CRD waste. Attendees then discussed timelines to implement various options. These results were used to develop the recommended tools in the final implementation plan.

Further engagement details can be found in Appendix A. Details surrounding programming options that were deemed not appropriate at this time for Bow Valley, based on engagement with industry and municipalities, are included in Appendix B.

3 Actionable Suite of Tools / Programming Options

This section outlines tools that are recommended to be part of a regional implementation plan to reduce the amount of landfilled Construction, Renovation, and Demolition (CRD) waste in the Bow Valley. Table 2 provides a linked list of the programming options with high-level description. Further detail for each option is provided in the subsequent sections and can be accessed by clicking on the program option name.

Table 2: Recommended Programming Options for the Bow Valley

Program Option (linked text)	High-Level Description
Information Package & Training	CRD waste diversion opportunities information package and associated training, such as deconstruction.
CRD Waste Reduction Ambassador	A BVWMC staff member that can educate and encourage CRD waste diversion regionally.
Local Hauler Engagement	Inform and educate local waste haulers on CRD waste diversion opportunities in the region.
Encourage Home Relocation	Promote home relocation, rather than demolition, within the region through an improved demolition permit process and incentives.
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Waste Management Plan	Builders must complete a plan that demonstrates how CRD waste is going to be managed and diverted throughout the duration of construction.
Performance Deposit Option	Building on the Waste Management Plan, a refundable deposit is required to incentivize compliance and reporting.
Building Design for Circularity	Educate and promote building design for future circularity and reuse

Information Package & Training

This programming option outlines the development and deployment of a comprehensive waste reduction education program for CRD industry stakeholders. The initiative will create standardized training materials, establish delivery mechanisms, and foster a culture of waste reduction across the construction, renovation, and demolition sectors.

It involves developing an information package (handbook) and training opportunities tailored for CRD waste management and harmonized across the region. This package would cover regional rules, practical how-to guides for industry needs, correct material disposal methods, and details on the region's diversion performance. It will also highlight cost benefits, examples of successful projects (i.e., local best practices), and endorsements (e.g., BOWDA) to help encourage and facilitate waste reduction.

Training can be delivered in-person, on-site, or through a customized format, initiated by builders with trainers engaging directly with projects. Training should be directed to topics integral to the recommended suite of tools (e.g., source separation, deconstruction, house relocation).

BVWMC already provides a variety of signage that is available for contractors and haulers to utilize for sites in the Bow Valley.

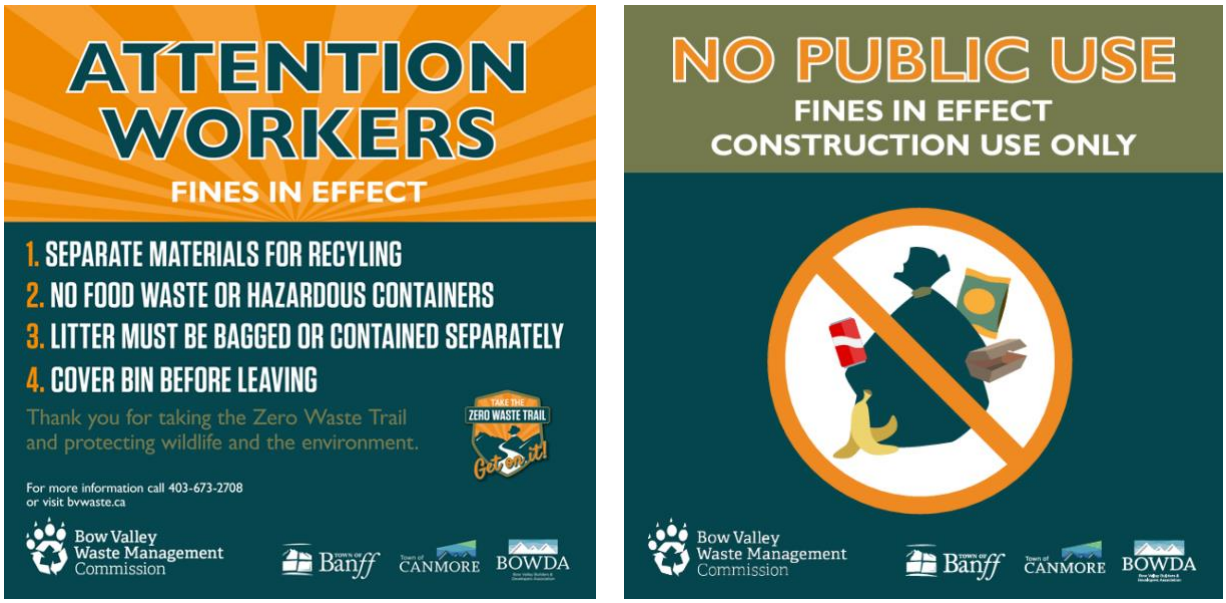


Figure 2: BVWMC Signage Available to Contractors

BVWMC also has its own handbook for using the Francis Cooke Landfill and Resource Recovery Centre. This handbook could be a starting point for expanded education resources aimed at industry.

Outcomes/Goals

The goal is to produce a concise information package featuring effective educational tools like infographics, local best practices and a well-structured training program that leverages relevant content.

The initiative aims to ensure program participation, compliance with existing requirements, training completion, and measurable waste reduction. It also seeks to foster an industry-wide culture of waste reduction, encourage industry commitment, and ensure regular updates to training materials.

Roles and Responsibilities

- **Municipalities:** Contribute content, including compliance and best practice details, and encourage industry engagement.
- **Commission:** Expected to act as ambassadors and trainers while contributing content, and facilitating and coordinating regional activities such as training.
- **Industry:** Play a role by providing content and collaborating with municipalities and the commission. Specifically, BOWDA could review content and/or endorse the package and training.
- Other **nonprofit groups** (e.g., Biosphere Institute) could also play a role in delivering education and training.

Timeline

- The information package is intended to be ready within 6 months to 1 year.
- If a new trainer position is required, the process (assuming commission involvement) might take around 3-4 months for approvals. However, if budget is required from municipalities, additional time will be required to add request in budget cycles.

Required Resources

Budget will need to be allocated for information package development, trainer position(s), and program delivery.

Personnel

- Project Manager (0.5 FTE, 12 months)
- Content Developer (0.5 FTE, 6 months) – or equivalent contract
- Training Lead (0.25 FTE, ongoing)
- Administrative Support (0.25 FTE, ongoing)

Performance Monitoring & Evaluation

Quantitative Measures

- Training completion rates by sector and company size
- Cost savings achieved by companies with workers completing the training

Qualitative Measures

- Increased knowledge of CRD waste reduction and diversion options in Bow Valley
- Increased adoption of the available CRD waste reduction and diversion tools in the Bow Valley

Risk Management

- Budget approval delays: Mitigate through early engagement and interim funding options
- Trainer recruitment challenges: Develop multiple recruitment channels and consider contract trainers
- Low industry participation: Implement incentive programs and leverage peer influence
- Content obsolescence: Establish regular review cycles and industry feedback mechanisms

Implementation Examples

- Re-use Consulting – "Re-Use is an international consulting firm with clients from coast to coast, ranging from demolition contractors to reuse operations, including building owners, and architects looking for sustainable alternatives to demolition. They also provide extensive job training programs, and partner with clients to sell materials."

- Become a Certified Deconstruction Contractor – Complete Build Reuse Project Management training course. This training course lasts three days and includes both online and in-person training with the Introduction to Deconstruction - Textbook.

- The City of Atlanta partnered with Lifecycle Building Center to advance deconstruction as a tool for workforce development. In November 2019, the Lifecycle Building Center was awarded a $50,000 Sustainable Materials Management grant from the Environmental Protection Agency to fund a deconstruction pilot training program and the creation of a Reuse for Communities Toolkit. Build Reuse, a nationwide nonprofit, will use the toolkit to educate communities across the country and develop a network of deconstruction and reclamation with the goal of increasing the job market around reuse.



Figure 3: Innova Developments Publicly Promoting its First Deconstruction Project in Calgary

CRD Waste Reduction Ambassador

This option outlines a strategic approach for integrating waste diversion "ambassadors" into the overall Implementation Plan approach. Ambassadors would assess construction sites for waste management improvements and work collaboratively with industry to find solutions for site-specific CRD waste diversion (e.g., transportation or storage of materials).

Outcomes/Goals

The goal of this programming option is to establish a collaborative, educational role to bridge municipalities and industry. The program will encourage positive relationships between municipalities, developers, and contractors.

Roles and Responsibilities

- **Municipalities**: Provide relevant bylaws and policies.
- **Industry**: Inform visiting staff of current and common practices for CRD waste.
- **Commission:** Hires Ambassadors and coordinates program

Timeline

To develop standard procedures for site visits, engaging contractors, and training of Ambassadors, this program is expected to take at least one year to establish.

Required Resources

Ambassador position(s) becomes a part-time or full-time employee of BVWMC.

Performance Monitoring & Evaluation

Quantitative Measures

- Number of sites visited per month by Ambassador
- Number of sites participating in diversion initiatives
- Number of contractors engaged through the Ambassador program

Qualitative Measures

- Increased participation in waste reduction initiatives
- Increased awareness of reduction and diversion options

Risk Management

- Lack of acceptance by industry: Train Ambassadors to act in a relationship-building and informing way and clearly communicate intent of the program is not a regulatory approach.

Implementation Examples

- Metro Vancouver has construction waste coordinators who work with industry on improving on-site waste reduction and diversion of specific materials
- King County, Washington employs waste reduction specialists who work with businesses including construction companies

Local Hauler Engagement

This option centres on improving engagement with local haulers in the waste and recycling sector, who are arguably key ambassadors for waste reduction and diversion. It uses a structured approach aiming to open dialogue about the sorting of materials, on-site bin options, improving cost-effectiveness for haulers, and fostering education through both municipal and industry representatives. The ultimate intent is to create clearer expectations around sorting of CRD materials and more efficient operational standards.

This approach proposes opening discussions to determine where items are currently and potentially sorted and suggests that haulers can optimize their own operations to be more efficient and cost-effective with regards to CRD waste.

Outcomes/Goals

The desired outcome for this initiative is a collaborative hauling industry for CRD waste materials that also serves as ambassadors for CRD reuse and recycling. The aim is for haulers to communicate pertinent and up-to-date information to construction companies while also providing a variety of service choices for waste reduction and diversion.

Roles and Responsibilities

- **Municipalities:** Working in conjunction with BVWMC, serve as facilitators for information sharing with haulers and provide them with education on diversion options and relevant bylaws.
- **Commission:** Continue ongoing engagement with haulers and focus on educating about the requirements for "sorted" materials at the Francis Cooke landfill.
- **Industry:** Provide feedback and suggestions for potential collection service solutions to best suit their needs.
- **Waste Haulers:** Offer solutions applicable to their clients' collection infrastructure (i.e., collection containers), clarifying expectations of Francis Cooke site and offering recommendations for material-specific diversion options.

Timeline

BVWMC already has well established relationships with most local haulers. These relationships can be built upon and further conversations developed within a year.

Required Resources

Few resources are required for this initiative, with more of a focus on relationship building and communication with the local haulers in the region. BVWMC staff will need to allocate time to regular meetings/check-ins with local haulers. Municipalities will need to provide content, such as relevant bylaw information, and possibly attend meetings with haulers and the BVWMC.

Performance Monitoring & Evaluation

Quantitative Measures

- Number of local haulers engaged
- Waste diversion improvements (Francis Cooke and on-site)
- Cost savings achieved by companies working with local haulers
- Number of collection container options provided in the region

Qualitative Measures

- Industry culture shift toward proactive waste reduction
- Increased voluntary participation in waste sorting on construction sites
- Enhanced collaboration between haulers, municipalities, and BVWMC

Risk Management

- Haulers lack appetite to be engaged: Establish relationships with haulers accessing Francis Cooke and encourage conversations around industry-based solutions. Potential to incentivize participation at Francis Cooke (e.g., reduced tipping fees or discounts on monthly accounts, access prioritization, etc.)
- Lack of understanding / awareness of CRD program options: Work directly with haulers to determine their needs in communicating programming options and enhanced separation of materials.

Encourage Home Relocation

Given Alberta's rural-urban divide and ongoing housing challenges, house relocation could be particularly effective in moving urban housing stock to rural areas with available land and housing needs. However, there are economic barriers and regulatory challenges that currently favour demolition over relocation in the region and most of Alberta. The following components to developing a Home Relocation program in the Bow Valley should be considered:

<table>
<tr><td colspan="2">Education and Awareness</td></tr>
<tr><td>Economic Case Studies: Publish cost-benefit analyses showing the economic advantages of relocation versus demolition, including reduced landfill costs and construction material savings.</td><td>Success Story Marketing: Highlight successful relocation projects to demonstrate feasibility and build community support for the practice.</td></tr>
<tr><td colspan="2">Financial Incentives</td></tr>
<tr><td>Tax Credits and Rebates: Offer property tax reductions, development fee waivers, or cash rebates to property owners who choose relocation over demolition. This could include reduced permit fees for both the donor and recipient properties.</td><td>Demolition Delay Requirements: Implement mandatory waiting periods before demolition permits take effect, creating time for relocation companies to assess and potentially purchase structures.</td></tr>
<tr><td colspan="2">Impact Fee Adjustments: Reduce or eliminate impact fees for developments that incorporate relocated homes, making the economics more attractive for developers.</td></tr>
<tr><td colspan="2">Partnership and Support Programs</td></tr>
<tr><td>Relocation Matching Service: Create a regional database connecting property owners planning demolition with those seeking affordable housing solutions, including rural properties where relocated homes might be welcomed.
BVWMC could maintain this database and be notified by municipalities when applications for Demolition permits are initiated.</td><td>Technical Assistance: Provide engineering and planning support to help assess structural integrity and facilitate the technical aspects of house moving, including route planning and utility disconnection / reconnection.
BVWMC could provide links/resources to experts that can provide this service or have a staff member play this role.</td></tr>
<tr><td colspan="2">Public-Private Partnerships: Collaborate with house moving companies, affordable housing organizations, and rural communities to create established networks for house relocation.</td></tr>
<tr><td colspan="2">Market Development</td></tr>
<tr><td>Developer Incentives: Offer density bonuses or other development incentives to builders who incorporate relocated homes into new subdivisions, particularly for affordable housing components.</td><td>Rural Outreach: Partner with rural municipalities and Indigenous communities that may have land available and housing needs, creating destination markets for relocated homes.</td></tr>
</table>

Policy and Regulatory Approaches	
Streamlined Permitting Process: Simplify the approval process for house relocation by creating dedicated permit pathways, reducing bureaucratic delays, and offering expedited review for relocation projects. Some municipalities are "allowing multi-phased demolition permits that would allow houses to be lifted before the final demolition permit is issued."[6]	**Zoning Flexibility**: Modify zoning bylaws to accommodate relocated homes more easily, including temporary variances for lot placement and revised setback requirements that recognize the unique challenges of placing existing structures on new lots.
Assessment Programs: Structural assessments before demolition permits are issued to identify homes suitable for relocation. Research shows that "20% of demolished homes are high-quality homes that can be moved and repurposed, while another 60% could be deconstructed and the materials" salvaged.[7]	

Roles and Responsibilities

- **Municipalities:** Promote the option of house relocation and begin tracking relocations through their permitting processes.
- **Commission:** Include education and information on house relocation through other training programs and a marketing campaign to contractors. Establish relationships with house relocation companies to further learn and encourage the program in the region.

Timeline

Education and promotion around house relocation can begin almost immediately. Education programs can be developed for contractors over a year or two, with information being incorporated into other training programs offered by BVWMC.

Additional time will be required for municipalities to update their permitting process to ensure adequate tracking that identifies home relocations is enabled.

Required Resources

This initiative will require municipal staff resources to develop policy/regulatory approaches, market development incentives, and approval and permitting processes. Resources will also be required for communication and marketing of the program. BVWMC and municipal staff need to encourage house relocation as a standard practice by promoting and educating contractors on the associated options.

[6] CBC News 2023. The Push in BC to Relocate Homes Rather Than Demolish Them.
[7] Lighthouse 2023. Preventing Demolition Waste through Home Relocation and Deconstruction.

Performance Monitoring & Evaluation

It is recommended that municipalities transition their Demolition permitting process to include tracking of house relocations. Currently, most of the Demolition permits in the region cover house relocation and standard demolitions, without differentiating the two. Tracking house relocations is necessary to determine future success of the program.

Quantitative Measures

- Number of houses relocated into, and out of, the Bow Valley region
- Waste diversion percentage improvements (Francis Cooke and on-site)
- Cost savings achieved by companies moving homes

Qualitative Measures

- Industry culture shift toward proactive waste reduction
- Recognition of the program as industry best practice

Risk Management

- Low industry participation: Implement incentive programs and leverage education and peer influence.

Implementation Examples

An example company that provides house relocation services is Renewal Development with a mission to *"rescue quality homes slated for demolition, relocate and modernize them, and repurpose these structures for communities in need".* By offering a sustainable alternative to demolition, Renewal Development gives homes a second life, preserving their character and reducing environmental impact while addressing the urgent demand for affordable housing."



Figure 4: Renewal Development Projects[8]

[8] Renewal Developments 2025.

Reuse Centre

This option outlines the development of a construction materials reuse centre that will divert building materials from landfill while providing affordable options for contractors, DIY enthusiasts, and community members. The centre will focus on collecting, processing, and reselling salvaged construction materials including lumber, fixtures, hardware, and architectural elements. The centre would be a logical progression in the development of the Francis Cooke Resource Recovery Centre, making this an ideal location for the Reuse Centre.

A recent study by Kijiji Canada, conducted in collaboration with researchers from the Université du Québec à Montréal and the University of Toronto, aimed to quantify the second-hand goods market – an area with historically limited data collection and research. The findings estimate that Canadian consumers spend $30 billion annually on second-hand durable and semi-durable goods, accounting for 15% of the value of new items purchased. Additionally, the study revealed that the second-hand market has grown by 20% over the past six years.[9]

Outcomes/Goals

The direct outcome is a Reuse Centre in the Bow Valley that serves the construction and renovation industry by salvaging high-quality materials. Overall, it highlights an initiative to maximize material reuse, minimize waste, and engage the community in sustainable practices, making the Bow Valley (specifically Francis Cooke if chosen as the ultimate location) a model for CRD Circular Economy.

Roles and Responsibilities

- **Municipalities, businesses, and organizations** will collaborate on staffing and logistics, including pick-up services.
- **Commission:** Expected to provide the location / facility for the centre and partner with industry and nonprofit organizations on its development and operation.
- **Habitat for Humanity (or equivalent ENGO):** work with BVWMC to determine most desirable items and coordinate a schedule for collection of materials from the centre for use at Calgary Habitat locations and through the Habitat eStore.

Timeline

A Reuse Centre can be established gradually over one or two years, with full implementation between two and three years. A partnership with an appropriate CRD-focused ENGO like Habitat for Humanity, that can provide regular scheduled collection of higher-end construction materials, can be established within a year as long as sufficient storage infrastructure is in place at Francis Cooke.

Required Resources

Ideally, BVWMC would recruit a facility manager with construction industry experience and knowledge of material valuation. Depending on staffing availability, site staff will need to assist with safely moving and organizing heavy items. It would be worthwhile to also consider part-time retail staff for customer service and sales.

[9] eBay Inc. Staff: Kijiji Launches Inaugural Second-Hand Economy Index in Canada

Infrastructure

Material for the Reuse Centre will need to be stored in a covered facility with recommended future expansion to a building with store front if budget permits. However, the program can be initiated with a simple covered structure such as shipping container(s).

Performance Monitoring & Evaluation

Quantitative Measures

- Tonnage of materials donated and sold through the Reuse Centre
- Waste diversion percentage improvements (Francis Cooke and construction sites)
- Cost savings achieved by companies utilizing the Centre

Qualitative Measures

- Industry culture shift toward proactive waste reduction
- Increased voluntary participation in waste reduction initiatives
- Enhanced collaboration between industry, Habitat for Humanity, and BVWMC
- Recognition of the program as industry best practice

Risk Management

- Material quality issues: Work with Habitat for Humanity to develop clear acceptance criteria and quality control procedures. The best reuse outcomes will result from curated selection and strict acceptance criteria.
- Operating costs: Establish regular operating hours and customer service standards. Implement feedback systems to continuously improve operations and customer satisfaction. Monitor financial performance and adjust pricing and procedures as needed.
- Material backlog: Collaborate with Habitat for Humanity on regular collection schedules for desirable materials and ensure an appropriate pricing structure for materials being sold at the Centre.

Other Program Recommendations

To introduce the concept of a Reuse Centre to the Bow Valley Community, it is recommended that the Centre initiate with a “soft launch”. BVWMC should begin operations with limited hours and customer base to test systems and procedures, with a focus on building inventory and refining processes based on early customer feedback. This period would be used to train staff and identify operational challenges.

Once BVWMC is confident with the system and has established industry and nonprofit relationships, a grand opening should be held. This should consist of a community event to officially launch the Centre, featuring tours, demonstrations, and special promotions. BVWMC should invite local media, government officials, and community leaders to raise awareness. This would be followed by other special pricing offers or events to attract initial customers and build momentum.

The success of a construction materials reuse centre depends on establishing reliable material sources, maintaining high quality standards, and building strong community relationships. Effective marketing that emphasizes both environmental benefits and cost savings will attract

diverse customer segments. Operational efficiency in material processing and inventory management will ensure profitability while keeping prices competitive.

Building partnerships with construction industry professionals, environmental organizations, and community groups will provide ongoing support and material sources. Continuous learning and adaptation based on customer feedback and market conditions will ensure long-term sustainability and growth.

The Centre should position itself as more than just a salvage yard, but as a resource for sustainable building practices and community education. This approach will build community loyalty and establish the centre as an essential part of the local construction ecosystem.

Implementation Examples

- Stardust (Phoenix, Arizona, USA) is a nonprofit organization that provides reclaimed building materials to thousands of people each month, helping homeowners, contractors, and nonprofits access affordable supplies. Their deconstruction services offer an eco-friendly alternative to demolition, salvaging reusable materials from homes and businesses. They also operate reuse centers, where shoppers can find discounted appliances, fixtures, cabinetry, and more. Additionally, their Gifts in Kind program redistributes household items to local nonprofits, supporting community initiatives. Their mission is to extend the life of quality materials, enrich the community, and protect the planet.

- A priority for San Antonio's Deconstruction & Circular Economy Program is directing reclaimed materials into the rehabilitation of existing affordable housing stock of a similar construction era. To that effect, in 2022, the City launched the Material Innovation Center at Port San Antonio, a former Air Force Base and current technology innovation campus, to serve as a trade workforce training site, community tool library, and the "last stop before the landfill" for building materials. The program has placed a special focus on how deconstruction and material reuse can advance the City's affordable housing, workforce development, heritage conservation, equity, and climate action goals, as well as national and international decarbonization targets.

- Second Use Building Materials (Seattle and Tacoma, Washington, USA) is a business dedicated to salvaging and reselling reusable building materials, helping divert waste from landfills. Since its founding, Second Use has provided affordable reclaimed materials to homeowners, contractors, and designers through its two retail stores. They offer salvage services, allowing people to donate or sell reusable materials, and they also conduct deconstruction projects. Their inventory includes doors, windows, lighting, hardware, lumber, and other architectural elements.

- Rebuilding Center (Portland, Oregon, USA) is a nonprofit organization dedicated to sustainable reuse and repair. Since its founding in 1997, it has diverted millions of pounds of building materials from landfills, making home repair and creative reuse affordable and accessible. The center provides low-cost reclaimed materials, teaches repair skills, and fosters a community of DIYers, artists, and makers. The organization prioritizes sustainability, inclusion, and community resilience, ensuring that people—especially low-income homeowners—have access to affordable building materials and repair education. Over the years, it has taught thousands of carpentry, plumbing, and electrical classes, offering scholarships and specialized courses for women, LGBTQ+,

and BIPOC individuals. The ReBuilding Center also played a role in advocating for Portland's deconstruction ordinance, which requires older homes slated for demolition to be deconstructed instead of demolished, further promoting reuse and waste reduction. While it no longer offers deconstruction services, it continues to be a hub for salvaged materials and home repair education.

- Architectural Clearinghouse focuses on salvaging / reclaiming good quality building materials. Located at 11518 119th St NW, Edmonton, AB and primarily markets materials / projects on their Facebook page (no website).

- Habitat for Humanity Southern Alberta operates from their head office at 805 Manning Rd NE in Calgary and currently maintains limited operations in the Bow Valley region. The organization has demonstrated significant success with larger-scale projects, notably their renovation work at Fairmont Banff Springs in 2022. The nonprofit offers valuable financial incentives to donors by issuing tax receipts for materials that companies donate from their existing inventory. Additionally, Habitat for Humanity supports sustainable building practices by assisting with LEED credit documentation, providing precise weight measurements of materials being reused and diverted from landfills. For ongoing partnerships, Habitat for Humanity can establish regular scheduled pickups from construction sites like Francis Cooke, though the organization maintains strict quality standards and will provide a comprehensive list of acceptable materials to ensure all donated items meet their requirements for safety and usability.

Francis Cooke Operational Review

This option outlines an initial concept for updating Francis Cooke's current CRD waste processing system by establishing clearer standards, defined roles (especially for municipalities), practical goals, and a timeline tied to future policy changes.

A key outcome of the engagement process with municipalities was the concept that the Francis Cooke landfill should be encouraging and incentivizing waste diversion / separation as much as possible. One conclusion was that the municipalities want Francis Cooke to serve as an outlet for sorted, clean, divertible material, rather than mixed waste.

CRD waste is currently treated as "unsorted" waste at the Francis Cooke landfill, with a tipping fee of $236/tonne if it contains more than ten percent recoverable materials (e.g., cardboard, construction wood, asphalt shingles, brick, etc.).[10] At the same time, sorted loads (loads assessed as containing 10 percent or less recoverable resources) have a tipping fee of $118/tonne, and separated resources (e.g., metal, asphalt, concrete, wood, drywall, glass) in acceptable condition receive further discounted tipping fees.

A review of the differential tipping fees at Francis Cooke should be completed with considerations for the following:

- Strict adherence to unsorted rates for unsorted loads (i.e., no discounts for unsorted loads).
- Higher rates for "Unsorted Waste" to discourage mixed garbage and recyclables from being brought to Francis Cooke. These higher rates will also encourage proper sorting and separation of recyclable materials, as sorted loads receive lower rates.
- Reduced donation rate (or no charge) for Reuse Centre material accepted as being appropriate for reuse.

Outcomes/Goals

Recognizing that Francis Cooke is already considered best practice for class 3 landfills, partnering municipalities have suggested a slight change in the current actions, emphasizing the need to set high standards for what is accepted as residual waste at Francis Cooke. In other words, materials deemed unacceptable along with residuals should be discouraged more rigorously. Mixed waste should rarely be accepted, if at all. Industry should be encouraged to take mixed loads to processing facilities in the Calgary area if that is the desired approach by the contractor. Using this approach, Francis Cooke will enhance its leadership in providing reuse and diversion options for separated CRD materials.

In collaboration with Commission partners, BVWMC could strategize expanded policy approaches to establish Francis Cooke primarily as a CRD waste diversion location, rather than a waste disposal site.

[10] Francis Cooke Landfill and Resource Recovery Centre 2025.

Roles and Responsibilities

- **Municipalities**: Encourage and enable industry to invest extra time in separating waste on-site.
- **Commission**: Continue to set clear rules and expectations around acceptance of mixed waste loads. Transition towards serving the community as a strictly source-separated materials destination for further use and/or diversion.

Timeline

Any rate changes will need to be reviewed and approved by the Board. This should occur after the 2025 municipal election, once the new Board, comprised of elected officials from the region, is in place

Required Resources

Staff and Board time to undertake strategic planning and associated operational enhancements to focus Francis Cooke on CRD waste reduction and diversion policy and practices.

Performance Monitoring & Evaluation

Quantitative Measures

- Number of mixed waste loads and tonnage of mixed waste accepted at Francis Cooke
- Waste diversion percentage improvements (Francis Cooke)
- Cost savings achieved by companies utilizing source-separated materials rates at Francis Cooke
- Budget spent on litter cleanup

Qualitative Measures

- Industry culture shift toward proactive waste reduction
- Increased industry participation in waste sorting on construction sites
- Improved site orderliness and associated customer experience at Francis Cooke

Risk Management

- Loss of revenue from tipping fees from higher priced loads of mixed waste: Requires budget adjustments to compensate for decreased unsorted waste revenue

Implementation Examples

- Neal Bolton's article Landfill Manager's Notebook: Tipping Fees—A Look at Differential Rates published in waste today suggests "tipping fees are the fuel that drives your landfill's financial engine".

- Canada's Ecofiscal Commission published the article Artificially cheap: Why landfills should charge the full cost of waste disposal which looks at the importance of tipping fees and how they can create strong incentives when they are properly valued and cover the true costs of disposal, including both financial and environmental costs.

- Construction and Demolition waste makes up about 12% of the waste that goes into the Squamish Landfill, and another 11% of the waste is Mixed Waste, which includes

construction and demolition waste containing divertible material. Of the Construction and Demolition waste that was audited in the 2020 Waste Composition Audit, over 40% of the waste was divertible wood waste.

Construction and Demolition Waste is subject to the Solid Waste Bylaw, which requires recyclables and organic waste to be separated from landfill waste. For most construction sites, this means separating wood waste, metal and drywall off cuts, and during the finishing stages separating cardboard and plastic overwrap from the garbage.

Squamish Landfill Tipping Fees (as of January 2025)

Material	Fee
Minimum charge for waste	$10
Waste residual waste with no recycle or reuse options	$244/tonne
Banned materials surcharge contains more than 5% recyclables and organics	$305/tonne
Recyclable materials	FREE
Appliances	FREE
Appliances with ammonia	$80/unit
Asphalt	FREE
Mattresses and box spring	$25/piece
Tires passenger and light truck only	$15 no rim $30 rims
Gypsum board no asbestos	$421/tonne
Clean wood and yard waste suitable for compost	$128/tonne
Dirty wood painted, glued etc. suitable for biofuel	$185/tonne
Surcharge for contaminated wood load (>5%)	$144/tonne
Concrete (up to 110kg) surcharge if concrete is >110kg	$183/tonne $87
Glass >100kg	$80/tonne
Weighing service	$48/load

Waste Management Plan

Municipal waste management plans are commonly required by local governments when construction companies apply for building permits, particularly for larger projects. The requirements vary by jurisdiction but generally serve to ensure proper handling, recycling, and disposal of construction and demolition waste. Waste Management Plans typically include two main components:

Pre-Construction Estimates: Projects estimate the amount of tonnage to be disposed and diverted during construction. This involves calculating expected waste volumes and identifying diversion strategies for different material types.

Post-Construction Reporting: Projects show what tonnage was diverted and disposed of, with disposal/diversion receipts or certifications required as documentation.

Many jurisdictions mandate specific diversion rates with a minimum diversion rate (e.g., 65%) expected. Some progressive municipalities have higher standards – for example, Boulder expects projects to divert 75% of materials generated from deconstruction projects from disposal.

The Town of Banff already requires CRD projects to submit a waste management plan, with a diversion rate of 70% expected, as a part of their Building Permit process. As a part of the Plan, companies must indicate how and where waste materials will be reused or recycled during the project. Final reporting requires scale tickets and/or photographs to be submitted to determine an overall diversion percentage for the project. Currently, the Town is only enforcing the submission of the Waste Management Plan and generally does not follow up with requests for diversion tracking, although it is anticipated this will happen in future.

Outcomes/Goals

It is recommended this program be initiated across the region as a voluntary initiative for the first year of implementation. Municipalities and the BVWMC can work with contractors to develop plans and usable templates for various types of construction projects. However, this program should be transitioned to a mandatory requirement with associated bylaws to obtain higher participation within one year of implementation to align with the Town of Banff.

Plans submitted to the municipalities would be linked to a data tracking system at Francis Cooke to improve overall waste diversion tracking in the region.

Roles and Responsibilities

- **Municipalities:** Develop consistent and enforceable policy across the region; plan requirements could be adopted using the Town of Banff's current requirements as a model. Provide strong education efforts prior to full enforcement and to assist industry, develop plan templates for different types of construction projects.
- **Industry:** Collaborate with municipalities in developing program details that encourage industry participation and facilitate the efficient submission of core information. Maintain compliance across municipalities in the region.
- **Commission:** Assist with education efforts and compliance through Ambassador program. Work with municipalities on developing an enhanced data tracking system at Francis Cooke that links to Waste Management Plans and permitting. In collaboration with municipalities, develop reporting templates for various types of construction projects.

Timeline

Full mandate implementation could take 2-3 years, starting with a voluntary approach.

Required Resources

Developing program details and getting industry buy-in will require dedicated project management resources, ideally coordinated through BVWMC. Since this option requires additional information and data to be gathered during the permit process, municipalities will need additional resources to handle the review of the Plan as a part of the permitting process. It is recommended the Plans received be shared with BVWMC to help from an expert review and data tracking perspective. Ultimately, tonnages received at Francis Cooke should be linked to Building Permits in each of the municipalities. Therefore, additional data tracking and coordination with BVWMC is necessary to ensure ultimate success of the program.

Performance Monitoring & Evaluation

Quantitative Measures

- Number of Waste Management Plans received compared to building permits
- Amounts of waste diverted (Francis Cooke and on-site)
- Cost implications for companies with a Waste Management Plan submitted

Qualitative Measures

- Industry culture shift toward proactive waste reduction through actions like source separation
- Increased participation in waste reduction initiatives

Risk Management

- Permit approval delays: Additional resourcing will be needed to maintain current approval times with this extra review being required. Municipalities should assign dedicated staff to the review of submitted plans, or potentially work with the BVWMC to determine an efficient approach for having the Commission complete the plan reviews for the entire region.
- Low industry participation: Transition the program from a voluntary to a regulatory approach over at least one year with clear communication channels to industry. This gives industry adequate time to adjust to the new program and allows industry to adapt as they deem best. Beginning with key industry champions would be a proactive approach to developing the program.

Implementation Examples

- Banff's Zero Waste Requirements for Building Permits.

- The Municipal District of Bighorn's Construction Waste Management Plan needs to be completed with Building or Demolition Permits. A requirement of the Plan is to describe how construction and demolition waste is going to be handled on site and the reuse/recycling or disposal method for key materials.

- San Bernadino County, California: The Department of Public Works, Solid Waste Management Division reviews and approves all new construction projects required to submit a Construction and Demolition Solid Waste Management Plan. Effective January 2017, the California Green Building Standards Code requires all newly constructed buildings, including low-rise residential and most non-residential commercial projects, to develop a waste management plan and divert a minimum of 65% of the construction waste. The waste management plan consists of two parts that are incorporated into the Conditions of Approval for County Planning and Building & Safety. Part I requires projects to estimate the amount of tonnage to be disposed and diverted during construction. Part II requires projects to show what tonnage was actually diverted and disposed of. Disposal/diversion receipts or certifications are required as a part of that summary. All applications and subsequent reporting are completed online using the "EZ Online Permitting Portal".

Mandatory Sorting / "On-site" Recycling

This option seeks to create a structured, enforceable approach to waste sorting while ensuring industry and municipal collaboration.

It is noteworthy that existing bylaws (such as those in Canmore) already address aspects like animal-proofing bins and landfill standards. This option goes above and beyond the current standards by building upon already existing language such as Schedule D in Town of Banff's Bylaw 377 that specifies construction waste shall be separated in accordance with a list of recoverable material streams (asphalt, asphalt shingles, concrete, drywall, white wood, yard and garden materials, branches, shrub and brush, assorted metals, and other CRD materials) and delivered to an approved site.

To accommodate different construction sites and locations, it is anticipated this bylaw will need to be structured around mandatory recycling of materials, not "on-site sorting". On-site sorting will be the easiest way for contractors to meet the bylaw requirements. However, sites that are limited in size or space, can still meet the requirements by sorting their mixed waste off-site (e.g., mixed CRD waste processors in Calgary).

It is suggested the bylaw start with materials recognized as recyclable in southern Alberta, including clean wood, drywall and asphalt shingles.



Outcomes/Goals

Sorting of materials and recycling becomes a universal practice among developers and industries across the region. Standardized sorting requirements and compliance formally enforced through updated bylaws at each municipality.

Roles and Responsibilities

- **Municipalities:** Residential & non-residential waste management bylaw updates (ideally a unified approach amongst the three communities). Education efforts before mandatory requirements take effect.
- **Industry:** Compliance with municipal bylaws through on-site sorting.

Timeline

Full mandate implementation could take 2-3 years with incentivized sorting beginning sooner, leading to a gradual transition to mandatory recycling.

Required Resources

Municipalities will need to plan for staff time to develop bylaw changes in a unified fashion.

Communication and education around upcoming bylaw changes will need to be handled by municipalities, assisted by BVWMC.

Personnel

- Compliance Officers (FTE in Canmore, part-time in Banff and MD of Bighorn)
- Administrative Support (0.25 FTE, ongoing)

Performance Monitoring & Evaluation

Quantitative Measures

- Amounts of waste diverted (Francis Cooke and on construction sites)
- Cost implications for companies adhering to the bylaw requirements
- Number of bylaw contraventions
    - Municipal responses by providing education
    - Municipal responses by applying fines

Qualitative Measures

- Industry culture shift toward source separation of CRD waste for diversion
- Increased voluntary participation in waste reduction initiatives
- Enhanced collaboration between industry and municipalities

Risk Management

- Lack of enforcement: municipalities must commit to providing adequate staffing for compliance officers. BVWMC can assist by being the first communication with problem sites by providing education and assistance through general education as well as the Ambassador program.
- Low industry participation: Implement voluntary and incentive programs to “win” over industry before transitioning to a mandatory approach. Leverage peer influence using industry champions and other social marketing approaches.

Implementation Examples

- The City of Vancouver’s Green Demolition By-law, most recently amended in 2019, requires 75% recycling of demolition waste from single-family homes built before 1950. This increases to 90% recycling for homes deemed to have character merit. Single-family homes built before 1910 and heritage-listed houses must meet the applicable recycling requirement, and salvage three tonnes of wood for reuse.[11]
- The Greater Vancouver Regional District has banned clean wood and gypsum from its waste disposal and trans-shipment facilities.[12]

[11] City of Vancouver 2024. Council Report: Zero Waste 2040: 5 Year Implementation Update. Appendix B.
[12] Metro Vancouver 2025. Disposal Ban Program.

Performance Deposit Option

In the event voluntary Waste Management Plans (WMP) do not lead to the desired level of waste reduction, the WMP can be further incentivized through a deposit or bond. The system aims to motivate adherence to waste management standards and encourage best practices via a financial incentive.

Typically, there is a deposit system in place where contractors pay refundable deposits that are returned upon demonstrating compliance with diversion requirements. The scale and scope of a given project will impact the amount required for the deposit.

The fee can be structured simply as a refundable deposit when a specified target is met, or by linking the refund to the actual percentage of diversion achieved on a sliding scale. In the latter case, a certain percentage of the total permit fee could be considered refundable, providing a tailored, proportionate approach.

Outcomes/Goals

The ultimate goal of the program is to foster meaningful compliance with the Waste Management Plan (WMP) by creating clear incentives for upholding its targets. It aims to educate stakeholders through transparent performance scoring—focused on waste diversion and material reuse—while tying these outcomes to the return of financial securities. A key element is the establishment of a robust tracking and verification system, likely through Francis Cooke, to ensure all waste receipts are ticketed and monitored for diversion rates. Ultimately, the program is designed not to generate revenue for the municipality, but to ensure that environmental objectives are met and standards are rigorously followed.

Roles and Responsibilities

- **Municipalities:** The performance deposit is linked to Development or Building Permits, depending on the community. Appropriate bylaws will need to be amended with consideration for associated fees and charges (i.e., deposits or bonds not being released due to non-compliance).
- **Industry:** The industry is charged with tracking and maintaining scale tickets (presumably for waste loads), serving as a record of compliance. Applicants themselves are responsible for actively monitoring their adherence to the deposit-related tasks.
- **Commission:** Could be assisted by BVWMC through tracking of scale tickets assigned to building permit numbers.

Timeline

This process is linked to the creation of the WMP and is expected to span 2-3 years.

Required Resources

Personnel

- Project Manager (0.5 FTE, ongoing)
- Municipal Planning Staff (Canmore 1 FTE; Banff 0.5 FTE; Bighorn 0.5 FTE ongoing)
- Administrative Support (0.25 FTE, ongoing)

Performance Monitoring & Evaluation

Quantitative Measures

- Number of permits associated with full and partial deposit refunds
- Average diversion rates across construction sites
- Waste diversion results (Francis Cooke and on-site)

Qualitative Measures

- Industry culture shift toward proactive waste reduction
- Increased participation in waste reduction initiatives
- Recognition of the program as industry best practice

Risk Management

- Industry pushback: This program option should be phased in and time allowed for industry to adjust without the financial pressures of the deposit being applied.
- Increased cost for construction: It will be important to share opportunities for industry to recoup and minimize costs – for example, deposits may be entirely refundable for compliant developers, and projects should experience decreased disposal costs due to separated, divertible, waste material loads at Francis Cooke.
- Delays to permit reviews/approvals: Additional municipal staff will be required to streamline the deposit system. However, these programs already exist in a similar model in the Town of Canmore (e.g., Green Building Performance Security) and process efficiencies can be learned from best practices in the Planning Departments.

Implementation Examples

- Banff's Zero Waste Requirements for Building Permits. It is noteworthy Banff has not implemented their performance bond program, but it would serve as a good starting point for regionalized policy development.

- In Squamish, B.C., the Demolition Waste Diversion Bylaw requires contractors to pay a refundable fee of $20 per square metre when applying for a permit. This performance bond is returned if 80% or more of the waste is diverted by volume. The bylaw supports broader goals outlined in the Solid Waste and Resource Management Plan, which aims for long-term waste reduction and landfill capacity management. Construction and demolition waste makes up a significant portion of landfill input, so the policy also includes requirements to separate recyclables like wood, metal, and drywall on-site. Tipping fees are structured to reward proper sorting, with lower rates for separated materials and penalties for loads containing more than 5% recyclables.[13]

- In Port Moody, B.C., Waste Management Bylaw 2822 requires 70% of all recyclable waste materials generated on a construction site must be diverted. To obtain a Building Permit contractors require a Waste Management Plan (detailing waste generation rate by material type – estimates by construction type and size are provided) and associated refundable fee (based on square footage of building). The fee is returned to the applicant upon completion of the project, if compliance reporting is submitted with accompanying

[13] Squamish 2025. Construction and Demolition Waste.

licensed facility receipts. The associated fee is typically between $2,000 and $7,000 and a portion of the Waste Management Fee is retained by the City to administer the Bylaw (typically between $100–$500). Application forms include a material checklist to ensure recyclable materials are identified and a website link is provided that lists licensed recycling facility locations. It is noteworthy that before Port Moody passed the bylaw in 2011, the City opted for a "one-year education phase" to provide staff flexibility in enforcing the bylaw. In this first year, no fees were charged.[14]

[14] Government of British Columbia 2013. City of Port Moody Mandatory Waste Management Plans and Refundable Fees.

Building Design for Circularity

This option advocates for the education and promotion of building designs that facilitate future disassembly and reuse of materials. This approach is intended to be tied directly to building codes and emphasizes providing resources to raise awareness and connect the building industry to the broader circular economy movement.

Outcomes/Goals

The ultimate goal of this initiative is to have buildings and structures recognized as resources at the end of their life, promoting the reuse of components and reducing waste. Additionally, the intent is to provide industry with a general understanding of options and the availability of educational program opportunities focused on these topics.

Roles and Responsibilities

- **Municipalities:** Encourage green building design through bylaw incentives. Engage in right-to-repair advocacy for common household items such as appliances. Potentially offer greater flexibility in land-use bylaw requirements for construction projects that adopt these principles (or other incentives).
- **Commission:** Engage in right-to-repair and green building advocacy.
- **Industry:** Contribute ideas to further the development and implementation of circularity. Work with relevant industry groups such as BILD AB to advocate for changes to the existing building code to fully support this approach.

Timeline

The approach is ongoing and adaptable as new options emerge. Implementation and consideration are to take place using a phased approach by tackling smaller initiatives and projects first.

Circularity design can be incorporated into the information package by providing links to relevant resources and industry experts.

This option highlights the importance of linking circularity efforts with broader concepts such as biodiversity and the provision of ecosystem services.

Required Resources

Minimal additional resources are required for this option. Initial training and research could be completed by the Commission and/or municipalities, but circularity principles should be incorporated into all training, internal and external.

Performance Monitoring & Evaluation

This longer-term program will not have quantitative measures at this stage. Instead, there should be a goal of incorporating circularity programming and education in all Commission and Municipal CRD interactions with industry. Qualitative measures will be similar to the overarching elements identified at the end of this report, such as an industry culture shift toward proactive waste reduction.

Risk Management

- Lack of understanding by industry: Embedding circularity concepts into all education materials and program policy is important to help build knowledge and understanding. Work towards circularity becoming the norm in a gradual project progression.
- Long project timelines could lose sight of end goals: the commission and municipalities should have regular discussions around circularity and have part-time resources dedicated to researching the topic and participating in relevant advocacy.

Implementation Examples

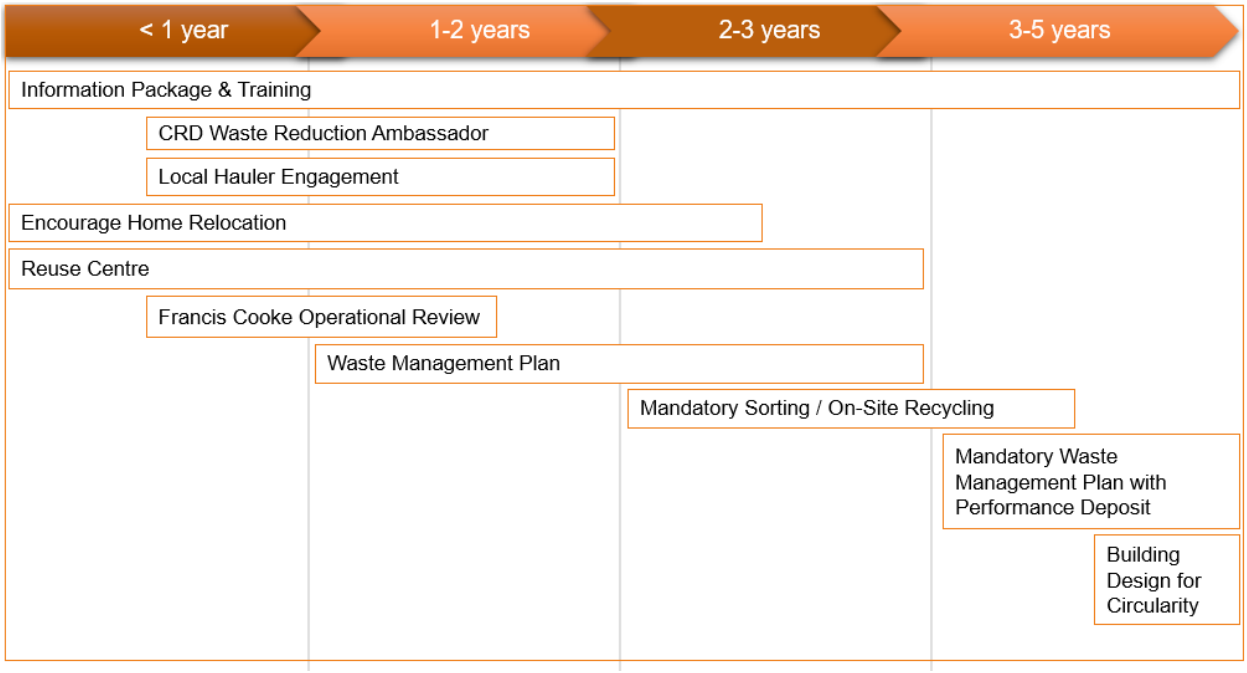
- The Town of Canmore has a Green Building Regulations program that includes a system for refunding a portion of the building permit fees for projects that meet or exceed specified energy efficiency and sustainability targets. “If the minimum performance targets are achieved, a portion of the Green Building Performance Security (a refundable deposit) is returned to the applicant. The amount of the Green Building Performance Security is based on an additional $4 per $1,000 of construction value calculated in the manner in which the building permit fee was determined (to a maximum of $20,000). If the necessary reporting requirements and required minimum score are achieved within six months of occupancy, the refundable Green Building Performance Security shall be refunded to the Applicant.”[15]

- In Seattle, WA, green building incentives for new construction also focus on the demolition of existing houses by requiring the full or partial deconstruction consisting of at least 1,000 board feet of wood material, using at least 500 board feet of salvaged material in the new construction, retaining an existing structure as part of the proposed development, or relocating a structure.

[15] Town of Canmore 2020. Public Guide to Green Building Regulations: Residential Applications.

3.1 Timeline

The proposed timeline for this plan, with vertical option prioritization (options listed at the top are prioritized due to lower effort and/or higher impact), follows:



Timeframe	Programming Option
0-12 months	• Develop CRD waste reduction information package and training programs New position for CRD Waste Reduction Ambassador to assist with education and training once information package and training scope developed Begin local hauler engagement (Waste Reduction Ambassador can assist with this option) • Encourage house relocation across the region and begin to develop relevant industry relationships • Begin design and work towards operation of Reuse Centre
1-2 years	• Undertake Francis Cooke operational review including discouraging acceptance of unsorted waste • Waste Management Plan (beginning with a voluntary option that only requires a plan that transitions into a mandatory program)
2-3 years	• Mandatory sorting / on-site recycling • Local hauler engagement post bylaw updates (mandatory on-site recycling) • Waste Ambassador trained on mandatory elements to assist projects with meeting requirements
3-5 years	• Waste Management Plan transitions into a mandatory option with a performance deposit • Encouraging Circularity in local building design

4 Future Circular Economy Considerations

Going forward, the ultimate goal of all waste management programs is to contribute to a Circular Economy. Figure 5 shows waste prevention initiatives that can play a role in moving the CRD industry towards Circular Economy in Bow Valley.

Sector/Subsector	Intervention	Targeted Waste
Construction	Adaptive Reuse	Construction materials
	Offsite Modular Construction	Construction materials
	Design for Disassembly	Construction materials
Manufacturing	Furniture Remanufacturing	Furniture
	Facilitated Repair	Appliances

Figure 5: Waste Prevention Initiatives[16]

Although not directly addressed within this plan, these options can be considered within the overall approach as subsets of larger initiatives. For example, Adaptive Reuse can be facilitated through the Reuse Centre, while Design for Disassembly is one element within Building Design for Circularity. These approaches can be included in the Information Package and Training where they will raise awareness within the Bow Valley CRD industry.

5 Potential Funding and Investment Streams

The Bow Valley Waste Management Commission is primarily funded through tipping fees for waste and rock waste disposal, aggregate sales, and the sale of other divertible materials (e.g., compost, wood chips, etc.). It operates on a full-cost recovery basis, meaning it aims to cover all operational costs through revenue streams, without requiring direct taxpayer funding from its member municipalities.

While the Commission aims to be self-sufficient, it may also receive government transfers for specific waste infrastructure projects, which are then managed and invested by the Commission. In the case of projects requiring significant expenditures, the Commission needs approval from its Board that includes representatives from its municipal members. If additional funding support is required from members, this funding will need approval in municipal budgets that are set on a two-year schedule.

Waste commissions generally raise funds from their members using various methods. One common method is the per-capita formula, where each member contributes a fixed amount based on their population, income or other factors. This formula ensures equitable participation from all members and can help fund waste management and reduction initiatives.

[16] National Zero Waste Council 2021. Waste Prevention Report.

A primary funding opportunity for municipalities is through FCM's Green Municipal Fund. As no waste category currently exists within the fund, Municipal Building and Climate Adaptation are the most relevant categories.

Potential federal funding includes the Canada Community-Building Fund.

Provincial funding includes the Local Government Fiscal Framework (capital and operating), and Local Growth and Sustainability Grant.

Alberta EcoTrust offers grants to non-profit organizations that address environmental and climate solutions. Although limited to $50,000 per project, this funding could potentially be pursued through a collaboration between BVWMC, or its member municipalities, and Habitat for Humanity or other ENGO (e.g., Biosphere Institute) for the Reuse Centre.

Foundations that fund environmental projects are another potential funding source for certain elements of the plan. Specifically, options like the Information Package & Training, and Reuse Centre, are prime candidates to apply for Foundation funding.

Developers and other key industry players may see investment opportunities in certain project areas. For example, if mixed CRD waste processing was identified as a proposed program element, design and construction of this facility could prove attractive to industry players like waste management companies. Similarly, the Reuse Centre could be attractive to project partners such as ENGOs who may see potential revenue generation from the option. Therefore, primary project partners like municipalities and the Commission should remain open to potential collaboration with entities whose objectives align with key project elements.

6 Administration Demands and Governance Structure

Governance will be an important part of the plan to determine who oversees and administers the various initiatives, considering the relative roles of municipalities and the Bow Valley Waste Management Commission. As a part of this analysis, integration of recommended policies with existing regulations, or systems, in the region will be an important consideration.

7 Performance Measurement and Milestones

Measurement is important to track project performance and assess progress towards goals. For successful monitoring, both quantitative and qualitative measures have a role. Some of the overall measures that should be considered are discussed below.

Overall qualitative measures

- Industry culture shift toward proactive waste reduction
- Increased voluntary participation in waste reduction initiatives
- Enhanced collaboration between industry and municipalities
- Recognition of CRD reduction and diversion programming as industry best practice

Quantitative measures

Quantitative measures are normally expressed on a tonnage, percentage or per-capita basis. The usefulness of the measure is often dependent on its ability to compare it to other relative measurements. For this reason, overall waste measures are increasingly being expressed on a per-capita rather than percentage basis, while project measures are often expressed on a per-$ value or per-square foot basis. However, some metrics remain most useful when expressed on a % basis compared to total activity.

Core Quantitative Metrics

- **Waste Generation Rate** (kg/m^2)
  Definition: The amount of CRD waste that is produced on a construction site.
  Why it matters: Efficiency and circularity are reflected in the total amount of waste generated on a project, including materials destined for diversion and disposal.

- **Waste Diversion Rate** (%)
  Definition: The percentage of total CRD waste that is diverted from landfills through recycling, reuse, or repurposing.
  Why it matters: This is the flagship metric that shows overall effectiveness in waste diversion efforts.

- **Recycling Efficiency** (%)
  Definition: The ratio of materials effectively sorted and recycled (or otherwise processed) versus contaminants or waste that ends up needing to be disposed.
  Why it matters: High efficiency indicates robust sorting and material recovery processes.

- **Cost per Tonne Managed** ($/tonne)
  Definition: The expenditure or savings achieved for every tonne of waste processed by recycling or diversion programs.
  Why it matters: It helps evaluate financial performance and drive cost-effective practices.

- **Regulatory Compliance Rate** (%)
  Definition: The proportion of projects or sites adhering to environmental and waste management regulations.
  Why it matters: Ensures that all operations meet legal standards and reduces risks of penalties.

Complementary Metrics

- **Material Recovery Rates**
  Definition: The tonnage or percentage of specific materials (e.g., wood, metal, concrete) recovered for reuse and recycling.
  Why it matters: Provides granular insights to pinpoint which materials are most successfully recovered and where improvements are needed.

- **Deconstruction vs. Demolition Ratio**
  Definition: The frequency of selective deconstruction (preserving materials for reuse) compared to conventional demolition practices.

Why it matters: A higher ratio reinforces sustainable practices and maximizes salvage potential.

- **Participation and Engagement Levels**
  Definition: Metrics reflecting how many contractors, developers, or residents are involved in diversion initiatives, including the use of educational programs or incentive schemes.
  Why it matters: High engagement is essential to community-wide behavior change.

- **Carbon Footprint Reduction/Energy Savings**
  Definition: The estimated reduction in greenhouse gas emissions or energy usage resulting from recycling, reusing, and reduced landfill operations.
  Why it matters: It ties waste management practices directly to environmental benefits and long-term sustainability goals.

- **Value Recovery**
  Definition: The monetary value recouped through the sale or reuse of salvaged materials, often compared against disposal costs.
  Why it matters: Demonstrates the economic benefits of sustainable practices to stakeholders.

Example KPI Table

KPI	Definition	Example Target/Goal
Waste Generation Rate Waste Diversion Rate	Amount of CRD waste produced on a construction site % of CRD waste diverted from landfill	18 kg/m^2 for a residential house ≥ 70% diversion
Recycling Efficiency	% of materials sorted correctly without contamination	≥ 90% sorted correctly
Cost per Tonne Managed	Dollars saved or spent per tonne of waste processed	Reduce by 10% annually
Material Recovery Rate (e.g., Wood)	% of wood recovered for reuse versus total wood from projects	≥ 50% recovery
Deconstruction Ratio	% of projects using deconstruction vs. demolition	Increase deconstruction by 25%
Regulatory Compliance	% compliance with local waste management regulations	100% compliance
Carbon Footprint Reduction	Estimated GHG emissions saved due to diversion efforts	Quantifiable reduction goal

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Implementation Considerations

1. **Baseline Assessments:**
   Establish initial waste generation and processing data to set realistic, measurable targets.

2. **Data Collection & Monitoring:**
   Implement technology solutions like real-time tracking, sensors, or digital dashboards to collect and analyze data consistently.

3. **Regular Reviews:**
   Conduct quarterly or yearly KPI reviews to adjust strategies, set new targets, and ensure continuous improvement.

4. **Stakeholder Engagement:**
   Involve local contractors and municipalities, tracking their participation rates and feedback to improve program effectiveness.

5. **Integration with Environmental Goals:**
   Tie metrics such as carbon footprint reduction or energy savings directly to waste reduction metrics to highlight long-term benefits.

By focusing on these varied KPIs, the Bow Valley can gain a holistic view of its CRD waste reduction initiatives. The combination of operational, environmental, and financial metrics helps not only in compliance and cost savings but also in promoting sustainable practices that lead to measurable environmental improvement.

Appendix A: Interest Holder Engagement

Relevant interest holders in the region were identified, considering all lifecycles of a structure (pre-construction & planning, construction, renovation & maintenance, and demolition). To start the engagement process, sonnevera engaged with each of the participating communities on an individual basis. This helped set the project context and understanding of each community's unique needs and expectations, while identifying any potential risks such as political sensitivities and municipal history with external stakeholders. Meetings were conducted with relevant Environment and Planning departments in each of the municipalities.

The list of engagement activities utilized to communicate and obtain feedback from interest holders included:

- In-Person Workshop for Municipalities: February 19th and June 4th
- In-Person Workshop for Industry: February 20th and April 30th
- Virtual Meetings with BOWDA Sustainability Committee: May 21st and 27th
- Attendance at BOWDA Luncheon: February 13th
- First Nations Engagement Invitation through Town of Canmore
- Individual Industry Meetings with various companies: ISL Engineering, Ashton Construction, Habitat for Humanity, Biosphere Institute

Separate workshops were held with municipalities and industry. This was to ensure participants feel the ability to truly express opinions without worrying about potential political sensitivities. Separate workshops also help to avoid conflict between industry and municipalities which could interfere with fruitful discussions.

A list of industry contacts invited to workshops can be found at the end of this appendix.

Details of the engagement process included:

1. Municipal Workshop One: SWOT Analysis

Municipal workshop invitees included stakeholders from Environment / Waste and Planning departments. It was important to include Planning staff in these conversations since many of the anticipated policies will require support and program administration from Planners.

A workshop for municipalities was hosted February 19th and had the following attendees:

13 attendees total			
MD of Bighorn: 6 representatives	Town of Canmore: 3 representatives	Town of Banff: 3 representatives	BVWMC: 1 representative

A "Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis was utilized for the first municipal workshop to add value through:

- **Understanding the Current Context:** The workshop provided an opportunity to assess existing policies and strategies across Banff, Canmore, and the MD of Bighorn, identifying strengths and weaknesses, clarifying what's working and what needs improvement before introducing new strategies.

- **Aligning Priorities and Goals:** Engaging municipal partners early helped align shared goals for CRD waste reduction. This ensures future initiatives are built on consensus and tailored to the unique needs and capacities of each municipality.
- **Addressing Local Challenges and Opportunities:** The Bow Valley's unique environmental, economic, and operational factors impact waste management. A SWOT analysis enabled participants to identify threats, such as regulatory barriers, and explore opportunities like regional collaboration or leveraging local innovations.
- **Building Buy-In and Collaboration:** Early engagement fosters trust and collaboration among municipal stakeholders. A collaborative SWOT ensured all voices were heard, creating a shared vision that increases the likelihood of successful implementation.

The following prompting questions were used to encourage discussion:

SWOT Analysis

Strengths:	**Weaknesses:**
What does Bow Valley do well? What unique assets/programs does Bow Valley have?	What does Bow Valley lack? What do other communities do better than Bow Valley?
Opportunities:	**Threats:**
What existing "hot spots" of success can we build on? Where do we see ways to reduce CRD waste in the region?	What might get in the way of our success? What challenges exist?

As a result of the SWOT analysis, actions were identified and grouped based on timelines:

1. **Achievable short-term actions** where information can be presented, industry educated, and policies approved in less than two years.
2. **Longer-term actions** that signal a shift to more circular practices.

To determine the beginning of an implementation process, municipalities were asked for additional detail for each of the identified actions, including:

- **How to take action in a collaborative way?**
- **What resources are required?**
- **What other support do you need to make this happen?**

2. Industry Workshop One: Surfacing of Ideas

An industry-specific workshop was hosted on February 20th in Canmore and had 12 total attendees, representing the following companies:

12 attendees total representing:		
Flying Pigs Environmental Services	Ashton Construction	BOWDA
ISL Engineering	JMB Waste Management	Biosphere Institute
CANA Construction	BVWMC	

Group discussions included current diversion programming and processes in the Bow Valley, followed by potential future processes. This was followed by a World Café engagement format to obtain more detailed information from stakeholders regarding their ideas for opportunities for enhanced CRD diversion in three areas:

1. Francis Cooke Resource Recovery Centre and Landfill
2. Building Permits
3. Deconstruction/Salvaging

Based on the collected feedback from industry, it was concluded that there are ample opportunities for encouraging and incentivizing additional CRD waste diversion in the region.

3. Industry Workshop Two: Validation of Potential Programming Options

The final industry-specific workshop was hosted on April 30th in Canmore and had 8 total attendees, each representing a different company in the CRD industry. Programming options reviewed with the workshop participants, individual meetings with contractors, and BOWDA Sustainability Committee were grouped into three categories: Education, Infrastructure Options, and Planning Requirements and Incentives.

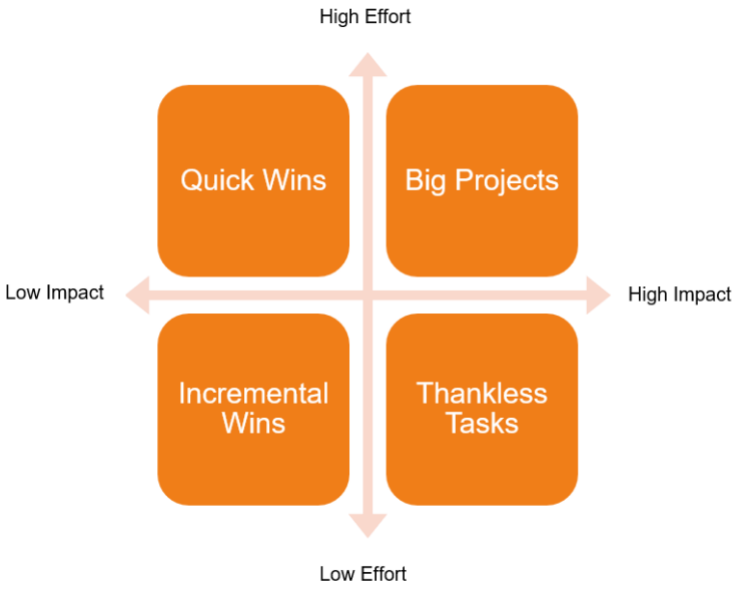
This second round of industry engagement built on the results of the first round of engagement, supporting the premise that there are opportunities for additional CRD waste diversion in the region. Overarching themes from this round included the desire to prioritize education and incentives over regulation and penalties. Generally, options that require additional time or financial investment from industry were not positively received by this group.

Industry is supportive of the concept of CRD waste reduction and diversion, and willing to play its part using a voluntary approach.

4. Municipal Workshop Two: Programming Options Development

A second workshop was held with municipal representatives in Canmore on June 4, 2025, with 16 participants attending from all municipalities.

The workshop included a presentation outlining the programming options being reviewed. Participants then took part in a group brainstorming exercise that assessed the effort and resources required for the different options, and resulting impact on CRD waste. Based on this assessment, options were placed in four quadrants:



Attendees then discussed a timeline to implement various options.

These results were used to inform the recommended tools in the final implementation plan to reduce the amount of landfilled Construction, Renovation, and Demolition (CRD) waste in the region.

5. List of industry contacts invited to workshops:

Company Name	Name
51 North Contracting	Phil Tarchuck
AB Real Estate Foundation	Patti Morris
All Weather Builders	
Arbus Mountain Homes	Dale
Arctos & Bird/Bow Strings Heritage	Vojtech
Ashton Construction	Lesley Bannister
Ashton Construction	Steve Ashton
Ashton Construction Services	Ian Bromley
Ashton Construction Services Inc	Dallas Williams
Ashton Construction Services inc	Daniel Stewart
Ashton Construction Services Inc	Darby Ogle
Ashton Construction Services Inc	Maia Schumacher
Ashton Construction Services Inc	Melissa Delgado
Ashton Construction Services Inc	Terry LeBlanc
Baja Construction	Andrew Herdman
Banff & Lake Louise Tourism	Christy Pashby
Banff Building Collective	Cam Sinclair

Company Name	Name
Banff Caribou Properties	Shawn Birch
Banff Legacy	John McIsaac
Banff Wood Lodge	Albert Zhang
Basecamp	Darwin Holm
Basecamp	Spencer Thackery
BILD Alberta	Scott Fash
Bilsborrow Building Movers	
Biosphere Institute	Gareth
Biosphere Institute of the Bow Valley	Grace Gillman
Biosphere Institute of the Bow Valley	Tanya Pacholok
BIRD Construction Group	Ben van Vree
Black Bear Builders	Alexa Huber
Bogdan's Construction	
Brewsters / River's Bend Developments	Shane Jonker
CANA Construction	Darren McGuire
Canalta Real Estate	Brent Plante
Canalta Real Estate	Robert Visser
Canmore Chamber of Commerce	Caitlin
Canmore Community Housing	Kristopher
Canmore Downtown Business Association	Ed
Carrig Ridge	Ian McGregor
Cielle	David Lin
Clean Sweep Waste Removal	Malcolm Koch
Cliff Resorts	Minesh Modi
Copper Mountain Building Co	Wade
Deegan Construction	
Distinctive Homes	Jamie Findlay
Distinctive Homes	
Elk Run Custom Homes	
Engi Group	Zach Jones
Eton-West Construction	Willie Tran
Exshaw Mountain Gateway	Jason Hoerle
Exshaw Mountain Gateway	Lindsay Vivers
Findlay Group Inc	Robb Findlay
Flying Pigs Environmental Services	Jerard McEachern
Flying Pigs Environmental Services Inc.	Wes Hughson
FRANK Architecture	Kelly Morrison
Glacier Holdings	Tim Kendal
Glacier Holdings	Tory Kendal

Company Name	Name
Government of Alberta	Geoff Smith
Habitat for Humanity Southern Alberta	Alex Meyer
Highpoint Developments	Aly Moloo
Highpoint Developments	
Holmes Buidling Movers	
HSS Design	Raphael
HSS Design	Raphael Spinner
HSS Design Build	Joseph Hopkins
Innovate Canmore	
ISL	Andrew
ISL	Declan
ISL Engineering	Liam Smedley
JMB Waste Management	
Jonalta Properties	Hardy Schmidtke
Josephine Tsu	Josephine Tsu
Kerco Limited	Dak Kerr
Logel Homes	Brayden Logel
Logel Homes	Caitlin
McCann's Building Movers	
McElhanney	Darin
Montane Architecture	Lea Lohnes
MT-Arch	Marjan Shirazian
MT-Arch	Max Tayefi
Oskar Construction Ltd	Oskar Pietrasik
Pine & Pillar Landscaping and Construction	Rob Naylor
Polaris Builders	James Fisher
Raynow Group	Eva Peng
SBL Contractors	
Seligman	Tony Seligman
Shugarman Architecture & Design	Joel Piecowye
Shunda Consulting & Construction Management	
Spring Creek Mountain Village	Frank Kernick
ST Contracting & Renovation	
Stone Creek Resorts Inc	
Studio North	Mark Erickson
SustainDriven	Joey O'Brien
Three Sisters Mountain Village (TSMV)	Phil
Turrum Construction	
Val Construction	

Company Name	Name
Valley Renovations and Repair	
Waymark Site Solutions	Rene Reutlinger
Woodland Mountain Homes	Bobby Richardson
Woodpecker Construction	Peter Graul
WSP	John

Appendix B: List of "Undesirable" Programming Options

These programming options were deemed to be "Thankless Tasks" (bottom right quadrant of Figure 6) on the Impact vs Effort Matrix by the municipalities in the final engagement workshop. These options were deemed to be high effort with low impact and were not selected for further development as a part of the Implementation Plan.

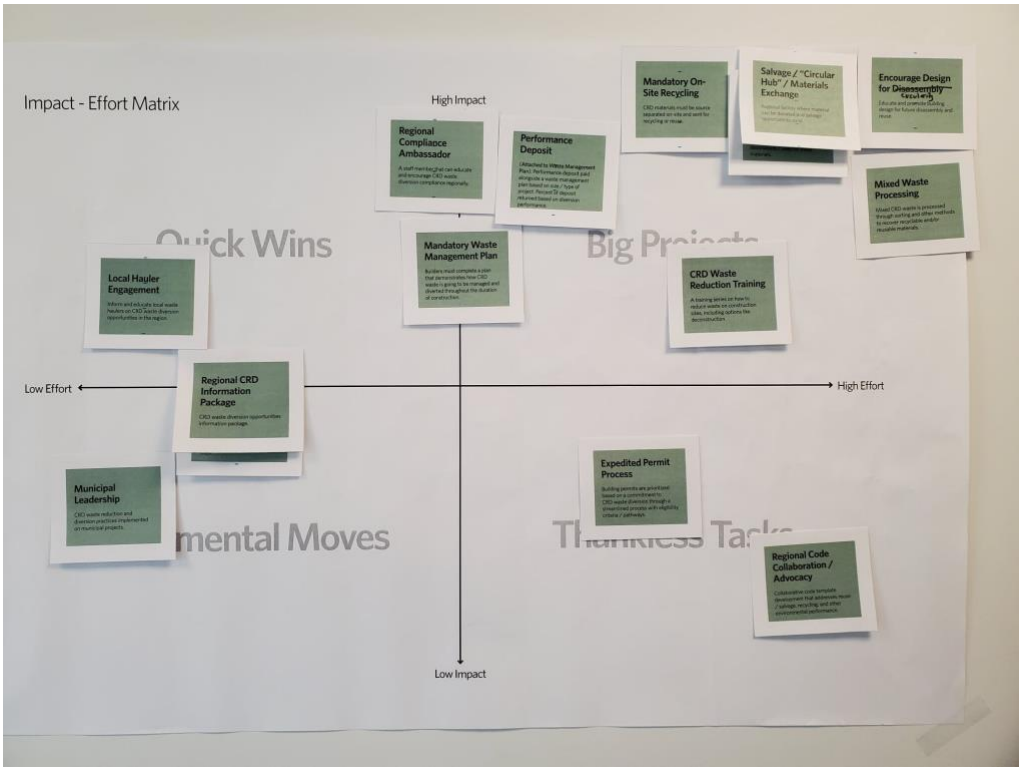


Figure 6: Impact vs Effort Matrix

Regional Code Collaboration / Advocacy – Collaborative code template development that addresses reuse / salvage, recycling, and other environmental performance
Expedited Permit Process – Building permits are prioritized based on a commitment to CRD waste diversion through a streamlined process with eligibility criteria / pathways