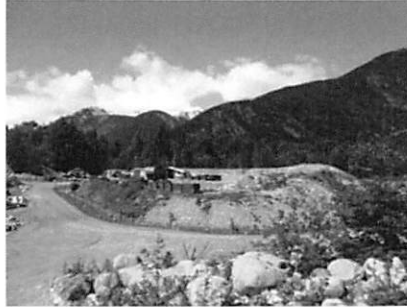


Existing Disposal System



Carey McIver & Associates Ltd.

Existing Disposal System



Carey McIver & Associates Ltd.

2004 SWMP – Bella Coola Valley

Key Actions – Bella Coola Valley	Status
Financing Options	Complete
Work with Nuxalk Nation on funding	Complete
Expand landfill boundaries	Underway
Improve landfill practices at Thorsen Creek	Complete
Improve waste reduction at Thorsen Creek	Complete
Bear Fencing	Complete
Regulated open burning of wood and cardboard	Complete
Promote stewardship programs	Underway

 Carey McIver & Associates Ltd.

2004 SWMP- Bella Coola Valley

Key Actions - Diversion	Status
Tire and lead acid battery recycling	Complete
Free Store	Complete
Scrap metal removal	Complete
Public reduce and reuse education	Underway
Retailer reduce and reuse education	Underway
Investigate office paper and cardboard recycling	Incomplete
Promote home composting	Complete
Promote stewardship programs	Complete

 Carey McIver & Associates Ltd.

2004 SWMP - Bella Coola Valley


KEY ACTIONS - LANDFILL	STATUS
Scale attendant and operator training	Complete
Bear resistant electric fencing	Complete
Key control and tipping fee rules	Complete
Weekly cover	Complete
Inspect incoming loads and bylaws for landfill use	Complete
CFC removal from fridges and freezers	Complete
Closure Fund	Complete
Twice annual litter pick-up at Bella Coola landfill/valley	Complete
Bear Education	Complete
Plan implementation and monitoring committee	?
Expand landfill boundaries	Underway
Water quality monitoring	Underway
Burning select waste under good venting index only	Complete

 Carey McIver & Associates Ltd.


Existing System Review

- Reduction & Reuse
- Recycling
- Composting
- Disposal
- Financing
- Policies & Bylaws
 - Disposal Bans
 - Tipping Fees
- Education & Promotion


 Carey McIver & Associates Ltd.




SHORT BREAK




Carey McIver & Associates Ltd.



**RESULTS OF COMMUNITY
SURVEY**



Carey McIver & Associates Ltd.

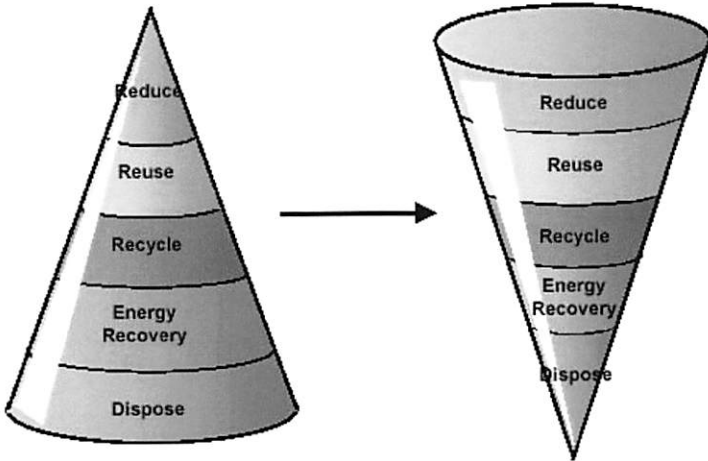


ISSUES AND OPPORTUNITIES

In the Bella Coola Valley

Carey McIver & Associates Ltd.

Issues and Opportunities

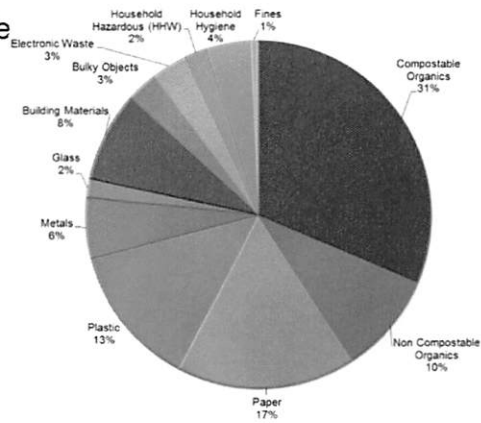


The diagram shows two inverted pyramids representing the waste management hierarchy. The left pyramid is upright and labeled with 'Reduce', 'Reuse', 'Recycle', 'Energy Recovery', and 'Dispose' from top to bottom. An arrow points to the right pyramid, which is inverted and labeled with 'Reduce', 'Reuse', 'Recycle', 'Energy Recovery', and 'Dispose' from top to bottom.

Carey McIver & Associates Ltd.

Waste Diversion Issues and Opportunities

- More diversion is possible
- Improve use of existing residential diversion opportunities
- Lack of opportunities for businesses to recycle
- Organic waste diversion (e.g. composting)



Carey McIver & Associates Ltd.

Residual Management Issues and Opportunities

- Landfill engineering issues (Morrison Hershfield)
 - Some steep slopes
 - Final covering of filled areas
 - Hydrogeological information may need updating
 - Groundwater monitoring should be undertaken
 - No design, operation and closure plans
- Cost of engineering improvements / limited budget available

Carey McIver & Associates Ltd.



KEY DRIVERS

 Carey McIver & Associates Ltd.

Exercise: Issues and Opportunities

- **Roundtable:**
 - Based on what you've heard this morning and your own experience, what are the issues and opportunities that this planning process should address?
- **Prioritization:**
 - Of the issues and opportunities posted, identify which ones you think are the most important
 - Put a checkmark on your top 3

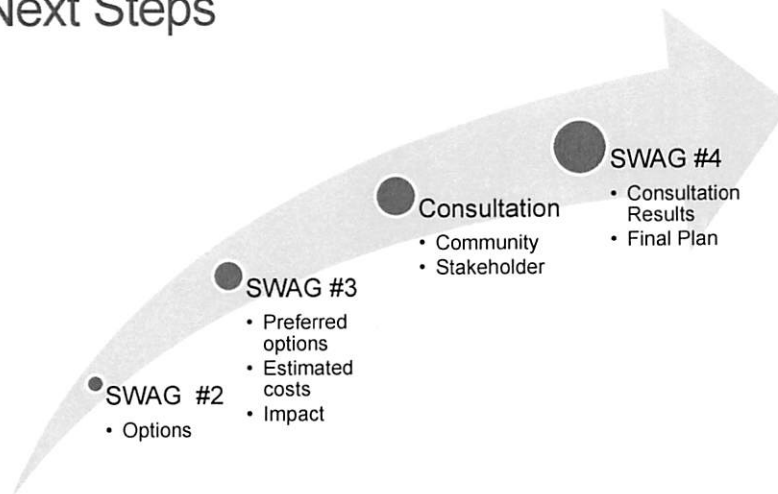


 Carey McIver & Associates Ltd.

NEXT STEPS AND WRAP UP



Next Steps



Wrap Up

- Preferred meeting day and time of day
- Summer meetings?



Bella Coola Valley Solid Waste Advisory Group
MEETING AGENDA
 Wednesday, September 7, 2016
 1:00 pm to 4:00 pm
 at the Royal Canadian Legion Hall
 1855 Highway 20

Meeting host: Ken McIlwain (CCRD)

Meeting facilitators: Carey McIver and Maura Walker (Carey McIver and Associates)

AGENDA

Welcome and Introductions <ul style="list-style-type: none"> Review of agenda and meeting objectives 	1:00 – 1:30
Minutes of Previous Meeting	
Review of Planning Process	
Existing System Report: finalization	
Future Solid Waste Management System: Options <ul style="list-style-type: none"> Presentation and discussion 	1:30 – 2:30
Short Break	2:30 – 2:40
Future Solid Waste Management System: Options <ul style="list-style-type: none"> On-going discussion 	2:40 – 3:30
Next Steps / Wrap Up <ul style="list-style-type: none"> Confirmation of next meeting date and time 	3:30 – 4:00

Light refreshments will be available.

Please advise Ken McIlwain if you are unable to attend.

Tel: 250-799-5291

Fax: 250-799-5750

Email: pwm@ccrd-bc.ca



Bella Coola Valley Solid Waste Advisory Group
(SWAG)
Wednesday, September 7, 2016
1:00 pm to 4:00 pm
at the Royal Canadian Legion Hall

MEETING NOTES

Note: The PowerPoint slides presented at the meeting are attached for reference.

Participants:

Kerry Phillips, Ministry of Forest, Lands and Natural Resource Operations
Barney Kern, Bella Coola Recycling and La Cool Truck and Crane
Drew Kovacic, Bella Coola Harbour Authority
Ken McIlwain, Central Coast Regional District
Russ Hilland, Bella Coola Watershed Conservation Society
Marty Nygaard, Landfill Contractor
Percy Schooner, Nuxalk First Nation
Carl Harestad, Bella Coola General Hospital
Peter Fralick, Co-op Board

Not in Attendance:

Fraser Korluk, WildSafe BC
Wayne Bittner, Waste Hauler – Load of Rubbish
Doug Baker, Tourism Industry representative
Steve Dishkin, School District

Facilitators:

Carey McIver, Carey McIver and Associates Ltd.
Maura Walker, MWA Environmental Consultants Ltd.

Welcome and Introductions

- A roundtable of introductions, as well as a review of the meeting agenda and objectives was conducted
- There were no changes to the agenda

Minutes of the Previous Meeting presented by Maura Walker

- Minutes passed as presented

Review of the Planning Process presented by Maura Walker

- No discussion

Existing Solid Waste Management System - Finalization presented by Carey McIver

General discussion:

- The advisory group reviewed the MOE Guiding Principles for Developing Solid Waste Management Plans and expressed concerns that principle No. 4 – support user pay approaches - may not be applicable in the Bella Coola Valley.
- The advisory group also expressed concern that increased fees could result in an increase in illegal dumping however the representative from Ministry of Forest, Lands and Natural Resource Operations commented that over the last five years there has been a drastic reduction in the amount of illegally dumped material.

Future Solid Waste Management System – Issues and Opportunities

Issue 1: Increasing Residential Recycling Rates presented by Maura Walker

General Discussion:

- The advisory group agreed that the CCRD offers a full range of recycling services to residents in the valley and that residents could do more with what they have available
- There was limited support for penalties and increased enforcement and more support for rewards and better communication.

Detailed Comments

- There was discussion regarding the fact that many people in the Valley do not own cars and have difficulty getting their garbage and recycling to the TCWRC.
- With respect to services there was recognition that the private garbage only collection service is a disincentive for recycling since residents who pay for this service still need to self-haul their recyclable materials to TCWRC.
- It was suggested that providing residents with free blue boxes would be a good incentive to encourage more recycling
- There was considerable discussion charging a nominal fee for garbage however it was recognized that this would be a challenge given the current staffing levels.
- The Valley's small population and low density would make curbside garbage collection an expensive proposition.
- The new transfer station/recycling area will help encourage recycling but there are still staff constraints in terms of communicating with all of the customers to ensure that they recycle
- There was support for banning items that could be diverted from disposal however financial penalties would be difficult to enforce since very few loads are assessed a tipping fee. However there was a comment that there would be no value to bans if they didn't have any teeth with respect to enforcement. It was suggested that rewards and communications could be used initially to support disposal bans and they are deemed to be ineffective, move towards fines or other forms of penalties.

- In general the advisory group preferred the carrot over the stick approach.

Issue 2: Lack of Waste Diversion Opportunities for Business presented by Maura Walker

General Discussion

- The advisory group discussed options for backhaul of recyclables by trucks that deliver goods to local businesses however the advisory group recognized that backhaul has a cost and local businesses are not likely to want to increase their cost of doing business.
- There was discussion regarding diversion and the value of landfill space. The landfill has a limited life span and the cost to export garbage to a landfill out of the region would be more expensive than in-region disposal.
- The consultants suggested that ICI food waste and fibres (cardboard and paper) could potentially be added to Barney's cardboard bins and this material could be composted once a composting facility is available

Issue 3: Landfill Related Issues presented by Carey Mclver

- No discussion

Issue 4: Insufficient Income in the Financial Plan Presented by Carey Mclver

- No discussion

Issue 5: Refuse Disposal Bylaw Needs Update presented by Carey Mclver

- Bylaw needs to define household waste

Issue 6: Minimal Waste Screening presented by Carey Mclver

- No discussion

Issue 7: Can Service Levels Be Increased presented by Carey Mclver

- There was interest in increasing service levels from two to three days per week
- To increased service levels, there will be increased cost, and it may require us to pay tipping fees to offset the cost.
- Same amount of garbage will come no matter how many days we are open, but an extra day will make managing the customer flow easier if there are fewer vehicles per day

Opportunity 1: Reduction

- Not supported, as there does not seem to be a need for this type of campaign in this area

Opportunity 2: Reduce Food Waste

- Not supported, as there does not seem to be a need for this type of campaign in this area

Opportunity 3: Encourage Backyard Composting

- No discussion

Opportunity 4: Improve the Free Store

- Support for improving Free Store as it is considered an asset within the community.
- Keeping a tidy site will require staffing. There was a suggestion to charge a nominal fee on goods to offset the cost of increased staffing by contractor or community organization.

Opportunity 5: Encourage More Reuse

- The advisory group felt that reuse happens already in the community and does not need to be actively promoted.

Opportunity 6: Support EPR

- No discussion

Opportunity 7: Mitigate Wildlife-Human Conflict

- Representative from Bella Coola Watershed Society commented that bear situation is currently not a problem in the area right now
- The TCWRC has an electric fence which discourages wildlife access and reduced potential conflict

Roundtable Summary

Maura asked each member of the advisory group what initiatives would have the greatest impact:

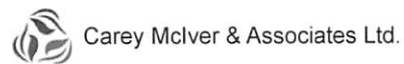
- Most of the advisory group identified education and communications as the most important
- Convenience was also raised by several members of the advisory group
- There was general consensus that fees and penalties should not be the initial mechanism to encourage diversion

Next Steps / Wrap Up

- Today's input will be used to begin to draft an updated Solid Waste Management Plan
 - Draft will include estimated costs and proposed implementation schedule
- Next SWAG Meeting planned for Wed. November 9th
 - Provide input on draft
 - Assist with developing the community consultation program
- Community consultation proposed for late November / early December
- Final SWAG meeting (teleconference/webinar) in new year
 - Review results of consultation
 - Provide input to finalize the updated Solid Waste Management Plan

BELLA COOLA VALLEY SOLID WASTE ADVISORY GROUP

Meeting #2
September 7, 2016



Welcome!

- Roundtable introductions
- Review of agenda and objectives



Agenda

Item	Time
1. Welcome and Introductions <ul style="list-style-type: none"> • Review of Agenda and Meeting Objectives 	1:00 – 1:30
2. Minutes of Previous Meeting	
3. Review of Planning Process	
4. Existing System Report: Finalization	
5. Future Solid Waste Management System – Options <ul style="list-style-type: none"> • Presentation and Discussion 	1:30 – 2:30
6. Short Break	2:30 - 2:40
7. Future Solid Waste Management System – Options <ul style="list-style-type: none"> • On-Going Discussion 	2:40 – 3:30
8. Next Steps/Wrap-Up <ul style="list-style-type: none"> • Confirmation of next meeting date and time 	3:30 – 4:00

 Carey McIver & Associates Ltd.

MINUTES OF PREVIOUS MEETING

 Carey McIver & Associates Ltd.

REVIEW OF PLANNING PROCESS

 Carey McIver & Associates Ltd.

The Process to Update the CCRD Solid Waste Management Plan

Step 1

Assess existing system
Identify issues and opportunities

Establish Solid Waste Advisory Group (SWAG)

Step 2

Consider range of options for the future
Select preferred options


Obtain SWAG input
Establish tools for community and stakeholder input

Step 3

Obtain community & stakeholder feedback on preferred options

Prepare an update solid waste management plan

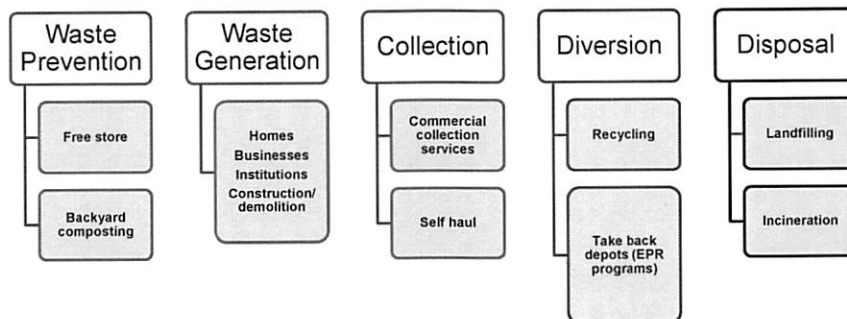
One Year Long Process 


 Carey McIver & Associates Ltd.

EXISTING SYSTEM REPORT

 Carey McIver & Associates Ltd.

CCRD Waste Flow



 Carey McIver & Associates Ltd.

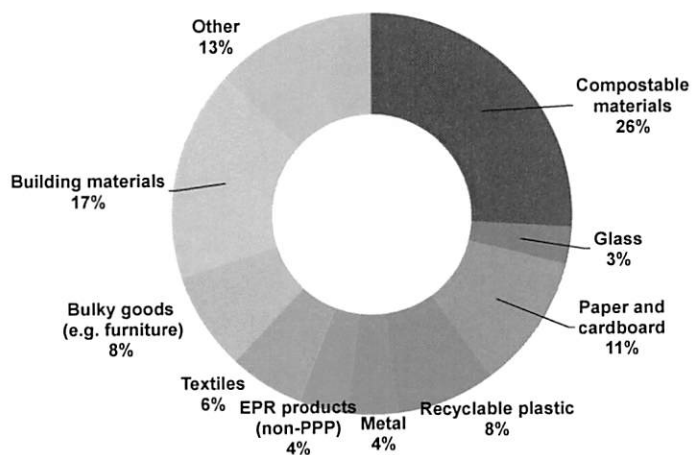
Bella Coola Valley Waste Stream

Estimated Annual Waste Generation Diversion + Disposal

Waste Diverted	Waste Disposed	Diversion Rate
478 tonnes	900 tonnes	35%
240 kg/cap	450 kg/cap	

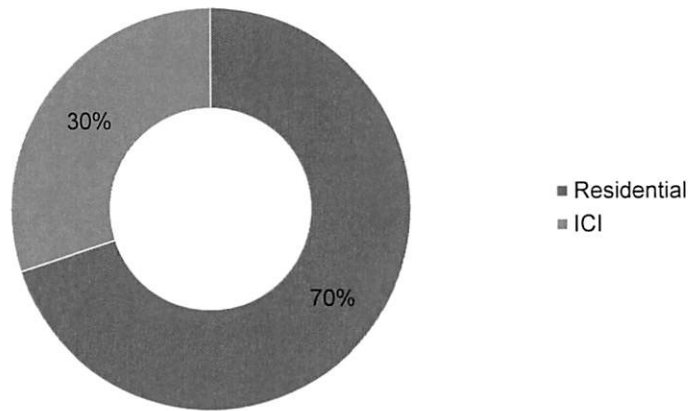
Carey McIver & Associates Ltd.


Estimated Waste Composition



Carey McIver & Associates Ltd.

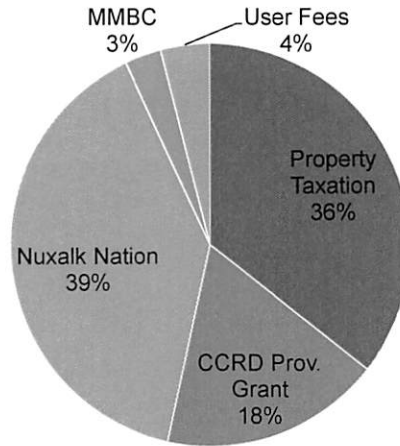
Estimated Sources of Waste




 Carey McIver & Associates Ltd.

Financial Plan	2016
Income	
Property Taxation	\$ 94,239
CCRD (Provincial Basic Grant)	\$ 46,677
Nuxalk Nation Contribution	\$ 103,750
Multi-Material BC	\$ 6,950
User Fees	\$ 11,000
Total Income	\$ 262,616
Expense	
Apportioned Administration Fees	\$ 56,226
Advertising & Promotion	\$ 9,000
Capital Works	\$ 56,687
Communications	\$ 1,200
Contingency	\$ 18,000
Planning	\$ 12,000
Insurance	\$ 816
Maintenance	\$ 11,500
Memberships, Dues & Subscriptions	\$ 650
Operating Expenses	\$ 103,913
Payroll Expenses	\$ 30,500
Professional Development	\$ 7,000
Special Projects	\$ 20,000
Supplies & small tools	\$ 12,500
Utilities	\$ 1,200
Asset Replacement Fund	\$ 9,424
Landfill Closure Reserve	\$ 30,000
Total Expense	\$ 380,616
Net Ordinary Income - surplus/(deficit)	\$ (118,000)
Other Income - prior year surplus	\$ 131,000
Budget Surplus - end of year	\$ 13,000

Revenue Source



 Carey McIver & Associates Ltd.

MOE's New Focus for SWMP's


A Guide to Solid Waste
Management Planning



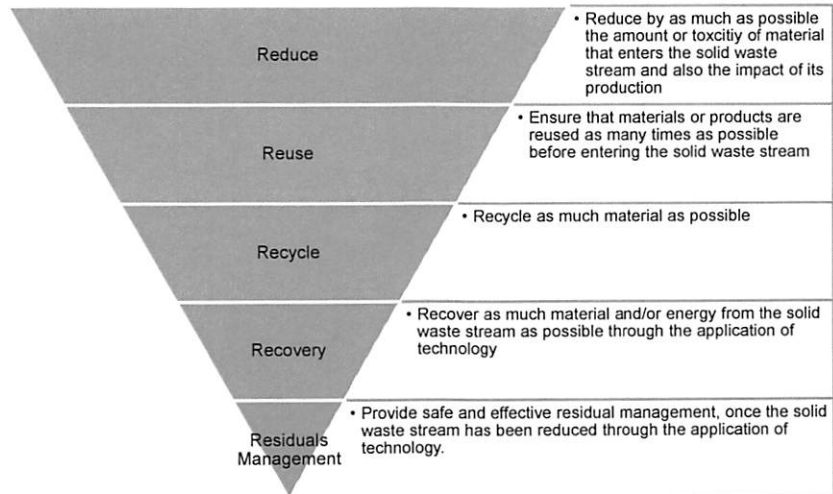
Ministry of
Environment

Draft May 16, 2016

Version 1.0

 Carey McIver & Associates Ltd.

Waste Management Hierarchy



 Carey McIver & Associates Ltd.

MOE Guiding Principles for SWMPs

1. Promote zero waste approaches and support a circular economy
2. Promote the first 3Rs (Reduce, Reuse, Recycle)
3. Maximize beneficial use of waste materials and manage residuals appropriately
4. Support polluter pay and user-pay approaches and manage incentives to maximize behavior outcomes

 Carey McIver & Associates Ltd.

MOE Guiding Principles (2)

5. Prevent organics and recyclables from going into the garbage wherever practical
6. Collaborate with other regional districts wherever practical
7. Develop collaborative partnerships with interested parties to achieve regional targets set in plans
8. Level the playing field within regions for private and public solid waste management facilities

New Provincial Targets for 2020

Organics

- 75% of BC's population covered by organic waste disposal restrictions

Disposal

- Lower the provincial MSW disposal rate to 350 kg per capita

Key Drivers

- Maximize participation in diversion services
- Improve landfill design and operations
- Manage organic waste



 Carey McIver & Associates Ltd.

OPTIONS FOR THE FUTURE

 Carey McIver & Associates Ltd.

Options for the future

- Refer to technical memorandum
- Driven by issues and opportunities

Issues	Opportunities
Residential recycling rate	Encourage waste reduction
Lack of business recycling option	Reduce food waste
Landfill-related issues	Encourage backyard composting
Lack of revenue for improvements	Improve the Free Store
Bylaw outdated	Encourage more reuse
Minimal monitoring of incoming waste at TCWMC	Support extended producer responsibility (EPR)
TCWMC service levels	Mitigate wildlife-human conflict

ISSUES

Issue 1: Increasing residential recycling rates

- Full range of recycling services available to residents in the Valley
 - Majority of disposal is residential garbage; much of this could be diverted to local recycling and EPR programs
 - How do we increase usage of these services?
- Options:
 - Penalties and enforcement
 - Rewards
 - Communications
 - Services



 Carey McIver & Associates Ltd.

Penalties

- Charge for all garbage
 - Incentive to reduce amount of garbage
 - In place at most waste facilities in BC
- Charge only for garbage that contains recyclables
 - Incentive to use recycling services
 - More challenging to enforce
- Ban items that can be diverted from disposal
 - No financial incentive to divert, but informs customers of intent
 - E.g. CVRD, RDN, CRD, etc.
 - Generally enforced through financial mechanisms (fines, increased tip fee)



 Carey McIver & Associates Ltd.

Example: Central Cariboo Landfill

<u>Municipal Solid Waste</u>	<u>Secured, Segregated Loads ¹</u>	<u>Non-Segregated Loads ²</u>
Commercial mixed waste	\$53.00 per tonne	\$200.00 per tonne
Clean wood waste	\$53.00 per tonne, \$18.00 minimum charge	\$200.00 per tonne
Demolition and Construction Waste (DLC)	\$180.00 per tonne, \$18.00 minimum charge	\$200.00 per tonne

Defined as loads containing greater than 10% by volume of other waste, including recyclable waste. Non-segregated loads are ineligible for the 450 kilogram weight exemption and a minimum fee of \$25 will apply.

 Carey McIver & Associates Ltd.

Enforcement

- Mechanisms to enforce penalties
 - Random checking of garbage bags
 - E.g. City of Nanaimo
 - Checking all garbage bags / require clear bags to be used
 - e.g. Markham, ON = 22% reduction in garbage
 - Can allow for limited use of "privacy bags"
 - No active enforcement / honesty system (only asking customers what is in the bags/containers)



 Carey McIver & Associates Ltd.

Rewards

- Activities that reward recycling behaviours
 - E.g. Hamilton Gold Box, City of Nanaimo "Zero Waste Hero" Challenge
 - Hold an event where garbage bags are checked (on a voluntary basis) for items that could have been recycled.
 - If no divertables are found, a reward is given; e.g. cloth shopping bag, refillable coffee cup, "golden garbage can"
 - Plus an acknowledgement sticker (for car, home, waste can, etc.)
 - Other ideas?



 Carey McIver & Associates Ltd.

Communications

- Promote and educate recycling opportunities to area residents
 - Information sheet/newsletter to all homes on an annual basis
 - Regular column in the newspaper
 - School program
 - Info on CCRD website
 - Regular, on-going postings on community notice boards




Services

- Door to door collection services generally have higher recycling levels than depot-based programs

Options:

- Provide recycling collection service to area homes
- Provide recycling *and* garbage collection to homes
 - with a can limit on garbage, or with pay-as-you-throw garbage



 Carey McIver & Associates Ltd.

Discussion

- What options would be effective to increase participation in recycling by Valley residents?
 - Penalties: tipping fees and disposal bans
 - Enforcement
 - Rewards
 - Communications
 - Services

 Carey McIver & Associates Ltd.

Issue 2: Lack of waste diversion opportunities for business

- Provincial recycling program (MMBC) does not include recyclables generated outside the home
- No local recycling services for businesses
- Cardboard burned at the landfill

 Carey McIver & Associates Ltd.

Issue 2: Lack of waste diversion opportunities for business

- Lobby the Province to include recyclable paper and packing generated by businesses in the Recycling Regulation




 Carey McIver & Associates Ltd.

Issue 2: Lack of waste diversion opportunities for business

- Help businesses help themselves:
 - Determine if a local business is currently backhauling recyclable cardboard and, if so, find out if they are willing to accept additional cardboard from local area businesses
 - Encourage area residents to use cardboard boxes from retailers instead of shopping bags
 - Monthly cardboard collection events
 - Possibly coordinated through the Chamber of Commerce



 Carey McIver & Associates Ltd.

Issue 2: Lack of waste diversion opportunities for business

- Develop a small-scale composting facility for commercial food waste and cardboard at the landfill site
 - Conduct a needs assessment first
 - Waste composition analysis of business waste
 - Stakeholder consultation
 - Consider conducting a small scale pilot to confirm design assumptions



 Carey

Discussion

- How can we enhance recycling opportunities for businesses and institutions?
 - Lobby the province
 - Help businesses help themselves
 - Investigate composting of organic waste generated by businesses

Issue 3: Landfill Related Issues

- Landfill does not have a design, operation or closure plan
- Fill areas have not undergone final cover (to minimize infiltration of rain)
- The slopes of some of the filled areas are too steep and need to be re-graded for long-term slope stability
- A groundwater monitoring program is needed



Background Review and Site Visit by MH

- Review of existing reports
 - Hydrogeological and Geotechnical Assessment (1993)
 - SWM (2004)
 - Operation Certificate (2006)
 - MOE Inspection Report (2013)
- Field review of landfill operations
- Inspection of the existing wells



Key Priorities

- Organics Diversion
 - Limited local availability of topsoil for closure
 - Community engaged
- Hydrogeological Assessment
 - Outdated reporting
 - Limited field data
 - Recommend drilling 3 new wells
- Interim Cover/Stormwater Management
 - Minimize leachate generation in areas that will not have fill for 10+ years



38