

CVRD Solid Waste Management Plan Update – Reframe and Recap



June 7, 2018

Agenda

- Project Overview – Recap of Process
- Community Survey Results
- Solid Waste Management System and Finance Overview
- Targets and Goals
 - Diversion Potential
- Strategy Review and Analysis
 - Intro and Dotmocracy, present PAC Feedback
 - Decision Analysis Activity (group to rank and compare)

Today's Goals

- Digest information provided to date
- Understand community priorities
- Agree on a SWMP Target
- Review and prioritize strategies

Questions or Comments?



- Questions?
- Comments?
- Clarifications?
- Corrections?

Project Overview

Re-Cap of Process



Solid Waste Management Plan

- All regional districts in BC are required to have Solid Waste Management Plans
- The Plan is comprehensive for the next 10 years, with vision for next 20-30 years
- Includes all material streams and aspects of solid waste management:
 - Collection
 - Recycling and Composting
 - Waste Reduction
 - Disposal
 - Financing
 - Education

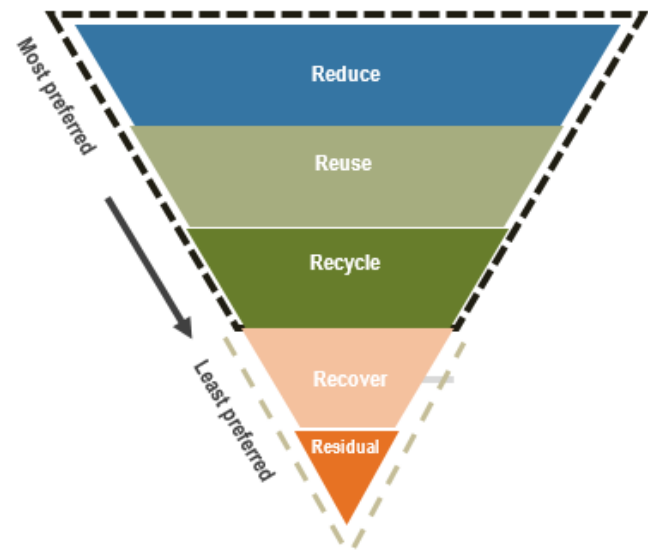


Figure 1-2: Waste Prevention Hierarchy

Steps 1 & 2: Initiate the Process & Set Direction

- 1) Committee and planning team established, scope of work identified
- 2) Current system status report issued for review



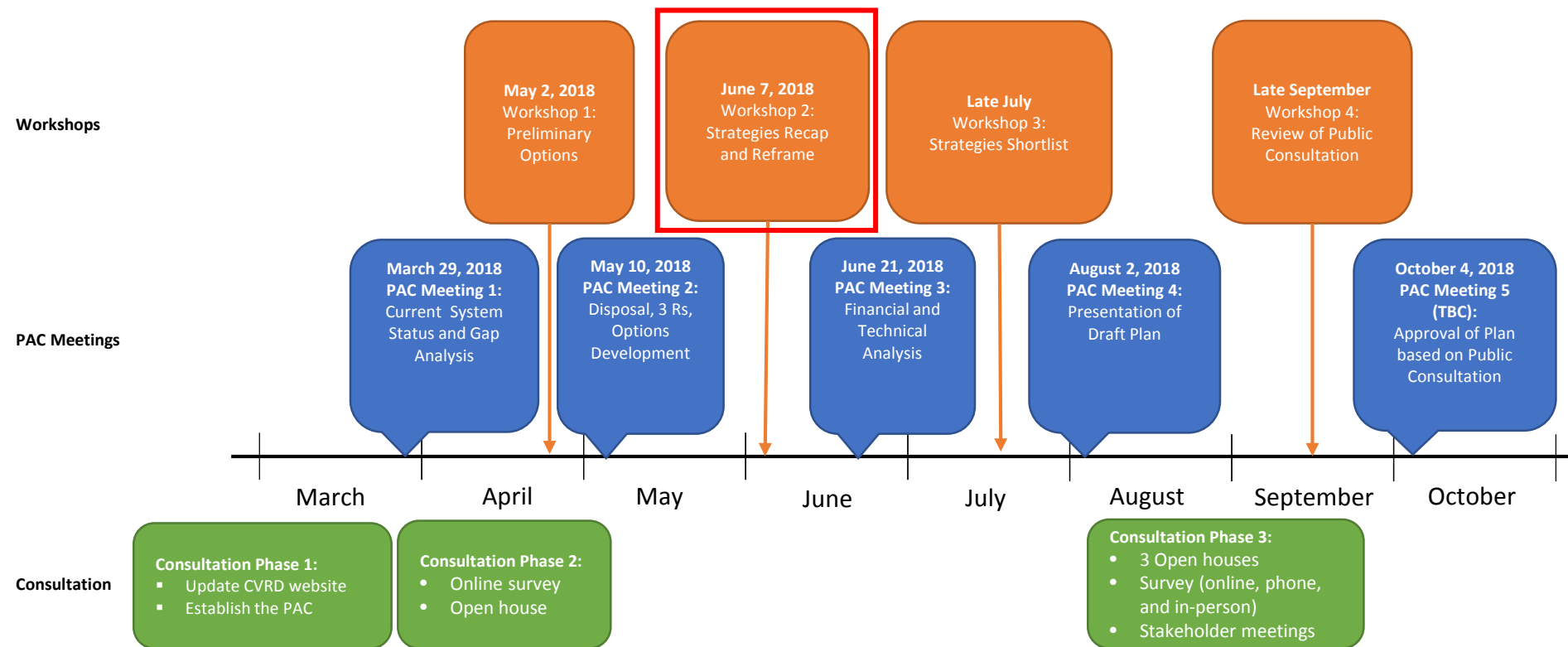


Step 3: Evaluate Strategies

- Develop strategies
- Assess financial and administrative impacts
- PAC Committee to review and provide ongoing feedback



Updated Schedule



October

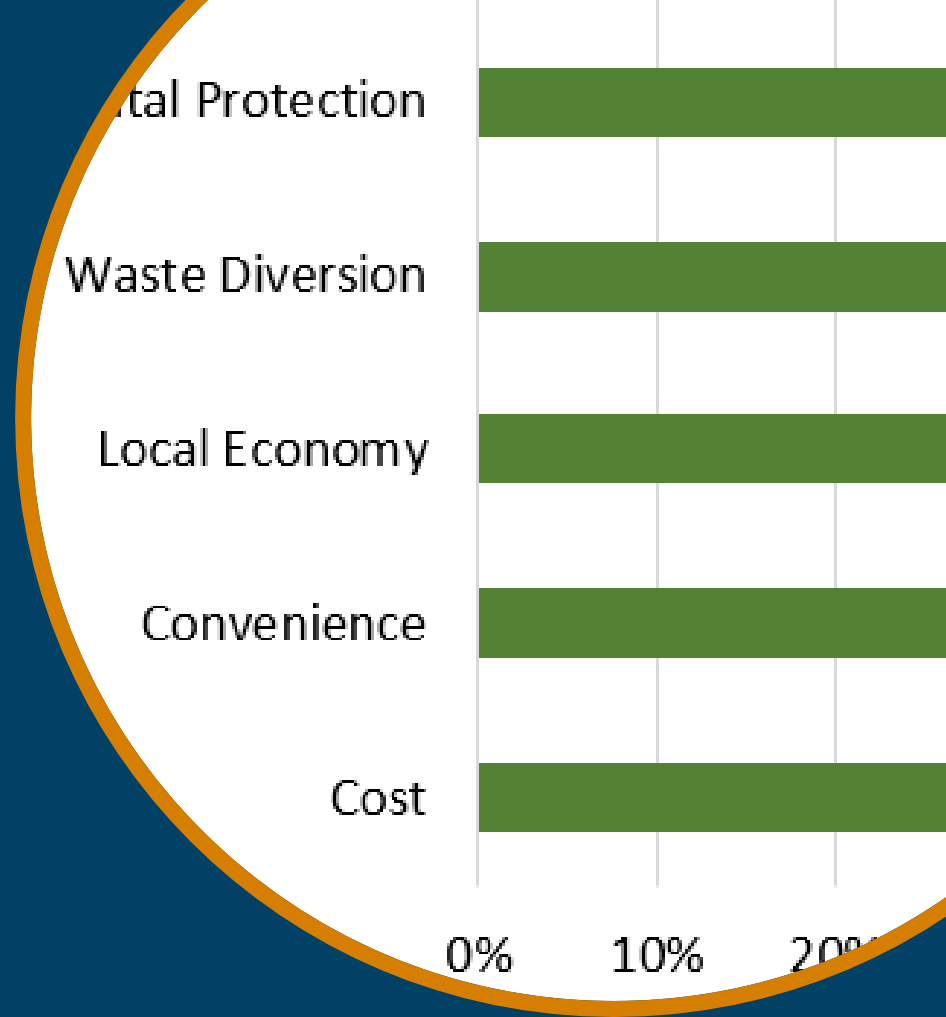
- Board Approval
- Submit to Ministry

Questions or Comments?



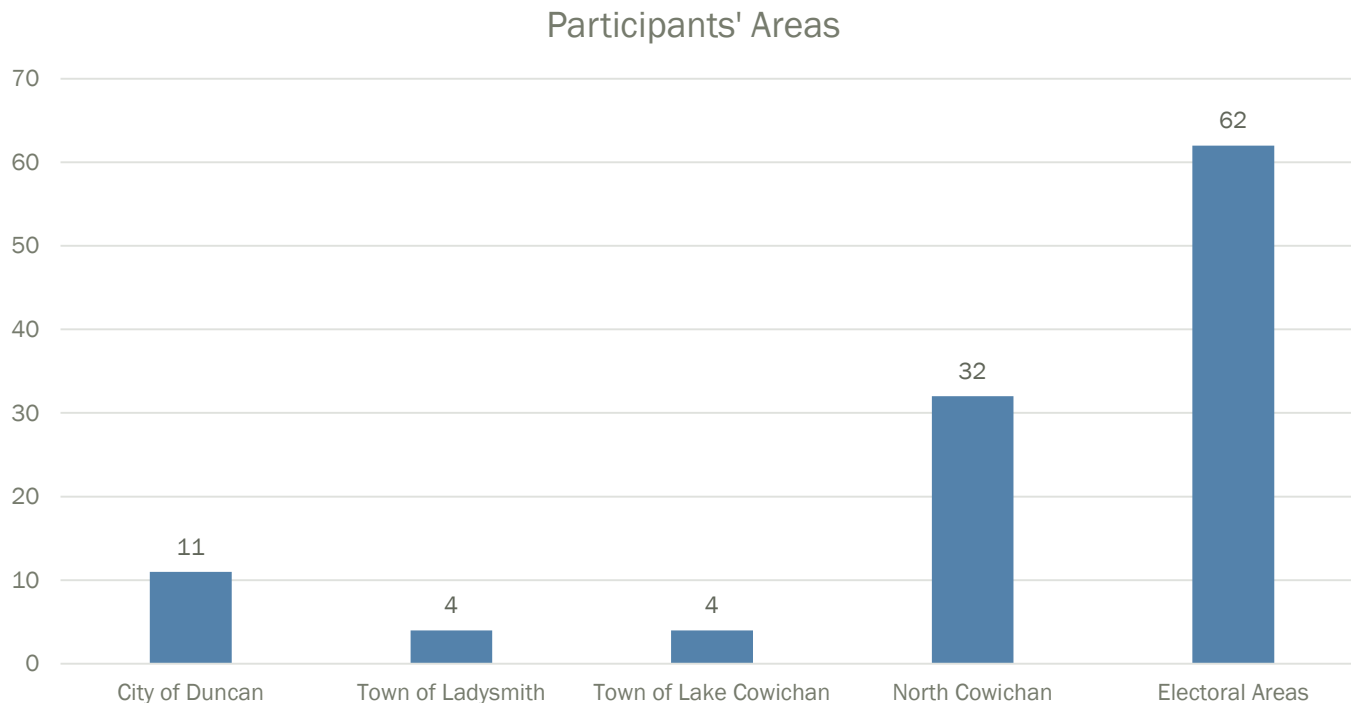
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Community Survey Results



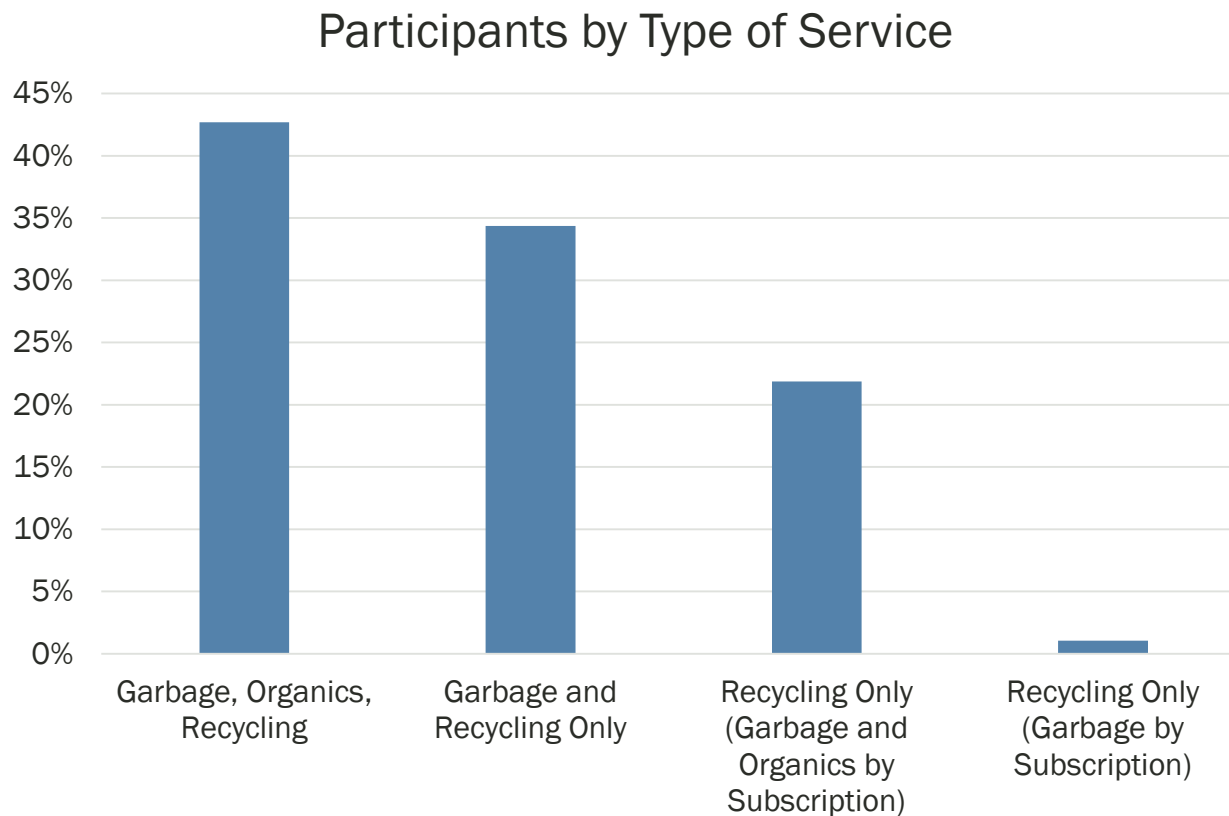
Survey Report

- 118 Participants
- Surveys conducted through CivicPlus and PlaceSpeak
- Closed May 8, 2018



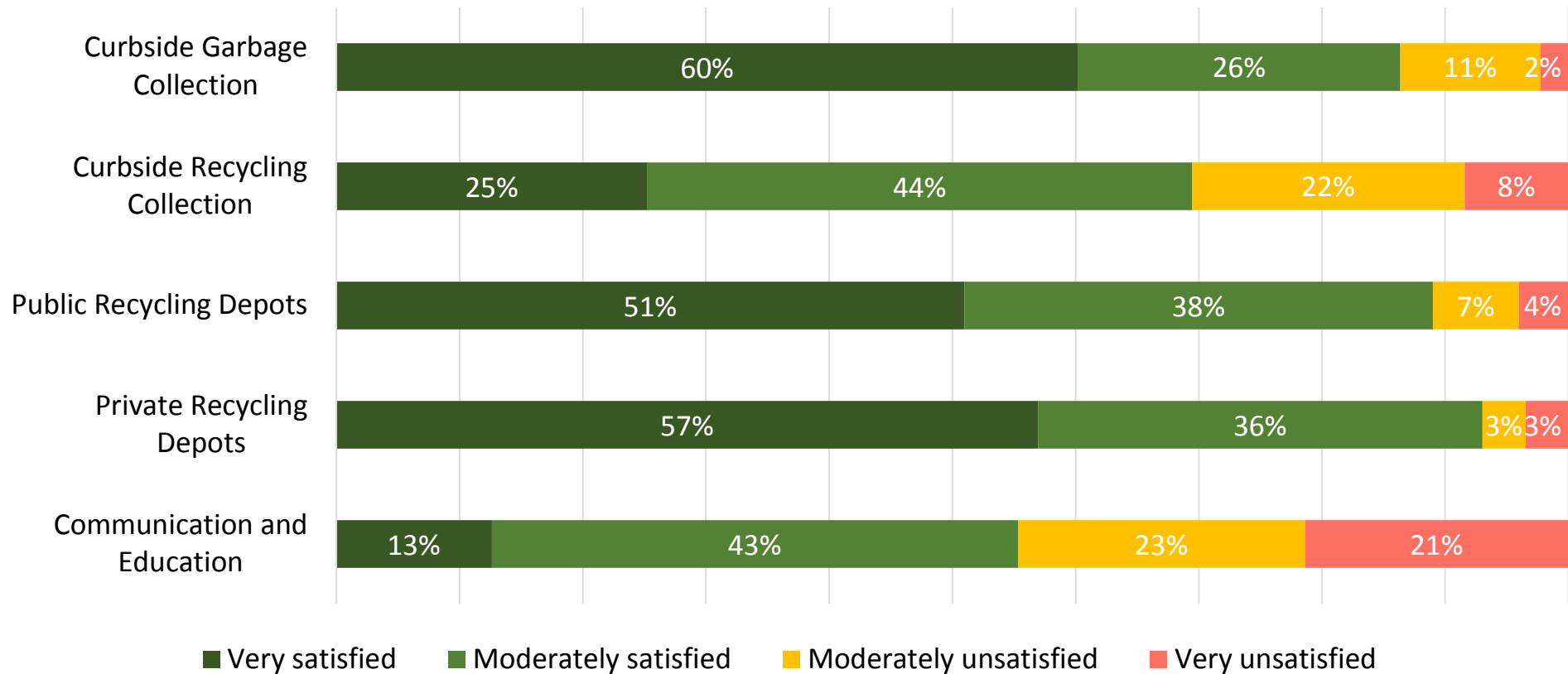
Survey Report

- 96 Participants from Single Family homes



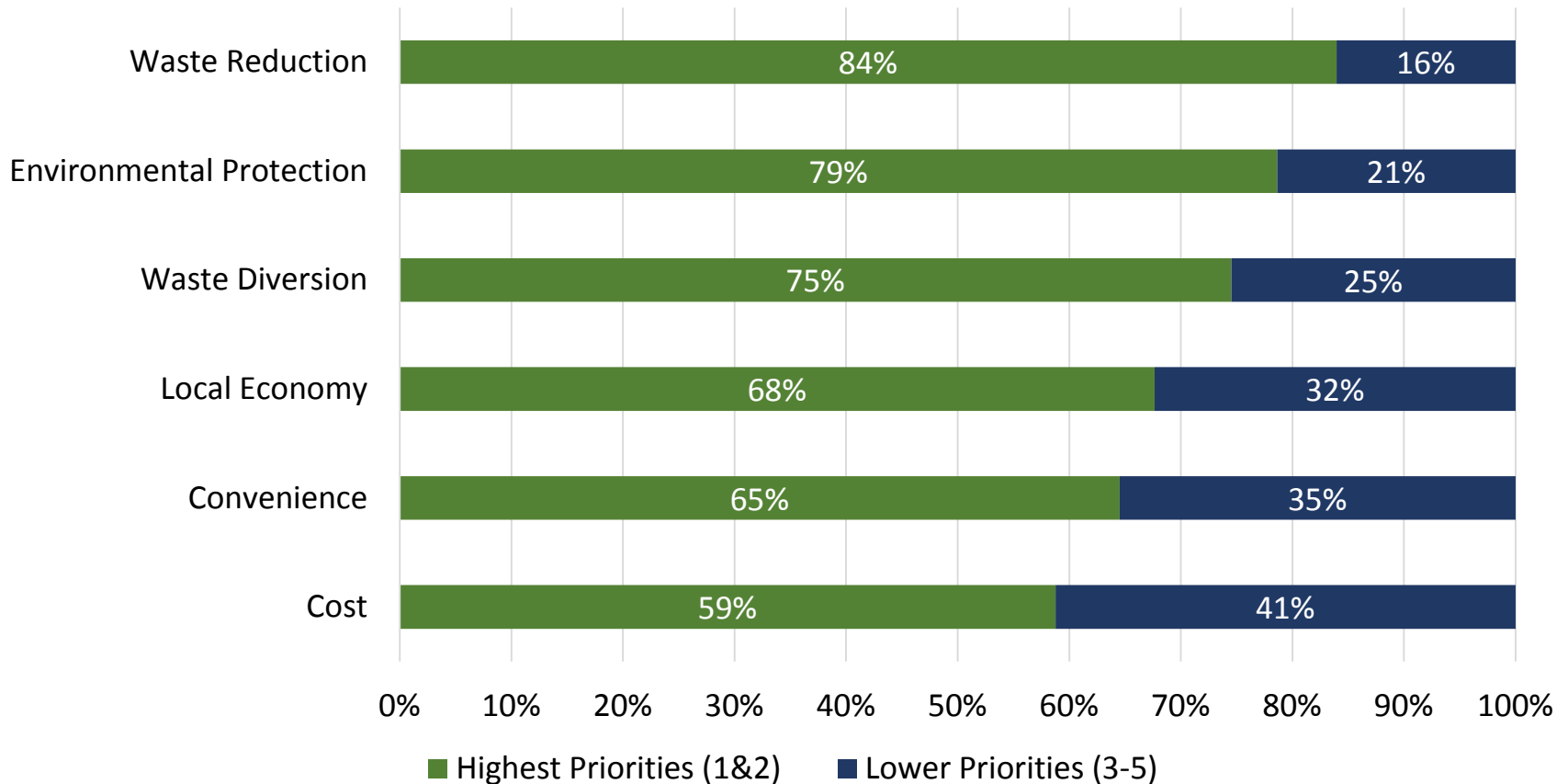
Satisfaction Levels

Satisfaction Levels by Type of Service



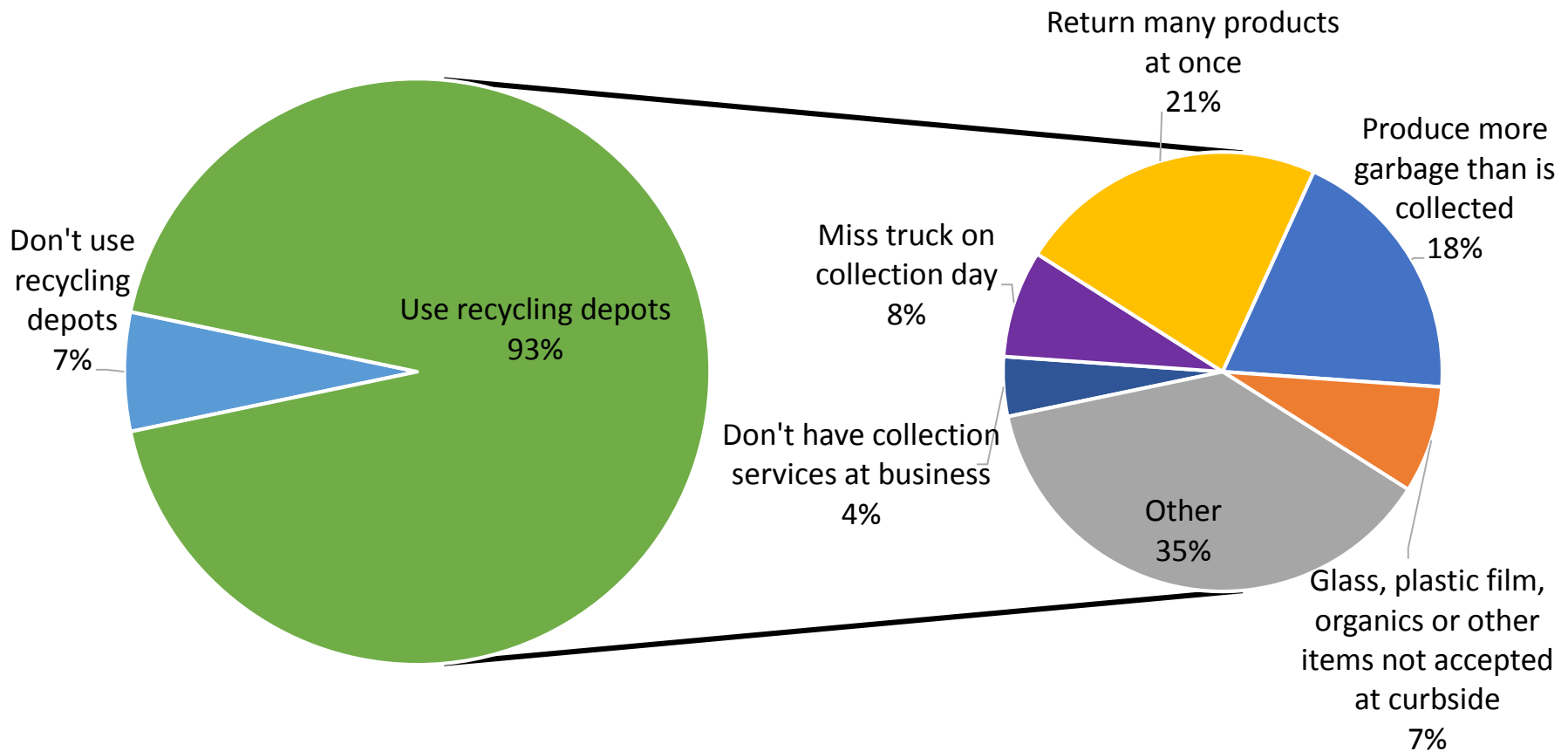
Considerations Affecting Waste Management Planning

Considerations Affecting Waste Management Planning

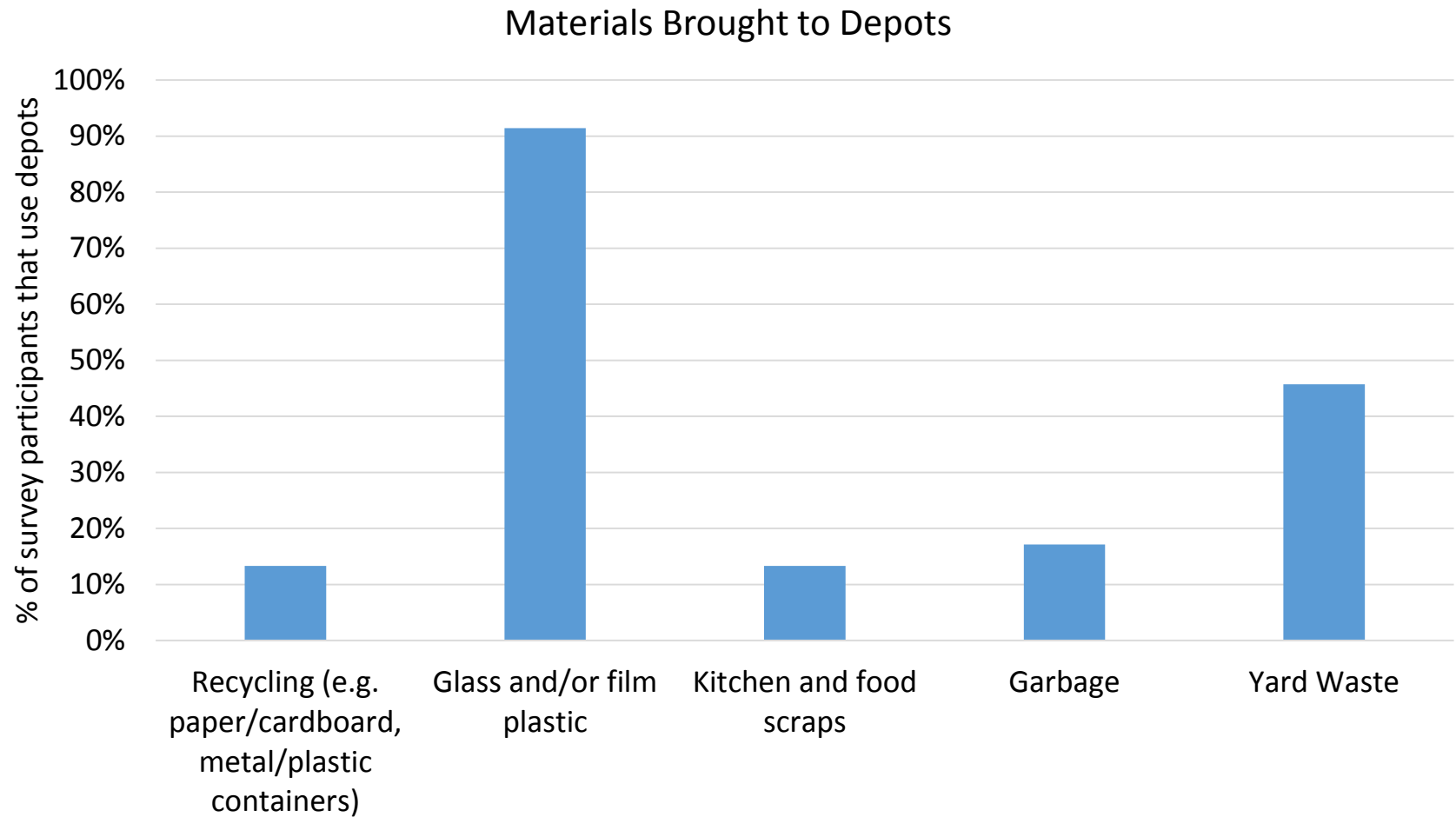


Use of Recycling Depots

Reasons for Using Recycling Depots



Depot Use



Questions or Comments?

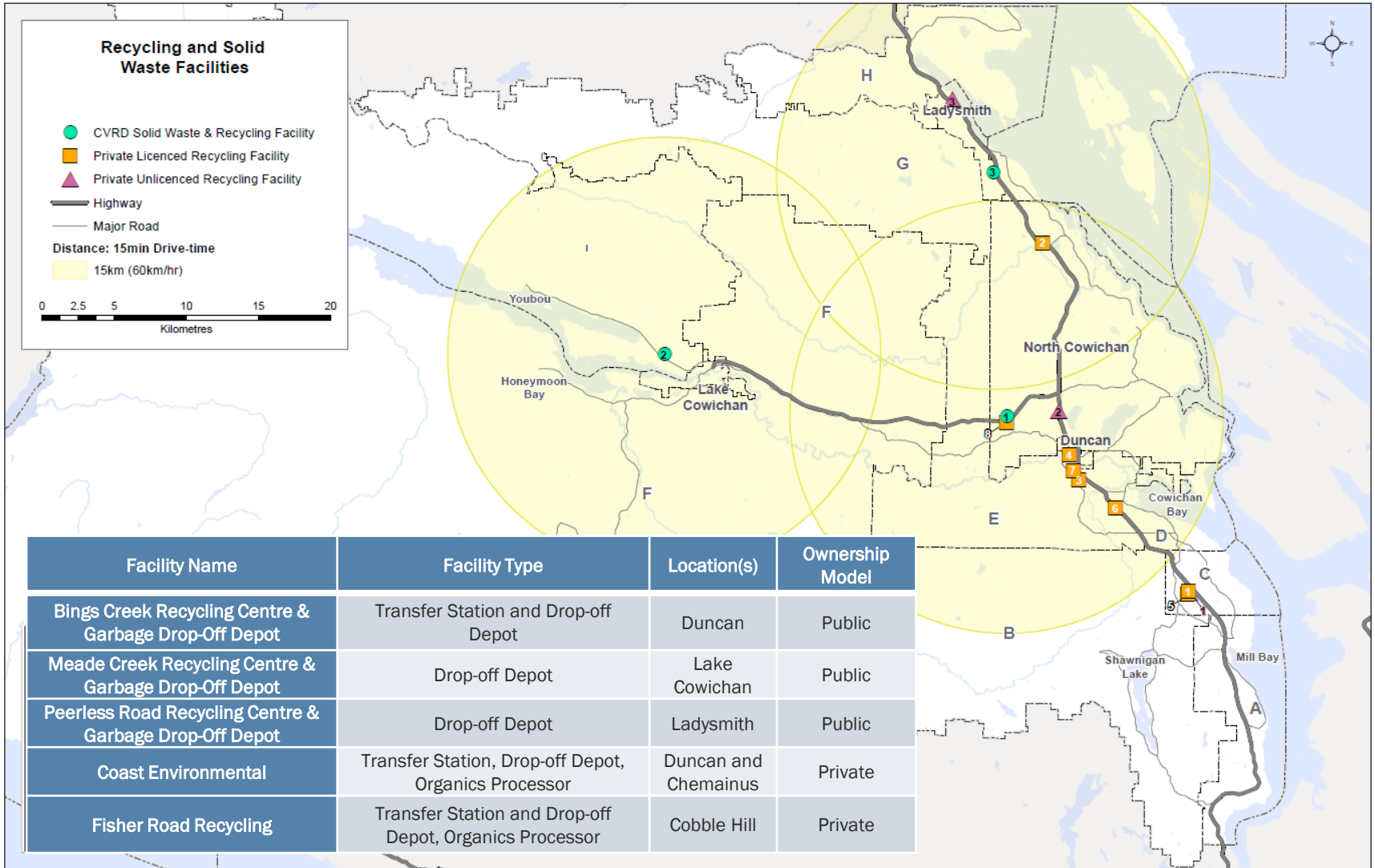


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Solid Waste Management System and Finance Overview



Facilities in CVRD



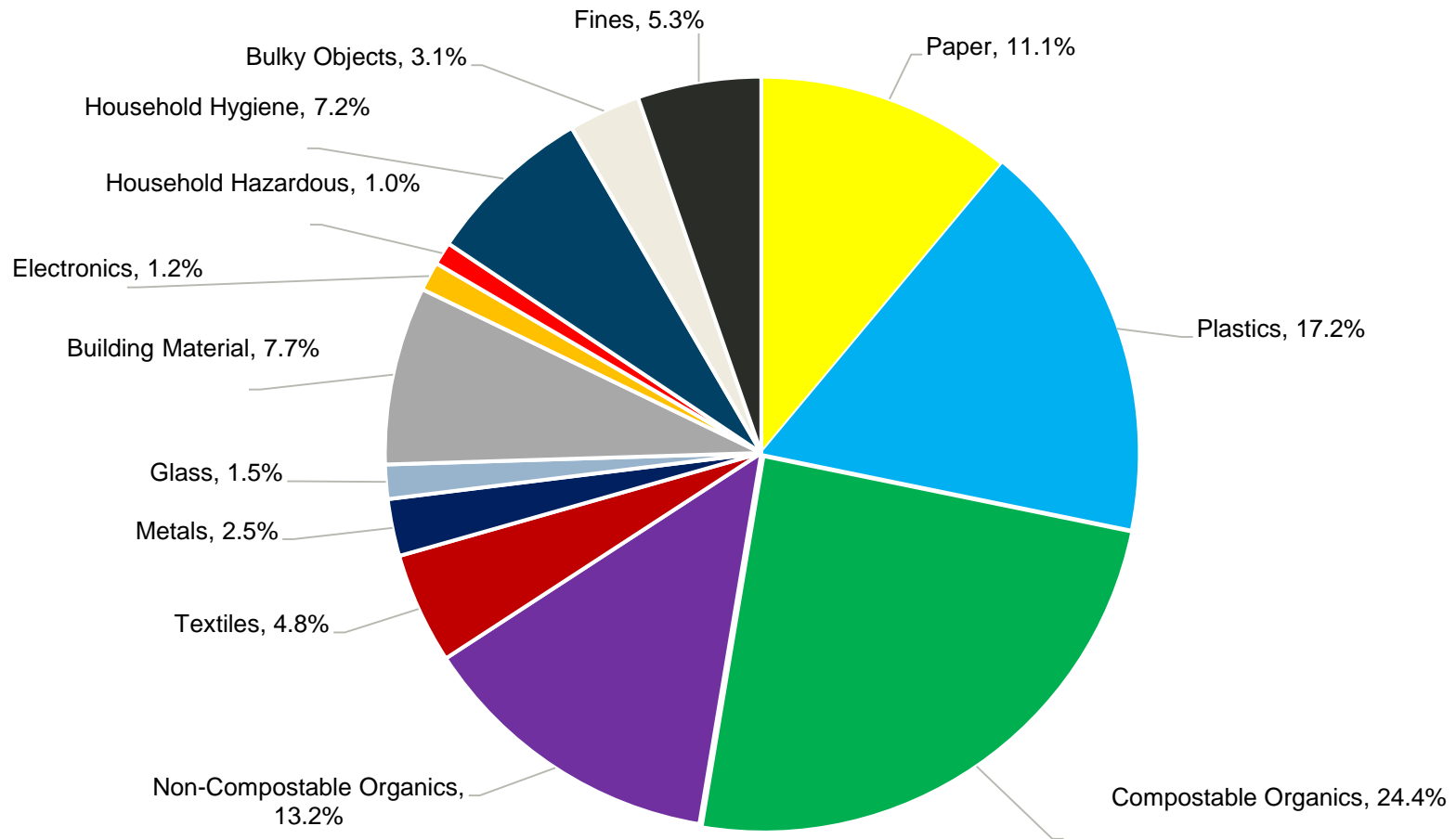
Disposal and Recycling Rates

Annual Disposal Rate	30,100 tonnes
Per Capita Disposal Rate	359 kg per capita
Annual Recycling Rate (partial)	44,000 tonnes
Per Capita Recycling Rate	525 kg per capita

Disposal Rates by Sector

Sector	Percent of Total Disposed Materials (Garbage Only)	Quantity of Disposed Materials (tonnes)
Single-Family (Municipalities)	9%	2,600
Single-Family (Electoral Areas)	14%	4,100
Multi-Family	6%	1,700
Industrial, Commercial, and Institutional	41%	12,800
Drop-off	12%	3,600
Construction and Demolition	18%	5,300
Total Disposal Rate	100%	30,100

Waste Composition Study



2017 Waste Composition Study Results

Diversion Potential and Target Setting

- Diversion potential was analyzed according to sector:
 - Single Family (Municipalities)
 - Single Family (Electoral Areas)
 - Multi-Family
 - Industrial, Commercial, and Institutional
 - Drop Off (Self-hauled) Waste
 - Construction and Demolition Materials
- Current Disposal in CVRD = 358 kg/capita
- BC Disposal Target = 350 kg/capita by 2020
- Long-term CVRD Disposal Target TBD = 180-300 kg/capita
 - 10 year target to be determined during this plan development process



Financial Plan – Initial Summary (2018)

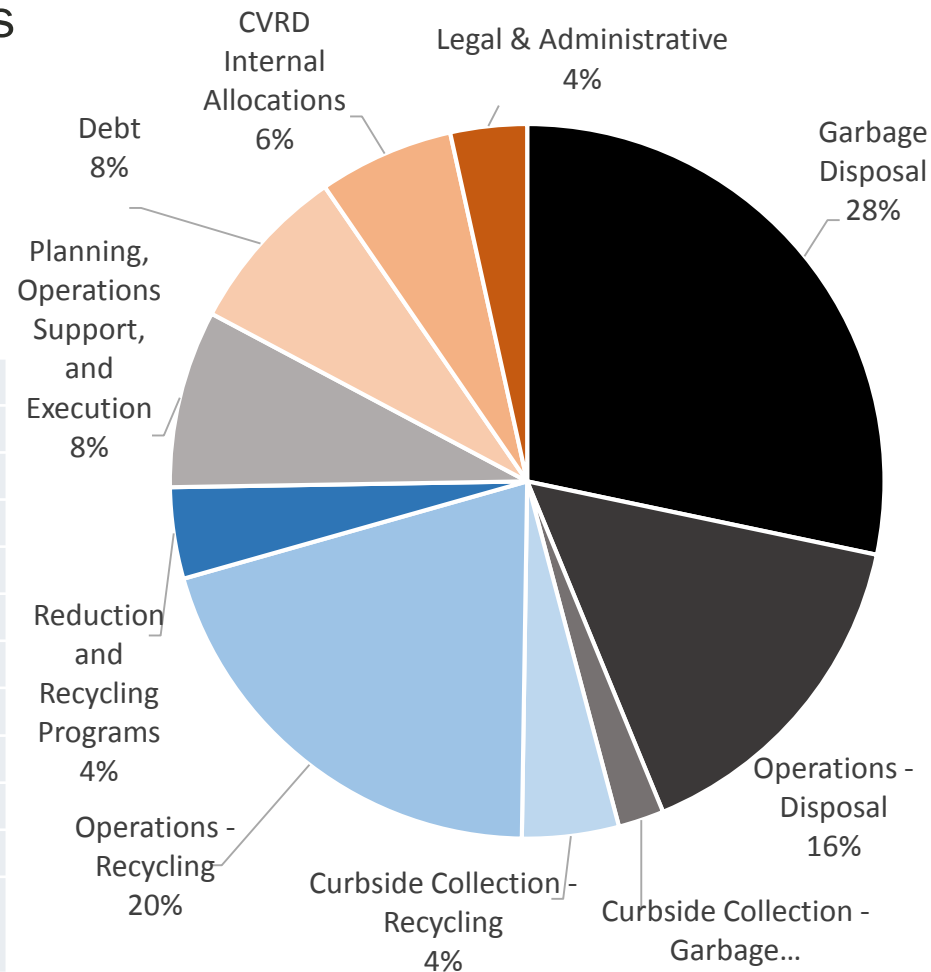
- Budget: \$9.6 million in two separate budgets (not including capital)
 - Solid Waste Management Complex
 - Curbside Collection
- Balanced revenue sources over time
- Capital budget of \$5.4 million in 2017 and \$3.9 million in 2018; no capital expenditures projected for 2019-2022

Budget	Budget Amount	Funding Sources
520 Solid Waste Management Complex	~8 million	<ul style="list-style-type: none">• Requisition• User fees
515 Curbside Collection	~1.6 million	<ul style="list-style-type: none">• User fees• Recycle BC

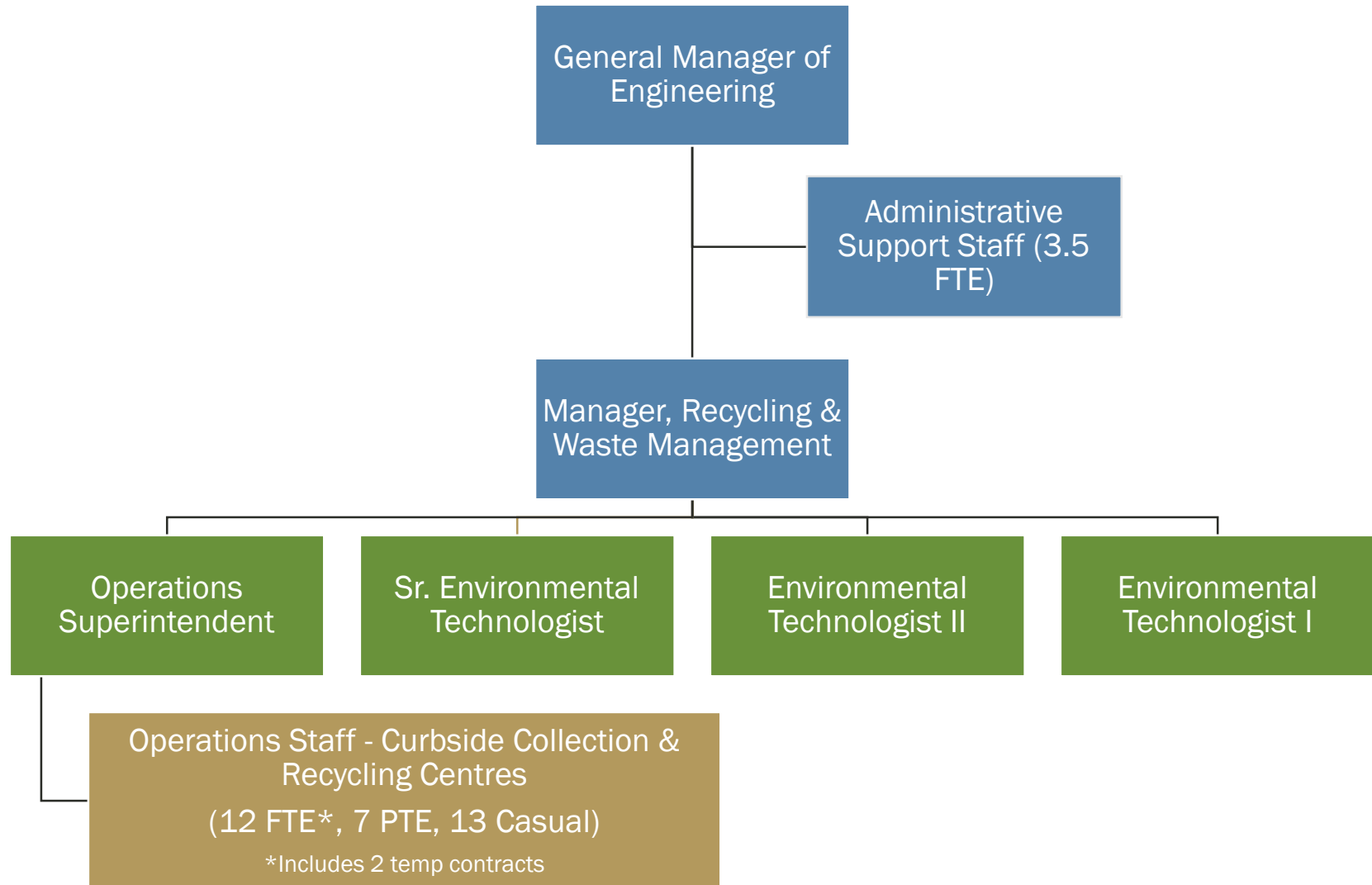
Expenditures (2018)

- 4% Reduction & Recycling Programs
- 28% Garbage Disposal
- 36% Facilities

Expense Categories	Total
Garbage Disposal	\$ 2,706,200
Operations - Disposal	\$ 1,482,232
Curbside Collection - Garbage	\$ 197,963
Curbside Collection - Recycling	\$ 418,563
Operations - Recycling	\$ 1,947,945
Reduction and Recycling Programs	\$ 395,145
Planning, Operations Support, and Execution	\$ 768,345
Debt	\$ 731,043
CVRD Internal Allocations	\$ 585,417
Legal & Administrative	\$ 331,245
Total	\$ 9,564,100



Staff Structure (2018)



Issues Re-cap – Reduce, Reuse, Recycle

- Opportunities exist to improve waste management at the top of the waste reduction hierarchy
 - Reducing wasted food
 - Enhance and improve reuse
- More than half of the garbage from ICI and MF generators is recyclable or compostable; disposal bans are not fully enforced
- Over 30,000 residents are not within 15 minutes of a public depot and do not have universal garbage collection
- Over 33,000 residents in the CVRD do not have mandatory organics collection



Issues Re-cap – Processing of Recyclables

- As the quantity of organics being processed in CVRD increases, odour complaints may worsen
- No facilities for commingled ICI recyclable materials
- No mandate for C&D recycling



Issues Re-cap – Disposal and Operations

- No local disposal capacity; waste is shipped to USA (risk mgmt re \$\$ and border)
- Illegal dumping occurs throughout CVRD
- Limited options for difficult-to-dispose items
- Historic Disposal Sites for Monitoring
- No disaster management plan



Questions or Comments?

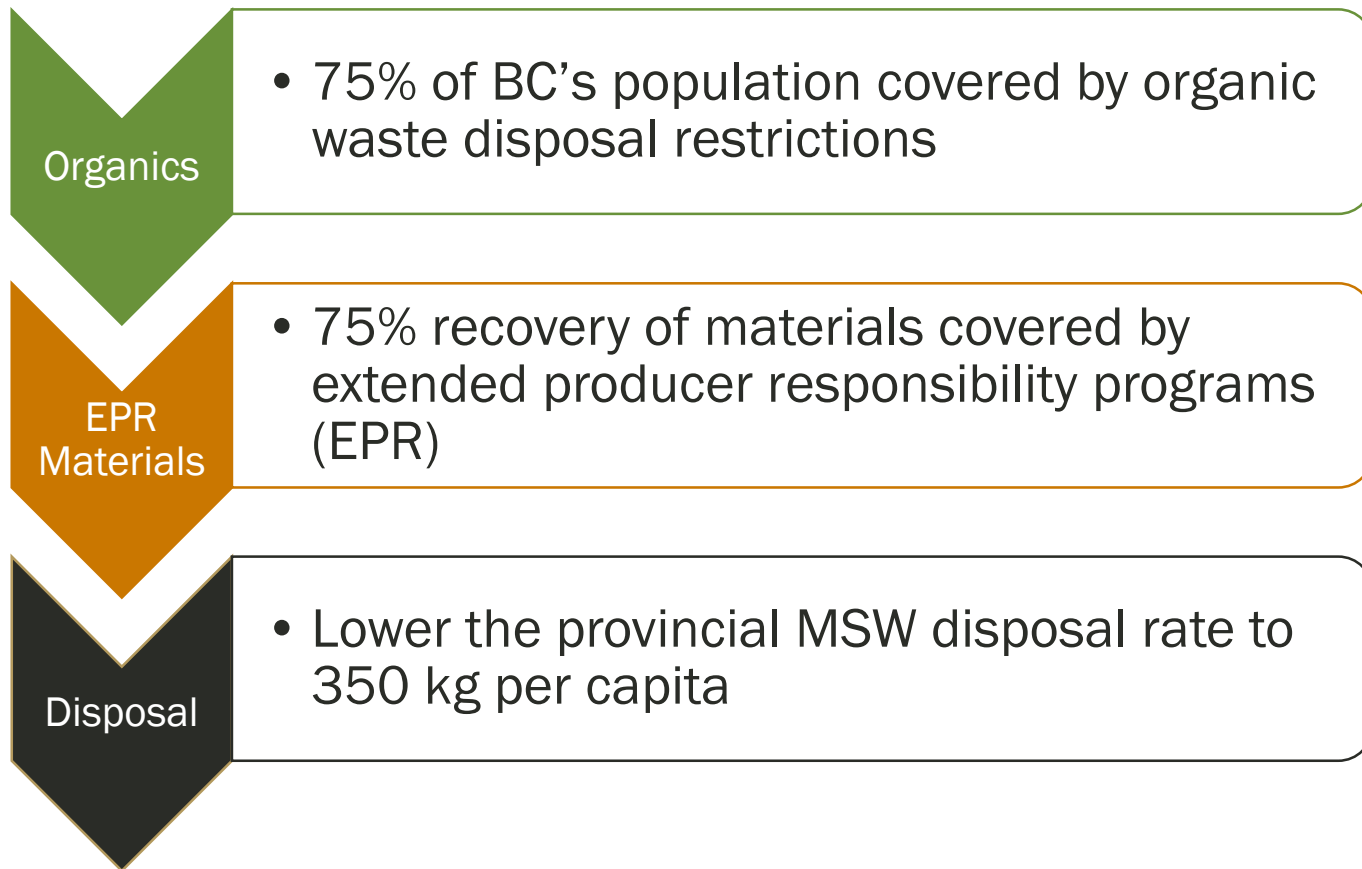


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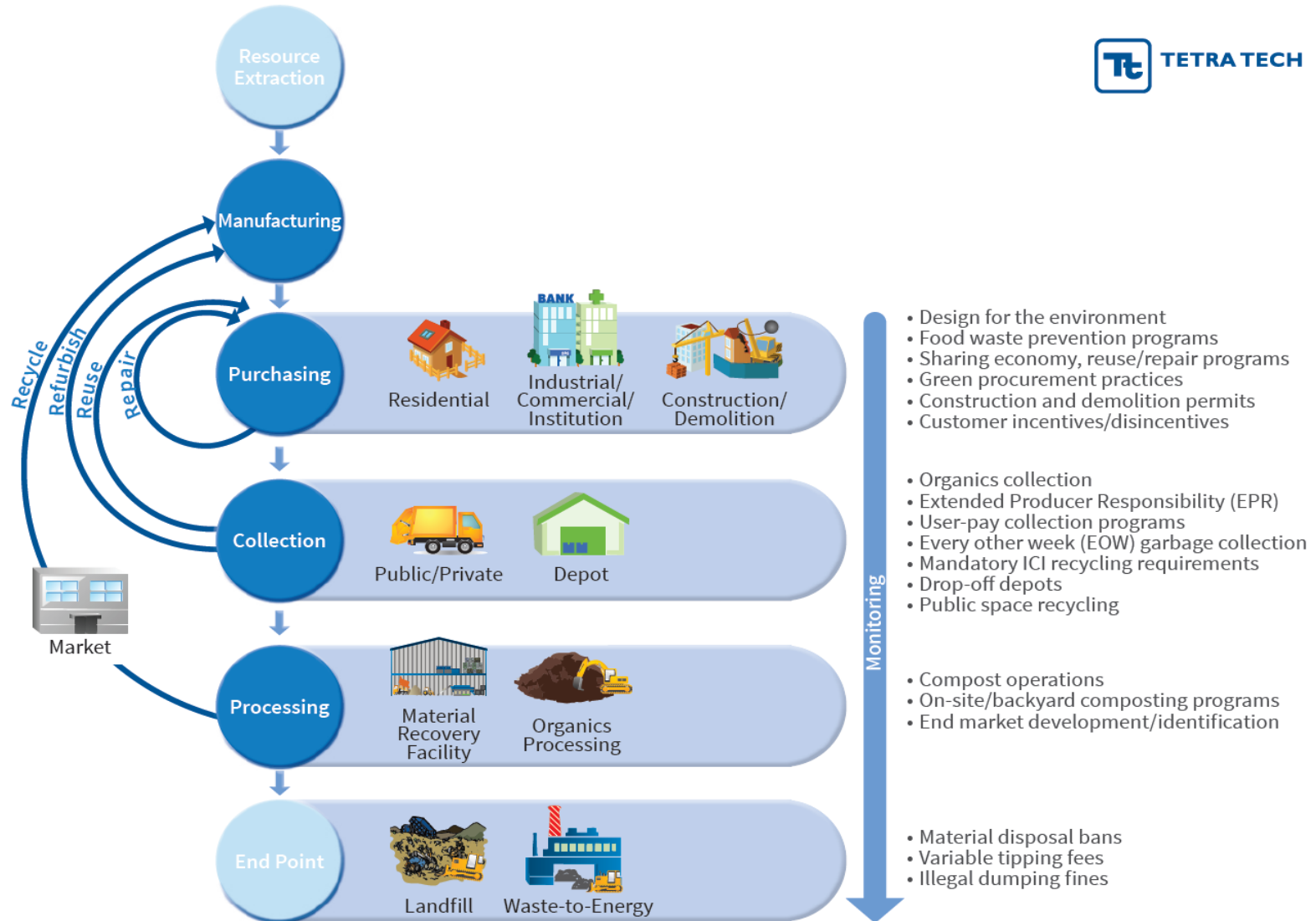
Targets and Goals



Provincial Targets for 2020



Circular Economy Approaches



Suggested CVRD Goals

- Target a Regional Disposal Rate of 180 to 300 kg per capita per year by 2030
- Adopt “Zero Waste” as a goal for the plan
- Target that 90% of all residents and businesses have minimum service levels (e.g., recycling and organics collection) by 2025

Suggested Goal 1

Set a Target Regional Disposal Rate (180 to 300 kg/capita)

- BC's goal is 350 kg/capita for 2020; CVRD currently at 358 kg/capita
- Diversion potential shows that if 50% of recyclable materials that are currently going to landfill were diverted, resulting disposal rate is 250 kg/capita

Diversion Potential: Single Family and Multi-Family Residential

				Current CVRD Disposal = 358 kg/capita Provincial Goal = 350 kg/capita CVRD Goal = 250 kg/capita by 2025 (to be confirmed)			
Sector	Contribution to Landfill by Sector (percent and tonnes)	Material Type	Material Contribution to Landfill (tonnes) ¹	Target Disposal Rate (kg/capita)			
				325	300	250	150
				16% of divertable materials is removed from the current waste stream	28% of divertable materials is removed from the current waste stream	50% of divertable materials is removed from the current waste stream	97% of divertable materials is removed from the current waste stream
Single-Family (Municipalities)	9% (2,600)	Curbside Recyclable Material	269	54	75	134	261
		Depot Recyclable Material (EPR)	204	41	57	102	198
		Wasted Food	322	64	90	161	313
		Inedible Organic Materials	463	93	130	232	449
		Recyclable Building Materials	71	14	20	35	69
		Textiles	204	41	57	102	198
		Bulky Objects	4	1	1	2	4
Single-Family (Electoral Areas)	14% (4,100)	Curbside Recyclable Material	326	65	91	163	316
		Depot Recyclable Material (EPR)	274	55	77	137	266
		Wasted Food	797	159	223	399	773
		Inedible Organic Materials	975	195	273	487	945
		Recyclable Building Materials	173	35	48	86	168
		Textiles	279	56	78	139	270
		Bulky Objects	0	0	0	0	0
Multi-Family	6% (1,700)	Curbside Recyclable Material	253	51	71	126	245
		Depot Recyclable Material (EPR)	165	33	46	83	160
		Wasted Food	292	58	82	146	284
		Inedible Organic Materials	376	75	105	188	365
		Recyclable Building Materials	27	5	8	14	26
		Textiles	89	18	25	44	86
		Bulky Objects	0	0	0	0	0

Diversion Potential: ICI, Self-Haul, and C&D

				Current CVRD Disposal = 358 kg/capita Provincial Goal = 350 kg/capita CVRD Goal = 250 kg/capita by 2025 (to be confirmed)			
Sector	Contribution to Landfill by Sector (percent and tonnes)	Material Type	Material Contribution to Landfill (tonnes) ¹	Target Disposal Rate (kg/capita)			
				325	300	250	150
				16% of divertable materials is removed from the current waste stream	28% of divertable materials is removed from the current waste stream	50% of divertable materials is removed from the current waste stream	97% of divertable materials is removed from the current waste stream
Industrial, Commercial, Institutional	42% (12,800)	ICI Paper and Printed Packaging	1,627	325	456	814	1,578
		Depot Recyclable Material (EPR)	709	142	198	354	688
		Wasted Food	4,400	880	1,232	2,200	4,268
		Inedible Organic Materials	2,302	460	644	1,151	2,233
		Recyclable Building Materials	326	65	91	163	316
		Textiles	569	114	159	284	552
		Bulky Objects	52	10	15	26	50
Self-hauled Waste	12% (3,600)	Curbside Recyclable Material	184	37	51	92	178
		ICI Paper and Printed Packaging	0	0	0	0	0
		Depot Recyclable Material (EPR)	282	56	79	141	273
		Wasted Food	74	15	21	37	72
		Inedible Organic Materials	105	21	29	53	102
		Recyclable Building Materials	691	138	193	345	670
		Textiles	275	55	77	138	267
		Bulky Objects	465	93	130	233	451
Construction and Demolition Materials	18% (5,300)	Curbside Recyclable Material	46	9	13	23	44
		ICI Paper and Printed Packaging	0	0	0	0	0
		Depot Recyclable Material (EPR)	120	24	34	60	116
		Wasted Food	0	0	0	0	0
		Inedible Organic Materials	61	12	17	30	59
		Recyclable Building Materials	46	9	13	23	45
		Textiles	61	12	17	30	59
		Bulky Objects	175	35	49	87	169
Disposal Reduction (tonnes) from 30,100				3,626	5,077	9,066	17,588
Resulting Per Capita Disposal Rate (kg/capita) from 358 kg/capita				325	300	250	150

¹Red cells indicate a large diversion potential (greater than 500 tonnes); orange cells indicate a medium diversion potential (200 to 500 tonnes)

Suggested Goal 2

Adopt “Zero Waste” as a goal for the plan

- Zero Waste means moving towards a circular economy, wherein ‘waste’ is viewed as a resource, and maximum value is extracted from all resources before they are eventually recovered or regenerated
- Encourage systematic redesign and management of products and processes
 - Avoid volume and toxicity of waste
 - Conserve and recover all resources
 - Don’t bury or bury resources

Suggested Goal 3

Target that 90% of all residents and businesses have minimum service levels (e.g., recycling and organics collection) by 2025

Questions or Comments?



- Questions?
- Comments?
- Clarifications?
- Corrections?

Strategies Review and Analysis



Strategies

- Reframe options as strategies; strategy components
- See Master Strategies List Handout
- Review PAC input - Dotmocracy Results
- Decision Analysis
 - Group activity
 - Results Presentation



Master Strategies List

Strategy Master List	
Reduce, Reuse, Recycle	1. <i>Reduce Wasted Food from Residential and Industrial, Commercial, and Institutional (ICI) Sectors</i>
	2. <i>Explore Reduction and Reuse Opportunities</i>
	3. <i>Improve Multi-Family Residential and ICI Recycling</i>
	4. <i>Provide Equal Access to Publicly-Funded Infrastructure</i>
	5. <i>Improve Organics Processing</i>
	6. <i>Investigate Processing and Transfer Capacity for Recyclables</i>
	7. <i>Improve Management of Construction and Demolition (C&D) Materials</i>
	8. <i>Advocate for Expansion of EPR Programs</i>
Recovery and Residuals Management	9. <i>Explore Options for Local Disposal</i>
	10. <i>Reduce Illegal Dumping</i>
	11. <i>Improve Collection of Materials which are Difficult to Dispose</i>
	12. <i>Monitor Historic Disposal Sites</i>
Operational Improvements	13. <i>Bings Creek Transfer Station 10-Year Plan</i>
	14. <i>Create an Asset Management Plan</i>
	15. <i>Emergency Management Plan</i>

Strategies – Dotmocracy Results

Strategy Master List	Dotmocracy Votes
1. Reduce Wasted Food from Residential and Industrial, Commercial, and Institutional (ICI) Sectors	13
7. Improve Management of Construction and Demolition (C&D) Materials	7
2. Explore Reduction and Reuse Opportunities	6
3. Improve Multi-Family Residential and ICI Recycling	6
5. Improve Organics Processing	6
8. Advocate for Expansion of EPR Programs	6
9. Explore Options for Local Disposal	6
10. Reduce Illegal Dumping	6
11. Improve Collection of Materials which are Difficult to Dispose	5
4. Provide Equal Access to Publicly-Funded Infrastructure	3
15. Emergency Management Plan	3
13. Bings Creek Transfer Station 10-Year Plan	1
6. Investigate Processing and Transfer Capacity for Recyclables	0
12. Monitor Historic Disposal Sites	0
14. Create an Asset Management Plan	0

Strategy Evaluation

- Decision Analysis and Strategy Review
 - Group activity



Strategy Analysis

- Handout
- Rank each strategy using the guiding principles as criteria
 - Discuss with other PAC members!
 - Use rankings 1-3
 - 1 is low, 3 is high
- Add input re Strategy groupings, wording or gaps
- Timing
 - Duration - 30 minutes
 - Break – 10 minutes
 - Report back – 20 minutes

Break



Strategy Analysis

- Report back
 - Ranked strategies as available
 - Possible strategy adjustments*
 - Gaps/Addition?
 - Ordering?
 - Grouping?

**Note strategy adjustments were primary aspect of report back*

Questions or Comments?

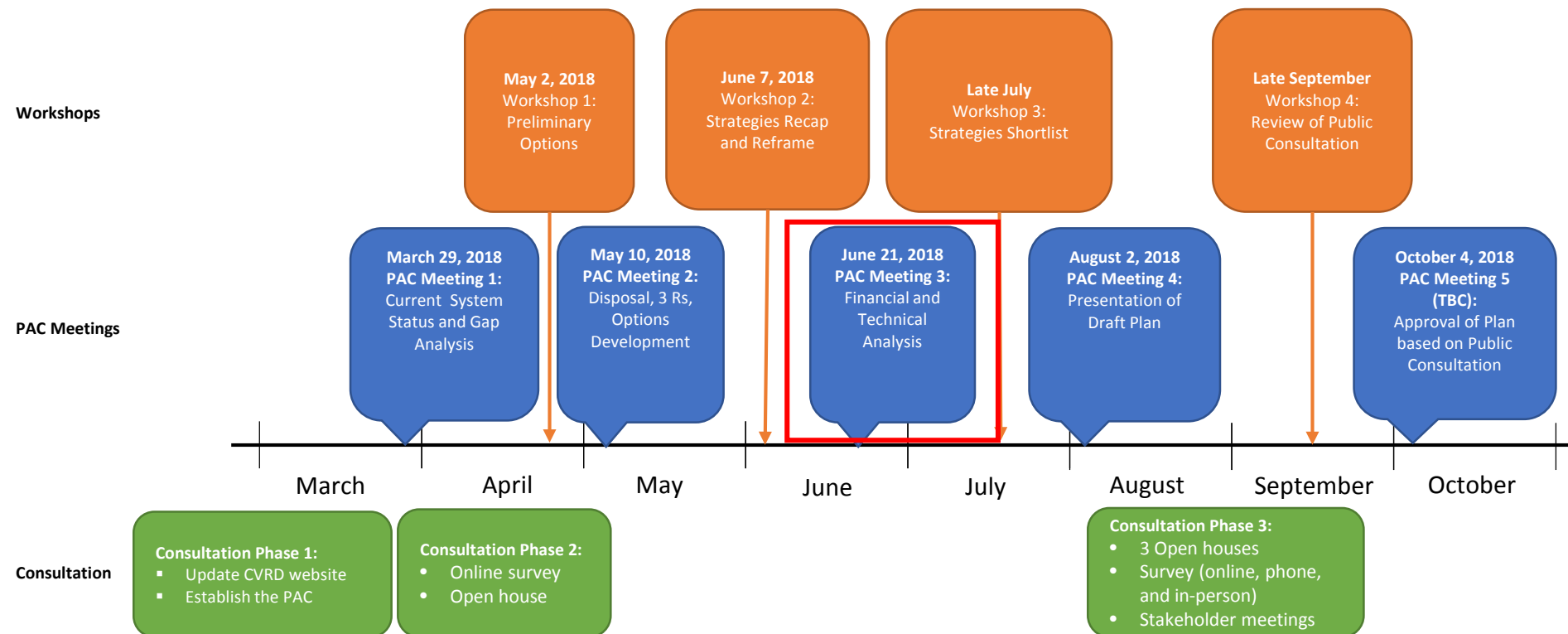


- Questions?
- Comments?
- Clarifications?
- Corrections?

Next Steps



Updated Schedule



October

- Board Approval
- Submit to Ministry

Next Steps

- PAC Meeting 3 – June 21, 2018
 - Financial and Technical Analysis of Strategies
- Workshop 3 – Late July, date TBD
 - Strategies Shortlist
- PAC Meeting 4 – August 2, 2018
 - Presentation of Draft Plan

Strategy Descriptions: For Reference

Strategy 1: Reduce Wasted Food from Residential and ICI Sectors

Issues:

- 1,400 tonnes of edible and donatable food being wasted by the residential sector
- 3,100 tonnes of edible food and 1,300 tonnes of donatable food being wasted by the ICI sector.



- A. Promote Residential Food Waste Reduction
- B. Build Local Food Rescue Capacity for the ICI Sector



Strategy 2: Explore Reduction and Reuse Opportunities

Issues:

- Opportunities exist to enhance the CVRD's programs at the top of the waste prevention hierarchy (reduction and reuse)



- A. Enhance and Improve Local Reuse Opportunities
- B. Consider Mechanisms to Ban Single-Use Plastic Bags or Other Single-Use Items



Strategy 3: Improve Multi-Family Residential and ICI Recycling

Issues:

- Easily recyclable materials make up 13% of the ICI disposal stream and 15% of the multi-family disposal stream (compared to 9% in the single-family sector);
- Compostable organic materials make up 52% of the ICI disposal stream and 39% of the multi-family stream (compared to 23% from the single-family sector that have garbage, recycling, and organics collection);
- Nearly one-third (9,250 tonnes) of the waste disposed is recyclable or compostable material from the multi-family and ICI sectors.

- A. Mandate Multi-Family Source Separation Requirements
- B. Mandate ICI Source Separation Requirements
- C. Provide for Collection Services to Multi-Family and ICI Sector
- D. Enhance Enforcement of Material Disposal Bans



Strategy 4: Provide Equal Access to Publicly Funded Infrastructure

Issues:

- Most residents in the south end of the regional district (over 30,000 residents) are not within a 15-minute drive of a publicly funded Recycling Centre
- Residents in these Areas and in Electoral Area H are also not provided with curbside garbage collection by the CVRD.
- Over 33,000 Residents in the CVRD (mostly in Electoral Areas) do not have public sector organics collection. Residents in areas with *no* organics collection, either public or private, have 13% more organics in the garbage than in areas with organics collection.

- A. Develop a Public Recycling Centre in the South End
- B. Expand Agreements between CVRD and Private Facilities in the South End
- C. Implement Universal Garbage Collection in all Electoral Areas
- D. Provide Organics Collection to all Electoral Areas



Strategy 5: Improve Organics Processing

Issues:

- There are several organic processing facilities in the CVRD and many are generating unacceptable odour that are impacting residents and businesses.
- Amount of organics being continues to grow as more organics from outside the being brought into facilities in the CVRD.
- Facilities that process more organics than they were designed to receive are susceptible to odour incidents.

- A. Ensure Use of Best Management Practices for Odour Management
- B. Prohibit Out-of-Region Organics Processing in CVRD
- C. Standardize Design Criteria and Limits to Protect Environment and Public
- D. Build an Organics Processing Facility
- E. Purchase a Wood Chipper for Curbside Services
- F. Increase Use of Backyard Composters



Strategy 6: Investigate Processing and Transfer Capacity for Recyclables

Issues:

- Recyclable materials are hauled to out of region to material recovery facilities (MRFs) because there is no MRF in the CVRD
- There are no facilities in the CVRD that accept comingled ICI recyclable materials; this material is typically hauled out-of-region or not collected at all because there is no local drop off location.

Strategies:

- A. Investigate Feasibility of a Material Recycling Facility (MRF)
- B. Determine Feasibility of Creating ICI Transfer Capacity for Recyclables



Strategy 7: Improve Management of Construction and Demolition (C&D) Materials

Issues:

- There are no programs that mandate recycling of C&D materials in the CVRD.
 - There is limited disposal capacity for hazardous C&D materials (asbestos, gypsum wallboard) and the material is costly to manage and properly dispose.
-
- A. Monitor C&D Disposal and Recycling Activities in the Region
 - B. Mandate Diversion Targets for C&D Materials
 - C. Mandate that all C&D Materials be taken to Permitted Facilities
 - D. Create a C&D Waste Management Strategy
 - E. Reduce Barriers to Disposing Hazardous Materials (asbestos, gypsum wallboard)



Strategy 8: Advocate for Expansion of EPR Programs

Issues:

- The CVRD currently accepts mattresses and bulky furniture at Bings Creek for recycling, however, recycling of these items is currently funded through tipping fees because there are no EPR programs for these items.
 - 579 tonnes of textiles are disposed by the residential sector and 569 tonnes are disposed by the ICI sector. These materials are recyclable but are not managed by an EPR Program.
- A. Advocate to the Ministry to Expand EPR Programs to these materials



Recovery and Residuals Management



Strategy 9: Explore Options for Local Disposal

Issues:

- The CVRD has one of the highest tipping fees in British Columbia.
- The solid waste is exported to the Roosevelt Regional Landfill in Washington State, and the CVRD is responsible for transportation costs and the USD exchange rates.

Strategy	Description
Status Quo	<ul style="list-style-type: none"> - Waste is shipped to Roosevelt Regional Landfill - Disposal cost = \$130/tonne
Disposal at Comox Valley Regional Landfill	<ul style="list-style-type: none"> - New landfill recently opened in Comox Valley - Explore feasibility of disposal here
Waste to Energy (WTE) (Public Facility)	<ul style="list-style-type: none"> - Two recent studies have deemed that a WTE facility is not feasible - The 2018 SWMP could revisit this
Waste to Energy (Private Facility)	<ul style="list-style-type: none"> - A new private WTE facility may be built in Cowichan Valley - Explore feasibility of disposal here
New CVRD Landfill Development	<ul style="list-style-type: none"> - CVRD last tried to site a landfill in the mid-1990s but was unsuccessful

Strategy 10: Reduce Illegal Dumping

Issue:

- Illegal dumping of materials occurs throughout the CVRD.

Background:

- A campaign was conducted in 2016 to reduce illegal dumping in Hillcrest
- A “Free Tipping” policy was implemented in the early 2000s to provide financial incentives to non-profit organizations who clean up public lands
- CVRD may wish to analyze costs and ubiquity of illegal dumping to determine whether changes should be made



Strategy 11: Improve Collection of Materials which are Difficult to Dispose

Issues:

- The CVRD has no options for residents to safely dispose of household hazardous materials which are not managed by an EPR program.
 - The CVRD does not have subsidized collection for bulky items, such as furniture and mattresses, which may contribute to illegal dumping.
- A. Accept Household Hazardous Materials at CVRD Recycling Facilities
- Periodically or year-round
- B. Implement Occasional Curbside Collection for Bulky Items
- Residents could call 2-3 times/year



Strategy 12: Monitor Historic Disposal Sites

Issues:

- The CVRD has a number of closed disposal sites that require ongoing monitoring and attention
 - Koksilah Sanitary Landfill
 - Koksilah Road Incinerator Ash Landfill
 - Peerless Road Incinerator Ash Landfill
 - Meade Creek Incinerator Ash Landfill (ash landfill closure is in progress at the time of writing).

The CVRD needs to continue monitoring and assessing the state of these historic disposal sites



Operational Improvements



Strategy 13: Bings Creek Transfer Station 10-Year Plan

Issues:

- Bings Creek receives most of the waste in the regional district. The future function and capacity of this facility needs to be determined.
- Bings Creek does not receive ICI sector recyclables.
- Bings Creek is not equipped with compactors or balers. Purchasing this equipment may lead to operational efficiencies.

Future role of the Bings Creek Transfer Station needs to be determined. Consider:

- Type and amount of material to be received
- Processing that could occur on site
- Condition assessment of the structures.



Strategy 14: Create an Asset Management Plan

Issues:

- The CVRD owns mobile (trucks/equipment) and stationary (buildings) assets
- Important to understand the assets that the CVRD holds and the considerations to manage the solid waste system sustainably

An asset management planning process could be conducted to document the future needs of the solid waste management system.



Strategy 15: Create an Emergency Management Plan

Issues:

- The CVRD currently does not have an emergency/disaster management plan for solid waste in the event of a natural disaster.
- Several Canadian municipalities, such as Fort McMurray, interior BC, and Calgary, were affected by fires or floods.

Consideration should be given to developing an Emergency Management Plan for public waste management facilities.

