

CVRD Solid Waste Management Plan Update – Meeting 4



August 2, 2018

Agenda

- Project Update
- Plan Context
 - System Overview
 - Guiding Principles, Goals, Targets, and Diversion Potential
- Strategy Review
 - Budget
 - Staffing Requirement
 - Timeline
- Consultation Updates
- Wrap Up

Today's Goals

- Review process and address questions posed during the industry stakeholder session and follow up
- Review refined strategies as relates to resourcing, financial implications, and schedule for the Plan
- Share and get input on public consultation plan

Questions or Comments?



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

Project Update

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

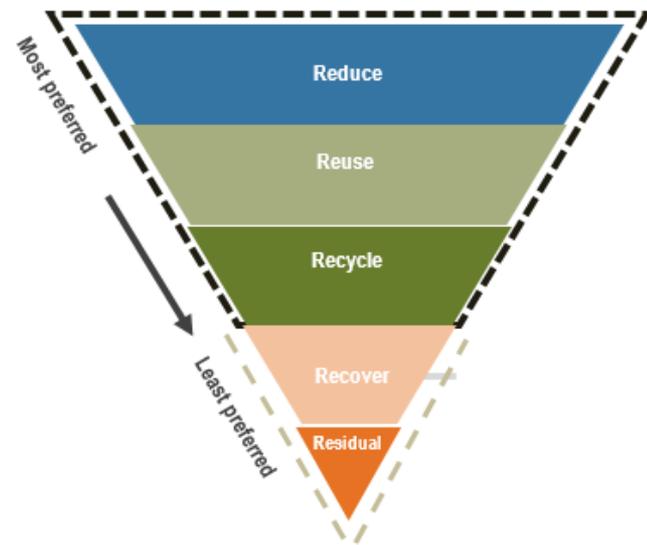
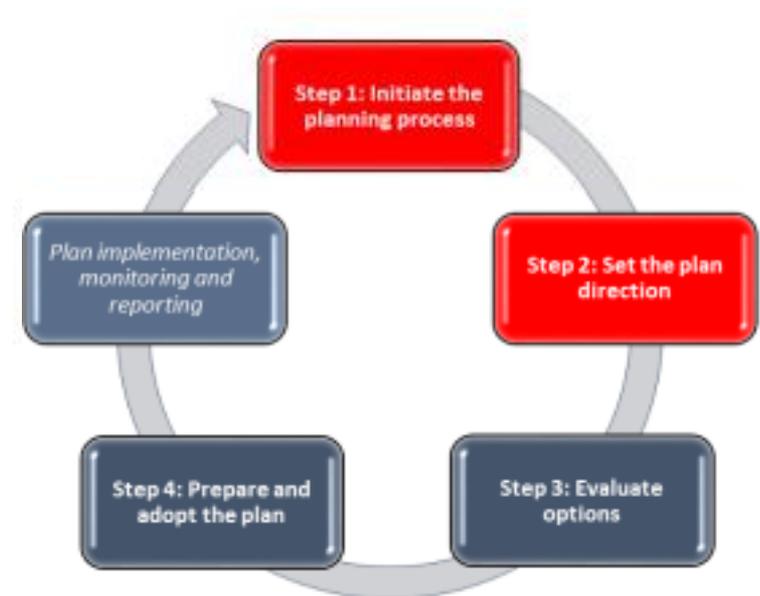


Figure 1-2: Waste Prevention Hierarchy

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



Plan Steps

Steps 1 & 2: Initiative 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
- Review with PAC Committee to establish plan direction

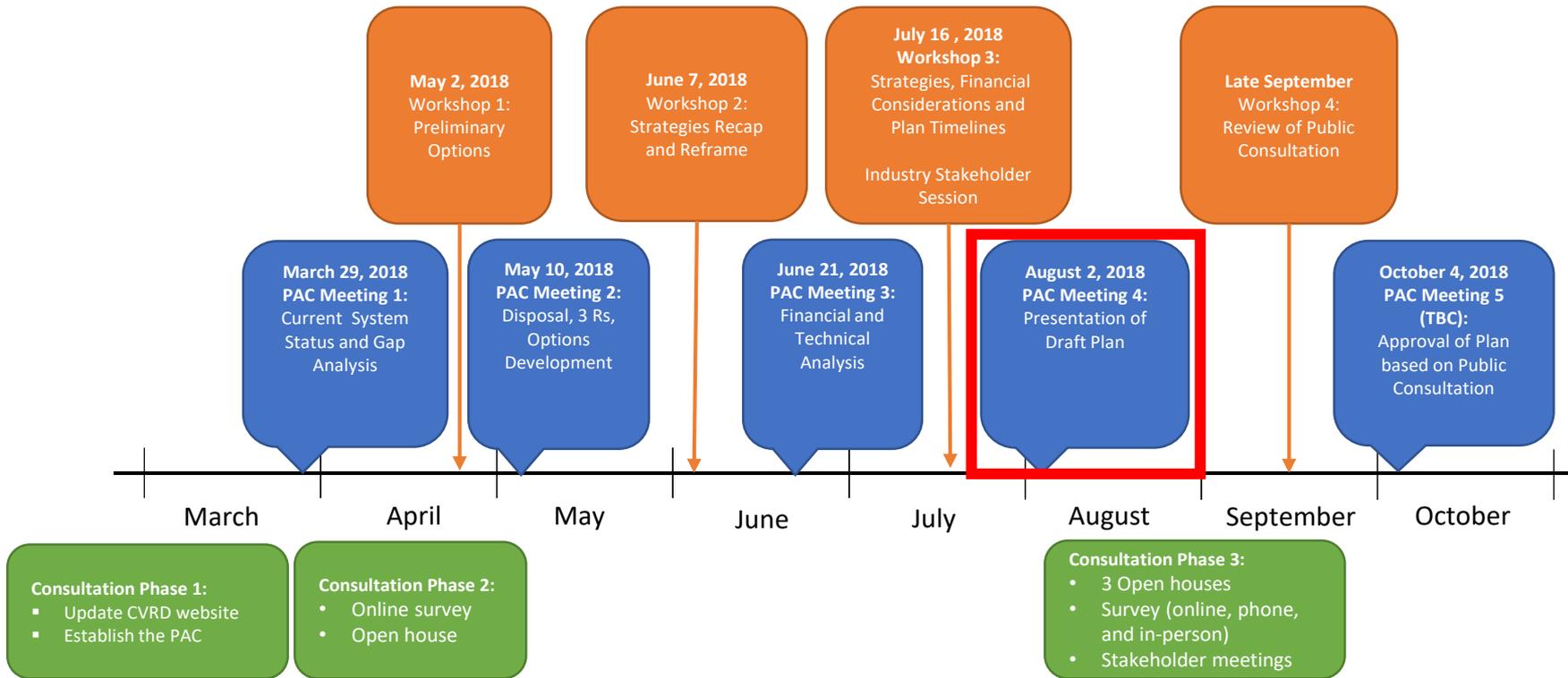


Updated Schedule

Workshops

PAC Meetings

Consultation



October

- Board Approval
- Submit to Ministry

Questions or Comments?



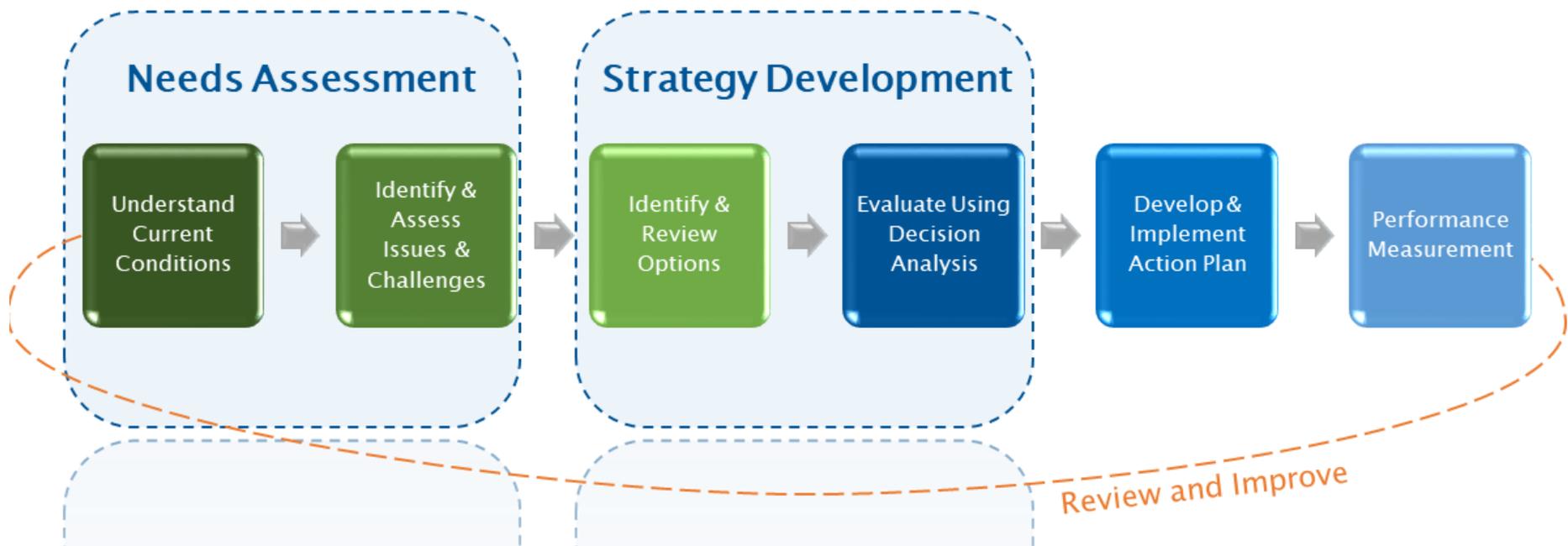
- Questions?
- Comments?
- Clarifications?
- Corrections?

Project Context

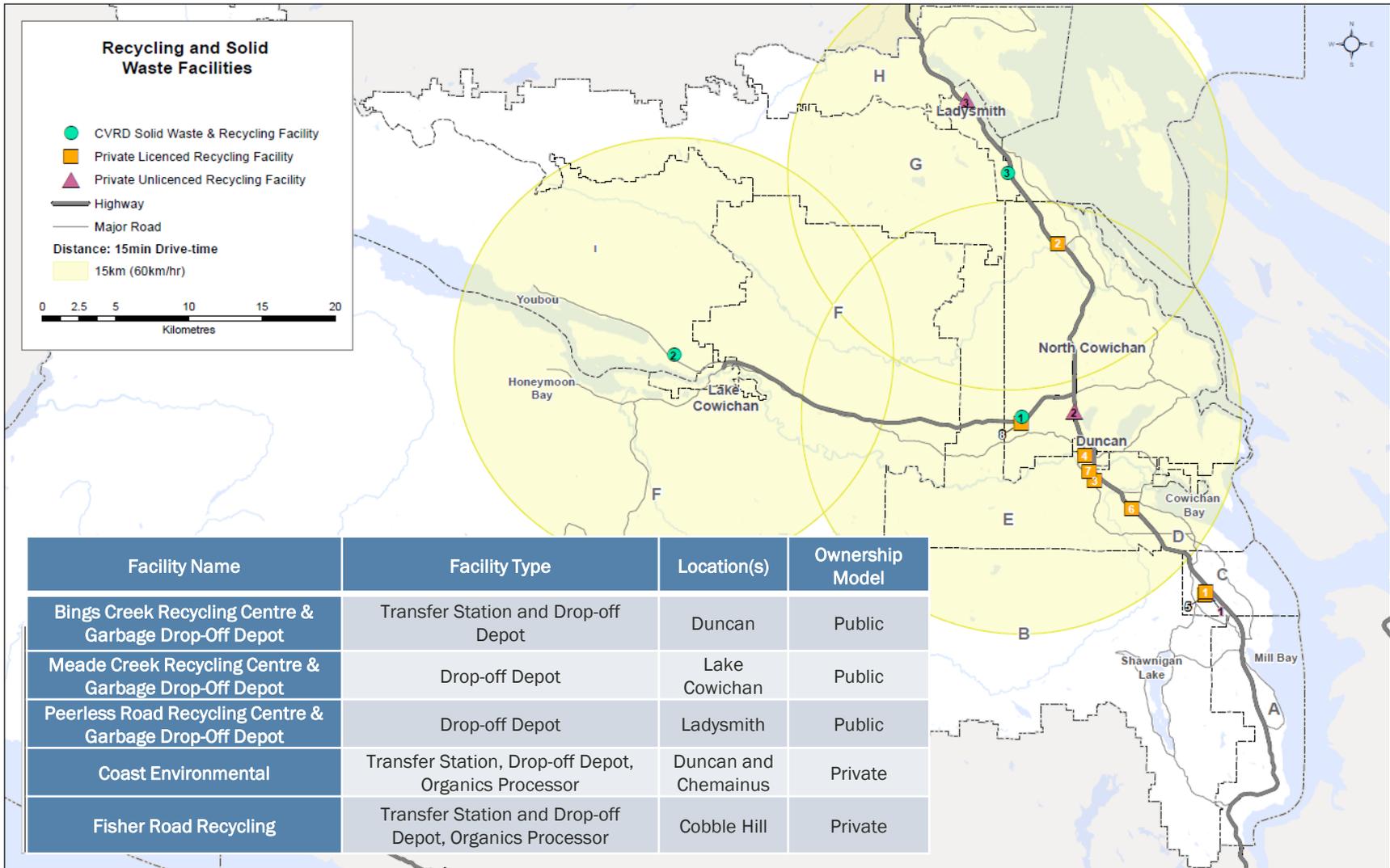
- System Overview
- Guiding Principles
- Goals
- Targets
- Diversion Potential



Planning Model within Context of Ministry Guidelines



Facilities in CVRD



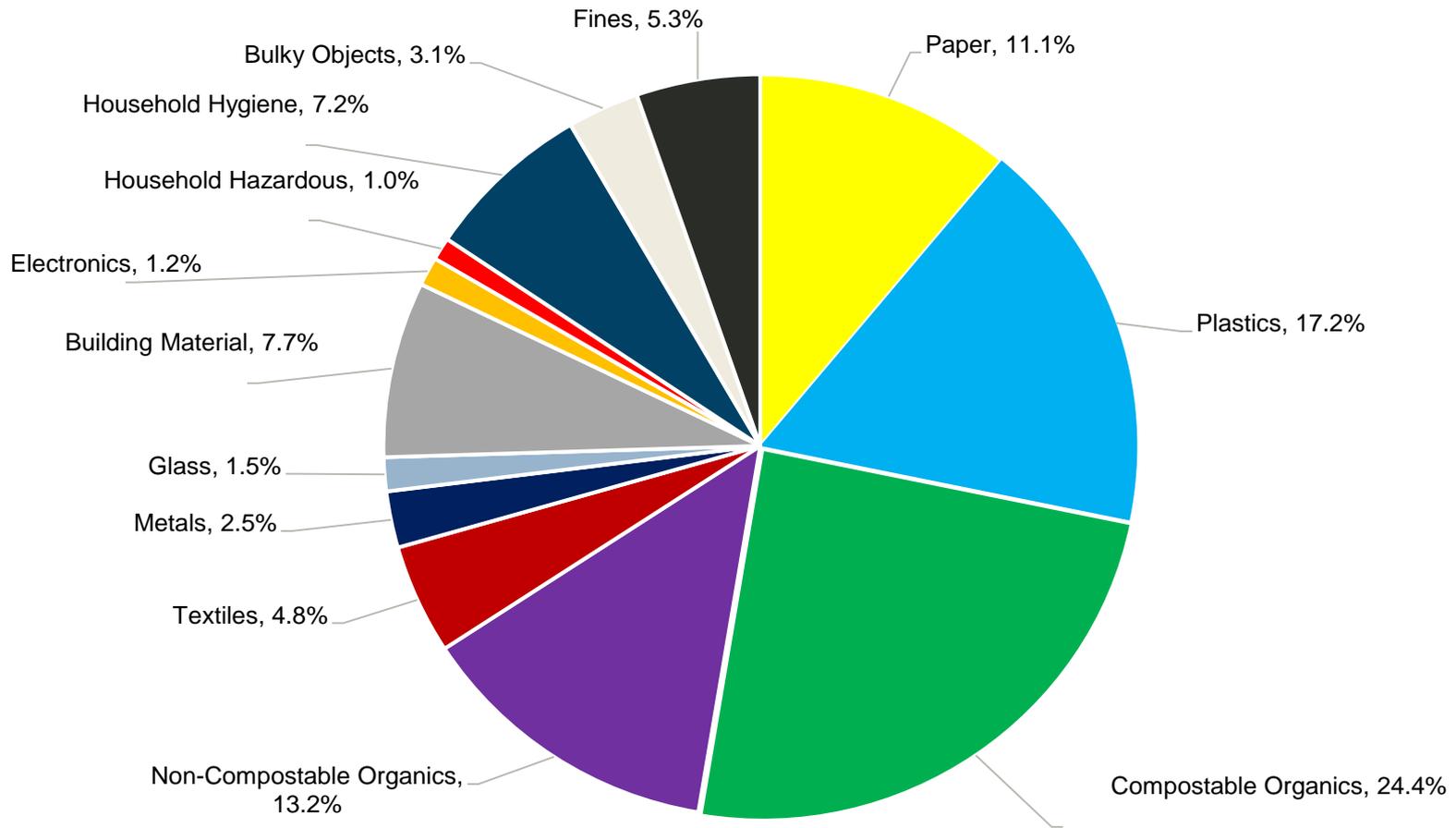
Disposal and Recycling Rates

Annual Disposal Rate	30,100 tonnes
Per Capita Disposal Rate	358 kg per capita
Annual Recycling Rate (partial)	44,000 tonnes
Per Capita Recycling Rate	525 kg per capita

Estimated Disposal Rates by Sector

Sector	Percent of Total Disposed Materials (Garbage Only)	Quantity of Disposed Materials (tonnes)
Single-Family (Municipalities)	10%	3,008
Single-Family (Electoral Areas)	9%	2,584
Multi-Family	8%	4,998
Industrial, Commercial, and Institutional	41%	12,262
Drop-off	16%	2,340
Construction and Demolition	16%	4,908
Total Disposal Rate	100%	30,100

Waste Composition Study



2017 Waste Composition Study Results

Waste Composition Study – Residential Organics

Service Level Description	Areas	Proportion of Organics in Garbage
Mandatory organics collection	All municipalities	23%
Optional organics collection	Electoral Areas A-C	30%
No organics collection	Electoral Areas D-I	36%

Project Context

- Guiding Principles
- Goals
- Targets
- Diversion Potential



Guiding Principles

Promote zero waste approaches and support a circular economy

Promote the first 3 Rs (Reduce, Reuse and Recycle) and consider Recovery before Residuals Management

Maximize beneficial use of discarded materials and manage residuals appropriately

Support structural and systemic changes (e.g. polluter and user-pay approaches) and corresponding behaviour change programs to optimize system changes and promote principles one and two.

Prevent organics and recyclables from going into the garbage wherever practical

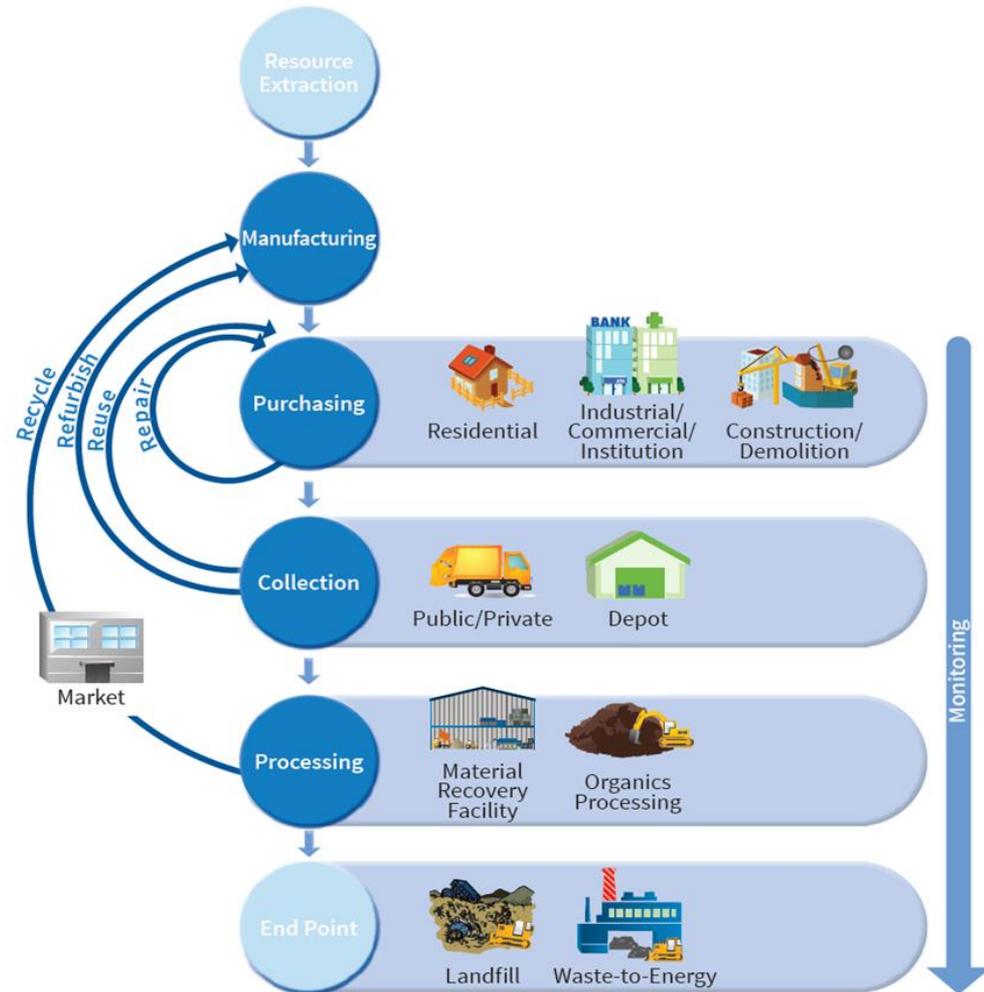
Collaborate with other regional districts wherever practical

Develop collaborative partnerships with interested parties to achieve regional targets set in plans

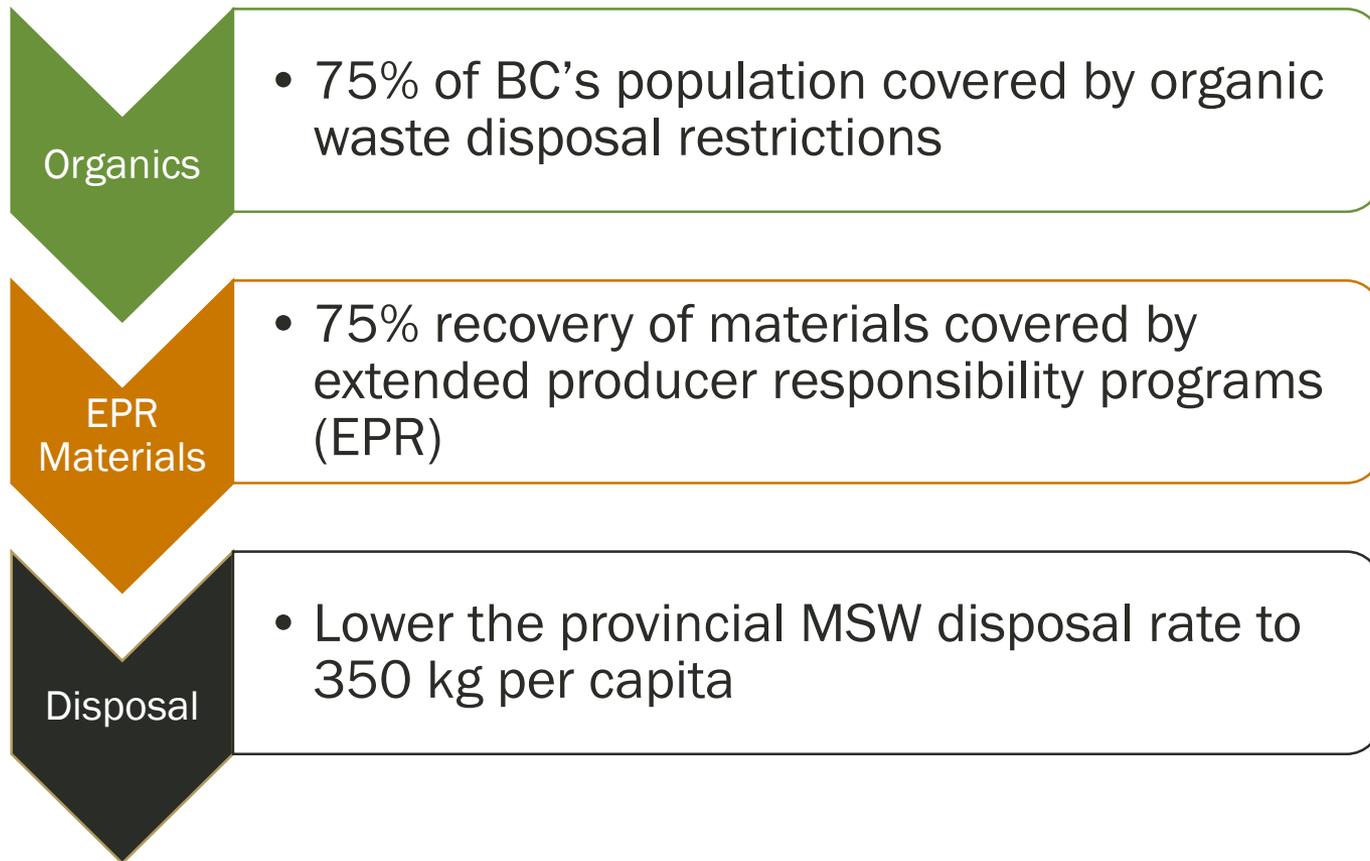
Support practical and effective delivery of waste management services from public and private service providers, and level the playing field within the region for private and public solid waste management facilities.

Goals

- #1 Reduce All Material Generation
- #2 Maximize reuse and recovery of materials
- #3 Maximize beneficial use of discarded materials and promote responsible and sustainable Residual Management



Provincial Targets for 2020



Target Setting – Metrics

- Interim Target – 2023 (5 year)
 - 280 kg/capita disposal rate
 - Implementation of Strategies 1-3 (waste reduction, ICI and residential systems with disposal ban)
- Plan Target – 2028 (10 year)
 - 250 kg/capita disposal rate
 - Optimization of Strategies 1-3 (system usage, disposal ban enforcement, and remaining strategies addressed to ensure system resilience)
- Long Term Target – 2040
 - 150 kg/capita disposal rate
 - Continued system and behaviour change improvements
 - Zero Waste Community



Strategy Review

- Areas of Improvement



Areas for Improvement– Reduce, Reuse, Recycle

- Top of hierarchy improvements:
 - Reducing wasted food
 - Enhance and improve reuse opportunities
- Improve service levels for ICI and MF waste generators
- Over 18,000 residents are more than 15 minutes away from a public depot
- Over 33,000 residents without mandatory organics collection
- More than 20,000 residents without mandatory garbage collection



Areas for Improvement – 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



Areas for Improvement – 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?



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

Strategies Review

- Resource Requirements (Budget & Staffing)
- Schedule



Strategies List

Primary Waste Reduction/Diversion

1. Explore Reduce and Reuse Opportunities
2. Reduce Disposal from ICI and Multi-Family Residential
3. Reduce Disposal from Residential Sector

Processing Infrastructure

4. Improve Organics Processing
5. Investigate Processing and Transfer Capacity for Recyclables
6. Improve Management of Construction and Demolition Materials

Recovery and Residuals Management

7. Explore Options for Local Disposal
8. Reduce Illegal Dumping
9. Collection/Drop Off for Household Hazardous Waste, Bulky Items and Organics
10. Monitor Historic Disposal Sites

Supporting System Resilience

11. Create an Asset Management Plan
12. Develop Disaster Debris Management Plan
13. Education and Behaviour Change Considerations

**Budgets are estimated*

Strategy 1: Enhance Reduce and Reuse Potential

Components:

- A. Reduce Wasted Food from RES and ICI Sectors
- B. Explore Reduction and Reuse Opportunities
- C. Support Bans on Single-Use Items
- D. Advocate for Expansion of EPR Programs



Actions	Operating Cost	Timeline
CVRD Support for above Components	\$101,000	2019-2023

Strategy 2: Reduce Disposal from ICI and Multi-Family Residential

Components:

- A. Mandate source separation for multi-family residential and ICI sector
- B. Adopt organics disposal ban and enhance enforcement of existing disposal bans



Actions	Operating Cost	Timeline
Strategies A	\$10,000	2020
Strategy B	\$87,500	2019-2022

Strategy 3: Reduce Disposal from Residential Sector

Components:

- A. Assess opportunities for access to recycling programs at depots
 - i. Evaluate opportunities to increase accessibility for public depots
 - ii. Continue to assess depot service levels for the south end
- B. Adopt universal curbside collection services across the region



Actions	Operating Cost	Timeline
Strategy A	-	2019-2023
Strategy B	\$30,000	2019-2020 (study)
Strategy B	\$22,812,404*	2019-2028

*Annual cost estimated at \$2.7 million, contracted or in-house TBD

Strategy 4: Improve Organics Processing

Components:

- A. Best Management Practices for odour and leachate management
- B. Ensure capacity for local organics processing



Actions	Operating Cost	Timeline
Strategy A	\$15,000	2021

Strategy 5: Investigate Processing and Transfer Capacity for Recyclables

Components:

- A. Assess gaps and recommend further opportunities for ICI transfer capacity and processing within the CVRD



Actions	Operating Cost	Timeline
Strategy A	\$15,000	2021

Strategy 6: Improve Management of Construction and Demolition (C&D) Materials

Components:

- A. Monitor C&D disposal and recycling activities in the Region
- B. Develop a C&D Waste Management Strategy
- C. Reduce Barriers to Disposing Hazardous Materials (asbestos, gypsum wallboard)



Actions	Operating Cost	Timeline
Strategies A & B	\$30,000	2022-2023
Strategy C	\$800,000	2021-2028

Recovery and Residuals Management



Strategy 7: Explore Options for Local Disposal

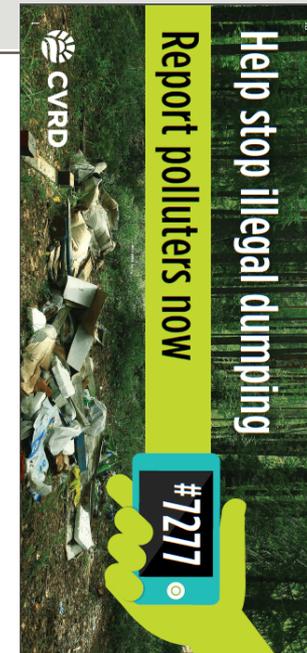
Disposal Option	Consideration
Export Off Island	Waste currently shipped to USA for \$130/tonne
Other Island Options	New Comox Valley landfill that may accept waste from other regional districts
Waste to Energy (WTE) (Public Facility)	Two recent studies deemed that a WTE facility is not feasible
Waste to Energy (Private Facility)	New private sector WTE facility being considered in Cowichan Valley
New CVRD Landfill Development	CVRD last tried to site a landfill in the mid-1990s but was unsuccessful

Actions	Operating Cost	Timeline
Disposal Options Assessment	\$20,000	2019

Strategy 8: Reduce Illegal Dumping

Components:

- 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



Actions	Operating Cost	Timeline
Update Strategies	Embedded	2019-2028

Strategy 9: Collection/Drop off For Household Hazardous Waste, Bulky Items, and Organics

Components:

- A. Improve collection for household hazardous waste
- B. Improve recycling opportunities for bulky items
- C. Assess effective ways to reduce open burning of wood waste



Actions	Operating Cost	Timeline
Strategies A	\$900,000	2020 - 2028
Strategy B & C	Embedded	2022

Strategy 10: Monitor Historic Disposal Sites

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



Actions	Operating Cost	Timeline
Annual Monitoring	Embedded	2019 - 2028

Operational Improvements



Strategy 11: Create an Asset Management Plan

Components:

- A. Review building and equipment assets and develop an O&M strategy
- B. Develop Bings Creek Transfer Station 10-Year Plan



Actions	Operating Cost	Timeline
Strategies A	\$60,000	2019-2023
Strategy B	\$10,000	2019

Strategy 12: Disaster Debris Management Plan

Developing a Disaster Debris Management Plan for solid waste services and infrastructure



Actions	Operating Cost	Timeline
Disaster Management Plan	\$15,000	2022

Strategy 13: Education and Behaviour Change Considerations

- Continued public outreach and community-based social marketing
- Tools
 - Commitments
 - Prompts
 - Norms
 - Social Diffusion
 - Communication
 - Incentives
 - Convenience



Actions	Operating Cost	Timeline
Education & Behaviour Change	Embedded	2019 - 2028

Budget Summary

- Current Operating Budget
 - \$9.6M
- Proposed New Budget – 10 year aggregated
- Combined Operating Budgets (current and proposed)
 - \$11 to \$14M (annually)

Year	1	2	3	4	5	6	7	8	9	10
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
CVRD FINANCIAL PLAN										
REVENUE										
Debt Proceeds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grants	\$ 33,765	\$ 33,940	\$ 34,119	\$ 34,302	\$ 34,488	\$ 34,678	\$ 34,871	\$ 35,069	\$ 35,270	\$ 35,475
Other	\$ 929,977	\$ 943,260	\$ 956,756	\$ 970,470	\$ 984,406	\$ 998,569	\$ 1,012,959	\$ 1,027,582	\$ 1,042,444	\$ 1,057,548
Proposed Requisition/Parcel Tax Surplus/(Deficit)	\$ 4,608,900	\$ 4,718,680	\$ 4,917,601	\$ 5,023,696	\$ 5,150,432	\$ 5,276,851	\$ 5,404,012	\$ 5,533,973	\$ 5,706,787	\$ 5,862,514
Transfer from Capital Reserve	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfer from Operating Reserve	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
User Fee	\$ 3,964,624	\$ 4,012,670	\$ 6,904,030	\$ 6,978,792	\$ 7,045,146	\$ 7,118,128	\$ 7,192,770	\$ 7,269,105	\$ 7,347,164	\$ 7,426,984
TOTAL OPERATING REVENUE	\$ 9,877,550	\$ 9,879,405	\$ 12,812,506	\$ 13,002,260	\$ 13,214,472	\$ 13,428,226	\$ 13,644,612	\$ 13,885,731	\$ 14,131,665	\$ 14,382,521
EXPENDITURES										
Existing Operating Expenditures										
Curbside Collection - Garbage	\$ 781,205	\$ 796,629	\$ 812,765	\$ 829,020	\$ 845,601	\$ 862,514	\$ 879,764	\$ 897,359	\$ 915,306	\$ 933,612
Curbside Collection - Recycling	\$ 376,212	\$ 234,964	\$ 239,663	\$ 244,436	\$ 249,344	\$ 254,330	\$ 259,419	\$ 264,610	\$ 269,902	\$ 275,300
CVRD Internal Allocations	\$ 544,066	\$ 556,401	\$ 568,984	\$ 581,818	\$ 594,910	\$ 608,263	\$ 621,882	\$ 635,774	\$ 649,943	\$ 664,396
Debt	\$ 786,318	\$ 796,318	\$ 741,228	\$ 741,228	\$ 741,228	\$ 741,228	\$ 741,228	\$ 741,228	\$ 741,228	\$ 741,228
Garbage Disposal	\$ 2,455,344	\$ 2,504,451	\$ 2,554,540	\$ 2,605,631	\$ 2,657,744	\$ 2,710,899	\$ 2,765,117	\$ 2,820,420	\$ 2,876,828	\$ 2,934,365
Legal & Administrative	\$ 202,113	\$ 206,153	\$ 210,276	\$ 214,482	\$ 218,771	\$ 223,145	\$ 227,609	\$ 232,161	\$ 236,804	\$ 241,543
Operations - Disposal	\$ 2,994,462	\$ 2,935,359	\$ 2,992,066	\$ 3,049,908	\$ 3,108,908	\$ 3,169,087	\$ 3,230,466	\$ 3,293,076	\$ 3,356,937	\$ 3,422,075
Operations - Recycling	\$ 1,182,591	\$ 1,206,244	\$ 1,230,368	\$ 1,254,975	\$ 1,280,076	\$ 1,305,679	\$ 1,331,792	\$ 1,358,428	\$ 1,385,595	\$ 1,413,305
Planning, Operations Support, and Execution	\$ 117,224	\$ 119,568	\$ 121,960	\$ 124,399	\$ 126,887	\$ 129,424	\$ 132,012	\$ 134,652	\$ 137,345	\$ 140,090
Reduction and Recycling Programs	\$ 30,015	\$ 30,616	\$ 31,228	\$ 31,853	\$ 32,490	\$ 33,140	\$ 33,803	\$ 34,479	\$ 35,169	\$ 35,873
Transfer to Reserve	\$ 320,000	\$ 324,000	\$ 328,080	\$ 332,242	\$ 336,487	\$ 340,817	\$ 345,233	\$ 349,738	\$ 354,333	\$ 359,020
Total Annual Existing Operating Expenditures	\$ 9,789,550	\$ 9,700,905	\$ 9,831,158	\$ 10,010,012	\$ 10,192,446	\$ 10,378,526	\$ 10,568,325	\$ 10,761,925	\$ 10,959,390	\$ 11,160,807
Existing Capital Expenditures										
Capital Expenditures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Annual Existing Capital Expenditures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Existing Expenditures	\$ 9,789,550	\$ 9,700,905	\$ 9,831,158	\$ 10,010,012	\$ 10,192,446	\$ 10,378,526	\$ 10,568,325	\$ 10,761,925	\$ 10,959,390	\$ 11,160,807
PROPOSED Operating Expenditures										
01 Enhance Reduce and Reuse Potential	\$ 18,000	\$ 36,000	\$ 21,000	\$ 3,000	\$ 3,000	\$ 20,000	\$ -	\$ -	\$ -	\$ -
02 Reduce Disposal from Multi-Family Residential and ICI	\$ 3,000	\$ 27,500	\$ 45,000	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
03 Reduce Disposal from Residential Sector	\$ -	\$ -	\$ 2,695,348	\$ 2,739,248	\$ 2,784,026	\$ 2,829,700	\$ 2,876,287	\$ 2,923,806	\$ 2,972,275	\$ 3,021,714
04 Improve Organics Processing	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
05 Investigate Processing and Transfer Capacity for Recyclables	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
06 Improve Management of Construction and Demolition	\$ -	\$ -	\$ 100,000	\$ 115,000	\$ 115,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
07 Explore Options for Local Disposal	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
08 Reduce Illegal Dumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
09 Collection/Drop off For HHW, Bulky Items, and Organics	\$ -	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
10 Monitor Historic Disposal Sites	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
11 Create an Asset Management Plan	\$ 30,000	\$ -	\$ 20,000	\$ -	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ -
12 Disaster Debris Management Plan	\$ -	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13 Education and Behaviour Change Considerations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Annual Proposed Operating Expenditures	\$ 88,000	\$ 178,500	\$ 2,981,348	\$ 2,992,248	\$ 3,022,026	\$ 3,049,700	\$ 3,076,287	\$ 3,123,806	\$ 3,172,275	\$ 3,221,714
PROPOSED Capital Expenditures										
No proposed capital expenditures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Annual Proposed Capital Expenditures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Annual Proposed Expenditures	\$ 88,000	\$ 178,500	\$ 2,981,348	\$ 2,992,248	\$ 3,022,026	\$ 3,049,700	\$ 3,076,287	\$ 3,123,806	\$ 3,172,275	\$ 3,221,714
TOTAL OPERATING EXPENDITURES	\$ 9,877,550	\$ 9,879,405	\$ 12,812,506	\$ 13,002,260	\$ 13,214,472	\$ 13,428,226	\$ 13,644,612	\$ 13,885,731	\$ 14,131,665	\$ 14,382,521
TOTAL CAPITAL EXPENDITURES	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL EXPENDITURES	\$ 9,877,550	\$ 9,879,405	\$ 12,812,506	\$ 13,002,260	\$ 13,214,472	\$ 13,428,226	\$ 13,644,612	\$ 13,885,731	\$ 14,131,665	\$ 14,382,521
Revenues - Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Proposed Schedule

- Corresponds to budget over 10 year period
- Existing staff resources factored in

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
01 Enhance Reduce and Reuse Potential										
A Reduce Wasted Food from Residential and Industrial, Commercial, and Institutional (ICI) Sectors										
B Enhance and Improve Local Reuse Opportunities										
C Support Bans on Single-Use Plastic Bags or Other Single-Use Items										
D Advocate for Expansion of EPR Programs										
02 Reduce Disposal from Multi-Family Residential and ICI										
A Mandate Source Separation for Multi-family and ICI										
B Adopt a full organics disposal ban and enhance enforcement of existing material disposal bans										
03 Reduce Disposal from Residential Sector										
A Assess Opportunities for Access to Recycling Programs at Depots										
B Adopt Universal Curbside Collection Services Across the Region										
04 Improve Organics Processing										
A Ensure Use of Best Management Practices for Odour Management										
B Ensure Capacity for local Organics Processing										
05 Investigate Processing and Transfer Capacity for Recycling										
A Feasibility Assessment for Transfer Capacity for ICI Recyclables										
06 Improve Management of Construction and Demolition										
A Monitor C&D Disposal and Recycling Activities in the Region										
B Develop a C&D Waste Management Strategy										
C Reduce Barriers to Disposing Hazardous Materials (asbestos, gypsum wallboard)										
07 Explore Options for Local Disposal										
A Review feasibility of alternative disposal options										
08 Reduce Illegal Dumping										
A Augment illegal dumping prevention strategies										
09 Collection/Drop off For HHW, Bulky Items, and Organics										
A Implement collection program for unlabelled liquid HHW										
B Improve recycling opportunities for bulky items										
C Assess effective ways to reduce open burning of wood waste										
10 Monitor Historic Disposal Sites										
A Monitor Historic Disposal Sites										
11 Create an Asset Management Plan										
A Review building and equipment assets and develop an O&M strategy										
B Develop Bings Creek Transfer Station 10-Year Plan										
12 Disaster Debris Management Plan										
A Develop a Disaster Debris Management Plan										
13 Education and Behaviour Change Considerations										
A Consider best management practices for Education and Behavior Change programs										

Next Steps and Consultation



Public Consultation

Consultation Phase	Consultation Component	Timing Details	Estimated Timeline (2018)
Phase 1 Initiation and Notification	CVRD Website Update	To begin before first PAC meeting	January 31
	PAC Announcement		January 31
	First Nations Outreach		February – March
Phase 2 Set the Plan Direction	Online & In-Person Survey(s)	Post-first PAC meeting	April (ongoing)
	Open House		
	PlaceSpeak		
	CVRD Website Update		

Public Consultation

Consultation Phase	Consultation Component	Timing Details	Estimated Timeline (2018)
Phase 3 Evaluate the Options	PlaceSpeak	Post-draft Plan	August - September
	Open Houses		
	Social Media Tools		
	Stakeholder Meetings		
	Data Synthesis	Post-consultation	September
	Consultation Summary	Post-consultation	September

Public Consultation

Consultation Phase	Consultation Component	Dates
Phase 3 Evaluate the Options	<p style="text-align: center;">Online Engagement</p> <ul style="list-style-type: none"> • Website update with draft Plan and survey • PlaceSpeak survey and discussion • Open houses and survey to be promoted via social and conventional media outlets 	<p>August – September</p>
	<p style="text-align: center;">In-Person Engagement</p> <ul style="list-style-type: none"> • Open Houses • Other community outreach and in-person promotion at depots and community events 	<p>Open house dates: August 29 (day) – west September 11 (eve) – south September 12 (day) – north</p>

Next Steps

- August 20, 2018 – 1:00-3:30pm
 - Webinar on draft Plan (distributed prior)
- August – September Consultation

Wrap Up and Questions

Tamara Shulman

Team Lead – Solid Waste Planning

Tamara.Shulman@tetratech.com