

CVRD Solid Waste Management Plan Update – Workshop 4



August 20, 2018

Agenda

- Project Update
- Plan Context
- Strategy Review
 - Budget
 - Timeline
- Consultation Updates
- Wrap Up and Questions

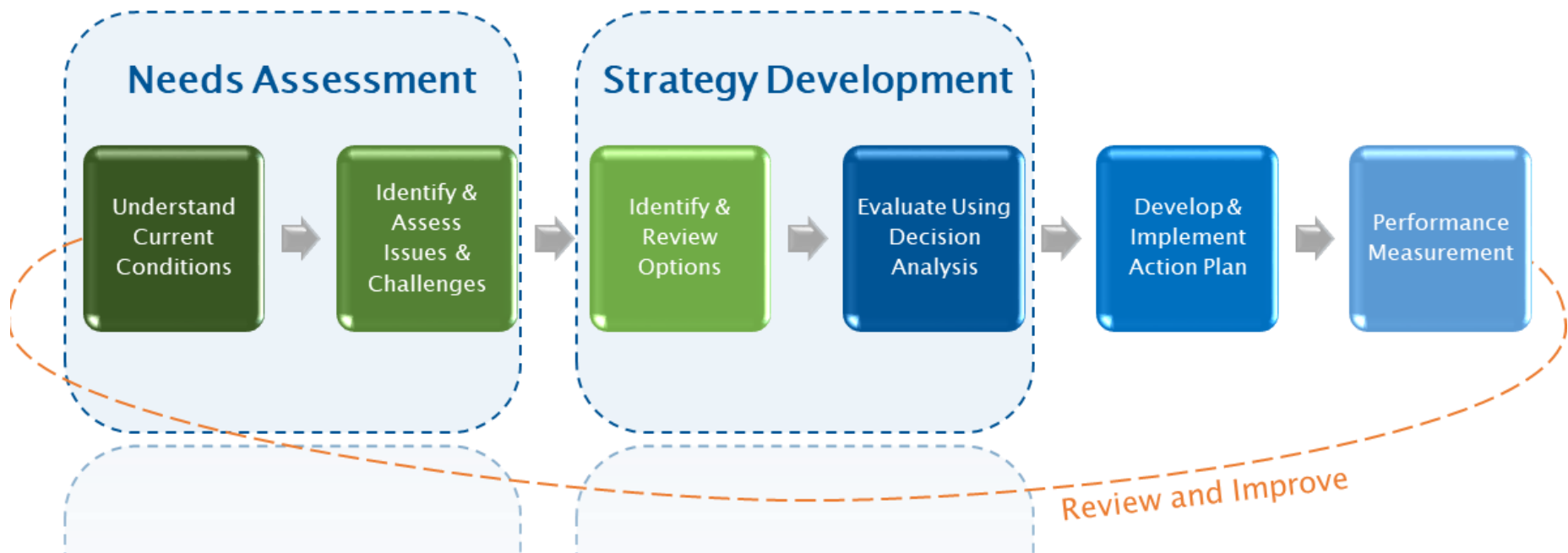


Project Context

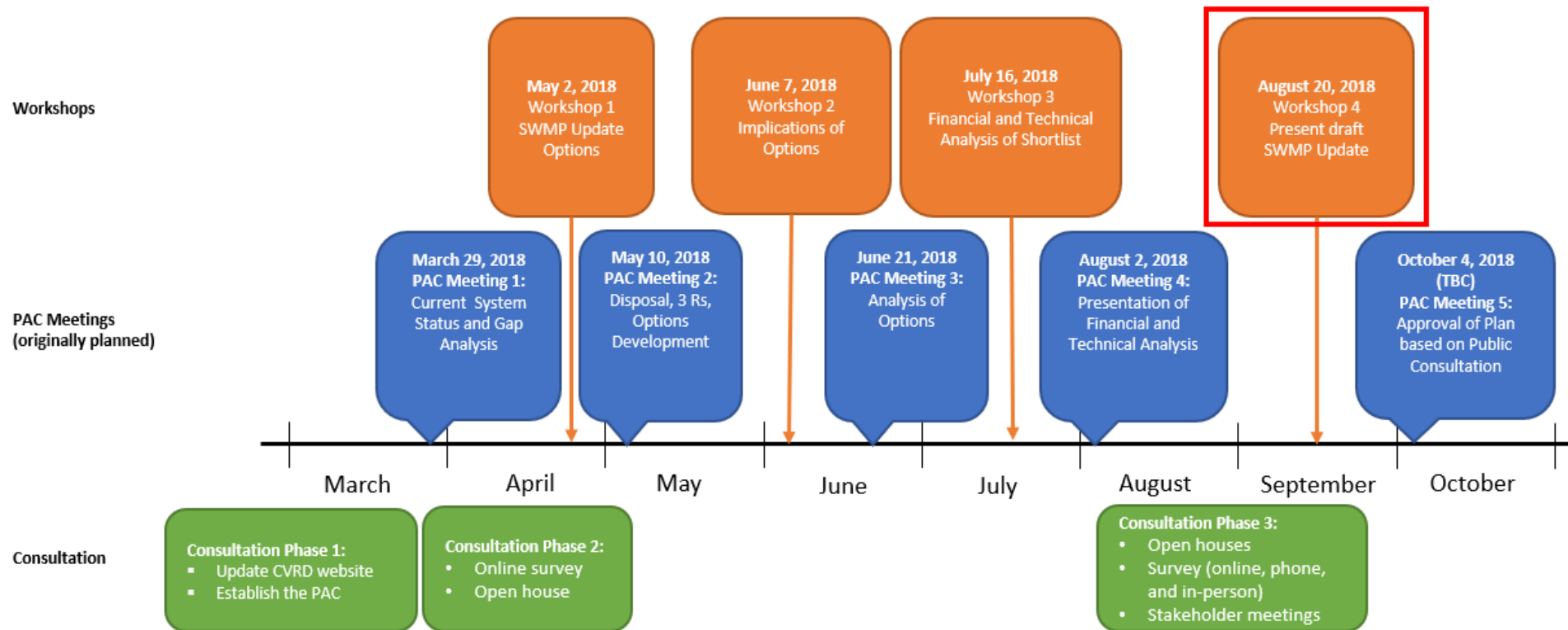
- System Overview
- Guiding Principles
- Goals
- Targets
- Diversion Potential



Planning Model within Context of Ministry Guidelines



Schedule



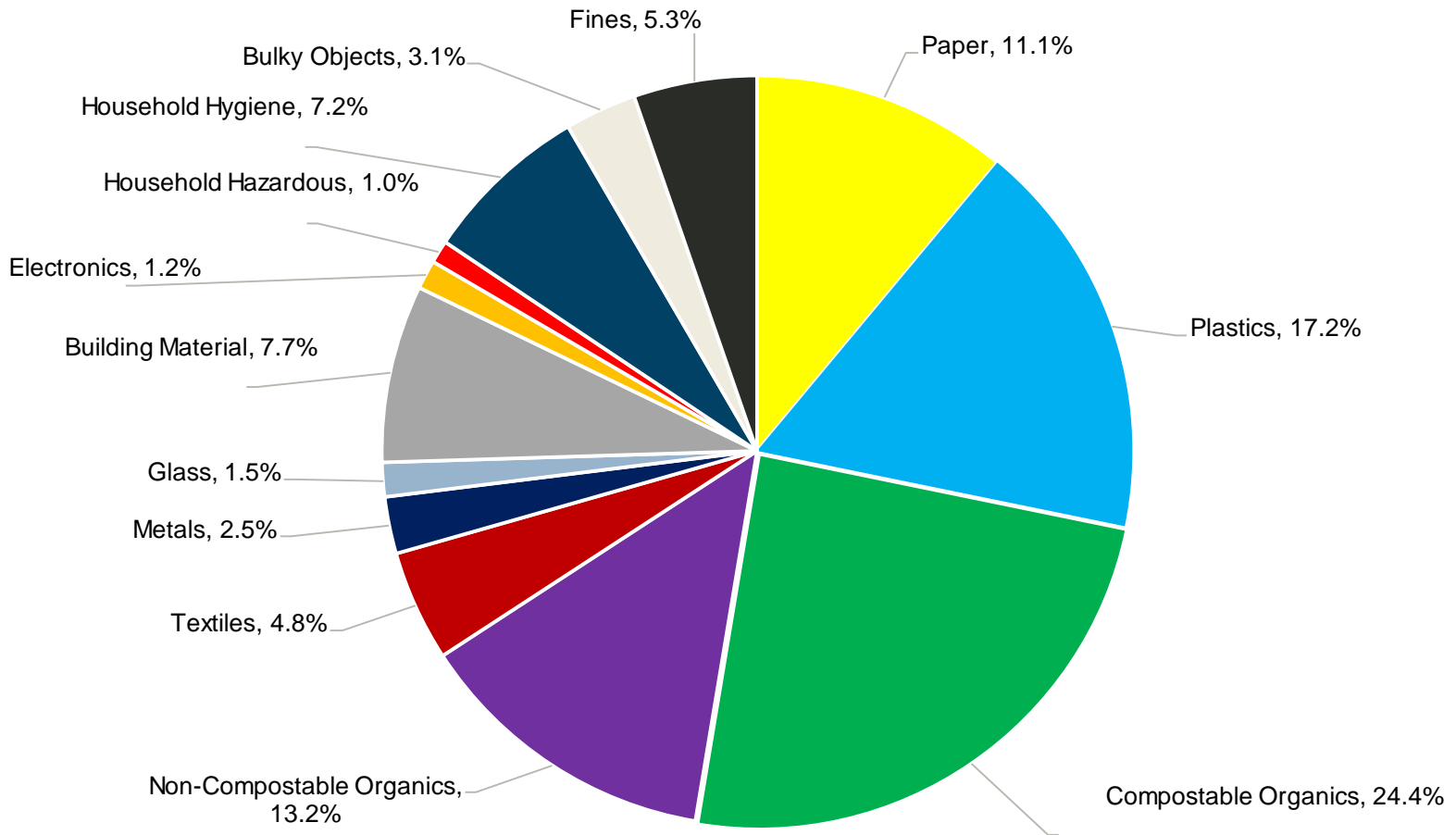
Disposal and Recycling Rates

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

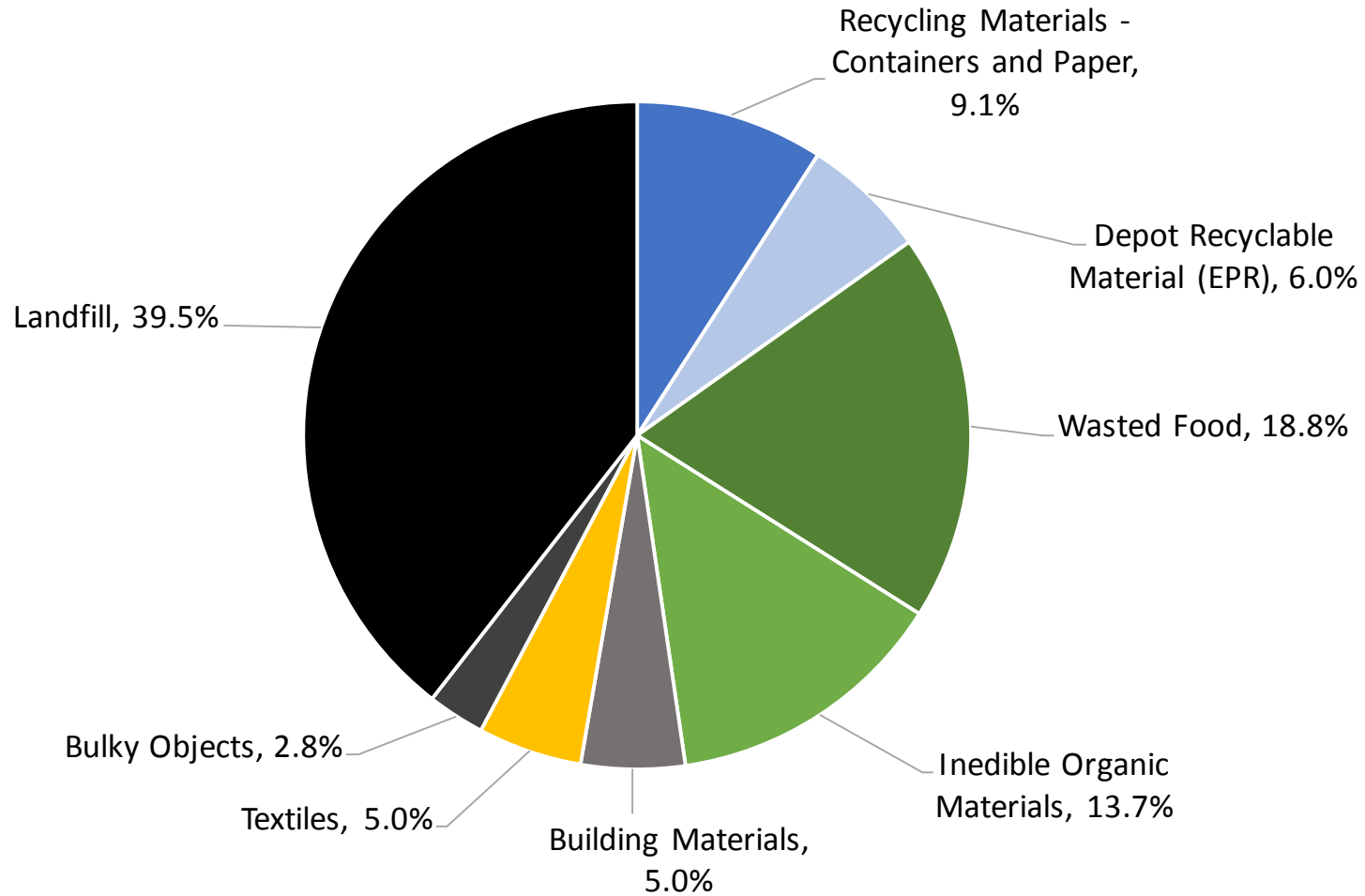
Sector	Percent of Total Disposed Materials (Garbage Only)	Quantity of Disposed Materials (tonnes)
Single-Family (Municipalities)	10%	3,008
Single-Family (Electoral Areas)	9%	2,584
Multi-Family	8%	4,998
Industrial, Commercial, and Institutional	41%	12,262
Drop-off	16%	2,340
Construction and Demolition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

Waste Composition Study



2017 Waste Composition Study Results – Material Categories

Waste Composition Study – Diversion Potential



2017 Waste Composition Study Results – Diversion Potential

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%

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– Improve Waste Reduction and Diversion

1. Improve first levels of the pollution prevention hierarchy
 - Wasted Food - 5,500 tonnes edible food wasted
 - Improve Reuse Platforms
 - Single-Use Item Reduction
 - Expansion of EPR Programs
2. ICI and Multi-Family Sectors have relatively low diversion rates
 - Source Separation Requirements
 - Materials Disposal Ban



Areas for Improvement – Improve Waste Reduction and Diversion

3. Limited access to recycling and collection services
 - 18,000 residents live more than 15-minute drive from public depot
 - Public depot hours vary widely across region
 - 33,000 residents don't have mandatory curbside organics collection
 - 20,000 residents don't have mandatory curbside garbage collection



Areas for Improvement – Support Transport and Processing Infrastructure

4. Some Organic Processing Facilities have generated odour complaints
5. No transfer or facilities for comingled ICI recyclables
6. C&D Materials are found in garbage; limited disposal capacity for asbestos-containing materials



Areas for Improvement – Improve Recovery and Residuals Management

7. No local disposal capacity and high disposal costs
 - Waste exported to Washington
8. Illegal dumping occurs throughout CVRD



Areas for Improvement – Improve Recovery and Residuals Management

9. Limited Disposal Options for:
 - Non-EPR household hazardous liquids
 - Bulky items
 - Burning of organic materials is ongoing issue (air quality concerns)
10. Closed disposal sites require ongoing monitoring (e.g., landfills)



Areas for Improvement – Support System Resilience

11. Development of asset management program underway
12. No disaster debris management plan, including how disaster debris is managed
13. Integrate education and behaviour change best practices throughout all strategies



Questions or Comments?



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

Strategies Review

- Resource Requirements
- Schedule



Strategies List

Primary Waste Reduction/Diversion

1. Enhance Reduce and Reuse Potential
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 ICI Recyclables
6. Improve Management of Construction and Demolition Materials

Recovery and Residuals Management

7. Explore Options for Local Disposal
8. Reduce Illegal Dumping
9. Implement Collection/Drop-off for HHW, Bulky Items and Organic Debris
10. Monitor Historic Disposal Sites

Supporting System Resilience

11. Implement Asset Management Plan
12. Develop a Disaster Debris Management Plan
13. Integrate Education and Behaviour Change Best Practices

Strategy 1: Enhance Reduce and Reuse Potential

Components:

- A. Reduce Wasted Food from Residential and 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



Actions	Operating Cost	Timeline
Strategies A-D	\$101,000	2019-2023

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

Components:

- A. Mandate source separation for ICI and multi-family
- B. Adopt A Full Organics Disposal Ban and Enhance Enforcement of Existing Material 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	Embedded	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. Ensure Best Management Practices for odour and leachate management
- B. Ensure Capacity for Local Organics Processing



Actions	Operating Cost	Timeline
Strategy A	\$15,000	2019-2028
Strategy B	Embedded	2021-2028

Strategy 5: Investigate Processing and Transfer Capacity for Recyclables

Components:

- A. Perform a Feasibility Assessment for Development of ICI Transfer Capacity



Actions	Operating Cost	Timeline
Strategy A	\$15,000	2020

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

Components:

A. Explore Options for Local Disposal

Disposal Option	Consideration
Export Off Island	Waste currently shipped to USA for \$140/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. Augment Illegal Dumping Prevention Strategies



Actions	Operating Cost	Timeline
Update Strategies	Embedded	2019-2028

Strategy 9: Implement Collection/Drop-off for HHW, Bulky Items and Organic Debris

Components:

- A. Introduce Collection for HHW
- 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	\$675,000	2020 - 2028
Strategy C	Embedded	2022

Strategy 10: Monitor Historic Disposal Sites

Components:

A. Monitor Historic Disposal Sites



Actions	Operating Cost	Timeline
Annual Monitoring	Embedded	2019 - 2028

Operational Improvements



Strategy 11: Implement Asset Management Plan

- A. Implement Asset Management Plan
- B. Develop Bings Creek Transfer Station 10-Year Plan



Actions	Operating Cost	Timeline
Strategies A	\$700,000*	2019-2023
Strategy B	\$10,000	2019

*Includes updated O&M costs for existing facilities

Strategy 12: Develop a Disaster Debris Management Plan

A. Develop a Disaster Debris Management Plan



Actions	Operating Cost	Timeline
Disaster Management Plan	\$15,000	2019-2020

Strategy 13: Integrate Education and Behaviour Change Best Practices

- 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 Operating 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
CVRD FINANCIAL PLAN	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
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	\$ 4,694,622	\$ 4,805,002	\$ 4,907,643	\$ 5,245,618	\$ 5,205,432	\$ 5,575,274	\$ 5,493,935	\$ 5,608,298	\$ 5,895,110	\$ 5,937,514
Surplus/(Deficit)	\$ 340,284	\$ 170,855	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfer from Capital Reserve	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfer from Operating Reserve	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
User Fee	\$ 3,964,624	\$ 4,012,670	\$ 6,904,030	\$ 6,973,792	\$ 7,045,146	\$ 7,118,128	\$ 7,192,770	\$ 7,269,105	\$ 7,347,164	\$ 7,426,984
TOTAL OPERATING REVENUE	\$ 9,963,272	\$ 9,965,727	\$ 12,882,548	\$ 13,224,182	\$ 13,269,472	\$ 13,726,649	\$ 13,734,535	\$ 14,020,054	\$ 14,319,988	\$ 14,457,521
EXPENDITURES										
Existing Operating Expenditures										
Curbside Collection - Garbage	\$ 781,205	\$ 796,829	\$ 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	\$ 244,456	\$ 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	\$ 786,318	\$ 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	\$ 206,155	\$ 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
Revenue - Expenditures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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 ICI and Multi-Family Residential	\$ 5,000	\$ 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 ICI Recyclables	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
06 Improve Management of Construction and Demolition Material	\$ -	\$ -	\$ 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 Implement Collection/Drop off For HHW, Bulky Items, and Org	\$ -	\$ 175,000	\$ 175,000	\$ 175,000	\$ 175,000	\$ 175,000	\$ 175,000	\$ 175,000	\$ 175,000	\$ 175,000
10 Monitor Historic Disposal Sites	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
11 Implement Asset Management Plan	\$ 115,722	\$ 11,322	\$ 15,042	\$ 146,922	\$ -	\$ 223,423	\$ 14,923	\$ 59,323	\$ 113,323	\$ -
12 Develop a Disaster Debris Management Plan	\$ -	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13 Integrate Education and Behaviour Change Best Practices	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Annual Proposed Operating Expenditures	\$ 173,722	\$ 264,822	\$ 3,051,390	\$ 3,214,170	\$ 3,077,026	\$ 3,348,123	\$ 3,166,210	\$ 3,258,129	\$ 3,360,598	\$ 3,296,714
PROPOSED Capital Expenditures										
No proposed capital expenditures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Annual Proposed Capital Expenditures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Annual Proposed Expenditures	\$ 173,722	\$ 264,822	\$ 3,051,390	\$ 3,214,170	\$ 3,077,026	\$ 3,348,123	\$ 3,166,210	\$ 3,258,129	\$ 3,360,598	\$ 3,296,714
TOTAL OPERATING EXPENDITURES	\$ 9,963,272	\$ 9,965,727	\$ 12,882,548	\$ 13,224,182	\$ 13,269,472	\$ 13,726,649	\$ 13,734,535	\$ 14,020,054	\$ 14,319,988	\$ 14,457,521
TOTAL CAPITAL EXPENDITURES	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL EXPENDITURES	\$ 9,963,272	\$ 9,965,727	\$ 12,882,548	\$ 13,224,182	\$ 13,269,472	\$ 13,726,649	\$ 13,734,535	\$ 14,020,054	\$ 14,319,988	\$ 14,457,521
Revenues - Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Proposed Schedule

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

Proposed Schedule

	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 ICI and Multi-Family Residential										
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 ICI Recyclables										
A Perform a Feasibility Assessment for Development of ICI Transfer Capacity										
06 Improve Management of Construction and Demolition Materials										
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 Explore Options for Local Disposal										
08 Reduce Illegal Dumping										
A Augment Illegal Dumping Prevention Strategies										
09 Implement Collection/Drop off For HHW, Bulky Items, and Organics										
A Implement Collection for HHW										
B Improve Recycling Opportunities for Bulky Items										
C Assess Effective Ways to Reduce Open Burning of Wood Waste										
10 Monitor Historic Disposal Sites										
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11 Implement Asset Management Plan										
A Implement Asset Management Plan										
B Develop Bings Creek Transfer Station 10-Year Plan										
12 Develop a Disaster Debris Management Plan										
A Develop a Disaster Debris Management Plan										
13 Integrate Education and Behaviour Change Best Practices										
A Consider Best Management Practices for Education and Behavior Change Programs										

Next Steps and Consultation



Public Consultation – August and September

Consultation	Consultation Component	Dates
Phase 3 Evaluate the Options	Online Engagement <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>
	In-Person Engagement <ul style="list-style-type: none"> Open Houses Other community outreach and in-person promotion at depots and community events 	<p>August 29, 2-5pm Cowichan Lake Recreational Centre – Multi-Purpose Hall (west) September 11, 5-8pm Cobble Hill Hall (south) September 12, Noon-3pm Saltair Community Hall (north)</p>

Wrap Up and Questions

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