

# CVRD Solid Waste Management Plan Update – Workshop 3



July 16, 2018

# Agenda

- Project Update
- Goal and Target Setting
- Diversion Potential
- Strategy Review
  - Areas of Improvement
  - Implementation (Budget and Timeline)
- Target Setting Revisit
- Next Steps and Consultation

# Today's Goals

- Review and discuss diversion potential, proposed goals and targets set per capita target
- Finalize consensus on strategies by reviewing resourcing, financial implications, and schedule for the Plan
- Revisit and get initial 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

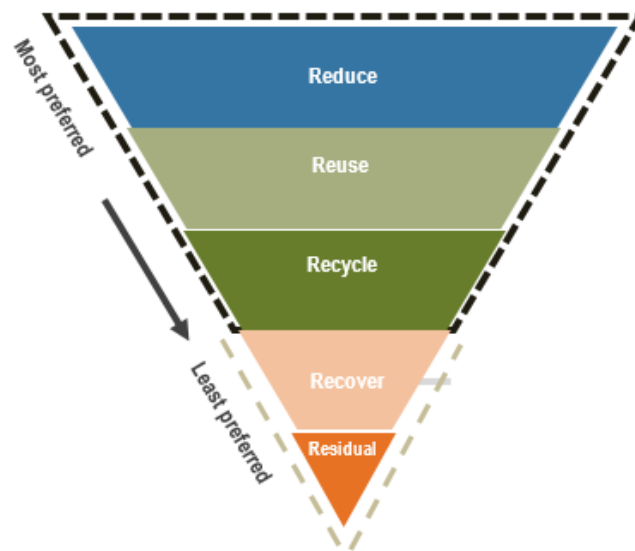


Figure 1-2: Waste Prevention Hierarchy

# 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



## Step 3: Evaluate Strategies

- Develop strategies
- Assess financial and administrative impacts
- Review with PAC Committee to establish plan direction





# Updated Schedule

Workshops

**May 2, 2018**  
Workshop 1:  
Preliminary  
Options

**June 7, 2018**  
Workshop 2:  
Strategies Recap  
and Reframe

**July 16, 2018**  
Workshop 3:  
Strategies, Financial  
Considerations and  
Plan Timelines  
  
Industry Stakeholder  
Session

**Late September**  
Workshop 4:  
Review of Public  
Consultation

PAC Meetings

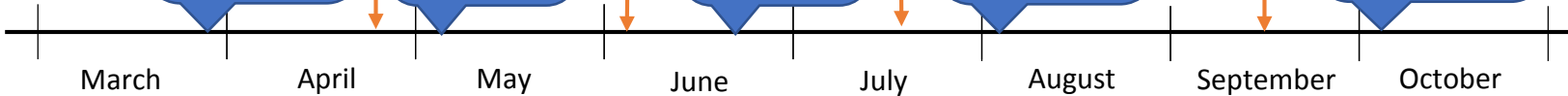
**March 29, 2018**  
PAC Meeting 1:  
Current System  
Status and Gap  
Analysis

**May 10, 2018**  
PAC Meeting 2:  
Disposal, 3 Rs,  
Options  
Development

**June 21, 2018**  
PAC Meeting 3:  
Financial and  
Technical  
Analysis

**August 2, 2018**  
PAC Meeting 5:  
Presentation of  
Draft Plan

**October 4, 2018**  
PAC Meeting 5  
(TBC):  
Approval of Plan  
based on Public  
Consultation



Consultation

**Consultation Phase 1:**

- Update CVRD website
- Establish the PAC

**Consultation Phase 2:**

- Online survey
- Open house

**Consultation Phase 3:**

- 3 Open houses
- Survey (online, phone, and in-person)
- Stakeholder meetings



**October**

- Board Approval
- Submit to Ministry

# Questions or Comments?



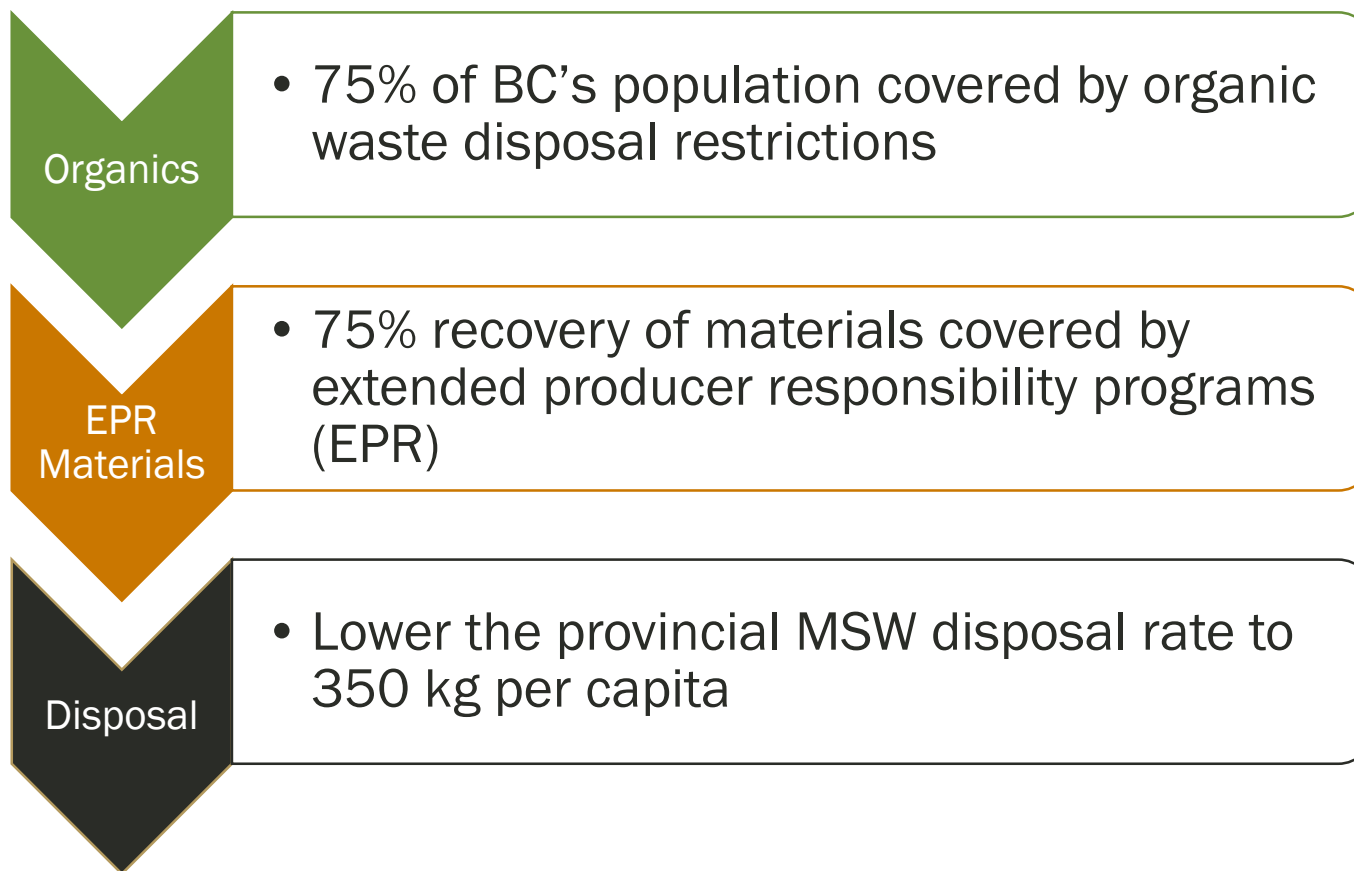
- Questions?
- Comments?
- Clarifications?
- Corrections?



# Goals and Target Setting



# Provincial Targets for 2020



# Diversion Potential and Target Setting

- Diversion potential analyzed for following sectors:
  - Single Family (Municipalities)
  - Single Family (Electoral Areas)
  - Multi-Family Residents
  - Industrial, Commercial, and Institutional
  - Drop Off (Self-hauled) Waste
  - Construction and Demolition Materials



- Current Disposal Rate in CVRD = 358 kg/capita
- Provincial Disposal Target = 350 kg/capita by 2020

# 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.

# Proposed 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

# Target Setting – Proposed 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



# Diversion Potential – 5 year interim target

| Sector<br>(Contribution to Landfill %)                | Diversion Potential<br>out of Landfill<br>(kg/capita) |
|---|---|
| Single-Family (Municipalities) 9%                     | 3.6   |
| Single-Family (Electoral Areas) 14%                   | 15.6  |
| Multi-Family 6%                                       | 4.0   |
| Industrial, Commercial & Institutional 41%            | 49.7  |
| Drop Off 12%  | 4.8   |
| Construction & Demolition 18%                         | 1.0   |
| Potential Additional Diversion from Landfill          | 78  |
| Estimated Annual Disposal<br>(assuming 358 kg/capita) | 280   |

# Diversion Potential – 10 year Plan target

| Sector<br>(Contribution to Landfill %)                | Diversion Potential<br>out of Landfill<br>(kg/capita) |
|---|---|
| Single-Family (Municipalities) 9%                     | 9.2   |
| Single-Family (Electoral Areas) 14%                   | 18.9  |
| Multi-Family 6%                                       | 6.0   |
| Industrial, Commercial & Institutional 41%            | 64.0  |
| Drop Off 12%  | 7.9   |
| Construction & Demolition 18%                         | 1.9   |
| Potential Additional Diversion from Landfill          | 108   |
| Estimated Annual Disposal<br>(assuming 358 kg/capita) | 250   |

# Diversion Potential – long term target

| Sector<br>(Contribution to Landfill %)                | Diversion Potential<br>out of Landfill<br>(kg/capita) |
|---|---|
| Single-Family (Municipalities) 9%                     | 18.4  |
| Single-Family (Electoral Areas) 14%                   | 33.1  |
| Multi-Family 6%                                       | 14.6  |
| Industrial, Commercial & Institutional 41%            | 110.6   |
| Drop Off 12%  | 23.9  |
| Construction & Demolition 18%                         | 6.0   |
| Potential Additional Diversion from Landfill          | 208   |
| Estimated Annual Disposal<br>(assuming 358 kg/capita) | 150   |

## 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 HHW, 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: Reduction and Reuse Opportunities

## 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 | Staffing | Timeline |
|---|----------------|----------|----------|
| <b>CVRD Coordination for above components</b> | \$55,000       | 1 FTE    | 2019     |

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

## Components:

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



| Actions          | Operating Cost | Staffing | Timeline    |
|------------------|----------------|----------|-------------|
| Strategies A & B | \$30,000       | 1 FTE    | 2019 - 2021 |
| Strategy C       | \$50,000       | 2 FTE    | 2020 - 2022 |

## Strategy 3: Reduce Disposal from Residential Sector

### Components:

- A. Provide equal access to publicly funded recycling programs
- B. Expand universal collection services to be consistent across the Region



| Actions    | Capital Cost | Staffing | Timeline                    |
|------------|--------------|----------|-----------------------------|
| Strategy A | \$7,000,000  | 1 FTE    | 2019 (plan)<br>2023 (build) |
| Strategy B | \$2,200,000  | 2 FTE    | 2020                        |

## Strategy 4: Improve Organics Processing

### Components:

- A. Best Management Practices for odour and leachate management
- B. Ensure priority and markets for locally-generated organics processing
- C. Standardize and enforce design criteria and limits to protect environment and public



| Actions        | Operating Cost | Staffing | Timeline    |
|----------------|----------------|----------|-------------|
| Strategy A & B | \$55,000       | 1 FTE    | 2019 - 2020 |
| Strategy C     | \$15,000       | -        | 2021        |

# Strategy 5: Investigate Processing and Transfer Capacity for Recyclables

## Components:

- A. Feasibility Assessment for a Material Recycling Facility (MRF)
- B. Feasibility Assessment for Transfer Capacity for ICI Recyclables



| Actions    | Capital Cost | Staffing | Timeline |
|------------|--------------|----------|----------|
| Strategy A | \$20,000     | 0.25 FTE | 2021     |
| Strategy B | \$15,000     | 0.25 FTE | 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 | Staffing | Timeline    |
|------------------|----------------|----------|-------------|
| Strategies A & B | \$30,000       | 1 FTE    | 2022        |
| Strategy C       | \$100,000      |          | 2020 - 2028 |



# Recovery and Residuals Management



# Strategy 7: Residuals Management

## Explore Options for Disposal

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

| Actions                        | Capital Cost | Staffing | Timeline |
|--------------------------------|--------------|----------|----------|
| Disposal Options<br>Assessment | \$50,000     | -        | 2022     |

# Strategy 8: Augment Illegal Dumping Prevention Strategies

## 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 | Capital Cost | Staffing | Timeline    |
|-------------------|----------------|--------------|----------|-------------|
| Update Strategies | \$10,000       | -            | 0.5 FTE  | 2019 & 2023 |

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

## Components:

- A. Round Up Event for Household Hazardous Waste
- B. Collection for Bulky Items
- C. Effective Ways to Reduce Open Burning of Wood Waste



| Actions          | Operating Cost | Capital Cost | Staffing | Timeline    |
|------------------|----------------|--------------|----------|-------------|
| Strategies A & B | \$300,000      | -            | 0.5 FTE  | 2019 - 2028 |
| Strategy C       | \$115,000      | -            | 0.25 FTE | 2019 - 2028 |

# Strategy 10: Monitor Historic Disposal Sites

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



| Actions           | Operating Cost | Capital Cost | Staffing | Timeline    |
|-------------------|----------------|--------------|----------|-------------|
| Annual Monitoring | -              | \$50,000     | 0.25 FTE | 2019 - 2028 |

# Operational Improvements



## Strategy 11A: Asset Management Plan

Conduct an asset management planning process to document the future needs and identify resource requirements of the solid waste management system.



| Actions               | Capital Cost | Staffing | Timeline    |
|-----------------------|--------------|----------|-------------|
| Asset Management Plan | \$100,000    | 0.25 FTE | 2023 - 2026 |

# Strategy 11B: Bings Creek Transfer Station 10-Year Plan

Develop 10-year site management plan for the Bings Creek waste management facility



| Actions      | Capital Cost | Staffing | Timeline |
|--------------|--------------|----------|----------|
| 10-year Plan | \$40,000     | 0.25 FTE | 2023     |



## Strategy 12: Disaster Debris Management Plan

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



| Actions                  | Capital Cost | Staffing | Timeline |
|--------------------------|--------------|----------|----------|
| Disaster Management Plan | \$20,000     | 0.25 FTE | 2023     |

# Strategy 13: Education and Behaviour Change

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



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

# Budget Summary

- Current Operating Budget
  - \$9.6M
- Proposed New Budget – 10 year aggregated
  - Operating Budget = \$5.3M
  - Capital Budget = \$8.7M (conceptual)
- Combined Operating Budgets (current and proposed)
  - \$11 to \$14M (annually)

# Proposed Schedule

- Corresponds to budget
- Staff resource allocation to be finalized
- Legend

|                 |
|-----------------|
| Operating Costs |
| Capital Costs   |
| Labour Only     |

|   | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
|---|------|------|------|------|------|------|------|------|------|------|
| <b>1. Explore Reduce and Reuse Opportunities</b>  |      |      |      |      |      |      |      |      |      |      |
| A. Explore Reduce and Reuse Opportunities - RES and ICI   |      |      |      |      |      |      |      |      |      |      |
| i. Promote Residential Food Waste Reduction; and/or   |      |      |      |      |      |      |      |      |      |      |
| ii. Build Local Food Rescue Capacity for the ICI Sector   |      |      |      |      |      |      |      |      |      |      |
| 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   |      |      |      |      |      |      |      |      |      |      |
| <b>2. Reduce Disposal from Multi-Family Residential and ICI</b>   |      |      |      |      |      |      |      |      |      |      |
| A. Mandate Source Separation for Multi-family and ICI   |      |      |      |      |      |      |      |      |      |      |
| B. Review most efficient and effect means for ensuring collection services are available for multi-family and ICI sector          |      |      |      |      |      |      |      |      |      |      |
| C. Adopt a full organics disposal ban and enhance enforcement of existing material disposal bans                                  |      |      |      |      |      |      |      |      |      |      |
| <b>3. Reduce Disposal from Residential Sector</b>   |      |      |      |      |      |      |      |      |      |      |
| A. Provide Equal Access to Publicly Funded Recycling Programs   |      |      |      |      |      |      |      |      |      |      |
| i. Develop a Public Recycling Centre in the South End;  |      |      |      |      |      |      |      |      |      |      |
| OR Expand Agreements between CVRD and Private Facilities in the South End   |      |      |      |      |      |      |      |      |      |      |
| B. Expand Universal Curbside Collection Services to be Consistent Across the Region   |      |      |      |      |      |      |      |      |      |      |
| i. Expand curbside garbage collection to all single-family households currently receiving recycling (provide by CVRD)             |      |      |      |      |      |      |      |      |      |      |
| OR contract curbside garbage collection to private hauler   |      |      |      |      |      |      |      |      |      |      |
| ii. Add weekly curbside organics collection including food scraps for all CVRD residents (e.g. electoral areas) (provide by CVRD) |      |      |      |      |      |      |      |      |      |      |
| OR contract curbside organics collection to private hauler  |      |      |      |      |      |      |      |      |      |      |
| iii. Determine most effective cart/container size limits to meet customer service needs while promoting diversion                 |      |      |      |      |      |      |      |      |      |      |

|   | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
|---|------|------|------|------|------|------|------|------|------|------|
| <b>4. Improve Organics Processing</b>   |      |      |      |      |      |      |      |      |      |      |
| A. Ensure Use of Best Management Practices for Odour Management                 |      |      |      |      |      |      |      |      |      |      |
| B. Ensure Priority for Locally-Generated Organics Processing                    |      |      |      |      |      |      |      |      |      |      |
| C. Standardize Design Criteria and Limits to Protect Environment and Public     |      |      |      |      |      |      |      |      |      |      |
| <b>5. Investigate Processing and Transfer Capacity for Recyclables</b>          |      |      |      |      |      |      |      |      |      |      |
| A. Feasibility Assessment for a Material Recycling Facility (MRF)               |      |      |      |      |      |      |      |      |      |      |
| B. Feasibility Assessment for Transfer Capacity for ICI Recyclables             |      |      |      |      |      |      |      |      |      |      |
| <b>6. Improve Management of Construction and Demolition (C&amp;D) Materials</b> |      |      |      |      |      |      |      |      |      |      |
| 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                             |      |      |      |      |      |      |      |      |      |      |
| <b>7. Explore Options for Local Disposal</b>                                    |      |      |      |      |      |      |      |      |      |      |
| A. Review feasibility of alternative disposal options                           |      |      |      |      |      |      |      |      |      |      |
| <b>8. Reduce Illegal Dumping</b>  |      |      |      |      |      |      |      |      |      |      |
| A. Augment illegal dumping prevention strategies                                |      |      |      |      |      |      |      |      |      |      |
| <b>9. Collection/Drop off For HHW, Bulky Items, and Organics Debris</b>         |      |      |      |      |      |      |      |      |      |      |
| A. Round up events for HHW  |      |      |      |      |      |      |      |      |      |      |
| B. Annual collection for bulky items  |      |      |      |      |      |      |      |      |      |      |
| C. Effective ways to reduce open burning of wood waste                          |      |      |      |      |      |      |      |      |      |      |
| <b>10. Monitor Historic Disposal Sites</b>                                      |      |      |      |      |      |      |      |      |      |      |
| <b>11. Create an Asset Management Plan</b>                                      |      |      |      |      |      |      |      |      |      |      |
| A. Review building and equipment assets and develop an O&M strategy             |      |      |      |      |      |      |      |      |      |      |
| B. Bings Creek Transfer Station 10-Year Plan                                    |      |      |      |      |      |      |      |      |      |      |
| <b>12. Develop a Disaster Debris Management Plan</b>                            |      |      |      |      |      |      |      |      |      |      |
| <b>13. Education and Behaviour Change Considerations</b>                        |      |      |      |      |      |      |      |      |      |      |

## Target Setting

- Revisit Per Capita Disposal (kg/capita/year)



# Target Setting – Proposed 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 to ensure system resilience)
- Long Term Target – 2040
  - 150 kg/capita disposal rate
    - Continued system and behaviour change improvements
    - Zero Waste Community



# Questions or Comments?

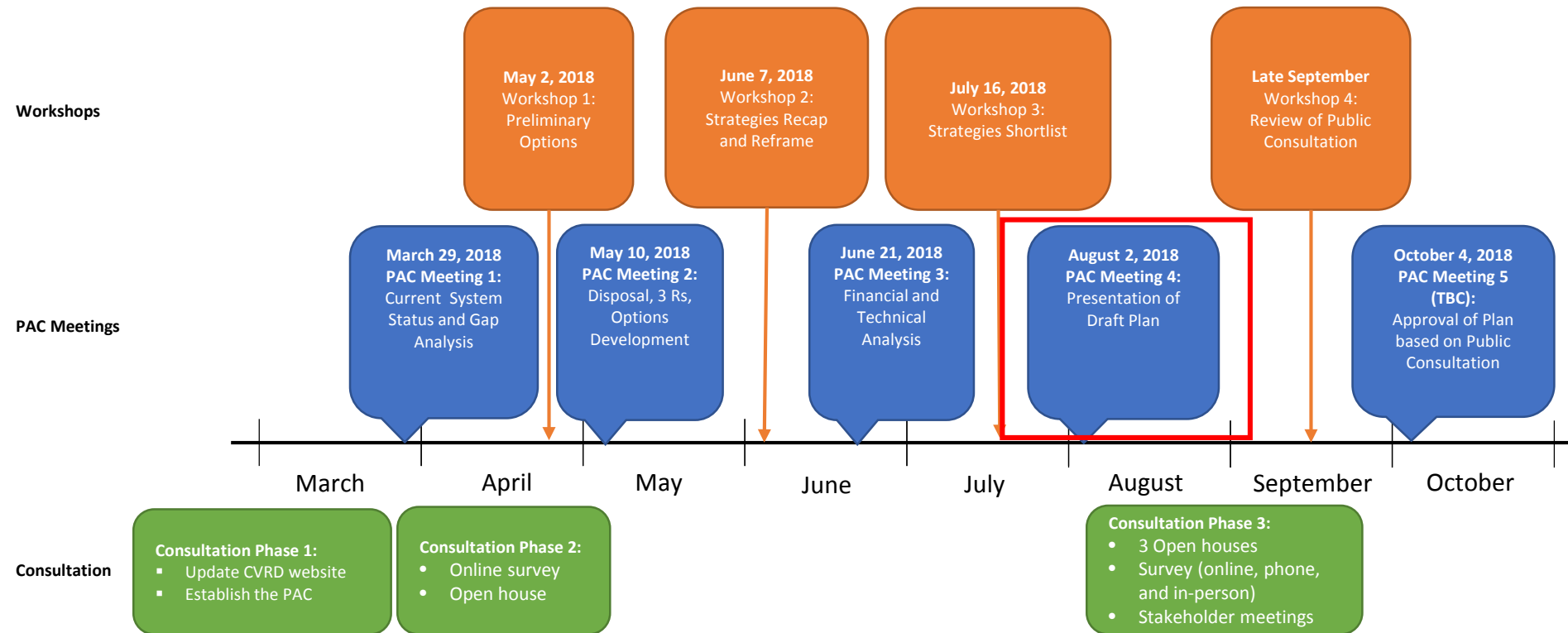


- Questions?
- Comments?
- Clarifications?
- Corrections?

## Next Steps and Consultation



# Updated Schedule



## October

- Board Approval
- Submit to Ministry

## Next Steps

- PAC Meeting 4 – August 2, 2018 (proposed)
  - Presentation of Draft Plan
  - Consultation Implementation Plan Update
- August – September Consultation
  - Factor in holiday timing and election events
  - Explore opportunities to optimize attendance through multiple Department stakeholder engagement
  - Use a multi-faceted approach to reach a diverse audience

# Public Consultation

| Consultation Phase                            | Consultation Component       | Timing Details                    | Estimated Timeline (2018) |
|---|------------------------------|-----------------------------------|---------------------------|
| <b>Phase 1</b><br>Initiation and Notification | CVRD Website Update          | To begin before first PAC meeting | January 31                |
|   | PAC Announcement             |                                   | January 31                |
|   | First Nations Outreach       |                                   | February – March          |
| <b>Phase 2</b><br>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) |
|---|------------------------|-------------------|---------------------------|
| <b>Phase 3</b><br><b>Evaluate the Options</b> | PlaceSpeak             | Post-draft Plan   | August - September        |
|   | Open Houses            |                   |                           |
|   | Social Media Tools     |                   |                           |
|   | Stakeholder Meetings   |                   |                           |
|   | Data Synthesis         | Post-consultation | September                 |
|   | Consultation Summary   | Post-consultation | September                 |

## Wrap Up and Questions

Tamara Shulman

Team Lead – Solid Waste Planning

[Tamara.Shulman@tetratech.com](mailto:Tamara.Shulman@tetratech.com)