




MORRISON HERSHFIELD

## Draft Regional Solid Waste Management Plan for the Peace River Regional District

For Board Consideration



PEACE RIVER  
REGIONAL DISTRICT

August 13, 2020

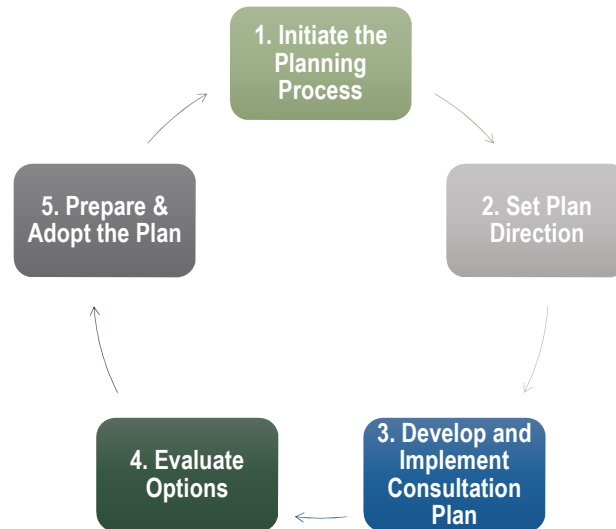
## Outline



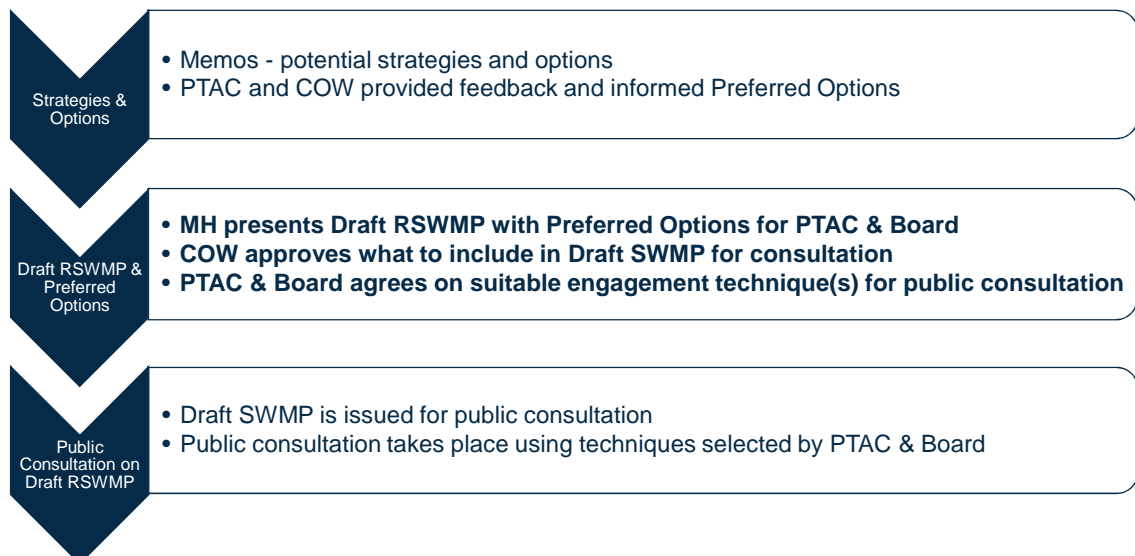
- Background & meeting purpose
- Guiding principles
- Targets
- Proposed strategies
  - Overview
  - Cost and staff impacts
  - Feedback
- Plan targets and monitoring
- Key considerations for strategy development
- Financing and administration
- Next steps - Public Consultation
  - Feedback on engagement techniques



## Overview Plan Review Process



## Meeting Purpose



## Guiding Principles

Promote zero waste approaches and support a circular economy

Promote the first 3 Rs (Reduce, Reuse and Recycle)

Maximize beneficial use of waste materials and manage residuals appropriately

Support polluter and user-pay approaches and manage incentives to maximize behaviour outcomes

Prevent organics and recyclables from going into the garbage wherever practical

Collaborate with other regional districts wherever practical

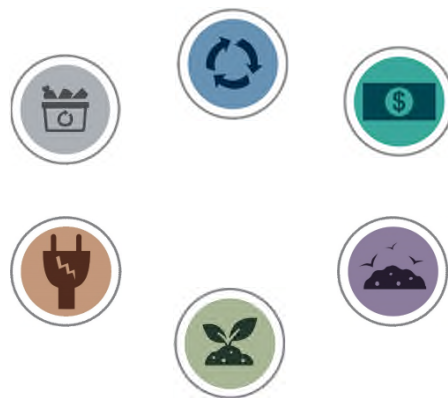
Develop collaborative partnerships with interested parties to achieve regional targets set in plans

Level the playing field within regions for private and public solid waste management facilities



## Preferred Recycling Options

- Waste Diversion:
  - Reduce & Reuse
  - Recycling and Composting
- Energy Recovery
- Residual Management
- Cost Recovery



## Reduce and Reuse



- Per-person waste generation is increasing
- Some products and materials problematic (e.g. single use plastics)
- Lowering waste generation results in reduced need for handling, transportation, processing, and disposal
- PRRD efforts focus on education and share sheds with plan to reuse of construction materials in North Peace Regional Landfill



## Proposed Reduction & Reuse Strategies



| # | Strategy   | Priority             |                       |
|---|--|----------------------|-----------------------|
|   |  | Short Term (1-5 yrs) | Long Term (6-10+ yrs) |
| 1 | Lobby for reduced single-use packaging               | ✓                    |                       |
| 2 | Promote waste reduction and reuse ideas to residents | ✓                    | ✓                     |
| 3 | Support repair events                                |                      | ✓                     |
| 4 | Adopt a green procurement policy                     |                      | ✓                     |

- Implementation costs:
  - Small impact on PRRD staffing (70 hrs short term and 150 hrs long term)
  - Annual operating cost <\$10,000
  - No capital costs



# Proposed Reduction & Reuse Strategies



- 1A. Lobby for a provincial EPR program for single-use items via organizations like the North Central Local Government Association and the Union of British Columbia Municipalities (UBCM).
- 1B. Lobby the federal government to address single-use items at a national level.



Year 1-5

\$

CapEx: \$n/a  
OpEx: \$n/a  
Staffing: 20 hrs/yr

Responsibility: PRRD

- 3A. Host, organize and/or support repair activities through for example repair cafés, "maker spaces", or similar in targeted communities.



Year 6-10

\$

CapEx: \$n/a  
OpEx: \$5,000\*  
Staffing: 60 hrs/yr

Responsibility: PRRD with support from member municipalities.

- 2A. Adopt successful waste reduction campaigns used in other regions to target residents. Implement education programs where feasible
- 2B. Equip each share shed with a "share board" to encourage the reuse of bulky items.



Year 1-10

\$

CapEx: \$n/a  
OpEx: \$2,000\*  
Staffing: 50 hrs/yr

Responsibility: PRRD

- 4A. Adopt a preferential purchasing policy for green procurement that supports the 3Rs (reduce, reuse and recycle), and encourage member municipalities to follow its example.



Year 6-7

\$

CapEx: \$n/a  
OpEx: \$n/a  
Staffing: 40 hrs/yr

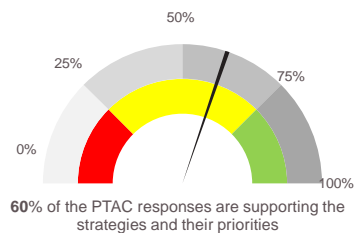
Responsibility: PRRD with support from member municipalities.



# Proposed Reduction & Reuse Strategies

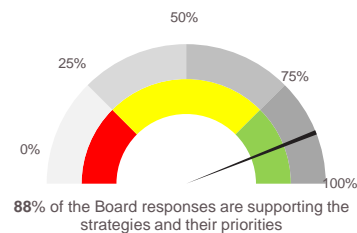


PTAC



- One against Strategy 3
- Some responses wanting different priority for Strategy 1, 2 and 3.

Board



- One against Strategy 3



## Recycling



- The diversion rate has increased from 8% in 2006 to 21% in 2019
- Regional challenge with high recycling costs with limited opportunities for financial support from Recycle BC
- The 2018 waste composition study showed there is still a significant quantity of disposed waste that could be diverted from landfilling



## Proposed Recycling Strategies



| #  | Strategy  | Priority             |                       |
|----|---|----------------------|-----------------------|
|    |   | Short Term (1-5 yrs) | Long Term (6-10+ yrs) |
| 5  | Lobby to influence issues relating to EPR programs                | ✓                    |                       |
| 6  | Educate residents on recyclables management and costs             | ✓                    |                       |
| 7  | Research options for recycling agricultural plastics              | ✓                    |                       |
| 8  | Support ICI sector to divert more recyclables                     | ✓                    | ✓                     |
| 9  | Improve collection of hazardous wastes and targeted EPR materials | ✓                    | ✓                     |
| 10 | Recycling of construction and demolition waste                    | ✓                    | ✓                     |

- Implementation costs:
  - PRRD staffing: 340 hrs short term and 210 hrs long term
  - Annual operating cost: \$2,000 - \$100,000 over the 10 yrs
  - No capital costs





# Proposed Recycling Strategies



- 5A. Lobby for better service levels for existing EPR materials in rural areas.
- 5B. Lobby for inclusion of new materials, regardless of source (residential or ICI), under the Recycling Regulation. Implement programs at PRRD facilities, where feasible.



Year 1-5



CapEx: \$n/a  
OpEx: \$n/a  
Staffing: 30 hrs/yr

Responsibility: PRRD

- 7A. Continue to investigate feasibility of recycling agricultural plastics. PRRD will implement pilot when deemed feasible.
- 7 B. If the pilot demonstrates promising results, implement larger scale recycling of agricultural plastics in the Region.



Year 1-5



CapEx: \$n/a  
OpEx: \$n/a  
Staffing: 50 hrs/yr

Responsibility: PRRD

- 6A. Provide clear information to residents on recycling options, including how to segregate materials and what happens to them, and the benefits of recycling. Use enforcement when suitable.
- 6B. Educate residents about the cost of recycling in the Region and on ways residents can help reduce costs.



Year 1-5



CapEx: \$n/a  
OpEx: \$2,000\*  
Staffing: 50 hrs/yr

Responsibility: PRRD

- 8A. Establish an ICI Waste Working Group to develop an overall ICI waste diversion strategy that identifies specific waste diversion initiatives supported by members.
- 8B. Support or organize a waste reduction forum or workshop for targeted businesses.
- 8C. Develop guidance information for organizations on how to redistribute food to people in need rather than wasting.



Year 1-10



CapEx: \$n/a  
OpEx: \$n/a  
Staffing: 80 hrs/yr

Responsibility: PRRD with support from member municipalities.



# Proposed Recycling Strategies



- 9A. Identify cost-effective ways of offering mobile or periodic hazardous wastes and targeted EPR materials collection at locations where service gaps exist. This may include partnering with stewardship or private organizations to support round-up events. PRRD will implement the temporary collection if deemed feasible.
- 9B. Investigate potential partnerships with stewardship organizations to offer permanent drop-off of hazardous wastes and targeted EPR materials at locations where service gaps exist. PRRD will pilot a permanent collection and establish more permanent drop-off options if it is deemed feasible.



Year 1-10



CapEx: \$n/a\*  
OpEx: \$100,000\*\*  
Staffing: 80 hrs/yr

Responsibility: PRRD

- 10A. Increase differential tipping fees and/or introduce disposal bans for landfilled C&D waste to encourage source separation of divertible C&D materials through education and enforcement.
- 10B. Investigate feasibility of recycling additional C&D materials such as drywall and carpets, and implement pilot when deemed feasible.
- 10C. If there is interest, support member municipalities that have permitting processes to require source segregation of C&D wastes for acceptance at PRRD's landfills.



Year 1-10



CapEx: \$n/a  
OpEx: \$n/a  
Staffing: 50 hrs/yr

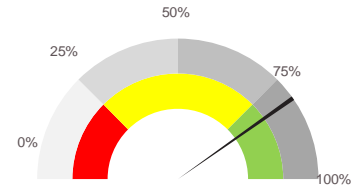
Responsibility: PRRD and member municipalities.



## Proposed Recycling Strategies



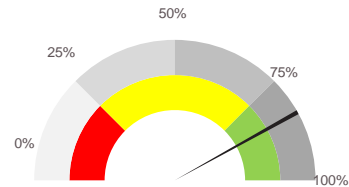
### PTAC



80% of the PTAC responses are supporting the strategies and their priorities

- One against Strategy 6, 7 and 10
- Some responses wanting different priority for Strategy 7, 8, and 10

### Board



83% of the Board responses are supporting the strategies and their priorities

- Two against Strategy 9



## Organics Diversion



- Yard and wood waste accepted at all three PRRD landfills, Tier 1 Transfer Stations and at the Hudson's Hope and Tumbler Ridge Transtor.
- Vermicomposting is being piloted by the PRRD
- Other composting initiatives: City of Dawson Creek, City of Fort St. John, Sauleau First Nation community
- Compostable organics made up 31% overall waste across all sources in 2018





# Proposed Organics Diversion Strategies



| #  | Strategy   | Priority             |                       |
|----|--|----------------------|-----------------------|
|    |  | Short Term (1-5 yrs) | Long Term (6-10+ yrs) |
| 11 | Establish organics processing capacity in the Region                         | ✓                    |                       |
| 12 | Support curbside collection of compostable organics in member municipalities | ✓                    | ✓                     |

## Implementation costs:

- PRRD staffing: 180 hrs short term and 30 hrs long term
- Operating cost: \$100,000 in consulting support in year 2
- Capital costs to be determined in feasibility assessments
- External funding may offset some costs



# Proposed Organics Diversion Strategies



11A. Pilot small-scale composting processes at PRRD's facilities and establish larger scale processes at suitable sites if pilot is deemed successful and cost-effective.

11B. Reassess the feasibility of a large scale organics processing facility (such as a Regional AD Facility) and how it compares with small-scale solutions.

11C. PRRD will implement small-scale composting processes and/or a large scale organics processing facility if deemed feasible.

Responsibility: PRRD and member municipalities.



Year 1-5



CapEx: \$n/a  
OpEx: \$100,000\*  
Staffing: 150 hrs/yr

12A. Support the implementation of curbside organic waste collection with existing curbside collection services in member municipalities when composting solutions are proven.

Responsibility: PRRD and member municipalities.



Year 1-10



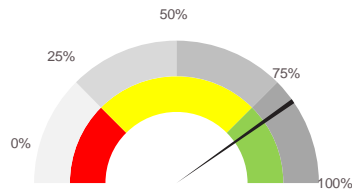
CapEx: \$n/a  
OpEx: \$n/a  
Staffing: 30 hrs/yr



## Proposed Organics Diversion Strategies



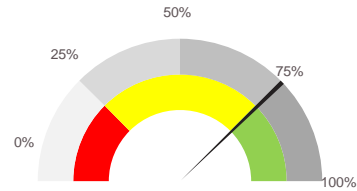
### PTAC



80% of the PTAC responses are supporting the strategies and their priorities

- One against Strategy 12
- One response wanting different priority for Strategy 12

### Board



75% of the Board responses are supporting the strategies and their priorities

- One against Strategy 12



## Proposed Energy Recovery Strategies



| #  | Strategy   | Priority             |                       |
|----|--|----------------------|-----------------------|
|    |  | Short Term (1-5 yrs) | Long Term (6-10+ yrs) |
| 13 | Assess suitability of technologies for energy recovery for organics in the Region                      | ✓                    |                       |
| 14 | Assess suitability of technologies for energy recovery for non-recyclable materials and residual waste | ✓                    |                       |

### Implementation costs:

- PRRD staffing: 300 hrs short term
- Operating cost: \$100,000 - \$200,000 in year 1-4 in consulting support
- Capital costs to be determined in feasibility assessments



# Proposed Energy Recovery Strategies



13A. Re-assess option to process organic waste (including biosolids) at a Regional AD facility after small-scale composting pilot results are available. If deemed feasible, pursue AD facility with procurement process to canvas interest from vendors.

13B. If deemed necessary, collaborate with member municipalities to implement bylaw amendments in order to secure organic feedstock for an AD facility.



Year 1-5



CapEx: \$n/a  
OpEx: \$100,000\*  
Staffing: 150 hrs/yr

Responsibility: PRRD and member municipalities.

14A. Assess feasibility of establishing a Regional Energy Recovery Facility (RERF) for non-recyclable materials and residual waste with potential to accept waste from neighbouring regions/province. If feasible, solicit interest from potential vendors and establish a process for evaluating and selecting a suitable technology or process.

14B Undertake an assessment and comparison of waste management and disposal options in accordance with Ministry requirements.

14C If an RERF is not feasible, consider out-of-region resource recovery facilities as potential future solutions for managing a portion of the Region's waste stream, as long as these options do not compromise local waste diversion initiatives



Year 1-5



CapEx: \$n/a  
OpEx: \$100,000\*  
Staffing: 150 hrs/yr

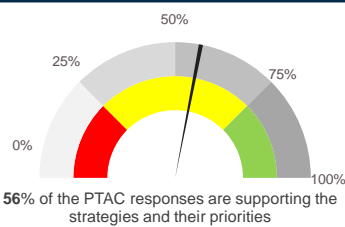
Responsibility: PRRD



# Proposed Energy Recovery Strategies

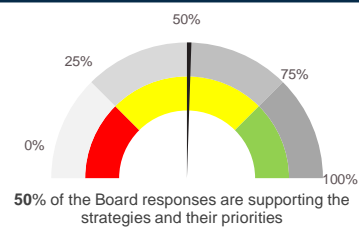


## PTAC



- Two against Strategy 13
- One against Strategy 14
- One response wanting different priority for Strategy 13

## Board



- One against Strategy 13
- One against Strategy 14



# Residual Waste Management



- PRRD's current initiatives include providing:
  - Network of facilities (landfills, transfer stations, transfer sites, Transfer sites and unattended sites)
  - Key initiatives to prevent illegal dumping, such as:
    - Providing opportunities for free garbage disposal (e.g. clean-up coupons, clean-up events)
    - Replacing unattended sites with manned facilities



## Proposed Residual Management Strategies



| #  | Strategy  | Priority             |                       |
|----|---|----------------------|-----------------------|
|    |   | Short Term (1-5 yrs) | Long Term (6-10+ yrs) |
| 15 | Review efficiency of the solid waste facility network                                       | ✓                    |                       |
| 16 | Improve accessibility to waste management services  | ✓                    |                       |
| 17 | Close Chetwynd Landfill and establish a transfer station                                    | ✓                    |                       |
| 18 | Develop an illegal dumping strategy   | ✓                    | ✓                     |
| 19 | Continually review the risks to North Peace Regional Landfill and close if deemed necessary | ✓                    | ✓                     |
| 20 | Assess suitability of offering curbside collection in rural areas                           |                      | ✓                     |
| 21 | Develop an emergency debris management plan   |                      | ✓                     |

- Implementation costs:
  - PRRD staffing: 310 hrs short term and 280 hrs long term
  - Annual operating cost: \$20,000 - \$70,000 in consulting support
  - Capital costs: \$3 million for Chetwynd Landfill closure & new transfer station



## Proposed Residual Management Strategies



15A. Regularly assess the efficiency of the waste management network and implement changes when cost savings are identified.



Year 1-5

\$

CapEx: \$n/a  
OpEx: \$20,000  
Staffing: 40 hrs/yr

Responsibility: PRRD

17A. In parallel with operating the Chetwynd Landfill, complete a review of the type and size of transfer station required to transfer waste to other facilities including reviewing transfer / transport options. Once the requirements for the transfer station have been confirmed by the review, proceed with procurement to establish transfer station prior to landfill closure.



Year 1-10

\$

CapEx: \$3,000,000\*  
OpEx: \$50,000\*\*  
Staffing: 100 hrs/yr

Responsibility: PRRD

17B. Consider options to continue to operate as a landfill for demolition and land clearing waste.

16A. Regularly review the needs to consolidate sites and replace unmanned disposal sites with constructing manned transfer stations with diversion options where deemed suitable in order to improve waste management services.



Year 1-5

\$

CapEx: \$n/a\*  
OpEx: \$n/a  
Staffing: 60 hrs/yr

Responsibility: PRRD

16B. Undertake a pilot to provide 24 hr access for free disposal of bagged household garbage at a transfer station and implement at more sites if deemed feasible (Links with Strategy 24 to harmonize residential rates). Implement initiative across the wider network of facilities.

18A. Establish an inter-agency working group and develop an illegal dumping strategy aimed to improve tracking and reduce the number of illegal dumping incidents.



Year 1-10

\$

CapEx: \$n/a  
OpEx: \$20,000  
Staffing: 100 hrs/yr

Responsibility: PRRD and member municipalities.

18B. Prepare and implement strategy including assess illegally dumped materials, identify problem areas, assess accessibility to transfer stations, improve public outreach and enforcement.



## Proposed Residual Management Strategies



19A. Continue to monitor risks to North Peace Regional Landfill and plan for early closure if deemed necessary. If landfill closure is deemed necessary, The PRRD will proceed with closure according to provincial regulation.



Year 1-10

\$

CapEx: \$n/a  
OpEx: \$n/a  
Staffing: 10 hrs/yr

Responsibility: PRRD

21A. Develop an Emergency Debris Management Plan.



Year 6-10

\$

CapEx: \$n/a  
OpEx: \$n/a  
Staffing: 50 hrs/yr

Responsibility: PRRD and member municipalities.

20A. Assess the feasibility of a rural curbside collection service and implement if feasible.



Year 6-10

\$

CapEx: \$n/a  
OpEx: \$20,000\*  
Staffing: 20 hrs/yr

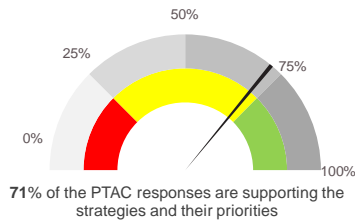
Responsibility: PRRD and electoral areas.



## Proposed Residual Management Strategies

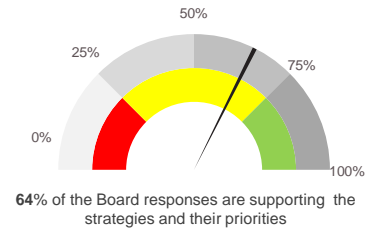


### PTAC



- One against Strategy 17 and 19
- Two against Strategy 20
- Some responses wanting different priority for Strategy 16, 17, 19 and 21

### Board



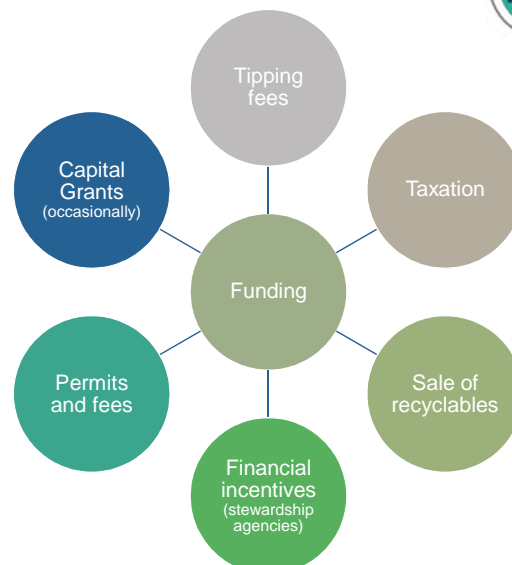
- One against Strategy 17, 18, 20 and 21
- One response wanting different priority for Strategy 16



## Solid Waste Management Funding



- Operating budget varies: \$11 - \$14 million
- Capital budget varies: \$2 - \$7 million
- Majority of funding from taxation and tipping fees
- Challenging to provide a cost effective services across a large network of solid waste facilities





## Proposed Solid Waste Management Funding Strategies



| #  | Strategy  | Priority             |                       |
|----|---|----------------------|-----------------------|
|    |   | Short Term (1-5 yrs) | Long Term (6-10+ yrs) |
| 22 | Assess cost recovery through tipping fees and taxation                                | ✓                    |                       |
| 23 | Incentivize ICI waste diversion by increasing disposal fees                           | ✓                    |                       |
| 24 | Harmonize residential rates for disposal  | ✓                    | ✓                     |
| 25 | Incentivize residential waste diversion by increasing disposal fees on unsorted waste | ✓                    | ✓                     |
| 26 | Set limit on acceptable recycling cost when other management methods are considered   |                      | ✓                     |

### Implementation costs:

- PRRD staffing: 390 hrs short and long term
- Operating cost: \$20,000 - \$30,000 for three occasions of consulting support
- No capital costs



## Proposed Solid Waste Management Funding Strategies



22A. Assess cost recovery model to implement tipping fees and taxation that fully funds the solid waste management system.



Year 1-5

\$

CapEx: \$n/a  
OpEx: \$20,000\*  
Staffing: 40 hrs/yr

Responsibility: PRRD

24A. Investigate and pilot the waiving of tipping fees for sorted residential waste at transfer stations and landfills. Implement system-wide if deemed feasible and fund disposal via taxation.



Year 1-10

\$

24B. Review waste disposal fees paid by First Nation communities in lieu of taxes and adjust to align with PRRD's Regional residential disposal rates.

CapEx: \$n/a  
OpEx: \$30,000\*  
Staffing: 100 hrs/yr

Responsibility: PRRD

23A. Gradually increase ICI disposal fees for sorted waste, unsorted waste, controlled, and restricted waste and carry out education and outreach program(s) to implement changes and improve waste diversion.



Year 1-10

\$

CapEx: \$n/a  
OpEx: \$n/a  
Staffing: 150 hrs/yr

Responsibility: PRRD

25A. Provide education and enforcement to support bylaw implementation.



Year 1-10

\$

CapEx: \$n/a  
OpEx: \$n/a  
Staffing: 100 hrs/yr

Responsibility: PRRD



## Proposed Solid Waste Management Funding Strategies



26A. Establish cost threshold when alternative lower cost options (e.g. landfilling) are pursued until recycling is no longer cost prohibitive.



Year 6-10+



CapEx: \$n/a  
OpEx: \$n/a  
Staffing: 40 hrs/yr

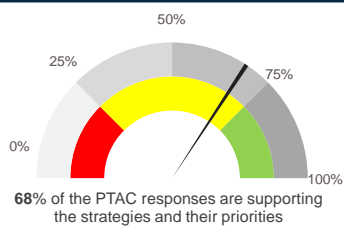
Responsibility: PRRD



## Proposed Solid Waste Management Funding Strategies

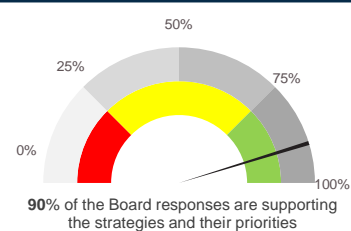


### PTAC



- One against Strategy 22, 23, 24 & 26
- Two against Strategy 25
- One response wanting different priority for Strategy 23 and 24

### Board



- One response wanting different priority for Strategy 24



## Key Considerations for Developing & Assessing Proposed Strategies

### General

- Alignment with existing/ proposed provincial strategies and initiatives
- Potential waste reduction
- Potential challenges administrating policy once introduced
- Opportunity for public-private partnerships
- Flexibility to adapt policy to changing circumstances over time
- Risk of failure

### Environmental

- Linkages to the pollution prevention hierarchy and prioritization of the first 3R
- Facility discharges to the environment and associated environmental risk
- Associated direct and ancillary environmental benefits

### Social

- Associated social benefits
- Ability to create opportunities for new partnerships
- Opportunities for collaboration with neighbouring regional districts
- Opportunities for increased private sector involvement and benefit to the Region



## Plan Financing and Administration



- Staffing implications: One extra FTE needed (first 5 years)
- Estimated annual expenditures ranges from \$7,000 to approximately \$1.5 million for the 10 year period
- Plan components (current and proposed Plan strategies) results in monthly cost to home owners from \$1 to \$42 over the 10 years
- Tipping fees and taxation will be primary mechanisms for funding Plan implementation



## Plan Administration



- Monitoring and governance will be supported by:
  - A Solid Waste Committee (SWC), made up of appointed members of the PRRD's Board of Directors.
  - Plan Monitoring Advisory Committee (PMAC).
- PMAC will oversee Plan implementation and report to the SWC and to the PRRD Board for approval and recommendation for action



## Next Steps – Public Consultation

- The general public was invited to be engaged via a solid waste management survey Sept/Oct 2019
- Public consultation planned in early Fall following Public Consultation Plan presented in November 2019
- A series of open houses was planned to consult and seek public feedback on the draft RSWMP



## Next Steps – Public Consultation

- Are residents willing or permitted under Public Health Order to attend open houses to comment on the draft Plan?
- Alternatives to open houses include:
  - Virtual Open Houses (Webinar) with Q&A
  - Mail Survey (potential to combine with online survey)
  - Targeted phone survey (potential to combine with online survey)



## Next Steps

- Public consultation can be undertaken using a combination of engagement techniques:
  - Initially undertake a mail-out survey and
  - Organize in-person open houses once COVID-19 restrictions are lifted in the Province
- What is the most suitable option for the residents of PRRD?



# Questions? Comments?

## Thanks for your time and input!



**MORRISON HERSHFIELD**

*People • Culture • Capabilities*

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