

Regional Solid Waste Management Plan Review: *Engaging solutions for tomorrow*

Presentation to PAC and TAC

October 18th, 2005



A Tyco International Ltd. Company

Outline



- Overview of Process

- Interim Strategy

- Next Steps

- Questions

Process – Content

Stage 1	
• Summarize current initiatives	✓
• Evaluate success at implementing previous plan	✓
• Develop long list of options for future	✓
Stage 2	
• Select options for implementation	✓
• Develop implementation plans	In progress
• Consultation with the General Public	In preparation
Stage 3	
• Final report, integrating results of Stage 1 and Stage 2	

Purpose of today's meeting



- To present the Interim Strategy Report
- To decide if this is the strategy we want to take to the general public

Interim Strategy Report



- An example of how and when the options could be implemented
- Options are grouped together in phases
- Everything is flexible at this point. We can:
 - ◆ Move options from one phase to another
 - ◆ Remove options that are not feasible
 - ◆ Add options if they have been omitted

A Maximum Diversion Strategy



- The combination of options presented here is a “maximum diversion strategy”
- Diversion means diversion of waste from landfill to other processes such as recycling and composting

Choosing the Programs



- We want to choose programs that protect the environment by diverting waste from landfill to other processes
- Programs need to be financially and operationally realistic
- Programs that are not feasible may be eliminated from the strategy

The Cost Factor



- In general, as diversion from landfill increases, the cost of waste management also goes up
- This is the price we pay in securing a clean environment for the future
- However, there are savings associated with conserving landfill space (i.e., not having to site another landfill or an incinerator)

User-Pay



- The cost of waste management is paid by the residents and businesses that generate the waste
 - ◆ For residents by means of utility bills or through general taxes
 - ◆ For businesses through the cost of hauling and disposing of waste
- Similar to how we all pay for other programs and services like electricity, sewer and water systems, etc.

Financial Analysis

- Costs associated with programs and services should be distributed in an equitable fashion between the municipalities and electoral areas in the RDCO
- A financial modeling exercise could be carried out to determine how this could be achieved
- This will be expanded upon in the relevant sections of the revised Plan

Education and Social Marketing



- Essential elements in making any waste management program successful
- All of the options described in the following sections would feature an integral education component

Zero Waste - A vision for our future



- Zero Waste is a “whole system” approach that:
 - ◆ Encourages reduced consumption
 - ◆ Maximizes recycling
 - ◆ Minimizes waste
 - ◆ Ensures products are made to be reused, repaired or recycled back into nature or the marketplace

What is a whole system approach?

- Redesigning a product to use fewer raw materials
- Finding new markets that use waste as an input to a process so that the waste becomes a resource rather than a problem
- On a personal level it might mean changing purchasing habits to avoid buying items with excess packaging, thereby avoiding waste before it happens

Zero Waste – Some Examples



- Communities that have adopted zero waste include Halifax, Toronto, Seattle and Nelson
- Regional Districts include Nanaimo, Cowichan Valley and Kootenay-Boundary
- Toyota adopted a zero waste policy in 2000 and reduced waste by 95%

Zero Waste – A target for the RDCO?



- In Nova Scotia, waste disposal to landfill per capita is 435 kg per person per annum
- It was 820 kg per person per annum in the RDCO in 2004
- By choosing zero waste as a goal we can focus on reducing waste disposal per capita

Product Stewardship Programs



- In British Columbia, product stewardship is regulated by the provincial government
- Programs are in place for
 - ◆ Beverage containers
 - ◆ Pharmaceuticals
 - ◆ Household hazardous waste
 - ◆ Used oil
 - ◆ Batteries
 - ◆ Tires

Product Stewardship Programs



- The RDCO can lobby the provincial government to expand the list of products governed by product stewardship regulations
- In the meantime, the RDCO can continue to support recycling programs such as Household Hazardous Waste Days and E-Waste Collection events

The Strategy



Phase 1 – Programs that can be implemented in the short term and expansion of existing programs.

Phase 2 - More aggressive waste diversion programs that could be implemented in the medium term.

Phase 3 - Alternatives to landfill that could be adopted in future plan revisions.

Phase 1



- Includes programs that can be implemented in the short term
- The short term might be anywhere from zero to seven years
- Many of the options in Phase 1 involve enhancing already-existing programs so that waste diversion from landfill is increased

Further Bag Limits

- Reduce from the existing two-bag limit
- Householders would have to pay for additional bags of garbage
- Supplement by enhancing recycling and composting programs



Improve Blue Bag Recycling

- Encourage by reducing garbage bag limits
- Current blue bag collection in the RDCO is 0.17 t/hh/a
- Blue bag collection in Edmonton is 0.21 t/hh/a
- Target for the RDCO could be 0.19 t/hh/a in Phase 1

Additional Waste Diversion	1150 tonnes
Reduction in landfill	1%
Cost per tonne of diversion	\$89
Total cost of program	\$100,000

Blue Bag Recycling – Add plastics

Additional Waste Diversion	192 tonnes
Reduction in landfill	0.1%
Cost per tonne of diversion	\$930
Total cost of program	\$180,000



No Yard Waste in the Garbage

Additional Waste Diversion	5700 tonnes
Reduction in landfill	4.3%
Cost per tonne of diversion	\$137
Total cost of program	\$140,000



Keep yard waste out of the garbage?

Encourage Home Composting

Additional Waste Diversion	15 tonnes per 100 households
Reduction in landfill	0.1% for 100 households
Cost per tonne of diversion	\$0
Total cost of program	\$0



**Encourage
home
composting?**

Collect from Multi-Family

Additional Waste Diversion	2000 tonnes
Reduction in landfill	1.5 %
Cost per tonne of diversion	\$89
Total cost of program	\$176,000



Offer Local Government collection service to multi-family?

Ban ICI Yard waste in Landfill

- ICI – Industrial, Commercial and Institutional
- Most of ICI yard waste is already composted at Glenmore Landfill
- 2002 waste composition study shows 5000 tonnes of ICI yard waste being disposed (this could be reduced by now)

Additional Waste Diversion	3200 tonnes
Reduction in landfill	3.4%
Cost per tonne of diversion	\$32
Total cost of program	\$102,000

ICI Paper and Cardboard Ban

- There is currently a ban on the disposal of paper and cardboard at landfills
- The RDCO are now adopting a Bylaw that will help to improve compliance with the ban
- Costs incurred by private sector rather than by Local Government

Additional Waste Diversion	5000 tonnes
Reduction in landfill	4%
Cost per tonne of diversion	\$0
Total cost of program	\$0

Variable Tipping Fee for DLC

- DLC – Demolition, Land Clearing and Construction
- High portion of DLC materials are recyclable
- Waste haulers pay more for mixed waste than for recyclables
- RDCO pilot project was hugely successful diverting 85% of DLC waste from landfill

Additional Waste Diversion	18,000 tonnes
Reduction in landfill	13%
Cost per tonne of diversion	\$20
Total cost of program	\$340,000

Summary of Phase 1

Additional diversion from landfill	35,000 tonnes
Reduction in landfill	26%
Additional cost to Local Government for diversion programs	\$1,680,000
Additional general waste management costs	\$40,000
Landfill space saved	25,000 m ³
Savings in disposal and collection	\$420,000
Net cost to Local Government	\$1,300,000

Phase 2

- Includes options that could be implemented in the medium term
- Medium term could be loosely defined as eight to fifteen years after plan adoption
- Options are more aggressive in terms of waste diversion from landfill than the Phase 1 options

Collection & Composting of Residential Food Waste

Additional Waste Diversion	8000 tonnes
Reduction in landfill	8%
Cost per tonne of diversion	\$135
Total cost of program	\$1,000,000



San Francisco's Fantastic Three

Composting of ICI Food Waste

- Compost facility could be operated by Local Government or the private sector
- Costs shown assume composting is done by Local Government along with the residential food waste

Additional Waste Diversion	8500 tonnes
Reduction in landfill	8.5%
Cost per tonne of diversion	\$50
Total cost of program	\$420,000

Ban on Disposal of Recyclables

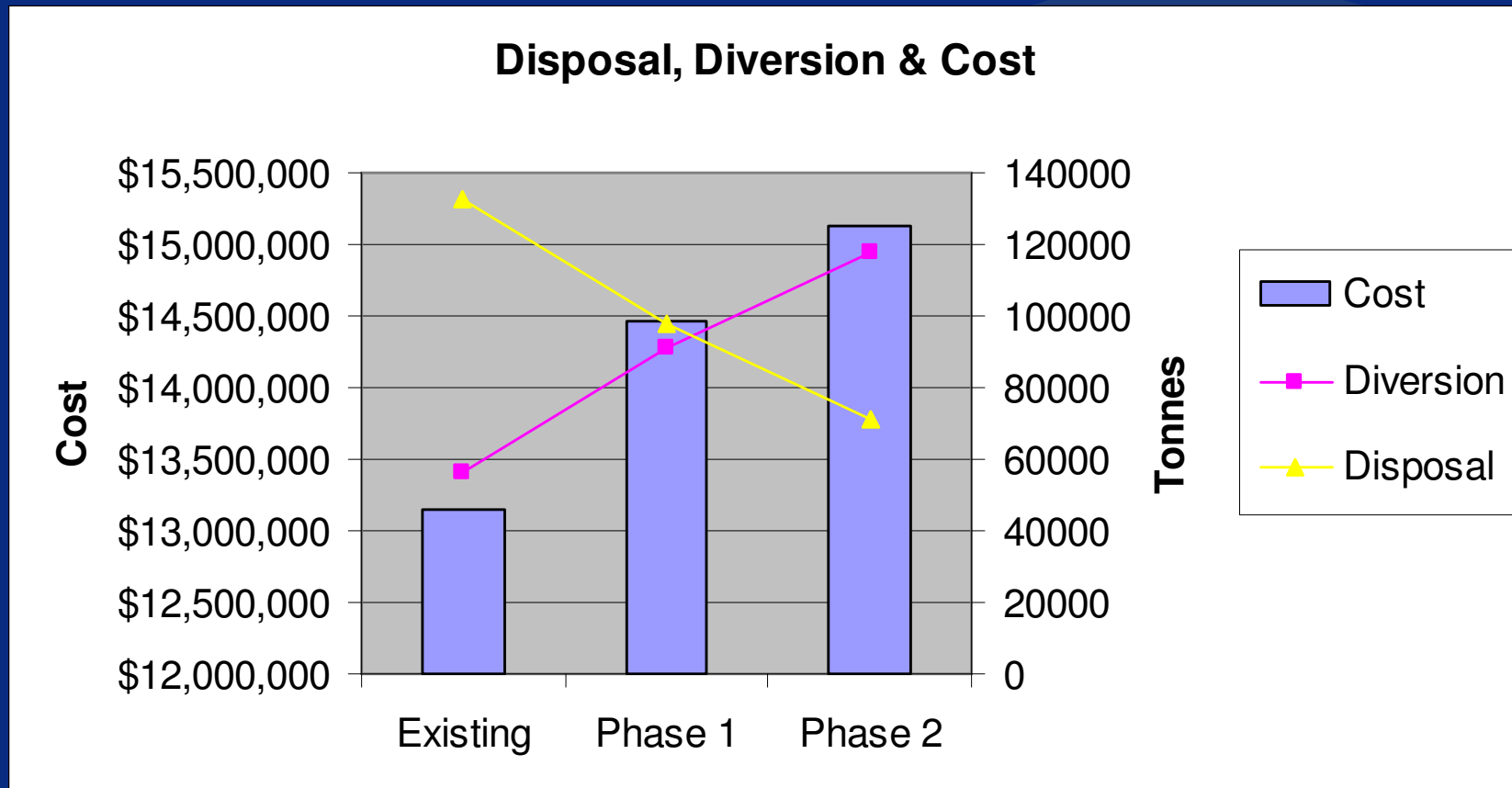
- For all materials where an alternative outlet exists, a disposal ban could be introduced at the landfill
- Blue bag recyclables, ICI recyclables (including metals and plastics) and DLC recyclables
- This is the current practice in Nova Scotia

Additional Waste Diversion	10,500 tonnes
Reduction in landfill	11%
Cost per tonne of diversion	\$21
Total cost of program	\$217,000

Summary of Phase 2

Additional diversion from landfill	27,000 tonnes
Reduction in landfill	27%
Additional cost to Local Government of diversion programs	\$1,700,000
Additional general waste management costs	\$40,000
Landfill space saved	19,000 m ³
Savings in disposal and collection	\$1,000,000
Net cost to Local Government	\$740,000

Existing, Phase 1 & Phase 2.



Per Capita Disposal



Existing: 0.82 Tonnes/Person/Annum

Phase 1: 0.60 Tonnes/Person/Annum

Phase 2: 0.44 Tonnes/Person/Annum

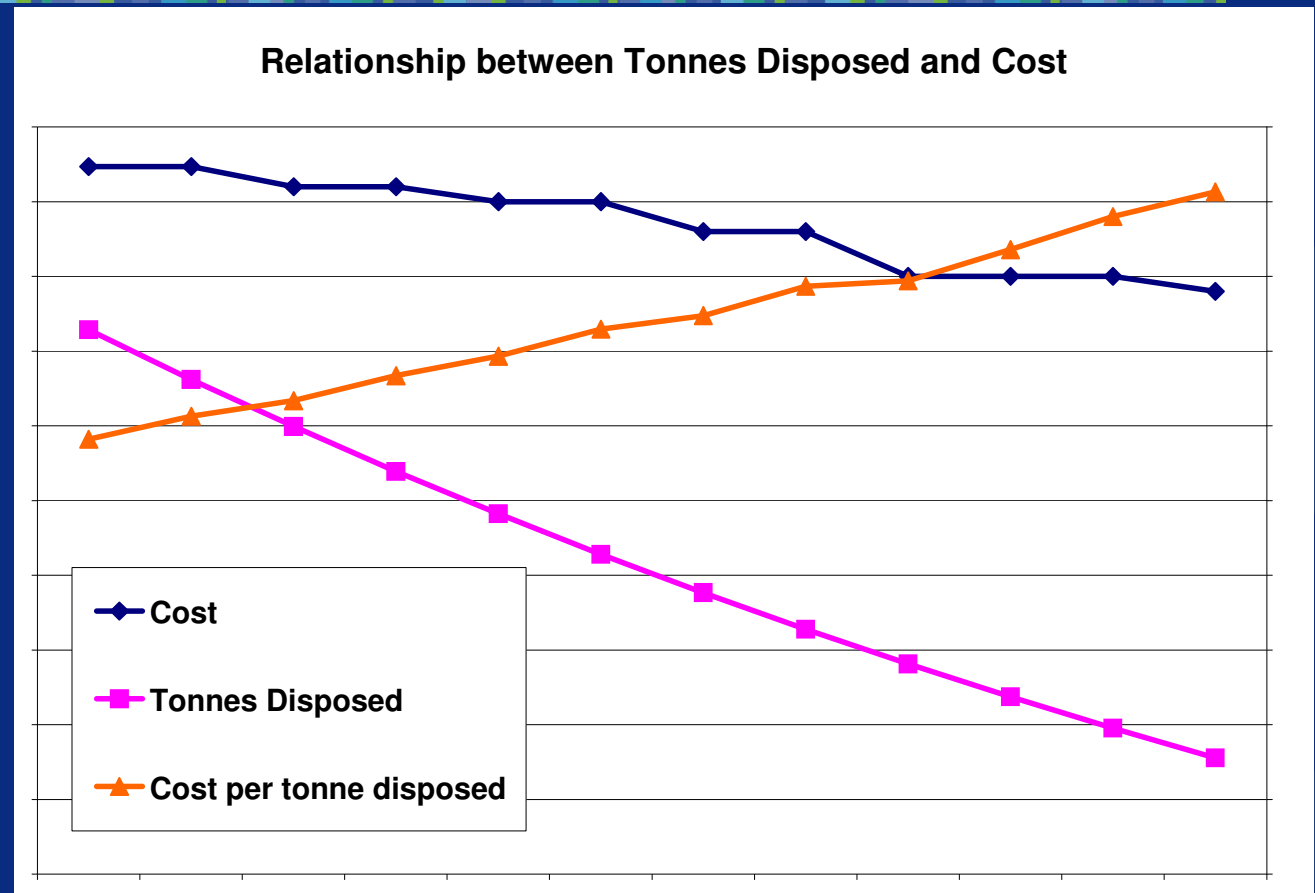
Phase 2 would put the RDCO on a par with current waste disposal rates in Nova Scotia

Disposal of Residuals

- Throughout Phases 1 and 2 the use of operating best practices would be maintained for disposal of residuals to Glenmore and Westside Landfills
- The feasibility of increasing landfill gas utilization would be explored
- Mechanisms by which the lifespan of the Glenmore Landfill could be extended would be investigated

Keep in mind...

As waste going into the landfill is reduced, costs of operation also go down. Due to fixed costs, however, actual per tonne costs go up.



Phase 3



- Phase 3 options considered in the long term
- The long term could be loosely defined as a 15-year plus timeframe
- Options to be considered in further Plan revisions

Evaluate Existing Programs



- Evaluate success of existing programs
- Assess new technologies and successful policies in other districts
- Continue to implement best practices

Investigate Alternatives to Landfill



- Investigate alternatives to Glenmore Landfill such as:
 - ◆ Waste to Energy
 - ◆ Sending waste to a regional landfill
 - ◆ Securing land for another RDCO landfill

Next Steps

- Incorporate today's feedback
- Develop options into a presentation for general public at community meetings
- Set up community meetings

Thank you for your time!

