

**Environment & Sustainability Standing Committee
February 7, 2013**

TO: Chair and Members of Environment & Sustainability Standing Committee

SUBMITTED BY: Original Signed

Ken Reashor, P.Eng. Director, Transportation & Public Works

DATE: February 7, 2013

SUBJECT: Analysis of Financial Impact of Modifications to the RRFB Budget Model

INFORMATION REPORT

ORIGIN

January 10, 2013, Item 8.1 Motion MOVED by Councillor Watts, seconded by Councillor Nicoll that the Environment and Sustainability Standing Committee request a staff report reviewing options for future RRFB funding opportunities in light of findings presented in the Hogg Report. MOTION PUT AND PASSED.

NS Solid Waste-Resource management (SWRM) Regulation Review, Discussion Paper, January, 2013.

LEGISLATIVE AUTHORITY

HRM Charter, Part IV, Section 79, Power to expend money, Item (q).

BACKGROUND

The Province established the Resource Recovery Fund (now known as the Resource Recovery Fund Board (RRFB)) under the Environment Act in 1995. The RRFB was given the following 5 mandates:

- (1) to develop and implement industry stewardship programs;
- (2) to fund municipal or regional diversion programs;
- (3) to develop and operate a deposit-refund system for beverage containers;
- (4) to develop education and awareness of source reduction, reuse, recycling and composting; and
- (5) to promote the development of value-added manufacturing in the Province.

To fund this stewardship program, the Province established a 10 cent deposit on all beverage containers except milk. The milk industry self manages its stewardship. This 10 cent deposit was to be used to establish a recycling system for the beverage containers. As described, RRFB had several mandates. Success depended on effecting behavioural change through encouraging residents to stop throwing the containers, high value aluminum and plastics, in the garbage, or worse, as litter. The incentive was the refund of half, or five cents, of their initial ten cent deposit, for every container they returned to the system. The RRFB refund deposit tax program generates almost \$50 million dollars a year. This is a clear indication of the success in effecting behavioural change.

The RRFB operations model consisted of the establishment of Enviro-Depots serviced by transportation logistics across the province for the consolidation of materials at materials recovery facilities under contract for processing, which were municipal/Regional Recycling facilities. RRFB has since invested in MRF capacity and just recently purchased new light compaction trailers for the transportation of the refundable containers from the dispersed enviro-depots.

Under the current deposit-refund program model, residents are required to return their beverage containers to the RRFB licensed depots for the five cent deposit refund. The remaining half of the ten cent deposit goes to support the RRFB operations model, with a dedicated net percentage of revenues mandated to support municipal waste stewardship programs resulting from Provincial legislation.

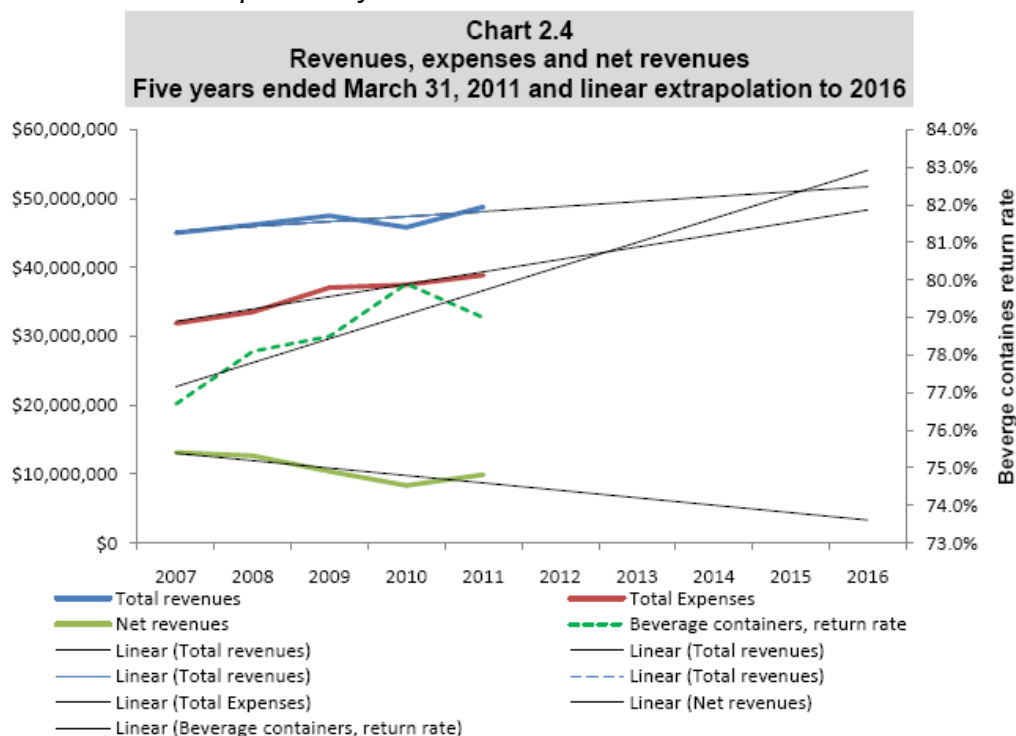
The RRFB operating overhead consists of the enviro-depot network, the transportation network to process containers at the RRFB MRF, the MRF operations and subsequent marketing of the materials to recycling processors. RRFB also delivers education and communications programming in support of the Provinces Environmental Goals and Sustainable Prosperity Act (EGSPA).

The Province sub-divided Nova Scotia into seven waste management regions. RRFB provides funding to the seven regions in terms of specific stewardship, education and waste management enforcement programs and a diversion credit model based on rate of diversion achieved and on a per capita basis.

The RRFB program model initially worked well and, during the early years, the deposit tax generated annual surpluses. The surpluses were banked. As the program evolved, RRFB operational system costs escalated, which necessitated using the surplus account to offset deficit budgets. This measure was employed in part to sustain diversion credit funding to the regions. This deficit budget management measure maintained an unsustainable operating model and diversion credit funding levels for the regions. The financial situation of the RRFB was impacted by rising operational and overhead expenses and essentially flat refund deposit revenues.

In 2011, Nova Scotia Environment commissioned an organizational review of the RRFB. This assessment was undertaken by William D. Hogg (the Hogg Report) which included an assessment of RRFB mandates and review of program expenditures and revenues. The Hogg report identified that the RRFB business model is in critical condition and without substantial change would be unsustainable beyond 2016 when costs would exceed revenues.

Assuming no changes to the current programs, and technologies, and assuming return rates continue to rise (there is likely a presently unknown point at which no further improvements can be made in return rates regardless of the additional amounts of education or promotion), an extrapolation of past revenues, return rates and expenses can provide an approximation of the financial resources available to the RRFB for its mandate. A purely mathematical, linear extrapolation based on the past five years is:



The above extrapolation is not an outright prediction of future financial results. Many variables can and will change, either as a result of planned actions or external, uncontrollable factors. However, on a status quo basis, using the past five years results as a base for extrapolation, there is cause for concern that the current systems will not be sufficient to financially sustain RRFB's activities past 2016.

The financial paradox in the RRFB's mandate and the potential decline in net revenues based on a linear extrapolation are so dramatic and worrisome that they are pictured on the cover page of this report.”¹

In December 2012, RRFB presented their business plan changes to Regional Chairs to address the findings of the Hogg report. It is understood that prior to the presentation, the new RRFB business plan funding model was approved by its Board and endorsed by Nova Scotia Environment for a five year period. The financial data outlined in the RRFB budget presentation in December are projections based on the FY 2011/12 known results.

In terms of HRM budget planning, when the presentation figures were reviewed with RRFB staff, HRM was advised to base future budget forecasting on the FY11/12 figures as presented by RRFB. The new RRFB business plan results in a calculated 30% reduction in diversion credit funding to HRM commencing in FY13/14. The new business plan and regional funding formula results is a loss to HRM of just over \$1 million on waste management programming revenues.

Nova Scotia Environment Waste Resource Staff are currently undertaking a regulatory review of the NS Waste Resource Management Strategy in conjunction with evolving the system to meet EGSPA goals. In mid-January, 2013, Nova Scotia Environment invited waste management stakeholders, including HRM, to provide comment and advance recommendations on changes to the existing systems, including the beverage container deposit refund program. HRM staff have undertaken review of the system and the distributed discussion paper. The discussion paper is the topic for a planned stakeholder consultation session, Thursday, 7 February with NSE staff and the Regional Chairs organization.

The RRFB beverage container recovery system was created to provide an otherwise unavailable means to divert valuable resources from landfill. To effect this behavioural change and convince people to keep their beverage containers out of the trash, the Province levied a deposit tax on all beverage containers. Return or “diversion” of the beverage container from landfill resulted in the return of half the deposit. The model worked, behaviour changed. Residents stopped putting their beverage containers in the garbage. However, concurrently while the RRFB depot system evolved and grew, as required by the EA legislative banned materials list, municipalities and regions implemented their own mandated recycling collection programs. Plastics, metal and glass containers, all recyclable materials were banned from landfill and residents required municipal services to support mandated recycling.

The depot model was intended to provide a capture systems across the province where only limited recycling programs existed at the time. Almost two decades later, the recycling landscape

¹ Organization Review of the Resource Recovery Fund Board, William Hogg, September, 2011, page 13-14.

has dramatically changed across the Province. Nova Scotia residents now have access to curbside recycling collection of containers - including all plastics #1-7.

The deposit refund program has been successful in terms of behavioural change and the diversion of resources from landfill. The current revenue generated from the deposit tax is almost \$50M per year. However, of the \$50 million in revenue, only \$8.2 million is left after \$41.8 million funds RRFB operating expenses. Even with some operational and business plan changes, in terms of more efficient trailers and adjustments to capital investment accounting, given rising operational costs, the Hogg report's identified looming crisis of expenses exceeding revenues remains a reality in the near future. To address this issue, there are two options, increase revenues equal to rising operational costs and expenses for both the RRFB and municipalities and regions or implement RRFB system changes that result in increased revenues to the municipalities and regions.

DISCUSSION

Existing System Implications

The RRFB deposit refund system is now a duplication of existing municipal recycling collection programs. In terms of environmental impact, any duplication is a negative environmental impact. Since the existing municipal collection programs can absorb the additional materials, and they would be collected with other recycling materials, from a stewardship perspective, the municipal system would be more efficient for the collection of these beverage containers. The RRFB contracted collection and transportation of uncrushed/lightly compacted beverage containers from the licensed enviro-depots across Nova Scotia generates unnecessary greenhouse gases (GHG). Residents returning their beverage containers to the enviro-depots also generate unnecessary GHG.

In terms of HRM's MRF operation, the current RRFB container sorting criteria introduces a number of operational challenges and costs. HRM's MRF processing line must sort refundable materials as per the RRFB criteria, as is undertaken by hand in the enviro-depots. This introduces unnecessary sorting requirements and operational costs for HRM.

The refund deposit program has also resulted in the evolution of an ongoing neighbourhood curbside scavenging activity. Blue bag recycling materials are routinely scavenged across the municipality for the refundable containers. This scavenging activity has introduced nuisance and litter issues into neighbourhoods and is another negative outcome of the refundable deposit program.

In addition to the negative environmental, operational cost and community impacts of the deposit refund depot system, there is the identified looming economic crisis in terms of the system's viability. The RRFB diversion credit fund was intended to assist in sustaining legislatively mandated municipal and regional waste management programming. The Province's waste management goals will result in significant cost increases to municipalities. Loss of RRFB revenue funding will result in impacts to municipal budgets and service delivery. Barring some

form of major revenue generation, this situation requires consideration of an entirely new scenario model.

In 2006, the EGSPA goal was established at 300 kg/capita by 2015. This is a Provincial target, not municipal. However, as an independent region, HRM is assessed funding, in part, based on this target. HRM is currently at 393kg/capita. In order to achieve the 300kg/capita target, HRM would need to reduce its annual tonnage at the landfill to just over 100,000 tonnes. In terms of diversion, this equates to an assessed diversion rate of 70% using HRM's calculation model. This is a challenging objective for any municipality, considering the national average for kg/capita is over 800 kg/capita.

HRM's integrated waste system generates several streams of revenues. The landfill and compost plants generate revenue through tip fees to support their costs. The MRF generates revenue from the sale of recyclable materials. HRM's diversion, what we send through the MRF and compost plants, and don't send to landfill affects distributed refund credits from the RRFB.

As detailed in the Hogg report, the RRFB's operating costs have been rising steadily. The RRFB has also continued to expand their internal operational activities in favour of contracted services. The addition of a MRF capacity is one example. The impact of these cost increases serves to reduce the net revenues available for distribution funding to the seven waste management regions.

HRM's program costs have also risen over the same period. The net impact is that as RRFB expenses rise, and the plateaued deposit revenue is used to pay for those rising expenses, the funding for distribution to regions goes down. So, as municipal expenses go up as a result of increased operational costs, and the negative impact diversion has on landfill tip fees, the funding received from the RRFB has been steadily declining.

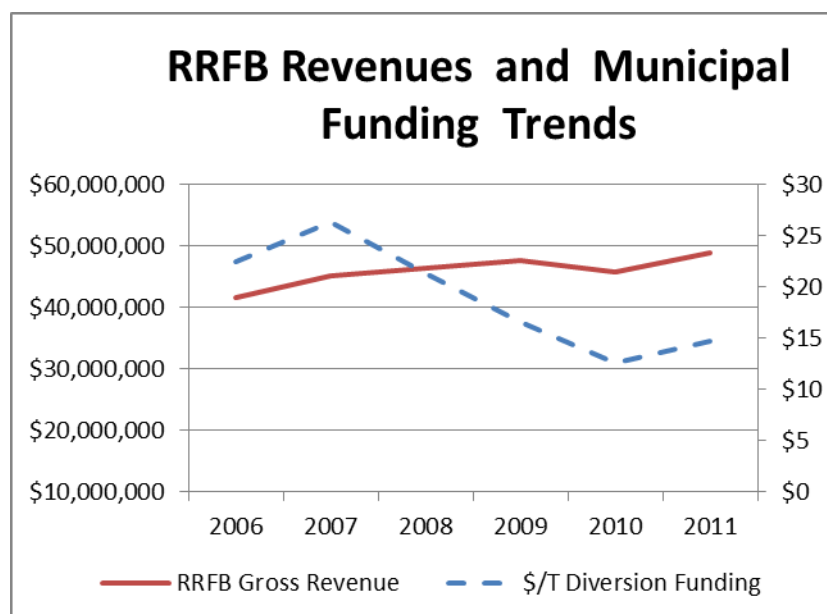
This latest change is projected to further reduce HRM funding by 30%, or just over \$1million. The RRFB covers its operating cost increases at the expense of municipal diversion credit funding. So in terms of HRM's program cost increases, not only are the costs going up, but as a result of the business plan changes implemented by the RRFB, the credit funding support will dramatically decrease.

The EGSPA 300 kg/capita goal has created a dichotomy in terms of waste management costs and revenues.

- Diversion success sends less material to the landfill where tipping fees are generated to support municipal waste program operating costs.
- Diversion sends more material to composting facilities where operating costs in HRM exceed tip fees which are lower than landfill tip fees to create a diversion incentive.
- In HRM's mature system, increasing its overall blended diversion rate of 62% to the target of 300kg/capita or 70% will require significant program resource investment. The cost of getting to 50% is much less than the cost of getting to 60%. The cost of getting to 70% has yet to be quantified.

- As program delivery costs are escalating to achieve the EGSPA target, the RRFB operating costs have escalated while refund deposit revenue has essentially plateaued creating the Hogg Report 2016 sustainability crisis.
- The new operating budget model for RRFB results in a projected 30% reduction in diversion credit funding to HRM.
- A 30% reduction in RRFB funding equates to just over \$1million dollars.
- The 30% reduction in diversion credit funding negatively impacts HRM's ability to apply greater resources to increase diversion and achieve the Province's EGSPA target.

The following graph illustrates RRFB revenues and declining diversion funding provided to municipalities:



Alternative Scenario Option – Increasing Revenues

As previously noted, the primary source of RRFB revenues is the beverage container deposits. A deposit of 10 cents is levied at point of purchase with a refund of half (5 cent refund) for containers returned to designated enviro-depots across the Province. The remaining nickel is the revenue used to fund the beverage container recycling program including the network of drop off enviro-depots, transportation operations, MRF processing and marketing of the refundable recyclable containers. This operation is costly. Operating expenses have grown from 67 to 77% of total revenues of the RRFB over the past 10 years.

Ongoing RRFB efforts to identify operational savings and efficiencies and the budget model changes to protect prioritised regional program funding are acknowledged. Unfortunately, the funding crisis was created by evolving operational overhead of the RRFB which has seen operating expenses steadily increase. Concurrent steady decline for municipal funding as shown above may be slowed by new business plan changes, but will they be reversed? What is needed

is additional funding to municipalities to support rising operational costs of meeting the NSE EGSPA goals.

This discussion is timely not only because of the forecast \$1Million dollar reduction to HRM funding, but also in terms of the Province undertaking a regulatory review of the RRFB model. The Province's recently distributed discussion paper, "NS Solid Waste-Resource Management Regulation Review" includes analysis of a hypothetical option to increase revenues through revising the current fixed deposit refund model. The straight fixed deposit of ten cents for all containers.

This hypothetical option is to sustain the status quo RRFB operations model by increasing revenues.

Hypothetical examples:

PET #1 plastic

Deposit = \$0.05

Fee (for PET #1 plastic) = \$0.05

Consumer pays \$0.10 gets a refund of \$0.05 (equivalent to the deposit paid)

Glass

Deposit = \$0.05

Fee (for glass) = \$0.15

Consumer pays \$0.20 gets a refund of \$0.05 (equivalent to the deposit paid)

In this hypothetical model, Nova Scotians would pay the escalating operational costs of the RRFB deposit refund processing, collection, transportation, marketing and recycling of beverage containers program. In this example, since glass costs more to recycle than a plastic pop bottle, the glass beverage container would cost the resident an extra 10 cents to purchase. This option would hypothetically generate the necessary increased revenues to maintain the status quo RRFB operating system and its escalating costs. However, the deposit would have to continue to rise to sustain this system.

Alternative Scenario Option – System Change

The following scenario option analysis was developed as a result of the development of province wide curbside recycling collection. This service is a product of the Province's successful environmental stewardship focus. As previously noted, the tax payer funded RRFB separate deposit refund beverage container program now operates in parallel as a duplication of municipal curbside recycling collection programs. When the RFFB system was created, the parallel municipal system did not exist for most Nova Scotians. The absence of a curbside recycling

collection service capability demanded the creation of the RRFB depot system. That justification no longer exists.

It is acknowledged that the Province and RRFB have recently signed a new five year agreement. It is also recognized that the system change alternative scenario option outlined below would initially impact some jobs in the existing enviro-depot program. The system change scenario option is advanced in the interest of full and objective discussion of the issue. The loss of over \$ 1 million dollars in annual funding to HRM, with the awareness that this funding loss will only increase as a result of rising operational costs at the expense of net revenues at the RRFB, will have a negative impact on integrated waste management service delivery in HRM

The scenario outlined below includes implications to waste management program service delivery, legislative and regulatory compliance, environmental stewardship, operational efficiency and community impacts. This alternative scenario was generated as a result of revenue impacts, but provides a number of non-financial system benefits. It is acknowledged that this degree of system change would require a period of substantial system review, stakeholder discussions and analysis. However, as a place to start the discussion, the system change option consists of simply eliminating the requirement to return the beverage containers to an enviro-depot and have them collected in the municipal blue bag/box programs. Preliminary analysis suggests that this change would result in:

- significantly increases revenues to all regions;
- decreases deposit tax on all residents;
- introduces service delivery enhancements and improvements;
- is fully compliant with Provincial legislation;
- improves environmental stewardship of the system in terms of GHG reduction;
- should result in increased diversion through improved accessibility;
- eliminates a negative community impact; and
- increases MRF revenues and introduces operational cost efficiency.

In order to pay for this municipal service, maintain but lower the fixed deposit rate to five (5) cents per beverage container, reduced from the current ten (10) cents/container. The five cent (5) tax requires further study and validation in terms of system costs of absorbing the additional containers into existing collection and processing stream.

Based on FY11/12 data as provided by RRFB, the scenario below outlines the system outcomes and projected funding changes which result from this system change scenario:

- Residents of Nova Scotia would pay a reduced fixed deposit of five cents for each beverage container, a 50% tax reduction. The five cents would be collected at the register to fund municipal processing and stewardship programs as it is now;
- Residents would no longer have to separately sort their refundable beverage containers and return them to an enviro-depot;

- Revenue from the marketing and sale of the high value beverage containers would be retained in the municipal recycling programs, directly supporting their MRF operations and processing of other less valuable materials;
- Elimination of the deposit refund model would eliminate the scavenger value of the beverage containers, resulting in the end of the neighbourhood scavenging of blue bag materials left at the curb, and reducing the impact of litter resulting from this activity;
- As illustrated in the tables below, the RRFB program distributed funding significantly increases for all regions while sustaining existing levels of RRFB funding for their remaining mandated activities
- RRFB enviro-depots would be repurposed to support Extended Producer Responsibility (EPR) and other Stewardship programs. This remodeled depot system would be funded solely from stewardship and EPR program revenue streams as now exists with the paint and E-Waste electronics recovery programs. This mandate is also consistent with the EGSPA “Our Path Forward” updated plan;
- The RRFB would maintain their environmental stewardship education and communications programming in support of the EGSPA goal of increasing diversion.
- The RRFB processing, collection, transportation and recycling operations for beverage containers would be closed down, significantly reducing RRFB operating expenses.

This system change alternative scenario serves to offset escalating municipal waste management operating costs resulting from achieving the Provincial EGSPA target of 300kg/capita. The table below details the RRFB financial statements status quo in terms of the existing operational model based on FY 11/12. The corresponding table incorporates those same budget figures into the system change model without the RRFB refund deposit system of enviro-depots, transportation and processing.

This table represents the best known projected numbers available at the time of drafting this report. It is fully recognized that these are projections being used to illustrate the impact of the outlined system change scenario. Actual forecasts would need to be developed in terms of confirming what deposit would be required to sustain the system.

There is one potential draw back from the system change alternative option. As with any incentive program, the incentive achieves the behavioural change. The \$50 million dollars per year speaks to Nova Scotians keeping their beverage containers out of the trash, not ending up at litter and recycling them. As with many system changes, there will be concern that without the refund incentive people will just put the containers back in the garbage or worse, resume chucking them out the window of their cars to become litter.

It is felt that the vast majority of Nova Scotians have long since made the behavioural change to recycle their recyclable materials. This Province is deservedly proud of its environmental stewardship record. To not do something because of concerns people will toss that reputation back in the trash for a nickel seems improbable. However, given the existing capture and

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tracking of recycling materials tonnage data, it would certainly be easy to identify. The reality is that this system change would only improve the ease with which residents would be able to recycle. As a result of this, the concern of the containers ending up back in the trash is considered a very low risk.

RRFB REVIEW							
CURRENT STRUCTURE			NEW MODEL (Tire Program In)				
Deposits (@ \$0.10)		\$ 37,874,628			Container Fee (@ \$0.05)		\$ 18,937,314
Sales of recyclables		\$ 5,710,676			Sales of recyclables		
Tire Program		\$ 3,604,676			Tire Program		\$ 3,604,676
Stewardship		\$ 807,208			Stewardship		\$ 807,208
Rental Income		\$ 182,000			Rental Income		\$ 182,000
Investment Income		\$ 967,509			Investment Income		\$ 967,509
Total Revenue		\$ 49,146,697			Total Revenue		\$ 24,498,707
Operating		\$ 37,710,385			Operating		\$ 4,000,000
Deposit Returned (Extrapolated)	\$ 14,865,791				Deposit Returned (Extrapolated)	\$ -	
Operating Depots (Extrapolated)	\$ 22,844,594				Operating Depots (Extrapolated)	\$ 4,000,000	
Administrative		\$ 1,900,076			Administrative		\$ 1,900,076
Other Expenditures		\$ 10,746,666			Other Expenditures		\$ 10,746,666
Approved Grants	\$ 1,539,828				Approved Grants	\$ 1,539,828	
Education	\$ 1,807,188				Education	\$ 1,807,188	
Regional Committees	\$ 325,799				Regional Committees	\$ 325,799	
HHW	\$ 112,000				HHW	\$ 112,000	
Municipal SW Diversion Credits	\$ 4,590,252				Municipal SW Diversion Credits	\$ 4,590,252	
Municipal Diversion Incentives	\$ 327,736				Municipal Diversion Incentives	\$ 327,736	
Municipal Enforcement	\$ 651,512				Municipal Enforcement	\$ 651,512	
NSE	\$ 1,215,603				NSE	\$ 1,215,603	
R&D	\$ 70,248				R&D	\$ 70,248	
Waste Audit	\$ 106,500				Waste Audit	\$ 106,500	
Total Expenses		\$ 50,357,127			Total Expenses		\$ 16,646,742
Net Position		-\$ 1,210,430			Net Position		\$ 7,851,965
					Assume 75% allocated to Municipalities		\$ 5,888,974
					Total Diversion Credit Pool		\$ 10,479,226
					Current HRM Portion		\$ 2,478,234
					Projected HRM Portion		\$ 5,657,637
					* Sale of recyclables along with processing costs moved to Municipal waste centers		
					Based on HRM's population proportion		\$ 2,418,326.40
					Increased Funding HRM		\$ 5,597,728.68

The impact of this option model change, as shown, is an immediate projected increase of over \$5.5M for regional program support funding. When assessed against the existing program funding dispersion it equates to a projected over \$3 million increase to HRM rather than the projected reduction of over \$1 million.

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The following table utilizes FY2011/12 in comparing the existing model to the system change alternative option scenario outlined above. The final column illustrates the projected additional program funding distribution for all of Nova Scotia.

ESTIMATED				ESTIMATED		
REGION	Generation areas	Tonnes diverted	Credits Distributed	Tonnes diverted	Credits Distributed	Additional Funding
		2011-12 Status Quo Model		2011-12 Alternative Option Model		
1	Inverness County	964		964		
	Port Hawkesbury	180		180		
	CBRM	30,771		30,771		
	Victoria County	1,370		1,370		
	Richmond County	1,498		1,498		
	Cape Breton	34,783	\$477,845.23	34,783	\$1,090,887.43	
2	Pictou County	18,495		18,495		
	Antigonish County	2,674		2,674		
	Guysborough County	739		739		
	Antigonish Town	2,732		2,732		
	Eastern	24,640	\$338,301.57	24,640	\$772,318.96	
3	Hants East	6,089		6,089		
	Colchester County	16,022		16,022		
	Cumberland County	2,710		2,710		
	Northern	24,821	\$341,055.72	24,821	\$778,606.49	
4	HRM	180,425	\$2,478,277.05	180,425	\$5,657,734.12	\$3,179,457.06
5	Valley WRM	26,760	\$367,679.19	26,760	\$839,386.00	\$471,706.82
6	Lunenburg County	11,483		11,483		
	District of Chester	4,429		4,429		
	Town of Windsor	1,692		1,692		
	West Hants	3,973		3,973		
	Queens Reg. Mun.	3,684		3,684		
	JSB	1,031		1,031		
	Barrington and Clarks Harbour	1,185		1,185		
	South Shore	27,477	\$377,318.71	27,477	\$861,392.38	
7	Western	15,282	\$209,774.52	15,282	\$478,900.63	\$269,126.11
	TOTAL	334,188	\$4,590,252	334,188	\$10,479,226	\$5,888,974

This type of system change would necessitate changes to the RRFB mandates. The following is the mandate impact of this option:

1. To develop and implement industry stewardship programs = The repurposing of enviro-depots as part of “Our Path Forward” framework for EPR programs supports the original mandate.
2. To fund municipal or regional diversion programs = The increase in diversion credit funding to municipalities would increase capacity to implement diversion programs across the Province.
3. To develop and operate a deposit-refund system for beverage containers = This mandate is no longer required given existing municipal collection programs and would be eliminated.
4. To develop education and awareness of source reduction, reuse, recycling and composting = This mandate is unchanged.
5. To promote the development of value-added manufacturing in the Province. This mandate is unchanged.

There is also a means to fully support the existing depot system. The Province needs to move forward with its designation of products to be governed by the new framework and included in EPR recovery by industry and other Stewardship programs. As previously noted, this issue is also included in the ongoing Nova Scotia Environment staff review of the solid waste regulations. Opportunities for convenient public drop off to recycle items such as batteries, empty expired propane tanks, mattresses and other items that are currently in the municipal waste stream can be diverted as designated by the Province. This is the opportunity to sustain the employment in the existing enviro-depot network in Nova Scotia.

FINANCIAL IMPLICATIONS

The financial implications on the planned business model changes by the RRFB are still being calculated and have not been officially promulgated by the RRFB. These estimates and projected figures are based on the most recent completed financial business plan of the RRFB, FY11/12. HRM has confirmed verbally with RRFB’s CFO that HRM should plan based on the FY11/12 financials and using the new budget model going forward for the FY13/14 year, which would result in a calculated 30% reduction (just over \$1 million) in diversion credit funding to HRM.

Projections for the alternative options have likewise been based on FY11/12 but remain just projections.

COMMUNITY ENGAGEMENT

Changes to the current deposit program will require amendments to Provincial Solid Waste Management Regulation. There has been no substantive review of these Regulations for the past

17 years. NSE is undertaking a Regulation Review including discussions regarding the efficiency of the deposit-refund program as well as a framework for product stewardship. These areas of opportunity will involve public input as part of a Regulation Review process with the Province taking the lead over the next year.

ATTACHMENTS

Hogg Report, September 2011

A copy of this report can be obtained online at <http://www.halifax.ca/commcoun/cc.html> then choose the appropriate Community Council and meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

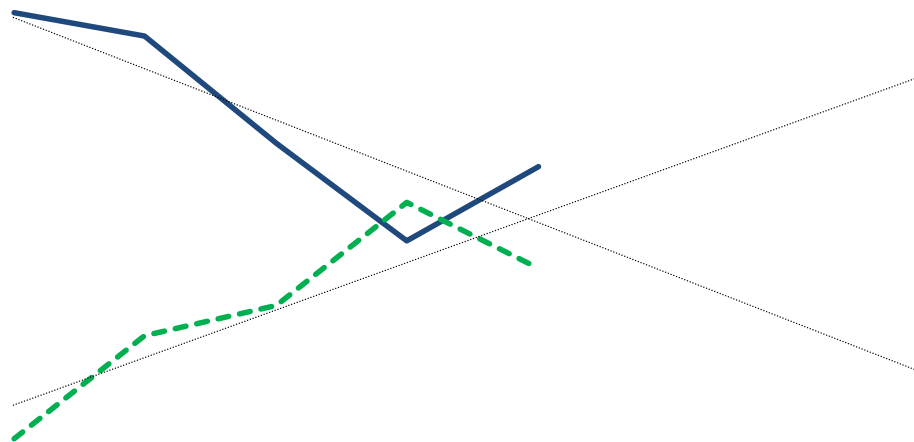
Report Prepared by: Gord Helm, Manager Solid Waste Resources, 490-6606

Financial Approval by: Original Signed

Greg Keefe, Director of Finance and Information Technology/CFO, 490-6308

Organizational Review of the Resource Recovery Fund Board

September 2011



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Executive Summary

The Department of Environment commissioned an organizational review of the RRFB. The purpose of this review is to:

- assess the effectiveness of RRFB in delivering its mandate;
- compare the current purpose of the RRFB to the strategic and functional needs of the Province; and
- evaluate the partnership model between Department of Environment, RRFB, and the solid waste resource management regions (the regions).

The results of the review can be used to guide Environment's strategic planning and if required, changes to the RRFB. Additional objectives were:

- identify possible cost savings and revenue generation ideas;
- review the adequacy of current asset management practices; and
- identify areas of expenditure, including procurement reform, for more cost effective outcomes.

RRFB effectiveness

The Resources Recovery Fund Board has been effective in delivering four of its five mandate areas. Municipal diversion programs have been funded to an average level of 76% of net revenues over the past five years. This exceeds the minimum of 50% of net revenues specified in the Regulations. The deposit-return system for beverage containers has produced redemption rates of 79%, consistently among the best in Canada. Comprehensive education and awareness programs are implemented by RRFB directly and by the Regions with funding assistance from RRFB at specifically selected target areas. Staff resources are in place and efforts continue to develop value-added manufacturing in the province.

There are risks to the continued effectiveness of these mandate areas. Those risks include:

- ensuring adequate resources are made available from net revenues for justified education and awareness, and value-added manufacturing programs; and
- the beverage container deposit-return system has the potential for improved cost effectiveness if optimal collection system efficiencies can be found and implemented.

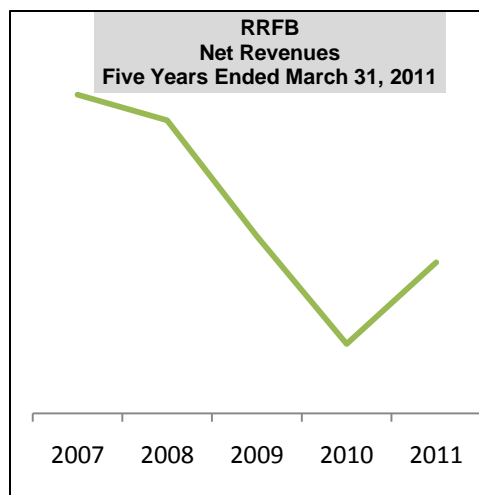
The one mandate area where effectiveness is constrained is developing and implementing industry stewardship programs. Most of the stewardship agreements were arranged in 2003 and prior years. Two arrangements have been completed within the past four years. Stewardship agreements are the primary means by which the province has implemented Extended Producer Responsibility (EPR) programs. These programs are used extensively in other jurisdictions and are expected to take on even greater importance in Nova Scotia to achieve the Province's recently restated waste diversion goals.

The waste audit program recently introduced by RRFB will be very helpful in providing data to identify targets for future agreements. However, the RRFB requires more tools in order to reach maximum effectiveness in implementing stewardship agreements. In order for the RRFB to put forward agreements to be incorporated in legislation they require the Department's policy direction and legislative authority. A special purpose working group, focused on stewardship agreements, comprised of the Department of Environment and RRFB is recommended. Neither party is likely to be successful pursuing these agreements on their own. Both parties are needed to determine the materials and industries which should be pursued to negotiate and implement stewardship agreements.

Strategic and functional needs of the Province

The Province has set a new waste diversion goal of 300 kg per person per year. In order to achieve this goal, new programs, as well as continued success in the existing diversion programs, will be required. There are threats to the continued financial effectiveness of RRFB's current waste diversion programs in the next five to ten years. Cost pressures and continued success in recycling behaviour puts combined pressure on RRFB's ability to finance its mandate areas at the levels experienced in the past. Net revenues declined from 2007 to 2011. The decline is particularly steep over this period due to an unusually poor redemption rate in 2007 which results in higher net revenues. Concern is warranted because net revenues in 2011 are at essentially the same dollar level as in 2002, nine years ago.

Lower net revenue creates tension with the Regions because historical funding levels supporting their waste diversion efforts cannot be sustained. Equally important, funding for education and awareness, value-added manufacturing, and the development of new programs is further limited. In order to meet the Province's waste diversion goal, there are at least two areas where strategic re-alignment may be required:



- At some point in the near term, it may be necessary to reevaluate and strengthen the deposit refund beverage container system, tire, and paint programs to ensure continued financial sustainability. Provinces who have restructured waste diversion systems, normally precede any changes with an analysis of systems implemented in other

jurisdictions, communicate the necessity for change, and a gauge public acceptance; and

- More extensive extended producer responsibility initiatives that will require a joint effort from RRFB and the Department, policy direction from the Department, and financial resources. The Department can provide a valuable policy direction on the material and industries to be targeted, structure of agreements, and negotiating framework. The organization structure of the RRFB will likely need to be strengthened to ensure EPR expertise is available. The Department may require some temporary resources as well.

Current asset management practices

RRFB's current assets are managed appropriately. The RRFB is established as a not for profit entity. Reasonable profits are necessary and prudent. However; in the past seven years, RRFB has had surpluses in excess of \$1 million and at times more than \$2 million. The Board recognized that continued surpluses of this magnitude were not necessary. For the past two years and into this current fiscal year, the Board has begun a process of distributing a part of its accumulated surpluses.

This report recommends an approach to limiting surpluses to reasonable amounts, which would provide the maximum funding possible to municipalities in any given year, and protect resources for use in achieving RRFB's other mandate areas.

Procurement

The RRFB should ensure that its procurement policy meets all of the requirements of the Nova Scotia Sustainable Procurement Policy. The policy should be finalized and presented to the Board for approval. The Board should also ensure that RFP's are designed to encourage innovative proposals.

Regional Chairs Committee

The regional chairs are accountable to the Department for progress toward provincial waste diversion goals. Effective accountability requires a clear and common understanding of the standard against which they will be measured. Suggestions are provided to clarify those standards.

Relationships

Although all three parties have waste diversion as a common goal, each has different responsibilities and hence different priorities. Successful trilateral relationships require the parties to focus on their common goal despite the fact that their individual objectives will not necessarily match exactly with the other parties' priorities.

The success of Nova Scotia's waste diversion efforts have been recognized across Canada. While the RRFB, the solid waste management regions, and the Province continue to have notable results, other jurisdictions have been aggressively pursuing systems similar to Nova Scotia's as well as alternate approaches. In addition to the recommendations for the immediate future, planning should start now for shifts in strategy and changes to current operations that will likely be required within the next five to ten years.

1. Terms of Reference

The Nova Scotia Department of Environment requested an organizational review of the Resource Recovery Fund Board (RRFB). The June 2011 “*Terms of Reference*” set out the following objectives:

The objective of this project would be to:

- 1. Examine the RRFB’s mandate, programs, functions, activities and services in detail to determine the efficiency and effectiveness of each of its mandates, programs, functions, activities and services.*
- 2. Assess each mandate, program, function, activity and service for its consistency with and relevance to the Government’s objectives and policy priorities.*
- 3. Identify more effective and efficient alternative methods of program delivery where applicable.*
- 4. Identify possible cost savings and revenue generation ideas at the mandate, program and service level.*
- 5. Examine the adequacy of the current asset management practices to ensure maximum utilization of assets.*
- 6. Identify areas of expenditure including procurement reform, where another approach would produce a more cost effective outcome.*
- 7. Examine the role of the Regional Chairs Committee to identify opportunities for it to be accountable to objectives and outcomes that are mutually beneficial to the municipalities, RRFB and NSE.*
- 8. Identify more effective and efficient methods of interaction in the trilateral relationship between NSE the RRFB and the solid waste management regions.*

The scope of the review does not include the adequacy or allocation of funding provided to municipalities or recyclers. Nor does the scope include consideration of any changes to the amount of the beverage container deposit/refund or other fees collected by RRFB.

The Terms of Reference notes that Nova Scotia has achieved remarkable success in solid waste management since the 1995 Solid Waste Resource Management Strategy. The Province is now working towards a new and more ambitious waste disposal target of no more than 300 kg/person/year by 2015. This goal is set out in both the *Environmental Goals and Sustainable Prosperity Act* (EGSPA) and the *Environment Act*. To put this goal in perspective, Nova Scotia's waste disposal rate in 2007-08 was 417 kg/person/year.

The methodology used to address the objectives set out in the Terms of Reference included:

- review and analysis of Department reports and other material, and independent research on waste diversion approaches in other jurisdictions and their applicability to Nova Scotia;
- review and analysis of RRFB reports, internal documents and analysis;
- interviews with key staff at RRFB, Chair and members of the Board, the Department and the Regional Chairs Committee;
- meetings with the RRF Board and Regional Chairs Committee;
- tour of the Colchester Balefill, composting, and Materials Recovery facilities;
- analysis of interviews, meetings, documents and data;
- discussion and challenges of alternatives or approaches suggested and review of interim and draft reports; and
- development of alternate approaches, strategies and relationships that would enhance the Department's efforts in achieving the Province's waste diversion goals.

While some methodologies used are similar to techniques used in audits, this review is not an audit.

This report refers to the solid waste resource management regions as the regions. These regions are not to be confused with the Department's regional EMC offices throughout the province.

2. Financial Overview and Extrapolation

The Resource Recovery Fund was established as part of the Province's solid-waste-resource management strategy. The Resource Recovery Fund Board was created to administer the Fund. The primary purpose of the RRFB's mandate is the diversion, management and prevention of solid waste and the Board's major tool is the financial resources created from administering the Fund.

Because of the importance of financial resources, a summary of the current financial situation and an extrapolation of financial trends into future years are critical in assessing the objectives in the terms of reference for this review. Financial resources impact virtually every one of the five mandates of the RRFB. An overview and extrapolation of the financial resources is presented at the beginning of this report and where necessary referred to in the sections following.

Revenues

Resource Recovery Fund revenues comprises beverage container deposits, sales of recycled material, proceeds of the tire program, stewardship programs, rental income, and investment income. The following table summarizes the relative proportions of the revenue sources and the percentage change over the last five years:

Resource Recovery Fund Board Table 2.1
Composition and % Change in Revenues
Five years ended March 31, 2011

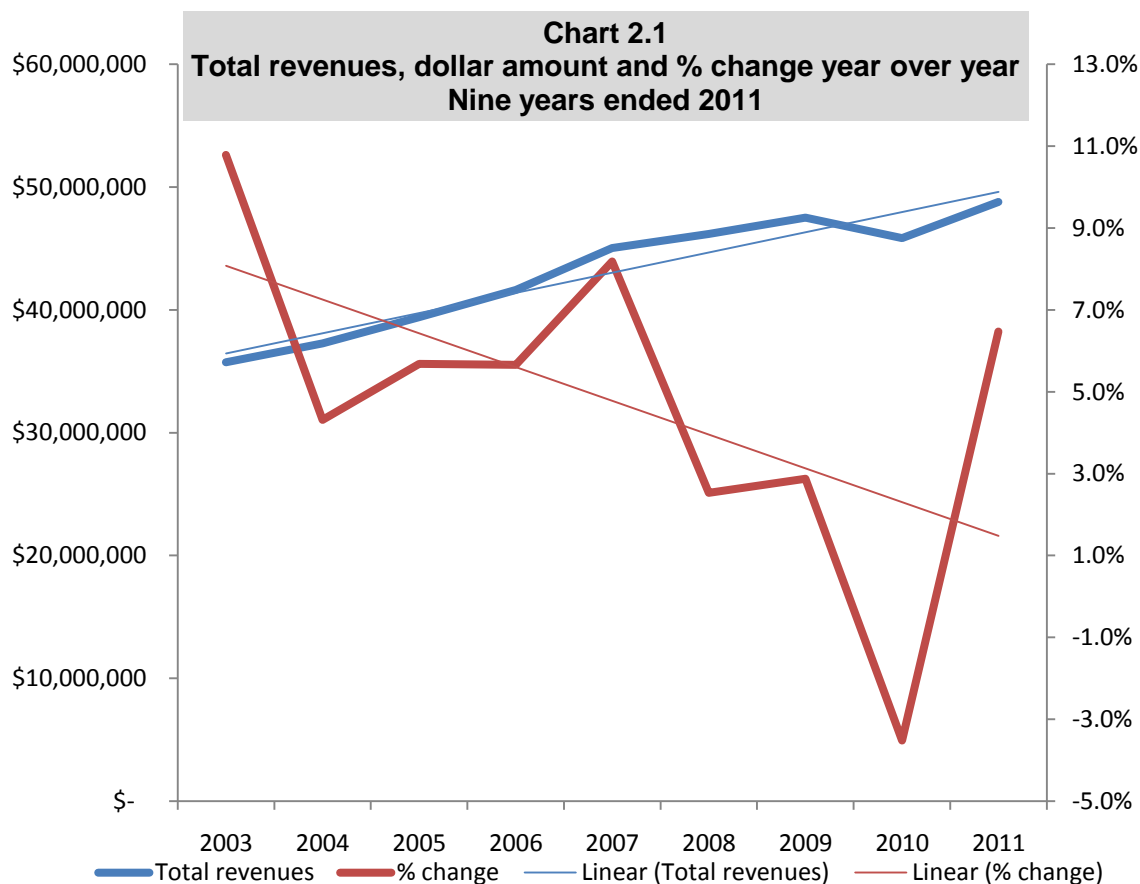
Revenues	% of Total Revenues	\$ Change 2007 Vs 2011	% Change 2007 Vs 2011
Deposits	78.4%	\$ 4,176,724	12.1%
Sales of recyclable materials	10.1%	(524,781)	-9.8%
Tire program	7.1%	(113,095)	-3.4%
Stewardship	2.1%	5,999	0.6%
Rental income	0.4%	(19,600)	-9.7%
Investment and other income	1.9%	242,067	34.8%
Total	100.0%	\$ 3,767,314	8.4%

Beverage container deposits are the largest source of revenue and revenue growth in dollar terms. Sales of recycled materials and proceeds of the tire program declined most likely due to the economic climate coincident with the five year period.

Annual revenues reflect the Board's revenue recognition policies. During a number of interviews held for this review, questions arose over RRFB's balance sheet item – "Unearned Revenue" and the impact on annual revenue.

The unearned revenue allocation insures that funds will be available in future periods to process recycled materials when they are expected to be returned or redeemed. While the amount of the unearned revenue account is large (2011 - \$14,485,500), the annual impact on revenues is much less (2011 increase in unearned revenue - \$ 483,800; impact on revenues – less than 1%). The policies and assumptions used by RRFB in determining when revenue is recognized is examined and reported on annually by the independent external auditors. The assumptions and calculations of unearned revenue and the impact on revenues appear to be prudent and appropriate.

The RRFB revenue trend over the past nine years presents a conflicting picture, and a cause for caution. The dollar amount of RFB revenues has been increasing fairly steadily. However, the percentage change in revenues from one year to another show a general downward decline.



Expenses

RRFB incurs operating and administrative expenses. Operating expenses are linked fairly directly to revenues and include such items as deposit refunds, Enviro-Depot fees, and tire and paint program processing costs. Funds remaining after operating and administrative expenses are net revenues. Net revenues are available to address RRFB's mandate in accordance with legislative requirements, agreements with the Department, and policy decisions of the Resource Recovery Fund Board.

Over the past ten years, operating expenses have ranged from 67.4% to 77.4% of total revenues (2011 – 75.6%). As return rates have increased, operating expenses increase as a percent of revenues due primarily to deposit refunds and Enviro-Depot fees. Over the past ten years, administrative expenses have ranged from 3.2% to 4.3% of total revenues (2011 - 4.0%).

Net revenues

Net revenues are the funds remaining after operating and administrative expenses are provided for and an adjustment for capital expenditures (depreciation removed as an expense and replaced with actual capital acquisition costs). The Board, within the legislated requirements and relevant to its mandate, determines how much of these net revenues will be distributed after considering whether an overall surplus is required or whether accumulated surpluses should be drawn down.

The Solid Waste-Resource Management Regulations under Section 102 of the Environment Act set out general and specific requirements for distribution of net revenues. Additional requirements are set out in the agreement (required under the regulations) between RRFB and the Department.

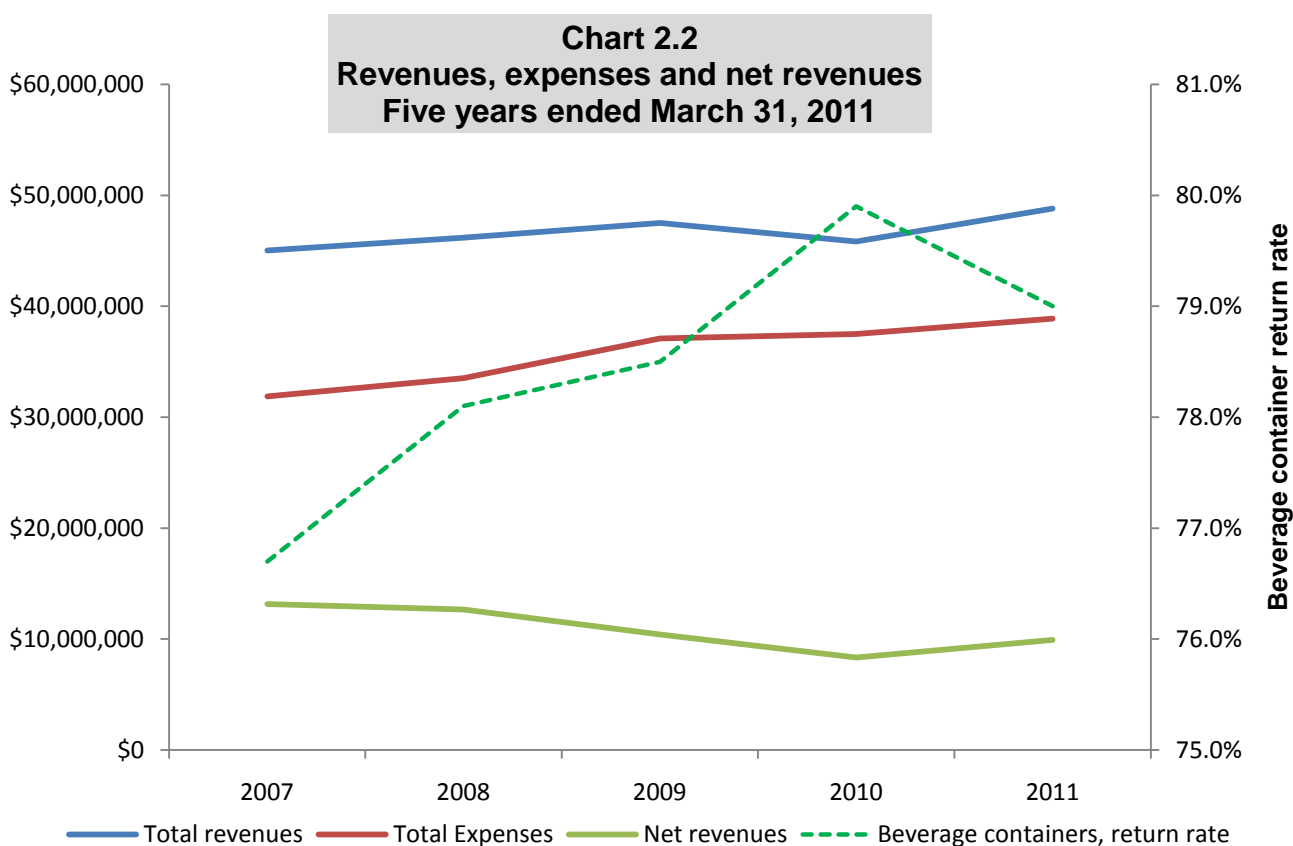
The general requirements for expenditures from the Fund are:

1. Programs approved for financial assistance under Schedule "A" of the regulations which are:
 - a. Municipal waste diversion programs, including source reduction, reuse, recycling and composting programs.
 - b. Municipal household hazardous waste programs.
 - c. Municipal waste management education programs.
 - d. Market development, manufacturing and processing of recycled materials.
2. Costs, charges, fees and expenses involved in the administration of the Fund.
3. Any other expenditure related or incidental to the purposes of the Fund.

The RRFB is specifically required to provide a minimum of 50% of net revenues as financial support for municipal solid waste diversion activities. The amounts provided are to be divided among municipalities or regions based on the solid waste diverted by the municipality or region.

Under the agreement between the RRFB and the Minister of Environment, the RRFB is required to reimburse the Department, up to a maximum of 15% of the net revenues of the Fund, for all reasonable services performed by the Department and any expenses related to the goals, objectives and mandate of the Board and Fund.

Net revenues have declined over the past five years as a result of increased expenses and a decrease in the pace of year over year revenue increases. Revenues and correspondingly net revenues increased in 2011 due primarily to a reversal in the decline in revenue from recycled material.

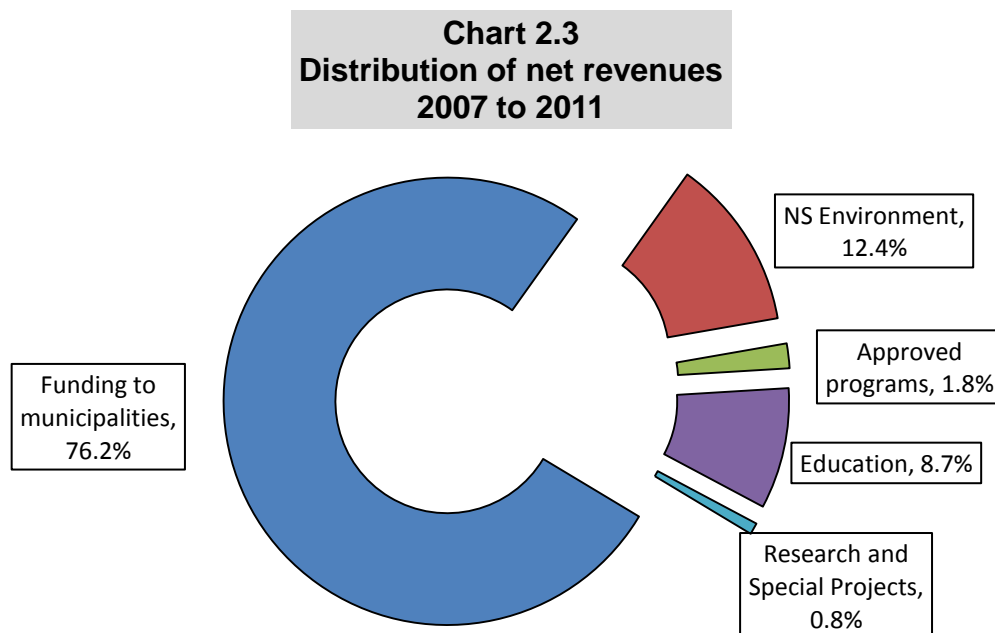


Overlaid on the chart are the return rates for the largest revenue source, deposits on beverage containers. Improvements in return rates increase expenses and reduce net revenues available for distribution.

Distribution of Net Revenues

For the five years ended March 31, 2011, the Fund had net revenues of \$54.8 million available for distribution. During that five year period, \$50.3 million of net revenues were distributed. The undistributed portion remains as a financial resource of the Fund.

Net revenues were distributed in the following manner:



Financial conflict in RRFB Mandate

Virtually all persons interviewed for this review pointed out the apparent financial conflict in the RRFB's mandate. The more successful the RRFB and municipalities become in diverting waste, particularly under the major revenue source – beverage container deposit/refund program - the less net revenues are available for distribution to municipalities to assist in funding their diversion programs, less for education and awareness, and less for value added manufacturing and other research.

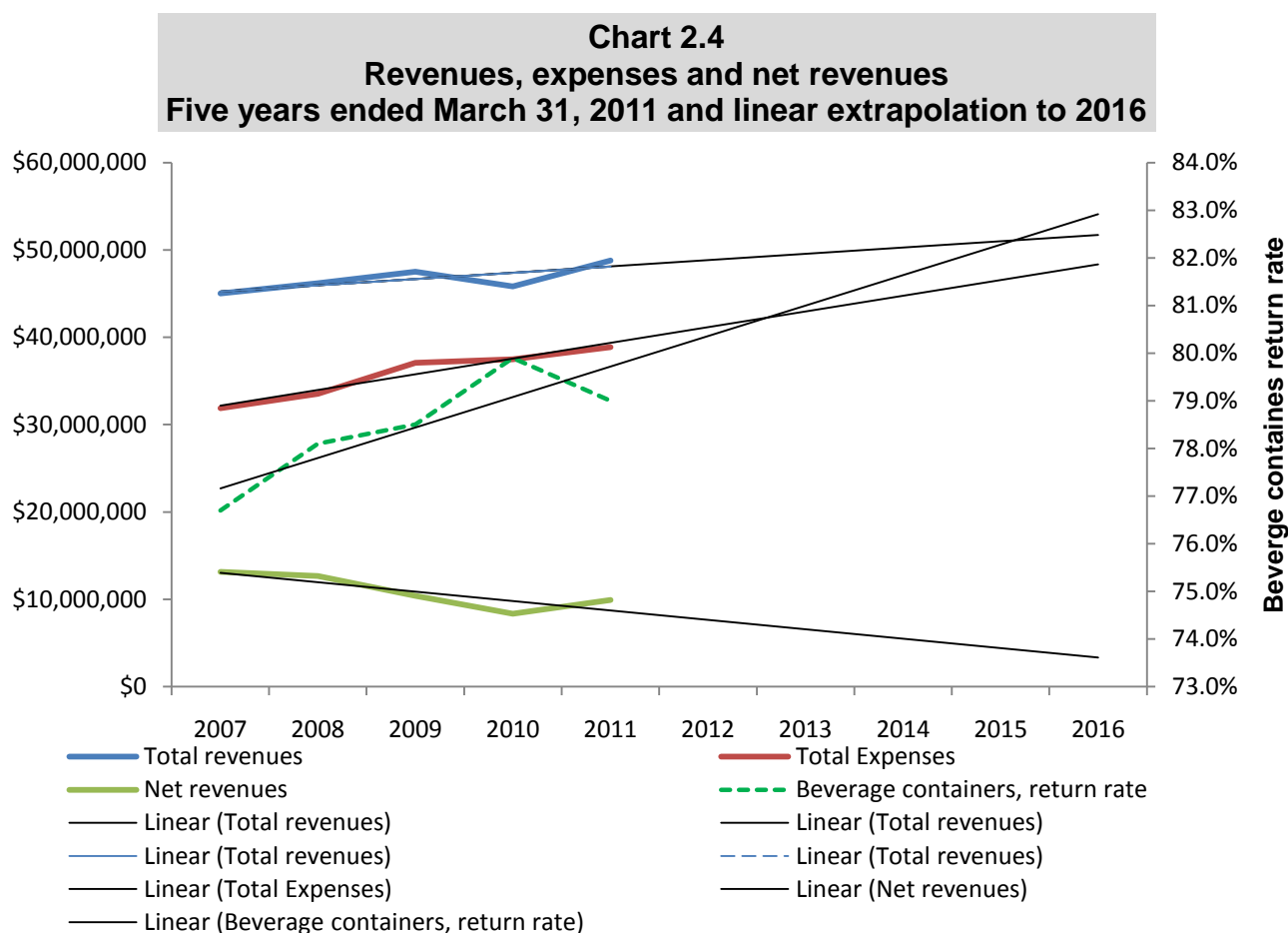
The deposits and fees paid by those consumers who do not return their beverage containers or tires for recycling flow directly, in full, to net revenues. The material not returned, if the consumer no longer holds onto them, occupy (even though banned under Provincial legislation) volume in municipal landfills or are disposed of improperly. Even though financial resources are improved, the goal of the RRFB is to divert waste from landfills and other improper disposal sites by reducing, recycling and reusing materials where possible.

Ironically, the more successful the RRFB and municipalities are in encouraging the return of materials for recycling; the less funds are available to assist in funding municipal waste diversion programs, educating consumers, and developing more waste diversion programs to protect the environment.

Revenue extrapolation

Projecting revenue for the Resource Recovery Fund is complex. Any projection is dependent on a number of factors (e.g. economic factors, return rates) that are not easily estimated. In addition, technological changes in packaging or consumer preferences could significantly impact revenues. A precise projection of financial results is not relevant to the objectives of this review. However, historical trends and relationships among financial statement items indicate the potential for a worrisome situation in about five years.

Assuming no changes to the current programs, and technologies, and assuming return rates continue to rise (there is likely a presently unknown point at which no further improvements can be made in return rates regardless of the additional amounts of education or promotion), an extrapolation of past revenues, return rates and expenses can provide an approximation of the financial resources available to the RRFB for its mandate. A purely mathematical, linear extrapolation based on the past five years is:



The above extrapolation is not an outright prediction of future financial results. Many variables can and will change, either as a result of planned actions or external, uncontrollable factors. However, on a status quo basis, using the past five years results as a base for extrapolation, there is cause for concern that the current systems will not be sufficient to financially sustain RRFB's activities past 2016.

The financial paradox in the RRFB's mandate and the potential decline in net revenues based on a linear extrapolation are so dramatic and worrisome that they are pictured on the cover page of this report.

3. RRFB Mandate

Section 98 of the Environment Act authorizes the establishment of the Resource Recovery Fund. The Solid Waste Resource Management Regulations provides details on the establishment and operation of the Fund and the manner and purposes for which money in the Fund may be used. The regulations require that the Fund be administered by a Board on behalf of the Province.

The Resource Recovery Fund Board was incorporated as a not-for-profit organization in 1996 as required under Section 5(3) of the regulations. The *“Final Report on Nova Scotia’s 1995 Solid Waste Resource Management Strategy”* noted the accomplishments of RRFB:

“In 1995, Nova Scotia developed a Solid Waste Resource Management Strategy that committed the province to achieving a national waste diversion target of 50 per cent by the year 2000. Nova Scotia was the only province to reach this goal and remains a national leader in waste diversion.”

The *Environment Act* (93(1A)) and the *Environmental Goals and Sustainable Prosperity Act* of 2007 [4(2)(o)] expanded on the 1995 goals with a long term objective:

“the solid-waste disposal rate will be no greater than three hundred kilograms per person per year by the year 2015 through measures that include the development of new programs and product stewardship regulations;...”

The Province’s solid waste disposal objective provides the strategic direction and specific measurements and timeframe to guide the RRFB in fulfilling the mandate set out in Section 4(1) of the regulations:

- (a) *to develop and implement industry stewardship programs;*
- (b) *to fund municipal or regional diversion programs;*
- (c) *to develop and operate a deposit-refund system for beverage containers;*
- (d) *to develop education and awareness of source reduction, reuse, recycling and composting; and*
- (e) *to promote the development of value-added manufacturing in the Province.*

The first three objectives of this review are to examine and assess the mandate, programs, functions and services of RRFB for efficiency, effectiveness, and consistency with government objectives. Each of the above mandates will be examined and assessed against the three review objectives.

4. Stewardship Agreements

Industry or product stewardship agreements are intended to shift some or all of the financial and/or physical responsibility for managing the waste created by products or industry from taxpayers to the manufacturer, producer, or consumer. Managing the waste may range from requiring producers to assume full or partial financial responsibility for the costs of handling the resulting waste to direct responsibility for the collection and environmental sound disposal of the waste. This approach is a form of Extended Producer Responsibility which the Canadian Council of Ministers of the Environment (CCME) describes as:

“Extended producer responsibility (EPR) is defined as a policy approach in which a producer’s responsibility, physical and/or financial, for a product is extended to the post-consumer stage of a product’s life cycle. EPR shifts responsibility upstream in the product life cycle to the producer and away from municipalities. As a policy approach it provides incentives to producers to incorporate environmental considerations in the design of their products. EPR also shifts the historical public sector tax-supported responsibility for some waste to the individual brand owner, manufacturer or first importer...”

In September 2011, the Province released “*Our Path Forward: Building on the Success of Nova Scotia’s Solid Waste Resource Management Strategy*”. The strategy identified one of its six goals as: *Increase producer responsibility for end-of-life management of products and materials*. The Strategy also notes that the EGSPA states that product stewardship will be used to ensure the province meets the goal of: *“the solid-waste disposal rate will be no greater than 300 kilograms per person per year by the year 2015 through measures that include the development of new programs and product stewardship regulations.”* It is clear that product stewardship, including Extended Producer Responsibility will be expanded as a key part of future waste diversion efforts.

There are currently eight categories of agreements or regulations that can be classified as industry stewardship agreements. Agreements are described as voluntary if they are governed solely by contractual arrangements and in regulations if regulations set out the requirements for the program even if industry or individual agreements are also in place.

Arrangements for producers’ financial responsibility range from in-kind contributions of services (newspapers) to full compensation of processing costs (dairy packaging). Some industries take responsibility for the physical collection of products (residential sharps) and others include the actual separation and recycling of used products (electronics).

Two arrangements were made within the past four years. All other arrangements are dated 2003 and prior. All arrangements that are not non-lapsing expire in 2011.

Table 4.1

Resource Recovery Fund Board Industry Stewardship Agreements					
Date	Expiry	Industry	Description	(V) Voluntary (R) in Regulations	RRFB Role
2001	2011	Daily newspapers	In-kind contribution	V	Administers
2001	2011	Community newspapers	In-kind contribution	V	Administers
2008	2011	Directories	In-kind contribution	V	Administers
2000	Non lapsing	Milk Packaging	Reimburse Regions for costs of processing milk packaging	V	None
2003	2011 – program extended for one year	Consumer paint	Fee per container of paint	R	Administers paint recycling program and fees collected by brand owners registered with their program goes to Fund. Also operates Product Care Association's paint recycling program
2000	Non lapsing	Residential sharps	Pharmacies collect sharps. Disposed at municipal facilities or under private contract	V	Education
1996	Non lapsing	Used tires	Collection of used tires and fee collected at time of purchase	R	Administers, collects fee, collects and processes used tires
2007 and 2008	Non lapsing	Electronics	Industry collects environmental handling fee on new purchases of electronics captured under the ACES program, collects and recycles used electronics Cell phones and wireless devices collected and recycled by industry with no associated fee	R	Contracted to deliver program on behalf of ACES, subject to renewal None

The Environment Act and regulations confer significant power on the Minister to impose requirements on producers regarding packaging, accepting used products, and the content of material as well as applying a surcharge to a material. The RRFB has a mandate to develop and implement industry stewardship agreements. However, any agreement developed requires approval by the Minister.

RRF board members were asked their views on a variety of matters related to the mandate of the RRFB. One Director pointed out that the RRFB has the “*carrot*” but only the Department has the “*stick*”. The carrot that RRFB offers is expertise, a network of collection and processing facilities, and the capability to monitor and administer stewardship agreements. The *stick* available to governments, in the extreme, is the threat or imposition of legislation. A combination of a carrot and a stick would be helpful in extending producers responsibility to the post-consumer stage of a product’s life cycle.

The RRFB mandate “to develop and implement industry stewardship agreements” cannot be achieved by the RRFB alone. It was likely the intention at the time the legislation was developed that stewardship agreements would be the result of the joint efforts of the RRFB and Environment. However; the mandate, read in isolation, cannot be effectively achieved by RRFB (they have the carrot but not the stick).

RRFB and the Department work closely together to develop stewardship agreements. However, individuals change and in order to reach the government’s new, more ambitious goals, the Department and RRFB will have to pursue stewardship agreements more aggressively and expeditiously. A more formalized working arrangement directed at improving existing agreements and searching out new ones would be beneficial.

Recommendations

- 4.1 RRFB and Environment should establish a special purpose working group focused on the task of improving existing agreements and developing new stewardship agreements for waste items not currently under an agreement that will assist in achieving the government’s waste diversion and reduction goals. Agreements developed by this working group should be reviewed by the RRF Board and if approved, forwarded to the Minister for approval and inclusion in regulations if required.
- 4.2 The working group should be small (e.g. two representatives from each party), meet regularly, access technical expertise on an as needed basis (external professionals or expertise from Regions), and have access to funding for analysis and implementation.
- 4.3 While the working group should be established for the special purpose of stewardship agreements, other initiatives could be pursued, but only when the potential from stewardship agreements contributing to meeting the diversion goals appear to have been exhausted

- 4.4 Through the agreement between RRFB and the Department, an allocation of RRFB's net revenue should be made available for the special purpose working group to access, if necessary, to expedite and support their work.
- 4.5 The Department should consider rewording the RRFB mandate to reflect the difficulty in apparently assigning full responsibility for developing and implementing stewardship agreements to the RRFB.
-

Alternatively, the Department could assess the appropriateness of delegating some regulation making authority to the RRFB, if possible under provincial statutes.

Regional Chairs Committee

The Regional Chairs Committee in their views submitted for this review, discussed the importance of stewardship agreements. Two of their comments were:

- *The completion of comprehensive new stewardship agreements is being hampered by the reliance on voluntary industry agreements. "...provide RRFB with the regulatory support it needs to fulfill its first mandate..."*
- *The Chairs believe that there are some Stewardship program administrative responsibilities which are not being followed up on. (e.g. reports on results of certain stewardship programs).*

The Department has assessed the administrative requirements of the current stewardship agreements and is working with stakeholders to bring outstanding items up to date.

Two other points of view related to financing and management of stewarded material. Those points were:

- *One important goal of stewardship programs should be to increase the Fund to create a pool of money to support overall diversion programs.*
- *From a public service perspective the Chairs believe that Stewardship programs should be structured to include municipalities in the management of stewarded material. A multiplicity of disconnected programs, with many different return or redemption networks, creates confusion in the public mind while a "one-stop shopping" concept increases convenience for the public and, we believe, will also increase compliance and diversion rates.*

It is probable, although far from guaranteed, that new stewardship programs will produce a revenue stream for the Fund. In many cases, programs could be envisioned that involve municipalities in the management of the stewarded material. However, more comprehensive and holistic criteria should be used when developing stewardship programs. For example, the

CCME's October 2009 "Canada-Wide Action Plan For Extended Producer Responsibility" suggested 17 "program elements that are key to considering the structuring of EPR programs by both governments and producer responsibility organizations (PROs) and are main considerations in EPR program development, design and implementation." The elements are:

Scope - the responsible producer needs to be clearly identified.

Product Definition - The products from both the residential and non-residential waste streams should be covered by the EPR program

Responsibilities of Designated Producers and Producer Responsibility Organizations (PROs) - Identified producers should be individually and fully responsible for the financing and operation of the EPR program and have the ability to raise and spend funds to meet the program objectives.

Stewardship Plan - A stewardship plan sets out how the designated producer or producers and the PRO will meet their obligations.

Approvals – Jurisdictions require proper reporting of program outcomes, environmental benefits and waste diversion performance.

Information Requirements/Reporting/Communications - Documentation and public reporting of the EPR program's performance will be necessary.

Training and Education - Training and education of staff working for the EPR program's PRO is essential.

Performance Measures - EPR programs should operate using recognized and comparable key performance indicators.

Targets - EPR programs should set measurable and quantifiable targets.

Design for Environment - Producers are encouraged to improve the life-cycle environmental performance of their product

Fees - Costs associated with an EPR program should be internalized as a factor of production of the product.

Historic and Orphan Products - Historic and orphan products should be received and managed by the EPR program.

Auditing - EPR programs should be audited for financial and operational performance.

Offences and Enforcement - Jurisdictional authorities can enforce regulation provisions by restricting a product's market access as provided for under the governing legislation.

End-of-Life Management - Recycling and other end-of-life management practices should be conducted in accordance with the appropriate environmental regulations and recognized environmentally sound management standard or guidance document.

Competition - ...authorities, producers and PROs are encouraged to take whatever steps are necessary to ensure competition issues are considered when developing and operating an EPR program.

Consultation - Consultation should be undertaken with all interested stakeholders and members of the public in the preparation of stewardship plans and regarding other program proposals.

Nova Scotia stewardship agreements should be developed on the basis of this type of broad framework, adjusted for the province's particular circumstances.

Recommendations

- 4.6 Developing stewardship agreements should be based on a broad framework of criteria, such as the CCME's "*Canada-Wide Action Plan For Extended Producer Responsibility*", with due consideration to increasing the size of the Fund.
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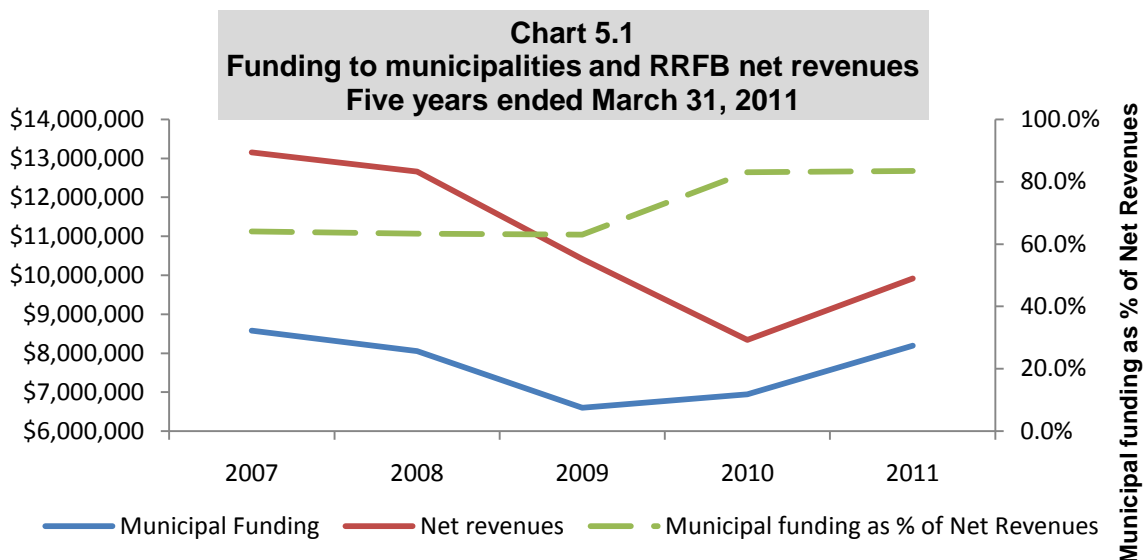
5. Funding Municipal/Regional Diversion Programs

The second RRFB mandate specified in the regulations is “...to fund municipal or regional diversion programs...” The direction provided in the regulations is that a minimum of 50% of net revenues is to be divided among municipalities or regions based on the solid waste diverted by the municipality or region. The RRFB has consistently met the minimum funding requirement set out in the regulations. The major funding program, Municipal Solid Waste Diversion Credits, provides municipalities with the proscribed amount of 50% of net revenues based on solid waste diverted.

The regulations also permit financial assistance for certain “*Approved Programs*”. Financial assistance under these approved programs may be provided to any person, not just municipalities, on the basis of a proposal. However; the majority of assistance under the first three approved programs is provided to municipalities:

1. *Municipal waste diversion programs, including source reduction, reuse, recycling and composting programs.*
2. *Municipal household hazardous waste programs.*
3. *Municipal waste management education programs.*
4. *Market development, manufacturing and processing of recycled materials.*

In the past two years, an additional 33% of net revenues was provided to municipalities through six different programs (seven in 2010), falling in the approved programs categories. In both years, total assistance to municipalities and spending on other programs exceeded the RRFB’s net revenues, resulting in deficits of almost \$ 1 million as part of a planned draw down of accumulated surpluses. In the years 2007 to 2010, assistance to municipalities under the approved program categories was 13% more than the minimum 50%. In those years the RRFB reported surpluses.



Even though in the past two years municipalities have received a greater proportion of net revenues and accumulated surpluses were drawn down, funding provided to municipalities in 2011 was \$385,000 less than in 2007.

The prospects for municipal funding to increase are dim unless there is a significant change in programs to increase net revenue. Using the status quo, no change to current programs assumptions used in the financial overview and extrapolation section, the decrease in net revenues could likely result in amounts of municipal funding less than half the current levels in just over five years.

Recommendations

- 5.1 The RRFB has met the “*fund municipal or regional diversion programs*” requirement of its mandate as well as the specific regulation to pay a minimum of 50% of net revenues to municipalities. Clarifying the mandate to reflect the reality that RRFB will only ever be in the position of “providing financial assistance” to municipalities may help avoid confusion or not heighten expectations.

Municipal funding categories

In the past five years, RRFB provided funding to municipalities under the following categories:

**Resource Recovery Fund Board
Municipal Funding Categories
Five years ended March 31, 2011**

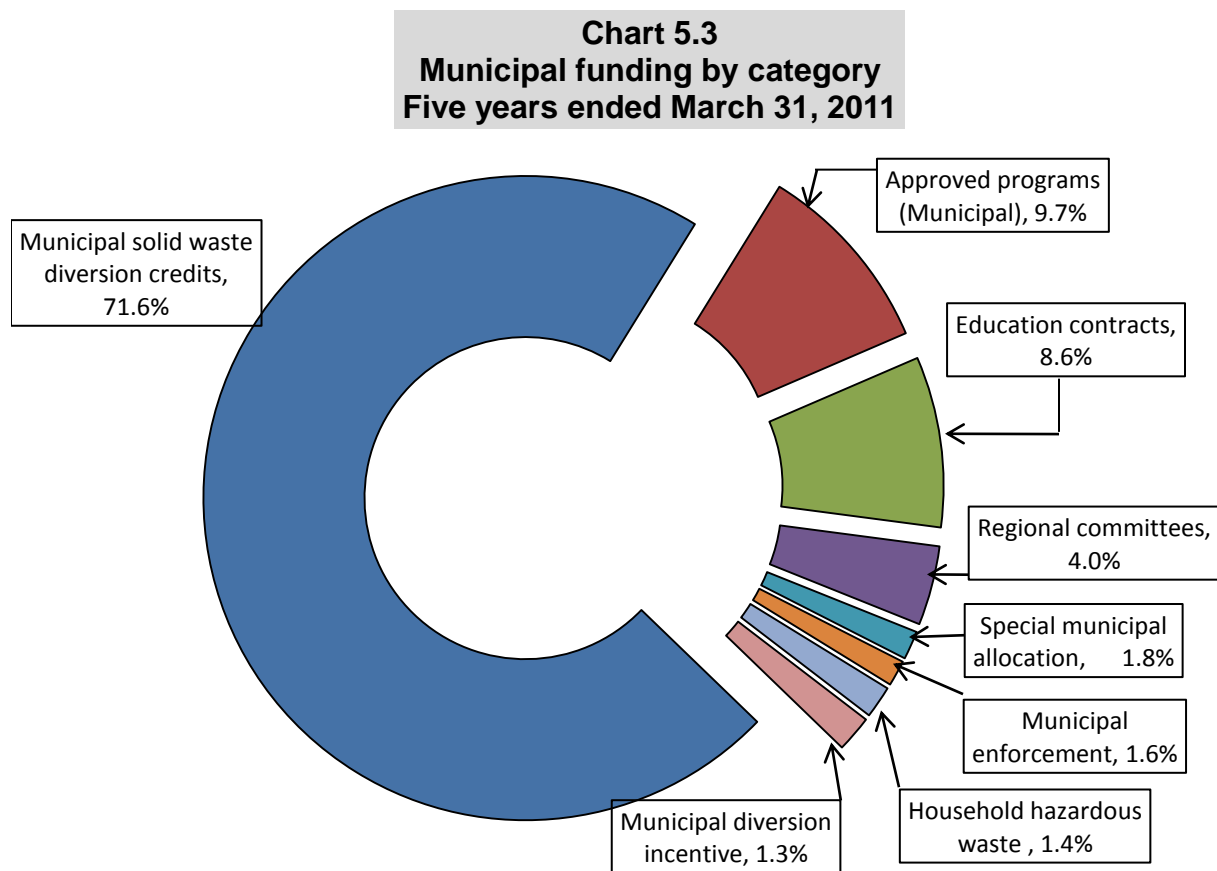
Table 5.2

Categories	Years funding provided
1 Municipal Solid Waste diversion credits	All
2 Municipal Approved Programs	All
3 Education contracts	All
4 Regional Committees	All
5 Household Hazardous Waste program	All
6 Municipal diversion incentive funding	2010, 2011
7 Municipal enforcement program funding	2010, 2011
8 Special Municipal allocation	2010

In connection with the different categories of municipal funding, the Regions commented:

“Municipalities should have more flexibility in the use of available RRFB funds. Most of the core municipal waste management programs are in place and mature throughout the province and the financial demands of maintaining those programs impose an ongoing burden on municipal budgets. As a full partner in the implementation of the Strategy, municipalities should be granted the leeway needed to allocate funding as required by the waste management programs in each jurisdiction.”

Total funding to municipalities by category over the past five years is presented in the following graph:



In 2009, extensive consultations with the Regions were carried out by Research Power Inc. on the method of providing funding to municipalities. Some of the relevant, selected comments from Regions in the report were:

- *It was consistently noted that MAP is important in providing funding to the regions and municipalities for programs that would not otherwise happen;*
- *MAP helps to ensure project protection because if we apply and it is in the municipal budget then the funds are protected and the project is safe and the money cannot be taken for another use.*
- *If it were not for the 50 cent dollars the municipal units would not be able to scrape together the dollars [to do these projects].*
- *Generally, it was felt that the application and administrative process associated with applying for and reporting on the MAP funding was somewhat onerous and complicated, and needed to be streamlined.*

The input provided by the Regions for this review made particular note that funding under education contracts was useful but, more flexibility was needed to address, more specifically, the priority issues in their areas. They also expressed frustrations over the complicated application and reporting process. They felt that staff resources could be better utilized if some form of year end reporting could replace the more detailed information currently required.

Just over 70% of all funding provided to municipalities over the past five years has been without conditions. Despite the desire by the Regions for more flexibility in spending their allocation, the consensus has been that imposing some conditions on funding flowing to municipalities ensures that projects are funded that would otherwise not have been implemented and project funding is protected from use in other municipal priorities.

Without directed categories of funding outside of the municipal solid waste diversion credits, RRFB and the Department would have few tools remaining to move towards the legislated environmental goals.

Recommendations

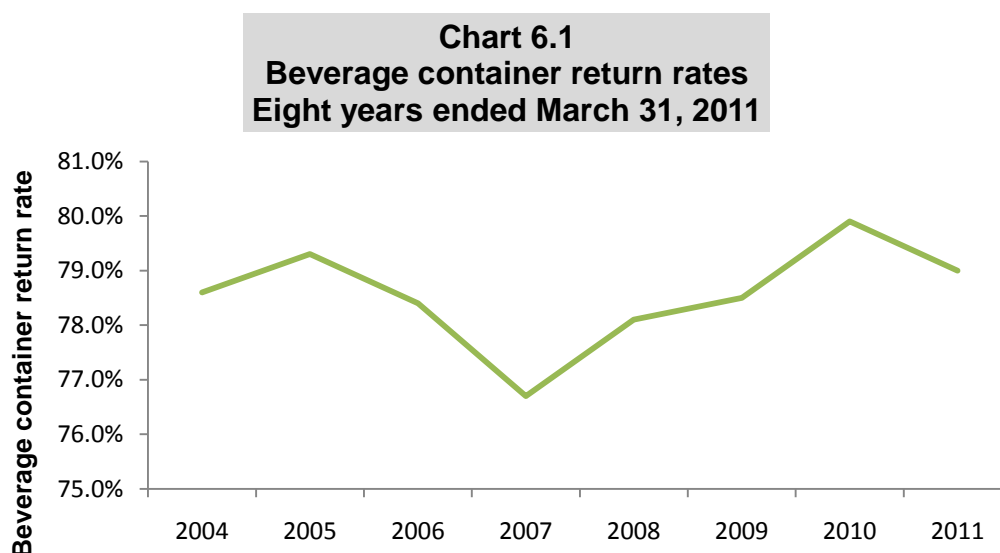
- 5.2 A combination of unrestricted municipal waste diversion credits and targeted program funding is appropriate and necessary to assist in achieving the Province's legislated environmental goals. RRFB should review the application and reporting process to ensure it is as efficient as possible.
-

6. Beverage container deposit-refund system

RRFB's largest and longest running operational activity is the beverage container deposit-refund system. Nova Scotia's system began operation in April, 1996 and by 2010 had return rates among the highest in Canada. Deposit-refund systems for beverage containers have historically been demonstrated to produce the highest return rates when compared to other approaches. In the report *"WHO PAYS WHAT, An Analysis of Beverage Container Recovery and Costs in Canada 2010, CM Consulting"*, reported that:

"Canadian deposit systems have a total recovery rate of 83% (including refillable beer bottles), while non-deposit systems have a total recovery rate of 41%..."

Beverage container return rates for Nova Scotia over the past eight years were:



Paradoxically, RRFB's financial results improve when return rates decline. Bottom line financial returns are important to municipalities and the RRFB to fund programs. But; a decline in return rates is contrary to the overriding goal of improving the environment by diverting material from landfills and unauthorized disposal methods.

British Columbia's beverage container recovery system combines the deposit-refund system with a non-refundable Container Recycling Fee. The fee is adjusted periodically to reflect the net cost of recycling each type of container. Alberta operates a similar system.

Manitoba and Ontario are introducing systems heavily involving the container industry and based on a container recycling fee system. Once a track record has been established, return rates and costs under these systems will provide another basis for comparison.

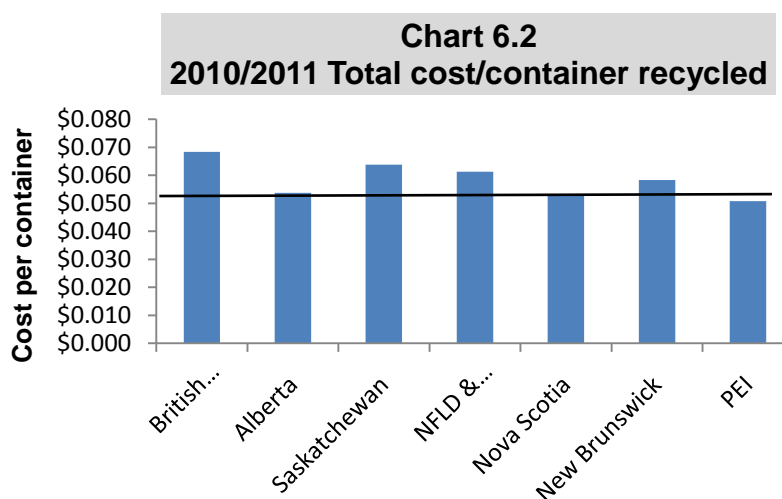
Recommendations

6.1 Other Canadian provinces are using different approaches to recover beverage containers for recycling. Some are producing increased return rates. If these programs deliver encouraging financial and environmental results, RRFB and the Province should consider reviewing the system in use in Nova Scotia and other jurisdictions to determine if modifications are justified.

Although a detailed, year by year tabulation was not constructed, a sample of comparable return rates across Canada shows Nova Scotia to be consistently in the top tier. Within the province, return rates have hovered between 77% and 80% over the past eight years. The RRFB appears to have been effective in its mandate of operating a deposit-refund system for beverage containers.

RRFB and the Department will need to continue monitoring return rates and costs in comparison with other systems in Canada. The crude extrapolation of net revenues provided previously and similar return rates generated with other systems in other provinces, if they are sustained, could indicate possible opportunities in the future for better results in Nova Scotia, financially and environmentally. Four to five years from now, a review of the Nova Scotia's beverage container deposit-refund system may be warranted.

One measure of RRFB's efficiency in managing the beverage container system is a comparison of the cost to recycle containers. Recycling Affiliates of Canada is composed of representatives from each province of beverage container recycling organizations. The group meets to share information and examine upcoming challenges. One of the types of information shared is recycling costs. RRFB has prepared a comparative analysis of the cost per recycled container in seven provinces that use a deposit-refund type system.



Other than PEI, Nova Scotia's cost per container was the lowest. A large part of PEI's cost advantage is the smaller geographic area over which the recycled material must be collected and transported for processing. A significant part of RRFB's costs is the collection system for recycled material. The collection system starts with the handling of items returned to enviro-depots for recycling, transportation of material to processing facilities, processing of materials, and transportation of materials for sale.

An example of where efficiencies might be found is the transportation of whole containers and uncrushed cans from collection points. The weight of these items is of lesser concern than their volume. The air within this un-compacted material requires larger trucks making more trips than if the material was compressed. A number of alternatives are being pursued by RRFB and other provinces. The *"Who pays What"* report noted:

"... new technologies for improved efficiencies have proven a welcome investment. Compactors built for beverage containers in reverse vending machines, on trucks and in processing centers all provide tremendous benefits by reducing the amount of space used. Reduced space requirements translate into fewer trucks, less labour and a smaller physical footprint used to store containers. Compaction technology can reduce transport costs alone by more than 40%."

RRFB tested a system that compacted material at the collection point before transport to the processing facility. The system was not adopted due to difficulties caused at the collection point and processing facility. However; RRFB are continuing to examine ways to improve the efficiency and cost effectiveness of the entire collection system. If a functional system can be found, the cost savings potential and reduction in greenhouse gases would be significant. These benefits would warrant the "investment" in expert advice to determine and test possible solutions to produce a workable solution.

The costs of changing collection systems can be significant and the expected results cannot be guaranteed. To avoid the cost and disruption of collection system changes that do not produce the expected results, the RRFB should continue its practice of piloting and testing new methods.

Recommendations

- 6.2 The collection systems for recycled materials are a significant cost factor. While a solution may be elusive, the potential benefits, financially and environmentally, would warrant considering engaging appropriate external resources to ensure the best possible collection system is in place.
- RRFB should continue to pilot and test collection system changes and phase in those changes they believe are the most likely to produce a successful outcome.
-

7. Education and Awareness

RRFB's education and awareness mandate is delivered by two methods:

- Communications and education programs carried out by RRFB staff and contractors; and
- Through education contracts with the Regions.

When discussing education and awareness with any of the Board members or RRFB staff, all expressed confidence and satisfaction with the education and awareness program. The Regional Chairs Committee reported that the Regions had talented and experienced education staff who are aware of the needs for education in their jurisdictions.

The RRFB developed the Regional Education Contract program to provide funds to regions for targeted and general education. The 2011 target areas – food service areas, institutions, and multi-unit dwellings - were determined in consultation with the regions. Half of the funding must be directed at these target areas. The remaining half can be used for municipal priorities. While the Regions appreciate RRFB education funding, they would like more flexibility in how the funds are applied. RRFB has a specific mandate for education and awareness on a province wide basis. In order for RRFB to carry out its responsibilities, they need to maintain their ability to direct a major portion of the funds to province wide target areas.

Recommendation

- 7.1 As long as education contracts with Regions are in place, RRFB should retain the ability to direct the majority of funding to province wide target areas.
-

8. Promote value-added manufacturing

Included in RRFB's mandate is promoting the development of value-added manufacturing in the Province. Value-added manufacturing not only improves the provincial economy but, in the context of RRFB's activities, provides a market and useful purpose for the materials that have reached the end of their useful life.

Finding a useful purpose for end of life material and doing so economically is the goal of virtually every jurisdiction. Methods of finding individuals and companies that have credible and profitable ways of adding value to recycled material is imprecise. A necessary step in developing value-added manufacturing is researching methods of processing and developing manufacturing systems that use recycled materials and developing markets for the products.

The RRFB has a number of programs directed at this mandate area:

- Municipal Approved Programs Innovation program - funding for municipalities and solid-waste management regions researching and developing new processes, methods, markets and equipment to increase solid-waste reduction and diversion in Nova Scotia.
- Value-Added Manufacturing Program - funding for projects designed to commercialize new technology, products or services, may include the following:
 - Development of new products from solid waste-resources
 - Development of new waste-resources processing and handling technologies
 - Development of new markets for waste resources
- Student Research Grants – funding for research related to solid waste diversion. The program is intended to support student research projects that will provide a commercial benefit to businesses and municipalities.

Feedback from RRF Board members is that more needs to be done. They believe they now have the appropriate staff resources in place. The RRFB and the Department work closely reviewing possible research and development projects.

There is a risk that other pressures on RRFB's net revenues could impede the Board from allocating funds to this mandate. Funding may not be the sole answer to finding value-added manufacturing applications, but it is important that resources be available when required.

Recommendation

- 8.1 The Board should ensure that any plan to find or attract value-added manufacturing, including research and development activities, is not unreasonably impaired due to net revenues being applied to other purposes.

9. Cost Savings and Revenue Generation

Revenue generation

One of the objectives of the review was to identify possible revenue generation ideas. Increasing revenues, and more importantly net revenues, is an understandable goal. However, methods of achieving this goal have to be assessed against the higher priority of diverting waste and improving the environment.

There are instances where programs to divert and recycle material otherwise heading to landfills will not involve revenues flowing to RRFB. For example, the ACES program does not significantly increase the net revenues of RRFB but it does achieve the environmental goal. Municipalities may still have to handle some material that cannot be processed but at much reduced levels than before the program.

Increasing revenues almost invariably requires someone else, companies, consumers or taxpayers, to pay more. In order for these programs to succeed, those paying more should be convinced of the need and benefits of what they are paying for. Even when the merits of a program are widely supported, the costs may influence behavior in a manner that reduces revenue. For example, fewer purchases or a change in packaging that avoids paying the deposit, fee or tax.

Changing existing revenue producing programs or introducing new ones should not be entered into lightly. Other provinces have preceded any changes to their systems with studies and comparison to other jurisdictions and detailed explanations for why the changes are being made and how they will be implemented. The interrelated factors to be considered are complex and include at least the following:

- Impact on return rates;
- Impact on revenues;
- Reaction by consumers;
- Impact on municipal waste management programs;
- Reaction by producers
- Consequences of programs different from neighbouring jurisdictions;
- Economic impact;
- Ensuring waste is truly diverted from landfills;
- Awareness and acceptance by the public.

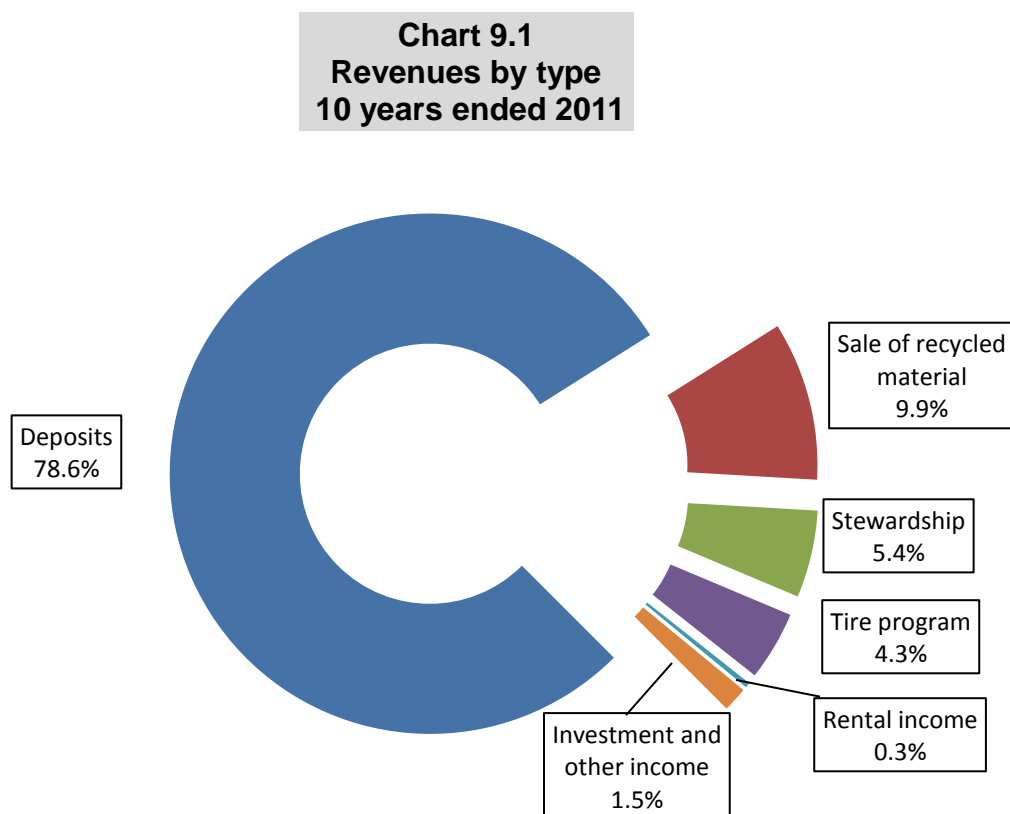
Any new revenue generating program or expansion of an existing program should only be pursued when it has a sound environmental and financial public policy basis, and the public understands and accepts the program's necessity. This would require utilizing recognized sector experts in designing programs, information programs, and surveys or other methods to gauge the public appetite for changes.

Recommendations

9.1 The success of any major new revenue generating initiative or change to an existing program is dependent on public understanding and acceptance and a sound public policy basis. The Department must be assured that the public is:

- informed – normally through a public information program; and
 - understands and accepts, the need for new or changes to existing programs.
-

Over the past 10 years, the relative composition of RRFB revenues has been:



External factors constrain significant growth of three revenue types.

- Rental income – no additional properties to rent
- Investment income – determined by the amount invested (primarily unearned revenue) and the return obtained by the Department of Finance which is dependent on the economy and markets.
- Sale of recycled material – determined in part by the volume and type of recycled material but, primarily by the commodity markets and foreign exchange rates. This revenue type has been, in recent years, very volatile with year over year changes of – 30% (2010) to + 36% (2011).

The remaining revenue types can only be significantly affected by policy or program changes.

Tire Program

The current tire program does not include “*Off The Road*” OTR tires (RV's, ATV's, farm equipment, heavy equipment) and is not aligned with neighbouring provinces. The RRFB cannot accommodate requests to process these types of tires without creating additional costs at the expense of its other legislated mandates. These tires are not being recycled resulting in illegal dumping, finding their way to landfills or other methods of improper disposal.

Recommendations

- 9.2 The merits and ability to expand the tire program to align with other provinces and capture more tires should be examined.
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Beverage Containers

The current deposit/refund paid/redeemed by the consumer has not been changed since 1996. During that period, envro-depot fees and processing costs have increased as well as container return rates which reduce net revenues.

Generally, there are three different methods of managing beverage containers in other provinces:

- System managed by private sector, with or without some revenues flowing to the province;
- Deposit/refund system as in Nova Scotia; and
- Deposit/refund system incorporating a recycling handling fee. The recycling fee is adjusted periodically to reflect collection and processing costs.

The most strategic approach, given Nova Scotia already has a deposit/refund system, is to consider a recycling fee in addition to the deposit. In some jurisdictions, the fee moves in relation to collection and processing costs, ensuring the mandates of RRFB can be carried out especially funding municipal waste diversion programs. Alternatively, changes to the deposit and refund amounts, including container dependent variable deposits could be considered.

Recommendations

9.3 In order to preserve the primary revenue source to RRFB and municipalities, the beverage container deposit/refund system may have to be altered in the future. External expert advice, encompassing the experience of other jurisdictions, is essential to demonstrate the effectiveness of the approach ultimately selected.

Due consideration must be given to programs operating in neighbouring jurisdictions to ensure there are no policy conflicts that may create unintended consequences.

Stewardship agreements

Elsewhere in this review, it is recommended that RRFB and Environment form a task group to aggressively examine existing and new stewardship agreements. Some of the specific steps that group could take are:

- Determine which stewardship agreements, in particular those expired or expiring, provide best value through:
 - transfer of financing, collection and disposal responsibility to producer,
 - in-kind compensation; or
 - revenue stream to RRFB.
- As recommended in this review, aggressively determine those sectors where stewardship agreements provide the most effective and efficient waste diversion and negotiate agreements with best value as one objective.
- In consultation with RRFB, review the Paint Program to determine:
 - Acceptable rate changes to make the program at a minimum cost neutral; and
 - Benefits of fee parity with nearby jurisdictions.

Recommendations

9.4 Amounts under the Paint program should be reviewed for parity to other jurisdictions and with a goal of making the program financially self sufficient.

Unexplored areas

There are possible revenue producing initiatives available to the Province that have not previously been investigated or pursued. There are two likely methods of identifying these areas:

- Examine other jurisdictions - This approach appears to be well advanced now by both the RRFB and the Department but there are constant changes and new methods under development;
- Results of waste audits - In 2011, RRFB initiated a program to methodically and regularly examine materials going to landfills. The results of this program will identify materials where there may be alternative methods of processing or disposal that is less harmful to the environment and a potential revenue source.

Recommendations

9.5 The Department and RRFB should continue to monitor other jurisdictions for revenue and waste diversion opportunities. When complete and operational, materials identified by the waste audit should be reviewed by the Department and RRFB jointly to develop programs that would divert, recycle and/or produce revenue.

Possible cost savings

The majority of RRFB expenditures are refunds of deposits, enviro-depot fees, tire and paint programs, processing and transportation of material, and payments to municipalities. Cost savings from these areas are limited, except for processing and transportation, for the following reasons:

- Deposit refunds are crucial to any beverage container recycling program. Reduction in refund amounts would almost certainly reduce return rates contrary to the Province's objectives;
- Enviro-depot fees are negotiated. Alternate systems of collection are possible but would be costly to establish. Some jurisdictions are attempting to use technology solutions such as reverse vending machines. A pilot program in Alberta had disappointing results however, newer technology is under development.
- Contributions to municipalities are based on net revenues after direct expenses are covered. These payments are not "costs" per se. Funding assistance to municipal diversion programs is an RRFB mandate, and is a distribution of available net revenues.

There are other distributions of net revenue for such items as Approved Programs (non-municipal), and Education and Awareness. From 2009 to present, distributions were made for research and special projects. In 2011, funds were allocated for development of a waste audit.

Over the past 5 years, these other distributions have ranged from 8.2% to 13.1% of net revenue. In 2007, other distributions were \$1,104,700 and grew to \$1,197,100 in 2011. Although the proportion of net revenue has increased, the total amounts involved are not significant.

Levels of spending do not necessarily correlate to importance or achievements. However, unless demonstrated to be ineffective, these areas should not be the focus of any cost saving initiative. In fact, they should be protected and even increased if justified by a convincing program plan because they are essential to a number of RRFB's mandate areas.

Recommendations

9.6 Financial resources for RRFB mandate items such as education and awareness, value-added manufacturing, research and development, and other strategic initiatives should be protected, where reasonable, to finance convincing program plans in support of RRFB mandate items.

The remaining areas for possible cost savings are collection systems, Environment funding, and administrative costs.

The area with the potential for the greatest cost savings is collection systems. A recommendation of this review is that RRFB consider external expert advice on transportation and processing methodologies that would make the processes more efficient and less costly. However, it is recognized making changes too quickly could be costly as improved technology becomes available.

Administration expenses amounted to \$1,975,000 (4% of revenue) in 2011. There have been fairly wide fluctuations on a year over year basis, some years with a negative change. However, as a per cent of revenue, costs have stayed within a range of 3.2% to a high of 4.3% of revenue over the past 10 years. Savings in administrative costs, if they could be achieved, would not yield substantial amounts.

The Department of Environment is reimbursed for its costs of services and expenses related to achieving the mandate of the RRFB. Until April 1, 2009, the agreement between RRFB and Environment permitted reimbursement of the Department's costs up to 10% of RRFB's net revenues. This limit was increased to 15% in the 2010 year. Generally, the Department received reimbursement near the limits in the agreement.

This reimbursement, in particular the 2009 increase, is a source of irritation for municipalities. Municipalities feel the proportion of costs reimbursed to the Department is unfair when compared to the amounts received by municipalities from the RRFB in relation to their total waste management costs.

Recommendations

- 9.7 The Department should review the justification for the increased reimbursement maximum. Part of the funding could be used to offset costs of studies examining changes to programs to increase revenues especially stewardship agreement investigation and negotiation.
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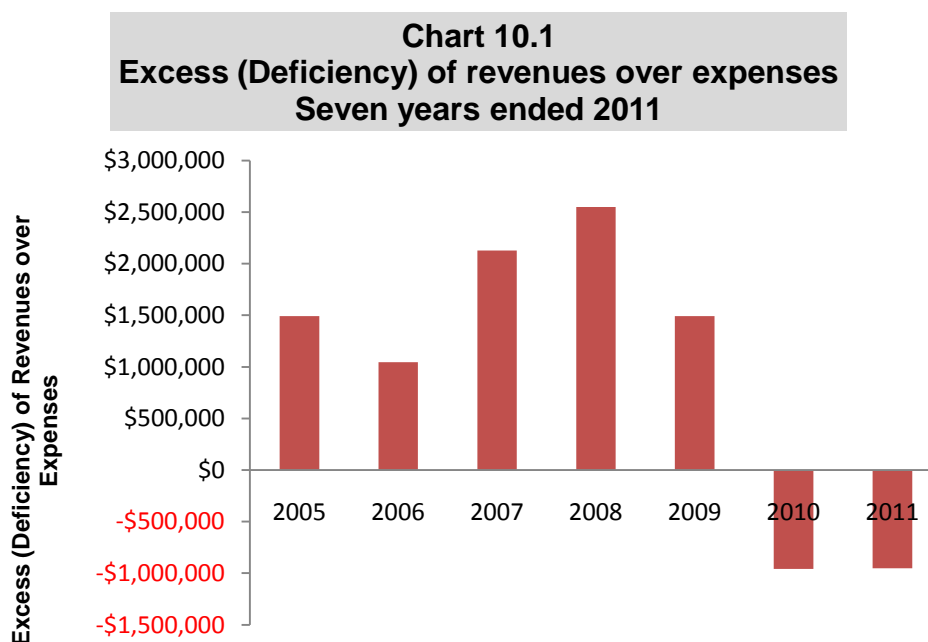
10. Current Asset Management Practices

At March 31, 2011, RRFB had \$5,900,000 in cash and cash equivalents. An additional \$ 17,100,000 was held in investments. These assets are managed with the assistance of the Department of Finance in conjunction with similar investments of the Province. These arrangements provide the RRFB with secure investments where the principal is protected and adequate liquidity for periods when cash is needed.

The RRFB is established as a not for profit entity. While the Resource Recovery Fund assets are managed and protected adequately, a concern is how these assets accumulated and whether the amount held is appropriate. In general, these assets are the result of unearned revenue held for future periods and the net accumulation of annual surpluses and deficits. If the amount of financial resources held is too small, it may impair RRFB's ability to operate. If cash and cash equivalents balances are excessive, it may mean that municipalities are not receiving as many resources as they could and RRFB mandate areas (e.g. education, value added manufacturing) may not be sufficiently funded to be as effective as they can be.

The accumulation of cash and cash equivalents related to unearned revenue is not discussed further. The RRFB revenue recognition policies were described previously. The accumulation of financial resources to provide for expenses related to materials expected to be returned in the future will require financial resources equal to the amount of unearned revenue.

The area of interest is the excesses and deficiencies of revenues over expenses from RRFB operations. The following graph, even though not adjusted for non-cash items, illustrates how the Fund has accumulated its financial resources.



The deficiencies in 2010 and 2011 are the result of a planned effort by the Board to reduce accumulated surpluses and provide more resources to municipalities. This plan will continue to draw down financial resources into the 2011-12 fiscal year. However, the Board and municipalities could benefit from an annual surplus target and a cap on accumulated surpluses.

Currently, RRFB's mandate areas – education and awareness, development of value-added manufacturing, and funding municipal diversion programs – are funded from net revenue. Net revenue is the amount remaining after operating and administration expenses are deducted from revenue. By regulation, 50% of net revenues must be allocated to funding municipal waste diversion programs. By agreement, 15% of net revenues are provided to the Department for their related expenditures. The remaining RRFB mandate areas (education, value-added manufacturing) have no minimums specified.

Not for profit does not mean zero profit. Non profit entities often produce some profit, enough to provide protection from fluctuations in revenues and expenses, and to accumulate funds for major future initiatives. Generally, profits should be small to ensure that the funds are directed to the purposes of the organization. A method of ensuring reasonable profit levels, maximum annual distributions to municipalities, and appropriate funding for other mandate areas could be fashioned in the following manner:

- An annual maximum profit level is specified, either by a Board policy, agreement with the Department or regulation. The profit level would a percentage of redefined annual net revenue. The exact amount could be set by the Board but for illustration purposes assume that the annual profit is to be no greater than 5% of net revenues.
- Even with a limit on the amount of annual profits, surpluses may accumulate and cash accounts increase to amounts greater than what is needed. To ensure these do not become excessive, a dollar limit could be set on the amount of accumulated surpluses.
- The definition of net revenues would be amended to allow for the other mandate areas - education and awareness, and value-added manufacturing – to be included with operating and administration expenses.
- Net revenues under the amended definition could be allocated 80% to municipalities and 15% to the Department of Environment.
- The remaining 5% of net revenues would be the annual surplus for the year. Should surpluses accumulate beyond the amount set by the Board, the excess would be distributed to municipalities and perhaps a portion to the Department.
- The minimum 50% of net revenues currently in the regulations could be removed. Funding to municipalities would be protected by the requirement for distribution of 80% of net revenues and limiting annual and accumulated surpluses. A more complicated approach would be to leave the 50% minimum in the regulations and account for it in a separate calculation.

- The amounts paid to municipalities would continue to be based on the amounts of waste diverted and approved, targeted programs.
- The requirements for a limitation on surplus amounts and allocation of redefined net revenues to municipalities and Environment could be included in the agreement between RRFB and Environment. This would allow Environment to monitor the plan and if there is a rare instance where a major initiative requires changes to the plan, they would have to be approved by the Department.

The benefits of this approach are:

- The amount of funding municipalities will receive from the RRFB in any year to assist in their waste diversion efforts will never be guaranteed. However, the method proposed would ensure that they are receiving the maximum amounts prudently possible.
- Annual and accumulated surpluses would be limited to reasonable amounts.
- Program plans for the other mandate areas would be better able to compete for funding.

Management and the RRF Board are responsible for the preparation and presentation of the financial statements. The auditors review the statements for conformity to Generally Accepted Accounting Principles. Whether the proposed redefinition of net revenues will be presented in the same manner in the financial statements will have to be determined by the Board in consultation with the auditors. However, the financial plans and distribution of net revenue of RRFB can still be prepared in the manner proposed.

Recommendations

- 10.1 The RRFB should consider establishing an annual surplus target and an upper accumulated surplus limit. The annual surplus target should be sufficient to maintain adequate cash flows and allow for prudent distribution of net resources. The accumulated surplus limit should be sufficient to provide for financial security and planned major initiatives.
 - 10.2 Revenues remaining after operating expenses, administrative expenses, and spending on mandate areas, other than funding municipal waste diversion programs, should be distributed to municipalities and the Department based on percentages fixed by the Board calculated to result in the annual surplus target.
 - 10.3 The requirements setting out annual surplus targets, accumulated surplus limits, and distribution percentages to municipalities and the Department can be set by either Board policy, contained in the agreement between the RRFB and Environment, or by regulation. Maximum flexibility for unforeseen events and protection of distributions to municipalities can be achieved by setting out the requirements in the agreement between RRFB and Environment.
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- 10.4 The regulations requiring a distribution of a minimum of 50% of net revenues to municipalities can either remain in regulation or be removed.
- 10.5 The percentage allocation to municipalities would continue to be distributed on the basis of the amount of waste diverted, approved programs, and targeted programs as determined by the RRFB.
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11. Procurement reform

RRFB's procures goods and services for the usual administrative requirements of any organization as well as the specialized needs of the Board. The specialized needs would include transportation, tire processing, recycled material processing, and equipment purchases. A procurement policy guides all procurement activity. To address the review objective - *Identify areas of expenditure including procurement reform, where another approach would produce a more cost effective outcome* – the procurement policy was reviewed as well as a recent specialized procurement.

In 2004, the Office of the Auditor General commented that the RRFB was not adhering to the spirit and detailed requirements of the Nova Scotia Procurement Policy. As part of this review, RRFB's current policy was compared to *Province of Nova Scotia Sustainable Procurement Policy*. Each document differs in the amount of detail and areas covered; however, the RRFB policy generally contains provisions on all the major provincial policy areas. There were a number of areas where the RRFB procurement requires attention. They were:

- The policy is titled: *"Interim Purchasing and Tender Policy"* and was prepared in September 2004. The effective date is not specified nor is there evidence in the policy that it was approved by the Board. The policy should show it has been approved by the Board and become final with a specified effective date.
- The RRFB policy proscribes that bid specifications provide for use of the maximum level of recyclable content, where possible and economical and without significantly affecting the intended use. The provincial policy has a greater emphasis on sustainable procurement in its title and principles, although the end result may not be appreciably different. The Board may want to consider more extensive discussion and inclusion of sustainable procurement wording to match their actual practices.
- The provincial policy requires that bid request documents include the bid evaluation method, criteria and weightings. The RRFB policy does not specify the inclusion of evaluation details, although in practice, evaluation methods are extensively detailed in bid request documents. The RRFB policy on evaluation should reflect actual practices.
- The RRFB policy discusses the advantages of cooperative purchases with other public sector agencies. The policy could reflect that RRFB may access standing offers or other completed tenders of other public sector agencies and deem them to comply with RRFB policy once the Board is satisfied that competitive processes were used.

Recommendations

- 11.1 The Board should address any outstanding areas and formalize the procurement policy with approval by the Board.

RRFB is reviewing the logistics of its collection systems. To provide flexibility for possible changes, recent Requests for Proposals (RFPs) have indicated contract terms shorter than in the past and less than the 10 years desired by the Regional Chairs Committee. Once a plan for collection systems is formulated, a series of RFP's may result.

RRFB issued a Request for Proposals for Materials Processing Services in May of 2011. The document was extremely detailed. While the request was clear that it was an RFP and there was the ability for discussion and negotiation, the detail and complexity of the documents may tend to discourage bidders from proposing different approaches that may be of interest to the RRFB.

Recommendations

- 11.2 To ensure all possible solutions are solicited from respondents to calls for proposals, the request documents should, after base requirements are clearly set out, clearly encourage alternate approaches or pricing.
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12. Regional Chairs Committee

The Province's solid waste disposal goal is - "*There is hereby established a target for waste disposal of 300 kilograms per person per year by the year 2015*" (*Environmental Act*, 93(1A)). The Act also implies that the goal may vary in different areas of the province. The Regions have noted that differences in population, concentration of institutions and businesses, and other factors may impact the rate at which a Region can be expected to achieve the goal. There does not appear to have been a formal statement of whether the Minister intends to apply the goal to the province as a whole, by Region, or municipality.

Recommendations

- 12.1 The Department should clarify whether the 300kg/person/year waste disposal goal applies province wide or varies by region or municipality.
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The previous provincial goal of 50% solid waste diversion was supported by specific Regulations. The Regulations required preparation and submission of plans and progress reports by region. The Province has set a new waste goal of 300 kg/person/year. This goal is set out in legislation however; the regulations supporting this goal do not currently require regional or municipal plans or reporting on progress as was required for the previous goal.

In order for the regions and municipalities to be accountable for their progress toward the provincial goals, the expectations of the Department should be set out more clearly. The requirement for waste diversion plans to achieve the new goal should be incorporated in the regulations or in a Memorandum of Understanding with the regions.

The September 2011 provincial strategy, "*Our Path Forward: Building on the Success of Nova Scotia's Solid Waste Resource Management Strategy*", indicates the government will require renewal of regional plans.

One of the objectives of this review is: *Examine the role of the Regional Chairs Committee to identify opportunities for it to be accountable to objectives and outcomes that are mutually beneficial to the municipalities, RRFB and NSE*. These renewed plans and reporting on the progress in achieving the objectives in the plans will be the primary means for regions to be accountable.

Recommendations

- 12.2 The requirement for waste diversion plans and reporting on progress to achieve the new goal should be incorporated in the regulations or in a Memorandum of Understanding with the Regions.
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13. Trilateral relationships

The objectives of this review include identifying more effective and efficient methods of interaction in the trilateral relationship between Environment, RRFB, and the solid waste management regions.

All three parties have the same overall objective – waste diversion. However, each has their own individual goals and priorities which do not overlap in all areas. However, each is dependent on the other for their success in achieving goals.

- RRFB is guided by the five mandate areas in the legislation but implements a number of programs through the regions. The RRFB is accountable to the Department because the Fund is the property of the Province.
- Environment sets overall goals and the policies, strategies and legislation required to achieve the goals. They also monitor the progress of both RRFB and the regions and perform a regulatory role.
- The regions implement waste management plans with some activities unrelated to RRFB mandate areas. While all parties are sensitive to the costs of waste diversion, municipalities are particularly aware of these costs because, other than contributions from RRFB, their activities are funded by property taxes.

The trilateral relationship will always have to contend with these differences in priorities. The review identified some actions that would result in a more effective relationship among the three parties.

Environment and RRFB

RRFB's strategic plan includes an objective of semiannual meetings between the Minister and the Board. There should be at a minimum, an annual, formal session between the full Board, senior department and RRFB staff, and Minister and Deputy Minister. These sessions will provide an opportunity for the Board to advise the Department of their operations and future challenges. The Department could also express any thoughts or concerns they may have or changes in government policy that may affect the Board.

Recommendations

- 13.1 There should be, at a minimum, an annual, formal session between the full Board, senior department and RRFB staff, and Minister and Deputy Minister.

There are two primary methods of interaction between the Department and the RRFB. The Board provides regular reports (e.g. business plan, annual report) to the Department as required by government policy. The Board or CEO also corresponds with the department from time to time on specific matters. In addition, RRFB staff report that they have a good relationship with department staff when required to work on common projects.

The second method is interaction through the Department's designated liaison with the RRFB and the participation of a senior departmental staff member as a member of the Board. The designation by the Department of a liaison person is important and should be continued but, a Departmental presence on the Board would be helpful to both RRFB and the Department. Historically, the Department has appointed a senior management representative to serve as a member of the Board. This position on the Board has been vacant for the past number of months. It is expected to be filled in the very near future.

Recommendations

- 13.2 The Minister should continue the practice of appointing a senior management person to serve as a member of the RRF Board.
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Additional Board member positions - the Chair and one other board appointment – requiring ministerial approval are currently outstanding. These positions also expected to be filled in the very near future. The government has somewhat lengthy and complex procedures for appointing persons to serve on government entities. While these procedures are important to government, they are not always understood by the entities. The entities are primarily interested in having a complete Board in order to conduct their operations as well as a liaison with the government. The Department must function within these procedures however, advance planning and anticipation of events requiring government approval would reduce the amount of time positions remain vacant.

Similarly, approvals of RRFB submissions such as business plans and other reports can also be delayed by government processes. While delays will occur from time to time, relationships can suffer when submissions are not responded to on a timely basis.

Recommendations

- 13.3 The Department should maintain a calendar of Board member expiry dates and report approval deadlines. Board appointments can be initiated prior to the expiry of a Board member's term. Similarly, anticipating the submission of and expediting approval of business plans and other requests assists the Board in carrying out its operations in a timely manner. When delays are encountered, RRFB should be kept informed.
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The RRFB has been successful in managing numerous diverse activities. The beverage container deposit/return system is its primary activity but RRFB also manages tire processing, education programs, materials processing, and stewardship agreements to note only a few. All of its activities are mandated by legislation. The Department of Environment is also responsible for many diverse activities however; its primary role is exercising its regulatory function. There may be opportunities for the Department to utilize RRFB's expertise in managing and operating waste related activities that the Department is currently, or is expected to be, responsible for.

Should opportunities be identified, there are three important considerations to be addressed before they are pursued:

- Ensure any new mandates are included in legislation or agreement and clearly delineates responsibilities;
- The activities should not so onerous that Board and management attention becomes diverted from other important functions; and
- Any new activities should have a means of self-financing so that key RRFB's mandate areas, education, value-added manufacturing and funding assistance for municipal waste diversion activities, are not jeopardized.

Recommendations

13.4 The Department may identify responsibilities or activities that could be more effectively managed or operated by the RRFB. Assigning these activities to RRFB should only be pursued if:

- The mandate is clearly described;
 - The assigned responsibilities are not likely to divert RRFB Board and management attention; and
 - The new responsibility is financially self sufficient and RRFB is or will be staffed with appropriate technical expertise.
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RRFB and solid waste management regions

Two Municipal Councillors and a Warden of a municipality serve as members of the RRF Board. When dealing with certain issues, individuals serving on Boards often face a dilemma of whether they are representing their municipality or the best interests of the organization. In meetings with these elected municipal officials, they spoke of the difficulty they have in reconciling their various positions from time to time.

Corporate governance standards are clear that when appointed to serve on a Board, the best interests of the Board are to be pursued. While the standards are clear, it is still a conflicting situation for municipal and any other persons who are affiliated with organizations and causes

other than the RRFB. In an ideal situation, the experiences and perspectives the individuals bring from these other areas should complement the decisions of the Board.

Recommendations

- 13.5 The RRFB should consider making available corporate governance training to Board members to assist in addressing difficult situations.
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The RRFB requires its Board members to adhere to a confidentiality agreement. This is a requirement common to most organizations. When dealing with personnel issues, litigation, upcoming procurements and other sensitive matters, the purpose of the agreements is self evident. However, confidentiality is also important in ensuring free flow of discussion at meetings and allowing decisions to be implemented in an organized manner. Municipal officials reported that the agreements created confusion for them on what information could be shared outside the boardroom. The RRFB should discuss the general application of the confidentiality agreements and members should seek guidance on individual issues as they are discussed.

Recommendations

- 13.6 The RRFB should discuss and determine how to advise Board members on what information is permitted to be shared with others under the terms of the confidentiality agreements.
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Recommendations

Stewardship Agreements

- 4.1 RRFB and Environment should establish a special purpose working group focused on the task of improving existing agreements and developing new stewardship agreements for waste items not currently under an agreement that will assist in achieving the government's waste diversion and reduction goals. Agreements developed by this working group should be reviewed by the RRF Board and if approved, forwarded to the Minister for approval and inclusion in regulations if required.
- 4.2 The working group should be small (e.g. two representatives from each party), meet regularly, access technical expertise on an as needed basis (external professionals or expertise from Regions), and have access to funding for analysis and implementation.
- 4.3 While the working group should be established for a special purpose, stewardship agreements, other initiatives could be pursued, but only when the potential from stewardship agreements contributing to meeting the diversion goals appear to have been exhausted
- 4.4 Through the agreement between RRFB and the Department, an allocation of RRFB's net revenue should be made available for the special purpose working group to access, if necessary, to expedite and support their work.
- 4.5 The Department should consider rewording the RRFB mandate to reflect the difficulty in apparently assigning full responsibility for developing and implementing stewardship agreements to the RRFB.
- 4.6 Developing stewardship agreements should be based on a broad framework of criteria, such as the CCME's "*Canada-Wide Action Plan For Extended Producer Responsibility*", with due consideration to increasing the size of the Fund.

Funding Municipal/Regional Diversion Programs

- 5.1 The RRFB has met the "*fund municipal or regional diversion programs*" requirement of its mandate as well as the specific regulation to pay a minimum of 50% of net revenues to municipalities. Clarifying the mandate to reflect the reality that RRFB will only ever be in the position of "providing financial assistance" to municipalities may help avoid confusion or not heighten expectations.
- 5.2 A combination of unrestricted municipal waste diversion credits and targeted program funding is appropriate and necessary to assist in achieving the Province's legislated environmental goals. RRFB should review the application and reporting process to ensure it is as efficient as possible.

Beverage container deposit-refund system

- 6.1 Other Canadian provinces are using different approaches to recover beverage containers for recycling. Some are producing increased return rates. If these programs deliver encouraging financial and environmental results, RRFB and the Province should consider reviewing the system in use in Nova Scotia and other jurisdictions to determine if modifications are justified.
- 6.2 The collection systems for recycled materials are a significant cost factor. While a solution may be elusive, the potential benefits, financially and environmentally, would warrant considering engaging appropriate external resources to ensure the best possible collection system is in place.
RRFB should continue to pilot and test collection system changes and phase in those changes they believe are the most likely to produce a successful outcome.

Education and Awareness

- 7.1 As long as education contracts with Regions are in place, RRFB should retain the ability to direct the majority of funding to province wide target areas.

Promote value-added manufacturing

- 8.1 The Board should ensure that any plan to find or attract value-added manufacturing, including research and development activities, is not unreasonably impaired due to net revenues being applied to other purposes.

Cost Savings and Revenue Generation

- 9.1 The success of any major new revenue generating initiative or change to an existing program is dependent on public understanding and acceptance and a sound public policy basis. The Department must be assured that the public is:
- informed – normally through a public information program; and/or
 - understands and accepts, the need for new or changes to existing programs.
- 9.2 The merits and ability to expand the tire program to align with other provinces and capture more tires should be examined.
- 9.3 In order to preserve the primary revenue source to RRFB and municipalities, the beverage container deposit/refund system may have to be altered in the future. External expert advice, encompassing the experience of other jurisdictions, is essential to demonstrate the effectiveness of the approach ultimately selected.
Due consideration must be given to programs operating in neighbouring jurisdictions to ensure there are no policy conflicts that may create unintended consequences.
- 9.4 Amounts under the Paint program should be reviewed for parity to other jurisdictions and with a goal of making the program financially self sufficient.
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- 9.5 The Department and RRFB should continue to monitor other jurisdictions for revenue and waste diversion opportunities. When complete and operational, materials identified by the waste audit should be reviewed by the Department and RRFB jointly to develop programs that would divert, recycle and/or produce revenue.
- 9.6 Financial resources for RRFB mandate items such as education and awareness, value-added manufacturing, research and development, and other strategic initiatives should be protected, where reasonable, to finance convincing program plans in support of RRFB mandate items.
- 9.7 The Department should review the justification for the increased reimbursement maximum. Part of the funding could be used to offset costs of studies examining changes to programs to increase revenues especially stewardship agreement investigation and negotiation.

Current Asset Management Practices

- 10.1 The RRFB should consider establishing an annual surplus target and an upper accumulated surplus limit. The annual surplus target should be sufficient to maintain adequate cash flows and allow for prudent distribution of net resources. The accumulated surplus limit should be sufficient to provide for financial security and planned major initiatives.
- 10.2 Revenues remaining after operating expenses, administrative expenses, and spending on mandate areas, other than funding municipal waste diversion programs, should be distributed to municipalities and the Department based on percentages fixed by the Board calculated to result in the annual surplus target.
- 10.3 The requirements setting out annual surplus targets, accumulated surplus limits, and distribution percentages to municipalities and the Department can be set by either Board policy, contained in the agreement between the RRFB and Environment, or by regulation. Maximum flexibility for unforeseen events and protection of distributions to municipalities can be achieved by setting out the requirements in the agreement between RRFB and Environment.
- 10.4 The regulations requiring a distribution of a minimum of 50% of net revenues to municipalities can either remain in regulation or be removed.
- 10.5 The percentage allocation to municipalities would continue to be distributed on the basis of the amount of waste diverted, approved programs, and targeted programs as determined by the RRFB.
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Procurement reform

- 11.1 The Board should address any outstanding areas and formalize the procurement policy with approval by the Board.
- 11.2 To ensure all possible solutions are solicited from respondents to calls for proposals, the request documents should, after base requirements are clearly set out, clearly encourage alternate approaches or pricing.

Regional Chairs Committee

- 12.1 The Department should clarify whether the 300kg/person/year waste disposal goal applies province wide or varies by region or municipality.
- 12.2 The requirement for waste diversion plans and reporting on progress to achieve the new goal should be incorporated in the regulations or in a Memorandum of Understanding with the Regions.

Trilateral Relationships

- 13.1 There should be, at a minimum, an annual, formal session between the full Board, senior department and RRFB staff, and Minister and Deputy Minister.
- 13.2 The Minister should continue the practice of appointing a senior management person to serve as a member of the RRF Board.
- 13.3 The Department should maintain a calendar of Board member expiry dates and report approval deadlines. Board appointments can be initiated prior to the expiry of a Board member's term. Similarly, anticipating the submission of and expediting approval of business plans and other requests assists the Board in carrying out its operations in a timely manner. When delays are encountered, RRFB should be kept informed.
- 13.4 The Department may identify responsibilities or activities that could be more effectively managed or operated by the RRFB. Assigning these activities to RRFB should only be pursued if:
- The mandate is clearly described;
 - The assigned responsibilities are not likely to divert RRFB Board and management attention; and
 - The new responsibility is financially self sufficient and RRFB is or will be staffed with appropriate technical expertise.
- 13.5 The RRFB should consider making available corporate governance training to Board members to assist in addressing difficult situations.
- 13.6 The RRFB should discuss and determine how to advise Board members on what information is permitted to be shared with others under the terms of the confidentiality agreements.
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