Recycling Works !

A Study of Source Separation Recycling Programs (Transfer Stations) in New Hampshire

Prepared by

NEW HAMPSHIRE The Beautiful INC.

INTRODUCTION

Most of the recent press coverage of the current state of recycling has been all gloom and doom. Knowing this is not entirely accurate, a member of the New Hampshire the Beautiful (NHtB) Board of Directors met with his local transfer station manager to learn more about how they are dealing with the reported "crisis." The facility manager was happy to share the results of their recycling efforts for 2018.

This report will show that recycling in NH at the community level is alive and well in many areas of the state. We acknowledge that communities using single stream recycling methods of mixing all recycled materials together before shipping to a sorting facility (MRF), are having difficulty as revenues are no longer covering the cost being charged by the MRF for sorting the materials. That and transportation costs are putting these programs underwater. A few have made the economic decision to divert their recyclables and treat them as trash. A savings of approximately $50 per ton. While understandable and perhaps fiscally responsible in the short term, it is still unfortunate and long term will ultimately become more costly as existing single stream contracts expire and as landfills approach capacity.

This study indicates that a significant percentage of NH's population is still served by source separating recycling methods and these towns are receiving significant financial benefits that is not being reported on.

Individuals that determine the appropriate actions that benefit taxpayers and the environment should have all the information to reach an informed decision before implementing policies that will effect the future of recycling efforts in our state.

The information provided by this transfer station, serving just 7,400 residents, showed that in 2018 they generated nearly $40,000 in net revenues from their recycling. These revenues saved taxpayers by helping offset the expense of disposing of their MSW (trash) and other non-recyclables.

This prompted NHtB to ask the Northeast Resource Recovery Association (NRRA) if they would provide the annual reports for some of their members in order to confirm that similar positive results were being experienced by other communities.

The figures contained in this study are a compilation of six source separating transfer station facilities. They were selected as representing a cross section of facilities that recycle at different levels of complexity and/or efficiency. The thought being that they are a valid sampling of similar recycling programs in the state. In order to maintain the confidentiality of the NRRA member information, the NRRA did not provide the names of the towns/facilities provided for this this study.

The population served by these facilities is approximately 34,800 or six percent of the total population of the state being served by source separation recycling methods.

The figures on the next page are the 2018 full year totals for recycling programs as reported to the NRRA. The materials shown make up the vast majority of the recycled tonnage collected at these six facilities. Revenues are net of expense for each material measured.

2018 End of Year Recycling Figures
Six NRRA Member Transfer Station
Source Separating Recycling Programs

Six Town Source Separate Compilation **Pop. Served: 34,800** Figures compiled from NRRA 2018 member annual reports

Recycling Program

2018 Year End Summary

Material	Volume (Tons)	% of Total Volume	Revenues *	% of Total Net Revenues	Revenue Per Ton	Cost Avoidance no disposal at $90/ton	Total Value To Residents	
Mixed Fiber (Paper)	721.6	30.5%	($22,652)	-12.9%	($31.39)			See second point below
OCC (cardboard) See Note 1	721.7	30.5%	$62,277	35.6%	$86.29			
Scrap Metal	569.4	24.1%	$60,462	34.5%	$106.19			
Steel cans	42.8	1.8%	$5,170	3.0%	$120.79			
Rigid Plastic	19.7	0.8%	$151	0.1%	$7.66			
PET Plastic	76.2	3.2%	$18,075	10.3%	$237.20			
HDPE Plastic	39.4	1.7%	$15,855	9.1%	$402.41			
Aluminum Cans	42.5	1.8%	$50,314	28.7%	$1,183.86			
Mixed Plastic 1-7	26.9	1.1%	$1,074	0.6%	$39.93			
Misc.***	105	4.4%	($15,627)	-8.9%	($148.83)	**		**Primarily electronics disposal cost
Total**	**2365.2**		**$175,099**		**$74.03**	$152,172	**$327,271**	

* Revenues Net of Expenses (hauling fees)

These facilities generated income of **$175,099** after hauling expenses, electronic disposal and expense for disposing of mixed paper

Note 1: The volume of mixed fiber and OCC being identical is an anomoly and likely just coincidence. Mixed fiber typically runs far ahead of OCC in tonnage and therefore the economic conclusions reached in this study are slightly overstated. The markets for quality recycled mixed fiber are improving which would bring the economic results back in line.

Cost of	Total Ton $/S	
Single Stream		1690.8
Drop off		
	($140)	($236,712)
per ton delivered		

If these towns recycled single stream, they would have incurred drop off expenses of almost $237,000.

Key Points:

Beverage containers make up only 5 % of total recycling volume but contribute 39% of total revenues

Mixed paper represents a significant volume of material handled but is a net drain on revenues. However…

sorting provides a clean supply. Over the course of 2018 these facilities only paid $31/ton versus $90/ton if treated as trash. One facility reported those costs declined during the second half of the year and that opportunity savings eventually dropped to $25/ton. That's an additional $4600+ savings for these communities in 2019 if the cost trend continues

With sorting, some materials have zero expenses (hauling fees) associated with them (PET, aluminum cans, HDPE and corrugate)

Sorting recyclables at the transfer station generates revenues that can be used to offset other MSW expenses and save taxpayer money

Removing beverage containers from the recovery stream via a deposit system would rob towns of a significant revenue stream

*** Misc. includes electronics, batteries, tires, radiators and other metals not in scrap

**Figures do not include MSW, C&D, glass PGA, Freon units, bulbs or baling wire.

Glass PGA is not included because towns do not weigh their glass. Towns have adopted various recycling methods for their accumulated PGA. Some use it in road bed and culvert projects. Others have partnered with NRRA to have their glass shipped to Canada to be processed into fiberglass insulation.

CONCLUSIONS

- NRRA estimates that 43 % of the state's population is served by source separation recycling programs. They cover 71% of NH's cities and towns… or roughly 160 municipalities.

- The residents of the six recycling programs covered in this study received an economic benefit of $327,271 or $9.40 per resident in 2018.

- These six programs are not "best practices". They are representative of how most source separation facilities in NH operate. Each one doing things a little differently. Some towns recovering more material than others or sorting it differently and receiving the economic benefits commensurate for their individual program.

- At 6% of the state's population, these towns are not a large sample size, but we feel they fairly represent the current status of source separation recycling programs serving the remaining percentage of the state's population.

- If one applies the $9.40 per person economic benefit to the total population of the 160 or so towns with source separation recycling programs, that equates to a total economic benefit of **$5,254,600.** That is the total of the net revenues received from their recovered materials and the savings from not diverting their recyclables to trash.

- The taxpayers of these municipalities are enjoying the benefits of having revenues that can be applied towards the management of their remaining municipal solid waste (MSW) and other materials requiring disposal.

- **Many NH communities and a significant portion of the state's residents continue to benefit economically from recycling.**

- **Recycling should be encouraged, not discouraged and alternative means to address the current challenges should be examined. There are better ways than treating recyclables as trash.**

- **New Hampshire the Beautiful and the NRRA can assist in these efforts.**

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"Partnering to make recycling strong through economic and environmentally sound solutions"

Northeast Resource Recovery Association

The Northeast Resource Recovery Association, a recycling non-profit, sent the following recyclable materials from its members to market to be remanufactured into new products. Below is information on the positive impact this recycling has had on the environment.

Avoided Emissions:

Recycling uses much less energy than making products from virgin resources, and using less energy means fewer greenhouse gases emitted into the atmosphere.

By recycling the materials above, NRRA members avoided about **63,886 tons** of carbon dioxide emissions.

This is the equivalent of removing **13,593 passenger cars** from the road for an entire year.

Recyclable Material	**Amount Recycled In 2018**	**Environmental Impact!** Here is only one benefit of using this recycled material rather than natural resources (raw materials) to manufacture new products.
Aluminum & Steel Cans	768,100 lbs.	Conserved enough energy to run a television for 78,192,580 hours!
Paper	16,452 tons	Saved 279,684 trees!
Plastics	3,026,000 lbs.	Conserved 2,269,500 gallons of gasoline!
Scrap Metal	10,970 gross tons	Conserved 30,716,000 pounds of iron ore!
Electronics	2,834,000 lbs.	Conserved enough energy to power 363 houses for one year!
Tires	1,358 tons	Conserved 895 barrels of oil!