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**Remarks to the Committee to Study
Recycling Streams and Solid Waste Management in New Hampshire**

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October 7, 2019

The Northeast Recycling Council, Inc. (NERC) is a multi-state non-profit (501(c)(3)) organization committed to environmental and economic sustainability through responsible materials management. Our programs emphasize source reduction, reuse, recycling, organics management, environmentally preferable purchasing (EPP), and decreasing the toxicity of the solid waste stream in the 11-state region comprised of New England, Delaware, Maryland, New Jersey, New York, and Pennsylvania. Our voting members include state agencies and solid waste authorities. We also welcome Advisory Members. Currently, more than 70 trade associations, MRF operators, haulers, equipment manufacturers, state recycling associations, consulting firms, regional recycling authorities, and brand owners support NERC through Advisory Memberships

Our mission is to minimize waste, conserve natural resources, and advance a sustainable economy through facilitated collaboration and action.

Through our work to improve the quality and quantity of materials recycled in the region, as well as supporting and promoting recycling market development, NERC has developed a unique perspective and knowledge-base about recycling market dynamics and how that effects community recycling efforts.

Recycling Markets

While the value of the materials collected in residential recycling programs has decreased since the implementation of the so-called “China National Sword”, this region is faring better than almost anywhere else in the country. The reason we are doing better than much of the country is because the eastern seaboard has never been as reliant on overseas exports for recycling markets as other parts of the country.

A recent study completed by NERC surveyed 15 publicly-operated MRFs in 10 states (not including New Hampshire as there aren’t any publicly operated MRFs). The results of this unique study were eye opening, especially when compared to national data.

The survey covered the period of April 1 – June 30, 2019. The participant MRFs included single stream, dual stream, and source separated operations. We will be repeating the survey on a quarterly basis.

We learned that in the 10-state region the:

- **Average value/ton¹ with residuals:** \$45.83
- **Average value/ton without residuals:** \$51.65
- **Average processing cost per ton:** \$82
- **Average residual rate²:** 12%
- **Average gate recycling tipping fee/ton:**
 - \$38 for municipal (municipal with contracts)
 - \$48 for commercial or municipal without contracts

These figures become most interesting when compared to national information. The most recent national data is from March of this year³. We know for certain that the value of commodities has decreased between March and June, so the average figure in our region is at a time when the average value nationally had declined. The national figure, with residuals, was \$38.18/ton – 20% less than the value of a MRF ton in the Northeast.

In addition, while we found that the average cost to process one ton of residential recycling materials received at a MRF was \$82/ton for the period April – June 2019, in 2018 the average national figure was just under \$10/ton. The difference is the extra costs that MRFs are incurring to improve the quality of what comes out of the MRF. When China tightened the standards for the quality of a bale – meaning how little unwanted material it would accept – all other markets (domestic and international) took advantage of this and also increased their requirements. This has led to increased costs (and losses) for MRFs, which have been passed on to communities.

It is also interesting to note that the \$38/ton tipping fee for recyclables is both a new phenomenon, and is almost the exact difference between the value of a ton and the cost to process a ton—bringing the MRF to a cost neutral point. I often hear that MRFs are taking advantage of communities, or overcharging them, and while there may be instances of this happening, the results of our study indicate that MRFs have found a formula to stay afloat until both the quality of what is received from residential programs improves, and the value of these commodities increases.

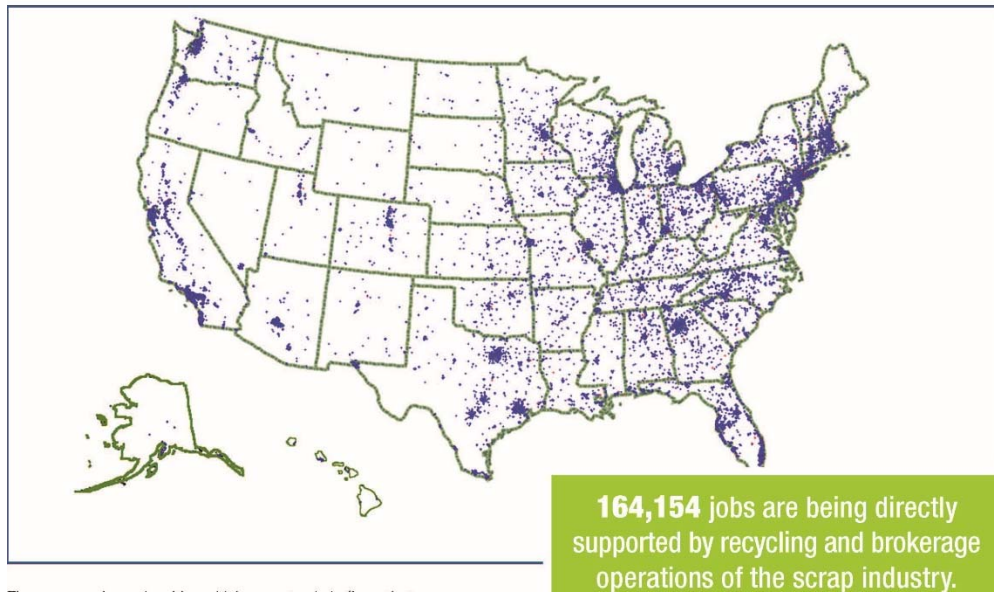
There is a vibrant recycling industry in the United States and it has the capacity to use the materials currently being collected – when the quality is good enough. In fact, in most instances, the recycling companies are operating below their capacity due to the lack of volume collected in recycling programs, and the poor quality of that material.

¹ We collected the average value (or loss) for the period April 1 – June 30, 2019 for the following materials: UBC (aluminum cans); steel food cans; PET (plastic #1); HDPE natural (plastic #2); HDPE colored (plastic #2); polypropylene (plastic #5); #'s 3-7 plastics; bulky rigid plastics; OCC grade #11 (corrugated cardboard); mixed paper grade #54; aseptic and gable-top cartons (grade #52); clear glass containers; green glass containers; brown glass containers; 3 mix glass containers; and residue.

² Residuals are what is left over (trash) after the MRF finishes processing a ton of materials brought to the facility for recycling.

³ Provided by Resource Recycling Systems (RRS)

U.S. Scrap Recycling Industry Facilities



Source: 2019 Economic Impact Study, U.S.-Based Scrap Recycling Industry, Institute of Scrap Recycling Industries (ISRI).

Changes & Status of the Recycling Industry

Paper

Almost as soon as the impacts of the change in China’s policies began to be felt, announcements began about investment in new or expanded residential mixed paper and cardboard recycling operations. To date, there have been 17 announcements, with one new mill having opened in Ohio just last week. Ultimately, if all of these projects bear fruit, there will be more capacity available for mixed paper and cardboard recycling than we collect in the U.S. We will see increased value for mixed paper and cardboard as a result.

On the east coast, the following mills are anticipated.

Location	Company	Capacity	Opening
Rumford, Maine	Nine Dragons	400,000 TPY pulp	2020
Fairmont, West Virginia	Nine Dragons	220,000++ MTPY	2019
Hanover, Virginia	Cascades	400,000 MTPY	1st quarter 2021
Albany, New York	CorrVentures	300,000 TPY	4th quarter 2021

Whether and when they will open remains uncertain, as is often the case with new business ventures. In particular, the two Nine Dragons facilities – Chinese owned ventures to produce pulp for export to China – may be delayed as the tariff war is having its impact on paper recycling. Currently, there is a \$40/ton tariff for exporting paper or pulp to China.

Plastic

There have also been many announcements about new investments in plastic recycling ventures, but that information is not as transparent as the information for paper so there is little information to share.

Glass

As you will have heard from Reagan Bissonnette, NRRRA, there are end markets for glass when the material can be properly separated and cleaned. In addition to the great work that NRRRA has done, NERC has had a glass recycling markets committee for two years and it has identified and worked with a number of glass recyclers in the region. In the 11-state NERC region there are 15 companies directly involved with residential glass recycling; including PGA, bottle to bottle, construction, infrastructure, fiberglass, and highway applications.

Container deposit laws can be particularly effective for helping glass recycling. As you may have heard from other speakers, glass containers cause significant problems for single stream MRFs – both in operations, and in either lowering the value of paper commodities or rendering them not recyclable at all. Container deposit laws result in a “clean”, readily marketable and recyclable glass commodity; this cannot be achieved with any other system – apart from source separated recycling.⁴ The topic of container deposit laws relative to plastic and aluminum is not as straightforward, and the arguments in favor would not be the same as for glass.

It is important, of course, that any container deposit law adequately reimburse the intermediaries that make the program work – such as retailers accepting the material, transportation, and processing. Container deposit laws that charge a nickel are inadequate to fund this type of program.

Quality & Quantity of Materials Collected through Residential Recycling Programs

Connecticut, Rhode Island, Maine, New York, and Vermont have invested heavily in statewide education about recycling – both to increase the volume as well as the quality. Maine and New York’s programs are new, but the others are several years old and have definitely had a positive impact.

Vermont passed an aggressive, comprehensive recycling law several years ago (Act 148) that has dramatically changed the recycling landscape in that state. It has included grants to communities as well as mandates for recycling education, programming, and materials handled in programs.

Quality

Perhaps the most important lesson the U.S. has learned as a result of the loss of the Chinese end-markets is the critical importance of the quality of what is collected in residential recycling programs. There is a direct economic relationship between “what” MRFs receive from the public and how much it will cost them to process it, as well as the value of the materials it will then sell.

The Recycling Partnership (<http://recyclingpartnership.org>), a national non-profit organization, has developed very successful, extensive program and resources for communities to help improve the quality of what is collected. These resources are available for free and as open source documents.

Nationally, Massachusetts has taken a leadership role in promoting and implementing The Recycling Partnership program, including developing its own branded version: Recycle Smart (<https://www.recyclesmartma.org>). The Massachusetts Department of Environmental Protection offers a grant program for communities to work on contamination that includes minimum requirements based on The Recycling Partnership model, and launched the Recycle Smart statewide education campaign with free resources and technical assistance. As a result, the overall contamination rate in Massachusetts has dropped significantly, and in many areas MRFs no longer consider contamination to be an active concern.

⁴ Glass containers put in designated recycling containers and not commingled with any other material.

Another strategy that states are using to drive improvements in the quality of recycling is to work collaboratively with the MRFs to agree to a list of acceptable and non-acceptable materials. The first initiative of this sort in the country came from Connecticut – the What’s IN What’s OUT program (<https://www.recyclect.com/>).

Massachusetts has also developed a list of acceptable recyclables, but it is not as straightforward as Connecticut’s approach.

Several states in our region have substantive statewide messaging and promotion programs supporting recycling – both the quality and quantity. These include:

- Massachusetts – *Recycle Smart* (focused on quality only)
- Rhode Island – Uses the *Recycle Across America* platform (www.recycleacrossamerica.org)
- Vermont - *Universal Recycling and Composting Initiative*

Finally, in several cases, communities have been able to convince the haulers/MRFs that they would put money and serious effort into education and fighting contamination and this has had success. The result has been decreased contamination and lowered price impacts to the community.

Quantity

Much attention has shifted to quality since the Chinese Sword, but quantity remains critical for the economic viability of MRFs, recycling market development and job growth, as well as the original goal of recycling – resource conservation.

Several states in the region have disposal bans and/or mandatory recycling for select materials. These are universally recognized as having dramatic benefits for the volume of material collected, as well as being an important buffer against program changes. In particular disposal bans, prevent materials normally recycled from being dropped from programs or by MRFs when the cost structure becomes challenging. Most states have unfunded mandate laws, and the disposal bans and mandatory recycling skirt this by not being enforced on individuals – rather on the haulers and MRFs. Having said that, public education from the state and community about what to recycle – as noted above – is an essential companion to success.

Several states in the region have disposal bans that have succeeded in preventing community recycling programs from folding. Costs have certainly gone up and this is an active concern.

Following is a summary of the disposal bans and mandatory recycling laws, regulations, and policies in New England.

State	Banned from Disposal	Mandatory Recycling
Connecticut	<ul style="list-style-type: none"> • Computers, monitors, TVs, printers • Lead acid & NiCad batteries • Mercury containing products • Paint • Tires • Waste oil • Yard waste 	<ul style="list-style-type: none"> • Aluminum & tin food & beverage containers • Computers, monitors, TVs, printers • Food scraps (for some commercial generators) • Glass & plastic (# 1 & 2) food & beverage containers • Grass clippings • Lead acid & NiCad batteries • Newspapers • Recyclable paper • Scrap metal • Steel • Waste oil • White goods • Yard waste
Maine	<ul style="list-style-type: none"> • Computers, CRTs, & cellphones • Lead acid, mercuric, & NiCad batteries • Mercury containing products • Tires • Waste oil • Yard waste 	<ul style="list-style-type: none"> • Computers, CRTs, & cellphones • Corrugated & high grade office paper • Glass food & beverage containers • Lead acid, mercuric, & NiCad batteries • Mercury containing products • White goods • Yard waste
Massachusetts	<ul style="list-style-type: none"> • C&D • CRTs • Food waste • Glass, metal, and plastic food and beverage containers • Lead acid & NiCad batteries • Leaf & yard waste • Recyclable paper • Tires • Wallboard • White goods 	
New Hampshire	<ul style="list-style-type: none"> • Computers, monitors, VCRs, DVDs, DVRs, TVs • Wet cell batteries • Leaf & yard waste • Mercury containing products • Waste oil 	

State	Banned from Disposal	Mandatory Recycling
Rhode Island	<ul style="list-style-type: none"> • Computers, monitors, VCRs, DVDs, DVRs, TVs • Lead acid & NiCad batteries • Mercury containing products • Waste oil 	<ul style="list-style-type: none"> • Aluminum & tin food & beverage containers • Aseptic containers • Corrugated cardboard • Empty aerosol and paint cans • Lead acid batteries • Leaf and yard waste • Glass and plastic food & beverage containers (#1 & 2) • Recyclable paper • Scrap metal • Textiles • Waste oil • White goods
Vermont	<ul style="list-style-type: none"> • Aluminum • C&D • Computers & peripherals, monitors, TVs & peripherals, printers, telephones, answering machines, stereos, PDAs, iPods, digital converter boxes, game consoles, fax machines, DVRs, DVDs, VCRs • Food waste (coming soon) • Glass, metal & plastic (#1 & 2) food & beverage containers • Lead acid & NiCad batteries • Mercury containing products • Paint • Recyclable paper • Tires • Wallboard • White goods • Yard waste 	<ul style="list-style-type: none"> • Aluminum & tin food & beverage containers • Glass & plastic (#1 & 2) food & beverage containers • Lead acid batteries • Mercury containing products • Recyclable paper

Encouraging Investment in New Hampshire

Twenty years ago, New Hampshire had a dynamic and successful program focused on recycling market development. It worked directly with the industry and state economic development officials to encourage investment and jobs in New Hampshire. Since this program was dissolved, New Hampshire has done extremely little to encourage such investments. As a result, other states in the region have been well positioned to encourage those investments. Several factors draw business investment into a state:

- Cost of energy
- Environmental requirements
- Permitting and licensing process/requirements
- Predictability of markets (both necessary materials coming in, and the confidence that the product will be sold)
- Sources of investment funding (loans, grants, subsidies)
- Taxes, tax rebates, and tax waivers
- Transportation networks

In addition to this list, greater access to a skilled workforce has become a critical factor as well. Some states, including Massachusetts, have invested in workforce training for the recycling industry.

As for any business, being “courted” makes a difference. Without targeted efforts to draw investment into New Hampshire, it becomes less likely that it will happen.

There are a few examples around the country where notable state programs have driven significant recycling investment and jobs. These currently include North Carolina and Pennsylvania. In the past, in addition to New Hampshire, there were very successful programs in Massachusetts and New York. Both Massachusetts and New York continue to provide grants, loans, and incentives to recycling businesses, but the context in which those arise has shifted.

Existing End Markets in New Hampshire

NERC recently published a directory of businesses in the 11-state region that process or use post-consumer recycled content after processing by MRFs, derived from so-called “blue bin” recyclables: paper, plastic, glass, aluminum and steel cans. The directory includes more than 140 companies, but only four in New Hampshire.

APC Paper Group	Claremont
Gorham Paper & Tissue	Gorham
Graphic Packaging	Concord
Rand-Whitney Container LLC	Dover

Recycled Content & Buying Recycled

State and local government can play a significant role in the development and support of end markets, and the value of commodities from MRFs. Required purchasing of products with post-consumer recycled content on the state and local levels (all agencies, including the Department of Transportation and DPWs, as well as colleges and schools), as well as having these products available on state contract, are extremely important drivers for end markets.

New Hampshire has such an Executive Order but how consistently it has been implemented relative to minimum recycled content is not obvious. Some states (not in our region) have gone as far as requiring minimum recycled content in certain products sold in their state. This is not a particularly credible strategy in a state with small consumer purchasing power, but sending a signal to brands and manufacturers that post-consumer recycled content “matters” and you want to see more of it sold in the state can be influential.

NERC has many examples of procurement policies, criteria for recycled content products, and other resources that New Hampshire could find helpful in implementing such a program.

Conclusion

There are many potential actions that the New Hampshire legislature could take to support and drive healthy recycling and recycling market development. These include:

- Disposal bans and/or mandatory recycling for paper, plastic, glass, metal, and aseptic packaging, food waste which are enforced on haulers and MRFs;
- Mandated purchasing of products with minimum post-consumer recycled content requirements;
- Laws requiring minimum post-consumer recycled content;
- Economic development programs focused on the recycling industry;

- Funding for statewide recycling education (both for the Department of Environmental Services as well as individual communities);
- A statewide recycling education campaign focused on reducing contamination, including leveraging the work of the Recycling Partnership;
- Supporting returning to dual stream recycling programs when there are MRFs available to process such materials;
- Supporting pay-as-you throw programs (Vermont has done it on a statewide level);
- A container deposit law – especially for glass containers; and
- Increased funding and staffing for the Department of Environmental Services.