

# FOWRD-THE FUTURE OF WISCONSIN'S RECYCLING DEVELOPMENT



1/1/2017

FORWD to 21st Century  
Recycling & Waste Diversion

## FOWRD-The Future of Wisconsin's Recycling Development

### **Mission & Vision Statement**

The Future of Wisconsin Recycling Development (FOWRD) group supports the following concepts:

In an effort to improve the quantity and quality of recyclable materials from residential, commercial, institutional and industrial sources, any revised statute or regulation should reflect waste generation trends, encourage innovation, allow adaptability to a changing marketplace, reward performance through accountability measures and maximize the amount of materials diverted to productive use.

### **Guiding principles**

- Create an equitable, sustainable grant program that rewards “continuous improvement” and provides a pathway for marginal programs to move toward excellence
- Develop a consistent, sustainable funding mechanism for local recycling programs
- Promote a streamlined process for Responsible Unit reporting, evaluation and grant application that is focused on continuous improvement
- Allows room for innovation and flexibility
- Establish objective program evaluation
- Ensure best utilization of Recycling Fee dollars
- Incentivize RU consolidation

**About Us:**

The genesis of FOWRD grew from a discussion with a northern Wisconsin legislator interested in finding ways to make a more sustainable recycling program. Mike Tolvstad of the city of Tomahawk began the dialog and invited in George Hayducsko, John Welch and Meleesa Johnson to visit with the legislator. Prompted by a number of questions from the legislator it became clear that it was time for industry to conduct an evaluation of the program, its overall efficiency, the method by which grants have been distributed, the accountability of each RU and how success should be defined. Because the Recycling Fee is collected at by landfills for waste disposal, Wisconsin's waste and recycling industry agrees that the money collected should be used for its intended purposes. As well, this industry also agrees that an evaluation of the Recycling Program is appropriate to understand how to share successes and to develop concepts for improvement.

In an effort to get broad representative and perspectives, the original core group invited other industry players from around the state. The group is made up of representatives from both public and private sector waste organizations. It has representatives who own and operate material recovery facilities and hauling companies. It has representatives from as far north as Eagle River and as far south as Waukesha County, as far west as Dunn County and as far east as Manitowoc. It is a diverse group of dedicated professionals, as well as newcomers to the industry. It is a group who took 18 months to work on building this model which could serve as the foundation for 21<sup>st</sup> Century upgrades for a great 20<sup>th</sup> Century program.

**Original Participating Members:**

Alan Albee (Eagle Waste & Recycling)

George Hayducsko (Dunn County)

Meleesa Johnson (Marathon County)

Rebecca Mattano (Waukesha County)

Lynn Morgan (Waste Management)

Gerry Neuser (Manitowoc County)

Pennie Pierce (Hilltopper Refuse)

Jennifer Semrau (Winnebago County)

Meribeth Sullivan (Waukesha County)

Mike Tolvstad (City of Tomahawk)

Joe Van Rossum (UW Extension-SHWEC)

John Welch (Dane County)

**SECTION 1-All Recommendations**

1. Retain all Recycling Fee monies for recycling programs, recycling administration and Clean Sweep programs.
2. In an effort to streamline and more effectively gather data for programs, we recommend creating new annual reporting system to replace the existing outdated reporting software. This will ensure accurate and objective calculations for evaluation of continuous improvement of RU success.
  - a. Allocate \$1.5 million to develop software for reporting that includes the evaluation metric and scoring system.
3. Delete WI Stat 289.43(1) and NR544.03(33m) and replace with:  
 "Recycling" is a series of activities by which material that has reached the end of its current use is processed into material utilized in the production of new products.
4. Change NR500.031(190) to read:  
 "Recyclable material" is solid waste recovered from the waste stream to be processed into material utilized in the production of new products.
5. Delete NR500.03(19) and replace with:  
 "Beneficial reuse" refers to the reuse of solid waste as a product or material in an industrial or commercial activity
6. Create definitions in NR500.03  
 "Direct beneficial reuse" (DBR) refers to the reuse of a product or material without prior treatment or reprocessing  
 "Secondary beneficial reuse" (SBR) is the use of a product after it has been treated or reprocessed
5. We recommend that the Legislature work with DNR staff and local officials to analyze, plan, and develop programmatic changes to implement state-wide cohesive inter-governmental cooperation and reduce the number of RUs in Wisconsin.
7. Develop templates for intergovernmental agreements for consolidation that streamline the process, including standards for how revenues and costs are distributed, how programs are administered and stipulations for duties and responsibilities for all parties.
8. Option 1:
  - a. Funding allocation shall remain tied to program costs (1999 formula) for the current \$20 million appropriation.
    - i. Phase out this system, providing RUs several budget cycles to realign recycling budgets and move toward a grant formula based entirely on "continuous improvement" standards
  - b. Fund "Continuous Improvement Grants" in the amount of \$10 million. Grantees would have to demonstrate compliance with the criteria found in Appendix A and be awarded points according to the metric.
- Option 2:
  - c. Completely scrap the 1999 formula and use the following methodology:
    - i. Use a per capita distribution of the current \$20 million recycling grant appropriation and base it on a 10-year rolling average of aggregated eligible expenses
  - d. Fund "Continuous Improvement Grants" in the amount of \$10 million. Grantees would have to demonstrate compliance with the criteria found in Appendix A and be awarded points according to the metric.

9. Verification of program costs is essential to program integrity and long-term viability of funding. It is recommended that RUs receiving grants must submit accredited third party audits of program costs. RUs shall be randomly selected annually, with twenty-five percent (25%) chosen in any given year. No RU shall be audited more than once in four (4) years.  
If during the DNR review of third part audit finds that a RU willfully misrepresent or inaccurately reports program costs, that RU shall not be eligible for funding for the next program year, with an mandatory approved audit review of that next funding cycle.
10. RUs that fail to report annually by the due date shall lose funding for the next program funding cycle.
11. Revise and upgrade Table 1 to reflect trends in light-weighting of packaging, changes in food packaging methods and changes to paper product use.
12. Every 3-5 years DNR conducts a re-evaluation of the weight per capita to address the above noted trends.
13. Change the method by which an effective recycling program is evaluated to be broader and focused on continuous improvement. The goal of a new metric would be to move away from a primarily weight-based definition of a successful recycling program, as well as to encourage and incentivize an expansion of recycling services, greater consolidation, and more waste diversion. The metric should include the following:
  - a. Rural curbside recycling incentive
  - b. Access to recycling services
  - c. Recycling opportunity
  - d. Per capita spending on education and program development
  - e. Recycling performance
    1. Tied to pounds per capita, but updated periodically to reflect trends in packaging and print material production/use
  - f. Per capita spending on enforcement
  - g. Innovation
    1. Innovation includes, but is not limited to, coordinated recycling services for multi-family housing, textile recycling, carpet recycling, reduction of food waste, home composting education, etc.



## **SECTION 1-BACKGROUND**

### **RECYCLING-ECONOMIC & ENVIRONMENTAL IMPORTANCE**

#### **Economic Impacts:**

For every 10,000 tons of recycled material, 32 new jobs are created. Just sorting collected recyclable materials sustains, on a per ton basis, 10 times more jobs than landfilling.<sup>1,2</sup> Additionally, beyond those direct job spurred by recycling and its related activities, an Iowa Department of Natural Resource (I-DNR) report indicated that for every 100 direct recycling jobs, there are 43 indirect jobs (vendors, suppliers, finance, insurance, etc.). Those employed in the direct and indirect recycling jobs then use salaries and wages to purchase goods and services, generating for another 38 “induced” jobs.<sup>3</sup>



During 2014 Wisconsin Responsible Units of Recycling (RUs) collected and processed over 710,000 tons of recyclables. Direct jobs associated with this tonnage is estimated to be 2,272, with 977 indirect jobs and 864 induced jobs. Further extrapolating from the I-DNR, labor income from these jobs is in excess of \$113 million, paying over \$12 million in state and local taxes.<sup>4</sup>

Wisconsin paper mills, foundries, manufacturers and plastic extruders use recyclables, such as old cardboard boxes, plastics bottles and glass containers, as feedstock for their production. These include, but are not limited to:<sup>5</sup>



- SCA Tissue –Menasha/Neenah
- N.E.W Plastics-Luxemburg
- Georgia Pacific-Green Bay
- Packaging Corp. of America- Tomahawk
- Wausau Tile-Wausau

#### **Environmental Impacts:**

Making new aluminum products with recycled beverage cans uses 96 percent less energy than making the same product with bauxite ore.<sup>6</sup> In fact, the aluminum cans recycled in Wisconsin over the past ten years

<sup>1</sup> UW-Green Bay Sustainability <https://www.uwgb.edu/sustainability/tools/recycling.asp>

<sup>2</sup> WI-DNR [https://www4.uwm.edu/shwec/recyclingtoolkit/PDF/recycling\\_means\\_business.pdf](https://www4.uwm.edu/shwec/recyclingtoolkit/PDF/recycling_means_business.pdf)

<sup>3</sup> Iowa DNR-Economic Impacts of Recycling in Iowa <http://infohouse.p2ric.org/ref/50/49863.pdf>

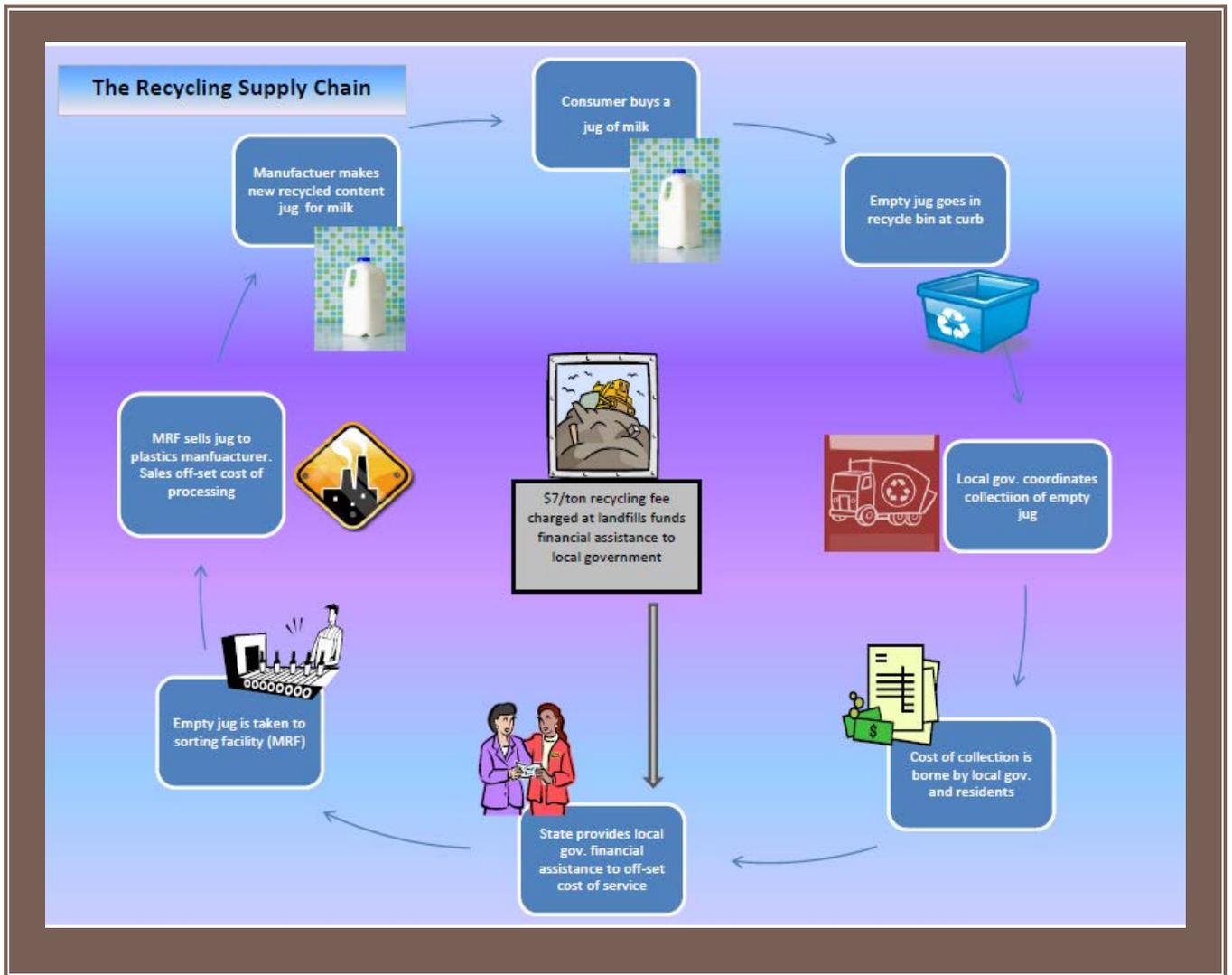
<sup>4</sup> Institute of Scrap Recycling Industries Creates and Supports Jobs in Wisconsin <http://www.isri.org/recycling-industry/jobs-in-the-u-s-scrap-recycling-industry/job-study-analysis#.V4aT-zUyYik>

<sup>5</sup> [https://www4.uwm.edu/shwec/recyclingtoolkit/PDF/recycling\\_means\\_business.pdf](https://www4.uwm.edu/shwec/recyclingtoolkit/PDF/recycling_means_business.pdf)

<sup>6</sup> <http://www.popularmechanics.com/science/environment/a3752/4291566>

accounts for an estimated 120 MW energy output savings.<sup>7</sup> And, using recyclable materials, to manufacture new products has an average 45 percent energy savings over extracting virgin materials.<sup>8</sup>

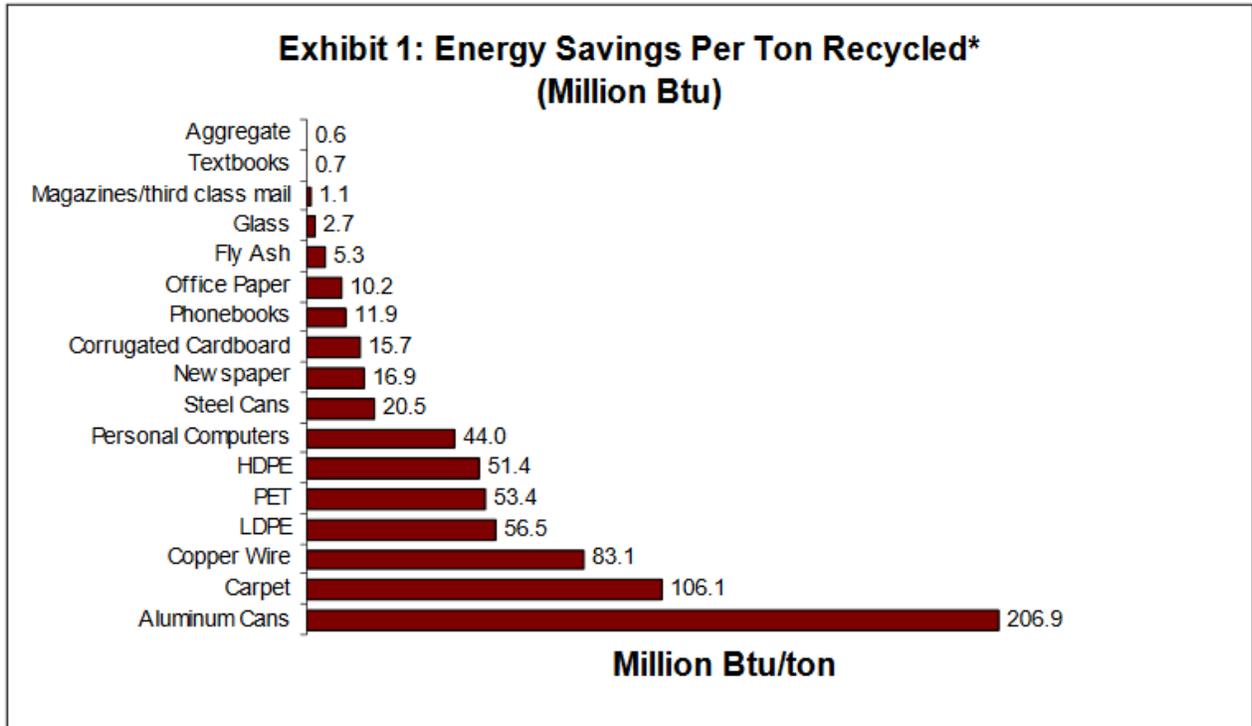
Even when factoring in all facets of the recycling supply chain, from households to processing centers, making products with a ton of recyclables uses 11.3 million BTU, compared with 23.3 million BTU for raw materials.<sup>9</sup>



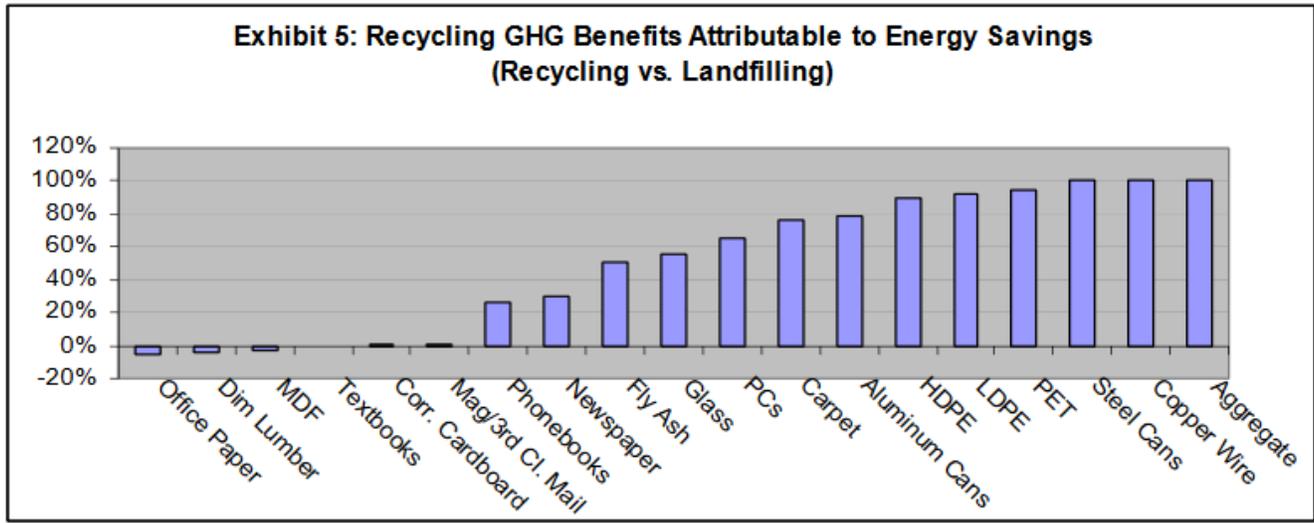
<sup>7</sup> Alcoa [http://www.alcoa.com/recycling/en/info\\_page/why\\_recycle.asp](http://www.alcoa.com/recycling/en/info_page/why_recycle.asp)

<sup>8</sup> <https://www3.epa.gov/climatechange/wycd/waste/downloads/Energy%20Savings.pdf>

<sup>9</sup> <https://www3.epa.gov/climatechange/wycd/waste/downloads/Energy%20Savings.pdf>



\* Assumes recycled materials would otherwise have been landfilled. Includes embedded energy.



Charts from EPA<sup>10</sup>

<sup>10</sup> <https://www3.epa.gov/climatechange/wycd/waste/downloads/Energy%20Savings.pdf>

**COMPONENTS OF AN EFFECTIVE RECYCLING PROGRAM**

Chart taken from Wisconsin DNR publication WA422

**Criteria for an effective recycling program**

Responsible unit recycling programs must comply with certain requirements listed in the state statutes and administrative codes. The basic requirements are summarized below.

- 1. Pass a local recycling ordinance** that:
  - requires residents to separate recyclables for recycling;
  - requires owners of multi-family housing and non-residential properties to provide adequate, separate containers for recyclables, notify and inform all users and occupiers about the recycling program and provide for the collection and recycling of the materials;
  - prohibits the disposal of recyclables that have been separated for recycling; and
  - contains provisions for enforcement that create the authority to verify compliance and assess penalties for non-compliance.

RUs can download a sample ordinance by searching "sample recycling ordinance" at [dnr.wi.gov](http://dnr.wi.gov).

- 2. Operate an education program** to inform residents and businesses on what recyclables are collected, where and how to recycle, as well as on recycling or composting options for other materials banned from landfill disposal.
- 3. Provide a program for collecting, processing and marketing recyclables** from single family and two- to four-unit residences. This system may be operated directly or contracted for by the RU. The system must ensure that recyclables are separated from solid waste and maintain their marketable condition. *RUs that do not provide or contract for collection service must be able to demonstrate that their residents have convenient access to privately contracted collection service. See note for more details.*<sup>1\*</sup>

- 4. Implement a Compliance Assurance Plan** to improve compliance for at least one commonly encountered recycling violation and update it as other non-compliance issues are encountered. RUs are encouraged to address more compliance strategies than the minimum and update these as necessary. For more information on compliance assurance plans, see DNR publication **WA-427**, "Developing a Compliance Assurance Plan for an Effective Recycling Program."

- 5. Submit an annual report** on programs and collection to the DNR by April 30 of each year. Every RU must do this, whether or not they receive a recycling grant. Annual reports are available online or in paper copy in mid-January each year. Department staff offer assistance in completing reports through webinars and conference calls.

- 6. Notify the DNR of program changes** (including changes in contact information) by contacting a regional recycling specialist.

- 7. Adhere to other provisions** established by DNR rule.

For more information on these requirements, see DNR publication **WA-1593**, "Basic Requirements for RU Recycling Programs," or search "responsible unit" at [dnr.wi.gov](http://dnr.wi.gov).

*\*\*Administrative rules require that municipalities with populations of 5,000 or more and an aggregate population density of at least 70 persons per square mile provide curbside collection of newspaper, glass, aluminum and steel containers, #1 and #2 plastic containers, corrugated cardboard and magazines at least once a month from single family and two- to four-unit residences. They must also provide drop-off collection for materials not collected at curbside. Municipalities with populations less than 5,000 or an aggregate population density of less than 70 persons per square mile must provide either curbside or drop-off collection for single family and two- to four-unit residences.*

**HISTORY-RECYCLING FEE & GRANT PROGRAM FOR RESPONSIBLE UNITS OF RECYCLING**

In order to assist RUs in implementing and operating an effective recycling program, 1989 Act 335 created a “recycling grant program”. Its purpose was to provide financial assistance for eligible expenses, such as the cost of collecting recyclables, providing an education program and administering a local program. The original financial assistance program, set at \$17 million annually, ran from July 1, 1990 through its sunset date of year end 1999. However, Act 27 of 1997 increased the funding to \$24 million and Act 7 of 1999 increased the funding to \$24.5 million and removed the sunset date, making the appropriation a continuous source of funding.<sup>11</sup> Table 1 show the money distributed to RUs as the “basic grant.”

Fiscal Year	Basic Recycling Grant
1990/91	\$18,500,000
1991/92	\$18,500,000
1992/93	\$23,800,000
1993/94	\$29,849,200
1994/95	\$29,200,000
1995/96	\$29,200,000
1996/97	\$29,200,000
1997/98	\$24,000,000
1998/99	\$24,000,000
1999/00	\$24,500,000
2000/01	\$24,500,000
2001/02	\$24,500,000
2002/03	\$24,500,000
2003/04	\$24,500,000
2004/05	\$24,500,000
2005/06	\$24,500,000
2006/07	\$24,500,000
2007/08	\$31,000,000
2008/09	\$31,000,000
2009/10	\$31,000,000
2010/11	\$31,098,100
2011/12	\$32,098,100
2012/13	\$19,000,000
2013/14	\$19,000,000
2014/15	\$19,000,000
2015/16	\$18,000,000
2016/17	\$19,000,000

Fiscal Year	Recycling Fee Collected (Landfill)	Recycling Fee Amount
1990/91	\$ -	\$ -
1991/92	\$ -	\$ -
1992/93	\$ -	\$ -
1993/94	\$ -	\$ -
1994/95	\$ -	\$ -
1995/96	\$ -	\$ -
1996/97	\$ -	\$ -
1997/98	\$ -	\$ -
1998/99	\$ -	\$ -
1999/00	\$457,900	\$0.30
2000/01	\$2,000,000	\$0.30
2001/02	\$6,000,000	\$0.30
2002/03	\$22,400,000	\$3.00
2003/04	\$19,900,000	\$3.00
2004/05	\$23,700,000	\$3.00
2005/06	\$23,200,000	\$3.00
2006/07	\$22,900,000	\$4.00
2007/08	\$24,100,000	\$4.00
2008/09	\$28,000,000	\$4.00
2009/10	\$28,900,000	\$7.00
2010/11	\$35,300,000	\$7.00
2011/12	\$36,300,000	\$7.00
2012/13	\$34,200,000	\$7.00
2013/14	\$33,000,000	\$7.00
2014/15	\$34,500,000	\$7.00
2015/16	\$33,000,000	\$7.00
2016/17	not yet reported	\$7.00

<sup>11</sup> Legislative Fiscal Bureau Informational Paper 64 Solid Waste Recycling & Reduction

The primary source of funding to the recycling grant program is the Recycling Fee, a fee assessed at Wisconsin landfills for disposal. Table 2 shows the amount collected and charged over time. Monies of the Recycling Fee were previously placed in a segregated account, the Recycling Fund. Historically the money has been used to fund not only recycling grants, but also DNR recycling administration, the Department of Agriculture, Trade & Consumer Protection Clean Sweep Program and UW System recycling/waste reduction research.<sup>12</sup>

In 2007 the fund was named the Recycling and Renewable Energy Fund, allowing some monies to be appropriated to renewable energy projects. In 2010 the Recycling Fund and Renewable Energy Fund ceased to exist, though the Recycling Fee assessed at landfills remained consistent. All Recycling Fee monies collected were placed into the Environmental Management Account with other fees such as Environmental Repair Fee, Hazardous Waste Generation Fee and the Non-Metallic Mining Fees. However, the Recycling Fee is the largest contributor to the Environmental Management Account.

The Recycling Fee has funded a variety of programs in addition to recycling and recycling administration. From 2010-2013 over \$12 million was diverted from recycling to the bioenergy initiatives and in 2010 \$14.8 million was diverted for renewable energy grants and loans. Over the course of three biennium (2011-2015) \$49.2 million was sent to cover “general obligation bonds.”<sup>13</sup>

**COST OF CONDUCTING AN EFFECTIVE RECYCLING PROGRAM**

RUs applying for grant funding may claim a variety of “eligible expenses.” Those costs are that which are incurred by the municipality as they conduct their Effective Recycling Program for single-family and up to 4-units residential homes. Grants cover less than 25% of eligible expenses. Eligible expenses include:<sup>14</sup>

<ul style="list-style-type: none"> <li>• Payroll expenses related to the enforcement of recycling law, as well as the collection, transporting, processing &amp; marketing of recyclables and yard waste.</li> </ul>	<ul style="list-style-type: none"> <li>• Capital expenditures including purchase of land, costs of construction and utility service costs to meet the needs of a recycling program.</li> </ul>
<ul style="list-style-type: none"> <li>• Consultant fees such as accountants, recycling program planners, attorneys and engineers.</li> </ul>	<ul style="list-style-type: none"> <li>• Equipment costs (purchase, rent, lease) in excess of \$1000 and a life of greater than 3 years</li> </ul>
<ul style="list-style-type: none"> <li>• Service contracts as a part of ensuring an Effective Recycling Program</li> </ul>	<ul style="list-style-type: none"> <li>• Indirect costs associated with operating a recycling program</li> </ul>
<ul style="list-style-type: none"> <li>• Non-capital materials &amp; supplies</li> </ul>	<ul style="list-style-type: none"> <li>• Other costs such as providing a recycling education and outreach program</li> </ul>

<sup>12</sup> Legislative Fiscal Bureau Informational Paper 67-Solid Waste Recycling & Waste Reduction

<sup>13</sup> Legislative Fiscal Bureau Informational Paper 63-Environmental Management Account.

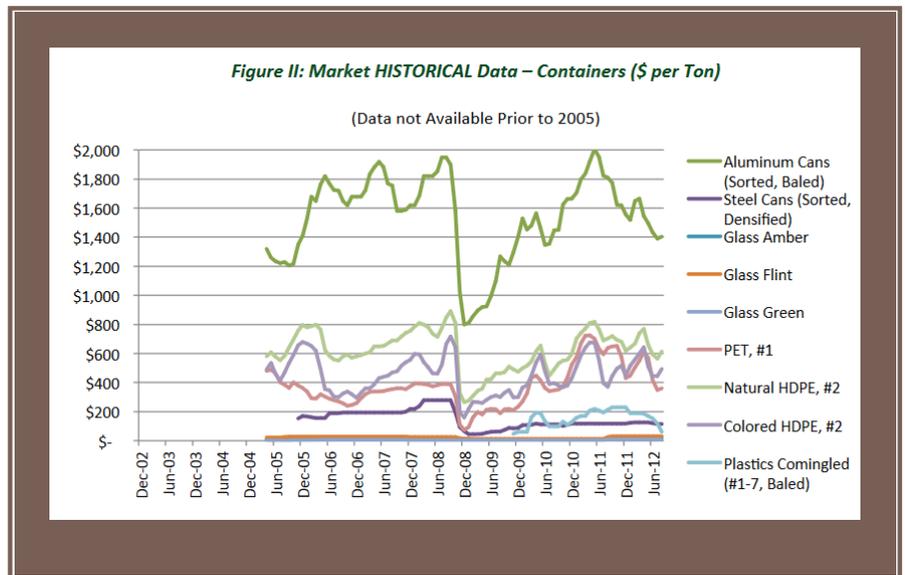
<sup>14</sup> <http://dnr.wi.gov/Aid/documents/recycle/EligibleCostCategories.pdf>

Wisconsin's recycling program has evolved significantly over time, as have the costs. Early programs were fairly simple from a processing perspective, with residents source-separating recyclables into individual waste types (e.g.: cardboard, tin cans, plastic bottles, etc.). This system required few costly innovations at material recovery facilities (MRFs) and minimal labor inputs. With the advent of Wisconsin's recycling program the price of diesel fuel was \$1.10 per gallon and the need for productivities at the curb were minimal.<sup>15</sup>



By the early 2000s, the cost of fuel doubled and the need for a more efficient method of collection drove the advent of "single-stream recycling," a simple system where all recyclables are placed in one cart. No need to sort or have multiple bins. This made recycling easy for residents and increased recycling rates. However, single-stream recycling tends to produce more contamination of recyclables and increases residuals, a non-recyclable fraction. In order to counter these issues, MRFs invested significant sums in technology, increasing the cost of recycling.

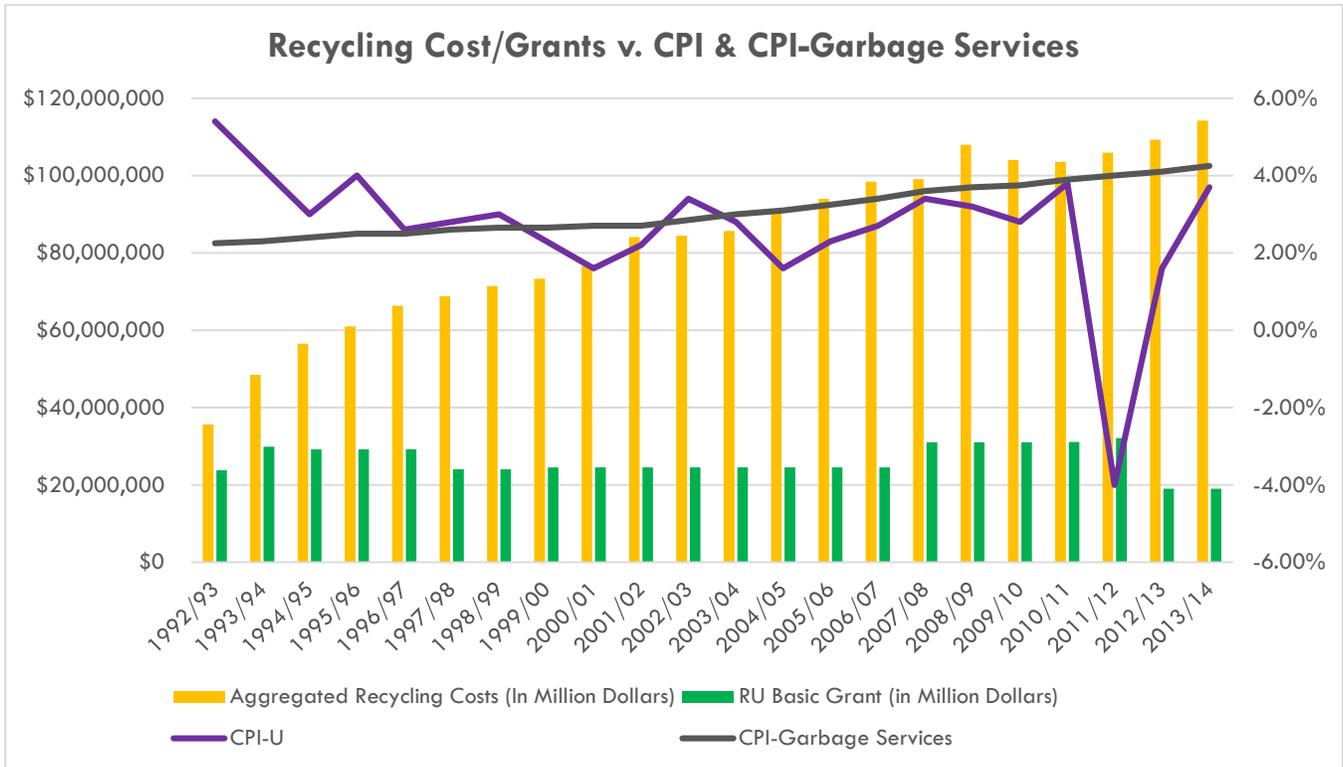
Offsetting the cost to recycle is the value of the various recyclable commodities. The value of old newspaper or soda bottles mirror the ups and downs of the global economy and with the price of oil. Other factors that affect the price of commodities include the perennial economic drivers of supply and demand; supply of available commodities verses the demand for the new products made with recyclable materials. All of these variables contribute to an expected volatility in market pricing, very similar to the stock market and play a role in the cost of recycling.



(Chart from Material Recovery Study-Chippewa Falls).<sup>16</sup>

<sup>15</sup> [https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=EMD\\_EPD2D\\_PTE\\_NUS\\_DPG&f=A](https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=EMD_EPD2D_PTE_NUS_DPG&f=A)

<sup>16</sup> <http://www.co.chippewa.wi.us/home/showdocument?id=36>



**SECTION 2-Issues and Solutions**

**NEED-REDEFINE RECYCLING, RECYCLABLE MATERIALS AND BENEFICIAL REUSE**

Currently there are three definitions of recycling and recyclable materials in statute and administrative code. Having a common definition and clear understanding of what recycling is, and is not, is absolutely necessary as a first step in defining success of a recycling program.

As well, the current definition of “recyclable materials” is inadequate to reflect the broader types and kinds of solid waste which have recyclability. As currently defined, recyclable materials is only the list of items in Wisconsin Statute 287.07(1m) through (4), essentially the commonly known recyclables, such as plastic bottles and newspapers. This narrow definition excludes wastes such as junk mail, aseptic packaging (juice boxes), textiles and construction wastes. It does not reflect the 21<sup>st</sup> century materials management system.

WI Stat 289.43(1) "Recycling" means the process by which solid waste is returned to productive use as material or energy, but does not include the collection of solid waste.

NR544.03(33m) "Recycling" means the series of activities by which solid waste is collected, sorted, processed and converted into raw materials and used in the production of new materials. It excludes the use of these materials as a fuel substitute or for energy production.

NR500.031(190) "Recyclable materials" means the items listed in s. 287.07 (1m) to (4), Stats. (Basically the original banned materials and oil filters, but not electronics)

Recommendation:

1. Delete WI Stat 289.43(1) and NR544.03(33m) and replace with:

Recycling is a series of activities by which material that has reached the end of its current use is processed into material utilized in the production of new products.

2. Change NR500.031(190) to read:

Solid waste recovered from the waste stream to be processed into material utilized in the production of new products.

Beneficial reuse or beneficial use is a term that is at times confused with recycling and on occasion, used synonymously. While beneficial reuse is a waste management strategy that directs a waste stream to another use, whether from a residential, commercial or industrial source, it is different from recycling. Beneficial reuse materials are not transformed into new product. They are minimally processed and used in a variety of ways that prevents direct landfill disposal.

According to Wisconsin Administrative Code NR 500.03(19), beneficial use or reuse is defined as "the utilization of a solid waste or an industrial by-product in a productive manner." Solid waste has a broad definition and encompasses "garbage, refuse, sludge from a waste treatment plant, water supply treatment plant or air pollution control facility and other discarded or salvageable materials, including solid, liquid, semisolid, or contained gaseous materials resulting from industrial, commercial, mining and agricultural operations, and from community activities."<sup>17</sup>

Recommendations:

1. Delete NR500.03(19) and replace with:  
"Beneficial reuse" refers to the reuse of solid waste as a product or material in an industrial or commercial activity
2. Create definitions in NR500.03  
Direct beneficial reuse (DBR) refers to the reuse of a product or material without prior treatment or reprocessing  
Secondary beneficial reuse (SBR) is the use of a product after it has been treated or reprocessed

**NUMBER OF RESPONSIBLE UNITS (RUs)**

Unlike overall solid waste planning of Wisconsin Statute 289.10, which looked to counties for waste management planning, the Recycling Law made no suggestion for county-led implementation. Instead the law allowed implementation at local level, making every town, village, city or county a potential Responsible Unit. While some counties accepted implementation obligations for municipalities in its jurisdiction, this was not the consistent across the 72 counties.

Currently, there are 1,060 RUs ranging in size from 94 residents to nearly 600,000. Programs range in scope and complexity as much as does the population. As long as each RU conducts an Effective Recycling Program, each are eligible for grant funding. RUs must report annually the activities of their recycling program, certifying expenses, tonnage of recyclable collected and other relevant data. Failure to meet

---

<sup>17</sup> <https://docs.legis.wisconsin.gov/statutes/statutes/289/1/01/33>

per capita weight criteria or meet submittal deadlines can lead to diminishment or revoking of grant eligibility.

According to the 2013 DNR RU recycling tonnage, 151 RUs have failed to meet the tonnage requirements of an Effective Recycling Program, yet received grant awards. One RU received a grant of over \$3,600 and only collected nine (9) pounds of recyclables per capita. While the average per capita of recyclables collected by RUs is 141 pounds, one RU reported a stunning 1482 pound per capita.

The total number of RUs create inherent challenges in implementing and enforcing a state wide recycling program. Oversight of the grant funding and annual reporting is the responsibility of DNR. As well, the DNR has audit authority and responsibility to ensure compliance with the law and funding criteria. However, given limited staffing at DNR, attempting to audit 1060 RUs, even in two to three year cycles, leaves audit oversight a daunting task.

There have been a number of initiatives that attempted to encourage “consolidation” of RUs. The Recycling Efficiency Incentive Grant (2002-2009) was a voluntary program that provided a per capita sum to RUs that worked cooperatively on programming or education. The hopeful goal of this grant was to make consolidation of RUs an attractive venture. While many RUs worked with neighboring RUs on collection programming or recycling education,<sup>18</sup> few, if any, consolidated, preferring to retain their autonomy as a RU and control over their recycling grant dollars.

Past experience has shown, in many circumstances, that improvements and efficiencies can be gained in education, enforcement, collection, and processing by combining smaller RUs. For instance, economies of scale may be realized by having collection contracts serving a larger number of homes and one staff member providing education for a larger population. This reduces financial burdens on small RUs trying to meet the terms of an effective program.

However, forcing counties to take on RU status for municipalities within their jurisdiction is not without issues. Many counties have no solid waste or recycling departments, nor do they have dedicated staff within other departments (i.e.: planning departments) to take on these responsibilities. Adding a department or even staff to implement a county-wide RU would risk other programs in already levy limit challenged county budgets.

Recommendation:

1. Encourage increased inter-governmental cooperation and RU consolidation through enforcement of current requirements of Effective Recycling Program.
2. We recommend that the Legislature work with DNR staff and local officials to analyze, plan, and develop programmatic changes to implement state-wide cohesive inter-governmental cooperation and reduce the number of RUs in Wisconsin.
3. Develop templates for intergovernmental agreements for consolidation that streamline the process, including standards for how revenues and costs are distributed, how programs are administered and stipulations for duties and responsibilities for all parties.

---

<sup>18</sup> Legislative Reference Bureau-Informational Paper 70 Solid Waste and Recycling Programs

**REDEFINING EFFECTIVE RECYCLING PROGRAMS THROUGH CONTINUOUS IMPORVEMENT & BETTER OVERSIGHT**

**Funding & Funding Formula**

In order to assist RUs in implementing and operating an effective recycling program, 1989 Act 335 created a “recycling grant program”. Its purpose was to provide financial assistance for eligible expenses, such as the cost of collecting recyclables, providing an education program and administering a local program. The original financial assistance program, set at \$17 million annually, ran from July 1, 1990 through its sunset date of year end 1999.<sup>19</sup>

The funding formula is outdated and has not kept up with industry challenges, changes, and trends. It has created a system of financial winners and losers, based on the antiquated formula, with winners having little incentive to improve programs or consolidate. In some cases it has halted the interest to improve local recycling programs. In effect, the current statutory language has discouraged program improvement and inter-governmental cooperation between RUs.

Funding formula-examples of problems:

- 1) Cities of similar size and demographics, from the same county, receive significantly different grant funding and report a wide range of recycling costs. Example below is real-life and taken from DNR 2015 Recycling Grant spreadsheet.
  - a. City A has a population of 25,833, has a per capita recycling expense of \$48.81, reports collecting 160 pounds per capita of recyclables and received \$7.58 per capita funding or \$195,831 in 2015
  - b. City B has a population of 17,550, has a per capita recycling expense of \$37.94, reports collecting 154.90 pounds per capita of recyclables and receives \$3.75 per capita funding or \$65,778 in 2015

Neither city is in error, rather in 1999 City A was able to report high recycling expenses, while City B had a program with fewer expenses. Both programs have evolved and kept up with the collection of recyclables in a similar way, as is demonstrated by the pounds of recyclable collected, yet City B is doing so with significantly fewer financial resources.

Legislative Fiscal Bureau’s Informational Paper 70 Table 10, provides a snapshot of this variance.

Award Per Capita	Number of RUs	Population	Net Eligible Recycling Costs	Combined Basic Plus Consolidated Grant Award	Average Per Capita Grant Award	Average Award as a % of Net Eligible Recycling Costs
\$0.01 - \$0.99	94	158,434	\$1,268,827	\$106,547	\$0.67	8.4%
1.00 - 1.99	228	577,492	8,902,887	886,298	1.53	10.0
2.00 - 2.99	232	1,029,689	18,025,281	2,675,780	2.60	14.8
3.00 - 3.99	246	2,695,856	55,748,705	9,701,347	3.60	17.4
4.00 - 5.99	146	980,253	21,925,228	4,529,751	4.62	20.7
6.00 - 7.99	58	196,255	5,527,873	1,354,933	6.90	24.5
8.00 - 9.99	7	38,518	1,296,499	340,388	8.84	26.3
10.00 and over	13	23,653	1,532,750	404,947	17.12	26.4
<b>Total</b>	<b>1,024</b>	<b>5,700,150</b>	<b>\$114,228,050</b>	<b>\$19,999,990</b>	<b>\$3.51</b>	<b>17.5%</b>

<sup>19</sup> Legislative Fiscal Bureau Informational Paper 64 Solid Waste Recycling & Reduction

Despite the above noted issues with the funding formula, a drastic change in how recycling monies are allocated would have a significantly negative effect on local programs and municipal budgets. A generation after the birth of Wisconsin's recycling program, the formula created an entrenched expectation of funding, for good or for bad. Local budgets are built around the funding and residents across the state have grown to expect recycling services. As well, any major disruption in the recycling supply chain could leave Wisconsin industries, which rely on recyclables as production feedstock, experiencing shortfalls in product, increasing their costs of production.

By redefining the funding formula and program evaluation criteria, the legislature can drive continuous improvement in recycling programs, while also increasing transparency and oversight of grant allocation. We strongly recommend implementation of a new formula for funding and recycling program evaluation that encourages program improvement, reflects waste generation trends, and allows adaptability to a changing marketplace.

**Recommendation:**

2. Retain all Recycling Fee monies for recycling programs, recycling administration and Clean Sweep programs.
3. Option 1:
  - a. Funding allocation shall remain tied to program costs (1999 formula) for the current \$20 million appropriation.
    - i. Phase out this system, providing RUs several budget cycles to realign recycling budgets and move toward a grant formula based entirely on "continuous improvement" standards
  - b. Fund "Continuous Improvement Grants" in the amount of \$10 million. Grantees would have to demonstrate compliance with the criteria found in Appendix A and be awarded points according to the metric.
4. Option 2:
  - a. Completely scrap the 1999 formula and use the following methodology:
    - i. Use a per capita distribution of the current \$20 million recycling grant appropriation and base it on a 10-year rolling average of aggregated eligible expenses
  - b. Fund "Continuous Improvement Grants" in the amount of \$10 million. Grantees would have to demonstrate compliance with the criteria found in Appendix A and be awarded points according to the metric.
5. Verification of program costs is essential to program integrity and long-term viability of funding. It is recommended that RUs receiving grants must submit accredited third party audits of program costs. RUs shall be randomly selected annually, with twenty-five percent (25%) chosen in any given year. No RU shall be audited more than once in four (4) years.
  - a. If during the DNR review of third part audit finds that a RU willfully misrepresent or inaccurately reports program costs, that RU shall not be eligible for funding for the next program year, with a mandatory approved audit review of that next funding cycle.
6. RUs that fail to report annually by the due date shall lose funding for the next program funding cycle.

**Program Evaluation Criteria & Continuous Improvement**

Under the existing system, the success of a program is largely measured by the weight of landfill-banned materials collected and processed as recyclables.

- Landfill-banned items of WI Statute 287.07
- (a) An aluminum container.
  - (b) Corrugated paper or other container board.
  - (c) Foam polystyrene packaging.
  - (d) A glass container.
  - (f) A magazine or other material printed on similar paper.
  - (g) A newspaper or other material printed on newsprint.
  - (h) Office paper.
  - (i) A plastic container.
  - (j) A steel container.
  - (k) A container for carbonated or malt beverages that is primarily made of a combination of steel and aluminum.

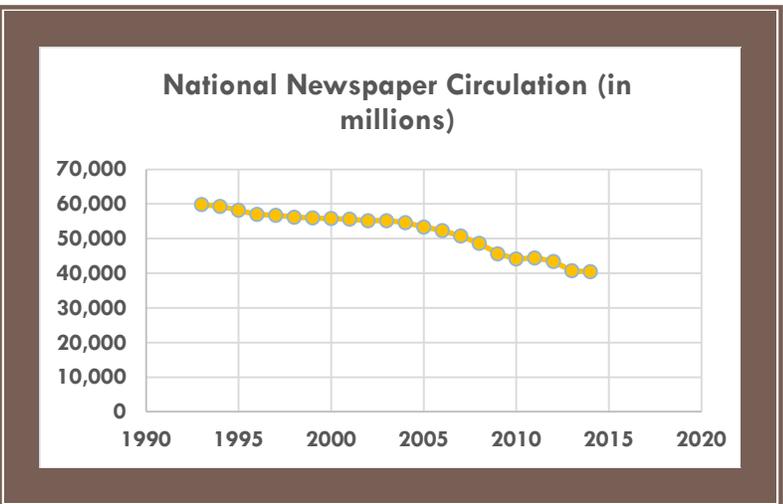
While this is an important component of an effective program, it does not present the whole picture of what constitutes a truly effective recycling program.

Some banned items have lower recyclability and market value than other recyclable materials. Disproportionally and inaccurately “demonstrating success” under the current weight criteria. For example, a glass beer bottle weighs approximately eight (8) ounces, while a plastic soda bottle weighs half that amount. A program can essentially triple the weight of materials collected without actually increasing the amount of materials recycled simply by having more glass containers.

as a measure of success is “light-weighting” of packaging. The food and beverage industry are driving lighter weight packaging to increase transportation efficiencies, reduce carbon impacts and also reduce production costs.

Other factors that skew a program focused on weight

For example, packaging innovations prompted by Coca-Cola have realized a 20 percent weight reduction in a plastic soda bottle, a 30 percent reduction in aluminum can weight and a glass bottles reduced in weight by half.<sup>20</sup>



The digital revolution has changed the way we get our news and information. According to the Alliance for Audited Media there are steady declines in both print subscription and single copy purchases of magazines. For some popular magazines, like Readers Digest, the declines are as much as 35%.<sup>21</sup> Newspaper print circulation shows a steady drop as people get their news from multiple online news sources and mobile applications and alerts.<sup>22</sup> The loss of these products to the recycling stream impacts a weight-based success system.

Food packaging has also changed. For instance, in the 1990s baby food was mostly sold in glass containers. By the early 2000s a variety of rigid plastic containers, with peel off covers, held baby food. The next generation of packaging for many types of baby food purees is the pouch, an easy-to-use, portable flexible package (non-recyclable).<sup>23</sup>

<sup>20</sup> <http://www.coca-colacompany.com/sustainabilityreport/world/sustainable-packaging.html>  
<sup>21</sup> <http://auditedmedia.com/news/research-and-data/top-25-us-consumer-magazines-for-june-2014/>  
<sup>22</sup> <http://www.naa.org/Trends-and-Numbers/Circulation-Volume/Newspaper-Circulation-Volume.aspx>  
<sup>23</sup> <http://articles.latimes.com/2001/jun/19/business/fi-12102>

**TABLE 1**  
**Standards for Collection of Recyclables**  
**– Pounds Per Person Per Year –**

	Rural Municipalities	Other Municipalities
Newspaper	36	47
Corrugated Paper	6	7
Magazines	7	9
Aluminum Containers	1.4	1.8
Steel & Bi-Metal Containers	7	9
Plastic Containers	4	5
Glass Containers	22	29
Foam PS Packaging	0.3	0.4
TOTAL	83.7	108.2

**Note:** 1) Rural municipalities are those with a population of 5,000 or less or a permanent aggregate population density of less than 70 persons per square mile. For purposes of ch. NR 544, municipalities that do not meet that population criterion fall into the other category. 2) The department intends to periodically revise these collection standards as conditions warrant.

Wisconsin Administrative Code NR544, Table 1 lists the weight criteria a RU must meet in order to have a successful recycling program. Because of the evolutions in food and beverage delivery systems, as well as the decline in print materials, this table no longer is valid. It simply does not reflect today's recycling stream.

**Recommendations:**

1. In an effort to streamline and more effectively gather data for programs, we recommend creation of a new annual reporting system to replace the existing outdated reporting software. This will ensure accurate and objective calculations for evaluation of continuous improvement of RU success.
  - a. Allocate \$1.5 million to develop software for reporting that includes the evaluation metric and scoring system.
2. Revise and upgrade Table 1 to reflect trends in light-weighting of packaging, changes in food packaging methods and changes to paper product use.
3. Every 3-5 years DNR conducts a re-evaluation of the weight per capita to address the above noted trends.
4. Change the method by which an effective recycling program is evaluated to be broader and focused on continuous improvement. The goal of a new metric would be to move away from a primarily weight-based definition of a successful recycling program, as well as to encourage and incentivize an expansion of recycling services, greater consolidation, and more waste diversion. The metric should include the following:
  - a. Rural curbside recycling incentive
  - b. Access to recycling services
  - c. Recycling opportunity
  - d. Per capita spending on education and program development
  - e. Recycling performance

1. Tied to pounds per capita, but updated periodically to reflect trends in packaging and print material production/use
- f. Per capita spending on enforcement
- g. Innovation
  1. Innovation includes, but is not limited to, coordinated recycling services for multi-family housing, textile recycling, carpet recycling, reduction of food waste, home composting education, etc.

**SECTION 3-All Recommendations**

7. Retain all Recycling Fee monies for recycling programs, recycling administration and Clean Sweep programs.
8. In an effort to streamline and more effectively gather data for programs, we recommend creating new annual reporting system to replace the existing outdated reporting software. This will ensure accurate and objective calculations for evaluation of continuous improvement of RU success.
  - a. Allocate \$1.5 million to develop software for reporting that includes the evaluation metric and scoring system.
9. Delete WI Stat 289.43(1) and NR544.03(33m) and replace with:

“Recycling” is a series of activities by which material that has reached the end of its current use is processed into material utilized in the production of new products.
10. Change NR500.031(190) to read:

“Recyclable material” is solid waste recovered from the waste stream to be processed into material utilized in the production of new products.
11. Delete NR500.03(19) and replace with:

"Beneficial reuse" refers to the reuse of solid waste as a product or material in an industrial or commercial activity
12. Create definitions in NR500.03

“Direct beneficial reuse” (DBR) refers to the reuse of a product or material without prior treatment or reprocessing

“Secondary beneficial reuse” (SBR) is the use of a product after it has been treated or reprocessed
5. We recommend that the Legislature work with DNR staff and local officials to analyze, plan, and develop programmatic changes to implement state-wide cohesive inter-governmental cooperation and reduce the number of RUs in Wisconsin.
7. Develop templates for intergovernmental agreements for consolidation that streamline the process, including standards for how revenues and costs are distributed, how programs are administered and stipulations for duties and responsibilities for all parties.
10. Option 1:
  - a. Funding allocation shall remain tied to program costs (1999 formula) for the current \$20 million appropriation.
    - i. Phase out this system, providing RUs several budget cycles to realign recycling budgets and move toward a grant formula based entirely on “continuous improvement” standards

- b. Fund "Continuous Improvement Grants" in the amount of \$10 million. Grantees would have to demonstrate compliance with the criteria found in Appendix A and be awarded points according to the metric.

Option 2:

- c. Completely scrap the 1999 formula and use the following methodology:
  - i. Use a per capita distribution of the current \$20 million recycling grant appropriation and base it on a 10-year rolling average of aggregated eligible expenses
- d. Fund "Continuous Improvement Grants" in the amount of \$10 million. Grantees would have to demonstrate compliance with the criteria found in Appendix A and be awarded points according to the metric.

- 11. Verification of program costs is essential to program integrity and long-term viability of funding. It is recommended that RUs receiving grants must submit accredited third party audits of program costs. RUs shall be randomly selected annually, with twenty-five percent (25%) chosen in any given year. No RU shall be audited more than once in four (4) years.

If during the DNR review of third part audit finds that a RU willfully misrepresent or inaccurately reports program costs, that RU shall not be eligible for funding for the next program year, with an mandatory approved audit review of that next funding cycle.

- 10. RUs that fail to report annually by the due date shall lose funding for the next program funding cycle.
- 11. Revise and upgrade Table 1 to reflect trends in light-weighting of packaging, changes in food packaging methods and changes to paper product use.
- 12. Every 3-5 years DNR conducts a re-evaluation of the weight per capita to address the above noted trends.
- 13. Change the method by which an effective recycling program is evaluated to be broader and focused on continuous improvement. The goal of a new metric would be to move away from a primarily weight-based definition of a successful recycling program, as well as to encourage and incentivize an expansion of recycling services, greater consolidation, and more waste diversion. The metric should include the following:
  - h. Rural curbside recycling incentive
  - i. Access to recycling services
  - j. Recycling opportunity
  - k. Per capita spending on education and program development
  - l. Recycling performance
    - 1. Tied to pounds per capita, but updated periodically to reflect trends in packaging and print material production/use
  - m. Per capita spending on enforcement
  - n. Innovation
    - 1. Innovation includes, but is not limited to, coordinated recycling services for multi-family housing, textile recycling, carpet recycling, reduction of food waste, home composting education, etc.

**FOWRD-Appendix**

CONTINUED IMPROVEMENT RECYCLING PROGRAM EVALUATION MATRIX											
<b>Component of A Demonstrating Continuous Improvement-Curbside</b>											
	Points per component									Component Weighting	Score (Points X Weight)
	1	1.5	2	2.5	3	3.5	4	4.5	5		
<b>Rural Curbside Recycling Incentive</b>											5
<b>Access</b>	Monthly or less				bi-weekly				weekly		4
<b>Recycling Opportunity</b>	<10 gallons		10-20 gal		21-35 gal		36-65 gal		>65 gallons		2
<b>Education spending/capita</b>	\$0.00-\$0.11	\$0.12-\$0.23	\$0.24 - \$0.35	\$0.36-\$0.47	\$0.48-\$0.59	\$0.60-\$0.71	\$0.72 - \$0.83	\$0.84-\$0.95	\$0.95 & over		3
<b>Recycling Performance # per capita</b>	<10#	11#-25#	26#-50#	51#-75#	76#-100#	101#-125#	126#-1150#	151#-175#	176# and over		3
<b>Enforcement</b>	No program				Complaint driven				Active enforcement		2
<b>Innovation</b>	<b>1 point per additional innovation up to a total of 10 items</b>										1
	Consolidation of two or more programs (means dissolution of one or more Rus)									<b>Total Score</b> →	
	Additional service options: At least once weekly drop-off access for residents (drop-off services may mean standard recycling, universal wastes, etc)										
	Multi-family housing recycling program for >4 unit facilities										
	Coordinated business/commercial										
	Special event recycling										
	Food surplus management/reduction of food waste programming										
	Optional diversion programs: Non-landfill banned recycling & beneficial use programs (must be RU run/operated program & cannot use figures from industry in RU)										
	Home composting program										
	Yard waste composting										
	"Other" optional items collection or education opportunities (as approved by DNR)										
<b>Component of A Demonstrating Continuous Improvement-Dropoff</b>											
	Points per component									Component Weighting	Score (Points X Weight)
	1	1.5	2	2.5	3	3.5	4	4.5	5		
<b>Access (ave hours/week/site)</b>	1-3	4-7	8-11	12-15	16-19	20-23	24-27	28-31	32+		4
<b>Education spending/capita</b>	\$0.00-\$0.11	\$0.12-\$0.23	\$0.24 - \$0.35	\$0.36-\$0.47	\$0.48-\$0.59	\$0.60-\$0.71	\$0.72 - \$0.83	\$0.84-\$0.95	\$0.95 & over		3
<b>Recycling Performance (option 1) # per capita</b>	<10#	11#-25#	26#-50#	51#-75#	76#-100#	101#-125#	126#-1150#	151#-175#	176# and over		5
<b>Enforcement</b>	No program				Complaint driven				Active enforcement		2
<b>Innovation</b>	<b>1 point per additional innovation up to a total of 10 items</b>										1
	Consolidation of two or more programs (means dissolution of one or more Rus)									<b>Total Score</b> →	
	Additional service options: At least once weekly drop-off access for residents (drop-off services may mean standard recycling, universal wastes, etc)										
	Multi-family housing recycling program for >4 unit facilities										
	Coordinated business/commercial										
	Special event recycling										
	Food surplus management/reduction of food waste programming										
	Optional diversion programs: Non-landfill banned recycling & beneficial use programs (must be RU run/operated program & cannot use figures from industry in RU)										
	Home composting program										
	Yard waste composting										
	"Other" optional items collection or education opportunities (as approved by DNR)										