

An Update for Wisconsin Governments and Recyclers

DNR / BUREAU OF WASTE AND MATERIALS MANAGEMENT



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Message from the Program Coordinator

— Cynthia Moore, DNR

As a new year begins, I'm pleased that we are able to report on two new initiatives in this newsletter—the 2009 update to the statewide waste sort and results from E-Cycle Wisconsin's first program year. Findings from the first waste sort, completed in 2002, helped identify new areas to focus on, like “away from home” recycling and recycling construction and demolition debris and food wastes. The 2009 waste sort provides a much needed update to this dataset and will no doubt prove to be equally valuable in setting direction and policy for coming years.

E-Cycle Wisconsin, the program developed by the DNR to implement the state electronics recycling law, completed its first program year in June 2010. The program has made recycling electronics easier across the state by providing Wisconsinites with information on collection sites in their communities. Results from the first year of activity, summarized in the article on page 4, will assist in setting program priorities for the coming year.

As always, there is much going on related to improving how we manage our end-of-life waste materials. Two Legislative Council study groups, Single Use Plastics and Local Government Services, met this fall and forwarded proposals for legislative action which could have implications for waste and materials management in our state. A number of discussion groups representing state and local governments, waste and recycling service providers and environmentalists are exploring strategies to more effectively and efficiently manage our waste resources. At the DNR, we continue to seek more efficient and effective approaches to providing needed compliance assistance and enforcement in the face of dwindling staff resources. We welcome new challenges and opportunities for managing waste in 2011.



Jack Cormelly, DNR

Used oil filters waiting to be recycled. A new law bans the landfilling of used automotive oil filters and oil absorbent materials. (See page 3)

Staff Updates

■ **Kari Beetham** is the new Recycling Grants Manager in the Bureau of Community Financial Assistance and is stationed in Madison. Kari previously worked as a Grants and Contracts Manager with the Bureau of Science Services and most recently served as Administrative Policy Advisor to the Administrator of the Customer and Employee Services (CAES) Division. Contact her at kari.beetham@wisconsin.gov.

■ **Melanie Burns** is the new Waste Management Specialist in Southeast Region (SER). Melanie worked for the DNR for 7 years as an Air Management Specialist in Air Monitoring before joining the WMM program. Contact her at melanie.burns@wisconsin.gov.

■ **Sandy Chancellor**, former Recycling Grants Coordinator, accepted another position with the DNR in spring 2010. She provided DNR staff and local government recycling programs with excellent service over the past few years, and will be remembered for her patient, gracious and thorough service.

■ **Kate Cooper** retired from the Waste and Materials Management program at the beginning

(Continued on page 2)

Staff Updates

(Continued from page 1)

of 2011. Kate started with the Bureau of Solid and Hazardous Waste in 1986 working in recycling, markets development and composting. She became Recycling Coordinator in 1989 and Section Chief for Waste Reduction and Recycling in 1991. Previously, Kate worked in the DNR's Water Quality Planning section, the Water Grants Bureau and spent several years in the Philippines working on environmental assessments of rural development projects. Kate will enjoy her retirement spending time in Quito, Ecuador, entertaining her two granddaughters and working in her organic flower garden.

■ **Jennifer Huffman** is the new Waste Management Specialist in Northeast Region (NER). Jennifer has worked for the DNR for 23 years, including positions as a hydrologist in Solid Waste and Remediation & Redevelopment and a Wastewater Specialist in Storm Water. Contact her at jennifer.huffman@wisconsin.gov.

■ **Percy Mather** retired from the DNR at the end of 2010. Percy served as the recycling specialist for South Central Region (SCR) for the past four years and worked hard to assist the more than 200 RUs in the region with their programs.

■ **Sarah Murray** is the new E-Cycle Wisconsin Coordinator, a position she has been acting in since the electronics



Recycling News

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Articles and descriptions of programs/ activities by non-DNR staff included in this newsletter are for informational purposes only and should not be construed as DNR endorsements of other organizations' opinions or programs.

For further information on any information in the newsletter, contact Cynthia Moore at Cynthia.Moore@Wisconsin.gov or by phone 608/267-7550.

Graphic Design by Nan Rudd / RUDD DESIGN

GRANTS

— Kari Beetham, DNR

The application deadline for the 2011 Basic Recycling Grant to Responsible Units (RUs) was October 1st to be eligible for the maximum grant amount possible. Late applications submitted between October 2nd and November 1st, were subject to penalties that result in a reduced grant award. We anticipate finalizing the 2011 grant calculation by the end of March 2011. Successful applicants can expect an award letter in mid-April and grant checks by June 1, 2011.

The total expected amount for 2011 Recycling Grants to RUs is \$32,098,100—\$1 million more than the 2010 amount. The 2011 grant budget includes a legislative enumeration of \$46,000 to the Town of Wrightstown for purchase of recycling bins and a potential lapse of approximately \$1 million due to the state budget deficit.

For questions about recycling grants, contact:

Kari Beetham, Recycling Grants Manager
(608) 264-9207 or kari.beetham@wisconsin.gov

recycling law passed in October 2009. Sarah started part-time with the Waste and Materials Management program in January 2006, and has worked for the program full time, as a LTE, since fall 2008. Contact her at sarah.murray@wisconsin.gov.

■ **Marie Stewart** is the new half-time South Central Region (SCR) Recycling Coordinator. Marie has more than 32 years experience working for the DNR, including positions in water quality enforcement, environmental impact and the SCR Waste program. For the past 17 years, Marie has worked for the Remediation & Redevelopment Bureau's State-funded Response program. Contact her at marie.stewart@wisconsin.gov.

■ **Bridgette Valdez-Kogle** is the new E-Cycle Wisconsin Outreach Coordinator. She joined the program part-time in June 2010 and is now full-time in the position. Bridgette recently received her master's in

Conservation Biology & Sustainable Development from UW-Madison. Previously, she worked for the Washington State Department of Ecology. Contact her at bridgette.valdezkogle@wisconsin.gov.

■ **Mike Wenholz** accepted a new position within DNR at the end of 2010, after two years of outstanding service as a Recycling and Waste Management Specialist in the West Central Region (WCR).

■ **Dan Werner** has joined the WMM program as the Green and Healthy Schools Program Coordinator, replacing Tessa Jilot, who left DNR to pursue a graduate degree program. Dan started working for the DNR in 2003, and has since held several positions. Currently, Dan works part time with the GHS program and recently began working as a Recycling Program Specialist position within WMM. Contact him at daniel.werner@wisconsin.gov.



Burning Garbage Publication Now Available

What's so bad about burning garbage? It's unhealthy, it's unsafe and it's a nuisance. Burning garbage releases smoke and ash that can pollute our air, water and food supply. Burning can lead to wildfire and property damage and smoke from fires can irritate eyes and lungs, especially among those with asthma and heart and lung disease. Thankfully, there are many alternatives to burning, including recycling, composting and donating used items. But many Wisconsinites are still burning their garbage. To help you educate those in your community on the dangers of burning and other alternatives, the DNR has developed a fact sheet, *Burning Garbage: A Problem for Our Communities*. To order copies of this publication for use in your community, contact:

■ DNRwastematerials@wisconsin.gov or (608) 266-2111

LEGISLATIVE UPDATE

— Dan Fields, DNR



Two Legislative Council special committees met this fall that are of interest to recyclers. Legislative Council special committees are formed by the Legislature to delve deeply into issues and present options for

possible legislative action. The two committees are:

■ Special Committee on Local Service Consolidation

Rep. Josh Zepnick, Chair and Rep. Mark Gottlieb, Vice-Chair

This committee was directed to review current law and practice regarding the provision of services by local units of government. The committee will help determine whether current law should be amended to allow local governments to more efficiently and cost-effectively

provide services—including police, fire, and educational services—to their constituents. The committee addressed responsible unit consolidation as part of their discussion but did not propose any legislation on the issue.

For more information on this committee:

<http://www.legis.state.wi.us/lc/committees/study/2010/LOCAL/index.html>

■ Special Committee on Single Use Plastics

Rep. Spencer Black, Chair and Sen. Jim Holperin, Vice-Chair

This committee was directed to: (a) evaluate the economic and environmental costs and benefits of single-use products, such as plastic food and beverage packaging and containers, plastic film products and agricultural plastics; (b) review costs, benefits, availability and feasibility of possible alternatives to these products; (c) assess current recycling efforts for these products, the effectiveness

of these programs and opportunities to promote increased recycling; and (d) recommend state policies related to these products that would minimize environmental impacts, maximize recycling, promote desirable alternatives and benefit the economy of this state.

The committee proposed two pieces of legislation:

■ **WLC: 0023/2**, relating to recycling effectiveness improvement grants, making an appropriation and authorizing rule-making.

■ **WLC: 0024/2**, relating to the collection and recycling of beverage containers at public events and authorizing rule-making.

Both proposals came out of committee by a vote of 12-1.

For more information on this committee:

<http://www.legis.state.wi.us/lc/committees/study/2010/SUP/index.html>

New Law Bans Landfilling of Used Oil Filters and Absorbents

— Kathleen Kiefaber, DNR

A new law bans the landfilling of used automotive oil filters and oil absorbent materials as of January 1, 2011. The ban covers everyone in the state, including homeowners, farmers, businesses, industrial operations and others.

The oil filters and absorbents ban is intended to keep these materials out of Wisconsin landfills. Each year, Wisconsinites throw away an estimated 187,000 gallons of oil in oil filters and 1.6 million gallons in oil absorbents. Oil is a valuable, reusable material. By recycling filters and absorbent material, used oil can be extracted and reused. Filters also contain steel components that can be recycled. Recycling the approximately nine million filters that currently enter the landfill will save over 4.5 million pounds of steel for reuse.

Recycling options for oil filters and oil absorbent materials are available throughout the state. Many businesses that perform oil changes will accept used oil filters. Some communities allow used oil and oil filters to be collected at their waste



A worker spreads oil absorbent materials.

David Kendziorowski, Stormtech, Inc

transfer stations or at specific collection sites. Contact your local recycling program for more information. Used filters may also be used as a fuel supplement in an approved municipal solid waste combustor. To find

other recycling options in your community, see the Wisconsin Recycling Markets Directory (<http://www4.uwm.edu/shwec/wrmd/search.cfm>), select the "Motor Vehicle Items" category and select oil filters.

Oil absorbent materials may be taken to an approved biopile at a landfill, used as a fuel supplement in an approved municipal solid waste combustor or recycled. To find recycling options in your area, see the Wisconsin Recycling Markets Directory (<http://www4.uwm.edu/shwec/wrmd/search.cfm>), select the "Other Materials" category, and select oil absorbents.

For more information on the ban, including a list of covered materials and links to recycling options, see the DNR website (<http://dnr.wi.gov/org/aw/wm/recycle/newpages/oilabsorb.htm>).

The DNR has also developed a media kit (http://www.dnr.state.wi.us/news/mediakits/mk_oil_filters_absorbents.asp) to explain the ban to the media.

Electronics Recycling Options Continue to Grow

— Sarah Murray, DNR



We have seen a significant increase in the number of registered collectors and collection sites, including more that offer free or low-cost recycling to consumers.

Since it began in January 2010, the state's electronics recycling program, E-Cycle Wisconsin, has helped keep millions of pounds of electronics out of landfills and stimulated Wisconsin's recycling industry.

A network of more than 325 collection sites, working with recyclers in Wisconsin and neighboring states, has made it easier for many Wisconsin residents to recycle their old TVs, computers, printers and other electronics.

In September, it became illegal to put a number of these electronics in the trash. Instead, everyone in Wisconsin—including individuals, schools and businesses—must donate, reuse or recycle their electronics. An updated list of collection sites and other information on recycling electronics is available at <http://dnr.wi.gov/ecyclewisconsin>. While some parts of the state still do not have as many collection sites as others, we expect recycling opportunities to improve as E-Cycle Wisconsin grows.

■ Year 1 Collection

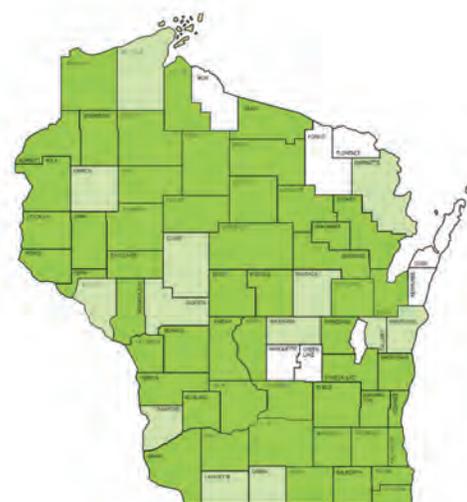
Wisconsin residents and schools recycled more than 10 million pounds of electronics during the first six months of 2010 (program year 1). While this was a great start, it fell short of the 15 million pounds electronics manufacturers were expected to collect during the time period. This was most likely due to the fact that collectors, recyclers and manufacturers had relatively little time to set up their programs after the law was passed

in October 2009—and the fact that the first three months of the year are typically some of the slowest for collecting and recycling electronics.

During program year 2, which runs from July 2010 through June 2011, we expect to see higher collection totals. Starting this program year, manufacturers will be penalized if they do not meet their recycling targets. We have seen a significant increase in the number of registered collectors and collection sites, including more that offer free or low-cost recycling to consumers. Publicity of the program—especially at the time the electronics disposal bans went into effect—has also increased public awareness of E-Cycle Wisconsin.

■ Responsible Recycling

Recyclers and collectors registered with E-Cycle Wisconsin must meet minimum standards to ensure they are handling electronics safely and responsibly. E-Cycle



E-Cycle Wisconsin Collection Site Distribution, 2010

- One site
- Multiple sites

Wisconsin compliance specialist Marcy McGrath has been working with recyclers and collectors to be sure they meet program requirements. She is also in the process of inspecting recycling facilities and collection sites in Wisconsin. Many of the recyclers go beyond these minimum standards—they have earned industry certifications and are considered leaders in the field.

When choosing a recycler, be sure to ask questions about where they send materials, and what they do to ensure data security and worker safety. We recommend talking to multiple recyclers to get a better sense of the different levels of service they offer, including which electronics and other materials they accept and what they charge.

If you have questions about E-Cycle Wisconsin, contact Sarah Murray at sarah.murray@wisconsin.gov or (608) 264-6001 or Marcy McGrath at marcy.mcgrath@wisconsin.gov or (920) 662-5167.

E-Cycle Wisconsin Quick Facts

# of registered collectors for Year 2	133
# of registered recyclers for Year 2	23
# of registered collection sites	325+ permanent and special event sites
# of counties with at least one collection	65
Pounds of Eligible Electronic Devices (EEDs) collected from urban counties in Year 1	9.3 million
Pounds of EEDs collected from rural counties in Year 1	1.1 million
Total pounds collected during Year 1	10.4 million

Wisconsin Recycling Markets Directory

Have something you want to recycle, but don't know where to take it? Do you work with residents or others in your community, and would like to direct them to recyclers in your area? The Wisconsin Recycling Markets Directory, managed by the UW-Extension Solid and Hazardous Waste Education Center (SCHWEC), offers a searchable directory of recyclable materials and recyclers in Wisconsin. Users search by category and subcategory of material to find recyclers for that material in their area. Recycling businesses may also register with the directory to make their information available to users

Visit the Markets Directory here:
www4.uwm.edu/shwec/wrmd/search.cfm

Recycling Fast Facts

— Kathleen Kiefaber, DNR

As you throw your bottles and cans in the recycling bin every day, you may not realize what a difference you're making in preserving natural resources and saving energy. But recycling makes a real difference.



Did you know...

- Recycling keeps almost 1.7 million tons of material out of Wisconsin landfills and incinerators every year. Since 1990, Wisconsin citizens have saved landfill space equivalent to five average landfills.
- Recycling paper produces 73% less air pollution than using virgin materials.
- In 2009, recycling efforts by Wisconsin households reduced greenhouse gas emissions by nearly 2.5 million tons of carbon dioxide—the equivalent of removing 475,000 passenger vehicles from the road. Businesses and institutions recycled even more.
- Americans throw away enough aluminum cans to rebuild an entire commercial air fleet every three months.
- Over 50% of the material in Wisconsin's landfills could have been recycled.
- Recycling one ton of plastic bottles saves the equivalent energy usage of a two person household for one year.

Plastics by the Numbers

— Brad Wolbert, DNR



We've all seen the tiny numbers on the bottom of our water bottles, yogurt containers and milk jugs. Most of us know that these codes define what type of plastic we're looking at, and many of us rely on them to know whether to throw our bottle or container in the trash or the recycling bin. But resin codes, as these numbers are called, are not always as straightforward as they seem.

The term "plastic" encompasses a diverse set of materials with varying physical properties like strength, flexibility, clarity, weight, melting point and so on. Companies that use plastic for their products or packaging carefully select the specific plastic, or polymer, that meets their needs. When plastic products or packaging are discarded,

variations in material properties can create serious challenges for recycling, since polymers with different properties generally can't be mixed.

Responding to this problem, the Society of the Plastics Industry (SPI) introduced a voluntary coding system for plastics in 1988. Under this system, manufacturers emboss their products with a code that allows recycling processors to more easily separate different types of plastic. The code consists of a number indicating the primary chemical

compound the item is made from and the familiar "chasing arrows" symbol. Since most plastic products are made of one of six major polymer types, numbers run from 1 to 6 and indicate what plastic is used in the material (see table below). The number 7 is used to indicate other polymers or a combination of polymers. Thirty-nine states including Wisconsin have adopted laws requiring the use of SPI codes on plastic products or packaging.

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What the Numbers and Letters Mean

Symbol	Number	Abbreviation	Resin Name
	1	PET, PETE	Polyethylene Terephthalate
	2	HDPE	High Density Polyethylene
	3	PVC, V	Polyvinyl Chloride
	4	LDPE, LLDPE	Low Density Polyethylene, Linear Low Density Polyethylene
	5	PP	Polypropylene
	6	PS	Polystyrene
	7	Other	Other Resin Types

Unfortunately, the presence of the chasing arrows symbol on a resin code can be misleading to consumers because it implies recyclability. The SPI resin code does not mean that the plastic item is recyclable in local recycling programs. For example, number 7 plastic is generally not recyclable. This category of plastics includes many different polymers with diverse physical properties. Some number 7 plastic cannot be recycled at all; most of the rest cannot be recycled without further separation that is economically infeasible. Despite not generally being recyclable, number 7 plastics are still marked with the chasing arrows symbol encasing the number 7.

Moreover, resin codes do not always group plastics into categories that can be recycled together. One might assume that all plastic items stamped number 1 could safely be recycled together, but there are hundreds of formulations of PET with different dyes, stabilizers and other additives. The most important distinction among the different types of PET involves whether the resin will be blow-molded into bottles or injection-molded into deli containers or other packaging. The two types of PET have different melting points. If injection-molded PET gets mixed in with a batch of PET intended for blow-molding, the entire batch of plastic can be ruined for either use. The same situation exists with number 2 HDPE: blow-molded milk jugs cannot be mixed with injection-molded sour cream and cottage cheese tubs in the recycling process.



As a society we benefit greatly from recycling plastics, despite the difficulties in labeling.

It is important that local recycling programs are explicit not only about what numbered plastics they will accept, but also what specific materials they will accept.

To address some of the problems with the current resin codes, SPI has recently entered into a partnership with the American Society for Testing and Materials (ASTM) to update, or possibly replace, current resin codes. Reviewers are paying particular attention to the growing variety of materials currently classified as number 7 plastics, and considering adding new codes for certain materials like bioplastics that are best managed through composting. The Sustainable Packaging Coalition, an industry consortium, is spearheading the design of a new recycling labeling system for packaging of all types. To support these efforts, the DNR recently forwarded a survey to Wisconsin responsible units, asking about problems the current resin codes have caused.

In the meantime, it is important that local recycling programs are explicit not only about what numbered plastics they will accept, but also what specific materials they will accept. For example, it may be better to say "plastic soda, water and sports drink bottles" than to say "number 1 plastics." Contact your local recycling program to find out what plastics and what kinds of products they accept.

Despite the difficulties in labeling plastics for recycling, many types of plastics are highly recyclable. As a society, we benefit from the energy savings, the greenhouse gas reductions, the decreased reliance on foreign oil, and the reduced air and water pollution that result from recycling plastics. Improved resin codes could make recycling plastics easier, more effective and even more beneficial.



Stay Updated and Register Online! Want more frequent updates on grant opportunities, changing waste and recycling policy and current issues? Sign up for Recycling Updates! Registration is easy, and once you're signed up, you'll get frequent e-mail updates on and an electronic copy of each Recycling News. To sign up, visit:

■ <http://dnr.wi.gov/org/aw/wm/recycle/recycleupdates.htm>

Register Now for the 2011 WIRMC Conference

The 2011 Wisconsin Integrated Resource Management Conference is scheduled for

**February 23–25
GREEN BAY, WISCONSIN**

This year's conference will feature a variety of sessions, workshops and an exhibitor hall.

See www.wirmc.org for more information or to register.

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For a downloadable, PDF version of this newsletter, please see **Recycling News online:**
<http://dnr.wi.gov/org/aw/wm/recycle/resources/newsletter.htm>

Results from Wisconsin's 2009 Waste Characterization Study

— Brad Wolbert, DNR



Workers sort samples for the 2009 Waste Characterization Study.

Last summer and fall, a team of contractors spent weeks combing through and sorting samples of waste from 14 landfills across Wisconsin. The result of their efforts is the newly released 2009 Wisconsin Statewide Waste Characterization Study, also known as the "Waste Sort," available on the DNR's website at http://dnr.wi.gov/org/aw/wm/recycle/WI_WCS_Final_Report_June-30-2010.pdf.

The contractors for this study of Wisconsin's landfilling habits were Recycling Connections Corporation of Stevens Point, Wisconsin and MidAtlantic Solid Waste Consultants of New Market, Maryland. Workers and volunteers hand-sorted 358 samples taken from incoming loads originating at Wisconsin households, businesses and institutions. Samples were sorted into 75 material categories, from food scraps to wood scraps, cardboard to carpeting. Workers also examined over 600 construction and demolition (C&D) loads to make visual estimates of the types of materials being landfilled as C&D waste. Through careful random sampling, data from the sort were used to produce statistically valid statewide weight estimates of the various materials, products and packaging thrown away in 2009. Results from this study were also compared to a similar study performed in 2002 to see how things have changed.

■ What Did They Find?

In 2009, the biggest individual categories of landfilled waste by weight were:

- food (10.6% of all landfilled waste)
- untreated wood (8.9%)
- roofing shingles (5.8%)
- composite plastic materials (5.7%)
- plastic film (5.6%)

■ What Has Changed?

Between 2002 and 2009, the overall tonnage of materials landfilled dropped about 10%. Some materials dropped much more.

Materials that dropped the most were:

- Mixed recyclable paper – down 60% between 2002 and 2009
- Aluminum beverage containers – down 44%
- Wood – down 37%
- Household hazardous waste – down 61%

An overall drop in the amount landfilled between 2002 and 2009 is likely due to the economic downturn that began in 2008, which led people to purchase and therefore throw away less. The decline in paper may reflect a decline in the use of direct mail marketing during that period, or the increasing prevalence of single-stream recycling collection programs, which make it easier to recycle junk mail and similar paper. Disposal of aluminum may have dropped

because more people are collecting cans for private cash redemption. The decrease in landfilled wood is likely due to external economic conditions such as the drop in home construction, as well as increased capturing of wood for boiler fuel and other forms of energy recovery.

Although overall tonnages of landfilled material dropped between 2002 and 2009, some materials were thrown away more:

- Plastic bottles #3-#7 – up 420%
- PVC construction materials (e.g., pipe) – up 379%
- Yard materials – up 190%
- Coated cardboard – up 183%
- Boxboard (low-grade cardboard such as cereal boxes) – up 59%
- Plastic film (includes bags, packaging, agricultural plastics) – up 26%
- #1 PET bottles – up 23%
- Polystyrene foam – up 19%

Unfortunately, the study does not provide sufficient information for estimating recycling rates for each material, since it did not supply estimates of how much of each material was generated in Wisconsin in 2009.

■ What's Next?

With a clearer view of what Wisconsinites are and are not throwing away, the 2009 Waste Sort will help set priorities for the DNR's

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Sorting table at the 2009 Waste Characterization Study.

Waste Characterization Study

(Continued from page 7)

Waste and Materials Management program over the coming years. Based on study results, likely areas of focus will be diverting food and other organic wastes, compostable paper, and construction and demolition waste.

Increasing recovery of recyclable materials has both monetary and environmental benefits. Based on the Waste Study results, DNR estimates that over \$50 million dollars worth of recyclable materials were landfilled in 2009 (see Table 1) By reducing emissions and energy use associated with extraction, manufacturing and distribution, recycling also helps preserve natural resources. Had Wisconsinites recycled all recyclable materials in 2009, they would have saved 3.1 million tons of carbon dioxide—the amount equivalent to removing 592,000 passenger cars from the road or the emissions from one full-size power plant. Recycling all the recyclable plastics alone would have saved the equivalent of 141,000 tons of carbon dioxide.

Wisconsinites already recycle a lot, and we've made notable progress in throwing away less aluminum cans, mixed paper, and wood products. New initiatives will help divert materials into more productive uses with fewer environmental impacts.

Table 1: Value of Materials in Landfill

2009 WISCONSIN WASTE CHARACTERIZATION STUDY

Material	Avg. Price Per Ton Dec. 2009	Tons Landfilled	Market Value
Corrugated Cardboard	\$75	167,000	\$12,525,000
Newspaper	\$35	64,000	\$2,240,000
Magazines	\$35	42,000	\$1,470,000
Office Paper	\$215	31,000	\$6,665,000
Mixed Paper	\$63	82,000	\$5,166,000
Aluminum Cans	\$1,312	9,000	\$11,808,000
Steel Cans	\$117	19,900	\$2,328,300
Clear Glass	\$31	15,000	\$465,000
PET	\$176	24,000	\$4,224,000
HDPE Clear	\$478	6,200	\$2,963,600
HDPE Colored	\$310	9,300	\$2,883,000
TOTAL			\$52,737,900

Table 2: Potential Energy Conservation Savings of Landfilled Materials

2009 WISCONSIN WASTE CHARACTERIZATION STUDY

Landfilled Material	Gallons Gasoline Equivalent	# Persons' Annual Energy Consumption
Paper	47 million	21,500
Plastic	175 million	66,000
Metal	82 million	30,900
Glass	1 million	400
Organics	18 million	6,800
Carpet	52 million	19,600
Textiles	38 million	14,300
TOTAL	423 million	159,500

What Are You Saving?

Recycling
1 ton of glass...



saves the
equivalent of
15.4 gallons of oil.

Recycling
1 ton of plastic...



saves the
equivalent of
**1,000–2,000 gallons
of gasoline.**

Recycling
1 ton of newspaper...



saves the
equivalent of
**100 gallons
of gasoline.**

Recycling
1 ton of aluminum...



saves the
energy equivalent of
**2,350 gallons of
gasoline**, or the
total amount of
electricity used by a
typical Wisconsin
home over 10 years.

RU Consolidation – A Possibility for Your Community?

— Kathleen Kiefaber, DNR



How municipalities choose to provide recycling and waste management services varies widely across the state.

By Wisconsin law, every community in the state is required to provide recycling and waste management services for their citizens. How municipalities choose to provide these services, however, varies widely across the state.

The majority of communities have chosen to establish an individual responsible unit (RU), while other communities have joined with one or more additional communities to form a consolidated RU. Although individual RUs serve thousands of Wisconsinites, the DNR has observed that smaller RUs tend to encounter program difficulties because of their small size and more limited budgets.

As both local and state budgets get tighter and staff time becomes scarcer, it's time we took a closer look at increasing program efficiency through RU consolidation.

■ The Situation

As of September 2010, Wisconsin had 1060 RUs. Of those 1060, 64 are consolidated RUs with 36 of these considered county RUs (serving at least 75% of a county population). All other RUs in the state are individual. The population range that RUs serve also varies across the state. About 85% of RUs serve a population under 5,000 and two-thirds serve a population under 2,000.

■ Why the Concern About Individual RUs?

Individual RUs serve thousands of Wisconsinites across the state. They provide recycling services to cities and towns, and operate programs their citizens take pride in. However, smaller RUs often encounter

operational and administrative inefficiencies that larger RUs do not.

Small RUs may experience:

- Higher recycling costs due to lack of market power and experience in contract negotiation
- Inadequate outreach and compliance (often due to limited staff resources)
- Confusion among residents arising from differences between individual RU programs operating in adjacent communities
- High staff turnover and lack of staff with the necessary expertise to run efficient programs

In addition to the difficulties smaller RUs encounter, smaller recycling programs are often more costly to operate. The table below shows the average costs of operating a recycling program per ton (i.e., what it costs the RU to collect one ton of material for recycling). The highest costs occurred in the smallest programs (\$238/ton), and were over \$80/ton more costly than the average costs for the large programs (\$151/ton).

■ Grants

Most RUs in the state apply for and receive grant assistance through the Local Government Recycling Program Basic Grants. This grant program provides \$32 million annually to local recycling programs to support statewide efforts to increase reuse, recycling and recovery of valuable resources. About 99% of RUs receive grant assistance through this program, but because smaller RUs often cost more to operate, grant money generally accomplishes less in smaller programs.

■ The DNR Connection

The DNR administers grant money to state RUs and ensures program compliance through an annual reporting process. However, with continued reductions in DNR staff and budgetary resources, one-on-one outreach and assistance to local programs has become increasingly difficult to deliver.

■ Consolidation—A Solution?

Local recycling programs are a valuable public service. Ensuring all programs operate efficiently would extend the benefits of recycling grants, allowing RUs to allocate additional resources toward outreach and education, processing and more. One way of achieving program efficiency is through program consolidation. Consolidation can occur on a services level, such as joining together to jointly provide education/outreach services or contracting for recycling collection services. Consolidation can also occur on a program level, where RUs join together to collect and process materials across their service area.

In Wisconsin, 36 RUs operate consolidated programs. These RUs report improved program benefits in the areas of:

(Continued on page 10)

2008 Cost Per Ton of Materials Processed for Small, Medium and Large RUs

	Small RUs		Medium RUs		Large RUs
Population	<2,000	2,000–4,999	5,000–9,999	10,000–49,999	50,000+
#RUs	701	187	68	87	16
Average Population	915	3,060	7,064	21,460	133,987*
Average Cost/Ton	\$238	\$181	\$190	\$177	\$157

RU Consolidation

(Continued from page 9)

- Lower local government cost share for program implementation
- Using market power and economies of scale to lower recycling collection costs and expand services (curbside collection, tires, appliances, oil filters, yard wastes, etc.)
- Opportunities for enhanced local services and new business opportunities (clean sweep/household hazardous waste collection, yard waste/composting, construction debris and asphalt shingles reuse/recovery, etc.)
- Pooling of grants and staff resources and a dedicated and experienced staff
- More effective use of state grant money
- Lower cost of material processing due to similar materials being collected from different member communities and better market prices because of increased volume.

Clearly there are many benefits to RU consolidation. On a local level, consolidation of programs or services is more efficient, which means RUs can provide more services to their citizens for less money. On a state level, consolidated programs are easier to monitor among fewer DNR staff and are able to stretch grant money further. The DNR is currently evaluating ways to better inform RUs of potential benefits from program or services consolidation in a way that would benefit local programs and state citizens.

Wisconsinites support recycling. Over 90% of state citizens recycle, saving millions of tons of waste from entering the landfill every year. Consolidation would allow us to recycle more, recycle more efficiently and cut government costs—a win-win for everyone.



Wisconsinites support recycling — over 90% of state citizens recycle.

Plant the Seed for a Green and Healthy School



We encourage participants to register early, as space is limited!

For more information on the workshop, or to register, visit the GHS website:

<http://dnr.wi.gov/org/caer/ce/greenschools/workshop/March2011.htm>

Contact Dan Werner at (608) 267-7622 or daniel.werner@wisconsin.gov with any questions.



A Workshop for Teachers and School Staff

The Green & Healthy Schools (GHS) Program is conducting a day-long workshop on March 25, 2011 at Havenwoods State Forest Environmental Awareness Center in Milwaukee. The workshop will provide southeast Wisconsin area school staff, teachers and administrators with training on how to incorporate GHS into their schools.

The workshop will connect GHS program staff with area schools and bring local resources and schools together. Training will provide an in-depth introduction to the program, specifically focusing on the topics of:

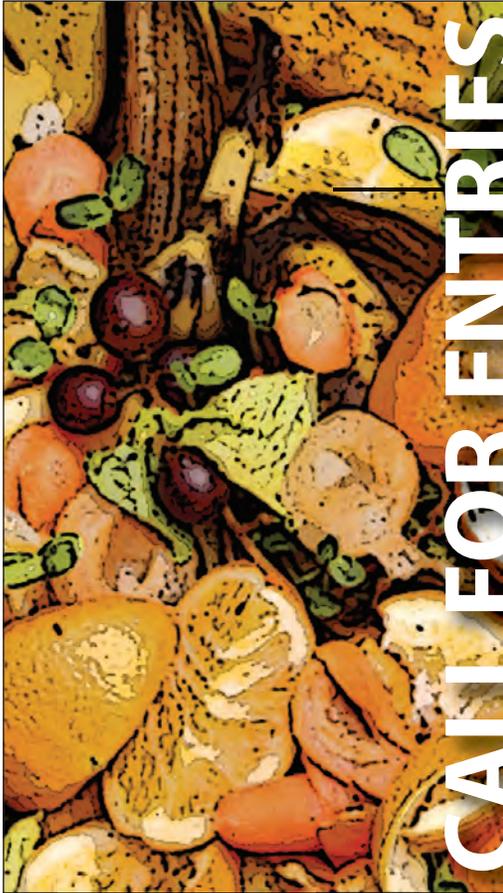
- **Waste & Recycling**
- **Energy**
- **Water**
- **School Facilities & Grounds**
- **Healthy Lifestyles**

Workshop participants will also have the opportunity to connect with area resources, such as businesses, nature centers, non-profit organizations and local governments. Schools will leave with a plan for making their individual school green and healthy.

Substitute teacher costs will be covered by the DNR thanks to grants from the Natural Resources Foundation of Wisconsin, the Townsend Foundation and the Wisconsin Energy Foundation.



Educators at last year's GHS conference.



Garbage to Gardens: Compost Grows POSTER CONTEST

CALL FOR ENTRIES

The DNR has just announced a new poster contest with the theme of *Garbage to Gardens: Compost Grows* and is seeking entries to design the front of the poster.

Students in grades 9-12 are invited to design a positive environmental poster representing the benefits and concept of composting. Entries must be the artist's original artwork and should show the theme of the poster contest. A winning entry will be chosen and featured on the front of an upcoming DNR poster about composting, which will be distributed statewide as an educational resource for schools, businesses, communities and individuals.

All contest entries are due to the DNR by **March 28, 2011** and a winning entrant will be announced on **April 19, 2011**.

For more information on the contest, or to download an entry form, see the website:

<http://tinyurl.com/compost-poster-contest>



WHAT'S NEW ON THE WEB

— Kathleen Kiefaber, DNR

Oil Filters and Absorbents Media Kit and Webpage

Beginning January 1, 2011 used automotive engine oil filters and oil absorbent materials are banned from Wisconsin landfills. The DNR has developed several outreach materials to help explain the ban.

See the oil filters and absorbents webpage (<http://dnr.wi.gov/org/aw/wm/recycle/newpages/oilabsorb.htm>) for more information on what materials are covered and how to recycle or manage those materials. The website also contains several additional materials like a fact sheet, guidance for selecting a recycler and more.

See the DNR's oil filters and absorbents media kit (http://dnr.wi.gov/news/mediakits/mk_oil_filters_absorbents.asp) for information on what the ban means and how it will affect Wisconsinites.

DNR News Releases for Use in Your Publication

Does your community put out a newsletter? Are you looking for recycling outreach materials to use on your webpage or distribute to your residents? The DNR's Waste and Materials Management program puts out frequent news releases about recycling in Wisconsin. These releases are free and available for you to use in your newsletter flyer or other materials.

All news releases are posted on Recycling Updates (<http://dnr.wi.gov/org/aw/wm/recycle/recycleupdates.htm>). You may subscribe to Recycling Updates to receive email updates on new grant opportunities, changing waste and recycling policy, and news releases. See the website (<http://dnr.wi.gov/org/aw/wm/recycle/recycleupdates.htm>) to register.

New Outreach Materials Available Through E-Cycle Wisconsin

The DNR has been busy updating the E-Cycle Wisconsin webpages to include new information about the program and additional outreach materials.

Updated lists of registered collectors and recyclers are now available at www.dnr.wi.gov/ecyclewisconsin.

New outreach materials including newsletter templates, a media kit, E-Cycle Wisconsin brochures and fliers, and radio announcements in English, Spanish and Hmong are all available on the outreach portion of the E-Cycle Wisconsin website: <http://dnr.wi.gov/org/aw/wm/ecycle/outreach.htm>.

Education Corner

— Elisabeth Olson, DNR

■ Pre K-12 Recycling Education Materials Available in Print & Online

Looking for educational materials to help teach kids the importance of waste reduction, recycling, reusing and composting? Whether you are a classroom teacher or someone who's been invited as a guest speaker in a school, DNR can help! The DNR recycling program has many resources for teachers and other formal and non-formal educators to help you teach and implement waste reduction and recycling in your school and community.

Visit <http://dnr.wi.gov/org/aw/wm/recycle/resources/index.htm> for a listing of our education programs and resources, or contact Elisabeth Olson at elisabeth.olson@wisconsin.gov or (608) 264-9258 for further assistance.

■ Composting Brochure Now Available in Hmong and Spanish

Home Composting: Reap a Heap of Benefits, a brochure explaining the basics of home composting, is now available electronically in Spanish and Hmong formats.

At this time, no printed copies are available, but both versions are available on the DNR's Home Composting webpage: <http://dnr.wi.gov/org/aw/wm/recycle/homecompost.htm>. To be notified if printed copies become available, contact Elisabeth Olson at elisabeth.olson@wisconsin.gov or (608) 264-9258.

■ E-Cycle Wisconsin Publications Now Available in Hmong and Spanish

A brochure explaining the basics of the E-Cycle Wisconsin, as well as a flier outlining which electronics are covered under the program are now available in Hmong and Spanish translations.

To order copies of these or other E-Cycle Wisconsin publications, see <http://dnr.wi.gov/org/aw/wm/ecycle/outreach.htm>.

■ Too Valuable to Waste Video Online

Ever wonder what happens to your recyclables after they are picked up at the curb? Or maybe you run a recycling program and are looking for a way to educate residents on this very topic. *Too Valuable to Waste* is a six minute video illustrating how paper, plastics, and other recyclables are changed into brand new products once they leave the curb; all while creating thousands of good jobs!

The video is available in DVD format by contacting Elisabeth Olson at elisabeth.olson@wisconsin.gov or (608) 264-9258. To view the video online visit: <http://dnr.wi.gov/org/aw/wm/recycle/resources/index.htm> and scroll to the bottom of the page to find the *Too Valuable to Waste* video link.

■ Green & Healthy Schools Recycling Bin Grant Program

Want to improve your school's recycling efforts? The Green and Healthy School Recycling Bin Grant Program can help! This program, offered



through the Green and Healthy Schools Program, provides eligible elementary, middle and high schools with recycling bins for their school. Schools that have completed steps one and two of the program are eligible to apply for up to 50 recycling bins for use in classrooms, lunchrooms, staff lounges and hallways.

For more information on the Green and Healthy School Recycling Bin Grant Program, or to apply, see: <http://dnr.wi.gov/org/caer/ce/greenschools/recycling.htm>.

For more information on the Green and Healthy Schools Program, see the program website (<http://dnr.wi.gov/greenandhealthyschools>) or contact Dan Werner at DNRG&HSchools@wisconsin.gov or (608) 267-7622.

■ Recycle More Wisconsin Offers Outreach Opportunity for RUs in Wisconsin

Wisconsin Responsible Units (RUs) are responsible for providing citizens with recycling information



so residents know what and how to recycle within their communities. As more people look to the web for information, it is important to provide online resources for your residents. The Associated Recyclers of Wisconsin (AROW) has a new website, www.RecycleMoreWisconsin.org, which allows local governments across the state to post recycling information for their area, as well as other resources. Recycle More Wisconsin is a great resource for local governments to maximize recycling education and outreach efforts and reduce waste. Members of AROW can post to Recycle More Wisconsin for free.

For more information on joining AROW, visit <http://arow-online.org/join.html>. For more information on Recycle More Wisconsin, contact Angie Lemar at programs@arow-online.org.



Recycling & Waste Reduction Publications

WINTER 2011

PUB WA-1512-2011

The DNR offers waste reduction and recycling publications in two formats: electronic and printed. Many publications are available on the DNR Recycling Education and Outreach webpage, <http://dnr.wi.gov/org/aw/wm/recycle/resources/index.htm>. These publications may be printed and used as needed. The publications listed below are available to order in print format. Please indicate how many of each publication you would like (no more than 100 copies per publication) in the space next to the publication. If you need a larger quantity, please contact us at DNRwastematerials@wisconsin.gov or (608) 266-2111 to discuss available options.

Please complete the information requested for mailing purposes. Your materials will be shipped UPS, so **no P.O. Boxes, please.**

Business/Commercial Recycling

- ___ *A Tenant's Guide to Recycling (English) IE-2005
- ___ A Tenant's Guide to Recycling (Spanish) CO-070c
- ___ *Greening the Lodging Industry CE-279
- ___ *Production & Reduction: Build a Better Business
for a Better Tomorrow (Poster) CE-283
- ___ *Recycling & Waste Reduction at Convenience Stores CE-280
- ___ Recycle Used Oil (poster/sign) IE-100
- ___ Recycle Used Motor Oil Here (poster) IE-101
- ___ Recycle Vehicle Batteries Here (poster) IE-103
- ___ *Special Events: Recycling and Waste Management CE-281
- ___ Waste Reduction & Recycling: A Guide for Owners of
Apartments & Other Multi-Family Dwellings CE-284
- ___ Waste Reduction & Recycling: A Guide for the Workplace CE-278

Composting

- ___ *Home Composting: Reap a Heap of Benefits
Also available online only in Spanish and Hmong WA-072
- ___ *Home Composting: The Basic Composter WA-182
- ___ *Yard Care: Do Your Share! WA-073

E-Cycling

- ___ *E-Cycle Wisconsin Program Brochure WA-1426
- ___ *E-Cycle Wisconsin Program Brochure (Hmong) WA-1498
- ___ *E-Cycle Wisconsin Program Brochure (Spanish) WA-1499
- ___ *E-Cycle Wisconsin Eligible Devices & Landfill/
Incineration Ban Flyer WA-1427
- ___ *E-Cycle Wisconsin Eligible Devices & Landfill/
Incineration Ban Flyer (Hmong) WA-1500
- ___ *E-Cycle Wisconsin Eligible Devices & Landfill/
Incineration Ban Flyer (Spanish) WA-1501

General Information

- ___ *Burning Garbage: A Problem for our Communities WA-1373
- ___ *Three Arrows FAQ Recycling Poster CE-2018
- ___ *Waste Reduction: Think It Through...It's Up To You! IE-206
- ___ *Wisconsin Waste Reduction and Recycling Program WA-422
- ___ *Wisconsin...Where Recyclables Are Too Valuable
To Waste! (Poster) WA-424

PreK-12 Education

- ___ *Air Defenders: A Quest for Clean Air
Teacher Activity Guide
Open Burning Education for Grades 4-7
(limit one per classroom) CE-7029
- ___ *Education Connection Order Form - listing of all DNR
environmental education resources EI-456
- ___ EEK! Environmental Education for Kids Bookmark CE-232
- ___ *Green & Healthy Schools Program Brochure CE-2013
- ___ *Green Schools Poster CE-285
- ___ *Keepin' It in the Loop
K-3 Teacher Activity Guide (limit one per classroom) CE-2004
- ___ *Keepin' It in the Loop
4-8 Teacher Activity Guide (limit one per classroom) CE-2003
- ___ Keepin' It in the Loop
K-3 Poster CE-2007
- ___ Keepin' It in the Loop
4-8 Poster CE-2006
- ___ Nature Recycles Poster CE-5013
- ___ Nature's Recyclers Coloring Book - English IE-042
- ___ Nature's Recyclers Coloring Book - Spanish CE-999
- ___ Recycling and Beyond: Fun Stuff Activity Book for Kids CE-2010
- ___ *Wee Crafts Activity Guide CE-2012
- ___ *Wee Recyclers Early Childhood Education
Teacher Activity Guide (Ages 3-5) CE-2011

* Starred publications are also available in electronic format. See: <http://dnr.wi.gov/org/aw/wm/recycle/resources/index.htm>.

Did you...?

- ✓ Indicate the quantity of publications you want.
- ✓ Complete the return address label **on the reverse side of this page.**
- ✓ Stamp and mail the form.

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Wisconsin Department of Natural Resources

This publication is available upon request in alternate formats for visually impaired persons. Please contact (608) 266-2111 to request an alternate format. The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to: Equal Opportunity Office, U.S. Department of the Interior, Washington, D.C. 20240

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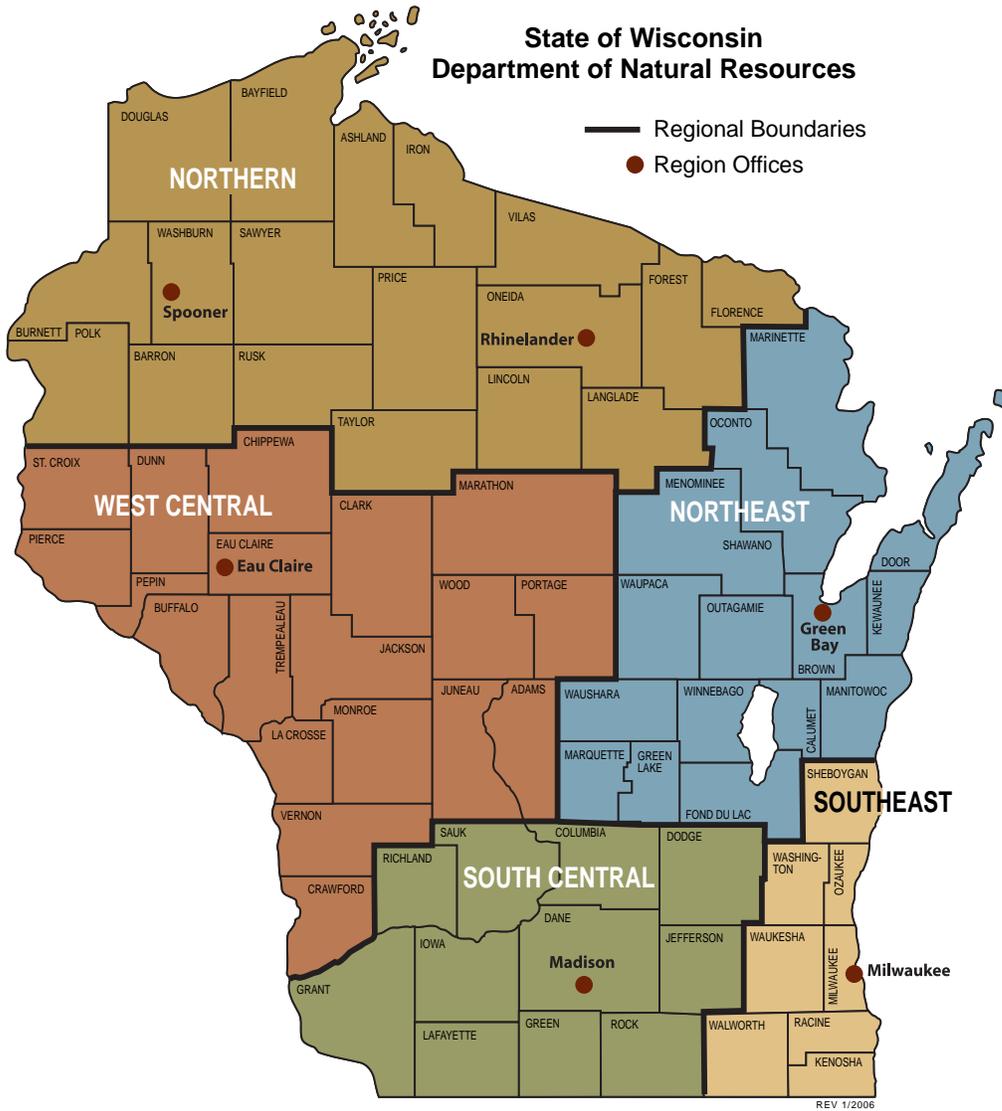
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Wisconsin Department of Natural Resources REGIONAL RECYCLING CONTACTS



DNR staff are currently in the process of reassigning recycling contacts across the state. Contact information listed below will likely change.

Northern Region

Bob Germer

(715) 635-4060

robert.germer@wisconsin.gov

COUNTIES SERVED: Ashland, Barron, Bayfield, Polk, Rusk, Sawyer, Washburn

Sherry Otto

(715) 365-8982

sheryla.otto@wisconsin.gov

COUNTIES SERVED: Florence, Forest, Iron, Langlade, Lincoln, Oneida, Price, Taylor, Vilas

Northeast Region

Jennie Easterly

(920) 303-5431

jennifer.easterly@wisconsin.gov

COUNTIES SERVED: Brown, Marinette, Menominee, Oconto, Shawano

Dave Misterek

(920) 424-2104

david.misterek@wisconsin.gov

COUNTIES SERVED: Calumet, Door, Fond du Lac, Green Lake, Kewaunee, Manitowoc, Marquette, Outagamie, Waupaca, Waushara, Winnebago

Southeast Region

Nancy Gloe

(414) 263-8369

nancy.gloe@wisconsin.gov

COUNTIES SERVED: Milwaukee, Waukesha

Melanie Burns

(414) 263-8710

melanie.burns@wisconsin.gov

COUNTIES SERVED: Ozaukee, Sheboygan, Washington

Ken Hein

(262) 574-2142

kenneth.hein@wisconsin.gov

COUNTIES SERVED: Kenosha, Racine, Walworth

West Central Region

Jill Schoen

(715) 839-2788

jill.schoen@wisconsin.gov

COUNTIES SERVED: Adams, Buffalo, Chippewa, Clark, Crawford, Dunn, Eau Claire, Jackson, Juneau, La Crosse, Marathon, Monroe, Pepin, Pierce, Portage, Saint Croix, Trempealeau, Vernon

South Central Region

Marie Stewart

(608) 275-3298

marie.stewart@wisconsin.gov

COUNTIES SERVED: Columbia, Dane, Dodge, Grant, Green, Iowa, Jefferson, Lafayette, Richland, Rock, Sauk



- Have questions about how to develop a media campaign for residents in your area?
- Want help with general recycling outreach and education?
- Looking for a publication to use at an upcoming event?

Elisabeth Olson, DNR Recycling Educator, is here to help you.

Contact Elisabeth with questions about outreach, education and available materials:

(608) 264-9258 or elisabeth.olson@wisconsin.gov

Wisconsin Department of Natural Resources
Bureau of Waste Management / WA3
P.O. Box 7921
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