

## An update for Wisconsin Governments and Recyclers

DNR / BUREAU OF WASTE AND MATERIALS MANAGEMENT

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## Message from the Waste and Materials Management Bureau Director

Greetings from the Waste and Materials Management Program. As the program's new bureau director, I'd like to tell you a little about where the DNR is going in recycling and waste reduction.

We recently released our annual report, which outlines some of the successes of the Waste and Materials Management Program over the past year, and our goals for the future. I hope you will read the report to learn more about what the DNR is doing to lessen the waste produced in Wisconsin, and increase the amount we recycle.

In all of this, our partners are crucial. We cannot sustainably manage waste and materials without your help. We thank those of you who are already partnering with us, and invite others to help us create a more sustainable world.

Every day we make decisions regarding waste and materials—what to buy, how much to consume and where to dispose, reuse or recycle the products we use. We all have the opportunity and responsibility to reduce, reuse and recycle.

Sustainability is an over-arching principle in our program. To sustainably improve waste and materials management in Wisconsin, we consider how waste issues impact the regulated community and the general public (people), the environment (planet) and the economy (profit). With your help, we continue to move toward zero waste.

— Ann Coakley, Director  
Bureau of Waste and  
Materials Management



Wisconsin households and schools are beginning to see increased opportunities for recycling their unwanted electronics.

(See page 4)

## Message from the Program Coordinator

— Cynthia Moore, DNR

## Recycling/Materials Recovery Is On the Upswing

The economy may still be down, but recycling/materials recovery is on the upswing, or so it seems from the amount of activity in Wisconsin, regionally and nationally. Especially exciting from my perspective is the research showing a clear connection between recycling/waste materials recovery efforts and economic and environmental benefits such as job creation, climate change reduction (see the article on page 6) and energy efficiency.

Initiatives we've all worked on for years are becoming a reality—projects in food waste diversion (see the article on page 6), shingles recycling, agricultural plastics recycling, recovery of construction and demolition materials and others have all taken root in our state.

(Continued on page 2)

## Upswing

(Continued from page 1)

Electronics recycling is now stronger in Wisconsin thanks to a new e-cycling law. Our E-Cycle Wisconsin staff are busy working with manufacturers, recyclers, collectors and local governments to ensure that all are informed of their responsibilities and prepared for their roles in this new program.

A new legislative initiative was recently introduced by Senator Jauch to establish manufacturer-financed recycling for household mercury-containing lamps such as CFLs. We expect the bill will be reintroduced in the next legislative session.

We're anxiously awaiting the final report from the 2009 statewide waste sort (see article on page 9) so we can use the results to help us in setting priorities for the coming years. One of our main areas of focus is making "away from home" recycling as successful as recycling at home. See the article on page 5 for more information on the web-based Business Recycling Toolkit, a valuable new tool to help you change, expand or create a recycling program for your business.

You'll read about these and other initiatives in this issue of *Recycling News*. I urge you to keep us informed by sending your comments and updates on initiatives you are involved in.



## Recycling News

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This publication is available in alternative format (large print, Braille, audiotape etc.) upon request. Please call 608/266-2111 for more information.

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](mailto:Cynthia.Moore@Wisconsin.gov) or by phone 608/267-7550.

Graphic Design by Nan Rudd / RUDD DESIGN

# GRANTS

## 2011 Basic Recycling Grants to Responsible Units Information

—Sandy Chancellor, DNR

Responsible Units (RUs)—defined as local units of government responsible for implementing recycling programs—are eligible for state grant funding to operate effective recycling programs. It is important that RUs submit complete applications by the established deadlines (see deadlines below). Late applications may receive reduced funding or no funding for that year's grant cycle.

### DEADLINES for 2011 Basic Recycling Grants to Responsible Units

To receive 100% funding	October 01, 2010
To receive 95% funding	October 12, 2010
To receive 90% funding	October 20, 2010
To receive 75% funding	November 01, 2010
To receive 0% funding	November 2, 2010 or later

Online grant applications will be available in July 2010. An e-mail will notify RUs that the electronic reporting system is open.

For questions about recycling grants, call:

(608) 264-9207

## Staff Updates

■ **Marcy McGrath** is now the Compliance Coordinator for the new DNR E-Cycle Wisconsin program. Marcy has been with the DNR for ten years, and formerly worked as a Waste Management Specialist in the Northeast Region. Marcy will be working from the DNR Green Bay office. Contact her at [marcy.mcgrath@wisconsin.gov](mailto:marcy.mcgrath@wisconsin.gov).

■ **Jennie Easterly** is a new Waste Management Specialist in the Northeast Region, working out of the Oshkosh office. Jennie has been with the DNR since 1999, formerly working as a hydrogeologist for the Remediation and Redevelopment Program. In her new role, Jennie will work on hazardous waste inspections, recycling, solid waste complaints and siting/operating

small construction and demolition landfills in the Northeast Region. Contact her at [jennifer.easterly@wisconsin.gov](mailto:jennifer.easterly@wisconsin.gov).

■ **Bridgette Valdez-Kogle** is a new, part-time communications specialist working with the E-Cycle Wisconsin program to promote new recycling opportunities and provide information to the public and stakeholders about the new landfill and incineration bans. She is finishing a master's degree in conservation biology and sustainable development at UW-Madison and previously worked for the Washington State Department of Ecology. She works in the downtown Madison office. Contact her at [bridgette.valdezkogle@wisconsin.gov](mailto:bridgette.valdezkogle@wisconsin.gov).



**Register Online!** Want more frequent updates on grant opportunities, changing waste and recycling policy and current issues? Sign up for Recycling Updates, a new feature on our *Recycling News* homepage. Registration is easy, and once you're signed up, you'll get e-mail updates on changing policy, new grant opportunities, recycling events and more. You may also register for *Recycling News* online and receive an electronic copy of *Recycling News* each time a new newsletter is released. To sign up for either Recycling Updates or *Recycling News* online, see:

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

# LEGISLATIVE & RULES UPDATE

— Dan Fields, DNR

## ■ 2009/2010 Legislation

The following legislation related to waste and materials management passed in the 2009/2010 session:

**Mercury** – Wisconsin Act 44 prohibits the sale of mercury-containing products, and prohibits their use in schools as of October 1, 2010. For more information on Act 44 and how it affects schools, see the article to the right.

**Electronics Recycling** – Wisconsin Act 50 bans the landfilling or incineration of certain electronics as of Sept. 1, 2010. The law also creates E-Cycle Wisconsin, a program to recycle electronics from Wisconsin households, K-12 public schools and Milwaukee Parental Choice Program schools. For more information on E-Cycle Wisconsin, see [www.dnr.wi.gov/ecyclewisconsin.gov](http://www.dnr.wi.gov/ecyclewisconsin.gov).

**Used Oil Filters and Absorbents** – Wisconsin Act 86 bans the landfilling of used oil filters and oil absorbents from routine spills as of January 1, 2011.

## ■ 2010 Legislative Activity

The following waste and materials management-related bills were introduced but not enacted by the legislature during the 2009/2010 session:

**Burying Household Waste** – Wisconsin Bill AB 372 would prohibit the burying of household waste on the property where it came from. The bill passed the Assembly, but died upon adjournment of the legislative session.



**Safe Burning** – Wisconsin Bill AB 114/SB 119 would prohibit open burning of solid waste and illegal storage or disposal of waste tires. AB 114 referred out of the Assembly Natural Resources Committee. SB 119 referred out of the Senate Committee on Environment. The bill died upon adjournment of the legislative session.

**Wheel Weights** – Wisconsin Bill AB 544/SB 364 would prohibit the installation, sale and distribution of wheel weights or other wheel balancing products that contain lead. The bill passed the assembly, but died upon adjournment of the legislative session.

## ■ 2010 Proposed State Regulations Affecting Waste and Materials Management

As of January 2010, we anticipate proceeding with work on four rule packages during 2010. The Natural Resources Board may add to or modify this list during the year:

**NR 500 Series revisions:** This series relates to the management of excavated stormwater basin sediment. The DNR will continue to revise and develop rules that will allow efficient and environmentally appropriate use or disposal of sediment excavated from stormwater retention basins.

**NR 502 and 518:** These rules will be revised to add compost use standards and modify compost facility standards. Changes will provide measurable quality standards for compost derived from source-separated yard materials, food scraps and non-recyclable paper, making it easier to market high-quality compost.

**NR 504 and NR 812:** Changes will be made to ensure consistency in the decision-making process for granting exemptions and variances to the required 1,200-ft setback from private wells and landfills. The DNR's Waste and Materials Management and Drinking Water programs will work together to ensure consistency.

**NR 600:** Will be updated based on rules adopted by the U.S. Environmental Protection Agency since 2002. These changes are required to retain EPA authorization for the DNR's hazardous waste program.

# New Law Bans Mercury in Schools

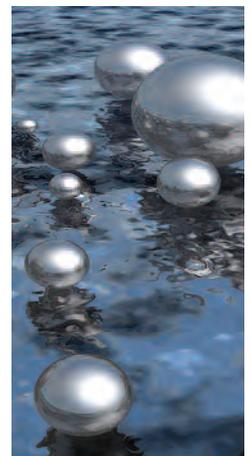
— Elisabeth Olson, DNR

Under a new law, Wisconsin schools are required to remove all mercury from school facilities and grounds.

Signed in October 2009, Wisconsin Act 44 establishes a multi-phase program to eliminate mercury from schools. Effective this year, schools are no longer allowed to purchase any equipment or materials that contain mercury. Starting January 1, 2012, schools may no longer store mercury anywhere in the building and are required to remove all traces of mercury from science labs, equipment and machinery. Schools are not required to make any unplanned infrastructure changes to things such as thermostats and other HVAC mercury-containing equipment. Only planned changes are regulated under the law. In certain instances where no alternatives are available, schools may still purchase equipment containing mercury. For specific requirements, please review Wisconsin Act 44 (available online here: <http://www.legis.state.wi.us/2009/data/acts/09Act44.pdf>).

Mercury is a hazardous material that causes serious environmental and human health problems. Although it is found naturally, it is most often released from man-made products like thermometers and fluorescent lights, or produced as a by-product of energy production. Mercury is a bioaccumulative pollutant, which means that it does not break down over time and accumulates in animal tissues.

Although many devices contain mercury, there are numerous mercury-free alternatives. In schools, mercury is most common in science labs and equipment, but it may also be found in items like fluorescent lights, thermostats and thermometers in the nurse's office.



For more information about mercury in schools, visit <http://www.mercuryinschools.uwex.edu/>

# E-Cycle Wisconsin Off to Strong Start!

— Sarah Murray, DNR



Manufacturers of electronics must register with the DNR and recycle a certain amount of items each year.

Wisconsin households and schools are beginning to see increased opportunities for recycling their unwanted electronics, thanks to a statewide electronics recycling law passed in October 2009.

The new E-Cycle Wisconsin program, which began Jan. 1, requires manufacturers of TVs, computers and desktop printers to register with the DNR and recycle a certain amount of electronics from households, K-12 public schools and Milwaukee Parental Choice Program schools each year.

Electronics collectors and recyclers must also register if they want to collect or recycle electronics for a manufacturer under E-Cycle Wisconsin. As of May, 122 collectors and 28 recyclers had registered, and consumers could recycle electronics under the program at approximately 300 sites. DNR staff will be visiting electronics collection sites and recyclers to ensure that they are meeting the

new law's requirements and to answer any questions regarding best management practices for electronics.

Because the new program started very quickly following the passage of the electronics recycling law, the first few months have been a learning process for everyone involved, including DNR staff. Consumers in some areas of the state may not yet see new electronics recycling opportunities, or reduced costs for recycling large items, but we expect this to change as the E-Cycle Wisconsin program grows and matures.

Look for more information from the DNR and others as we near the electronics recycling ban that becomes effective Sept. 1, 2010. After that date, state landfills and incinerators can no longer accept many electronics for disposal, including TVs, computers and computer accessories, printers, DVD players, and cell phones. Wisconsin residents, schools, businesses and governments will need to recycle these electronics rather than putting them in the trash. E-Cycle Wisconsin will provide convenient recycling options for most households and covered schools.

For more information, including a new brochure outlining the E-Cycle Wisconsin program and devices accepted under the program, visit the E-Cycle Wisconsin Web pages at <http://dnr.wi.gov/ecyclewisconsin>



## New Landfill Ban Effective Sept. 1

This fall marks the beginning of a new landfill ban in Wisconsin. Starting September 1, it will be illegal to landfill or incinerate the following devices in Wisconsin:



- **Desktop computers**
- **Desktop printers**, including printers combined with fax machines, scanners and copiers
- **Video display devices** of at least 7" long in the longest diagonal dimension. These include TVs, laptops and computer monitors.
- **Computer peripherals** including keyboards, mice, hard drives, scanners, speakers, flash drives, external modems and other devices
- **Fax machines**
- **DVD players, VCRs, DVRs and other video players**
- **Cell phones**

For more information on the landfill ban, or where to recycle your old electronics, see [dnr.wi.gov/ecyclewisconsin](http://dnr.wi.gov/ecyclewisconsin)

# Milwaukee Wins National Recycling Challenge for 6th Straight Year

— Cecilia Gilbert, City of Milwaukee



For the sixth year in a row, the City of Milwaukee has won the U.S. Conference of Mayors' Cans for Cash – City Recycling Challenge sponsored by Novelis Inc., and Keep America Beautiful Inc.

Over 40 cities participated in this year's contest, with cities in four population categories taking home prizes. Over the course of October 2009, participating cities collected and recycled over 125 million aluminum cans. Milwaukee alone collected over 60 million cans weighing in at 882 tons. Lined up, these cans would stretch over 2,380 miles—from Milwaukee's City Hall to the shores of Vancouver, British Columbia. Recycled, they saved the energy equivalent of over 2,750,000 gallons of gasoline and conserved over 2,640 cubic yards of landfill space.

The Cash for Cans Challenge is an annual contest meant to raise awareness of the importance of recycling aluminum cans. Each year, Americans discard over 50 billion aluminum cans. Trashed cans waste valuable resources and money. Recycling cans saves energy, reduces greenhouse gas emissions and decreases the need for natural resources. Novelis, a sponsor of the event, hopes to use events like the cash for cans award to increase the U.S. recycling rate for aluminum cans from the current 54 percent to 75 percent by 2015.

# New Online Toolkit Offers Resources to Help RUs, Businesses Improve Away-from-Home Recycling Efforts

— Sarah Murray, DNR



The toolkit is divided into two sections – one designed for local governments and the other for business managers, special event organizers or school officials.

A new resource is available to help guide local government responsible unit (RU) recycling programs and Wisconsin businesses through the process of improving away-from-home recycling efforts. Many Wisconsin businesses have seen dramatic cost savings and environmental and social benefits from strong recycling programs, but taking the first step towards establishing or changing a recycling program can be a challenge during times of limited staff and budgets.

Wisconsin's recycling law requires everyone in the state to recycle things like cans, bottles and newspapers anytime, any place. This means recycling not just in your home, but at work, parks and sporting events. Businesses, schools and governments must have a way for both employees and customers to recycle.

Starting a recycling program from scratch, or making dramatic changes to an existing program, can be intimidating. A business may have a contract with a waste hauler that focuses on garbage, rather than recycling. That business may not have enough recycling bins, or adequate space for separating and storing bulky items like cardboard. Some business managers or employees may simply not be aware of state recycling requirements and opportunities. These and other challenges can all be overcome with planning, patience and willingness to work with others to find creative solutions.

The Wisconsin Business Recycling Toolkit aims to help governments and businesses overcome these challenges to develop successful recycling programs. The toolkit is divided into two sections. One section is designed for local governments, to guide them through the process of improving away-from-home recycling in their communities. The second section is designed for business managers, special events organizers or school officials looking to start or improve recycling programs. Both toolkit sections include links to examples, case studies and other resources.

Staff at Recycling Connections Corporation, the DNR and the UW-Extension Solid and Hazardous Waste Education Center (SHWEC) developed the toolkit with input from RUs. New resources will be added to the toolkit as they become available, and will be adapted to keep it useful and user friendly. We welcome suggestions and new examples from successful RU and business recycling initiatives. Send comments or resources to Cynthia Moore at [cynthia.moore@wisconsin.gov](mailto:cynthia.moore@wisconsin.gov).

Visit the toolkit at [www.shwec.uwm.edu/recyclingtoolkit/](http://www.shwec.uwm.edu/recyclingtoolkit/)

## WasteCapDIRECT

— Alexis Stoxen, WasteCap

WasteCapDIRECT, an online directory created through a partnership between the DNR and WasteCap Resource Solutions, is now live and recently updated at

[www.wastecapdirect.org](http://www.wastecapdirect.org)

WasteCapDIRECT is a centralized, online directory of construction and demolition recycling processors, haulers and end markets that are dedicated to helping Wisconsin reduce waste and increase recycling. The site allows recyclers to post information on the WasteCap directory so other companies can find places to bring their project material for recycling or disposal.

Businesses can either post for free with a basic listing that includes the company's name, address, phone number, website link and details page, or may post a more detailed profile for an additional fee.

The easy-to-use search bar on WasteCapDIRECT allows customers to search recyclers based on location, material or type of handler. Materials included on the site are: batteries, bricks, carpet pads, ceiling tiles, concrete, drywall, electrical ballast, glass, light bulbs, pallets, reusables, scrap metal, shingles and wood. The directory also includes a Google map, giving you the opportunity to see the exact location of where other companies are located in relation to you.

## From Circuit Board to Olympic Gold

— Kathleen Kiefaber, DNR

Medals adorning the necks of 2010 winter Olympic and Paralympic Games had previous lives as electronic components.

For the first time ever, this year's gold, silver and copper medals contained metal from end-of-life electronics. Teck Resources in Vancouver, British Columbia, processed 6.8 metric tons of electronic circuit boards to separate gold, silver and copper metals that were then combined with mined metals from other Teck sources. Gold medals contained 1.53 percent recycled material, silver contained .122 percent recycled material and copper contained 1.11 percent recycled material.

# The Waste-Climate Connection

— Brad Wolbert, DNR

Scientists have known for years that landfills produce methane and carbon dioxide. The gases are created as a by-product of decomposing organic materials like food, paper, wood and some textiles. With the recent interest in global warming, the direct role landfills play in emitting greenhouse gases to the atmosphere has become more apparent. Methane is at least 20 times more powerful than carbon dioxide in its warming power. Landfills are the second-largest manmade source of methane emissions in the U.S., and by themselves make up about two percent of U.S. greenhouse gas emissions.

But did you know that materials create greenhouse gas emissions long before they're thrown away? It's true: the products we buy every day are responsible for some **42 percent** of U.S. greenhouse gas emissions, according to a recent report by the EPA. How? The raw materials from which products are made have to be extracted from the earth, transported, manufactured into products and transported to stores. Each step in this chain of events uses energy and emits greenhouse gas emissions.

By reducing the need for new materials to be mined or logged, manufactured and transported, recycling reduces the emission of greenhouse gases and other pollutants significantly. Recycling a ton of paper saves nearly four tons of carbon dioxide that would otherwise have been pumped into the atmosphere. Reducing the amount of products we purchase, and reusing our products when possible also helps to reduce the amount of greenhouse gases produced.

## Estimated greenhouse gas emission reductions through recycling in Wisconsin

Category	Total Tons	Metric Tons CO2 Equivalent	Number of Passenger Vehicles Equivalent
Glass Containers	95,752	30,641	5,859
Corrugated Cardboard	247,818	869,841	166,318
Mixed Paper (no cardboard)	354,042	1,377,223	263,331
Steel Containers	15,098	27,629	5,283
Plastic Containers	34,164	52,271	9,994
Aluminum Containers	7,994	108,798	20,803
Yard Materials	525,802	10,516	2,011
<b>TOTAL</b>	<b>1,280,670</b>	<b>2,476,920</b>	<b>473,599</b>

The DNR recently developed several web pages that provide more information on the connection between waste, materials and climate change. You can explore the connection further at

<http://dnr.wi.gov/org/aw/wm/climatechg/>

In addition, the EPA's website has a number of tools you can use to determine the benefits that your recycling program can have on reducing greenhouse gas emissions.

<http://epa.gov/climatechange/wycd/waste/>

# Organics Initiatives

— Cynthia Moore, DNR



Several initiatives across the state are reducing solid waste by composting organic materials.

As communities and businesses continue to look for ways to reduce their environmental footprint, projects involving composting and other organic reuse are becoming more popular. Here are just a few of the organics initiatives going on across the state. Read on and get inspired.

■ **Wisconsin Wal-Mart superstores and Sam's Clubs** are part of a worldwide initiative to bring all Wal-Mart stores to zero waste by 2025, and to reduce solid waste by

25 percent over the next three years. To achieve these goals, Wal-Mart is approaching all sides of the reduce, reuse, recycle mantra. The company is working with the DNR to divert organic materials from Super Center and Sam's Club stores. Organics may be composted, although options for anaerobic digestion and alternative fuel sources derived from cooking oil are also being considered. Outside of their partnership with the DNR, Wal-Mart will also be donating usable food to food pantries, and will be developing programs to reduce the amount of food waste generated by stores. Wal-Mart hopes to have organics programs active in all Super Centers and Sam's Clubs by August 2010. For more information of the partnership between the DNR and Wal-Mart, contact Brad Wolbert at [brad.wolbert@wisconsin.gov](mailto:brad.wolbert@wisconsin.gov) or (608) 264-6286.

■ **The Oneida County Solid Waste Department** received approval to expand their vegetable and yard waste facility to incorporate vegetable waste from local

grocery stores and seed potatoes from local farmers. In the past, the county has collected food waste from local restaurants and grocery stores. For more information, contact Charlie Evenhouse, Oneida County Solid Waste Administrator at [csevenjouse@co.oneida.wi.us](mailto:csevenjouse@co.oneida.wi.us) or (715) 282-4945.

■ **Veolia Environmental Services** received an extension to a pilot food waste compost project located within the footprint of the Seven Mile Creek landfill in Eau Claire County. Food materials currently come from two grocery stores, a health care facility, a school and select residential areas. The extension added food waste from the University of Wisconsin-Stout food service. Materials accepted at the site are food scraps, associated paper products and compostable dinnerware. Weekly monitoring ensures compost conditions are ideal. For more information, contact Mark Vinnall at [mark.vinnall@veoliaes.com](mailto:mark.vinnall@veoliaes.com) or (715) 858-3105.

# Homegrown Plastics Revolution

— Kathleen Kiefaber, DNR

On an evening in 1979, as their husbands puttered in the back yard, Millie Zantow and her friend, Jenny Ehl asked a question that would change the course of recycling across the country.

Millie wondered whether plastics were recyclable. She called around, eventually talking to a dairy in Milwaukee that melted down its imperfect jugs to reform them—plastic recycling was possible. That year in North Freedom, Wis., Millie and Jenny began their own recycling business, EZ Recycling, collecting plastics from neighbors and local businesses.

Back then, it was impossible to tell what kind of plastic a container was made of. Jugs, bottles and other plastic products were not labeled with the kind of plastic they were composed of. Jenny had the idea of imprinting each container with a resin code—a number indicating what type of plastic that container was made of. She took her idea to the Environmental Protection Agency (EPA) and, after years of work, succeeded in her quest to label plastics.

Next time you see that little numbered triangle, thank a Wisconsin woman with an idea.

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## 20 Years of Recycling in Wisconsin

— Kathleen Kiefaber, DNR

Hard to believe that only 20 years ago, recycling was a new idea in state government. On Earth Day, 1990, Wisconsin became one of the first states to establish a comprehensive and mandatory program to “reduce, reuse and recycle” solid waste. Since then, Wisconsin’s recycling program has grown to include many more materials, and has prevented almost 28.5 million tons of reusable, recyclable and compostable materials from entering the landfill.

To celebrate the 20th anniversary of this landmark law, the DNR has developed a commemorative poster featuring the iconic “three arrows” on one side, and common recycling questions on the other. To order your copy, contact Elisabeth Olson at [elisabeth.olson@wisconsin.gov](mailto:elisabeth.olson@wisconsin.gov) or (608) 264-9258.

## Don't Get Stuck Holding the Bag!

— Brad Wolbert, DNR



Did you know that Wisconsin Statutes prohibit dropping off yard residues at a composting facility in a non-compostable bag? Bags containing yard residues can only be placed at a compost facility if they are “constructed of a material that decomposes within a reasonable time after exposure to weather elements and is labeled as being so constructed” (s. 287.08, Wis. Stats.). It makes sense, because no one wants shreds of dirty plastic in the compost they’re using on their flowerbeds or vegetable gardens.

One way of meeting this provision is for local governments and private haulers to require the use of paper bags or certain compostable plastic bags for picked up yard materials. Municipal ordinances, as well as contracts between municipalities and private haulers for collection of yard materials, should reflect the statutory prohibition on non-compostable bags at compost sites. Service providers that do not require yard materials to be set out for collection in compostable bags may have to debag the collected materials at the curbside or prior to deposition at the compost facility.

Plastic bags that are certified by an independent organization as meeting the ASTM D6400 or D6868 standards for compostable materials comply with the statute. Independent certifying organizations include either of the following:

■ **The Biodegradable Products Institute (BPI)** awards the use of the “Compostable Logo” to any products meeting ASTM D6400 or D6868, based on testing in approved independent laboratories. BPI has a list of approved compostable bags on its website: [www.bpiworld.org](http://www.bpiworld.org).

■ **DIN CERTCO** certifies compostable products made of biodegradable materials and licenses the use of the corresponding Mark developed by the Interest Group for Biodegradable Materials (IBAW). More information about DIN CERTCO is available at <http://www.dincertco.de/en/index.html>.

## Oshkosh Correctional Institution's Vermicomposting Program

— Kathleen Kiefaber, DNR

A team of wriggly workers—with help from inmates at the Oshkosh Correctional Institution (OSCI)—are saving over 130,000 pounds of waste annually from entering the landfill.



In 2000, OSCI began a vermicomposting program—composting using small worms to break down waste. The facility currently houses 332 large worm boxes, which are lined with cardboard bedding and fed a combination of food waste and coffee grounds collected from OSCI's kitchen. Inmates maintain the boxes, keeping the cardboard moist and feeding the worms once weekly. After four months, boxes are cleared out and worm castings are collected, dried and sold to local nurseries as organic compost and fertilizer.

To date, there have been 24 harvest cycles, harvesting a total of 5,144 worm boxes. In total, these worms have used 498,162 pounds of food waste, 183,225 pounds of cardboard and 52,125 pounds of coffee grounds, for a grand total of 379 tons of material that has been saved from the landfill. The facility has recently installed a rooftop rainwater capture system to collect and use rainwater for the vermicomposting program. So far, the water system is saving about 25,000 gallons of water per year.



Overall, the per capita amount of materials recycled and composted from residences in Wisconsin increased just under 3 percent from 2007 to 2008.

## Recycling by Wisconsin Residents Increases in 2008

— Sarah Murray and Cynthia Moore, DNR

The amount of materials banned from Wisconsin landfills that were recycled or composted by state residents increased in 2008, according to information compiled from local government recycling programs and materials recovery facilities (MRFs).

Each year, Wisconsin responsible units (RUs) are required to report their accomplishments of the past year to the DNR, including the amounts of recyclable materials collected from residences in their area. State rules do not require RUs to report on recycling by non-residential sector sources; the DNR relies on an annual report submitted by MRFs, along with secondary data sources when making estimates for statewide recycling from all sectors.

Recyclable materials banned from Wisconsin landfills are paper products, food and beverage containers, foam polystyrene packaging, yard waste, appliances, tires, oil, and lead acid batteries. RUs must report the amount of banned paper, containers, and foam collected from households. These materials are referred to as “mandatory reporting” items. (Foam is rarely collected by RUs and so is an insignificant portion of the total. The DNR has issued waivers allowing RUs to choose not to collect foam or plastic containers #3-7 because of poor markets for these materials.)

RUs may also report on collection of yard waste, as well as other banned and non-banned materials. Because reporting of non-mandatory collections is optional and the number of RUs that choose to include this information varies each year, the DNR

considers this category better for showing trends than serving as a reliable statewide collection total of these materials.

### Results for 2008 Compared With Previous Years

Collection of banned paper and container products increased 3 percent in 2008 compared to 2007. Reported collections of yard waste and other banned materials such as tires also increased in 2008 compared with the two previous years.

Overall, the per capita amount of materials recycled and composted from residences in 2008 increased just under 3 percent from 2007, and was roughly the same in 2008 as in 2006.

Tables showing collection amount since 1999 are available on the DNR website: <http://dnr.wi.gov/org/aw/wm/recycle/recycleldfrept/>.

MRFs serving as part of RU collection programs must also report tonnages to the DNR each year. In 2008, the format of the MRF report changed so that MRFs now report tonnages received from both residential and non-residential sources. They also break out the amounts of recyclables processed by material category (cardboard, glass, aluminum, etc.). The total shown below does not include materials collected from non-residential facilities and sent directly to MRFs that do not serve as part of an RU program, paper mill, salvage yard or other processing facilities not required to report to the DNR.

Since the format of MRF reporting changed dramatically this year, we cannot make comparisons to previous years for this data, but will be able to compare the amount processed by these facilities each year going forward.

### Recyclables Processed by Materials Recovery Facilities in Wisconsin, 2008

The amounts below include material from both residential and non-residential sources.

Material	Total Tons Processed by MRF
Glass containers	95,200
Aluminum containers	6,469
Steel/Bi-metal (tin) containers	14,373
Plastic containers #1-7	34,024
Corrugated cardboard	245,575
All other paper	348,363
Foam polystyrene packaging	87
<b>Total tons</b>	<b>744,091</b>

### Collection of Recyclable Materials by Responsible Units, 2006 to 2008 (in tons)

Recyclable Materials	2006	2007	2008	% change from 2006 to 2008	% change from 2006 to 2008
Residential paper, containers & foam	419,116	411,047	423,973	1.16%	3.14%
Appliances, tires, oil, lead acid batteries	13,558	14,001	16,344	20.48%	16.67%
Yard waste	267,338	241,149	275,802	3.17%	14.37%
Non-banned recyclables (scrap metal, textiles, electronics, etc.)	18,538	23,521	19,467	5.01%	-17.04%
<b>Total, All Recyclables</b>	<b>718,550</b>	<b>689,718</b>	<b>735,586</b>	<b>2.37%</b>	<b>6.65%</b>
WI Population	5,617,744	5,668,543	5,696,578	1.40%	0.49%
<b>Pounds per person, paper &amp; containers</b>	<b>149.2</b>	<b>145.0</b>	<b>148.9</b>	<b>-0.24%</b>	<b>2.64%</b>

# Up Close and Personal with Waste Materials

— Brad Wolbert, DNR

**How can you determine whether your recycling program is effective? Are residents throwing away recyclables? Are they trying to recycle things that can't be recycled under local program rules? What opportunities are there for improving your recycling rate and reducing the amount of material that has to be landfilled? These are questions that many Wisconsin municipalities, as well as the Department of Natural Resources, would like to answer.**



## Fitchburg Waste Sort

Last summer, the City of Fitchburg opted for a simple and direct way to answer these questions: they had their waste hauler set aside trash and recycling bins from 40 randomly selected households and, using volunteers, sorted the materials into different types of waste and recyclables. (See the article in the Winter, 2010 *Recycling News* for more information).

Fitchburg's project is called a "capture rate study" because it examined the contents of both the waste and the recycling bins from selected households. Under this type of study it is easy to calculate recycling rates for various materials. For example, if you know how much newspaper the households threw away, and you also know how much of that newspaper was thrown into the garbage cans versus the recycling bins, you can easily calculate those households' recycling rate for newspaper. The more households included in the study, the more likely your findings fairly represent the community as a whole. The information is great, but you have to get your hands dirty! (Wear gloves!)

From the study results, Fitchburg officials concluded that their residents are doing a pretty good job of recycling—not surprising from a city that touts itself as "Wisconsin's Recycling Leader." But they found that there are still opportunities to improve their recycling rate. For example:

■ **Capture rates for cardboard, office paper and aluminum and plastic beverage containers were well below 100 percent** (100 percent capture would mean all these recyclables were being placed in the recycling bin instead of the trash bin). Fitchburg is improving its outreach to residents to try to improve its capture rate for recyclables.

■ **About 42 percent (by weight) of the collected refuse consisted of food waste and contaminated mixed paper.** The city has begun investigating options for diverting food and other organic materials like non-recyclable paper (paper towels, pizza boxes, etc.) away from landfills and into composting or anaerobic digestion. Diverting food scraps and non-recyclable paper would reduce landfill emissions of methane, a potent greenhouse gas, and may provide fuel for biogas production, replacing fossil fuels.

■ **Seven percent of the sampled refuse and 2 percent of the recyclables (by weight; a greater proportion by volume) were plastic bags and film plastics.** This material is also recyclable, although the current Fitchburg program does not accept it. The city's report recommended either adding plastic bags to the collection program, or informing residents of other recycling options to increase recovery of this material.

Fitchburg sponsored a similar study in 1999. By conducting periodic waste composition studies, the City of Fitchburg has established

a low cost, quantitative basis for evaluating its recycling performance, identifying opportunities and measuring improvements.

**See Fitchburg's complete report at:**  
[http://www.city.fitchburg.wi.us/refuse\\_recycling/documents/2009WasteSortResults.pdf](http://www.city.fitchburg.wi.us/refuse_recycling/documents/2009WasteSortResults.pdf).

## Statewide Waste Sort

Just as individual communities may want to know how effective their recycling programs are, the DNR is also interested in evaluating the success of the state's recycling program. Sorting and measuring waste on a statewide level is a considerable undertaking. The most recent landfill study of this nature dates back to 2002, and does not take into account recent developments such as the advent of single-stream curbside collection and the growing emphasis on away-from-home recycling.

Last year, a DNR contractor completed fieldwork for a large-scale waste composition study to determine what specific wastes are being sent to the state's landfills by Wisconsin residents. The contractor hand-sorted hundreds of samples at 14 different landfills statewide over two seasons to ensure that the data gathered were statistically sound and reliable.

The data for the statewide waste composition study is not yet available. Look for more information in the next edition of *Recycling News*. In the meantime, watch our website at <http://dnr.wi.gov/org/aw/wm/>.

# Education Corner

— Elisabeth Olson, DNR

## DNR Recycling Poster Now Available

To celebrate the 20th anniversary of Wisconsin's recycling law, the DNR recycling program has created a new poster. Featuring the iconic "three arrows" on one side and commonly asked questions on the other, the poster is a great resource for schools, businesses, communities and individuals. You can view the poster online, at: <http://dnr.wi.gov/wnmag/2010/02/recyclingposter.pdf>.



To order free posters, contact Elisabeth Olson at [elisabeth.olson@wisconsin.gov](mailto:elisabeth.olson@wisconsin.gov) or (608) 264-9258.



## E-Cycle Wisconsin Outreach Materials Now Available

A new brochure promoting the E-Cycle Wisconsin program is now available in print and on the Web. Also available in print and electronic form is an 8.5 x 11" poster showing which electronics can be recycled under the program on one side and which electronics will be banned from landfills on the other. The new publications, along with other e-cycling outreach examples, are available in the new outreach section of the E-Cycle Wisconsin web pages, [www.dnr.wi.gov/ecyclewisconsin](http://www.dnr.wi.gov/ecyclewisconsin).

To order free print copies of the brochure or poster, or to share e-cycling outreach and education materials (posters, brochures, articles, etc.), contact Elisabeth Olson at [elisabeth.olson@wisconsin.gov](mailto:elisabeth.olson@wisconsin.gov) or (608) 264-9258.



Educational professionals attended a GHS workshop to develop a plan for making their school green and healthy.

## Green & Healthy Schools Pilot Workshop a Success

In February 2010, over 50 school staff, teachers and administrators from across the state gathered at the Lussier Family Heritage Center in Madison to learn about the Green & Healthy Schools Program (GHS). The workshop provided an in-depth introduction to the program; connected various resources, such as businesses, nature centers, non-profit organizations and local governments with the schools; and helped individual schools develop a plan for making their school green and healthy. The workshop focused on five of the GHS program topics: Waste and Recycling; Energy; Water; School Facilities and Grounds; and Healthy Lifestyles. Substitute teacher costs were covered through a grant from the Wisconsin Environmental Education Board.

For more information about the GHS program or to stay informed on upcoming workshops, visit [www.dnr.wi.gov/greenandhealthyschools](http://www.dnr.wi.gov/greenandhealthyschools).

# WHAT'S NEW ON THE WEB



Thanks to so many of you who signed up for Recycling Updates online (if you haven't yet, you can subscribe here: <http://dnr.wi.gov/org/aw/wm/recycle/recycleupdates.htm>). I hope you are finding the new page useful and timely. If you have any suggestions on items you would like to see in Recycling Updates, please be in touch. You may send suggestions to Kathleen Kiefaber at [kathleen.kiefaber@wisconsin.gov](mailto:kathleen.kiefaber@wisconsin.gov) or (608) 267-2463.

Recycling Education and Outreach:

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

*An updated page providing resources for citizens, formal and non-formal educators, and outreach specialists to help teach and implement waste reduction and recycling in your home, school, organization or community.*

Recycling Updates:

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

*Get new information on recycling opportunities, resources and updates involving outreach, education, grants, policy news and more.*

Climate Change Web Pages:

DNR site:

■ <http://dnr.wi.gov/climatechange/>

Waste and Materials Management site:

■ <http://dnr.wi.gov/org/aw/wm/climatechg/>

*Ever wondered how much your daily life impacts the health of the planet? Are you curious how much energy is really saved by recycling? Not quite sure what people mean when they say 'climate change?' Answers to these questions and more are available on the DNR's new website on climate change and the Waste and Materials Management Program's new webpage on climate change.*

(continued)



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