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☛ Wisconsin's Waste and Materials Management Program 2009 Annual Report

(FORM UPDATED: 08/11/2010)

WISCONSIN STATE LEGISLATURE ... PUBLIC HEARING - COMMITTEE RECORDS

2009-10

(session year)

Senate

(Assembly, Senate or Joint)

Committee on Environment...

COMMITTEE NOTICES ...

- Committee Reports ... **CR**
- Executive Sessions ... **ES**
- Public Hearings ... **PH**

INFORMATION COLLECTED BY COMMITTEE FOR AND AGAINST PROPOSAL

- Appointments ... **Appt** (w/Record of Comm. Proceedings)
- Clearinghouse Rules ... **CRule** (w/Record of Comm. Proceedings)
- Hearing Records ... bills and resolutions (w/Record of Comm. Proceedings)
 - (**ab** = Assembly Bill) (**ar** = Assembly Resolution) (**ajr** = Assembly Joint Resolution)
 - (**sb** = Senate Bill) (**sr** = Senate Resolution) (**sjr** = Senate Joint Resolution)
- Miscellaneous ... **Misc**

* Contents organized for archiving by: Stefanie Rose (LRB) (September 2013)



*Wisconsin's
Waste and Materials
Management
Program*

2009 Annual Report

From the Bureau Director

The Waste and Materials Management (WMM) Program, along with the rest of Wisconsin, has faced many challenges over the past two years due to tight budgets, fewer staff and the other effects of the economic downturn. But the tough times have also helped us to see new opportunities.

We are in this together—we cannot sustainably manage waste and materials without you. 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 each make decisions regarding waste and materials—what to buy, how much to consume, and where to dispose, reuse, or recycle the materials and 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). We continue to move toward zero waste.

The program's short-term goals (2010) include: engage stakeholders and develop a coal combustion byproduct strategy, implement 2009 Act 50—the e-cycling legislation, develop improved compost rules, encourage elimination of open burning on road improvement projects, and adjust staffing to meet commitments.

Our mid-term goals (next two years) include: develop an information and outreach strategy focused on business and industry, consider revisions to the beneficial reuse code (NR 538), implement improved compost rules, develop an information technology strategy, create performance measures for waste and climate change, and advance the program's sustainability strategy.

Finally, our ongoing and long-term goals focus on: matching grant funding to environmental needs, exploring improvements to construction and demolition landfills, conducting life-cycle analysis of waste materials, considering strategic code revisions to improve efficiency for both the DNR and our customers, implementing appropriate environmental legislation, seizing knowledge transfer opportunities and developing staff leadership at all levels, learning from other states and stakeholders, working with businesses and industry to promote sustainable materials management, and continually improving the program's sustainability within our environment.

Please join the campaign for a more sustainable world. What can you do to help? Waste less, reuse and recycle more, and learn more about waste and materials issues and solutions at: <http://dnr.wi.gov/org/aw/wm/>.

Forward,

Ann Coakley

Ann Coakley, Director
Bureau of Waste and Materials Management



*We are in this together—
we cannot sustainably
manage waste and
materials without you.*



Wisconsin Department of Natural Resources Waste and Materials Management Program

Written and edited by Sarah Murray and Colleen Storck, with contributions from many other Waste and Materials Management Program staff.

Design by Nan Rudd, Rudd Design.

Photo credits

Cover photo courtesy city of Milwaukee (spring 2009 electronics collection)

Cover inset photos (top to bottom): DNR photo by Michael Zillmer (investigating potential VOC contamination); DNR photo by Sarah Murray (recycled glass tiles); DNR photo by Ann Bekta (monitoring statewide waste sort); DNR photo by Cynthia Moore (staff at Fitchburg waste sort); DNR photo (helping at medical waste collection)

Photo at left: DNR photo (workers at City Wide Recycling sort construction and demolition debris)

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Program Impacts

OUR PROGRAM OVERSEES FACILITIES AND ACTIVITIES TO ENSURE THEY ARE MANAGED IN A WAY THAT MINIMIZES NEGATIVE PUBLIC HEALTH, ENVIRONMENTAL AND ECONOMIC IMPACTS. WE CONTINUALLY EVALUATE POLICIES, REGULATIONS AND ACTIVITIES SO THEY ARE RELEVANT, CONSISTENT, AND DO NOT CAUSE UNDUE REGULATORY OR ECONOMIC BURDEN. WE FOSTER SUSTAINABILITY AND MINIMIZE IMPACTS TO THE ENVIRONMENT, INCLUDING THOSE THAT CONTRIBUTE TO GLOBAL CLIMATE CHANGE, THROUGH WASTE MATERIAL REDUCTION, REUSE AND RECYCLING.

Some examples of this from 2009 include:



PHOTO COURTESY SEN. MARK MILLER

Our staff's work toward passage of 2009 Act 50, establishing a statewide program to collect and recycle electronics. Based on a product stewardship approach, the law requires manufacturers to take financial responsibility for recycling a certain amount of computers, TVs, printers and other devices each year. It also establishes requirements for recyclers and collectors to ensure environmentally sound recycling and bans certain electronics from Wisconsin landfills and incinerators after Sept. 1, 2010. The new E-Cycle Wisconsin program is expected to provide more convenient recycling locations, conserve valuable resources, prevent pollution from improper disposal of electronics and encourage an expansion of the state's recycling industry. It is being used as a model for similar bills in other states and for other product stewardship legislation in Wisconsin.



PHOTO COURTESY WASTECAP, INC.

DNR and the Department of Administration's Division of State Facilities received the Wisconsin Builder Innovative Achievement Award for a partnership with WasteCap Resource Solutions that diverted more than 40,000 tons of construction and demolition (C&D) materials to recycling and reuse from state building projects. The effort, funded through a DNR contract and overseen by WMM staff, reduced greenhouse gas emissions by the equivalent of removing 1,600 cars from the road for one year. The overwhelming success of this project led to a commitment to recycle on all state building projects over \$5 million beginning Jan. 1, 2010. It is already increasing C&D recycling around the state and nation as construction contractors apply what they have learned to other projects and WasteCap shares its expertise and newly developed tracking software with other governments and construction firms.



DNR PHOTO BY ADAM HOGAN

We increased our focus on diverting food waste from landfills to composting or biogas production, a recommendation of two recent governor's task forces because of the opportunities for greenhouse gas reductions and other environmental and economic benefits. We began rewriting our composting rules to facilitate responsible food scrap composting and improve compost marketability. We worked with state Department of Transportation staff and the Associated Recyclers of Wisconsin to increase use of compost on transportation projects, which should increase demand for quality compost and the food scraps and yard debris required to produce it. In addition, staff have worked with businesses, institutions, composters and others whose growing interest in sustainability has created demand for new opportunities to compost food materials on a large scale.

STEVE ASHENBRUCKER



**Employee
of the Year
for 2008**

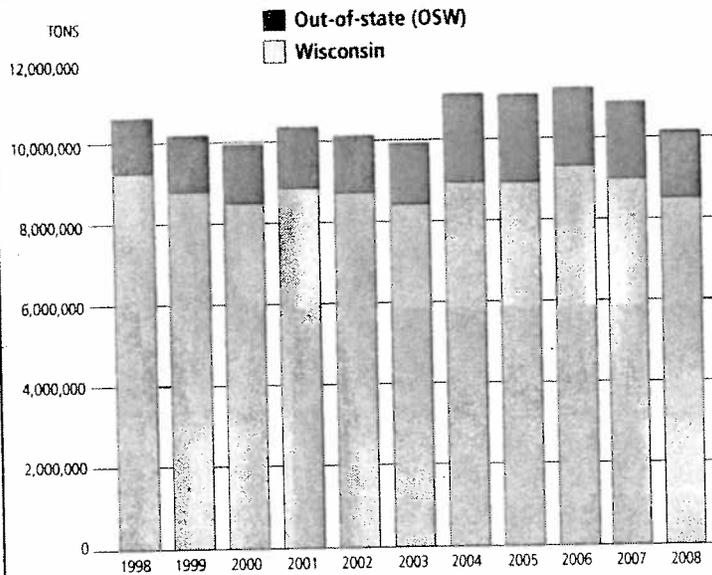
Steve Ashenbrucker, a waste management specialist based at the DNR Northern Region Park Falls Office, was honored with the Waste and Materials Management Program's Employee of the Year award for 2008. Ashenbrucker earned this award for his outstanding work and the valuable assets he provides to the program in terms of knowledge, experience and judgment. He is admired and respected for the quality and value of his work, as well as for quietly, voluntarily doing more than he is asked to do. He has been with the program since 1990.

Ashenbrucker worked on numerous high profile and sometimes controversial projects during the year, including a large demolition project, closure work at a bankrupt landfill and several enforcement cases. He is dedicated, dependable and helpful. He has a high regard for others. Ashenbrucker is humble and wise, serving without expecting recognition.

By the Numbers

WISCONSIN HAS A WELL-DEVELOPED INFRASTRUCTURE FOR MANAGING WASTE DISPOSAL AND MATERIAL RECYCLING. HERE ARE SOME FACTS AND FIGURES ABOUT THE INFRASTRUCTURE THAT THE WASTE AND MATERIALS MANAGEMENT PROGRAM REGULATES.

FIGURE 1: Origin of solid waste in Wisconsin landfills



Source: DNR Annual Tonnage Capacity Reports

FIGURE 1: The overall amount of waste landfilled in Wisconsin has increased over the past decade, though the amount of waste generated and landfilled in-state is about the same as it was 10 years ago. The amount of waste coming from other states—primarily municipal solid waste—has tripled during that time period and represented close to one-fifth of all waste landfilled in Wisconsin in 2008 (the last year for which complete numbers are available).

FIGURE 2: There are currently 70 operating, licensed landfills in Wisconsin. This is down from 1,158 in 1980, when there were many small landfills and dumps operated by municipalities. There were 861 landfills in 1989 and 85 in 1999. The number of landfills has declined sharply over the years after the state and federal governments began adopting new standards in the 1970s. The new rules required the use of thick, clay liners; leachate collection systems; gas collection and treatment systems; and other design and engineering practices that reduce impacts on groundwater and air quality.

Solid waste

See Figure 1 for trends in the amount of in-state and out-of-state waste landfilled in Wisconsin over the last decade. See Figure 2 to view where municipal and industrial landfills are located in Wisconsin.

10.2 million tons of solid waste (municipal and industrial) were disposed of in Wisconsin landfills in 2008, down 5.8 percent from the amount in 2007.

70 operating licensed landfills, including 35 municipal solid waste (MSW) landfills and 35 industrial waste landfills

29 approved construction and demolition (C&D) waste sites

103 transfer stations

46 solid waste processing facilities

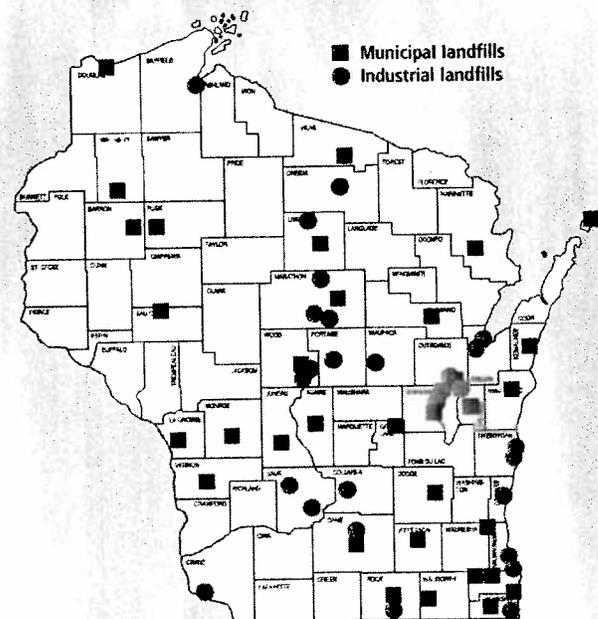
3 solid waste incinerators

3 solid waste compost facilities

600 closed landfills monitored regularly to detect potential groundwater and environmental contamination

343 compliance inspections at solid waste disposal and processing facilities and 190 recycling program audits and inspections at compost or materials recovery facilities conducted by program staff

FIGURE 2: Location of licensed landfills in Wisconsin, 2009



Source: Wisconsin Department of Natural Resources

By the Numbers

Hazardous waste

See Figure 3 to see trends in the number of hazardous waste generators.

157,000 tons of hazardous wastes generated by large and small quantity generators, 60,188 tons of which were recycled or reused.

11,000-plus Wisconsin businesses, schools and government institutions generate hazardous waste each year

460 large quantity generators of hazardous waste

1,335 small quantity generators

9,511 very small quantity generators

15 licensed hazardous waste management facilities

7 closed hazardous waste disposal facilities monitored/inspected regularly

192 inspections at hazardous waste, universal waste and used oil generators conducted by program staff. Staff also responded to 46 citizen complaints alleging improper hazardous waste management and related items

Recycling

1,060 local government responsible units (RUs) with recycling programs

424,000 tons of paper and containers were recycled by residential recycling programs in 2008, an increase of 3.1 percent from the 411,000 tons recycled in 2007.

213 residential composting programs collected 276,000 tons of yard materials, up 15 percent from 2007; we estimate residents composted another 250,000 tons at home

An estimated 2.6 million pounds (1,300 tons) of electronics scrap collected through 111 residential recycling programs

83 materials recovery facilities (MRFs) serving local government recycling programs

214 yard waste compost facilities

20 facilities composting food scraps, up from 14 in 2008, and at least 10 additional projects in development

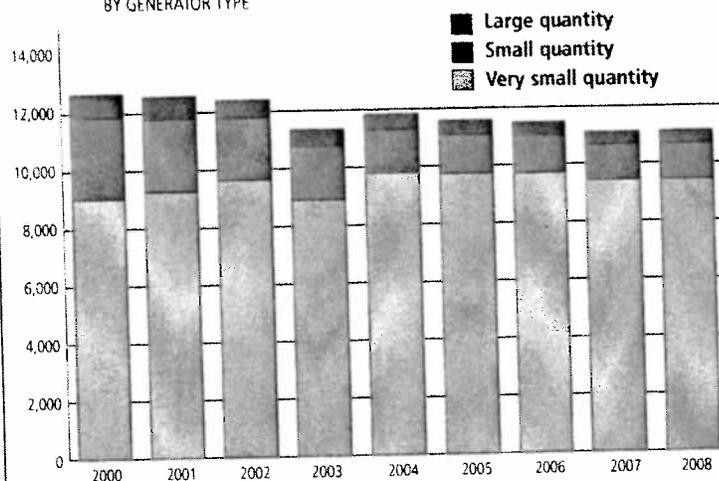
15 facilities licensed to recycle tear-off asphalt shingles, up from 11 in 2008 and 5 in 2007. These facilities received more than 83,400 tons of shingles in 2009

Nonmetallic mining

35,000 acres of hard rock quarries and sand and gravel pits mined at 2,500 nonmetallic mine sites throughout the state

6 program review audits of 91 county and local regulatory authorities conducted by WMM staff; 1,260 acres of land certified as reclaimed by these audits through 2007

FIGURE 3: Number of hazardous waste generators in Wisconsin BY GENERATOR TYPE



Source: Waste and Materials Management Program

FIGURE 3: The overall downward trend in the number of large and small generators may be explained in part by recent regulations that make more wastes conditionally exempt from hazardous waste regulation if properly recycled. Not all hazardous wastes pose the same degree of hazard when recycled, and new technologies are allowing more wastes to be recycled safely. As businesses seek ways to reduce or recycle hazardous waste, this trend of decreasing generator size is likely to continue.

FIGURE 4: Estimated greenhouse gas emission reductions through recycling in Wisconsin

Category	Total Tons	Metric Tons CO2 Equivalent	Number of Passenger Vehicles
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
TOTAL	1,280,670	2,476,920	473,599

Source: Waste and Materials Management Program

FIGURE 4: The recycling efforts of Wisconsin households and businesses reduced greenhouse gas emissions by the equivalent of removing more than 470,000 passenger vehicles from the road in 2008. This estimate is calculated by multiplying tons of recycled/composted materials by emissions factors from the U.S. Environmental Protection Agency's WARM model to obtain metric tons of carbon dioxide equivalents (MTCO2E), then using a conversion factor for the number of passenger vehicles. The tons are based on the amounts of materials processed by MRFs and reported on RU annual reports. These numbers likely do not include a significant portion of the materials recycled by businesses, institutions and industry.

Program Structure and Budget

THROUGH A CENTRAL BUREAU, FIVE REGIONAL HEADQUARTERS AND SEVERAL SERVICE CENTERS, WMM STAFF WORK WITH STAKEHOLDERS STATEWIDE. OUR PROGRAM'S WORK COVERS ACTIVITIES FROM INSPECTIONS AND COMPLIANCE ASSISTANCE TO COMMUNICATIONS AND OUTREACH. OUR STAFF TIME FOCUSES ON EFFORTS TO PREVENT GROUNDWATER CONTAMINATION AND OTHER POLLUTION (THROUGH PLAN REVIEW, INSPECTIONS AND COMPLIANCE ASSISTANCE) AND TO PROVIDE THE PUBLIC, PARTNERS AND REGULATED FACILITIES WITH INFORMATION, TOOLS AND GUIDELINES TO REDUCE WASTE AND PREVENT ENVIRONMENTAL CONTAMINATION.

Figure 5 shows the percentage of total staff time devoted to each function across the program during fiscal year 2008-2009.

We carry out these activities in four main program areas.

The **Solid Waste Management** program ensures proper management of solid waste through regulation of municipal, industrial, and construction and demolition waste landfills. Staff license facilities; oversee closure of poorly located or operated facilities; and make sure new facilities are properly located, designed, constructed, operated and maintained. The program also encourages beneficial use of industrial byproducts to preserve resources, conserve energy and reduce the need for additional landfills.

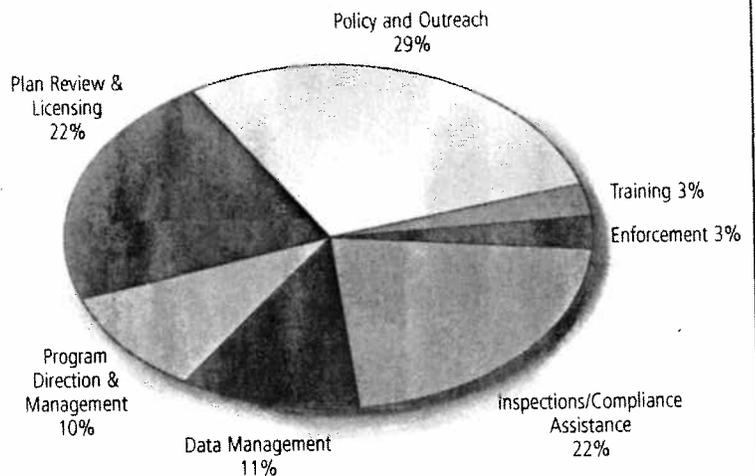
The **Hazardous Waste Management** program oversees the generation, transportation, storage, treatment and disposal of Wisconsin's hazardous waste. Staff work with generators and facilities to ensure proper management of hazardous waste and to prevent threats to human health and the environment.

The **Recycling** program promotes and regulates recycling through review of municipal recycling programs and regulation of recycling and compost sites. Staff seek innovative approaches to minimize waste generation and increase recycling. Focus areas include promoting reuse of construction and demolition debris, diversion of organic wastes, and diversion of products containing toxic materials from landfills.

The **Mining** program regulates the environmental aspects of metallic and nonmetallic mining, including working to return closed mines to productive, healthy land. Nonmetallic mines throughout Wisconsin yield products as varied as sand, stone for monuments, agricultural lime, gravel and dolomite used in road building. Currently, there are no metallic mining sites operating in the state, but staff monitor reclamation and remediation activity at three closed mines.

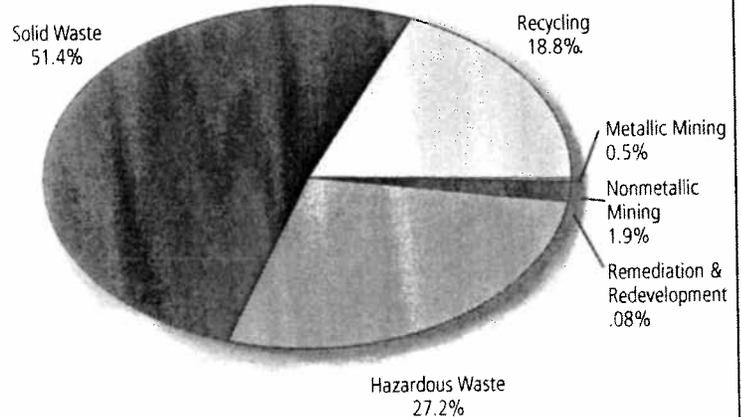
The WMM Program spent \$6.8 million in fiscal year 2008-2009. This supports the activities of about 72 staff, including engineers, hydrogeologists, waste management specialists, information technology specialists, program assistants and managers. As Figure 6 shows, just over half our expenditures go toward solid waste activities and a little less than 30 percent go to hazardous waste activities. The rest goes toward recycling (19 percent), metallic and nonmetallic mining (3 percent), and remediation and redevelopment (less than 1 percent).

FIGURE 5: Time spent on program activities



Source: Waste and Materials Management Program

FIGURE 6: Expenditures by program area



Source: Waste and Materials Management Program

Legislative and Rules Update

2009 legislation

The waste and materials management-related legislation that passed in 2009.

Bill Title	Act Number	Basic Description of Legislative Act	Effective Date
Relating to products containing mercury and granting rule-making authority	44	Prohibits sale of mercury-containing products with certain exceptions.	10/1/2010
Relating to the sale, disposal, collection and recycling of electronic devices	50	Creates new recycling program for electronics from households and schools and prohibits disposal of certain electronic devices in Wisconsin landfills and incinerators as of September 1, 2010.	1/1/2010
Relating to the disposal of used automotive engine oil filters and oil absorbent materials	86	Bans disposal of used oil filters in Wisconsin landfills. Bans landfilling of absorbents of one gallon or more from non-routine spills.	1/1/2011

2010 legislation activity

The following waste and materials management-related bills that may see legislative action in 2010.

Bill Title	Bill Number	Basic Description of Legislative Act
Disposal of solid waste from a property where it is generated	AB 372	Prohibits the burying of household waste on your property.
Safe burning	AB 114/SB 119	Prohibits open burning of solid waste, illegal storage or disposal of waste tires. In Assembly Rules Committee.
Wheel weights	AB544/SB364	Prohibits installation, sale and distribution of wheel weights or other wheel balancing products that contain lead.

2010 proposed state regulations affecting waste and materials management

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

Rule Revision	Purpose
NR 502 and 518 changes to add compost use standards and modify compost facility standards	Provide numerical quality standards for compost derived from source-separated yard materials, food scraps and non-recyclable paper, making it easier to market good-quality compost.
NR 504 and NR 812 changes related to granting exemptions and variances from the required 1,200-foot setback of private wells from landfills	Ensure consistency in the decision-making process regarding private well exemptions and variances near landfills between the Waste and Drinking Water programs.
NR 600 series updates for hazardous waste management	Update state regulations based on rules adopted by the U.S. Environmental Protection Agency (EPA) since 2002. To retain EPA authorization for the hazardous waste program, we are required to make these updates.
NR 600 hazardous waste generator fee changes	Create emergency and permanent rules to implement statutory changes to hazardous waste generator fees.

Accomplishments and Significant Events

Green and Healthy Schools Program gains momentum with workshop and grant program

The Wisconsin Green and Healthy Schools (GHS) Program continued to grow in 2009, offering students, teachers and school administrators a chance to get recognized for their green accomplishments and challenge themselves to make their school a healthy, safe and environmentally-friendly learning environment. Among the 2009 highlights was a new grant program allowing participating schools to receive up to 50 recycling bins to support their efforts. Staff also received a Wisconsin Environmental Education Board grant to conduct a pilot workshop to provide school staff, teachers and administrators with face-to-face training on how to incorporate GHS into their schools. More than 100 people attended the workshop.

The voluntary, three-step GHS Program is available to all Wisconsin elementary, middle and high schools. After completing all three steps, a school is recognized as an official Green & Healthy School by the DNR and Department of Public Instruction. By participating in the program, students learn about the environmental, health and safety challenges facing our state, and are given skills to address these challenges throughout their lives.

Since its inception in 2004, more than 100 schools have participated in the program and found ways to save energy and increase recycling, composting and other waste reduction efforts. One participating school district reported it was able to avoid layoffs in 2009 because of the energy savings achieved through their GHS initiatives.



Students recycle at Waukesha's Meadowbrook Elementary, the first Green and Healthy Schools "Reaching Higher" certified school.

PHOTO COURTESY SALLY MICHALKO

Waste materials contribute to Wisconsin's energy independence

As the state seeks to increase its use of renewable energy, there is new attention on the untapped resource of waste materials. For several years, our program has focused on landfill gas emissions, primarily methane from decomposition of paper, cardboard and other organic materials.

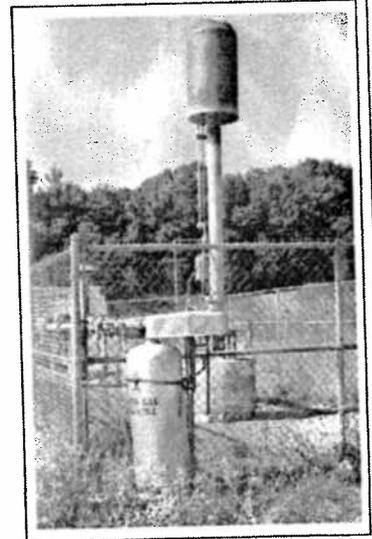
Estimates show Wisconsin's municipal solid waste (MSW) landfills have made significant improvements in landfill gas collection. For

instance, we estimate decomposition gas generation increased by 25 percent between 2004 and 2008, and gas collection increased by 29 percent over the same period.

By capturing more potential emissions, MSW landfills in the state are not only preventing the release of greenhouse gases but also generating energy. A large majority of the facilities convert landfill gas to electricity or, in few instances, provide it to other end users for use in boilers or industrial processes. If the methane content of all 19.1 billion cubic feet of landfill gas captured in 2008 were converted to energy use, this would represent about 7.24 trillion BTUs of energy value.

Accumulated sediment rule goes into effect

WMM staff conducted two public hearings in February on a new rule covering management of accumulated sediment from storm water management structures (ch. NR 528). After staff addressed public comments, the Natural Resources Board adopted the revised rule in June and it went into effect Dec. 1, 2009. The rule will help owners of storm water ponds manage the removal and use of sediment from those ponds. It uses an innovative, self-implementing approach that requires no fee and avoids delays that can result from the typical review process. This approach, relying on completion of a self-certification form, streamlines the process of managing storm water sediment while protecting human and environmental health.



Landfill gas collection system at the Portage County Landfill, including the flare for combusting the gas (tall object in foreground).

DNR PHOTO BY BOB GREFE

Accomplishments and Significant Events

Food composting pilot at Eau Claire-area landfill thrives

In early 2009 West Central Region (WCR) staff worked with Veolia ES Seven Mile Creek Landfill staff to develop and approve a one-year food residuals composting pilot project. Veolia wanted to expand its existing yard residuals compost program to accept food residuals, but both the DNR and Veolia had questions that could not be answered without actually operating with the new material. These included whether food residuals could be effectively and efficiently collected, whether compostable dinnerware would break down at rates similar to the other materials, what the best ratio of yard to food residuals would be, and whether the venture would be viable for Veolia long-term. The pilot has been successful enough that it has been expanded for one more year, and an increasing number of institutions and businesses are participating. Without the pilot approach it is unlikely food residuals diversion and composting would be growing at this pace in the Eau Claire area. The success at Seven Mile Creek Landfill has also spurred Veolia to consider similar efforts at other properties in the future.



Workers load railroad ties for hauling to the power plant at Cassville for burning as biofuel.

DNR PHOTO BY GREG MATTHEWS

Biofuel solution ends longstanding enforcement case

Innovative thinking and collaboration among DNR WMM, Air Management and Law Enforcement staff transformed a solid waste disposal problem and enforcement case into a biofuel recycling project.

The longstanding problem began in 2000 when about 15,000 railroad ties were removed from an abandoned railroad corridor in Green County. For almost nine years, the ties sat piled in an abandoned quarry, while DNR and state Department of Justice (DOJ) staff worked with the quarry landowner and responsible parties to find a way to fund their removal for appropriate disposal. Meanwhile, in October 2008, WMM staff from South Central Region learned that Detroit Edison's Stoneman Power Plant in

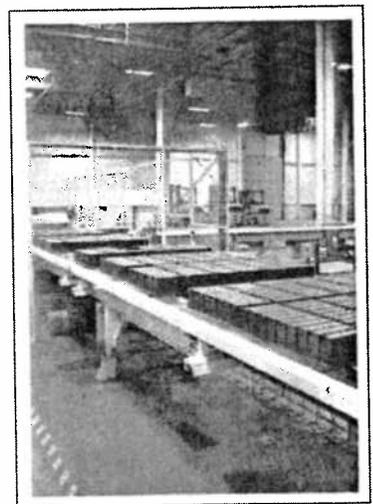
Cassville, Wis., which was being converted to a biofuel facility burning primarily waste wood, was looking for old railroad ties. After DNR Air Management staff determined the ties were acceptable for burning at the Stoneman plant, DNR and DOJ staff approached the quarry landowners and responsible parties with the idea. Detroit Edison agreed to pay half the removal and hauling costs, and the defendants in the enforcement case paid the rest. The arrangement removed an environmental hazard while providing a valuable fuel source to help meet the state's renewable energy goals.

Reuse of power plant byproducts reduces environmental impacts, creates jobs

WMM staff in Southeast Region (SER) facilitated new projects to reuse byproducts from two WE Energies coal-fired power plants in southeast Wisconsin.

New pollution controls at the Pleasant Prairie plant, which remove sulfur compounds from air emissions, produced a relatively pure gypsum byproduct. After extensive testing and review, SER staff approved use of this gypsum as a soil amendment on farm fields. WE Energies now markets the byproduct under the brand name Gypsoil. Replacing a mined product with a local source reduced costs and pollution from long-distance hauling as well as the environmental impacts of gypsum mining. It also reduced farmers' costs and allowed WE Energies to avoid the cost of landfilling the material.

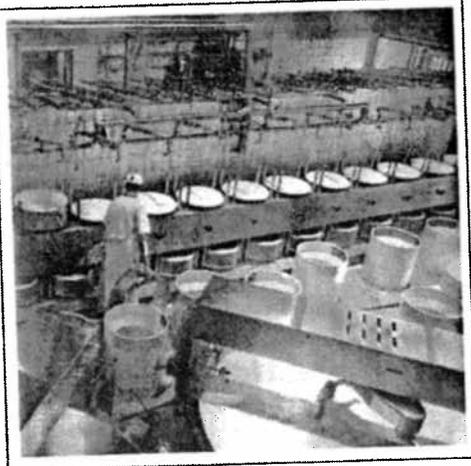
Another byproduct, fly ash from the Oak Creek power plant, will be used to make bricks for construction and landscaping at a new plant in Racine County operated by California-based CalStar. CalStar's green manufacturing process reduces energy use and carbon dioxide emissions by 80 percent compared to traditional brick-making methods while meeting ASTM quality standards. The facility is expected to use between 40,000 and 100,000 tons of fly ash to produce 40 million bricks annually. It will create 10-15 jobs initially and could add another 20-25 as production expands in 2010. WMM staff helped CalStar understand the regulatory requirements for the operations and suggested additional waste reuse opportunities that CalStar is exploring at its California testing laboratory.



RIGHT: Bricks made with fly ash move down the line at the new CalStar plant in Racine.

PHOTO COURTESY CALSTAR PRODUCTS, INC.

Accomplishments and Significant Events



Salt brine left over from the cheese-making process is now being used to improve winter driving conditions.

PHOTO FROM BIGSTOCKPHOTO.COM



Reuse of salt brine creates safer winter roads

A pilot project to use waste salt brine from cheese-making as a pre-wetting agent for salt and sand on Polk County roads proved successful last winter, and in fall 2009 WMM staff laid the groundwork for expanding this promising reuse of a material traditionally considered waste.

During the winter of 2008-2009, WMM staff in Northern Region (NOR) approved a pilot project between F & A Dairy Products, Inc., in Dresser and the Polk County Highway Department. The study allowed the Highway Department to use the brine as a pre-wetting agent to determine if the material had any added value in improving winter road conditions. In April, the Highway Department reported it had been able to use 30 to 40 percent less salt and sand on the county's roadways (compared to normal application rates) and the salt brine provided a quicker reaction time for clearing roads to safer winter driving conditions.

In November, NOR staff issued a solid waste low hazard exemption to F & A Dairy Products for long term use of waste salt brine. F & A is now allowed, following specific conditions, to distribute the brine to municipalities for use as an additive to salt and sand for maintaining safer winter road conditions.



New agreement with EPA allows better allocation of staff resources

As a part of the 2009-2011 Environmental Performance Partnership Agreement (EnPPA) with the U.S. Environmental Protection Agency, the WMM Program negotiated a one-year inspection "alternatives" pilot with EPA. This pilot will allow flexibility in conducting hazardous waste compliance evaluation inspections, which will help focus limited staff resources on the types of facilities that have the greatest potential for harm to human health and the environment.

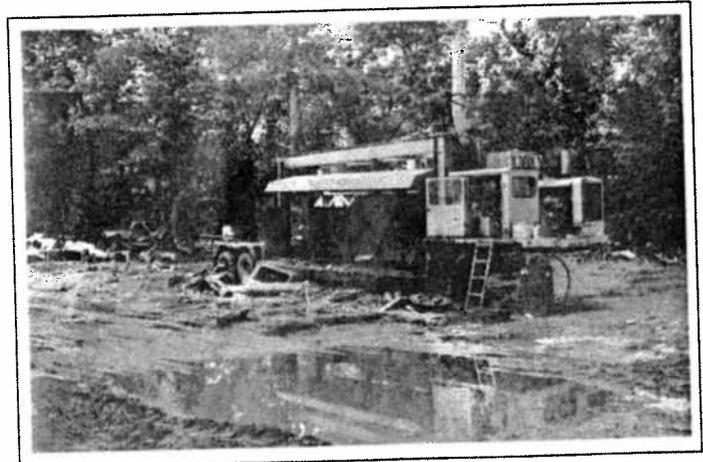


Two long-running enforcement cases end in West Central Region

In December, after nearly six years of investigation, Daniel D. Marini was found guilty of a series of environmental violations committed in La Crosse and Jackson counties. His violations included open burning of five mobile homes, illegally transporting and storing approximately 90 non-labeled drums of hazardous waste and hazardous substances, and allowing automobile fluids to run onto the ground without reporting hazardous spills. The court ordered Marini to pay \$132,343 and prohibited his involvement in a scrap recycling or vehicle salvaging for 10 years.

In July, Randall J. Cornford and his corporation, River Junction Mobile Homes Services, were found guilty of numerous environmental violations in Crawford and Grant counties and ordered to pay \$65,000. Cornford burned several mobile homes and miscellaneous debris while trespassing on a rural property. A sample of the debris pile documented the presence of asbestos-containing material. In addition, Cornford was found guilty of illegally filling a wetland with solid waste for use as a mobile home storage area without any permits.

These cases required intra-departmental cooperation among several programs including WMM, Air Management, Water and Law Enforcement, along with extensive assistance from the counties involved.



A December 2009 settlement ended a long-running enforcement case against Daniel D. Marini of Complete Salvage Service for illegal open burning, waste burial and other violations.

DNR PHOTO BY SCOTT SZYMANSKI

What's Next in 2010 and Beyond

Challenges in coal combustion byproduct management



DNR PHOTO

Over the past 20 years, Wisconsin has developed a tradition of beneficially using coal combustion byproducts (CCB), such as ash, that electrical power production plants generate. These materials have been used as a substitute geo-technical fill material for highway and building projects as well as in the manufacturing of wall board and cement.

Two recent events have affected CCB generation and management, posing a challenge to these methods of beneficial use. First, the U.S. EPA-mandated use of new technologies to reduce sulfur dioxide (SO₂) and nitrogen oxide (NO_x) emissions from power plants has resulted in changes to CCB characteristics such that some material may no longer be suitable for these uses. Second, the catastrophic failure in December 2008 of a dam at a Tennessee Val-

ley Authority power plant, which released 1.1 billion gallons of liquid coal ash slurry into two rivers and onto adjoining property, has drawn new attention to CCB management. Since that incident, EPA has accelerated development of new rules for managing CCB and plans to release a draft regulatory approach in April 2010. These rules could eliminate use of CCB as a geo-technical fill material.

The challenge over the next few years, as EPA proposes and finalizes these rules, will be to determine how they apply to CCB and how utility companies will be able to beneficially use CCB. The utilities, their trade association and their consultants will need to research potential beneficial use approaches and work with DNR staff to initiate demonstration projects.

Results from 2009 waste composition study



DNR PHOTO

During summer and fall 2009, contractors working for the WMM Program completed fieldwork for a statewide waste composition study. The study, also known as a "waste sort," will provide statistically valid estimates of the types of materials in waste sent to Wisconsin landfills. Waste sort data provides an objective measure of the effectiveness of state and local diversion efforts, reveals the prevalence of problem materials in landfills, and indicates the

overall level of compliance with Wisconsin's landfill bans. The last statewide waste sort in Wisconsin was in 2001, and there have been many changes to local recycling programs since that time, as single-stream collection has grown rapidly and interest has increased in diverting food and other organic materials from landfills. The results of the study are eagerly anticipated and are expected to be available in April.

Legislature considers climate change bill



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The Clean Energy Jobs Act (SB 450/AB 649), introduced in early 2010, does not include specific recycling or waste diversion provisions. However, the WMM Program's ongoing activities in scrap food and wood diversion, electronics recycling and increasing overall recycling rates for paper and other materials support the objectives of the bill and the recommendations of the Governor's Global Warming Task Force. To reinforce the importance of mate-

rials management in limiting climate change, our program has new Web pages explaining the climate-waste connection, with links to the DNR's new climate change Web pages and the U.S. EPA's online resources on climate change, including calculators that indicate how much greenhouse gas reduction the state or local communities can achieve through waste reduction, reuse, recycling and composting.

New emphasis on product stewardship

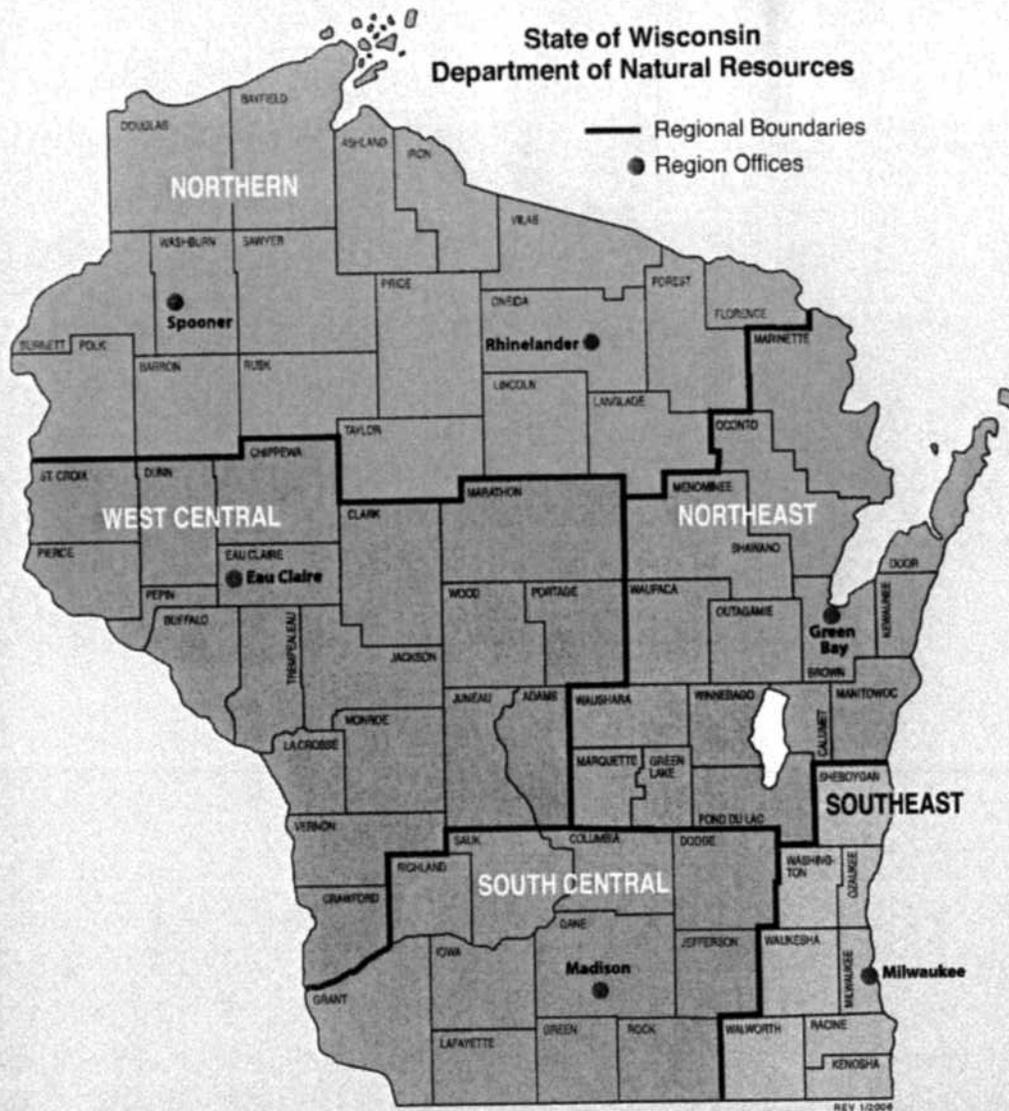


DNR PHOTO

The new E-Cycle Wisconsin program demonstrates the increasing interest in product stewardship approaches to managing waste materials. Product stewardship (also known as "extended producer responsibility" or EPR) is the idea that manufacturers should assume a greater role in managing their products at the end of a product's life. Such an approach can help relieve state and local governments (and taxpayers) of the burden of dealing with mountains of consumer goods that have reached the end of their useful lives and prompt manufacturers to consider recycling and reuse in product design. In

addition to the new electronics recycling laws in many states, EPR approaches in the U.S. cover rechargeable batteries, beverage containers, carpet and other items. Wisconsin is working with the U.S. EPA and several other states on an initiative exploring EPR approaches for managing consumer product packaging. Systems for funding and facilitating recovery of packaging exist in Ontario and Quebec as well as several European countries, and may serve as a model for pilot projects in one or more U.S. states.

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