

Wisconsin's
Waste and Materials
Management
Program



2008 Annual Report

Program Mission and Structure

THROUGH A CENTRAL BUREAU, FIVE REGIONAL HEADQUARTERS AND SEVERAL SERVICE CENTERS, WASTE AND MATERIALS MANAGEMENT STAFF WORK WITH STAKEHOLDERS STATEWIDE. WE PROVIDE TECHNICAL ASSISTANCE, EDUCATIONAL OUTREACH, PLAN REVIEW, SITE INSPECTION, REGULATORY GUIDANCE AND ENFORCEMENT ACTION 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; close 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 hazardous waste throughout Wisconsin. 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, recycling facilities 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, horticultural peat, 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.



DNR PHOTO BY TOM PORTE

Within these primary focus areas, we commit to streamlining regulations, inviting public involvement in policy development, providing public information and encouraging businesses to go beyond compliance in protecting the environment. We strive to reduce illegal open burning, minimize landfill gas and groundwater impacts, ensure owner financial responsibility for solid and hazardous waste facilities, and restore sand and gravel pits to valued natural resources.



Wisconsin Department of Natural Resources Waste and Materials Management Program

Written and edited by Sarah Murray and Kate Cooper. Thanks to Waste and Materials Management Program staff for their many contributions to this report.

Design by Nan Rudd, Rudd Design.

Photo credits

Cover (clockwise from upper left): photo by Richard Wolkowski (researchers survey vegetation at a reclaimed gravel pit); DNR photo by Sarah Murray (Dumpsters for recycling at construction site); photo courtesy Friends of the Lower Wisconsin Riverway (surveying debris on the Wisconsin River); photo by Kimberly Kujoth, City of Milwaukee Environmental Services (Milwaukee electronics recycling collection).

Left: At a collection event, workers prepare electronics for recycling. Photo by Kimberly Kujoth, City of Milwaukee Environmental Services.

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Program Impacts

OUR PROGRAM DOES NOT DIRECTLY COLLECT OR PROCESS WASTE MATERIALS. RATHER, WE WORK TO PROTECT HUMAN HEALTH AND THE ENVIRONMENT THROUGH STATEWIDE REGULATION, CONSISTENT ENFORCEMENT OF RULES, EDUCATION, AND COLLABORATION WITH STAKEHOLDERS TO FIND SOLUTIONS TO WASTE AND MATERIALS MANAGEMENT PROBLEMS AND ADDRESS NEW CHALLENGES AND OPPORTUNITIES. OUR STAFF MEMBERS ARE IMPORTANT RESOURCES FOR BUSINESSES, LOCAL GOVERNMENTS AND OTHERS DEALING WITH DAY-TO-DAY WASTE AND MATERIALS MANAGEMENT DECISIONS.

Some examples of this from 2008 include:



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The hard work of our staff to find beneficial uses for industrial byproducts (including coal ash, foundry sand and paper mill sludge) continued to pay off, putting these materials to productive use and avoiding disasters such as the December coal ash spill in Tennessee. Wisconsin moved to dry ash handling systems from coal ash holding ponds, like the one that burst in Tennessee, two decades ago, and our program has worked with power plants to find new uses for the ash in cement and as construction fill. In 2006, state power plants found new uses for 86 percent of the ash they generated, and the rest was safely handled and disposed of in DNR-licensed landfills designed to receive the material.

Hazardous waste program staff led a new effort to educate the health care industry on proper hazardous waste management. The DNR is partnering with the U.S. Environmental Protection Agency (EPA) to ensure that hospitals and clinics properly separate and dispose of solid and hazardous wastes, including chemotherapy waste, infectious waste and other materials unique to the health care setting. Staff developed fact sheets and self-assessment tools (available at <http://dnr.wi.gov/org/aw/wm/healthcare/>) that facilities can use to evaluate compliance with hazardous waste requirements, as well as identify problems and waste reduction opportunities. After this initial outreach effort, the EPA is planning to conduct hazardous waste inspections at select Wisconsin health care facilities.

In December, Northern Region staff approved a pilot project to use waste salt brine from a dairy as a prewetting agent for sand and salt applied to improve winter road conditions. The Polk County Highway Department will test the use of the brine, which is expected to speed up the activation of salt on roads during snow plowing operations. If the pilot project is successful, the waste brine—generated in cheese-making operations—could be more widely used in the future to improve winter driving conditions while reducing the amount of salt applied to roadways.

TERRY HEGEMAN



DNR PHOTO

**Employee
of the Year
for 2007**

The Waste and Materials Management Program recognized Terry Hegeman, a waste management hydrogeologist based at the Northeast Region's Green Bay office, as our 2007 Employee of the Year. Hegeman earned the award for his outstanding work and the valuable knowledge, experience and judgment he brings to the DNR. He has been with the program since 1988 and is widely known inside and outside the agency for quality work products.

Though the nature of his work frequently places him in controversial positions with the regulated community, Hegeman always remains calm, articulates the DNR's position, and bases his comments and questions on sound science and technical merits. He serves as a model for unwavering professionalism.

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.

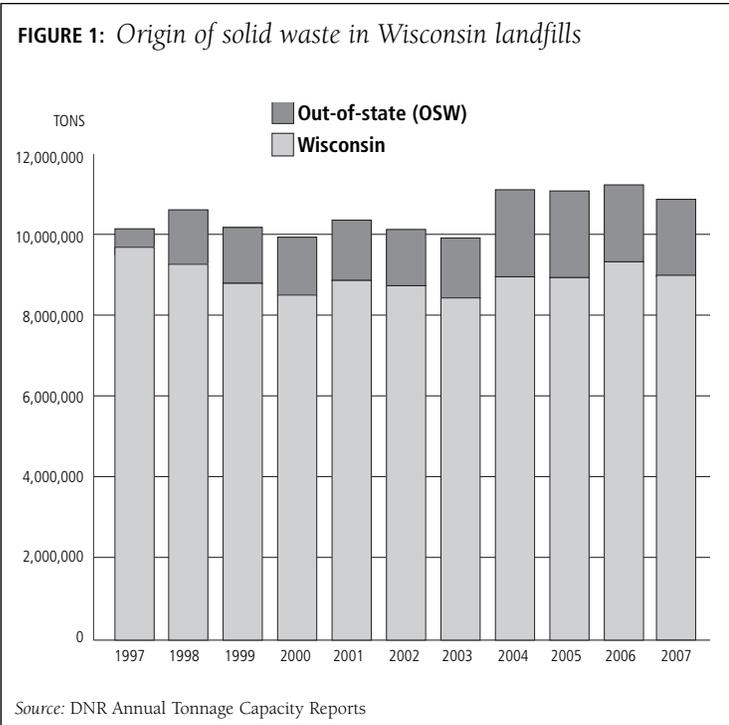


FIGURE 1: The overall amount of waste landfilled in Wisconsin has increased over the past decade, though the amount of waste generated and landfilled in-state is slightly less than it was 10 years ago. The amount of waste coming from other states—primarily municipal solid waste—has tripled during that time period and represented close to one-fifth of all waste landfilled in Wisconsin in 2007 (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 to groundwater and air quality.

Solid waste

See Figure 1 at the left to see trends in the amount of in-state and out-of-state waste landfilled in Wisconsin over the last decade.

See the map below to see where municipal and industrial landfills are located in Wisconsin.

10.8 million tons of solid waste (municipal and industrial) were disposed of in Wisconsin landfills in 2007, down 3.2 percent from the amount in 2006.

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

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

91 transfer stations

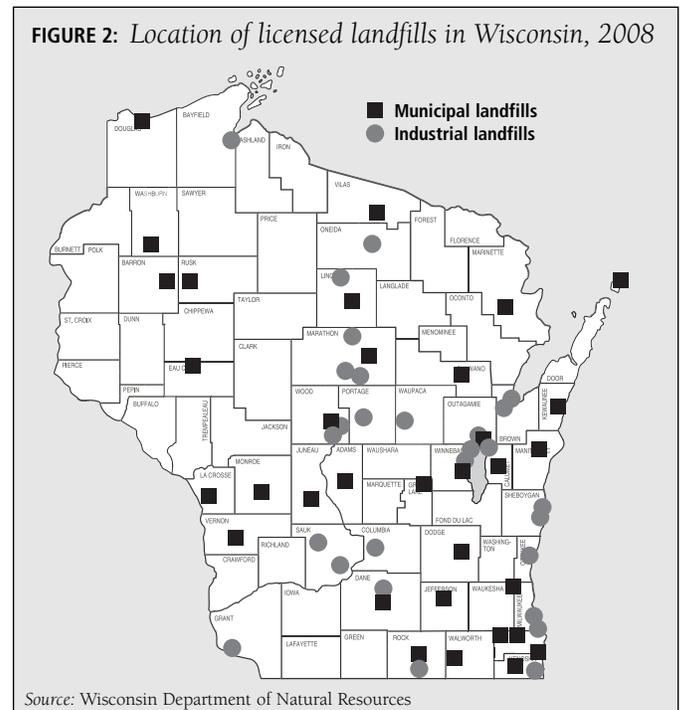
46 solid waste processing facilities

2 waste-to-energy incinerators

2 solid waste compost facilities

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

324 compliance inspections at solid waste disposal and processing facilities and 168 recycling program audits and inspections at compost or materials recovery facilities conducted by program staff



By the Numbers

Hazardous waste

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

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

449 large quantity generators of hazardous waste

1,250 small quantity generators

9,438 very small quantity generators

15 licensed hazardous waste management facilities

5 closed hazardous waste disposal facilities monitored/inspected regularly

Recycling

See Figure 4 at the right to see how recycling is reducing greenhouse gas emissions in Wisconsin.

1,061 local government responsible units (RUs) with recycling programs

411,047 tons of paper and containers were recycled by residential recycling programs in 2007. This was a 0.9 percent decrease from the 414,635 tons of these materials collected in 2006. 241,000 tons of yard materials were also collected for composting. In addition, we estimate that businesses and institutions recycled at least 628,000 tons in 2007.

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

215 licensed yard waste compost facilities

14 facilities composting food scraps

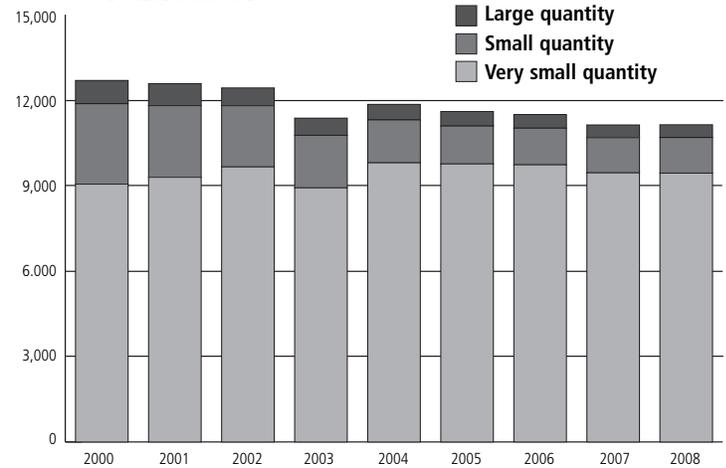
11 facilities licensed to recycle tear-off asphalt shingles, up from 5 in 2007

Nonmetallic mining

2,500 regulated nonmetallic mining sites (sand and gravel pits)

7 program review audits of 91 county and local regulatory authorities conducted

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



Source: Waste and Materials Management Program

FIGURE 3: The 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	113,516	36,325	6,683
Paper	856,183	3,330,552	609,991
Steel Containers	27,550	50,417	9,234
Plastic Containers	32,884	50,313	9,215
Aluminum Containers	8,981	122,231	22,387
TOTAL	1,039,114	3,589,837	657,480

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 650,000 passenger vehicles from the road in 2007. This estimate is calculated by multiplying tons of recyclable 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 recycled tons are based on the actual amounts reported for residential recycling and the estimated amounts recycled by businesses.

Program Budget and Staffing

THE WASTE AND MATERIALS MANAGEMENT PROGRAM SPENT \$6.9 MILLION IN FISCAL YEAR 2007–2008. THIS SUPPORTS THE ACTIVITIES OF 75 STAFF, INCLUDING ENGINEERS, HYDROGEOLOGISTS, WASTE MANAGEMENT SPECIALISTS, INFORMATION TECHNOLOGY SPECIALISTS, PROGRAM ASSISTANTS AND MANAGERS.

As Figure 5 shows, just over half of our expenditures go toward solid waste activities and just under one-third go toward hazardous waste activities. The rest of our expenditures go toward recycling (16 percent), metallic and nonmetallic mining (3 percent) and remediation and redevelopment (1 percent).

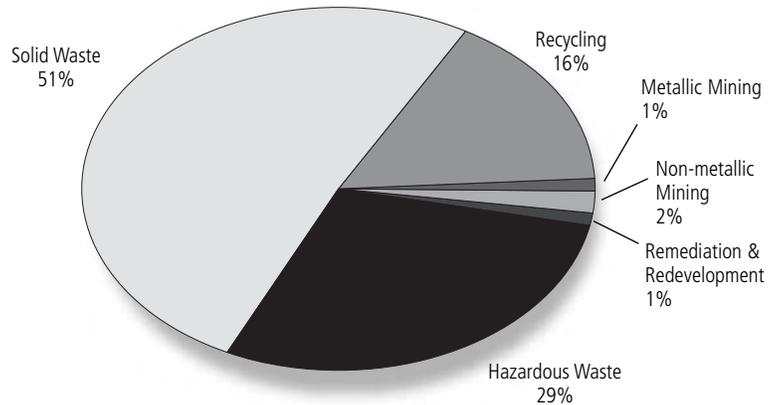
These figures do not include financial assistance the state provides to local governments for recycling or the Waste Reduction and Recycling Demonstration Grants. DNR's Community Financial Assistance Program administers these funds.

Our program's work covers a range of activities, from inspections and compliance assistance to communications and outreach. Our staff time focuses on activities 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 6 shows the percentage of total staff time devoted to each function across the program during fiscal year 2007–2008.

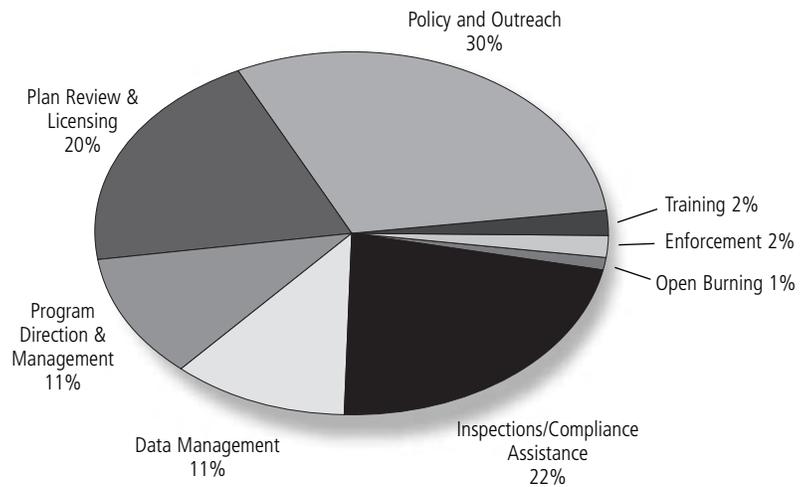
Our program work covers a range of activities, from inspections and compliance assistance to communications and outreach.

FIGURE 5: Expenditures by program area



Source: Waste and Materials Management Program

FIGURE 6: Time spent on program activities



Source: Waste and Materials Management Program

Accomplishments and Significant Events

✓ Construction recycling at state buildings yields significant returns

A partnership between the nonprofit WasteCap Wisconsin and the Department of Administration's Division of State Facilities, funded by a DNR contract, is diverting thousands of tons of wood, concrete and other materials from landfills. Recycling the materials is reducing costs, reducing greenhouse gas emissions and providing valuable raw materials for a variety of uses. Based on the results of a pilot program, recycling and results tracking will now be a requirement on all state building projects. Through 2008, recycling on five projects around the state diverted more than 14,000 tons of materials from landfills, with an average recycling rate of 81 percent (see Figure 7).

FIGURE 7: Initial results from pilot recycling programs

Project	Tons recycled	Tons landfilled	Recycling rate
UW-Whitewater (demolition phase)	13,693	332	98%
UW-Whitewater (construction phase)	517	224	70%
UW-Parkside	51	26	66%
UW-Stevens Point	231	24	91%
Total	14,492	606	96%

Source: WasteCap Wisconsin



A sign marks the progress on recycling at a UW-Whitewater construction site.

PHOTO COURTESY WASTECAP WISCONSIN.

✓ Reusing materials saves money in Marquette Interchange project

Several successful projects have shown foundry and slag and utility bottom and fly ash can be beneficially used in construction projects. The benefits are both economic (reduced cost of construction materials and avoided disposal costs) and environmental (less mining of virgin material or manufacturing of construction material).

In 2008, workers successfully completed Milwaukee's Marquette Interchange ahead of schedule and under budget—thanks in part to the beneficial use of waste materials. The

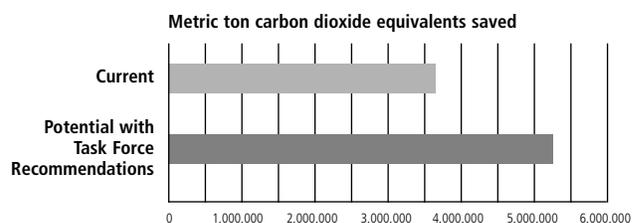
project used 95,000 tons of foundry sand for fill material and 21,000 tons of fly ash (generated by coal-burning power plants) in concrete and grout work from 2005 through 2007, resulting in significant savings for generators and the environment. Southeast Region staff assisted in the planning and use of the material, working with the Wisconsin Department of Transportation, local foundries and construction contractors.

✓ Global Warming Task Force recommendations include waste management policies

Five policies related to waste management were among the 63 recommendations the Governor's Task Force on Global Warming included in its final report, released in July. The task force set ambitious goals for reducing the state's greenhouse gas emissions, culminating in a 75 percent reduction from 2005 levels by 2050. Waste and Materials Management staff worked closely with a task force working group to prepare and refine the policies.

Though waste management activities contribute just 3 percent of Wisconsin's greenhouse gas emissions, they are a substantial source of potential emissions reductions that can be achieved using current technology. By diverting paper, food waste, untreated wood, electronics and other materials from landfills—above and beyond current recycling efforts—Wisconsin could eliminate thousands of tons of carbon dioxide emissions each year. (See the reductions current recycling efforts are achieving in the *By the Numbers* section of this report.)

FIGURE 8: Current and potential greenhouse gas savings



Source: Waste and Materials Management Program



Untreated wood waste from construction is one of the materials targeted for increased recycling by the Global Warming Task Force's policy recommendations.

DNR PHOTO BY SARAH MURRAY.

Accomplishments and Significant Events



Landfill plan modification and closure of Renard Island site means reduced risk, new public benefit

In June 2008, Northeast Region staff approved a closure plan for the Renard Island Confined Disposal Facility. Renard Island is a man-made structure located in Green Bay, used by the U.S. Army Corps. of Engineers during the 1980s and 1990s for disposal of contaminated sediment dredged from lower Fox River and Green Bay navigational channel. The closure plan provides for the beneficial use of 466,000 cubic yards of sediment and saves space in Brown County's active sediment disposal facility; reduces infiltration by precipitation; prevents erosion; isolates contaminated sediment from direct contact by wildlife and the public; and returns the property to public use for recreational purposes.

Staff also approved a modification to the Veolia ES Hickory Meadows Landfill (VHML) plan of operation, which will allow the landfill to accept sediment from the Fox River Superfund Remediation Project. After dredging and dewatering on-site, the contaminated sediments will be trucked to the landfill for safe disposal. Over approximately 10 years, the landfill may accept up to 3.5 million cubic yards of sediment contaminated with less than 50 parts per million (ppm) polychlorinated biphenyls (PCBs) and heavy metals. Disposal of the sediments at VHML removes PCBs from the environment and allows for restoration of the lower Fox River fisheries.



Audits show consistency among reclamation programs

In 2008, nonmetallic mining program staff continued their work with local officials and other stakeholders to ensure proper management, regulation and reclamation of Wisconsin's 2,500 nonmetallic mining sites.

In the fall, staff presented a report to the Natural Resources Board on the mine reclamation fees charged by local government regulatory authorities (RAs), which regulate nonmetallic mine



Paper mill sludge and foundry sand were among the materials used during the reclamation of a nonmetallic mining site near Kiel.

PHOTO BY RICHARD WOLKOWSKI

sites. The Fee Report, prepared every five years, examines statewide consistency and accountability among RAs' reclamation programs. For the report, staff conduct audits and obtain financial data for RA programs.

The report concluded that RAs are generally operating their reclamation programs consistently and charging mine operators reasonable fees. DNR staff will continue to monitor programs where fees did not match closely with expenses, and work with the Nonmetallic Mining Advisory Committee (NMAC) to ensure that RAs properly administer their nonmetallic mining reclamation programs.



Significant gains in asphalt shingle recycling

Wisconsin's tear-off asphalt roofing shingles represent a 350,000-tons-per-year opportunity to turn waste into resources. Our capacity to recycle asphalt shingles into new asphalt products continued to grow during 2008, a year that saw record high prices for virgin asphalt (near \$400/ton) which created strong incentives to reduce costs by using ground shingles.

The state had five approved processing facilities at the end of 2007 and added six approved facilities by the end of 2008. We estimate 51,000 tons of shingles were received by these facilities and 23,000 tons were processed during 2008, raising overall diversion to 18 percent.

Roofing contractors play a crucial role in successful shingle recycling, by sorting materials during their jobs, following best management practices to exclude most recyclable material from the loads of shingles. Growing interest among contractors and a new specification for use of recycled shingles in road construction, issued by the state Department of Transportation, point toward another strong year in 2009.



Increased recycling of tear-off shingles from homes is saving energy and valuable resources.

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Accomplishments and Significant Events



More progress on pharmaceutical waste

Our program continues to engage with other state agencies, local authorities and private-sector stakeholders to find solutions for managing pharmaceutical waste. In addition to providing regulatory and technical support to organizers of pharmaceutical collection events, program staff are working with others to explore longer-term solutions. In 2008, in cooperation with the UW-Extension Solid and Hazardous Waste Education Center (SHWEC) and Capital Returns, a pharmaceutical reverse distributor, staff helped establish a six-month, pilot pharmaceutical mail-back program in two Wisconsin counties. In addition, interest from the law enforcement community continues to grow, and DNR staff have assisted several county sheriff's offices and local police departments that are (or are interested in) collecting unused pharmaceuticals at their offices. Program staff also continue to advocate for product stewardship by pharmaceutical manufacturers, distributors and/or others involved in the product life cycle, and to work with other stakeholders to overcome barriers to such an approach.



Brown County staff, pharmacy representatives and law enforcement personnel sort through unwanted pharmaceuticals from a public collection event.

PHOTO COURTESY BROWN COUNTY



Continued progress on landfill organic stability plans

During 2008, program plan review staff continued to approve plans developed by landfill operators under the Landfill Organic Stability Rule. The rule's purpose is to reduce the long-term risk of uncontrolled decomposition of organic materials in landfills. The plans describe steps operators will take to either reduce landfilling of biodegradable materials—such as food and paper—through composting or other methods, or to speed up decomposition of organic materials. To date, staff have approved plans for eight of the 35 municipal solid waste (MSW) landfills in Wisconsin, and we continue to work toward our goal of having all MSW landfills implement organic stability plans by 2012.



DNR staff members Ted Amman and Kelly Forman survey a debris pile on the lower Wisconsin River.

PHOTO COURTESY FRIENDS OF THE LOWER WISCONSIN RIVERWAY.



Cooperative effort leads to successful river cleanup

The record rains in Wisconsin during June led to record flooding in southern Wisconsin—and massive piles of debris. Nowhere was this more evident than along the lower Wisconsin River, where floodwaters deposited hundreds of tons of debris from Lake Delton after a breach sent several homes downstream.

Working with the Federal Emergency Management Agency (FEMA), other state agencies, community representatives and businesses, Waste and Materials Management Program staff in the South Central Region contributed to a massive cleanup effort, including finding alternatives for recycling and disposing of the largest debris from the river and its banks. Eileen Pierce, the Air and Waste regional leader, led a diverse, multi-program project team that coordinated funding, hired vendors and developed strategies for difficult waste removal process.

The collaborative effort removed approximately 120 tons of debris from a 20-mile stretch of the lower Wisconsin at a cost of \$92,000—lower than originally expected.



Accumulated sediment rule moves forward

Throughout 2008, a technical advisory committee met to advise program staff on crafting language for managing sediment from stormwater management ponds—the ponds used to collect stormwater runoff in subdivisions and other developments. The periodic removal of accumulated sediment is important to ensure proper maintenance and function of the ponds. Until now, the regulatory approach has been uncertain, often time-consuming and costly. The new rules are intended to improve this situation by using a regulatory approach based on self-regulation, relying on flexible requirements designed to match the inherent risk to the appropriate level of regulation. Program staff will hold two public hearings in early 2009, with the goal of completing the rules by the end of the year.

What's Next in 2009 and Beyond

2009 may bring new electronics recycling opportunities



PHOTO BY KIMBERLY KUJOTH, CITY OF MILWAUKEE ENVIRONMENTAL SERVICES

Interest and concerns about proper disposal of discarded electronics continued to grow in 2008. A series of media stories highlighted the problems associated with shipping old computers and TVs overseas or dumping them domestically—including the potential release of toxic materials such as lead and mercury. Yet many households still struggled to find convenient, responsible recycling options—a problem made more urgent by the upcoming switchover to all-digital television. DNR staff fielded many calls from residents asking for help in recycling old televisions and other household electronics.

In 2009, state Sen. Mark Miller will reintroduce legislation that would require electronics makers to take responsibility for recycling their products. If passed, the law will ban items such as computers, TVs and computer monitors from Wisconsin landfills, and require manufacturers to collect and recycle a certain amount of electronics from state households each year, based on their Wisconsin sales of televisions, computer monitors and desktop printers. Similar laws in other states have greatly expanded the electronics recycling options for both rural and urban households.

Waste materials will play a role in Wisconsin's energy future



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As the state seeks to increase its use of renewable energy there is new attention to the untapped resource of waste materials currently being landfilled.

Our program has focused on landfill gas emissions—primarily methane from decomposition of food and other organic materials—for several years. Estimates show that municipal solid waste landfills in Wisconsin have made significant improvement in landfill gas collection, with a 39 percent decrease in the estimated release of fugitive landfill gas between 2004 and 2007, though estimated fugitive emissions increased by 5 percent from 2006 to 2007. By capturing more emissions, many state landfills are not only preventing the release of greenhouse gases, but also generating energy. In the year ending in June 2007, for example, Wisconsin landfills collected 19.6 billion cubic feet of gas, representing 7.4 trillion BTUs of energy value after the gas is filtered to remove impurities.

Other emerging roles for waste materials in generating energy include:

- The state has 30 or more on-farm anaerobic digesters, six of which accepted food byproducts

such as oil, corn syrup and whey in 2008. On-farm biodigesters have the potential to process food scraps from local communities or businesses and produce significantly more biofuel, as long as the digester is designed to incorporate food scraps/pulp into the manure.

- In Milwaukee, initial results are encouraging in a joint project involving WasteCap Wisconsin, Outpost Natural Foods, the Milwaukee Metropolitan Sewerage District and the DNR that tests the potential to increase methane production and recovery by adding pulped food scraps to a sewage digester.

Renewable energy also presents new waste management challenges. Proper disposal of crude glycerin from biofuel production is important; if it is dumped in a stream, it will kill fish and wildlife. But if it is adequately cleaned, glycerin can be sold for secondary uses. When DNR Secretary Matt Frank convened a task force on small-batch biofuel production, our staff representative focused on streamlining regulations and drafting best management practices so projects can proceed quickly and avoid environmental harm.

Emerald ash borer presents wood disposal challenge



PHOTO BY DAVID CAPPAERT

In July 2008, the emerald ash borer was detected in Wisconsin for the first time and we faced the sad prospect of losing millions of ash trees statewide within the next eight to 10 years. Waste and Materials Management staff coordinated with Division of Forestry and Department of Agriculture, Trade and Consumer Protection to provide guidance to local officials on managing and making productive use of

ash trees that will be cut. Our goal is to help ensure the maximum recovery of ash trees for wood products and to minimize open burning and associated health and safety risks and environmental impacts.

What's Next in 2009 and Beyond

Economic problems hurt recycling markets



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The overall economic downturn has not spared the recycling industry. After record high prices for paper, metals and plastics in summer 2008, markets for these recyclable commodities fell dramatically through the fall. The swift decline in demand left many communities and processors with large inventories of recyclables and fewer end markets to send them to. While some experts predicted that prices had stabilized by the beginning of 2009, few expect prices to increase substantially for many months.

Many communities have come to count on revenue from the sale of recyclables to help pay the costs of recycling collection and processing, and are now struggling to adjust already tight budgets. State grant funding for recycling has also been affected by state government's growing deficit. In many cases, additional costs may be passed on to residents—leading to some concern that households will return to illegally burning or burying waste to save money. The coming year will be a tough one for everyone involved with recycling, and program staff will be working with stakeholders to find alternatives and solutions.

Food service leading way in food scrap composting



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More compost operators are exploring how to compost the roughly 487,000 tons a year of food scraps and 228,000 tons of non-recyclable paper that currently end up in the state's landfills. Though Wisconsin has a long history of composting yard materials, food scraps bring additional challenges for managing odors and pests and avoiding public health problems.

By the end of 2008, 14 facilities composted some type of food, including three college/university campuses that operate composting or vermicomposting programs for food scraps. Another five projects were

in the planning stages, including regional coordination efforts for Brown County and Ashland and Bayfield counties.

Food service managers are leading the way in the new wave of food scrap composting, spurred by customers' sustainability concerns and the availability of biodegradable plates and utensils. DNR staff are working with project organizers and other stakeholders to ensure that food composting is possible—and properly managed—in more places.

2009 proposed state regulations affecting waste and materials management

As of January 2009, we anticipate proceeding with work on four rule packages during 2009, although the Natural Resources Board may add to or modify this list during the year.

Rule Revision	Purpose
NR 500 series revisions related to management of excavated stormwater basin sediment	Develop rules that will allow efficient and environmentally appropriate use or disposal of sediment excavated from stormwater retention basins.
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 separation distances between water supply wells and solid waste facilities	Ensure consistency in the decision-making process regarding water supply well exemptions and variances near solid waste facilities 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.

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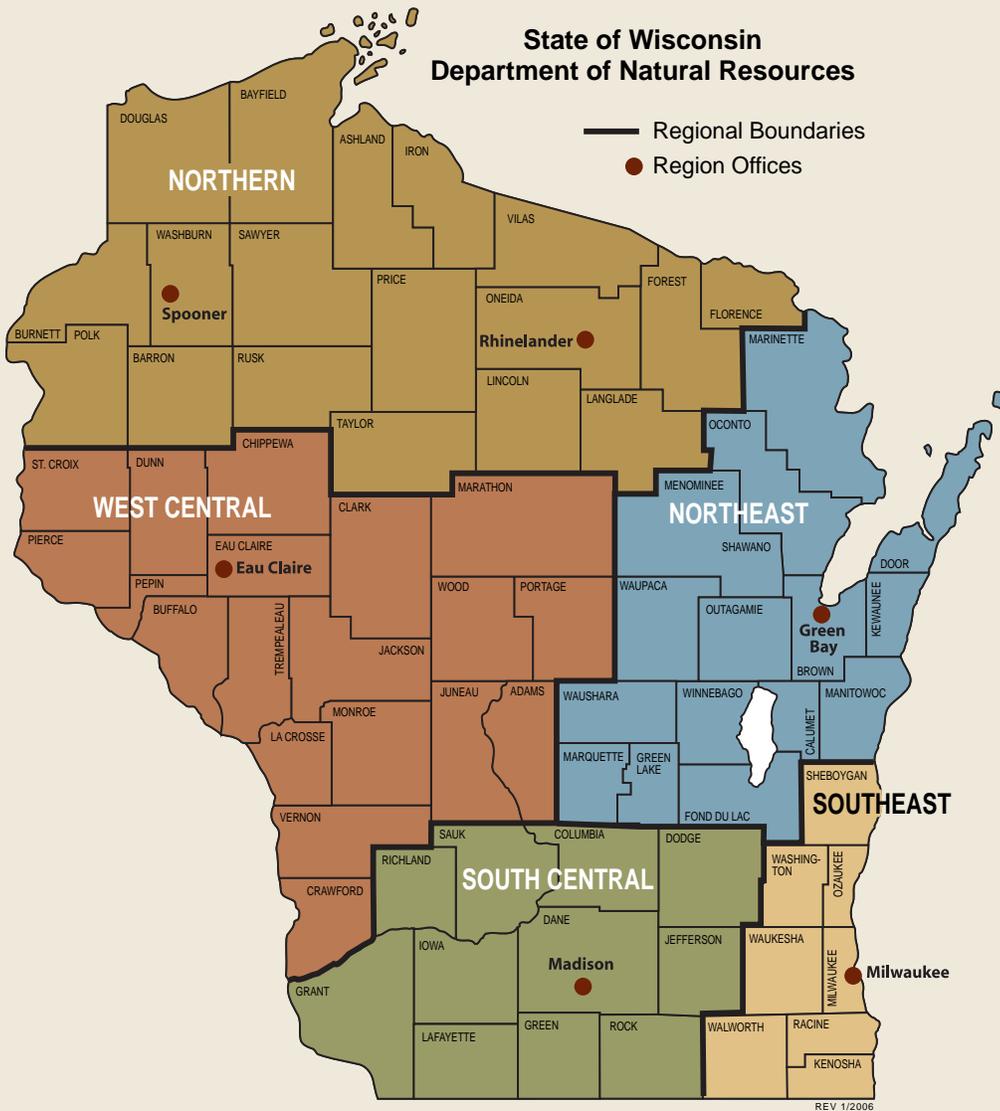
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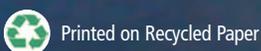
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