SHWEC SOLID & HAZARDOUS WASTE EDUCATION CENTER

UW Extension

news

November 2005

9th Annual Solid Waste Solutions Conference Held in Waupaca

Joe Van Rossum

The ninth annual Conference on Comprehensive Solid Waste Management Solutions was presented October 12 and 13 by the Northeast Wisconsin Cooperative Marketing Group. This program continues to be an outstanding forum for programs in Wisconsin to share solutions to challenges many programs are facing across the state. Here are some highlights from this year's two day program.

Radio Active Materials

Michael Mack from the Wisconsin Department of Health & Family Services provided information to conference attendees regarding paths radioactive materials may be taking to enter the solid waste stream. Radioactive materials are used in a variety of applications throughout the state ranging from medical equipment to density measurement devices. In response to these materials being discarded along with metals, many scrap yards now have radiation detectors at their gates to detect incoming loads that may contain radioactive materials. Household Hazardous Waste collection programs are another path for these materials to be improperly disposed of. Certain laboratory chemicals may be classified as radioactive, and are often found when schools clean out old laboratories. The DH&FS will provide assistance when needed to help provide for the proper disposal of radioactive materials.

Education Programs/Projects

Four recycling programs shared ideas for addressing the educational needs of their communities. Meleesa Johnson from Portage County spoke about a C & D tool kit being developed by Portage, Waupaca and Outagamie Counties. The tool-kit, targeted at contractors, contains best practices and guidance for handling waste materials on construction and demolition sites. Winnebago County's Jennifer Semrau offered the multi-lingual recycling brochures developed by her program. The basic recycling brochure was translated into Spanish and Hmong languages to get the recycling message to these groups. Finally Karen Fiedler shared the "Turn Over a New Leaf" project developed by The Wisconsin BeSmart Coalition. The project aims to educate individuals about leaf mulching. Similar in nature to grass-cycling, homeowners are instructed to mulch leaves in the fall and leave in place on lawns. BeSmart developed a 10 minute educational video that can be viewed online at **http://www.besmart.org/hazwaste/resident/leaves/index.html**

Alternative Funding Concepts for Solid Waste Programs

Patty Dreier, Portage County's Grant Writer shared strategies for writing successful grants, as well as tips for locating grant providers. Ms. Dreier stated grant writers can improve their access to grants by:

- Building capacity/infrastructure,
- Developing and documenting partnerships,
- Thinking like a grantor,
- Using grants as planning tools, and
- Being outstanding stewards of grants.

Sources for grant funding can be found through internet searches (grants.gov or topic searches), Wisconsin foundations, the Federal Register and Grants Information Centers located at certain university libraries.

For further information regarding any of these items please contact Joe Van Rossum, SHWEC Recycling Specialist, **vanrossum@epd.engr.wisc.edu** or 608-262-0936

Government Policies and Projects Support Green Building
Sherrie Gruder
(Elected to the Government Committee of the US Green Building Council, October 2005)

The government sector is a significant force in supporting the green building transformation across the US. Government buildings comprise 45% of the more than 2,000 green building projects both certified and registered under the LEED Green Building Rating System of the US Green Building Council as of September 2005. This represents $22.3 billion in investment. The breakdown is shown in Table 1.

Table 1 Government LEED Projects (registered + certified)

Sector	# LEED buildings	% in Market	Gross SF (million)	Investment ($billion)
Local	463	22%	40.8 m	$ 9.2 b
State	296	14%	32.3 m	$ 7.2 b
Federal	171	8%	26 m	$ 5.8 b
Total	930	45%	99.1 m	$ 22.3 b
USGBC total	2068		253.9 m	$ 57.1 billion

LEED (Leadership in Energy and Environmental Design) is the national standard for green building developed by the US Green Building Council. LEED is a performance based standard with measured benchmarks that address sustainable site planning, safeguarding water, energy efficiency and renewable energy, materials and resource conservation, and indoor environmental quality. Use of LEED promotes the design and construction of buildings that are environmentally responsible, profitable and healthy places to live and work (**www.usgbc.org**).

Public policy is driving the marketplace for green building. Currently, 49 states have at least one form of green building policy whether it be local or state. The states with the most, green buildings, are California, Washington, New York, Pennsylvania and Oregon. Each of these states has green building executive orders, and some have tax incentives and legislation in addition.

Cities with the highest number of LEED green buildings include Portland, OR; Seattle, WA; Chicago, IL; Los Angeles, CA; and Grand Rapids, MI. Each of these cities has green building policies and initiatives.

Currently, 16 states have green building policies as does the federal government. States include: PA, NY, OR, CA, MD, NJ, IN, WA, MN, ME, AZ, MI, CO, AR, NV, RI. Of those, 9 are by executive order. The federal government and 13 states use the LEED™ Green Building Rating System as a standard for green building along with more than 40 cities from Arlington, VA to Seattle, WA (See *Government Green Buildings Program Inventory* ***http://www3.uwm.edu/Dept/shwec/publications/publications.cfm***). Additionally, 30 colleges and universities have green building programs based on LEED. LEED is also used internationally in Canada, China, India, Mexico, Japan and other countries.

Wisconsin's Green Building Status
Governor Jim Doyle, on August 18th, announced *Conserve Wisconsin*, his conservation agenda for safeguarding Wisconsin's environment and the public and economic health of our state. A keynote of his energy initiatives is an Executive Order on High Performance Green Building.

High performance green buildings cut costs of operating and maintaining state buildings while conserving energy, water, materials and land as well and improving worker health and productivity. The State of Wisconsin owns 6,300 buildings with a total energy cost of $127 million for 2004 alone. Green buildings on average are 30% better than state code in energy efficiency potentially saving millions of taxpayer dollars

annually just in energy savings. Additional savings in water and sewer and waste disposal will also be realized.

The Governor will enact the green building executive order in concert with other conservation measures to address a multitude of challenges facing Wisconsin:

- High costs of electric power
- Inadequate electric grid transmission
- Diminishing drinking water supply and waste issues (construction & demolition materials comprise 30% of materials in WI landfills)
- Diminishing air quality and facing federal non-attainment regulation
- Rising concern over global warming
- Rising incidence of allergies and asthma, especially in children, and of sick building syndrome
- Increased absenteeism, health issues and productivity losses from chemicals released from building products, furniture, and cleaning products (Poor indoor air quality costs the U.S. economy $60 billion of lost worker productivity every year, EPA)
- Increasing expenses of operating and maintaining state buildings over time

As the state's largest landlord, leadership by state government can significantly accelerate the mainstreaming of high-performance green building practices in the design and building industry while saving taxpayer dollars. Currently, there are nearly 200 LEED accredited professionals in Wisconsin (and more than 21,000 nationally). The Wisconsin Green Building Alliance was one of the earliest states to form an affiliation with USGBC with approximately 200 members (currently there are 53 USGBC chapters across the US). Members range from architects, engineers and builders to product manufacturers, energy service companies and utilities. They will quickly be able to meet the new standard to deliver high performance buildings in Wisconsin and in so doing, will become more competitive nationally.

Governor Doyle stated that his Conserve Wisconsin initiatives will not only be good for the environment, but will create jobs, encourage and support sustainable products (like sustainably harvested Wisconsin wood and green cleaning products) and increased use of renewable technologies. Another potential ripple effect of the Green Building Executive Order would be an increase in green building in the private sector in addition to the public sector. "Governor Doyle is committed to government that is more efficient, more creative, and more strategic in using scarce resources wisely" (Grow Wisconsin, November, 2003). A high performance green building initiative reflects that commitment.

Madison Approves 80 mgpy Storm Water Infiltration Project
David S. Liebl

The City of Madison has approved a plan to infiltrate 80 million gallons per year (mgpy) of storm water runoff from an 880 acre watershed on Madison's near westside. Proposed by the DNR and Madison Gas & Electric, the project is meant to offset surface water withdrawal from Lake Mendota by MG&E's new 150MW cogeneration power plant, located on the UW-Madison campus.

The infiltration project will withdraw runoff at a constant rate of 500-600 gpm from a storm water-fed pond located on the City's Odana Golf Course. The water will be passed through a 0.1micron microfiltration unit, before being infiltrated in a series of sub-surfaces trenches located below the surface of the golf course, where glacial soils provide high permeability. Chloride contamination will be prevented by real-time conductivity monitoring, and pond level fluctuations will controlled automatically.

Runoff from the Odana watershed combines with other watersheds releasing 167 mgpy at a single outfall in the UW-Arboretum. This runoff has caused devastating erosion in the natural areas and marshes along Lake Wingra. In addition to intercepting 80 mgpy of this runoff, computer models of Dane County groundwater indicate that the infiltrated runoff will flow to springs around the Lake. This consistent influx of chilled groundwater is expected to improve habitat and water quality in Lake Wingra. For more information on the project see the MG&E project website:
http://www.mge.com/about/powerplants/cogen/

Intel Environmental Health and Safety Program
Steve Brachman

Mindy Koch, Manager, Environmental, Health and Safety Department for Intel Corporation in New Mexico, recently highlighted the efforts Intel is making to improve the environment for its 90,000 employees. Only 35 years old, Intel has made significant strides in reducing its environmental footprint. With the goal of becoming an EHS global leader, Intel's guiding principles include:
-keeping the workplace safe
-becoming lead free and
-reducing the environmental footprint.

Design for the Environment is a key to Intel's strategy, especially with an 18 month cycle for product development. For example in the past 26 years, the number of transistors has increased 18,000 fold and are now include 46 different elements in the manufacturing process. Chemical choices are important in the design phase, including a comprehensive review of each chemical used for their environmental performance. The manufacturing process focuses upon "copy exactly" in each plant in order to minimize problems and to build upon successes.

OSHA Releases Data on Health and Safety Citations
Joe Van Rossum

Each year the Occupational Safety & Health Administration (OSHA) provides a report on citations issued during the previous fiscal year. OSHA has released the data for the fiscal year that ended September 20, 2005. The data is searchable by Standard Industrial Classification (SIC) codes, and provides the number of citations of specific OSHA standards that were issued during the previous year. A search performed for SIC code 5093, Scrap and Waste Materials, showed 69 inspections resulting in 387 citations. SIC code 9511, Air and Water Resources and Solid Waste Management, had 64 citations issued during 21 inspections.

The top five standards cited for each code are summarized in the table below.

Scrap and Waste Materials	Air and Water Resources and Solid Waste Management
1. The Control of Hazardous Energy, Lockout/Tagout	1. Portable Fire Extinguishers
2. Powered Industrial Trucks	2. Electrical, Wiring Methods, Components, and Equipment
3. Hazard Communication	3. Electrical Systems Design, General Requirements
4. Portable Fire Extinguishers	4. Hazard Communication
5. Electrical, Wiring Methods, Components, and Equipment	5. Walking-Working Surfaces, General Requirements

This information can be used by facility operators and managers to examine practices in their facilities to ensure compliance with existing OSHA standards. These codes and others can be searched at the following web address: **http://www.osha.gov/pls/imis/citedstandard.html**. Further information on health and safety issues can be found at the OSHA website: **www.osha.gov**, or the Wisconsin Department of Commerce's Safety and Buildings Division: **http://commerce.wi.gov/SB/SB-HomePage.html**

Green Schools Programs
Steve Brachman

A number of states have embarked upon green schools program around the US, including Wisconsin. Maryland, for example, has had their green schools program for over three years. Using the environment as a tool for learning, Maryland utilizes the Maryland Association for Environmental and Outdoor Education (**www.maeoe.org**) to administer their program. A key component of this program is the focus on Best Management Practices for schools. Each school can choose between 4 areas in order to participate. MAEOE provides help with resources, as well as coordination with other partners.

Results of the Maryland Green Schools program include increased excitement from teachers and administrators, additional recognition, & model building using a case study approach. In general, with 112 schools participating, elementary and middle schools are the predominant participants. Recent research has found a positive relationship between student achievement and the activities conducted to become a Maryland Green School.

By contrast, Wisconsin's Green and Healthy Schools program is managed jointly by the Wisconsin DNR and Department of Public Instruction. It is a web-based, voluntary program available to all public and private elementary, middle, and high schools across Wisconsin. The Green & Healthy Schools Program consists of three steps:

- Pledge,
- Discovery and Inventory, and
- Action and Implementation.

Upon completion of all three steps a school can apply for recognition as a Wisconsin Green & Healthy School. Participation in program has been encouraged by a grant program and so far, 36 schools have pledged. For more information about the grants and program visit the DNR web site at **http://dnr.wi.gov/org/caer/ce/greenschools/pdf/grantinfofordistricts.pdf**

Regulatory Updates and News……

Public Information Meeting Announcement Revisions to the State Mercury Rule
The Wisconsin Department of Natural Resources will be holding three public informational meetings concerning plans to revise the state mercury emission reduction rules (chapter NR 446, Wisconsin Administrative Code) to conform to the federal Clean Air Mercury Rule (CAMR). These meetings are intended to provide an early opportunity to learn about the rule development timetable and issues that need to be addressed in advance of drafting proposed rule revisions.

The meetings will include a presentation on the following topics and a question and answer session.

- Overview of the federal CAMR
- Revisions needed to reconcile the state rule with the CAMR
- Identification of options to consider in revising the state rule
- Schedule for mercury rule revision development
- Update on legal and other challenges to the CAMR

DNR will outline the process for the public to provide their recommendations for addressing the options that the Department should consider in revising the state mercury rule. The DNR will also establish a period of time for comments to be submitted to the Department following these meetings.

Supporting materials may be found at **http://dnr.wi.gov/org/aw/air/reg/mercury/camr.htm**.
Contact Jon Heinrich **Jon.Heinrich@dnr.state.wi.us** or 608-267-7547 for information.
The meetings will be held at 3:00pm on the following dates and locations:
November 8, 2005 Havenwoods State Forest, 6141 N. Hopkins Street, Milwaukee
November 15, 2005 GEF 2 Room G09, 101 S., Webster Street, Madison
November 16, 2005 DNR Northern Region Headquarters, 107 Sutcliff Ave, Rhinelander

E-Scrap Legislation News Release
John Reindl, Dane County
Last week, Senate Bill 367 was introduced to require manufacturers of electronic products to establish programs for the recycling of specific products and to ban specific items from landfills. Here is a news release from the main author of this legislation. A link to the bill is at
http://www.legis.state.wi.us/2005/data/SB367hst.html

DNR API I -October Update Available On-line
The Air Permit Improvement Initiative, or API I as it is known, is a large scale effort by the DNR to improve the way the air program issues permits. The idea is to create a more streamlined and less complicated permitting system so that DNR staff can spend less time writing permits and more time assisting companies with compliance issues. The improvement in permit efficiency will also provide for a greater overall effort by the program in enforcement of air regulations. The web site and most recent update is located at **http://www.dnr.state.wi.us/org/aw/air/apii/**

EPA Encourages Facilities to Report Information Electronically
EPA recently signed the Cross-Media Electronic Reporting Rule, which is designed to encourage electronic reporting of environmental information. The new rule allows states, tribes and local governments to accept electronic signatures from regulated facilities under most environmental regulations and will enable facilities to file electronic reports instead of paper reports, reducing the cost and effort of data transfer, according to the U.S. Environmental Protection Agency.
The new rule maintains corporate and individual accountability for all reports that currently are sent on paper, ensuring that enforcement actions are not affected by the change, according to the EPA. EPA programs must comply with the new rule within two years. More information is available at
http://www.epa.gov/cdx/cromerrr/index.html

EPA Releases Great Lakes Task Force Report to the White House
EPA News release October 28, 2005

EPA Administrator Stephen L. Johnson signed and sent to the White House the Great Lakes Interagency Task Force report highlighting activities accomplished by the task force since its creation by President Bush in May 2004.

The report details task force successes including the construction of the dispersal barrier on the Chicago Sanitary and Ship Canal to help prevent the spread of Asian carp and other invasive species into the Great Lakes, and implementation of the Great Lakes Legacy Act to accelerate remediation of contaminated sediments in the lakes. The report also outlines the Task Force's involvement in the Great Lakes Regional Collaboration and that partnership's efforts to develop a strategy for protecting and restoring the Great Lakes.

The task force, under the lead of EPA, brings together 10 agency and Cabinet officers to provide strategic direction on federal Great Lakes policy, priorities and programs. The 10 agencies together administer more than 140 different federal programs that help fund and implement environmental restoration and management activities in the Great Lakes basin. For more information about the task force, see:
http://epa.gov/greatlakes/collaboration/taskforce/index.html

Energy Related News……

We Energies Customers Set to Drive Renewable Energy Market
Michael Vickerman, Executive Director of RENEW Wisconsin

Utility regulators recently gave the green light to two We Energies initiatives that will promote customer-owned solar power systems and large-scale purchases of renewable electricity from the utility.

In approving a new solar tariff, which will take effect October 1 this year, the Public Service Commission (PSC) of Wisconsin cleared the way for We Energies to buy solar power from its customers at 22.5 cents per kilowatt-hour (kWh), a much higher rate than customers usually receive for renewable electricity that they produce. To qualify for this rate, system owners must enroll in the utility's Energy for Tomorrow program, through which customers can voluntarily source up to 100% of the electricity they use from renewable energy sources.

With this new tariff, producers of solar electricity can serve Energy for Tomorrow customers, who place a high value on locally produced clean power. The price paid for solar electricity will not require a higher premium from Energy for Tomorrow customers because the other sources of power supplying the program have become less expensive relative to coal and natural gas. This tariff allows We Energies to reap the benefits of this fast-growing renewable energy source without having to raise rates and Southeast Wisconsin could very well become the Solar Energy capital of the Midwest.

The PSC also approved a bulk purchase premium of 1.5 cents/kWh for Energy for Tomorrow customers who buy more than 70,000 kWh per month. The current premium is 2.04 cents/kWh. The new bulk purchase premium will be become effective October 1 as well.

Interest in buying renewable power is building among businesses, universities, and state and local governments and by offering a discount rate for this customer segment, We Energies should see considerable growth in the amount of renewable electricity sold through Energy for Tomorrow. In its rate filing for 2006, We Energies proposes to lower the standard premium and the bulk purchase discount by about one-third of the current amount.

We Energies and the Focus on Energy Renewable Energy Program will hold a one-day conference titled Wisconsin's Solar Decade 2005-2015 on November 3 in Milwaukee. The event will target building owners and businesses interested in entering the solar market, highlighting the benefits of generating electricity from solar energy. RENEW Wisconsin, Milwaukee Area Technical College, Wisconsin Green Building Alliance, and other organizations are co-sponsoring the workshop. More information is available in the calendar on the Web pages of Focus on Energy at **www.focusonenergy.com**. For more information about Energy for Tomorrow visit the Web site of We Energies at **www.we-energies.com/eft.htm**.

RENEW Wisconsin is an independent, nonprofit 501(c)(3) organization that acts as a catalyst to advance a sustainable energy future through public policy and private sector initiatives. RENEW is a member of the Wisconsin Renewable Energy Network, a subcontractor to Focus on Energy. Visit RENEW at **www.renewwisconsin.org** or e-mail Michael Vickerman at: **mvickerman@renewwisconsin.org**.

US-EPA and DOE Release the Fuel Economy Information for 2006 Vehicles
Jack Annis

The US-Environmental Protection Agency and the U.S. Department of Energy (DOE) recently released the 2006 Fuel Economy information for vehicles including a Guide to help consumers make well-informed choices when purchasing new vehicles. Hybrid and diesel vehicles continue to lead the government's fuel economy ratings, with the Honda Insight and Toyota Prius hybrids and Volkswagen New Beetle and Golf diesels, topping the list.

Several hybrid SUVs are ranked in the top-ten for model year 2006, including the Lexus RX 400h, Ford Escape Hybrid, Mazda Tribute Hybrid, Mercury Mariner Hybrid and Toyota Highlander Hybrid. One conventional gasoline-fueled vehicle made the 2006 top-ten list, the Toyota Corolla with manual transmission.

Fuel economy estimates, which appear on the window stickers of all new cars and light trucks prior to sale, are determined by tests conducted by manufacturers and EPA according to EPA specifications. EPA

plans to propose updates to the methods used to determine the sticker fuel economy by the end of the year.

The following are online sources for more vehicle fuel economy information:

- The joint EPA and Department of Energy Fuel Economy Web site includes a complete downloadable version of the Fuel Economy Guide. The Web site is located at: **http://www.fueleconomy.gov**
- Comprehensive information about EPA's Fuel Economy program is available at **http://www.epa.gov/fueleconomy**
- The Green Vehicle Guide Web site gives consumers a better picture of fuel economy and automobile emissions. Consumers can use this guide to locate the cleanest running and most fuel efficient vehicle that meets their needs. To access this guide, visit: **http://www.epa.gov/greenvehicles**

FACTBOX - Key Facts on Biodiesel and Ethanol Fuels
Sources: Reuters; International Energy Agency
http://www.planetark.com/dailynewsstory.cfm/newsid/32751/story.htm
The following key facts about biodiesel and ethanol were provided in the Planetark News article at the web site listed above.

- Biodiesel, which works in any diesel engine, is a clean-burning fuel derived from any fat or vegetable oil. About 90 percent of US biodiesel is made from soybean oil. It takes roughly 7 pounds (about 3.2 kg) of soybean oil to make one gallon (about 3.8 liters) of diesel.
- Ethanol, an alcohol most often made from grains and sugar cane, is blended with gasoline to reduce tailpipe emissions in cars and trucks.
- Biodiesel production capacity in Europe, mainly in Germany and France, has risen sharply as countries try to reduce carbon dioxide emissions and cut the bloc's dependence on fuel imports. The EU in 2004 set a target that fuels should contain 5.75 percent of biofuels in 2010.
- Brazil is the world's leading producer and exporter of ethanol, derived from its huge sugarcane crop. It already blends its domestic gasoline with 25 percent ethanol and is looking to US, Japanese and Indian markets to boost exports.
- In the United States, the second-largest biofuel producer after Brazil, hundreds of major truck fleets use biodiesel including all branches of the US military, NASA, several state departments of transportation and public utility fleets.
- China, the world's second-largest energy consumer, is also the third-largest ethanol producer. The Philippines encourages use of coconut oil for biodiesel.
- The International Energy Agency estimates that under the most optimistic scenario ethanol could make up 10 percent of world gasoline by 2025.

Training, Workshop and Tour Opportunities……

November 9-11, 2005, **Greenbuild International Conference and Expo** Atlanta, Georgia to Learn about the latest advancements in green building design, construction, project financing and building management, including the **LEED Green Building Rating System(TM)** To register visit **http://www.greenbuildexpo.org/**

November 10, 2005, **Environmental Regulatory Update** seminar in Brookfield sponsored by FET. **For a complete agenda, click here**.

PHASE I AND II TRAINING AVAILABLE FROM DNR, ASTM
The DNR and the American Society for Testing and Materials (ASTM) are cooperating to present 3 training sessions in Wisconsin on Phase I and II Environmental Site Assessments (ESAs). Staff from ASTM and the RR Program will hold the sessions on the following dates and locations:

- November 29 – December 1, 2005: Eau Claire

- January 30 – February 1, 2006:Appleton
- February 6-8, 2006:Milwaukee

The three day course includes ASTM instructors, who will provide how-to training, and RR staff, who will discuss how ESAs are used by the DNR. Each three-day session cost $895 per person. For more information, including a course description and agenda, please see the following links:

• Brochure: **http://dnr.wi.gov/org/aw/rr/general/calendar/astm_wi_brochure.pdf**
• Registration Form: **http://dnr.wi.gov/org/aw/rr/general/calendar/astm_wi_registration_form.pdf**

April 20-21 **GLOBAL WARMING CONFERENCE - CFP** in Miami, Florida.
Topics for the 17th Global Warming International Conference and Expo include; Sustainable Environment And Health For The 21st Century; Water Resources Management; Global Warming And The Oceans; Human Health In A Changing Climate; Education: Global Change & Sustainable Development. See website for details **http://www.globalwarming.net/**

June 26-30 the **4th International Conference on Environmental Management for Sustainable Universities** in Stevens Point. See web link for details:
http://www.uwsp.edu/cnr/GEM/EMSU/Home.htm