

**JANUARY 2007**

## Pharmaceutical Waste Collection

*Steve Brachman*

Collection of household pharmaceuticals took a major leap forward in Wisconsin in 2006. Six communities offered one-day collections, generating over one ton of material from participating households (see table below). In addition, a number of one-day collection events are being planned for 2007, including new ones in Dane and Jefferson counties. The primary goal of all of these programs is to keep unwanted pharmaceuticals either from being flushed to the waste water systems or disposed of in landfills.

Collection Site	Amount Collected	# of Participants
Wood County	418 lbs.	114 participants
Brown County	300 lbs.	175 participants
Milwaukee County	824 lbs.	128 participants
Winnebago Co.	184 lbs.	114 participants
Manitowoc Co.	190 gal.	95 participants
Rock County	261 lbs.	132 participants

Jefferson County hosted a workshop focusing on this issue at the December meeting of the County's Solid Waste and Air Quality Committee. A number of options were discussed, including a one-day collection event, a joint program with pharmacies and the sheriff department as collection points, and use of the existing pharmaceutical reverse distribution network. SHWEC is hosting a discussion session in late January to further explore these options, with the goal of finding a longer term solution for managing unused pharmaceuticals.

## Report Shows PET Container Recycling Up Slightly

*Joe Van Rossum*

The National Association for PET Container Resources (NAPCOR) recently released its annual report on the recovery of Polyethylene Terephthalate (PET) containers. According to a November 30 press release, the national recycling rate for PET was 23.1% during 2005. PET containers coded with the #1 recycling symbol are commonly used for soft drinks, water, peanut butter and salad dressing. During 2005, recycling programs collected 1.17 billion pounds of post consumer PET containers. While the increased recycling rate is encouraging, there is still a large volume of PET containers not being recovered.

Wisconsin recyclers reported receiving \$300-\$400 per ton for baled PET containers during 2005. While prices have fallen to the \$200-\$300 per ton range during 2006, PET remains an important revenue generating material for MRFs. One local recycling program manager recently noted that PET containers continue to be a growing component of the material stream his facility processes.

The 2005 report as well as previous annual PET recycling reports can be found on NAPCOR's website at: <http://www.napcor.com/reports.htm>. For more information about prices being paid to Wisconsin recyclers for recovered materials visit the SHWEC publications page (<http://www3.uwm.edu/Dept/shwec/publications/publications.cfm>) and enter the keyword "market" in the search box, or contact [Joe Van Rossum](#), SHWEC Recycling Specialist.

## Recycling in Wisconsin Continues to Show Strength

The latest Wisconsin Department of Natural Resources survey shows strong commitment to recycling with more materials recycled at higher levels. Statistics are outlined in the following press release.



MADISON – Results of a household survey on recycling in Wisconsin show residents remain committed to recycling and are recycling more kinds of items at higher rates. The survey is the ninth taken since 1990, when Wisconsin began its statewide recycling program.

“The survey shows that Wisconsin’s recycling program has been successful and popular ever since it began in 1990,” says Suzanne Bangert, director of the waste and materials management bureau for the Wisconsin Department of Natural Resources. “People continue to recycle, which diverts valuable raw materials from landfills – materials businesses want and are using to make new products and provide jobs.”

The number of respondents who described themselves as strongly committed or committed to recycling has remained at 96 percent since 1992, with the number of those strongly committed rising over time from 62 percent in 1992 to 71 percent in 2006.

In 1990, not a single household reported recycling magazines, but in 2006, 75 percent report that they recycle magazines. Similar recycling increases are noted for cardboard and other paper, metal cans, glass and plastic.

The 2006 survey included new questions about electronic waste items such as computers, televisions and cell phones. In Wisconsin, 80 percent of households now have a computer; roughly half of those own two or more. More than 98 percent of households own televisions, with more than 80 percent owning two or more. Computers have a lifespan of about three years. Cell phones and other electronic devices have similarly short lifespans, and the end of broadcast analog TV signals in 2009 in the move toward digital TV may prompt more consumers to discard older televisions. “Electronic waste is among the fastest growing waste categories in the state,” Bangert says. “This survey information will help us develop efficient and effective strategies for dealing with e-waste.”

The University of Wisconsin-Madison Survey Center conducted the statewide telephone survey of 555 households for the DNR. Survey results are accurate to plus or minus 5 percent. Survey results also showed that people’s concern about mercury in the environment has increased. In 2002, 51 percent of households were very (15 percent) or somewhat concerned (36 percent) about mercury disposal. In 2006 72 percent were very concerned (25 percent) or somewhat concerned (47 percent) about mercury. About two-thirds of respondents said that they did not have thermometers or thermostats containing mercury in their home, but about the same number were unaware if their community had a program for recycling these items.

Many households rely on a number of methods to handle yard waste, including composting and leaving grass clippings on the lawn, but the proportion of households that burn yard waste increased from 18 percent of respondents in 2002 to 22 percent in 2006.

“We will continue to encourage the public to reduce burning as a waste disposal method and to compost and reuse the nutrients in yard waste. It’s better for our air and for the land,” Bangert says.

A summary of survey results is available on the DNR Web site at (<http://www.dnr.state.wi.us/org/aw/wm/recycle/recyclefullrpt06.pdf>). Two other recent publications about recycling in Wisconsin, the report *Wisconsin Recycling Means Business* and the video, *Too Valuable to Waste*, can be found on the [recycling](#) pages of the DNR Web site. The materials show how the recycling industry in Wisconsin creates jobs, prevents valuable resources from being wasted in landfills and develops innovative new products. FOR MORE INFORMATION CONTACT: Cynthia Moore, (608) 267-7550

## Iowa Waste Reduction Center Publishes Work on Recycling Problematic Wastes

Jack Annis



The Iowa Waste Reduction Center recently announced the availability of a suite of fact sheets, cost calculators and information concerning three common and problematic wastes that many small companies, particularly automobile repair shops, generate.

- Used antifreeze
- Fluorescent bulbs
- Used Oil

The information provided by IWRC is very helpful in determining costs analysis for recycling.

Note that these wastes are specifically regulated by Wisconsin Administrative Code NR-673 Universal Waste Management and the 2003, 2004 DNR Guidance Documents regulating a Wisconsin list of universal wastes that include fluorescent bulbs and antifreeze. Wisconsin Administrative Code NR-690 Used Oil Management addresses used oil. Always check the Wisconsin regulations concerning these wastes before purchasing equipment or implementing a program related to the IWRC information. If you need assistance in determining your recycling options in Wisconsin you can contact [jannis@uwsp.edu](mailto:jannis@uwsp.edu) or go directly to the DNR web site for information or through the SHWEC web site at [www.shwec.uwm.edu](http://www.shwec.uwm.edu)

The following brief summaries and links to IWRC publications are provided by Sue Schauls, Program Manager at IWRC. Sue can be contacted at [Sue.Schauls@uni.edu](mailto:Sue.Schauls@uni.edu) or through the IWRC web site at [www.IWRC.org](http://www.IWRC.org) for questions concerning the following information and resource tools.

### Used Antifreeze

The best management of used antifreeze is to recycle it. Testing has shown that recycled antifreeze meets ASTM performance standards and may be superior to virgin antifreeze since the recycling process removes chlorides commonly found in hard water. There are several methods used for antifreeze recycling including filtration, distillation, reverse osmosis, and ion exchange.

[Antifreeze Facts](#) (pdf format)

Interactive [Antifreeze Recycling Worksheet](#) in MS Excel

[Onsite Closed-Loop Recycling](#) (pdf format)

Interactive [Onsite Closed-Loop Recycling Worksheet](#) in MS Excel

[Onsite Batch Recycling](#) (pdf format)

Interactive [Onsite Batch Recycling Worksheet](#) in MS Excel

[Offsite Recycling](#) (pdf format)

Interactive [Offsite Recycling Worksheet](#) in MS Excel

Vendors

[Antifreeze Recycling Equipment Vendors](#) (MS Word format)

[Antifreeze Offsite Recyclers](#) (MS Word format)

[Antifreeze Long Life Additive Vendors](#) (MS Word format)

### Fluorescent Bulbs

Incandescent bulbs and fluorescent tubes are the most common lighting used in businesses today. Switching to either compact fluorescent or low-mercury fluorescent bulbs can have a major impact on energy cost savings, as well as lessening your contribution to energy production-related pollution, including global warming.

[Light Bulb Facts](#) (pdf format)

[Compact Fluorescent Bulbs](#) (pdf format)

Interactive [Compact Fluorescent Bulb cost worksheet](#) in MS Excel format

[Low-mercury bulbs](#) (pdf format)

Interactive [Low-mercury bulb cost worksheet](#) in MS Excel format

[Universal Waste Rule](#) (MS Word format)  
[Fluorescent Bulb Recyclers](#) (MS Word format)  
[Emission Factors for Coal-fired Power Plants](#)

## **Used Oil**

Used oil is one of the most common wastes as it is generated by vehicle maintenance/repair facilities, in various industrial settings, as well as by do-it-yourselfers, such as farmers and households. The IWRC recommends several options for handling used oil.

[Replace Existing Heat with Used Oil Furnace](#) (pdf format)  
[Used Oil Furnace Manufacturers](#) List (MS Word format)  
[Used Oil Furnace Distributors for Iowa](#) List (MS Word Format)  
[Used Oil Recycling Facts](#) (pdf format)  
[Used Oil Recyclers Serving Iowa](#) (MS Word format)  
[Fleet Vehicle P2 Options for Used Oil](#) (pdf format)  
[Reusable Oil Filter Vendors List](#) (MS Word format)

Follow the links below to learn more about the benefits of replacing your fuel source with used oil. Use the cost-benefit calculator to help you determine the economic payback of purchasing a used oil furnace.

[Replace Existing Electric Heat with Used Oil-Fired Furnace](#) (pdf format)  
Interactive [Used Oil Worksheet Electricity](#) in MS Excel format  
[Replace Existing Natural Gas Heat with Used Oil-Fired Furnace](#) (pdf format)  
Interactive [Used Oil Worksheet Natural Gas](#) in MS Excel format  
[Replace Existing Propane Heat with Used Oil-Fired Furnace](#) (pdf format)  
Interactive [Used Oil Worksheet Propane](#) in MS Excel format

## **LEED Green Buildings Target Greenhouse Gas Emissions Reduction**

*Sherrie Gruder*

LEED green buildings reduce carbon emissions by about 40% compared with traditional buildings, reports the US Green Building Council's (USGBC) CEO, Rick Fedrizzi. USGBC's intentions are to achieve even greater results in reducing the impacts of buildings on global climate change Fedrizzi told more than 13,000 attendees at the Greenbuild International Conference & Expo held in Denver in November. Currently, buildings are responsible for 38% of US CO<sub>2</sub> emissions compared with transportation at 33% and industry at 29%. In fact, US buildings alone are responsible for more CO<sub>2</sub> emissions than those of any entire country in the world except China. (Source: Kinzey et al., "The Federal Buildings Research and Development Program: A Sharp Tool for Climate Policy," 2002 ACEEE proceedings, Section 9.21.)

The LEED Green Building Rating System (Leadership in Energy and Environmental Design) is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings. There will now be a climate change overlay to LEED. To achieve reduced impacts on global warming, LEED requirements will be altered effective immediately after ratification by the membership (early 2007). LEED certified commercial buildings would be required to meet a 50% reduction in emissions. This will be based on reductions achieved in energy, water, transportation and materials. In addition, the energy and optimization credits will have a prerequisite level of at least 2 points out of the 10 possible.

USGBC will further help reduce emissions from buildings by certifying more buildings to LEED Green Building Rating System. All LEED New Construction and Core and Shell certified projects will be registered under LEED for Existing Buildings at no charge. Additionally, beginning in 2007, all certification fees will be fully rebated for any building that achieves a LEED platinum rating. The LEED Portfolio Standard is currently being piloted that will allow multiple buildings of the same owner, be it a government, university or corporation, to be certified quickly at a high level of performance. PNC bank just certified 18 branch banks under the portfolio standard.

USGBC as an organization will be 100% carbon neutral by the end of 2007. They just moved into offices built out to a platinum level under LEED for commercial interiors in a LEED gold building in Washington D.C. Finally, USGBC is signing a Memorandum of Understanding with the Clinton Climate Initiative (CCI) to engage the largest cities in the world through the Large Cities Climate Leadership Group and provide them with the tools to become leaders in energy efficiency and green building strategies, which will result in the reduction of carbon emissions.

### **The Living Building Challenge**

*Sherrie Gruder*

A new standard is under development that will challenge the industry to build beyond the platinum level of LEED to a true measure of sustainability. Called the Living Building Challenge, these buildings will be net zero energy, relying only on solar income. They will be water independent or net zero water. They will be healthy and responsible for all species with efficient use of materials and the avoidance of all known persistent bio-accumulative toxins (PBT's), carcinogens and reproductive toxicants. They will provide an offset for the carbon footprint of construction They can only be built on previously developed sites. And they must provide beauty, inspiration and education. This basic outline is proposed by the Cascadia Region Green Building Council of the USGBC.

The standard is all prerequisites—sixteen of them-- without any optional points. And it is performance based with certification possible after one year of operation. The parameters of the prerequisites will be forthcoming in the *Living Building User's Guide*.

The materials requirements will be based on the PHAROS protocol developed by the Healthy Building Network, [www.pharos.net](http://www.pharos.net) . The Living Building Standard is detailed on the Cascadia Region's web site: <http://www.cascadiagbc.org/resources/living-buildings>. It will be further discussed at the Living Future regional green building conference in Seattle, April 25-27 2007.

### **Wind Energy Production Tax Credit Extended through 2008**

The wind energy Production Tax Credit (PTC) will be extended one year through December 31, 2008. According to the American Wind Energy Associations Legislative Director, Jaime Steve, "This timely action by Congress will boost significant upward growth and investment for wind and other renewable energy technologies, spurring thousands of new jobs and millions of dollars in rural economic development while also bringing cleaner air to all Americans. Extending the credit is also an investment fighting climate change and increasing American Energy Security".



### **EPA Launches Municipal Network for Clean Energy, Environment Strategies**

The new Clean Energy-Environment Municipal Network is an informational resource network that supports local governments' efforts to use clean energy strategies to advance community priorities. The Network provides information on cost-effective methods to meet growing demands for electricity, oil, and natural gas while:

- reducing emissions of air pollutants and greenhouse gases,
- lowering energy costs,
- improving energy reliability and security,
- spurring local economic development,
- improving public health and quality of life,
- helping communities meet sustainability and green building goals,
- providing opportunities for leadership and recognition.

Local governments can use the Network website to access EPA programs, tools and resources tailored to their needs. EPA is also coordinating among federal, state, and non-governmental programs to make available a comprehensive database of planning, policy, technical, analytical, and information resources for municipal governments, and developing guidance on best practices for municipal clean energy.

The Clean Energy-Environment Municipal Network is available at:

<http://epa.gov/cleanenergy/stateandlocal/network.htm>.

## **Greenhouse Gas Product Certification Standard Out for Stakeholder Comment**

*Sherrie Gruder*

A standard to promote the credibility in the marketplace for voluntary greenhouse gas (GHG) reduction products-- the Green-e Greenhouse Gas (GHG) Product Certification Standard-- is now out for stakeholder comment. The draft standard was developed by The Center for Resource Solutions (CRS) along with the Green-e GHG Advisory Group, composed of key environmental organizations, government agencies, businesses, and advocacy organizations who work on climate change issues. This is the same group that developed the Green-e standard for renewable energy products.

According to a Green-e press release, based on recent press coverage and uncertainty in the marketplace, it is evident that consumers are ready for steps to be taken to provide support to the emerging voluntary greenhouse gas reduction market. CRS aims to provide consumer protection to the growing number of individuals and businesses who choose to decrease their own contribution to global warming by purchasing greenhouse gas reductions. The Green-e Program is developing this new certification standard to ensure customers are getting high quality reductions and are protected from double counting and misleading marketing practices.

The draft standard will be out for comment until the end of January 2007. The draft standard, along with instructions on how to submit comments, can be found at:

[www.resourcesolutions.org/mv/ghgstandard.html](http://www.resourcesolutions.org/mv/ghgstandard.html) . CRS will host a stakeholder conference call in late January to answer questions about the draft Standard. If you are interested in becoming a stakeholder, please contact Alex Pennock at [alex@resource-solutions.org](mailto:alex@resource-solutions.org).

## **Dell Completes Implementation of Global Free Recycling**

From Dell news release December 12, 2006

Dell announced that it has met its goal to provide free recycling of any Dell-branded product for consumers worldwide as part of its global recycling policy. According the company "Dell is the first and only computer manufacturer to offer such a program.

This recycling offer is designed for consumers and includes responsible recycling of used Dell-branded computers and peripheral equipment at no-charge. The service does not require a replacement purchase. Details are available at [www.dell.com/recycling](http://www.dell.com/recycling)"

In addition the company states that "Dell supports a policy that would make all producers responsible for offering recovery and recycling services for their own brand products from consumers at no charge.", something that many mid-west states have been working toward for quite some time. Read the entire news release at

[http://www.dell.com/content/topics/global.aspx/corp/pressoffice/en/2006/2006\\_12\\_12\\_rr\\_000?c=us&l=en&s=corp](http://www.dell.com/content/topics/global.aspx/corp/pressoffice/en/2006/2006_12_12_rr_000?c=us&l=en&s=corp)

## ***Regulatory Updates and News.....***

### **EPA Draft Staff Paper Outlines Lead Air Quality Standards Review**

Its first Draft Staff Paper for the Lead National Ambient Air Quality Standards (NAAQS) was released December 5th by the U.S. Environmental Protection Agency (EPA). The document is part of the agency's review of the lead NAAQS to ensure that federal air quality standards reflect the latest air pollution and health effects research. EPA will accept public comment on the lead documents until Feb. 5, 2007. For copies of the draft staff paper and a related fact sheet:

[http://www.epa.gov/ttn/naaqs/standards/pb/s\\_pb\\_cr\\_sp.html](http://www.epa.gov/ttn/naaqs/standards/pb/s_pb_cr_sp.html) for more about the National Ambient Air Quality Standards (NAAQS) for lead: [http://www.epa.gov/ttn/naaqs/standards/pb/s\\_pb\\_index.html](http://www.epa.gov/ttn/naaqs/standards/pb/s_pb_index.html)

### **EPA Begins the New Vehicle Fuel Economy Estimates for 2008 Models**

EPA announced that it is issuing new methods to determine the miles per gallon (MPG) estimates that appear on new vehicle window stickers. The new standards will take effect for model year 2008 vehicles, which may be available for sale as soon as next month. The new method brings MPG estimates closer to consumers' actual fuel use, by including factors such as high speeds, aggressive accelerations, air conditioning use and driving in cold temperatures.

To more clearly convey fuel economy information to consumers, EPA is also enhancing the design and content of the window sticker. The new label will allow consumers to make more informed decisions when comparing the fuel economy of new vehicles. For more information about fuel economy at the following web site: <http://www.epa.gov/fueleconomy> and to learn more about the new label:

<http://www.epa.gov/fueleconomy/label.htm> Related fuel economy information for vehicles is available at: <http://www.epa.gov/greenvehicle>

### **EPA Issues Final Rule on Oil Spill Prevention, Control, and Countermeasures**

The final requirements for facilities subject to EPA's Oil Spill Prevention, Control, and Countermeasure (SPCC) regulations have been announced. The SPCC regulations require covered facilities to prevent, prepare for and respond to oil discharges. The final rule will provide alternative compliance options for certain regulated facilities. To provide the regulated community time to implement these modifications, as well as anticipated additional modifications, EPA is also issuing a proposed rule to extend the compliance dates to July 1, 2009 for owners and operators of facilities (with the exception of farms) to amend and implement an existing SPCC plan or in the case of new facilities, time to prepare and implement a new SPCC plan.

Nothing in the final rule and the proposed rule removes any regulatory requirement for owners or operators of facilities in operation before Aug. 16, 2002 to have developed, implemented and maintained a SPCC plan in accordance with the SPCC regulations then in effect. Such facilities continue to be required to maintain their plans during the interim until the applicable date for amending their existing plans and implementing their amended plans. Information about the SPCC Rules: <http://www.epa.gov/oilspill>

### **Toxic Release Inventory Changes to Encourage Chemical Use Reduction, Increased Recycling**

EPA finalized a Toxics Release Inventory (TRI) rule change that encourages reductions in chemical emissions and increases in recycling at facilities and also announced its decision to continue requiring TRI data reporting on an annual basis. These changes in no way affect the specific chemicals or amounts of chemicals facilities are authorized to release to the environment.

The final rule does not exempt any facility from reporting their releases, nor does it remove any chemicals from the TRI. The rule allows facilities that completely eliminate releases of persistent, bio-accumulative and toxic chemicals (PBTs) and recycle and treat no more than 500 pounds of such chemicals, to use a shorter reporting form. For non-PBT chemicals, the rule allows businesses to use the simpler reporting form if their releases are no more than 2,000 pounds of waste as part of an overall waste management limit of 5,000 pounds. The 2,000 pound cap on releases is designed to encourage businesses to use recycling and treatment, rather than disposal and other releases.

TRI is a publicly available EPA database, which contains information on toxic chemical releases and other waste management activities reported annually by certain industries and federal facilities. For information about the rule: <http://www.epa.gov/tri/tridata/modrule/phase2/forma.htm> and to learn more about the TRI: <http://www.epa.gov/tri>

## ***Events, Training, Workshop and Tour Opportunities.....***

January and February 2007 **Consolidated Reporting System/Environmental Update Air Seminars** sponsored by FET, Commerce and DNR will be provided at 4 locations around the state which will be announced soon. Go to [www.fetinc.org](http://www.fetinc.org) or call 414-354-0070 for more information or register. These seminars will provide details on both air and hazardous waste rules as well as toxic release inventory and much more.

January 10, 2007 **Residential Geothermal Lunch and Learn**, 11:30-1:30, Chula Vista Resort, Wisconsin Dells and March 28, Radisson Hotel LaCrosse. Learn the fundamentals of geothermal heat pump systems, how they work and what makes them perform well in Wisconsin and the upper Midwest. We will also discuss what geothermal can do for you, your customers, Wisconsin ENERGY STAR Homes, LEED, green home and light commercial projects. For more information contact Trisha Stibor at 608.238.8276 x124 or [tstibor@ecw.org](mailto:tstibor@ecw.org).

February 1, 2006 **North Central Regional Wastewater Operators Meeting** and seminar sponsored by Wisconsin Wastewater Operators Association in Plover, call Rich Boden at 715-345-5259 or email [rboden@ploverwi.gov](mailto:rboden@ploverwi.gov) to register or for information.

Feb 5-6, 2007 **Better Buildings: Better Businesses Conference**, Kalahari Resort, Wisconsin Dells. Tailored to Wisconsin's residential building and remodeling industry. For general conference or registration questions, contact Trisha Stibor, Energy Center of Wisconsin at 608.238.4601 x124, [tstibor@ecw.org](mailto:tstibor@ecw.org)

February 21-23 2007 the **2007 Winter Conference** is sponsored by AROW, SWANA and WCSWMA in Appleton. To register call 608-339-9178 or download the brochure at: [2007 Conference Agenda & Registration Form \(as of 11/06\)](#)

March 12-14 2007 **Environment 2007 Conference and Exhibition** is sponsored by FET and held in Milwaukee. The conference is one of the oldest and largest environmental conferences held in the state and includes the recognition of companies or organizations for the Governors Award for Environmental Excellence. Go to [www.fetinc.org](http://www.fetinc.org) or call 414-354-0070 for more information on exhibiting or register.

March 12-14 2007 the **Great Lakes Regional Pollution Prevention Roundtable** meeting and seminar in Chicago Illinois at the US-EPA Region V Headquarters  
<http://www.glrppr.org/meetings/Spring2007/>

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