

Interagency Pollution Prevention Advisory Team (IPPAT)
Thursday, January 26, 2006
MEETING SUMMARY

Announcements and Updates

A community forum on renewable energy, "Moving the Midwest toward Energy Independence," was held Tuesday, February 7, sponsored by the City of White Bear Lake's Commission on Environmental and Sustainable Practices and White Bear Racquet & Swim. The event featured a panel discussion with Michael Noble of Minnesotans for an Energy-Efficient Economy, Mark Eilers of General Electric Corporation, Tara Widner of the United Steelworkers Union, and local business operator Paul Steinhauser of White Bear Racquet & Swim.

The Governor's MnGREAT! Awards were selected by a judges committee and handed out at a ceremony during the Air, Water and Waste Conference on February 15. Mike Nevala said that of the twenty nominations submitted, the judges committee selected ten projects for the award. The judges had a good discussion about all the nominations and did an honorable job of selecting awardees. Mike commented that the MnGREAT! Awards have been elevated to a higher profile, and all levels of government are included in a category for the application. He felt the awards ceremony was a meaningful presentation. The description of the winners is attached at the end of this meeting summary. We will hold a more lengthy discussion of the awards program and winners at the April 27 IPPAT meeting.

Ned Brooks thanked all the IPPAT members who collected data from their agencies for the Governor's Executive Order 04-08 for their Pollution Prevention Summary reports. If you wish to help analyze the statewide data or plan improvements for next year's report, please contact Emily Moore at 651-215-0201 or Emily.moore@state.mn.us. Gene Christenson suggested that IPPAT try to secure a MnTAP intern for the summer to go through the data submitted and determine which actions were the most productive.

Renewable Fuels, Executive Order 04-10 and Smart Fleet

Mike Taylor, Department of Commerce 651-296-6830

Tim Morse, Department of Administration 651-201-2511

The Governor's Executive Order 04-10 was issued in September of 2004. It requires state departments to reduce the use of gasoline by on-road vehicles by 25 percent by 2010 and 50 percent by 2015 and to reduce the use of petroleum-based diesel fuel by 10 percent by 2010 and 25 percent by 2015.

To meet the goals established above, each state department will, whenever legally, technically and economically feasible, subject to the specific needs of the department and responsible management of agency finances ensure that at least 75 percent of purchases of new on-road vehicles, excluding emergency and law enforcement vehicles use "cleaner fuels" or have fuel efficiency ratings that exceed 30 miles per gallon for city usage or 35 miles per gallon for highway usage, including but not limited to hybrid electric cars and hydrogen-powered vehicles.

b. Increase its use of renewable transportation fuels, including ethanol, biodiesel and hydrogen from agricultural products.

c. Increase its use of web-based Internet applications and other electronic information technologies to enhance the access to and delivery of government information and services to the public, and reduce the reliance on the department's fleet for the delivery of such information and services.

Tim's take on this point in history is that it is an exciting time! We will see the fuel for transportation change. This change will happen in our lifetime, and we can participate in this change. He handed out an article from Automotive News about Ford Motor Company's combining flexible-fuel and hybrid technologies in one car. The article is available at

<http://www.autonews.com/apps/pbcs.dll/article?AID=/20060125/REG/60124010&SearchID=73238057671119>

The many things wrong with petroleum are that petroleum demand is increasing; China and India are becoming large consumers of petroleum fuels; the USA is continuing to increase energy demand; petroleum supply is limited; the more we use, the harder it is to extract; many petroleum supplies are located in politically unstable regions of the world; it is a relatively dirty fuel to burn; and it is becoming more expensive.

What can we do about this? We can continue to pay more, we can wait for the ultimate ideal fuel, or we can act now to utilize the alternatives that are available. Flex-fuel vehicles are available now – new and used. E85 is becoming more available – there are over 200 stations now in Minnesota, and hybrid vehicles are becoming mainstream technology. We can choose wisely among the gasoline powered vehicles that are available.

The State of Minnesota is using SmartFleet to lead the State forward in the area of petroleum reduction. The Travel Management Division (TMD) is installing and utilizing a fleet information system that has the capability of serving all agencies. The Department of Administration's Materials Management Division (MMD) is focusing vehicle acquisition contracts on flex-fuel and fuel efficient vehicles.

To carry out the SmartFleet Directive, we need to purchase vehicles that use less petroleum fuel. We need to do this and, at the same time, remain cost effective. The MMD is responsible for establishing vehicle contracts. There was a cooperative effort between MMD, MnDOT, DNR, and TMD this year. Vehicle contracts specify that all passenger cars need to be flex-fuel or meet certain fuel efficiency criteria with a city mileage rating of 28 miles per gallon (MPG) or highway rating of 33 MPG. The vehicles on the contract are:

Automobiles

- Ford Focus (gasoline) \$11,398
- Dodge Status (flex-fuel) \$12,592
- Ford Taurus (flex-fuel) \$12,671
- Chevrolet Cobalt (gasoline) \$13,347
- Chevrolet Impala (flex-fuel) \$15,643

Station Wagons

- Ford Focus Wagon (gasoline) \$12,912
- Pontiac Vibe (gasoline) \$15,250
- Mini-Vans
- Dodge Caravan (flex-fuel) \$15,821
- Dodge Grand Caravan (flex-fuel) \$18,078

Sport Utility Vehicles

- Dodge Durango (flex-fuel) \$20,248 – \$22,263
- Ford Escape (gasoline electric hybrid) \$24,516 - \$25,946
- GMC Yukon XL (flex-fuel) \$26,773 – \$29,483

Passenger Vans

- Ford E150 – 8 pass. (gasoline) \$15,849
- Chevrolet Express – 8 pass. (gasoline) \$16,762
- Ford E350 – 12 pass. (gasoline) \$17,598

Was any of this controversial? Yes. The fact that there is less variety in vehicle selection has not been popular with some agencies and some political subdivisions. Will this change help the State comply with Executive Order 04-10? Yes, because it is much more difficult to choose a vehicle that is not fuel efficient or not capable of using E85 fuel. Vehicle selections will be refined in response to available vehicles as changes happen in future years. We are moving in the right direction, but there is a long and challenging road ahead of us. However, we have made a significant start and we will continue forward.

Sleep is Good and Other Lo-cost/no-cost Tips for Conservation

Bruce Nelson, Department of Commerce 651-297-2313

Governor Pawlenty's Executive Order 05-16 requires state agencies to reduce energy use by 10 percent over the next calendar year. Agencies are to implement specific operational changes immediately, pursue long-term energy conservation measures, and adopt prudent energy procurement strategies. The Department of Administration has primary responsibility, with Commerce assisting. The full text of the Executive Order is available at www.savingenergy.state.mn.us/. That website contains the State Employee Energy Conservation Action Plan, the State Building Operators and Managers Energy Conservation Action Plan and energy conservation links.

Bruce gave us an extensive list of low-cost and no-cost energy tips you could try:

- Turn off lights in unused offices, conference rooms & other common areas.
- Eliminate hot plates, coffeepots, refrigerators, microwaves in work areas.
- Eliminate space heaters and cooling fans (they are prohibited in all state buildings).
- Enable the power management feature on all computer monitors.
- Provide adequate but not excessive outdoor air ventilation – ventilation should be shut off when rooms are unoccupied.
- Facility managers should adjust building equipment start/stop schedules to minimize fuel use during unoccupied or lightly occupied periods.
- Remind all building users to turning off task lights when leaving for the day and when leaving conference rooms unoccupied.
- Be certain that air handling units, filters and dampers are clean and operating correctly (should be checked at least annually).

The Buildings, Benchmarking & Beyond (B3) project has developed a Sustainable Design Guide (<http://www.msdg.umn.edu/>) that must be used for all buildings that use the state bond proceeds fund. The Sustainable Design Guide objectives include not only energy and environmental management, but also occupant comfort and productivity.

Another aspect of the B3 project is energy benchmarking of all public buildings. Benchmarking identifies the poorest energy performers that can be improved the most for the least cost. It also allows managers to track performance over time, which may provide indications of problems. A building's variance from performance over time may indicate a problem. Benchmarking allows you to track the effect of an energy improvement and to recognize successes.

Recommissioning is a systematic process to improve the operation of building systems so that they actually meet your needs (fresh air, humidity control, comfort, etc.) AND use only as much energy as is really needed. The cost of recommissioning buildings that have been identified as poor energy performers can be recovered from the resulting energy savings within 1 to 3 years.

Different means for funding projects exist, including state bonding and performance contracting. The State Energy Office manages an Institutional Energy Loan Program, which currently serves schools, hospitals and local units of government, but may soon be expanded to fund state buildings projects.

“Sleep is Good” is a term used by the Monitor Power Management program. Check out the EPA website www.energystar.gov/powermanagement for details on this topic. Resources:

• **ENERGY STAR Program**

—<http://www.energystar.gov> 1-888-STAR-YES (1-888-782-7937)

• **Minnesota Energy Information Center**

—651-296-5175 or 800-657-3710 <http://www.commerce.state.mn.us>

EnviroCalc – Massachusetts EPP Tool

Angie Schmidt, Office of Environmental Assistance 651-215-0261

Angie Schmidt presented a new tool developed in the Commonwealth of Massachusetts called EnviroCalc. It is for calculating the environmental benefits associated with the purchase of certain products made from post-consumer recycled content. The post-consumer recycled products covered in this calculator are Paper (for example, janitorial paper products, copy paper, paper used in printing, office supplies, lottery tickets, etc), recycled plastic products (traffic cones, recycling bins, plastic containers and carts, etc.), recycled content metal products, remanufactured furniture, compost and mulch, recycled glass products, remanufactured antifreeze, and re-refined motor oil. **Energy Star® Products** include compact fluorescent light bulbs, computer monitors, copiers, and fax machines. The environmental benefits are available in recycled paper, plastic, metal, and glass. Also included are landfill space savings, wood saved in trees, energy savings in BTU's, and CO2 emissions. The calculator converts equivalents to households, loaded garbage trucks, acres of wood plantation, energy content in barrels of oil, and annual tailpipe emissions of cars. Additionally, it calculates electrical energy savings and cost savings for compact fluorescent lights, monitors, copiers, and fax machines. The calculator with related instructions is attached.

We decided at the meeting that collectively we would review EnviroCalc for State-specific discrepancies on the calculator. This is important because this calculator could be used as a supplement to the calculator we currently use for IPPAT as well as potentially replacing the paper calculator for the Pollution Prevention Summary Report. This is something to be addressed in a P2 Summary Report Instructions Committee. Please get responses or comments to Angie Schmidt at 651-215-0261 or angie.schmidt@state.mn.us.

EcoS.A.T. is another purchasing tool put out by the North American Green Purchasing Initiative. EcoS.A.T. is designed to help professional purchasers evaluate their organization's environmental purchasing initiatives and identify opportunities for improvement. Once areas for improvement have been determined a convenient Best Practices Guide is also available to assist in those very areas. The link for the tool is <http://www.cec.org/eco-sat/english/index.html>.

Printing Tip: Consider saving money by implementing least cost printing practices. First make sure that you are duplexing. Secondly, consider and advocate for the least cost printing option available to your office situation. Using a copying machine will cost you the least amount of money per copy. After that, use a Network Laser Printer. So print that document once on the Laser printer and copy the rest on the copy machine. Personal Inkjets/Lasers cost the most per copy.

Electronics Procurement Tool

Garth Hickle, Office of Environmental Assistance 651-215-0224

The Electronic Product Environmental Assessment Tool (EPEAT) is an environmental procurement tool designed to help institutional purchasers in the public and private sectors evaluate, compare and select desktop computers, laptops, and monitors based on their environmental attributes. Its development was prompted by a growing demand by institutional purchasers for an easy-to-use evaluation tool that allows the selection of electronic products based on environmental performance. The electronics industry welcomed EPEAT as a tool to provide a clear set of environmental criteria for product design.

EPEAT includes two major elements:

1. A set of environmental performance criteria for computers and monitors that have been adopted as an American National Standard by the Institute of Electrical and Electronics Engineers through a voluntary consensus process, called IEEE 1680.
2. An organization, The **Green Electronics Council**, which operates a web-based product declaration system for manufacturers, a verification system to ensure accuracy and credibility, and a listing of all registered products for purchasers.

IEEE 1680 consists of 23 required criteria and 28 optional criteria in 8 categories –

- reduction/elimination of environmentally sensitive materials;
- material selection;
- design for end of life;
- product longevity/life extension;
- energy conservation;
- end of life management;
- corporate performance; and
- packaging.

The EPEAT criteria were selected to be balanced and to cover multiple environmental attributes throughout the product's life cycle. The standard is stringent enough to promote better environmental design, manufacture, and end-of-life management, while reflecting existing technologies and technical limitations. Specific criteria are drawn heavily from programs such as Energy Star and the European Union's Directive on the Restriction of Hazardous Substances, while creating new elements that were agreed upon by the team.

EPEAT evaluates electronic products according to three tiers of environmental performance – Bronze, Silver and Gold. Bronze products meet all required criteria. Silver products meet all required criteria plus at least 14 optional criteria. Gold products meet all required criteria plus at least 21 optional criteria. For a copy of the IEEE 1680 Standard or for more information, contact Garth Hickle at 651-215-0224 or garth.hickle@state.mn.us.

Attendees

Ken Auer, Department of Military Affairs
 John Bryan, Metro Transit 612-349-7680
 Gene Christenson, University of Minnesota 612-626-1590
 Gordy Dormanen, Iron Range Resources 218-254-7967
 Bill Broessler, Minnesota Environmental Initiative/Clean Air Minnesota 612-334-3388
 Dave Engstrom, Department of Transportation (612) 725-2372
 Chris Gilchrist, Department of Commerce
 Garth Hickle, Pollution Control Agency 651-215-0224
 Marilyn Jordahl Larson, Department of Transportation 651-634-2151
 Jeff Ledermann, Pollution Control Agency 651-215-0236
 Don Matthys, Department of Natural Resources 651-259-5478
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 Bernie Steele, Department of Administration 651-296-0797
 Mike Taylor, Department of Commerce
 John Thompson, Metro Mosquito Control District, 612-643-8364
 Mark Wacek, Metropolitan Airports Commission 612 725-6428
 Marlene White, Office of Health Education 651-642-0517
 Roger Wirkkinen, Department of Revenue 651-556-4002

Governor's MnGREAT Winners

Minnesota Solar Electric Rebate Program – Minnesota Department of Commerce, State Energy Office

The Minnesota Solar Electric Rebate Program, run by the Minnesota Department of Commerce, provides an incentive to Minnesota electricity consumers to use solar electricity. The program offers general consumers the opportunity to receive roughly a 25 percent rebate on dealer-installed solar systems.

The state-run program has increased solar electricity in Minnesota significantly. Before the program began, Minnesota had 190 kilowatts of solar electricity installed. In the three plus years since, 223 kilowatts of additional solar electricity have been added—an increase of over 100 percent.

The Green Institute, located in Minneapolis, has the largest solar electric system in Minnesota and the bordering states. Minnesota is now ranked within the top 20 states nationally in terms of total solar capacity and solar capacity per kilowatt. In fact, notable states such as Texas and Florida now lag behind Minnesota in solar electricity installed per capita. It is estimated that the solar panels from this program will offset 223,000 kilowatt hours of traditional electricity.

Winona County Environmental Services Department- Used Motor Oil Container Program

Winona County's Used Motor Oil Container Program was implemented by the Environmental Services staff to best address the problem of improper containers being used by residents when disposing of used oil at the Winona Household Hazardous Waste Facility. The facility averages over 1,300 individuals that dispose of over 7,000 gallons of waste oil.

Staff experienced problems with residents bringing their oil into the facility in open buckets, plastic bags, unlabelled containers or very large containers. These containers would often break and were difficult for Winona County staff to handle.

In order to promote solid waste reduction, protect ground and surface water, recycle more oil, and help with worker safety, Staff came up with the idea to purchase efficiently sized 2½ gallon containers with educational labels and distribute them to Winona County residents that use the HHW center to dispose of their oil. Over 425 containers were purchased and handed out to residents. By purchasing the containers, the county has seen a reduction in spills, a decrease in staff time needed for oil recycling, and less contamination.

University of Minnesota E85 Program

The University of Minnesota, Parking and Transportation Services Division, began purchasing vehicles compatible for E85 fuel in 1995. E85 is a blend of 85% ethanol and 15% gasoline. From the initial purchase of six, the number of E85 vehicles has grown substantially to 71, or 14 percent of the university's fleet.

When the university relocated Fleet Services to a newly built facility in 2000, an E85 tank and pump were added into the plans.

In an effort to ensure that E85 was selected during on-campus refueling, drivers of leased and rented fleet vehicles were provided with a fuel key that works only at the E85 pump. This key prevents the driver of the vehicle from using any other type of gasoline at the St. Paul facility. This resulted in E85 becoming 50 percent of the total fuel used for E85 vehicles on the Twin Cities campus. The University is the largest user of E85 fuel both in the state of MN and nationally with over 20,000 gallons being used each year.

Your Eco Home Television Show – City of Fridley

Since 1998, Fridley, Minnesota has been incorporating recycling information into an ongoing community television program called Community Development Journal. A magazine-type format television program and a corresponding web page were developed. The web page, which is on the city's web site, offers viewers links to more detailed information about current and past television program topics. The show is produced quarterly and has environmental experts speak on topics that include waste reduction, environmentally friendly yard care, air quality, reuse and construction salvage. Cable television and the city's web site provided a no-cost way to distribute much-needed environmental education throughout the community.

The goals of the program were to convey regular recycling information to the public, communicate some of the positive environmental projects the City of Fridley has implemented, encourage residents to practice pollution

prevention at home, provide residents with a list of environmental resources and increase environmental education while decreasing overall costs and paper expenses.

Nearly 29,000 Fridley residents have access to electronic environmental programming, and the city has reached a wider audience by diversifying the way information is dispersed. The show helps Fridley maintain a steady recycling rate.

The Next Step for Recycling: Wayzata's Curbside Organics Collection Program

In 2003, Wayzata, Minnesota implemented a citywide pilot project to divert as much of Wayzata's residential source-separated organics (SSO) as possible to composting, rather than disposal or resource recovery.

At the beginning of the project, each of the 1250 households was given a 38 gallon-cart, a kitchen bucket to collect organic material from the home and a three-month supply of biodegradable bags. The organic material collected from the homes is brought to the Hennepin County Recycling Center and Transfer Station in Brooklyn Park for inspection to ensure that non-biodegradable contaminants are below-threshold levels. After the material is inspected, it is transported to NRG Processing Solutions, a composting facility located in Rosemount, MN.

As a result, NRG was able to compost all the material sent to its facility. The amount of material collected weekly is typically between 1½ to 2 tons.

During the pilot project, 215 tons of organics, primarily food waste and non-recyclable paper, was diverted from Wayzata's residential waste stream and composted into a valuable soil amendment. Residential garbage generated by Wayzata's residents decreased by 12 percent, from over 1,000 tons in 2002 to 926 tons in 2004, while recycling tonnage increased by 23 percent.

In early 2005, the Wayzata City Council unanimously approved adding organics collection to the city's regular recycling services.

MPCA/OEA Alliance for Reduction and Recycling of Waste (ARROW) Team

Established in 1989, staff from the Minnesota Pollution Control Agency and the Office of Environmental Assistance created a committee to provide building-specific information about waste reduction, reuse, and recycling. Staff in the building are encouraged to "walk the talk." Examples of some programs that the group has implemented in the building are:

- Continue to recycle materials such as tyveks, batteries, paper, beverage containers, and ink jet cartridges
- Maintain the native planting areas on the building's grounds
- Coordinate the Treasures Table, a reuse area where staff can drop-off slightly used items for other staff to take.
- Maintain the commercial composting program in the office. All organic material, including food waste, plant trimmings and non-recyclable paper are separated and placed into the composting containers throughout the building.
- Run the Waste- Buster Award program that recognizes staff in the building for environmental accomplishments that are above and beyond the call of their jobs.

In 1995, the amount of waste produced in the building was 113,000 pounds, by 2004, trash has been reduced to only 64,000 pounds.

Minnesota Army National Guard Battery Recharging Program, Rosemount FMS-1

The Minnesota Army National Guard Field Maintenance Shop located in Rosemount implemented a rechargeable dry cell battery program in 2003. As a result, this program eliminated most dry cell battery purchases and disposal costs.

The Minnesota Army National Guard generates approximately 7,000 pounds of disposable dry cell battery waste every year. This includes alkaline, lithium, nickel cadmium, mercury and magnesium batteries. It costs the Minnesota Army National Guard on average \$1.60 per pound to dispose of all the different battery technologies. Now that the battery program is fully implemented, there will be a waste battery disposal savings of near \$12,000 per year. This project is very successful and feedback from the soldiers is very positive. These changes have saved money, reduced pollution and improved efficiency.

Northeast Minnesota Mattress Recycling Pilot Project

The Northeast Minnesota Mattress Recycling Pilot Project is a complete system that provides for the collection, deconstruction, and recycling of recovered mattresses in Northeast Minnesota. The recycling project brought together partners from Goodwill Industries, universities, the hospitality industry, retailers, government and the seven counties in northeast Minnesota. All of the partners have been able to work together to establish consistent criteria for mattress acceptance, tipping fee adjustments and other complicated problems.

The program has recycled 7,745 mattresses and box springs, diverted over 200 tons of material from landfills and saved over 1,100 cubic yards of landfill space valued at over \$28,000. The program has recovered 90 tons of steel, 22 tons of cotton, nine tons of poly foam, and nine tons of mattress covers. Wooden frames are chipped and incorporated into the Western Lake Superior Sanitary District's Food Waste Composting Program. The program has generated more than \$46,000 in tipping fee income for Goodwill Industries and is now employing three full-time employees.

Camp Ripley Recycling Program

The Camp Ripley program was established to reduce waste generated throughout Camp Ripley by procuring environmentally friendly products, reducing waste, and recycling as much as possible. This goal has been incorporated and institutionalized within the Minnesota Army National Guard Environmental Management System and Policy.

In 1988, Camp Ripley was generating 8½ pounds of refuse per person per day. In 2004, this amount had dropped to less than 2½ pounds of refuse per person per day. Camp Ripley currently recycles over 63 different items and systematically reviews the waste stream for new or expanded recycling initiatives. Recycling has paid off for Camp Ripley, which has collected over \$625,000 through the sales of their material. More than 3,500 tons of material have been recycled which results in a landfill disposal cost savings of close to \$265,000. The program started out as one person doing the right thing and now Camp Ripley has maintained a recycling rate above 50% since 1995.

Glensheen Low Impact Development, Shoreline and Bank Stabilization Projects

The Glensheen Low Impact Development & Shoreline and Bank Stabilization projects were a result of an extremely successful partnership between the University of Minnesota Duluth, South St. Louis Soil and Water Conservation District, CCLNS Joint Powers Board, Minnesota Board of Water and Soil Resources, Great Lakes Commission and the University of Superior.

The Glensheen Estate is located on the rapidly developing shoreline of Lake Superior in Duluth. Glensheen Historic Estate is a museum run by the University of Minnesota Duluth. The storm water from the Glensheen parking lot used to run untreated through a trench over the clay bank directly into Lake Superior. It is now directed through grass swales, rock check dams and/ or a bio-retention pond before being discharged over the edge of the bank through rock chutes. This has improved the near shore water quality of Lake Superior.

The bank stabilization portion is protecting 140 feet of easily erodible bank with the use of armor stone, geosynthetic turf reinforcement and native plants. It is estimated that over 70 tons of soil erosion will be kept out of Lake Superior trout spawning habitat because of the project.