

# CLOSED Loop

all 2002

## STAR<sup>®</sup> training expands

**By Bill Zimmerle and  
Chad Gookin**

*Iowa Waste Reduction Center*

The Spray Technique Analysis and Research (STAR<sup>®</sup>) program at the Iowa Waste Reduction Center (IWRC) continues to expand its reach across the United States, and is being widely accepted as a revolutionary spray technique enhancement program. Four Hawaii colleges are among the most recent additions to the STAR<sup>®</sup> national training network.

Two instructors from Hawaii colleges, Steven Chu and Michael Siato, traveled to IWRC's STAR<sup>®</sup> training facility in Cedar Falls, IA, to receive instruction on STAR<sup>®</sup> training techniques in June.

On August 4, Chris Lampe and Bill Zimmerle, instructors from IWRC's STAR<sup>®</sup> team, traveled to Hawaii for two weeks of training. They visited four community colleges on four of Hawaii's islands to help set up the STAR<sup>®</sup> training program.

The first school to perform training was Honolulu Community College, where Chu trained Dennis Tanga of Maui Community College. The three-day training session resulted in a 23-percent decrease in material consumption.

Lampe and Zimmerle then traveled to Maui Community College located at Kahului to assist Tanga set up and implement the STAR<sup>®</sup> program. Tanga trained Reed Nakamoto, one of Tanga's top students. Nakamoto improved his spray technique significantly, while increasing his transfer efficiency by 20 percent. His material consumption also dropped by eight percent.

The third school to be trained was Hawaii Community College (HCC) in

Hilo. Siato trained both Lloyd Sanborn of HCC and Glenn Alquiza of Kauai Community College. Sanborn decreased his material consumption by nearly 23 percent. Alquiza increased his transfer efficiency by 23 percent and decreased his paint consumption by 38 percent.

The final training took place at Kauai Community College. Alquiza trained Alvin Higashi. Results from this training session have not yet been calculated.



# In the NEWS

## Recent Reorganization of Iowa DNR

By Traci McCollom

*IWRC Public Relations Assistant*

For several reasons, the Iowa Department of Natural Resources (DNR) has implemented the first reorganization of its structure since 1986. Starting July 1, the Iowa DNR has begun to improve the overall structure of the department by reducing the number of divisions from seven to three, and cutting the number of bureaus under those divisions from 21 to 16.

Along with enabling better coordination of similar functions, the change will put staff in more direct contact with Iowans and allow for the separation between environmental legal enforcement in the director's office and the environmental assistance operations in the Environmental Services Division. This improvement will better assure that initial environmental regulation contacts are assistance oriented and that legal enforcement is considered only as a last resort.

By eliminating four division administrator and five bureau chief positions, a savings of \$500,000 in salaries is expected. Over the next few years, the restructuring relocates about 130 Des Moines office positions, mostly environmental jobs, to field locations across Iowa. More information about the reorganization can be found at <http://www.state.ia.us/government/dnr/other/reorg.html>

## Common Questions About Waste from Composite Manufacturing Operations

By John Schweitzer

*Senior Director of Government Affairs, CF*

*Reprinted with permission from Composites Fabrication magazine*

*Are overspray and edge-trims hazardous wastes?*

Generators of waste have the responsibility of determining if a given waste is hazardous. However, composite manufacturers typically find that their overspray, edge trims, and similar materials, are neither listed wastes nor characteristic wastes, and are therefore not hazardous wastes.

*Is scrap molding compound hazardous waste?*

Generators of waste have the responsibility of determining if a given waste is hazardous. However, composite manufacturers typically find that scrap molding compounds are neither listed wastes nor characteristic wastes (specifically, they do not satisfy the criteria in 40 CFR 261.21 (a)); and are therefore not hazardous wastes.

*Is scrap polyester resin hazardous waste?*

Generators of waste have the responsibility of determining if a given waste is hazardous. However, composite manufacturers typically find that their scrap resins are ignitable (exhibiting a flash point of less than 60 deg. C), and are therefore hazardous wastes.

*When does the scrap resin become hazardous waste?*

Scrap resin becomes hazardous waste as soon as the generator forms an intent to discard it.

*What if the scrap resin is recycled?*

Materials that are reclaimed are not considered wastes. However, the storage and recycling process must take place in a completely closed system (see 40 CFR 261.4 (a)(8)). Since this is typically the case for scrap polyester resins, these materials are usually considered hazardous wastes even if they are recycled.

*Can scrap resins be polymerized and then disposed of as non-hazardous waste?*

In May of 1997, EPA approved polymerization ("POLYM") for the treatment of scrap resin, at the site of generation, without having to

*(continued on back page)*

# Call for papers for MSWG workshop

Multi-State Working Group on (MSWG) is an organization that convenes government, non-government and academic interests to conduct research,, promote dialogue, create networks and establish partnerships that improve the state of the environment, economy and community through systems-based public and private policy innovation.

Since 1999, MSWG has sponsored an annual workshop, each June or July, with support from the US EPA, states and businesses. It is a “hands-on” event that hosts Environmental Management System (EMS) practitioners from the US and abroad. The workshop has grown from the 75 participants in 1998 at the first workshop to almost 300 at the largest workshop.

The 2003 workshop is June 2-3 in San Antonio, TX at the Adams Mark Hotel. They are seeking abstracts from authors around the following premise and topic areas:

## **Workshop Premise:**

Government cannot solve all environmental problems. The law and its implementing federal system assume irresponsible use of the free enterprise system is the primary cause of environmental problems. Regulation has solved many problems but many remain that regulations cannot or will not solve. The Question: Can an innovative federal system using the states as laboratories release the untapped resources of businesses to tackle remaining environmental problems without risking the loss of current gains? Is business motivated more by partnerships or incentives or by threat of penalty? If the answer is “yes,” what’s in it for business? What are the roles of government and environmentalists?

## **Topic Areas:**

- ❖ Leading by Example: Decisions that Produce Environmental Value Because of the Federal-State System of in Spite of It
- ❖ Relationships Matter: Pulling Everyone’s Chain by Daring to be Different
- ❖ Community and Environmental Group Engagement and Participation
- ❖ Leveraging EMSs and Innovation for Business Value
- ❖ Budget and Unexpected Benefits of EMS Adoption
- ❖ Aligning Environmental Protection and Homeland Security
- ❖ Trade and Trans-National Ownership: Borderline Impacts and Environmental Performance
- ❖ The Triad: Innovation, Involvement and Incentives
- ❖ The Compliance Mindset: Changing Minds, Changing Performance
- ❖ Environmental Imagination and Ingenuity
- ❖ Corporate Governance

To view the topic areas in more detail go to the MSWG website.

## **Abstract Submission:**

To be considered, a one-page abstract should be sent by October 25, 2002. Authors are encouraged to use the electronic “Paper Abstract Submittal System (PASS)” on the MSWG website for paper submission.

At its December meeting, MSWG member will review submitted abstracts. Authors whose papers are selected will be notified in January 2003. Those authors whose papers are selected will

be asked to submit abstracts for conference proceedings and brochure by the end of February 2003.

Abstracts should be sent to Beth Graves, NC Division of Pollution Prevention and Environmental Assistance, 1639 Mail Service Center, Raleigh, NC 27699-1639; phone (919) 715-6506, fax (919) 715-6794, bth.graves@ncmail.net.

Abstract submission and registration information, when available, may be found at [www.mswg.org](http://www.mswg.org). For more information on the workshop of information about becoming a sponsor, contact workshop co-chairs Dave Ronald, MSWG Executive Director, (502) 508-1700, dronald@epinetwork.com or Ken Zarker, Workshop Chair, P2 Strategic Partnerships Program Small Business and Environmental Assistance Division, (512) 239-3144, kzarker@tnrcc.state.tx.us.

The Iowa Waste Reduction Center in Cooperation with Eastern Iowa Community College and Des Moines Area Community College will be hosting Workshops on November 15 and November 19.

## **November 15:**

Eastern Iowa Community College, Bettendorf  
8 a.m. to 3:30 p.m.

## **November 19:**

Des Moines Area Community College, Ankeny  
9 a.m. to 11:45 a.m.

Both workshops will highlight hazardous and solid waste regulations, air emission regulations, recycling, pollution prevention and much more. The workshops are a great opportunity for employers and/or companies to learn about environmental regulations that may impact their business, as well as local and state programs available to assist businesses with the issues.

For further information or to register for either workshop call the Iowa Waste Reduction Center at (800) 422-3109.

## News

(continued from inside page)

obtain a RCRA permit. (Visit <http://www.cfa-hq.org/scrapresin.pdf> to download the relevant pages of the May 12, 1997 Federal Register Notice approving polymerization for the treatment of scrap resin). The treatment must occur in tanks, containers or containment buildings, and these units must comply with the substantive standards set out in 40 CFR 262.34 (standards for so-called 90-day generator tanks, containers, and containment buildings). A written waste analysis plan is required and the amount of scrap resin that is polymerized counts toward the amount of waste generated monthly. The storage and treatment units should also comply with the RCRA air emissions standards set out in 40 CFR 265 Subpart CC. (Visit [http://www.cfa-hq.org/subpart\\_cc.htm](http://www.cfa-hq.org/subpart_cc.htm) for a discussion on Subpart CC air emission control requirements for storage and polymerization of scrap resin.) Generators should ensure that the resulting polymerized resin does not itself exhibit the characteristic of ignitability; many composite manufacturers who use polymerization to treat resin break open the drums to ensure that no ignitable liquids remain.

## October Smoke School Set By Brian Button

*Iowa Department of Natural Resources*

Visible Emission Evaluation School, or "smoke school," will be offering educational lecture information in Des Moines on Tuesday, October 22. Field information and actual smoke evaluations will be held October 23 and 24.

The training allows personnel to visually determine smoke opacity values in accordance with federal reference methods (Method 9, Code of Federal Regulations). Participants in this school can become certified opacity observers, often hired for the DNR, industries and consultants statewide.

This training, offered by Eastern Technical Associates, is a valuable environmental resource. For details on cost or to register visit [www.eta-is-opacity.com](http://www.eta-is-opacity.com) or call Debbie Scalise at 919-878-3188.

**Iowa Waste Reduction Center**  
Creating Tools for Small Business

**SMALL BUSINESS POLLUTION PREVENTION CENTER**

**SPRAY TECHNIQUE ANALYSIS AND RESEARCH PROGRAM**

**IOWA AIR EMISSIONS ASSISTANCE PROGRAM**

**IOWA WASTE EXCHANGE**

**MOBILE OUTREACH FOR POLLUTION PREVENTION**

**POLLUTION PREVENTION FOR PAINTING AND COATING COMPLIANCE ENHANCEMENT**

Articles in



may be reprinted.

As a courtesy, please contact the IWRC.

**Chad Gookin & Traci McCol**  
Editors (800) 422-3109

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**FALL  
2002**



**Iowa Waste Reduction Center  
University of Northern Iowa  
1005 Technology Parkway  
Cedar Falls, IA 50613-6951**

# IOWA waste exchange

July 2002

cooperative effort of the

- Iowa Waste Reduction Center/University of Northern Iowa
- Iowa Department of Economic Development/Recycle Iowa
- Iowa Department of Natural Resources
- Iowa Community Colleges
- Local Councils of Government
- Iowa Solid Waste Agencies

Iowa Waste Exchange  
diverts  
**100,000 tons**  
Saves businesses over **\$3.8M**  
in disposal

## By Johanna Woelfel

Recycle Iowa

## and Jeff Beneke

Iowa Waste Reduction Center

The Iowa Waste Exchange program is a cooperative effort between Recycle Iowa/Iowa Department of Economic Development, the Iowa Waste Reduction Center, the Iowa Department of Natural Resources, Iowa Community Colleges, Local Councils of Governments, and Iowa Solid Waste Agencies.

In the past fiscal year (July 1, 2001 to June 30, 2002), the Iowa Waste Exchange program found uses for nearly 500 mate-

rials, diverting over 100,000 tons of waste from landfills. Based on Iowa Department of Natural Resources tonnage fee estimates, the associated savings to state businesses resulting from avoided disposal costs is over 3.8 million dollars. The Iowa Waste Exchange far surpassed its goal of diverting 75,000 tons of waste materials from state landfills this year.

Since its inception in 1990, the program has helped thousands of businesses find new uses and new users for industrial materials and by-products. In addition to avoiding disposal costs, companies taking advantage of the services may also realize savings in avoided purchases, reductions in transportation costs, increased storage space, and other benefits.

The Iowa Waste Exchange was created to provide Iowa industries with smart waste management alternatives and business assistance services that result in both economic and environmental benefits, including waste reduction from Iowa landfills.

Successful match  
saves  
money  
and resources



## By Dennis Hayworth

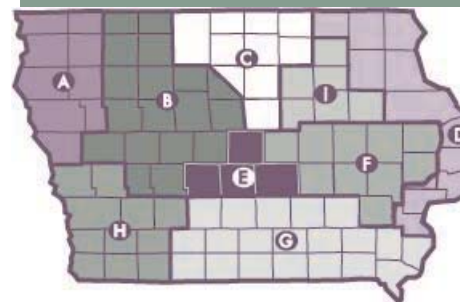
IWE Resource Specialist, Area E

Richard Paxton of the 3-M plant in Ames contacted Dennis Hayworth of the Iowa Waste Exchange and

indicated the polypropylene sheets he had were the wrong thickness. Paxton asked for Hayworth's help in recycling the polypropylene sheets.

After searching the Iowa Waste Exchange database, Hayworth came across Delta Plastics, which grinds polypropylene into pellets for reuse. The introduction between 3-M and Delta Plastics resulted in a diversion of 146.5 tons from the landfill. As a result of the match, 3-M was able to use the pellets to make the sheets the right thickness for their production needs. By utilizing the Iowa Waste Exchange, 3-M was able to reuse the material and avoid \$7,000 in disposal cost.

## Iowa Waste Exchange Regions and Specialists



- |                                                                                                    |                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>A:</b><br>PERRY NELSON<br>Western Iowa Tech<br>Community College<br>(712) 274-8733<br>Ext. 1560 | <b>F:</b><br>RICK MEYERS<br>(Linn County only)<br>and<br>JOHN KOCH<br>Kirkwood Training<br>and Outreach<br>Services<br>(319) 398-5665,<br>(319) 398-4904 |
| <b>B:</b><br>FRED KESTEN<br>Region XII Council of<br>Governments<br>(712) 792-9914                 | <b>G:</b><br>JIM REIMER<br>Indian Hills<br>Community College<br>(641) 683-5269                                                                           |
| <b>C:</b><br>North Iowa Area<br>Community College<br>(641) 422-4379                                | <b>H:</b><br>BILL PENDGRAFT<br>Iowa Western<br>Community College<br>(712) 325-3309<br>Ext. 3309                                                          |
| <b>D:</b><br>JULIE PLUMMER<br>Eastern Iowa<br>Community College<br>District<br>(563) 336-3319      | <b>I:</b><br>JODI JEANES<br>Iowa Northland<br>Regional<br>Council of<br>Governments<br>(319) 235-0311                                                    |
| <b>E:</b><br>DENNIS<br>HAYWORTH<br>DMACC - Business<br>Resources<br>(515) 964-6346                 |                                                                                                                                                          |

ITEM	DESCRIPTION/AMOUNT	ID#	CONTACT
<b>Chemicals</b>			
Alberto hair conditioner (virgin 16 oz bottles)	One time only, 250 pounds	9940	G - Jim
Ammonium hydroxyl fluoride (ice melt)	One time only, 1,600 pounds	9918	H - Bill
Chlortetracycline	One time only, 10 drums	9931	I - Jodi
Coal	One time only, 600 pounds	9839	I - Jodi
Dyes	One time only, 247 pounds	9549	B - Fred
Zinc oxide bags	One time only, 8,000 pounds	9977	H - Bill
<b>Fluorescent Lights</b>			
Fluorescent bulbs/lamps, T-12's, almost NEW	One time only, 600 lamps	9879	F - John
<b>Glass</b>			
Mirror glass	Ongoing, 20,000 pounds per month	6594	D - Julie
<b>Liquid Waste</b>			
Molasses rinse	Ongoing, 16,800,000 pounds per year	9178	A - Perry
<b>Metals</b>			
Aluminum foil scrap	Ongoing, 48,000 pounds per year	9728	H - Bill
Safety solvent bench cans	One time only, 240 pounds	9967	I - Jodi
Steel bar stock, 4 & 8 foot pieces	Ongoing, 150,000 pounds per year	9847	F - Rick
<b>Miscellaneous</b>			
Barrel tumbler (50 gal.)	One time only, 500 pounds	9943	G - Jim
Cold press	One time only, 1 unit	9942	G - Jim
Crushed lime	One time only, 1,250 pounds	9969	I - Jodi
Denison hydraulic hot 50 ton press	One time only, 10,000 pounds	9941	G - Jim
Dry powder paint - grey primer	One time only, 1,745 pounds	8324	D - Julie
Drywall scraps (gypsum)	Ongoing, 840,000 pounds per year	108	D - Julie
Enamel paint (virgin)	Ongoing, 25 gallons per year	9501	G - Jim
Heat treating machine	One time only, 1 unit	9945	G - Jim
Lab equipment	One time only, 200 pounds	9981	A - Perry
Mica flakes	One time only, 10,000 pounds	9051	E - Dennis
Sand, foundry - can be used as flowable fill	Ongoing, 28,800,000 pounds per year	1604	D - Julie
Sand, white silica (beach quality)	Ongoing, 1,000,000 pounds per year	100	G - Jim
Seco dust collector (new 4-bag)	One time only, 1,000 pounds	9976	G - Jim
Sharper grinding wheel	One time only, 1 unit	9944	G - Jim
Somach washer	One time only, 2 units	9997	A - Perry
Talc poly 9610	One time only, 10,000 pounds	9050	E - Dennis
Zenolite	One time only, 800 pounds	9968	I - Jodi

recycling. By using the Iowa Waste Exchange, you may be able to save your company money. At the same time, you can help reduce waste and save natural resources. Listing is free-of-charge. Solid waste fees fund the service.

umn marked "Contact" and call the specialist(s) listed on the front page of this insert. A searchable list of materials available through the Iowa Waste Exchange can be found at: [www.recycleiowa.org](http://www.recycleiowa.org) or [www.iwrc.org/exchange](http://www.iwrc.org/exchange).

ITEM	DESCRIPTION/AMOUNT	ID#	CONTACT
<b>Organic Waste</b>			
Whey	Ongoing, 1,536 pounds per year	9712	I - Jodi
Grease, Cooking Oil	Ongoing, 2,340,000 pounds per year	22	E - Dennis
<b>Paper</b>			
"Fast-Packs", boxes with PUR Foam inside	Ongoing, 19,500 pounds per year	309	F - Rick
Abrasive paper waste	Ongoing, 600,000 pounds per month	8771	E - Dennis
<b>Plastics</b>			
10" white core plugs #2	Ongoing, 2,080 pounds per year	9841	H - Bill
Jelco HDPE plastic totes & lids	One time only, 30,000 pounds	9733	G - Jim
PE, crosslinked, black and natural	Ongoing, 200,000 pounds per year	636	F - John
Plastic pallets	One time only, 8,000 pounds	9782	F - John
Plastic purgings	Ongoing, 104,000 pounds per year	9907	F - John
Plastic super bags	One time only, 3,125 pounds	9978	H - Bill
Polyurethane closed cell foam	Ongoing, 832,000 pounds per year	7230	D - Julie
Recycled resin mix HD/LD	One time only, 20,350 pounds	9189	I - Jodi
Thin plastic trays	Ongoing, 120 pounds per year	9788	F - Rick
Vinyl rolls	One time only, 440,000 pounds	9584	H - Bill
<b>Rubber</b>			
Kraton rubber	Ongoing, 120,000 pounds per year	8773	E - Dennis
Rubber floor mat (4'x10')	Ongoing, 208,000 pounds per year	8691	G - Jim
Rubber, gummed	Ongoing, 104,000 pounds per year	3029	A - Perry
<b>Textiles</b>			
Cotton, nylon, polyester foam	Ongoing, 34,000 pounds per week	456	A - Perry
Scrap felt pads	Ongoing, 166,400 pounds per year	8062	A - Perry
Wool trimmings, tanned sheep	Ongoing, 14,400 pounds per year	3737	D - Julie
<b>Wood</b>			
12'x6' Wood Skids	Ongoing, 8,000 pounds per year	9938	G - Jim
Balsa wood, sawdust	Ongoing, 132,000 pound per year	330	F - John
Oak lumber 1"x4"x10'	One time only, 90,000 pounds	9957	G - Jim
Oak lumber 2"x4"x10'	One time only, 90,000 pounds	9958	G - Jim
Pallets - odd sizes	Ongoing, 780,000 pounds per year	9930	I - Jodi
Plywood and particle board cut offs	Ongoing, 38,500 pounds per month	8072	E - Dennis
Wood pallets 48"x32"	Ongoing, 20,800 pounds per year	9904	G - Jim
Wood pallets 48"x40"	Ongoing, 23,400 pounds per year	9903	G - Jim
Wooden spools	Ongoing, 321,000 pounds per year	9852	F - Rick

# Reuse benefits customers

**By Julie Plummer**

*IWE Resource Specialist, Area D*



*Julie Plummer*

Guttenberg Industries, Inc. is a plastic injection molding company with facilities located in both Guttenberg and Garnavillo, Iowa. Plastic pellets, the raw material used in the injection molding process, arrive at the Garnavillo facility in gaylord containers. Guttenberg Industries re-uses many of these gaylords internally, to package and ship out the parts that they manufacture. Their customers then flatten the gaylord containers and send them back to the Garnavillo facility. Each gaylord is reused many times in this manner, saving Guttenberg Industries the cost of buying new shipping containers – a savings passed on to their customers as a lower product price.

Since gaylords filled with plastic pellets are always arriving at Guttenberg Industries, and Guttenberg Industries consistently reuses the containers many times over, a surplus of gaylords results. Guttenberg Industries makes these extra gaylords available to other business for a small fee. Safety Coordinator Angie Sickels indicated that Guttenberg Industries provides a total of about 400 gaylords per year to three other businesses. This results in not only savings from avoided waste disposal costs, but also generates about \$1400 in revenue from the small fee charged for the gaylords.

“Our internal reuse of gaylords gives us the ability to contribute to environmental stewardship,” Sickels

said. “Recycling in our part of the state is difficult - we have found that few companies are willing to travel to our area for recycling unless there is a large quantity of material available. Providing gaylords for reuse by other area companies is another way we have found to be environmentally responsible.”

One Northeast Iowa company that consistently purchases reused gaylords from Guttenberg Industries Garnavillo facility is East Iowa Machine Company, Inc. (EIMCo) in Farley, Iowa. EIMCo is a CNC Job Shop requiring sturdy containers in order to ship manufactured metal components. The company has found that using recycled triple-wall gaylords from Guttenberg Industries works quite efficiently.

EIMCo's Safety Coordinator, Mary Klaren, works regularly with Iowa Waste Exchange Representative Julie Plummer to locate specific gaylord containers and flat cardboard spacer pieces that will facilitate packing and shipping parts from EIMCo's plasma cutting and CNC departments. EIMCo's commitment to recycling and reusing materials whenever possible is evidenced by employees like Mary, who reports she has never purchased a new gaylord.

EIMCo often delivers machined parts to various eastern Iowa locations and then brings used gaylords and cardboard flats back on a truck that otherwise would return partially loaded or even empty. These efforts eliminate some of the cost associated with the transport of reusable materials and purchasing of shipping materials. Ultimately, EIMCo passes these savings on to its customers.

## Sorry, we're booked...

**By Dennis Hayworth**

*IWE Resource Specialist, Area E*



*Dennis Hayworth*

During a conversation with Mick Barry of Mid-America Recycling Company, Dennis Hayworth, IWE Area Resource Specialist, discovered Mid-America Recycling was recycling books.

Hayworth had recalled during a previous visit with West Des Moines Schools that the school had books to dispose of every year. He contacted Brenda Moorhead, West Des Moines Schools, and provided information on the possible opportunity to recycle their books. During a follow-up call, Hayworth discovered the books were now being recycled through Mid-America Recycling.

By introducing the two, paper from nearly eight tons of books were recycled, preventing them from piling up in a warehouse or from being landfilled.

The Iowa Waste Exchange is a cooperative effort of Recycle Iowa/Iowa Department of Economic Development, the Iowa Waste Reduction Center, the Iowa Department of Natural Resources, Iowa Community Colleges, Local Councils of Government and Iowa Solid Waste Agencies. The Exchange will not determine what may constitute a hazardous substance or create a hazardous situation. The Exchange will not make judgements with respect to any legal requirements, particularly for the storage, transportation, treatment or disposal of what may be defined as hazardous substances. For information about hazardous waste reduction and/or proper disposal, call the Department of Natural Resources Energy and Waste Management Bureau at (800) 367-1025 or the IWRC at (800) 422-3109.