

WasteMatters

The Energy & Waste Management Bureau - Iowa Department of Natural Resources

Waste Characterization Study Completed

Nearly 40 percent of Iowa's solid waste stream – more than 1 million tons of waste – has the potential to be reduced, recycled or composted, according to a recent study.

The *Iowa Statewide Waste Characterization Study*, prepared for the Iowa DNR by R.W. Beck, identifies the types and estimated quantities of waste disposed at Iowa solid waste facilities in 2005, and compares the data to a 1998 waste characterization study, also prepared by R.W. Beck.

"The study is a valuable tool for the DNR and the solid waste community to see how we're all doing with our efforts and to help us manage our resources more effectively and efficiently," said Jeff Geerts, program planner with the DNR's Energy and Waste Management Bureau.

For the 1998 study, statewide estimates were obtained from waste sorts conducted at five Iowa facilities. The 2005 study used a comparable methodology to sort and calculate waste quantities at six facilities: Boone County Landfill, Cedar Rapids/Linn County Solid Waste Agency Landfill Site #1, Des Moines County Regional Waste Commission Landfill, Dubuque Metropolitan Area Solid Waste Agency Landfill, Metro Waste Authority Metro Park East Landfill, and Northwest Iowa Area Solid Waste Agency Landfill. A total of 300 samples representing 69,313 pounds of municipal solid waste were sorted.

DIVERSION OPPORTUNITIES HIGHLIGHTED

Iowa's disposed solid waste stream continues to contain high

amounts of materials that can be reused, recycled and composted.

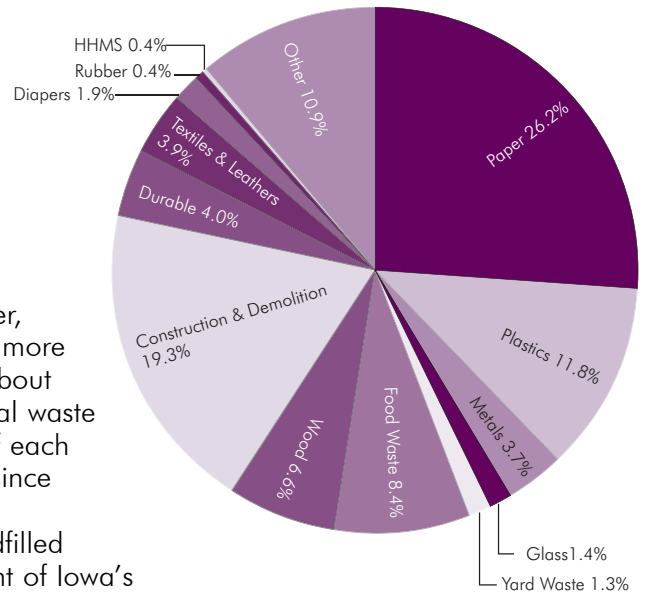
The study shows, for example, that there is still a great need to divert old corrugated cardboard (OCC) and mixed recyclable paper from our landfills. Together, these materials comprise more than 328,000 tons, or about 12.25 percent, of the total waste stream – and amounts of each material have increased since 1998.

Geerts called the landfilled amounts surprising in light of Iowa's well-developed infrastructure and markets for these materials. "We all need to do a better job to get paper and OCC out of the waste stream. The DNR's technical and financial assistance programs are ready to help with finding markets and identifying opportunities," he said.

The study identifies landfill bans of OCC as one policy option that has been successful. The Cedar Rapids/Linn County facility bans OCC from the landfill, and the percentage of OCC at that facility was significantly lower than what was found at the other five facilities.

The 225,000 tons of food waste and 138,000 tons of compostable paper in Iowa's landfills represent the greatest opportunity for composting, according to the study.

"There is huge potential to divert these materials, and a variety of approaches around the state show what can be done with collection, processing and end-use," Geerts said. He cited the City of Cedar Rapids, which collects residential food residuals at the curb with yard



2005 Iowa Statewide Solid Waste Composition

trimmings; Chamness Technology in Eddyville, which composts by-products from food processors; and the DNR's recent work with a municipal facility to study the feasibility of anaerobic digestion to produce energy from food processing and animal feed residuals.

The study also showed marked increases since 1998 in landfilled PET #1 plastic (up 62 percent), film/wrap/bags (up 253 percent) and construction and demolition (C&D) materials (up nearly 50 percent). An estimated 516,000 tons of construction and demolition debris are landfilled in Iowa, representing 19.3 percent of the entire landfilled waste stream.

REGIONAL COLLECTION CENTERS WORK FOR IOWA

The good news is that the proportions of several materials have

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International Interns Come to Iowa

Pollution Prevention Services has partnered with the University of Iowa College of Engineering's Engineers for a Sustainable World group to host two international student interns during the spring semester. The students are part of an intern exchange program with Xicotepec de Juarez, Puebla, Mexico and Universidad Técnica Federico Santa María, Valparaíso, Chile. The program adapts the Department of Natural Resources (DNR's) existing pollution prevention internship program curriculum to improve the effectiveness of students in differing cultural and industrial settings.

"We feel that it is possible to alter our existing training to make lessons applicable to conditions in Mexico and elsewhere, and that a curriculum that includes different levels of technology and diverse cultural mores will lead to more creative efforts both in Iowa and abroad," said Jeff Fiagle, team leader for Pollution Prevention Services.

The first student, Erendira Vargas Ayala, arrived in Iowa in mid-January. After intensive training, Ayala began her internship with the University of Iowa's facility maintenance staff to work on energy efficiency projects around campus. The second intern, Daniel Alejandro Diaz Saez, came to Iowa from Chile in mid-March. Saez's project will focus on studying the feasibility of installing a wind turbine to generate electricity on campus.

Both students are spending 12 weeks in Iowa. Funding for the international exchange is being provided by a U.S. Environmental Protection Agency education grant.

For more information, contact Jeff Fiagle at (515) 281-5353 or Jeff.Fiagle@dnr.state.ia.us.



Hurricane Katrina Victims Benefit From Iowa Waste Exchange

Many government and private agencies are continuing to help victims of Hurricane Katrina including the Iowa Waste Exchange (IWE). The waste exchange brings companies together to ensure that waste materials that may serve another purpose are diverted from Iowa landfills.

In May 2005, Shelly Codner, Iowa Waste Exchange Resource Specialist, acquired approximately 12 tons of new and slightly used textbooks from a school that had been storing them in an area of their building slated for demolition. These books, which were transported to Codner's office for storage, included full sets of Scholastic's Literacy in Place reading series. Through various matches with private schools and home-schooled students, the Iowa Waste Exchange had matched nearly six tons of these curriculum materials, but six tons remained.

In addition to staple items such as food and water, usable textbooks became a high-priority need for students of the Katrina disaster. With the assistance of volunteers from North Butler High School's Student

Council, who sorted, boxed and loaded the available books, Codner transported them to a relief trailer at St. Paul's Lutheran Church in Hampton, Iowa. St. Paul's had secured the use of a trailer through the generosity of a private trucking company. The items were loaded by Codner and volunteers from St. Paul's and then were transported to students in Mississippi.

This transaction diverted nearly six tons of usable materials from the landfill, saved \$240 in disposal fees as well as provided nearly \$5,000 worth of curriculum materials to students and hurricane victims in Mississippi.

"Matches such as these make working with the Iowa Waste Exchange especially gratifying," said Codner. "The students and principal at North Butler High School and St. Paul's Lutheran Church helped make this exchange happen. Their assistance and volunteer efforts visibly display Iowa's hospitality."

For more information on the Iowa Waste Exchange, visit www.recycleiowa.org.

Iowa Waste Exchange Makes Improvements

Members of state government and the recycling sector met recently to discuss ways to improve upon or beyond the current success of the Iowa Waste Exchange (IWE) program. This process improvement event was held January 9-11 in Des Moines.

The main goals for holding the process improvement event were: to identify ways to successfully sustain the IWE into the future; to identify options for structuring the program and services to best meet the needs of the program's customers; and to create a timeline to implement a new program model by July 1.

The Iowa Waste Exchange provides Iowa industries with smart waste management alternatives and business assistance services that result in both economic and environmental benefits including waste diversion from Iowa landfills.

The IWE brings companies together to ensure that waste materials that may serve another purpose are diverted from landfills and connected to companies that need them. IWE is a confidential program

that actively promotes the reuse and recycling of Iowa business and industry by-products and wastes at no cost to the business.

Before the process improvement event began, a customer survey was conducted in November and December. Based on those results, several areas of improvement were identified to discuss at the January event.

These areas included developing more markets for recyclable materials in Iowa, strengthening follow up with customers, better clarifying the roles of partners, and enhancing communication among the partners.

During the event, the group outlined expectations and responsibilities for the administrator of the IWE program such as strategic planning, increasing program visibility, contract management, seeking funds to support the program, and developing partnerships. Additionally, the group examined the expectations for those delivering the IWE services to customers, such as tonnage diversion and recycling market development needs. As a result of the event, later discussions

determined that ownership of the IWE would be transferred to the DNR.

As a next step, the DNR issued a Request for Proposal (RFP) to select one or more grantees to deliver the IWE services. Responses for the RFP are due May 1. More information is available at www.iowadnr.com.

"The DNR appreciates the time the stakeholders spent to discuss and analyze ways we can make the program more efficient and effective for our customers," said Jeff Geerts, program planner with the DNR. "We look forward to receiving innovative proposals in response to the RFP to deliver the IWE services. We encourage all that are interested to apply including those organizations or individuals that thought about applying in the past but for whatever reason did not apply."

For more information, contact Jeff Geerts with the DNR at (515) 281-8176 or Jeff.Geerts@dnr.state.ia.us.

Summer Landfill Compliance Deadline Approaching

A new deadline is fast approaching for Iowa solid waste agencies. All landfills that are not in compliance with Subtitle D requirements must submit plans and specifications, engineering designs or notify the DNR of their intent to close by June 9, 2006.

"The DNR is taking this deadline seriously," said Jeff Myrom, DNR executive officer. "We will begin to move ahead with the enforcement process after the June 2006 deadline, so we encourage all agencies to notify us of their status right away or request a brief extension if they need a little more time to decide."

Some solid waste agencies have

already notified the DNR of their intent. For example, the Rathbun Area Solid Waste Commission plans to close the Appanoose County landfill and is investigating transfer station property options. The area's solid waste will be sent to the South Central Iowa Solid Waste Agency (SCISWA) via the new transfer station. The planning area has already submitted a certification of closure to the DNR and conducted leachate treatment and testing requirements for closed landfill cells.

Additionally, the DNR is moving forward with the Chapter 113 rulemaking process. The draft rules are being released in

stages on the DNR's Web site at www.iowadnr.com/waste/policy/landfill.html. ICN sessions are also planned to allow solid waste agencies to ask questions about the proposed rules. Dates and times for the ICN sessions can be found on the rule revision Web site listed above.

"The chapter is longer than before, so we want to allow adequate time for landfills to review the draft," said Myrom. "We are also simultaneously working with EPA regarding their review of the draft rules."

For more information, contact Jeff Myrom at the DNR at (515) 281-3302 or Jeff.Myrom@dnr.state.ia.us.

Scrap Tire Program Update



TARGETED SOLICITATION

The DNR has issued a targeted solicitation seeking scrap tire market development projects that will expand or establish self-sustaining, on-going markets for scrap tires. Proposals are due April 12, 2006. Visit www.iowadnr.com/rfp.html for more information or contact Jeff Geerts (515) 281-8176 or Jeff.Geerts@dnr.state.ia.us.

ABATEMENT

The clean up of the Bee Rite Tire Disposal site in Rhodes is nearly complete. More than 13,000 tons of tire material equivalent to approximately 1.3 million tires have been removed from the Bee Rite sites in State Center and Rhodes since December 2004. As soon as the weather permits, Greenman Technologies of Iowa will return to the site to remove the remaining small number of visible tires and approximately 200 tons of ash remaining from a December 2001 fire.

The DNR is working on updating the list of tire piles remaining in Iowa to target for abatement prior to the sunset of the Waste Tire Fund legislation on June 30, 2007.

EDUCATION/AWARENESS

The educational materials developed for the point-of-purchase

campaign to encourage consumers to "Leave the Old, When Buying New" are available on the Department of Natural Resources' Web site at www.iowadnr.com/waste/recycling/tires/retire.html.

If you are interested in receiving copies of any of these materials for local education efforts, please contact Jeff Geerts at (515) 281-8176 or Jeff.Geerts@dnr.state.ia.us.

STUDENT PUBLIC SERVICE ANNOUNCEMENT CONTEST

The Iowa Department of Natural Resources is hosting a public service announcement (PSA) contest to find three television and three radio 30-second ads to be aired across the state of Iowa. The state's "Retire Your Tires: Leave the Old When Buying New" campaign aims to increase the percentage of customers leaving their old tires at the dealership when purchasing new tires and decrease the number of illegally dumped tires. An estimated 1-out-of-5 Iowans still take their scrap tires with them when purchasing new tires. The campaign's primary target audience is rural and urban males, ages 25-54. The secondary target audience is rural and urban males and females, ages 18-35, who are consumers of tires.

Eligible parties for the contest include colleges and university students enrolled at the time of entry submission. Individuals or groups may submit entries.

Winners will be announced by May 1, 2006. Visit www.iowadnr.com/waste/recycling/tires/retire.html for more information.

TIRE HAULING/PROCESSING

The 26 tire haulers registered to haul tires in Iowa collected 50,227 tons of Iowa tires in fiscal year 2005 (July 1, 2004 – June 30, 2005). That is equivalent to approximately 5 million passenger tires. This number includes approximately 988,000

passenger tire equivalents from the Bee Rite Tire Disposal clean-up.

The same haulers also collected 13,261 additional tons of tires from outside of Iowa, equivalent to 1.3 million passenger tires. Visit www.iowadnr.com/waste/recycling/tires/files/haulerlist.pdf for a list of current registered haulers.

MARKET DEVELOPMENT

The Department of Natural Resources issued financial assistance contracts for two market development projects in Iowa. The projects were awarded funding from the Scrap Tire Market Development program in the summer and fall of 2005.

The first project provided forgivable loan funding for Tire Environmental Services of Muscatine, to purchase and install a screening and bagging system to increase sales of bulk and bagged rubber mulch. The second project provided a combination of forgivable, zero-interest and low-interest loans to Greenman Technologies of Iowa to increase its production capacity for ground rubber to 90,000 pounds per day to fulfill existing market demands.

In late November, the DNR gathered together five companies who expressed interest and have the potential in using tire-derived fuel. The purpose of the meeting was to assess where each business is at in the decision making process for using tire-derived fuel and what types of state assistance the companies may need to move their projects to the implementation stage. The DNR continues to follow up with these companies as they progress with internal evaluations of the environmental, engineering, and financial viability of using tire-derived fuel.

Waste Study continued

decreased since 1998. Glass has decreased by 16 percent and rubber by 24 percent. Household hazardous materials (HHMs) have decreased by 40 percent and now comprise .035 percent of the waste stream.

The study attributes the decrease in HHMs to comprehensive HHM programs that have been put in place since 1998, including 17 regional collection centers (RCCs). Since 1998 the number of RCCs has steadily increased, and they currently serve 69 counties. The DNR's goal is to have coverage available to every county in the state. Over the next two years, funding available to start an RCC will be reduced, while funding will increase for RCC operations support.

DNR Deputy Director Liz Christiansen called for a targeted approach to tackle the challenges posed by the study. "We need to go deep into the commercial and industrial sector to retrieve OCC, papers, plastic wraps, and C&D materials, and to divert commercial and industrial compostables," she said. "With limited resources at the state and local levels, that is where we're going to achieve the greatest diversions."

The DNR is exploring ways to refine its pollution prevention programs, the Iowa Waste Exchange, and the Solid Waste Alternatives Program (SWAP), in order to increase their efficiency and to provide the best possible outreach to business and industry.

For more information, contact Jeff Geerts at (515) 281-8176 or by e-mail at Jeff.Geerts@dnr.state.ia.us. To view the study online, visit www.iowadnr.com/waste/.



Take a Stand for Your Land Campaign to go Statewide

Recently, the DNR partnered with Keep Iowa Beautiful (KIB) to create a pilot program for combating illegal dumping in Iowa. The program was implemented in three targeted communities of differing sizes and geography with hopes that best practices could eventually be shared and used by all Iowa communities. Appanoose, Boone and Linn counties were all selected as the pilot communities for this program.

Research suggests that catching illegal dumpers and imposing strict penalties and fines may be the best deterrent to the problem. Local residents can assist law enforcement with that effort by reporting illegal dumping. For that reason, the DNR and KIB developed the *Take a Stand for Your Land* campaign, which encourages people to report illegal dumping to the proper authorities. The campaign pieces also reminded residents that illegal dumping is everyone's problem.

"All of the communities felt the campaign was valuable in combating illegal dumping," said Tom Anderson, senior environmental specialist at the DNR. "Each community determined a reporting and tracking system was key to the campaign's success as well as developing partnerships between local residents and officials."

Newspaper ads or inserts, which ran in two communities, and radio

ads, which ran in all three communities during spring and summer months, were effective methods of reaching local residents with the *Take a Stand for Your Land* message. Media coverage of illegal dumping program activities in all three communities also proved beneficial.

As a result of the pilot program, "A Community Guide to Combat Illegal Dumping" was created to send to all communities and counties in the state. Based on best practices determined by the pilot communities, the guide provides information and suggestions for creating an effective illegal dumping prevention program in any community. In addition, all campaign materials and templates are now available for statewide use on the DNR's Web site at www.iowadnr.com/waste/sw/illdump.

Besides the community guide and statewide campaign, recommendations forwarded to the DNR include a multi-county pilot surveillance program, television ads, and creating an educational campaign stressing the importance of local ordinances in illegal dumping control and prevention.

For more information, visit www.iowadnr.com or contact Tom Anderson with the DNR at (515) 281-8626 or Tom.Anderson@dnr.state.ia.us.

January SWAP Announcements

The following SWAP (Solid Waste Alternatives Program) awards are announced:

Page County Sanitary Land-fill Association of Clarinda was awarded \$487,500 to establish a permanent processing facility for recyclables collected in the Page County Planning Area and to expand their existing collection programs. The association also plans an education campaign targeted at both the

housing subdivision slated for development in Linn County. The infiltration-based approach relies heavily on the use of compost to increase the organic matter of developed soils. Funds would be applied toward the direct utilization of compost in an infiltration-design implementation.

Gateway Redevelopment Group of Davenport received \$24,750 to establish an Architectural Rescue Shop that will salvage usable, vintage building materials from structures undergoing renovation or demolition. Materials collected will be made available for public sale as well as utilized in the organization's abandoned building restoration projects. The group will also be working in cooperation with the City of Davenport and the Waste Commission of Scott County to develop new ordinances to encourage recycling and salvaging of materials at construction and demolition sites.

Prairie Solid Waste Agency of Creston was awarded \$9,000 to conduct a three-county recycling

infrastructure assessment of the agency's existing recycling programs. Efforts will work to identify existing program inefficiencies and develop initiatives for service, efficiency and cost improvements.

Professional Development Assistance Program

The Professional Development Assistance Program (PDA) seeks to support professional development workshops/conferences provided to Iowa citizens in the areas of minimizing of solid waste generation and increasing landfill diversion.

Proposals to the PDA program are accepted on an open basis throughout the year and will be reviewed upon submission of the completed application.

Applications are available at www.iowadnr.com/waste/.

For more information, contact Jennifer Reutzel with the DNR at (515) 281-8672 or Jennifer.Reutzel@dnr.state.ia.us.

SWAP
Application
Deadline:

July 3, 2006

residential and commercial sectors to increase recycling participation within the planning area.

Bi-State Regional Commission of Rock Island, Illinois received \$36,611 to establish five permanent collection sites for electronic waste (e-waste) in Cedar, Delaware, Dubuque, Jackson and Muscatine counties. A public education campaign will also be developed to educate the counties' residents on proper e-waste handling, as well as the risks of improper disposal.

Jerry's Homes, Inc. of Cedar Rapids was awarded \$25,000 to demonstrate the superior effects of utilizing an infiltration-based design, rather than a conventional detention-basin design, for improved stormwater management in a tract-

Two New Sustainable Resources

**First Iowa Chapter of
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For more information,
contact Kevin Nordmeyer
at (505) 309-3208 or
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Waste Management - Mason City Wins Prestigious Environmental Excellence Award

Waste Management – Mason City has been named the recipient of an award for Special Recognition in Waste Management for 2005 and was honored by Gov. Tom Vilsack at a ceremony this spring in Des Moines.

The recognition is part of the Governor's Iowa Environmental Excellence Awards, a program which honors organizations, businesses and individuals for their leadership and innovation in protecting Iowa's natural resources.

"I am proud to recognize Waste Management for taking an active role in protecting our natural resources," Vilsack said. "Their leadership serves as a model in implementing environmental sustainability across the state of Iowa."

Waste Management – Mason City provides a full range of collection, disposal, recycling and

environmental services to residential, commercial and industrial customers in 13 counties in northern Iowa. Waste Management developed a Youth Recycling Green Team Project to engage youth organizations in a hands-on recycling education project



where youth learn by doing, teach others about recycling, and earn money for their organization. Youth organizations submit an application to become a Youth Recycling Green Team for a two-month time block. Following their selection, orientation and tour of the Waste Management Recycling Center, the Youth Recycling Green Team educates their families,

friends and the community about the benefits of recycling mixed paper and cardboard. The teams encourage the public to bring their mixed paper and cardboard to drop-off collection boxes at the Waste Management Recycling Center. Each team earns \$15 per ton for the recycled paper during their two-month time block. Now in its fifth year, 34 Youth Recycling Green Teams have recycled more than 4 million pounds of cardboard and mixed paper, earning more than \$30,000 for their organizations.

For more information about the Governor's Environmental Excellence Awards, visit www.iowadnr.com or contact Jill Cornell at (515) 281-0879 or Jill.Cornell@dnr.state.ia.us. Applications for the 2006 awards will be available in August.

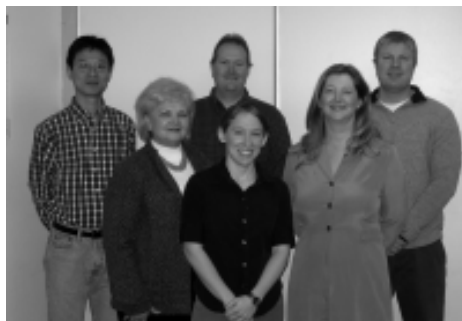
DNR Staff Updates

Alex Moon is the new environmental program supervisor for solid waste comprehensive planning and solid waste permitting and regulatory programs. Previously, Alex was a senior environmental specialist in the solid waste planning, permitting and engineering services section. Alex has been with the DNR since 2001.

Mick Leat is a new environmental engineer in the bureau's solid waste planning, permitting and engineering services section. Previously, Mick was an environmental engineer in the DNR's contaminated sites section and has been with the DNR since 1996.

Danielle Dilks is the new Pollution Prevention Intern Program coordinator. Previously, Danielle

worked in the DNR's energy section, managing the Energy Bank and Rebuild Iowa programs. Danielle has



(Left to Right) Jiong Zhou, Jan Loyson, Mick Leat, Amie Hart, Danielle Dilks, Alex Moon

been with the DNR since 2004.

Jan Loyson is the new marketing coordinator for the bureau's energy and waste

management programs. Previously, Jan was the intern program coordinator and has been with the DNR since 2000.

The DNR congratulates **Amie Hart** on the successful completion of the Professional Engineering (P.E.) exam in Environmental Engineering. Amie is an environmental engineer in the solid waste planning, permitting and engineering services section and has been with the DNR since 2001.

The DNR also congratulates **Jiong Zhou** on the successful completion of the Professional Engineering (P.E.) exam in Mechanical Engineering. Jiong is a mechanical engineer in the energy section and has been with the DNR since

On the
HORIZON
Upcoming events in the world of waste management

April 28, 2006: Chapter 113 ICN Session

For more information, visit www.iowadnr.com/waste/policy/landfill or contact Jeff Myrom with the DNR at (515) 281-3302; e-mail: Jeff.Myrom@dnr.state.ia.us.

May 1, 2006: Iowa Waste Exchange Requests for Proposals Due

For more information, visit www.iowadnr.com/rfp or contact Jeff Geerts with the DNR at (515) 281-8176; e-mail: Jeff.Geerts@dnr.state.ia.us.

May 1-3, 2006: ISOSWO's Spring Hot Topics Seminar

Held in Burlington, Iowa. For more information, contact Hal Morton at (319) 753-8126; e-mail: recycent@interl.net.

July 3, 2006: SWAP Application Deadline

For more information, contact Jennifer Reutzell with the DNR at (515) 281-8672; e-mail: Jennifer.Reutzell@dnr.state.ia.us.

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Energy and Waste Management Bureau
Iowa Department of Natural Resources
502 East Ninth Street
Des Moines, Iowa 50319-0034

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Jeff Vonk, Director
Wayne Gieselman,
Administrator, Environmental
Services Division
Brian Tormey, Chief, Energy and
Waste Management Bureau
Jill Cornell, Editor
Jill Cornell and
Gaye Wiekierak, writers



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