WASTEMATTERS

The Energy and Waste Management Bureau — Iowa Department of Natural Resources May 2004

What to Do with All Those Leftovers?

Iowa cattle, sheep, horses, chickens – and even ostriches – are enjoying the bounty provided by Loffredo Fresh Produce Company's "Scraps for Feed" program.

Loffredo's Des Moines headquarters processes fresh cut and specially prepared fruits and vegetables for more than 2,000 food service and retail establishments in seven Midwest states.

As byproducts of daily slicing, dicing, peeling and coring processes, about 1,300 tons of organic scraps are produced annually at Loffredo. Traditionally, these scraps were sent to the landfill – at a high cost to the company.

That all changed in 2003, when the "Scraps for Feed" program was launched, with $143,750 in financial assistance provided by DNR's Solid Waste Alternatives Program (SWAP). With the funding, Loffredo purchased equipment and vehicles that enable the company to process and deliver all usable food scraps to area farmers for supplemental livestock feed.

Loffredo employees sort food scraps at the company's processing plant in Des Moines.

"This is a win-win situation," said Valerie Drew, DNR's SWAP coordinator. "Because of Loffredo's forward thinking and proactive leadership, we have produce being used to its fullest, as a commodity instead of a waste."

Before the program began, managing the produce scraps was a labor-intensive process that required Loffredo staff to continually cart the scraps from food processing areas to dumpsters. Now, the scraps are placed on conveyors that take them to reduction and compression equipment. A customized waste blower then ejects the processed scraps into a dump trailer. From there, they are loaded into a truck and delivered to area farmers, at no cost to the recipients.

"Although the equipment was customized to fit our own system, we're hoping other processors like ourselves will take this as a model and a way to help the environment and our fellow Iowans," said Tracy Gilmore, Loffredo food service sales and marketing representative. "It has been very well received by farmers."

Currently, Loffredo makes regular weekly deliveries, on a rotating basis, to at least five farmers in surrounding counties. By diverting about 25 tons of produce from the landfill every week, Loffredo estimates annual savings of up to $100,000 per year.

Loffredo Satisfies Appetite of an Appreciative Audience with Food Scraps

Farmers take process full-circle

For three years, Black's Heritage Farm, near Ames, has grown sweet corn, green beans, tomatoes, pumpkins, and other fruits and vegetables for Loffredo Fresh Produce. Owners Norine and Duane Black also raise cattle, horses, sheep, goats, chickens, and ducks, and run a petting zoo in the fall.

The seeds of the "Scraps for Feed"

continued on page 6

DISPOSAL OPTIONS:
- **Rendering**
- **On-site burial**
- **Composting**
- **Landfills**
- **Incineration**

WHERE TO COMPOST:
Chapter 105 of the Iowa Administrative Code outlines these rules and regulations on composting placement:
- Outside of wetlands
- If inside the 100-year floodplain, in accordance with local and state regulations
- 100 feet from private wells
- 200 feet from public wells
- 50 feet from property lines
- 500 feet from inhabited residences
- 100 feet from flowing or intermittent streams, lakes or ponds

Composting: a new option for livestock mortality disposal

Most people know how to properly dispose of a leftover hamburger or pork chop. But what about a whole cow? Or hundreds of pigs? Individual and mass livestock mortalities on farms can be dealt with in several ways.

The most urgent need for disposal of animal carcasses is when a mass mortality occurs, usually the result of a fire or asphyxiation at a confined animal feeding operation. However, normal mortalities occur more regularly, and farmers can expect to lose 3 percent of their swine from normal mortalities. Percentages are lower for cattle.

The five most common ways to dispose animal carcasses are rendering, disposal in landfills, incineration, onsite burial and composting.

Rendering is one of the most frequently used options. Renderers pick up animal carcasses from producers and process them into a variety of products, including pet food and animal feed. Most areas in Iowa have access to rendering services; however, distances between plants and producers can increase travel time.

"Renderers provide an excellent service," said Tom Glanville, associate professor of agricultural and biosystems engineering at Iowa State University. "We're fortunate to still have reasonably good rendering service throughout much of Iowa."

Disposing livestock carcasses in landfills is another choice, although not all landfills in Iowa will accept livestock carcasses. If a specific landfill does refuse the carcass, the landfill should assist in arranging another disposal option. The DNR solid waste planning and permitting section can also provide assistance in choosing a disposal alternative.

> *"Composting offers good biosecurity, with less risk of infecting other animals. When done properly, it controls odors and with a good base layer, it reduces the amount of leachate leaking into the ground."*
>
> — Jeff Myrom, Iowa DNR

Incineration is generally considered practical only for small animals, such as poultry or young swine, due to the high capital and operating costs of large incinerators. Other drawbacks to this method can include expensive fuel and odors when the process is not handled correctly. However, incineration works throughout the year and protects shallow groundwater resources more effectively than burial, according to Glanville.

The remains of a swine confinement facility after a fire.

When groundwater factors allow, **onsite burial** is another alternative. Burial can be difficult during winter months or when the soil is saturated from spring rains. It is estimated that 40 percent of the state is not suited for burial due to shallow groundwater or proximity to streams or other environmentally sensitive areas. There are benefits to choosing onsite burial, as it can take place almost immediately after the carcass is discovered and the producer is in control of the situation.

Onsite burial can also work well during some mass mortalities. After the outbreak of foot and mouth disease in Europe in 2001, the DNR developed a mass animal burial policy for Iowa. Mass burial has occurred only a handful of times in recent years, usually after a fire or asphyxiation at a confinement site. To ensure groundwater protection, the DNR must give permission for a mass burial.

Composting is the newest method of carcass disposal. Composting was first used successfully by the poultry industry in the 1980s, and the swine industry has adopted composting in the past five years. Ongoing research, funded by the DNR, is proving that composting can work well for cattle as well. When properly done, animal composting lessens the risk of groundwater contamination compared to other methods.

"Composting can be a more pleasant decomposition and disposal process," said Jeff Myrom, DNR executive officer. "Composting offers good biosecurity, with less risk of infecting other animals. Also, when done correctly, it controls odors and with a good base layer, it prevents leachate leaking into the ground."

Bin composting can be used for normal, everyday, individual poultry

Beginning construction of a composting windrow after a fire at a sow facility.

and swine mortalities. Carcasses are placed in bins, generally 5 to 6 feet tall and 8 to 10 feet wide. The bins' small size helps speed up decomposition by retaining heat, and the enclosure prevents wind from blowing away compost materials while keeping other animals and rodents away from the carcasses. Bins with roofs keep out excess moisture, which can produce leachate and create odors in the compost pile.

"Bins are a great way to give producers control over the process, and they are easy to manage," Glanville said.

However, bins can be impractical for large animals like cattle, or for emergency mass mortalities, where there may not be enough time to build bins. In these cases, windrows may be used.

A windrow consists of a minimum 24-inch-thick layer of a base material, which helps reduce leachate. Ground cornstalks, sawdust, woodchips, ground straw and ground hay can all be used as base and cover materials.

Carcasses are placed on top of the base layer. Mature cattle carcasses should never be stacked; however smaller animals, such as poultry or swine, can possibly be stacked or layered.

A minimum 18 inches of material is necessary for covering the carcasses in a mound shape. The cover will manage itself, with temperatures in the pile ranging from 130 to 160 degrees Fahrenheit, which is high enough to kill many pathogens. The cover also works to minimize odors and reduce runoff.

Under normal conditions, cattle carcasses will completely decompose in eight months to a year. It may take longer if the carcass froze before composting. Smaller animals take less time to decompose, but still take a minimum of six months, Myrom said.

Composting requires ongoing management. Turning the windrow pile is not necessary. If the pile is turned, it should not be done before six months. Turning the pile can speed up decay, but if turned too early, it can cause the pile to become unsightly, attract animals, reduce biosecurity and create odors. When the pile has decomposed completely, it should be land-applied to cropland.

Contact your local DNR field office staff to help determine the best plan of action for both normal mortalities and emergency mass mortalities. The state veterinarian is responsible for determining the appropriate disposal method for mortalities from foreign animal diseases.

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Mass Mortalities Hit Iowa Producers

A fire in a farrowing building near Harlan in August 2002 caused the roof to collapse on top of 864 sows and 6,500 of the sows' litter. When the fire was extinguished, it was impossible to separate the swine from the pens that had held them, making carcass disposal difficult for the producer.

With assistance from the DNR field office in Atlantic, it was determined that the only option was onsite burial. No groundwater resources were located nearby, allowing a 20-foot deep hole to be created. The hogs were buried with the solid waste, only because they could not be separated from each other.

"The burial took place in a good location," said Alison Manz, an environmental specialist with the DNR's Atlantic field office. "Monitoring wells were installed upgradient of the burial site and approximately 30 feet downgradient to ensure the protection of groundwater."

Onsite burial was not an option when a fire at a sow facility near West Bend in Kossuth County killed 183 sows and 130 litters in September 2003. The water table was too shallow, and burial could have contaminated groundwater. The carcasses were charred, making them unfit for rendering. The producer did not want to travel to an out-of-county landfill that would accept the carcasses. So, the DNR recommended onsite composting.

One large windrow was constructed, with woodchips used for the base and top layers, and hogs were layered three high. The producer monitored temperatures in the windrow and did not turn it. This spring, the producer can land-apply it to crop fields.

"Composting diverts the waste from the landfill, and it's a natural way to break it down," said John Pecchia, an environmental specialist in the Mason City field office. "Once you build the windrow, it's very easy to maintain."

In case of a mass mortality, call your local DNR field office as soon as possible. DNR staff will travel to the site and provide assistance with carcass disposal.

FOR MORE INFORMATION:

Emergency cattle composting: www.abe.iastate.edu/cattlecomposting/

Swine Mortality Problems: www.abe.iastate.edu/pigsgone/

DNR FIELD OFFICES:

Manchester (563)927-2640

Mason City (641)424-4073

Spencer (712)262-4177

Atlantic (712)243-1934

Des Moines (515)725-0268

Washington (319)653-2135

DNR 24-HOUR EMERGENCY LINE: (515)281-8694

STATE VET: (515)281-8615 john.schiltz@idals.state.ia.us

FOREIGN ANIMAL DISEASE SPECIALIST: Pat Webb (515)242-5002

DNR

Goodwill Helps Iowa Businesses Profit from Recycling and Waste Reduction

A HELPING HAND:
Currently, 100 Goodwill clients in southeast Iowa are partnered with businesses and Goodwill facilities.

NO DUMPING:
SWAP awarded Goodwill Industries of Central Iowa $82,665 to curtail illegal dumping and unacceptable donations.

Businesses and industries committed to reusing and recycling materials generated at their sites are tapping into a valuable resource, by contracting with Goodwill Industries for sorting, cleaning, packaging, and many other services.

Partnerships between Goodwill Industries of Southeast Iowa and area companies demonstrate how contracting with Goodwill can benefit businesses, Goodwill clients, the environment and the community.

"When people think of Goodwill, they often just think of our retail stores. But virtually every Goodwill offers contracted services to meet unique business needs," said Leanne Sommers, vice president of Communications and Marketing for Goodwill Industries of Southeast Iowa. "Our clients benefit by enhancing their skills and abilities and it's a stepping stone to greater independence. Businesses reduce costs by freeing up their professional staff for other needs."

Illegally dumped furniture at the Davenport Goodwill store.

Currently, about 100 Goodwill clients in southeast Iowa are assisting several businesses with short-term, long-term, and seasonal needs, either at the business site or at supervised Goodwill facilities. Partners in Cedar Rapids include Rockwell Collins Corporate and Cedar River Paper, a Weyerhaeuser Business.

Rockwell Collins has gained local and national recognition for its reduction, reuse and recycling activities. "Partnerships with Goodwill and other community rehabilitation centers have played a key role in the success of our landfill avoidance programs," said Darrel Brothersen, senior environmental specialist with Rockwell Collins. "We are very pleased with the quality, reliability and consistency of their work."

Sorting bins at the Coralville Goodwill store.

Since 1991, Rockwell Collins has contracted with Goodwill to reclaim and sort its electronic packaging materials. Goodwill transports used materials from Rockwell Collins to its local facilities, then ships clean, sorted packaging back to the company, ready for reuse. The program has been adopted by other Rockwell Collins facilities nationwide.

Goodwill clients have also prepared and assembled materials from Rockwell Collins suppliers, sorted large volumes of mail, segregated outdated marketing materials, and have done other jobs, as needed.

"Their willingness to always take on more work has been great. We haven't challenged them with anything they can't do," Brothersen said.

Renee Neumann, manager of the Office of the Customer for Cedar River Paper, shares Brothersen's enthusiasm for Goodwill's work, which has enabled the business to aggressively pursue materials reclamation. "It's been a great partnership and their work is first-quality. They have met all of our needs, and they have been very flexible to work with," Neumann said.

For eight years, Cedar River has shipped used wooden core plugs, utilized at the end of paper rolls, to Goodwill, where they are sorted, repackaged and returned to the company for reuse. Annually, 67 tons of core plugs are reclaimed and reused by Cedar River Paper and other companies, saving Cedar River thousands of dollars each year.

The company also ships rubber trailer floor mats, used for paper shipment, to Goodwill, where they are sorted, stacked, and re-palleted. Mats that meet quality specifications are sent back to the company for reuse; the rest of the mats are picked up by other companies for a variety of applications. Twenty-two tons of mats are reclaimed annually.

Brothersen encourages companies to "look around your facility for tasks that employees are being underutilized at and see if those tasks can be outsourced to Goodwill. If you can find opportunities for these individuals, the entire community wins."

To learn more, contact a Goodwill near you. In southeast Iowa, contact Tom Cavanagh at (319) 393-3434 or by e-mail at tcavanagh@goodwillseiowa.org

Goodwill Curbs Illegal Dumping

Goodwill Industries of Central Iowa recently received $82,665 in DNR Solid Waste Alternatives Program (SWAP) funding to combat illegal dumping and to curtail donations of unacceptable items at retail stores and main facilities for the five Goodwills located in Iowa.

"Goodwill stores provide a needed service and have very positive recycling practices, but the amount of unacceptable and illegal materials they receive undermines their efforts, increases their disposal costs, and hurts the community," said Jeff Geerts, program planner with DNR's Energy and Waste Management Bureau.

The SWAP funds will enable the retail stores and main facilities to install fencing, lighting and security cameras, train staff, and improve signage and donor education.

Marlyn McKeen, president of Goodwill Industries of Central Iowa, reported that the facilities have completed most of the new measures and installation of the security cameras is underway.

"We hope to see results from the project in the spring and summer, when we typically see a lot of donation activity at the stores," McKeen said.

For more information, contact Valerie Drew, DNR SWAP coordinator, at (515) 281-8672 or by e-mail at valerie.drew@dnr.state.ia.us.

University of Iowa Launches Sustainable Systems Course

Engineering and urban planning students at The University of Iowa had an opportunity to learn about pollution-saving practices this semester through a new sustainable systems course.

More than 15 guest lecturers from Iowa and across the nation have taken turns teaching the course, called *Contemporary Topics in Civil Engineering:Sustainable Systems*. The Iowa DNR has helped coordinate topics and speakers, including environmental experts on water quality, green building design, risk management, energy efficiency and other topics.

"This is an exciting opportunity for the DNR to help influence the next generation of environmental stewards," said Jan Loyson, pollution prevention coordinator at the DNR.

The DNR's award-winning Pollution Prevention Intern Program helped initiate the new course. The intern program places Iowa college students in industries to help identify and implement pollution prevention practices. Anna Forkan, summer of 2003 intern at Tone Brothers, Inc. in Ankeny, and the University of Iowa Engineers for a Sustainable Future group made the connection between the DNR and the University of Iowa to establish the College of Engineering class.

"No other university has a partnership in sustainability like this in their engineering program," said Anna Forkan, campus coordinator. "We're empowering students to take responsibility for the environment."

Guest lecturers for the class included Liz Christiansen, Iowa DNR deputy director; Tom Graedel, Yale University professor; Dr. Richard L. Sandor, chairman and CEO of Chicago Climate Exchange, Inc.; Dr. Greg Norris from the Harvard School of Public Health; and others.

Supervising professors for the course are Dr. Jerald Schnoor, Dr. Keri Hornbuckle and Mr. Mike Valde.

The course is funded by the Center for Global and Environmental Research, EPA Region 7, Rebuild Iowa, Department of Energy, University of Iowa Speaker's Bureau and the Iowa Department of Natural Resources.

For more information, contact Jan Loyson, P2 intern coordinator at (515) 281-3142; e-mail: Jan.Loyson@dnr.state.ia.us

Electronic Waste Grants

Application Deadline: August 13, 2004

The DNR is now accepting proposals for grants up to $10,000 for new sustainable electronic waste management programs.

Contact: Amy Klopfenstein at (515) 281-0649 or Amy.Klopfenstein@dnr.state.ia.us

DID YOU KNOW?

- **At least $187 worth of electricity, petroleum, natural gas and coal are conserved by recycling one ton of materials in a typical curbside program.**
- **Recycling saves 11 times more energy than is generated by recovering methane gas from a landfill.**
- **Recycling significantly postpones the need and expense to site new solid waste landfills by slowing the rate at which landfills reach capacity and close.**
- **In comparison to landfilling, recycling avoids leachate and methane gas generation.**

Participate and Make Your Voice Heard

VOICE YOUR OPINION:
Send your ideas and suggestions to Jeff Myrom at the DNR.

The DNR invites Iowans to participate in rulemaking processes through informal public comments.

"We want to take into account people's thoughts and ideas about what they feel is important," said Jeff Myrom, executive officer at the DNR. "The earlier we know, the better."

Each year, the DNR makes numerous updates to administrative code language. Individuals are encouraged to participate in this process by providing written or verbal comments to Myrom. The following tips will ensure a clear understanding of the commenter's issues and recommendations:

- Include a mailing address and contact information.
- State if you are submitting comments as an individual, or on behalf of a business or organization.
- Cite the specific rule(s) on which you are commenting.
- Explain your views as clearly as possible by describing any assumptions, data, or technical information you used.
- Provide specific examples to illustrate your concerns.
- Offer alternative language that you think would improve the specific rule(s) and explain why.

The rulemaking process takes a minimum of six months, with major rules taking up to one and a half years. An advisory committee aids in the process, but Myrom encourages the public to voice ideas as well.

Written materials may be sent to Jeff Myrom, Iowa Department of Natural Resources, 502 E. 9th St., Des Moines, Iowa 50319-0034; fax (515) 281-8895. Myrom can also be reached at (515) 281-3302 or Jeff.Myrom@dnr.state.ia.us

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Loffredo Shares Leftovers

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DID YOU KNOW?
About 1,300 tons of organic scraps are produced annually at Loffredo.

program were sown when the Blacks and Loffredo began a temporary "dumpster exchange," when the Blacks would periodically haul unprocessed scraps from Loffredo to their farm, to be used as supplemental feed for their own livestock.

"The dumpster exchange with Black's and other farmers was a good start, but [Loffredo's] owners realized we could be a lot more efficient, serve more farmers, and use a lot more scraps with the new system," Gilmore said.

Now, Loffredo trucks a total of at least 22 tons of processed scraps to the farm, in three weekly deliveries. "We are amazed at the variety [of produce scraps] we get. The animals can choose hay, oats or vegetables, and they all choose the veggies first," said Norine Black. "We love the program and we're excited about helping the environment like this. It has been an incredible journey, a work in progress for everyone involved."

No scrap goes to waste at the farm; the Blacks compost all scraps that the animals do not consume for land application.

Potato peels and other vegetable scraps are transported to local farms for animal feed.

Anticipating future growth, Loffredo is continuing its educational programs for agricultural extension and other farmer's organizations. With the assistance of Iowa State University, nutritional analyses of the product scraps are ongoing. "In the future, it may even be possible for Loffredo to receive and process organic waste from other distributors, grocery stores and restaurants," Gilmore said.

For more information, contact Tracy Gilmore at (515) 285-3367, or at tgilmore@loffredo.com.

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New Program Helps Metal Finishers

The DNR's Pollution Prevention Services team is working with stakeholders to develop an Iowa Strategic Goals Program (ISGP). The ISGP is a voluntary initiative that assists metal finishers in exceeding environmental compliance limits. Goals of the ISGP include:

- 50 percent water reduction;
- 25 percent energy reduction;
- 50 percent reduction in land disposal of hazardous sludges
- 50 percent reduction in metals emissions to water and air;
- 98 percent metals use; and
- 90 percent reduction in organic TRI emissions.

Benefits of participating in the Strategic Goals Program include free confidential assistance, opportunities to discuss concerns and regulatory issues with government agencies, access to compliance and waste reduction experts, and the potential for reduced monitoring, with certain criteria and qualifications.

For more information about the ISGP, contact Jeff Fiagle at (515) 281-5353 or e-mail: Jeff.Fiagle@dnr.state.ia.us.

Iowa Sustainable Design Guide

Now Available

Resources and Solutions for:
- Building owners
- Designers
- Contractors
- Occupants

of commercial and residential buildings

Sustainable design =
- Reduction of environmental impacts
- Lower operating costs

Go to: www.sustainableiowa.org

For information on sustainable design contact Monica Stone at (515) 281-6361

Sustainable Design Projects Get Boost from SWAP

The Solid Waste Alternatives Program (SWAP) has provided funding for numerous sustainable design projects that have incorporated strategies to reduce impacts on the environment. Some examples include:

Golden Hills Resource Conservation & Development, Oakland

One of the first buildings in the state to be designed with LEED™ as a guiding principle, the RC&D office's sustainable design features include minimal site disturbance, low-flow plumbing, geothermal heat pump, daylighting, insulated concrete forms, reuse of office furniture, insulation manufactured from recycled newsprint and operable wood windows with high performance glazing.

Landfill of North Iowa Environmental Education Center, Clear Lake

This education center incorporates sustainable design practices by using numerous reused and recycled products and materials, daylighting, passive solar and geothermal heating. In addition, compost made on site was used for landscaping and natural limestone for both exterior and interior walls.

The Golden Hills RC&D building near Oakland.

Scott Area Recycling Center, Davenport

Complete since the summer of 2002, the center made an effort to reuse existing materials as well as purchase recycled-content products and materials. Sustainable building practices were also incorporated in the design of heating, air conditioning, lighting, and insulation.

Hartman Reserve Nature Center, Cedar Falls

The Gene & Betty Buckles Program Center was just completed in April 2004. The building features several types of flooring, all made from recycled materials; energy-efficient windows, lighting, and heating; and automatic fixtures and lights to conserve waste and energy use.

Huntsville Interpretive Center, Maquoketa

Construction began on this building in October 2003. Once complete, the building will be able to qualify for a minimum of 10 LEED™ credits by incorporating a geothermal heating and cooling system and using 100 percent recycled shingles, carpet, insulation and decking.

South Central Iowa Solid Waste Agency Environmental Education Center, Tracy

Complete in December 2003, this building also was designed with LEED™ principles in mind. In addition to using recycled content products for exterior siding, gypsum wallboard, ceiling tiles, and ceramic tiles, sustainable landscaping will reduce water use and the geothermal heating and cooling unit will reduce energy use.

For more information about SWAP funding opportunities, contact Valerie Drew at (515) 281-8672; e-mail: Valerie.Drew@dnr.state.ia.us.

GO GREEN:

- **Use salvaged materials (bricks, lumber, plumbing fixtures).**
- **Use 100 percent recycled insulation.**
- **Purchase energy efficient light bulbs.**
- **Buy Energy Star appliances.**
- **Use environmentally friendly pestcides.**

BUY GREEN:

- **Habitat for Humanity ReStore, Davenport (563)391-4949, sells gently used doors, windows, tiles, sinks, toilets, wallpaper, and other items.**
- **Green Building Supply, Fairfield (641)469-5558 or (800)405-0222, sells environmentally friendly construction products.**

On the HORIZON

Upcoming events in the world of waste management

June 3-4, 2004: The Second Heartlands Regional Scrap Tire Conference

Held in Omaha, Nebraska. For more information, contact the Rubber Manufacturers Association at (202) 682-4800 or visit: www.rma.org.

July 1, 2004: SWAP Application Deadline

The next application deadline for funding through the Solid Waste Alternatives Program is July 1. For application information, contact Valerie Drew with the DNR at (515) 281-8672; e-mail: Valerie.Drew@dnr.state.ia.us

June 7-10, 2004: Midwest Composting School 2004

Held at the Field Extension Education Laboratory at ISU in Ames, Iowa. Includes hands-on training, lectures, discussions and problem solving regarding composting issues. For more information, visit: www.aep.iastate.edu/compost/homepage.html

July 14, 2004: Solid Waste ICN Meeting

A Solid Waste ICN meeting will be held from 10 AM - noon at the following locations: Des Moines (Dept. of Economic Development), Mason City (community college), Cedar Rapids (Dept. of Human Services), Spencer and Washington (National Guard), and Manchester, Bettendorf, Boone, Sioux City and Atlantic (Public Libraries). For more information contact Jane Mild at (515) 281-5105; e-mail: Jane.Mild@dnr.state.ia.us

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