

WASTEMATTERS

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

Get Concrete Results with Recycling

Corell Recycling Doesn't Let Anything Go To Waste

In 1993, Corell Recycling was formed as a division of Corell Contractor, Inc., to recycle broken concrete and asphalt into reusable aggregate products. During a decade of steady growth, the company has helped set the standard for producing quality, economical products for construction, municipal, and general public markets in and around the Des Moines metropolitan area.

Corell Recycling accepts clean broken concrete and asphalt free of charge at its West Des Moines facility. After the material is broken down by rock crushing equipment, it is screened to various sizes and gradations and sold back to local markets for fill and base material, pipe bedding, stabilization material and cover material for roads, driveways and parking lots.

Nothing goes to waste during this process. For example, scrap metal, wire and rebar are removed by magnets and are ultimately recycled into reusable steel products. "If Bill (Lawrie) found cat hair in the material, he'd probably knit a sweater out of it," quipped Bill Ivanovich, superintendent of Neumann Brothers Construction, a long-time Corell Recycling customer.

Forming the division was a logical step for Corell Contractor, which had years of experience with aggregate materials used on its own construction projects.

"In the early years, we were our own best customer," said Bill Lawrie, manager of Corell's recycling division. "Today, our customer base numbers well over 400 companies who dispose of broken



Broken concrete is recycled and reused at Corell Recycling

concrete and asphalt and also use recycled products in their new construction projects. We started slow and developed a local retail trade. Then our services really began to take off."

With a 1995 zero-interest loan from DNR's Landfill Alternatives Financial Assistance Program (now known as the Solid Waste Alternatives Program), Corell purchased a larger crusher and other equipment that enabled the company to more than double its processing capability and to meet U.S. Department of Transportation (DOT) specifications.

Production statistics illustrate the company's growth: In 1995, Corell Recycling produced an estimated 74,000 tons; in 2003 production was approximately 250,000 tons.

"We've never had a year when we didn't outsell the prior year. Transforming these waste materials into reusable aggregate products just makes good

economic and environmental sense," Lawrie said.

Recycling paves the way to new products

Corell is well established in a number of local markets, including heavy construction markets that must meet high-quality specifications.

"If the DOT writes off on their products, that tells me a lot," Ivanovich said. "We (Neumann Bros. Construction) recycle our own materials at Corell whenever we can and have had great results with their products."

Neumann Brothers uses 3-inch aggregate for temporary roadbeds at construction sites and 1-1/2-inch clean DOT-specification aggregate for backfilling. As an alternative to using sand for grading under floors, the company uses concrete fines from Corell, combined with a binding agent. "The fines are a

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Decreasing tonnage fees from landfills affecting DNR programs

DECREASING REVENUES:

- Since 1999 DNR revenue from tonnage fees has dropped from an average of \$6.2 million to \$5.5 million (A drop of \$1.1 million)

- SWAP used to receive \$1.75 per ton; now receives an average of \$.92 per ton

- Decreased funding caused SWAP to shift from offering grants to providing loans

Reducing the amount of waste that reaches our landfills is generally a good thing. However, it presents a double-edged sword when it comes to funding for environmental protection.

Tonnage fees that are paid on landfilled waste fund the DNR's solid waste services and assistance programs. As waste and tonnage fees decrease, so does the DNR's solid waste budget, limiting services and impacting environmental protection efforts.

What is a tonnage fee?

For every ton of municipal solid waste that a garbage truck brings to an Iowa landfill, it pays a fee. This tonnage fee, collected on any municipal solid waste landfilled in the state, is obtained as part of the landfill's overall tipping fee.

The landfill keeps some of the tonnage fee for its own local planning and environmental protection activities, and sends a portion of the tonnage fee to the state.

While the base tonnage fee is \$4.25 per ton, the exact fee is based on performance measures for a landfill's waste diversion efforts, which can slightly increase or decrease the fee. Funds remitted to the DNR can range from \$1.95 to \$3.30 per ton.

Funding environmental protection

Fees sent to the Department of Natural Resources (DNR) fund key programs like the Solid Waste Alternatives Program (SWAP) and Regional Collection Centers (RCCs). Money from tonnage fees also goes toward solid waste permitting, com-

prehensive planning, management, DNR Environmental Services Division field offices and technical recycling assistance.

Since 1999, revenue has decreased from an average of \$6.2 million per year to \$5.5 million in 2003, a drop of \$1.1 million.

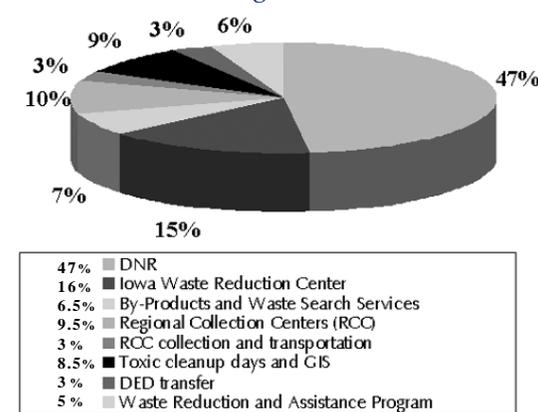
This lack of funding prevented the DNR from doing solid waste inspections during the last two months of the fiscal year. Employee training and travel were also significantly reduced in the fiscal year 2005 budget.

"If we cut back, it's in planning, permitting and inspection," said Brian Tormey, head of the DNR's energy and waste management bureau. "It impacts our ability to provide permits in a timely manner, other services and environmental protection."

Other program areas have also suffered from funding cuts. SWAP used to receive \$1.75 for every ton, but now receives an average of 92 cents per ton. This has led the program to shift from offering grants to providing repayable loans.

There are a number of different reasons for the drop in revenue. Waste reduction and recycling programs have helped cut the amount of waste being landfilled. Some waste from outside of Iowa is no longer landfilled in the state, and the economy has hurt the industrial sector, reducing landfilled waste, Myrom

Distribution of Tonnage Fees Paid to the DNR



"Tonnage fees are the only significant funding for the DNR's waste management program," said Jeff Myrom, DNR executive officer.

Other entities like the Iowa Waste Reduction Center and Iowa Waste Exchange are also partially funded by tonnage fees added to the solid waste account.

A small amount of funding for the DNR's waste management program

“Tonnage fees are the only significant funding for the DNR's waste management program.”

— Jeff Myrom, Iowa DNR

also comes from household hazardous waste retailer permit fees, the state road use tax fund, fines and penalties paid to the DNR, and grants.

Decreasing budgets

Over the past few years, revenues from tonnage fees have been decreasing, meaning smaller budgets for the DNR's waste management program.

said.

In addition, legislative changes have allowed more money to be kept at the local level — landfills used to retain 95 cents; now they keep from \$1.30 to \$1.55 per ton.

For example, of the tonnage fees taken in at the Carroll County Solid Waste Management Commission (CCSWMC) last year, the landfill retained about \$43,000, according to Director Mary Wittry.



The tonnage fees retained at the landfill went towards education, advertising for its regional collection center, and to complete its comprehensive planning report.

Wittry said that although the tonnage fees paid to the DNR by CCSWMC remain steady, the decrease in tonnage fees paid by other solid waste agencies across Iowa may create problems in the future for state programs.

“If the DNR has less funds to work with, it may have fewer staff, which may in turn lead to fewer services provided,” Wittry said. “I believe this could be huge in the next few years.”

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—Mary Wittry,
Carroll County Solid Waste
Management Commission

Future funding considerations

While no specific actions are currently planned, the DNR may have to consider options beyond tonnage fees if funding continues to decrease.

The DNR may consider pursuing alternative funding through legislative means to gain more freedom in allocating funds, or creating permit fees, Myrom said.

A permit fee study has been conducted by the DNR to find how to implement the fees, if needed in the future, for specific facilities or facilities that are currently not required to pay a tonnage fee.

“Permit fees across the board would be more sustainable and a steadier flow of money,” said Tormey.

Other options would be to further cut programs, or to consider a surcharge paid by generators of waste. Other states have a tax paid on all garbage by the generator of the waste (residential and commercial), rather than by the landfill.



Breakdown: Solid Waste Tonnage Fees

Of the tonnage fees remitted to the DNR, \$1.55 per ton is used for:

- 74¢
 - Iowa Department of Health transfer (maximum total of \$8,000)
 - Solid waste administration
 - Comprehensive planning
 - Recycling technical assistance
 - Solid waste permitting, planning, inspections
 - Division management
 - Environmental protection division field offices for solid waste activities
- 25¢
 - Iowa Waste Reduction Center (University of Northern Iowa)
- 10¢
 - Iowa Waste Exchange (Iowa Department of Economic Development)
- 15¢
 - Regional Collection Centers (establishment)
- 5¢
 - RCC collection and transportation (reimbursement for disposal costs)
- 13¢
 - Toxic cleanup days
 - Geographic Information Systems (GIS)
- 5¢
 - Recycle Iowa (Iowa Department of Economic Development)
- 8¢
 - DNR Pollution Prevention services

The remainder of the fee remitted to the DNR is used for:

- Special Waste Authorization Program
- Iowa Waste Exchange
- Solid Waste Alternatives Program (SWAP)

WHY THE DROP IN REVENUE?

- Waste reduction and recycling programs have helped cut waste
- Some waste from out-of-state is no longer landfilled in Iowa
- Economy has hurt the industrial sector, reducing its landfilled waste
- Legislative changes allow more money to be kept at the local level



Reusing Materials Goes A Step Further

A HELPING HAND:

The Quad Cities ReStore contributed \$67,000 to Habitat for Humanity over 18 months. The Des Moines ReStore contributed \$24,000 to Habitat for Humanity over one year.

SALVAGING SOMETHING USABLE:

MidAmerica Architectural Salvage deconstructs and salvages their own building materials for resale.



Reduce. Reuse. Recycle.

These three terms are synonymous with solid waste, but doing all three at once can be difficult. Several Iowa organizations and businesses are proving they can do all three and be successful. These businesses are taking a creative approach to reducing, reusing and recycling, all in the form of selling used and new building materials to the public at a discount.

"Reusing these items takes it a step further than recycling," said Tom Anderson, senior environmental specialist with the DNR. "This is a solid waste program that has social benefits."

Three of the programs are highlighted here:

Quad Cities Habitat ReStore

Habitat ReStore is a non-profit resale business operated by the Quad Cities chapter of Habitat for Humanity. The store opened its doors in December 2002.

In just 18 months, Habitat ReStore diverted 350 tons of waste from the landfill and contributed \$67,000 for Habitat for Humanity projects.

"Throwing an item away is our last option," said Cindy Kuhn, executive director.

The keys to a successful restore are definitely the donors, volunteers, customers and the community, Kuhn said.

"Stores like Home Depot and Lowe's make donations weekly," she said. "Our volunteers contribute hundreds of hours a week and our customer base comes to us basically by word of mouth. The entire community has embraced the idea of not throwing things away."

In 2003, Habitat ReStore received a Governor's Environmental Excellence Award in Waste Management and in 2004, they received the Putnam Museum and IMAX Theatre Environmental Stewardship Award.

With support from a \$60,000 DNR SWAP (Solid Waste Alternatives Program) grant, the store's business hours will expand and a part-time marketing associate and donations associate will be added to the staff.

Quad Cities Habitat ReStore is located at 3629 Mississippi Ave. in Davenport. For more information, contact Cindy Kuhn at (563) 391-4949.

Greater Des Moines Habitat ReStore

In a unique partnership with Dowling Catholic High School, the Greater Des Moines Habitat ReStore has been in operation since June 2003. Dowling's entrepreneurial studies class provided the volunteer resources necessary to start the store.

"The community is able to fulfill three missions with just one donation or purchase," said Mark Elliot, director of development for Greater Des Moines Habitat for Humanity. "They are protecting the environment by not throwing things away, supporting youth education and involvement and supporting Habitat for Humanity's mission to provide decent, affordable housing for low-income families."

In its first year, operating with limited hours and space, the ReStore diverted 38 tons of waste from the landfill and provided \$2,000 a month in revenue to Habitat for Humanity.

The store recently received a \$46,000 forgivable loan from the DNR's SWAP program. The loan will be used to expand the store's space and hours of operation.

"Along with our planned expansion, our goal is divert 350 tons from the landfill by our fourth year of operation," said Elliot.

Greater Des Moines Habitat ReStore is located at 2341 2nd Ave. in Des Moines. For more information, contact Mark Elliot at (515) 471-8686.



A customer looks at the Des Moines's ReStore inventory

MidAmerica Architectural Salvage, Dubuque

MidAmerica opened its doors to the public in December 2003, although the business worked on building its inventory for 2 years.

A unique feature about the business is that the staff actually deconstructs and salvages the building material themselves.

"When people first come into the store, they have this overwhelming look of interest because there is nothing like this near here," said Vance Delire, co-owner. "The most rewarding part is that people can now find what they are looking for."

MidAmerica is in the process of developing a computerized system to track inventory and to attribute weight to their items. A partnership is also being developed with local non-profit organizations to improve and restore local buildings.

MidAmerica is located at 1095 Elm St. in Dubuque. For more information, contact Vance Delire at (563) 588-2144.

DNR Improves Landfill Permitting Process

A revamped landfill permitting process is expected to increase efficiency and decrease the time it takes the DNR to process a landfill permit by nearly 85 percent.

Permit holders, engineers, solid waste organizations and other customers involved with landfill permits were instrumental in assisting the DNR with evaluating and recommending changes in the permit process.

Focus groups held in March and April enabled DNR's customers to identify concerns and recommendations for every part of the permit process. An intensive four-day process improvement event, held in June, addressed the following objectives based on top focus group concerns: to develop a process that reduces average wait time by 75 percent; to

provide consistent permits and amendments; and to develop more efficient tracking of landfill-related information.

"It was important to have customers involved because it helped the team establish guidelines to address the customer's needs," said Kelly Rinehart, owner of the North Dallas Landfill.

The June event produced a system that reduces the time from permit submittal to approval from 187 days to 30 days - exceeding the 75 percent reduction goal. Team members also provided methods to improve the tracking system and assisted with developing a revised permit form and guidance document for permit holders.

"Improving the efficiency of our processes has allowed us to keep a strong commitment to the environment, which is our top

priority," said DNR Director Jeff Vonk. "We are demonstrating that business principles are an effective means for improving state government."

The DNR conducted the June event with the assistance of Pella Corporation, a company with extensive experience in using process improvement techniques to maximize efficiency.

As of mid-August, the DNR had no permit backlogs and had already reduced permit review time to about 40 days. "Our engineers have done a terrific job over the last year," said Jane Mild, supervisor of DNR's planning, permitting and engineering services. "They are to be commended for their hard work."

For more information, contact Jane Mild at (515) 281-5105; e-mail: Jane.Mild@dnr.state.ia.us.



DID YOU KNOW?

- The DNR reduced its landfill permitting time from 187 to 45 days.

Corell Recycling continued from page 1

marvelous product. It compacts real well," Ivanovich said.

The City of West Des Moines is another long-time Corell customer, using up to 3,000 tons of recycled product annually.

One of the city's challenges was determining the best way to handle asphalt overlays that must be removed from concrete streets before new asphalt is applied. The city met the challenge by taking the asphalt material to Corell, where it is ground to 1-1 1/2-inch millings. The city then buys the ground material, mixes it with a binding agent and applies it to rural roads, in lieu of conventional limestone aggregate.

"We've had really good success using the millings on our roadways," said Bret Hodne, public works superintendent with

the City of West Des Moines. "If it is packed in and tightens properly when first applied, it compacts wonderfully and provides a good, stable driving surface. We have seen it act almost like a paved surface in places where there is a lot of truck travel." Hodne also observed that the recycled aggregate produces less dust than limestone and does not break down as quickly as limestone, making the product economically attractive.

Other projects produced and completed by Corell Recycling in 2003 include:

- ◆ 60,000 tons of special backfill sub-base to the I-80 Douglas Avenue interchange, Urbandale;
- ◆ 12,000 tons of sub-base for the Menards store building addition, Ankeny;
- ◆ 8,000 tons of special



Corell Recycling Division

backfill sub-base for the NW Beaver widening, Des Moines;

- ◆ 10,000 tons of surfacing, backfill and stabilization materials for the Iowa Events Center, Des Moines;

- ◆ 10,000 tons of various recycled materials for the reconstruction of Sec Taylor Field, Des Moines.

Corell Recycling is located at 200 S. 13th St., West Des Moines. For more information, contact Bill Lawrie at (515) 223-8010.



A LOT OF CONCRETE:

- In 2003, Corell Recycling produced 250,000 tons of recycled materials.

Treated Timbers Require Special Care

DID YOU KNOW?

Treated wood may be used in your deck, gazebo fence or playset.

Wood fences, posts, playsets, decks and gazebos are often times made with chemically treated wood. Depending on the treatment used, the nature of these wood products can sometimes be hazardous and requires careful planning for handling, placement, reuse and disposal.

Before December 2003, some wood for residential use was treated with chromated copper arsenate (CCA).

Through a highly pressurized process, the chemicals (chromium, copper and arsenic) are injected to the core of each piece of CCA-treated wood to protect against the attack of fungi, insects and marine borers. Since the end of 2003, the Environmental Protection Agency (EPA) has encouraged the use of alternative wood preservatives.

Another wood preservative, creosote, is used for commercial purposes only. Composed of a mixture of chemicals, it is intended for railroad ties, utility poles, bridge timbers and piling.

Certain levels of these CCA and

creosote chemicals may be considered toxic. Over time, studies suggest that arsenic slowly leaches from CCA-treated wood products into the soil, causing soil, surface or groundwater contamination. Creosote can also leach into the soil, but also may evaporate into the air, especially during hot weather.



“While the EPA has not concluded there is considerable risk to the public from these products, any reduction in

exposure to these chemicals is desirable,” said Alex Moon, DNR senior environmental specialist.

The EPA does not believe there is reason to remove or replace CCA-treated structures, including decks or playground equipment. However, individuals should consider taking some precautions with chemically treated wood. CCA and creosote treated woods should never have direct contact with human and

animal drinking and food supplies. Protective goggles, gloves and dust masks should be worn when handling wood, or while sawing and sanding for extended periods of time. Individuals should also wash their hands after contact with the wood, especially prior to eating and drinking.

These chemically treated timbers will eventually need to be replaced or disposed, and the DNR recommends several methods.

“Salvaging and reusing the treated wood for another appropriate use is the first priority,” said Moon. “This keeps the wood out of the waste stream.”

Landfilling of CCA-treated wood is the only environmentally acceptable disposal option currently, as the wood should not be burned, mulched or composted due to soil and air contamination by heavy metals. Finally, the DNR recommends avoiding the use of CCA-treated wood for new projects. If wood must be used, one of the newer, copper-based products, such as ACQ Preserve should be used.

For more information, contact Alex Moon at (515) 281-6807 or by e-mail at Alex.Moon@dnr.state.ia.us.



TRAILER FEATURES:

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For more information, contact Amy Klopfenstein at (515) 281-0649; e-mail: Amy.Klopfenstein@dnr.state.ia.us.



Check Us Out



Learn about waste management in Iowa at the DNR's newly designed Web site!

www.iowadnr.com/waste/

Governor's Iowa Environmental Excellence Awards

Iowa companies, communities, organizations and public facilities are invited to apply for the 2004 Governor's Environmental Excellence Awards.

Awards are given to those organizations demonstrating leadership and innovation in the protection and enhancement of Iowa's natural resources. Special recognition awards are given in the categories of: waste management; energy efficiency and renewable energy; habitat development and restoration; water quality; and air quality. Additionally, an overall Excellence Award is given to organizations protecting the environment in many or all of these areas.

Applications are due by November 5, 2004. To

download an application from the Internet, go to: www.iowadnr.com and click on the Environmental Excellence Awards icon on the right side of the page.

Or you can contact Jill Cornell at the DNR at (515) 281-0879; e-mail: Jill.Cornell@dnr.state.ia.us for complete details about the awards.

The awards are sponsored by the Iowa Department of Natural Resources, the Iowa Department of Education, the Iowa Department of Agriculture and Land Stewardship, the Iowa Department of Economic Development, the Iowa Department of Public Health, the Iowa Governor's Office and the Iowa Waste Reduction Center.

Illegal Dumping Update

In a partnership with Keep Iowa Beautiful (KIB), the DNR is working with three Iowa counties to prevent illegal dumping. As part of the pilot program, Linn, Boone and Appanoose counties were chosen to develop and implement strategies to reduce illegal dumping in rural and urban neighborhoods.

"Illegal dumping not only affects the beauty and character of our state, but damages the environment and costs Iowa taxpayers millions of dollars each year to cleanup," said Tom Anderson, DNR senior environmental specialist. "The DNR investigates hundreds of illegal dumping complaints each year and provides assistance where possible. However, the greatest responsibility of investigating, enforcing and ultimately reducing illegal dumping rests at the local level."

Each pilot county has assembled a task force that will explore ways to reduce and prevent illegal dumping in its own area. These county task force groups will test methods for effectively preventing illegal dumping, ranging from public awareness programs to increased enforcement and dump site tracking.

A series of focus group meetings have also been held in each county. In general, participants believed that illegal dumping's primary causes are inconvenience, cost (to some extent), and a lack of consequences.

A DNR grant of \$249,245 is funding the pilot program. KIB will evaluate approaches utilized in each of the three counties at the end of 2005 and will make recommendations for a statewide initiative to prevent illegal dumping.

For more information, contact Tom Anderson at (515) 281-8623 or by e-mail at Tom.Anderson@dnr.state.ia.us.

THIS WON'T FIT IN MY TRASH CAN!

- Take old tires and appliances to local retailers for a small fee when new items are purchased.
- Donate usable items to charities.
- Call your landfill to find out how to dispose of large items.

2003 WASTE AWARD WINNERS:

- Habitat for Humanity Restore, Quad Cities
- Midwest Computer Brokers, Walford
- West Des Moines Community Schools, West Des Moines



On the HORIZON

Upcoming events in the
world of waste management

October 9 & 23, 2004: Fall Toxic Cleanup Days

Cleanup days of household hazardous materials will be held at the Appanoose County Fairgrounds and the Davis County Maintenance Shop on October 9. A cleanup day will also be held at Greater Ottumwa Park on October 23. For more information, contact Kathleen Hennings with the DNR at (515) 281-5859; e-mail: Kathleen.Hennings@dnr.state.ia.us.

October 25-27, 2004: 2004 Iowa Recycling & Solid Waste Management Conference

The annual conference of the Iowa Recycling Association and the Iowa Society of Solid Waste Operators. Held at the Sioux City Convention Center. For more information, contact Dewayne Johnson at (515) 265-1596 or Kathy McBeth at (515) 256-8814 or visit www.iowarecycles.org.

November 8-10, 2004: 4th Annual BioCycle Renewable Energy From Organics Recycling Conference

Held at The Hotel Savery in Des Moines. Includes information about converting biomass into methane, alcohol fuels, composting and other value-added bioproducts. For more information, visit: <http://www.jgpress.com/conferences1/conferences1.html>.

December 10, 2004: Toxic Cleanup Day Proposals Due/Household Hazardous Materials Education (General Awareness and Retailer Consumer Education Program) Proposals Due

For more information, contact Kathleen Hennings with the DNR at (515) 281-5859; e-mail: Kathleen.Hennings@dnr.state.ia.us.

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