



**NORTH CAROLINA
RECYCLING BUSINESS
ASSISTANCE CENTER**

A cooperative effort
of the N.C. Department of
Environment and Natural
Resources and the N.C.
Department of Commerce.

Recycling Works

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Self-Help/DENR Recycling Loan Funds Assist C&D and Organics Businesses

By Sabrina Butler, Self-Help Sustainable Development Intern

From relocating and expanding Durham's Building Supply Recycling Center to helping Cool Springs Mulch and Stone ramp up its compost production, Self-Help financing is making dreams come true.

Building Supply Recycling Center's relocation in January 2006 from downtown Durham to historic Hillsborough will be made possible through an \$85,000 loan from Self-Help's N.C. Recycling Loan Fund. The Hillsborough store project, the brainchild of Chris Wachholz, will bring a wonderful supply of vintage doors, windows, hardware and more to environmentally-conscious consumers and bargain shoppers.

Dedicated to building re-use, Wachholz purchases threatened historic houses around North Carolina. He deconstructs the buildings, moves them to better real estate markets and then re-builds them. The beautifully restored homes boast eco-friendly designs and retain as much of their original, historic na-

ture as possible. Wachholz also operates a fee-based deconstruction service, which provides needed building materials to his restoration projects and the expanding store.

Wachholz doesn't just want to sell recycled materials at his new store — he wants to help people see the potential of sustainable building. His aim is to make it “a destination location for people who want to learn about materials re-use and energy conservation.” The store's landscaping and multiple buildings will showcase re-used materials and other eco-friendly design tools.

Wachholz noted that the store's growth is constrained by the limited demand for deconstruction services in North Carolina, due to below-average demolition costs and low landfill tipping fees. In addition to financing from Self-Help, the Division of Pollution Prevention and Environmental Assistance provided a grant to help the operations and growth of the deconstruction program. “Chris is an environmental visionary,” said

(See *Self-Help*, Page 4)



Examples of vintage hardware available at the Building Supply Recycling Center.

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McGill-Leprechaun to Add Wood Processing System

By Brian Rosa, Organic Recycling Specialist and Lynn McCracken Lucas, McGill Business Development Manager

McGill-Leprechaun, a compost manufacturer with two North Carolina facilities, will soon add a small wood processing system to supply additional amendment material for its composting operations in Sampson and Chatham counties.

Clean wood waste (including debris from construction and demolition), pallets, waxed cardboard, "dirty" paper and gypsum products will be among the additional feedstocks sourced from waste generators. Modest tipping fees for composting will offset some of the company's processing costs. New equipment will also allow the company to further process woody materials from existing suppliers. When it reaches full capacity, through-put of the Chatham-based system will be about 200 tons per day.

According to M. Noel Lyons, president of McGill-Leprechaun, a \$28,000 grant from the N.C. Division of Pollution Prevention and Environmental Assistance will greatly assist the company in the system's purchase, which is expected to cost about \$300,000. The manufacturer hopes to have the project up and running by fall.



A new wood processing system will improve McGill's compost quality.

said. "Consistency of the ground wood is a critical factor for compost manufacturers. Even modest variations in physical characteristics or available volumes can negatively impact process efficiency

and market value of the end product. The wood shortage is also hindering the growth of our business and our ability to create more jobs and accept more feedstocks with high moisture content."



McGill's trommel screener will help maintain consistency of the increased volume of ground wood.

It hasn't always been possible for commercial and industrial waste generators to justify the cost of environmentally superior disposal options. The composting industry has emerged as an efficient, cost-competitive service provider for generators of biodegradable materials. "In the end, landfilled wood wastes will not only be diverted to composting because it's a best management practice for biodegradables, but also because composting makes economic sense for the waste generator," Lyons explained.

For more information about McGill, contact Lynn Lucas at (910) 532-2539, ext. 29.

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Food Waste Recovery

By **Brian Rosa, Organic Recycling Specialist**

Food residuals are created at every step in the distribution chain from the farm to the dinner table. In 2003, more than 1 million tons of food residuals were generated in North Carolina, representing 15 percent of the total solid waste stream.

Although composting food wastes is a growing trend, particularly at institutions such as schools and correctional institutions, less than 3 percent of the food residuals created by commercial and residential sources were recovered in North Carolina during 2003.



Several large-scale food diversion-composting projects are helping decrease the amount of food wastes in the waste stream by collecting and composting inedible food residuals. Four composting operations in the state pro-

cess 38,700 tons of food residuals each year and six North Carolina colleges compost their cafeteria waste on-site.

Food rescue and recovery is the greatest single opportunity for food waste diversion. Food bank and rescue programs have increased distribution of recovered or rescued edible foods by 350 percent in the past four years. In 2003, nearly 30,000 tons of rescued or recovered food was distributed throughout North Carolina.

As food rescue and diversion operations continue to grow, more and more food residuals will be diverted away from the state's solid waste stream, minimizing the impact on our landfills.

Novozymes Opens New Nature's GREEN-RELEAF Compost and Mulch Production Facility

By **Brian Rosa, Organic Recycling Specialist**

Late last year, Novozymes North America Inc., located in Franklinton, began operations at its Nature's GREEN-RELEAF™ compost and mulch production facility. Novozymes is the world largest producer of industrial enzymes. Enzymes produced at the Franklinton facility

are used in the baking, brewing, detergent and ethanol industries. NZNA had relied solely on land application as a means of reuse for its enzyme production residuals, but in light of increased urbanization and long-term sustainability, it now composts a portion of these residuals.



Novozymes uses dewatered enzymes as a nitrogen source in its compost production.

In December 2004, Novozymes received a composting permit from the N.C. Department of Environment and Natural Resources to compost source separated byproduct materials.

The facility accepts clean wood wastes, yard trimmings, wallboard gypsum, food waste and in-house enzyme production residuals. Enzyme production residuals are dewatered and used as a nitrogen source in the compost production. After being mixed with high carbon feedstocks the enzyme residuals are transported to a compost production pad where windrows are formed.

(See [Novozymes Page 5](#))

Self-Help, from page 1



Cool Springs hopes to increase its compost production 400 percent with a new mobile compost turner similar to the one shown here.

Fred Broadwell, manager of the loan fund at Self-Help. "Triangle residents are going to love the store concept and already do love his restored houses. We are proud to be able to help him move forward." You can still shop at the old Durham location until next year's move. It's located in the Venable Tobacco Warehouse, at the corner of Pettigrew and Roxboro Streets, and it's open Saturdays from 11 a.m. until 3 p.m. Saturdays.

If you'd like more information about the Building Supply Recycling Center, contact Chris Wachholz at (919) 638-2117, www.cabinscottagesandbungalows.com.

As the demand for compost and mulch increases, organics recyclers are racing to expand their capacity. Cool Springs Mulch and Stone LLC in Statesville received a \$50,000 Self-Help loan to ramp up its compost production.

Owned and managed by Allen Sharpe and Pauline Smith, Cool Springs is the largest bulk landscape supply provider in the Statesville area, selling stone, mulch, soil and pond equipment.

According to Sharpe, one of Cool Springs' bestselling products is organic Garden Blend, a specialty blended soil product that is virtually weed-free. It is very popular with landscapers, country clubs, local governments and home gardeners.

Cool Springs accepts scrap wood, mulch, pallets, sawdust and bark and other wood wastes to combine with existing manure to produce this popular product. Because the com-

pany was hindered by a limited capacity to compost Garden Blend's manure ingredient, it had been unable to keep with demand for the product.

With Self-Help financing, Cool Springs purchased a mobile compost turner. Sharpe hopes the machine will increase compost production by 400 percent or more. The new turner will also allow the company to expand into providing compost turning services to nearby farmers. "Specialized equipment can be tough to finance," said Broadwell. "We are excited to be helping Allen and Pauline turn manure into money."

"The popularity of organic gardening and farming continues to grow," said Sharpe. "In order to be organic, you need to have organic soil amendments. That's where we come in. I believe the demand for our products will only increase."

If you'd like more information about Cool Springs Mulch and Stone, contact Allen Sharpe, (704) 872-0008.

Self-Help encourages new and expanding recycling enterprises. To inquire about the N.C. Recycling Loan Fund, contact Fred Broadwell, Self-Help Ventures Fund, (800) 476-7428 www.self-help.org. Self-Help has loaned more than \$6.5 million to more than 55 enviro-tech and recycling firms.



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Novozymes, from page 3

The compost production areas have a unique drainage system that allows collection of compost production leachate. This water is recycled back into the compost production process. All finished compost is tested as part of the U.S. Composting Council Seal of Testing Assurance Program.

Novozymes also manufactures mulch products from clean recycled wood byproducts. The facility processes 50,000 tons annually. All compost and mulch products are sold in bulk wholesale through distributors. For more information about Nature's GREEN-RELEAF products, please contact Frank Franciosi, NZNA's Composting Department manager at (919) 494-3489.



Novozymes grinding operation produces mulch from recycled wood byproducts.

Food Bank of N.C. and Novozymes Team Up to Recycle Food Waste and Save Money

By **Brian Rosa, Organic Recycling Specialist**

The Food Bank of N.C. has started the first leg of its new recycling efforts this month, working with Novozymes to divert food wastes from landfills.

The Food Bank is now collecting all food scraps and delivering them to Novozymes to be composted. Not only is the diversion of food scraps environmentally friendly, it's also a substantial cost savings.

The Food Bank is using a truck that would normally be empty as it traveled within a few miles of Novozymes' new Franklinton compost facility, but now will be full of food scraps. The elimination of the hauling fees combined with a tipping fee less than the landfill fee has resulted in substantial savings for the Food Bank. It expects to divert a minimum of 100 tons/year to be composted, which Peter Werbicki of the Food Bank of N.C. says represents only about one percent of the total tonnage the Food Bank handles throughout the year.

Novozymes started operating Green-Releaf, its new composting facility, in December 2004 to handle the water treatment sludge and residuals from its enzymes processing plant. This facility is also permitted to compost yard waste, wood waste and food waste.

For more information about the Green-Releaf Compost facility, contact Frank Franciosi, (919) 494-1246. Contact Pe-

ter Werbicki of the Food Bank at (919) 875-0707 ext. 201 for more information about its program.

LOANS FOR RECYCLING COMPANIES

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2005 Recycling Business Development Grant Winners

By Matt Todd, Market Development Specialist

In its continuing efforts to reduce the flow of solid waste to landfills and to encourage the sustainable recovery of materials from North Carolina's waste stream, the N.C. Division of Pollution Prevention and Environmental Assistance awarded 19 recycling business development grants, totaling \$300,000. The grants ranged from \$7,000 to \$28,000 and if all the projects are successful, will create more than 172,000 tons of additional recycling capacity in North Carolina. Overall, DPPEA received 26 proposals requesting \$950,000 in funds. Selected projects include:

Plastics Recycling Wash Line - Plastics recycler will purchase and install an additional wash line to double its existing capacity at its Eden plastics processing facility. Contact: Don Grigg, Blue Ridge Plastics, (919) 522-2011.

Relocate/Expand Building Supply Recycling Center and its Deconstruction Services - Durham used building supply recycler will relocate and expand the Building Supply Recycling Center to its new location in Hillsborough, and purchase a telescoping boom forklift to assist in the growth of the deconstruction program. Contact: Chris Wachholz, Building Supply Recycling Center, (919) 302-1627.

Oil Filter Recycling System - Antifreeze recycler will install a used oil filter processing system at its Durham processing facility. Contact: Tim Wilkinson, Clean Green Inc., (919) 596-3500.

Electronics Recycling Process Upgrade - Charlotte Electronics recycler will purchase equipment to improve material handling and tracking capability at its electronics recycling facility. Contact: Brett Rhinehardt, CompuTel IG, (704) 376-1116.

Wood Fiber/Nonwoven Waste Recycling - Plastics recycler will purchase and operate a recycling line that will produce a wood fiber composite polymer at its Randleman recycling facility. Contact: Darren Lynch, EcoResin, (336) 495-8516.

Engineered Recycling Expansion - Charlotte plastics recycler will expand operations and add equipment to increase throughput at its plastics processing facility. Contact: Peter Suttoni, Engineered Recycling Company, (704) 358-6700.

RE3 at Ensley - Plastics recycler will install balers to assist in the improved management of waste material resulting from its Reidsville plastic processing recycling operation. Contact: Dwight Ensley, Ensley Corporation, (336) 349-6243 x1.

Wash Line Upgrade - Reidsville plastics recycler will upgrade wash line to increase capacity for processing recycled plastics at its facility. Contact: Tom Scheffer, Envision Plastics, (336) 342-4749.

High Speed Baler Replacement - Recycler will purchase a high capacity two-ram baler to assist in efficiency upgrades and provide additional processing capacity for its Greensboro material recovery facility. Contact: Peter Gross, FCR Inc., (704) 379-0600.

Increasing Recycling Capacity for Bargain Store - Reuse Center will relocate an existing reuse store to a larger building and purchase a truck to increase the volume of material collected and delivered to its High Point facility. Contact: Susan Wood, Habitat for Humanity of High Point, Archdale and Trinity, (336) 887-8388.

Heartwood Pine Floors Project - Pittsboro company will install a saw to allow for more efficient processing of reclaimed and re-useable heart pine at its facility. Contact: Lawrence Green Jr., Heartwood Pine Floors, (919) 452-4394.

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Colored Mulch, Higher Volumes, Less Time - Company will install a more efficient and higher volume mulch coloring system at its Rocky Mount wood waste and pallet processing facility. Contact: Roger Seale, Kamlar Corporation, (252) 443-2576.

Wood Grinding-Screening System - Commercial composter will install a grinding and screening system to assist in processing pallets, clean wood waste, gypsum and other materials at its Chatham County composting facility. Contact: Robert C. Taylor, McGill-Leprechaun, (910) 532-2539 ext. 22.

Metal Recycling Shredding - Monroe metal recycler will purchase equipment to complete its newly expanded recovered metals processing facility. Contact: Jason Horner, Metal Recycling Services Inc., (704) 283-4455.

In-feed Conveyor - Raleigh recycler will install an in-feed conveyor to assist in the development and operation of its material recovery facility. Contact: Jim Foster, Paper Stock Dealers Inc., (919) 833-9783.

Continuing the Modernization of Shimar Recycling - Recycler will install an industrial shredding system to shred confidential material at its Durham recycling facility. Contact: Will Marley, Shimar Recycling Inc., (919) 680-6262.

Project P/V/C - Canton recycler will create an infrastructure for the recovery of vinyl siding scrap, plastics and cardboard from the construction and demolition sector of western North Carolina. Contact: David Landt, Smoky Mountain Resource Recovery, (828) 648-8787.

Plastics Grinding and Secure Data and Document Destruction - Mayodan electronics recycler will install a processing system to assist in better management and marketing of its plastics waste stream as well as providing additional material destruction services at its electronics recycling facility. Contact: Joe Clayton, Synergy Recycling, (919) 619-4856.

Recycling Works is published by the N.C. Recycling Business Assistance Center, a program of the Division of Pollution Prevention and Environmental Assistance of the N.C. Department of Environment and Natural Resources. For more information call (919) 715-6500 or (800) 763-0136, or write to DPPEA, 1639 Mail Service Center, Raleigh, NC 27699-1639.

Michael F. Easley, Governor, North Carolina
William G. Ross Jr., Secretary, Department of Environment and Natural Resources



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N.C. Division of Pollution Prevention and Environmental Assistance



Cardboard and Paper Sorting System - Recycler will install a commingled paper sorting system to assist in increasing the fiber processing capacity at its Durham material recovery facility. Contact: Waylon Lynch, Tidewater Fibre Corporation, (919) 957-8803.

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North Carolina market prices for recyclables

Prices current as of June 8, 2005

Item	Western Region	Central Region	Eastern Region
METALS			
Aluminum Cans, lb. loose	\$0.65	\$0.38	\$0.65
Steel cans, gross ton baled	\$45	\$33	\$40
PLASTICS			
Central Region markets plastics together			
PETE, lb. baled	\$0.225	\$0.16	\$0.19
HDPE, lb. baled	Natural	\$0.28	\$0.27
	Colored	\$0.23	\$0.24
PAPER			
Newsprint, ton baled	\$85	\$80	\$83
Corrugated, ton baled	\$85	\$80	\$87.50
Office, ton baled	\$85	\$85	\$180
Magazines, ton baled	**	\$85	***
Mixed, ton baled	\$60	\$50	\$60
GLASS			
Eastern Region sells glass F.O.B. origin			
Clear, ton crushed delivered	\$40	\$26	\$17
Brown, ton crushed delivered	\$35	\$16	\$21
Green, ton crushed delivered	\$15	\$0	(\$9)

*Markets with mixed paper.

**Markets with newsprint.

Note: Prices listed above are compiled by RBAC and are for reference only. These prices are not firm quotes. RBAC obtained pricing information from processors for each category and developed a pricing range.

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