

**NORTH CAROLINA
RECYCLING BUSINESS
ASSISTANCE CENTER**

A cooperative effort
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Environment and Natural
Resources and the N.C.
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Recycling Works

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Union Gypsum Uses Ingenuity to Develop, Market 'Funky Chicken'

By Matt Ewadinger, RBAC Manager

When Steve Davis began his recycling business near Marshville back in 1999, he sold ground gypsum in bulk at a discount to local farmers. His product replaced the virgin agricultural gypsum they would otherwise purchase at a premium price.

Gypsum is a large component of the construction and demolition (C&D) debris waste stream. According to the National Association of Home Builders, approximately one ton of residual gypsum is generated at the average new residential construction site. Thus, drywall contractors or homebuilders

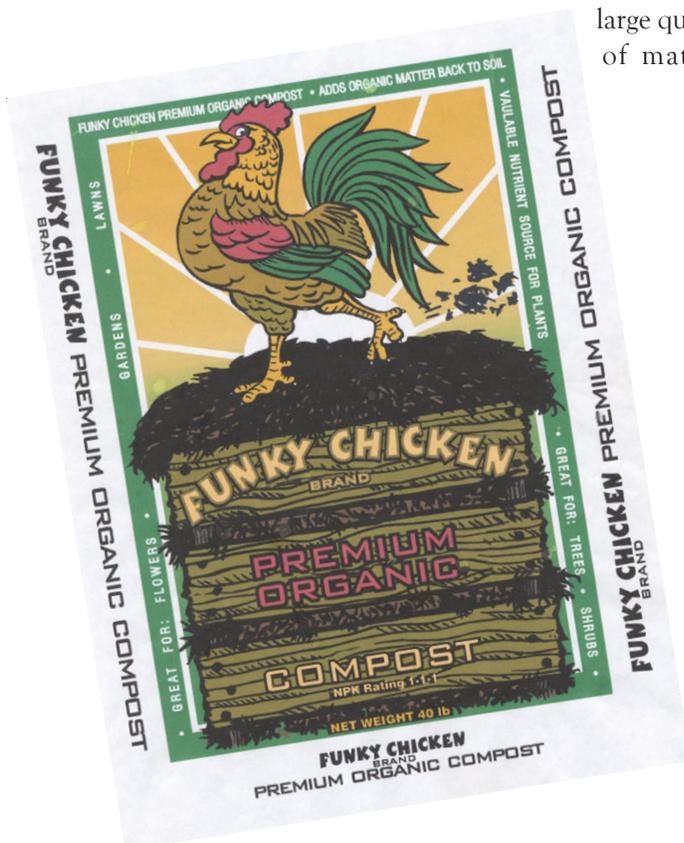
are left with a large quantity of material

they must either dispose or attempt to recycle at each job site. The manufactured housing industry also generates a significant amount of gypsum waste. That realization, coupled with Davis's knowledge of the need for agricultural gypsum in the local farming industry, led him to enter the recycling industry.

Union Gypsum's major source of recycled gypsum drywall feedstock is independent clean-up companies that remove gypsum drywall from new construction sites. Davis is in the process of cultivating a relationship with a potentially large source of gypsum drywall – the North Carolina manufactured housing industry.

Today, he produces a high value-added product in 40-pound bags called Funky Chicken. The new product is a magical mixture of poultry litter, recycled gypsum drywall, and wood ash that is blended and

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Product Stewardship, Recycling Business Development Focus of 2004 CRA Conference

By Wendy G. Worley, Market Development Specialist

The 14th annual Carolina Recycling Association (CRA) Conference and Trade Show featured presentations about the latest recycling trends and successes. The conference was held March 22 - 25 at the Adam's Mark Hotel in Charlotte.

Each year, CRA showcases recycling programs and businesses during its conference. This year's "Staying on Track - Revving up Recycling" conference and trade show highlighted new and innovative businesses and industries along with new technologies for waste reduction and recycling.

One theme woven throughout the conference was the relatively new concept of product stewardship. Corporations and communities are beginning to share responsibility for the environmental impacts of consumer products. At the center of this shift is the Product Stewardship Institute (PSI), led by this year's CRA keynote speaker, Scott Cassel. PSI works with state and local government agencies to partner with manufacturers, retailers, environmental groups, federal agencies and other key stakeholders to solve waste management problems by encouraging product design changes and mediating stakeholder dialogues. Cassel provided conference attendees with an overview of the past, present and



Attendees of the 2004 CRA Conference enjoy lunch and networking during the Charlotte meeting.



bright future of product stewardship in reducing waste and supporting recycling businesses.

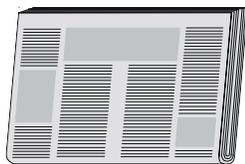
In the session "Recycling: It's Your Business," participants - including a number of North Carolina recycling businesses - received hands-on training in business and financial decision-making. This informative session provided an overview of small business development services in North and South Carolina and an outline of creative financing options for recycling businesses. The bulk of the session then allowed participants to work in

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Scott Cassel of the Product Stewardship Institute hangs out with Can Guy and Dottie Bottle during the 2004 CRA Conference.

Recycling Businesses



in the News

Union Gypsum, from page 1

dried prior to going through a long curing process. "Our goal is to make a consistent premium product that we can be proud of," says Davis.

According to its brightly colored bag that features a rooster strutting atop a compost bin, Funky Chicken is a premium, organic compost that adds organic material back to the soil and provides valuable nutrients for trees, shrubs, flowers, gardens and lawns. Davis plans to market Funky Chicken to golf courses, landscapers and retail home improvement stores within a 250-mile radius of Marshville.

Davis and his staff are in the process of expanding their operation to process the new product. "We are constructing two new buildings totaling approximately 6,000 square feet that will enable us to operate in all weather conditions. One building will house a large mixing machine, 300,000 BTU heater, and a high volume fan, along with a series of infeed and outfeed conveyors," Davis added.

Union Gypsum also supplies ground recycled gypsum drywall to two large poultry producers as bedding for their poultry houses. The patented product, a mixture of gypsum and poultry litter, is sold to farmers and, according to Davis, "The demand is almost impossible to keep up with."

Currently, six people work at Union Gypsum, where they contribute to the recycling of about 5,000 tons a year of gypsum drywall and 50,000 tons a year of poul-

Material Reclamation LLC opened a new construction and demolition (C&D) recycling processing facility in **High Point** in February 2004. Material Reclamation also operates a C&D recycling facility in Raleigh which has been open since December 2000. Mixed C&D debris are accepted at both facilities and sorted into marketable commodities such as wood, metal, corrugated cardboard, aggregate (concrete, brick and block), and dirt/soils. MR of High Point expects to recycle approximately 300-400 tons of waste per day. Contact Chris Roof at (919) 835-3655 or ctroof@dhgc.com for more information or to make market arrangements.



If you have a news item about your recycling business that you'd like to see in this column, please contact Wendy Worley at wendy.worley@ncmail.net or (919) 715-6542.

try litter. If the current marketing plan is successful, the number of tons recycled could increase by fifty percent. Davis anticipates hiring an additional six employees over the next six months as demand for his product increases. The increased demand will also mean that Union Gypsum will need to greatly increase the amount of gypsum drywall that it recovers from clean-up operations.

For more information about Union Gypsum, contact Steve Davis at (704) 624-2077.



Union Gypsum President Steve Davis with ground gypsum drywall prior to blending with poultry litter and wood ash.

Crumb Rubber and Plastics Recycling Facility Coming to North Carolina



Gov. Mike Easley recently announced that Texas Encore Materials (TEM) will relocate to Gaston County, creating 100 jobs over three years with an average salary of \$16 per hour. Twenty new jobs will be created in the company's first year of operation. The location of this facility is directly related to North Carolina's efforts in waste management and recycling and the partnership between the Department of Commerce and the Department of Environment and Natural Resources. Efforts to recruit TEM to North Carolina were led by Sherry Yarkosky, RBAC's liaison with the Department of Commerce. "The professionalism and energy that Sherry exhibited helped to streamline our decision process and make our transition seamless," said Dr. Philip Friedman, chief executive of TEM.

"TEM's announcement to locate in Gaston County not only provides our state with high quality jobs but demonstrates yet again that job creation and environmental protection can go hand and hand," said Easley. "North Carolina continues to benefit from our investments in infrastructure, workforce development and the environment. TEM is an innovative company that enjoys much success in the industry, and we welcome them to North Carolina."

The company received a \$983,360 grant from the Scrap Tire Disposal Account managed by the Department of Environment and Natural Resources' Division of Waste Management. "We were pleased to support this project," stated Paul Crissman, branch head, Solid Waste Planning and Program Management. "We believe it will create a stronger

market for recycled tires in North Carolina while protecting human health and the environment."

TEM is moving from Romulus, Mich., and will locate in a 74,840 square foot existing industrial facility that will be fully operational in April 2004. Investment during the three-year period is estimated at \$2.5 million.

For more than 11 years, TEM has been researching and developing a process incorporating recycled tire pieces into new manufactured products such as plastics, coatings, asphalt and rubber products. The North Carolina facility will manufacture extruded sheets made from recycled rubber and plastic resins. Finished sheets are used for automotive parts, consumer products, roofing materials and industrial components.

"I would like to take this opportunity to thank the state of North Carolina and to commend the Department of Commerce, Department of Environment and Natural Resources, Gaston County Economic Development Commission, Duke Power and the Southside Companies for their roles in making this move possible. Texas Encore Materials is looking forward to occupying our new facility, producing quality products from recycled materials and providing good job and business opportunities to the community," said Friedman.

Environmentally Preferable Purchasing

- What are North Carolina state agencies and universities doing in green procurement?
- Where can local governments, schools and businesses find examples of policies, specifications and studies on recycled content and environmentally preferable products and services?

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More than \$400,000 in Recycling Business Grants Awarded

By Matt Todd, Market Development Specialist

In its continuing efforts to reduce the flow of solid wastes 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 (DPPEA) has awarded 17 recycling business development grants, totaling \$415,000. Selected projects (with contact information listed) include:

Expansion of Bagging Operation - Composting operation will make improvements to increase bagging capacity for finished compost/fertilizer product at Marshville wall-board recycling facility. Steve Davis, Union Gypsum Inc., (704) 624-2077.

Mini Material Recovery Facility - Recycling facility will install a semi-automated sorting line at existing recycling plant in Durham. Perry Black, Orange Recycling Services Inc., (919) 688-5660.

Mixed Paper / Cardboard Recycling Collection Service - Recycling service provider will implement a paper and corrugated cardboard recycling collection program for commercial customers in the Asheville area. David Johnson, Curbside Management Inc., (828) 252-2532.

Recycling Pallet Flooring - Wood products company will process pallet deck boards into hardwood flooring at existing Waynesville facility. Joe Pryor, Oaks Unlimited, (828) 926-1621.

HDPE & More - Plastics recycler will expand recycling operation to include many alternative forms of plastic. Expansion will include equipment purchases and site improvements for Reidsville facility. Dwight Ensley, Ensley Corporation, (336) 966-2700.

Waste Paper / Fiber Reclamation - Paper processor will implement a paper and corrugated cardboard recycling collection program for commercial customers in the Raleigh area. Jim Foster, Paper Stock Dealers Inc., (919) 833-9783.

Waste Processing Equipment Upgrade - Plastic processing operation will purchase equipment to increase capacity at its Gastonia facility. Chuck Cooper, Preserve Business Systems, (919) 732-9253.

Collection Program for Electronics Recycling - Electronics recycling company will begin collection services for customers throughout the state. Material will be picked up and delivered to their Mayodan facility. Joe Clayton, Syn-

ergy Recycling LLC, (336) 548-7014.

Habitat Salvage and Deconstruction Services - Habitat ReUse Center plans to add a salvage and deconstruction program to its reuse center services. Ben Rogers, Habitat ReUse Center (Wake), (919) 833-6768.

Electronics Recycling Transport / Infrastructure Upgrade - Electronics recycling company will begin collection services for customers. Material will be picked up and delivered to its Charlotte facility. Brett Rhinehardt, CompuTel IG LLC, (704) 376-1116.

Scotland Neck Heart Pine Project - Company plans to upgrade equipment used to assist in reclaiming products from demolished, abandoned and decaying textile mills, tobacco barns, old houses and other buildings. Walton Burgwyn, Scotland Neck Heart Pine Inc., (252) 826-2755.

Recycled C&D Pane Glass, Ceramics, and Post-Consumer Glass as Feedstock for Precast Cement Based Products - Glass processor will install production process to produce precast concrete products from a glass aggregate. Shawn LeMond, Elizabeth City Glass Inc., (252) 333-1002.

Confidential Shredding - High Point paper recycling company will expand shredding services to include on-site document destruction. Pat Jordan, Triad Paper Recycling, (336) 275-4047.

Modernizing Shimar Recycling - Recycling company will upgrade processing capability at existing Durham recycling facility. Meredith Marley, Shimar Recycling Inc., (919) 680-6262.

Mixed Broken Cullet Recovery - Recycling processor will install additional equipment to recover mixed, broken glass cullet at Greenville recycling facility. Doug Bonds, Eastern Carolina Vocational Center Inc., (800) 758-4188.

Urban Forestry Recycling - Sawmilling company will convert fallen urban timber into usable product, primarily lumber to be used by furniture makers and flooring manufacturers at Lincoln County facility. Kyle Edwards, Edwards Custom Sawmilling & Lumber, (704) 875-8901.

Regional Solid Waste Composting Facility - Solid waste composting company will construct a composting facility in Pitt County. Craig Coker, McGill Environmental Systems of NC Inc., (910) 532-2539.

Waste Reduction Partners Update



By Terry Albrecht, WRP Program Director

Every year 65 million tons of fly ash are disposed in U.S. landfills. Increasingly, coal-fired power plants and industrial boiler operators face landfill capacity constraints, environmental impact concerns, and declining ash quality due to regulatory operating requirements.

N.C. State University's Minerals Research Laboratory (MRL), Waste Reduction Partners (WRP), and several other public and private companies have come together as the N.C. Lightweight Aggregate Consortium in order to assess the feasibility of using fly ash in conjunction with organic biosolids from various sources to produce Lightweight Aggregate (LWA). After three years of research, the consortium has concluded that it is possible to productively use nearly 100 percent of coal combustion byproducts using a unique integrated process.

The MRL has developed a process that takes coal combustion byproducts from boilers, separates the bottom ash, extracts the carbon, and then mixes the remaining materials with organic biosolids; this mixture is then processed into LWA. The four processed byproducts have strong and economically viable markets in this region and beyond.

Through a public private partnership, the MRL will construct an integrated pilot plant to demonstrate the technical and economic feasibility of an integrated coal combustion products (CCPs) management system. In addition, the pilot plant would give the MRL the ability to cost-effectively develop a specific process for unique waste streams and provide samples of end products for testing, sales and marketing. The project will attract the business development interests of industrial boiler waste management companies, concrete and block manufacturers, and utility plants that are consuming their landfill capacity.

Waste Reduction Partners (WRP) is a team of volunteer retired engineers and scientists providing western North Carolina businesses with free technical assistance on waste reduction and energy management. Last year WRP volunteers helped its clients save \$1.4 million on utility costs. WRP is a program of the Land-of-Sky Regional Council and works in partnership with the N.C. Divi-

sion of Pollution Prevention and Environmental Assistance. For more information visit <http://www.landofsky.org/wrp> or call (828) 251-6622.



Drs. Robert Mensah-Biney (MRL) and Elaine Marten (WRP) at the rotary kiln used in the LWA manufacturing process.

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small groups to focus on a case study of a typical medium-sized recycling company with significant planning and financial challenges. The dynamic group discussion of potential solutions that followed provided participants with an increased confidence in their own ability to understand and manage difficult business issues.

Other sessions and workshops featured green building, construction and demolition debris recycling and reuse, food waste composting, secondary markets for glass recycling, paper recovery programs, and commingled re-

cycling processing - just to name a few. All speakers were very informative and presentations generated useful discussion and exchange of ideas.

For more information about membership in CRA or about the conference, contact Kerry Krumsiek at kerryk@cra-recycle.org or (919) 545-9050.



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Sherry Yarkosky, RBAC Industrial Development Specialist
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information about preventing,
reducing and recycling waste.



North Carolina market prices for recyclables

Prices current as of April 7, 2004

Item	Western Region	Central Region	Eastern Region
METALS			
Aluminum Cans, lb. loose	\$0.62	\$0.45	\$0.54
Steel cans, gross ton baled	\$107	\$140	\$100
PLASTICS			
Central Region markets plastics together			
PETE, lb. baled	\$0.175	\$0.085	\$0.16
HDPE, lb. baled	Natural	\$0.085	\$0.23
	Colored	\$.13	\$0.12
PAPER			
Newsprint, ton baled	\$85	\$95	\$88
Corrugated, ton baled	\$100	\$90	\$97.50
Office, ton baled	\$105	115	\$140
Magazines, ton baled	**	\$90	***
Mixed, ton baled	\$50	\$50	\$50
GLASS			
Eastern Region sells glass F.O.B. origin			
Clear, ton crushed delivered	\$30	\$26	\$17
Brown, ton crushed delivered	\$20	\$16	\$21
Green, ton crushed delivered	\$10	\$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.

Visit RBAC online at <http://www.p2pays.org/rbac>

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