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**RECYCLING BUSINESS
ASSISTANCE CENTER**

Recycling Works

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

Self-Help funds new C&D debris recycling operation in Rowan County

By Fred Broadwell, Environmental Loan Specialist and John Blaisdell, Market Development Specialist

K.R. Miller Inc. of Granite Quarry (just south of Salisbury) is the newest recipient of financing from the North Carolina Recycling Loan Fund, a partnership of N.C. DENR and the Self-Help Credit Union. "We are very excited about our new C&D (Construction and Demolition) recycling venture and appreciate the loan to get us underway," said company president Ken Miller.

K.R. Miller is a 31-year-old company that has traditionally operated a quarry, a land clearing and inert debris (LCID) management facility, and grading/demolition operation. Miller decided this year that he wanted to shift the company's focus to C&D debris recycling, primarily as a way to make a positive contribution to the

See Self-Help, page 7



We are very excited about our C&D recycling venture ... I am excited to be taking care of an environmental problem as well.



Ken Miller
President, K.R. Miller Inc.



From left to right: **Brick** and **concrete** are just two of the materials that will be recycled by K.R. Miller Inc. Fred Broadwell discusses project financing with Ken and Julia Miller.

Inside

- First Union Investment Closes SJF . . . 2**
- Rockingham Recycling. 3**
- ReUse Center Expansion 4**
- What's new ... in business 5**
- One-Stop Permit Assistance.5**
- Markets Assessment commodity profile .6**

First Union's investment closes SJF at \$17 million

Durham, N.C. and Philadelphia, Pa. – The Sustainable Jobs Fund (SJF) has completed its third and final closing today, adding First Union Corporation to its list of limited partners and bringing the total funds under management to \$17 million.

Other limited partners of the Sustainable Jobs Fund include Bank of America, the Community Development Financial Institutions Fund of the U.S. Treasury Department, Deutsche Bank, Metropolitan Life Insurance Company, MBNA America Bank, Citibank, a member of Citigroup, the John D. and Catherine T. MacArthur Foundation, and the Dakota Foundation.

“This \$2.5 million investment in the Sustainable Jobs Fund is part of First Union’s commitment to neighborhood revitalization,” said Robbin Moore, First Union’s community development investment manager. “Since 1996, First Union has committed almost \$54 million in community development loans and investments to Community Development Financial Institutions in our operating region.”

This investment builds on the First Union Regional Foundation’s existing relationship with SJF. In early 1999, the foundation awarded a three-year, \$450,000 grant to SJF’s nonprofit ally, the National Recycling Coalition (NRC).

This closing completes the capitalization of the Sustainable Jobs Fund, exceeding its \$15 million original goal, noted David Kirkpatrick, SJF co-founder and managing director. “The additional funds will enable us to make more investments to further our mission,” said Kirkpatrick.

To date, SJF has invested in an electric vehicle company, an engineered steel container producer, a recycled plastic products manufacturer, and a wood remanufacturer. For more information, see SJF’s Web site at www.sjfund.com.

Sustainable Jobs Fund



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- require equity or subordinated debt capital to fuel profitable growth
- create quality jobs for low-income citizens or locate in economically distressed regions of the eastern United States

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N.C. Environmental Loan Fund: Self-Help established the N.C. Environmental Loan Fund to provide financing to small businesses and other organizations that preserve our natural resources. Projects that are targeted for financing include recycling firms, land conservancies, environmental consulting and services, environmental equipment firms and sustainable development products and services. Self-Help has extended more than \$6 million in financing to this growing and important segment of our economy.

Rockingham County: Plastics Recycling Capitol of the South

By Tom Rhodes, Market Development Specialist

Nestled amongst the rolling foothills and natural beauty of North Carolina's northern Piedmont, Rockingham County is arguably the hub of the region's plastics recycling industry. With such names as Ensley, FCR, Plastic Revolutions and Zarn rubbing elbows in the Rockingham County area, a great deal of the processing and end use of recycled plastics in the state is happening right here amid the lush forestland.

According to Ed Handy, a well-known and respected player in the plastics recycling industry, Rockingham County truly is the "Plastics Recycling Capital of The South." Handy, an acknowledged expert in the field, has a wealth of knowledge about plastics processing.

Handy said the industry's introduction into the area began with Plastic Omnium Zarn Inc. back in 1961, when plastic recycling was a new venture. Zarn, as the company is more commonly known, was an industry leader in plastic recycling. The company, which now employs about 100 people, is a consumer of high density polyethylene, which serves as the feedstock for Zarn's high-quality rollout garbage carts.

As the company grew, so did the entrepreneurial spirit of a number of Zarn employees. Branching off into individualized areas of interest and expertise gave birth to new enterprises — processing post-consumer and post-industrial recovered plastic resources, manufacturing end products or both. Some of those businesses have come and gone, but the core group of die-hard plastics industries continues to crank out products and provide jobs for local residents, which is an added plus for an area once dominated by the textile industry. Many of the labor positions that were lost to textile layoffs and closings have been replaced with employment in the recycling industry.

Plastic Revolutions of Reidsville processes about two million pounds of material per month through the company's granulation and wash operation. Practically any post-industrial resin can be turned into a viable feedstock for a number of products. The company provides 25 jobs to local residents. Material from the regrind resin is shipped to manufacturers who recycle it into such products as plastic lumber, pipe, film and bottles. In addition, Plastics Revolutions produces high-quality plastic curb stops as an end product.

Ensley Corporation, a processor just down the street from Plastic Revolutions, produces reprocessed pellet from 60

percent post-consumer resin (PCR) such as milk and water jugs and 40 percent post-industrial discard resin. Approximately 90 percent of the recovered resin consists of high density polyethylene (HDPE) and 10 percent high

molecular weight polyethylene from plastic drums. The company, which employs 25 workers, produces about 1.2 million pounds of pellet per month for the pipe and blow-molding industry.

FCR employs 50 workers from the Reidsville area. The company is a handler, processor and exporter of 100 percent post-consumer material. FCR has the capability of cleaning and palletizing a number of resins. Upgrading material from post-consumer status to finished pellet for use in a number of applications is a skill that FCR has perfected.

Plastics exporters, processors, handlers and manufacturers have created a stronghold for the recycling industry in North Carolina, infusing the area with needed income and employment. According to industry leaders, the demand for product is stronger than availability of supply. In order to catch up, more collection infrastructure is needed. But Rockingham County remains the "Plastics Processing Capital of the South."

Many of the labor positions that were lost to textile layoffs and closings have been replaced with employment in the recycling industry.

Habitat For Humanity of Wake County ReUse Center undergoes massive expansion

By John Blaisdell, Market Development Specialist

Due to overwhelming interest in the program, Habitat For Humanity of Wake County ReUse Center outgrew its old facility on Capital Boulevard in Raleigh, and has moved into a bigger and better one. The new ReUse Center, located at 2400 Alwin Court in Raleigh, less than a half mile away from the old facility, opened on July 5, 2000, providing an additional 20,000 square feet of retail space.

Habitat For Humanity of Wake County ReUse Center is a well-established nonprofit which accepts donations of new and used construction materials for resale to the general public. Revenues generated from the program help support the parent organization's mission of building affordable housing for North Carolinians.

With more of a retail store feel to it, the new facility holds an impressive 27,000 square feet of new and used building materials. This expansion will allow the ReUse Center to accommodate larger-sized donations. For example, if a demolition contractor wants to salvage a truckload of windows, doors, flooring and other materials, the ReUse center will now be able to accept the materials at one of its large trucking bays and display the materials on its expanded floor space.

Besides improving the size of the retail space, the lighting has also improved. "Customers used to come to shop at our old place with flashlights, the lighting was so bad in there," said Ryan Jacoby, warehouse

manager. "Now we have lots of regular and natural lighting."

Materials selection is also improving. According to Jacoby, the most popular items are windows, doors and cabinets. Some of the higher-end items include reused hardwood flooring, marble tiles which surround fireplaces and high-end bathtubs.



Marketing remains a main focus. Earlier this year, the ReUse Center received a Construction and Demolition Debris Recycling Grant

from the Division of Pollution Prevention and Environmental Assistance (see related article in Winter 1999-2000 edition of *Recycling Works*: <http://www.p2pays.org/ref/04/03343.pdf>). The grant project is a marketing campaign that includes newspaper and radio advertising, as well as targeted meetings and presentations to homebuilders and contractors to increase donations and sales. In the past few years, the ReUse Center has been salvaging and reselling approximately 400-500 tons per year. Center officials hope to drastically increase that quantity with their latest marketing efforts.

Although they haven't officially celebrated with a grand opening, the facility is open fully for business Wednesday through Saturday, 9 a.m.-5 p.m. To make donations or learn more about the ReUse Center, contact Ryan Jacoby at (919) 833-6768.

Ryan Jacoby, warehouse manager, proudly displays 27,000 square feet of new and used building material inventory.



Store Manager Adam Deck receives a certificate for the ReUse Center's 2000 Construction and Demolition Debris Recycling Grant.



DENR provides new one-stop permit assistance

The N.C. Department of Environment and Natural Resources (DENR) has established a new "One-Stop Permit Assistance Service" in its Customer Service Center. The new service provides a single entry point where businesses and citizens can seek assistance in identifying state and federal environmental requirements that may apply to a proposed project.

DENR is starting the one-stop permit assistance service as a pilot in two of its regional offices, Mooresville and Wilmington. Permit assistance coordinators are available in these offices to guide the applicant or other interested party through the regulatory process. These coordinators act as project managers to assess the customer's needs, develop a project plan, identify relevant permits and prepare an integrated permit decision timeline.

The customer has the option of working directly with a coordinator, the appropriate permitting agency, or through the Customer Service Center (CSC). Use of coordinators is encouraged for projects that require several permits, use innovative technologies or have significant public interest. Telephone numbers for the coordinators are (704) 799-2987, Mooresville Regional Office; and (910) 790-2317, Wilmington Regional Office.

The goal of this new service is to clearly identify potential environmental permits in the early stage of project development and to work with customer and permitting agencies to ensure that requirements are addressed and met in a timely manner. Businesses, industries, citizens and departmental teams have characterized the permitting process as complex, confusing and unpredictable. The one-stop assistance service is designed to address these concerns.

In addition to the regional permit coordinators, permit information will be expanded via the Internet. A customer-friendly Web site will allow permit applicants and others to obtain information on many of the state and federal environmental permits issued by DENR. An application tracking system will provide more convenient information on the status of certain pending permits. The new, improved and developing Web site can be visited at www.envhelp.org.

The one-stop permit assistance service and the regional permit coordinators expand the offerings of DENR's existing CSC, a one-stop information source on the department's full range of environmental and natural resources programs. Customers may call the CSC toll free at 1-877-623-7648 for general information and assistance, including permit coordination.

What's new . . . in business

In Business is a bi-monthly publication that conveys information about creating sustainable enterprises and communities. It frequently highlights innovative, environmentally-friendly business endeavors and concepts. Three such endeavors, which were featured in the March/April and May/June 2000 issues, are described below.

Cargill Dow Polymers: this venture between Cargill Inc. and Dow Chemical Co. will produce "natural plastic" made from plants instead of petroleum for use in clothing, carpet, food containers and packaging. The project involves investments of \$300 million, which will involve construction of a facility in Blair, Neb. The company hopes to produce one billion pounds per year of product within the next decade.

Green Glass USA: using unbroken recovered glass bottles as feedstock, this company produces glassware by cutting off the base of each bottle and reattaching it to the bottleneck/mouth. It currently manufactures roughly 25,000 pieces of glassware per month in South Africa, and is building a new facility in Stratford, Wis., that has a projected output of 200,000 glasses per month.

Conigliaro Industries: boasting \$2.6 million in sales last year and an average growth rate of 30 percent, this diverse collection and remanufacturing company accepts 150 different materials including plastics, metals, paper, electronics, batteries, mattresses and fluorescent bulbs. It has vertically integrated its operation to produce such products as road patch kits made from mixed plastics, old computer housings, flower pots, liquid asphalt and standard aggregate.

To subscribe to *In Business* magazine, contact The JG Press Inc. at (610) 967-4135.

electronics

Glass

White Goods

metals

TEXTILES

oil-related

C&D

Plastics

WOOD

tires

1998

NORTH CAROLINA

Markets Assessment

OF THE RECYCLING INDUSTRY AND RECYCLABLE MATERIALS

Findings/ Recommendations

By Matt Ewadinger, RBAC Manager

This article highlights information contained in the "1998 Markets Assessment: Findings/Recommendations." The commodity profile may be downloaded in its entirety at:

<http://www.p2pays.org/ref/02/0162240.pdf>

The Findings/Recommendations section of the "1998 North Carolina Markets Assessment of the Recycling Industry and Recyclable Materials" summarizes the results of the analyses of all the commodities presented and assigns high, medium or low priority to each. This section also presents overall recommendations to stimulate recovery and/or demand for most commodities. These recommendations are geared toward showing North Carolina recycling market developers where the greatest efforts are needed to direct the growth of the state's recycling infrastructure.

The recovery rates for specific commodities vary. Container recovery rates tend to be low, especially for plastics. Although the paper recovery infrastructure is well established, there is room for growth in many grades, especially magazines, mixed paper and office paper. Some other materials are virtually untouched in terms of recycling potential, including C&D, electronics, food residuals, most plastics and textiles.

PRIORITIES

The ultimate goal of the assessment was to chart the state's current recycling course and to identify where market development assistance is needed to stimulate gains in recovery. As a result of the analyses of 26 commodities in 12 categories, each commodity was assigned a priority for action.

High priority commodities typically warrant immediate market development assistance and offer opportunities for infrastructure

See Markets Assessment, next page

Markets Assessment, from previous page

and market development that justify the application of technical, financial and policy resources. They also constitute a significant and growing portion of the waste stream or pose environmental and health threats. Medium priority commodities require more limited assistance and tend to constitute a smaller portion of the waste stream. Low priority commodities have mature markets and typically do not require action from the state.

High Priority

- C&D Debris (wood, wallboard, concrete, brick, etc.)
- Organic Materials (recovered edible food, animal feeds and food residuals)
- Paper (OCC, office paper, OMG, ONP, RMP)
- Used Oil Filters
- Wood Waste

Medium Priority

- Electronics
- Plastics
- Used Oil

Low Priority

- Glass
- Aluminum and Steel Cans
- Textiles and Carpet
- Tires
- White Goods

OVERALL RECOMMENDATIONS

Policy

- Implement disposal bans for recyclable materials with well-established collection infrastructure and strong market demand.
- Expand procurement of recycled and environmentally preferable products by state and local governments (Carpets, C&D Debris, Electronics, Newsprint, Office Paper, Oil and Wiping Cloths).
- Fund and implement oil and oil filter initiatives outlined in the General Statutes and in the 1992 state solid waste management plan.
- Develop an enforcement policy for items that contain cathode ray tubes (CRTs), such as computer monitors and televisions.

Programmatic

- Gather data on specific waste streams to enable informed decision-making (C&D, Food Residuals, Wood Residues, Vegetative Debris, Commercial/Industrial Textiles).
- Enhance local government program efficiency to increase recovery
- Target the small retail/commercial sector to increase recovery
- Increase plastic recovery through incentives and promotion of recycled product procurement.
- Continue to educate government, business, industry and the public on the need for and benefits of recycling.
- Continue to promote source reduction.

Self-Help, from page 1

environment. Miller used bank and Self-Help financing to purchase several additional acres of land and screening equipment. He hopes to be up and running by the beginning of 2001.

Miller plans to start out small and grow the C&D business carefully. He anticipates processing approximately 50 loads per week, or roughly 300 tons. After the shakedown period, Miller will increase the volume of material coming into the facility.

Initially, the process will include simple hand sorting of materials that will be dumped onto a gravel tipping area. The materials being recovered include clean wood, which will be ground with a horizontal grinder to produce mulch or boiler fuel; and plastics, gypsum, metals and cardboard which will be containerized and transported to other recyclers for further processing. Eventually, Miller would like to add a concrete tipping pad, a trommel screen and a raised picking station to increase his diversion rates. Even further down the road, Miller would like to house the operation in an enclosure to keep his recyclable materials clean and dry.

Miller said he thrives on new challenges and this venture will certainly be one. "I am excited to be taking care of an environmental problem as well," he enthusiastically reported.

Miller is part of a growing cadre of private C&D debris processors. The business is a family operation: his wife Julia serves as chief financial officer and his son and daughter operate the heavy equipment.

Loans from \$10,000 to over \$1 million are available from Self-Help, which has offices in five North Carolina locations. For more information, contact Fred Broadwell at 1-800-476-7428 and/or visit the Self-Help Web site at www.selfhelp.org.

Recycling Works is published by the N.C. Recycling Business Assistance Center (RBAC), a program of the Division of Pollution Prevention and Environmental Assistance of the N.C. Department of Environment and Natural Resources (DENR). For more information call (919) 715-6500 or (800) 763-0136, or write to DPPEA, 1639 Mail Service Center, Raleigh, NC 27699-1639. Archived issues can be viewed at <http://www.p2pays.org/news/newsletters/recyclingwk.htm>.

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Reduce Reuse Recycle

The Recycling Business Assistance Center (RBAC) is a program of the North Carolina Division of Pollution Prevention and Environmental Assistance.

Call (919) 715-6500 or 1-800-763-0136 for free technical assistance and information about preventing, reducing and recycling waste.

North Carolina market prices for recyclables

Prices current as of October 2*

Item	Western Region	Central Region	Eastern Region
METALS			
Aluminum Cans, lb. loose	\$0.45	\$0.49	\$0.59
Steel cans, gross ton baled	\$33	\$28	\$11
PLASTICS			
Central Region markets plastics together			
PETE, lb. baled	\$0.15	\$0.055	\$0.16
HDPE, lb. baled	\$0.16	\$0.055	\$0.20
PAPER			
Newsprint, ton baled	\$75	\$70	\$75
Corrugated, ton baled	\$45	\$60	\$53
Office, ton baled	\$130	n/a	\$135
Magazines, ton baled	***	\$100	**
Mixed, ton baled	\$35	n/a	\$35
GLASS			
Clear, ton crushed	\$35	\$39	\$25
Brown, ton crushed	\$24	\$29	\$21
Green, ton crushed	\$15	\$0	\$0

*Central Region prices from end of August.

**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/rbac1.htm>



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