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Recycling Works

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Employment Trends in North Carolina's Recycling Industry

by Sherry Yarkosky, Recycling Business Development Specialist

Thank you to the recycling businesses that participated in the recent recycling employment study. Recycling businesses in North Carolina continue an upward growth trend according to a newly-released study by the Recycling Business Assistance Center. The study's major findings include:

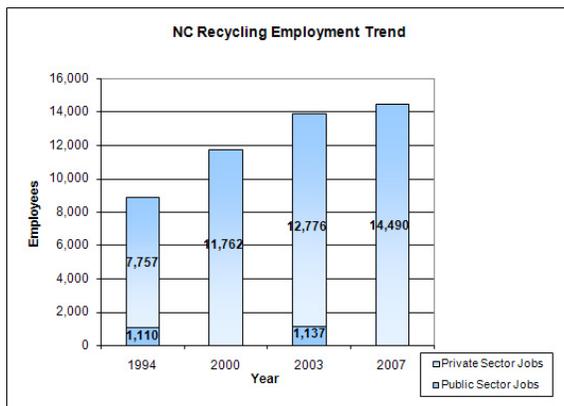
- North Carolina supports 14,490 private sector recycling-related jobs.
- Private sector recycling jobs have increased 13.4 percent since 2003.
- North Carolina recycling businesses support an annual payroll of \$376.8 million.
- Forty-five percent of recycling businesses surveyed anticipate creating more jobs over the next two years.
- Thirty-nine percent of businesses surveyed report manufacturing a product using recycled materials.

- Recycling businesses target a wide variety of recyclables for collection, processing or utilization in manufacturing. No single recycling commodity dominates the market.

The study is a follow-up to previous studies conducted by RBAC in 1994, 2000 and 2004. Five hundred and thirty-five North Carolina-based recycling businesses listed in the state's free, online Recycling Markets Directory received an invitation to participate in the 2008 Recycling Business Employment Study update. Additional recycling employment data from the N.C. Employment Security Commission and an online Harris Directory database was included in the study.

As the graph below indicates, recycling employment continues to rise. Although the

(See **STUDY**, Page 9)



North Carolina supports 14,490 private sector recycling jobs, up from 12,776 in 2003.

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An “Accent” on the Environment

by Wendy Worley, Recycling Business Development Specialist

The U.S. Environmental Protection Agency estimated that in 1996, 136 million tons of building-related construction and demolition debris was sent to landfills. Ninety-two percent of this waste came from demolition and renovation and only eight percent came from new building construction. One North Carolina company, Durham’s Accent Construction, took note. With sustainability as one of its core values, the company’s operations needed to change direction.

In 1999, Accent Construction set aggressive recycling goals. It set up a job site process to separate construction waste for recycling, reuse or donation. With the help of a grant from the N.C. Division of Pollution Prevention and Environmental Assistance, Accent purchased totes to separate construction waste on each job site and trailers to haul materials to recycling centers. That same year, Accent became an EPA WasteWise Partner to learn more about reducing its impact on the environment.

Because of its strong leadership and commitment to recycling, Accent Construction was named EPA’s WasteWise “Small Business Partner of the Year” for 2008.

“We are very pleased to be recognized as the 2008 WasteWise Small Business Partner of the Year,” said Lori Eichel, president of Accent Construction. “We believe we have a responsibility to reduce construction waste and reuse or recycle building materials that might otherwise end up in landfills.”

How do they do it?

On every job site Accent Construction has labeled totes for different types of waste materials that can be recycled, as well as separate Dumpsters for commingled construction



Accent Construction recycles many materials collected at job sites, such as metal.

and demolition debris and drywall. Separated materials, like metal, plastic and drywall, are taken directly to market for recycling or composting. All mixed construction and demolition waste is taken to a mixed C&D recy-

cling company for separation and recycling.

Whenever possible, materials such as cabinets, countertops, windows, doors, clean wood and appliances are salvaged for reuse and donated to Habitat for Humanity and the Alamance and Durham County Rescue Missions.



Accent Construction President Lori Eichel.

Since joining the WasteWise program in 1999, Accent Construction has kept nearly 500 tons of waste from going into landfills through its innovative approach to construction material reuse and recycling. In 2007, Accent diverted about 68 percent of its waste from landfills; its goal for 2008, 85 percent.

Affect on the Bottom Line

While the first two years were difficult trailblazing the recycling process and procedures on the construction sites, Accent started breaking even by only the third year. And now, by identifying new partners, it is actually saving money.

“It may not be enough to call it a revenue generator,” Eichel explained, “but, it is enough to help us do this work at no additional cost to our clients while keeping our prices competitive.”

Looking Ahead

Seen as tree huggers in 1999, in the last few years the building industry is catching up with Accent’s commitment to “green” building. The U.S. Green Building Council is making major inroads in creating more acceptance of green building as good business. Building owners can now earn up to three of the 57 points required for LEED certification by diverting construction waste away from landfills – a practice that Accent has been voluntarily following and encouraging others to follow for years.

Today, Accent Construction is a full-service commercial general contractor focused on providing environmentally-friendly interior finishing for office buildings and medical facilities.

(See **ACCENT**, Page 6)

2 Million by 2012

by **Scott Mouw**
Chief, Community and Business Assistance Section

The N.C. Department of Environment and Natural Resources is announcing a new goal for the recovery of recyclable commodities by local government programs in North Carolina – the recycling of 2 million tons of material annually by the year 2012.



In 2007, local government recycling programs set new records of 1.35 million tons and more than 300 pounds per capita of material recovery, continuing an upward trend in the effectiveness of these programs. Reaching 2 million tons by 2012 will require increases of about 10 percent per year, an ambitious goal that DENR believes is feasible because of robust conditions for recycling, including:

- Strong and growing demand for recyclable materials by domestic and global manufacturers.
- Processing capacity expansions throughout the state in the form of new and upgraded material recovery facilities.
- Opportunities to increase collection efficiency through commingling and increased public participation.
- A widening spectrum of recyclable commodities, including materials such as wallboard and food waste.
- Legislative drivers behind material recovery, such as upcoming disposal bans on pallets, oil filters, plastic bottles, computers and televisions.
- New levels of funding available to local governments for recycling initiatives, with direct distribution of North Carolina’s disposal tax proceeds back to local governments and more funding available from the state’s recycling grants program.

In issuing the 2 million by 2012 goal, DENR challenges both public sector programs and private sector recyclers to take full advantage of the broad opportunities for recycling success, which will deliver direct economic development benefits to North Carolinians.

Grant Cycle Begins

The recycling business grant cycle is beginning for 2009. The schedule will be similar to the past couple of years. A request for proposals will be released by early November 2008, with proposals due by Feb. 2, 2009.

DPPEA will likely commit \$600,000 from the Solid Waste Management Trust Fund for this grant cycle – a doubling of the total from years past. Applicants may request any amount of funding up to a maximum of \$45,000. Applicants must provide at least a 50 percent cash match to the requested amount.

Please visit www.p2pays.org/rbac/grants.html for more information about the 2009 Recycling Business Development Grant Cycle, or contact Matt Todd, at (800) 763-0136 or (919) 715-6522 or by e-mail at matthew.todd@ncmail.net.

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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.

Coble Now Recycling Mixed C&D Waste

by Sherry Yarkosky, Recycling Business Development Specialist



A tub grinder is used to process clean wood waste into boiler fuel.

In May 2008, Coble Sandrock Inc. owners Kent and Brenda Coble started full-scale recycling at their construction and demolition landfill in Alamance County. Since opening the C&D landfill in 1998, scrap metal has been recovered in small amounts for recycling but now clean wood waste, concrete, brick, block and cor-

rugated cardboard are being recovered from mixed loads of construction waste.

With increased solid waste management requirements on C&D landfills, the economics of operating landfills has changed and recycling more materials is now a strategic business decision for Coble Sandrock Inc.

"I knew recycling would save us some landfill space, but I really didn't appreciate just how much space we would save," said Kent Coble. "Landfill space is at a premium now with increasing permitting costs. It just makes good business sense to pull out what recyclables you can now and save space in the landfill for later."

The Cobles have seen some other unintended benefits, too. "We're not using as much fuel compacting waste in the landfill. With diesel more than \$4 a gallon this is a real cost savings that we did not even realize," added co-owner Brenda Coble.

On Aug. 1, 2008, Coble Sandrock received a six-month probationary certification as an Orange County commingled recycling facility. Orange County is the only county in the state that has an ordinance requiring recycling of certain C&D materials, including corrugated cardboard, clean wood and scrap metal.

Initially, the Cobles wanted to have a mixed waste C&D recycling facility more conveniently located for construction waste haulers off I-40 in the Burlington city limits.

When that didn't work out, the Cobles wanted to start recycling so they forged ahead and made the decision to recycle on-site at the C&D landfill instead.

How do they do it?

When trucks weigh in at the scale-house, an assessment of the waste is made. Loads containing all waste and no recoverable recyclables, such as roofing shingles, are directed to the bottom area of the landfill for immediate disposal. However, mixed loads of C&D waste are directed to the working face of the landfill where it is dumped and spread with an excavator to expose any recyclable materials.

Several employees manually sort cardboard, metal, brick, block and clean wood for recycling. Concrete is pulled out by an excavator and placed in a pile. What's left receives a further cleaning for small metal objects with a magnet attached to the excavator.

Where do the recyclables go?

The cardboard and metal are sold to local recycling markets. The clean wood waste is ground, screened and sold as boiler fuel. Concrete, brick and block are crushed and used on-site as road base.

(See **COBLE**, Page 8)



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Demolition Project Recycles 98.8 Percent

by Matt Todd, Recycling Business Development Specialist

Background

The Green Square Complex is a two-block, multi-use sustainable development project that will bring North Carolina's state environmental offices and a nationally-significant Nature Research Center to the heart of North Carolina's Capitol city.

In October 2007, the pre-design phase planning process began for a 172,000-square-foot office building for DENR, a 79,400-square-foot expansion to the N.C. Museum of Natural Sciences and some underground parking.

The development of this site required the removal of two existing buildings. With the goal of recycling as much of the construction and demolition waste as possible, a construction and demolition materials management plan was put into place, and adopted as part of the contracting documents.

Waste Reduction Activities

DENR's materials management plan assisted in identifying onsite materials, and the steps to be taken in each phase of deconstruction/demolition, site preparation and construction to minimize the amount of material headed to landfills. The outcome would help meet requirements to obtain points for LEED certification, and ultimately increase the volume of scrap headed back into economic use through reuse or recycling. The materials management plan was included in the demolition specifications for Green Square.

Waste Reduced

The goal for diversion was to meet or exceed the highest-level requirement in the LEED rating system. This requirement is to recycle or salvage at least 75 percent of non-hazardous C&D debris from disposal. Meeting this requirement nets two points, with an additional point available as an innovation credit if a project can attain 95 percent diversion.

Through June 2008, the demolition part of the project is complete. Monthly reporting was required by the demolition contractor, which requires listing of the following information: action (recycle/salvage/landfill), material type, weight, destination, hauler name, cost of handling/transport, revenue or tip fee and total cost.

Monthly reporting for March - May 2008:

Action	Type of Material	Weight (tons)
Recycle	Wood	150.0
Recycle	Clean Concrete	878.0
Recycle	Brick/Mixed	2,834.0
Recycle	Drywall	13.7
Recycle	Mixed Metal	616.8
Recycle	Mixed Steel	4.8
Recycle	Mixed Copper	0.1
Salvage	Doors/Windows	5.1
Landfill	Mixed Misc.	53.9
TOTAL	All Material	4,556.4
	Recycled/Salvaged	4,502.5
	Percent Recycled	98.8%

Cost Savings

The cost savings for recycling the above material vs. sending it to a landfill were significant. Hauling charges to move all the material to its final destination totaled just under \$40,000. If all the material listed had been sent to

(See *Green Square*, Page 6)

Natural Capital Investment Fund

NCIF makes loans and investments in the \$35,000 to \$250,000 range, primarily to expanding businesses.

**Recycling
businesses interested**

in NCIF funding should contact

**Rick Larson at rlarson@conservationfund.org
or by phone at (919) 967-2223.**

NCIF is an affiliate of The Conservation Fund, a national non-profit with a unique commitment to balanced land and water conservation solutions that emphasize the integration of economic and environmental goals.



GREEN SQUARE, from page 5

a landfill, the tipping fee associated with this tonnage (at \$33/ton for disposal) would be approximately \$150,000. The disposal cost plus the hauling fees would bring the total to around \$190,000.

Based on lower tip/processing fees for some of the separated materials (wood, drywall, brick and clean concrete) as well as revenue generated from recycling the metal, the demolition of the buildings at the Green Square site generated revenue of \$209,000. Subtracting the hauling charges of \$40,000, net revenue generated from the demolition at the Green Square site was \$169,000.

The total cost savings when compared to sending the demolition material to a landfill is approximately \$359,000. Below is a breakdown of the costs and revenues of the material managed during the demolition phase for the Green Square complex:



Removal of the Thompson Building on the corner of McDowell and Jones Streets in downtown Raleigh helps make way for the development of the Green Square complex.

Type of Material	Weight (tons)	Cost of handling/transport	Cost of recycling/disposal
Wood	150.0	\$ 625	\$ 610
Clean Concrete	878.0	5,375	1,890
Brick/Mixed	2,834.00	12,875	3,380
Drywall	13.7	500	148
Mixed Metal	616.8	18,000	(215,368)
Mixed Steel	4.8	500	(907)
Mixed Copper	0.1	150	(400)
Doors/Windows	5.1	0	0
Mixed Misc.	53.9	1,125	837
TOTAL	All Material	\$39,150	(\$209,810)



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ACCENT, from page 2

Scott Mouw with N.C. DPPEA notes, "Accent Construction has really taken a leadership position. To my knowledge, Accent is still the only commercial general contractor in the state of North Carolina engaged in separating building materials for recycling and reuse on a consistent basis. It has shown what can be done when committed businesses really set their minds to a task. We wish that more builders and contractors would follow its lead to recovering resources."

For more information, contact Lori Eichel at (919) 636-4503, lori@accentllc.com or visit www.accentllc.com.

State's Electronics Recycling Convenience Contract Updated

by **Matt Todd, Recycling Business Development Specialist**



State and local agencies, universities, community colleges and local school units are all eligible users of the state term contract for electronic equipment recycling services. The vendors selected have met the technical re-

quirements required by the state, and have provided competitive pricing for the range of services required under this contract.

Recycling services include reuse or responsible end-of-life management of computer monitors, TVs, CPUs, periph-

erals, cell phones and many other electronic devices. Collection services include one-day collection events, transportation for truckload and less-than truckload quantities, trailer rental, packing supplies, as well as labor for collection events or material loading at customers' sites.

You may contact any of the selected vendors below to get details on how to arrange for collection of electronics for recycling at your facility or institution.

CompuTel IG LLC - Charlotte

Creative Recycling Systems of N.C. LLC - Durham

Synergy Recycling LLC - Mayodan

Information about the contract can be found at www.doa.state.nc.us/PandC/926a.pdf. For more information or for assistance on how to use the services offered under this contract, contact Matt Todd at (919) 715-6522, or matthew.todd@ncmail.net.

RISE Act Now Law

by **Wendy Worley**
Recycling Business Development Specialist

As part of the 2008 financial rescue plan, a provision that allows taxpayers to claim accelerated depreciation for qualified reuse and recycling property was signed into law on Oct. 3, 2008. Previously known as the Recycling Investment Saves Energy Act, the law provides a special depreciation allowance equal to 50 percent for qualified reuse and recycling property. The term "reuse and recycling property" is defined as any machinery and equipment (excluding buildings and real estate) used exclusively to collect, distribute or recycle a variety of qualified commodities. Qualified commodities include plastic, glass, textiles, rubber, packaging, fibers, metals and electronic scrap.

This legislation will help enable recycling businesses, including collectors, processors and end-users, to purchase modernized equipment and improve efficiencies.

The full text of the RISE Act and corresponding definitions may be viewed at www.p2pays.org/ref/46/45996.pdf.

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NC Green Business Fund

by Wendy Worley, Recycling Business Development Specialist



In 2009, \$950,000 in grant money will be available to North Carolina businesses through the NC Green Business Fund. The NC Green Business Fund awards competitive grants to North Carolina organizations with innovative projects focused on three

priority areas, including:

1. Development and commercialization of the biofuels industry,
2. Development and commercialization of the green building industry, and
3. Attraction and leverage of private sector investments and entrepreneurial growth in environmentally conscious clean technology and renewable energy products and businesses.

Grants made in the green building industry category will be made to assist in the development of environmentally conscious and energy efficient green building technologies and processes. In 2008-2009, businesses with fewer than 100 employees are eligible to apply for a maximum of \$100,000 per company.

Fiscal Year 2009 solicitation will be available in mid-December 2008. Workshops on grant writing for this program are being held in November and December across the state. Visit www.ncscitech.com/announce.htm for a list of workshop dates and locations.

For more information about the NC Green Business Fund, including a list of FY2008 awardees, contact R.V. Rikard at rvrikard@ncommerce.com, (919) 716-0110, or visit www.ncscitech.com/gbf/index.htm.

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.

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New Fluorescent Web Site



To meet a growing demand for information on the regulatory status and recycling options for fluorescent lights, the N.C. Division of Pollution Prevention and Environmental Assistance has posted a new Web site on this issue: www.p2pays.org/Fluorescent/index.asp. Because of their overall energy efficiency, use of tube or linear fluorescent bulbs is widespread throughout the state and use of compact fluorescent bulbs is rising rapidly. Since both types of bulbs have a small amount of mercury, it is important that discarded bulbs be handled properly and recycled. Business generators of fluorescent bulbs (including recycling companies) are also obliged to manage them in accordance with state and federal regulations. The new fluorescent Web site includes information to help both households and businesses best manage their fluorescent bulbs.

COBLE, from page 4



Crushed screened concrete is transported to a staging area to be sold or used as road-base on site.

While it continues to work out the best approaches for recovery and processing of materials, as well as negotiating with recycling mar-

kets for the best prices, in September it estimates it will achieve a 36 percent recycling rate (excluding concrete, brick and block).

What Now?

The Cobles plan on recovering more recyclables after fine-tuning their current recycling process and as more markets become available for materials such as sheetrock and other plastics. They are excited about their successful recycling efforts and want to spread the word to construction haulers that they would appreciate the opportunity to recycle their waste.

Coble Sandrock Inc. currently employs 15, including five recently-hired employees as a result of the new recycling efforts.

For more information about Coble Sandrock's C&D recycling efforts, contact Brenda Coble at (336) 565-4750.

STUDY, from page 1

employment growth from 2003 to 2008 is slight, the 2003 study, as well as the 1994 study, included a public sector recycling-related employment component, while the 2000 and 2008 studies did not.

RBAC periodically conducts recycling business studies to gauge the health of the recycling economy. In 2008, an estimated 14,490 private sector recycling-related jobs in North Carolina are involved in the collection, processing, manufacturing, reuse or composting of post-consumer or post-industrial materials. The state's recycling busi-

nesses are strong, diverse and utilize a large variety of recyclable or discarded materials that become feedstock for a wide-variety of products.

A complete copy of the 2008 N.C.'s Employment Trends in N.C.'s Recycling Industry study can be found online at www.p2pays.org/ref/46/45998.pdf.

For more information about the study, contact Sherry Yarkosky at (919) 715-6511 or sherry.yarkosky@ncmail.net.



The Recycling Business Assistance Center is a program of the N.C. Division of Pollution Prevention and Environmental Assistance.

Call (919) 715-6500 or (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 Oct. 10, 2008

Item	Western Region	Central Region	Eastern Region
METALS			
Aluminum Cans, lb. loose	\$0.77	\$0.69	\$0.78
Steel cans, gross ton baled	\$115	\$44.64	\$50
PLASTICS			
PETE, lb. baled	\$0.18	\$0.18	\$0.18
HDPE, lb. baled	Natural	\$0.44	\$0.44
	Colored	\$0.34	\$0.345
PAPER			
Newsprint, ton baled	\$140	\$130	\$137.55
Corrugated, ton baled	\$105	\$95	\$105
Office, ton baled	\$215 (SOP)	\$200 (SOP)	\$305 (white ledger)
Magazines, ton baled	*	\$130	**
Mixed, ton baled	\$95	\$90	\$95
GLASS			
Eastern Region sells glass F.O.B. origin			
Brown, ton crushed delivered	\$18	\$19	\$17
Clear, ton crushed delivered	\$25	\$29	\$21
Green, ton crushed delivered	\$3	\$2	(\$7.50)

*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>