



Recycling Works

Volume 18, Number 2

Spring 2012

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

Glass Recycler, Reflective Recycling, Expands Operations in Wilson

by Matt Todd, *Recycling Business Development Specialist*

Glass recycling in North Carolina has changed over the years. In the early days, most commercial and residential recycling programs collected glass separated by color. The volumes may have been lower, but the quality was consistent. Most recyclers would deliver material directly to the bottle plants and sell it as recycled cullet for use in making new bottles. Driven in part by the move to single-stream collection and the desire of bottle plants to source a consistent and clean supply of material, all glass is now managed through secondary glass processors before going to a bottle plant for use as recycled cullet.

Bottle plants want to increase the percent of recycled cullet they use to make bottles. The

more recycled cullet the bottle plants use, the more energy they can save by being able to run their furnaces at lower temperatures. As the recycled content is pushed to the 55–60 percent range, a company's ability to handle contamination in their feedstock mix decreases.

In response, Reflective Recycling has invested more than \$8 million in a state-of-the-art glass processing facility in Wilson. The investment will allow for the processing of a large volume of "dirty" glass that typically comes from single-stream material recovery facilities. The new Reflective facility can process "dirty" glass into a clean and color-sorted feedstock to supply various end-market customers — including the Verallia bottle plant also located in Wilson. Verallia makes bottles for Budweiser and Mt. Olive Pickles, to name a few.

Most of the material fed through the Reflective Recycling plant in Wilson is generated through residential and commercial curbside recycling programs from across North Carolina and beyond. Material from curbside collection is

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The interior of the new Reflective Recycling facility in Wilson is shown above. The processing line cleans up the glass stream as it moves through the plant.

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Glass-containing material, primarily from MRF operations, is fed by conveyor (shown above left) from the tipping floor into the plant. Clean, furnace-ready cullet is the final goal. Above right shows flint ready for the glass plant.

sorted at a material recovery facility. Various material recovery facilities supply glass (in some cases “glass containing residue”) to Reflective Recycling.

The new plant is 128,000 square feet and has the capacity to process more than 20 tons per hour. The final product generated at the plant is color-sorted, furnace-ready cullet. This material makes up about 70 percent of the product leaving the plant. End-uses for the other grades of glass that are produced include: highway beads used in the production of reflectors, concrete additives, non-carcinogenic abrasives, and feedstock for fiberglass production.

The plant is in a repurposed building — a previously vacant manufacturing site — and used reclaimed I-beams for the construction of the glass processing line that was built inside. The new facility also includes energy efficient



A dump trailer waits on the scales before proceeding to the tip floor to dump its load of glass.

lighting, electric switching and computer-controlled equipment that can be monitored online.

Reflective Recycling currently employs 40 workers at the plant in Wilson. Reflective Recycling began 10 years ago with just two employees in Winston-Salem. It has grown to 11 facilities (four serving North Carolina) and 85 total employees.

For more information about Reflective Recycling, contact Bill Clark at 281-520-0613, or Bill.Clark@Ref-Ind.com.

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 nonprofit with a unique commitment to balanced land and water conservation solutions that emphasize the integration of economic and environmental goals.



Sonoco Recycling Takes Control of the Onslow County MRF

by Matt Todd, Recycling Business Development Specialist

On Nov. 1, 2012, Sonoco Recycling and Onslow County entered into a 10-year contract authorizing Sonoco to begin managing the county-owned material recycling facility located at the Jacksonville landfill. The plant primarily uses manual labor to process approximately 800 tons per month of single-stream materials generated by the city of Jacksonville, Onslow County and surrounding municipalities.



To increase the efficiency of the plant and allow for additional throughput, Sonoco Recycling plans to invest \$1.3 million to upgrade and expand the facility. The improvements will include the installation of a new conveying system, metering drum, OCC fiber screen, newsprint sorting screen, glass breaker and eddy current, and the relocation of the current baler.

centralized location for municipalities and haulers to bring materials without incurring significant transportation costs and/or tip fees.

As part of this project, Sonoco Recycling will also construct an education center at the Onslow County site to help promote recycling in the region. The expansion of the Onslow County facility creates a

The initial plant expansion will enable the facility to process 9,600 tons per year and, as more material is sourced, volumes will increase to a projected 24,000 tons annually.

Founded in 1899, as the Southern Novelty Company, Sonoco began as a business to provide paper cones to the many textile factories throughout the Carolinas. Sonoco is proud that even in the early 1900s, it recycled paper at its Hartsville, S.C., mill to make the paper cones it sold to the textile industry. As time passed, the company expanded its footprint and range of products, slowly evolving from a paper company into a packaging company. It now operates more than 340 plants in 34 countries, producing packaging for a variety of industries and many of the world's most recognized brands.

For more information on Sonoco Recycling or to contact the Onslow facility, contact Ryan Long at 910-423-8700, or ryan.long@sonoco.com.

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Recycling Works is published by the N.C. Recycling Business Assistance Center, a program of the Division of Environmental Assistance and Outreach of the N.C. Department of Environment and Natural Resources. For more information call 877-623-6748, or write to DEAO, 1639 Mail Service Center, Raleigh, NC 27699-1639.

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RBAC Funds Investments in North Carolina Recycling Businesses

by Matt Ewadinger, RBAC Manager

In its latest round of grants to North Carolina recycling businesses, the N.C. Division of Environmental Assistance and Outreach's Recycling Business Assistance Center awarded about \$800,000 in grant funding, leveraging a pledged investment from the selected grantees in cash match of more than \$3.5 million.

A focus of the 2012 Recycling Business Development grant round was on proposals that addressed construction and demolition (C&D) waste recycling, and food waste collection and composting. The grants ranged from \$2,800 to \$40,000 — and if all the projects are successful, will create more than 270,000 tons of additional recycling capacity in North Carolina.

"The additional market capacity created by these grants helps to expand local government recycling programs and enhance cost-effective recycling opportunities for citizens, businesses and industries across the state," said Matt Todd, a recycling business development specialist in DEAO's Recycling Business Assistance Center.

Overall, RBAC received 72 proposals requesting \$2.3 million in funds. Selected projects include:

A Greener World Recycling, Inc. (\$2,800) — A Greener World (Millers Creek) will purchase recycling bins and a collection vehicle to assist in servicing their expanding customer base. Contact: Amanda Hamby, 336-657-1003.

AAA Hauling of NC (\$40,000) — AAA Hauling (Fayetteville) will purchase mobile material handling equipment to more efficiently move incoming loads of C&D and sorted material. Contact: Kenneth Hardin, 910-321-6037.

Abbey Green Inc. (\$40,000) — Abbey Green will install a fixed trommel section to its fines line to enhance the screening on its production line. Contact: Jim Bryan, 336-785-2130.

American Recycling of WNC (\$20,000) — American Recycling (Candler) will purchase a skid steer loader to sort cardboard on the MRF tipping floor for direct baling. Contact: Ron Moore, 828-418-0777.

Antique Reclaimed Lumber (\$23,000) — Antique Reclaimed Lumber (Nebo) will purchase equipment and expand the processing capabilities at its existing wood reclamation facility. Contact: Michele Price, 828-659-9062.

APAC Atlantic Inc. (\$20,000) — APAC Atlantic (Greensboro) will install a clear span fabric building at its asphalt plant in Asheboro, allowing covered storage of proc-

essed tear-off asphalt shingles. Contact: Marvin Hylton, 336-412-6855

Barnhill Contracting (\$25,000) — Barnhill (Tarboro) will install a recycling bin, conveyor and other components to produce asphalt mixes using recycled shingles at its asphalt plant in Rocky Mount. Contact: David Glover, 252-823-1021.

Benfield Sanitation Services (\$20,000) — Benfield Sanitation Services (Statesville) will install a conveyor system under the glass breaker at its existing MRF in Mooresville. Contact: Brian Burgess, 704-663-1513.

BlackGold Operating Services LLC (\$20,000) — BlackGold (Charlotte) will offer a location for commercial haulers to recycle its fats, oils, and grease waste from restaurant grease traps to be processed into a bio-fuel for use in industrial boilers. Contact: Emily Landsburg, 215-253-5844.

Boggs Paving (\$30,000) — Boggs Paving (Monroe) will invest in a set of truck scales at its asphalt shingle recycling plant. Contact: Drew Boggs, 704-289-8482 x291.

Coastal Ladies Carting (\$10,000) — Coastal Ladies Carting (Wilmington) will purchase front-load dumpsters and residential containers for recycling. Contact: Kelly Buffalino, 910-313-2556.

DC Foam (\$10,000) — DC Foam (Morrisville) will purchase a collection truck to expand carpet recovery in the Greensboro and Winston-Salem market areas. Contact: Louis Renbaum, 301-502-9503.

Elastrix LLC (\$20,000) — Elastrix (Pilot Mountain) will purchase eight Smooth Mills that will be used for loop milling in its rubber recycling plant. Contact: Bruce Maxwell, 336-302-2402.

Envision Plastics (\$15,000) — Envision Plastics (Reidsville) will install equipment to recover and dry "sinkers" from its sink/float sorting process. Contact: Scott Booth, 336-342-9841.

Foster-Caviness Foodservice (\$40,000) — Foster Caviness (Charlotte) will construct a building and install additional worm bins and pre-processing equipment to expand its on-site vermi-composting system. Contact: Jeff Gorelick, 704-329-7264.

Gallins Family Farm (\$38,700) — Gallins Family Farm (Winston-Salem) will expand its food waste collection and composting operation with the addition of collection containers, a collection truck modification to include a dump cylinder, and the purchase of a bucket loader. Contact: Peter Gallins, 336-407-0961.

(RBAC Grants continued on page 5)

RBAC Grants *continued from page 4*

Greasecycle LLC (\$25,000) — Greasecycle (Raleigh) will purchase an upright 10,000 gallon cone bottom carbon steel tank with heating coils and two horizontal 10,000 gallon storage tanks as part of a grease trap waste processing facility. Contact: Dylan Gehrken, 434-996-7692.

Green Recycling Solutions (\$40,000) — Green Recycling Solutions (Maysville) will purchase recycling equipment and rolling stock to develop a construction and demolition processing facility. Contact: James Maides, 910-938-5900.

Jackson Paper Manufacturing (\$40,000) — Jackson Paper (Sylva) will install equipment to convert waste "rag rope" generated from its recycled fiber mill operations into separate streams of scrap metal and boiler fuel. Contact: Jeff Murphy, 828-586-5534 x205.

Junk Rescue (\$15,000) — Junk Rescue (Charlotte) will purchase 15 hook lift containers for use in its recycling facility to assist in the sorting, storage and movement of material. Contact: Brad Redden, 800-586-5911.

Kemp Recyclers (\$20,000) — Kemp Recyclers (Goldsboro) will purchase an eddy current and cross-belt magnet to assist in the recovery of aluminum and metal at its existing material recovery facility. Contact: Aaron Korangay, 919-735-2604.

Marves Industries (\$10,000) — Marves Industries (Hildebran) will install a recycling line to handle post-production scrap and the return of its customers' scrap to be processed and incorporated into new production. Contact: Elias Gomez, 828-397-4400.

MAYTime Composting Systems (\$25,000) — MAYTime Composting (Burnsville) will construct a complete vermiculture and vermi-composting facility, consisting of two continuous-flow reactor systems housed in metal buildings on concrete pads. Contact: Mark Langer, 828-231-9352.

Metech Recycling (\$10,000) — Metech (Creedmoor) will rebuild a shear shredder at its recycling facility to assist in the destruction and recycling of hard-drive scrap. Contact: Andrew McManus, 919-528-6000 x5205.

North Davidson Garbage Service (\$25,000) — NDGS (Welcome) will provide 5,000 more residences with recycling bins to increase the tonnage of material that is collected and processed through the company's MRF. Contact: Bradley Everhart, 336-731-4025.

Power Mulch Systems (\$10,000) — Power Mulch Systems (Smithfield) will buy and install equipment to produce compost filter socks on pallets for the erosion control and construction industry. Contact: Eddie Foy, 919-938-4141.

Reflective BevCon LLC (\$10,000) — BevCon (Winston-Salem) will establish an aggregation facility to hold the daily collections of BevCon LLC and other small collectors in the

southeastern region of North Carolina. Contact: Bill Clark, 281-520-0613.

Reflective Recycling Inc. (\$25,000) — Reflective Recycling (Wilson) will place an aggregation center with rail loading in Marion to serve the western portion of the state. This collection efficiency will stimulate the increased collection of post-consumer glass and serve to contain transport costs. Contact: Steve Bowles, 252-206-9000.

Shimar Recycling (\$10,000) — Shimar (Durham) will construct a concrete dump pad and bunker area to accept OCC for baling from other collection contractors. Contact: Will Marley, 919-680-6262.

Sonoco Recycling - Charlotte (\$20,000) — Sonoco (Charlotte) will purchase a new horizontal baler at its MRF to increase baling capacity at this single-stream recycling facility. Contact: Rodney Hannah, 704-525-8728.

Sonoco Recycling - Onslow (\$40,000) — Sonoco (Jacksonville) will purchase a newsprint sorting screen as part of an upgrade to the single-stream MRF located in Onslow County. Contact: Ryan Long, 910-423-8700.

Stoney Creek Lumber (\$10,000) — Stoney Creek Lumber (Powellsville) will purchase a mulch coloring machine to add value to the mulch produced as a byproduct of the

company's pallet recycling business. Contact: Melody Futrell, 252-332-2188.

Synergy Recycling (\$20,000) — Synergy (Madison) has developed procedures that will allow them to concentrate the copper and precious metals for smelting and reclaim the ferrous, aluminum, zinc plastic and glass from the fines prior to smelting. Contact: Joe Clayton, 919-619-4856.

The Recycling Group LLC (\$15,500) — TRG (Connelly Springs) will purchase additional roll-up dock doors, and pour additional concrete pads with a covered awning to increase recycling capacity at its existing facility. Contact: Rosemarie Williams, 336-279-8809.

The Scrap Exchange (\$10,000) — The Scrap Exchange (Durham), a nonprofit creative reuse center, will purchase property to create a permanent home for the organization. Contact: Ann Woodward, 919-682-2751.

Todco Inc. (\$40,000) — Todco (Lexington) will establish a C&D recycling facility to process materials from Davidson County and surrounding areas. Contact: Todd Warfford, 336-248-2001.

Waste Management Inc. (\$25,000) — Waste Management (Winston-Salem) will convert its Winston Salem MRF to a \$7.8 million single-stream facility. Contact: Marla Prince, 770-590-3336.

2012 RBAC Grants:
\$800,000 — Grant Funding Awarded
\$3.5 million — Private Investment Pledged
270,000 tons — Increased Recycling Capacity in N.C.

2012 CRA “Recycling on the Rise” Conference Rises to New Heights

by Matt Ewadinger, RBAC Manager

With more than 525 attendees and 90 exhibitors on hand for the 22th Annual Carolina Recycling Association Conference & Trade Show, the event set new records in both categories. According to CRA Board Treasurer Tom Jones, “We filled up our exhibitor spots, expanded it, and filled it up again.”

This year’s event was held March 19–22 at the Grove Park Inn in Asheville and included workshops, tours and sessions that featured a wide variety of North and South Carolina recycling businesses.

Some of the sessions that featured Carolina-based recycling businesses included:

Food Waste Collection Opportunities – The session showcased companies that focus on organic waste collection and processing. Speakers included Jim Lanier, President of **Earth Farms Organics**, a company that processes a wide variety of organic waste at its Stanley operation. Also presenting was Danny Keaton, Owner of **Danny’s Dumpsters** in Leicester, who — in addition to collecting the typical curbside mix of materials — also collects restaurant food waste in and around Asheville.

Recycling Asphalt Roofing Shingles – A “hot commodity” in the C&D recycling field, shingles have become one of the fastest growing recyclables today. Following a presentation on the regulatory aspects of shingle recycling by Ed Mussler of N.C. DENR’s Solid Waste Section, the audience heard from Mike Griffin, Manager of **Handle Safe Systems** in Asheville and David Glover, Corporate QC Manager of **Barnhill Construction** with 17 asphalt shingle recycling locations in North Carolina.

MRF Roundtable – Representatives of companies, many of which operate multiple MRFs around the Carolinas, discussed their facilities and the growth of single-stream operations. Presenters included: Frank Killoran, **Pratt Industries**; Ronnie Grant, **Sonoco Recycling**; Dave Bevacqua, **Republic Industries**; Ron Moore, **American Recycling of WNC**; and Bill Leonidas, **ReCommunity**.

Carpet: The Next Recyclable Material – The audience at this session heard from presenters whose carpet recycling activities ranged from initial collection through fiber identification and intermediate processing. Presenters included Paula Clark, Pitt County; Robert Gleaves, Owner of **Blue Ridge Recycling** in Charlotte; and Glenn Odom, Vice President of Raw Material Develop-



Mehul “Max” Patel and Anand Chahuan of American Greenz, Inc. in Durham meet with Brett Rhinehardt of eCycleSecure in Charlotte to discuss electronics recycling during open networking time with exhibitors at the 2012 CRA annual conference.

ment with **Wellman Plastics Recycling** in Johnsonville, S.C.

North Carolina Independent Collectors Network Meeting – A popular recent addition to the CRA Conference agenda, and likely to become a permanent one, the ICN meeting brought together a number of new and developing recycling businesses that provide collection services to residents, commercial establishments and bars and restaurants. In addition to comparing notes among themselves, the ICN members also chatted about glass recycling with Bill Clark of **Reflective Recycling** in Winston-Salem; about business loans with Jane Hatley, a senior commercial loan officer with **Self-Help**, a nonprofit lender that has provided many loans to recycling businesses across North Carolina; and about cart and bin purchasing with Greg Folmar of **Otto Industries**. Special thanks to CRA and **Reflective Recycling** for sponsoring the event and to our own Matt Todd for organizing the event and managing the Independent Collectors Network since its inception.

In addition, a group of attendees toured the recently opened **American Recycling of WNC** Buncombe County MRF that services the Western North Carolina area and beyond. The facility accepts corrugated cardboard, mixed paper, newspaper, glass bottles, aluminum & steel cans and various plastics.

For more information about the conference or to join CRA, call (877) 972-0007, email staff@cra-recycling.org, or visit <http://www.cra-recycle.org/>.

NC Federal Environmental Symposium

Attention North Carolina Recycling Businesses...

Consider attending and exhibiting at the upcoming **N.C. Federal Environmental Symposium** on **June 13, 2012**.

This statewide symposium will engage up to 350 industry and government representatives and will focus on net zero waste goals for military installations and federal agencies. A major component of net zero waste is to maximize recycling and composting efforts as well as other waste reduction strategies that will ultimately result in making waste disposal non-existent.

For more information about the symposium which will be held on **June 13, 2012** at the Holiday Inn Bordeaux & Conference Center in Fayetteville, contact the following individuals:

- Program questions or comments – Anne Campbell at campbella@coastalcarolina.edu.
- Registration, payment or event logistics – Courtney Smedick at smedick@ncmbc.us.
- Sponsorship questions or inquiries – Courtney Locus at locusc@ncmbc.us

For more information, or to register for the symposium, visit <http://ncmbc.us/2012NCFES.php>.

SE Food Waste Reduction Conference

Mark your calendars for the first-ever Southeast Food Waste Reduction Conference, scheduled for Nov. 12–13 in Charlotte.

The event will provide a unique opportunity to learn about the growing level of activity and interest in food waste diversion in the Carolinas and Southeast

region. It will feature discussions on food rescue and donations, residential and commercial food waste collection, composting, digestion and other issues in managing food residuals.

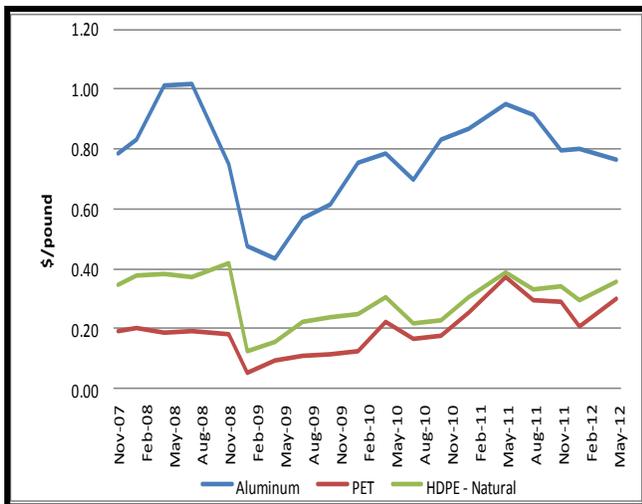
For more details, please visit: <http://www.cra-recycle.org/foodwasteconference/>



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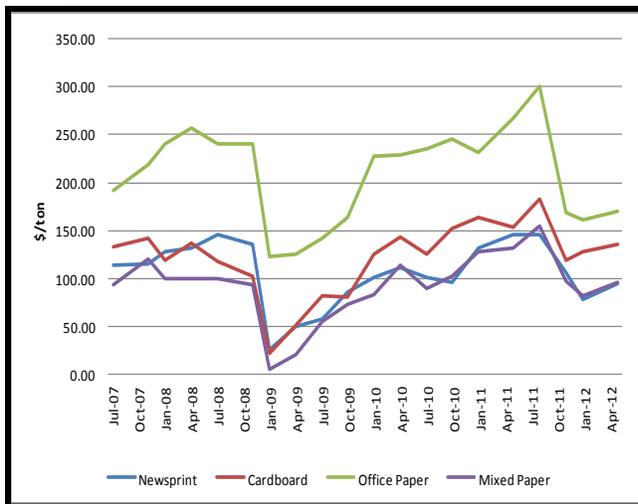
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Container Price Trends



Quarterly prices for aluminum cans (loose), PET (baled) and HDPE natural (baled) in dollars per pound.

Paper Price Trends



Quarterly prices for newsprint, cardboard, office paper and mixed paper in dollars per ton, baled.



The Recycling Business Assistance Center (RBAC) is a program of the N.C. Division of Environmental Assistance and Outreach.

Call 877-623-6748 for free technical assistance and information about preventing, reducing and recycling waste.



North Carolina Market Prices for Recyclables

Prices current as of May 9, 2012

Item	Western Region	Central Region	Eastern Region
METALS			
Aluminum Cans lb. loose	\$0.7600	\$0.7500	\$0.7850
Steel Can, gross ton baled	\$303 gt	\$120	\$241
PLASTICS			
PETE, lb. baled	\$0.310	\$0.280	\$0.305
HDPE, lb. baled	Natural	\$0.375	\$0.360
	Colored	\$0.310	\$0.300
PAPER			
Newsprint, ton baled	\$100	\$90	\$95
Corrugated, ton baled	\$135	\$125	\$148
Office, ton baled	\$170 (SOP)	\$155 (SOP)	\$185 (white ledger)
Magazines, ton baled	*	\$140	**
Mixed, ton baled	\$100	\$90	\$97
GLASS			
Brown, ton crushed delivered	\$18	\$20	\$17
Clear, ton crushed delivered	\$25	\$30	\$21
Green, ton crushed delivered	\$3	\$12	(\$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 www.p2pays.org/rbac