

Recycling Market Development Advisory Council

2010 Annual Report

SOUTH CAROLINA DEPARTMENT OF COMMERCE

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AdvanceSC

American Recycling of South Carolina, LLC

Asphalt Rubber Technology Service

BMW Manufacturing

Bob Doster's Backstreet Studio

Carolina Plastics

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City of Columbia

City of Columbia Climate Protection Action Campaign

Cleanlites Recycling

Clemson University

Clemson University Strom Thurmond Institute – Jim Self Center for the Future

Custom Forest Products

Davco-Steel

Dove Data Products

ECI-Find New Markets

Emes-USA

Ever-Green Recycling

EZ Products, LLC

Fisher Recycling

Freudenberg-Texbond

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Greater Greenville Sanitation Commission

Keep the Midlands Beautiful

Leigh Fibers

MetalTech Systems

Michelin North America

Midlands Technical College

Milliken
Moore & Van Allen Law Firm
Mumford Industries
Municipal Association of South Carolina
New Carolina - South Carolina's Council on Competitiveness
Nine Lives Mattress Recycling
Nucor
OmniSource Southeast
Plastics Provider, Inc.
Recover Incorporated
Renew Resources, LLC
Republic Services
Research Technologies
Santee Cooper
South Carolina Archives and History
South Carolina Association of Counties
South Carolina Biomass Council
South Carolina Department of Commerce
South Carolina Department of Health and Environmental Control (DHEC)
South Carolina DHEC Office of Solid Waste Reduction and Recycling
South Carolina DHEC Center for Environmental Sustainability
South Carolina DHEC Small Business Environmental Assistance Program
South Carolina Department of Motor Vehicles
South Carolina Economic Developers Association
South Carolina Energy Office
South Carolina General Assembly
South Carolina Materials Management Office
South Carolina Recycling Industry Group
South Carolina Sustainability Institute
South Carolina Technology and Aviation Center
S.H. Carter Development, Inc.
Solid Waste Association of North America-South Carolina Palmetto Chapter
Sonoco
Southeast Recycling Development Council, Inc.

Southeastern Plastics Recovery, Inc.
Steel Recycling Institute
Sun Printing
Sustainable Warehouse
Swamp Fox
The Waste Solution
Tomato Palms
United Resource Recovery Corporation
US Fibers

Recycling Market Development Advisory Council

The Recycling Market Development Advisory Council (RMDAC) is a council of 14 Governor-appointed members representing recycling companies, industry, local governments, higher education and the general public. Established by the South Carolina Solid Waste Policy and Management Act of 1991, RMDAC formulates programs and policies to encourage markets for new and existing recyclable materials. The council is supported by the South Carolina Department of Commerce (Commerce) staff which coordinates the activities of the council and provides technical and economic development assistance to recycling businesses and industry. RMDAC tracks the success and growth of the state's recycling industry and makes policy and program recommendations to the Governor and General Assembly each year.

The council's mission is to facilitate job growth and capital investment by assisting recycling industry companies operating within the state through programs that encourage markets for recyclable materials, increase the recovery of recyclable materials, and connect new and existing companies with outlets for their recyclable products.

In 2010, Chris Fisher transitioned off the council. Kira Roff, Fisher Recycling, was appointed to serve as the glass representative for RMDAC. Hari Krishnan also transitioned off the council in 2010 and Jim Schaefer, Michelin North America, was appointed as the tire representative.

RMDAC Guiding Principles

1. *To meet specific council requirements contained in the South Carolina Solid Waste Policy and Management Act of 1991.*
2. *To assure existing and potential recycling businesses of consistent, cost-competitive, quality supply of required recyclables.*
3. *To identify existing barriers to and opportunities for increased recovery and use of recovered materials within the state and take appropriate actions to eliminate or maximize these conditions.*
4. *To monitor and understand the implications of institutional, economic, market and technical development both in and out of the state that could measurably influence the generation and use of recyclables.*

A list of the council members is located in Appendix A.

South Carolina Solid Waste Management and Policy Act

The South Carolina Solid Waste Policy and Management Act of 1991 requires the Recycling Market Development Advisory Council (RMDAC) to consider elements such as the following in its annual report:

Any revisions which the council determines are necessary to its initial report

There are no revisions to be added.

A description and analysis of the amounts and types of solid waste materials recovered or recycled in this state during the preceding year

In 2000, South Carolina adopted the U.S. Environmental Protection Agency's (EPA) definition for measuring only municipal solid waste (MSW), with some exceptions. Therefore, the state's current recycling and disposal goals are based on MSW. According to the South Carolina Department of Health and Environmental Control (DHEC), the MSW recycling rate for fiscal year (FY) 2010 was 25.5 percent and the MSW disposal rate was 3.7 pounds per person per day.

RMDAC will continue to work with DHEC to analyze solid waste recycling numbers to identify growth opportunities for the recycling industry.

Recommendations regarding materials which should be added or deleted from source separation, recovery and recycling programs

Electronics, carpet, construction and demolition (C&D), waste tires, fiberglass and organic waste should continue to be promoted as recyclable commodities.

Any other recommendations, including tax incentives, to facilitate the development of markets for recovered materials or products in this State

RMDAC will continue to work with SC Recycling Industry Group on any market development opportunities requiring tax incentives or other legislative activity.

RMDAC Work Plan

Carbon Reducing Strategies through Recycling Study

RMDAC developed a strategy to study carbon credits and carbon reduction strategies in relation to recycling. This study would examine tools to track carbon emissions, case studies of companies performing this activity in South Carolina and examine how carbon and greenhouse gas regulations (GHG) would affect the recycling industry. Research information would consist of EPA's greenhouse gas regulation, the Boxer/Kerry Bill, EPA reports, carbon credit exchanges, banks and other models. Once the study was complete, RMDAC proposed hosting a workshop to disseminate the information. Staff would assist companies with the use of resource tools such as EPA's Waste Reduction Model (WARM), tracking of recycling information and reporting.

Commerce made preliminary investigations into carbon credits and federal GHG regulations. As the investigation proceeded, it was determined that from a business perspective Commerce would not move forward with the study. GHG regulations at this time are viewed as a highly charged subject with a lack of full agreement on strategies, calculations and legislation. There is concern about the overall negative impact of GHG legislation on business and industry, thus RMDAC and Commerce decided not to proceed with this strategy.

Pay As You Throw and Other Incentive Based Recycling

Pay As You Throw (PAYT) and RecycleBank, incentive based recycling programs, help increase collection of recyclable materials and recycling rates. PAYT is a unit based trash collection pricing method that has proven to increase residential collection of materials and reduce the amount of trash landfilled.

RecycleBank, a rewards recycling program, provides participants with coupons to use with local businesses for the amount of materials recycled. With increased collection of materials, end users benefit from a consistent flow of recycled materials. Only two communities in South Carolina utilize PAYT recycling (City of Chester and Darlington County). No communities in South Carolina use RecycleBank. Education and overcoming perceptions about PAYT is important to assisting local governments with decisions on PAYT.

PAYT has been identified by the EPA as "the single most effective way to reduce residential solid waste, increase recycling, and decrease waste-related GHG emissions." The residential sector provides the next

biggest potential source of feedstock for industry as the residential sector provides about 60 percent of the MSW stream. RMDAC viewed PAYT as a strategy to begin discussions with municipalities on efforts to increase residential recycling rates.

RMDAC proposed creating a marketing booklet with information on recycling incentive programs such as PAYT. The marketing booklet would have been unveiled at a joint RMDAC and RIG meeting to educate recycling industry participants on PAYT. This information would serve as a resource tool when speaking with local governments as they consider implementing incentive based recycling programs.

RMDAC partnered with the CRA to develop PAYT presentations and webinars for municipal governments. A PAYT flyer was developed and drafted using input from RMDAC and information from EPA's PAYT website. A copy of the flyer is located in Appendix B.

RMDAC presented information on PAYT at the Municipal Association of South Carolina (MASC) Conference on July 16, 2010, in Charleston, South Carolina. RMDAC, staff and the CRA presented information on RMDAC, RIG and PAYT to approximately 500 elected officials, local government staff and council members. Two discussion sessions were held with city officials, staff and solid waste representatives where additional PAYT information was presented and methods to increase the recovery of materials. Resources on PAYT were distributed, along with a flyer outlining the economic impact of PAYT, the "Recycling: Smart Business for South Carolina" brochure and other Commerce resources.

RMDAC and staff worked with the Catawba Council of Government (COG) to host a series of one day PAYT meetings on August 18, 2010. Meetings were held with the City of Rock Hill, Town of Fort Mill and the City of Tega Cay. A strategy identified during the meeting was to meet with York County to discuss how PAYT would impact the county's recycling and solid waste collection programs. In addition, the group decided that webinars would be an effective outreach and education tool. Three PAYT webinars were scheduled for September 1, October 6, and December 1, 2010, targeting local government officials, councils and staff, administrators, finance directors and solid waste directors. Staff worked with the MASC and South Carolina Association of Counties to publicize the webinars.

Eleven participants attended the September 1, 2010, webinar. RMDAC and staff presented information on PAYT and facilitated questions from the attendees. Presentations were emailed to attendees and placed on Commerce's Web site.

RecycleBank partners with cities and waste haulers to increase recycling and collection efficiency and to support local economies. RecycleBank services more than one million people in more than 250 communities across 24 states and the United Kingdom. By cumulative recycling efforts, those households recycled more than 315,000 tons of material. Wilmington, Delaware was the first municipality to deploy the RecycleBank program citywide in September 2007. Since then, RecycleBank has grown to service residents in Albuquerque, New Mexico, Atlanta, Georgia, Chicago, Illinois, Hartford Connecticut, Houston, Texas and many other cities. Staff met with representatives of RecycleBank to discuss marketing the program in the state. RecycleBank works with a hauler who provides service to a Sun City community in South Carolina.

During discussions, it was determined that PAYT would be challenging to implement in South Carolina because tipping fees are low and the perception that PAYT is an additional residential fee. Strong political will and education of elected officials and the media will be necessary to implement PAYT.

PAYT provides an opportunity to increase recycling in the residential sector which is the sector the industry sees as providing a huge potential for feedstock. The commercial and industrial sectors view recycling as an opportunity to reduce disposal costs, but currently, residents do not have an economic incentive to recycle. PAYT communities indicate they want to keep the system because it is a fair and equitable recycling and trash disposal method.

PAYT is an indirect company focus and requires outreach and education to local governments. While PAYT presentations were made, a regional strategy session held and one webinar was broadcast, the full scope outlined in the RMDAC work plan was not completed. Continuing elements of this initiative are outside of Commerce's core mission, relating heavily to residential collection policy.

Collaboration with Higher Education

Staff collaborated with the University of South Carolina (USC) and Clemson University (Clemson) to determine how recycling is taught in public sector higher education institutions in South Carolina and other states.

RMDAC proposed to host a workshop to increase communication and collaboration with South Carolina's universities and technical colleges regarding sustainability, environmental and business school curricula. Staff conducted an inventory of higher education curricula in South Carolina and other states to examine programs and determine how recycling can be integrated into curricula. Twenty-seven institutions of

higher learning were researched for 'sustainability degrees' and these universities. Further research within the school's website was done to determine sustainability related degrees were offered. When the specific search for sustainability did not provide many universities, research focused on related fields such as environmental studies, conservation and resource management degrees, which are similar to the sustainability degrees, but may be more focused on a specific area such as green architecture, sustainable architecture, green business and others. Specific recycling-only curricula were more difficult to find within the institutions.

Several universities have recycling certificate programs or offer classes in recycling. New Jersey's Recycling Enhancement Act (REA) requires that reports or other recycling-related documents be signed/certified by a Certified Recycling Professional (CRP). The New Jersey Recycling Certification Program is provided by New Jersey Agricultural Experiment Station (formerly the Rutgers-Cook College) Office of Continuing Professional Education (OCPE). Other universities offering recycling classes were Montclair University which offers a waste management class and Portland State University which offers a Capstone course on solid waste reduction, reuse and recycling.

Most sustainability programs had core classes that were included in the curriculum and included additional classes as they related to the specific degree areas. Five classes were identified: Environmental Economics, Green/Sustainable Business, Resource Management, Environmental Ethics and Sustainable Ecosystems.

In South Carolina, USC's School of the Environment serves as the university's hub on sustainability and the environment. A virtual school, it includes approximately 150 associated faculty from diverse disciplines such as history, engineering, law and art. USC's Honors College developed a Sustainable Futures semester and offered a number of sustainability courses. The Sustainable Enterprise and Development Initiative was implemented in 2008, at the USC Darla Moore School of Business. It was designed to facilitate discussions on the management of large-scale environmental, economic and social systems.

The David E. Shi Center for Sustainability was started in July 2008, at Furman University, with support from the Andrew W. Mellon Foundation. The mission of the David E. Shi Center is to promote the study of sustainability on campus and in the community. The Center supports the integration of themes and topics related to sustainability into Furman's academic programs through curriculum development and research. Staff held discussions with Furman University's Center for Corporate & Professional Development. Furman offers a Postgraduate Diploma in Corporate Sustainability aimed at executives in corporations responsible for sustainability as a business strategy. In 2011, Furman will also launch a Sustainability On-line Business

Program and a Small Business Sustainability Boot Camp. A copy of Furman University's Sustainability Program brochure is located in Appendix C.

Clemson performs environmental research in all academic areas including business, policy studies, architecture, planning and construction, agriculture, ecology, engineering, and packaging, and has 65 majors and offers over 700 sustainability related courses. Course examples include Planning, Design and the Built Environment, a PhD program focused on interdisciplinary research incorporating architecture, landscape architecture, planning and construction science. The civil engineering program has a new graduate level program on sustainability and resiliency which examines how recycled materials can be incorporated into building structures. Clemson's Asphalt Rubber Technology Service (ARTS) was created to promote, design, and test the use of recycled scrap tires in rubberized asphalt and other civil infrastructure applications. The Restoration Institute is another area whose focus is to drive economic growth by creating, developing and fostering restoration industries and environmentally sustainable technologies in South Carolina. Research at the Restoration Institute is conducted in six focus areas: Advanced Materials, Processes and Systems, Community Revitalization, Historic Preservation and Materials Conservation, Renewable Energy, Resilient Infrastructure and Restoration Ecology.

Clemson pledged that all Clemson facilities will be constructed to Leadership in Energy and Environmental (LEED) silver certified standards. As a result, it had the first LEED certified public building and the first LEED gold certified public building. The new architecture building slated for January 2012 is expected to be a net zero building. In September 2009, the President's Commission on Sustainability was formed to coordinate the university's efforts to become a fiscally responsible, environmentally sustainable model for other higher learning institutions.

In fall 2010, the College of Charleston, offered a Master's program focused on a professional career in environmental and sustainability issues, the dual Master of Environmental Studies (MES) and Master of Public Administration (MPA) program to prepare students for professional level positions in public organizations that address environmental issues.

The proposed roundtable discussion would help demonstrate the importance of recycling as an economic engine, the role higher education would play in developing a skilled workforce. It would also focus on the inclusion of recycling in higher education curricula and how to bring recycling related research and development (R&D) from the universities to the corporate level.

Staff met with South Carolina Educational Television (SC ETV) to discuss the parameters of producing the roundtable for television broadcast and taping for future use. From the roundtable taping, a speaker series could be developed at participating universities and colleges where panel discussions could be held. The speaker panels would consist of faculty, local industry leaders and state and/or local government representatives. The audience would consist of students and other interested parties and a question and answer session would be included. These speaker series would provide students with information on green technology, policy and economic development and R&D.

The production cost for the roundtable was estimated at \$10,000, which was outside the budget scope. In addition, SCETV faced budget cuts that could limit its service ability. University budget cuts were also identified as a barrier. With limited travel budgets and focus on core mission, the roundtable would need a key element to entice professors and faculty to participate. A mini-grant program was discussed to attract professors and faculty. However, it was determined that creation of a mini-grant was not feasible in the current private sector economic climate.

Education and Outreach

RMDAC and staff developed webinars on recycling related topics to educate public and private sector representatives about South Carolina's recycling industry. The webinars were entitled *RMDAC Economic Development Webinar: Recycling Means Big Business in South Carolina and Uniting Government and Recycling Industry in South Carolina*.

The "RMDAC Economic Development Webinar: Recycling Means Big Business in South Carolina" was developed to help economic development representatives understand South Carolina's recycling industry and respond to requests from recycling entrepreneurs and businesses. The webinar was also designed to provide information on the types of recycling businesses and resources available to assist with business development. The webinar was advertised through Commerce's database of economic development professionals, the South Carolina Economic Developers Association (SCEDA) and county economic development communities.

The webinar was presented on May 26, 2010, and 20 representatives from the economic development community participated. RMDAC and staff presented information on South Carolina's recycling industry, economic impact, recycling investments, economic development incentives, recruiting and recycling

resources. Webinar presentations and an informational sheet were emailed to participants after the webinar.

The "Uniting Government and Recycling Industry in South Carolina" webinar provided recycling coordinators and solid waste directors with information on the recycling industry and the economic impact of recycling in South Carolina. It focused on paper, plastic and metal commodities. The MASC and South Carolina Association of Counties helped promote the webinar.

The webinar, presented on September 1, 2010, had 11 participants. Information was also presented on PAYT, increasing collection of materials for end-users, how to find recycling businesses in the counties and regions, Business Services resources and other strategies for working with recycling businesses to increase local collection and recycling of materials. Webinar presentations were emailed to participants after the webinar and also placed on Commerce's website.

Green Purchasing Initiative



In the fall of 2008, the South Carolina Budget and Control Board's Division of Procurement Services Materials Management Office (MMO) led a team representing several state agencies in the development of comprehensive environmental purchasing policy (EPP) for South Carolina. The agencies represented on the team included MMO, DHEC, Commerce, South Carolina Energy Office (Energy Office), College of Charleston and Midlands Technical College.

On October 15, 2009, EPP information was released to all state agencies and publicly funded colleges and universities. The policy identified standards as a guide for implementation with the goal of reducing the environmental and human health impacts of state government operations by integrating environmental considerations into its procurement processes.

The comprehensive EPP program includes information on source reduction, recycled-content products, energy and water conservation, pollution prevention and toxics reduction, green building and leasing, green landscaping, green travel, green meetings and end-of-life management. The program supports the state's desire to further reduce the environmental and human health impacts of its operations by integrating environmental considerations into its procurement processes. The policy shows the state's

commitment to more efficient use of natural resources, reduction of waste, saving money, sustaining markets and protecting the environment, economy and quality of life for all citizens of the state.

MMO was presented with the Recycle Guys Outstanding State Agency Waste Reduction and Recycling Program Award during DHEC's 15th Annual Recycle Guys Awards Program. Without the commitment and support of all agencies involved, the development of the EPP standards would not have been possible. While the EPP program only applies directly to state agencies and public colleges and universities, others may benefit from its development. The policy and standards, for example, may assist local governments in reducing the environmental impact of their purchases or serve as a model for others in both the public and private sector to develop these policies. For more information, visit www.mmo.sc.gov/MMO/MMO-index.phtm.

On June 2, 2010, the Senate adopted S1497, a resolution to recognize and commend the Green Purchasing Initiative and encourage the statewide adoption of the initiative's policies. A copy of the resolution is located in Appendix D.

On October 20, 2010, a "Going Green Saves Green Environmental Expo" was held at the Columbia Conference Center in Columbia, South Carolina. Scot Case, Vice President of TerraChoice, was the keynote speaker. Case is an internationally recognized expert on responsible purchasing and green supply chains. More than 200 participants attended the expo. In addition, over 30 state contract vendors who offer sustainable, environmentally preferred products or services exhibited.

Waste Tires

RMDAC works with the Asphalt Rubber Technology Service (ARTS) and DHEC to help develop potential recycling markets for waste and recycled tires. They also work to expand the use of crumb rubber in crumb rubber-modified (CRM) asphalt paving projects. The group holds monthly conference calls to help advance the group's efforts.

On February 18, 2010, the "Clemson Tire Recycling Expo and Development Symposium" (TREADS) was held in Clemson, South Carolina. RMDAC staff assisted with the coordination of this event. The expo targeted tire manufacturers, retailers, collectors, processors, end-product producers and users. Presentation topics included an overview of the southeastern tire market, regional state scrap tire policies, tire recycling business resources, rubberized asphalt, tire aggregate, environmental stewardship and many others.

RMDAC staff presented information on tire markets and current economic conditions for tire processors. Other presenters included the Rubber Manufacturers Association (RMA), U.S. Tire Recycling, Clemson University, North Carolina Department of Environment and Natural Resources, EPA, DHEC, ARTS and the University of Buffalo. Approximately 80 participants from the southeast attended the event.

A copy of the TREADS promotional flyer is located in Appendix E.

Each year, DHEC approved tire processors and recyclers are surveyed to help determine the number of waste tires recycled and landfilled in the state. To be included in the state's recycling rate, the tires had to be generated in South Carolina, post-consumer instead of pre-consumer and passenger/truck tires instead of off-road tires. To assist with completion of the waste tire survey from South Carolina approved waste tire recycling and processing facilities, during March – May 2010. Staff met with representatives from Kiln Direct, Systech Environmental Systems, Ridge Recyclers and U.S. Tire Recycling to discuss the waste tire survey and reporting requirements.

A copy of the waste tire survey is located in Appendix F.

Used Oil

A state government fleet survey was conducted to determine the use of re-refined oil practices in South Carolina state government fleets. Staff researched re-refined oil policies for other states and the federal government. The Office of State Fleet Management assisted with the advertisement and facilitation of the re-refined oil survey to maintenance shops. The survey was conducted through Survey Monkey in March 2010. Sixteen state agencies and 75 maintenance shops were surveyed. The survey results were as follows:

Question 1: How much motor oil do you purchase monthly or yearly?

Responses received: 78

| Gallons Purchased per Month | Number of Shops |
|-----------------------------|-----------------|
| 20 | 1 |
| 55 | 7 |
| Over 100 | 7 |
| Over 200 | 5 |

| Gallons Purchased per Year | Number of Shops |
|----------------------------|-----------------|
| 250 | 16 |
| 500 | 26 |
| 1,000 or more | 16 |

Discussions with MMO continue regarding re-refined oil being added to the state contract. Staff sent the re-refined oil use policy and draft flyer to DHEC and will engage in future discussions on policy roll-out and layout for the flyer.

Question 2: Do you currently recycle your oil?

Responses received: 89

Yes – 69

No – 20

Question 3: What vendor do you use to recycle your oil?

Responses received: 60 Responses

| Vendor | Number of Shops |
|----------------------------------|-----------------|
| Diversified Recycling | 16 |
| Universal Environmental Services | 33 |
| Santee Cooper | 3 |
| Stewart Oil | 2 |
| Crandall | 1 |
| Unidentified | 4 |
| None | 1 |

Question 4: Have you ever used re-refined oil?

Responses received: 65

Yes – 2

No – 63

Question 5: What Brand of refined oil do you use?

Responses received: 3

| Brands |
|---------------|
| Citgogard 500 |
| Motor Oil SAE |
| 15W 40 Warren |

Question 6: How much re-refined oil do you used monthly or yearly?

Responses received: 2

| Gallons Purchased per Month | Number of Shops |
|-----------------------------|-----------------|
| 20 | 0 |
| 55 | 0 |
| Over 100 | 0 |
| Over 200 | 0 |

| Gallons Purchased per Year | Number of Shops |
|----------------------------|-----------------|
| 250 | 0 |
| 500 | 1 |
| 1,000 or more | 1 |

Question 7: What do you see as the barriers to using re-refined oil?

Responses received: 75

| Barriers | Response Percentage |
|--------------------|---------------------|
| Vehicle Warranties | 83 percent |
| Quality | 69 percent |
| Availability | 29 percent |
| Misperceptions | 21 percent |
| Price | 20 percent |

Question 8: Do you have any further comments on used oil recycling or re-refined oil that may help us in the future?

Responses received: 12

A re-refined oil use policy and promotional flyer was developed for re-refined oil.

Recycling Business Development Strategy

This strategy was developed to help encourage the growth of new and existing recycling-related businesses. The strategy included strategic professional counsel in business management and commodity advice for material sources, markets, opportunities and barriers.

A FastTrac initiative was developed for recycling businesses and individuals interested in establishing a recycling-related business. FastTrac consists of business courses offered to South Carolina businesses and individuals. Businesses engaged in FastTrac had the opportunity to discover ways to expand their markets, improve margins and enhance operating efficiency. The program also provided entrepreneurs with business insights, leadership skills and professional networking connections to help create a new business or expand an existing enterprise.

FastTrac provides two programs: NewVenture, an education program designed to help entrepreneurs explore the potential and feasibility of new business ideas and GrowthVenture, where entrepreneurs learn to streamline their business processes, analyze strengths and shortcomings and hone business skills that will be used for years to come.

Programs were offered one night a week for eight weeks in Aiken, Bluffton, Charleston, Columbia, Greenville and Rock Hill. A draft plastics commodity study was completed for use as a market analysis for prospective recycling businesses.

Through a partnership with Commerce and DHEC, RMDAC was able to pay full tuition costs for FastTrac courses for South Carolina recycling-related businesses. While there is a fairly large recycling industry to draw from, the recycling community did not respond to the FastTrac offerings in the numbers originally anticipated.

Internet Marketing

Commerce engaged in internet marketing to help target commodities and generate business development leads. Commerce's Marketing and Research Departments assisted with this effort. Internet optimization information was shared with DHEC. Commerce utilizes Virilion, an interactive agency that helps companies

use digital media to achieve marketing and communication goals, to engage in Search Engine Optimization (SEO) and Search Engine Marketing (SEM) to optimize web hits for the recycling online directory. Through the use of keywords and text ads, the online recycling directory and pages on the Commerce website have seen a definite uptick in the amount of impressions and clicks over the year. The following definitions pertain to SEM:

Impressions – The number of times text ads are shown as a result of a specific search term(s). It does not include how many times text ads are clicked.

Clicks – The number of times text ads are clicked.

Click Through Rate – Obtained by dividing the number of users who clicked on an ad on a web page by the number of times the ad was delivered (impressions).

Cost Per Click – The amount of money an advertiser pays search engines and other internet publishers for a single click on its advertisement that brings one visitor to its website.

For the last month of the contract year, the South Carolina recycling campaign delivered 51,533 impressions and 987 clicks in August 2010– a significant increase from July 2010. Impressions were up 80 percent, indicating increased search activity of keywords in this campaign. Clicks were up 68 percent.

Click Through Rate: 1.90 percent

Total page views: 2,451

Views driven by paid search (paper click): 2,024

Percentage of page views driven by paid search (paper click): 83 percent

An overview of the internet marketing results is located in Appendix G.

| Campaign Summary – Search - Recycling | September 2009 | August 2010 |
|---------------------------------------|----------------|-------------|
| Impressions | 571,995 | 51,533 |
| Clicks | 8,915 | 987 |
| Click Through Rate | 1.56% | 1.90% |
| Cost | \$19,863.16 | \$2,065.52 |
| Cost Per Click | \$2.23 | \$2.11 |

Commerce plans to continue work with Virilion on a recycling banner ad and SEO/SEM strategies.

South Carolina Recycling Industry Group

The Recycling Industry Group (RIG) works to increase the recycling industry's competitiveness. RIG is supported by RMDAC with help from New Carolina – South Carolina's Council on Competitiveness (New Carolina). Its mission is to expand and strengthen South Carolina's recycling industry by establishing policy, building networks, promoting market development and leveraging existing infrastructure. The RIG vision is for South Carolina to be a national leader in the recycling industry in terms of creating jobs and investment and providing access to sustainable markets for recyclable materials.

RIG is composed of five committees: Business Environment, Firm Formation, Joint Marketing, Value Chain and Cross Functional. In 2010, joint RIG and RMDAC meetings were held at Milliken and Company, Spartanburg, South Carolina, South Carolina Archives and History Center, Columbia, South Carolina and the Columbia Metropolitan Convention Center, Columbia, South Carolina. Information presented during the various meetings included the RMDAC Work Plan, RIG Strategic Plan, DHEC update and strategies to help recover new materials and increase the state's recycling rate. In addition to three annual meetings, monthly conference calls between RMDAC, RIG and staff were held.

South Carolina Recycling Industry Group Legislative Day

February 3, 2010, the Carolina Recycling Association (CRA), South Carolina's Recycling Industry Group (RIG) and South Carolina Recycling Market Development Advisory Council (RMDAC) held a Recycling Industry Legislative Day at the State House. Sponsors for the day were Sonoco, OmniSource Southeast, Moore & Van Allen Law Firm, S.H. Carter, Ever-Green Recycling and Nucor.



Recycling industry advocates had the opportunity to meet with members of the South Carolina General Assembly to discuss the positive environmental and economic benefits recycling has on the state. The General Assembly recognized South Carolina's recycling industry through House and Senate Resolutions H 4437 and S 1125, proclaiming February 3, 2010, as Recycler's Day.

A recycling educational session was provided by the CRA, RIG and RMDAC. Participants received information on the South Carolina recycling industry's \$6.5 billion economic impact, recycling related legislation and the industry's economic drivers. In addition, a press event highlighting the "Reduce Reuse Recycle" specialty license plate was held. The plate benefits South Carolina's recycling industry through education, awareness and support of the CRA. Several local news outlets covered the event, and RMDAC chair, Gerry Fishbeck, was interviewed by television and radio outlets on recycling as an engine for jobs and economic growth.

The next Recycling Industry Legislative Day is scheduled for March 9, 2011.

South Carolina Recycling Industry Group Strategic Plan

RMDAC, New Carolina and RIG partnered to sponsor a strategic plan for South Carolina's recycling industry. The cost for the development of the plan was \$30,000 and work was provided by Clemson University's Jim Self Center on the Future. AdvanceSC, through New Carolina, provided a \$15,000 grant towards the project. Matching funds from the recycling industry and related organizations were sought

through a fundraising drive. With the support of a diverse group of small, medium and large recycling company sponsors, money for the strategic plan was achieved. The strategic plan sponsors include:

Platinum



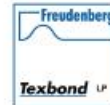
Gold



Silver



Bronze



Patron



Plastics Provider

Donor



The Waste Solution



The strategic plan examined recycling activities outside South Carolina and utilized a Chief Executive Officer (CEO) Roundtable for recycling chief executive officers to develop policies, visions and goals for the recycling industry. The CEO Roundtable was held on January 29, 2010, at the Municipal Association of South Carolina. The roundtable was facilitated by Clemson University representatives, Donna London and Kathy Woodard with support from Commerce and New Carolina. The CEO Roundtable was attended by the following representatives:

| | | |
|--|---|--------------------------------------|
| Myra Carpenter Michelin | Kym Cleveland Omnisource SE | Harris Deloach Sonoco |
| Tamsin Ettefagh Envision Plastics | Gerry Fishbeck United Resource Recovery | Eric Foust Custom Forest Products |
| Elizabeth Garrison Ever-Green Recycling | Jerry Hayes SERDC | Ralph Taylor Waste Management |
| George Martin Leigh Fibers | Jennifer Taylor Republic | Marcy Thompson Sonoco |

Questions posed to the CEO's included:

What needs to be done to position South Carolina as a national leader in the industry?

Networks: Who are potential, but unexpected and unrecognized partners with whom the industry should align when it comes to job creation, investment and access to sustainable markets?

Networks: Are there public/private partnerships or legislation that are notable models/potential case studies and worthy of exploration in order to advance the industry?

Business Growth and Development: What can this group do to bring more manufacturers, suppliers, and service providers to the area?

Business Growth and Development: When you think about your business, do you think state, region, country and/or global?

Business Growth and Development and Leveraging Infrastructure: In what areas does South Carolina recycling have a competitive advantage?

Leveraging Infrastructure: How can we maximize infrastructure?

Marketing and Communications: What industry values are important to communicate and what should be a part of the recycling industry brand?

Policy: If you were legislator for the day, what would you do to increase recycling business development?

Staff provided support for the development of the strategic plan by providing background information, documents, contacts and feedback on drafts of the strategic plan.

A copy of the executive summary is located in Appendix H. To view the complete strategic plan, visit <http://newcarolina.org/UserFiles/ncar/Documents/final%2010-19-10%20Strategic%20Plan%20Summary.pdf>.

Recycling License Plate



A Recycling Specialty License Plate bill was passed through efforts of the RIG. The bill created a license plate with the recycling logo which benefits South Carolina's recycling industry through education, awareness and support through a partnership with the CRA. The "Reduce Reuse Recycle" license plate is available to all South Carolina residents. The cost of the plate is \$54, which includes the \$24 registration fee and \$30 tag fee. A portion of the fees collected from the sale of the plate will support South Carolina's recycling industry, provide education and increase awareness of recycling in the state. Approximately 200 plates have been distributed. Plates may be ordered via the South Carolina Department of Motor Vehicles website.

Electronic Recycling Legislation

On May 19, 2010, Governor Sanford signed H4093, the Manufacturer Responsibility and Consumer Convenience Information Technology Equipment Collection and Recovery Act, into law. Beginning July 1, 2011, consumers will be prohibited from disposing of televisions, computers and printing devices into

South Carolina landfills. This legislation includes provisions that require computer and television manufacturers to establish recovery programs to ensure the end-of-life management for the equipment is retired in a manner that promotes resource conservation. The law encourages manufacturers to offer convenient collection and recycling service to consumers at no charge.



Additional 2010 recycling legislation is located in Appendix I.

South Carolina Department of Commerce

Business Services



Commerce's Business Services department works with new and existing industry to help determine company needs and advises companies on Commerce resources which include recycling market development, existing business and entrepreneurial support, export development, BuySC (supply chain) and workforce development. In addition, the Global Business Development department incorporates recycling information in each official recruiting proposal and closing package. South Carolina's recycling industry offers value-added services for businesses to locate in South Carolina and provides opportunities to help the industry grow.

These initiatives will help promote waste reduction and recycling and encourage businesses and industries to report their recycling activities.

Commerce initiated company calls with South Carolina's manufacturing industry and recycling services. The Business Services Department contacts startup and existing industry to help determine company needs and cross-sells Commerce's resources which include recycling market development, existing business and entrepreneurial support, export development, international trade missions and BuySC (supply chain). For more information on Business Services, visit <http://sccommerce.com/business-services>.

Global Business Development

Commerce's Global Business Development program incorporates recycling information in each official recruiting proposal and closing package. South Carolina's recycling industry provides value-added services

to businesses to locate in South Carolina and provides opportunities to help the recycling industry grow. Business Services, in coordination with Commerce's Marketing and Communications department, helped develop recycling material for prospect proposal packages.

A copy of the Smart Business Recycling business development closing package is located in Appendix J.

Recycling Related Investments

The recycling industry announced over \$438 million in capital investment, the creation of 1,130 new jobs with 28 new or existing companies investing in South Carolina in 2010. The recycling industry is comprised of haulers, collectors, processors, brokers, recycling equipment sales and manufacturers, and end-users or manufacturers who take recycled material feedstock and make recycled content products from them.

In addition to recycling, other green industry sector companies in South Carolina announced over \$825 million in capital investment and 3,080 green jobs, adding 14 new or existing businesses. The green industry sector is comprised of companies that help reduce the use of fossil fuels, pollution, GHG emissions, develop renewable energy sources and increase the efficiency of energy usage.

Total green economy jobs in South Carolina including both recycling and green industry investments led to over \$1.3 billion in capital investment, 4,210 jobs and 42 new or existing company expansions in 2010.

Copies of recycling related press releases are located in Appendix K.

Recycling Market Development Program

The Recycling Market Development Program (RMD) promotes market development for recycled materials, assists startup recycling businesses, helps existing companies with expansion efforts and provides technical assistance to business and industry to reduce waste streams and increase the amount of materials recovered and recycled.

Commerce's Business Services Department staff received and addressed 589 in-bound calls during the 2009-2010 year. Of those calls, 152 related to recycling questions and issues; or 25 percent of total in-

bound calls. Staff provided assistance with business development, recycling, waste reduction, marketing, finance and regulatory affairs.



Commerce, ARTS and DHEC worked together to promote the use of scrap tires. The group participated in monthly conference calls and held a Tire Recycling Expo and Development Symposium (TREADS) on February 18, 2010, in Clemson, South Carolina. This southeastern regional symposium targeted end-life of scrap tires, tire manufacturers, retailers, collectors, processors and end-product producers. TREADS presentation topics included an introduction and southeastern market overview, regional state scrap tire policies, tire recycling business resources, rubberized asphalt overview, U.S. usage and types of applications, tire-derived aggregate, environmental stewardship in tire manufacturing, tire chips in septic tank drainfields, tire-derived fuel (TDF), beneficial usage of scrap tires in equestrian markets and state government procurement.

Staff develops a recycling newsletter that provides readers with information on RMDAC, RIG, South Carolina's recycling industry, associations and recycling related legislation. Newsletter recipients also receive announcements about new and expanding businesses, meetings and conferences. In addition to the newsletter, "Recycling Newsbits", an email listing relevant recycling information and news articles is e-mailed to recipients on a weekly basis.

Recycling Business Forum

RMDAC and Commerce recognized the achievements of recycling businesses and recycling industry programs for their impact on South Carolina's environment, communities and economy. The 2010 Recycling Business Forum was held on November 9, 2010, in Columbia, South Carolina. The forum provided information on the RIG, recycling related legislation, plastics recycling and featured presentations by Commerce, South Carolina DHEC, CRA, Clemson University – Jim Self Center on the Future, Energy Office, Moore Recycling Associates, Inc. and the U.S. Commercial Services.

The following businesses were recognized for achievements in recycling:

Best Small Recycling Business, Tomato Palms, LLC, Irmo, South Carolina

Tomato Palms offers commercial recycling in the Midlands and provides recycling services for metal, plastic, paper, cardboard and electronic equipment. The company's founder, Nancy Ogburn, started the

recycling venture in Columbia, South Carolina in 2008. In 2009, the company, recycled over 55 tons of material, donated a portion of the proceeds from the sale of aluminum cans to local community homeless shelters and ensured that clients' recycling efforts were entered into DHEC's Smart Business Re-Trac Program. Re-Trac provides details on the impact recycling efforts have made on the environment.



Nancy Ogburn, President of Tomato Palms, is co-chair of the RIG's Joint Marketing Committee and is one of the sponsors of the group's strategic plan. Ms. Ogburn spoke before the Senate Agriculture Committee to provide updates on South Carolina's recycling industry. She was featured in "Lexington Woman's Magazine", "Columbia Business Monthly" and "Free Times".

Best Medium Recycling Industry Program, EuroKera, Fountain Inn, South Carolina

EuroKera, a glass ceramic manufacturer, recycles glass, metal, wood, paper, cardboard, cotton gloves, plastic, batteries and foam wrap. Currently, the company recycles 325 tons of glass per month. In the past year, the company reduced the amount of material it landfilled from 67 tons to 6.8 tons. EuroKera works to find charities that will reuse working items and verifies that local recyclers are recycling the items it receives. EuroKera hosts an annual Earth Day recycling event to benefit the environment and local charities.

Best Large Recycling Industry Program, Freightliner Custom Chassis Corporation Gaffney, South Carolina



Freightliner Custom Chassis Corporation, a supplier of premium diesel chassis, recycles batteries, cardboard, fluids, nylon, paper, plastics, metals, rubber and wood. Historically, it packed local landfills averaging millions of pounds annually. Results achieved by the company's Green Team pushed it toward environmental excellence. In October 2009, the company reached Zero Waste to Landfill status, the first chassis manufacturer to achieve this milestone. Freightliner Custom Chassis

Corporation encourages its vendors and suppliers to assist in recycling efforts by utilizing returnable and/or recyclable packaging.

Recycler of the Year, Charleston Water System, Charleston, South Carolina

Charleston Water System, a public water and wastewater utility serving the Lowcountry of South Carolina,

recycles aluminum cans, glass, paper, plastic, wood, oil filters, computers and many other items. Charleston Water System was one of the first combined water and wastewater utilities to achieve certification under the International Organization of Standardization (ISO) 14001 Standard for implementation of an Environmental Management Systems for environmental improvement. Since 2007, Charleston Water System consistently increased its recycling activities with a Green Team that oversaw the recycling and fuel reduction activities. In 2007, Charleston Water System recycled over 56 tons and in 2009 increased the amount recycled to 79 tons by recycling cans, glass, paper, plastic, wood, oil filters, computers and other items. The company's E-Report initiative generated a one ton per year paper savings in addition to ink savings. In 2010, Charleston Water System initiated a program to increase the recycling of metals associated with construction activities.

Charleston Water System also sponsored Earth Day events, educational programs and participates annually in Operation Beach Sweep and Habitat for Humanity.

The following companies were also recognized for their waste reduction and recycling efforts:

Akebono Brake Columbia Plant
Columbia, South Carolina



Santee Cooper
Moncks Corner, South Carolina



International Automotive Components – North America
Greenville, South Carolina



Southeastern Plastics Recovery
Mt. Pleasant, South Carolina



Bosch Rexroth, Inc.

Fountain Inn, South Carolina

(Not Pictured)

National and Regional Leadership

Staff maintains leadership positions in several professional recycling related organizations and programs. Their involvement in national and regional initiatives is aimed at increasing material supply and enhancing the growth of South Carolina's recycling industry through its suppliers, processors and end-users. These professional affiliations include the Solid Waste Association of North America (SWANA) – South Carolina Chapter, South Carolina Environmental Excellence Program Advisory Committee, CRA, Southeast Recycling Development Council (SERDC), DHEC's Solid Waste Advisory Council and Waste Tire Committee, Keep the Midlands Beautiful, South Carolina Biomass Council, U.S. Green Building Council – South Carolina Chapter, City of Columbia Climate Protection Action Campaign (CPAC), New Carolina and South Carolina Resource Conservation Challenge. In these leadership positions, staff assists with projects such as SERDC's Mapping Profile of South Carolina located in Appendix L.

South Carolina Smart Business Recycling Program



The South Carolina Smart Business Recycling Program provides free, confidential and non-regulatory technical assistance on recycling, waste reduction, beneficial reuse and other ways for businesses to conserve resources. The program offers site visits, waste assessments, market assistance, educational materials, staff

training and other services. It is a partnership between Commerce and DHEC's Office of Solid Waste Reduction and Recycling, Center for Waste Minimization and Small Business Environmental Assistance Program.

The South Carolina Smart Business Recycling Program provides free, confidential and non-regulatory technical assistance on recycling, waste reduction, beneficial reuse and other ways for businesses to conserve resources. The program offers site visits, waste assessments, market assistance, educational materials, staff training and other services. It is a partnership between Commerce and DHEC's Office of

Solid Waste Reduction and Recycling, Center for Environmental Sustainability (formerly Center for Waste Minimization) and Small Business Environmental Assistance Program.

Businesses, industries and other entities seeking recycling assistance can call DHEC toll-free at (800) 768-7348 or Commerce at (803) 737-0400. The South Carolina Smart Business Recycling Program works to get businesses and industries to voluntarily report their recycling data to their county recycling coordinators. These numbers are utilized to determine the state's recycling rate. In addition, this information will allow the program to determine measures to help increase the state's recycling rate and decrease the disposal rate.

The program also offers a free and confidential online reporting system called Biz-TRAC. This reporting tool allows businesses and industry to track recycling and solid waste management efforts such as disposal costs and revenue generated from the sale of recyclables. Reporting is done each fiscal year (FY) from July 1 to June 30. Incorporating business and industry recycling information helps analyze recycling markets, minimize inconsistent recycling data and accurately measure recycling and disposal rates.

Business and industry reporting are vital to the state's recycling rates. The state's recycle goal is 35 percent of municipal solid waste generated. Commercial recycling numbers are needed to increase this rate and meet the goal. Commerce and DHEC continue to work with businesses and industry through the South Carolina Smart Business Recycling Program to promote waste reduction and recycling and encourage businesses and industry to report recycling activities.

Visit www.scdhec.gov/environment/lwm/recycle/smart_business/index.htm for more information on the Smart Business Recycling Program.

Recycling Resources

Several recycling resources exist to assist businesses, industries and the public with waste reduction, reuse and recycling. These resources include, but are not limited to:

Commerce's online recycling directory provides essential links between businesses, industries and local governments searching for markets for recyclables and the companies that accept the materials for processing and reuse. This directory provides businesses the opportunity to market and increase awareness of its services and/or products. Entities are able to search the directory for South Carolina recycling haulers, processors, end-users, exporters and equipment suppliers. To be included in the

directory, business must complete Commerce's recycling directory form. A copy of the form is located in Appendix M. The directory can be viewed at

<http://maps.sccommerce.com/resource/recyclingdirectory.aspx>.

Sustainability Index

The Sustainability Index (formerly the Index of Waste Minimization Resources) provides users of company by-products, waste minimization equipment, waste minimization programs and substitutes for hazardous materials. Visit

www.scdhec.gov/environment/admin/CWM/wmindex/WmindexSearch.aspx to access the index.

Keyword Search: Search by company name or commodity type.

Advanced Search Criteria: Select any of the additional categories to refine your search.

Material Source:
 Post Industrial
 Post Consumer

Material Type:
 Biomass-Wood
 Construction Demolition
 Electronics
 Glass
 Metals
 Miscellaneous
 Organics
 Paper
 Petroleum
 Plastics
 Rubber
 Textiles

Business Service:
 Broker
 Collector
 Donation Site
 End User
 Exporter
 Processor
 Public Drop Off Site
 Recycling Equipment
 Remanufacturer
 Reuse
 Transportation Services

County:
All Counties
Abbeville
Aiken
Allendale
Anderson
Barnberg
Barnwell
Beaufort
Berkeley
Calhoun

(Use the Ctrl Key to select more than one County.)

Search
Clear

Sort by Company Name (Default is by County)



The South Carolina Materials Exchange is a free, Web-based service that seeks to reduce waste by facilitating the exchange of reusable materials by businesses, non-profit institutions and government agencies. Recycling businesses, industry and individuals utilizing the exchange help increase the state's recycling rate and decrease the disposal rate. The exchange can be accessed at www.scdhec.gov/scme.



The South Carolina Green Building Directory is a free online tool of green building resources. The directory, established by the South Carolina Sustainability Institute, provides information on products and services that support green building practices in the state. Commerce, DHEC and the Energy Office sponsored the development of the directory. The directory can be viewed at

www.scgreenbuildingdirectory.org.



The CRA provides information on recycling markets and recycling centers. It has several recycling councils and sponsors recycling workshops and webinars. In addition, the association hosts an annual recycling conference and trade show which rotates between North Carolina and South Carolina. In 2010, the CRA held its 20th Annual Conference and Trade Show in Asheville, North Carolina. Staff participated on the conference planning committee and helped recruit speakers, develop workshops and publicize the event. Staff also moderated conference sessions and workshops. For more information on the CRA, visit www.cra-recycle.org.



SWANA, a solid waste professional organization, provides resources, professional development, certifications and networking opportunities. Its technical divisions include

recycling and special waste, collection and transfer, waste-to-energy, and landfill gas. In 2010, the South Carolina Palmetto Chapter of SWANA received the "Largest Increase in Membership" and "Largest Percentage Increase in Memberships" awards at SWANA's national conference. It exceeded 46 other chapters to win both membership award categories. Ed Marr, president of the chapter, is also a member of RMDAC. For information on the South Carolina Palmetto Chapter of SWANA visit www.scswana.org/index.cfm.

Recycling Markets

FERROUS METAL

2010 Summary

2010 was similar to 2009, as far as stability in the ferrous markets, with price fluctuations generally in the \$20 to \$40 dollar per gross ton range. Steel mill order books began to show some improvement, particularly in the sheet products that "flat roll" mills produce. These types of products support automotive and appliance manufacturers. The "structural" mills that support new construction and expansion showed little improvement.

2011 Outlook and Future Trends

2011 could be a very volatile year for ferrous scrap. Steel mills attempting to maintain low inventories, order books showing some early 2011 improvement, plus the supply/demand for export could lead to somewhat of a "roller coaster" ride. Overall the projections are for somewhat higher average prices in 2011 compared to 2010.

ArcelorMittal has re-opened the steel mill in Georgetown, South Carolina (formerly Georgetown Steel) and will initially run at approximately 30 percent capacity compared to full production prior to their shutdown. Ferrous scrap is positioned "globally" and the appetite of countries such as China, India, Brazil, and Korea will have a tremendous impact on the supply/demand of domestic scrap and the finished product.

RMDAC Action

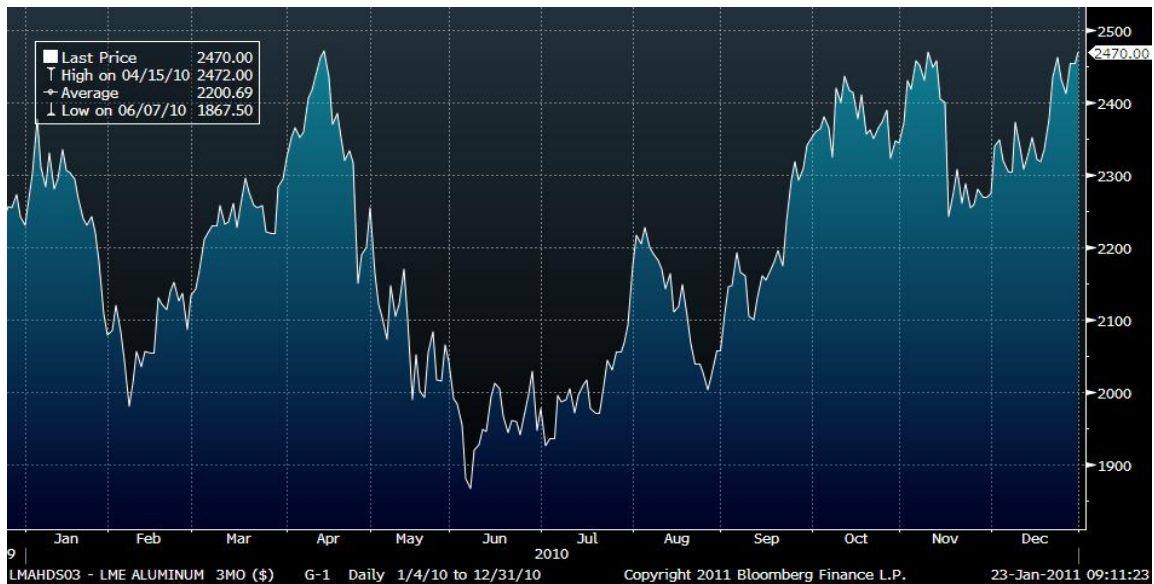
The re-opening of Georgetown Steel (ArcelorMittal) will be a boost to steel making capacity in South Carolina. The state is home to three steel mill groups and many steel and metal recycling operations that continue to prove that "best recycling practices" are good for the environment and the economy of South Carolina.

NONFERROUS METALS AND ALUMINUM

2010 Summary

High grade aluminum prices on the London Metal Exchange (LME) finished the year near their yearly high at \$2,472 per metric ton. After achieving the high in April, the market sold off on the heels of the concerns over Greek sovereign debt. However, throughout the second half of 2010, the market responded to positive developments in the physical market and built momentum.

Aluminum cash prices on the London Metal Exchange (LME) for calendar year 2010 averaged \$2,173 compared to \$1,667 in 2009.



Supply Highlights

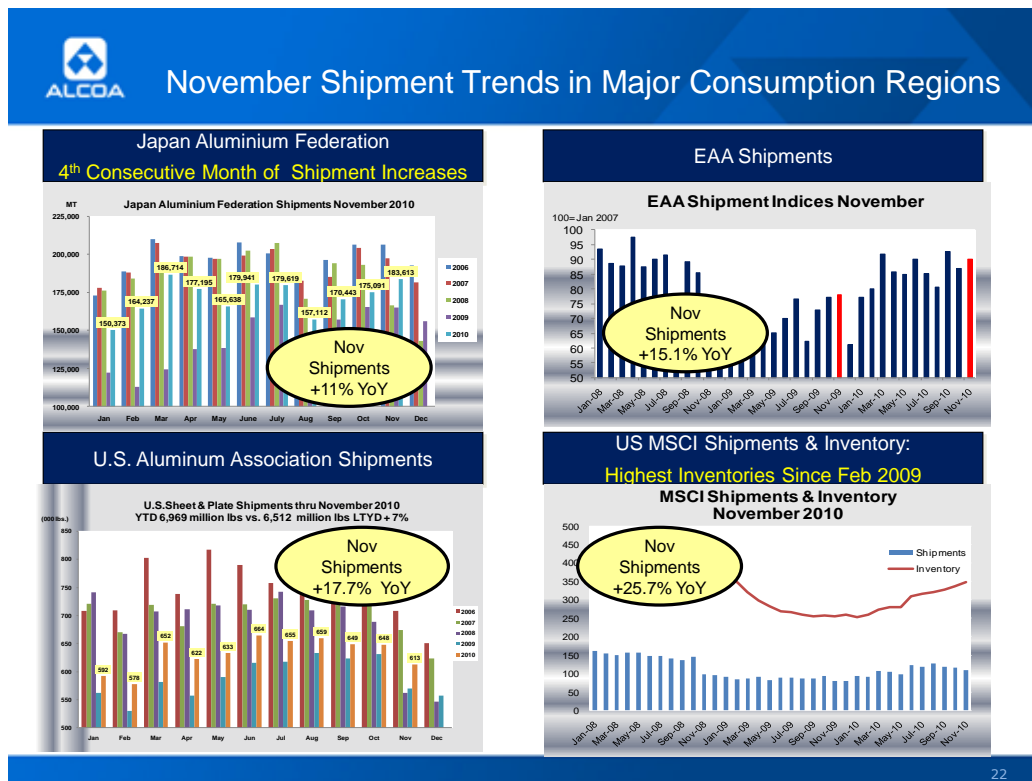
According to the International Aluminum Institute, Western world producer output in 2010 reached 24.2 million metric tons compared to 23.45 million tons in 2009. Most of the incremental supply is the result of new, "greenfield" capacity being inaugurated in India and the Middle East. By and large, much of the previously idled capacity (shut due to low prices during the economic downturn) has not been returned to production.

In China, production has been steadily declining since June 2010, when annualized production rates hit a high of 17.2 million tons. Since then, the Chinese have been reducing production due to increasing power costs, which has hurt profitability. Beijing has also been intent on meeting energy conservation goals and this initiative has led to pressure to curb output. Longer term, Beijing has announced plans to cap

aluminum production by 2015 at 20 million tons in an effort to reallocate domestic energy supplies to more value added sectors.

Demand Highlights

Shipments in all the major consuming regions of the world continued to rebound strongly in 2010 year on year.



Brazil, Russia, India and China (BRIC) continue to provide much of the impetus behind the recovery, however demand is also coming back in the major markets. According to Alcoa estimates, demand for primary aluminum in North America rose 6 percent in 2010, while Europe improved 4 percent.

2011 Outlook and Future Trends

LME and Midwest primary ingot prices begin 2011 maintaining the momentum they had as 2010 came to a close. Independent forecasts from Harbor Intelligence, surveying a host of estimates suggests 2011 prices on the LME will average \$2,292, \$2,530 in 2012 and \$2,413 in 2013.

Midwest ingot premiums to LME are trading around 6.2 cents per pound over the LME cash quote and are expected to remain a range of 5.50 cents per pound to 7 cents per pound for 2011.

Demand for scrap materials is expected to remain strong. Domestic demand is rising as demand for semi-fabricated product continues to recovery, complimented by growing demand from China.

RMDAC Action

The Council should continue to educate and encourage local governments, private citizens, community groups, and industry to recover more aluminum and other non-ferrous metals.

GLASS

2010 Summary

Glass collected and recycled in South Carolina remains low at approximately 2 percent to 3 percent of the overall recovered recycled MSW material. Several factors continued to adversely affect glass tonnage across the state, including but not limited to availability of recycling to residents and tourists, method of collection, recycling center efficiency and safety, contamination and transportation costs. The overall market prices shifted this year, averaging \$25 to \$30 per ton for clear flint and \$5 per ton for amber/brown, with green glass costing the collection facility \$15 per ton to process and transport. The majority of the recycled glass collected in South Carolina is sent out of state to Strategic Materials in Georgia and North Carolina for processing. The glass market breakdown consisted of 75 percent post-consumer, with beverage glass being 53 percent of this amount, and 25 percent post-industrial flat and plate glass and C&D.

2011 Outlook and Future Trends

Collection and recycling of glass across the state is anticipated to grow in 2011 for several reasons. First, both municipalities and private industry recycling business operations recognize the growing need for increased services across the state. An increased and joint effort also includes support from hospitality and tourism industries to increase the collection of glass from restaurants, bars and hotels. Second, national industry standards for curbside pick-up continue to grow and support single-stream and dual-stream collection. With the ease of these methods there has been an increase in recycling haulers implementation of such services thus increasing the volume of glass tonnage. Third, post consumer, post industrial and cathode ray tube (CRT) glass will increase when the July 1, 2011, electronic waste landfill ban takes effect, in addition to bans on florescent bulbs.

Nationally and internationally, there remains a consistent overall demand for clean cullet, and currently the national processing plants need more recycled glass material. The world demand for glass continues to

increase as well, but the industry challenge is to keep it domestic. Glass kept domestically will increase its market value and demand, thus enticing new and additional efforts for collection.

The demand for glass bottles and containers is expected to continue to increase globally. The fact that glass is 100 percent recyclable and can be recycled endlessly without any loss in purity or quality makes this natural material a valuable commodity on a longer term basis. This factor coupled with the controversy surrounding Bisphenol A (BPA) toxicity findings in plastic, tin and aluminum containers, has glass industry processors and packaging companies gearing up for an increase in demands both for recycled and virgin material. 2011 federal legislation has been introduced in Washington, D.C. to ban BPA 100 percent in food and beverage containers.

RMDAC Action

RMDAC should continue to support public and private programs as well as legislation that increase the overall recovery rate of recyclables in South Carolina. Even though glass remains a current challenge to safely, efficiently and financially collect and recycle, the benefits for the State of South Carolina to grow this market outweigh the obstacles. A significant increase of glass collection will bring economic development to the state as well as a reduction in raw materials and energy consumption.

PAPER

2010 Summary

Old Corrugated Cardboard (OCC) Grade 11

The Yellow Sheet, pricing index for paper, started in 1970. 2010 was the first year that OCC was \$100 per ton plus for the full year, which has never happened before. January started out at \$110 per ton, by March it was at \$175 per ton. The market took a \$30 per ton drop in April, another \$15 per ton in May and was at \$130 per ton. July and August dropped to \$120 per ton. September jumped \$10 per ton with October bringing another increase of \$15 per ton. The market jumped another \$15 per ton to \$160 per ton for November and held at \$160 per ton through December. This increase was a result of domestic orders being very strong throughout 2010 and exports will probably set a new record for 2010. China once again led the way and India is starting to make a strong presence.

Newsprint

Newsprint started the year at \$95 per ton rising to \$110 per ton by May. It dropped to \$80 per ton by September and closed out December at \$110 per ton. Newsprint is getting hampered with the growth of mixed paper. With growing single stream collections it will push the grade harder as Mills run more and more mixed paper.

Mixed Paper

Mixed paper started out at \$80 per ton, going up \$10 per ton in February and another \$10 per ton in March putting it at \$110 per ton through May. From March – June, mixed paper was \$5 per ton more than newsprint, also a first. June saw a high of \$115 per ton for the year, mixed dropped back to \$80 per ton in September going up to \$100 per ton in October and November. December went back to \$105 per ton. Mills really like this grade, again due to single stream programs that combine junk mail, magazines and newsprint. Mixed now has a better fiber content than newsprint. This grade did not exist a few years ago and now is in strong demand both domestic and export.

Office Paper

The year started out at \$200 per ton and hit a high of \$220 per ton in August, September, and October. It dropped to \$210 per ton in November and closed at \$200 per ton in December.

2011 Outlook and Future Trends

Last year saw a great increase in pricing for all grades over 2009. A large decrease in demand for 2011 is not anticipated. The Chinese New Year will curtail export demand until the latter part of February. Once the Chinese get back in the market and with major winter storms affecting supply, things will take off in the second quarter. OCC is not expected to go below \$100 per ton this year and all other grades should follow their 2010 pricing.

RMDAC Action

RMDAC will continue to work with DHEC and other recycling groups to lead the way in recycling in the state.

PLASTICS

2010 Summary

Polyethylene Terephthalate (PET) Summary

According to recently published 2009 recycling rates from the National Association for PET Container Resources (NAPCOR), 1,444.2 million pounds of PET bottles were recycled out of 5,149 million pounds sold for a recycling rate of 28 percent. The recycling rate rose 1.0 percent from 2008 recovery levels. For the sixth straight year, the post consumer PET bottle recycling has increased.

Domestic U.S. recyclers purchased 641.8 million pounds of bottles while 779.7 million pounds were purchased by exporters and 22.7 million pounds of mixed bale bottles were also purchased by exporters comprising the 1444.2 million collected and sold.

According to NAPCOR, U.S. reclaimers continued to supplement their domestic purchases by importing 98.5 million pounds of post consumer bottles, predominately from Canada, Mexico, South and Central America. Domestic reclaimers also reported buying 33.2 million pounds of alternative feedstock, including pre – consumer bottles, post consumer strapping, and other unprocessed industrial scrap. All total, U.S. reclaimers purchased a total of 773.5 million pounds of scrap material, an increase of 45 million pounds from 2008.

2010 Outlook and Future Trends

PET collection and demand for resale remained strong during 2010 for the year. This demand was driven by several new or restarted expansions by Clear Path, Wellman Plastics Recycling, NURRC, Custom Polymers and others. Towards the end of 2010, a severe cotton shortage in Asia due to flooding further increased demand for both PET bottles and clean flake.

Going into 2011, demand remains very strong due to the capacity expansions and cotton shortage mentioned above. Continued growth of new applications like thermoformed sheeting from the packaging industry indicates further demand for recycled products during the year.

RMDAC Action

RMDAC will continue to work closely with DHEC and the CRA to increase collections and develop new markets.

USED OIL

2009 Summary

The statewide used motor oil recycling program targeting do-it-yourselfers (DIYers), those who change their own oil, continues to flourish. Through a combination of educational programs, technical assistance and grant funding for local governments, South Carolina has developed one of the nation's most comprehensive used motor oil recycling programs for DIYers.

According to figures compiled by the DHEC's Office of Solid Waste Reduction and Recycling (Office), DIYers recycled 957,708 gallons of used motor oil in 2008. Overall, more than 15 million gallons have been

collected from DIYers since used motor oil recycling efforts began in South Carolina in 1990. Figures for 2009 were not available when this document was prepared.

The recycling of used motor oil filters reflects a significant environmental protection program considering that each filter may contain from four ounces to one quart of oil if not properly drained. Most counties collect used motor oil filters from DIYers for recycling. Many of these counties collect and market used motor oil filters with large appliances and/or other metals. With this being the case, not all used motor oil filters that are being recycled are being counted directly. As a result, numbers are not available to measure used oil filter recycling efforts.

The recycling of motor oil bottles also offers an important environmental protection program considering that they can contain up to an ounce of oil each if not thoroughly drained. Most counties collect and market motor oil bottles with other pigmented high density polyethylene (HDPE) plastic. As a result, numbers are not available to directly measure motor oil bottle recycling efforts.

Introduced in January 2000, the Office continues to offer the "Green Driver Project" that targets students in high school driver education classes. The project stresses the environmental impact of driving and includes information on recycling used motor oil, filters and bottles, energy conservation, ground-level ozone prevention and other environmental tips. The project serves as a lifelong lesson in environmentally responsible driving. Since the project began, staff made 2,431 classroom presentations to 113,215 students. "DHEC 1: Behind the Oil Change," a video chronicling the life of a driving teenager and the consequences of the decision to improperly dispose of used motor oil, debuted in summer 2002. The video has been extremely well accepted and received an In-Show Award that honors excellence in advertising and public relations. The video also won an Emmy Award from the National Academy of Television Arts and Sciences. In addition, the Office set up a partnership with Palmetto Pride to add a litter component, including litter laws and enforcement, beginning in 2002 to the "Project".

2010 Outlook and Future Trends

The amount of used motor oil, bottles and filters collected for recycling should continue to grow in 2010. The priorities of the Office regarding the used motor oil recycling program are described below.

To continue to collect motor oil bottles. Most counties are using oil drain racks to drain the bottles and make them easier to process. Once drained, the motor oil bottles can be mixed with other HDPE plastics.

This makes it easier to market the motor oil bottles. The Office will continue to encourage all counties to use the oil drain racks.

To continue to expand the farmer oil collection program by adding collection tanks where needed. There are currently 62 farmer oil collection sites in 40 counties. Three more counties will be setting up tanks in FY 2010 (July 1, 2009 – June 30, 2010). Each of the tanks holds at least 550 gallons of used motor oil and is fitted with a pump and hose to make it easier for farmers to recycle up to 55 gallons of used motor oil at one time.

To continue to expand the oil/gasoline mixture collection program by adding collection tanks where needed. There are currently 82 oil/gasoline mixture collection sites in 41 counties. Two other counties will be setting up tanks in FY 2010. The oil/gasoline mixture tanks typically hold 500 gallons and are designed to accept motor oil, gasoline and oil/gasoline mixtures from lawn equipment and recreational vehicles. To secure and maintain markets or other uses for used motor oil, bottles and filters.

The Office will continue to provide grant funding to local governments to set up, maintain and improve used motor oil recycling programs. The Office also will continue its statewide awareness campaign on used motor oil recycling including the national award winning "Recycle Guys" public service announcements and the "Green Driver Project."

RMDAC Action

RMDAC should continue its work promoting, supporting and securing markets for the state's used motor oil recycling program.

Note: Outlook and Future Trends dates lag one year for used oil due to fiscal year timing differences in DHEC data collection.

WASTE TIRES

2010 Summary

Each year, Commerce generates a survey for DHEC approved tire processors and recyclers. This survey helps determine the number of waste tires processed and landfilled in the state. The survey also shows the types of end-use market applications for waste tires. According to the survey, waste tires were processed for tire-derived fuel (TDF), crumb rubber and outdoor applications such as landscaping.

2010 Outlook and Future Trends

The primary markets for waste tire markets will continue to be TDF, civil engineered applications and ground rubber applications. ARTS will continue its civil engineering application projects to encourage markets for processed crumb rubber.

The RMA anticipated a modest recovery in 2010 for consumer and commercial sectors and an increase in tire shipments due to economic recovery, auto sales and an increase in vehicle miles traveled. This activity is projected to continue in 2011 as the economic recovery moves forward.

It is expected that entities utilizing waste tires for TDF will continue to track EPA's proposed solid waste rule as it may have a significant impact on them.

RMDAC Action

The Council will continue to support existing waste tire markets and work with DHEC, ARTS, SC DOT and the RMA to encourage the use of crumb rubber in asphalt rubber paving and other added-value applications for recycling waste tires in South Carolina. RMDAC continue to work with DHEC approved tire processors and recyclers to encourage reporting of waste tire numbers. In addition, the Council will continue to monitor EPA's proposed rule regarding the definition of solid waste.

Appendix

Appendix A – RMDAC Members

COUNCIL MEMBERS

Mr. Gerald Fishbeck, Chair

United Resource Recovery, Inc.

Mr. Ronnie Grant, Vice Chair

Sonoco

Mr. Phil Ammons

Plastics Provider, Inc.

Mr. Michael Baird

Milliken and Company

Ms. Kristen Brown

The Waste Solution

Mr. Victor Carpenter

Abbeville County

Mr. Norman Chandler

Republic, Inc.

Ms. Kira Roff

Fisher Recycling, Inc.

Mr. Jim Schaefer

Michelin North America, Inc.

Mr. Art Levy

OmniSource Southeast

REPRESENTING

Recycling Industry

Paper Industry

Plastics Industry

South Carolina Department of Commerce

General Public

County Government

Solid Waste Industry

Glass Industry

Tire Industry

Scrap Metal Industry

COUNCIL MEMBERS

Mr. Everett "Lin" Longshore

Safety-Kleen Corporation

Ms. Donna London

Clemson University – Jim Self Center on the Future

Mr. Edwin Marr

Greater Greenville Sanitation Commission

Mr. William "Larry" McCaskill

Alcoa Mt. Holly

REPRESENTING

Petroleum Industry

Higher Education Research

Municipalities

Aluminum Industry

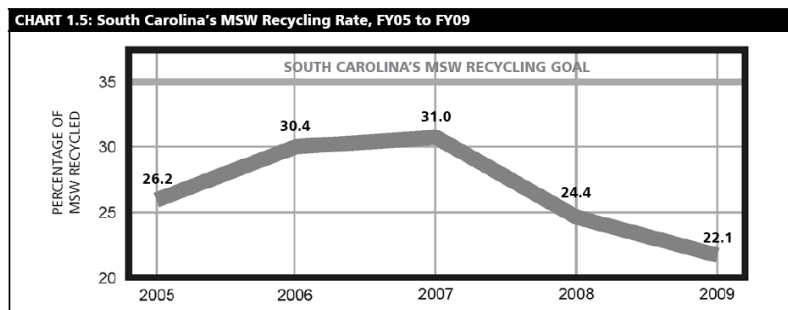
RECYCLING: A SMARTER WAY

WHY RECYCLING MATTERS IN YOUR COMMUNITY

Local programs are the backbone of recycling in South Carolina. Local decision makers— mayors, county administrators, managers, council members and other community leaders – play a crucial role in these programs. Through their understanding, support and commitment, local decision makers can determine the success of their community's recycling programs. While the environmental benefits of recycling are well recognized, what is less known is that recycling is an economic success story. By turning waste into valuable raw materials, recycling creates jobs throughout the process and adds significantly to the nation's and South Carolina's economy.

A green, clean community is a great place to live, work, raise a family and do business. Recycling is good for the environment, the economy and South Carolina. (Source: SC Department of Health and Environmental Control, Office of Solid Waste Management and Recycling)

SC's Recycling Rate (35% goal)



The Challenges

- Residents are generating more waste and the costs of solid waste management are escalating
- Current programs are not equitable – residents pay the same no matter how much trash they produce
- SC's recycling rate has steadily declined over the past 4 years.
(Source: SC Department of Health and Environmental Control, Office of Solid Waste Management and Recycling)
- SC's recycling industry is growing at a 12% annual growth rate from an economic impact of \$6.5 billion in 2005 to nearly \$10 billion in 2010. The demand has increased for recycled materials from local government programs.

- The residential sector offers tremendous opportunity for collection of recycling materials that can help maintain the growth and supply for industry feedstock.

Pay As You Throw in South Carolina

What can communities do?

Consider a Pay as You Throw (PAYT) program for your community. With PAYT, or variable rate pricing, residents are charged for the collection of municipal solid waste (MSW)—ordinary household trash—based on the amount they throw away. This creates a direct economic incentive to recycle more and to generate less waste. By increasing the amount of materials recovered from residential recycling programs, these recyclables can be sold by local governments to manufacturers across the state. These materials are in high demand for local industry to use as feedstock for new products made from recycled content. What's more, the increased recovery of recyclables means jobs not only at the local government level but also in the end-use or manufacturing sector.

More than 7,000 communities throughout the U.S. have implemented PAYT and the trend continues to grow. As a result, there are many models available across the nation to choose from that can match your communities demographics. The PAYT of old where there were only a couple of choices for implementation is gone – now PAYT is highly customizable and can be fit to a communities special needs. For instance, Marietta, GA has an overflow program where a 32 gallon container is offered for garbage and for anything above that, a fee for additional trash is assessed; Duluth, GA has implemented a multiple hauler PAYT program; and Athens-Clark, GA has a PAYT roll-cart container program.”

The Environmental Protection Agency's SMART BET (Saving Money and Reducing Trash Benefit Evaluation Tool) is designed to help community waste managers decide whether unit-based pricing for solid waste management (also known as Pay-As-You-Throw or PAYT) is the right model for their town or city.

How does it work?

Traditionally, residents pay for waste collection through property taxes or a fixed fee, regardless of how much—or how little—trash they generate. PAYT programs break with tradition by treating trash services just like electricity, gas, and other utilities. PAYT communities remove the cost for collecting municipal solid waste from their tax bills, and instead they charge residents a fee that varies based on the amount of waste they generate, while all recyclables are picked up at no cost. A typical PAYT system may use variable size carts, a bag program, or a sticker/tag program. PAYT programs can be very flexible and can be adapted to any community with minimal cost and minimal change to collection infrastructure.

Why PAYT?

- Produces a more equitable, visible fee system that lets households control their own solid waste disposal costs
- Solid waste services are a utility function much like water and electricity where the baseline costs are recovered and high-volume users are charged accordingly
- Creates a direct and sustainable funding source for this essential service that is insulated from the volatility of a general fund-based program
- Offers a direct economic incentive for residents to reduce waste and increase recycling
- Provides a consistent stream of recycling commodities that can be sold to manufacturers; minimizes variability in recycling rates by residents
- Increased demand from manufacturers for recyclables to create recycled content products benefits the state's economy directly creating green jobs and new businesses in South Carolina communities

NURRC, LLC is a South Carolina based bottle to bottle recycler. The material collected in SC yearly is only enough to feed our plant for 15 days. We purchase PET from all over the United States and Canada to feed our 100 million pound and growing requirement. We support PAYT as a valuable component to increase collection of recyclable materials.

Gerry Fishbeck, Vice-President, New United Resource Recovery Corporation, Spartanburg, South Carolina

PAYT Benefits

- Residents who recycle more are rewarded with a lower trash bill
- Residential waste reduction rates range from 25-50%; nationally, increases in recycling rates with PAYT programs range from 32—59%. *(Source: EPA Region IV website)*
- Recycling has well-known environmental benefits; increasingly, the economic benefits to communities are driving the recycling proposition with more jobs, stronger tax revenue, significant income and growth for businesses that depend on recovered commodities. *(Source: EPA Region IV website)*
- Avoided disposal costs free up funds for other critical municipal services, such schools, fire and police protection
- Valuable landfill space is conserved, delaying the need for building a new disposal site
- With proper public education, PAYT can be seen as a community benefit

RECYCLING SAVES MONEY

By recycling more, particularly in these difficult economic conditions, how much more could your community save?

- It is estimated that in South Carolina more than **400,000 tons** of easily recyclable material – cardboard boxes, office paper, aluminum cans, plastic bottles as well as, glass bottles and jars – was sent for landfill disposal in FY09.
- Using the state's average MSW tipping fee of \$35 per ton, more than **\$15 million** was spent to dispose of this material.
- Even worse, nearly **\$52 million** in potential revenue from the sale of these recyclables was lost based on the average revenue received per ton by local governments for each of these types of material.

SOURCE: S.C. Department of Health and Environmental Control's Office of Solid Waste Reduction and Recycling

RECYCLING WORKS

Recycling is good business in South Carolina.

The state's recycling industry has a **\$6.5 billion** impact on the state's economy according to a study conducted by the College of Charleston. The study shows that the recycling industry is directly responsible for:

- more than **15,000 jobs**;
- **\$1.5 billion** in annual personal income; and
- **\$69 million** in tax revenue each year.

SOURCE: "The Economic Impact of the Recycling Industry in South Carolina"

Other Outcomes

Illegal dumping concerns have been raised but this has not been an issue where recycling and other waste reduction programs are offered. In a survey of PAYT communities, about 25% said illegal dumping was a short term problem and should not be considered a barrier to implementing the program.

Where can I get more information?

South Carolina Department of Commerce

Visit the Business Services section of SCcommerce.com for additional recycling resources, such as the Recycling Directory, Smart Business Recycling Program and useful recycling Web site links.

South Carolina Department of Commerce

Visit the Business Services section of SCcommerce.com for additional recycling resources, such as the Recycling Directory, Smart Business Recycling Program and useful recycling Web site links.

Environmental Protection Agency Region 4 Municipal Government Tool Kit

www.epa.gov/region4/waste/rcra/mgtoolkit/index.html

Southeast Recycling Development Council

www.serdc.org

South Carolina Department of Health and Environmental Control

Office of Solid Waste Reduction and Recycling

(800) 768-7348

www.scdhec.gov/Recycle

Carolina Recycling Association

Will Sagar, President

(828)507-0123

www.cra-recycle.org

Recycling Market Development Advisory Council

Gerry Fishbeck, Chair

(864)574-0904

GFishbeck@URRC.net


Recycling Industry Group

Ronnie Grant, Chair

(843)383-7665

Ronnie.Grant@Sonoco.com

Appendix C – Furman University Sustainability Program



Surviving — or more importantly, thriving — in today’s corporate world is impossible without sustainable business strategies. In the most obvious sense, a company has little chance in outlasting its competitors if it simply exists in the present. What separates the flourishing businesses from the mediocre ones is an ability to operate in an almost dual existence: achieving in the present while also anticipating the future.

Today, corporate businesses are embracing sustainability because it makes business sense. The “triple bottom line” impact of increasing revenues, decreasing costs and enhancing corporate social responsibility is attractive to both small and large business owners, their employees and customers. These companies are clearly illustrating that going green is a key ingredient to success in the new, reset economy.

Green marketing, green accounting, sustainable innovation and life cycle analysis are fast becoming the language of those who are responsible for implementing sustainable business practices.

Furman is ready to help your company become sustainable. As an institution of higher education, the university has always sought to lead the way to a more sustainable future. Therefore, Furman is already aware of — and an expert in — the tools, techniques and thinking required for a successful green transformation.

Ensure that your organization will surpass the rest. Envision years of success. Earn your Postgraduate Diploma in Corporate Sustainability through Furman University’s Center for Corporate and Professional Development.

Contact: Dr. Brad Bechtold

Email: brad.bechtold@furman.edu

Phone: (864)294-3136

Appendix D – Green Purchasing Initiative Senate Resolution

S. 1497.
Introduced by Senator Coleman.

A SENATE RESOLUTION

TO RECOGNIZE AND COMMEND THE GREEN PURCHASING INITIATIVE BEGUN IN THE FALL OF 2008, AND TO ENCOURAGE THE STATEWIDE ADOPTION OF THE INITIATIVE'S POLICIES.

WHEREAS, the members of the South Carolina Senate are grateful for the efforts of the Green Purchasing Initiative. Since its inception in 2008, the initiative has set out to preserve the beauty and purity of our great State; and

WHEREAS, seeking to reduce further environmental and human health impacts of state operations, the initiative has given South Carolina's state government the task of integrating environmental considerations into its procurement process; and

WHEREAS, the initiative has facilitated this effort by defining environmentally preferred purchasing, identifying desired environmental attributes that need to be protected, balancing environmental considerations with performance, cost, and availability, and educating and promoting standards to purchasers; and

WHEREAS, the goals of the Green Purchasing Initiative include prevention of pollution and waste, elimination or reduction of toxins, conservation of energy and water, giving preference to recycled-content material, and reduction of emissions; and

WHEREAS, the policy of the initiative recognizes the need to improve green-purchasing practices within state agencies when practicable and cost effective without reducing the safety or performance of a product or service; and

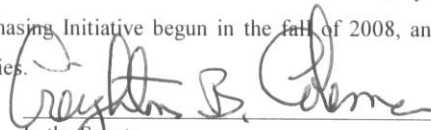
WHEREAS, South Carolina state government is committed to environmentally preferred purchasing in recognition of the need for all of our citizens to use natural resources more efficiently, to reduce waste, to save money, to sustain markets for materials collected in recycling programs, and to protect South Carolina's environment; and

WHEREAS, the members of the South Carolina Senate are grateful for the statewide efforts set forth in the Green Purchasing Initiative to preserve the natural health and prosperity of our State.

NOW, THEREFORE,

BE IT RESOLVED by the Senate:

THAT the members of the South Carolina Senate, by this resolution, recognize and commend the Green Purchasing Initiative begun in the fall of 2008, and encourage the statewide adoption of the initiative's policies.



In the Senate
Columbia, South Carolina
June 02, 2010

I hereby certify that the foregoing is a true and correct copy of a resolution passed in the Senate.

Appendix E – TREADS Promotional Flyer

| | | |
|---|--|--|
|  <p>TIRE RECYCLING EXPO AND DEVELOPMENT SYMPOSIUM</p> | | <p><i>Sponsored by:</i></p> <p>The Asphalt Rubber Technology Service at Clemson University</p> <p>South Carolina Department of Commerce</p> <p>South Carolina Department of Health and Environmental Control</p> <p>Rubber Manufacturers Association</p> |
| <p>February 18, 2010 Madren Conference Center Clemson, SC</p> | <p>For More Information: 864-656-6799 www.ces.clemson.edu/treads</p> | |

This southeastern regional symposium is for those who are interested in the end-life of scrap tires, including tire manufacturers, retailers, collectors, processors, end-product producers, and current or potential end-product users. This conference will cover a broad spectrum of scrap tire-related topics including available resources to aid scrap tire businesses and help with selling to governments, as well as some application-specific issues. Our expert speakers will cover the following range of topics:

- Introduction and Southeastern Market Overview
- Regional State Scrap Tire Policies
- Tire Recycling Business Resources
- Rubberized Asphalt Overview: U.S. Usage and Types of Applications
- Tire-Derived Aggregate
- Environmental Stewardship in Tire Manufacturing
- Tire Chips in Septic Tank Drainfields - Research Updates
- Tire-Derived Fuel
- Beneficial Usage of Scrap Tires in Equestrian Markets
- Selling to State Governments

Fees: \$150 per person (or \$75 for state, federal, or local government employees) for the 1 day symposium. Includes all course materials, refreshment breaks, luncheon, and networking reception. Airfare, lodging, other meals, and expenses are not included.

Cancellations: A \$25 processing fee will be applied should you need to cancel. If you cancel more than 5 days before the conference date, you will receive a refund less the \$25 processing fee. If you cancel 5 days or less before the conference date, you will not receive a refund. Substitutions can be made at any time at no additional charge.

Accommodations: The James F. Martin Inn is adjacent to the Madren Conference Center. The James F. Martin Inn is offering a special conference rate of \$90/night for Executive rooms or \$110/night for multi-bedroom suites. A second lodging option is available at the Courtyard by Marriott at a special conference rate of \$89/night and \$70/night for government employees. The cut off date for these special rates is January 18, 2010. Reserve your room by calling the James F. Martin Inn at (864) 654-9020 or the Courtyard by Marriott (864) 654-8833 and mention the "TREADS Conference".

TREADS: Tire Recycling Expo and Development Symposium
Register Online at www.ces.clemson.edu/treads or
Mail or Fax this Completed Form for each registrant to:
 Asphalt Rubber Technology Service, 2002 Hugo Drive,
 Clemson University, Clemson, SC 29634
 Attn: TREADS Conference
 Fax (864) 656-6186

| | | |
|-----------------------|------|--|
| Full Name: | | |
| First Name for Badge: | | |
| Company: | | |
| Address: | | |
| City, State, Zip: | | |
| Phone: | Fax: | |
| Email: | | |
| Title: | | |

- Symposium Registration Fee: \$150 / person
- Discounted Rate for Additional Participants \$125 / person
- State or Government Employee: \$75 / person
- Guest (Includes Luncheon and Reception) \$40 / person

Payment Type:

- Check
- Visa
- Master Card
- Discover

Credit Card No. _____

Name on Card: _____

Make Checks Payable to: Clemson University
 Mail Checks to: Asphalt Rubber Technology Service,
 2002 Hugo Drive, Clemson University, Clemson, SC 29634

To learn more about TREADS:
 Tire Recycling Expo and Development Symposium
 visit our website at www.ces.clemson.edu/treads or contact
 Teri Oswald • Phone: 864-656-6799 • Fax: 864-656-6186
 Asphalt Rubber Technology Service, 2002 Hugo Drive,
 Clemson University, Clemson, SC 29634 arts@ces.clemson.edu



Appendix F – Waste Tire Survey

| | |
|----------------------|-----------------------|
| Company Name: | |
| Contact Name: | Email Address: |
| Phone Number: | Fax Number: |

How many total **TONS** of tires did your company process in 2009? (Do not include non-DOT off-road, farm, mining or logging tires) _____ tons

About what **PERCENTAGE** of the passenger or light truck tires handled was generated in S.C.? _____%

About what **PERCENTAGE** of the heavy truck tires your company handled was generated in S.C.? _____%

Please provide the number of **SOUTH CAROLINA TIRES** in tons processed in 2009 below, using actual South Carolina tonnage data or by applying the estimated percentage of South Carolina tires:

| TYPE | Passenger/Light Truck TONS PROCESSED IN 2009 | Heavy Truck TONS PROCESSED IN 2009 |
|--|---|---------------------------------------|
| Post Consumer (from retail, municipal and individuals) | | |
| Post Industrial (from manufacturing and industrial scrap tires) | | |

How much **South Carolina** tire material was used in the following end-use market applications? **Please indicate whether answer is in tons or percent (%).*

| TYPE OF USE | TONS or % | TONS or % | TONS or % |
|--------------------------------|--|----------------------------|--------------------------------------|
| Tire-Derived Fuel (TDF) | Whole Tires: | Processed Material: | |
| Civil Engineering | Landfill/Alternate Daily Cover: | Landfill/Construction: | Non-Landfill Use: |
| Ground/Crumb Rubber | Crumb Rubber: Crumb Rubber Use? _____ Mesh size(s)? | | |
| Outdoor Applications | Landscape: _____ | Playground: _____ | Sports Surfacing: _____ Other: _____ |
| Manufactured Products | Molded, Extruded, Pressed, or Stamped Manufactured Products: | | |
| Other Applications | Other: _____ | Please describe use: _____ | |

| | |
|--|--|
| What PERCENTAGE of your product (TDF, crumb rubber, etc.) is sold in S.C.? | |
| How many TONS of whole or processed S.C. tires were land-filled in 2009? | |
| How many TONS of S.C. tires did your company export out of the U.S. in 2009? | |
| How many TONS of off-road, farm, mining or logging equipment tires did you process in 2009? | |
| Do you have markets for steel and fabric waste? If yes, what are they? | |

Comments (use back of page or additional paper if needed):

Appendix G – Search Engine Marketing Results

September 2009

The recycling-specific campaign was a huge success in its first month. The campaign generated over 403 clicks to the recycling-focused Commerce page, with a click through rate (CTR) of 1.34 percent. As we have witnessed in other campaigns, through optimization and time, the performance will improve, which is a great thing for this part of the overall campaign.

| Campaign Summary – Search – Recycling | September 2009 (21 Days) | Cumulative |
|--|-----------------------------|------------|
| Impressions | 30,007 | 30,007 |
| Clicks | 403 | 403 |
| CTR | 1.34% | 1.34% |
| Cost | \$999.96 | \$999.96 |
| CPC | \$2.48 | \$2.48 |

October 2009

Results/Recap

The recycling campaign remained the bar-setter of the three campaigns Commerce has running. The Search CTR jumped from 1.34 percent to 2.24 percent and the clicks almost doubled, going from 403 to 723. As predicted, the performance of this young campaign has improved, due to optimizations and the focused nature of the keywords and text ads.

| Campaign Summary - Search - Recycling | September 2009 (21 Days) | October 2009 | Cumulative |
|--|-----------------------------|--------------|------------|
| Impressions | 30,007 | 32,318 | 62,325 |
| Clicks | 403 | 723 | 1,126 |
| CTR | 1.34% | 2.24% | 1.81% |
| Cost | \$999.96 | \$1,549.73 | \$2,549.69 |
| CPC | \$2.48 | \$2.14 | \$2.26 |

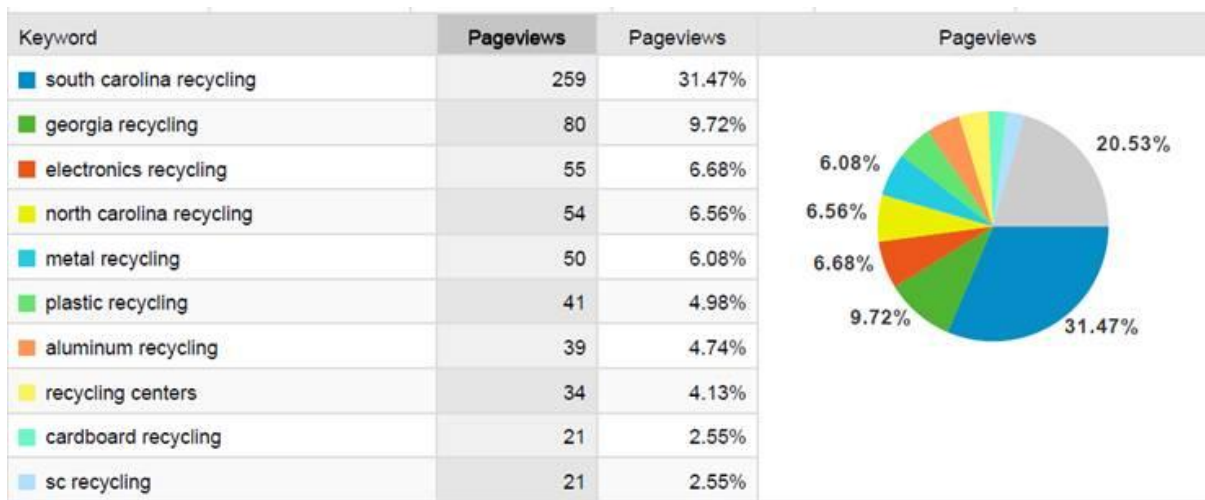
Overview of Recycling Campaign

The recycling campaign made substantial improvements in December, when compared to the previous month. The clicks held relatively steady, while the CTR (Click Thru Rate) increased by 50 percent. We believe that this campaign will benefit greatly from further optimization. Our goal is to surpass the stellar numbers found in October.

Recycling – www.scommerce.com/businessservices/recyclingdirectory.aspx

CTR: 1.60 percent

The paid search campaign accounted for 85 percent of traffic to the recycling directory (429 out of 503 total unique page views were generated as a result of the campaign). The primary paid keywords driving traffic to the site are listed below:



*The grey area of the pie chart denotes all the "other" keywords that drive traffic to the Recycling Directory page. The keywords that comprise the grey area don't drive enough traffic on their own to qualify them for the top ten list. Examples of keywords that contribute to this "other" area are "paper recycling," "Georgia business recycling" and "solid waste management."

Monthly Spend Breakdown

| Campaign Summary – Search Recycling | September 2009 (21 days) | December 2009 | November 2009 | October 2009 | Cumulative |
|--|-----------------------------|------------------|------------------|-----------------|------------|
| Impressions | 30,007 | 25,249 | 39,772 | 32,318 | 127,346 |
| Clicks | 403 | 404 | 426 | 723 | 1,956 |
| CTR | 1.34% | 1.60% | 1.07% | 2.24% | 1.54% |
| Cost | \$999.96 | \$995.30 | \$1,002.79 | \$1,549.73 | \$4,547.78 |
| CPC | \$2.48 | \$2.46 | \$2.35 | \$2.14 | \$2.33 |

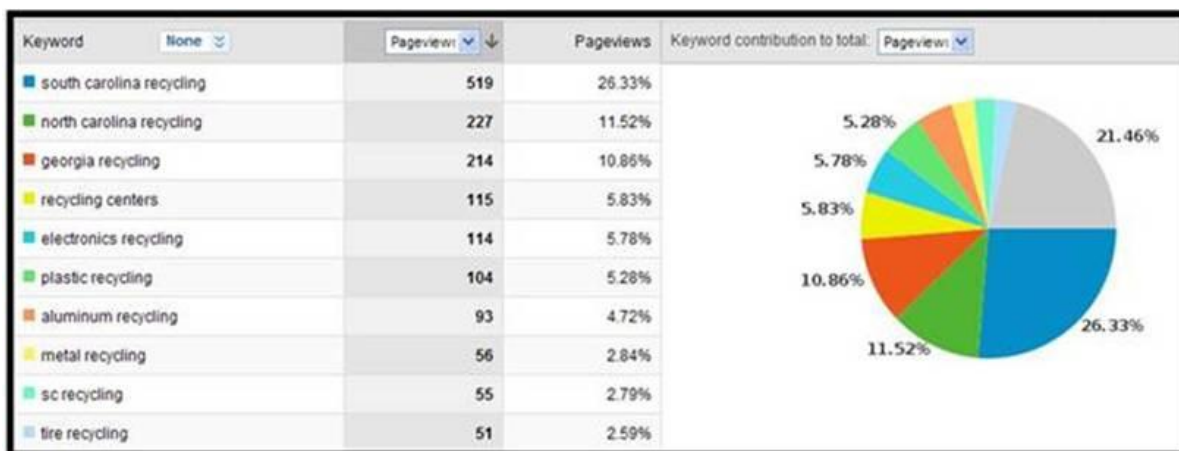
Overview of Recycling Campaign

The Recycling campaign leveraged the increase in funds which resulted in greater returns. The doubling of investment in the recycling campaign paid off in January. With this influx of funds, and proper optimization, the campaign increased in clicks by 111 percent and improved its return on investment (ROI) by 44 percent. All told, January was the best month for this branch of the campaign to date.

Landing Page: www.scommerce.com/businessservices/recyclingdirectory.aspx

Recycling – CTR: 2.31 percent

The paid search campaign accounted for 98.5 percent of traffic to the Recycling Directory (940 out of 954 total Unique Page Views). The primary paid keywords driving traffic to the site are listed below:



*The grey area of the pie chart denotes all the "other" keywords that drive traffic to the Recycling Directory page. The keywords that comprise the grey area don't drive enough traffic on their own to qualify them for the top ten list. Examples of keywords that contribute to this "other" area are "paper recycling," "Georgia business recycling" and "solid waste management."

Geographic Summary

Traffic coming to the Commerce site via the keyword campaign varied by initiative. Below are the top geographic states/countries for each campaign:

Recycling Campaign:

| State | Number of Clicks |
|----------------|------------------|
| Georgia | 277 |
| South Carolina | 256 |
| North Carolina | 233 |
| Tennessee | 87 |

January 2010

| Campaign | September | January | December | November | October | Cumulative |
|---------------------------------|----------------|------------|----------|------------|------------|------------|
| Summary – Search – Recycling | 2009 (21 Days) | 2010 | 2009 | 2009 | 2009 | |
| Impressions | 30,007 | 36,885 | 25,249 | 39,772 | 32,318 | 164,231 |
| Clicks | 403 | 853 | 404 | 426 | 723 | 2,809 |
| CTR | 1.34% | 2.31% | 1.60% | 1.07% | 2.24% | 1.71% |
| Cost | \$999.96 | \$1,992.90 | \$995.30 | \$1,002.79 | \$1,549.73 | \$6,540.68 |
| CPC | \$2.48 | \$2.34 | \$2.46 | \$2.35 | \$2.14 | \$2.33 |

February 2010

Overview of Recycling Campaign

The recycling campaign held consistent during the month, with increases in clicks and impressions, and a decreased CPC level (\$2.34 to \$2.32). Despite the strong CTR of 1.97 percent, the campaign did not improve as much as anticipated. As such, we will focus our optimization efforts on this group in March to ensure an upward trend.

The normal breakdown telling how much traffic to the directory was generated from the campaign was not available, due to the switch over to the new Commerce website.

Budget Breakdown

| Campaign Summary – Search – Recycling | September 2009 (21 Days) | February 2010 | January 2010 | December 2009 | November 2009 | October 2009 | Cumulative |
|---------------------------------------|--------------------------|---------------|--------------|---------------|---------------|--------------|------------|
| Impressions | 30,007 | 43,575 | 36,885 | 25,249 | 39,772 | 32,318 | 207,806 |
| Clicks | 403 | 860 | 853 | 404 | 426 | 723 | 3,669 |
| CTR | 1.34% | 1.97% | 2.31% | 1.60% | 1.07% | 2.24% | 1.77% |
| Cost | \$999.96 | \$1,998.74 | \$1,992.90 | \$995.30 | \$1,002.79 | \$1,549.73 | \$8,539.42 |
| CPC | \$2.48 | \$2.32 | \$2.34 | \$2.46 | \$2.35 | \$2.14 | \$2.33 |

March 2010

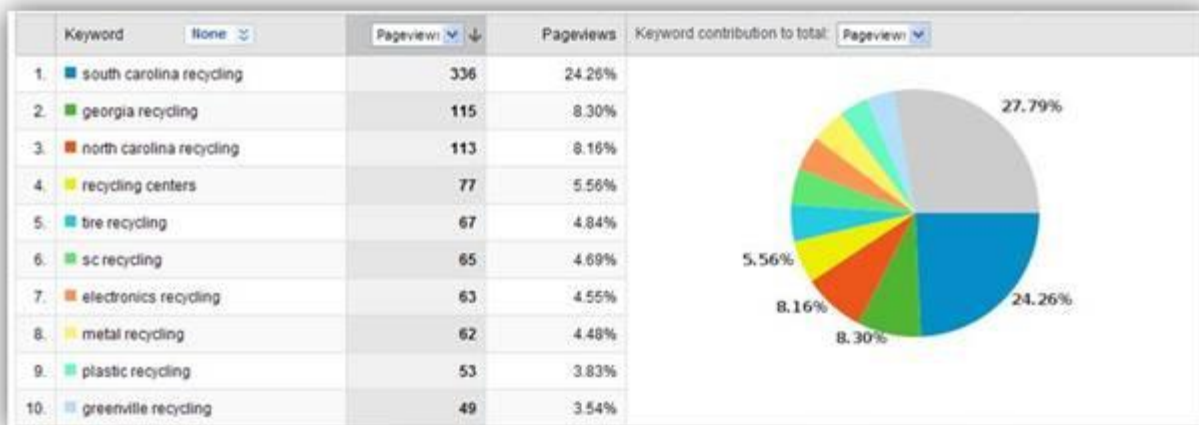
The recycling campaign produced the largest amount of clicks to date, reaching approximately 900. Similar to the core campaign, while the CTR slipped slightly, the overall CPC improved – falling from \$2.32 to \$2.25 – the third straight month of improved ROI.

Recycling – CTR: 1.44 percent

Campaign Percent: Not calculated as part of core campaign numbers

The paid search campaign accounted for 82 percent of traffic to the Grants and Incentives page (598 from paid search compared with 731 total unique page views for the month).

The primary paid keywords driving traffic to the site are listed below:



*The grey area of the pie chart denotes all the “other” keywords that drive traffic to the Recycling Directory page. The keywords that comprise the grey area don’t drive enough traffic on their own to qualify them for the top ten list. Examples of keywords that contribute to this “other” area are “paper recycling,” “Georgia business recycling” and “solid waste management.”

April 2010

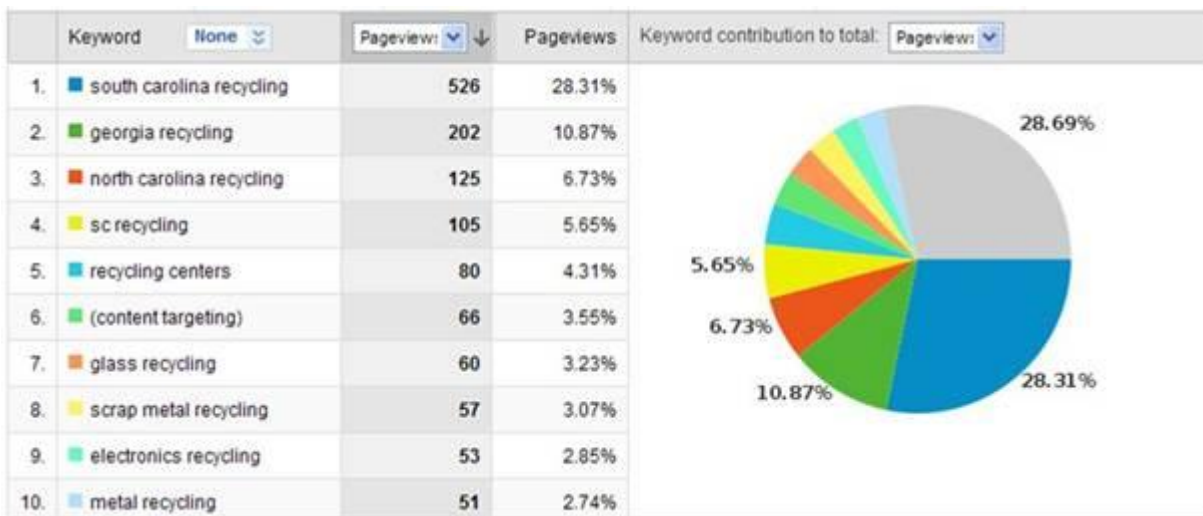
The Recycling campaign improved in a couple key ways in April. For the fifth straight month, the Click total increased (with a static budget). As a result, the CPC has fallen during each of those periods. While the CTR has trended slightly down, in this instance, the cause is a higher organic search volume, which has increased the impression level, thus decreasing the CTR. Overall another solid month for Recycling.

Recycling – CTR: 1.39 Percent

Campaign Percent: Not calculated as part of core campaign numbers

The paid search campaign accounted for 85 percent of traffic to the Grants and Incentives page (848 from paid search compared with 1,001 total Unique Page Views for the month).

The primary paid keywords driving traffic to the site are listed below:



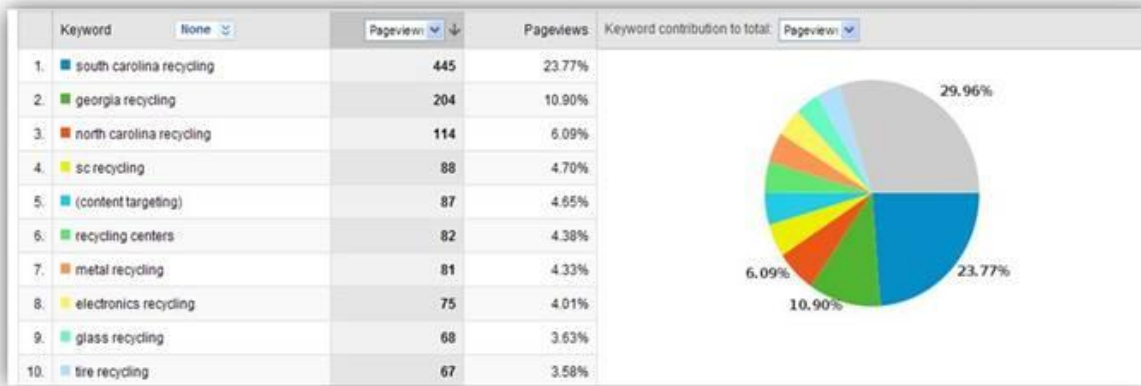
*The grey area of the pie chart denotes all the "other" keywords that drive traffic to the Recycling Directory page. The keywords that comprise the grey area don't drive enough traffic on their own to qualify them for the top ten list. Examples of keywords that contribute to this "other" area are "paper recycling," "Georgia business recycling" and "solid waste management."

May 2010

Similar to the Commerce SEO/SEM campaign for Boeing, the Recycling campaign continued to head in the right direction. In every month since December of last year, the CPC has fallen (to \$2.19 in May), and the amount of Clicks has increased (to 912). This ultra-consistent trend is surprising considering the inconsistencies of web traffic, but is another demonstration of the successful methodologies employed to make the campaign a success.

The paid search campaign accounted for 89 percent of traffic to the Recycling page (838 from paid search compared with 945 total Unique Page Views for the month).

The primary paid keywords driving traffic to the site are listed below:



*The grey area of the pie chart denotes all the "other" keywords that drive traffic to the Recycling Directory page. The keywords that comprise the grey area don't drive enough traffic on their own to qualify them for the top ten list. Examples of keywords that contribute to this "other" area are "paper recycling," "Georgia business recycling" and "solid waste management."

Campaign Stats/Monthly Spend Recap

| Campaign Summary – Search – Recycling | May 2010 | April 2010 | March 2010 | Cumulative |
|---------------------------------------|------------|------------|------------|-------------|
| Impressions | 76,903 | 65,324 | 61,449 | 411,482 |
| Clicks | 912 | 907 | 887 | 6,375 |
| CTR | 1.19% | 1.39% | 1.44% | 1.55% |
| Cost | \$1,998.07 | \$1,995.30 | \$1,999.29 | \$14,532.08 |
| CPC | \$2.19 | \$2.20 | \$2.25 | \$2.28 |

June 2010

The Recycling campaign produced the largest amount of clicks to date, reaching 964 clicks. The CTR increases slightly from 1.19 percent in May to 1.20 percent in June. The overall CPC improved dramatically from \$2.19 to \$2.07 - the fourth straight month of improved ROI.

| Campaign Summary – Search – Recycling | June 2010 | Cumulative |
|---------------------------------------|------------|-------------|
| Impressions | 80,310 | 491,792 |
| Clicks | 964 | 7,339 |
| CTR | 1.20% | 1.49% |
| Cost | \$1,997.85 | \$16,529.93 |
| CPC | \$2.07 | \$2.25 |

July 2010

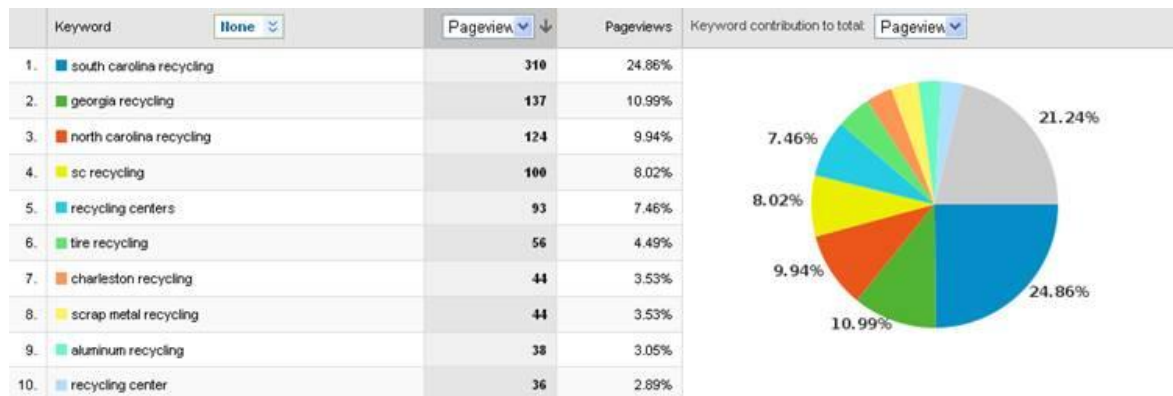
South Carolina Recycling Campaign Overview

The South Carolina Recycling campaign delivered 26,670 impressions and 589 clicks in July – a slight decrease in the number of clicks delivered in June. The campaign, which showed growth over the last few months, is scheduled to be refreshed in August by both a budget increase and optimization plan.

Landing Page Overview

Ad groups pointing to this page: Recycling

CTR: 2.05 Percent



*The grey area of the pie chart denotes all the "other" keywords that drive traffic to the Recycling Directory page. The keywords that comprise the grey area don't drive enough traffic on their own to qualify them for the top ten list. Examples of keywords that contribute to this "other" area are "paper recycling," "Georgia business recycling" and "solid waste management."

Total page views: 1,627

Views driven by paid search: 1,244

Percentage of page views driven by paid search: 76.46 percent

Campaign Summary

| Campaign Summary – Search – Recycling | July 2010 | Cumulative |
|---------------------------------------|------------|-------------|
| Impressions | 28,670 | 520,462 |
| Clicks | 589 | 7,928 |
| CTR | 2.05% | 1.52% |
| Cost | \$1,267.71 | \$17,797.64 |
| CPC | \$2.15 | \$2.24 |

August 2010

The South Carolina Recycling campaign delivered 51,533 impressions and 987 clicks in August – a huge increase compared to July 7. Impressions were up 80 percent, indicating increased search activity of keywords in this campaign. Likewise, clicks were up 68 percent.

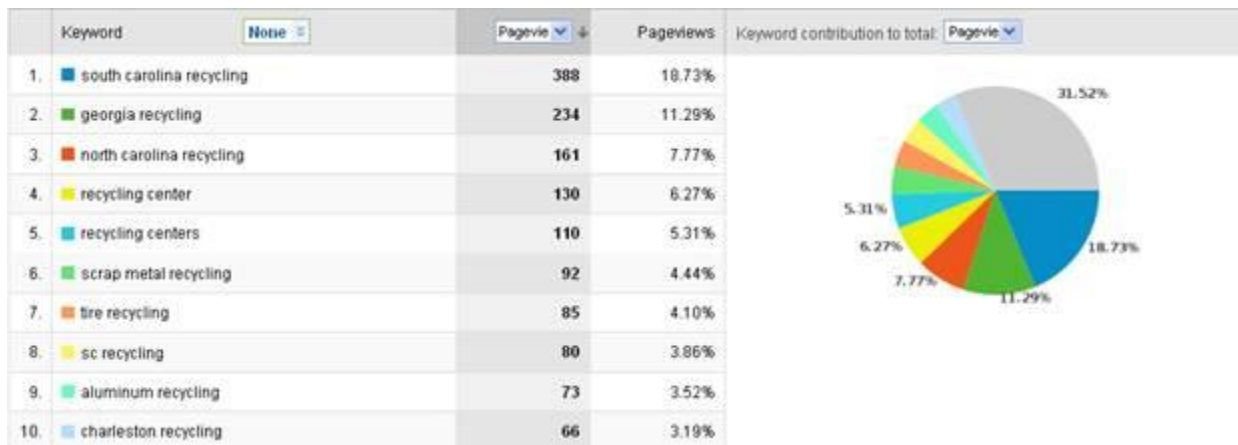
CTR: 1.90 percent

Campaign Percent: Not calculated as part of Core campaign numbers.

Total page views: 2,451

Views driven by paid search: 2,024

Percentage of page views driven by paid search: 83 percent



*The grey area of the pie chart denotes all the "other" keywords that drive traffic to the Recycling Directory page. The keywords that comprise the grey area don't drive enough traffic on their own to qualify them for the top ten list. Examples of keywords that contribute to this "other" area are "paper recycling," "Georgia business recycling" and "solid waste management."

| Campaign Summary – Search – Recycling | August 2010 | Cumulative |
|--|--------------------|-------------------|
| Impressions | 51,533 | 571,995 |
| Clicks | 987 | 8,915 |
| CTR | 1.90% | 1.56% |
| Cost | \$2,065.52 | \$19,863.16 |
| CPC | \$2.11 | \$2.23 |

RECYCLING INDUSTRY CLUSTER STRATEGIC PLAN SUMMARY 2010



Executive Summary

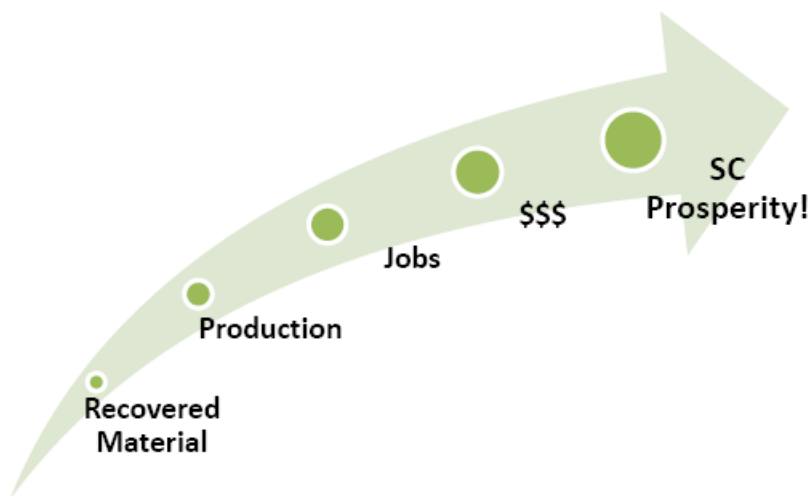
The management of waste has been a challenge since the beginning of time. Ancient civilization wrestled with the sanitary aspects of waste disposal. Thousands of years later, recall the New York garbage barge that travelled for six months in 1987 along the eastern seaboard looking for a place to unload its 3,168 tons of trash. The discussions continue today in terms of landfill locations, costs of disposal and reducing the carbon footprint. Recycling offers alternatives to waste disposal that result in avoided disposal costs for industry and government as well as revenues from the sale of recyclable materials. It also provides other significant benefits including material for new products made from recycled content. Increased demands, scarcity and the cost and environmental impact of extracting and producing raw and virgin materials presents manufacturers and the recycling industry with high level opportunity. The challenge is recovering material before it reaches the landfill.

While South Carolina's municipal solid waste recycling goal is 35%, the actual 22% residential recycling rate is below the national average rate of 33.2%. Still, the recycling industry has a 6.5 billion dollar impact on South Carolina's economy with 15,600 identifiable jobs and an impact on 37,440 jobs. While technological innovation is increasing the recycling capabilities and applications well beyond imagination, there is a wealth of material being lost to landfills rather than going back into production. Today we find recyclers across the state, in rural and urban areas, and in many different capacities. From a simple one person/one truck operation to high tech, multi-million dollar equipment investments with global clientele, each operation contributes to South Carolina's recycling economy.



Still, there is a disconnect in terms of the opportunities to capture the advantages of recycling from an environmental and a business perspective in comparison to the actual implementation of procedures to make a difference. The industry is dependent on voluntary recycling decisions from commercial and residential sources. Without the backing of incentives, law or both, there are abundant untapped assets leaving supply and business activity unpredictable and at greater risk.

In 2007, with a mission to strengthen the state's recycling industry by establishing policy, building networks, promoting market development and leveraging existing infrastructure, the recycling industry joined its varied forces and began operating as a cluster. Since its first meeting, it has stayed true to its mission by dividing into operating teams that tackle educational programs, marketing efforts, developing relationships with policymakers and universities and even getting approval for recycling's own license tag. Volunteer recycling stakeholders with the assistance of the Recycling Market Development Advisory Council (RMDAC), South Carolina Department of Commerce, and New Carolina, have initiated numerous activities that promote the cluster. To guide their efforts in a more concerted way, the recycling industry embarked on a Strategic Plan in 2010.



The basis of the *Recycling Industry Cluster Strategic Plan* rests on stakeholder analysis of the issues and opportunities facing South Carolina's recycling industry. In early 2010, a roundtable of influential CEOs from the recycling and solid waste industries met to develop solutions and lay the groundwork for enhancing the industry opportunities ahead. By combining the input of the recycling industry stakeholders, the examination of industry trends, applicable law and individual case studies, along with proposed recommendations, the plan is intended to serve as a guide for how and what the cluster should most appropriately and effectively focus on in the future.

To realize the recycling cluster's vision for South Carolina to be a national leader in the recycling industry in terms of job creation, investment and providing access to sustainable markets for recyclable materials, goals were developed. The following goals and implementation strategies were identified by the recycling cluster in previous meetings and fine tuned based on CEO input.

Goal 1: Communications

South Carolina's recycling economy will be prominent and respected in the quest for state prosperity.

To appeal across audiences, targeted, professional communications will be developed that integrate the cluster's philosophy and the connections between personal responsibility, transparency on the costs of solid waste disposal, economic prosperity, policy decisions and education about the workforce and business potential. Industry officials recognize the need to use free media where practical but also underscore the need for a progressive, resonating marketing campaign that appeals to the demographic categories that are recycling the least. A recent successful marketing initiative, Georgia's *You Gotta Be Kidding Campaign!* is a tongue in cheek campaign targeted to the 25-34 year old population and the places they visit including concerts, bars, Facebook and other congregating sites. The cluster recognizes the importance of building working

relationships with policymakers. Collaboration is the mantra among this cluster, but so is advocacy as an on-going communication tool.

Goal 2: Networks and Collaboration

South Carolina will have a comprehensive recycling industry network that provides compelling rationale for widespread industry connections and collaboration.

The industry is built on loosely arranged as well as more formal structures. The stakeholders identified potential and even some unexpected partners during the CEO roundtable. From business and economic development alliances, to environmental groups, education entities and to policymakers at all levels and perspectives, collaboration is a top priority. It is important that trust and respect among partners is cultivated early on and that the early stages of proposal and plan development are inclusive. When controversial policy issues surface, these established relationships will be critical.

Goal 3: Leverage Infrastructure

South Carolina's recycling industry will leverage its assets to increase value and strength and overall competitive advantage to its individual business components and the industry as whole.

In addition to hard infrastructure such as roads, buildings and equipment, there also is collaborative potential in administration, marketing, procurement, education, policy advocacy and research. In South Carolina, recycling businesses vary in size and location, and activities frequently cross state and even national boundaries. These businesses have broad ranges of function (from marketing to manufacturing), application and commodities. A thorough assessment of the current and potential value chain would allow prospective or growing businesses to consider where there are unmet needs and where there are opportunities to refine processes, improve quality and add efficiencies. The industry will initiate

discussions with South Carolina's transportation and logistics cluster in order to explore the potential for regional recycling distribution and processing centers as well as hub and spoke applications for a consortium of recycling businesses. By pooling resources that support the industry as a whole, the entire industry will prosper.

Goal 4: Business Development and Recruitment

Build a critical mass of sustainable recycling related businesses in South Carolina.

Additional recovered material is needed to enhance the capabilities of existing business and to recruit and grow new business. Currently, residential recycling in the southeast is the lowest in the nation and offers tremendous potential to South Carolina industry in terms of increasing feedstock. In addition, if manufacturing waste streams transitioned to recycling, they, too, offer significant opportunity for material growth. Industry leaders noted the importance of targeted recruitment of industrial operations that either generate recyclable material or that need recyclable material as feedstock.

Businesses need accurate and consistent information when considering whether to locate or expand in South Carolina. Data should include material composition, amounts and location, workers needed or available, operational resources and where the gaps exist in these areas. A more consistent data collection system is in the works for local governments. At this point, business reporting is voluntary and inconsistent and stakeholders generally agree that while more robust business reporting would be advantageous to recycling business development, they prefer an incentivized rather than mandated business reporting system.

Other recommended business development strategies include populating the initial value chain draft outlined in the plan with up to date resources in order to reveal the states' areas of competitive advantage in the recycling arena. Also, while not specifically targeted to the recycling industry, South Carolina offers some attractive incentives to business. Because of recycling's macro-level impacts, industry officials intend to study and pursue incentives that specifically support recycling business development and recruitment.

Goal 5: Research and Education

South Carolina will be on the cutting edge in recycling knowledge and technology and economic enterprise.

Education and research have a major influence on the future growth of South Carolina's economy particularly as they relate to the state's ability to develop and apply new technologies. The industry recognizes and supports investments in research, education and equipment that will stimulate positive change and invigorate new and better processes, material and equipment innovations. Invention, however, comes with a certain degree of uncertainty and cost.

Stakeholders note that there is not a structure for collaborative research that specifically supports recycling's industry wide needs even through the results often apply to the entire industry. An industry sponsored, university based advisory group was suggested as a means to identify and coordinate an approach for potential research grants for technical and demonstration needs. The Asphalt Rubber Technology Service (ARTS) partnership among Commerce, SC DHEC and Clemson University has been successful as a research and funding model that could apply to other recovered commodities.

Goal 6: Policy

The Recycling Industry Group will facilitate strategic policy decisions that foster a sustainable and prosperous recycling economy.

Policies that lay the foundation for a strong, fair and sustainable business environment will go a long way towards increasing recycling rates and business growth. From accounting transparencies, select mandates on marketable commodities, producer responsibility laws similar to the e-waste bill passed in the 2010 South Carolina legislative session, to a modest state imposed tipping fee that covers costs for research and local government grants, state policies can play a dramatic role in the strength of the recycling industry. In a number of states across the country, these types of policies have made significant positive local and statewide impacts when coupled with locally administered incentives such as Pay As You Throw (PAYT), iRecycle and Win! or senior citizen recycler rebate programs.

Due to climate change, energy issues, technological advancement and product stewardship initiatives, South Carolina DHEC is recommending an update to South Carolina's Solid Waste Management Plan and Act. Currently, the state recycling goal is 35%, which has not been met since the Act was amended in 2000. Industry officials recommend that stronger policies will help the state meet or exceed the 35% goal and substantially increase the waste diversion rate. The industry will advocate for and support these update efforts, particularly when they relate to business activity. In addition, the industry is generally supportive of wise state policy that recognizes that there are investments and costs that are justified and needed if we are to recruit and grow business in South Carolina. Comprehensive tax reform, infrastructure maintenance and education funding are potential tactics to enhance the general business climate in South Carolina.

Goal 7: Organizational Development

The recycling cluster will have an organizational structure that includes procedures and processes that represent and optimize the value of the recycling industry and its component businesses.

The recycling cluster has been ably administered with the help of the Department of Commerce's staff and the Recycling Market Development Advisory Council, New Carolina and South Carolina DHEC. Industry stakeholders have contributed numerous volunteer hours. As outlined, this plan is ambitious and because of the increased activity that will be necessary to fulfill the vision, a more formal administrative and organizational structure has been suggested that transitions from a government administered to an industry administered organization. In addition to developing a long term structure, membership recruitment, funding development, advocacy and plan implementation based on strategic plan priorities round out the organizational responsibilities. A public/private funding mechanism for support of the cluster that potentially includes membership fees, sponsorships, support from a state imposed tipping fee, and grants are aspects that need to be explored. Once the strategies are prioritized, the cluster's committee structure may need to be realigned.

Conclusion:

To date, the recycling industry cluster has been successful in its efforts. Why, then, is there an urgent need to implement this strategic plan? The industry is at a crossroads where individual businesses can operate without industry-wide structural cohesion or it can collaborate on areas of competitive advantage and accelerate its position as a national recycling leader.

Attaining the stated goals requires careful planning and the appropriate allocation of recycling cluster resources. Recycling stakeholder commitment will be crucial for the cluster to gain prominence and buy-in from potential partners.

Each goal identified in this plan is individually important. Collectively, the goals, and the steps devised for their implementation, provide an approachable way for the recycling cluster to enhance the recycling landscape and the recycling economy across South Carolina.

The full *South Carolina Recycling Industry Cluster Strategic Plan* provides more detail on the goals, tactics and potential resources needed. That information is summarized in table form at the end of this summary document.

Appendix I – 2010 Recycling Related Legislation

| Bill Number | Sponsor(s) | Description | Status |
|---------------------------------|------------------------------|--|---|
| House Bill 4638 | Gunn, Hutto | The South Carolina Small Business Micro Green Loan Program would limit its focus to enterprises employing fewer than six employees and requiring \$35,000 or less for startup capital. | Introduced in the House on 2/25/10. Currently residing in the House Labor Commerce and Industry |
| House Bill 4093 | Loftis | Electronic recycling bill featuring manufacturer responsibility for electronics recycling in the state | Electronics Recycling - Bill cleared House and sent to Senate 3/3/10. 3/3/2010: House – Read third time and sent to Senate |
| House Bill 3200 | Funderburk | Electronic recycling bill featuring manufacturer responsibility for electronics recycling in the state | No activity; worked out compromise with Loftis on HB 4093 on 2/3/10 |
| House Bill 3153 | Harrison, Daning | Vehicle scrap purchases require photo ID | No activity; resides in Committee on Judiciary |
| House Bill 3160 | Harrison, Battle, Littlejohn | Unlawful to transport nonferrous metals under certain circumstances | No activity; resides in Committee on Judiciary |
| House Bill 3156 | Brady | Provides preference for environmentally preferable purchases by state agencies; Companion/Similar bill(s): 88 | No activity - resides in Ways and Means |

| Bill Number | Sponsor(s) | Description | Status |
|---------------------------------|-----------------------------------|--|---|
| House Bill 4638 | Gunn | Provides for a micro enterprise loan program from pollution control fees | Introduced in the House on 2/25/10. Currently residing in the House Committee on Labor, Commerce and Industry |
| H 3517 | House | A tipping fee of \$5 for a ton of waste is imposed on the disposal of solid waste in a permitted landfill. | No activity; resides in Committee on Agriculture, Natural Resources and Environmental Affairs |
| Senate Bill 9 | McConnell, Leventis, Rose, Elliot | Requires state agencies to become more energy efficient, purchase green power and buy compact fluorescent bulbs to replace incandescent ones | No activity; Recommitted to Committee on Agriculture, Natural Resources and Environmental Affairs HJ-206 - 4/29/09. |
| Senate Bill 131 | Sheheen, Leventis | Electronics recycling bill featuring advanced recovery fees (ARF) | No activity, resides in Senate Medical Affairs |
| Senate Bill 173 | Cleary | ABC recycling requiring permitted facilities to recycle beverage containers sold for the purpose of on premise consumption | Senate Committee on Judiciary heard testimony on bill on 2/24/10. Delay further activity on bill until Summer 2010. |

Appendix J – Smart Business Recycling Closing Package

RECYCLING AND SUSTAINABILITY RESOURCES

South Carolina boasts a strong and diverse recycling industry, with more than 300 companies that broker, collect, process, manufacture and transform recovered materials into new products that are used every day. The economic impact statewide of the recycling industry is estimated to be \$6.5 billion.

More than 37,000 people are employed in this industry sector, generating a personal income impact of \$1.5 billion. The Business Services Department at Commerce is committed to helping companies both large and small turn waste streams into profit streams, increase competitiveness and reduce their environmental footprint.

PROGRAMS AND SERVICES

- **South Carolina Recycling Business Directory**
Commerce's Recycling Business Directory, found at SCcommerce.com under the Business Services tab, provides convenient search features allowing users to find outlets for recycling commodities.
- **Sustainable Business Development**
Many companies across the nation have adopted sustainable practices as part of their daily operations in an effort to increase financial profitability, lessen environmental effects and foster greater community support. Commerce is committed to helping create economic, social and environmental prosperity that enhances the quality of life for all South Carolinians. Promoting sustainable business practices helps contribute to this mission.



South Carolina's Smart Business Recycling program provides free, confidential, non-regulatory technical assistance on recycling, waste reduction, beneficial reuse and other ways for businesses to conserve resources and improve bottom lines.

SERVICES

- Site visits to assess reuse, waste reduction and recycling opportunities
- Technical assistance including telephone consultations and best management practices
- Research and contacts for potential markets, service providers and beneficial reuse
- Workshops
- State recognition program

BUSINESS SERVICES DEPARTMENT CONTACT

Chuck Bundy, Manager
Phone: (803) 737-0440
Email: CBundy@SCcommerce.com

Mission: The Recycling Market Development program promotes market development for recycled materials, assists with start-up efforts for recycling companies with their expansions and provides technical assistance to business and industry with efforts to reduce waste streams and increase the amount of recycled materials.

S.C. Department of Commerce | 1201 Main Street, Suite 1600 | Columbia, S.C. 29201
(803) 737-0400 | (800) 868-7232 | SCcommerce.com

Appendix K – Recycling Related Press Releases

Leigh Fibers Inc. Announces Expansion in Spartanburg County

COLUMBIA, S.C. – March 24, 2010 – The South Carolina Department of Commerce and the Economic Futures Group of Spartanburg County today announced that Leigh Fibers Inc., a supplier of reprocessed and raw fibers, will expand its manufacturing plant in Spartanburg County. The \$10.1 million investment is expected to generate 40 new jobs over the next five years.

“We continue to see an increase in demand for our products and services, and this expansion will help us better serve our customers as well as position us for future growth. Our plans to invest in the Wellford facility will not only promote job growth, but will also have a positive environmental impact on our county and state by minimizing waste going to the landfill. We believe these investments will foster an entrance into a Green Economy less impacted by foreign imports and support the manufacturing base within the state,” said Keith Taylor, President of Leigh Fibers Inc.

Leigh Fibers recycles textile waste at its plant and uses the recycled material to manufacture new fibers. The company will add new equipment at its plant that will allow it to diversify its product offerings. Leigh supplies high-quality, environmentally friendly materials to meet manufacturers’ particular needs in a wide range of markets, including: automotive, construction, erosion control, home furnishings, nonwovens and traditional textiles. Leigh Fibers imports and exports material to and from over 25 countries around the world.

“Leigh Fibers has a strong history in South Carolina and this expansion is indicative of the company’s success in evolving its business model to remain competitive in today’s economy. Leigh Fibers has been an important part of South Carolina’s business community for a number of years, and today the company is on the cutting edge of producing reprocessed fibers that are being used in a large variety of industries. Leigh Fibers’ expansion in our state is another sign that South Carolina continues to encourage growth by providing a solid foundation for success with a skilled workforce and business-friendly climate. The company has positioned itself well for future growth and we hope today’s announcement will be the first of many expansions to come in the years ahead,” said Joe Taylor, Secretary of Commerce.

"We are pleased Leigh Fibers, a long time corporate citizen of Spartanburg County, is diversifying and growing the operation here. We are always excited when existing companies grow, verifying Spartanburg County as an excellent location to do business," said David Britt, chairman of Economic Development Committee of Spartanburg County Council and board member of the Economic Futures Group.

"I applaud the Leigh Fibers' management team for their investment and commitment in Spartanburg County, as well as being corporate leaders in protecting our environment by promoting the green economy," said state Rep. Mike Forrester.

Leigh Fibers will complete the expansion over the next five years. The company has already begun hiring and filled some of its new positions. The company expects to hire the remaining positions in stages over the next five years. Individuals interested in employment opportunities can contact the company at 864-439-4111.

Leigh is one of the world's largest, most experienced suppliers of reprocessed and raw fibers. A pioneer in textile reprocessing for nearly 100 years, Leigh adds value to a wide range of post-industrial and post-consumer waste. The company serves manufacturers and processors in markets around the globe. For more information, please visit www.leighfibers.com.

Myrtle Beach Recycling Inc. Announces New Facility in Horry County

Investment expected to bring 15 new jobs to the area

COLUMBIA, S.C. – April 21, 2010 – The South Carolina Department of Commerce and the Myrtle Beach Regional Economic Development Corporation (MBREDC) today announced that Myrtle Beach Recycling Inc. will locate its new operations in Horry County. The \$5 million investment is expected to generate 15 new jobs.

"We are pleased to locate our new facility in Horry County and look forward to beginning operations there. South Carolina provides us with an excellent business climate and a top-notch workforce. Horry County also had a building that provided the perfect fit for our company's needs. We appreciate all the support we have received from state and local officials," said Joe Juliano, owner of Myrtle Beach Recycling.

Myrtle Beach Recycling is a new company that will focus on paper recycling services. Myrtle Beach Recycling is a "green industry" company, helping to reduce the amount of waste that would otherwise go into landfills.

"South Carolina continues to see positive results from enhancements to our state's business-friendly climate, and Myrtle Beach Recycling's decision to locate operations here is another sign of how small businesses and innovation benefit when tax and regulatory burdens are low. It is important, now more than ever, that we work to continue to strength the fundamentals that support the growth of small business because start-ups and existing small businesses play a vital role in providing job opportunities for many South Carolinians," said Joe Taylor, Secretary of Commerce. "We are pleased to welcome Myrtle Beach Recycling to our state's business community and wish them much success in their endeavors here."

"We are delighted to welcome Myrtle Beach Recycling Inc. to the business community. Recycling improves the environment and creates jobs in the process. This is an exciting project and we look forward to working with this company in the future," said MBREDC Chairman Jimmy Yahnis.

The company plans to begin hiring for the positions in mid-May. Anyone interested in finding out about job opportunities with the company should contact the Coastal Workforce Center at 843-234-9675.

Southeast Renewable Energy Announces New Facility in Allendale County

Investment expected to create 20 new jobs

COLUMBIA, S.C. – November 22, 2010 – The South Carolina Department of Commerce, Allendale County and the SouthernCarolina Alliance today announced that Southeast Renewable Energy will build its new renewable energy facility in Allendale County. The \$50 million investment is expected to generate 20 new jobs over the next five years.

Company president and CEO Raine Cotton said that Southeast Renewable Energy is "working diligently to get the last few steps of the project worked out; including permitting, that will allow the project to begin construction in early 2011."

Southeast Renewable Energy will build a 15-megawatt biomass energy plant in Allendale County that will be fueled using timber residues. The company will sell the green power to Santee Cooper, and the plant is

expected to be completed in late 2012. It is expected that the new plant will also create many indirect jobs in the logging, trucking and forest product industries.

“South Carolina continues to see an increasing number of opportunities in both the energy and forestry sectors of our economy, and Southeastern Renewable Energy’s investments utilize our state’s unique skills and resources in these sectors. By fostering a business-friendly climate and focusing on building a skilled workforce, South Carolina is well positioned to attract new investments from companies like Southeastern Renewable Energy and this in turn means job opportunities for workers in our state. We appreciate Southeastern Renewable Energy’s investment and look forward to its success in the state,” said Joe Taylor, Secretary of Commerce.

The company also has plans for a similar plant in Dorchester County. The company has an agreement to sell green power in both cases to Santee Cooper for 30 years.

“We welcome Southeast Renewable Energy to our community, and we appreciate their investment in Allendale County,” said Allendale County Council Chairwoman Theresa Taylor. “We look forward to working with their team and creating the best environment for a successful operation.”

“Southeast Renewable Energy will be an asset to our regional economy, where the alternative energy and forest product industries have played key roles in job creation and capital investment here for many years,” said Danny Black, president and CEO of the SouthernCarolina Regional Development Alliance. “From our local workforce to our regional industrial community and infrastructure, we believe Southeast Renewable Energy will find our area a perfect fit for this exciting project.”

The company will begin requesting applications for the positions in early 2012.

Southeast Renewable Energy was founded in 2000 and is a growing leader in the biomass energy market. The company’s focus is on developing biomass facilities with strategic partners and helping others navigate the development phase. For more information, please visit www.sereneew.com.

South Carolina Tissue LLC Announces New Facility in Barnwell County

Investment expected to create 200 new jobs over five years

COLUMBIA, S.C. – November 23, 2010 – The South Carolina Department of Commerce, the Barnwell County Economic Development Commission and the SouthernCarolina Alliance today announced that South Carolina Tissue (SCT) will locate its new production facility in Barnwell County. The \$140 million investment is expected to generate 200 new jobs over the next five years.

“We have spent over a year working diligently with the state of South Carolina to find a location for our new plant. In the search for our location, we were seeking a business-friendly environment with a talented work force and logistic superiority; we have found that in Barnwell County. We sincerely appreciate all of the support we have received from both the state and local governments, specifically Bob Marriott, Danny Black and Marty Martin, without whom this plant would not be a reality,” said Marc Gilson, senior vice president of Development for SCT.

SCT will locate its new facility at the S.C. Advanced Technology Park in Barnwell County, and will be installing state-of-the-art tissue manufacturing equipment and advanced post-consumer fiber recycling processes to supply the tissue machine. The facility will be designed to meet LEED Gold Standards. Tissue parent rolls produced by SCT will be sold to convertors that supply the consumer and away from home markets.

“The decision by South Carolina Tissue to put down roots here and make a substantial investment in capital and new job creation is further indication that our state's efforts to establish a business-friendly climate are proving to be successful in today's competitive economic environment. South Carolina Tissue will be a welcome addition to our state's business community and its investment will bring new opportunity to the local workforce in Barnwell County. I'd thank and applaud Secretary Taylor and the team at Commerce, as well as the local economic development community for their continued efforts in making this announcement possible,” said Gov. Sanford.

“Today's announcement is a positive indication that the region's skilled workforce and the state's focus on the business fundamentals such as keeping taxes and regulatory burdens low are working to attract new investment and jobs. From Dixie Narco's expansion to Horsehead's significant investment to Kronotex's recent announcement, good things are happening in Barnwell County and South Carolina Tissue's decision

to locate in Barnwell County is more good news for the area. The community's strong leadership and regional support are to be commended and have been a key element in attracting new jobs and investment. The Department of Commerce congratulates South Carolina Tissue on its investment and wishes the company much success in its endeavors," said Joe Taylor, Secretary of Commerce. SCT will begin construction of the facility in first quarter 2011 and plans to have it completed by early first quarter 2012. The facility will produce parent rolls of tissue, towel and napkin.

"We are pleased with S.C. Tissue's announcement of their intentions to invest \$140 million in a new facility at the S.C. Advanced Technology Park and to create 200 new jobs over the next five years," said Danny Black, President of SouthernCarolina Alliance. "We will continue to work closely with the company and our economic development partners at the local and state level to make this project a reality."

"On behalf of SouthernCarolina Alliance, we extend our cooperation and our welcome to the S.C. Tissue team and a project which will benefit the four-county area through the multi-county agreement" said SouthernCarolina Alliance Chairman Johnny Williamson. "We look forward to working with them to create the best conditions for a successful start-up."

"The proposed \$140 million capital investment and the estimated 200 jobs announced by SC Tissue today, represents what will be a significant boost to Barnwell County's economy. This news follows closely the \$45 million capital investment and 40 jobs associated with Kronotex USA's announced expansion several weeks ago and is another strong indication that Barnwell County is a great place to do business," said Marty Martin, Barnwell County's Economic Development Director.

"We welcome SC Tissue to Barnwell County's corporate community. This is another example of what partnering can accomplish and special thanks go to the Town of Snelling, Barnwell County, SCA, City of Barnwell and the Department of Commerce in making this announcement possible," stated Barnwell County Economic Development Commission Chairman Pete Grady.

"The people of Barnwell County appreciate the job creation and capital investment that South Carolina Tissue plans to bring to our region in the coming years, and we stand ready to assist them in any way that we can," said Thomas Williams, Chairman of Barnwell County Council. "We appreciate the support and hard work of our local, regional, state, and corporate partners in working with the South Carolina Tissue team to bring new jobs to our communities."

"The people of Snelling always welcome good jobs and investment in our area," said Snelling Mayor Paul Moore. "It's good news for our community."

SCT will be working alongside local and state workforce agencies to meet its staffing needs. SCT is expected to begin hiring three months prior to the commissioning of the plant to provide adequate time for new hire selection and training. Anyone interested in job opportunities with the company should forward their resume to HR@sgtissue.com.

South Carolina Tissue LLC is a privately owned company. The principals are Ray Stoveken, CEO and Andrew Thompson, chief financial officer. The company produces parent rolls from post consumer fiber and sells the parent rolls to converters to produce tissue products.

Bosch Announces Expansion and Green Initiative in Dorchester County

\$125 million investment expected to create approximately 300 new jobs over five years

COLUMBIA, S.C. - December 3, 2010 – Gov. Mark Sanford, the South Carolina Department of Commerce, Dorchester County and the Charleston Regional Development Alliance today joined Robert Bosch LLC, a leading automotive supplier in North America, to announce the company's plans to expand its Dorchester County operations. Over the next five years, Bosch will invest approximately \$125 million in the company's manufacturing facility in Dorchester County and create approximately 300 new jobs.

"We are very pleased to announce this investment which is designed to help us continue to strengthen our business at our plant in Dorchester County," said Gene Oswalt, vice president and commercial plant manager, Robert Bosch LLC. "Working with our colleagues from the state, the county and the Charleston Regional Development Alliance, we have been able to develop a plan through which we can invest in our facility and associates, strengthen our business and support Bosch's global focus on environmental sustainability."

Bosch will add personnel and equipment to support production of its latest passenger car diesel and gasoline fuel injectors, and next generation anti-lock brake and electronic stability control systems for the North American automotive market. The company expects to begin creating new jobs based on this investment beginning in the second half of 2011. Additionally, as part of the company's expansion, Dorchester County plans to provide reclaimed water for the company's manufacturing processes. This initiative aligns with Bosch's commitment to environmental sustainability while reducing the company's

utility costs and increasing its competitiveness. This sustainable alternative, which will be developed with the assistance of a grant from the U.S. Department of Commerce, Economic Development Administration (EDA) and matching funds from Dorchester County, will conserve 80,000 gallons of wastewater per day. The EDA grant is currently pending final approval.

"Today's announcement is another positive sign that our efforts to improve the state's business climate are paying dividends. This announcement adds to the growth we have witnessed in the manufacturing sector over the past several months. In fact, South Carolina has added 4,500 manufacturing jobs over the past seven months and Bosch's job creation adds to this encouraging trend in our state. As well, Bosch's expansion serves as an indication that our state's automotive industry continues to present opportunity. The company is one with a long history in our state, but its decision to expand and create jobs here reiterates Bosch's confidence in South Carolina's workforce and its ability to meet the demands of a growing international corporation," said Gov. Mark Sanford.

"Bosch is a world-class company, and its Dorchester County facility has been an important part of the state's economy for more than 30 years. The company's decision to make another large investment at its facility in Dorchester County is a strong testament that our state's focus on the business fundamentals such as keeping taxes and regulatory burdens low are working to attract new investment. We thank Bosch for choosing to grow in South Carolina and wish the company continued success for decades to come," said Joe Taylor, Secretary of Commerce.

The facility, located at 8101 Dorchester Road, currently employs more than 1,500 people and produces a wide range of diesel, gasoline and chassis products. The Dorchester County facility has been in operation since 1974 and was the company's first operation in South Carolina.

"Since 1974, Bosch has called Dorchester County home," said Dorchester County Council Chairman Jamie Feltner. "We are proud to see their success and growth continue within the county."

"By choosing our region for this latest expansion, Bosch is sending a powerful message to companies around the world," said Sean Bennett, chairman of the Charleston Regional Development Alliance.

"Collectively, our three counties offer an incredible combination of assets for world-class manufacturers, and this expansion proves just how competitive we've become. Congratulations to Bosch, and to everyone involved in this valuable economic development win."

About Bosch

The Bosch Group is a leading global supplier of technology and services. In the areas of automotive and industrial technology, consumer goods and building technology, some 275,000 associates generated sales of \$53 billion (38.2 billion euros) in fiscal 2009. The Bosch Group comprises Robert Bosch GmbH and its more than 300 subsidiaries and regional companies in over 60 countries. If its sales and service partners are included, then Bosch is represented in roughly 150 countries. This worldwide development, manufacturing and sales network is the foundation for growth. Each year, Bosch spends more than \$5 billion (3.5 billion euros) for research and development, and applies for some 3,800 patents worldwide. With all its products and services, Bosch enhances the quality of life by providing solutions which are both innovative and beneficial.

In the U.S., Canada and Mexico, the Bosch Group manufactures and markets automotive original equipment and aftermarket products, industrial drives and control technology, power tools, security and communication systems, packaging technology, thermotechnology, household appliances, solar energy and healthcare products. Having established a regional presence in 1906, Bosch employs over 20,000 associates in more than 70 locations, with reported sales of \$7.3 billion in fiscal 2009.

For more information, visit www.boschusa.com.

ICE Recycling LLC Announces Expansion in Florence County

Investment expected to create 50 new jobs

COLUMBIA, S.C. – December 9, 2010 – The South Carolina Department of Commerce and the Florence County Economic Development Partnership (FCEDP) today announced that ICE Recycling LLC, a recycler of plastics and polymers, will expand its operations in Florence County. The \$4.35 million investment is expected to generate 50 new jobs.

“This expansion represents an exciting step for our company. Demand for our industrial recycling services has grown, and this expansion will allow us to increase production and better serve our customers. Florence County and Lake City have provided us with an excellent environment in which to do business, as well as an excellent labor force. We are pleased to be a part of South Carolina’s business community and look forward to continuing to grow here,” said Larry Gay and Butch Crawford, co-owners of ICE Recycling.

ICE Recycling plans to increase its capacity at its plant in Lake City by adding new equipment in its facility. The company recycles a wide range of materials. The company also expects to purchase the building they are currently leasing that houses their operation, making this the home office of multiple locations.

"Our state continues to provide the fertile ground for businesses to put down roots and grow, and ICE Recycling's expansion is another example of how small businesses and innovation benefit when taxes and regulatory burdens are low. It is important, now more than ever, that we work to continue to strengthen the fundamentals that encourage the growth of small business because this growth plays a vital role in providing job opportunities for many South Carolinians. We congratulate ICE Recycling on its expansion and wish the company continued success in its endeavors here," said Joe Taylor, Secretary of Commerce.

"We are proud ICE Recycling will continue to make Florence County its home and I applaud them on their announcement," said state Senator Hugh Leatherman. "I look forward to continuing to work with many existing companies to aid with their expansions, while seeking to bring more jobs to the people of the Pee Dee region."

"Great things continue to happen for the people of Lake City. This announcement is exactly what we need: jobs for the local economy," said state Senator J. Yancey McGill.

"The ICE Recycling announcement for further expansion comes at an opportune time. Undoubtedly, these are trying times for everyone around the country, but exciting things are in the works and happening in Florence County," said Dr. Charles Gould, president of Florence Darlington Technical College and chairman of the FCEDP.

Florence County Council Chairman K.G. "Rusty" Smith said, "The ICE Recycling announcement of expansion and new jobs is yet another example of how Florence County's economy is strategically positioned for sustainable and long-standing growth. I look forward to many more announcements in our future."

The company has already begun the hiring process for available positions. Anyone interested in employment opportunities with the company is asked to stop by the company's office at 431 Cedar Street in Lake City to pick up an application.

About ICE Recycling LLC

ICE Recycling LLC is a South Carolina corporation established in 2008. The growth of the company is attributed to the basic business philosophy of "Total Recycling Solutions." The company's mission is to reduce waste handling costs of industrial plants, reduce carbon footprint, re-use any salvageable waste and create a positive sustainable position from what was once an expense to industrial plants. In short, the company helps turn industrial businesses green. Businesses interested in a facility recycling review, please contact either Larry Gay at icerecycle@gmail.com, or Butch Crawford at ButchCrawford68@gmail.com.

Wellman Plastics Recycling Announces Expansion in Florence County

Investment expected to create 50 new jobs

COLUMBIA, S.C. – December 16, 2010 – The South Carolina Department of Commerce and Florence County Economic Development Partnership (FCEDP) today announced that Wellman Plastics Recycling will increase its current operations in Florence County. The \$2.5 million investment is expected to generate 50 new jobs over the next two years.

"We are pleased to be able to reinvest in our facility in Florence County. Demand for our products is on the rise. This expansion will allow us to increase our market share as well as position us for future growth. South Carolina has provided us with an excellent business environment and strong workforce. We appreciate all the support we have received from state and local officials," said Robert Taylor, vice president of PET Resin and Fiber for Wellman Plastics Recycling.

Wellman Plastics Recycling will add equipment to its current facility in Johnsonville to help increase capacity. This increase in output will also require additional employees. The company expects to make the additions gradually over the next 24 months. The company produces a range of products for the automotive, lawn and garden, consumer products and electronics industries.

"Wellman Plastics Recycling's decision to expand its operations in Florence County is another indication that South Carolina has the business climate, workforce and infrastructure necessary to help our existing businesses grow. Additionally, South Carolina's efforts to keep taxes and regulatory burdens low, well positions our state to continue to attract new jobs and investment. We appreciate Wellman Plastics Recycling's decision to expand in South Carolina and look forward to the company's continued success," said Joe Taylor, Secretary of Commerce.

Dr. Charles Gould, president of Florence Darlington Technical College and chairman of the FCEDP said, "Wellman's announcement confirms that Florence County's economy continues to flourish. I commend them on their expansion and know they will succeed with the task at hand."

"Wellman's announcement to reinvest in its Johnsonville plant is a true testament of our people's work ethic. These new jobs will begin to improve our local economy, as so many families seek to recover from this truly devastating economic downturn," said state Senator Hugh K. Leatherman. "I applaud everyone who pitched in to help make this possible, but moreover, I applaud those hard-working families who will benefit because of this announcement."

Florence County Council Chairman K.G. "Rusty" Smith stated, "Every job counts in Florence County and we're so pleased with these recent announcements. This is indicative of our bright future and what is to come in 2011 as economic conditions continue to look up for the citizens of Florence County."

"Florence County is excited about our journey to that 'next level.' As each announcement and expansion evolves, we know we're positioned for further success. Our local officials and economic development team have set their sights on a goal to ensure Florence thrives," said Florence County Progress Inc. Chairman Timothy F. Norwood.

The company will begin hiring for the positions in the first quarter of 2011. Anyone interested in job opportunities with the company should contact the Florence Workforce Center at 843-669-4271 at that time.

Wellman Plastics Recycling for the past 40 years has been dedicated to creating high-quality, high-performance, environmentally supportive and cost-effective products for the automotive, lawn and garden, consumer products and electronics industries. The company's mission has always remained the same: to provide cost effective materials to customers while concurrently providing the technical expertise and support to ensure complete customer satisfaction and project success. For more information about Wellman Plastics Recycling, please visit www.wellmanplastics.com.

Appendix L – SERDC Mapping Profile of South Carolina

Mapping Demand for Recycled Content Material

A PROFILE OF SOUTH CAROLINA'S RECYCLING ECONOMY

When communities invest in local recycling collection programs, they're supporting SC manufacturers who use recycled plastic, glass, metal, and paper to make new consumer goods.
 Recycling isn't just about **SMART** use of natural resources – it's about delivering **valuable** commodities to some of our most important businesses.

LOCAL INVESTMENT, REGIONAL RETURN

The Southeast is unique in its access to healthy recycling markets that feed regional manufacturing needs.



This map highlights key manufacturers who look to recycled materials to make their products.

Increased recycling rates help South Carolina manufacturers source good, affordable manufacturing feedstock.

A 2010 SERDC study determined that South Carolina is home to more than 24 manufacturers who rely on recycled content feedstock.

These companies:

- Generate more than \$5.3 billion in yearly sales
- Employ more than 5,300 South Carolina citizens directly working in the manufacture of recycled content products

Source: Hoovers/OneSource Business Databases (SERDC)



RECYCLING IN SOUTH CAROLINA a healthy industry poised to grow

Local commitment to recycling supports Southeastern companies who haul, recycle, and manufacture goods.

RECYCLING IS AN INVESTMENT THAT RETURNS AGAIN AND AGAIN ♻️

The state's recycling industry has a \$6.5 billion impact on the state's economy according to a study conducted by the College of Charleston. The study shows that the recycling industry is directly responsible for:

- more than 15,000 jobs;
- \$1.3 billion in annual personal income;
- \$69 million in tax revenue each year.

SOURCE: "The Economic Impact of the Recycling Industry in South Carolina"

In FY 2009 and 2008, local municipalities received over \$13 million from the sale of recyclables.

- SC DHEC

It is estimated that in South Carolina more than 400,000 tons of easily recyclable material were sent for landfill disposal in FY09, representing nearly \$15 million spent to dispose of the material and a loss of roughly \$32 million in marketable materials.

- SC DHEC



*Using the 1000 ton metric from S.C.'s Economic Impact Study
 Results from a 2010 SERDC study to map demand of recycled feedstock in the Southeast US



Appendix M – Recycling Directory Form



RECYCLING BUSINESS DIRECTORY FORM

| | | | |
|--|--|---|---|
| Name of Company | | Contact Title | |
| Prefix | Contact First Name | Last Name | |
| Contact Phone# | Contact Fax # | Contact Email | |
| Company Toll Free # | Company Fax # | Company Email | Company Website |
| Physical Address of this Facility | | | |
| Physical City | State SC | Zip | County |
| Mailing Address for this Facility | | | |
| Mailing City | State | Zip | County |
| Please check the category (ies) that best defines the company's role as a recycling business: | | | |
| <input type="checkbox"/> Hauler | <input type="checkbox"/> Processor | <input type="checkbox"/> End User | <input type="checkbox"/> Broker |
| <input type="checkbox"/> Collector | <input type="checkbox"/> Reuse | <input type="checkbox"/> Exporter | <input type="checkbox"/> Recycle Equipment |
| <input type="checkbox"/> Post Consumer | | <input type="checkbox"/> Post Industrial | <input type="checkbox"/> Public Drop Off Site |
| <input type="checkbox"/> Remanufacture | | | |
| <input type="checkbox"/> Donation Site | | | |
| Please indicate type of waste you handle: | | | |
| <input type="checkbox"/> Post Consumer | | <input type="checkbox"/> Post Industrial | <input type="checkbox"/> Both |
| Please check the materials below that the business transports, processes or uses as a raw material. | | | |
| Construction & Demolition: | | Paper: | |
| <input type="checkbox"/> Concrete & Brick | <input type="checkbox"/> Asphalt Pavement | <input type="checkbox"/> Paperboard | <input type="checkbox"/> Card Stock |
| <input type="checkbox"/> Bricks | <input type="checkbox"/> Vinyl Siding-PVC | <input type="checkbox"/> Colored/Blended | <input type="checkbox"/> Paper - Kraft |
| <input type="checkbox"/> Drywall-Gypsum | <input type="checkbox"/> Salvaged Building Materials | <input type="checkbox"/> Greenbar | <input type="checkbox"/> Paper Tubes |
| <input type="checkbox"/> Scrap Lumber | <input type="checkbox"/> Aggregate | <input type="checkbox"/> Fly or Bottom Ash | <input type="checkbox"/> Books - Soft Cover |
| <input type="checkbox"/> Railroad Tires | <input type="checkbox"/> Fiberglass | <input type="checkbox"/> Deconstruction Services | <input type="checkbox"/> Books - Hard Cover |
| <input type="checkbox"/> Ceiling Tiles | <input type="checkbox"/> Minerals | <input type="checkbox"/> Other (please write in) | <input type="checkbox"/> Paper - Office Mix |
| <input type="checkbox"/> Roofing Materials | | | <input type="checkbox"/> Corrugated Cardboard-Waxed |
| | | | <input type="checkbox"/> Corrugated Cardboard |
| | | | <input type="checkbox"/> Aluminum Laminated Paper |
| | | | <input type="checkbox"/> Other (please write in) |
| Plastic: | Organics: | Metal: | Glass: |
| <input type="checkbox"/> ABS | <input type="checkbox"/> Restaurant Food Waste | <input type="checkbox"/> Ferrous | <input type="checkbox"/> Clear |
| <input type="checkbox"/> Foam | <input type="checkbox"/> Bakery Waste | <input type="checkbox"/> Non-Ferrous | <input type="checkbox"/> Brown |
| <input type="checkbox"/> Nylon | <input type="checkbox"/> Beverage Waste | <input type="checkbox"/> Appliances | <input type="checkbox"/> Green |
| <input type="checkbox"/> HDPE | <input type="checkbox"/> Brewery Waste | <input type="checkbox"/> Automobiles | <input type="checkbox"/> Mixed Glass |
| <input type="checkbox"/> LDPE | <input type="checkbox"/> Cooking Oil | <input type="checkbox"/> Steel Slag | <input type="checkbox"/> Plate and Window Glass |
| <input type="checkbox"/> PETE | <input type="checkbox"/> Restaurant Grease | <input type="checkbox"/> Steel Drums | <input type="checkbox"/> Lead Glass |
| <input type="checkbox"/> PE | <input type="checkbox"/> Other (please write in) | | <input type="checkbox"/> Mirror Glass |
| <input type="checkbox"/> PP | | | <input type="checkbox"/> Lab Glass |
| | | | <input type="checkbox"/> Other (please write in) |
| Oil and Petroleum: | Biomass/Wood: | | |
| <input type="checkbox"/> Diesel | <input type="checkbox"/> Manure | <input type="checkbox"/> Mobile Wood Recycler | <input type="checkbox"/> Land clearing debris |
| <input type="checkbox"/> Transmission Fluid | <input type="checkbox"/> Biosolids | <input type="checkbox"/> Boiler Fuel | <input type="checkbox"/> Manufacturing Scrap |
| <input type="checkbox"/> Hydraulic Fluid | <input type="checkbox"/> Pallets | <input type="checkbox"/> Sawdust and Bark | <input type="checkbox"/> Industrial Sludge |
| <input type="checkbox"/> Light Grease | <input type="checkbox"/> Yard Waste | <input type="checkbox"/> Mulch | <input type="checkbox"/> Other (please write in) |
| Textiles: | Rubber: | Electronics/Computers: | |
| <input type="checkbox"/> Textile Clippings | <input type="checkbox"/> EPDM Rubber | <input type="checkbox"/> Electronic Equipment and Scrap | <input type="checkbox"/> Monitors - CRT's |
| <input type="checkbox"/> Material-Wovens | <input type="checkbox"/> Foam Rubber | <input type="checkbox"/> Telecommunications Scrap | <input type="checkbox"/> Fluorescent Tubes and Ballasts |
| <input type="checkbox"/> Material-Nonwovens | <input type="checkbox"/> Rubber Inner Tubes | <input type="checkbox"/> Televisions - Flat Screens | <input type="checkbox"/> Televisions - CRT |
| <input type="checkbox"/> Nylon | <input type="checkbox"/> SBR Rubber | <input type="checkbox"/> Televisions - CRT | <input type="checkbox"/> Cartridges |
| <input type="checkbox"/> Rayon | <input type="checkbox"/> Automotive Tires | <input type="checkbox"/> Monitors - Flat Screens | <input type="checkbox"/> Reels |
| <input type="checkbox"/> Polyester-Textile | <input type="checkbox"/> Other (please write in) | | <input type="checkbox"/> Other (please write in) |
| Other (please list): | | | |
| Please list and describe products you manufacture that contain recycled materials (use additional paper if necessary): | | | |

Prepared by (please print name and): _____
 Please return to: South Carolina Department of Commerce, Attention: Tonya Lott, 1201 Main Street, Suite 1600, Columbia, S.C. 29201,
TLott@SCcommerce.com or fax to (803) 737-3818.

