



Nikki Haley
Governor

SOUTH CAROLINA
DEPARTMENT OF COMMERCE

Robert M. Hitt III
Secretary

Recycling Market Development Advisory Council (RMDAC) Meeting
SONOCO Recycling
1132 Idlewilde
Columbia SC, 29201
10:00 a.m. to 2:00 p.m.

RMDAC

Kristen Brown, WasteZero
Angel Lara, Southeast Recycling Resources
Andy Spicer, Ph.D. USC Darla Moore School of Business
Wes Westbrooks, BMW
Tina Huskey, Mumford Industries
Norman Chandler, Republic Services
Chad Prescott, Mid-Carolina Steel

ABSENT

Chuck LaGrange, Greater Greenville Sanitation Commission
Vic Carpenter, Kershaw County
Brad Dutton, FiberQuest
(Pending) Drew Smith, Michelin
Esther Murphy, HCSWA
Carol James-Gilchrist, Sonoco Recycling
Bill Laursen, Universal Environmental Services

COMMERCE STAFF

Chantal Fryer, SC Department of Commerce
Anna Lange, SC Department of Commerce

GUESTS

Emeritus Member: Glen Odom, Retired
Joseph McMillin, Atlas Organics

DISCUSSION

Waiting on quorum, Wes Westbrooks introduced Kristen Brown to give a glass update.
Kristen: In July RMDAC was looking at piloting a glass project to facilitate glass collection, we met with DHEC and decided to move forward with a pilot.
Kristen was working in the Northeast with a lot of bottle-bill states and seeing first-hand how bottle-bill states are capturing material. Recently, single stream has had a lot of problems,



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including increased contamination, and lower commodity pricing. We have a concept that recycling is free and it will be paid for through selling commodities.

Kristen looked at waste characterization studies in the country to identify glass volume in waste stream.

She looked at comingled, glass drop offs, glass capture rate in SC in 2015 was 12% compared to the national average of 27%.

However, houses with curbside recycling had a 48% capture rate - when people have single stream people use it.

When you take glass away how does that change consumer confidence?

Municipalities that offer curbside glass in SC: 76

There are a few commercial collectors.

Average municipality is paying \$14/T with glass, clean sorted glass \$13-22.5/T.

The economic impact of recycling creates jobs 4 to 1 compared to landfilling.

Angel Lara: Are jobs actually being cut from not having glass in the Upstate or are people just doing different work?

Glenn Odom: It's possible that they are cutting hrs on workers, even if they are not cutting the jobs themselves

Andy Spicer PhD: Keep in mind we are mixing public and private benefits and we need to keep that in mind as we are doing these models

MRF Choices:

- 1) Charge extra fees, but you still end up with the same contamination problems
- 2) Discontinuing glass, easier to maintain contracts but a lot of consumers were upset and there still is contamination
- 3) Bottle bill cleaner mix, increase volume, expenses for retailers, politically difficult
- 4) Co-collection
- 5) Glass-Separated drop-off centers

In Europe many communities have pay-as-you-throw programs that reduce the amount of trash going to into the landfill. Their diversion rates are much higher than ours in the US.

We decided to try a co-collection pilot with 3,000 households.

The Goodwill example was very successful, residents were given 4 Goodwill bags with information on what materials Goodwill was looking for and what drop off location were in their area. Participation rates were very high. The idea is to have a similar approach for the glass



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pilot, except residents can utilize their single stream container for glass. They would put their glass in in gab in the recycling bin and the MRF would separate the material on the front-end of their process.

Residents are looking for something affordable and easy.
Municipalities want to divert material from the landfill.

Estimated Annual Revenue	Glass Bag Revenue Pilot 3000 homes (based on current curbside glass recycling rate)	Glass Bag Revenue State Wide (based on current 402,000 homes with curbside collection)	Glass Bag Revenue State Wide (based on current commercial and residential comingled collection)
Total Glass Tonnage Recycled	72	9,619	15,172
Estimated weight per bag	10	10	10
Estimated number of bags used	14,351	1,923,912	3,034,329
Estimated Bag Revenue (less bag and distribution costs)	\$5,310	\$711,847	\$1,122,702
Revenue per ton	\$74	\$74	\$74

DHEC Would fund the pilot around \$40,000 that would run for 6 months.
Waste Zero makes the bags.

Andy Spicer PhD: We are putting the fee on people who recycle, they are paying the extra cost for the bags. What really motivates people to change behavior is social pressure. If people know their neighbors are doing something they are more likely to do it.

Angel Lara: Is the demographic a factor too?

Joseph McMillin: We have seen with residents who are composting their streams are very clean, so paying for the bag is a good strategy. You are capturing people that are your reliable recyclers.

Kristen Brown: Demographics would have to be a factor, to hit communities that have strong recycling programs. Moving forward we need to think about who breaks the bag is that something that happens at the MRF?

Tina Huskey: Who handles the bag with glass chards, that’s something to think about because you have plastic and glass contamination.



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Andy Spicer PhD: The question is, will you stop using glass if you can't recycle it? If someone did a study to look at perceived behavior with recyclers and non-recyclers, the glass industry would be interested in data like this. If there was a perception that customers would reduce glass purchasing because it was not recycled in their area, then the glass industry would have a direct interest in the solution.

Kristen Brown: We are working right now on a wrap collection program in RI using a purple bag and it's going very well.

CALL TO ORDER

Wes Westbrooks: Called meeting to order 11:10

MINUTES

Minutes were approved for September 2016 meeting.

DISCUSSION

Chantal Fryer: Review attached progress report

Plastic bottle recycling discussion: Discussing making the case for a small company paying for plastic recycling from a regional office when trash is considered "free" because the corporate office pays the trash bill.

Andy Spicer PhD: Walmart example, it has to be cost effecting and you can make the economic case. Walmart's goal was that the sustainability platform had the be cost neutral. They were not trying to be the most sustainable company, but they wanted to reduce operations cost. If you can fit more on a truck you have less trucks to load. Walmart got rid of their dumpsters by going zero waste and put their waste companies out of business.

Glenn Odom: A lot of that was through reducing packaging at Walmart, concentrated detergents, and cleaners.

Kristen Brown: Hamburger helper switched to flat noodles to accommodate Walmart's packaging reduction requirement.

Norman Chandler: This is economically a loop we have to go through. It has to make business sense.

Angel Lara: For the small business making the case for recycling is a heavier burden then for a business that has 1,000+ employees.



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Norman Chandler: Clemson on game day is recycling 14-18 tons it's an incredible volume, focusing on these large opportunities is key.

Glenn Odom: It's a cost issue for plastics and carpet with oil at \$45 a barrel you can make virgin bottle cheaper

Kristen Brown: We need to think about different commodities differently instead of a one size fits all strategy for handling recycling.

Andy Spicer PhD: When you are Walmart, you can tell your suppliers to change their packaging and they are going to do it if they want to stay on the shelf. We look at it as "low cost sustainability" - reduce energy you reduce price, if I can keep price the same and increase efficiency I have increased revenue.

ADJOURN

Adjourn 1:01 Next meeting TBA.

MARKETS UPDATE

Angel Steel: Up \$20 supposed to go back up

Chad Aluminum: Mid 2.73lb

Norm Paper: Flat \$80t

Joseph Compost: \$25-42 yd finished

Tina Plastic: 2 large virgin plants to open in the next 12 months

China is taking material.

We are seeing companies getting involved as "secondary recyclers" taking more product from commodities than they are used to handling.

Some of these companies are being used as pass throughs at times turning a blind eye to materials that are actually being recycled

Companies are picking and choosing recycling

Andy Spicer PhD: Chain of custody and certification is key, there are a lot of standardization systems out there, trust is very important when looking at public and private goods.

Certification discussion: Do we need a third party certification for zero waste?

Joseph Spartanburg 7 is doing a great job composting - compared pre to post consumer and there was a 75% increase, 6 is doing 3 schools, Republic is consolidating routes, so they have been picking up more schools.