



**Nikki Haley**  
Governor

**SOUTH CAROLINA**  
DEPARTMENT OF COMMERCE

**Robert M. Hitt III**  
Secretary

**Recycling Market Development Advisory Council (RMDAC) Meeting**  
**1201 Main Street**  
**Columbia, SC 29201**  
**10:00 a.m. to 12:00 p.m.**

**RMDAC**

Wes Westbrooks, BMW  
Kristen Brown, WasteZero  
Brad Dutton, FiberQuest  
Angel Lara, Southeast Recycling Resources  
Andy Spicer, Ph.D. USC Darla Moore School of Business  
Vic Carpenter, Kershaw County  
Carol James, Sonoco Recycling  
Tina Huskey, Mumford Industries  
Bill Laursen, Universal Environmental  
Norman Chandler, Republic Services  
Chad Prescott, Mid-Carolina Steel  
(Pending) Drew Smith, Michelin

**ABSENT**

Chuck LaGrange, Greater Greenville Sanitation Commission  
Esther Murphy, HCSWA

**COMMERCE STAFF**

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

**GUESTS**

Ronnie Grant, Ekman  
Ryder Hogan, SC Department of Commerce  
Richard Chesley, DHEC  
Kristen Hare, DHEC

**CALL TO ORDER**

Wes Westbrooks called the meeting to order at 10:00am. Guests were introduced, From DHEC and the Department of Commerce.



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## **MINUTES**

Minutes were approved for May 2016 meeting.

## **DISCUSSION**

Dr. Joey Von Nesson gave an update on the Economic Impact of the Recycling Industry. The study looks at the economic impact of increasing recycling rates at the household level. Economic impact changes with businesses coming into the state. Direct: Initial change in economic activity, Indirect: Supply chain multiplier, Induced: Household spending multiplier.

What does that ripple effect look like?

Economic Output: The dollar value representing total contribution to overall economic activity

Employment: FTE

Labor Income: The total employee compensation associated with the estimated number of FTE jobs.

Get a sense of what a profile of MSW in US: 249M Tons; 37% MSW is recycled translates into 1.4Mtons recycled materials in SC

If just 1% of SC households were to recycle more, the results would be substantial =17,957 results would be substantial.

Collected weights for different commodities to calculate economic impact. Ex. 5 glass bottles per month would generate \$2.2M; 9 jobs; \$88K

Tina: does this take into account the end markets for glass in SC?

Discussion about glass and market value

Dr. Spicer: What assumptions were used to take this into account because the markets have changed a great deal in a short period of time?

Angel: Does this include industrial?

Joey: This is strictly MSW, this assumes there is a market for this material.

Kristin: Is the output based on the fact that different commodes have different job outputs?

Joey: Yes, we have that data so we don't have to make assumptions about that.

Dr. Spicer: Where does the data come from?



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Joey: Tellus Institute, 2015 Federal data to capture the relationships of one industries effects on other industry.

Vic: Tax revenue, what comprises that?

Joey: Total tax revenue is reflected by state general fund allocations, just looks at tax revenue.

Vic: Most are marginal increases to the industry most companies are now hiring additional capacity. It could be missing that component of the industry. The benefit received by the state may be captured but the cost is borne by local governments and that may not be reflected here.

Joey: We have the data to make that more explicit. The employment multiplier (EM) is 2.4, meaning the recycling industry can scale up employment at a higher rate than other industries; if you look at the average EM in SC, it's right at 1.9. Automotive has the highest rate at 4.1.

Life Cycle Analysis: What is the cost over time? Data came from USC survey of municipal services FY14, UNC Report on City Services FY 14, and market data for buying/selling recyclables from Sonoco Recycling.

Dr. Spicer: This is why the point in time is important because you can see the market fluctuation is significant.

Kristen: Could you do a 10 year weighted average?

Joey: That is something we can do.

Joey: Landfilling cost vs recycling varies considerably, collection cost \$107-146 T, includes curbside recycling as well as drop off centers.

Chantal: We wanted to ensure the market fluctuation was included in the study, and not paint a rosy picture of just the peaks.

Joey: We want to make sure that conservative and generous estimates are both taken into account.

Norman: \$131 all-inclusive seems to be high disposal estimate, I think I can get permission to take some performas for a few municipal contracts that include lifecycle of the landfill where the costs are all accrued through today's operations (30yrs out).

Dr. Spicer: We have a marketing challenge because we can't say you should recycle more glass because it generates revenue but we don't recycle glass anymore.

Norman: What we have done with single stream recycling is we have contaminated all of the commodity streams.



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Angel: Some of these waste to energy facilities could capture the material that we cannot recycle.

Ronnie: Paper mills are not happy with single stream.

Norman: This report is a great tool for decision making.

Wes: We are giving our staff the message to separate material at work but they are throwing it all in one container at home.

### **Glass Update**

Kristen: I went on a trip to Belgium and France to look at their recycling streams. Optical sorters sort all different commodities so you have clean streams of all materials, but everything is just bagged. Most of the bags are recycled, except organics which are incinerated. They don't have to add an extra bin or route. They just use different color bags.

Forbach, France is all color coordinated regardless of pick up style. They have minimal contamination and the municipalities break-even as they give out free bags. Users scan an ID card for bags, and the number of bags purchased can be tracked this way. They put stickers on your bin if you are doing well. They have extended producer responsibility across the board for glass and other materials, so this is just another piece of the program.

### **New Member Update**

Chantal: We wanted to give our new members a chance to introduce themselves.

Dr. Spicer: Faculty director MBA program, Business Society Sustainability: Walmart. One of the leaders at Walmart likes to say: "You have three types of sustainability people, advocates, agnostics, and a\*\*holes." I like to work with agnostics, advocates are interested in triple bottom, but those issues are often separate and require different solutions. Working with agnostics is where you get true behavior change.

#### **Walmart Sustainability Case Study:**

**Mission and Vision**—[Walmart's Sustainability Journey: Lee Scott's Founding Vision](#)

#### **Structures and Systems**—

[Walmart's Sustainability Journey: Andy Ruben and the Design of Organizational Structures and Systems \(A\)](#)

[Walmart's Sustainability Journey: Andy Ruben and the Design of Organizational Structures and Systems \(B\)](#)

**Programs and Initiatives**—["Peter Redmond and the Search for Sustainable Seafood"](#), ["Bottled Water Logistics and Forecasting"](#); ["Walmart's Sustainability Journey: Elizabeth Fretheim and the Search for Sustainable Trucking"](#)

**Measurement and Learning**—["Defining Sustainable Products \(A & B\)"; "Consumers and Sustainability at Walmart: A Student's Perspective"](#)



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Tina Huskey: At Mumford Industries, our core business is industrial plastics. Tina started out in the left garbage industry, then was a GM for a facility in Greenville, and Mumford was her outlet for industrial plastics. Mumford is in Greenwood County, and does a lot of work with the automotive industry. We regrind and sell a lot of materials back to customers. With the hit that the market is taking, Mumford is going to be doing more consulting, waste audits, and film converting.  
Film Converting: A customer that can use scrap film from one industry in another application that is sized down.

Wes: Introduced Chad Prescott

Chantal: 1 in 6 South Carolinians is food insecure despite the fact that 40 of our food is wasted in the US. With Don't Waste Food SC we are bringing infrastructure online, entrepreneurs, and food waste generators together in our shareholder groups.

Kevin Hill has taken a new job, we have a composting ex officio position available. Should we take a look at Atlas Organics - Gary NiHart, Joseph McMillin, Resoil, Charleston County?

Kristen: Glass pilot: Commerce awarded \$5,000 grant to research and outline a strategy. Ideally 5,000 households would participate. This will help assess if we can save glass, and does separating glass clean up the value of the stream? What is the cost to do a pilot with sorting by hand, free bags vs paying for them, what is the infrastructure cost? These are some of the questions we hope to answer.

Angel: Have we reached out to anyone in the glass industry. GPI, glass manufacturers?

Chantal: Strategic/Bevcon was bought out by a venture capital firm, they are still restructuring and in transition, but we have reached out to them.

Market Update:

Carol: Cardboard went up \$5 a ton

Bill: Oil is down

Tina: PET is down

Angel: Shredded down \$10/Ton, not enough demand for material

Chad: Summer has contributed to the market fluctuation, aluminum was up this morning, (aluminum cans) UBCs .62 /lb to the mill .4

Glenn: Nylon 66 is up

## **DASHBOARD**

Chantal: Provided DHEC Quarterly Progress Report. Survey discussion. Ryder will send out updated survey.

## **NEW BUSINESS**

No new business.



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**OLD BUSINESS**

No old business.

**ADJOURN**

Adjourn 12:43 Next Meeting at Port of Charleston on Sept. 13, 2016