

2010 Resource Conversation Challenge Food Recovery Roundtable
March 24, 2010
Crystal City, VA

A list of participants is included at the end of the notes.

Presentations

Jean Schwab, U.S. EPA Organic Materials Management

Welcome, everyone. There's a lot of synergy in this room and a lot of brain power. Let's see how we can work together to identify opportunities and obstacles.

In just over a decade, we've tripled the recovery of yard waste, and generation levels for yard waste have been roughly stable. In contrast, generation of food waste has more than doubled, and recovery is down. Food waste is now right behind paper as the second largest waste stream sent to the landfill. We need to improve our waste reduction and recovery efforts for food.

Let's review some definitions about which people are often confused:

- Degradable – Something is degradable if it breaks down (e.g., tarp that's shattered into little pieces).
- Biodegradable – Something is biodegradable if eventually the microbes will eat it, and it will become one with nature. Although it might take many years - almost every biobased thing biodegrades – eventually.
- Compostable – Something is compostable that it will biodegrade completely within 90 days in a commercial composting facility.

If end users spend extra money to purchase compostable materials that they put in the trash after use, then they've wasted that extra money.

Wasted food, not including agricultural and industrial food wastes, is the third largest waste stream. In business, waste results from inefficiency and is an indicated of lost money. When we put our materials in a landfill we are literally throwing our money away.

The participants in this room are the model for sustainability. You have the opportunity to close the loop by using the product, generating waste, turning waste into another product, and then using that product.

In 1998, EPA and USDA developed the food recovery hierarchy, an inverted triangle with source reduction—preventing food from ever becoming a waste—on the top as the lion's share to tackle. Landfilling is the smallest on the bottom as the least-preferred option. Over the past few years, EPA has refocused its food recovery efforts through the development of the following tools and resources:

- [New EPA Food Waste Web site](#)
- [Food Waste Audit Log](#), developed with the help of LeanPath
- [Food Waste Management Cost Calculator](#), an Excel-based calculator to help you determine the costs and benefits of different food waste management options
- [Success stories](#)
- [Where you live](#), a page with links to state Web pages and contacts, as well as EPA Regions contacts

All of these and more are on our web page at www.epa.gov/foodrecovery

Bobby Fanning, Senior Manager, Solid Waste and Recycling, Walmart

To begin, when discussing Walmart's work, it's important to understand that our scope and scale are both a challenge and an opportunity. We're not just a store. We include all of our stores and clubs plus all of the support facilities and operations.

Walmart is dedicated to being a sustainable company in so much as it makes business sense. Our three corporate goals are 1) 100 percent renewable energy; 2) zero waste by 2025 with a 25 percent reduction in the first three years; and 3) the sale of products that sustain people and the environment.

We began with a waste characterization study to determine how we can achieve zero waste. We found that organic materials account for the top waste stream in every Walmart sector.

We then developed basic objectives for designing an organic materials diversion program:

- Divert all food scraps from landfill disposal
- Starting on the west coast, implement a large-scale rollout of food scrap recovery to all 50 states and Puerto Rico
 - Utilize various methods of source reduction, beneficial reuse, and recycling
 - Launch programs in all 50 states by August 1, 2010
- Follow the EPA/Walmart food recovery hierarchy; redirect organic waste streams towards strategies at the top of the hierarchy as new technologies become available

We initially thought that the approach would be simple. Then things became more complicated. We were able to reduce almost one third of the organic waste generated by volume by improving inventory control. We were able to reuse almost a second third by volume by donating to Feeding America. Previously, Walmart corporate policy prohibited perishable food donations, but we reversed that policy, and the program is working very well. As a bonus, the nutritional level of what we're donating is much higher than it's been in the past: dairy, produce, baked goods, etc.

For the remaining third, we hired contractors to find technology solutions. Walmart has tailored the EPA/USDA food recovery hierarchy to its particular situation. On the

Walmart hierarchy, feeding humans is followed by fuel generation/anaerobic digestion (with composting of digestate) instead of feeding animals. As a retailer, it's easy to segregate the meat products from the non-meat products, but then the products that are combinations of meat and non-meat ingredients remain. What's the acceptable level of contamination for feeding animals?

Our efforts have encountered numerous challenges. Operationally, we ran into predictable obstacles due to a lack of infrastructure for organic materials recovery:

- Local haulers not equipped to handle organics
- Few viable end-use outlets in some locations
- Excessive cost
 - Transportation costs/distance prohibitive
 - Excessive cost can force downward shift on the hierarchy
 - We dealt with this obstacle by prioritizing program-wide cost neutrality over local profit and loss. We held internal discussions to reach this agreement. It costs more to implement these programs in some areas than in others, and local manager bonuses are based on local profit and loss.
- Longer contractual obligation to capital end uses required
 - We had to go outside of our comfort zone to give longer contractual periods.
- Vector issues (e.g., ants, bees, bears)
- Stormwater issues
 - What's the appropriate container for collection?
- Odor control
 - Potential to drive up costs; a facility may have to pay for container collection more frequently in the summer months
- Cold weather
 - What's the seasonal freezing temperature?
- Vagrant control
- Controlling mixed meat contamination
- Associate ergonomics
- Structural barriers, such as space on the property and aesthetics

Regulatory obstacles include legal definitions of recyclables vs. wastes. Many regulatory decisions are based on flow control definitions written in the 1980s. These definitions discourage innovation.

Most Franchise Agreements are established without anticipation of the removal of organics from the waste stream. If fees are tied to quantity of waste, that can present some challenges. Haulers don't want to give up their revenue, and cities don't want to give up the taxes paid on the tipping fees. City ordinances sometimes don't allow any options besides landfilling. For example, municipalities may require the engagement of contracted haulers that do not offer recovery options. Within the same municipality, there can be a disconnect between different departments on this issue. The same is true

of state and municipalities. Sometimes the municipality will get it, but the state will have no clue how to handle permitting or vice versa.

To close, I'd like to show you some limited data that is ready for presentation. In 2009, Walmart as a company donated more than 23,000 tons of food to feed hungry people, and that number rose to more than 64,000 tons in 2010. As a point of comparison, the state of California generates 42,000 tons of trash in a year. The takeaway here is that if you don't think organics diversion can make a difference, you're hugely mistaken. Thank you.

Participant

One of the biggest issues in any kind of supermarket operation is the packaging. You have super centers where you have a decent amount of food that is not packaged, but more and more food is coming in packaging, especially produce. What have you done to recover packaged food?

Bobby Fanning, Walmart

For packaging there's a lot of wins, such as milk cartons and cereal boxes. We're aggressively working with vendors to make packaging appropriate for size and for recoverability. As a retailer, it's a cost break for shipping. Walmart attends sustainable packaging summits on a regular basis. Several outfits pitch packaging innovations to Walmart. One recent thought we've had is how do we make the round label on a banana compostable?

Participant

You still have to remove packaging to make it a source-separated thing and prevent contamination of the organic waste stream. That's a lot of time for employees to spend. What plans have you made to remove all of the film from the rotten vegetables and get rid of the Styrofoam that sits underneath the produce?

Bobby Fanning, Walmart

That's a challenge for us. We have a lot of biodegradable packaging. Our packaging people are aggressively working on that.

Sara Hartwell, EPA

I work with the Packaging Network. We're seeing a lot of movement towards using compostable packaging materials for trays and over-wraps. With compostable packaging, you don't have to separate wastes.

Mike Manna, Organic Recycling

Using biodegradables is great, but unless you convert the material onsite, don't even bother. Instead, you should look at your transportation infrastructure and palletize your food waste for transport to your distribution centers and distribution areas.

Bobby Fanning, Walmart

That's an active conversation. One of the things we do well is logistics. We have few empty truck miles today. For example, when we do milk runs, a truck will go to a

distribution center and dump its goods, and then it will go to a manufacturer and pick up goods, and then it will go to a warehouse and dump its goods, etc. You're right that there's an opportunity, but because of our logistics, few trucks are available. We do have backlog miles in some rural areas, where we're dealing with long distances.

Michael Keleman, InSinkErator

In Milwaukee there are projects where food waste is used to produce energy, and the composted digestate is then sold as fertilizer. Is Walmart involved with anaerobic digestion?

Matt Hedrick, Quest Recycling

Yes, we're using several digesters in Wisconsin and Minnesota.

Participant

You've spoken of flow control issues. I work for a jurisdiction that has flow control to a waste-to-energy facility. There's a \$55/ton tip fee, which is very competitive, and our system is in the land of "if it's not broke, don't fix it." In Northern Virginia, many jurisdictions are clamoring for food waste capacity, in part because no generators of food waste are asking for it. We need companies like Walmart to demand support from our politicians so that our infrastructure can grow.

Bobby Fanning, Walmart

We've actively engaged Public Affairs to help us work on this. But we have an August 1, 2010 goal to have a nationwide program in all 50 states. We see the infrastructure challenge as bigger than just us. If we can get our program in place, then everyone can chime in. Greater participation brings our costs down and helps everyone else too. Once we get this program across the U.S., we're going to start going back jurisdiction by jurisdiction to see whether can work those local politics. Frankly, it's something we need help with.

Break.

Roundtable Discussion

Jean Schwab, EPA Organic Materials Management

Now that we've had a look at what's going on, let's talk about what we can do together. I'm looking forward to some lively discussion, but since your mind can only absorb what your butt can endure we'll be sure to have some breaks too.

Introductions. See participant list at the end of these notes.

We have a wide-ranging group of folks. With this brain power, we'll solve all of our problems. The desired outcome of our meeting today is to identify opportunities and obstacles at each level of the food hierarchy. Let's start with source reduction.

Source Reduction

Andrew Shakman, LeanPath

It's important that we put some data out there to demonstrate that the challenge of food waste is endemic and that we need to manage it more actively. We should convey that source reduction is feasible, but it requires data, and you need to measure it. There's not enough discussion in the marketplace of tracking mechanisms to produce behavioral change.

To identify how to reduce food waste, you must first identify what you have, why it's being created, and where it's being created. Conduct an audit. In supermarkets, shrinkage is really important. If you're a general store manager, just take a look at the waste bins.

Mark Smallwood, Whole Foods Market

Our audits identified that 85 percent of our waste stream can be diverted from the landfill. We started at the corporate level with source reduction. We asked that nobody keep a trash can in their work space. There were many skeptics at first, but then people thought it was a brilliant idea. It makes people look at the waste that they bring into the office. As a benchmark, we aim to have no more than 1 ton of waste per day in our stores. If we're filling up the container with more than that, then we know we're doing something wrong, whether it's cooking too much, buying too much, etc.

Jean Schwab, EPA Organic Materials Management

How do you account for the seasonal ebb and flow in your planning and waste tracking?

Mark Smallwood, Whole Foods Market

We track everything, and our planning includes consideration of our previous year's numbers. We have 9 stores that are in the 90 percentile for waste diversion.

Participant

I'd like to make a quick comment about edibility. Having been forced to eat hospital meals and school cafeteria meals, I can say firsthand that there is a dramatic reduction in food waste when users have choices available to them. With farm-to-food programs, edibility and consumption increase dramatically, and waste goes down. Menu preparation is key. Serving size is key. For a while in many schools, kids were required to take certain items. Because the kids didn't want them, they threw them away. Some schools tried to minimize the waste produced from these programs by establishing an edible food table for leftovers.

Bobby Fanning

We've achieved dramatic source reduction with just-in-time purchasing—purchasing smaller quantities of locally sourced food more often.

Participant

In universities, the delivery system can reduce the amount of food waste generated. If you're paying one price for a buffet with the tray, just get rid of the tray. Going trayless

reduces purchases, labor, energy, and water consumption. The reception won't be great initially, but the savings will be tremendous.

Monica Zimmer, Sodexo

Sodexo is doing this. We have 600 campuses in the U.S. We've encouraged them all to go trayless. At least one third have. Our pilots show that about 30 percent of the food waste is reduced because people don't take as much. It's not easy to transport.

Priscilla Hayes, Rutgers University

I'd like to comment on the school situation. Mike Manna and I did waste audits at various schools. We don't necessarily find that kids will respond to vegetables. But in some New Jersey schools, kids are growing some of their food or working with compost. When they're more involved in the process, healthy food becomes more interesting to them. In Princeton, kids will grow things in their garden, and an ice cream shop will make a flavor for the ice cream.

Kevin Hall, National Institutes of Health

I arrived at food waste from a different perspective. What is the source? The food supply is part of the problem here. Supply is up from 3,000 calories/person/day to 4,000 calories/person/day. This is the push effect. We are pushing extra supply into the food and marketing system. But humans don't and shouldn't increase food intake very much. I want to challenge people to think about what's going on in terms of agricultural and food policy. Subsidies are motivating the production of extra calories that none of us need.

George Dreckmann, City of Madison, WI

We have both an opportunity and an obstacle. We should get people to think about what they eat when they go to the store. People buy what they think they should eat instead of what they actually eat. The same thing applies to packing lunch for your kids.

Steve Fishman, EPA Region 7

There's an opportunity right now with Michelle Obama looking at obesity, and the Department of Education (ED) funding schools. EPA should look at an initiative encouraging schools to go trayless. EPA, USDA, ED, and the White House should work together.

Jean Schwab, EPA Organic Materials Management

We're trying to develop a menu of options for people to choose from based on their particular situation.

Participant

One difficulty is that smaller hauler businesses want to stay with landfill-only waste management because it's cheaper for them.

Margaret Henry, Sodexo

We've found that it's very effective to share a photograph of trays with the university community. Also, paying by weight has a big impact on the post consumer side of food waste.

Mike Curtin, DC Central Kitchen

Pre-consumer waste is a huge issue for independent farms because of distribution issues and aesthetic issues. DC Kitchen purchases this food from the farms. We provide the farmers with additional revenue. We save money, and we can feed people. The notion that local is more expensive is a fallacy. It doesn't need to be. There is a huge opportunity to reduce the waste at the beginning of the source.

Andrew Shakman, LeanPath

There's a bigger point that trayless is bringing up. Hospitals are switching from tray-based delivery to room service. Structural changes are happening in meal delivery systems. This is a big opportunity.

I'd like to encourage the group to distinguish between the word audit and the word track. Auditing is a one-time check, often by a third party. Tracking is ongoing. It enables behavioral change. Tracking offers a greater tactical opportunity.

Most successful restaurants run reports every week. How much food did they purchase, dispose, and sell? These data are indicators of profitability and efficiency.

Mike Manna, Organic Recycling

To reiterate, some of the best food waste programs have achieved success because of tracking. Changing preparation practices can yield dramatic savings. As far as removing trash cans, people eat at their desks. Switch to biodegradable packaging and set up clusters of bins on office floors.

Participant

There should be a way that we can reduce the amount of food that's damaged in transit and that's not traveling from the farms to the grocery stores in time. It could be a store's responsibility to require that from suppliers.

Participant

The Food Marketing Institute and Grocery Manufacturers of America meet once a year to talk about how to reduce unsaleables.

Jonathan Bloom, WastedFood.com

I'd like to see a publicity campaign to address the importance of food waste reduction. The U.K. has such a campaign called Love Food Hate Waste. It spreads the word to the average person. The next step after promoting trayless is recognizing that maybe all-you-can-eat is the real problem. What if we switch to a la carte? No one really understands the difference between throwing away food and composting it.

Participant

Our vision for composting is to form relationships with local growers. We want to make product that's good enough for the organic grower.

Jean Schwab, EPA Organic Materials Management

So what are some of the obstacles to source reduction?

Andrew Shakman, LeanPath

One of the obstacles is right here. People don't really understand the difference between source reduction and recovery. Understanding and education is required. We need to change the culture.

Participant

There's a dialogue for EPA to think about. How do we reconcile production that results in secondary materials generation? There's a reason that we can get cheap fast foods. If we make headway in source reduction then we're threatening someone else's bottom line.

George Dreckmann, City of Madison, WI

Price points are a challenge. Producers drive through quantity by decreasing unit price for bulk purchases.

Participant

I helped run the food services for the Atlanta Olympics. We required precise planning and pricing from our vendors. The trick is to really plan out how much you can move and how quickly.

Priscilla Hayes, Rutgers University

A major challenge in schools is the health department requirements. Health departments can require a ridiculous degree of packaging, zero reuse, and disposal. Regulations are an obstacle to source reduction.

Participant

The number one obstacle is human behavior. Policies can affect behavioral change. Composting should be available at a competitive cost or required. The number two challenge is packaging. Work with your vendors to give them guidelines and timelines. Walmart just banned Styrofoam packaging peanuts.

Jean Schwab, EPA Organic Materials Management

So what are the next steps for reducing food waste?

Monica Zimmer, Sodexo

What are some of the systemic explanations for the status quo of the food industry supply chain? We tried to reduce delivery frequency. But that would have been financially detrimental to the suppliers given the current relationship, so we worked to redefine the relationship. Many restaurants minimize their pre-consumer protein waste because protein is expensive. We should encourage restaurants to apply their success with protein to produce and carbohydrates.

A comment on human behavior: people believe that if they have to do something differently it's going to be harder. We need to promote environmentally responsible practices as changes that will make life easier. Green should not be seen as a burden. Look at the UPS' decision to stop making left turns.

Cheryl Baldwin, Green Seal

We've found that upstream food waste has greater environmental impacts than food waste generated downstream. Source reduction is just a major opportunity. We should talk about source reduction in the same tone as we'd talk about recycling paper.

Jean Schwab, EPA Organic Materials Management

So what do we do? There's no magic grant money or silver bullet. What can we do today?

Participant

We're missing a player from this conversation: the U.S. Health and Human Services Department. Eating less is source reduction. We have a perverse relationship with food in the U.S. because we don't respect it. There's too much, and it's too cheap. Reduce waste and reduce waste lines.

Kevin Hall, National Institutes of Health

We should rewrite the policies on food production. Farmers run on such narrow margins. They have to find a way to sell their food to the public. Something has to be done on the policy side in the next farm bill.

Participant

What about a next step of better educating the public about the Good Samaritan Law? There's overproduction, spoilage, expiration, and trim waste. Every operator says that post consumer exceeds pre-consumer by a strong margin.

Lin Sensenig, Somat Company

For pulping systems, we assume a half pound of waste per plate in universities and restaurants. That includes both pre- and post-consumer waste.

Mike Manna, Organic Recycling

I use an average of 5.7 ounces post-consumer food waste per meal.

Jean Schwab, EPA Organic Materials Management

Can we as a group reduce serving sizes?

Participant

There's an opportunity for restaurants to serve less food for less money. TGIF does that, and they're doing really well financially. They haven't shared their data.

Food Donations

Jean Schwab, EPA Organic Materials Management

Food donations are more critical now than ever. Bobby Fanning already talked about Walmart's food donation efforts. What are the opportunities?

Jim Larson, Food Donation Connection

Since 1992, Food Donation Connection has helped restaurants donate their surplus food. We link restaurants with local non-profits so that they can take unwanted food that's been prepared but never served, flash freeze it, and deliver it to places of need. The tax benefit helps motivate restaurants.

On the subject of waste tracking, one thing we've noticed is that saving the food in the freezer is a visual reminder to employees that they can do a better job of reducing their food waste in the first place.

Jean Schwab, EPA Organic Materials Management

What are the untapped opportunities?

Jim Larson, Food Donation Connection

Awareness. Local governments should spread the word and promote information sharing. Also, we should encourage the donation of prepared or perishable food.

Bobby Fanning, Walmart

We've found that the infrastructure is not in place on the scale that we need to achieve our goals.

Bill Reighard, Food Donation Connection

We geo-code restaurants, non-profits, and places of need. Because we know where everyone is located, we can create a network. The proof of the pudding is that major chains are donors, for example, 25 percent of Pizza Hut locations. There is a tax challenge for franchises, but company-owned chains can leverage a tax benefit.

Participant

Farmers against Hunger is a New Jersey agriculture food rescue program. So-called undersized produce can't be sold because people don't buy it. Gleaning systems deliver this food to the major food banks within a day. The challenge is to acquire the needed funding and state and local government support.

Participant

What about increasing outreach about the Good Samaritan Law? Do businesses and the public understand this law?

Jim Larson, Food Donation Connection

The Good Samaritan Law was signed in 1996 by Bill Clinton. It protects businesses from liability except for gross negligence or mal intent. While it safeguards against financial

damages, it can't prevent damages to a business' reputation. That's why we encourage hazardous waste analysis and critical control points to ensure the safety of the food delivered. The tax benefits really are a big impetus. A number of companies in Atlanta work with the zero waste initiative there. Companies can break even or improve their bottom line. And when they realize that waste equates to wasted money, they're motivated to change their ordering practices.

Stop and Shop focused its food rescue efforts on proteins and meats. The store froze them before the last sale date; meats are easier to freeze than produce. The frozen food was picked up once a week. Scheduled pickup is one of the key indicators of success. If you're overproducing for an event, at least you're not wasting.

Last year Food Donation Connection facilitated the delivery of 25 million meals from 7,000 restaurants. This year we're working with 13,000 restaurants. The tax credit is not guaranteed for small businesses, but bills have been proposed to make the tax credit permanent for them.

Participant

The Oregon Department of Environmental Quality developed a case study to explore the barriers and opportunities for restaurants to pursue food donation. One barrier is that some restaurants are so progressive with on-time delivery that they don't have enough food to deliver to make it worth the pickup. Other restaurants don't want the public to identify the donated food with their brand since the quality will be lower and they might be perceived as wasteful.

Jim Larson, Food Donation Connection

It's important to remind donors that they're not selling their plated meal. Their donation is one component of what the shelter is preparing. To overcome the small quantity issue, we link up with the end user, such as a shelter, and have it pick up directly from the restaurant rather than through a food bank. We keep the drive time between five and ten minutes. The food is produced and served in the local communities.

Bobby Fanning, Walmart

Maintaining code compliance is an obstacle. The other is understanding your out-of-dates and redesigning your internal policies. We made the conscious decision to pull milk two or three days before the expiration date. Our studies showed that the milk wouldn't get sold anyway. Everyone goes for the reach around for the milk in the back and leaves the milk in the front of the display case.

Margaret Henry, Sodexo

You can plan food donation with Feeding America eight weeks prior to an event. It makes the transition smoother.

Participant

We require hotels to package food for donation right from the start in the contracts for meetings, so that it's easy to move it up.

Andrew Shakman, LeanPath

There are tradeoffs throughout the hierarchy. Technically, the food service operator is responsible for the leftover food. Some food service operators would object to being required to donate food. Another barrier I hear is that employees will be less concerned about source reduction if they know that wasted food is donated.

Jean Schwab, EPA Organic Materials Management

The [EPA Waste Reduction Model](#) can help waste managers compare the environmental benefits of different food waste strategies.

Feed Animals and Industrial Uses

Jean Schwab, EPA Organic Materials Management

We've rolled together feed animals and industrial uses. These strategies aren't done as extensively these days. Feed animals is "food for food." Industrial uses include fats, oils, greases, and bones for rendering. This strategy is less relevant today because so much meat is delivered to stores already trimmed and de-boned.

Participant

It's hard to sort through these regulations. Some states are garbage states and others are non-garbage states. With the price of corn so high, there are opportunities to move into the animal feed area. But it is the intent of the USDA to restrict this.

Participant

To clarify, FDA sets most of these restrictions. Much of the rendered product goes into cosmetics.

Bobby Fanning, Walmart

This area is low on our hierarchy because of the liability. How can you ensure that you've removed all of the meat?

Andrew Shakman, LeanPath

Momentum is growing around anaerobic digestion. If you're creating energy, that should provide a greater benefit than just composting. There's a lot of innovation on the equipment and process side. I'd move to change the hierarchy to reflect that.

Jennifer Brady, EPA

Some people choose to depart from the hierarchy based on the business case. It depends on the industry.

Andrew Shakman, LeanPath

It's a hugely favorable narrative. The hierarchy is a huge agent of change. I would encourage EPA to explore using the hierarchy as an agent of change.

Jean Schwab, EPA Organic Materials Management

We are definitely interested in doing more with the hierarchy, and we'd like to adapt to the market developments.

Participant

Research has been showing benefits of mixing MSW with food waste for biofuels. More biogas is produced by mixing food waste with sludge than by mixing either separately. This practice also improves volatile solids destruction during the wastewater treatment digestive process.

However, adding food waste will supply a system with additional nutrients to handle on the backside. In Washington, we strive to put the digestate back on the land. But by adding food waste, you have another stream to manage, which can bring regulatory challenges with it.

Participant

FOGs should not be encouraged to go through water systems. Restaurants have problems when they don't maintain their grease traps. While FOGs can be good for digestion, they slow the process down. FOGs can also be composted.

Composting and Anaerobic Digestion

Jean Schwab, EPA Organic Materials Management

So what are some of the issues?

Participant

If you can manage organic waste so that you generate both energy and compost, that's a win-win.

Participant

You can't compost greens unless you have enough browns.

Carla Castagnero, AgRecycle Inc.

We've got to keep the plastic out. The stickers are a challenge. We can compost a cow, but we can't get that little sticker to go away.

Participant

90 percent of composting businesses fail in their first five years. We consider ourselves a manufacturer, not a waste processor. It's important for the business venture to sell a product and not just pick up waste.

Jean Schwab, EPA Organic Materials Management

How about getting the food in the first place? What about the haulers? A minimum density is required to make pickup worthwhile. It's not an insurmountable challenge, but it's complicated.

Participant

I'm a regulator. We used to have a crown jewel of a composting operation that had an odor problem. The problem seemed to have started with the introduction of large concentrations of food waste. Now the waste is contained in a lagoon, which is incredibly polluted. A public investment was made in an infrastructure to collect and invert. Right now, we know there are technical fixes. But the neighbors went ballistic over the capacity issue. If you're working with a public entity, please be realistic about what you're seeing, whatever it is. Don't accept waste to the maximum capacity. Do the due diligence, because if the systems go down, the consequences will be huge.

Brian Rosa, North Carolina Department of Environment and Natural Resources

We have three major food diversion problems. First, we only have seven permitted compost facilities that can take food. Second, we have only one independent waste hauler who accepts food waste, a contractor in the Raleigh area. Waste haulers are concerned that there won't be enough demand. We have the food waste and at the moment the available compost facilities, but this is the missing link, in part because the general tipping fee is so cheap. Our third problem is plastic bags. We all have to switch from plastics to compostables.

The haulers are concerned that if they start programs today, when there is a lot of interest, they will not be able to sustain their programs tomorrow, when the interest is gone. There is much hesitancy. They also need to be able to offer a pricing structure that is competitive with landfill facility tipping fees. This is a challenge.

Sameer Rashid, Harvest Power

We're looking at the issue of developing some processing capacity. Everyone talks about the chicken and the egg situation. Rather than asking customers to separate sources, let's use a material that's already there. Be an egg.

Carla Castagnero, AgRecycle Inc.

Walmart can transform the market with its leadership. You can make the word composting mainstream. You can change our industry by following through with this.

Chery Sullivan, Washington State Department of Ecology

Washington State has a compost facility operator training program. The whole issue of tipping fees and the composter business model has to do with the end product. We should change the way that we value compost as a product. We should use it and sell it and create a demand pull.

Matt Hedrick, Quest Recycling

At next year's RCC conference the hauler issue shouldn't be such an obstacle. Walmart is jumping into the game, and this encourages haulers to recognize that sustained demand is a reality. So where do we go from here? Walmart doesn't want to saturate the market. It's trying to help build a market that will accommodate other companies' participation. If more businesses play a role then we can get the pricing down to where it's economical for everyone to participate.

Priscilla Hayes, Rutgers University

The New Jersey Conservation Partnership works to preserve the health of Barnegat Bay, a sole source water aquifer. New Jersey depends on a clean bay for a host of services. We've been using compost to break up sole compaction and recharge water down into the ground and aquifer. There are case studies on the costs and benefits of using compost on soil instead of fertilizer. We keep our water clean by using compost.

George Dreckmann, City of Madison, WI

What can we do to duplicate the composting programs in San Francisco and Toronto? Anaerobic digestion makes more sense because of climate change, but we're looking at everything right now. Where do we go from here? Restaurants want to bag their waste and be done with it. What type of container will lead to greater buy in? People say that managing anaerobic digestion is managing livestock. You're keeping all of the bacteria happy, and it requires a different mindset.

Jean Schwab, EPA Organic Materials Management

We're going to start winding this down. What are our next steps?

Participant

Our issue is capacity. I applaud Walmart and hope it works, but the worst thing would be if Walmart sets up a program that encounters serious problems because of capacity, odors, vendors, etc. That would have a negative effect on all of our efforts, so please get it right.

KC Alexander, Connecticut Department of Environmental Protection

In Connecticut, we're introducing legislation that would direct major generators within a certain number of miles from composting facilities to partner with those facilities within six months or one year of enactment. We need to send the "if you build it, they will come" message to composters, haulers, and the rest of the industry. The food industry lobby opposes this legislation, but every day I receive calls from members of the industry asking me where they can divert their organics. We need capacity, and we need it now.

Mike Manna, Organic Recycling

We're holding an investment forum on June 16 in New Jersey. We firmly believe that we need to build a bridge between the technology and the investors. We need to engage Wall Street in building these technologies.

Jean Schwab, EPA Organic Materials Management

We also have to create an end market. Maybe composters are bad at marketing. Maybe local governments are not buying it. Whatever it is, we need to make sure we're closing the loop.

Sameer Rashid, Harvest Power

We need policies on the backend. We need standards for high quality material and procurement of these materials by the state and local governments that are natural buyers. The Institute for Local Self Reliance has been pushing this concept in Maryland. With

waste-to-energy, there's always the challenge of obtaining a long-term contract. We need procurement policies for renewable power. Let's use policies on the backend to create competitive economics on the front end.

Jean Schwab, EPA Organic Materials Management

At EPA we modified the [Comprehensive Procurement Guidelines](#) (CPG) to include compost, regardless of feedstock. CPG presents recycled content products that the government will buy and includes compost and biobased fertilizers. So we've been doing our part to help stimulate market demand. You can find more on this on our web at www.epa.gov/cpg

Participant

Let's have more emphasis on this issue, more outreach, greater promotion of the Good Samaritan law, and a dedicated advertising campaign.

Participant

In addition to success stories, let's make information available about what goes wrong.

Participant

State permitting regulations vary so much. Can EPA take more of a lead in trying to work with state regulators? It's onerous for farmers and others to compost.

Jean Schwab, EPA Organic Materials Management

Last year we established a listserv for state regulators to talk to each other and compare notes. States have been asking each other for information. The U.S. Composting Council has a listserv and can do the same thing. Many of these regulators are on the council's listserv. People should use these resources to keep the conversation going. Knowledge is power.

Mike Manna, Organic Recycling

Can we bring all the state regulators together in a room to facilitate a discussion?

Jean Schwab, EPA Organic Materials Management

EPA Regions have brought together state regulators within their Regions to have these conversations. That's been very productive. How can we all get there together? Anaerobic digestion and composting expand past the regulatory boundaries of solid waste into air and water. It's an educational process for regulators as well as developers. For example, with dry fermentation, regulators may play hot potato. Who should write the first permit?

As a final note, please don't leave with the misperception that we have to create markets out of nothing. Compost is at 5 percent penetration, and home gardening is the nation's biggest hobby. The markets are there to be developed. Thank you, everyone.

Participants

- Alok Agrawal, A.T. Kearney
- KC Alexander, Connecticut Department of Environmental Protection
- Alice Appleton, ICF International
- Angel Arroyo-Rodriguez, Ohio EPA
- Cheryl Baldwin, Green Seal
- Heeral Bhalala, Institute for Local Self Reliance
- Jonathan Bloom, WastedFood.com
- Jennifer Brady, EPA
- Stuart Buckner, U.S. Composting Council
- Christy Bujnovszky, Maryland Department of Environmental Protection
- Allison Burns, Solid Waste Association of North America (SWANA)
- Stephanie Busch, Georgia Department of Natural Resources
- Carla Castagnero, AgRecycle Inc.
- Nicole Chardoul, Resource Recycling Systems
- Elizabeth Chiedi, Bates Trucking and Trash
- Kendall Christiansen, Gaia Strategies
- Steve Coe, Virginia Department of Environmental Quality
- Kate Cooper, Wisconsin Department of Natural Resources
- Shannon Crawford, Solid Waste Association of North America (SWANA)
- Mike Curtin, DC Central Kitchen
- Eric Davis, Feeding America
- Jack DeBell, University of Colorado
- Brian Dick, Quest Recycling
- George Dreckmann, City of Madison, WI
- William Easley, DC Office of Recycling
- Roy Edwards, Sustainability Division, Georgia Department of Natural Resources
- Marilu Encisco, Montgomery County
- Bobby Fanning, Walmart
- Steve Fishman, EPA Region 7
- Matt Flechter, Michigan Department of Natural Resources and Environment
- Mike Giuranna, EPA Region 3
- Joe Goicochea, Ohio EPA
- Rachel Goldstein, EPA
- Pamela Gratton, Fairfax, VA Solid Waste Management
- Lorraine Graves, EPA Region 2
- Tim Gray, New Mexico Environment Department and New Mexico Recycling Coalition
- Kevin Hall, National Institutes of Health
- Priscilla Haloran, EPA
- Sara Hartwell, EPA
- Priscilla Hayes, Rutgers University
- Matt Hedrick, Quest Recycling
- Margaret Henry, Sodexo
- Jon Johnston, EPA Region 4

- Michael Keleman, InSinkErator
- Wayne King, U.S. Composting Council
- Linda Knapp, Institute for Local Self Reliance
- Dieter Kretschy, Solid Waste Solutions
- Jim Larson, Food Donation Connection
- Tara Lewis, Bates Trucking and Trash
- Mike Manna, Organic Recycling
- Heather Martin, GreenBlue Sustainable Packaging Coalition
- Chuck Matthews, Washington State Department of Ecology
- Mike McMahon, National Park Service
- Bill Miller, Delaware Department of Natural Resources and Environmental Conservation
- Andrea Mitrovitch, Clinton Climate Initiative
- Karen Moran, Defense Logistics Agency
- Laura Moreno, EPA Region 9
- Chris Newman, EPA Region 5
- Gina M. Noel, GSA
- Kathy O'Hern, Montana Department of Environmental Quality
- Michael Oshman, Green Restaurant Association
- Syd Partridge, Climate Action Reserve - Yes
- Maria Perez Vickers, EPA
- Annette Poliwka, EPA
- Ian Pope, Arlington County Solid Waste Bureau
- Christopher Prins, EPA
- David Pritchett, Soloway Solutions
- Kristen Rannels, Arlington County Solid Waste Bureau
- Sameer Rashid, Harvest Power
- Bill Reighard, Food Donation Connection
- Liz Resnick, EPA
- Brian Rosa, North Carolina Department of Environment and Natural Resources
- Jean Schwab, EPA
- Lin Sensenig, Somat Company
- Andrew Shakman, LeanPath
- Rick Shipley, Organix Recycling
- Mark Smallwood, Whole Foods Market
- Chery Sullivan, Washington State Department of Ecology
- Judy Timberlake, Potomac Hudson Engineering
- Elizabeth Tuckermanty, USDA
- Maria Vickers, EPA
- Kate Wattson, Harvest Power
- Jen Weiss, EPA Region 1
- Harold Wiggins, Paterson Environmental Holdings
- Joe Van Rossum, University of Wisconsin Extension Office
- Monica Zimmer, Sodexo