

Guidance for Special Event Food Waste Diversion



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Special Event Food Waste Diversion

Why Divert Food Waste?

Fun, sun, food, and yes, garbage! When people gather at special events waste is inevitably generated. Food scraps and soiled paper typically comprise a significant portion of waste from special events. Waste audits conducted by the Northeast Recycling Council, Inc. (NERC) through a USDA-funded project, demonstrated that more than one pound per person of food waste is generated.¹ At each of these events, food and serving packaging averaged 41% of the waste by weight. A study conducted for the California Integrated Waste Management Board found that food, leaves and grass, and compostable paper make up to 54 percent of the potential diversion from an event's waste stream; recyclable paper and cardboard another 12 percent, and beverage containers about nine percent.²

In order to maximize diversion of these materials, specific planning, training, and collection logistics are necessary. Diverting food waste presents unique challenges, from attendee and vendor education, to the difficulty of finding a hauler and a processor to accept the material. Food vendors may be resistant to switching to compostable service ware and utensils. Already overstretched event organizers can be reluctant to take on new tasks.

Special events include community festivals and fairs, parades, sporting events, concerts, conferences, parades, farmer's markets, and more. Events may take place in public parks, on the street, or in venues typically designated for multiple uses—such as conference centers and stadiums. Virtually all communities, large and small, have at least one special event each year. Through waste prevention, reuse, recycling, and composting, event organizers and communities can realize a range of benefits including, potential cost reductions, avoided disposal, greenhouse gas savings, and good public relations.

Benefits of Diverting Food Waste

- Reduces event waste.
- Potentially lowers waste management costs.
- Contributes to a cleaner event.
- Enhances the event profile.
- Attracts sponsors.
- Provides advertising opportunities on collection bins and signage.
- Supports community waste reduction efforts.
- Supports the regional economy.
- Saves natural resources and energy.
- Reduces greenhouse gas emissions.
- Inspires positive change in attendees and vendors.



¹ [Best Management Practices Guidebook for Special Event-Generated Waste in Rural Communities.](#)

² [Targeted Statewide Waste Characterization Study: Waste Disposal and Diversion Findings for Selected Industry Groups](#), June 2006, California Integrated Waste Management Board, Produced under contract by: Cascadia Consulting Group.

About this Guide

NERC was awarded a grant from the U.S. Environmental Protection Agency to conduct a demonstration project for special event food waste diversion and to develop solutions to the challenges that it presents. The project included food waste diversion pilots in Connecticut, Massachusetts, New Hampshire, and Vermont. The pilots demonstrated different methodologies for designing and implementing diversion programs for pre- and post-consumer food, as well as compostable service ware, and soiled paper. NERC's demonstration project focused on reuse (food donation) and diversion through composting, however this guidance document may also be useful in other food scrap diversion methods, such as anaerobic digestion or as animal feed. Research and results from the project have contributed to development of this guidance document.

Getting Started: Pre-Event Preparation

Assign a Coordinator or Committee

Planning is crucial for success in diverting food scraps from the special event waste stream. The first step is to enlist an enthusiastic coordinator or committee to undertake the effort. Preparation for food waste diversion needs to start at the beginning of event planning. It is essential that the coordinator or committee work directly with the event manager to ensure a commitment to waste diversion. Start early to gain commitment from all stakeholders—event organizers, venue hosts, sponsors, vendors, municipal authorities, event promoters, venue employees, local solid waste staff, and service contractors (including cleaning services, haulers, and processors). Invite input and participation from stakeholders. Ensure that all stakeholders understand their responsibilities and are committed to making them happen.

Collection of compost materials is more difficult than collecting recyclables or trash. Events are fast-paced and hectic. Adding an additional activity and one that may be unfamiliar to many organizers could meet with resistance. Collection logistics that are not well planned and implemented will inevitably lead to failure. Involving experienced individuals in the planning and implementation of the diversion effort can help organizers anticipate potential problems so that if they occur they can be successfully addressed. Consider enlisting the help of local solid waste experts in the development and implementation of a collection plan, for at least the first year of your efforts.



Identify Materials to Collect and Estimate Volumes

The best way to determine the materials to collect for diversion is to find out what is being generated. Conduct a waste assessment of all event food vendors (kitchen staff, caterer). This assessment will determine the types of food waste, service ware, and packaging likely to be generated as well as the volume of each. See Appendix B for a sample vendor survey. Talk with each vendor about non-compostable service ware used and whether there is an alternative product that is recyclable or compostable.

Medium-to-large events should consider developing a “food waste management plan” (FWMP). A FWMP will detail the types and volumes of waste generated and outline the appropriate strategy for diverting food waste from disposal. See the FWMP template in Appendix C. Consult records of past event waste generation to determine volumes. If waste volumes are not available, consider asking vendors the amount of service ware used and food distributed. Venue management and food service staff or contractors at stadium and conference center events should be able to provide similar information. Look at the contents of waste collection bins, especially in the food service areas, dining areas, and other places where attendees congregate, to determine the approximate percentage of waste that is compostable.

Typical materials suitable for composting that are found at special events include:

- Food scraps: Pre-consumer (vendor prep waste/“back-of-house”) and post-consumer (attendee food wastes/“front-of-house”).
- Soiled paper: Napkins, paper (fliers, newspapers), paper products, waxed paper, and waxed cardboard. Paper products with a plastic coating cannot be composted.
- Compostable plastic flatware and dishware.
- Livestock manure and bedding.

Compostable material types and volumes will vary by the type of event. Catered events and conferences will likely have less paper and disposable service ware because reusable service ware is likely to be used. These types of events typically generate more food waste than events where attendees are buying food from vendors (or bringing their own). Food shows will have tremendous amounts of vendor prep and food display waste. A limited initial pilot diversion that focuses only on vendor food wastes or compostables from designated areas will help organizers prepare for full implementation of composting at subsequent events.

Getting Started

- Establish a goal for the event.
- Be sure that the goal is widely understood by vendors, staff, and volunteers.
- Establish strategies to reach the goal (a food waste management plan).
- Develop a budget based on your strategic plan.
- Determine ways to measure success.
- Many states and localities have recycling and waste reduction policies or regulations that require diversion from special events and/or that organics be sent to approved facilities. Contact your municipal or regional government for information prior to planning your event.

See Appendix A for a “Suggested Timeline & Checklist.”

Decide where the Compostable Material Will Go

Prior to determining the materials to collect for composting, arrangements must be made for a compost destination. Contact local farms or commercial compost operations to see if they are able to accept the materials. Check with local solid waste program staff or the event waste or recycling hauler for potential options. See Appendix D for tips on locating a compost operation. If composting is not an option, a pig or other livestock operation or farm with an anaerobic digestion operation may be able to accept collected food scraps. The operation that will accept the waste will make the final decision about what it can handle. It is important that event organizers and the compost operation are in full agreement about what materials to collect. Key considerations include:

- Verify the compostable materials acceptable at the operation. Are meat scraps and bones okay? How much grease is acceptable? Are liquids acceptable? Paper products? Waxed cardboard? Compostable plastics³?
- Discuss the types of containers that will be acceptable for collection. Can the compost operation accept materials in compostable bags? Do they prefer materials to be delivered in carts?
- Does the facility provide hauling services? In other words, can it come get the diverted waste?
- Find out the allowable types and amount of contamination—unwanted items, such as plastics. Are there any penalties for too much contamination?
- Is there a cost for processing the compostable materials? Is the operator willing to consider waiving fees in exchange for sponsorship recognition, a free booth, and/or company recognition on signage or containers?
- Event organizers should seriously consider a contract with the compost operation to ensure that the materials will be accepted and on the agreed upon terms and conditions. All agreed upon materials should be included in the contract, as well as allowable limits on contaminants. See sample contract language in Appendix E.
- Determine how manure and bedding will be collected and hauled for composting. Be sure to store animal waste away from concession areas; work with animal exhibitors to ensure proper waste management.
- Events in permanent locations, such as fairgrounds, might consider composting food and animal wastes on-site. Check with local solid waste authorities and health officials to determine if food waste would be allowed in on-site composting. Managing a site will require knowledge of composting techniques to ensure that paper, meats, and compostable plastics fully degrade and that odor and other problems do not develop.

Food Rescue

Food shows, banquets, and similar events will likely generate significant amounts of leftover, edible food and other items that can be donated. Contact food banks or similar agencies in advance of the event to find out specifically what is acceptable and how it will be collected.

Responsible food donation is protected under the [“Good Samaritan Food Donation Act.”](#)

³ Many compost operations have difficulty processing compostable plastic service ware. Talk at length with the compost processor before suggesting acceptable items for vendors to use.

Determine How Materials Will Be Transported to the Compost Operation

Once the compost operation is identified, transportation of the collected materials to the site must be arranged. Compost materials are heavy, so be sure to set-up a collection system that limits the amount of handling and movement. Also consider how materials will be lifted into the collection vehicle. Verify that the compost operation can accept the way in which you expect to deliver the collection carts or bags.

- Ask the compost operator if they provide collection services or can recommend a company that will provide the service.
- If services are not provided by the compost operator, check with the company that hauls trash or recyclables for the event. Negotiate a hauling contract that includes all hauling services to reduce costs.
- Regional or local solid waste programs may provide these services. If not, they may know of a hauler able to transport collected food scraps to the compost operation.
- Smaller events may be able to ask volunteers or staff to haul the compost to the designated composting facility.
- Events at permanent venues, such as conference centers and stadiums, should check with the facilities manager to identify existing contracted service providers that may be able to haul the collected compostable materials.
- When evaluating costs, consider that composting and recycling significantly reduce waste disposal needs. Negotiate with the waste hauler for a smaller trash dumpster, reduced trash services, and rates. Events implementing zero waste may wish to consider self-hauling, if appropriate.
- A contract should always be used. The contract will clarify delivery times for containers, dumpsters, pick-up schedule for materials, costs, etc. It is important to clearly define collection times in order to reduce the potential for illegal dumping and contamination of collected materials. See sample contract language in Appendix E.

Choosing a Hauler

- What are the hauling costs?
- Will they be willing to haul at no charge in exchange for sponsorship benefits?
- Do they provide containers? Type? How many?

See additional "Tips on Locating and Choosing a Hauler" in Appendix D.

Costs

Food diversion will help events avoid disposal costs; however, it is important to anticipate some new costs. New costs may include fees for hauling collected materials and compost processing, compost collection containers, and signage. Working with local solid waste staff will provide the best opportunity for devising a system that is cost-effective for the event. Negotiating with haulers and the compost processor to exchange services for sponsorship benefits will also help to control costs. Full implementation of zero waste will significantly reduce waste and virtually eliminate waste from many events, thus helping to balance any additional costs associated with food waste diversion.

Implementing the Food Waste Management Plan

Working with Vendors/Concessionaires/Caterers

Having a well-designed and efficient food waste diversion plan that clearly explains the role that vendors play will make it more likely that they will support the program changes.

Begin notifying vendors about event composting plans as far in advance as possible. Consider discussing the plans with vendors the year before it is to be implemented. Make composting a required part of the vendor contract. Clearly outline the responsibilities of the vendor. For example, if vendors will be required to use only compostable service ware this should be stated in the contract. See sample language in Appendix F.



Invite vendors to participate in a “food waste diversion pilot,” in which prep wastes are collected in the first year, with full implementation of food waste diversion (to include collection of attendee wastes) to occur the following year. This will benefit the vendors by helping them to prepare for the program changes, and it also benefits event organizers with a “practice” run that will provide a better sense of the wastes generated and tasks involved with event-wide implementation. Food shows and stadium events may want to consider collecting only vendor generated compostable materials for an extended period in order to work out any kinks in the system before adding attendee participation into the diversion program.

Other important strategies for success include the following:

- Provide an information sheet about the composting plans to all vendors in their registration packet. Discuss the benefits to vendors, expectations, guidelines, etc. Also present the information in all follow-up communication with vendors.
- Ask or require vendors to use paper and compostable service ware. Provide a list of acceptable products and supplier information. Include a list of commonly used service ware products that are no longer acceptable, such as polystyrene (Styrofoam™) and plastic cups or utensils. An easy way to encourage vendor cooperation is for the event committee to purchase compostable utensils and sell them directly to the vendors. This helps reduce costs through bulk purchasing.
- Ask or require vendors to sell beverages in recyclable containers (aluminum, plastic, or glass bottles). Reduce waste by asking vendors to serve beverages in the original containers (for recycling).
- Adopt an event-wide prohibition on the use of non-recyclable plastic or polystyrene service ware or utensils.

- Invite vendors to make their role in the event as waste-free as possible. Discuss additional waste reduction options for food and food service ware. This could include the use of finger foods and serving condiments in bulk. Encourage vendors to practice reuse of cooking and serving/display dishes, signage, etc.
- Be prepared to work with vendors to find creative packaging for items like cotton candy, candy apples, bakery items, etc., including the use of parchment paper or wax paper instead of plastic wrap. Most of these food items are consumed at the event, so minimal or “no packaging” should be realistic. Straws, hot cup lids, and similar items may need to be eliminated or switched to compostable alternatives.
- Provide compost and recycling collection containers for vendors (caterer/kitchen staff prep area) and a collection system for vendor use. Ask vendors to break down cardboard and set it aside for pick-up by event staff or volunteers.
 - Consult with local health officials about placement of compost bins in food vendor booths.
 - Work with vendors to alleviate space concerns they may have about a bin in their booth (or prep) area.
 - Assign at least one dedicated volunteer/staff to work with vendors, particularly around the start of the event to provide vendors with an overview about the composting program, troubleshoot and answer any questions, and to monitor vendor compliance.
- If appropriate for the event, arrange for the collection of unserved, non-perishable food and other usable items to food banks, soup kitchens, or shelters. Inform food vendors about the opportunity and which items are acceptable.
 - Catered events, especially buffets, as well as food shows, will generate larger volumes of food and other items (napkins, service ware, etc.) suitable for donation.
- Ask vendors to inform patrons that food is being served on compostable service ware and can be placed along with food waste in the proper receptacles.
- If vendors will be dispensing drinks “on tap,” consider selling event souvenir cups for use by attendees. Provide cups free or offer a discount on drinks when the souvenir cup is used. Provide collection bins (at exits and near beverage vendors) for collection of the cups if attendees do not want to take them home (donate the cups to a charitable organization).
- Be sure to require all vendors, not just food vendors, to abide by the event rules for using only compostable service ware. Many vendors will use portion or sampling cups and utensils to allow attendees to sample their products. If not compostable, these items will contaminate the collected materials.



CUESA Ferry Plaza
Farmers Market
(San Francisco, CA)

- Events held in permanent venues, such as food shows, conferences, and annual meetings, should consider investing in reusable, washable service ware and display containers. Event organizers can also consider renting reusable service ware.
- Consider requiring vendors to haul away their own trash. This will encourage them to recycle and compost fully. If the event is disposing of vendor waste, be sure to review disposal requirements with them to ensure that trash does not end up in the compost or recycling collection containers.
- Contact a rendering company to remove grease from concessionaires or require concessionaires to haul it away for proper handling.
- Work with vendors to ensure that any special wastes, such as hydraulic fluid, motor oil, or batteries, are handled properly.
- Monitor vendor compliance throughout the event and remind them of the importance of composting and recycling.
- Recognize vendors (with ribbons, prizes, signage, and free publicity) who participate correctly in the composting and recycling program.
- Events with on-site kitchen staff or a contracted food service provider or caterer, such as stadiums, sports events, conferences, etc., can exercise greater control over making changes in service ware and packaging, as well as in collection options.

On-Site Collection System

A food waste diversion system should be a parallel system to the event trash (and/or recycling) collection. Having food vendors all in one area will make collection of compostables easier; especially if staffing for bin station monitoring is limited.

Signage

Signage is crucial for ensuring that food wastes and other organics are successfully collected. It must be immediately effective in order to gain attendee attention. Many event attendees will be unfamiliar with what is compostable. Compostable plastics will be especially confusing to most people. Proper signage will help to educate attendees about what is compostable and what is not, as well as help to ensure the proper separation of materials. Signage should be placed both at bin stations and on the collection bins themselves. Signage also provides an opportunity for sponsor advertisement, especially for haulers or compost operations offering free or discounted services.



Strolling of the Heifers (Brattleboro, VT)
Courtesy of Windham County Solid Waste District

Types of signage to consider include:

- Banners or flags.
 - These can be very effective for helping attendees locate bin stations. Post these high so that they can be seen from a distance.
- Signage on posts next to the collection containers. Use arrows to point to the proper container for recycling and composting.
 - “Compost Here” and “Recycle Here”
 - Place signs behind the bin stations just above eye level so that event attendees can easily see them.
- Ensure that all bins are marked with signage on the top and on all visible sides.
- Make bin signs big, bright, and easy-to-read.
- Keep signs simple and consistent throughout the event (same color, size, message).
 - “Food scraps, soiled paper, compostable plastics ONLY.”
 - “No trash.”
 - Consider printing signs in multiple languages, as necessary, for targeted attendees.
- Solicit sponsors for signage.
- Make signage durable, reusable, lightweight, portable, and weatherproof.
- Place photos, images, or samples of vendor packaging and service ware on bins.
 - Placing samples on the bins or above them on signs, can assist attendees in easy identification of what goes into the bins.

2-Bin (Compost & Recycling) or Zero Waste System

With the 2-bin or zero waste system, few or no trash containers are provided. Instead, only composting and recycling bins are provided throughout the venue. This system will work most effectively if all vendors are required to use compostable and recyclable service ware and utensils; if attendees are less likely to bring outside food and packaging into the event; and, where there are sufficient volunteers or staff to monitor the bins. Additional tips include:

- Limit the number of collection stations to reduce monitoring and material collection requirements. Place stations in food vendor areas, attendee gathering and sitting areas, and other areas of high waste generation.
- Trash bins are only placed in restrooms or next to portable toilets. Consider having a baby changing area or table near portable toilets or restrooms with a designated waste



Garlic and Arts Festival
(Orange, MA)

container for disposable diapers. If outside food and beverages are brought to the event, consider placing a trash container at entrance gates (and prohibit non-compostable and non-recyclable items from being brought in).

- Vendor packaging (“back-of-the-house”) and other materials that are not compostable or recyclable (such as plastic film, polystyrene trays) will have to be handled either by requiring vendors to remove these materials or by providing trash collection just for vendors.
- Provide special purpose buckets or containers for cigarette butts and gum.

3-Bin System (Compost, Recycling, & Trash)

With the 3-bin approach compost collection bins and recycling bins are placed next to trash cans. This system works well for catered events where staff bus tables (and have control over how materials are sorted), as well as at stadium, food show events, fairs, and similar venues where non-compostable service ware is likely to be more prevalent or where attendees can bring in outside food and other items.

- Consider color-coded bins (or lids)—different colors for compost, recyclables, trash—otherwise distinguishing the different bins. Color-coded bins work especially well for large venues, such as sporting events.
- Collection logistics will be similar for each waste stream.
- It is important that compost collection stations be monitored in order to reduce contamination. If necessary, limit the number of stations with compost collection bins to reduce monitoring and material collection requirements. Place compost bins in food vendor areas, attendee gathering and sitting areas, and other areas of high waste generation (e.g., stage and entertainment).
- Venues with existing stand-alone waste receptacles should consider ways to integrate these with composting (and recycling).



Marymoor Park
(King County, WA)

Containers

Compost collection container options vary widely in terms of cost, appearance, and ease of use. Check with the hauler and processor of materials to see if they will provide containers. Be sure to check local health and safety regulations that may apply. See Appendix G for additional options.

- Wheeled carts (“Toters™”; varying sizes from 20-to-96 gallon).
- 5-gallon buckets or tubs.



- Built-in (permanent) containers.
- Regular trash bins or barrels.
 - Retrofitted cover, made from wood or cardboard, with hole.
 - Hold an art contest to decorate the containers.
 - Wooden, metal, or plastic structures can be built around bins to contain them and to make maneuvering easier.
- Waxed cardboard boxes. Check with the compost processor to make sure these are acceptable.
- Regular cardboard boxes lined with compostable bags.

Stadiums, hotels, or similar venues might consider permanent containers that match the décor of the venue.

Additional equipment and supplies:

- Compostable bags, if necessary.
- Litter pick-up sticks (“grabbers”) and a shovel and rake for clean-up.
- Good quality disposable gloves.
- Hand washing area, sanitizing solution, and/or wipes.
- Wheeled cart, wheelbarrow, golf cart, etc.
 - Medium-to-large sized events (or ones spread over a wide area) should have a wheeled means to haul collected compostables to the staging/storage area.

Location of Bin Stations

Careful planning for the location of the bin stations is important. If an event map is published or posted, be sure to note stations on the map. Larger events should consider preparing a map with stations and service area/staging areas (see below) for volunteers and event staff.

- Place compost collection containers next to recycling and trash cans (if using a 3-bin system).
 - If not using a 2-bin or zero waste system, where vendors are required to use only compostable service ware, compost collection containers should be adjacent to trash barrels in order to reduce contamination problems.
- Make sure the stations are convenient and visible.
 - High traffic areas, including main entrance/exit areas.
 - Vendor and concession areas.
 - Attendee gathering areas, such as eating areas, performance/stage areas, etc.
- Monitor bin usage during the event and adjust locations (or add extra bins) if necessary to cover high use areas.

Site Map

Include in the site map:

- Bin station locations
- Food vendor area
- Other vendor areas
- Eating areas, designated and non-designated
- Main landforms, buildings
- Stage, competition area, or other attractions
- Toilets/portable toilets
- Public entrances and exits
- Location of service area (compost, recyclables, and trash collection/pick-up area). Include hauler access road.
- Location of staging areas (temporary storage areas)

Collection Logistics

Collection of compostable materials will be similar to the collection of recyclable materials.

- Consult the hauler when you are developing the collection logistics. Inform the hauler ahead of time of any changes to the logistics.
 - Have a contact number for the hauler (or driver) for use during the event in case unexpected circumstances arise.
- Determine the number of volunteers/staff needed to monitor each bin station. Work closely with the volunteer coordinator or staff manager to ensure sufficient staffing.
 - Will there be sufficient numbers of staff/volunteers to monitor all bin stations? If not, consider limiting compost collection containers to the food vendor area and primary attendee gathering areas.
 - Ensure full coverage of bin stations nearest the food vendors and in highly frequented areas, as well as during highest attendance periods.
 - Assign a floater to monitor bins in less frequented areas.
 - Will the bin monitors be responsible for emptying the full containers? Or, will “floaters” empty full containers or swap empty carts for full ones?
- Plan for the time it will take to transport full carts (or bags) to the service area (or staging areas).
- If container liners are being used for collecting compost, the full bags will need to be removed and transported to the service area. If container liners are not in use, smaller compost containers can be used and emptied into a larger container or cart for transport to the service area. Or, if larger carts are used in the bin stations, full carts can be taken to the service area and swapped for empty ones.
 - Exchange full bins or remove full bags at appropriate frequencies to avoid overfilling.
 - Plan for peak periods (lunch and dinner) and empty nearly full bins or bags in advance.
- If large carts (such as 95-gallon) are provided by the hauler, plan a system so that the hauler can easily move through the venue after hours to pick-up full carts. This size cart may be too heavy to roll when full. Instead, these could be placed in central locations (service or staging area) and smaller bins used at the bin stations. Contents from these smaller bins can then be transferred into the larger carts.



Rentschler Field, University of Connecticut Stadium (East Hartford, CT)
Courtesy of the Sodexo Company

- Determine how full bags or carts will be transported to the service or staging area. Is there a larger cart or wagon available to move full bags? Can full carts be easily wheeled to the service area? Is a motorized cart available for hauling?
- Monitor compost (and recycling) containers for correct usage during the event and take action to solve problems.
 - Place additional carts or bins in frequently used locations or empty them more frequently, as necessary.
- If the event area is secure, set up bin stations the day before. If set-up is to be the day of the event, start early to make sure all stations are in place, bags in containers, and signs and banners in place.
- If liner bags are used, ensure that collection volunteers/staff can distinguish between compost, recyclable, and trash bags (if used). Colored masking tape works well for labeling.
- Consider tagging full carts and rolling them to an out-of-the-way place (perhaps behind vendor booths or in predetermined “staging areas”) for temporary storage until the carts can be taken to the service area or collected by the hauler. This system works well for larger events and during peak crowd periods.
- Determine how the compostable materials will be hauled from the event to the compost facility.
 - Will the hauler provide a dumpster?
 - Can a collection vehicle be parked on-site for easy storage of full compost carts (such as a box truck with a lift) or full bags (such as a rear loader-type vehicle)?
 - Will full carts be collected directly by the hauler?
- Remove all compost materials from collection bins at the end of each day and move them to the service area or alternatively, swap out the full carts with empty ones.
 - If the event runs for more than one day, secure collected compost materials in a building, collection vehicle, or collection dumpster to prevent animal intrusion.
 - Set the carts up (with clean liners, if used) for the next day. Ensure that signage and bin labels are in place.
- Determine, in advance, how carts (or bins) will be collected at the end of the event.
 - Will full containers be placed on a collection vehicle for hauling to the compost facility?
 - Will contents be emptied into a dumpster and empty containers placed in a pick-up location or on a vehicle, as arranged with the provider of the containers?
 - Will the hauler move through the event (after attendees are gone) and pick-up full bags or empty (or collect) full carts?
 - If bins or carts are owned by the venue do they need to be collected for storage?
 - Do bins or carts need to be washed prior to collection/storage?
 - Is breakdown or stacking of bins required?
- Can dumpsters or collection vehicles be removed on a weekend or evening? If removal will not occur until Monday morning, is the vehicle or dumpster area secure from illegal dumping?
- Make contingency plans for collecting full carts of compost prior to the end of the event, or for a dumpster swap, if more compostable materials are generated than anticipated.

- Have plans in place for the inevitable—volunteers not showing up, collection bag breakage, or carts tipping over and contents ending up scattered on the ground, etc.
- Yellow (cooking) grease collection needs to be determined in advance of the event. Do vendors haul their own fry-o-lator grease or is this service provided by the event?
- Food shows will need to provide special collection containers for liquid wastes.
- Stadium, conference centers, and similar venues would benefit from phased integration of food waste diversion and recycling. Consider working with venue management to use the event as a pilot for permanent expansion to the entire venue.

Arrangements for Waste Generated at Vendor Food Booths

- Provide each food vendor with a collection bin or cart to have at their booth or preparation area (“back-of-house”).
 - Check with Health Code/fire safety regulations for bin requirements and placement.
 - Space constraints may be a concern; work with vendors to accommodate their needs.
 - Small buckets, 16-gallon “Slim Jim™” containers, or similar sized containers work well.
 - Small containers can be emptied into larger wheeled collection carts. Place these larger carts in central locations for several vendors to share.
 - Label all collection bins with “what’s acceptable” and “what’s not.”
- Provide information to vendors on the location of compost bins in which their prep buckets can be emptied.
 - If these carts are located behind vendor booths, be sure to label the bins and consider placement of the bins to limit contamination potential by event attendees. Turn cart lids away from easy access by attendees.
- Assign at least one volunteer/staff to the vendor area to distribute the vendor collection containers, educate vendors about what goes into the bins, answer any questions vendors may have, troubleshoot, and to monitor the bins to make sure that contamination does not occur. The volunteer can also assist in the collection of cardboard at booths.
 - Vendors will typically not be familiar with composting, so providing a volunteer resource to assist will help gain vendor cooperation and support.
 - Much of the preparation food scraps and cardboard will be generated before the event actually begins, so prepare for early emptying of full carts.
 - Ensure that there is sufficient volunteer coverage to prevent vendor carts from overflowing. Vendors who encounter full bins or other problems with food scrap collection will be reluctant to participate in subsequent years.
 - Designate an event organizer or staff to speak with vendors who are not in compliance with event requirements to use only compostable or recyclable service ware and utensils. A decision will need to be made immediately on how best to prohibit these items from use so that the compost collection is not contaminated.



- Decide whether to require vendors to remove all non-recyclable or non-compostable waste at the end of the event. Alternatively, provide vendors with information about how to dispose of their trash. Consider requiring a deposit by each vendor, which will be refunded upon acceptable completion of waste separation.
- At the end of an event, the primary goal of all vendors is generally to leave the premises as soon as possible. Assign one or more volunteers to monitor the vendor area, assist vendors with collection of compostables, and to ensure that vendors do not contaminate the compost collection carts or leave trash behind.



Service Area Description

The service area is the predetermined location where the collected compost materials (and recyclables/trash) are stored until removed by the hauler. This may be an area for collection vehicles or dumpsters; alternatively, it could be a holding shed or pen where materials can be later removed for hauling to the compost processor. Permanent venues, such as sporting arenas and conference centers, may have dock space or space in a parking area for a compost collection dumpster.

- The service area needs to be accessible to volunteers/staff who are hauling full bags or carts.
 - Ensure that full carts or collected bags can be maneuvered through crowds to the service area.
- It should be out of the way so that it is not easily viewed or accessed by event attendees or the public. Limit access in order to reduce contamination potential.
- The path to the service area must be accessible in inclement weather.
- Discuss the proposed site with the hauler to determine that it is accessible by the collection vehicle.
- It can also serve as the area where volunteers meet and pick-up bags, litter-sticks, gloves, etc.

Staging Area

If the event site is large or if crowds may hamper movement of materials, designate a “staging area” (prior to the start of the event) to store full bags or containers of compostables until they can be moved at the end of the day to the service area or removed for hauling to the compost facility. Make sure compost materials are secure against animal intrusion. Larger events may need two or more staging areas.

- A shed, an area behind a building, or behind vendor booths, or even under a large tree can serve as a staging area.
- Keep trash bags, recyclable bags, and compost bags separate in the staging area. Label each bag with colored tape or use different color bags, if necessary to prevent contamination.

Staffing/Volunteers

Staff and/or volunteers are essential to the success of an event's composting efforts. Having sufficient staff/volunteers will ensure that the right materials are collected and that attendees and vendors have a positive experience. Duties for compost collection are different from those for trash and recycling. Staff/volunteers should have a basic knowledge of composting or at least a desire to learn about what is compostable and what is not. Compost monitors must be willing to “speak-up” to attendees and vendors to prevent contamination of the bins. Additionally, staff/volunteers will be required to pull out contaminants from the collection bins—a potentially messy task that may not appeal to everyone!



SolarFest
(Tinnmouth, VT)

If volunteers are used for the event, work closely with the volunteer coordinator. Encourage the coordinator to ask local solid waste or environmental groups to provide volunteers. Other possible sources of volunteers include college students (often environmental studies instructors will provide extra credit to students for volunteering), recreational groups, youth groups, church groups, scout troops, and high school groups. Foster volunteer participation by offering free event passes, t-shirts, free or discounted meals, or other promotions, such as reusable beverage cups/mugs or recycled canvas bags. Volunteers also benefit from the positive recognition associated with reducing waste at the event.

Staff/Volunteer Needs and Duties

Ideally, there should be at least one person dedicated to each bin station during the entire event. If bins are monitored regularly there will be fewer problems with contamination. Attendees will find it helpful to have someone to speak with and to clarify what items go where. Remember, attendees come to have fun, not to have to figure out how to sort their food scraps and service ware.

Primary Duties Include:

- Monitoring the stations to ensure that event attendees separate materials properly.
- “Talking compost” with attendees. Station monitors should take the opportunity to speak about composting with event attendees and show them how to separate wastes for composting and recycling.
- Keeping the bin station area clean and neat and monitoring bins to ensure that they do not overflow. Make sure signage/samples remain in place.
- Emptying full bags or carts. Predetermine how containers will be emptied—by bin station monitors or floaters. At shift changes for staff/volunteers the individuals coming on (or going off) can be assigned the responsibility of emptying full containers.

- Establish a communication system so that station monitors know how to locate a floater or coordinator if containers are full.
 - Periodically check bags (or carts) to ensure that they do not get too heavy to lift or move.
- Dealing with contamination: if a compost container becomes contaminated, station monitors should carefully remove the unwanted items as quickly as possible to discourage attendees from placing more trash in the containers. If the compost container is completely contaminated with trash, the contents should be put into a trash receptacle at the service area.
- Working with vendors. One or more volunteers/staff should be assigned to greet vendors, provide them with a compost collection container, review vendor expectations for separating compostables and recyclables, troubleshoot, and collect cardboard.
- There should be additional staff/volunteers during the primary meal and activity periods to help move full containers or bags to the service area (or staging area) and to help with litter pick-up.
- Additional volunteers are also needed for clean-up and emptying bins (or bags) at the end of each day of the event (see below).
- Stadiums, conference centers, and similar venues will need to train staff or custodial contractors about moving the material from the collection bins to the compost dumpster. Work with managers to integrate collection training as a regular aspect of employee training.

Event Cleanup

At multi-day events, plan to have enough staff/volunteers to help with the collection of compostables and recyclables at the end of each day. Once vendors leave at the end of the event, there will also be large volumes of compostable and recyclable materials.

- Assign staff/volunteers to specific event cleanup areas.
- Have individuals systematically remove all bags (or full carts) of compostables to the service area or other designated areas for hauler collection.
- Track the number of trash, recycling, and compost bags (bins or boxes) to compare the volume of each generated at the event.
- Pick-up litter.
- Set-up for next day.
 - Make sure containers are lined (if required).
 - Signs and banners in place.
- Volunteers or staff will also be needed to move the collection bins at the end of the event to the area designated for pick-up by the hauler or provider of the bins. If bins need to be broken down and/or washed additional staff/volunteer time will be needed.

Staff/Volunteer Training

Thoroughly trained staff and volunteers are critical to program success. If there is a volunteer training in advance of the event or if training information is sent to staff/volunteers, include compost collection training. If not, provide training at the beginning of the volunteer or staff shift. Staff/volunteers will encounter questions from attendees, so be prepared to periodically check on staff/volunteers during shifts to assist and answer questions.

- Review the logistics for the event, including check-in location and shift period, the materials being collected for composting, the locations of collection containers and supplies (bags, gloves, etc.), assigned composting station(s), and where the full containers (or bags) of compostables go for storage (“service area”).
- Managing the Stations
 - “Talk Compost” briefing: Explain what composting is and why the event is composting, what materials are being collected for compost and what will happen to them, and what the compostable service ware is made from.
 - Monitoring the bins: Ensuring that materials are separated into the proper containers; emptying full containers (or bags), and other required duties.
 - Location of service or staging areas.
- Practice safety.
 - Volunteers and staff should wear gloves at all times when handling compostables. They should not stick their hands inside a container to press down on the material.
 - Any contaminants should be carefully removed, preferably using a litter pick-up stick.
 - Lift using legs, not back, and do not lift more weight than is easy. Food scraps are heavy; caution is necessary when lifting full bags or pushing full carts. Individuals with physical concerns should not be assigned the task of moving the materials.
 - Wasps may be attracted to the composting containers, depending on the time of year.
 - Volunteers with wasp or bee allergies should not participate in the composting collection or bin monitoring process.
 - Always be aware of the presence of stinging insects if picking out contaminants from collection containers or moving containers.

Communication and Promotion

Communicating the substance of the food waste diversion plan to all stakeholders is critical to successful implementation. There are three major stakeholder groups with distinct communication needs:

- Vendors
- Volunteers and staff
- Media and public

Vendors

Prior to determining the content and extent of communication needs with vendors identify the requirements that will apply to the vendors. For example, will vendors be required to only use recyclable and compostable service ware?

Effective communication strategies include:

- Providing key information in the vendor packet.
 - A letter describing the composting program and vendor responsibilities, such as only using compostable service ware and utensils. See Appendix H for a sample letter.
 - Composting (and recycling) guidelines and a site plan.
 - Ensure that materials sold/distributed by all vendors are consistent with the food waste diversion and recycling system. Advise all vendors of unacceptable products and provide information where preferred items can be purchased.
- Make the collection of compostable items (and recyclables) a component of any application for vendor participation; similar to vendor compliance with health regulations or other event requirements. If it is a part of the application process, vendor cooperation is more likely. It also places all vendors on equal footing, since it is a requirement of all vendors participating in the event.
 - Similarly, if a vendor fails to fully comply with the requirement to only use compostable service ware, participate in composting, etc., consider some sort of consequence. For example, vendors not complying will not be allowed to participate in the next event.
- Meet with each vendor individually prior to the start of the event.
 - Confirm that vendors know what will be composted (and recycled).
 - Provide collection bins for vendor use at their booth (or prep area). Bins should be labeled with what is and is not acceptable.
 - Review the bin station locations with vendors, including where to empty full compost buckets and recyclables.
 - Ask them to let customers know what and where to compost (and recycle).
 - Discuss the appropriate disposal method for non-compostable and non-recyclable wastes.
 - Remind them to break down cardboard for recycling and make sure they know that there will be volunteers to collect it or that they need to drop it off at a designated location.
- Monitor vendor compliance and re-educate as necessary during the event.
- Determine in advance how to deal with vendors who do not comply with the requirement for using only compostable or recyclable service ware and let them know the consequences. If possible, require the vendor to stop using the noncompliant service ware or perhaps purchase appropriate service ware from another vendor.

Staff and Volunteers

- Educate all staff and volunteers (not just those responsible for composting and recycling) about the food waste diversion plan. All staff/volunteers should be able to direct attendees to the compost/recycling stations (or alternatively to trash cans located near the restrooms or portable toilets).
- Make sure that all staff and volunteers know which materials will be composted.
- Provide a brief overview for the dedicated compost and recycling staff/volunteers: review what is acceptable and where the materials should go, the collection plan, where the service and staging areas are located, and other logistics, including who to contact during the event with questions or problems and *how* to contact them (for example, check-in at volunteer central).
- See volunteer training tips in Appendix I.

Media and Public

- Be sure to distribute press releases and announcements about the event's food waste diversion effort to all media outlets serving the region
- Post information about the goal to reduce waste and the event's plans for food waste diversion on the event Website and Facebook page. As the event gets closer use Twitter and other social networking to raise awareness and excitement.
- Seek community or celebrity endorsements for your efforts.
- Include the food waste diversion project and recycling information in event brochures, program, posters, fliers, and all other event information.
- Include information about event composting in pre-registration packets for participants in events such as fairs, animal shows, and road races.
- Make public announcements over the sound system during the event.
- Sporting events with electronic scoreboards can post announcements on these.
- Share waste prevention, food diversion, and recycling successes with the public by issuing press releases after the event about what was accomplished.
- Recognize "green" vendors by featuring them in a press release or case study in the local paper and on the event Website.

Evaluation

Being able to assess what you accomplished is important. It both demonstrates the value of your efforts, as well as provides you something tangible to boast about.

- Work with the compost collector or processor to weigh or estimate volumes of materials diverted through composting.
- If food or other items are donated, ask the recipients (such as the food bank) for estimated tonnages of the items received.
- Ask the compost processor if there were any problems with contamination.
- Take photos of the event composting, recycling, signage, vendor participation, and staff/volunteer efforts.

- Ask vendors, event organizers, and volunteers for comments about the composting effort.
- Prepare a brief report on the project including strategies used, amount of material diverted, comments and suggestions from participants and future recommendations. Share the results with event organizers. Prepare a press release. Post results on the event Website and Facebook page.
- Determine the amount of waste generated and calculate the composting (or composted and recycled) rate:
Composting rate = Amount composted (and recycled) / (Amount composted (and recycled) + Amount disposed).
- Use the NERC [Environmental Benefits Calculator](#) or the [EPA WARM tool](#) to determine resource use savings and greenhouse gas reductions from event composting and recycling.
- Send thank you letters or Certificates of Appreciation to waste reduction sponsors and vendors, along with copies of any news articles or event materials in which they are credited.

Conclusion

Around the world a growing number of special event organizers are “greening their events.” Diversion of food scraps from the special event waste stream is an essential component for “going green” and approaching zero waste. Events of all types and sizes have successfully implemented food waste diversion.

Special event organizers have a vital role in helping to demonstrate to the general public that composting and recycling can become a part of our everyday lives. The high profile and popularity of events whether in small towns or large cities provides fertile outreach and educational opportunity on sustainable handling of waste.

Following their participation in pilot events through NERC’s Food Waste Diversion Project, SolarFest and The Sodexo Company are continuing their composting efforts. More information about their food waste diversion programs is contained in the case studies at the end of this document.



Mansfield Festival on the Green, Connecticut
Courtesy of Connecticut Department of Environmental
Protection & Pollution Prevention View

Appendix A - Suggested Timeline & Checklist

One Year Prior to Event

- Identify contact person or committee responsible for food diversion.
- Formulate minimum waste or “greening the event” policy if not already completed.
- Conduct a vendor waste assessment to determine materials in the event waste stream.
 - Determine where and who generates the most waste (vendors, attendees, etc.).
- Develop a food waste management plan.
- Decide if a 2-bin collection system for compostables and recyclables will be implemented, or a 3-bin collection system for compostables, recyclables, and trash.
 - If a 2-bin system is used, trash cans must be placed in restrooms or by portable toilet areas.
 - Consider providing a baby changing area with designated bins for disposable diapers.
- Begin researching potential service providers for composting, recycling, and trash collection.
 - Work with hauler(s) to develop service contract that specifies materials to be collected and composted (as well as recycled). Negotiate contract.
 - Determine the type and number of compost containers that the hauler or processor can provide, if any.
 - Discuss whether the hauler will provide a dumpster, collection vehicle for the service area, or if collected materials will be stored on site for a designated collection time.
 - Determine when the service area will be serviced by the hauler.
- Research procurement opportunities (buying reusable or compostable service ware and other items).
- Begin communication with stakeholders, promotion and outreach opportunities.
- Identify vendor requirements:
 - Will vendors be required to only use reusable, recyclable, and compostable service ware, utensils, sampling items?
 - What arrangements are going to be made for vendor generated waste that is not compostable or recyclable? Will the event agree to handle this waste or will vendors be required to take all non-recyclable/non-compostable waste off premises for disposal.
 - Write clause in vendor contracts for distribution in vendor packets.
- Include waste management activities (bin stations and service area) in overall event site plans.
- Consider conducting a pilot waste diversion at the event to capture vendor (or caterer/kitchen) food prep wastes, with expansion to the entire event (post-consumer or attendees) the following year.

Six Months Prior To Event

- Determine items to collect for food waste diversion and recycling.
 - Consult with compost processor.
 - Consult with recycler.
- Include food waste diversion plan guidelines in vendor packet.
 - Identify acceptable reusable, compostable, and recyclable items.
 - Describe what is expected of vendors, including the use of only compostable products, if applicable.
 - Describe the collection procedure for compostable and recyclable materials.
 - Discuss disposal options for non-recyclable/non-compostable vendor generated trash.
 - Include a list of compostable product suppliers.
- Discuss additional ways for the event and vendors to reduce waste.
- Enter into contractual agreement with compost hauler and processor.
- Research the best equipment/containers for compost collection.
 - Consult with hauler/processor.
 - See if containers currently used for waste collection can be converted to compost and recycling bins.
 - Determine the number of bins needed.
- Select and obtain supplies (bins, compostable bags, gloves, etc.).
- Research food waste donation opportunities, if appropriate.
- Continue publicity and outreach strategies (i.e. information in event program, Website, posters, fliers, press release, etc.).
- Make list of staff/volunteer tasks, number of volunteers needed; discuss with volunteer coordinator.
- Develop or order signage for bin stations and signs or decals for bins.
 - Check with hauler or local solid waste agency to see what signage they may have available.

One-Two Months Prior To Event

- Continue ongoing publicity through Website, displays, media, and promotions.
 - Develop and send press releases.
- Finalize arrangements with hauler(s). Ensure contract in place, if not previously arranged.
 - Confirm bin/dumpster drop-off.
- Confirm purchase of compostable bags, gloves, other supplies.
- Send reminder to vendors.
- Create site map of compost and recycling bin stations and service area (as well as staging areas, if used) for hauler and volunteers.

Week Prior To Event

- Confirm food donation pick-up.
- Confirm delivery or pick-up of compostable bags, gloves, other supplies.
- Confirm hauler/processor schedule.
- Confirm signage.
- Confirm compost/recycling volunteers.

- Make notes for staff/volunteer training.
- Make script for stage announcements about the event composting effort.

Day Before Event

- Train staff/volunteers (can be done day of event).
- Discuss compost and recycling procedures with vendors (if on site, or first thing the morning of the event, if not).
- If possible, strategically place “bin stations”— compost and recycling bins (and trash bins, if used), as laid out in the site design. Post signage on bins and erect bin station signage. Plan to cover bins and signs if inclement weather is to occur.

Day of Event

- Set-up bin stations if not done the day before.
- Be aware that vendors will generate much of their cardboard and prep wastes prior to the start of the event. Make sure that vendors know to break down their boxes and either stack outside their booth for pick-up or leave at a designated location.
- Provide vendors with compost buckets for the booths or prep area prior to the start of the event.
- Remind vendors about the composting and recycling. If the event is a 2-bin event, make sure that vendor service ware and utensils are compostable. Check back throughout the event to ensure that vendors are abiding by the event waste reduction plan and to see if they need assistance.
- Provide volunteer training if not conducted previously. Review volunteer tasks, acceptable items, supply location, logistics, service area location & logistics, safety procedures, etc. Escort volunteers to their assigned location or area.
- Ensure that volunteers/staff are monitoring compost and recycling stations regularly.
- Make sure that containers are emptied adequately to prevent overflow. Regularly check dumpster/collection vehicle to ensure that there is sufficient room to hold all collected materials.
- Keep the event free of litter and the bin stations neat and clean.
- Promote composting and recycling throughout day with stage announcements.

After the Event

- Cleanup and litter removal. Empty all full carts. Set-up bin stations and prepare for next day, if event is not over.
- At end of event ensure containers are picked up, as prearranged with hauler or event organizer.
- Collect weight tickets and receipts from haulers/processors.
- Evaluate container locations, collection system, and other procedures to determine what did and did not work.
- Write-up recommendations for next event.
- Publicize results.
- Implement vendor “green recognition” program.

Appendix B - Sample Vendor Waste Survey

Instructions: Use the vendor food waste assessment survey to track waste generation at the event. Ask vendors and event organizers (or staff) questions about specific waste items, clarification of reuse, recycling, and disposal practices, and potential options for reuse and/or substitution to recyclable or compostable products. Use the chart below to list the types of wastes generated and record additional information.

Vendor Name				Date:
	Items	Compostable/Recyclable	Could be Converted to Reusable, Compostable, or Recyclable	Notes
Food & beverage items	<i>(List food & beverage items)</i>	<input type="checkbox"/> Beverage containers		
Cutlery	<input type="checkbox"/> Fork <input type="checkbox"/> Knife <input type="checkbox"/> Spoon <input type="checkbox"/> Spork	<input type="checkbox"/> Compostable plastic	<input type="checkbox"/> Plastic	
Serving	<input type="checkbox"/> Portion or soufflé cups <input type="checkbox"/> Plates <input type="checkbox"/> Bowls <input type="checkbox"/> Other	<input type="checkbox"/> Compostable plastic <input type="checkbox"/> Paper	<input type="checkbox"/> Plastic <input type="checkbox"/> Paper w/ plastic coating	
Cups	<input type="checkbox"/> Cold cups <input type="checkbox"/> Hot cups	<input type="checkbox"/> Compostable <input type="checkbox"/> Paper	<input type="checkbox"/> Plastic <input type="checkbox"/> Paper w/ plastic coating	
Trays/other packaging	<input type="checkbox"/> Aluminum serving trays <input type="checkbox"/> Aluminum baking trays <input type="checkbox"/> Plastic serving trays <input type="checkbox"/> Molded paper trays <input type="checkbox"/> Boxboard/mixed paper <input type="checkbox"/> Cardboard boxes <input type="checkbox"/> Non-recyclable packaging (chip wrappers, etc.) <input type="checkbox"/> Plastic wrap <input type="checkbox"/> Other:			
Other	<input type="checkbox"/> Coffee stirrers <input type="checkbox"/> Toothpicks <input type="checkbox"/> Straws <input type="checkbox"/> Napkins <input type="checkbox"/> Other:	<input type="checkbox"/> Wood <input type="checkbox"/> Compostable plastic <input type="checkbox"/> Paper	<input type="checkbox"/> Plastic <input type="checkbox"/> Paper w/ plastic coating	

Appendix C - Food Waste Management Plan Template

A Food Waste Management Plan (FWMP) can serve as a stand-alone document or as a component of a waste management or zero waste plan for an event. Each section below contains instructions and sample information. Organizers should plan to develop the FWMP one year in advance for implementation at the following year's event.

A food diversion pilot, collecting pre-consumer vendor (caterer or concessionaire) prep wastes (food scraps), could be done in conjunction with the FWMP or as a first step in implementation of the FWMP, depending on the abilities of the organizers, staff or volunteer availability, size, and type of event, and other considerations.

SECTION 1. EVENT SYNOPSIS	
Instructions: include background information about the event, organizers, vendors, etc.	
Name of Event	
Event Organizer	
Contact Name: Telephone/Email:	
Event Description	
Location of Event	
Duration and Date(s) of Event	
Venue Description (hotel, park, street, permanent facility, etc.)	
Predicted Attendance	
Number of Food Booths /Vendors or Catering/Kitchen Areas	
Number of Other Booths /Vendors	
Event Activities	
Existing Solid Waste Facilities, Services, & Practices	
Other Relevant Information (Number of years event has run, is outside food allowed in, etc.)	

SECTION 2. WASTE COMPOSITION, GENERATION, AND QUANTITIES

Instructions: Conduct a waste assessment using a vendor food waste assessment survey to track waste generation at the event. As part of the waste assessment, ask vendors and event organizers (or staff) questions about specific waste items, clarification of reuse, recycling, and disposal practices, and potential options for reuse and/or substitution to recyclable or compostable products. Talk with the vendors about composting and the potential implementation of composting at the event. Use the chart below to summarize the types of wastes generated. *Example in italics.*

	Reusable	Recyclable	Compostable	Could be converted	Trash
Food vendor “back-of-house” <ul style="list-style-type: none"> ▪ prep wastes ▪ grease 	<i>Example: Aluminum baking trays</i>	<i>#10 steel (tin) cans</i>	<i>Vegetable scraps</i>		<i>Plastic film Polystyrene trays</i>
Attendee “front of house” <ul style="list-style-type: none"> ▪ food wastes 			<i>French fries</i>		
Service ware <ul style="list-style-type: none"> ▪ utensils ▪ plates ▪ bowls ▪ hot cups ▪ cold cups ▪ portion cups or sampling cups 	<i>Metal serving utensils</i>	<i>Aluminum soda cans</i>	<i>Non-coated paper plates</i>	<i>Plastic utensils</i>	
Other items <ul style="list-style-type: none"> ▪ coffee stirrers ▪ toothpicks ▪ straws 			<i>Wooden coffee stirrer</i>	<i>Plastic straw</i>	
Other waste <ul style="list-style-type: none"> ▪ manure ▪ restroom or portable toilet (hand towels) ▪ diapers ▪ attendee waste from outside ▪ vendor signage 					

Expected Quantities (Weight and/or Volume) of Waste Based on Past Events, Estimates, or a Pilot Food Waste Diversion Project.

Instructions: The goal is to determine the number of compost collection carts (and/or dumpster size) needed to meet the anticipated volume of compostable materials to be collected. Consult past waste volumes or weights, if available. If records are not available, consider asking vendors the amount of service ware/packaging used. Do a visual review of waste composition in collection containers during the vendor waste assessment. Track the percent of compostable (and recyclable) generated. Record the number of times containers are emptied during the event, especially in food vendor and food court or dining areas. This will provide an estimation on the amount of compostable material.

- Food waste/soiled paper/compostables:
- Recyclables:
- Trash:

Which Areas During The Event Generate The Most Compostable Waste? When?

SECTION 3. FOOD REUSE (DONATIONS) & DIVERSION

Overall Diversion Goals:

Reuse (Donation)

Instructions: Food shows, catered events, and similar special events generate significant amounts of usable food and other items (napkins, plants, decorations, etc.) that can be donated to food rescue organizations and others. Arrange with local organizations in advance of the event. Describe how vendors will be informed about the food donation opportunity, acceptable items, etc. Talk with vendors at food shows and similar events about their reuse practices; these might present a model for other vendors.

Food and service ware reuse plans for event:

Acceptable food and other items for donation:

Other waste reduction plans (*Such as serving “finger foods” to eliminate the need for utensils*):

Event Food Waste Diversion System

Instructions: A food waste diversion system should be a parallel system to event trash (and/or recycling) collection. There are two primary options for a collection system that includes composting and recycling – 2-Bin System or 3-Bin System. Events with limited volunteers or staff may consider using a monitored 2-bin system in the food court areas and a 3-bin, non-monitored system in other areas.

2-Bin System (Composting and Recycling – “Zero Waste”): Only composting and recycling bins are provided throughout the venue. In order for this system to work most effectively, all vendors must agree to use recyclable or compostable service ware and utensils.

- Place trashcans in restrooms or next to portable toilets. These can be used for attendee generated waste such as disposable diapers and other items brought in from outside the event. Consider having a baby changing area or table near the restrooms/portable toilet area with a designated waste container for disposable diapers.
- Vendor-generated wastes, such as packaging and other materials that are not compostable or recyclable will also have to be handled by either requiring vendors to remove these materials or providing trash collection just for vendors.
- Provide special purpose buckets or containers for cigarette butts.

3-Bin System (Compost, Recycling, and Trash): A compost collection bin (and recycling bin) should be placed next to all trashcans if doing a 3-bin system (just trash bins near the restrooms/portable toilet area). This system works well for catered events where staff will have control over bussing tables (and thus can easily separate compostables), as well as stadium, food show events, and similar venues where non-compostable packaging is likely to be more prevalent.

- Consider color-coded bins or signs—different colors for compost, recyclables, trash. Or, otherwise distinguishing the different bins.
- Collection logistics would be similar for all waste streams.
- Venues with existing stand-alone waste receptacles should consider ways to integrate these with composting (and recycling).

Food Waste Diversion System Description

Instructions: Describe whether a 2-bin or 3-bin system will be used.

System Description

Name/contact information of compost hauler:

Name/contact information of compost processor:

Materials To Be Collected For Composting

Instructions: Work with the compost facility and hauler to determine acceptable materials for composting.

Number, Type & Capacity of Compost Collection Bins (or Bin Stations)

Instructions: Describe the number and type of bins to be used and how these will be obtained. *Example: Ten, 65 gallon carts provided by Bob's Hauling for collection of food scraps, soiled paper, and compostable plastics will be placed throughout the venue.*

Number:

Type:

Capacity:

How are containers being obtained?

When and where will they be delivered to the venue?

Where will they be emptied (staging area/service area)?

When will bins be removed at end of event? Who is responsible?

Compostable bags (type and amount, if needed). How are compostable bags being obtained?

Location of Bin Stations

Instructions: Describe the plan for placement of compost and recycling bins. Events that feature maps of the venue should locate bin stations on the map or consider developing a map for volunteers and service providers. *Example: Three bin stations will be located in the food court area.*

Compost Collection Logistics

Instructions: Describe how the compostable materials will be collected (volunteers, event staff, venue staff); where and how the collected materials will be stored, etc. Will full bags of compost be removed and transported to the service area or full carts transported? Will carts be swapped with empty carts? Or, do carts need to be emptied into a dumpster? Who is responsible (bin monitors, compost coordinator, assigned “roamers”); Will carts be emptied on a schedule or when full? *Example: Each bin station will have one volunteer assigned at all times during the event. A coordinator and assistant will roam during the event to provide breaks for volunteer monitors and to empty full bags of compostables and recyclables and transport to the service area. One roaming volunteer will also be assigned to the vendor area and to pick-up litter around the event.*

Describe collection method:

Clean up

Instructions: Describe the clean-up tasks. Number of people needed on the clean-up crew and how carts will be emptied. Where carts are to be taken or stored at the end of the event. Do carts need to be cleaned? How litter clean-up will be assigned.

Service Area

Instructions: The service area is the location of the collection vehicle(s), dumpster(s), or storage area, for collected compostable and recyclable materials. Describe the arrangements made with the hauler to collect the compostable materials. *Example: Will the hauler provide a dumpster for full bags of compostables or for emptying carts? Will a box truck or other vehicle be used to haul full carts? Will the vehicle be stationed at the event during its entirety? Do full bags of compost or full carts need to be stored until pick-up by the hauler? Can the hauler roam through the venue at the end of the event to pick-up carts or bags of collected material? Is the service area protected from unwanted intrusion by animals?*

Service area location and description of how materials will get from the event to the compost facility:

Number and size of dumpster(s) or collection vehicle description:

Contingency plan for full dumpster or carts (e.g., driver can be called early to pick-up full dumpster and swap :

Access for collection vehicle(s) and for transporting of full bags or carts to the service area:

Staging Area

Instructions: Larger events or events in venues with multiple food courts or dining areas may want to consider using one or more “staging areas” to temporarily store collected bags or full carts of compostables. Staging areas could be located behind vendor booths, behind portable toilet areas, or other out-of-the way locations. Collected materials could be transported to the Service Area at the end of the event or collected by the hauler after the event.

Food Vendors

Describe Vendor (Kitchen/Catering) Responsibilities in the Food Waste Diversion Plan

Instructions: Are vendors required to use compostable service ware? Is the requirement written in the vendor contract? Has vendor education been arranged (materials in the vendor packet; ongoing education, etc.)?

Describe Collection Arrangements for Vendor (Kitchen/Catering) Generated Wastes

Instructions: Will vendors be provided with a collection container at their booth or prep area. Who will be responsible for emptying the collected materials (the vendor, volunteers)? Where will the materials be emptied (compost/recycling stations, cart located behind vendor booths)?

Number and type of compost buckets needed for vendor booths (caterer/kitchen preparation area):

Arrangements for Other Vendor Generated Wastes (Cardboard, Recyclables, Grease)

Instructions: Recycling: This would be planned and implemented similarly to compost collection. Grease: Typically, vendors are responsible for transporting grease for proper disposal. If not, ensure proper disposal.

SECTION 4. COMMUNICATION AND PROMOTION

Instructions: Develop a communication plan that will be used to promote the food waste diversion effort to all relevant stakeholders. It should discuss the importance of food waste diversion to the event, the role and responsibilities of the stakeholders, how the communication will be conducted, etc. Who will be responsible for discussing the plan with the stakeholders – management, vendors, volunteers, attendees?

Event Organizers/Management Communication Plan *(Example: Have event organizers adopted waste reduction goals or a waste reduction policy? Are organizers and sponsors supportive? Have potential compost or zero waste sponsors been contacted?):*

Vendor Communication Plan *(Example: include vendor requirements in vendor packet):*

Volunteer/Staff Communication Plan *(Example: include recruitment plan, training instructions, and description of duties):*

Attendee Communication Plan *(Example: onsite outreach to attendees – MC and stage announcements, signage, posters, etc.)*

Public Relations and General Public Outreach

Instructions: Who will write media releases and issue to local media? How will the food waste diversion effort be promoted and included in ongoing event advertising? Include any additional promotion – kick-off event, local celebrity endorsement.

Container Labels/Signage and Bin Station Signage

Instructions: Describe the bin station signage, container signs/decals, how they are being obtained, are event organizers or volunteers making the signs, etc.

Signage and banner positioning:

Sign specifics:

SECTION 5. STAFFING/VOLUNTEERS NEEDS

Instructions: Provide an overview of staff/volunteer needs and duties (bin monitoring, emptying of full carts, clean-up, etc.). Include tasks to be undertaken by the compost coordinator.

Number of volunteers/staff needed for monitoring and collection during each day of the event:

How are staff/volunteers being enlisted? Who is responsible for getting volunteers?

Description of Duties

Number of Individuals Needed For Clean Up at the End of Each Day and Description of Tasks:

Training

Instructions: Describe how the training will occur (before the event, as volunteers/staff come onto shifts). Who is responsible for the training? What will be included in the training?

SECTION 6. EVALUATION

Evaluation Report

Instructions: Collect tonnage information provided by the hauler or processor. Use the NERC [Environmental Benefits Calculator](#) or the [EPA WARM tool](#) to determine resource use savings and greenhouse gas reductions from event composting and recycling. Compile a brief report, distribute, issue press release, and post on event Website.

Vendor Recognition

Vendor recognition initiated (Example: signage, certificates, press release, or article posted on event Website):

The [Food Waste Management Template](#) is available for download as a standalone Word document (http://www.nerc.org/documents/food_waste_management_plan_template.doc).

Appendix D - Tips on Locating and Choosing Haulers and Compost Processors

When selecting a hauler for compostable (and recyclable) materials, choose one that provides high-quality, dependable service. The hauler should be willing to work with event organizers to meet the needs of the event and the particular venue. Locating a hauler for compostable materials may be difficult as many haulers will provide recycling services, but may not collect compostable materials.

The best place to start searching for both a hauler and a processor of compost is with existing recycling or trash haulers. Ask the hauler if they know where there is a compost facility and if they are willing to haul the collected compostables to the facility. If the hauler(s) do not haul compostables or know of a facility, contact the local or regional solid waste office to see if they maintain a list or can provide hauling assistance. Finally, look on the Internet or in the yellow pages under "waste haulers," "garbage haulers," and/or "rubbish haulers." Local farmers may provide an option for both hauling and composting of materials. Check with farm organizations, farmers markets, etc. Small-to-medium sized events can consider consulting volunteers who may have trucks to haul collected materials to the compost processor.

Speak the Language

Before contacting compost operations or haulers, it is important to become familiar with their language. By using common industry terms communication is more effective and a comparison of responses can be made. The following are some key terms to know:

- **Tipping Fee** (also known as a disposal or *processing fee*) is the fee that the compost operation charges based on the amount (usually tons) of material that is to be composted (or tipped) at the compost operation.
- **Pull Charge** is the charge for removing the dumpster or container.
- **Rental Fee** is the cost of using the carts/dumpster for a specified length of time.
- **Cubic Yard** (or *yard*) is the most common unit for measuring the volume of compostables or recyclables. A cubic yard is equivalent to 202 U.S. gallons.
- **Tons** are the common measure of weight for materials – a ton is equal to 2,000 pounds.
- **Density** of waste refers to the weight per unit of volume (e.g., the estimated weight of food waste is 412 pounds/55 gallon drum).
- **Dumpster** (also *container, box, or can*) is a large container for storing compostables and recyclables outside. Dumpsters are sized by the cubic yard, and can range from 1-40 cubic yards.
- **Toters™** or carts are wheeled containers for collection and storage of compostables and recyclables, typically holding 20 - 100 gallons.

If a term used by a compost operator or hauler is unfamiliar, don't be afraid to ask for clarification.

Questions for the Hauler

- Does the hauler collect compostables, recyclables, and trash?
- Is a minimum amount required for a pickup?
- How is the charge for collection determined? What is the charge? How is the charge fixed (per haul, by volume, or a standard fee)?
- If the trash hauler and compost (and recycling) service provider are the same, can the current trash contract be re-negotiated to reflect a lower volume of trash? Are compost and recycling services offered at no-cost or reduced rates?
- Will the hauler provide services free in exchange for sponsorship opportunities, such as signage on collection bins and bin stations, Website publicity, etc?
- Is a contract required for service? What are the terms and contract duration?
- Can the hauler provide compost bins or carts for use around the venue?
 - How many?
 - What type?
 - Where will bins be delivered?
 - Is there a rental fee?
- How will the materials be collected and transported to the compost operation? Will the hauler provide a truck or dumpster in which to empty the bins or store the full bags of compostables during the event? Are there any operational requirements, including container location, security provisions, and maintenance.
 - A truck.
 - A dumpster.
 - Full bags need to be stored for collection at the end of the event.
- Does the hauler pick up after business hours and/or on weekends?
 - If so, is there an additional charge?
- Will the hauler assist in placement of the carts/bins around the event and pick-up of the carts/bins at the end of the event?
- Where will the dumpster/truck be located?
- What type of weight or volume reporting will the hauler provide?
- Is the hauler available to meet with event organizers to help determine the number of bins/dumpsters needed?
- Can the hauler provide references?
- Ask for the location and a description of the composting facility that will be used. (If event organizers have not directly contacted the compost facility.) Require documentation that the facility is an approved composting facility or proof of registration with a state-licensing agency as an agricultural composting operation.

Questions for the Compost Processor

- Types and quantities of permitted materials accepted for composting.
 - Are all food scraps acceptable? Including meat?
 - Is liquid acceptable? Are there limits on the amount?
 - Is grease acceptable? Are there limits on the amount?
 - Is soiled paper acceptable? Paper plates and cups? How about waxy cardboard?
 - Are compostable plastic items, including utensils, cups, etc. acceptable? (If compliant with BPI and ASTM compostability standards).
- What is the tipping fee? Will the processor consider providing free services in exchange for sponsorship opportunities?
- Is the facility able to weigh the materials or provide an estimate on volume?
- Briefly describe the composting process used at the facility (windrows, in-vessel, etc.).
- Is the facility permitted or agriculturally exempt? (Ask for documentation, as appropriate).
- Schedule of days and hours that the facility is open for deliveries.

Appendix E - Sample Language for Compost and Hauler Agreements

Processing of Compostable Materials

<Event, organizers, or venue> requests services for processing the following compostable materials: food scraps, soiled paper (napkins, paper plates, paper cups, and other paper packaging); waxed and wet cardboard; compostable plastic service ware (meeting [Biodegradable Products Institute \[BPI\]](#) and [ASTM](#) standards for compostability); renderings; and/or manure.

<Compost operation> agrees to process the delivered approved materials for composting:
<list materials>

Materials not acceptable include: <list materials>

Allowable contamination levels: <contamination levels>

<Compost operation> is a permitted compost facility (or agriculturally exempt):

<Compost operation> agrees to provide weight or volume of organic materials collected.

Hauler Agreement

Collection and Removal of Compostables

The contracted service provider shall:

1. Work with event organizers to ensure that collection systems in public and vendor areas are designed and managed to maximize the recovery of compostable materials, to include food scraps, soiled paper, and acceptable compostable plastic service ware.
2. Provide containers or carts for collection of compostable materials.
3. Provide a dumpster or collection vehicle for on-site storage of collected materials during the event. Or, alternatively, agree to pick-up materials at a predetermined location and time, as arranged with event organizers.
4. Deliver collected compostable materials to a designated compost operation for composting.
5. Submit a report to event organizers within one week of completion of the event which includes written evidence from the compost operation that material was accepted and the weight or volume of materials delivered for composting.

Appendix F - Vendor Contract Language

Our event is composting! All vendors are required to only use recyclable and compostable service ware and packaging for attendee use and participate in our event's composting and recycling program.

- All food must be served on fully compostable service ware. Petroleum based plastic, polystyrene, and other non-compostable utensils and service ware are prohibited. Vendors are encouraged to serve finger foods that do not require utensils and adopt other creative ways to limit service ware needs.
- All plates, bowls, cups, takeout food containers, other service ware, utensils, and napkins must be made out of approved compostable materials. This includes lightly coated or non-coated paper (no plastic coated paper products are acceptable). Acceptable, lightly coated paper products will be coated with a vegetable or compostable plastic that will flake off when scratched. Paper should easily rip by hand; this indicates that any coating should decompose readily.
- Acceptable compostable plastic items include: PLA plastic made from corn, potato starch resin, or bagasse made from sugar cane fibers. All compostable plastic items must be identifiable as compostable and be BPI or ASTM certified for compostability. These certifications help to ensure that the items will actually compost at a properly operated compost facility.

Acceptable compostable paper and plastic service ware products can be found at:

- [Biodegradable Packaging Institute \(BPI\)](http://www.bpi.org) (www.bpi.org) for compostable paper and plastics that meet their testing standards.
- [ASTM D6868 - 03 Standard Specification for Biodegradable Plastics Used as Coatings on Paper and Other Compostable Substrates.](http://www.astm.org/Standards/D6868.htm)
<http://www.astm.org/Standards/D6868.htm>
- For a sample list of acceptable service ware items at a compost facility visit: [Cedar Grove Composting](http://www.cedar-grove.com/acceptable/Accepted%20List.asp) (<http://www.cedar-grove.com/acceptable/Accepted%20List.asp>).
- All vendors must participate in our composting effort by disposing of food preparation wastes and soiled paper in compost bins provided to each vendor. Vendors are responsible for emptying food scrap bins into the larger, centralized carts. An event volunteer will review the locations with food vendors.
- Items for recycling include glass bottles, plastic beverage containers, and aluminum cans. These items should be placed in the event recycling bins.
- Flatten and stack all cardboard behind your booth and a volunteer will pick it up periodically during the event.

See the vendor packet for additional information on acceptable service ware options and recycling/composting information. Noncompliant vendors will be assessed a fine or not allowed to participate in future events.

Appendix G - Options for Compost Collection Bins/Carts

Consult with the hauler that will be providing the collection services to see if they have carts or other bins suitable for use. If the hauler does not provide containers, check with the local solid waste office or district.

Other options:

- Five gallon buckets, kitty litter buckets, or similar-type pails will work for low-cost compost collection containers. These are typically available at stores, farms, and food outlets at no or low cost. Volunteers or staff may also have access to buckets that they can save for the event.
- Venue or event waste containers can be converted into compost collection bins. The lid should be affixed so that it cannot be lifted. A hole about the size of a paper plate can be drilled into the top for people to discard their compostables. Alternatively make lids out of plywood, with a hole cut out in the middle. Be sure to paint the bin or otherwise distinguish it from recycling bins (and trash bins, if used).
- Waxed cardboard boxes or regular boxes, lined with compostable bags will also work.

If there is money in the budget to purchase compost collection containers, consider the following when you select collection containers:

- Is the container easy to use and will it encourage composting?
- Is it easily identified as a compost container?
- If the event is outside, will it stand up to wind, rain, high heat, or other environmental factors?
- Can the containers be collected by staff or volunteers easily? Will they be too heavy to be lifted or moved easily when full?
 - Carts on wheels (“Toters™”) work well for collection, however consider how the materials will be emptied from the carts into the service area storage dumpster or collection vehicle.
 - Some haulers will collect full carts on a truck with a lift and swap out with empty carts or be able to tilt and empty full carts into a collection vehicle.
- If using compostable bag liners, will the liners fit into the bins? Will the bags fit snugly around the rim so when materials are added the bag will not fall into the container?
 - Consider the weight of the bag when full. If the cart is too big and requires a large bag, this may be too heavy to lift from the cart when full.
- If appearance is important, will the container fit in with the décor (and trash and recycling receptacles) both aesthetically and physically?

Appendix H - Sample Vendor Letter

Dear Vendor:

The <event name> is dedicated to protecting our environment. Currently, we recycle cardboard and beverage containers. In an effort to manage our event to be even more environmentally-conscientious and reduce our waste disposal expenses, we are implementing a segregated collection of food and compostable service ware discards. The collected materials will be sent to a composting operation.

Food waste and food service ware comprise virtually all of the remaining waste generated at the event. To implement our composting project, vendor participation will be vital. In order to make composting feasible at the event it would be essential that vendors use only compostable cups, plates, and utensils. *Plastic-coated paper, Styrofoam™ (polystyrene), plastic utensils, plastic bags, or other plastics will not compost.*

To make our switch to composting successful, we ask that you please plan to assist us in the following ways:

- ✓ Do not to use polystyrene and other non-recyclable plastics.
- ✓ Serve beverages in aluminum cans and plastic bottles, or use paper or compostable cups (see the back of this sheet).
- ✓ Use only paper or certified compostable plastic service ware (plates, cups, etc.) and compostable utensils. See the list of product vendors on the reverse side of this sheet. Consider providing a “spork” instead of both spoons and forks.
- ✓ Consider selling food that requires minimal packaging (such as just a plate or napkin), foods that come with “edible wrappers,” such as burritos, or “finger foods.”
- ✓ Instead of individual packages of condiments (sugar, ketchup, cream, mustard, etc.), use refillable pump condiment dispensers or recyclable containers.
- ✓ Consider placing napkins behind the counter to be dispensed upon request.
- ✓ Do not provide straws or cup lids (or use compostable alternatives).
- ✓ Use wooden coffee stirrers, not plastic.
- ✓ Plan to break down (flatten) any cardboard boxes that you generate and set them outside your booth for recycling.
- ✓ Participate in our program by placing food wastes and soiled paper (such as paper towels, napkins, etc.) in the compost container provided. Place empty food and beverage containers in the conveniently located beverage recycling containers.

Acceptable compostable service ware and utensils:

- Lightly coated or non-coated paper (no plastic coated paper products are acceptable). Acceptable, lightly coated paper products will be coated with a vegetable or compostable plastic that will flake off when scratched. Paper should rip easily by hand; this indicates that any coating will decompose readily.
- Acceptable compostable plastic items include: PLA plastic made from corn, potato starch resin, or bagasse made from sugar cane fibers. All compostable plastic items must be identifiable as compostable and be BPI or ASTM certified for compostability. These certifications help to ensure that the items will compost at a properly operated compost facility.

Where to find information on compostable products

Check with your regular food service ware sales representative, chances are they sell acceptable compostable products.

Acceptable compostable paper and plastic service ware products and vendors can be found at:

- [Biodegradable Packaging Institute \(BPI\)](http://www.bpi.org) (www.bpi.org) for compostable paper and plastics that meet their testing standards.
- [ASTM D6868 - 03 Standard Specification for Biodegradable Plastics Used as Coatings on Paper and Other Compostable Substrates.](http://www.astm.org/Standards/D6868.htm)
<http://www.astm.org/Standards/D6868.htm>
- For a sample list of acceptable service ware items at a compost facility visit: [Cedar Grove Composting](http://www.cedar-grove.com/acceptable/Accepted%20List.asp) (<http://www.cedar-grove.com/acceptable/Accepted%20List.asp>).



Thank you for helping to make our event a waste wise one!

Appendix I - Volunteer Training Tips

Set-up: Make sure all stations are in place—recycling and compost containers; signs in place.

The Event Overview

Where to start: **The Service Area**

- Review the logistics for the event: the materials being collected for composting, the locations of collection containers, assigned station(s), and how to sort materials.
 - ✗ It is important that the recyclables and compostables do not get contaminated with trash.
 - ✗ All vendors should be using only compostable and recyclable packaging, service ware, and utensils.
- Practice safety. Gloves should be worn at all times when handling recyclables and compostables. Do not stick hands inside a container to press down on the recyclables or compostables. Carefully remove trash from collection containers. Lift using legs, not back and do not lift more weight than is easy.
- Wasps may be attracted to the composting and recycling containers. *Volunteers with wasp or bee allergies should not participate in collecting or transporting compost.* Volunteers need to always look for stinging insects before putting their hands inside a collection container or picking up a full container.

Managing the Recycling and Composting Stations

- Take the opportunity to talk about composting and recycling with event attendees:
 - ✗ Recyclables—cans, bottles, aluminum foil (clean).
 - ✗ Compostables—food, soiled paper, compostable plastics (utensils, cups, etc.).
 - The service ware and utensils are all compostable. The ones that look like plastic are not—they are made from corn starch, potato starch, or bamboo.
- Monitor the Stations. Keep them clean and neat. Make sure signage is in place.
- If trash is in any of the containers, carefully remove it (using litter pick-up sticks or gloves) in order to discourage attendees from placing more trash in the containers.
- Transport full carts of recyclables and compostables to the Service Area. Empty full recycling carts into the recycling truck. Switch out a full compost cart for an empty.
- Do not let the carts get too full that they overflow or get too heavy to move. After lunch, carts may start to get full so monitor closely.
- Check the trash cans near the portable toilets, periodically push the paper towels down so that the trash bags get as full as possible (use a stick to push down, not your hands!).

Event Clean Up

- Pick up any litter.
- Empty recycling carts into recycling truck.
- Return all compost collection carts to compost truck.
- Check vendor area for compostables and recyclables (including cardboard).

NERC | Northeast Recycling Council

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Food Waste Composting at a Special Event: Hallsmith Sysco Food Show Case Study, Manchester 2008



Written by Athena Lee Bradley, Northeast Recycling Council, Inc.

This document was made possible by a grant from the U.S. Environmental Protection Agency. For more information on recycling and composting at special events visit the [NERC Website](http://www.nerc.org) or call 802-254-3636.

Overview

The Northeast Recycling Council, Inc. (NERC) was awarded a US Environmental Protection Agency (EPA) New England Resource Conservation Challenge Grant to conduct food waste composting pilots at special events. NERC worked with events of varying types and sizes to demonstrate different methodologies for designing and implementing food waste diversion programs. For purposes of the project, materials diverted included pre- and post-consumer food, as well as compostable flatware, plates, packaging, and napkins. Assistance with integrating food diversion into existing recycling efforts or implementation of recycling was also provided, along with presentation of zero waste as a viable option.

Key Steps to Food Show Waste Diversion

- Commitment of event organizers.
- Cooperation of vendors.
- Sufficient staff or volunteers for end-of-event clean-up.
- Food donation opportunities.

The goal of the project was to assist event organizers to implement a sustainable food waste diversion program at their event and to serve as a model for other events.

The Event

Hallsmith Sysco Food Show Pilot Composting at a Glance	
Location	Radisson – Manchester, NH
Organizer	Hallsmith Sysco
Date	April 2, 2008
Estimated attendance	1,500
Vendors	160
Food waste & biodegradable service ware composted	1,750 pounds of pre-consumer food wastes, biodegradable paper and plastic service ware, soiled paper
Food Donation	1,670 pounds to the New Hampshire Food Bank
Materials recycled	None. The hotel had no recycling program. Hallsmith Sysco purchased recycling and composting containers for use at the Food Show. However, all materials placed in these containers were disposed as trash.
Compost hauler & processor	Earthtenders
Waste management	Hallsmith Sysco contracted with the Radisson to handle solid waste collection for the event. Small wastebaskets were provided by the hotel to all vendors for placement next to their tables. Large waste receptacles were located around the exhibit hall and emptied by hotel employees periodically throughout the day. Immediately following the close of the event hotel employees began clean-up of the hall. Vendors typically left items for disposal on their table or on the floor.

The purpose of the Hallsmith Sysco Food Shows is to provide an opportunity for its food brokers to display and sample food items, service ware, and other food industry products (e.g., paper and plastic service ware and janitorial supplies). The Manchester Food Show event featured 160 vendors, including food brokers, distributors, and manufacturers. Vendors tend to be the same or similar at all Hallsmith Sysco Food Show events.

Attendees of the events include hotel chefs and food service providers, restaurateurs, and others in the food service industries that are customers or potential customers of Sysco and its brokers. The Manchester event had approximately 1,500 attendees.

Food Waste Diversion Planning

Background

Hallsmith Sysco contracts with the Food Show host hotel or conference center (“venue”) to handle solid waste for the event. If the hotel recycles cardboard and other materials, Hallsmith Sysco encourages vendors to recycle. Vendors are asked to stack cardboard aside. At the end of the event, vendors are asked to remove trash to a designated location.

In the fall of 2007, the Massachusetts Department of Environmental Protection (MassDEP) initiated conversations with Hallsmith Sysco about the possibility of diverting food waste to composting at its food show events. Hallsmith Sysco enthusiastically supported the idea. MassDEP initially observed a regional Sysco Food Show event in Rhode Island in mid-March, 2008. MassDEP then initiated a compost collection at a small Cape Cod Food Show in late-March.

NERC was asked by MassDEP to conduct a food waste assessment and assist with a pilot food waste diversion project at the Hallsmith Sysco Food Show in Boston on April 17, 2008 as a part of its EPA grant project. As an Advisory Member of NERC’s EPA Project, the New Hampshire Department of Environmental Services (NH DES) was also approached about conducting a pilot food waste diversion project at the Hallsmith Sysco Food Show in Manchester on April 2.

Planning and Logistics

Planning for the compost collection was discussed via email and a conference call between MassDEP, NH DEP, and NERC. Based on the experience of the MassDEP composting effort at the Cape Cod Food Show, a basic plan for composting at the New Hampshire event was outlined. A quantification of the tonnages collected for composting from the Cape Cod event allowed for an estimation of the number of collection carts and compostable bags that would be needed at the larger Manchester and Boston events. An unanticipated waste collection need was for liquid wastes, such as leftover soups and beverages. Such containers were provided at the New Hampshire and Boston shows.

A timeline for collecting the organics was made, with particular attention to the removal of full compostable bags (from each vendor booth), as well as leftover samples and display foods generated at the close of the Food Show. Lessons learned from the Cape Cod

event also pointed to the need to assist vendors in removing display meats, fish, cheese, and similar items from packaging so that these items could be collected for composting.

The New Hampshire Food Bank has a standing arrangement with many hotels in the region and had contacted the Manchester hotel about collecting usable food and other items following the Food Show. Food Bank employees met with NERC and NH DES staff prior to the start of the Food Show to prepare for the end of the day collection.

Pilot Food Waste Diversion Project Implementation

Vendor Education

At the New Hampshire Food Show, NH DES and NERC staff visited each vendor prior to the start of the event to discuss the pilot project. A handout was provided to all vendors along with a compostable bag in which to place acceptable items. See Attachment A for the vendor education handout. Some vendors were aware of the specifics about the composting project due to the one-on-one education provided at the Cape Cod event by MassDEP staff. Vendors were visited periodically during the event to answer any additional questions, to remove full collection bags, and assist as necessary.

Containers and supplies

Due to space concerns and issues associated with booth appearance, it was determined to use compostable bags for the collection of the food waste. Vendors were provided compostable bags donated by Heritage Bags (a Food Show vendor) in which to place preparation scraps, leftover samples, de-packaged display foods, and paper towels, napkins, and paper plates. At least one bag was distributed to each booth before the event began. More bags were distributed throughout the day per vendor request.

Due to limited space in vendor booths, the bags proved to be a workable collection tool. They typically do not burst, as long as vendors were provided with sufficient quantities so that the bags did not become overfilled or too heavy to lift. Small containers with lids (5-gallon buckets) were distributed for collection of leftover soups, beans, and similar liquid products. Substantial volumes of liquid wastes are generated throughout the day at Food Show events; separate collection of these liquids in buckets proved essential so that collection bags did not get too heavy.

Materials Generated

Compostables generated at the event included a wide range of preparation food wastes, including vegetables; sampling leftovers, principally heated foods that went stale and were tossed out during the day, plus any remaining sample items left at the end of the day; and display items. A large quantity of soups and other prepared foods were leftover at the end of the day, along with display items. Display items ranged from small packages of cheese and fish to fifteen pound or larger display packages of meats. Display packages were primarily wrapped in plastic, thus requiring that they be opened in order to be collected for composting.

On-site Collection

Prior to the collection of food wastes at the end of the event, information was distributed to vendors about the opportunity to donate useable food items and clean service ware to the New Hampshire Food Bank. Volunteers from the Food Bank circulated through the event in advance of the food waste compost collection.



At the end of the event, staff from the NH DES, NERC, and Earthtenders circulated through the event with carts to collect the bags of compostable food scraps, display products, and other items for composting. Each staff person circulated down a row of vendors in order to cover all the vendor tables in a timely manner prior to the vendors completely breaking down their booths. An empty cart was also left in the middle of each row for vendors to place loose and bagged scraps. Carts were monitored to reduce the potential for contamination and to ensure that they did not get too heavy to move.

Ten, 65-gallon carts were necessary for the Food Show pilot. The carts were lined with heavy plastic. Gloves were also essential for each person collecting food scraps. A knife or sharp scissors was required to open packaged goods.

A dock was available for the Earthtenders collection truck; however the dock was higher than the truck. Earthtenders did not have a Tommy-lift gate to wheel the carts onto the truck or other means to get the carts onto the vehicle. It was very difficult to lift the heavy carts onto the back of the collection truck. The wastes were transported to Earthtenders for composting.

Food Waste Management Plan

In conjunction with the food waste diversion pilot NERC conducted a waste survey of each food vendor and interviewed the primary event organizer. Based on this information, NERC developed a [Food Waste Management Plan](http://www.nerc.org/documents/hallsmith_sysco_case_study_manchester.pdf) (FWMP) (http://www.nerc.org/documents/hallsmith_sysco_case_study_manchester.pdf) that detailed options for food waste diversion at food show events.

The waste surveys consisted of visual observations and records of the types of food served, service ware used, and wastes generated. Additionally, NERC staff spoke with food vendors and Sysco staff about the pilot food waste diversion, answered questions, and also discussed potential substitute options for plastic and other non-compostable or non-recyclable service ware used. General observations about needs, logistics, layout, etc. in order to design and implement a FWMP were also made.

Food Waste Diversion Results & Environmental Benefits

More than 1,750 pounds of food scraps, paper, and biodegradable plastics were collected during the Food Show pilot. An additional 1,670 pounds of food was donated to the New Hampshire Food Bank. This is estimated to be at least 90% of the food waste generated during the day of the event.

Observations

Initiative and Dedication of Hallsmith Sysco

To ensure success of any food diversion effort takes the commitment and dedication of the event organizer. Hallsmith Sysco was very cooperative and enthusiastic during the planning and piloting of the food waste diversion pilot. “Green” product displays by Sysco were a valuable component of the show.

Waste Reduction Practices Already Undertaken by Vendors

Food shows, by the very nature of the event and high number of food vendors, generate a significant amount of waste. Some vendors already followed waste reduction practices that could be adopted by other vendors.

Waste reduction practices observed:

- Many vendors had reusable glass or metal display dishes. Some vendors washed and reused plastic serving trays.
- Several vendors said that they could donate unopened cheeses (all on ice) to the Food Bank, but this response was not universal.
- Display mushrooms were presented in packaging (cardboard boxes) and used in cooking during the event; remaining display product could be donated to a food rescue organization.
- Many vendors reused unopened display packages of meat (on ice), bread, and other packaged items at future shows.
- Two vendors used specially designed, realistic looking rubber display food.
- Several vendors used bulk vegetables transported to the show in reusable trays.
- Some vendors reused condiment containers for reuse at future shows.
- One vendor displayed empty milk and other product cartons, instead of actual product.
- Several vendors reused aluminum baking pans.

Vendor support for the food waste diversion pilot

Vendor participation and support for the food waste collection was nearly universal. Vendors were appreciative of the opportunity to compost their food wastes. Most vendors cooperated fully in filling the bags with food discards during the event. Minimal contamination was observed during the collection of the compost materials. Several vendors had already begun switching to compostable plastic service ware and utensils. Many used uncoated paper for sampling. Several vendors also used napkins made with post consumer paper.

The rapid pace of vendor booth break down at the end of food show events presents some issues, particularly in terms of removing display food from packages. Many vendors did not remove packaging from display items, either leaving items out on their tables after breaking down their booths, or placing wrapped items into compost collection bags or collection carts. This will have to be addressed at future events.

Recommendations

Problems, Issues, Lessons Learned

- ▶ It was not possible to collect food waste from the day before the event during the pilot. Several vendors mentioned that they generate the bulk of their waste the afternoon before the actual event during display food preparation. Distributing collection bags the day before and asking vendors to place bags in a designated cart would be relatively easy to implement, with little additional staff requirements.
- ▶ Considerable reuse opportunity exists at the Food Shows, including food items, particularly produce, unused utensils, and paper products (such as napkins).
 - Some food banks or food rescue organizations have standing relationships with hotels and conference centers, however it is important that Hallsmith Sysco include in its contract with the Food Show venue host a provision that the venue contact a food bank or other food rescue organization. This will benefit Hallsmith Sysco and the venue host by reducing waste and provide valuable food and other items to the local food bank. It also serves as a positive image for Hallsmith Sysco and the venue host.
- ▶ Packaged display foods are a substantial volume of waste that is generated at the end of the event, For example, one vendor had 15 packages of salmon filets, another had ten pouches of fish to throw out, and another had seven, 5lb packages, plus a number of smaller packages of meat to discard. Meat and fish could not be given to the Food Bank. All of these packages were displayed on ice.
 - Some vendors reused meat packages for other food shows; this would be the best recommendation to reduce waste.
 - If vendors are not willing to reuse meat and fish packages, vendors need to be required to remove the packaging prior to placing the display items in bags for composting. Vendors may be resistant to doing this due to the time necessary. Perhaps assistance by Sysco or venue employees can be offered.
- ▶ Some vendors said that they would donate unopened cheeses (all on ice) to the Food Bank. However, other vendors refused to donate cheese to the Food Bank due to health concerns.
 - A clear “food show” policy on this issue would benefit both the food show and the Food Bank. Unless health regulations specifically prohibit the donation of unopened cheese, a policy would encourage more vendors to donate.
- ▶ Teas and juices come in small beverage containers. Some vendors poured these into pitchers and tossed empty containers into the trash.
 - Before the show opened one vendor had filled a 64-gallon trash barrel with 16-ounce plastic (HDPE) bottles.
 - If recycling occurs at the food show, it is important to ensure that beverage containers generated pre-show and during the show be collected. Perhaps recycling stations can be placed near the vendors with these products.
 - Perhaps bulk product can be used for sampling and individual serving packaging used just for display.
- ▶ Many vendors used plastic bowls for display and did not wash the bowls for reuse at other shows. At least one vendor did wash the display bowls for use at future shows. This would be a positive practice to reinforce.

- ▶ Some vendors use black plastic plates that look and feel like paper (Dixie brand). These items would be confusing in compost collection and may contaminate the material.
- ▶ Water bottles (for attendees) were packaged on cardboard trays wrapped in plastic. The boxes were placed in trash bins with plastic wrap still on them. If recycling is integrated into the event it would be important that staff placing the water bottles in the display barrels also remove the plastic wrap and place the boxes in a location for recycling.
- ▶ Single serving sauces, even if not opened, are considered “one-way” and tossed at the end of the show (typically PETE, 32 oz.). Perhaps vendors could be encouraged to designate the containers for “show” purposes only and bring extras if show attendees request them.
- ▶ It is essential that the collection vehicle be equipped with a Tommy Lift or a means to tilt the cart contents into the dump bed or hopper of the collection vehicle.
- ▶ Small containers with securable lids are useful in the collection of gravy, soups, and other liquid wastes at the end of the event.
- ▶ A substantial volume of cardboard, boxboard, and beverage containers were generated at the event. Other types of recyclables were also generated, including #10 steel cans, plastic film, and other types of plastic bottles and containers. The Manchester venue did not provide recycling services. It is important that Hallsmith Sysco work with the venue host to provide recycling services. If the venue host does not provide recycling services Hallsmith Sysco can insert into its contract language to require that the hotel/conference center assist in establishing recycling for the event.

Conclusion

Observations made at the Food Show food waste diversion pilot indicated that more than 90 percent of the waste could be diverted through donation, composting, and recycling with only minor changes in the service ware used by vendors and vendor cooperation (and assistance) in removing packaging from compostable display items. Much of the sampling service ware already used at the event was compostable, providing a model that could be used by all vendors. The very nature of the wastes generated at food show events presents a viable food waste diversion opportunity.



Promoting the Sysco and its Food Shows as “being green” by implementing food waste diversion can help to move the event toward greater environmental sustainability and present a model for similar events.

Attachment A

HALLSMITH SYSCO IS GOING GREEN!⁴

Hallsmith Sysco is “Going Green” and they need your help! Hallsmith Sysco, the New Hampshire Department of Environmental Services, and the Northeast Recycling Council, with partial funding from the U.S. Environmental Protection Agency (EPA), are providing on-site assistance in the COLLECTION OF ALL FOOD WASTE generated during the show! IMAGINE food not being thrown away but composted!

It’s Easy to Be Green!

Please use the special GREEN biodegradable bags and designated containers for FOOD WASTE and PAPER ONLY, including:

- **PREPARATION SCRAPS**
- **SAMPLES**
- **DE-PACKAGED DISPLAY FOODS**
- **LEFTOVERS**
- **PAPER TOWELS, NAPKINS AND PAPER PLATES**



No - cutlery, plastics, single use containers, toothpicks, aluminum trays, glass, or other non-biodegradable items

Please keep the green biodegradable bag behind your booth so as not to be used by the public. Collection of food waste, cardboard and general trash will occur throughout the event. Additional bags will be provided upon request.

Staff will be on hand to assist with the collection and provide additional bags for food waste at the end of the day. ***If you can eat it, we’ll take it!!***

Your participation is greatly appreciated!

⁴ This handout was displayed on the Hallsmith Sysco table and provided to vendors for additional information.

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Food Waste Composting at a Special Event: Hallsmith Sysco Food Show Case Study, Boston 2008



Written by Athena Lee Bradley, Northeast Recycling Council, Inc.

This document was made possible by a grant from the U.S. Environmental Protection Agency. For more information on recycling and composting at special events visit the [NERC Website](http://www.nerc.org) or call 802-254-3636.

Overview

The Northeast Recycling Council, Inc. (NERC) was awarded a US Environmental Protection Agency (EPA) New England Resource Conservation Challenge Grant to conduct food waste composting pilots at special events. NERC worked with events of varying types and sizes to demonstrate different methodologies for designing and implementing food waste diversion programs. For purposes of the project, materials diverted included pre- and post-consumer food, as well as compostable flatware, plates, packaging, and napkins. Assistance with integrating food diversion into existing recycling efforts or implementation of recycling was also provided, along with presentation of zero waste as a viable option.

Key Steps to Food Show Composting

- Commitment of event organizers.
- Cooperation of vendors.
- Sufficient staff or volunteers for end-of-event clean-up.
- Food donation opportunities.

The goal of the project was to assist organizers to implement a sustainable food waste diversion at their event to serve as a model for other events.



The Event

Hallsmith Sysco Food Show Pilot Composting at a Glance	
Location	Seaport World Trade Center, Boston
Organizer	Hallsmith Sysco
Date	April 17, 2008
Estimated attendance	1,300 attendees
Vendors	178 vendors
Food waste & biodegradable service ware composted: Pre- consumer food wastes, biodegradable paper and plastic service ware, soiled paper	More than 2,800 pounds
Materials recycled: Cardboard, steel/tin cans, plastic bottles, aluminum cans, aluminum foil.	Recyclables were collected by Seaport World Trade Center employees; weights were not available.
Compost hauler	Save That Stuff, Cambridge, MA
Compost processor	Brick Ends Farm, Saugus, MA
Waste management	Hallsmith Sysco contracted with Seaport to handle solid waste collection for the event. Small wastebaskets were placed next to all booths. Large waste receptacles were located around the exhibit hall and emptied by Seaport employees periodically throughout the day. Immediately following the close of the event Seaport employees began clean-up of the hall. Vendors typically left items for disposal on their table or on the floor.

Hallsmith Sysco Food Shows provide an opportunity for its food brokers to display and sample food items, service ware, and other food industry products (e.g., paper and plastic service ware and janitorial products). The Boston Food Show event featured 178 vendors, including food brokers, distributors, and manufacturers. Vendors tend to be the same or similar at all Hallsmith Sysco Food Show events.

Attendees of the events include hotel chefs and food service providers, restaurateurs, and others in the food service industries that are customers or potential customers of Sysco and its brokers. This Boston event had approximately 1,300 attendees.

Food Waste Diversion Planning

Background

Hallsmith Sysco contracts with the Food Show host hotel or conference center (“venue”) to handle solid waste for the event. If the hotel recycles cardboard and other materials, Hallsmith Sysco encourages vendors to recycle. Vendors are asked to stack cardboard aside. At the end of the event, vendors are asked to remove trash to a designated location.

In the fall of 2007, the Massachusetts Department of Environmental Protection (MassDEP) approached Hallsmith Sysco (Sysco) about the possibility of diverting food waste to composting at its annual Food Show.⁵ Hallsmith Sysco enthusiastically supported the idea. MassDEP initially observed a regional Sysco Food Show event in Rhode Island in mid-March, 2008. MassDEP then initiated a pilot compost collection at the small Cape Cod Food Show in late-March.

As a part of its EPA grant project, NERC agreed to work with MassDEP to conduct a food waste assessment and assist with a pilot food waste diversion project at the Hallsmith Sysco Food Show in Boston on April 17, 2008. Additionally, the New Hampshire Department of Environmental Services was approached about conducting a pilot food waste diversion project at the Hallsmith Sysco Food Show to be held in Manchester, New Hampshire on April 2, 2008.

Planning and Logistics

Based on the experience of the MassDEP composting effort at the Cape Cod Food Show and conversations with Hallsmith Sysco staff, a basic plan for the food show event pilot was developed. A quantification of the tonnages collected for composting from the Cape Cod event allowed for an estimation of the number of collection carts and compostable bags that would be needed at the larger Manchester and Boston events. An unanticipated waste collection need was for liquid wastes, such as leftover soups and beverages. Such containers were provided at the Boston show.

A timeline for collecting the organics was made, with particular attention to the removal of full compostable bags (from each vendor booth), as well as leftover samples and display foods generated at the close of the Food Show. Lessons learned from the Cape Cod and New Hampshire events also pointed to the need to assist vendors in removing display meats, fish, cheese, and similar items from packaging so that these items could be collected for composting.

⁵ This year Hallsmith Sysco decided to hold several regional events throughout New England, instead of one large event, typically held in Boston. Five regional events are held in March and April in Rhode Island, Massachusetts, and New Hampshire.

Pilot Food Waste Diversion Project Implementation

Vendor Education

The MassDEP staff spent a significant amount of time at the small Cape Cod pilot event talking with the food vendors at the event about the opportunity to compost, what was acceptable, and how it would be collected. MassDEP also developed a handout explaining the food waste diversion project to vendors. Similar vendor education was provided by NERC and NH DEC staff at the New Hampshire Food Show event. The one-on-one education provided at both the Cape Cod and New Hampshire events was useful for the Boston Food Show pilot, as many vendors attending the event were then familiar with what was acceptable for composting and how the collection would work.

At the Boston Food Show, MassDEP and NERC staff visited each vendor prior to the start of the event, provided a list of acceptable food and paper items for composting and discussed the pilot project individually with all vendors. See Attachment A for the vendor education handout. Vendors were also given compostable bags for collection of prep scraps and food display items. Vendors were visited periodically during the event to answer any additional questions, to remove full collection bags, and assist as necessary.

Containers and supplies

Due to space concerns and issues associated with booth appearance, it was determined to use compostable bags for the collection of the food waste. Vendors were provided compostable bags donated by Heritage Bags (a Food Show vendor) in which to place preparation scraps, leftover samples, de-packaged display foods, and soiled paper. At least one bag was distributed to each booth before the event began. More bags were distributed throughout the day per vendor requests.

Due to limited vendor booth space, the bags proved to be a workable collection tool. They typically do not burst, as long as vendors were provided with sufficient quantities so that the bags did not become overfilled or too heavy to lift. Small containers with lids (5-gallon buckets) were distributed for collection of leftover soups, beans, and similar products. Substantial volumes of liquid wastes are generated throughout the day at Food Show events; separate collection of these liquids in buckets proved essential so that collection bags did not get too heavy.

Lessons learned at the Cape Cod event indicated that “Slim Jim” type containers (tall and narrow) did not work well. Based on the experiences at Cape Cod and Manchester Food Shows, MassDEP secured small, “desk-side” containers for use by some of the vendors at the Boston Food Show. These containers proved useful for collection of coffee grounds and prep wastes.

Materials Generated

Compostables generated at the event included a wide range of preparation food wastes, including vegetables; sampling leftovers, principally heated foods that went stale and were tossed out during the day, plus any remaining sample items left at the end of the day; and display items. A large quantity of soups and other prepared foods were leftover at the end of the day. Display items ranged from small packages of cheese and fish to fifteen pound or larger display packages of meats. Display packages were primarily wrapped in plastic, thus requiring that they be opened in order to be collected for composting.



On-site Collection

At the end of the event, staff from the Massachusetts Department of Environmental Protection, NERC, and US EPA New England circulated through the event with carts to collect the bags of food scraps and other items for composting. Each staff person circulated down a row of vendors in order to cover all the vendor tables in a timely manner prior to the vendors completely breaking down their booths. An empty cart was also left in the middle of each row for vendors to place loose and bagged scraps. Carts were monitored to reduce the potential for contamination and to ensure that they did not get too heavy to move. The carts were lined with heavy plastic.

Ten, 65-gallon carts were necessary for the Food Show pilot. The carts were lined with heavy plastic. Gloves were also essential for each person collecting food scraps. A knife or sharp scissors was required to open packaged goods.

Save That Stuff, a waste management company that provides recycling services for New England businesses, picked-up the full carts from inside the Trade Center the morning following the event. The collected materials were transported the collected compostables to Brick Ends Farm in Saugus for composting.

Food Waste Management Plan

In conjunction with the food waste diversion pilot NERC conducted a waste survey of each food vendor and interviewed the primary event organizer. Based on this information, NERC developed a [Food Waste Management Plan](http://www.nerc.org/documents/hallsmith_sysco_case_study_boston.pdf) (FWMP) (http://www.nerc.org/documents/hallsmith_sysco_case_study_boston.pdf) that detailed options for food waste diversion at food show events.

The waste survey consisted of visual observation and records of the types of food served, service ware used, and wastes generated. Additionally, NERC staff spoke with food vendors and Sysco staff about the pilot food waste diversion, answered questions, and also discussed potential substitute options for plastic and other non-compostable or non-recyclable service ware used. General observations about needs, logistics, layout, etc. in order to design and implement a FWMP were also made.

Food Waste Diversion Results & Environmental Benefits

More than 2,800 pounds of food and paper wastes were collected for composting. No food bank was present to collect useable food and other items, resulting in a higher composting rate than the New Hampshire event. This is estimated to be at least 90% of the food waste generated during the day of the event.

Recyclables

A substantial volume of cardboard, boxboard, and beverage containers were generated at the event. All vendors generated corrugated cardboard boxes; most of which was produced during set-up either the day before the event or the morning of the event. Although cardboard continues to be generated throughout the day. Exhibitors were asked to break down cardboard and set it aside for pickup by Seaport staff. All vendors disposed of boxboard and mixed paper, as well. At least thirteen vendors displayed pastries and other baked goods, producing the majority of the boxboard.

Beverage containers, including aluminum cans, PETE (#1), and HDPE (#2) plastic bottles, were generated by only a few vendors. However, volumes were significant. In one instance, a vendor filled a 64-gallon trash container with 16-ounce HDPE plastic bottles (unflattened) prior to the show opening. Bottled water in small PETE containers was provided to all attendees, generating significant volumes of post-consumer recyclable plastic. Aluminum trays were used by a substantial number of vendors (at least eighteen) to both cook in and display food. Some of these trays would need to be cleaned prior to recycling. Other types of recyclables were also generated, including #10 steel cans, plastic film, and other types of plastic bottles and containers.

Seaport World Trade Center provided recycling services for the collection of cardboard and beverage and food containers. Large recycling boxes were stationed at the end of all aisles in the exhibit hall. Additionally, Hallsmith Sysco had purchased two sets of recycling and composting containers that were stationed around the exhibit hall. Seaport staff checked these containers and emptied them as necessary.

Observations

Initiative and Dedication of Hallsmith Sysco

To ensure success of any food diversion effort takes the commitment and dedication of the event organizer. Hallsmith Sysco was very cooperative and enthusiastic during the planning and implementation of the food waste diversion pilot. "Green" product displays by Sysco were a valuable component of the show.

Waste Reduction Practices Already Undertaken by Vendors

Some vendors already followed waste reduction practices that could be adopted by other vendors.

Waste reduction practices observed:

- Many vendors had reusable glass or metal display dishes.
- Some vendors wash and reuse plastic serving trays.
- Several vendors said that they could donate unopened cheeses (all on ice) to the Food Bank, but this response was not universal.
- Display mushrooms were presented in packaging (cardboard boxes) and used in cooking during the event; remaining display product could be donated to a food rescue organization at the end of the event.
- Many vendors reused unopened display packages (on ice) of bread, meat, and other packaged items at future shows for display.
- Two vendors used specially designed, realistic looking rubber display food.
- Several vendors used bulk vegetables transported to the show in reusable trays.
- Some vendors reused condiment containers for reuse at future shows
- One vendor displayed empty milk and other product cartons, instead of actual product.
- Several vendors reused aluminum baking pans.



Vendor support for the food waste diversion pilot

Vendor participation and support for the food waste collection was nearly universal. Vendors were appreciative of the opportunity to compost their food wastes. Most vendors cooperated fully in filling the bags with food discards during the event. Minimal contamination was observed during the collection of the compost materials. Several vendors had already begun switching to compostable plastic service ware and utensils. Many used uncoated paper for sampling. Several vendors also used napkins made with post consumer paper.

The rapid pace of vendor booth break down at the end of the event presents some issues, particularly in terms of removing display food from packages. Many vendors did not remove packaging from display items, either leaving items out on their tables after breaking down their booths, or placing wrapped items into compost collection bags or carts. This will have to be addressed at future events.

Recommendations

Problems, Issues, Lessons Learned

- ▶ It was not possible to collect food waste from the day before the event during the pilot. Several vendors mentioned that they generate the bulk of their waste the afternoon before the actual event during display food preparation. Distributing collection bags the day before and asking vendors to place bags in a designated cart would be relatively easy to implement, with little additional staff requirements.
- ▶ Considerable reuse opportunity exists at the Food Shows, including food items, particularly produce, unused utensils, and paper products (such as napkins).
 - Some food banks or food rescue organizations have standing relationships with hotels and conference centers, however it is important that Hallsmith Sysco include in its contract with the Food Show venue host a provision that the venue contact a food bank or other food rescue organization. This will benefit Hallsmith Sysco and the venue host by reducing waste and provide valuable food and other items to the local food bank. It also serves as a positive image for Hallsmith Sysco and the venue host.
- ▶ Packaged display foods are a substantial volume of waste that is generated at the end of the event, For example, one vendor had fifteen packages of salmon filets, another had ten pouches of fish to throw out, and another had seven, 5-pound packages, plus a number of smaller packages of meat to throw out. Meat and fish could not be given to the Food Bank.
 - Some vendors reused meat packages for other food shows. This would be the best recommendation to reduce waste.
 - If vendors are not willing to reuse meat and fish packages, vendors need to be required to remove the packaging prior to placing the food items in bags for composting. Vendors may be resistant to doing this due to the time necessary. Perhaps assistance by Sysco or venue employees can be offered.
- ▶ Some vendors said that they would donate unopened cheeses (all on ice) to the Food Bank. However, other vendors refused to donate cheese to the Food Bank due to health concerns.
 - A clear “food show” policy on this issue would benefit both the food show and the Food Bank. Unless health regulations specifically prohibit the donation of unopened cheese, a policy would encourage more vendors to donate.
- ▶ Teas and juices come in small beverage containers. Some vendors poured these into pitchers and tossed containers into the trash.
 - Before the show opened one vendor had filled a 64-gallon trash barrel with 16-ounce plastic (HDPE) bottles.
 - If recycling occurs at the food show, it is important to ensure that beverage containers generated pre-show and during the show be collected. Perhaps recycling stations can be placed near the vendors with these products.
 - Perhaps bulk product can be used for sampling and individual serving packaging used just for display.
- ▶ Many vendors used plastic bowls for display and did not wash the bowls for reuse at other shows. At least one vendor did wash the display bowls for use at future shows. This would be a positive practice to reinforce.

- ▶ Some vendors use black plastic plates that look and feel like paper (Dixie brand). These items would be confusing in compost collection and may contaminate the material.
- ▶ Water bottles (for attendees) were packaged on cardboard trays wrapped in plastic. The boxes were placed in trash bins with plastic wrap still on them. If recycling is integrated into the event it would be important that staff placing the water bottles in the display barrels also remove the plastic wrap and place the boxes in a location for recycling.
- ▶ Single serving sauces, even if not opened, are considered “one-way” and tossed at the end of the show (typically recyclable plastic). Perhaps vendors could be encouraged to designate the containers for “show” purposes only and bring extras if show attendees request them.

Conclusion

Food shows, by the very nature of the event and high number of food vendors, generate a significant amount of waste food waste and other materials suitable for diversion to composting. Observations made at the Food Show during the pilot food waste diversion indicated that more than 90 percent of the waste could be diverted through donation, composting, and recycling with only minor changes in the service ware used by vendors. Much of the sampling service ware already used at the event was compostable, providing a model that could be used by all vendors. This will allow for both pre-consumer and post-consumer collection of materials for composting.

Promoting the Sysco and its Food Shows as “being green” by implementing food waste diversion can help to move the event toward greater environmental sustainability and present a model for similar events.

Attachment A: Vendor Education

Hallsmith Sysco is Going GREEN!

Hallsmith Sysco is “Going Green” and they need your help! Hallsmith Sysco, the Massachusetts Department of Environmental Protection (MassDEP), and the Northeast Recycling Council (NERC), with partial funding from the U.S. Environmental Protection Agency (EPA), are providing on-site assistance in the COLLECTION OF ALL FOOD WASTE generated during the show! IMAGINE food not being thrown away but composted!

It's Easy to Be Green!

1. Please use the special GREEN biodegradable bags and designated containers for FOOD WASTE and PAPER ONLY, including:

- PREPARATION SCRAPS
- SAMPLES
- DE-PACKAGED DISPLAY FOODS
- LEFTOVERS
- PAPER TOWELS, NAPKINS AND PAPER PLATES



No - cutlery, plastics, single use containers, toothpicks, aluminum trays, glass, or other non-biodegradable items

2. Please keep the green biodegradable bag behind your booth so as not to be used by the public. Collection of food waste, cardboard and general trash will occur throughout the event. Additional bags will be provided upon request.
3. Staff will be on hand to assist with the collection and provide additional bags for food waste at the end of the day. ***If you can eat it, we'll take it!!***

Your participation is greatly appreciated!

NERC | Northeast Recycling Council

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An Example of a Zero Waste Special Event: SolarFest Case Study 2009



Written by Athena Lee Bradley, Northeast Recycling Council, Inc.

This document was made possible by a grant from the U.S. Environmental Protection Agency. For more information on recycling and composting at special events visit the [NERC Website](#) or call 802-254-3636.

Overview

The Northeast Recycling Council, Inc. (NERC) was awarded a US Environmental Protection Agency (EPA) New England Resource Conservation Challenge Grant to conduct food waste composting pilots at special events. NERC worked with events of varying types and sizes to demonstrate different methodologies for designing and implementing food waste diversion programs. For purposes of the project, materials diverted included pre- and post-consumer food, as well as compostable flatware, plates, packaging, and napkins. Assistance with integrating food diversion into existing recycling efforts or implementation of recycling was also provided, along with presentation of zero waste as a viable option.

The goal of the project was to assist event organizers to implement a sustainable food waste diversion program at their events to serve as a model for other events.

In 2009, the SolarFest managers opted to incorporate composting as part of a zero waste program.



The Event

SolarFest Zero Waste at a Glance	
Location	Forget-Me-Not Farm Tinmouth, Vermont
Organizer	SolarFest Festival Committee
Contact	SolarFest Manager: Patty Kenyon Phone: 802-235-2707 (home office); pkenyon@solarfest.org
Event website	www.solarfest.org
Date	July 10 - 12, 2009 (Friday, Saturday, Sunday)
Estimated attendance	5,500
Non-food vendors	95
Food vendors⁶	Nine
Food waste & biodegradable service ware composted: Pre-and post consumer food wastes, biodegradable paper and plastic service ware, soiled paper	Volume generated: 20, 65-gallon carts Estimated weight: 1,400 pounds
Materials recycled: Cardboard, steel/tin cans, plastic bottles, aluminum cans, aluminum foil.	Volume generated: 25, 65 gallon carts, plus loose cardboard Estimated weight: 780 pounds
Solid waste generated: primarily paper towels from portable toilet area and disposables brought in my campers.	Volume generated: 6, 30-gallon bags Estimated weight: 150 pounds
Compost hauler	Rutland County Solid Waste District
Recycling hauler	Casella Waste Systems

SolarFest blends art, education, and grassroots activism to inspire resource conservation, promote renewable energy, and support the creation of sustainable communities. More than 100 workshops were held during the event, renewable energy and sustainability exhibitors were featured, along with arts and crafts, locally produced food, and children's activities. Entertainment was provided throughout the festival, with a wide-variety of musicians and speakers, as well as dance, theatre, and poetry performed on two solar-powered stages.

SolarFest is a non-profit 501(c)(3) organization. SolarFest was first organized in 1995.

⁶ SolarFest also ran a volunteer-staffed kitchen providing meals for event volunteers.

Forget-Me-Not Farm in Tinmouth, Vermont, an 80 acre working horse farm, provides the event venue. A large permanent tent (owned by the farm) was used during the festival as a covered vending area. Another permanent structure, a barn, was used as the backdrop for the main stage, as well as a work area for SolarFest volunteers and as a place for performers to gather. Additional large tents for the workshops (five all together), a family stage area, booths, and other structures were brought in for the event.

In 2009, event activities started at noon on Friday and ran until 10 pm. On Saturday, activities began at 9:00 and continued until 11:00 pm, and, on Sunday events started at 9:00 and ended at 7:00 pm. Most food vendors were open starting around noon on Friday and remained opened through the early evening each day. A few food vendors opened for breakfast on Saturday and Sunday.

On Saturday late afternoon and through the evening there was a tremendous rainstorm. Unfortunately, this impacted turnout for late Saturday and Sunday, lowering the expected attendance of close to 10,000 for the weekend to fewer than 6,000. Only a very small crowd was on hand for the entertainment provided on Saturday night and events were slow to gain momentum on Sunday morning. Many weekend attendees left the grounds Saturday afternoon. Undoubtedly the reduced attendance and activity had an impact on the generation of materials for both composting and recycling from the event.

One meal on Friday evening and two full meals each weekend day (breakfast and dinner) were prepared for the hundreds of volunteers that work at SolarFest. Camping and parking were accommodated onsite. Campers were asked to take out what they bring in; no trash or recycling collection occurs in the camping area. No glass is allowed in any location of the event, including the camping area.

Zero Waste Planning

The Food Waste Management Plan

Before a pilot diversion project is implemented NERC visits the event, conducts waste surveys of each of the food vendors, and interviews the event organizers, in particular the person in charge of solid waste. Based on this information, NERC develops a Food Waste Management Plan (FWMP) that details options for food waste diversion at the next event and works with event organizers to implement the FWMP the following year.

The waste survey consists of visual observation and recording the types of food served, service ware used, and wastes generated. Additionally, NERC staff speaks with food vendors and event organizers about implementing food waste diversion at the coming year's event, answers any questions they have, and discusses potential substitute options for plastic and other non-compostable or non-recyclable service ware used. General observations about needs, logistics, layout, etc. in order to design and implement a FWMP are also made.

The SolarFest Food Waste Management Plan—Background & Observations

NERC staff was onsite for the 2008 SolarFest event to conduct a waste assessment in preparation for developing a Food Waste Management Plan for the 2009 SolarFest event. During its on-site observation, NERC staff met with the volunteer in charge of waste disposal and recycling, shadowed recycling crew volunteers, and spoke with all food vendors. A waste assessment sheet was completed for each food vendor, along with notes on the general layout and logistics for solid waste management.

At the event there were eight trash and recycling stations. Carts on wheels were used for the collection of trash and recyclables; stations in the food vendor areas also had 5-gallon buckets collecting food scraps. Volunteers rotated around the event to collect the materials and transport them to a central waste and recycling “service area.”

The service area consisted of two, 30-cubic foot roll-off dumpsters for trash, and a divided roll-off container for recyclables. It was located away from the event site, but accessible to volunteers. Trash from the farm operation was also disposed in the dumpsters in exchange for allowing organizers to use the farm for the event. Thus, no records of trash generated solely from the event are available. Trash and recycling services were provided by Casella Waste Systems, Inc. The food scraps were not composted at a maintained compost site, but were instead buried onsite by the farm venue hosts.

Signage at the waste stations was minimal (see pictures at right), with no clear message about what materials were recyclable or compostable. Because the stations were not staffed, the food scrap buckets were typically underutilized or contaminated. The recycling bins were contaminated with plastic and paper drink cups. NERC observations indicated that attendees were confused about what went into the food scrap buckets and the recycling bins.



Event Signage 2008

Food Waste Management Plan—Zero Waste Pilot Proposed

In November 2008, NERC sent the completed [Food Waste Management Plan](http://www.nerc.org/documents/solarfest_case_study.pdf) (http://www.nerc.org/documents/solarfest_case_study.pdf) to the SolarFest recycling coordinator and event manager. NERC recommended a “zero waste” strategy as the best for the event and be relatively easy to implement. NERC also provided SolarFest organizers with a sample food vendor letter. See Attachment A for the vendor letter.

A meeting was held in early March 2009 with the SolarFest Event Manager and the event’s Recycling Coordinator to review the FWMP and discuss how best to move SolarFest toward becoming a zero waste event. This meeting proved to be very beneficial and the event organizers agreed to move forward with the FWMP implementation.

The initial concern about implementation of zero waste was its impact on the food vendors. However, a review of the event’s waste assessment results indicated that switching to biodegradable and recyclable food service ware would for the most part not require

substantial change. Moreover, discussions NERC staff had with the food vendors indicated their support for helping the event implement composting.

The decision to have volunteers positioned at each “zero waste station” was also a concern. NERC staff strongly expressed the importance of having each station staffed for the entire event in order to prevent contamination in the collection carts and to assist attendees in knowing how to sort materials. Since composting, and especially compostable service ware, is relatively new to most people, the need for continuous monitoring of each station was vital for the success of implementation of zero waste at SolarFest.

Other issues of concern from the organizers included: logistics changes—primarily the establishment of the zero waste stations and elimination of trash containers; new signage needed; new vendor education required; and additional onsite training of volunteers. NERC’s role in assisting with vendor and volunteer education and providing training information and onsite trainings was also addressed.

Information from the vendor letter provided by NERC, including the requirement for vendors to use compostable service ware (and where these could be purchased), was included in a mailing sent by SolarFest organizers later in March to all food vendors. Additional reminders were sent out in all follow-up communication to vendors.

NERC staff contacted the Rutland County Solid Waste District (RCSWD) for compost collection specifics and logistics. The RCSWD provides compost collection containers and pickup services to businesses and schools in Rutland County, Vermont. The RCSWD agreed to provide containers and collection services for SolarFest at no charge for the pilot. SolarFest organizers contacted Casella about delivery of recycling carts.

In April, NERC staff wrote an article, “SolarFest is a Zero Waste Event,” which was posted on the SolarFest website and included in their electronic newsletter (sent by email to 1,600 recipients). See Attachment B. An “Organizers Tip Sheet,” was also developed and forwarded to the SolarFest Manager and Recycling Coordinator. See Attachment C. SolarFest organizers sent out additional reminders to food vendors about the using compostable service ware and SolarFest’s goals to be a zero waste event. Sample signage was also developed and sent to organizers for preparation. Plans were developed for NERC staff and the SolarFest Zero Waste Coordinator to conduct a training for all volunteers. See Attachment D for sample signage and Attachment E for training documents developed by NERC. SolarFest organizers completed bin station signage. The volunteer coordinator solicited volunteers for monitoring the zero waste stations during the event. In early July, NERC staff made final arrangements with the RCSWD for delivery of the compost collection carts and logistics for removal of the full carts.

Zero Waste Implementation

Zero Waste Stations

On Friday morning, the first day of the event, Casella brought the recycling carts. The carts and signage were placed at the zero waste (ZW) stations in the morning by the SolarFest ZW Coordinator. Unfortunately, the compost collection carts did not arrive until after 3:00 pm that day. The ZW Coordinator and NERC staff placed these carts at pre-determined sites around the event. Paper signs that provided a list of acceptable materials (provided by RCSWD) were placed by NERC on all the compost carts. A sample napkin, small plate, and a biodegradable plastic utensil and cup were also placed on top of each of the compost collection carts (affixed with tape). An empty aluminum can and plastic bottle were placed on each of the recycling carts as representative sample of items to recycle.

Eight zero waste stations were set up around the event. Five primary sites, with full monitoring:

- In the food vendor area, next to the dining tent areas (two locations).
- Near the main stage
- Near the entrance to the covered vendor arena.
- Behind the vendor arena, near the Family Stage.

Three unstaffed stations:

- At the entrance to the event, in the wash/clean-up area.
- In the volunteer kitchen and dining area.
- Back stage for entertainers/volunteers.



The staffed ZW stations had volunteer monitors during most of Saturday and Sunday. The other stations were in areas not as frequented by attendees, or were more controlled, such as the one in the volunteer kitchen.

Each ZW station consisted of at least one recycling cart and one compost collection cart. The main ZW station in the food booth/dining tent area had an additional compost collection cart. The volunteer kitchen and dining area also had additional compost and recycling carts. The carts were not lined, as full compost carts were swapped for empty carts and the recycling carts were emptied into the recycling container in the service area.

The location of the ZW stations and the number of carts in each appeared to be adequate to meet the needs of participants, with only minor overflowing. The one exception was the station located on the main path, near the entrance to the vendor area. This received more traffic than anticipated, so would benefit from additional compost, and recycling carts. Due to the heavy rain on Saturday late afternoon and evening, none of the carts were emptied as planned following the dinner hour. This contributed to some overflow problems on Sunday morning.

Service Area

RCSWD provided a box truck with a lift for storage of the full compost carts. Twenty-five compost collection carts were brought in the truck for use at the event. A divided roll-off container for recyclables was provided by Casella. Both the truck and the roll-off container were parked in the service area for the entire event. A 30-yard roll-off was provided by Casella for trash disposal; this was a reduction from the previous year, which had two roll-off containers. As was the case in previous years, the trash disposal dumpster was used by the venue hosts. The service area was located in the same place as previous years (location of the trash dumpster and recycling truck), in an isolated area off the main road into the event and easily accessed by service vehicles. The location is uphill from the event and the path to move the compost collection carts somewhat rutted making it difficult for ZW volunteers to push the full carts to the box truck.

Volunteers

There was one Zero Waste Coordinator for the event. The ZW Coordinator was responsible for zero waste logistics implementation, as well as ensuring that volunteers were trained and stationed. Due to the length of the event both in terms of days and hours of operation having one coordinator proved inadequate at times. For the pilot project, when issues arrived while the coordinator was taking a break or off-site, NERC staff assisted.



Primary volunteers for the ZW Team were students from Green Mountain College. The students were hard workers and generally reliable. The students received incentives from their school for participating. Unfortunately, the students were not available on Friday, and no other provision for volunteers was made. This resulted in some contamination of the recycling carts on Friday because of a lack of volunteer presence at the ZW stations. On Saturday and Sunday each volunteer worked at least two shifts.

Two orientation trainings were provided for all SolarFest volunteers. Following the general volunteer orientations, ZW Team volunteers met with the ZW Coordinator and NERC staff to review logistics, acceptable materials, duties, monitoring of collection bins, safety, etc. At this time, a schedule for the volunteer shifts was finalized. As volunteers were placed at their stations during the course of the event, a review of acceptable materials was again provided, along with tips on interacting with the public, answering questions, etc. SolarFest volunteer kitchen/dining area staff were provided with an overview of acceptable materials for both composting and recycling.

SolarFest volunteers were provided free breakfast and dinner at the volunteer dining tent. Meals were specifically prepared for the volunteers at set times, from 8 am until 10 am and from 5 pm until 7 pm. There were no extra volunteers to rotate with the stationed ZW volunteers to allow them to eat meals. When possible, NERC staff provided coverage to allow volunteers to eat, however some stations ended up not being staffed during this time.

While there was sufficient volunteer coverage to staff the four primary ZW stations, in addition to not having enough volunteers to relieve station monitors for breaks, at least one additional volunteer was needed to pick up cardboard from vendors and transport it to the service area. Vendors were told at the beginning of the event that their cardboard would be collected for them. However, several vendors ended up taking their cardboard to the ZW stations as it was piling up and becoming a nuisance. This caused an unsightly pile of cardboard at some of the ZW stations until the material could be taken to the service area.

Vendors

On Friday morning, NERC staff greeted the food vendors, checked to see if they only had biodegradable and recyclable service ware, and answered any questions that they had about the composting and recycling logistics. Vendors were provided a compost bucket if they did not have their own. Vendors were told what materials were acceptable in the bucket. Vendors had easy access to two ZW stations for emptying full buckets. A review of recyclable materials was also provided. Vendors were reminded to break down and stack cardboard behind their booth for pickup by ZW Team volunteers.



All but one of the vendors complied with the SolarFest zero waste requirements to only use recyclable or biodegradable service ware. This vendor used plastic cutlery and plastic cups. Fortunately, the vendor's primary food offering was a "finger food" (not requiring utensils). ZW Team volunteers were warned about the cutlery and the plastic cups from this vendor. Additionally, at least one vendor contaminated the compost carts with bags of trash on two occasions. These bags were removed and disposed of properly.

Most vendors purchased compostable service ware from Foley Distributing in Rutland, Vermont. Neither performance nor cost seemed to be a factor in using the compostable service ware as none of the vendors expressed any concerns. Several vendors commented that they were very much in favor of participating in a zero waste event.

Collection Logistics

ZW Team Volunteer shifts were set-up to overlap so that at the end of each shift the replacement crew could staff the ZW stations, while the crew that was relieved could empty any full containers at the service area and return with empty carts. Full carts of compostable materials were taken to the box truck and swapped for an empty cart. Recyclables were dumped into the recycling roll-off. Volunteers were also asked to pick up any litter around their stations and keep the stations neat. Additionally, NERC staff and the ZW Coordinator took responsibility for emptying carts from the Volunteer Kitchen area, as well as other stations as necessary. Advance arrangements were made with the compost hauler to provide early pick-up and emptying of compost carts if necessary.

Volunteers were provided gloves to use in case improper materials were placed in the compost collection carts. Full carts of compostable materials were heavy and difficult for volunteers to move from the ZW stations to the service area. When available, arrangements were made to use an electric cart (used by SolarFest organizers) to haul the full carts.

At the end of the event (Sunday evening), ZW Team volunteers broke down the zero waste stations and transported all carts to the service area. The compost carts were loaded onto the truck for transport by RCSWD. Materials from the recycling carts, along with loose cardboard, were placed into the recycling storage container for removal by Casella. Empty carts were placed next to the recycling container for pickup by Casella. Clean-up took approximately four hours, with six volunteers and the ZW Coordinator working.

One RCSWD employee transported the box truck with the full compost carts to its transfer station. At that location, the carts were tipped and mixed with a bulking agent for composting at the RCSWD small demonstration compost site. It was decided to dump the material at the compost demonstration site for the pilot event instead of at the District's contracted compost facility to determine how much contamination was in the collected material. Transporting the carts and off-loading took one hour; tipping the full carts, and mixing with the bulking agent took two hours.

Trash

One or two 20-gallon trashcans were placed at each portable toilet areas. Vendors were asked to handle their own trash and take it either off-site or to the service area. As noted above, on two occasions at least one vendor contaminated the compost bins with trash (in bags). Many campers came through in the morning and brought mixed trash in plastic bags. ZW Team volunteers helped the campers sort the materials, however, much of it was non-recyclable/non-compostable trash; campers were informed of the trash cans located near the portable toilet areas.

According to RCSWD staff, there were very few contaminants in the compost material; consisting only of two soda cans and one small bag of trash. RCSWD was very pleased with SolarFest's efforts and committed to providing free collection and composting again for the event next year.

Promotion & Signage

The SolarFest Event Manager did an excellent job of promoting zero waste by posting documents on the SolarFest website, in their electronic newsletter, and in their program guide. Signage (at the ZW stations) was also greatly improved over past SolarFest events. Signs were attractive and colorful. Separate signs were made for "Compost" and "Recyclables" with the clever use of arrows to point to the bins. Not all ZW stations had completed signage, however. Additionally,



the post on which the signs were attached was not tall enough for proper visibility.

As noted above, NERC staff also placed examples of compostable items on the compost bins and cans/bottles on each of the recycling bins to assist attendees in sorting items.

Zero Waste Results & Environmental Benefits

An estimated 1,400 pounds of food waste, soiled paper, and compostable service ware was collected for composting, along with 780 pounds of recyclables. Using [NERC's Environmental Benefits Calculator](#), SolarFest's zero waste efforts resulted in a reduction of more than half a ton of greenhouse gases (compared to if the material would have been landfilled), a net energy savings of 14 million BTUs —enough to supply about 15 percent of the energy for a household for a year or 109 gallons of gasoline saved.

Recommendations

Coordination/Volunteers

It would be beneficial for the ZW Coordinator to have an onsite co-coordinator or assistant at least part of the time. The hours of the event are too long to expect one person to be able to coordinate all of the ZW Team volunteers and to ensure the implementation of all the necessary logistics for zero waste implementation. Moreover, if volunteers miss a shift, need to be relieved, or other circumstances arise, the extra assistance will ensure that the operation continues to run smoothly. The assistant could work with the vendors to review the zero waste program, ensure that they have collection buckets, answer any questions, and help in collecting cardboard from the vendors.

- It is important that volunteers be secured for Friday, since the Green Mountain Students are unavailable. As the popularity of the SolarFest workshops continues to grow, Friday attendance will inevitably increase. Volunteers are essential to assist in the Friday morning set-up of the ZW stations so that this task does not fall entirely upon the ZW Coordinator. By noon all ZW stations should be in place and a volunteer monitor staffing at least each primary station in the dining and food vendor areas.
- It would be useful to have the volunteer crews for Saturday and Sunday mornings walk around to all the ZW stations and empty the full bins that did not get taken care of the night before. Volunteers should also check the signage and make sure that signs are in place and samples are still on all carts. Additionally, assign at least one volunteer each morning to take the cardboard from behind the vendor booths to the service area.
- Have at least one relief volunteer to provide adequate coverage during meal times for ZW Team volunteers to be able to participate in the volunteer meals. The relief volunteer could also be assigned to check periodically on the non-staffed ZW stations, including the Volunteer Kitchen.
- Volunteer reliability was an issue on Sunday morning, when only three volunteers showed up for their shift. This may have been due to the heavy rains the evening before, however some mechanism to ensure that volunteers will be in place for Sunday morning is essential.

- Volunteers need to be supplied with disposable rubber gloves and waterless sanitizing solution. Perhaps these can be set aside at the First Aid station for easy access.

Logistics

- Ensure that both the compost and recycling carts arrive Friday morning and are in place at each designated Zero Waste station by noon in preparation for event attendees to begin generating materials following lunch.
- At the start of the festival, trash cans should also be placed, with trash liners, next to the portable toilet for disposal of paper towels and the inevitable trash brought in by attendees. This will help reduce contamination of the ZW station containers.
- Place small bins for recycling and composting in the kids area. These bins, along with information on keeping items properly separated, can provide educational opportunities for children and help the kids area be zero waste.
- Full carts of both compostable materials and recyclables are too heavy for volunteers to safely transport to the service area. The use of the solar-powered utility cart was helpful in transporting the full collection carts, but it was not always available. A regular schedule for use of the motorized utility cart by the ZW crew would be useful.

Outreach

- On the camping information section of the SolarFest website, it would be helpful to have an announcement about SolarFest being a zero waste event. Campers should be made aware (in advance) of their role in helping to make SolarFest a zero waste event by bringing fewer disposable items with them, coming prepared to separate items for recycling and composting, and to haul their trash away when they leave.
- Post signs about the importance of zero waste in the camping area. Signs such as “Did you remember to bring your recyclables and compostables?” could be posted at the path leading from the camping areas to the main event area. Also, signs stating “SolarFest is a Zero Waste Event—please separate your recyclables and compostables and take any trash you generate home with you!” would be helpful if placed around the camping area.
- Stage announcements should be made throughout each day reminding participants that SolarFest is a zero waste event.
- Ensure that a short presentation on the ZW stations be provided to all volunteers during each volunteer orientation, followed by a more in-depth training for ZW volunteers. All staff and volunteers should know about the zero waste logistics and the location of the ZW stations and trash cans (by the portable toilets, only)
- While the SolarFest program is a nice presentation of the event and activities, it seems unnecessary. The workshops can easily be posted throughout the venue on bulletin boards, along with listings of vendors, exhibitors, performers, and other event happenings. This would save a significant amount of paper generation.
- Incorporating “zero waste” into the SolarFest message of “conserving earth's limited resources, promoting renewable energy, and supporting the creation of sustainable communities” will help to educate attendees about zero waste and also enhance public relation benefits for the event.

Vendors

- While only one vendor violated the zero waste policy, the impact could have been significant as the vendor used plastic service ware and plastic cups. Beyond the concern for contamination, it is not fair to the vendors that comply with the rules if one or more vendors do not. A more forceful vendor requirement for the use of compostable service ware is suggested. A clause in vendor contracts stating that all vendors must abide by SolarFest's Zero Waste policy *or they will not be allowed to return* would impress upon the vendors the importance of compliance.
- Additionally, as part of the contract it must be clearly stated that vendors must dispose of their trash in the trash containers provided for vendor use and NOT in the containers designated for composting and recycling. Again, while only a few bags of trash were found in the compost carts, vendors must realize that there are consequences to contaminating the compost and recycling containers.
- The ZW Coordinator (or assistant) should visit the vendor booths each morning in order to ensure that all vendors are in compliance and to see if they have any needs.

Signage

- Signage or banners placed above the ZW stations, in addition to the signs placed directly on the containers, is essential to ensure the visibility of the ZW stations. The signs designed by SolarFest were adequate to describe what is recyclable and what is compostable. The use of the signs with arrows pointing to the appropriate containers was a clever way of designating the appropriate carts. However, some of the signs were not visible behind the carts and not all signs were posted due to the inadequate length of the posts. Taller posts for displaying the signs would work as a solution. Placing the recycling sign on one side of the post and an arrow to point down to the cart, and the compost sign on the other, with another arrow should significantly improve visibility and appeal of the ZW stations.
- It would also be useful to have signs on the trash containers located at the portable toilets, such as "Trash only—please compost and recycle when possible!"

Conclusion

The pilot food waste diversion and zero waste project at SolarFest were impressive. A three day event, with thousands of participants, can be difficult to fully implement zero waste. It is a credit to the Event Manager, ZW Coordinator, vendor coordinator, and the vendors that there was almost full compliance by the food vendors in using only compostable service ware. The ZW Coordinator was able to fully implement the logistics and coordinate the ZW Team volunteers with few significant problems. This is impressive for a first time coordinator at a large event. The ZW Team volunteers were reliable and dedicated to ensuring success.

It is noteworthy that little contamination occurred in the compost collection carts. Having volunteers posted at the primary ZW stations proved to work well in eliminating contamination, plus providing an educational opportunity for SolarFest attendees.

SolarFest is in a position to present zero waste as a goal and model for other special events in the region.

The Northeast Recycling Council would like to thank and acknowledge Patty Kenyon, SolarFest Manager, Joe Boisson, ZW Coordinator, and the ZW crew for all of their hard work in making zero waste happen at SolarFest.



Attachment A: Vendor Letter



Dear Vendor:

As you know, SolarFest is dedicated to protecting our environment. Currently, we recycle cardboard and beverage containers. In an effort to manage our event to be even more environmentally-conscientious and reduce our waste disposal expenses, we are adopting a “zero waste (or darn close)” event policy. In addition to collecting recyclables, we will also be collecting all food discards and compostable service ware for composting.

Food waste and food service ware comprise a substantial volume of waste generated at SolarFest. To implement our composting project, vendor participation will be vital. In order to make composting feasible at the event it will be essential that vendors use only compostable cups, plates, and utensils. *Plastic utensils, plastic bags, or other plastics will not compost.*

To make our switch to composting successful, we ask that you please plan to assist us in the following ways:

- ✓ Do not to use Styrofoam™ (polystyrene), other plastic service ware, plastic film, or plastic bags for serving food.
 - Foods that need wrapping, such as cookies and pastries can be wrapped in wax paper or contained in wax paper baggies.
- ✓ Serve beverages in aluminum cans and plastic bottles, or use paper or compostable cups (see the back of this sheet).
- ✓ Use only paper or biodegradable food service containers (plates, cups, etc.) and biodegradable utensils. See the list of product vendors on the reverse side of this sheet. Consider providing a “spork” instead of both spoons and forks.
- ✓ Consider selling food that requires minimal packaging (such as foil or napkin), foods that come with “edible wrappers,” such as burritos, or “finger foods.”
- ✓ Instead of individual packages of condiments (sugar, cream, ketchup, mustard, etc.), use refillable pump condiment dispensers or bulk containers.
- ✓ Consider placing napkins behind the counter to be dispensed upon request.
- ✓ Do not provide straws or lids.
- ✓ Use wooden coffee stirrers.
- ✓ Plan to break down (flatten) any cardboard boxes that you generate and set them outside your booth for recycling.
- ✓ Plan to place your empty food and beverage containers in the conveniently located beverage recycling containers.
- ✓ Food wastes and paper (such as paper towels, napkins, etc.) can be placed in the compost container.
- ✓ We also ask that all vendors be responsible for disposal of all wastes that are not recyclable or compostable. The event will not be providing trash services for vendors.

Acceptable compostable service containers:

- Any non-plastic paper cup, plate, bowl, or other paper service containers.
- Wax paper or wax paper baggies are acceptable for cookies, pastries, and similar items.
- Compostable plastic service ware and utensils.

Check with your regular food service-ware sales representative, chances are they sell acceptable paper or compostable products.

Clear drink cups and utensils (cutlery) made from starch or compostable plastic are available through the following businesses:

Foley Distributing
(802) 773-3738
www.foleydistributing.com

Mansfield Paper
(800) 225-2641
www.mansfieldpaper.com

Cereplast and Nat-Ur, Inc
www.cereplast.com
distributor.info@cereplast.com
Small quantity purchases can be made at: www.nat-urstore.com

Earthware Biodegradables
www.earthwarebiodegradables.com
800-211-6747 ext. 206
sales@earthwarebiodegradables.com

Thank you for helping to make SolarFest a zero waste event!

Attachment B: Zero Waste Article

Zero Waste and Sustainable Communities

In a world of ever increasing population and consumption it is not sustainable to continue to make packaging and products from virgin resources and then toss the items in the trash. Zero waste offers a new path, a vision, a new way of thinking about waste. Instead of “managing waste,” our goal is to eliminate waste and manage resources. Zero waste offers financial opportunity, green jobs, and a cleaner, more sustainable future. In a zero waste world, products would be designed to be durable and repairable, made from recycled or renewable materials and in turn be completely recyclable. Composting would be universal and compost would be used to enrich our depleted soils.

SolarFest: Zero Waste (or pretty close!)

Participating in a zero waste event allows all attendees to act and think about how a zero waste world could happen. At a zero waste event, food scraps, service ware, and packaging are either recycled or composted. The key to a zero waste event is detailed planning to ensure that all materials used and discarded at the event are reusable, recyclable, or compostable. The first step is to gain the support of event organizers. SolarFest organizers fully endorse creating a zero waste event as a vital component of the event’s mission and a sustainable future.

The next step is to work with vendors to eliminate items that are not recyclable or compostable. At SolarFest, vendors have been asked to only use service ware and utensils that can be recycled or composted. Fortunately, SolarFest vendors are very supportive of being a part of a zero waste event. Utensils and service ware made from cornstarch, potatoes, or bamboo that looks like plastic, but is compostable at a composting facility will be available at food booths. Paper plates and paper cups, as well as compostable “plastic” items will be collected for composting. Many vendors will also serve “finger foods” that don’t need utensils.

Zero Waste Stations

Zero Waste stations, consisting of recycling and compost containers, will be located throughout SolarFest. Plastic bottles, aluminum cans, and aluminum foil can be placed in the recycling containers. SolarFest vendors will recycle their plastic bottles and metal cans and serving pans as well. All food scraps, paper plates, cups, napkins, and biodegradable service ware can be placed in the compost collection containers. Volunteers will monitor the Zero Waste stations and be available to answer any questions that attendees may have.


Recyclables will be collected by Casella Waste Systems. Aluminum cans are made back into new aluminum cans; plastic bottles are made into other plastic items, such as fleece. All food scraps, paper, and compostable plastic will be collected by Rutland Solid Waste District for composting.

SolarFest participants are asked not to bring in outside packaging (or other disposable items) which are not recyclable or compostable. This includes polystyrene (Styrofoam) cups and plastic bags. If you must bring in these items please be prepared to carry them

out with you. Trashcans will be located near the portable toilets for hand wipes and disposable diapers.


Compost

- Napkins, plates
- Other paper, newspaper
- Food scraps
- Compostable forks & spoons




Recycle

- Cans
- Bottles
- Foil



(Please empty liquid & food)



Attachment C: Tips for Organizers

Volunteers

- There should be enough volunteers throughout each day to monitor all of the Zero Waste stations. Ideally each station would have a volunteer at it. But if not enough volunteers are available, assign several stations to each volunteer. *It is a lot easier to have a volunteer stand at each station during the event, than it is to have to sort out trash from the collected recyclables and compost after the event!*
- Provide a venue map with station locations on it to volunteers or post one at the Zero Waste Central (where recycling truck and compost bin truck are located).
- Schedule a place to meet all volunteers at their appointed shift. The Zero Waste Central would be ideal as sorting requirements can be discussed.
- Provide volunteers or staff with good quality gloves. Provide either a hand washing area or wipes.
- Volunteer/Staff training
 - Brief all volunteers/staff about the zero waste event. They should know that the vendors are using only biodegradable and recyclable service ware. Zero Waste stations are located throughout the event; trash cans are for limited use, located by the portable toilets.
 - Review the logistics for the event with Zero Waste volunteers, including check-in location and time, the materials being collected for composting and recycling, the locations of Zero Waste stations, their assigned station(s), and where the full containers go for storage.
 - Practice safety. Reinforce safety rules with volunteers. Gloves should be worn at all times when handling compostables. Hands should not be used to press down on the compostables or recyclables. Carefully remove trash from collection containers. Lift using legs, not back and do not lift more weight than is easy.
 - Wasps may be attracted to the recycling and composting containers. Be sure to ask volunteers if they are allergic to bee or wasp stings. *Volunteers with wasp or bee allergies should not participate in the organics collection.* Volunteers need to always look for stinging insects before putting their hands inside a collection container or picking up a full container.

Vendors

- Provide information about the zero waste event and vendor requirements to all vendors (not just food vendors) in all information sent out. This will help to reinforce the idea and make vendors think in advance about how they need to prepare.
- Encourage vendors to make their role in the event as waste-free as possible.
- Appreciate the vendors in announcements, press releases, etc.

Promoting Zero Waste

- Include a message about SolarFest’s Zero Waste Event in all publicity:
 - Event advertising
 - Radio station ads and public service announcements
 - Web pages
 - Local newspapers
 - Outdoor signs

- Promote zero waste and trash free in event programs/guides and during event announcements.



Zero Waste Station Signage and Container Labels/Signage

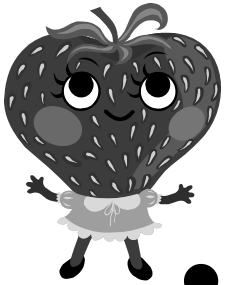
- Big “Zero Waste Station” signs at each station.

- Ensure all bins are marked with signage on all accessible sides.

- Signs should clearly and simply say what is acceptable in each bin—“Recycling” and “Composting” at the Zero Waste stations.

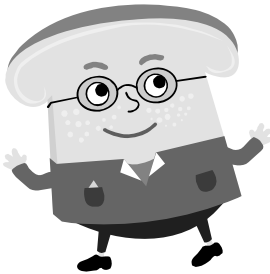
- Place signs behind the Bin Stations at eye level so that event attendees can see them from a distance.

- Examples placed on the signs and on the carts will be most helpful.
 - Food examples, such as a banana peel, paper napkin, plate, biodegradable plastic cup, etc. on the compost signs and carts.
 - Aluminum can and plastic soda bottle on recycling signs and carts.



Compost

- Food scraps
- Napkins, plates
- Other paper, newspaper
- Compostable forks & spoons



Recycle

- Cans
- Bottles
- Foil



(Please empty liquid & food)

Attachment E: Volunteer Training

Zero Waste Volunteers

Set-up: Make sure all stations are in place—recycling and compost containers; signs in place.

The Event:

- Review the logistics: the materials being collected for composting, the locations of collection containers, assigned Zero Waste station(s), and how to sort materials.
 - It is important that the recyclables and compostables not be contaminated with trash.
 - All vendors should be using only biodegradable and recyclable packaging, service ware, and utensils.
 - The only trash cans are located by the portable toilets.
- Practice safety. Gloves should be worn at all times when handling recyclables and compostables. Do not stick hands inside a container to press down on the recyclables or compostables. Carefully remove trash from collection containers. Lift using legs, not back and do not lift more weight than is easy.
- Wasps may be attracted to the composting and recycling containers. *Volunteers with severe wasp or bee allergies should not participate in the Zero Waste collection.* Volunteers need to always look for stinging insects before putting their hands inside a collection container or picking up a full container.

Managing the Zero Waste Stations:

- Take the opportunity to talk about composting and recycling with event attendees. Zero Waste is a two sort system: recyclables—cans, bottles, aluminum foil (clean) and compostables—food, soiled paper, biodegradable plastics (utensils, cups, bowls, etc.). It is vital that materials be separated properly.
 - The service ware and utensils are all biodegradable. The ones that look like plastic are not—they are made from corn starch, potato starch, or bamboo.
- Monitor the Zero Waste stations. Keep them clean and neat. Make sure signage is still in place.
- If trash is in any of the containers, carefully remove it (using gloves) in order to discourage attendees from placing more trash in the containers.
- Transport full carts of recyclables and compostables to Zero Waste Central. Empty full recycling carts into the recycling truck. Switch out a full compost cart for an empty.
- Do not let the carts get too full that they overflow or get too heavy to move. After lunch, carts may start to get full so monitor closely.
- Check the trash cans near the portable toilets, periodically push the paper towels down so that the trash bags get as full as possible (use a stick to push down, not your hands!).

Event clean-up:

- Pick up any litter.
- Empty recycling carts into recycling truck.
- Return all compost collection carts to compost truck.

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Food Waste Composting at a Special Event: The Sodexo Company Rentschler Field Case Study 2009 - 2010



Written by Athena Lee Bradley, Northeast Recycling Council, Inc.

This document was made possible by a grant from the US Environmental Protection Agency. For more information on recycling and composting at special events visit the [NERC Website](http://www.nerc.org) or call 802-254-3636.

Overview

NERC was awarded an EPA New England Resource Conservation Challenge Grant to conduct food waste composting pilots at special events. NERC worked with special events of varying types and sizes to demonstrate different methodologies for designing and implementing food waste diversion programs. For purposes of the project, materials to be diverted include pre- and post-consumer food, as well as compostable flatware, plates, packaging, and napkins. Assistance with integrating food diversion into existing recycling efforts or implementation of recycling is also provided, along with presentation of zero waste as a viable option.

Key Steps to Food Diversion at Stadium Events

- Commitment of management.
- Training and dedication of staff.
- Monitored food waste collection stations.
- Use of compostable service ware.

The goal of the project was to assist organizers to implement food waste diversion at their events and to develop a program that is sustainable, as well as to serve as a model for other events.



The Event

Sodexo Food Diversion at a Glance	
Location	Rentscher Field , East Hartford, Connecticut
Organizer	The Sodexo Company, a subsidiary of Sodexo, Inc.,
Contact	Joanne Gagnon Joanne.gagnon@sodexo.com
Date	Six Football games (September, 2009 – January, 2010); catering events throughout the year.
Estimated participants in pilot	Approximately 1,500 in the Concession, Catering, and Club sections, and 500 to 1,000 at Corporate Tents per game.
Food waste & biodegradable service ware composted: Pre-and post consumer food wastes, compostable paper and plastic service ware, soiled paper	3.35 tons of food waste 1.5 tons of grease
Materials recycled: Cardboard, steel/tin cans, plastic bottles, aluminum cans, aluminum foil, scrap metal, light bulbs.	4.25 tons
Solid waste generated	36.65 tons
Compost processor	New Milford Farms

Rentschler Field is Connecticut's sports and entertainment stadium owned by the State of Connecticut. In addition to being the home of the University of Connecticut Huskies (UConn) football team, Rentschler Field's 40,000-seat stadium serves as a venue for concerts, conferences, banquets, and special events.

The Sodexo Company is the concessionaire and caterer selected to direct and manage all concession and food service operations at Rentschler Field for both event-day requirements and private parties and meetings. Sodexo provides customized services, including basic concessions and gourmet catering. Sodexo, Inc. is a leading provider of integrated food and facilities management services in the U.S., Canada, and Mexico, serving 10 million customers in 6,000 locations every day.



The facility provides a venue for corporate and government meetings, banquets, weddings and other celebrations, trade shows, and other events. The facility features more than 7,500 square feet of meeting/reception space, on-site catering, two full service bars, and one full service concessions stand. Sodexo manages and provides staffing for all Rentschler Field concession areas. These include the club level which has two full service bars, full service concession stand, and a preparation area for up to 800 people.



The outside perimeter concourse level of Rentschler Field has 16 concession stands located around it. Sixteen of those concession stands have complete food preparation; an additional two locations are only equipped for vending. The southeast side of the stadium lower level provides the appropriate supporting kitchen/preparation space, office space, and employee space. There are novelty/merchandise stands located on the outside perimeter concourse level of the north and south sides of the stadium.

After each football event, Sodexo works with non-profit groups to come in and help clean the stadium property. All groups must have a minimum of 30 people and no more than 35. All participants must be at least 16 years old. These groups earn \$10 an hour towards their cause and keep the deposit revenue received from the redeemable beverage containers collected. "Bottle pickers" are allowed into the Tailgating areas the morning following the game to collect redeemable containers as well.

Food Waste Diversion Planning

Background

Sodexo was initially contacted by the Connecticut Department of Environmental Protection (CT DEP) about participating in NERC's Food Waste Diversion project. Sodexo had already been considering food waste diversion and recycling for their catering events at Rentschler Field and so embraced the proposal. In June 2009, a meeting was held to discuss the general overview of the Sodexo operation at Rentschler Field, the plans made to date by Sodexo to implement recycling and composting at the Stadium, and the roles that NERC and CT DEP could play in working with Sodexo to implement diversion at the UConn Football Games and its catering events.



An initial waste assessment by NERC and CT DEP and implementation of a pilot composting event was scheduled for the first game of the season on September 12, 2009. Areas included were the Club area, Skyboxes, Corporate Tents, Kitchen and Pantries, Food Vendor Concourse, and Beer Stations. The Tailgating area was also observed, but this area is so huge that it was decided to concentrate on the Stadium complex. The assessment consisted of a walk-through of each area, discussions with the Sodexo manager, waste surveys of each of the food concession areas, and observation of all tent areas. The waste survey consists of visual observation and recording the types of food served, packaging used, and wastes generated. Findings of the waste assessment and observations were included in a Food Waste Management Plan to be developed by NERC and provided to Sodexo for its implementation.

Planning and Logistics

There are six football games per year. Sodexo has full control of food preparation in the facility. Recycling and composting were implemented in the following stadium areas for the 2009 football season:

- ▶ Club Area: Approximately 675 people can be seated in the Club areas.
- ▶ Luxury Suites (Skyboxes): There are 38 Luxury Suites, each holding up to 20 people per suite.
- ▶ Corporate Tents: Each game has 2-10 large tents sponsored by corporations or Alumni. Tents are open approximately 2 hours before the game and close when the game starts.
- ▶ Press and Media Boxes.

Pilot Food Waste Diversion Project Implementation

The pilot food waste diversion project was implemented at the UConn game held on September 12, 2009. Pre-consumer and post-consumer food wastes, soiled paper, and compostable plastic service ware were collected at all Corporate Tents, Club areas, Luxury Suites, press areas, and kitchen and pantries for the pilot event.

NERC and CT DEP staff provided assistance with implementing the pilot compost and recycling collection for the game; including troubleshooting, working with employees to train and assist as necessary, as well as monitoring for efficiencies and ease of operations.



Following this first pilot event, Sodexo continued with composting and recycling at six UConn football games and providing composting services at several hundred catered special events during the year.

Employee Training

There are 400 Sodexo employees. A mandatory training is held each August for all Sodexo stadium employees. NERC developed a PowerPoint presentation and training information on the recycling and compost collection. The presentation and written information was incorporated into the employee orientation.

Containers and Supplies

Sodexo was provided with 65-gallon carts on wheels from the hauler for the collection of food wastes and soiled paper. Recycling collection carts were also provided.

Location of Compost Collection Containers during Pilot Collection

Kitchen Area

- Collection carts were located next to the recycling carts for convenient use by kitchen staff.

Club Area, Luxury Suites, Press Boxes

- Collection carts were placed in the pantry areas and other out-of-the-way locations for easy access by Sodexo employees.
- Concern over unsightliness and space limitations inside the participant gathering areas limited container placement, however Sodexo employees typically bus these areas so bin placement was satisfactory for this purpose.



Corporate Tents

- Carts were placed outside of each tent.

Compost Collection Logistics

Kitchen Area

- Virtually all food for the Club Area, Luxury Suites, Press Boxes, and Tents, as well as most of the food for the Concessions is produced in the Stadium kitchens. This allows for capture of a substantial volume of the food preparation wastes generated in the complex.



Club Area, Luxury Suites, Press Boxes

- Club Area and Luxury Suites use buffet style food stations.
- Sodexo employees typically bus these areas. This system works well for compost collection as employees can control what goes into the collection containers.
- Switching to largely compostable service ware made it relatively easy for employees to place most waste in compost containers.



Corporate Tents

- There were nine corporate tents at the pilot collection event. Each tent is staffed by two Sodexo employees.
- Corporate Tents have buffet style food stations. Tents vary in the refreshments and food provided. Tables and chairs are provided for participants.
- Typically participants leave their plates and service ware on the tables upon completion of their meals.
- As with the Club Area, Luxury Suites, and Press Boxes, Sodexo employees are primarily responsible for bussing tables. However, as recycling and trash receptacles are placed inside of the tents, some participants bus their own plates when finished with their meal.



Materials Generated

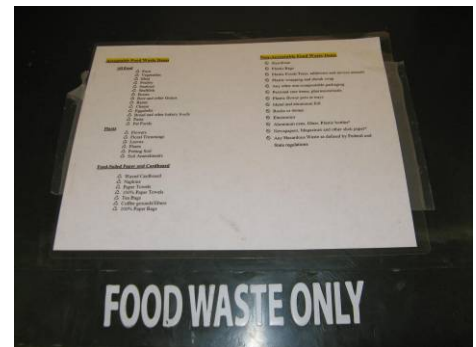
All food for the Stadium Club areas, Luxury Suites and press areas, as well as the Corporate Tents on game day is prepared in the Stadium Kitchen. Kitchen prep scraps include a wide-range of vegetables, fruits, cheese rinds, meat scraps, and more. Food wastes were generated in all areas, along with soiled paper napkins and paper plates, and compostable plastic cups. Food is served buffet style in all locations. Kitchen managers do an excellent job of preparing just enough food to meet the service needs for game day with limited leftovers. Moreover, food is provided as a part of the ticket price paid by patrons, encouraging patrons to indulge. The majority of wastes collected for composting from the pilot event areas, other than the kitchen, were soiled paper plates and napkins.

Promotion & Signage

All carts were labeled with signage “food waste only” with a list of acceptable and non-acceptable items.

Recycling Results & Environmental Benefits

For the six games of the 2009 - 2010 season, plus several catered events held during the period, 3.35 tons of food waste, soiled paper, and compostable service ware was collected for composting, along with 4.25 tons pounds of recyclables. Using [NERC's Environmental Benefits Calculator](#), Sodexo food waste diversion and recycling efforts resulted in a reduction of more than 4.62 metric tons of carbon equivalent (MTCE) of greenhouse gases (compared to if the material would have been landfilled), a net energy savings of 123.21 million BTUs—enough to supply 100 percent of the energy for a household for a year or 991.69 gallons of gasoline saved.



Recommendations based upon the Pilot Collection

Food Waste Management Plan

In conjunction with the food waste diversion pilot, NERC and CT DEP staff conducted a waste survey of all areas participating in the food waste diversion pilot, including the kitchen, catered areas (Club Area and Luxury Suites), and corporate tents. Additional waste surveys of the concession stands and tailgating areas were conducted, along with interviews of the primary event organizer.

Based on this information, NERC developed a [Food Waste Management Plan](#) (FWMP)

http://www.nerc.org/documents/sodexo_rentschler_field_case_study.pdf that detailed additional recommendations for Sodexo in its food waste diversion efforts.



The waste surveys consisted of visual observations and records of the types of food served, service ware used, and wastes generated throughout the UConn Stadium complex and the tailgating areas. Additionally, NERC staff spoke with food vendors and Sodexo staff about the pilot food waste diversion, answered questions, and also discussed potential substitute options for plastic and other non-compostable or non-recyclable service ware used. General observations about needs, logistics, layout, etc. in order to design and implement a FWMP were also made.

Sodexo's management support and integration of composting and recycling into their employee duties was effective in diverting compostable material from the waste stream in the targeted area. Capturing additional compostable materials from the arena during football games and the tailgating area will require a more substantial commitment of Sodexo staff. The Food Waste Management Plan includes suggestions for implementing this expansion.

Recommendations:

- Continued expansion of the use of biodegradable packaging and compostable service ware and utensils will increase collection efficiency and reduce trash generation.
- Elimination of individual chip bags, individual condiment packages, and similar items will increase efficiency in collection by Sodexo employees and ensure that these items do not end up contaminating the compost stream.
- Adoption of greater reuse throughout the areas of the pilot and the Stadium complex.
 - Consider working with suppliers/distributors to provide supplies in reusable crates. This would eliminate the need for staff to breakdown cardboard boxes and collect for recycling.
 - In the Club Area and Luxury Suites area, consider using reusable, durable, washable containers for pretzels, chips, salsa, etc. Consider donating un-served, refrigerated or frozen food and unopened food that does not need refrigeration to local food banks.

- Donate or reuse materials following events (building supplies, plants, centerpieces, decorations, etc).
- Recycling bins in the Stadium perimeter should be more visible and placed so that bins are clearly in view without obstructions.
- Large signage should be placed directly on the recycling containers. Preferably a sign overhead as well to make the recycling stations more visible.
- Recycling bins should be placed at all entry/exit gates to capture containers as participants exit the stadium.
- Sodexo and UConn could benefit from increased outreach for “green” sponsorship (signage on collection bins, etc.) and promotion. More signage promoting composting and recycling would increase visibility and recognition. A “Sodexo Goes Green” or similar page on the Rentschler Field webpage would benefit both Sodexo and UConn.



Conclusion

The Sodexo Company’s addition of food waste and other materials for diversion from the waste stream at their catered events and its willingness to initiate a pilot event at the UConn football games indicates its commitment to reducing the waste stream and greening the company. Sodexo has stated that it intends to continue with its composting efforts during the 2010 - 11 football season and catering events.

A move toward purchasing compostable service ware for use throughout the Stadium was essential to the success at the pilot. Training and integrating diversion of recyclables and compostable materials into the regular duties of Sodexo staff was also essential. The kitchen manager and staff were impressive in their willingness to participate in the food diversion pilot.

The Sodexo Company’s efforts reflect the goals of its parent company, Sodexo, Inc. in its “The Better Tomorrow Plan” to source and promote sustainable supplies, reduce both organic and nonorganic waste by 2015, and other sustainable measures.

The success of implementation of both composting and recycling at Rentschler Field presents a model for other stadium complexes. According to the 2009 Collegiate Athletic Department Sustainability Survey Report, three out of four NCAA FBS (Football Bowl Subdivision) report that sustainability initiatives are a “very high” or “high” priority for their campus. However, athletic departments lag behind in adopting and implementing sustainability plans. Implementing recycling and composting is a significant step on a path for greater sustainability at Rentschler Field.

NERC would like to extend its appreciation to the staff at the Connecticut Department of Environmental Protection and the Sodexo Company for their invaluable assistance and dedication in making this project a success.

