

NERC | Northeast Recycling Council

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



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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 vendors¹	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.

¹ SolarFest also ran a volunteer-staffed kitchen providing meals for event volunteers.
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SolarFest is a non-profit 501(c)(3) organization. SolarFest was first organized in 1995. 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.



Food Waste Management Plan—Zero Waste Pilot Proposed

In November 2008, NERC sent the completed Food Waste Management Plan to the SolarFest recycling coordinator and event manager. See Attachment A for a copy of the FWMP. 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 B 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 C. An “Organizers Tip Sheet,” was also developed and forwarded to the SolarFest Manager and Recycling Coordinator. See Attachment D. 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 E for sample signage and Attachment F 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: SolarFest Food Waste Management Plan

Overview

This Food Waste Management Plan (FWMP) reflects the results of a waste assessment conducted at the SolarFest event held on July 10, 11, and 12, 2008 in Tinmouth, Vermont. The waste assessment was conducted by staff from the Northeast Recycling Council (NERC). The FWMP was intended to provide guidance to SolarFest organizers in implementing food waste diversion at future events. The project was conducted as a part of an EPA New England Resource Conservation Challenge Grant awarded to NERC to conduct food waste composting pilots at special waste events.

SECTION 1. EVENT SYNOPSIS	
Name of Event/Organizer	SolarFest
Contact:	Patty Kenyon, Managing Director, SolarFest, Inc. 802-235-2707; pmhkenyon@vermontel.net
Event Description	SolarFest blends art, education, and grassroots activism to inspire resource conservation, to promote renewable energy, and to support the creation of sustainable communities. More than 95 workshops are held during the event, renewable energy and sustainability exhibitors are featured, as well as music, dance, theatre, and poetry on two solar-powered stages.
Location of Event	Tinmouth, VT
Duration and Date(s) of Event	Three days: July 10 - 12, 2008 (Friday, Saturday, Sunday)
Venue Description	Forget-Me-Not Farm. Event is located in open fields. A large permanent tent is on site for use during the festival. Additional tents (5 all together), two stages, booths, and other event structures are brought in. Three outdoor workshop areas are also set up. Camping and parking are accommodated on-site.
Approximate number of participants	7,000
Food Vendors	<ul style="list-style-type: none"> • The Barn Restaurant - Serving burritos, Caesar salad wraps, Thai chicken wraps, hot dogs, breakfast burritos, muffins, fresh squeezed lemonade and wild mint iced tea. • Best Moon - Local and organic products used whenever possible. • Coffeeman - Organic coffee, black and herb tea, hot chocolate, brownies. • Ben & Jerry's - Premium ice cream. • Naga Bakehouse -Naturally leavened stuffed breads featuring Vermont- grown seasonal, local, and organic ingredients. • Northeast Organic Farming Association of Vermont - NOFA-VT - Local, organic, seasonal veggies roasted in a wood-fired oven. • Samosaman – Samosas. • Sunweaver Solar Café & Juice Joint - Serving smoothies, fresh juice, vegetarian, and vegan food choices.
Number of Other Vendors	Nearly 100 various renewable energy, crafts, and other exhibitors.
Event Activities	Workshops, entertainment, exhibitors, networking, camping.

<p>Existing Solid Waste Facilities, Services, & Practices</p>	<p>Eight trash, recycling, and food scrap bins were stationed around the event (including two located back stage for entertainers/volunteers).</p> <p>Volunteers were not stationed at the recycling/trash bins. Volunteers rotated around the event area to collect the trash, recyclables, and food scraps. Trash and recycling was collected by Casella Waste Systems, Inc. Two large roll-off dumpsters for trash and a divided roll-off container for recyclables were provided by Casella. These were located in an area away from the event site, but accessible to volunteers. Collected food scraps were not composted, but instead buried on the farm.</p> <p>Campers are 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 camp area due to concerns by the venue hosts who use the land to ride horses.</p>
<p>Other Relevant Information (Number of years event has run, etc.)</p>	<p>SolarFest is a nonprofit organization with 501(c)(3) status. One of the organization's goals is to spread the simple message—<i>Solar works!</i>—throughout the region by providing interactive demonstrations of harnessed solar energy. The SolarFest event was started in 1995.</p>

SECTION 2. WASTE COMPOSITION, GENERATION, AND QUANTITIES

A food waste assessment chart was created to record pre-and-post consumer wastes at the event. As a part of the waste assessment food vendors and SolarFest organizers were asked 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. The chart below contains a summary of information.

Area	Reusable	Recyclable	Compostable	Could be Converted	Trash
Food vendor Prep	<ul style="list-style-type: none"> ▪ Plastic bags 	<ul style="list-style-type: none"> ▪ Bi-metal juice cans ▪ Aluminum foil ▪ Cardboard ▪ Boxboard 	<ul style="list-style-type: none"> ▪ Fruit rinds (lemons, oranges, banana peels, other) ▪ Fruit pulp ▪ Greens/salad fixings ▪ Coffee grounds/filters 		<ul style="list-style-type: none"> ▪ Aseptic containers ▪ Plastic wrap ▪ Soiled plastic bags ▪ Other plastics
Food Served		<ul style="list-style-type: none"> ▪ PET pop bottles ▪ PET water bottles 	<ul style="list-style-type: none"> ▪ Coffee, tea, smoothies, fresh juice, lemonade, ▪ Burritos ▪ Wraps, various ▪ Hot dogs ▪ Samosas ▪ Roasted vegetables ▪ Muffins, brownies, breads ▪ Ice cream ▪ Curries ▪ Fries 		
Serving <ul style="list-style-type: none"> ➤ utensils ➤ plates ➤ bowls ➤ hot cups ➤ cold cups 		<ul style="list-style-type: none"> ▪ Foil 	<ul style="list-style-type: none"> ▪ Paper plates & bowls ▪ Biodegradable plastic cold cups ▪ Biodegradable plastic utensils ▪ Paper sacks 	<ul style="list-style-type: none"> ▪ Plastic utensils ▪ Plastic cups 	
Other food vendor <ul style="list-style-type: none"> ➤ coffee stirrers ➤ toothpicks ➤ straws 		<ul style="list-style-type: none"> ▪ Grease 	<ul style="list-style-type: none"> ▪ Napkins 		

Area	Reusable	Recyclable	Compostable	Could be Converted	Trash
Other vendor waste	<ul style="list-style-type: none"> ▪ Aluminum serving trays ▪ Plastic tubs ▪ 2 gallon plastic jugs 	<ul style="list-style-type: none"> ▪ 5 gallon HDPE jugs of plastic in cardboard box 	<ul style="list-style-type: none"> ▪ Wooden coffee stirrers 	<ul style="list-style-type: none"> ▪ Plastic sacks ▪ Plastic wrap on cookies, etc. 	<ul style="list-style-type: none"> ▪ Plastic wrap ▪ Sterno cans

Expected quantities (weight and/or volume) of waste based on past events or estimates:

This information was unavailable because the event organizers used one roll-off container for event waste which was also shared with the venue farm operators for farm clean-out activities.

Which areas during the event generate the most waste? When?

All food vendors are clustered in one location of the outside exhibitor area. Small tents with tables are located in this area for attendees to sit and eat; significant waste is generated here. Waste is also generated throughout the stage entertainment areas.

SECTION 3. FOOD DIVERSION, RECYCLABLES, & WASTE COLLECTION SYSTEM

REUSE

Reuse already occurring at the event:

- Vendors wash out and reuse aluminum heating/serving trays.
- Vendors wash and reuse plastic tubs and sauce containers.

Additional reuse suggestions for event:

- At one vendor booth 11 serving stations contained two Sterno cans each. If electricity is available, perhaps an alternative can be suggested, such as the “Buffet Burner.” If not, Sterno® makes a nontoxic, re-sealable product—“Brand Gel Chafing Fuel – EcoGreen” or EcoFlame Warming Gel, which is nontoxic and refillable. Or, ensure that that the Sterno cans are refillable (and refilled).
- Encourage vendors to give away unserved food at the end of the event to a local charity organization. Contact local charity in advance of the event and arrange for them to come near the end of the event to collect unserved food.

RECYCLING

Current recycling at the event: Beverage containers, foil, paper, and cardboard.
Number and type of recycling bins: Currently there are eight collection stations. This number of stations appears to be adequate for the event and are well positioned around the venue.

- Type: Casella provided recycling carts for the organization. However, these carts were exactly the same as the trash carts which leads to confusion. Also, there was no signage on the carts, causing confusion for attendees trying to figure out which containers to use.

How are recyclables being collected and processed?: Casella Waste Systems will continue to provide collection and processing services.

COMPOST COLLECTION

Recommendation: Make SolarFest a “Zero Waste (or darn close)” event through adoption of “2-bin station” system

- 2-bin system: Only composting and recycling bins are provided throughout the venue. In order for this system to work all vendors must agree to use compostable and recyclable packaging, service ware, utensils, and sampling.
 - Trash bins are placed 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.
 - Vendor packaging and other materials that are not compostable or recyclable are handled either by requiring vendors to remove these materials or providing trash collection just for vendors.
- Elimination of the trash carts would reduce confusion cited above between the trash and recycling containers. It would also reduce costs.
- Signage should be placed directly on the carts. Because the compost will also be collected in carts this will reduce confusion.
- Collection logistics would be the same for both compost and recyclables (see below).

Suggested compost hauler and Processor: Rutland County Solid Waste

Suggested materials to be collected for composting: food scraps, soiled paper napkins, plates, bowls, other paper waste, and compostable plastic service ware.

Number, Type & Capacity of Compost Collection Bins

Number: 28 carts

Type: Carts on wheels

Capacity: 68 gallon

Compostable bags (type and amount needed): Bags are not required to line the carts. However, in the heat it would be good to line the carts to help limit odors. Perhaps a company could be solicited to donate bags. Deane Wilson, from Rutland County Solid Waste, stated that logos could be placed on the carts if a donor of compostable bags could be found.

How are containers being obtained? Carts will be provided by Rutland County Solid Waste District at no cost for first year.

Bin Station placement:

Eight bin stations were in place at the previous event. This seemed adequate; however, additional stations would certainly increase visibility of the “zero waste” stations as the crowds undoubtedly continue to grow at the event. Continue strategic placement of bin stations in the dining/food vendor area and along pathways.

Compost Collection Logistics

Bin station monitoring and collection method: The SolarFest organizers seem to have a strong volunteer base. If sufficient volunteers can be obtained, it is suggested that volunteers be stationed at all times at the “zero waste” stations in order to better assist event attendees in separating their wastes and to limit contamination. If there are not enough volunteers for all stations, having volunteers stationed to monitor the bins in the food vendor/dining areas and the main trafficked areas would be essential; a “rover” could be assigned to check the non-monitored stations.

Estimated collection and processing costs: Collection of compostables will be donated at no cost by Rutland Solid Waste District. As part of the work to be conducted through the pilot compost collection costs for future years will be determined.

Food Vendor Waste

Compost buckets for vendor booths:

- If authorized by the Health Department, 5-gallon buckets for food preparation wastes could be provided to all food vendors. Food vendors can have easy access to the ZW stations located in their area. Alternatively, stationing one or more shared collection carts behind the vendor booths for use by the vendors could also be provided.

Arrangements for other food vendor generated wastes:

- Cardboard: Ask vendors to set aside cardboard (broken down) for collection by event volunteers.
- Trash: All non-recyclable and non-compostable wastes, including plastic wrap and aseptic containers, should be hauled away for disposal by vendors. This will reduce disposal costs for the event and encourage vendors to practice greater waste reduction. If SolarFest is to provide disposal for vendors, it must be clearly stated to vendors their obligations to participate in the zero waste requirements and to properly dispose of trash in the Service Area.

Arrangements made for Waste Generated at Other Vendor Booths:

- All vendors should be notified of the “zero waste” initiative and be provided with a list of acceptable recyclable and compostable materials in their initial vendor packet and subsequent communication.
- Remind vendors that they are responsible for removal of all waste that is not recyclable or compostable.
- Prior to the start of the event, assign a volunteer to circulate around vendor booths to provide a collection containers for their booths, provide an overview of what is compostable, where recycling and compost collection bins are located, describe the provisions for collection of cardboard, and to reinforce the requirement that vendors haul their own trash out of the event.

Service Area Description

The service area established by the SolarFest organizers for the recycling truck and trash dumpster is well designed, accessible to the main event, and has adequate space to store the full compost carts for collection by Rutland County Solid Waste.

- The collection vehicle for the compost collection carts is a box truck. It will be parked in the service area for the duration of the event. Arriving Friday early afternoon; to be removed Monday AM).
- The collection vehicle holds 28 carts. It has a Tommy-Lift for easy loading of full carts.
- Enough carts will be provided for swap out of full carts with empties.
- Rutland County Staff will be available during the weekend to provide early pick-up and dumping of the carts if necessary.

SECTION 4. COMMUNICATION & PROMOTION

Suggested organizer communication plan: SolarFest organizers use their website and outreach materials to promote renewable energy. They do an excellent job of explaining their mission of promoting solar energy. Adding a “zero waste” component to this message will only serve to foster a greater commitment to preserving our environment.

Vendor Communication Plan:

- Send “zero waste” letter to vendors in the vendor packet. See Attached.
- Include “zero waste” – composting and recycling – guidelines in vendor packets.
- Include list of acceptable and unacceptable service ware in these guidelines.
- Include zero waste information in all follow-up vendor communication.
- Visit all vendors prior to the start of the event and periodically throughout the event to ensure compliance and see if they have any questions.
- Recognize vendors in outreach, on signage, etc.

Volunteer communication plan:

The solid waste coordinator for SolarFest event provides excellent training and support for volunteers. If “zero waste” is adopted it will be important, however, to supplement with additional education about what is compostable and recyclable.

- All organizers and volunteers should be briefed on the “zero waste” concept and on the 2-bin station system.
 - It is vital that all volunteers and staff (not just those responsible for compost and recycling) be provided with a brief overview of what is compostable and recyclable.
 - Everyone must understand that trash cans will only be located by the portable toilets. Attendees will want to know where to put disposable diapers, etc.
- Since vendors will be using compostable plastics and paper service ware it will also be important to provide volunteers with an overview of what the compostable plastics are made from, where the material collected for composting is going, etc.

Container Labels/Signage & Bin Station Signage

The one area that can definitely use improvement at SolarFest is signage. Organizers will need to spend a little time and energy in preparing signage for the “zero waste” event in order to help prevent contamination of the collected materials and reduce attendee confusion. Signage will need to be clear as all attendees will need to undergo “reeducation” in waste handling and can easily understand how to sort materials.

- Have a large sign or banner over each zero waste station to help attendees locate the stations. Signs should be placed high enough for visibility from a distance.
- Signage on the carts or just above the carts must explain exactly what goes in each container—“Recycling—bottles and cans” and “Compost—food scraps, soiled paper, compostable plastic.”
- Examples of compostables and recyclables placed on the signs and on the carts will be most helpful.
 - Food examples, such as a banana peel, paper napkin, plate, compostable plastic cup, etc. on the compost carts.
 - Aluminum can and plastic soda bottle on recycling carts.

Suggested Additional Outreach:

- To reduce contamination in the recycling and compost bins it is advisable to not allow outside food or beverages into the event. Alternatively, signage at all the entrances should explain the zero waste approach and ask attendees to take away any trash that’s not recyclable or compostable.
- Before the event zero waste announcements on the event’s website would be beneficial. Explaining the 2-bin system, what’s recyclable and what’s compostable.
- During the event announcements can be made to remind attendees of the importance of zero waste. This is a great opportunity to equate zero waste and waste reduction into energy reduction and goals for a sustainable world.

SECTION 5. STAFFING/VOLUNTEERS NEEDS

Suggested number of volunteers/staff needed for monitoring and collection during each day of the event and description of tasks:

- Have at least one volunteer monitoring each “zero waste” station throughout the event. If this is not possible for all stations during the entire event, it will be important to have full coverage for the stations nearest the food vendors and along the main walking paths. A “rover” volunteer can check on the other stations.

Volunteer tasks for clean-up at the end of each day:

- Remove full carts (or removed bags) of compost to the service area for storage on the collection truck. Empty carts can be put in place for the next day. At the end of the entire event, all full containers can be loaded onto the collection truck.
- Collect recyclables for emptying into the recycling truck.
- Pick-up litter and check trashcans near the portable toilet area.

SECTION 6. EVALUATION

Evaluation Report

- Collect tonnage information from Rutland County Solid Waste District and Casella, compile brief report, distribute, issue press release, and post on event Website.
- Ask if there were any problems with contamination.
- Take photos of the event composting and recycling.
- Use the NERC [Environmental Benefits Calculator](#) or the [EPA WARM tool](#) to determine resource use savings and greenhouse gas reductions from recycling and composting.

Vendor Recognition

Suggested vendor recognition:

- Due to the relatively small number of food vendors, it might be beneficial to recognize all of the vendors as “zero waste” vendors.
- Perhaps signage could be placed on or near vendor booths stating: “Our food vendors are zero waste vendors, please do your part by recycling and composting.”
- The event’s Website and press releases can be used to both promote the new “zero waste” event and also to recognize the vendor participation and changes they are making.

Attachment B: 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 C: 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. Garbage cans 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 D: 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.

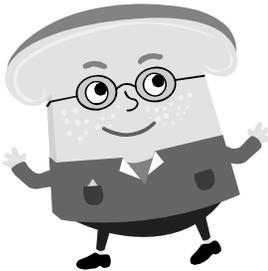
- Place signs behind the Bin Stations at eye level so that event attendees can see them from a distance.

- 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 F: 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 garbage cans near the portable toilets, periodically push the paper towels down so that the garbage 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.