

**WASTE REDUCTION AND RECYCLING PLAN FOR  
CLINTON LIONS CLUB AGRICULTURAL FAIR  
CLINTON, ME**



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**PREPARED BY:**

**THE NORTHEAST RECYCLING COUNCIL**

**[WWW.NERC.ORG](http://WWW.NERC.ORG)**

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# RECYCLING PLAN FOR CLINTON LIONS CLUB AGRICULTURAL FAIR

## ***Introduction***

The Clinton Lions Club Agricultural Fair (Clinton Fair) Waste Reduction and Recycling Plan (Plan) is one component of the USDA-funded Special Events Recycling Project being conducted by the Northeast Recycling Council, Inc. (NERC), and its subcontractor, DSM Environmental Services, Inc. (DSM).

The purpose of this project is to improve special event waste reduction and recycling (recycling) efforts, particularly in rural communities with populations of less than 10,000. The scope of the project includes developing recycling plans for six events (two each in New Hampshire, Vermont and Maine), conducting waste audits at those events, and developing a manual based on the results of the plans, audits and recycling activities taking place in 2005. The Clinton Fair is one of the participant events.

The Clinton Lions Fair has already adopted some recycling measures to reduce the volume of waste requiring disposal from the event. The Plan is intended to provide the organizers of the Clinton Fair with a strategy for implementing an expanded recycling program specific to the needs of their event. The Plan is based on quantitative and qualitative information gathered from discussions and email correspondence with event organizers, attendance at the event, and a waste characterization analysis of the event. In addition, the Plan is informed by lessons learned from other events and sources of information.

## ***Event Background***

The 52<sup>nd</sup> Annual Clinton Fair took place on September 8, 9, 10 and 11, 2005 at the Clinton Lions Fairground in Clinton, Maine. The event is organized by the Clinton Lions Club, and features a family atmosphere, midway, food vendors, animal pulling events, mechanical pulling events, woodsmen's competition, 4H exhibits, petting zoo, wrestling, craft and jewelry sales, and music on two stages. Table 1 provides an event overview.

**Table 1 : Event Overview**

<i>Event</i>	<i>52<sup>nd</sup> Annual Clinton Lions Agricultural Fair</i>
Location	Clinton, Maine
Organizer	Clinton Lions Club
Staff/Volunteers	Over 300 volunteers
Dates	September 8-11, 2005 - Thursday through Sunday
Attendance	17,000 estimated
Vendors	35-40 vendors
Food	12 food vendors (see list below)
<b>Web site</b>	<b><a href="http://www.getrealmaine.com/visit/maine_fairs.shtml">http://www.getrealmaine.com/visit/maine_fairs.shtml</a></b>

### Typical Food Offerings:

Hot dog, hamburger  
Seafood  
Salad  
Sandwiches

Fried mushroom on stick  
Fried onions  
BBQ Beef  
Pizza

Ice Cream  
French Fries  
Fried Dough

### Material Generation and Management

Trash barrels and refundable beverage container barrels were conveniently distributed all around the fair grounds. The adjacent photo shows the types of collection containers provided. Clear plastic bags lined the trash containers. As the containers filled, Lions' staff and volunteers removed the filled bags and replaced them with new ones. Full bags were placed in the trash trailer that was centrally located on the fairgrounds.



Bags of refundable containers were removed and replaced by an individual (from a local redemption center). This individual made arrangements with event organizers to remove and redeem containers. He paid for a vendor booth and kept all the refund money from the containers. No data was collected was available regarding the number of containers redeemed by the individual.



Grease rendering barrels were provided for vendor use (shown on left) by Baker Commodities. Each barrel was estimated to be half full when removed.

weight, as the cardboard had become wet from exposure to rain.

Bolster's Trash Company provided the trash storage container and a roll-off container for recyclable corrugated cardboard (below, right). Bolsters indicated that there were 3.38 tons (6760 pounds) of waste were removed from the event. Lion's organizers were not clear as to whether the corrugated cardboard was included in this



### Waste Characterization

A waste sort was conducted on Friday, September 9, 2005, during the second day of the event. Event organizers felt that for the most part, the composition of trash that was generated at the event would not vary considerably from

day to day. One exception to this assumption, is that more cardboard is likely generated by vendors at the start of the event. Perhaps another is that more food waste is generated at the end of the event when vendors are preparing to close their booths and leave the event.

Four individuals performed the waste characterization, sorting some 366 pounds of waste, representing 5 percent of the total waste generated at the event. Sixteen pounds of waste sorted represented materials that were not considered part of the fair generated waste, including a section of chain link fence, and plastic tarps that sorters introduced to the waste. These are removed from the totals.

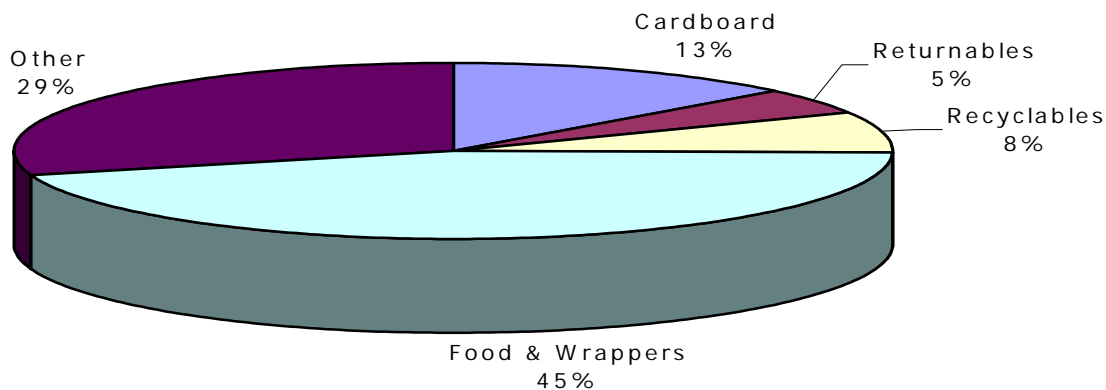


**Table 2. Clinton Festival Waste Characterization**

<i>Material</i>	<i>Weight of Material Sorted (Lbs)</i>	<i>Percent by Weight (based on Waste Sort)</i>	<i>Estimated Total Weights of Materials Disposed at Event (Lbs)</i>
Cardboard	45.2	12.9%	874
Returnable containers	16.6	4.7%	321
Recyclables	27	7.7%	522
Food & Wrappers	158	45.2%	3053
Other	103	29.4%	1991
<b>Total</b>	<b>349.8</b>	<b>100.0%</b>	<b>6760</b>

**Note:** 6760 lbs. was multiplied by percents from the waste sort to obtain estimated total weights of materials disposed.

**Figure 1. Clinton Fair Waste Generation – Percent by Weight**



## Observations from the Waste Sort

It was evident from the waste sort, and inspection of the cardboard recycling effort, that the vendors and Lion's crew, did a good job diverting cardboard from disposal, particularly since



this was a new initiative in 2005. (Cardboard had been recycled in prior years, but not during the last few.) Much of the cardboard that was disposed of in the trash storage area appeared to have been used as a container for other trash, or was otherwise contaminated with food residues.

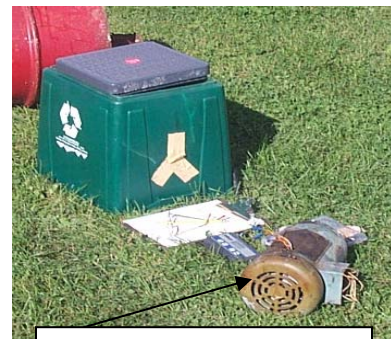
The returnable bottle and can recycling effort also had a positive impact on the amount of waste requiring disposal. Even though data on the total number of cans or bottles diverted

from the waste stream was not available, the separate collection effort appeared successful. Only 4.7% of the waste, by weight, were returnable containers.

Since Maine's deposit law is extremely comprehensive (including water bottles, juice bottles as well as carbonated beverage and beer containers), the small amount of returnable containers in the waste is a good indication that the returnable beverage collection program was successful. Some of these containers found in the trash were beer bottles (not sold or permitted at the event) that were likely tossed in the trash by campers or vendors who were staying at the fairgrounds during the event. Still, the estimated 321 pounds of returnable containers estimated to have been tossed into the trash, represents about 640 containers.<sup>1</sup> With a combined deposit value and handling fee of 8 cents per container, if these containers were captured they would earn the redemption center an additional \$50 to \$75 dollars.

Other "recyclables" that were identified during the sort included metal and plastic food containers used by vendors, and some recyclable newspaper, brochures and other paper products.

The "other" category included plastic bags, diapers, an electric motor presumably discarded by a vendor (26 pounds), a rusted metal barrel (8 pounds), and non-recyclable materials discarded by vendors or fair-goers.



Electric motor near scale

The single largest category of waste was food waste and food wrappers (e.g., plates, cups, napkins). Of this, 16.6 pounds was unused dough from vendors, and another 16 pounds was onions from an onion ring vendor.

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<sup>1</sup> The average weight of returnable containers is estimated at 8 ounces, as many of the containers still had liquid in them. This figure is based on actual analysis conducted at other events which were part of the Special Events Recycling Project.

## **Waste Costs**

The total bill submitted by Bolsters for trash removal and disposal, and having the cardboard recycled, was \$699.70. It is not clear from data made available by the event organizers what the breakout of these two costs were, and thus difficult to estimate whether the cardboard recycling effort helped to reduce waste disposal costs.

The cost of rendering (grease) was \$112.00. There were also staff costs related to handling the trash and cardboard, which were not identified separately.

On the revenue side, the Fair charged a fee to the individual who set up and operated the beverage container collection and redemption program, which diverted material from the waste stream, and earned this individual revenue and made an important environmental contribution.

## **Recycling Suggestions for 2006**

The overall suggestion for 2006 is to continue the successful programs that have been implemented for cardboard, returnable containers and grease, improve upon them where possible, and to consider expanding the program to include other recyclable materials as interest, energy and budgets allow.

### **Returnable Bottle and Can Recycling**



The returnable bottle and can recycling program seemed to work well overall, and seemed relatively efficient. There was virtually no effort required by Fair organizers, and in return they received payment from the redemption center, provided a recycling service to the fairgoers, and reduced the waste requiring disposal.

Ensuring that there are well labeled recycling containers next to all the trash cans will help to capture additional returnable containers that were disposed in trash. In addition, recycling containers near camping areas would help capture the empty beverage containers that campers might generate and currently dispose of in the trash.

### **Corrugated Cardboard Recycling**

It appears that much of the cardboard at the event was placed in the designated cardboard container. However, as the cardboard was stored in an open top container it was exposed to rain, which may have impacted its recyclability, according to event organizers. Storing cardboard in a closed container will alleviate that issue. Another suggestion is to provide more signs designating that the container is for cardboard only, with a sign on each side of the container accessible by vendors. This would help reduce the potential for confusion about what to put in the container. Event organizers distributed a flier to vendors explaining the cardboard and grease recycling program (Appendix A), which seemed to be effective. Additional advance notice to vendors (even in contract language) will help improve this initiative even further.

## **Other Recyclables**

The Lions Club may wish to consider providing dedicated trash cans, or a small dumpster, for vendors to place empty, rinsed food containers, such as #10 metal cans and non-deposit plastic bottles. There are two options identified for the Fair to manage these materials once collected. Event staff or volunteers could make a trip to the transfer station with bags containing these recyclables, or they could be removed by the hauler that is taking trash and cardboard. A price quote for this service would help determine the cost-effectiveness of this effort. Using the analysis from the waste characterization, an estimated quantity of 500 pounds, or roughly 2 to 3 cubic yards, is realistic.<sup>2</sup>

## **Food and Food Wrappings**

A more ambitious recycling effort could involve food waste and food wrappers. If there is interest in such a program it would be advisable to seek assistance from the Maine State Planning Office, Waste Management and Recycling Program, whose staff assisted with the waste sort. More information on such programs will also be made available in the *Special Event Recycling Manual* that NERC is preparing for USDA.

Some of the issues to consider in order to divert organic food waste and wrappers to a compost operation are: whether to compost the material on site, or at an off-site permitted compost facility; the cost and effort to ensure that vendors serve food only on biodegradable plates and cups, and provide only biodegradable utensils; and the cost and effort to set up systems for food vendors and fairgoers to place organic waste in designated containers.

Clearly, the principle purpose of such an effort would be public education and a commitment to waste diversion. It is not likely that this effort would save money, and it would require a significant level of organization.

## **Recycling Education**

The Clinton Fair is an excellent forum for promoting recycling efforts. The fact that the Fair provides attendees with the opportunity to recycle cans and bottles, and for vendors to recycle cardboard and grease, are significant first steps.

The Fair could build upon these efforts by providing information to fairgoers about the efforts taking place, perhaps at a booth on the fairgrounds, or in promotional materials about the Fair (such as press releases, brochures and fliers).

In addition, the Fair could provide a booth to a local recycling organization to construct a recycling exhibit or have recycling related games at the event. Many suggestions along these lines will be provided in the *Recycling Manual* that NERC is developing and that will be provided to the Clinton Fair organizers upon its completion.

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<sup>2</sup> A cubic yard of metal cans weighs about 150 pounds. A cubic yard of plastic bottles weighs about 40 pounds. And a cubic yard of glass weighs about 500 pounds. If there is an equal quantity of each type of container, then a cubic yard could be assumed to weigh about 230 pounds.

## Appendix A: Sample Recycling Sign

Please Help Us to

**Recycle Cardboard**

at the Clinton Fair This Year

**PUT ALL DRY CARDBOARD IN THE DESIGNATED  
CARDBOARD RECYCLING CONTAINER**

**DID YOU KNOW?**

**Each ton of recycled paper can save 17 trees, 380 gallons of oil, three cubic yards of landfill space, 4,000 kilowatts of energy and 7,000 gallons of water!**

**THANKS FOR PITCHING IN!**

