

Massachusetts
Department
of
ENVIRONMENTAL
PROTECTION

case study

Public Event Recycling & Composting: Marshfield Fair

Marshfield Fair implemented recycling as part of its waste management system in 2004, and began on-site composting in 2006. Before recycling, about 50 tons of waste was typically disposed during the 10-day event. By 2008, the amount disposed had dropped to 39.5 tons, a 21% reduction. By 2012, disposal had dropped to 35.4 tons, a 30% reduction.

Type of Event: Agricultural Fair

Event Length: Ten days

Attendance: 160,000 (approximate)

Fairground Size: 32+ acres in use (65 total acres, 50% wetlands)

Number of vendors: 150 (approximate)

Event Description: Family-oriented agricultural fair started in 1867 by the Marshfield Agricultural & Horticultural Society, featuring 4-H shows, animal exhibitions, agricultural and horticultural competitions and displays, a midway with rides, games and food concessions, concerts, magic shows, motocross, demolition derbies and other entertainment. Marshfield Fair is operated by a Board of Directors, a small staff and many volunteers eager to share their love of “all things agricultural.”

Program Overview

Waste Management: During the Fair, about 200 50-gallon trash cans are placed throughout the Fairgrounds. The waste is collected by the Marshfield Grounds Crew each morning in a packer truck and disposed at the Marshfield Transfer Station. Before recycling, cardboard boxes used to be set aside by vendors for collection with trash.

Recycling: In 2004, a pilot recycling program was developed to complement Marshfield Fair’s existing waste management practices, using available materials and resources.

- For recycling, a 14-gallon curbside “blue bin” or a 35-gallon wheeled cart with specialized “bottle recycling” lid and clear plastic liner is placed next to each trash can throughout the Fairgrounds and buildings. Each bin and cart is labeled with “Recycle” and “Bottles and Cans” stickers.
- The blue bins and wheeled carts are used by fairgoers and vendors to recycle plastic, metal and glass bottles, cans and other recyclable containers, such as aluminum trays.
- The recycling effort requires vendors to flatten their boxes to facilitate collection for recycling. Breaking down boxes was challenging to institute, being more difficult and time-consuming for the vendors, who had never had to do so at this event in the past.
- The recyclables are collected each morning by the Marshfield Fair Grounds Crew, using a pickup truck for the cardboard and electric cart for the commingled containers.
- Two 30-yard roll-off containers are used for accumulating the recyclables during the Fair, one for cardboard and one for commingled bottles, cans and containers. When full, the roll-off containers are hauled away by the recycling company and replaced. These containers and hauling services have been donated to Marshfield Fair each year, and the haulers receive the recyclables to offset their expenses.

Composting: Manure and certain agricultural wastes have traditionally been composted on-site in a passive windrow in a remote area of the Fairgrounds. In 2006, volunteers began a managed on-site composting program in compost bins to divert food and produce waste from vendors and agricultural exhibits. About one ton of food and produce waste are composted

on-site in three compost bins. After composting in the bins, the compost is harvested and bagged and given to fairgoers the following year.

Volunteers: About 25 volunteers help during the 10-day event to set out and monitor the recycling containers, consolidate bottles and cans for morning collection, and help vendors flatten cardboard boxes to facilitate collection for recycling. Volunteers also help collect and compost food waste in the on-site compost bins, and harvest and bag the finished compost from the previous year's Fair.

Public Education: Recycling and composting exhibits are displayed throughout the ten days of the Fair to provide recycling and composting information to fairgoers, to inform them about the Fair's recycling efforts and to give away compost that is produced on-site.

Awards: Recycling Initiative Awards and ribbons are given to 35-40 vendors and exhibitors who consistently prepare their recycling properly or who substantially improve their recycling participation during the Fair. Many vendors have received recycling ribbons for 8 or 9 years, which they proudly display at their concession stands.

History: In 2004, MassDEP provided a technical assistance grant to the South Shore Recycling Cooperative to foster recycling at public events on the South Shore. Equipment purchased through the grant was to be shared among all the South Shore communities for public events. In 2012, South Shore Recycling Cooperative received a MassDEP grant to produce professional recycling and composting signage, and buy additional compost bins.

- The grant, in the amount of \$5,679, was used to purchase 100 14-gallon blue curbside recycling bins and 50 35-gallon wheeled carts with specialized lids for bottle recycling, volunteer incentives (t-shirts and water bottles) and 100 hours of technical assistance.
- A pilot recycling program was successfully implemented at the 3-day Cohasset Arts Festival in May, 2004. Project proponents used experience gained there to assist Marshfield Fair in piloting a recycling program.
- Project proponents met with Marshfield Fair Directors to determine if and how recycling could be incorporated into the Fair's waste management system. Waste from the Fair was collected each morning by the Marshfield Fair Grounds Crew and brought to the Marshfield Transfer Station for disposal at the going rate of \$92 per ton.
- Potential savings through reduced disposal costs, along with a desire to follow good environmental practices, encouraged the Fair Directors to take on a pilot recycling program.
- Enthusiasm for recycling resulted in a core group of volunteers who helped initiate, refine and continue the recycling and composting efforts at the Fair.

Results: The overall effect of the recycling and composting effort at Marshfield Fair has been to reduce the tonnage of waste disposed by about 30%, compared to the amount disposed before recycling and composting were implemented.

- Recycling participation by vendors and the public has improved each year. This is not always reflected in the recycling tonnages, because several other factors influence the waste disposal and recycling tonnages, such as rainfall, weather, light weighting of packaging, less cardboard packaging, less liquid going into the trash due to recycling, and changes in attendance levels. Extreme weather events can cause sudden drops in attendance, resulting in significantly more waste requiring disposal than would have been the case if the expected attendees had been there to purchase prepared food, etc.

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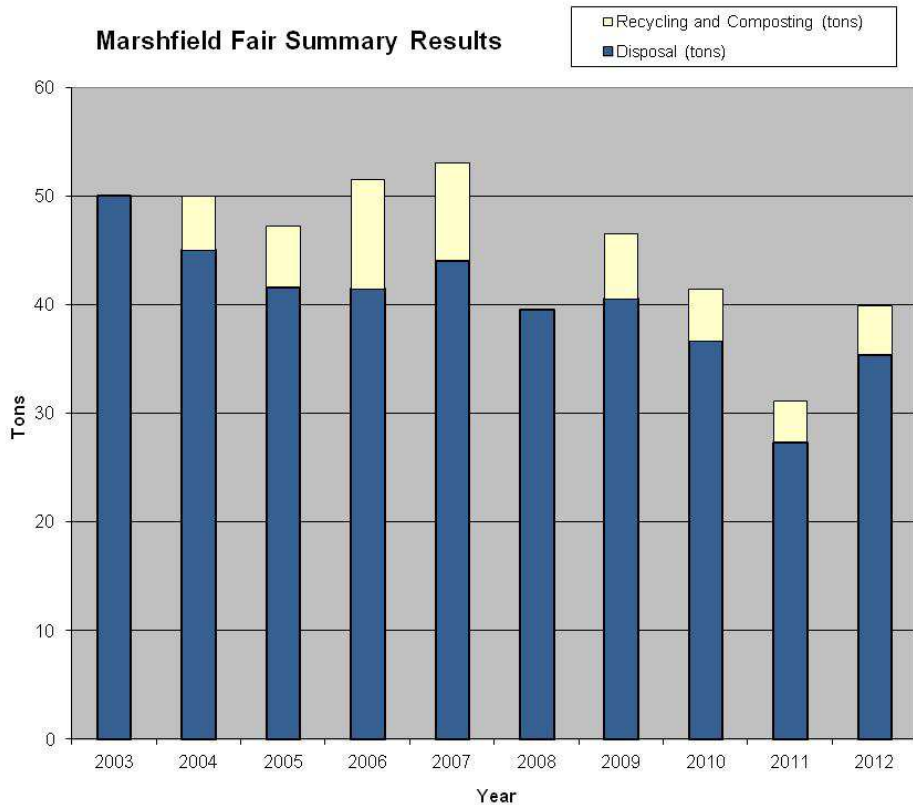
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Kenneth Kimmell, Commissioner

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Marshfield Fair Summary Results



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- The majority of cardboard and a substantial amount of bottles, cans and other recyclable containers are now being recycled at the Fair. The remainder of the waste stream is most likely organic material (which could be composted if resources were available to expand the composting program) and nonrecyclable waste.
- One of the larger vendors at the Fair created a recycling position and hired someone to focus specifically on preparing cardboard for recycling at all of his concession stands.
- The recycling bins and carts have been loaned to other organizations for use at public events on the South Shore several times each year.
- A small percentage of recycling equipment has disappeared since 2004, but the Town of Marshfield donated additional recycling bins to cover the shortfall.
- Public response to the recycling effort has been very positive, and many people have commented on noticeably cleaner Fairgrounds since the recycling program began.
- The Fair's recycling and composting efforts have been well received by the public and the media and provided many positive public relations opportunities, such as radio interviews and newspaper articles.
- In addition to the recycling and composting exhibits, a water conservation and green landscaping exhibit have been added to the public education exhibit area, adding to the overall environmental impact of the outreach effort.

Economics

- Recycling and composting have resulted in disposal savings for the Fair each year.
- Donations of the use and hauling of roll-off containers during the Fair are an important factor in making the recycling effort cost-effective. Mike DelPrete & Sons Trucking of Rockland donated these services in 2004 and 2009-2012. Trojan Recycling of Brockton and Recycle America Alliance of Avon also donated recycling hauling and processing services in 2004. Integrated Paper Recyclers of Woburn donated these services in 2005 through 2008.

- The recycling collection process requires more time and work from the Grounds Crew than their previous waste management practices. However, over time, the recycling collection process has become more streamlined due to better compliance by the vendors and consolidation of recyclables by volunteers.
- Clear plastic liner bags for the recycling carts are used for the recycling program, but their purchase may not add significant expense because the recycled materials no longer go into the trash, thereby reducing the number of regular trash bags needed. The majority of recycling receptacles are unlined “blue bins.” Consolidating loose recyclables from the “blue bins” into the lined carts helps conserve on the number of liner bags used because these are not collected until the bags are full.

Lessons Learned

- Recycling has to be easy for the vendors and the public, to achieve maximum participation. Some people complained of difficulty pushing bottles and cans through the gaskets on the specialized lids of the recycling carts.
- Breaking down cardboard is not easy and this “new” requirement made the recycling program difficult to institutionalize. Citing the disposal ban on cardboard was helpful in obtaining vendor cooperation. After four years of being harangued, cajoled and rewarded for their efforts, the majority of vendors have adopted the practice.
- Awards are great for morale and sustaining the effort over time, particularly when recycling requires more work than the previous waste management practices.
- Many vendors work at other Massachusetts fairs and events, and will be more likely to participate in recycling programs at other events, having become accustomed to doing so at Marshfield Fair.
- People instantly recognize blue recycling bins as recycling receptacles without having to read labels. Labels are beneficial in helping define what types of recyclables to put in the bins.
- If a recycling bin is located on its own without a trash can next to it, it will receive a lot of trash. If a recycling bin is located next to a trash can, the recycling bin will not usually receive much, if any, trash.
- Implementing recycling and composting programs at an event of this size and length requires a dedicated person to lead and sustain the effort.
- Support for recycling and composting must come from the upper management of the organization as well as from others involved in the effort in order for it to be successful. Support from the Marshfield Fair Grounds Crew was imperative to the program’s success. The Crew members have become waste management and recycling experts.
- Support from the Marshfield Department of Public Works was important to the program’s overall success.
- A core group of dedicated volunteers has been essential to the ongoing success of the recycling and composting program.

For more information

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