



White Paper

Arena and Stadium Recycling

Aside from the experience of watching a game, the following could be said about sports fans who flock to arenas and stadiums. They eat, drink, and leave behind mountains of trash that could be recycled and composted. The issue of recycling and composting is a complex one and involves many stakeholders, including venue owners/managers, team tenants, government agencies and private trash hauling contractors. The range of solutions is equally broad. This white paper addresses the role of recycling container design and deployment as well as the value of signage in implementing and improving arena and stadium recycling and composting.

Tons of material that could be recycled or composted

How big is the potential for recycling and composting at professional and college arenas and stadiums?

- According to the Environmental Protection Agency (2011 Game Day Challenge), an average college football game produces 50 to 100 tons of waste.
- A study of 25 different venues and events in California by Cal Recycle in 2006 found on average 2.44 pounds of waste is generated per visitor, per day.
- National Association for PET Container Resources (Venue Recycling in the USA, 2008) surveyed outdoor (category 1) and indoor (category 2) venues to determine total numbers of PET bottles, aluminum cans and glass generated by sports facilities:

Venue or Event Category*	Total # Venues or Events	Total Category Attendance (in MM's)	Average PET Bottle Use	Total PET Bottle Use (in MM's)	Average Cup Use	Total Cup Use (in MM's)	Average Aluminum Can Use	Total Aluminum Can Use (in MM's)	Average Glass Use	Total Glass Use (in MM's)
1	723	263	1.72	452.36	1.0	263	0.422	110.99	0.04	10.520
2	61	141	0.9	126.9	1.0	141	0.08	11.28	0.2	28.200

Large crowds, Major Opportunities

Stadiums and arenas bring a high volume of people in one place at one time results in a high volume of waste and potential recyclable materials. Implementing an effective recycling plan at these venues can generate potential revenue from collected recyclables but, most importantly, a [recycling plan](#) can save the administering organization tens of thousands of dollars a year in disposal costs. The management of these facilities is beginning to understand the financial gain opportunities.

To analyze the potential for recycling and composting at arenas and stadiums, it is important to realize that these facilities have distinct areas, each of which poses particular challenges.

Parking and other areas outside the stadium or arena, particularly where tailgating is popular, generate a considerable volume of recyclable and compostable material. Using permanent or semi-permanent recycling containers in parking areas may be impractical due to the potential for damage to the bins. Many colleges and some professional franchises are addressing this part of the waste stream with teams, often made up of volunteers, who collect recyclables or who distribute recycling bags. Food and beverage vendors who operate on streets and sidewalks outside stadiums also generate waste. However, collection and recycling may be under a municipal jurisdiction and thus not the responsibility of stadium management.

Doors /gates are typically the first direct contact point between the venue and the fans. Many stadiums and arenas prohibit fans from carrying in food and beverages. Therefore they need effective [recycling containers](#) to collect recyclables like water bottles. Highly visible [signage](#) can help educate patrons and better manage this process.



Concession concourses generate much of the potentially recyclable and compostable materials. They are also the most crowded areas especially between innings, at halftime and during other breaks in the action. In these crowded, sometimes cramped quarters fans typically do not take the time to search for recycling containers – even if they want to use them. Most stadiums and arenas calculate waste volume and provide an adequate number of trash cans. However, there may not be enough [recycling containers](#) and/or these containers may not be positioned in high-traffic areas. If a patron has to go out of his way to use a recycling container, he is more likely to use the nearest trash can instead.



Care must be made in developing and deploying signage. Not only do signs point to the location of recycling containers, creative graphics instruct fans as to what can – and cannot – be put into each recycling container.

Venues that adopt fully recyclable cups, napkins and other foodservice items create a tremendous potential for composting. Here, too, effective, impactful signage is integral to the success of the program.

Private boxes. The proliferation of private boxes and suites has raised the recycling potential in these areas. However, collection is different in these restricted areas, where crowding is not typically an issue. What may be a concern is [aesthetics](#). Sloppy, overflowing recycling and composting bins are not welcome in private areas. Aesthetically pleasing, unobtrusive recycling containers (right) should be placed in common areas and within individual suites.



Seating areas. Much of the potentially recyclable and compostable material is generally left behind in seating areas. After each game or event, crews literally sweep through the stands. While some stadiums are trying to recycle these materials, most is sent to the landfill. Locating recycling containers in seating sections is typically not an option due to space considerations. Instead, patrons need to be educated to bring recyclable and compostable materials to designated containers that are located in the concession areas.

Eye-catching signs and posters are a key component of this educational effort.

It's a Win-Win Situation

Arenas and stadiums across North America are taking a more proactive approach to recycling and composting. This growth is due not only to fan demand, but also because these programs have a positive impact on the bottom line by reducing clean-up and waste disposal costs.

The [Xcel Energy Center](#) (right), home to the National Hockey League Minnesota Wild, has reduced waste by 1.43 million pounds or over 58 percent, thanks to an aggressive recycling program. Multi-stream recycling containers feature unique openings and clear graphics so that bottles and cans, paper, compost, and garbage go in the right place.



The Cleveland Indians recycled 173.93 tons of waste materials at their facility during 2011, amounting to 23% of their total waste production. During the season the franchise cut their landfill trash by 47%, reducing their trash hauling pickups by more than one-third.

The University of California-Davis has been named the diversion rate champion during the EPA's 2011 [Game Day Challenge](#) for colleges and universities. In 2011, UC-Davis and 74 other colleges and universities, along with their 2.7 million fans, diverted more than 500,000 pounds of waste at college football games, according to a news release. UC-Davis, which was the first to initiate a zero waste goal in 2007 at its stadium, had a nearly 94% diversion rate.

Action by stadiums and arenas, the teams that occupy them, and organizations like the [Green Sports Alliance](#) are helping to usher in a new era of responsible – and even zero waste – sports venues.

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