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University of Tennessee, Neyland Stadium's Recycling Program

Neyland Stadium, located on the University of Tennessee (UT) campus in Knoxville, is home of the UT Volunteers football team. With a seating capacity of 104,079, it is the largest football stadium in the South, and the third-largest college stadium in the country. Since 1993, the stadium has collected more than 50 tons of materials for recycling.

Facts at a Glance

- Neyland Stadium has a seating capacity of 104,079 and sells out nearly every game.
- Neyland is the third-largest college stadium in the country.
- The stadium currently recycles 15 percent of the 15 tons of waste generated during each game.
- The stadium recycled more than 17 tons of material during the 2006 season.

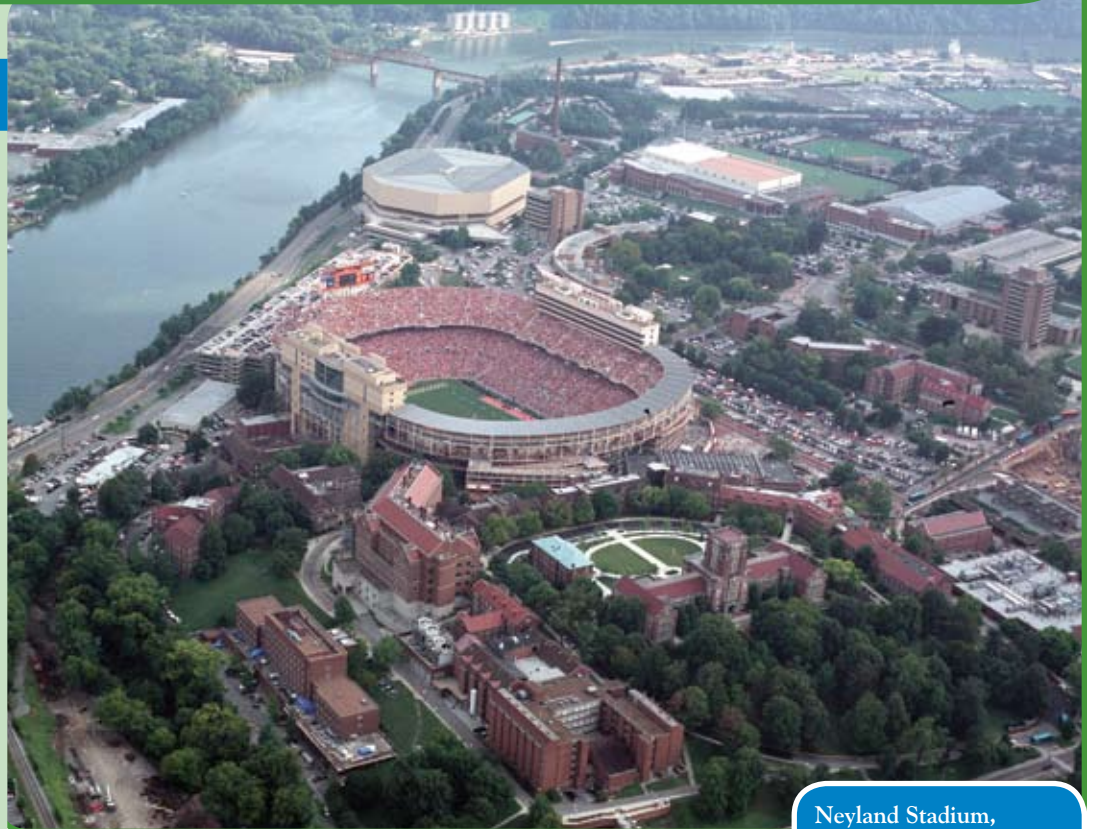


Photo: University of Tennessee Video & Photography Center

Neyland Stadium,
University of Tennessee.

Program Overview

The recycling efforts at UT's Neyland Stadium are spearheaded through *Good Sports Always Recycle™* (GSAR), a recycling program cosponsored by UT, Eastman Chemical Company, Knoxville Coca-Cola Bottling Company, Waste Connections, and Food City. The program encourages Big Orange fans to toss their empty plastic cups and bottles into designated recycling bins located in the concourses and tailgating areas.

UT's Athletics Department began working with GSAR in 1993 to increase recycling at sporting events and in the community. Today the program recycles plastic cups, water bottles, and cardboard inside the stadium and at athletic events throughout the year, and plastic bottles, aluminum cans, and newspapers in tailgating areas.



Facts at a Glance

- The recycling program saves UT about \$3,500 in avoided trash hauling costs per season.
- Fifty-five-gallon wheeled toters are used inside the stadium, while collapsible ClearStream® bins are placed in the tailgating area.
- In 2006, UT students volunteered 200 hours of service staffing a recycling booth, picking up litter, and pulling trash from the stadium's recycling bins.
- Regular and congenial interaction with fans in the tailgating areas can help ensure a successful recycling program.
- Sponsorships and partnerships with local businesses, nonprofit organizations, and government agencies for funding, hauling, logistical support, or staffing can help launch, maintain, or expand a recycling program.

The stadium typically hosts seven football games per season, during which the recycling program is active. When basketball season rolls around, the 55-gallon toters used in the stadium are moved to the Thompson-Boling Arena for use during the basketball season. The smaller, collapsible bins, which feature blue plastic tops, foldable metal leg frames, and clear plastic bags, are used in the tailgating areas during football season and then used for other outdoor events during the year, such as a picnic for freshmen.

The recycling program also helps educate students across Tennessee about the benefits of recycling.

Each year a committee chaired by a representative of the Tennessee Department of Environment and Conservation selects ten K-12 schools with outstanding recycling programs to enjoy a tailgating party and free access to a home game as guests of the GSAR program. During an on-field ceremony, each school representative receives a commemorative plaque and a check for \$500 to support its respective recycling program.

HOST Communications, in partnership with GSAR sponsors, broadcasts recycling messages on the university's television and radio network to give GSAR maximum exposure. The sports call-in show also gives away GSAR prize packs filled with sponsor gifts.

Nuts and Bolts

Materials, Bins, and Placement. Inside the stadium, soft drinks are sold in plastic stadium cups, while water is sold in plastic bottles (plastics #1 or #2). No beer is sold on campus. No glass or aluminum containers are allowed or used inside Neyland Stadium, so the recycling bins collect plastic bottles and cups only.

In-stadium recycling bins are positioned in the fall of each year before football season and remain in place throughout the entire season. Fans inside the stadium can recycle their plastic drink bottles and stadium cups by placing them in one of 140 recycling bins located in the concourses. The wheeled, 55-gallon bins feature restrictive, locking lids to minimize contamination (mixing trash with recyclable materials). Stickers on the bins feature the program's name, *Good Sports Always Recycle*, as well as the logos of the sponsoring partners. Overhead signs above the bins feature the "chasing arrows" recycling symbol. Clear liners are used in the recycling bins to assure that material collected after each game can be easily identified as recyclables.

Tailgating areas provide another opportunity for fans to recycle. Since 2005, more than 100 recycling bins have been placed in the tailgating areas and other high-traffic locations outside the stadium, including near the entrance gates, to collect commingled plastic bottles and aluminum cans. (Fans are not allowed to bring beverages inside the stadium.) At the start of the 2007 season, the stadium placed 20 of the small, collapsible bins at entrance points to collect newspapers and other kinds of paper.



Photo: Sarah Surak

Shown here is a 55-gallon wheeled toter (left) used inside the stadium and a smaller, collapsible bin (right) used in the tailgating area.

Collection. Between games the bins are stored in a nearby university-owned warehouse. On game days, workers set the recycling bins in place by 8 a.m. After kickoff, all the bins in the parking lot are picked up to avoid damage or theft of either the bins or recyclables. Newspapers, which feature game day player lineups, also are collected after kickoff from five distribution locations scattered around campus in areas with high pedestrian traffic.

The cleanup process inside the stadium begins the morning after a game. In addition to the materials placed in the recycling bins, workers collect for recycling all cups and bottles that fans leave inside the stadium, such as those left beneath the seats.

Remaining liquid is poured into five-gallon buckets and then poured down a drain. The cups are stacked and then gathered into clear bags. Throughout the morning the cleaning crew places trash bags (black), bags of cups and bottles (clear), and cardboard from the concession areas into three separate piles on the concourses. Two lift-gate trucks owned and operated by the UT facilities staff, one for cups and bottles, and one for cardboard, collect the recyclables as they are pulled from the stadium and then transport the materials to 60-yard roll-off dumpsters located near the stadium. The following Monday, the campus waste hauler, also a GSAR sponsor, picks up the roll-off dumpsters and trucks them to a recycling facility to drop off the recyclables.

Oversight and Reporting. The logistics of the program are overseen by the campus recycling coordinator, who is onsite during recycling collection Saturdays and Sundays of every game day weekend. For the first three games, the recycling coordinator is in the field supervising recycling activities.

The recycling coordinator's role includes overseeing the entire process from placement of the bins to hauling of the materials to the recycling facility. The coordinator also is responsible for troubleshooting, such as dealing with heavy rain situations, finding missing recycling bins, scoping the parking lot to ensure that all recycling bins have been picked up after the game, and coordinating the placement and removal of dumpsters with the waste hauler.

The coordinator also maintains contact with the recycling facility, which provides monthly weight tallies. The weights are given for materials collected from inside the stadium and from the tailgating areas. Cardboard weights are reported separately, as are newspaper totals.



Photo: Sarah Surak

The bed of this pickup truck, used to collect cardboard for recycling, has wire mesh walls and a retractable roof.

Staff Training. Three staff members do a majority of the cleanup work. They attend a 30-minute training meeting the week before each game. At this time, they are given a packet of information to use over the weekend, which includes aerial photographs or maps of the parking lots with locations marked for each recycling bin in the tailgating area, the order for setting out and picking up the bins, and a timeline for the weekend's activities. These individuals work about 8 hours each Saturday and Sunday to help with the recycling duties.

Student volunteers assist in picking up litter in the tailgating areas and emptying full recycling bins and relining them. After kickoff, the volunteers also help break down the bins in the tailgating areas. Students wear t-shirts that read "Make Orange Green," which is a branding slogan for the campus's environmental efforts that plays on UT's school color, orange.

Education and Outreach.

UT educates its visitors and fans about the stadium and tailgating recycling programs through a number of avenues. First, student volunteers staff a table and booth with information about recycling and "green tailgating" in the

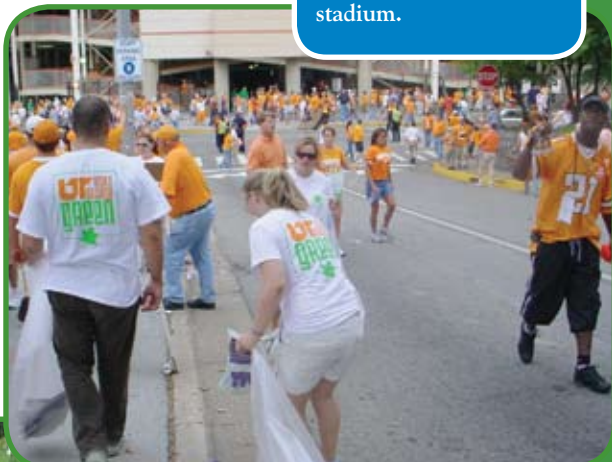
Volunteer Village, which is an area of lawn outside the stadium that serves as the radio hub for WIVK's game day broadcast and hosts family-oriented, pre-game events such as face painting. During the 2006 academic year, students volunteered 200 hours of service staffing the recycling booth, picking up litter, pulling trash placed in outdoor recycling bins, and relining the bins.

Information about the stadium's recycling program is included in the official playbook sold at each game. The playbook features a two-page color advertisement that shows a photo of a football player beside a recycling bin with the message "Good Sports Always Recycle." Video clips also run on the jumbotron, and the radio DJ periodically intersperses reminders to fans to "Make Orange Green" by recycling.

Financing the Program. GSAR sponsors provide the financial support to operate the stadium's recycling program, covering the cost of purchasing the recycling bins, hauling the materials to the recycling facility, and supporting the education and outreach.

UT pays both hauling and tipping fees for each dumpster of waste that is emptied, but the waste-hauling contractor is a GSAR partner and offers the university a reduced rate on the hauling fee. Because the company that receives the recyclables does not charge a tipping fee, the more UT recycles, the fewer times dumpsters on campus need to be emptied and the less the university pays in hauling and tipping fees. Ultimately, the recycling program

Volunteers in white "Make Orange Green" t-shirts pick up litter and recyclables outside the stadium.



Photos: Sarah Surak



Students staff the "Make Orange Green" booth in the Volunteer Village, which provides tips on green tailgating and recycling.

coordinator estimates that UT saves about \$3,500 in reduced hauling and tipping fees per season based on a lower volume of trash hauled to a landfill.

The GSAR program also runs the recycling program at the Thompson-Boling Arena during basketball season and collects plastic cups from all other events in the arena as well.

Results From the 2005 and 2006 Football Seasons

| Material | 2005 Collection (in Pounds) | 2006 Collection (in Pounds) |
|---|--------------------------------|--------------------------------|
| Plastic cups and bottles from inside the stadium | 6,300 | 10,587 |
| Plastic bottles and aluminum cans from the tailgating areas | 3,000 | 5,293 |
| Cardboard from vending areas | 5,300 | 7,600 |
| Newspaper | 5,540 | 10,000 |
| Totals | 20,140 | 33,480 |

Challenges and Solutions

Challenge: The biggest challenge is educating the staff, volunteers, vendors, and contract workers who are responsible for handling the materials. For example, high turnover among the staff of the waste/cleaning contractor that cleans the stadium on Sunday mornings requires vigilance in oversight to ensure that recyclables are kept separate from other wastes and delivered to the concourse area for collection and recycling.

Solution: One solution is for the recycling coordinator to arrive onsite at 7:30 a.m. Sunday to make sure the collection starts off properly and that everyone is informed of the process.

Challenge: Figuring out where to place recycling bins in tailgating areas can be a matter of trial and error.

Solution: The best places tend to have high pedestrian traffic and a high volume of materials, and are often where people are congregated together sitting, eating, and drinking. Regular and congenial interaction with fans—on the parts of the recycling coordinator, facilities and maintenance staff, volunteers, and others with a stake in the recycling effort—can be one of the best ways to ensure success. Fans at UT tend to tailgate in the same place every game, and many end up “adopting” a bin near their chosen spots. According to the UT recycling coordinator, finding the best spots to place the bins may take a few games or even a few years—and coordinators should be willing to modify their placements as necessary over time.



Volunteers pull plastic bottles and aluminum cans from the trash and place them in the adjacent recycling bin.

Photo: Sarah Surak

Photo: Sarah Surak



AmeriCorps volunteers occasionally help collect materials for the UT recycling program.

Reasons for Success

Sponsorship or Partnership. The stadium's four corporate partners who fund GSAR are active in implementing the recycling program, and their support is integral to the ongoing success. When possible, seeking sponsorships or partnerships with local businesses—including waste/recycling vendors—nonprofit organizations, or government agencies to provide funding, hauling, logistical support, or staffing can help launch, maintain, or expand a recycling program. Sponsors that offer relevant products or services as well as others that might be interested in publicity for their environmental efforts can be good candidates.

Choosing Materials to Recycle. Stadium officials selected the materials to recycle (and purchase, in the case of the plastic cups used inside the stadium) based on their knowledge of what materials would be accepted by the local recycling facility. Plastics labeled #1 and #2 were selected because they could be recycled locally.

Future Forecast

- In the future, the recycling coordinator plans to work more with its concessionaires and vendors to reduce the volume of waste they produce.
- In the large, paved parking lots where fans tailgate, which are unsuitable for using collapsible-frame recycling bins because of parking and traffic patterns, the recycling program is considering handing out translucent orange bags for fans to collect their plastic bottles and aluminum cans. The goal would be to encourage fans to place their recyclables in the orange bags, and then UT staff would drive through the parking lots collecting the bags of recyclables.