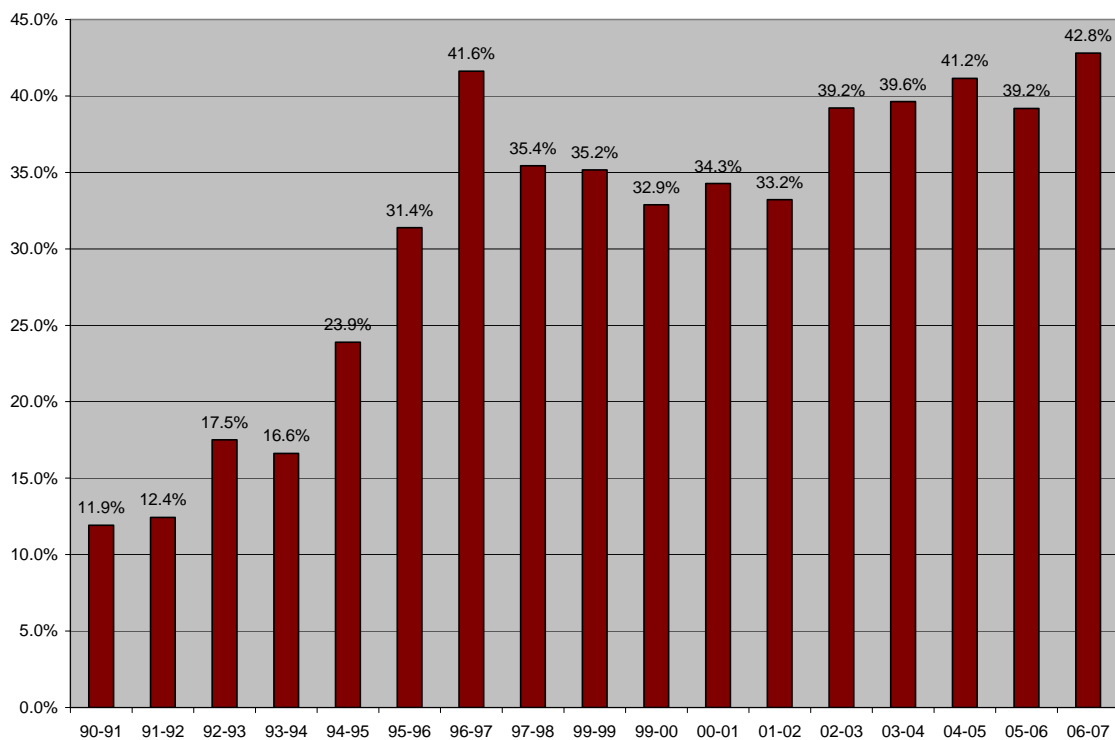


## Waste Reduction & Recycling

At Carolina, the amount landfilled per person has decreased by 44% since the base year 1990-1991. Over the past 15 years the amount each person recycles has also increased five-fold. During fiscal year 2006-2007, campus waste rose to 10,116 tons of waste managed (5,785 tons landfilled and 4,331 tons recycled) with a population of 39,000. At the same time, campus recycling reached an all-time high of 43%. The next-highest recycling rate and tons for Carolina were 41.6% and 4,300.76 which occurred in 1996-1997 when Hurricane Fran hit the region. The storm left an astonishing 1,750 tons of wood and organic debris to be processed by the Grounds Department for use as mulch or sold to the community as firewood—compared to 387 tons of yard waste and tree trimmings during the 2006-2007 fiscal year.

Recycling Rate History



By recycling almost 2,600 tons of fiber, the largest share of the waste stream, Carolina saved 44,130 trees, 18 million gallons of water, 1.2 million gallons of oil and avoided 1.5 million pounds of air pollution and almost 8,000 cubic yards of landfill space.

The campus indoor recycling program has expanded as the campus has grown. Carolina has indoor recycling in virtually every building on campus, including computer labs in many residential communities. There are 2,600 indoor recycling bins at 1,263 sites in 225 buildings on campus. Efforts have been made to keep up with this growth spurt by adding collection bins and adjusting pickup schedules. Since FY 05-06, the indoor recycling of office paper has increased 20% and 23% for newspapers and magazines. This may be in part due to large number of offices cleaning out in preparation for moves related to construction and renovations projects. Twenty-one percent more bottles and cans were also recycled this year.

Recent legislation has passed which affects the disposal of certain recyclable materials. House Bill 1465 amends the general statute governing the list of materials banned from disposal in landfills to include plastic bottles, oyster shells, wooden pallets and used motor oil filters. House Bill 1518 requires that certain ABC (Alcohol Beverage Control Commission) permit holders, specifically those with “on-premises permits”, recycle beverage containers. The law, which goes into effect in January 1, 2008, calls for “the separation, storage and recycling of all beverage containers that are required to be recycled under General Statute 18B-1006.1.” Currently both aluminum cans and recyclable rigid plastic bottles are prohibited from landfills statewide.

Locally, the Regulated Recyclable Material Ordinance (RRMO) prevents the disposal of pallets, clean wood waste, scrap metal and cardboard from disposal in the Orange County landfill. It also requires that these materials be recycled either via source separation at the jobsite or taken to a processing center where marketable materials are separated out for recycling. During the 2006-2007 fiscal year, operations and renovations on campus generated 763 tons of construction waste. Of this, 602 tons were landfilled—10% of our total amount landfilled for the campus. A significant portion of waste landfilled was collected from the “convenience center” at the Surplus Property Warehouse—202 tons. The convenience center was created to handle waste from both the Surplus Property operations and to serve as a drop-off point for construction shops. For example, broken furniture and construction debris collected at Surplus are taken to the Orange County Construction and Demolition Landfill. The “convenience center” also serves as the primary campus collection point for scrap metal.

Regarding construction and demolition debris, 87% of the 161 tons recycled were source-separated by campus employees. These materials included pallets, clean wood waste, scrap metal, concrete, and brick. This year the Masonry Shop initiated a collection program to recycle their broken brick and concrete debris. Twenty-five tons were hauled to a local recycler to be crushed and used for aggregate for road base and other paving products. Approximately 48 tons of campus construction and demolition waste were transported to a material recovery facility (MRF) in Apex. Based on the recovery rates reported for the facility, approximately 20 tons of recyclables were recovered from these mixed loads.

Corrugated cardboard accounts for approximately 20% by weight of all the recyclables collected from campus. At 855 tons, it is second only to office paper which weighs in at 1,071 tons. These two are followed by newspapers and magazines at 585 tons, animal bedding at 482 tons, food waste at 428 tons and yard waste at 387 tons. Together, these six material categories make up 88% of the materials recycled on campus (by weight).

In 2006-2007, the University received \$12,000 in fines for cardboard in loads destined for the landfill. This is a 1200% increase in fines from the previous year and the highest the fines have been since the county’s landfill inspectors began penalizing trash loads containing cardboard in 2001.

Before students arrive on campus in August, they receive information about the Orange County ban on cardboard at the landfill. Additional dumpsters, eye-catching signs, and extra staff remind them of the need to recycle boxes once they arrive. In 2006, 18 tons of cardboard, brought by 8,000 residential students, were recycled.

Before students move out of the residence halls at the end of spring semester, donation stations are placed in residence hall lobbies. Students are encouraged to contribute any office supplies, unopened food products, and apparel they don't plan to take with them. Donations have tripled since 2003. Of the 80 cubic yards of items collected in May 2006, 70% consisted of clothing and shoes, which were donated to the local PTA Thrift Shops. Eighteen percent were office supplies which were given away to students during the first week of classes. Twelve percent was food that benefited the Interfaith Council homeless shelter and food bank.

Both animal bedding and food waste are sent offsite for composting in roughly equal amounts. More than 428 tons of food waste are collected annually from the Lenoir and Rams' Head Dining Centers, The Friday Center conference and catering facility, and The Beach Café at Brinkhous-Bullitt in the Medical School. Lenoir, the first location on campus to collect food waste for composting, now boasts a 64.5% recycling rate. In FY 2006-2007, campus dining staff recycled 149 tons of cardboard and 250 tons of food waste. At Rams' Head, a food pulper, dehydrator, and chute send chopped food waste directly down to the loading dock for daily pickup. With the water removed, the weight and volume are reduced. Overall, Rams' Head collected 63 tons of cardboard and 71 tons of food waste for a recycling rate of 55%.

To reduce the amount of food waste produced, Carolina Dining Services switched to smaller plates at many food stations in the all-you-can-eat dining halls. In 2006-2007, 44 fewer tons of food waste were discarded than during previous school year. Meanwhile, food waste amounts at Rams' Head and The Friday Center stayed relatively constant. With the addition of the Beach Café to the food waste program in April 2006, another 57 tons of food waste have been collected. An information program on food waste, created in partnership with the Student Dining Board, started in 2007. Plans are underway to begin food waste collection at the Café McColl and the Tar Heel Café during the 2007-2008 school year.

After football games, both plastic and cardboard are collected for recycling. Throughout the 2006 seven-game home season, 44% of the trash was recycled. The majority of this came from the post-game cleanup efforts of Athletics and cardboard recycling by the concession stand vendors.

In many science labs, mercury is not only recycled: The goal is to be "Mercury-free at UNC". During the 2007-2008 school year, the Environment, Health & Safety Department will replace old mercury-containing thermometers for free. The School of Pharmacy has already made the switch to digital and alcohol thermometers. Other equipment that contains mercury includes barometers, sphygmomanometers, dental amalgams, batteries, fluorescent lights and electrical switches.

### **Green Games**

The Residential Green Games program is an environmental competition among residence halls, started by students in 1993. The goal is to stimulate energy and water conservation, reduce the amount of trash generated while increasing recycling, and promote student awareness of campus sustainability initiatives. Each year the student-generated

educational programs become more creative. They include energy fairs, building tours, and Captain Planet pancake breakfasts. Posters, t-shirts, and a variety of activities spread the word and garner points. The Office of Waste Reduction and Recycling and the Department of Housing and Residential Education fund the program and offer cash prizes. In 2007, the Sustainability Office instituted an Energy Award, which went to the Olde Campus Upper Quad community.

The first annual Faculty and Staff Green Games launched in 2007. Award categories and winners are listed below:

- **Alternative Commuter of the Year:** *Sue Tolleson-Rinehart, Ph.D., Research Assistant Professor, School of Public Health Leadership Program*
- **Energy Saver of the Year:** *Housing and Residential Education*
- **Enviro-Maniac of the Year (All-Around Award):** *Sandra Hancock, Department of Otolaryngology*
- **Environmental Motivator of the Year:** *Elizabeth Matteson, Aids Clinical Trials Unit*
- **Green Department of the Year:** *N.C. Botanical Garden*
- **Recycler of the Year:** *Jodi Flick, School of Social Work*
- **Waste Reducer of the Year:** *John Beres, Chemistry Department*
- **Water Conservationist of the Year:** *Chilled Water Systems*

UNC also participates in RecycleMania, a national recycling competition that included 178 schools in 2007. UNC ranked fourth in highest gross tonnage of recyclables, regardless of campus population.