

US EPA ARCHIVE DOCUMENT

Oregon Convention Center Puts “Good Waste” to Use

The Oregon Convention Center (OCC) in Portland, the largest convention center in the Pacific Northwest, designed and launched an extensive sustainability program, incorporating a broad range of practices—from composting to water conservation. These environmental changes earned it the distinction of being the first convention center certified under the Existing Buildings (EB) program of the Leadership in Energy and Environmental Design® (LEED) Green Building Rating System™. OCC recycled more than 315 tons of materials in the last two years alone.

OCC Facts at a Glance

- The convention center covers about 1 million square feet, including 255,000 square feet of exhibit space, 50 meeting rooms, and 2 ballrooms. It hosts an average of 700 events and 700,000 people annually.
- The Center recycled more than 315 tons of materials in 2009–2010.
- OCC is committed to achieving a 75 percent recycling rate by 2012.
- OCC was the first convention center to re-certify at a higher level (Silver) under the LEED-EB program.

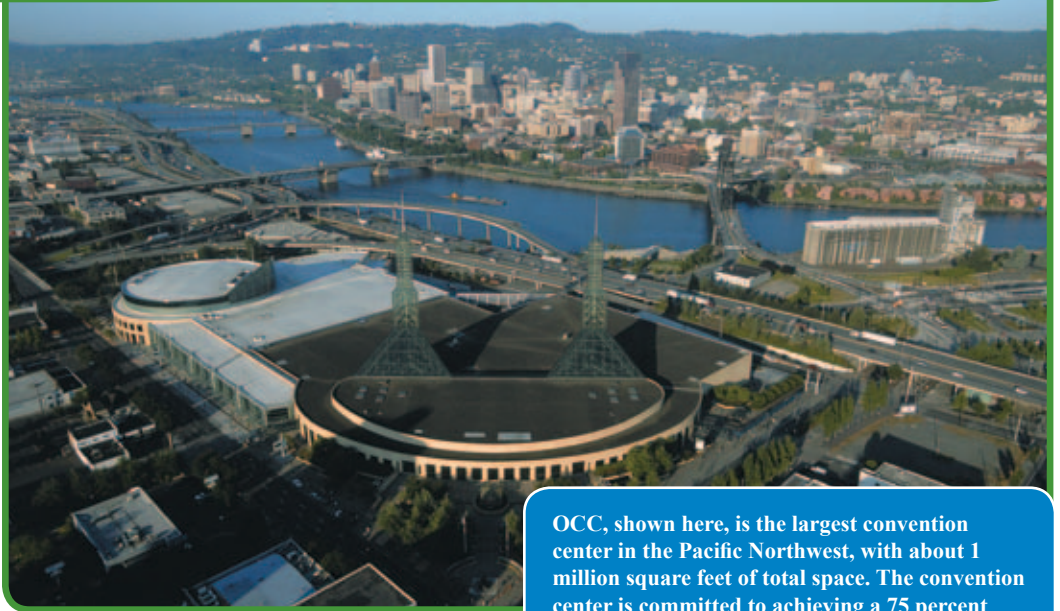


Photo: Bruce Forster

OCC, shown here, is the largest convention center in the Pacific Northwest, with about 1 million square feet of total space. The convention center is committed to achieving a 75 percent recycling rate by 2012.

Recycling Program Overview

OCC has operated a recycling program since 1990. Today, OCC manages an extensive recycling program that includes organic waste, cardboard, mixed paper, cans, plastics, glass bottles, wood pallets, cooking oil, electronic equipment, and landscape trimmings. The center generated approximately 552 tons of waste in fiscal year 2009–2010, and diverted more than 315 tons of materials from landfilling through recycling, composting, and donating.

Notably, OCC implemented and continues to run its recycling program without grant money or other financial support. “The money to set up the program was well spent, and the cause is one that has wide appeal to our clients and employees,” says Ryan Thorpe, director of operations for OCC. Savings are now achieved through a dynamic familiar to operations personnel: preventing waste and increasing recycling to reduce landfill hauling costs.

The waste stream at OCC comes from a variety of sources including conference center attendees, contracted food service employees, and OCC staff. Conference and event attendees mostly generate paper and beverage containers; vendors generate food waste, cardboard, and containers; custodians or event vendors unload pallets with recyclable

shrink wrap at loading docks; staff for OCC’s contract food service provider, handle food waste in the kitchen or dining rooms; and office and administrative workers generate paper and beverage containers. To help with collecting such recyclable materials, all public spaces inside the center have convenient, clearly marked bins.

Nuts and Bolts

Bins and Placement

The convention center has 65 three-container waste bins for mixed recycling, glass recycling, and trash. The bins are used in meeting rooms and other high traffic areas to collect discarded material from event attendees. Separation of wastes and recyclables has been very successful in the meeting areas, with low contamination rates.

Recently, OCC rolled out a redesign of the container signage throughout the facility for clearer communication. Signs with pictures of what can be recycled—aluminum cans, plastic and glass bottles, etc.— have been placed on the bins to better direct the public and staff.

The Operations Department staff use a variety of receptacles to move the waste and recyclables: 25 rolling dumpsters, 25 rolling cages, 30 64-gallon recycling roll carts, and 30 64-gallon composting roll carts. Many of these are located in the “back of the house”—to be used by staff and exhibitors away from public view. The center places “Wet” and “Dry” signs on rolling dumpsters.

Collection

Event attendees separate much of OCC’s waste themselves when they dispose of it in the clearly marked receptacles. Convention center crews, three shifts with 40 people total, collect waste left in public places such as unwanted items from exhibits. The crews sort recyclable material from nonrecyclables at their locations throughout the halls and meeting rooms, or at the back of the building. The nonrecyclable material is then further sorted into wet and dry portions. Dry waste is hauled to a transfer station, where further sorting pulls any other recyclables. Twice a week, recyclables are collected from the center and hauled to a local material recovery facility less than 10 miles away.

OCC uses three sites on its loading dock to transfer waste and recyclables. The dock is located at the rear of the building, near the equipment used for disposal, and there is a staging area of about 1,500 square feet. The equipment, run by OCC staff, includes two 25-yard compactors, one for wet waste material and one for dry; a 15-yard cardboard baler; and a 20-yard cardboard compactor. OCC staff bales and prepares all the material.



Visitors to the convention center can recycle mixed paper, aluminum cans, and plastic and glass bottles in the numerous recycling bins conveniently located throughout the facility.

Photo: Ryan Thorpe



OCC uses a variety of roll carts and rolling dumpsters to collect waste and recyclable material in the back of the house.

Photo: Nancy Erz

Food Waste

The convention center donates leftover preconsumer meals and other food items through partnerships with local food shelters and food banks. Large food-focused events are specially targeted for capturing food donations from exhibitors. At a recent event, 10 tons of donated food was diverted through this effort.

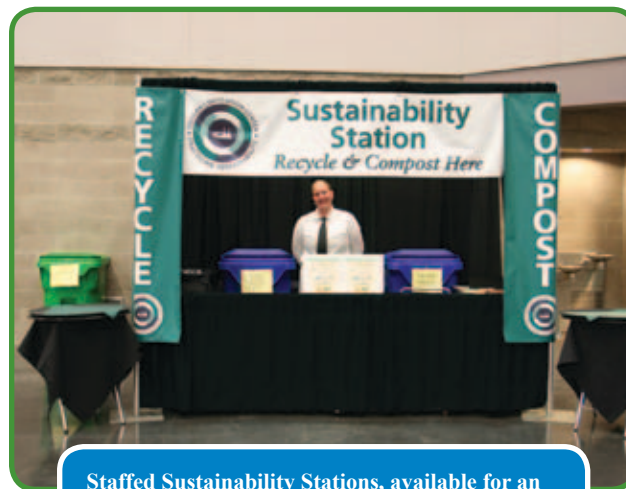
OCC also composts pre- and postconsumer food waste, the heaviest waste material. The convention center captures all food waste from its contractor's operations and the center's hauler transports the waste once a week to a transfer station. By removing food waste from the landfill waste stream, OCC significantly reduces disposal costs that are dependent on weight.

OCC also composts other materials that are not food waste. Box lunches that include compostable plates, coffee cups, flatware, and barware can be tossed in among food scraps and other organic material. OCC composts food service paper towels too. Currently, most disposable items provided in catering and concession services are compostable. However, a few items, including soda containers and beverage lids, are not yet available in a compostable version that is accepted by Cedar Grove, OCC's offsite composting facility. But, Thorpe assures, "We are working with these vendors to make their containers more environmentally sustainable."

OCC recently made its collection process for food waste more efficient by converting a compactor for organic materials. The composting area is power-washed weekly, and other odor-control measures are in place.

All collected material from the Portland area is taken to Cedar Grove Composting in Maple Valley, Washington, where it is made into finished compost for gardening. Cedar Grove is a 60-day compostable site, meaning it only accepts material that will degrade within 60 days. In order to divert as much organic material as possible, OCC uses only 60-day compostable material approved by Cedar Grove. Although OCC receives no payment from Cedar Grove, it does not have to pay composting fees, making this process less expensive than paying hauling fees for landfilling.

For help with collecting compostable material, event organizers can pay a separate fee to have staffed recycling and composting stations called Sustainability Stations. The stations help event attendees separate compostable material at a 10-by-10-foot booth.



Staffed Sustainability Stations, available for an extra fee, help attendees separate recyclable and compostable materials from trash.

Photo: Nancy Erz

OCC guidelines require purchasing office products that contain recycled content. The convention center purchases 100 percent postconsumer recycled-content office paper, and 100 percent recycled-content paper towels and toilet paper from a local manufacturer. All in-house publications are printed on recycled stock using soy-based inks.

Recycling Miscellaneous Materials

Wooden pallets are ubiquitous in the convention industry, and OCC charges clients for pallets that are left behind. These pallets and other wood scraps go into a wood drop box (an open-top dumpster) for recycling. Occasionally, OCC recycles materials such as metals, concrete, porcelain, and electronics. OCC also recycles shrink wrap, clear plastic, and light vinyl table cloths, which are compacted and baled with cardboard.

Hauling Contract

The center has one contract for both the waste and recyclables pickups. OCC pays roughly \$70,000 each year to have its waste and recyclable materials hauled. The cost is low because the center receives credit on the hauling invoice for its recyclables and saves a significant amount of money avoiding waste disposal costs by reducing, recycling, and composting.

The Operations Department staff is responsible for separating, processing, and preparing the materials for pickup. Generally, the hauler rejects recyclable material if the contamination rate reaches 2 percent and sends the load to the landfill. If this happens, OCC is charged twice the hauling fee for the same load. Facing such a penalty, the convention center works diligently to prevent contamination and loads are rarely rejected by the hauler.

As a result of revised procedures and reporting by the hauler, the center now benefits from more accurate diversion data. “The hauler supplies us with original copies of all the transfer station slips with all the pertinent data—weight, material, day, time, etc.—for tracking purposes,” says Thorpe. “We’re very conscientious about being accurate and transparent when reporting these numbers to our clients and the public. There’s extremely tight self-monitoring here.”

Education and Evaluation

OCC educates its custodial force and food service contractor personnel about recycling through on-the-job training, formal annual training, and its Green Team. The center also offers staff offsite training and access to seminars through groups such as the Natural Step Network, which helps organizations work toward sustainable development.

To advertise its recycling program to vendors, event planners, and attendees—and educate them on their roles in supporting it—OCC uses fact sheets available on its Web site and holds preconference meetings with clients. “A hands-on approach is always the most effective,” says Thorpe. “Extensive informational signage on the containers and throughout the facility helps, too.”

OCC evaluates its program in various ways. For example, the center discusses sustainability efforts in staff and departmental meetings. In addition, OCC reviews monthly hauler reports that break down the recyclables hauled from the center by category and weight. Clients also weigh in with post-event evaluation surveys.

Waste Prevention Practices

- Staff reduces paper use as much as possible by printing double sided and by using email to send contracts, event documents, and to communicate with clients.
- Condiments, beverages, and other food items are served in large containers instead of individually packaged.
- Five gallon water bottles on water coolers are provided at events to refill glasses and bottled water is only provided upon request.

Sustainable Choices for Customers

OCC offers two levels of sustainability and recycling options to prospective event managers: standard and premium. The standard option is included in the facility rental and covers regular operational practices for waste diversion and sustainable food and beverage, including recycling bins for move in/out and for the duration of the event, use of china in carpeted areas, compostable disposables, bulk condiments, excess food donation program, and energy-saving lighting schedules. The premium option includes the standard measures plus a package of a la carte food and beverage services, and a post-event report of total weight of materials recycled, composted, and donated during the event.

The convention center also has some clients that choose to go beyond the premium option, working with OCC to design custom sustainability efforts for their events. For example, the Sysco food service company held its regional culinary expo at OCC in April 2008. Given its line of work, the company wanted to excel in terms of food waste and composting. OCC worked out a package of services with Sysco representatives, and collected 7 tons of compostable material at the event.



OCC utilizes rolling cages with variable signage to collect recyclables during move-in and move-out days.

Photo: Nancy Erz

Other Environmentally Sustainable Features

As part of its 2003 expansion, OCC added features that collect storm water from the roof and filter it through a system of rock terraces, pools, and soil, helping to prevent pollutants from reaching the nearby Willamette River. Also outside, grounds and building exteriors are designed to reduce the “heat islands” produced by asphalt, concrete, and hard-surface roofs. Native species and habitat-friendly vegetation is used in landscaping.

Inside its facility, OCC keeps its energy consumption and costs low through the use of its many windows and skylights, which naturally illuminate the facility. Light sensors reduce the need for artificial light, and individual controls moderate the temperature for each space. The center also purchases 40 percent of its electrical energy from Pacific Power’s Blue Sky Block Program, which uses renewable wind power. In addition, the convention center’s ventilation system brings fresh, outdoor air directly into each major space, not allowing it to mix with exhaust air from the facility.

In January 2009, OCC voluntarily joined NW Natural’s Smart Energy Program to help offset the facility’s natural gas usage. Smart Energy supports renewable energy projects by installing bio-digesters at local farms. OCC pays a fee on its monthly gas bill to participate in the Smart Energy program



OCC’s award-winning rain garden is an extensive system that takes rainwater from the roof of the facility and filters it through a series of settling ponds and landscape features before it is released into the nearby Willamette River.

Photo: Bruce Forster

Reasons for Success

The OCC leadership attributes its success to several factors. The convention center's team spirit is exemplified by the Green Team, comprised of individuals from all levels and backgrounds within the organization. The team meets monthly to discuss sustainability issues that affect OCC and its clients, track programs and projects, and make suggestions for enhancing effectiveness or expanding existing programs. The team also educates staff, clients, and vendor partners on the importance of working toward sustainability. Similarly, OCC shares its environmental goals with clients at pre-conference meetings, where it details its sustainability and recycling procedures.

Management support is also critical to the program's success. All senior staff and department managers contribute within their areas of focus and are key decision makers for the recycling and sustainability programs. OCC also benefits from city and regional resources, such as Portland's Bureau of Planning and Sustainability, the state's Department of Environmental Quality, and Metro, the elected regional government that manages waste and recycling for the Portland metropolitan area.

One of the most innovative programs that OCC has implemented to help support sustainability is the Gainsharing Agreement between OCC and the bargaining unit members that have responsibility for day-to-day recycling duties. Members of AFSCME 3580-1 ratified a Gainsharing Agreement in 2008, which awards members a cash incentive for reaching the recycling goals agreed upon in bargaining. OCC partially funds the program through savings from lower hauling and landfill fees. According to Thorpe, "The Gainsharing program has increased awareness and buy-in from staff and has demonstrated an increase in diversion rates."

Forecast

Portland currently has a city-mandated recycling program with a 50 percent total diversion requirement for businesses, and has legislated a 75 percent requirement by 2012. OCC exceeded the 50 percent recycling rate in 2008 and is making program adjustments to meet the new target. To centralize management of the recycling program and other environmental elements, the center hired a sustainability coordinator.

In September 2008, OCC achieved Silver level LEED-EB and aims to achieve Gold during the next re-certification process. OCC also hopes to expand its sustainability efforts and reach out to its customers by implementing a voluntary carbon offset program for show managers and attendees. The OCC values LEED certification for its guiding principles to sustainable operation, as well as the recognition it brings within the events industry and green building community.

For More Information

For more information on waste reduction in public places such as convention centers, airports, stadiums, and parks, visit www.epa.gov/recycleonthego.

OCC FY 2009–2010 Recycling Report

Material	Tons
Cardboard	57.49
Glass ¹	20.50
Mixed Paper ²	29.11
Co-mingled ³	17.70
Electronics	1.12
Vinyl	2.65
Wood	28.29
Metal	12.20
Organic Waste	127.51
Donated Food	2.52
Misc. Donations ⁴	6.28
Recycling Total	315.43
Waste Total	237.38
Diversion Rate	57.06%

1 Glass cannot be co-mingled with other material because it can foul sorting machinery if it breaks. At OCC, it comes from front-of-the-house collection containers and the kitchen.

2 Paper comes from shows and OCC offices.

3 Co-mingled includes paper, newspaper, tin, and plastic. OCC still collects some of those materials separately as needed, and records them separately. For example, if an exhibitor leaves behind four boxes of brochures, OCC may put them on a pallet for the hauler to pick up.

4 Misc. Donations includes items donated for reuse to local schools, charities, and businesses.



Office of Solid Waste (5306P)
EPA 530-F-09-028
October 2010

www.epa.gov/recycleonthego