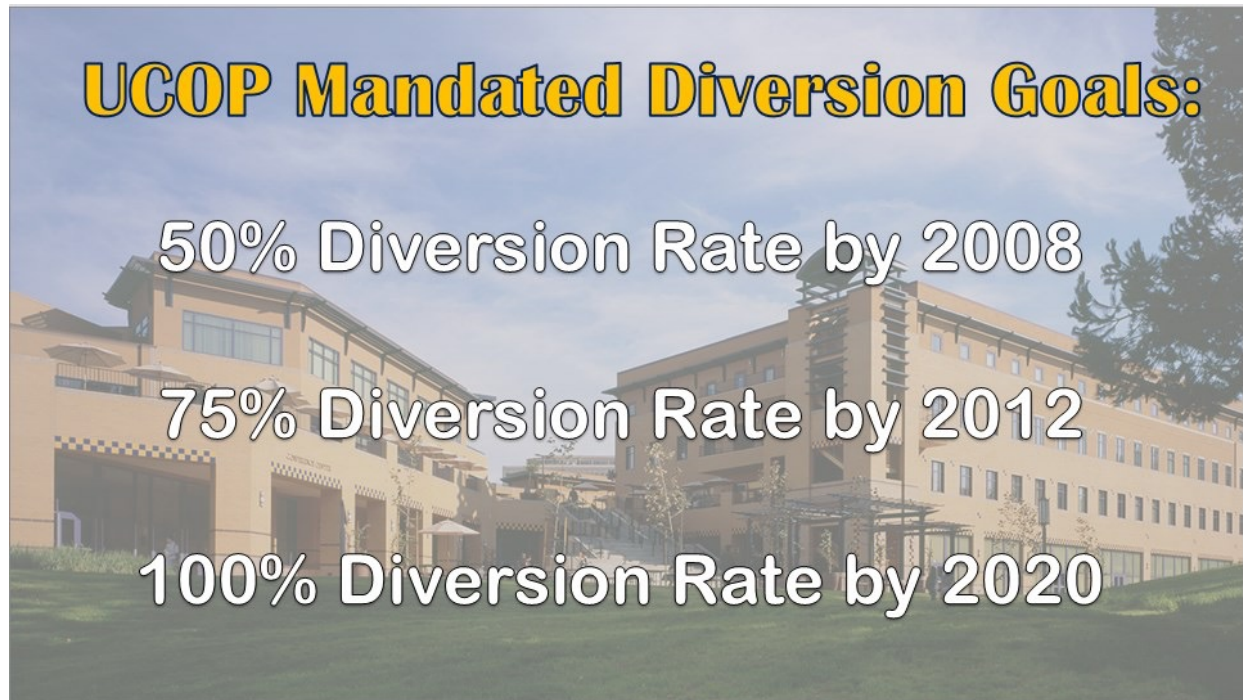




ANNUAL RECYCLING REPORT 2016



Zero Waste

UC Irvine has committed itself to achieve the University of California Office of the President (UCOP) goal of Zero Waste by 2020 by reducing, reusing, recycling, and composting campus waste. Zero Waste is the process of minimizing the amount of material going to landfill and maximizing the material that is recycled and composted, resulting in a lower carbon footprint and a cleaner environment.

Zero Waste International Alliance (ZWIA) defines Zero Waste as:

“Zero Waste means designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them. Implementing Zero Waste will eliminate all discharges to land, water or air that are a threat to planetary, human, animal or plant health.”



ZERO WASTE

Zero Waste, as defined by UCOP, is diverting 95% or more of campus municipal solid waste from landfills—making the amount of waste produced from the university as close to zero as possible. The UCI campus recycles and composts 25 different commodities.

ZERO WASTE LOCATIONS

UCI is well on its way to achieving the goal of Zero Waste by 2020. Five buildings have been certified as Zero Waste facilities:

- Lot 5 Commons
- Pippin Commons
- Brandywine Commons
- Phoenix Grill
- Anteater Recreation Center (ARC)



using their Zero Waste bin systems and are moving closer to becoming zero waste facilities.

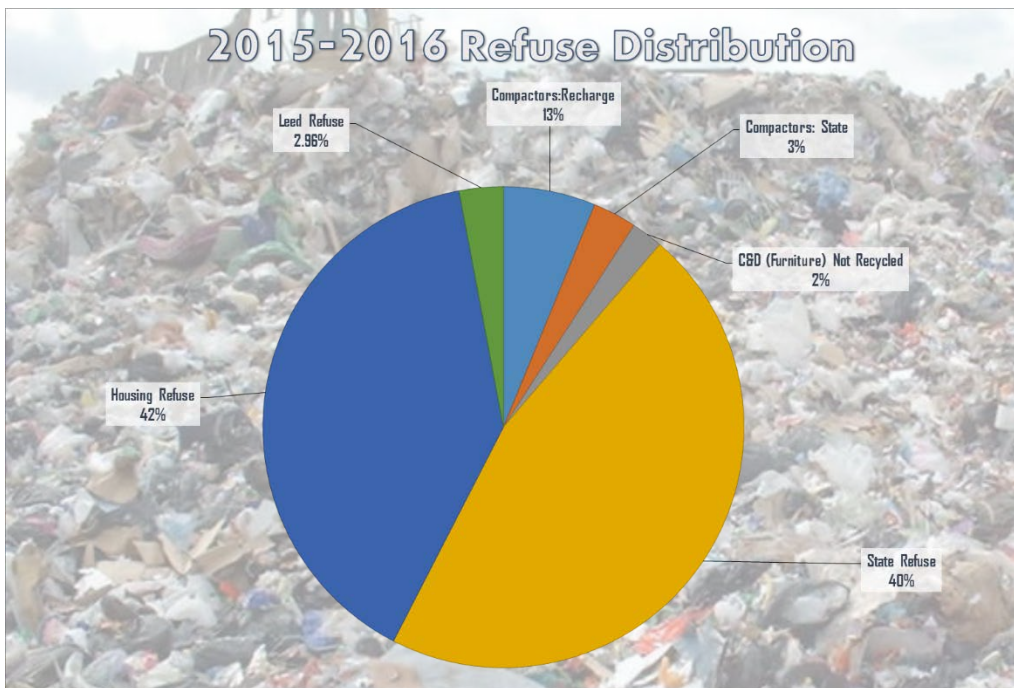
Facilities Management, UCI Dining and Athletics are working together to convert the Bren Events Center and the Baseball Field into Zero Waste Facilities.



Both of these locations have Zero Waste bins in their facilities (style pictured above), which were funded through a grant by The Green Initiative Fund (TGIF).

DIVERSION RATE ACHIEVEMENTS

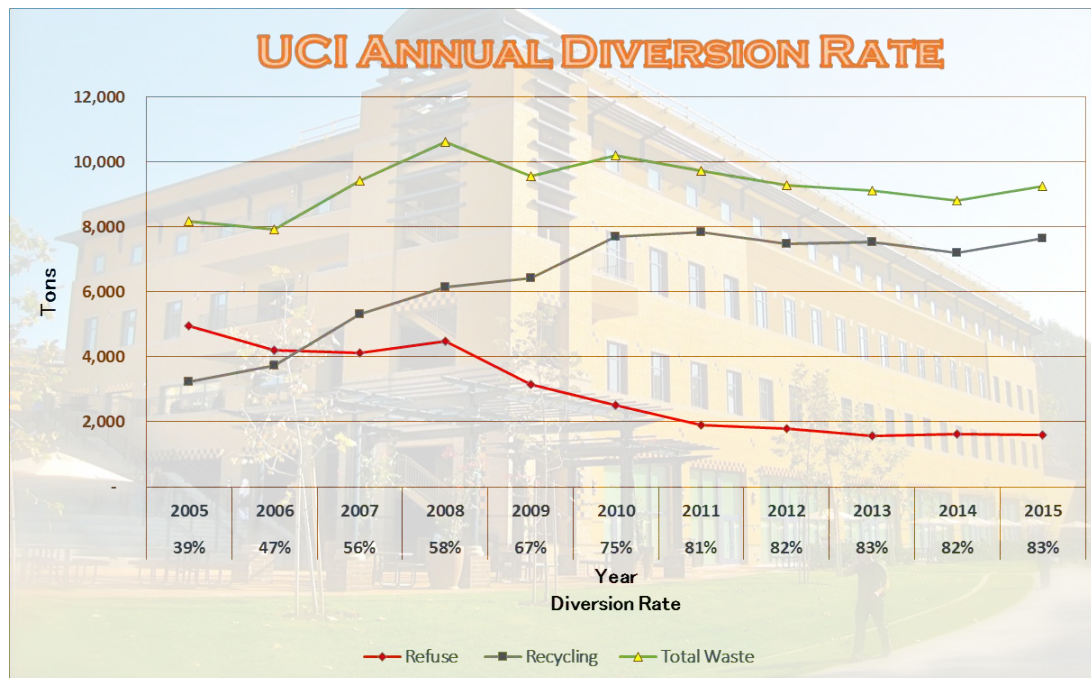
UCI has an 81% diversion rate, meaning that 19% of its solid waste is going to landfill, while the remaining 81% of waste is recycled, reused or composted. The areas to target in order to maximize recycling potential in 2017 are offices, lecture halls, student housing communities, and campus events.



UCI creates an average 10,000 tons of solid waste annually. In 2015, the campus diverted 7,642 tons of material that were either recycled, composted or donated.

1,943 tons of material has been sent to landfills this fiscal year, which demonstrates a consistent reduction in landfill disposal over the past seven years.

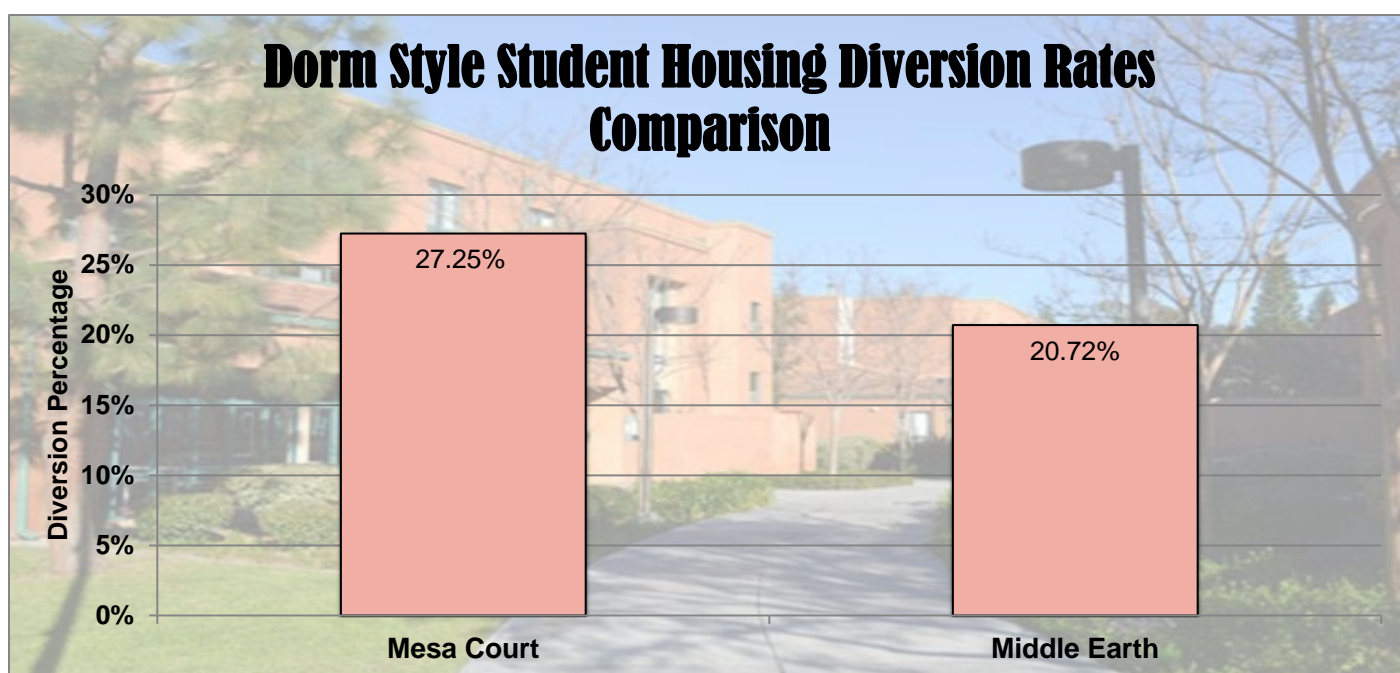
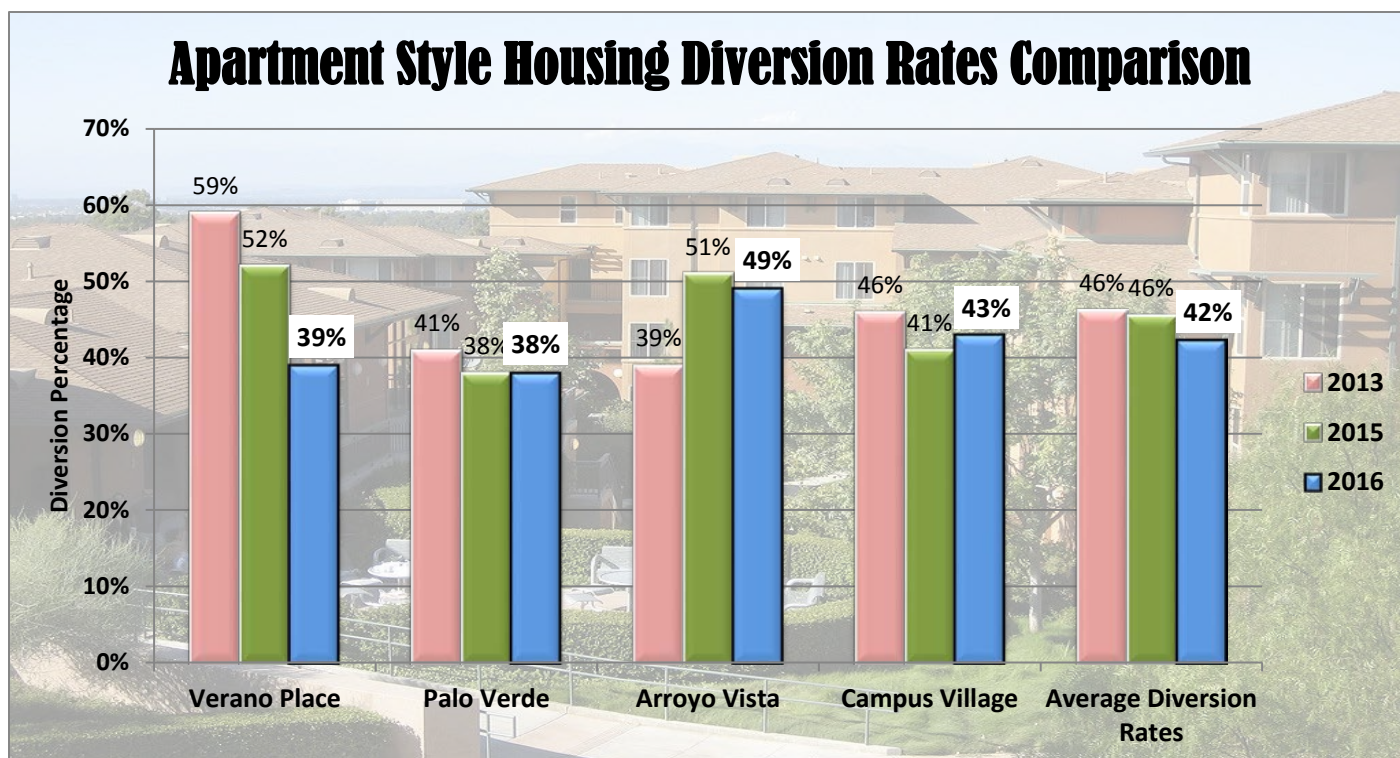
ANNUAL DIVERSION RATE



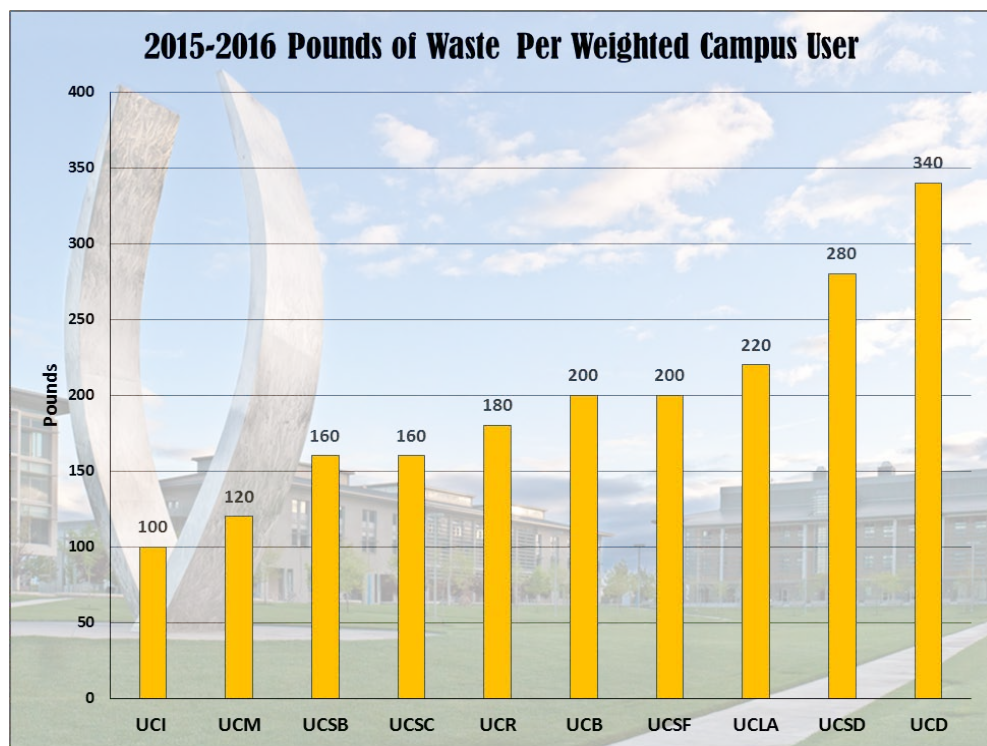
UCI's recycling program has been in effect since 2005. Every year, UCI has been successful in reducing the amount of material sent to landfill, proving that the campus excels in both recycling and waste reduction.

HOUSING DIVERSION RATE COMPARISON

On campus student housing hosts more than 7,000 residents, including both dormitory and apartment-style living. The average diversion rate for these housing communities is currently 42%, which is below the statewide average diversion of 65%, according to CalRecycle. To help improve the housing diversion rate, there are numerous student trainings on recycling and sustainable practices in addition to the placement of campus standardized signs on all housing recycling and landfill bins.

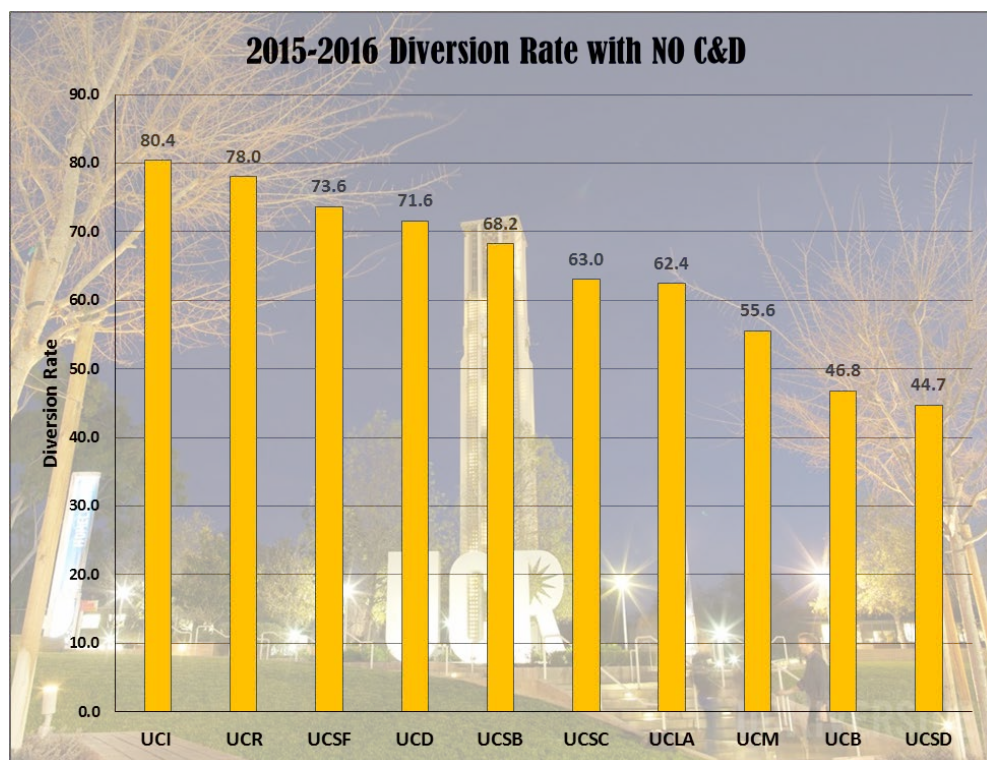


UCOP REPORT: HOW UCI RANKS



Of the 10 UC campuses, UCI continues to rank #1 with the highest diversion rate for the past 5 years.

In the 2015-2016 school year, UC Irvine obtained the lowest landfill waste per campus user at 0.05 tons or 100 pounds per person per the year.



Material from Construction and Demolition (C&D) are not taken into consideration when comparing campus diversion rates because this material is heavy and varies significantly from year to year.

The weighted campus user is used to normalize the comparison between campuses with students living on campus and those schools that are primarily commuter schools.

ANNUAL RECYCLING REPORT 2016

MINI-BIN, BIG CHANGE PILOT PROGRAM

In the 2015-2016 school year, UCI launched the “Mini-Bin, Big Change” pilot program; this program aimed to improve UCI’s diversion rate through direct involvement with office staff.

In this program, the 6-gallon trash bins were replaced with a 1.2-gallon mini-landfill bin attached to a 6-gallon commingled recycling bin (as pictured). The reduced size of the landfill bin encourages individuals to make responsible decisions on what they are throwing away. The commingled recycling bin accepts more items such as cardboard, glass, paper and plastic, minimizing the amount of material being landfilled.

The FM Sustainability Team provides educational material to office-users such as videos and flyers that help individuals become more knowledgeable on how to properly sort their waste. Through this program, office-users are encouraged to increase the amount of material recycled while also becoming more aware of their own waste disposal habits.



WASTE TO WAVES

UCI recently implemented a pilot program to recycle EPS Styrofoam. Campus laboratory buildings produce around 40-60 cubic yards of Styrofoam material each month, which is enough to fill a whole train cart! Styrofoam collection bins have been placed at the loading docks of 10 laboratory and medical buildings across campus. Through our partnership with a local surf shop, Marko Foam, UCI’s Styrofoam will now become the foam core of surfboards.

From waste to waves!



COMMINGLED RECYCLING PROGRAM

UCI's commingled recycling program continues to be a great success! Our most recent expansion converted the mixed paper recycling bins to be commingled recycling bins.

In August 2016, we converted approximately 10,000 recycling bins in offices and copy rooms from "mixed paper only" bins to commingled recycling bins. These bins will allow paper, plastic, metal, and glass (if they are CLEAN and DRY).



UCI CLASSROOM RECYCLE BIN IMPROVEMENT PROJECT

The Facilities Management Sustainability Team recently won a \$37,000 grant from The Green Initiative Fund (TGIF) to fund the UCI Classroom Recycle Bin Improvement Project.

The grant allowed for the purchase of more than 160 connected landfill and recycling bins that were distributed in general assignment classrooms. The bins are color-coded, connected, and have campus standardized signage to make recycling easier. The connector prevents from separating to give students the option to sort and recycle their waste. These bins are also equipped with standardized signs that can be seen throughout campus to make recycling easier. The Recycle Bin Improvement Project will help UCI get closer to the goal of Zero Waste by 2020 by increasing diversion in classrooms.



BIG BELLY BINS

Big Belly bins are a set of landfill and recycling bins that compact material using energy from built-in solar panels. A Wi-Fi enabled sensor keeps measurement of the percent capacity in each bin. These new and innovative compactors hold up to five times more material than a standard street bin. Once the bins are nearly full, a notification is sent out to have the trash or recycling picked up.

These bins have been deployed in high traffic pedestrian areas on campus. In 1 year, Big Belly bins have increased the amount of recyclable materials collected from 20% to 45%. These new innovative resources are helping us keep our campus clean while also reducing our carbon footprint!



Big Belly bins with updated signage

The remaining concrete bins around Ring Mall have been revamped with new labels that use more images to help simplify recycling. With universal signage, students, staff and campus visitors are more likely to make better waste disposal decisions by quickly identifying the items that belong in each bin. This project is part of the campus program to improve recycling education through consistent signage.



LEED EB:OM

UCI has hit another milestone as a leader in the Green Building movement. Six campus buildings have achieved certifications from the U.S. Green Building Council for leadership in energy and environmental design. A LEED-EB:OM certified building is performing more sustainably than its peers. This brings UCI's total LEED EB:OM certified buildings to seven, including Croul Hall which was certified Silver in 2012.

The following existing buildings have been recognized for excelling in operations and maintenance:

| GOLD | |
|-----------------------------------|--|
| Humanities Instructional Building | |
| SILVER | |
| Social Ecology 1 | |
| Natural Science 2 | |
| Hewitt | |
| CERTIFIED | |
| Reines Hall | |
| Gillespie | |

The certification process was completed by the Facilities Management Sustainability Team which includes both staff and student workers. The process took over 2 years, and included measuring and documenting the building's energy efficiency, water efficiency, cleaning and maintenance, indoor air quality, recycling program, mechanical systems, and lighting.

FOOD COMPOST PROGRAM

In 2014, UC Irvine began a food composting pilot program in on-campus housing communities. Due to its initial successes, it soon developed into a full-blown program, and by the start of 2016, the Facilities Management Sustainability Team and the Housing Department were able to fully deploy food waste composting programs in all on-campus housing communities.

Depending on the style of housing (apartment vs. dormitory), each community received a compost bin to allow student residents to partake in the food composting program.

- Middle Earth has 24, 2-gallon compost bins for each community kitchen
- Mesa Court has 29, 2-gallon compost bins for each community kitchen.
- Campus Village has 195, 2-gallon compost bins for every apartment unit.
- Arroyo Vista has 42, 6-gallon compost bins for each themed housing kitchen.



2-gallon compost bin



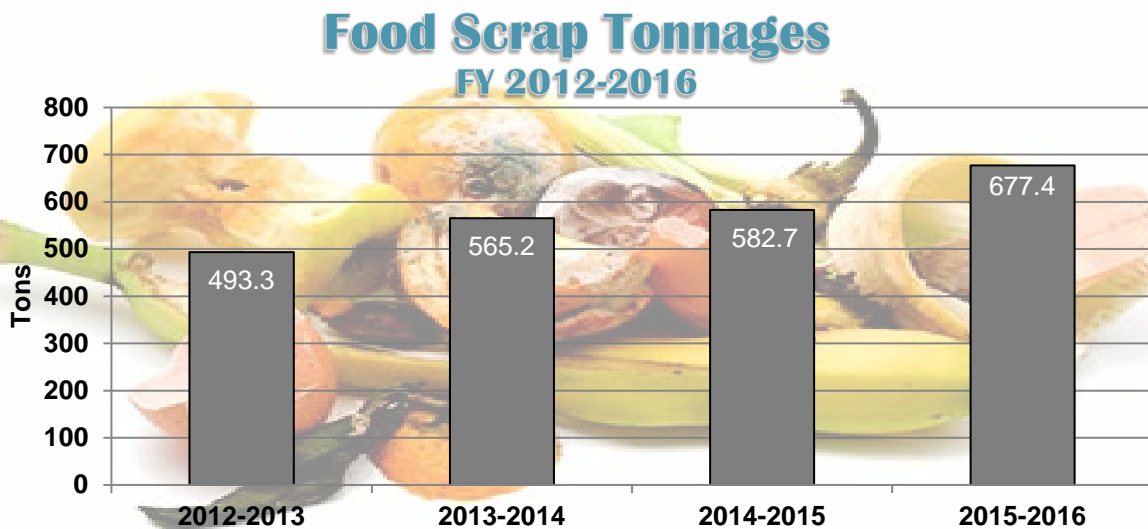
6-gallon compost bin

FOOD SCRAP PROGRAM

In 2010, UCI Facilities Management and Dining began the Food Scrap Program at Mesa Commons. Since then, the program has grown to include all 26 campus dining locations. The EPA estimates that only 5% of the nation's food waste is diverted from landfills; UCI greatly exceeds the national average, diverting upwards of 600 tons of food waste annually. The food scraps are then anaerobically digested, which generates power for a local water treatment plant.

While the food scrap program primarily began as a pre-consumer program, in 2015 it expanded to post-consumer at Phoenix Grill, B.C. Cavern, and the Bren Events Center and continues to expand in Student Housing.

Shadow boxes for compost, recycle and landfill were created to educate users on how to properly sort their waste. The shadow boxes were installed in EH&S, Facilities Management and the Student Center East Food Court to display commonly found items in the respective locations.



Zero Waste Shadow Boxes



ANNUAL RECYCLING REPORT 2016

RECYCLEMANIA – GO UCI!

Every year, colleges across the United States participate in the annual RecycleMania competition. The 8-week competition runs from February through April. UCI has consistently placed in the top 10 over the past five years of RecycleMania.

The competition aims to improve and promote on-campus recycling. This year, RecycleMania featured 350 schools participating from 48 states within the US, the District of Columbia and Canada, with combined enrollment of 4.4 million students.

UCI placed 6th in the Grand Champion category of the 2016 RecycleMania competition as well as 7th in the Gorilla category, with over 567 tons of recycled commodities. By diverting this amount of recycled material, UCI has prevented 1,812 metric tons of CO2 from entering the atmosphere, equivalent to keeping 355 cars off the road annually.



EARTH WEEK

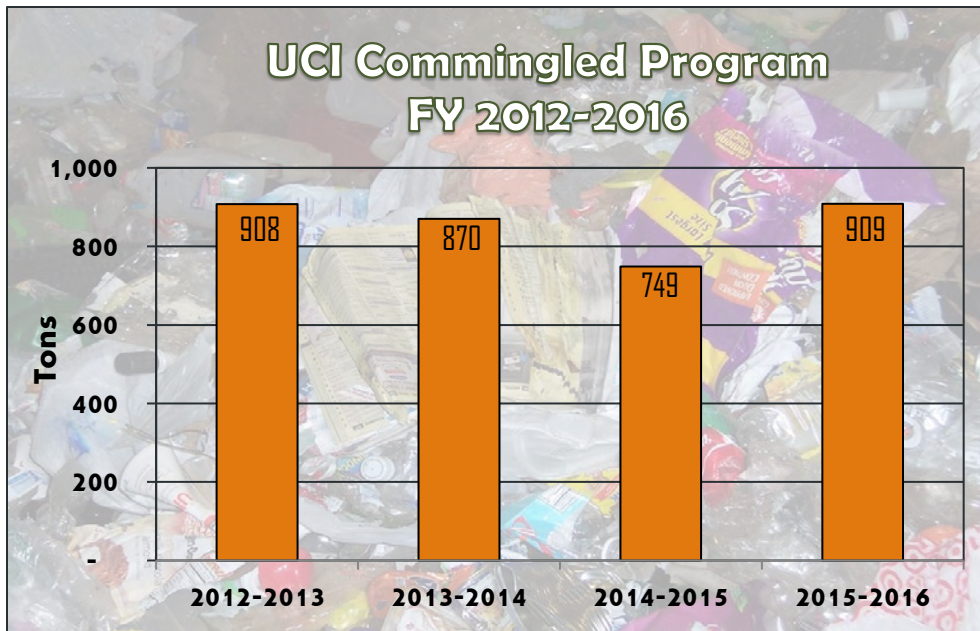
The UCI campus produces nearly 8,000 pounds of landfill waste every day. This is equivalent to the weight of almost 100 anteaters! In honor of Earth Week this year, the Facilities Management Sustainability Team organized a display called “Mt. RecycleMore”, which represented 17% of material that is landfilled daily.

The display was intended to visually showcase to students how much waste is produced on an everyday basis while emphasizing the importance and value of properly sorting trash. The Sustainability Team talked to students and staff about Mt. RecycleMore’s meaning and demonstrated that many of the waste found in landfills can be recycled. See more of Mt. RecycleMore on our Earth Week video!

<https://www.youtube.com/watch?v=aoeYn8gcHRI>



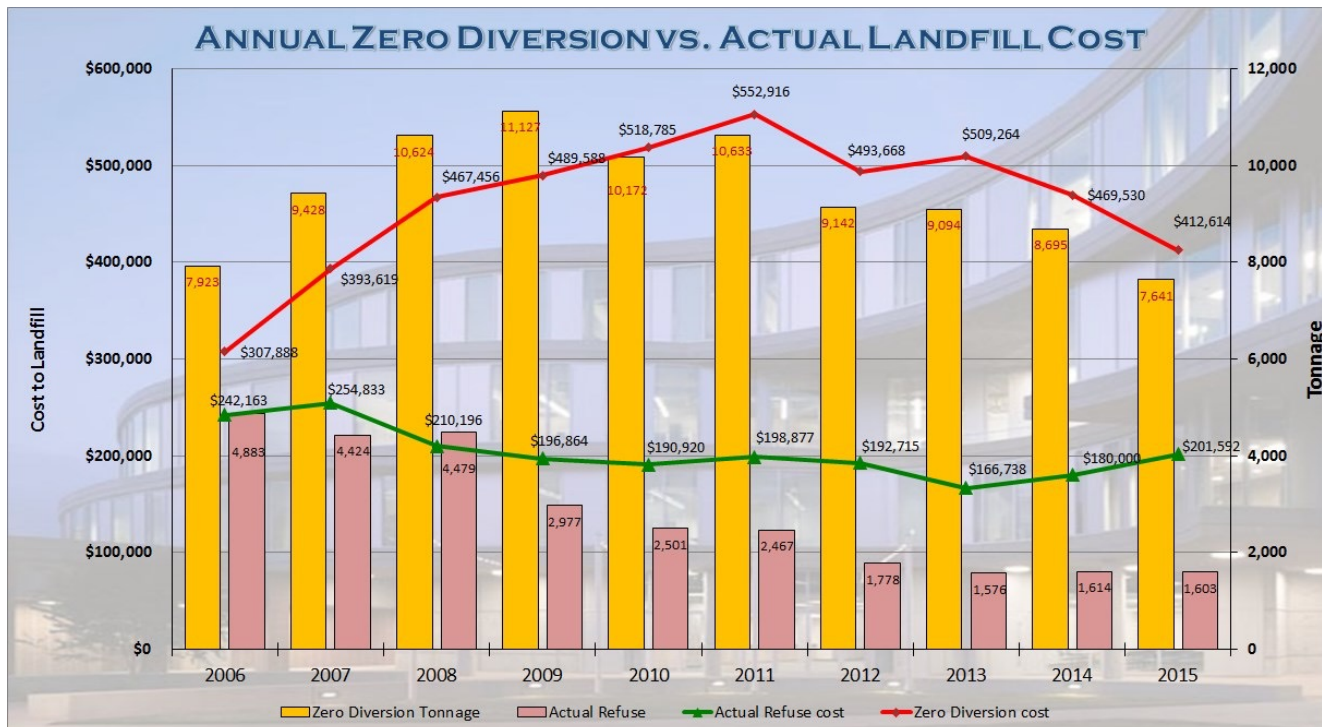
FINANCIAL ACHIEVEMENTS



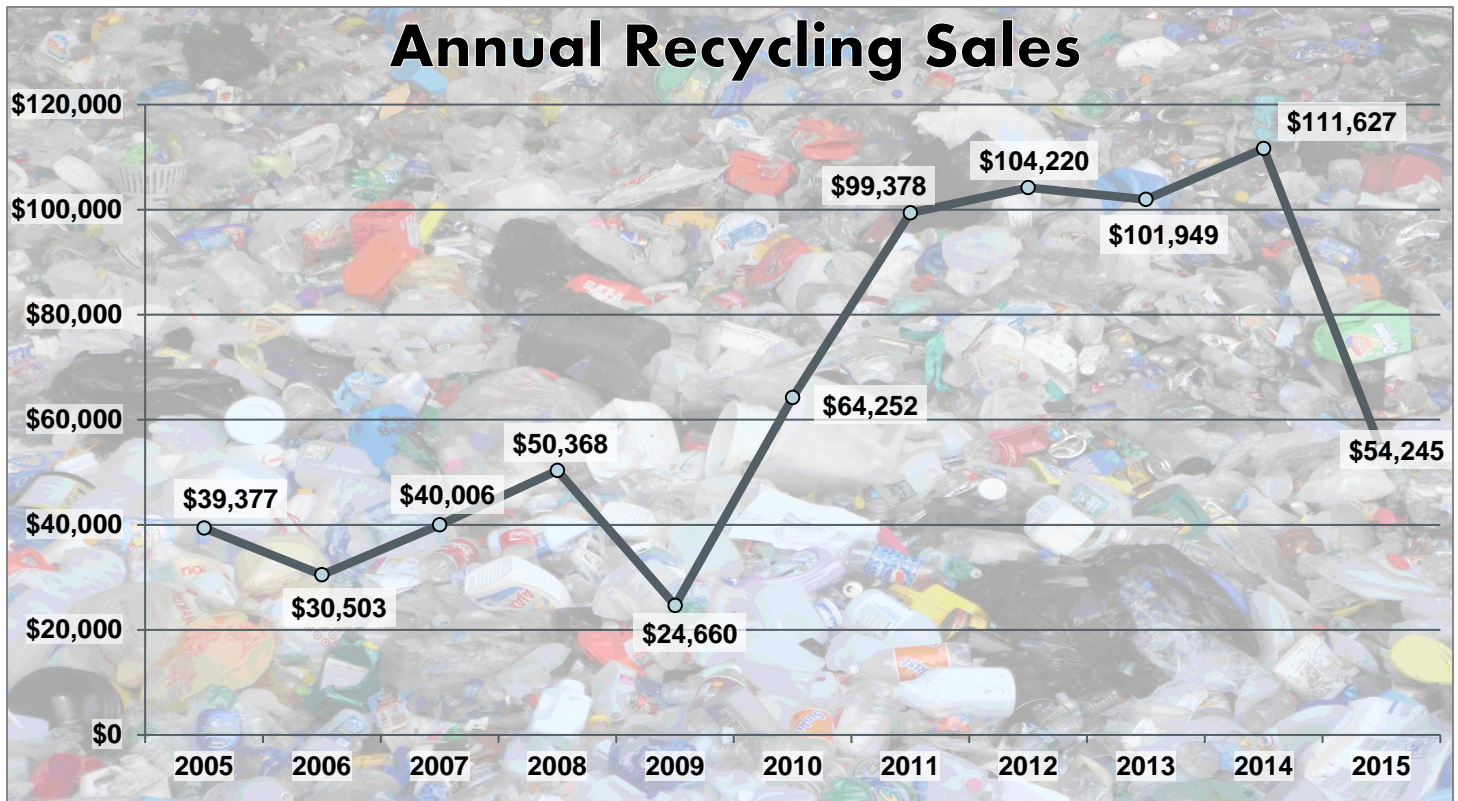
UCI's commingled recycling program diverts glass, plastics, aluminum, and paper materials from landfill and generates revenue in two ways:

- Every ton of material diverted saves \$54 in landfill costs
- The resale of this commodity is equivalent \$40/ton

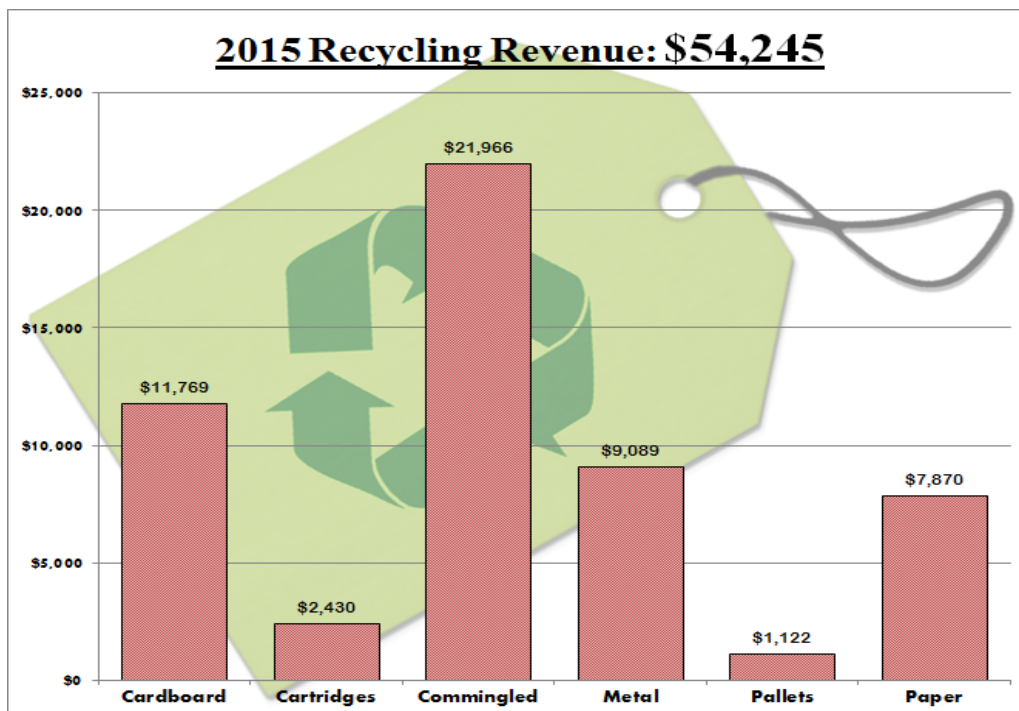
The combined savings in landfill fees and sale of commingled recyclables resulted in a revenue stream of \$85,446 for UCI during FY 2015-2016.



Landfill costs are rapidly increasing – in 2006, the cost to dispose of waste was just \$38.86 per ton. Fast forward to 2016 where the cost increased to \$54 a ton; this is a 38 percent increase in just 10 years. If UCI disposed of all municipal solid waste in landfill, the cost would be \$414,342, but through a robust recycling program, the campus paid just \$129,567.



The sale of recycled commodities fluctuates based on world demand. UCI negotiates bi-annually with several companies in order to receive the highest value for each commodity sold. In 2016, the price of recycled commodities dropped tremendously due to plummeting oil prices.



Different types of recycled commodities have different sale values. In 2015, UCI generated a revenue of \$54,245 through the sale of commingled recyclables, metal, cardboard, paper, printer cartridges and pallets.

MULTIMEDIA

This year, the UCI FM Sustainability Team focused on spreading the knowledge of Zero Waste and the importance of sustainability to students and staff through peer-to-peer education and social media platforms such as Facebook and YouTube. The team created informative videos on how to be sustainable and contribute to UCI's goal of Zero Waste by 2020. Check out our videos to learn more about Zero Waste:

How to be Zero Waste at UCI

<https://www.youtube.com/watch?v=Z-Rr6VTzdTw>

Meet the MRF

https://www.youtube.com/watch?v=pv_pNb84ZA

Sharing the Knowledge of Sustainability

<https://www.youtube.com/watch?v=8SQldEal-Kc>

Recycling at UCI

<https://www.youtube.com/watch?v=PAiHzZqBDLo>

Mini-Bin, Big Change

<https://www.youtube.com/watch?v=qBQApJJ2q0>

Spread the Green

<https://www.youtube.com/watch?v=4o8Ez0jDYgI>

Bottle-Filling Stations

<https://www.youtube.com/watch?v=O7mBRwChyIY>

What Does Recycling Mean to you?

(UCI Earth Week)

<https://www.youtube.com/watch?v=aoeYn8gcHRI>



STUDENT SUSTAINABILITY HAND GUIDE

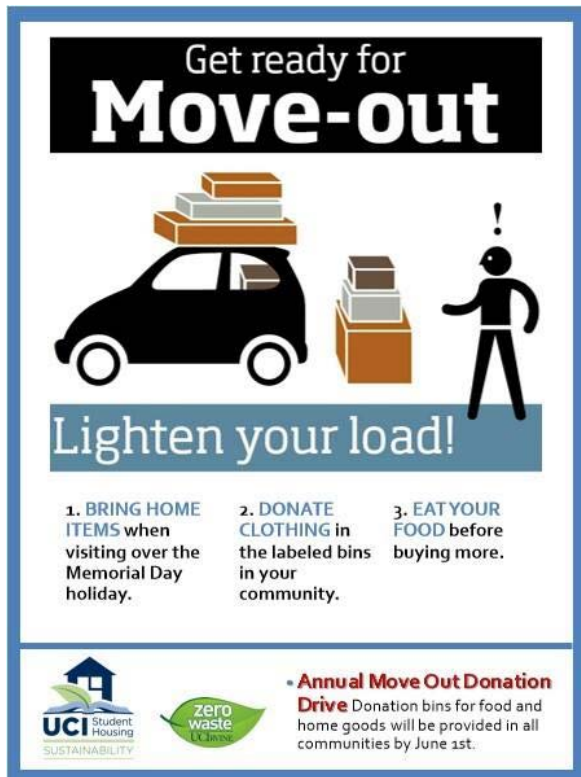
A Student Sustainability Hand Guide was created for incoming students in order to provide them with an informational guide on UCI's sustainability programs. The guide includes information on what recycling and composting is, as well as how to get involved with the program. Additional information, such as facts about the California drought is provided to educate students on ways to conserve water. [Sustainability Hand Guide](#)



2016 HOUSING MOVE-OUT DONATION

During our annual campus move-out in 2016, 46 tons of reusable goods were donated to Goodwill of Orange County through our campus donation drive.

Bins, trucks, and manpower are provided by Goodwill in order to support the two-week long program. These donations spike the sales of Goodwill and help students create a habit of helping others by donating.



WHERE DO WE GO FROM HERE?

While UCI is a leader in sustainability and waste management, there are still many advances to be made such as:

- Recycling education and diversion improvement opportunities in student housing
- Enhance student knowledge of sustainability through social media, interactive websites and videos
- Certification of more Zero Waste buildings on campus
- Implementing more water conservation effort programs
- Implementing the student housing compost program in all communities to reduce overall waste and improve diversion

With continued focus on recycling, UCI is on track to meet the UCOP 2020 goal!



Questions? Please contact
Anne Krieghoff at akriegho@uci.edu

