

Zero Waste Annual Report FY17-18
University of Colorado Colorado Springs

Produced by the UCCS Office of Sustainability

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EXECUTIVE SUMMARY

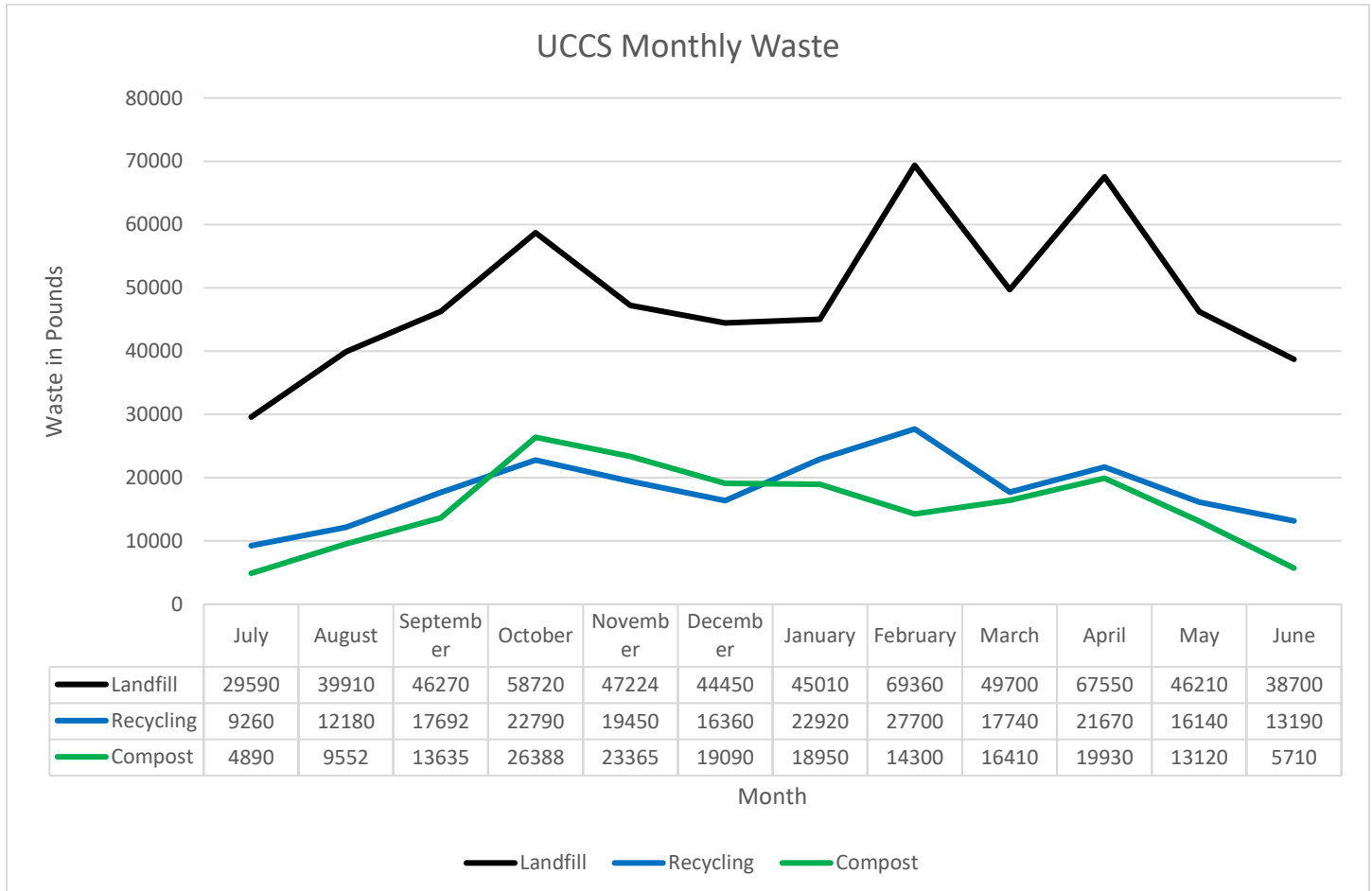
UCCS' waste stream is not unlike many other institutions of higher education. The traditional (and widely visible) recycle, compost and trash are just three of twelve general waste streams that are managed and tracked from our campus.

Waste Management services our campus by removing single-stream recycling, post-consumer compost, and trash. The Office of Sustainability employs two student staff, and with the assistance of Facilities & Auxiliary Services, collects, bales and sells cardboard as a clean commodity to Bio-Pappel McKinley Paper Company. Pre-consumer compost is collected and used by the UCCS Farm. Food donations from our Dining and Hospitality Services are given to Colorado Springs Food Rescue. Organic matter collected by Facilities and Auxiliaries Outdoor Services is serviced by Rocky Top Organics. Scrap metal is taken to Colorado Industrial Recycling. Ink & Toner is collected by the UCCS Staff Association and recycled by Tonerbuyers, Cartridges-for-Kids, and FundingFactory. Shredded paper is serviced by Shred-It. And used oil is recycled by ThermaFluid. Electronic waste is collected by Materials Acquisition and Distribution Services and the Office of Sustainability and recycled through BlueStar Recyclers.

UCCS growth in square footage, as well as student, staff and faculty members, accounts for continued increases in cost and amount of waste materials.

Our recommendations to increase diversion and reduce budget requests include:

- Office of Sustainability should continue conducting building-specific waste audits to influence educational campaigns and programs and implement those semestery
- Facilities Services should continue reducing pick-ups from Waste Management during winter, spring and summer breaks depending on usage of building
- Office of Sustainability should produce educational materials for Custodial staff to hand out, informational posters for DHS training purposes, and training videos to share with Custodial, DHS, etc. to formalize continuity



WASTE REMOVAL COSTS

For Fiscal Year (FY) 18, the total cost of waste removal was \$111,997.60 (Rocky Top \$2,535.00 + WM \$109,462.60)*, an increase of \$25,822.06 (Rocky Top \$2,340.00 + WM \$83,835.54) or 29.96% compared to FY17. Trash constitutes the bulk of waste removal costs at \$70,973.54 or 63.37% of the total cost for FY18.

The cardboard collection program produced \$6,041.25 for FY18 with an overall weight of 53.73 tons, 122 bales, and an estimated 1,592 cubic yards of uncompacted cardboard. For FY17, UCCS received \$5,942.80 for an overall weight of 48.69 tons, 110 bales, and 1,443 cubic yards of uncompacted cardboard. What seems like a discrepancy in numbers is based on the net price of the bales per pick-up week. The avoided cost savings of this program can be seen in the reduced number of pick-ups of Waste Management recycle dumpsters.

Considering the program only employs students with work study financial aid awards, the office pays 27% of the wage. This is intentional to keep costs lower. With an increased demand of quantity of pick-ups, numerous, untracked hours were spent assisting collection from Facilities and Auxiliary Services and Office of Sustainability part-time and full-time staff.

*Shred-It costs are not included in the overall waste removal costs. Each department utilizing this outside service pays for their own material disposal. Used-oil costs are paid by Parking & Transportation Services. Electronic waste costs are paid by Materials, Acquisition and Distribution.

WASTE DIVERSION – FY 2017-18

For FY17-18, UCCS diverted 55.2% (measured in weight) of our waste stream from the landfill. This is a 2% increase in diversion rate from the previous fiscal year. In comparison to our baseline year of 2009, the fiscal year 2018 diversion rate saw an increase by 33.2%. UCCS diverts 43.2% more than the state of Colorado (12%), and 20.2% more than the national average (35%).

UCCS averages 1.05 pounds of landfill waste, 0.63 pounds of recycling, and 0.64 pounds of composting per person per week. The total waste generation for the year was 1,301,817 pounds.

HIGHLIGHTS & RECOMMENDATIONS

1. The educational, behavior-change campaign, Espresso Yourself, was the most well-received campaign of FY18. Sustainability staff conducted building waste audits fall 2016 and spring 2017 resulting in the findings of coffee cups being the number one contamination item in both recycle and compost streams. Espresso Yourself encourage the campus community to express themselves by bringing their own, reusable mugs to reduce the number of single-use coffee mugs and the contamination in both streams.
2. Recommendation: The cardboard collection program needs to be more self-sustaining and efficient with a new collection vehicle. The accumulative maintenance cost from 2014-2018 is \$11,276. This incurs an additional cost of resources from Facilities and Auxiliary Services for both their staff and vehicles. An additional recommendation would be re-evaluating the feasibility of a baler located at Roaring Fork Dining Hall. This is the largest producer of cardboard on campus and requires numerous trips a week from both the Office of Sustainability and Facilities and Auxiliary Outdoor Services.
3. Recommendation: Based on feedback from the Senior Executive Director of Facilities Management, a feasibility report will be completed to determine the anticipated expenses of increasing compost services to General Fund buildings.
4. Post Landfill Action Network (PLAN) – Students for Zero Waste (SZW17) Conference was an opportunity for three, Office of Sustainability staff, and one full-time staff to attend and learn best practices from peer institutions. Two student staff presented aspects of UCCS' zero waste program to an international audience.

5. Freshman Orientations have become completely zero waste. Not only is this information stated by the Director of Orientation to each lunch, but it also reduces the need for sorting at waste stations.

2017-18 ZERO WASTE INITIATIVES & PROGRAMS

OFFICE EVENTS

- Espresso Yourself
- Clean the Stream
- Bestway MRF Tour
- Ditch the Dumpster

SYMPOSIUMS

- Post Landfill Action Network - Students for Zero Waste (SZW17) Conference
 - “3D Glasses Required” waste case study student presentation
- 1st Annual Sustainability Summit

STUDENT INVOLVEMENT

- Train the Trainer
- Club and Organization Training
- Freshman and Transfer Orientations
- Outreach Opportunities

ACADEMIC PROGRAMS

- Compass Curriculum
- Sustainable Development Minor

COMMITTING TO ZERO WASTE

As an original signatory to the American College and University Presidents Climate Commitment (ACUPCC) in 2007, the University of Colorado Colorado Springs has committed to achieving carbon neutrality guided by the UCCS Climate Action Plan 2010 and UCCS Sustainability Strategic Plan 2012-2020. Within these documents, UCCS has a strong commitment to waste diversion and a final goal of zero waste. The University’s commitment to recycling, composting, and reusing has surpassed that of the state of Colorado.

The state of Colorado currently has a diversion rate of 12% compared to the national average of 35%.¹ Our university resides in one of the ten most wasteful states in the country. Colorado’s recycling industry is currently suffering under the common misconception that “recycling is free.” Due to landfill hauling fees costing drastically less than other states across the nation, people are losing interest in paying to have their materials recycled when they can landfill them for a fraction of the cost.

ECONOMIC IMPACT OF RECYCLING

Even with a relatively low diversion rate across the state, recycling has a major impact on the state’s economy and job and labor force. Recycling, reusing and remanufacturing industries currently provide 85,000 jobs in Colorado and \$8.7 billion in direct economic impact. Recycling creates at least nine times more jobs per ton than landfills, while remanufacturing reusable products creates as many as 30 times more jobs. With many commodities still in need of end markets, there are many opportunities for innovative methods to find uses for these materials. To continue to sustain the recycling industry and reduce transportation carbon footprint, we need these types of investments in finding new ways to reuse resources within our city and state.

At the University of Colorado Colorado Springs, we provide student employee positions through the Office of Sustainability including research interns, recycling assistants, a cardboard collection crew, and zero waste coordinator/supervisor. Each of these positions provide much needed support to the zero waste initiatives the office supports, produces, and educates the campus community. Tasks include researching peer institutions for the most recent education marketing, organizing campus events, education the campus community on the proper disposal of

¹ MacGregor, Kelly. “Waste Diversion Goals Set for Colorado.” *Colorado.gov*, Colorado Department of Public Health & Environment, 15 Aug. 2017.

items, partnering with other departments and staff on campus to solve contamination issues, implement new ways of reduction of materials, collection of commodities (specifically cardboard,) and ultimately gain knowledge that will be beneficial for them when applying for jobs after graduation.

CONSERVING OUR RESOURCES

Colorado could save an estimated \$145-178 million each year by reselling materials on the recycling market that are traditionally thrown in the landfill. The state has plenty of opportunities to provide both jobs and economic growth in Colorado by increasing our recycling rate and identifying local end market users for commodities.

The University also provides a unique opportunity to earn a Bachelor of Innovation degree, which could prove to foster those ideas of entrepreneurship and finding solutions to using materials that currently do not have an end use for new products. Along with the BI, the University has committed to requiring a sustainability-themed course as part of the campus-wide general education program, Compass Curriculum. With each student that graduates from UCCS introduced to sustainability, there will be an increased awareness of environmental issues and hopefully a positive impact on the recycling industry.

ZERO WASTE INVOLVEMENT AT UCCS

As an institution of higher education, the Office of Sustainability provides many avenues to interact with and educate the campus community on proper disposal of materials into the many recycling streams. UCCS provides single-stream recycling, commercial-grade composting, electronics recycling, lawn and limb/organics composting, surplus donations, separation of cardboard for baling, ink and toner recycling, metal recycling, shredded paper recycling, motor oil recycling, and based on the projects for the year, roll-offs of specific items (e.g. 2013 toilet retrofit in which Residence Hall toilets were crushed and made into aggregate that became the foundation for a construction project on campus).

Our office is also committed to making all UCCS events zero waste. We provide staff, volunteers, training, and resources to support these efforts to help 'zero-waste goalie' and educate attendees along with encouraging them to bring their own water bottles and other reusable items. The office supports Events Services by seeking to provide zero waste services at any event on campus with 100+ attendees.

In 2017-18, we hosted and/or provided zero wasting at roughly 50+ campus events. Our ultimate goal is to educate the UCCS community so that we are no longer needed to guide material into the correct streams, but infrastructure is in place to bring those changes about sustainably. Moving into FY19, Dining & Hospitality Services has announced that all events will utilize reusable materials. This changes the Office's role in staffing and educating events, which allows for hours to be refocused in other, potentially more impactful areas of zero waste education.

CONTINUING OUR GOALS

The Zero Waste Team is responsible for overseeing the education and communication for the UCCS recycling and composting programs. This includes updating, maintaining and replacing of signage for recycling bins in all buildings, preparing promotional signs and materials for recycling program, performing waste audits to evaluate waste within specific buildings, and developing recommendations and campaigns to best combat UCCS' most common waste issues, reducing the campus' contamination and increasing the overall diversion rate. Other responsibilities for our ZW Team include creating educational materials about zero waste and waste minimization, giving presentations in classes and at orientations, maintaining recycling emails, messages, and partnerships with stakeholders like Waste Management, and building a social media presence to better engage and outreach to students. Education and student engagement are primary focuses to improve ZW infrastructure on campus. Our ZW team is continuing to reach for ZW at UCCS by offering more training and resources to campus staff, students, clubs, and organizations.

ZERO WASTE DATA QUICKSHEET

CAMPUS DIVERSION RATE (weight):

FY18 55.2%

2% increase in diversion rate from FY17

STATE DIVERSION RATE (weight):

Colorado	12%
National	35%
UCCS	55.2%

UCCS DIVERSION RATE (WEIGHT):	DIVERSION GOALS
2009 22%	<ol style="list-style-type: none">1. Diversion Rates: 50% by 2018 60% by 2024 70% by 20302. 25% of all campus-wide events classified as "Zero Waste"3. 100 campus-wide events considered zero waste annually
2010 27.3%	
2011 29.9%	
2012 38.2%	
2013 56.3%	
2014 42.7%	
2015 40.5%	
2016 44.8%	
2017 53.3%	
2018 55.2%	

UCCS AVERAGE WEEKLY WASTE PER STUDENT: 2.32 lbs.

Landfill: 1.05 lbs.

Recycle: 0.63 lbs.

Compost: 0.64 lbs.

TOTAL WASTE GENERATION FY18: 1,301,817 lbs.

Landfill: 582,694 lbs.

Recycle: 353,499 lbs.

Compost: 365,624 lbs.

Agricultural: 165,620 lbs.

With these reduction goals in mind, UCCS is helping Colorado reach their 2021 goals to reduce individual waste disposal to 3.5 pounds/person-day and increase our diversion rate to 66%. As an Office, we will continue to provide education and engagement to the campus community on ZW initiatives and sustainable disposal, recycling, donation, and reusing practices.