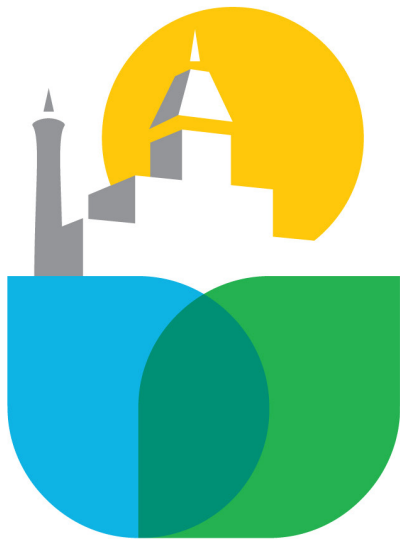


Annual Sustainability Report

Academic Year 2018-2019



Auraria Sustainable Campus Program

Table of Contents

Mission Statement	3
Introduction Letter	4
Impact by Metric	5
Metrics by Pillar	6
 Our 7 Pillar Metrics	
- Alternative Transportation.....	7
- Education & Outreach	8
- Energy Efficiency.....	11
- Food & Gardens.....	12
- Renewable Energy.....	13
- Water Conservation	14
- Waste Diversion	15
 Cumulative Metrics (2008-present)	 17

Global impact through local action.

The ASCP is a campus-wide program with the explicit mission of reducing the Auraria Campus' ecological impact and dependence on fossil fuels. We work to accomplish this through projects, events, and programs. This annual report for the 2018-2019 Academic school year highlights our accomplishments.

We serve the three institutions on the Auraria Campus in Denver, Colorado:



ASCP Annual Report Introduction

The Auraria Campus is a dynamic and vibrant higher education community that is home to three separate and distinct institutions of higher education: Community College of Denver, Metropolitan State University of Denver, and University of Colorado Denver. Our 156-acre campus has a shared population of roughly 40,000 students -- that is the size of the 30th largest institution in the US! The Auraria Sustainable Campus Program (ASCP) has worked hard over the past nine years to serve these three institutions and address the environmental impact of our campus, implementing a myriad of projects and programs. We have partnered with passionate students, staff, and faculty who have been invaluable partners in gaining momentum and helping us maximize our effectiveness. For the first time, our program has developed a strategic plan with long-term ambitious goals for each of our 7 areas of focus which will increase our effectiveness in reducing the Campus' ecological footprint and greenhouse gas emissions. We are proud to share our accomplishments of the past academic year and we look forward to making considerable strides forward in the coming year.

Over this past year, we have focused on expanding and stabilizing our impact by building staff capacity, launching exciting new programs, and aggressively tackling long-standing challenges. Our expansion of the compost pilot program was a great success that now serves parts of four campus buildings and will continue to expand quickly. We secured approval to install one of the largest solar arrays in downtown Denver – with a capacity of 753 kW– on the roof of the Auraria Library, which has long been a goal of the ASCP. We have expanded our team which has allowed us to ramp up social media engagement, started a Green Offices Program, partnered with event planners to implement zero waste events, and so much more. From an impact perspective, I believe it was one of our most productive years on record. We have already seen an increase in our waste diversion rates, with a 2.6% reduction in material going to the landfill in the Spring semester compared to last fall.

We would like to thank all of the students, staff, faculty, and alum who have contributed to the success of our program over the years. We look forward to continuing our work with you all as we strengthen our commitments to addressing significant environmental, economic, and social challenges, both on the Auraria Campus and within the broader community.

Chris Herr
Sustainability Officer

IMPACT BY METRIC

For the 2018-2019 Academic Year



*kWh = kilowatt hours

**CO₂e = carbon dioxide equivalent

METRICS BY PILLAR



Alternative Transportation

pg. 7

PROJECTS: Hosted Bike to Work Day & bike fix-it events, 2 new bike parking shelters approved
IMPACT: Increase access and ridership to campus through the installation of 120 new bike parking spots in the new bike parking shelters



Education & Outreach

pg. 8

PROJECTS: Launched 3 new campus programs: EcoReps, Faculty/Staff Coalition, & Green Offices (Pilot program)
IMPACT: 80+ volunteer hours contributed, 3 days binside waste education offered, 50% increase in social media and newsletter following, new logo & branding, and new website



Energy Efficiency

pg. 11

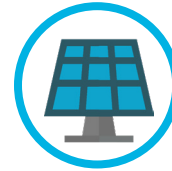
PROJECTS: PED Lighting Upgrade
IMPACT: Reduced annual electricity consumption by 2.37% (1.15 million kWh), \$43,000 annual savings, and 3 million lbs of CO₂e avoided



Food & Gardens

pg. 12

PROJECTS: ASCP Community Garden & garden events
IMPACT: Est. 50% reduction in turf management chemical (glyphosate) use through purchase of steam weed killer



Renewable Energy

pg. 13

PROJECTS: 753 kW Library Solar Array approved for installation in Fall 2019
IMPACT: 1,025,000 kWh savings, an est. \$45,000 annual savings, 1.2 million lbs CO₂ avoided/year



Water Conservation

pg. 14

PROJECTS: Water Action Plan (75% completed)
IMPACT: Identified 10 possible strategies to reduce water consumption, including irrigation upgrades, efficient landscape design, submetering and equipment upgrades



Waste Diversion

pg. 15

PROJECTS: Comprehensive Recycling & Compost infrastructure installation & education, E-Waste Receptacles, 5 New water bottle filling stations, Compost Expansion Pilot
IMPACT: Diverted 497,000 lbs from landfill through recycling and composting, increased waste diversion rate from 17.4% in Fall '18 to 20% in Spring '19, 4,000 lbs of e-waste recycled through partnership with Blue Star Recycling, 1,000 lbs/month diverted from new compost pilot

ALTERNATIVE TRANSPORTATION

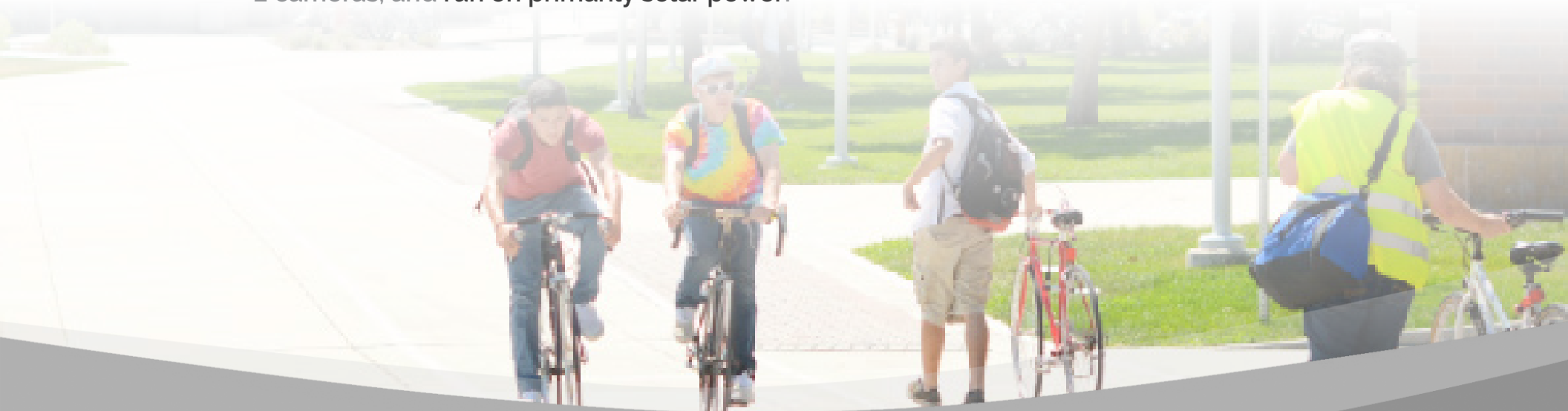
GOAL: A 10% increase in percentage of campus commuters using some form of alternative transportation by 2022 (currently at 67%) including biking, train, bus, scootering, or walking



PROJECTS: Hosted Bike to Work Day & Educational Bike Fix-It events, 2 new covered bike parking shelters approved for construction

IMPACT: **2 New Covered Bike Parking Shelters**
= 120 additional bike parking spaces

Working together with CU Denver and CCD's Design-Build programs, we will be constructing two brand new covered and secure bike-parking shelters in 2020. This adds an additional 120 bike parking spots in high-bike-traffic areas and helps address key barriers to bike commuting on campus: theft and vandalism. The bike cages will be **free for the Auraria community**, accessed via encoded ID keycard, and will house a bike pump, a fix-it station and a "kiosk" which will house resources/materials for bicyclist on campus. Each structure will also be equipped with LED lights, 2 cameras, and run on primarily solar power!



EDUCATION & OUTREACH

GOAL: Increase campus awareness of ASCP and general sustainability concepts by 25% by 2022



PROJECTS: Launched 3 new on-campus engagement programs

IMPACT: 80+ volunteer hours contributed, 5 waste audits completed, 40+ buildings inventoried for waste receptacle infrastructure, the introduction of composting to new buildings, and 3 days of binside waste education were offered through the volunteer efforts of our newly launched programs.

Student Volunteer “Eco-Rep” Program

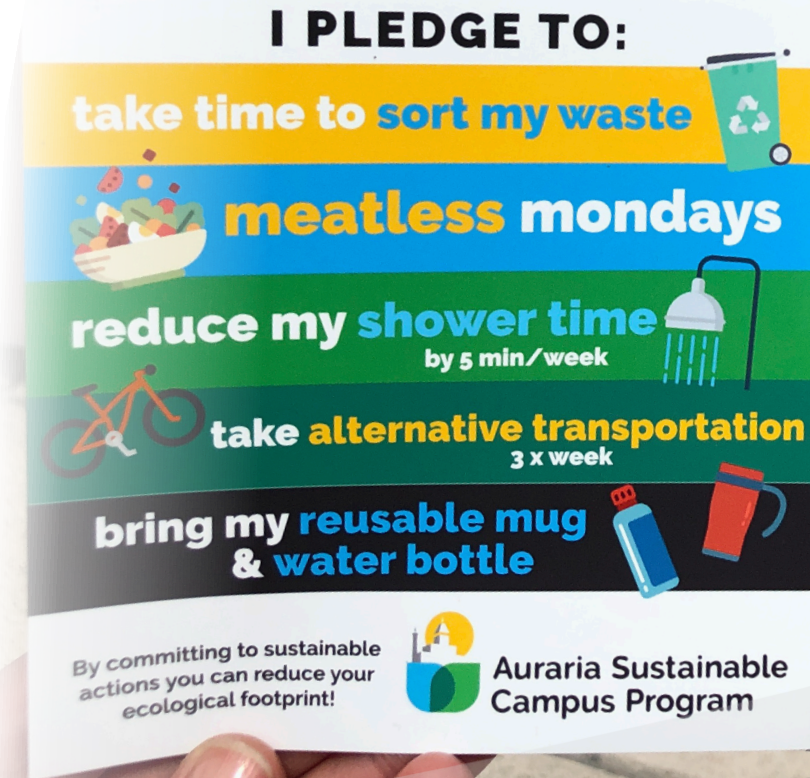
We created a student-volunteer program in October, 2018 to engage students looking to get involved in sustainability efforts on campus. Over the course of 80+ collective volunteer hours, this group helped to expand our waste education knowledge and efforts, get the word out about events, and staff our Earth Week festival.

Faculty & Staff Sustainability Coalition

In May, 2019, a faculty and staff sustainability coalition was created to help bridge our tri-institutional campus efforts and develop a stronger network of sustainability-oriented campus community members. The group has identified a set of projects and focus areas they'd like to establish from their monthly meetings, and will be consulting with students, as well.

“Green Office” Pilot Program

Launched in Spring 2019, participating offices completed a comprehensive checklist to evaluate their current level of sustainability and identify opportunities for improvement. This program is a point-based award system for certification.



EDUCATION & OUTREACH

GOAL: Increase campus awareness of ASCP and general sustainability concepts by 25%



PROJECTS: Bolstered Outreach & Education Channels

IMPACT: New branding and marketing efforts were curated for campus-wide growth resulting in a **50% increase** of social media and newsletter following/readers.

After integrating a new logo & branding efforts, a new website, and tabling at several on-campus events, we experienced a 50% increase in our social media and newsletter following. For the upcoming year, we aim to engage more students, faculty, and staff at their orientation to involve more individuals with the ASCP and our efforts.



PROJECTS: Hosted 5 Successful Events

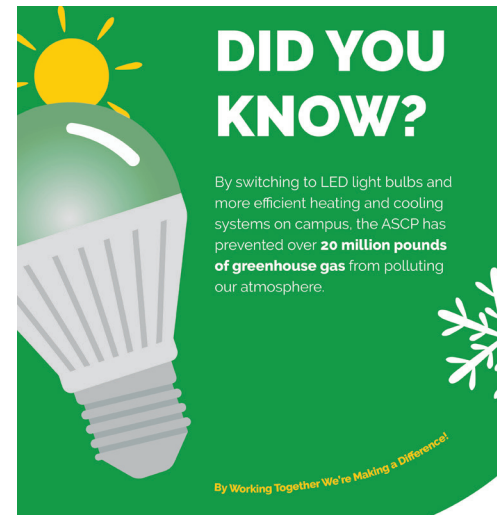
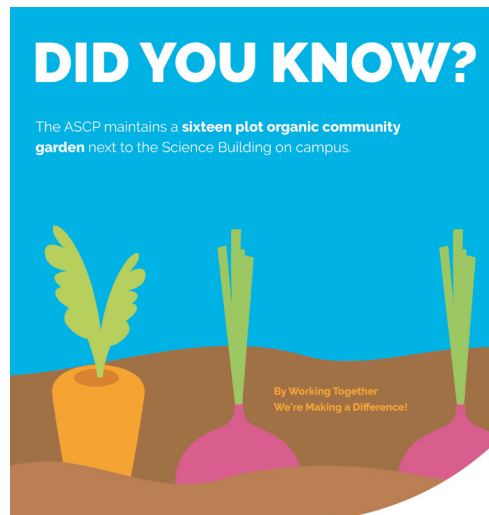
- Bike Education Workshop (October, 2018)
- Food Waste Film Screening: "Wasted" by Anthony Bourdain (November, 2018)
- Community-Based Social Marketing (CBSM) Training (March, 2019)
- 2-Day Earth Week Festival (April, 2019)
- Bike to Work Day (June, 2019)

EDUCATION & OUTREACH

GOAL: Increase campus awareness of ASCP and general sustainability concepts by 25%



PROJECTS: "Did You Know" Campaign



Beginning in Fall 2018, we implemented a successive poster series aimed at encouraging sustainable behavior changes amongst individuals.

Our "Did You Know" posters highlighted tangible metrics related to our seven pillars of sustainability and offered a personal behavior change individuals could adopt to decrease their impact on the environment.



ENERGY EFFICIENCY

GOAL: Reduce campus electricity consumption by 10% below 2018 baseline by 2023 (2018 baseline: 49,285,653 kWh)



PROJECTS: Pedestrian Lighting Upgrade

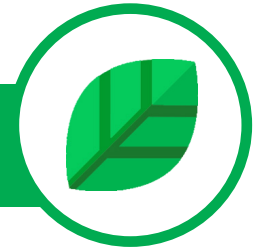
IMPACT: **1.15 million** kWh electricity use avoided annually
\$43,000/year in campus-wide savings
2.37% reduction in electricity usage

We partnered with AHEC Facilities and Parking to fund the replacement of most Metal Halide outdoor lighting fixtures with high-efficiency LED bulbs campus-wide. While the ASCP funded a portion of this, collectively 436 PED lights were upgraded, reducing our GHG output by 813 MTCO₂e/year and resulting in an estimated 2.37% reduction in annual campus energy use.



FOOD & GARDENS

GOAL: Increase student awareness/access to local & organic food.
Achieve 90% organic/natural soil management by 2022.



PROJECTS: ASCP Community Garden & Events, Steam Weed Killer Purchase

IMPACT: **50% reduction in turf-care chemicals (glyphosate)**

The ASCP purchased a steam weed killer to limit glyphosate usage in Auraria landscaping and turf management on campus. The machine uses hot steam (water) to kill weeds and their roots rather than chemicals—which is much better for the grass, soil, and workers. This unit **will be used on flower beds, sidewalks, and mulched areas**, but is not suitable for grass. Xeriscape and other organic controls will be explored for organic turf management to displace the remaining pesticide use on campus.

Ongoing: **Urban Garden Programming**

- 1 master composter event
- 1 master gardener event
- 2 Yoga in the garden events
- Implemented a new compost tumbler



RENEWABLE ENERGY

GOAL: 2.5 MWs of campus energy from renewable sources by Dec 2025



PROJECTS: 753 kW Library Solar Array approved for installation in Fall 2019

IMPACT: **est. 1,025,000 kWh** produced annually
est. \$45,000 annual savings
1.2 million lbs CO₂/year avoided

We have partnered with **Namaste Solar** to install 753 kW of solar on our library (bringing our total solar capacity to 828 kW). This array will be the **second largest singular rooftop array in downtown Denver** and will offset over two thirds of the Library's annual electricity needs! Over it's lifespan (25-30 years), the array will prevent over **31 million lbs of CO₂e** from polluting the atmosphere.

PROJECTS: Photovoltaic (PV) Roadmap

IMPACT: **8.5 megawatts** of solar capacity identified

We quantified the solar potential (est. 8.5 megawatts) across **25 buildings** on campus and proposed an incremental plan to scale up on-site renewable energy, resulting in enactment of Phase One: 753 kW library array.



WATER CONSERVATION

GOAL: Reduce campus H₂O consumption by 10% below 2017 baseline (70 million gals/year) by 2022



PROJECTS: Water Action Plan

IMPACT: **75%** of Water Action Plan complete

In 2016, Metropolitan State University's One World One Water Center (OWOW) earned a grant from the Colorado Water Conservation Board to work with the Auraria Campus as a **living laboratory for wise water use** (both indoor and outdoor). We've spent the last year, in partnership with OWOW and the Brendle Group, gathering water consumption data and developing a Water Action Plan for the Auraria Campus. We are hoping to finish the report-which identifies potential conservation strategies- by the end of the 2019 year. Potential strategies include irrigation upgrades, efficient landscape design, submetering and equipment upgrades.



WASTE DIVERSION

GOAL: Increase the rate of waste diversion to 35% by end of 2022 (current = 18.28%)

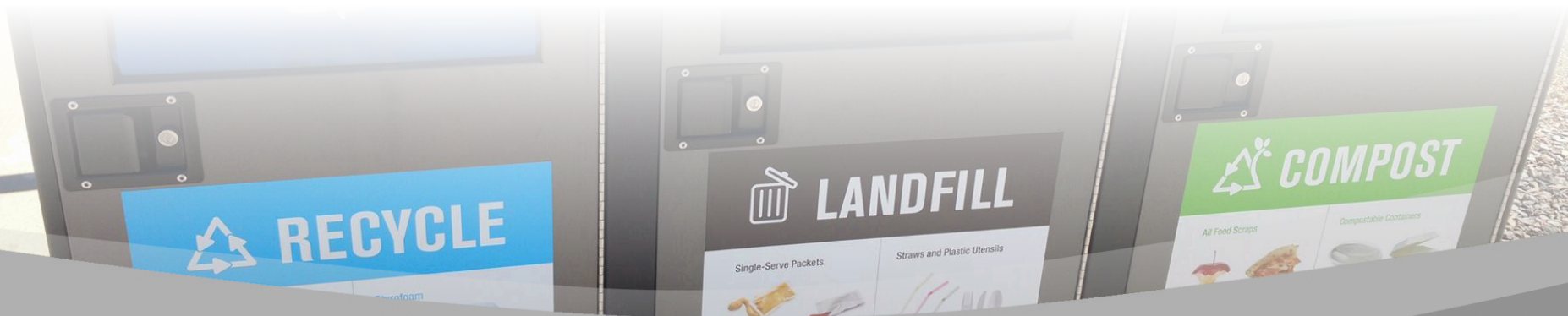
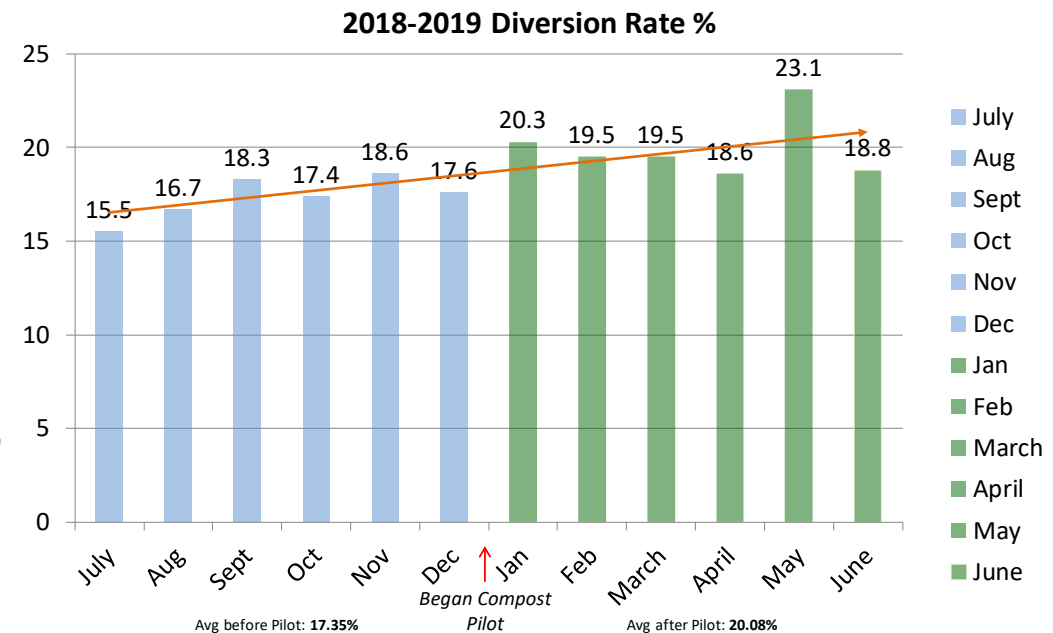


PROJECTS: Compost & Recycling

IMPACT: **493,000 lbs** of compost and recycling diverted from landfill

Increased waste diversion rate from **17.4% in Fall 2018** to **20% in Spring 2019**

This year, we took steps to increase our waste diversion rate (the amount composted or recycled instead of being landfilled). We developed a comprehensive waste sorting guide, finalized brand new receptacle signs, conducted 5 waste audits, offered bin-side education in the Tivoli food court and placed new compost collection bins in 3 student-facing locations and 4 back-of-house food vendor spaces.



WASTE DIVERSION

GOAL: Increase the rate of waste diversion to 35% by end of 2022 (current = 18.28%)



PROJECTS: E-Waste (Electronic Waste)

IMPACT: **4,000 lbs.** of E-Waste recycled

We partner with Blue Star Recyclers to recycle and repurpose electronic waste. Through our two permanent e-waste receptacles and our Earth Week e-waste collections, we diverted 4,000 lbs of toxic electronic waste from our landfills.

PROJECTS: On-Campus Compost Expansion Pilot

IMPACT: **Additional 1,000+ lbs.** compost diverted from landfill/month

In Spring of 2019, new compost bins on campus at Simply Fresh Café (North Classroom), Library Café, and the 2nd floor break room of West Classroom were installed. We also established back-of-house composting education and resources with four on-campus food vendors, which include S'onos, iPie, Simply Fresh and the Library Café.

PROJECTS: Launched 'Event Composting' Pilot

IMPACT: **New ASCP service introduced to cater to on-campus events**

This new pilot program works with on-campus events for all institutions to utilize ASCP composting services and employees to help limit event-produced waste.



IMPACT BY METRIC (CUMULATIVE)



**Auraria Sustainable
Campus Program**

The ASCP Cumulative Metrics are derived from 2010 to 2019 statistics



Alternative Transportation

42% of campus population takes only alternative transportation to campus

PROJECTS: 2 bike fix-it stations, 1 covered and secure bike parking with 60 spots



Education & Outreach

Inrease in ASCP newsletter & social media following by 50% from previous academic year

PROJECTS: 61 Projects: Hosted annual events (Sustainability Fairs + Conferences, Earth Week Festival); Hosted workshops, trainings, and events surrounding composting, recycling, waste diversion education, and social marketing trainings. Ongoing marketing, advertising, and outreach campaigns



Energy Efficiency

2,578,014 annual kWh saved (26,902,970 kWh saved cumulatively over project lifespans) and ~5.2% reduction in annual electricity consumption.

IMPACT:

- Equivalent of eliminating 180 homes electricity consumption per year
- Avoiding 2,535,316 lbs of CO₂e emissions per year
- Avoiding 23,809,924 lbs CO₂e emissions across lifespan
- \$185,000 saved on electricity per year -or- \$1.8g million over lifespan

PROJECTS: 16 lighting efficiency upgrades, 2 automation software programs (Library powersave software), hand dryer upgrades, energy dashboard, vendor machine motion sensors, and Solar Dok charging tables



Food & Gardens

16 organic raised beds growing produce & flowers, 50% reduction in campus glyphosate usage

PROJECTS: Connect Auraria Community Garden in partnership with Denver Urban Gardens, Steam weed killer purchased in 2019 to reduce herbicide usage

IMPACT BY METRIC (CUMULATIVE)



**Auraria Sustainable
Campus Program**

The ASCP Cumulative Metrics are derived from 2010 to 2019 statistics



Renewable Energy

828 kW of installed solar capacity on campus, producing 1.12 million kWh of renewable energy annually (nearly 29 million kWh over life span) and sourcing 2.4% of Auraria's electricity.

IMPACT:

- 1.4 million lbs of CO₂e emissions avoided per year / 34 million lbs CO₂e across lifespan
- Equivalent to NOT burning 896,116 lbs of coal
- Equivalent to taking 174 passenger vehicles off the road/year
- Financial savings of \$75,000/year or \$2.24 million over lifespan

PROJECTS: 6 projects including: Solar arrays on campus (75 kW on Arts Building, 2011 + 2014, 753 kW being installed on Campus Library, 2019) Tivoli Solar Powered Picnic Table Charging Stations (2015)



Water Conservation

4.5 million gallons saved annually (69 million gallons over span of projects), or a 6.4% reduction in water consumption.

IMPACT:

- Equivalent of over 262,000 "American" length (8.2 min) showers of H₂O saved per year
- Equivalent of 105 Olympic-sized swimming pools over lifespan of savings
- \$28,665 saved annually/\$390,000 million saved over project lifespans

PROJECTS: 5 projects including: Shower retrofits (16 low-flow shower heads in PE/Events Center) Restroom retrofits (installed low-flow devices across AHEC buildings- 600 toilets, 200 urinals, 250 sinks)



Waste Diversion

Diverted over 3.2 million lbs of recycling, 556,959 lbs of compost and 4,000 lbs of e-waste from the landfill between 2013 and 2019!

IMPACT:

- Saved 312 truckloads of waste from being landfilled between 2013-2019
- Avoided an estimated 11 million lbs of CO₂e emissions

PROJECTS: Recycling & Composting program through Alpine Waste, Provided 400 reusable silicon Menstrual Cups, Big Belly Solar Compactors, Water Bottle Filling Stations to reduce bottled water consumption

FROM ALL OF US AT THE ASCP,
THANK YOU FOR AN AMAZING YEAR!



Auraria Sustainable Campus Program



TO LEARN MORE ABOUT THE ASCP

www.sustainableauraria.org

If you want to know more about our plans for the future,
click here for our Draft 5-year Strategic Plan,