



# **Biennial Sustainability Reporting**

Regents Finance Committee Meeting

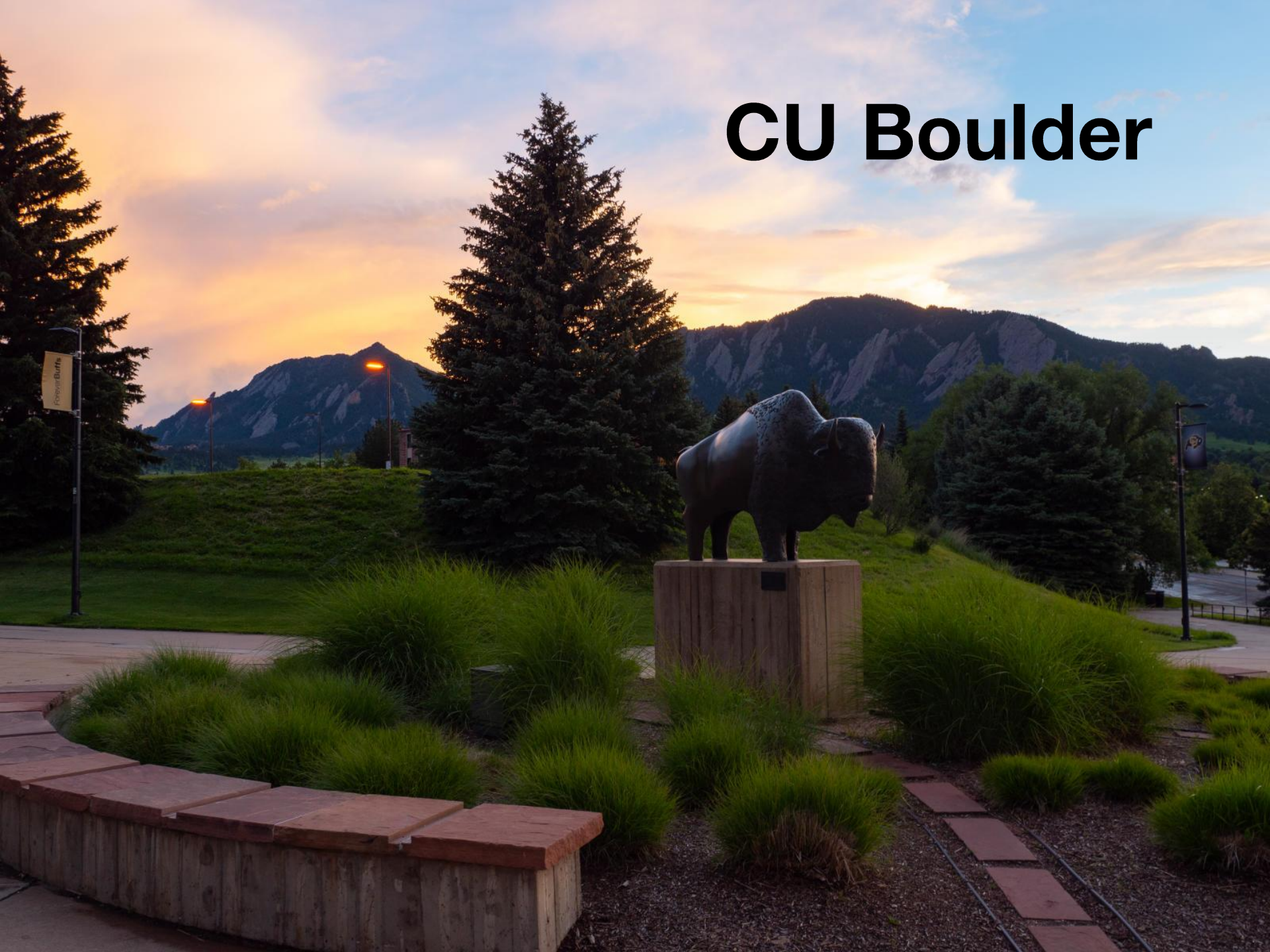
May 22, 2024

# Introduction

- Biennial reporting since 2009
  - Regent resolution directs reporting on sustainability
- Campus progress highlights
  - New hires dedicated to sustainability
  - New cross-campus groups dedicated to sustainability
  - New planning efforts
  - Capital submittals report on sustainability improvements
- System progress highlights
  - Second System Sustainability Report published December 2023
  - New Systemwide Sustainability Steering Committee
    - Work begins 2024, first meeting held May 20
    - Focus on next CU Strategic Plan



# CU Boulder



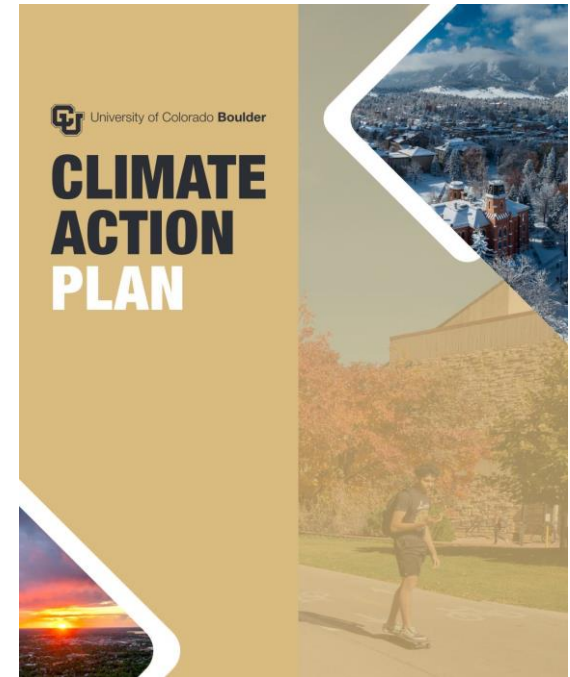
# CU Boulder Sustainability Overview

## Campus Sustainability Planning

- Climate Action Plan (CAP) released April 25, 2024
  - Regular reporting planned on progress toward goals
- Implementation of 2024 CAP complements other planning efforts
- Transportation Demand Management Plan forthcoming

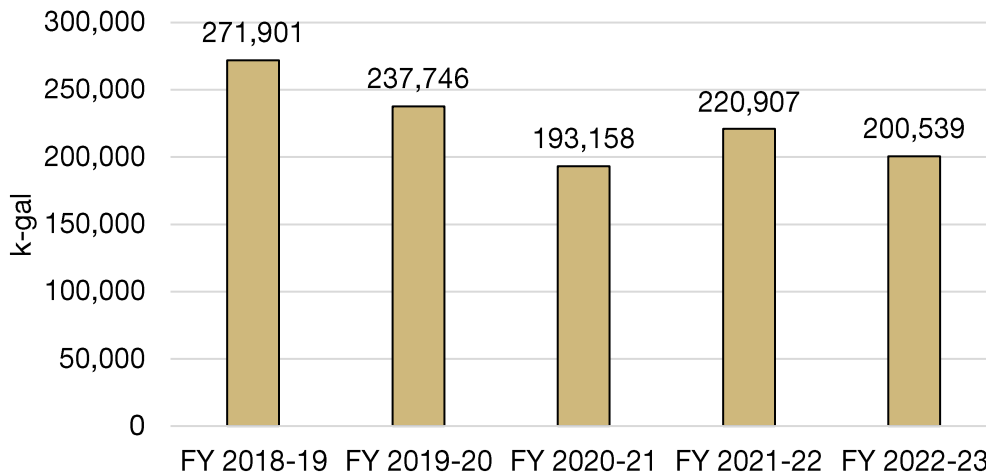
## Sustainability Highlights

- New Sustainability Executive Council formed to facilitate CAP implementation
- Several energy efficiency and solar projects underway or planned for 2024-25
- Working with Colorado Energy Office to explore campus geothermal
- Next phase of main campus decarbonization study will begin summer 2024
- Purchasing two more electric busses (6 of 25 busses will be electric by 2025)



# CU Boulder Water Consumption

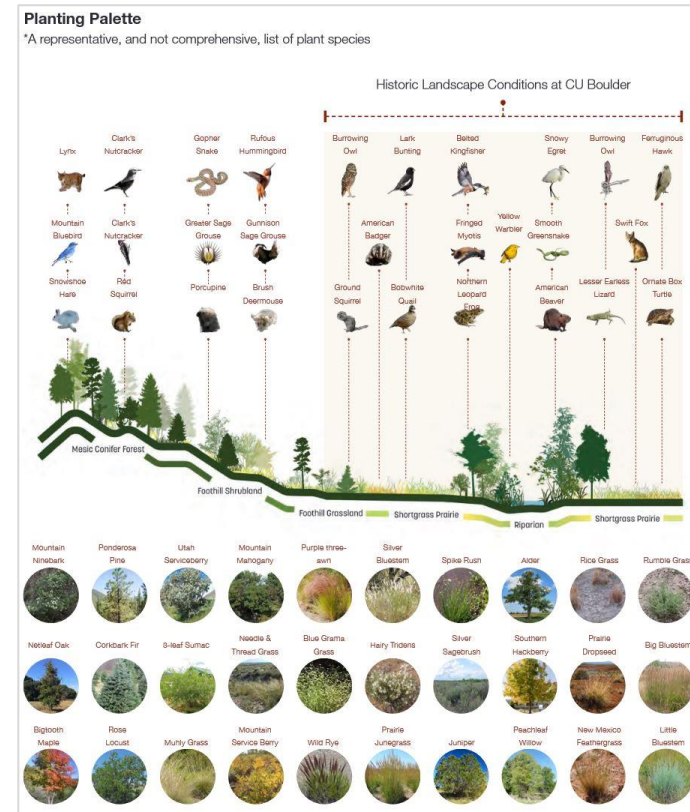
## Potable Water Consumption



- Promote sustainability through creating bio-habitat diversity, using native plant species, choosing plants that benefit pollinators, and increasing the campus tree canopy
- New landscape designed to incorporate native and adaptive plantings with lower water requirements
- Turf limited to functional programmed areas and some sports fields

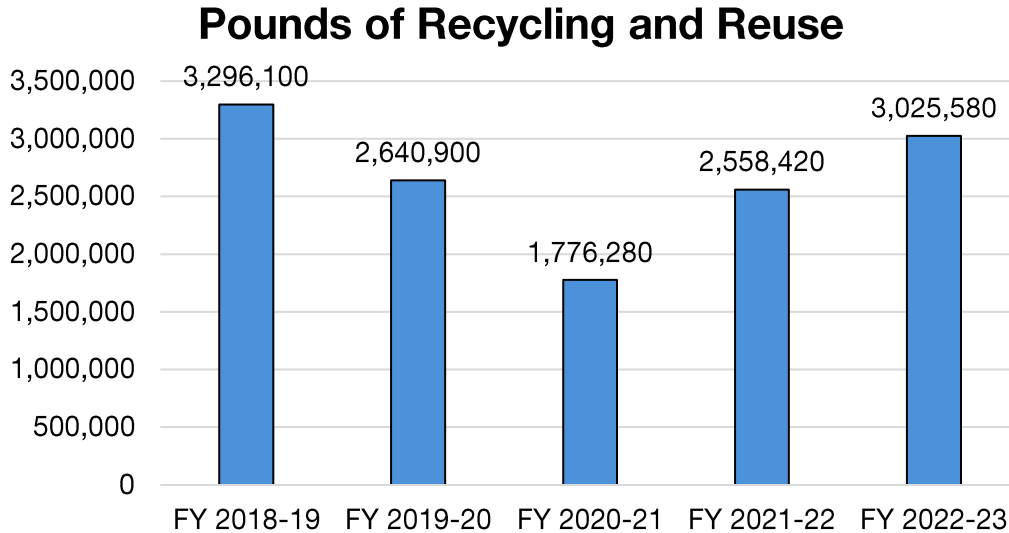
## Percent of Potable Water Used for Campus Landscaping

2.7%



# CU Boulder Waste Diversion

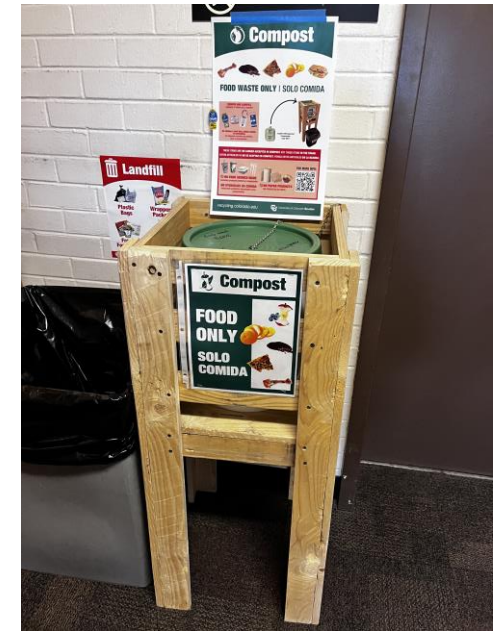
## Recycling



**1.9 million  
pounds of  
food waste  
diverted in  
2023**

## Composting

- In 2023, commercial contractor placed restrictions on acceptable composting materials

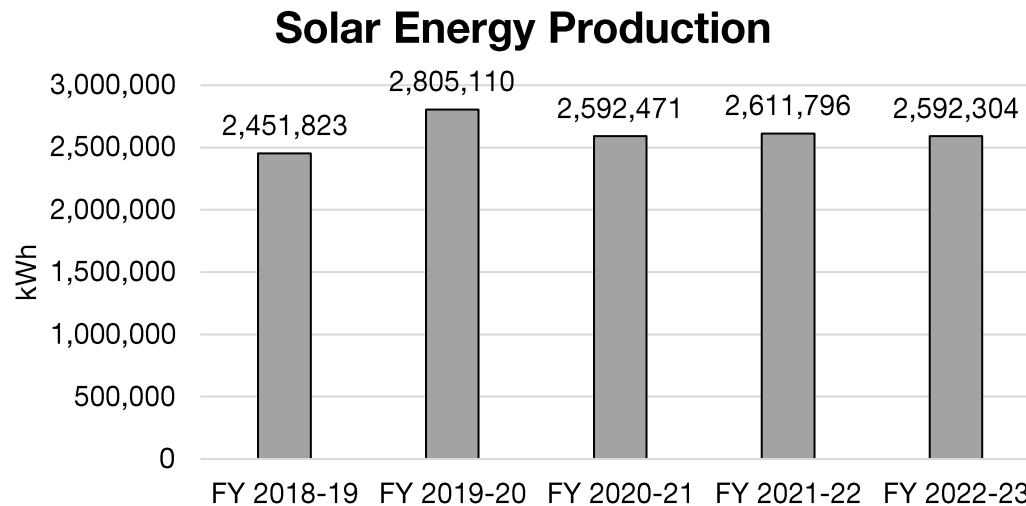


Campus pilot program of small-scale food waste collections in six buildings.

# CU Boulder Renewable Energy

## Solar

- Solar arrays installed on 16 campus buildings
  - Half of the solar arrays are owned by campus, others are leased through power purchase agreements
- New 1.1 megawatt solar array planned for east campus
- New 5.0 megawatt offsite solar planned for 2025



# CU Boulder Community Engagement

## Community Engagement

- Climate Action Plan Equity Team (Summer 2023 – Present)
  - Conducted 10+ engagement opportunities with on- and off-campus stakeholders
    - Presented to City and County of Boulder (February 2024)
  - Held 8 workshops and feedback gathering session for faculty, staff, and students
- 30th Annual Campus Sustainability Summit (April 2024)
  - Featured student projects competing for cash prizes
- CU Garden Club
  - Hosted 86 events with ~200 volunteers (2023)
    - Grew over 1,000 pounds of produce for residents of Graduate and Family Housing
- Ralphie's Green Stampede
  - Celebrated 15<sup>th</sup> year (2023)
    - Supported zero waste operations, volunteerism, and gameday activities
    - Conducted 300 zero waste trainings for vendors



# CU Boulder Academic Offerings

## Academic Offerings and Research

- ~ 100 sustainability-focused courses for undergraduate and graduate students

## Sample Academic Offerings

- Environmental Sustainability in a Globalized World (BUSM 3060)
- Sustainable Energy Policy (ENVM 5006)
- Environment-Society Geography (GEOG 1972)

# CU Boulder Transportation and Equipment

## Alternative Transportation

- Public Transit
  - BuffOneCard ID includes transit pass for students and employees
    - Use of RTD bus services has declined significantly since 2017
  - Subsidized vanpool program; serves 92 frontline service employees
- Extensive infrastructure to support bicyclists (lockers, shelters, repair centers)
  - 1.3 miles of bike-only paths and 5.9 miles of shared-used paths
  - E-bike and e-scooter trips exceed 750,000 trips annually

## Electric Vehicle Charging Stations

- 45 Level 2 ports for commuters
- 12 Level 2 ports for fleet vehicles
- 4 Level 3 ports for fleet busses

## Campus Fleet and Equipment

- 5% of fleet is hybrid and 5% of fleet is electric
- Facilities Management Outdoor Services transitioning to electric equipment

**Campus Night Ride service has four electric fleet vehicles. Estimated reduction in gas consumption August 2023 to April 2024 = 1,748 gallons.**

UCCS



# UCCS Sustainability Overview

## Campus Sustainability Planning

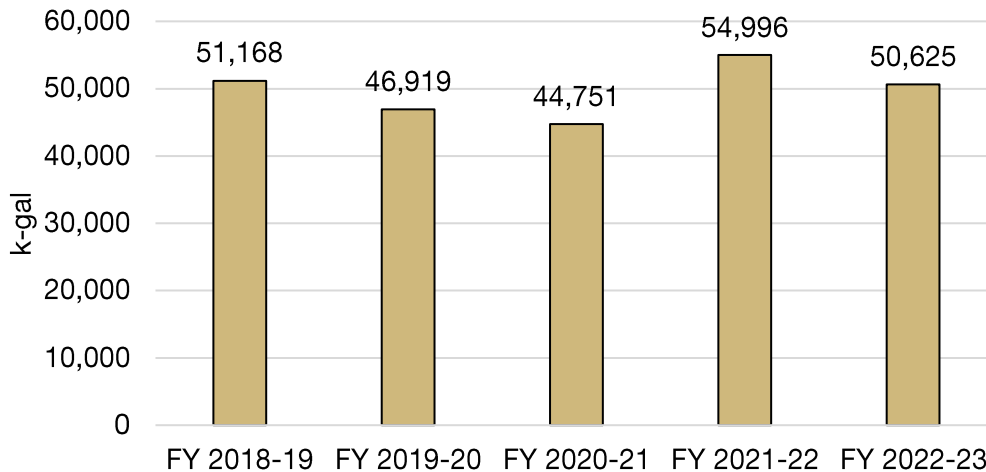
- 2022 - Sustainability Master Plan
- 2023 - Energy Performance Audits (ongoing)
- 2024 - Sustainability Tracking, Assessment & Rating System (STARS)
- 2024 to 2028 - Energy Performance Program project execution

## Sustainability Highlights

- Hired technical staff to implement energy performance projects in-house
  - Building Performance Specialist (10/2023)
  - Director of Energy and Utility (1/2024)
- New hires will complete energy performance projects
- Campus is progressing from measurement and gap analysis of energy and deferred maintenance needs to implementation of new efficiencies and deferred maintenance improvements

# UCCS Water Consumption

## Potable Water Consumption



## Percent of Potable Water Used for Campus Landscaping

46.2%

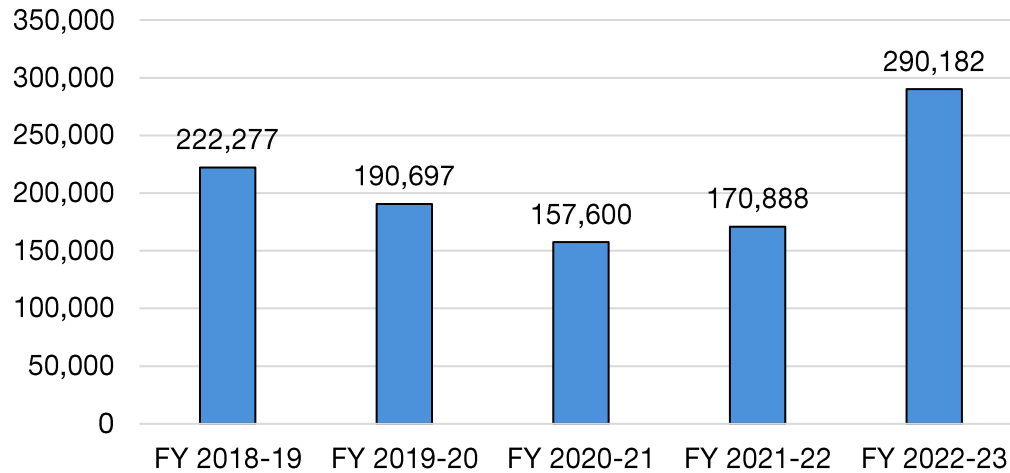


- Use mix of water wise shrubs, perennials, ground covers, grasses, and annuals to develop colorful campus entry points (see first photo)
  - Plants are selected to supply winter interest as well as water savings
- Use low grow native grass mixes, instead of high-water turf, in large, unused areas of campus (see second photo)
  - Only watered when first planted

# UCCS Waste Diversion

## Recycling

Pounds of Recycling



247,650  
pounds of  
food waste  
diverted in  
2023

## Other

- Students have been monitoring campus waste diversion for 14 years resulting in a waste diversion rate of 46% or better over the last five years
- City of Colorado Springs provided two-year paid internship through WastelessCOS to UCCS student to support city-wide waste characterization study



Geography and Environmental Studies student Hayden Strait conducting a recent audit of the campus composting program and provided recommendations for improvement.

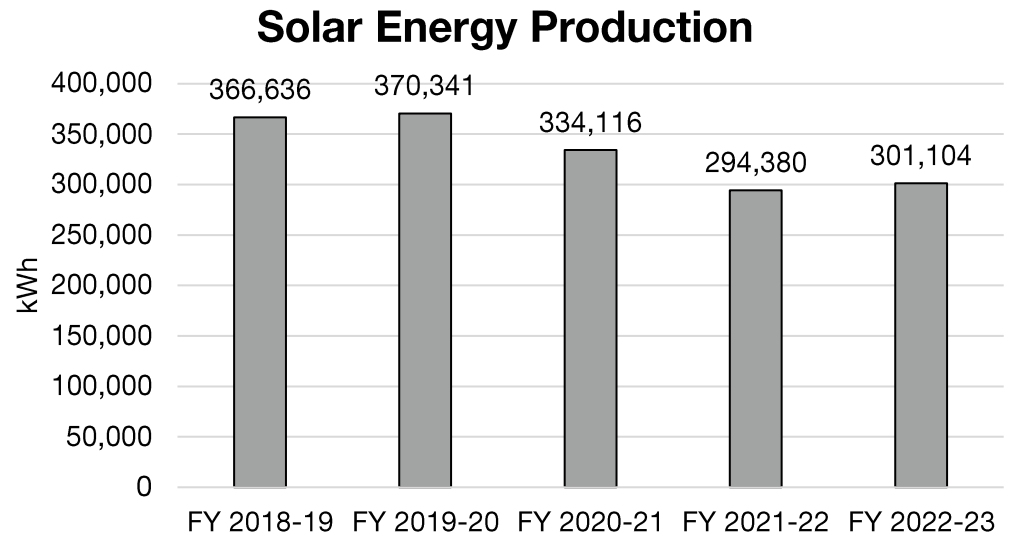
# UCCS Renewable Energy

## Renewable Energy Credits

- Provided 10.8 million kWhs of campus power over last five years

## Solar

- Solar arrays installed on five campus buildings
  - Alpine Parking Garage (2015)
  - Centennial Hall (2011)
  - Gallogly Events Center (2017)
  - Osborne Center (2009)
  - Sustainability House (2019)



# UCCS Community Engagement

## Community Engagement

- Templeton Gap Floodway Cleanup Event (September 2023)
  - Office of Sustainability partnered with UCCSlead, Reisher Scholars, and GPS class
    - One of five UCCSlead's Day of Service and Activism service projects
- CU President's Sustainable Solutions Challenge (November 2023)
  - Three student winners. Winning proposals included:
    - Improve soil at UCCS Farm
    - Extend shuttle service to nearby shopping center
    - Address food waste and food insecurity on campus with to-go containers
- Central Colorado Foodshed Gathering (March 2024)
  - Hosted by UCCS and led by UCCS instructor

## Sample Academic Offerings

- Introduction to Environmental Studies and Sustainability (GES1500)
- Introduction to Energy Science I (PES1500)

**29 students  
enrolled in a  
degree program  
with a  
sustainability minor**



# UCCS Community Engagement (Cont.)



Templeton Gap Floodway Cleanup Event. 65 student participants collected 54 bags of trash and 21 shopping carts.



Winners of 2023 CU President's Sustainable Solutions Challenge.

# UCCS Transportation and Equipment

## Alternative Transportation

- Extensive infrastructure to support bicyclists (lockers, shelters, repair centers)

## Electric Vehicle Charging Stations

- Level 1 charging stations
  - 2 scheduled for repair
  - 3 scheduled for purchase

## Campus Fleet and Equipment

- 9% of fleet is hybrid
- Purchasing two electric riding mowers, as well as electric trimmers, and blowers

## 2024 Campus Transportation Survey Results

**28% of students used more sustainable commuting options as their primary mode of transportation; increased from 14% of respondents (compared to 2019 survey).**

# CU Denver



# CU Denver Sustainability Overview

## Campus Sustainability Planning

- Auraria Campus Climate Action Plan underway (anticipated approval summer 2024)

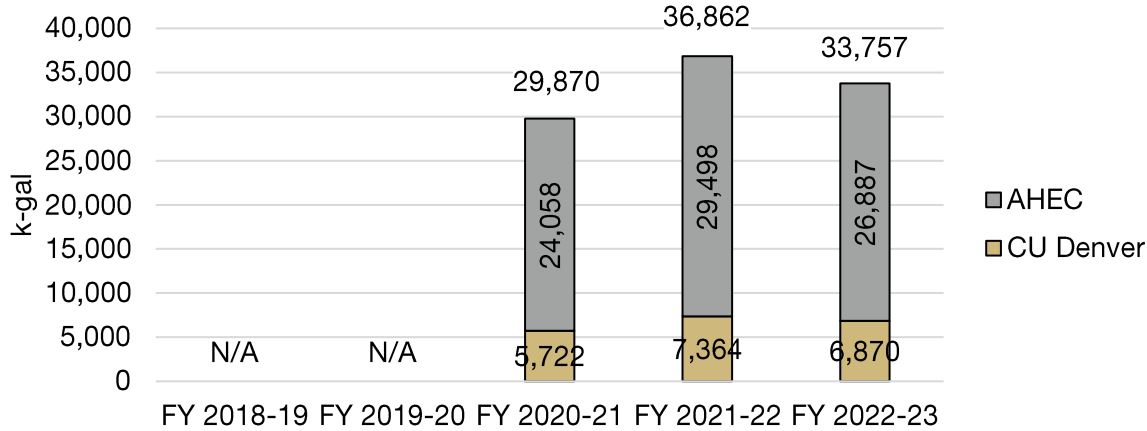
## Sustainability Highlights

- Auraria Sustainable Campus Program purchased commercial composter and hired Compost Operations Manager
- CU Denver hiring Sustainability Manager (Summer 2024)
- Auraria campus finalizing energy performance contract
  - Includes lighting, chilled water system, and control upgrades in 26 buildings (2.3 million square feet)
- Auraria campus received FY 2023-24 controlled maintenance funding for HVAC upgrades in multiple buildings, which will lead to energy savings



# CU Denver Water Consumption

Potable Water Consumption  
CU Denver and AHEC



Percent of Potable Water  
Used for Campus  
Landscaping

2.7%

- Use native, drought tolerant landscaping on all new projects
- AHEC developing landscaping guidelines to promote native and drought tolerant landscaping and systematically replace turf where possible

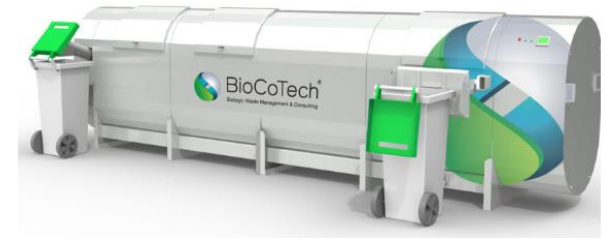
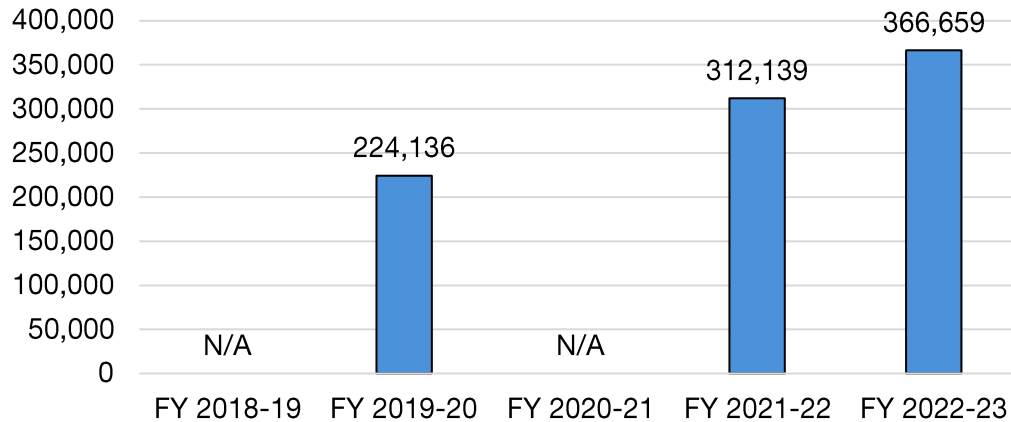


Hardscape with Planters- CU Denver Building

# CU Denver Waste Diversion

## Recycling

**Pounds of Recycling  
CU Denver and AHEC**



**92,947  
pounds of  
food waste  
diverted in  
2023 (AHEC)**

## Composting

- Managed by Auraria Sustainable Campus Program and WOMPOST (Women-Owned Composting)
  - Purchased new commercial composter (image above)
  - Hired new compost manager
  - Purchased electric tricycles for compost pickup
- Composting also available in two off-campus CU Denver buildings



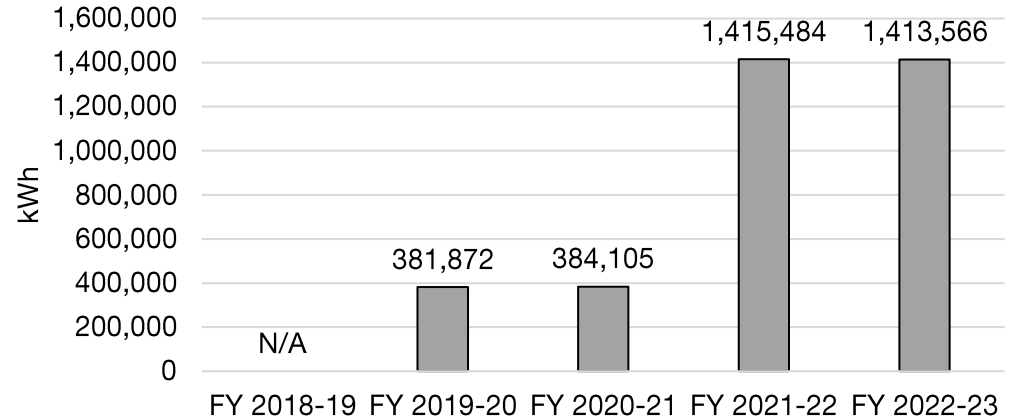
**Electric Compost Tricycle**

# CU Denver Renewable Energy

## Solar

- Solar arrays installed on three campus buildings
  - Arts Building (2015)
  - Auraria Library (2020)
  - Lynx Crossing (2009)

## Solar Energy Production CU Denver and AHEC



Installation of Auraria Library Solar Array



# CU Denver Community Engagement

## Community Engagement

- Shared Meals App
  - Notify campus community of leftover food from events
- Auraria Sustainable Campus Program Free Store
  - Collects ~10,000 pounds of items annually from students who move out of on-campus housing to offer to incoming students at no cost
- Cherry Creek Clean Up
  - Monthly Auraria Sustainable Campus Program event

## Academic Offerings

- 21 total course offering in sustainability
  - Business School
    - Master's Degree in Sustainable Business (Fall 2024)
    - MBA "Managing for Sustainability" certificate
  - College of Liberal Arts and Sciences
    - Minor in Sustainability





# CU Denver Transportation and Equipment

## Alternative Transportation

- Public Transit
  - RTD Eco Pass offered to all employees
  - Commutrics App (developed by CU Denver professor) launching soon
- Extensive infrastructure to support bicyclists (lockers, shelters, repair centers)
  - Two student-designed and -built bike shelters
  - Bike parking throughout campus and in three parking garages

## Electric Vehicle Charging Stations

- Level 1 charging locations: 1 garage, 1 surface lot
- Finalizing installation of one charger at Business School

## Campus Fleet and Equipment

- CU Denver has one gas vehicle, but all carts and equipment are electric
- Auraria has a blend of diesel, gas, and electric fleet vehicles

# CU Anschutz Medical Campus



# CU Anschutz Sustainability Overview

## Campus Sustainability Planning

- Initiated Energy Master Planning in 2024 (anticipated completion 2025)
  - Hired team of experts
  - Plan will:
    - Create roadmap to energy and GHG emission reduction goals
    - Be incorporated into broader Climate Action Plan
    - Address scope 3 GHG emissions and sustainability culture

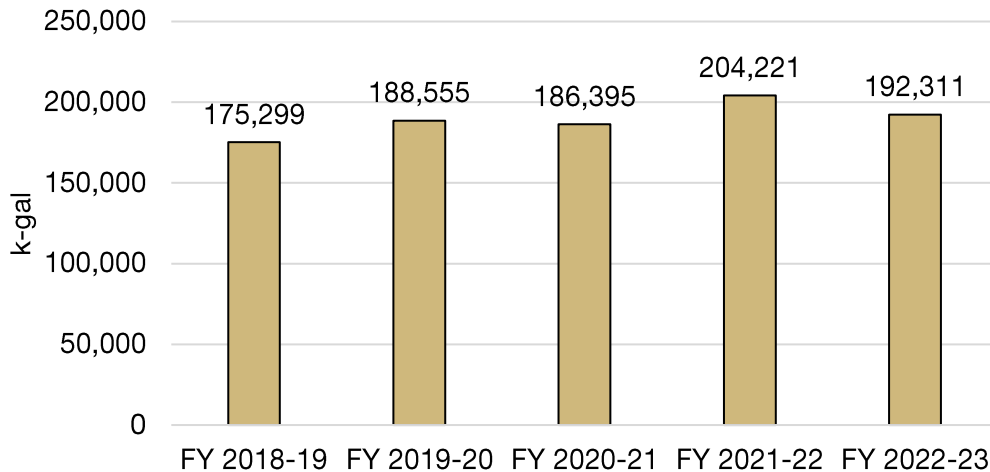
## Sustainability Highlights

- Recent expansion of sustainability and climate action efforts on campus include:
  - New Sustainability Council
  - Revamped website and quarterly newsletter
  - New hires to address waste and energy conservation needs
    - Green Labs Coordinator
    - Sustainability Resources & Waste Diversion Coordinator



# CU Anschutz Water Consumption

## Potable Water Consumption



**Percent of Potable Water  
Used for Campus  
Landscaping**

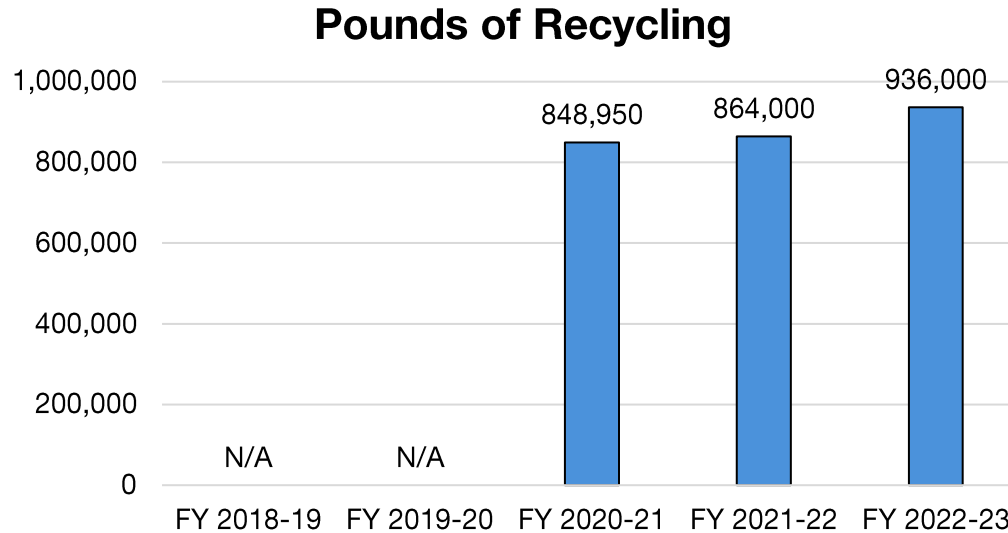
**11.4%**

- Campus Services Building reduced irrigation around facility by 11,000 square feet through replacement of turf with rocks and native plants
- 15,000 square feet of drought tolerant fescue grass and native species used instead of bluegrass at Campus Safety and Emergency Preparedness Facility
  - Saves up to 30% of irrigation water needs



# CU Anschutz Waste Diversion

## Recycling



## Composting

- Campus began composting in 2023
  - Food service
  - Campus events

## Other

- 30 labs participate in nitrile glove recycling program

**2,947 pounds  
of food  
waste  
diverted in  
2023**

# CU Anschutz Renewable Energy

## Renewable Energy Credits

- 20.2 million kWh over 10-year term on behalf of Anschutz Health Sciences Building

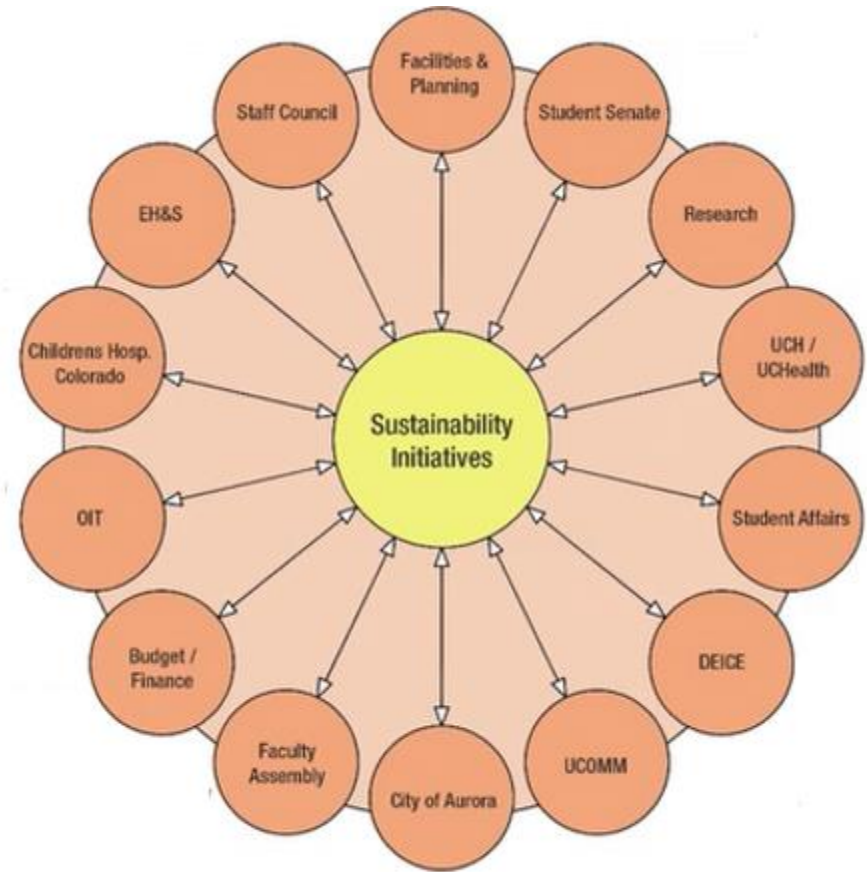
## Solar

- Campus Safety and Emergency Preparedness Facility
  - Roof and carport mounted
  - Leased, 270 kW system
  - Recently installed, insufficient data to report on energy production

# CU Anschutz Community Engagement

## Community Engagement

- Climate & Health, Advocacy, Sustainability, and Education (CHASE)
  - Focused on raising awareness about health implications of climate change
  - Open to all students, faculty, and staff
- Medical Students for a Sustainable Future
- Chancellor's Cabinet for Sustainability
  - New Sustainability Council
    - Includes broad campus community in decision making and guideline development related to Energy Master Plan, Climate Action Plan and campus sustainability culture on campus



**Sustainability Council**

# CU Anschutz Academic Offerings

## Academic Offerings

- Colorado School of Public Health
  - Climate and Human Health, PhD
  - Environmental and Occupational Health, MPH
- School of Medicine
  - Climate and Health Program
    - Mission to further understanding impacts of climate change on human health
    - Diploma in Climate Medicine (continuing education certificate program)
- Sample Courses of Interest:
  - Climate Change and Health (EHOH 6635)
  - Climate and Disaster Mental Health (EHOH 6642)
  - Global Response to Disaster and Climate Crisis (EHOH 6625)
  - Planetary Health: Look Up and Lead (IDPT 5042)
  - Politics of the Environment & Sustainability (POLS 6700)





# CU Anschutz Transportation and Equipment

## Alternative Transportation

- Public Transit
  - RTD Eco Pass offered to all employees; 2,014 active Eco Pass Holders
  - Carpool discount offered; 142 active carpools
- Extensive infrastructure to support bicyclists (lockers, shelters, repair centers)

## Electric Vehicle Charging Stations

- Level 1 charging stations: 54 (free to charge)
- Level 2 charging stations: 6 + 8 scheduled for installation (free to charge)
- Fleet vehicle charging station under construction, will support 16 vehicles

## Campus Fleet and Equipment

- 6% of fleet is electric
- All hand-held lawn equipment is electric