



ANNUAL SUSTAINABILITY REPORT

ACADEMIC YEAR 2021-2022

HIGHLIGHTS



PACK IT, STORE IT, DONATE IT

With 4 local businesses staging their own vehicles on campus, CSU volunteers collected approximately **20,000** pounds of materials during the 4 day move-out period.



EARTH DAY FESTIVAL

The Festival hosted **30** local student and community groups, where hundreds of people came out to celebrate Earth Day!



SUSTAINABLE LIVING CHALLENGE

For the 2nd year, the Institute for the Built Environment (IBE) partnered with Housing & Dining Services to engage **9%** of all apartment residents, focusing on the “Healthy Homes” theme.



THE SPOKE

This living lab had another record-breaking year, completing **8,357** engagements this year, with **871** engagements specifically during student move-in.



RAM FOOD RECOVERY

As in-person catering events came back, so did the Ram Food Recovery program. Residential Dining provided **68** opportunities for those facing food insecurity in the CSU community.



ECO LEADERS INDEPENDENT SHOWCASE

Of the **8** independent projects the Eco Leaders completed over the Spring semester, **4** projects became a reality, with sustainability impacts extending beyond the fiscal year.

**Colorado State University
Housing & Dining Services**

2021-2022 Sustainability Report

HOUSING & DINING SERVICES PROFILE 2

ADAPTING TO A GLOBAL PANDEMIC 3

CAMPUS-WIDE SUSTAINABILITY INITIATIVES 4

EDUCATION & OUTREACH 6

WASTE MANAGEMENT 10

FOOD AND DINING 16

ENERGY & EMISSIONS 18

WATER MANAGEMENT 22

ALTERNATIVE TRANSPORTATION 23

SUSTAINABLE INFRASTRUCTURE & OPERATIONS 25

AREAS OF FOCUS FOR 2022-2023 28

ACKNOWLEDGEMENTS 28

Housing & Dining Services Profile

Mission Statement

To create dynamic housing and dining experiences that enhance personal growth and global engagement.

Commitment to Sustainability

We commit to being responsible stewards, actively engaging our students, guests, and staff in sustainable practices and programs that preserve the environment, are socially just, and are fiscally sound.

At a Glance

Housing & Dining Services (HDS) is responsible for the management, finance, administration, and program development of all University housing facilities. As the largest department on campus, there are many areas within HDS:

Conference & Event Services

Conference & Event Services coordinate over 100 conferences per year for internal and external organizations, ranging from fewer than 20 participants to more than 7,000 participants each year.

Dining Services

Dining Services offers a wide range of innovative venues and services to CSU students, faculty, and staff. There are currently three dining centers, three marketplaces / cafes, and three express facilities in operation, serving more than 12,000 meals per day or approximately 3 million meals annually.

HDS Facilities

HDS facilities furnishes, cleans, fixes, and maintains everything within HDS. The department encompasses more than 2,721,013 square feet of space.

CSU Mountain Campus

CSU's Mountain Campus is in a valley just north of Rocky Mountain National Park. The mountain campus provides a unique and outstanding natural resource base for instruction, conferences, workshops, and research.

University Housing

Housing manages 15 residence halls and 4 apartment complexes that support student success through creating a community environment that is both socially and academically enriching. Housing hosts hundreds of programs to further engage residents in areas such as academics, social diversity issues, and professional development.

RamCard Office

The RamCard office provides all students, faculty, and staff with an identification card, which

can be used for several services on campus. Students, faculty, and staff are encouraged to donate their RamCards to be recycled when they are no longer needed.

Adapting to a Global Pandemic

After coming out of a pandemic, fiscal year 2022 proved to be a year of changes and working with limited resources. Our campus opened back up, with many of our sustainability programming coming back, including a fully in-person Eco Leaders class, with face-to-face engagement in the residence halls and dining centers. Understanding that many of our students spent much of the last year and half in a remote learning setting, we challenged our Eco Leaders to step back out into the public space and engage with residents through Eco Actions and the Zero Waste Game.

HDS's pinnacle events such as student move-in and move-out also took place, helping to divert tons of material from the landfill each semester. Finally, we brought back the Earth Day Festival on a beautiful spring-weather day, attracting the CSU community to dozens of local community and student group booths.

Some things were still put on hiatus including the HDS Sustainability Fund due to the lack of funding. Additionally, we did not participate in the Race to Zero Waste competition nor the waste audit, a joint decision made with CSU Facilities. However, we hope to bring all these things back for the next fiscal year.

Campus-Wide Sustainability Initiatives

Every year HDS collaborates with both on-campus and off-campus community partners. It is a firm belief that we cannot create a sustainable campus culture alone but must do it in coordination with others. Not only does this create a larger community involved with sustainability, but it allows us to learn about other areas and expand our outreach.

Pollinator Friendly Campus

In 2018, CSU formed a Pollinator Friendly Campus Committee with representatives from Facilities Management, HDS, Environmental Health Services, the City of Fort Collins, academics, research, and students.

HDS supported bringing three student-run hives to the Durrell Center. A bee cam with visibility from inside the dining center helped the hives become a focal point for visitors. The hives were funded through the HDS sustainability fund and are managed as a living lab by students in the CSU Apiculture Club. Since then, ASCSU granted funding to the Apiculture Club to add four more hives at the Horticulture Center.

Alternative Transportation

In July 2021, the City of Fort Collins and CSU announced a new combined electronic and electronic bike share program in partnership with Spin. A few hundred e-scooters and e-bikes were distributed throughout the city, including main CSU campus, to encourage more micro-mobility transportation.

Campus Grown Greens

This past academic year, the horticulture intern produced and harvested 2,538.05 pounds of greens for the Dining Centers in FY22. This is over a 100% increase from the previous year of production. With dining centers coming back to in-person eating and seating, this partnership resumed back to normal operations with weekly harvests throughout the year. During the summer months, harvests are reduced to accommodate a smaller population of individuals eating on campus.

Beginning in Spring 2019, a new course grew out of the Campus-Grown Food Partnership: a hydroponics practicum for upper-level horticulture students. Within this course, students are assigned a hydroponic grow table and are responsible for planting, growing, harvesting, and cleaning lettuce for the entirety of the semester. This course is funded by student fees, enrollment costs, and the HDS Sustainability Fund, which provided the course with monitoring equipment. This program is spearheaded by our horticulture intern, Caelyn Hammet, who provides training, mentors the group of practicum students, and oversees the lettuce operation. Since its inception in 2015, the Horticultural Center has produced 12,738.7 pounds of edible greens for the dining centers.

Waste Management

Each spring semester, CSU participates in Campus Race to Zero Waste (previously called RecycleMania) an 8-week intercollegiate competition focused on recycling and waste minimization. In response to the coronavirus pandemic, HDS chose to not participate in the intercollegiate competition and instead focus our efforts on our internal campaign with the Zero Waste Sorting Game. This game focuses on accurate waste sorting and waste reduction led by our Eco Leaders.

President's Sustainability Commission (PSC)

Tonie Miyamoto serves as the co-chair of the commission, while Mary Liang serves as the representative from Housing & Dining Services, and Kirstie Tedrick serves as the administrative support. Through the PSC, HDS collaborates on several campus sustainability initiatives which include STARS, Climate Action Plan, Sustainability Strategic Plan, and Earth Week.

Education & Outreach

HDS prides ourselves with our engagement efforts through our large programs, notably the Eco Leaders program and annual Earth Week events in April. While our focus is within housing and dining facilities, many of our programs and events often extend to the entire university, partnering with various campus groups and student organizations to engage and educate students about sustainability.

Eco Leaders Peer Education Program

Eco Leaders are peer educators in the residence halls and Aggie Village apartments, helping to raise awareness about environmental, social, and economic sustainability issues and encouraging environmentally responsible behaviors using community-based social marketing techniques. There is approximately one Eco Leader per residence hall and four at Aggie Village apartments trained to engage with campus residents in sustainability areas such as waste reduction, energy conservation, social responsibility, environmental literacy, and social justice in the residence halls, Aggie Village, and other HDS facilities. Additionally, the program focuses on recruiting a diverse group of students to create an inclusive approach to sustainability engagement and leadership. The residence hall program began in 2011 and was expanded to Aggie Village in 2016.

During the fall semester, hall Eco Leaders enroll in a one-credit course titled “Introduction to Sustainability Engagement”, endorsed by the School of Global Environmental Sustainability. GES 130 provides the basic tools needed to engage peers in sustainability initiatives, including community based social marketing. In the fall, as part of their resident engagement, Eco Leaders focus on one large 8-week campaign, Eco-Actions designed to bring public awareness to sustainable behavior choices for students living on campus.

During the Spring semester, a major part of Eco Leader engagement is on recycling and waste education, through an interactive online waste sorting game to coincide with the university’s Race to Zero Waste competition. Additionally, Eco Leaders take GES 380, a variable credit course titled “Sustainability in Practice” that pairs a one-credit class with a one or two credit independent project. The spring semester focuses on the United Nations Sustainable Development Goals in a flipped classroom, allowing students to educate each other on how global sustainable goals can impact local communities, in the residence halls, on-campus, in Fort Collins, the state of Colorado, and beyond. Finally, students complete an independent project to culminate their time as an Eco Leader, and 2022 independent project topics included a Community Garden Concept, Resident Compost Campaign, Rentable Sewing Machines, Mountain Campus Bear Containers, Sustainable Vending Machines and more. This year, students presented their independent projects in the Independent Project Showcase at the Pavilion during Earth Week, previously virtual during the pandemic.

The Aggie Village Eco Leaders do not have an academic component, and instead focused on engaging residents and small group discussion meetings on current events that relate to sustainability. However, they still participate and engage with their apartment residents during Eco Actions and waste education campaigns alongside the other hall Eco Leaders.

The Aggie Village Eco Leaders continued to engage residents at Aggie Village Apartments through their Instagram page to (@aggiyecoleaders). They have completed 110 posts to date around waste reduction, sustainable behavior choices, sustainable businesses in Fort Collins, programs and events, and healthy eats. They currently have 265 followers with their account. This is an increase from 178 followers in the previous year.

Finally, Eco Leaders are provided a housing stipend each semester to complete five weekly engagement hours within their residential halls. While many of these hours overlap with large sustainability campaigns throughout the year (i.e., Eco Actions - previously called Green Warrior - and Campus Race to Zero Waste), Eco Leaders are encouraged to engage with their peers by collaborating with other student organizations on sustainability initiatives, such as hosting a zero-waste event with Hall Council or self-created ideas like organizing a bike ride to the local farmer's market.

Earth Week

HDS celebrates Earth Week annually with the goal of increasing sustainability awareness and providing an avenue for sustainable organizations and programs to promote sustainability on campus. This past year, Earth Week became Earth Month with 5 weeks' of programs, events, and other sustainability initiatives. Each week highlighted a theme: energy, zero waste, mobility, sustainability at CSU & water, and food justice.

HDS specific events included the Compost Giveaway & E-Waste Collection event; SWAP, Don't Shop: Clothing Trade event at Aggie Village Apartments (Aggie Village Eco Leaders Program); Sustainable On-Campus Walking Tours, CSU Earth Day Festival, and the Eco Leaders Independent Project Showcase.

For the Compost Giveaway & E-Waste Collection event, over 120 attendees collected compost processed by HDS's in-vessel composter, Oscar. Each person was allowed to bring two five-gallon buckets to collect compost, and all the of this compost was distributed. For the E-waste collection event, Surplus and EHS collected was 1,876 pounds of materials. The Aggie Village Eco Leaders hosted a SWAP event encouraging residents to bring donatable clothing and choose to exchange them for another item. This event had over 75 attendees over the course of the three-hour event.

After a few years of hosting our Annual Earth Day Festival only online, we were able to fully bring it back in person outside of the Lory Student Center. Approximately 30 groups hosted a booth this year ranging from student groups, departments, academics, and Fort Collins community members.

Sustainability Learning Communities

For students who are passionate about living green at CSU, and want to pursue career in sustainability, the Natural Resources and Sustainability Community offers students a supportive residential living community, centered around sustainable living. The Natural Resources and Sustainability Community is co-sponsored by the Warner College of Natural Resources (WCNR) and University Housing. In FY22, 23 students participated in this learning community – the largest cohort ever – in Summit Hall.

The living community allowed all interested WCNR first-year students the enrollment opportunity to help them make positive community connections on the CSU campus even while still practicing aspects of social distancing. During the Fall semester, students were fully masked in our classroom activities but have outdoor programming adventures that included the CSU Mountain Campus and the CSU Environmental Learning Center.

A couple of fun facts about the NRS Community “alums” either at CSU or who have recently graduated from the university include:

1. Bryn Hall who was part of the 20-21 cohort will be graduating in three years this coming Spring of 2023. Bryn is majoring in Ecosystem Science and Sustainability Class and serves on the CSU President’s Sustainability Commission as the CSU undergraduate student representative.
2. Helen Flynn, Ecosystem Science and Sustainability Class of 2023, is the Chairperson for ATFAB: Alternative Transportation Fee Advisory Board at Colorado State University for AY 22-23.
3. Diego Tovar, Ecosystem Science and Sustainability Class of 2022, is in graduate school in Global Environmental Policy at American University School of International Service in Washington, DC.

A second living community, the College of Natural Sciences Amplify Learning Community offers experiences for their first-year students for to connect to their science majors to their lives and interests. Many Amplify students are interested in sustainability and the environment, so Amplify prioritizes experiences sustainability-related experiences. Most of the students in Amplify live in Piñon Hall, a LEED certified building. Opportunities from this year included working with the Amplify Community Garden and helping to launch the Amplify indoor living lab. Specific events included the science of air plants, cyanotype plant art, and garden harvesting and cooking. Amplify works with University Housing and the Eco Leader program to collaborate on experiences for students that connect their science majors to sustainability-themed topics.

There are 300 students involved on the Amplify Floor but only a handful of residents participated in the garden/sustainability events for FY22 but there are efforts to increase engagement for FY23.

CAMUnity

In Spring 2020, Aggie Village Eco Leaders began contributing sustainability-themed articles and stories to CAM-Unity, University Housing’s digital newsletter to engage with on-campus students and staff. This newsletter switches to bi-weekly submissions and not only did our Aggie Eco Leaders submit to it, our Horticulture Intern, Compost Intern, Sustainability Intern and Eco Leaders submitted to it for the 2021 – 2022 academic year. Some articles include At Home Hydroponics, Green Your Spring Cleaning, How to Slay Vampire Power in Your Room, Use of Compost, and more. CAM-Unity remains a success, and our interns and Eco Leaders with continue submitting articles for the 2022 – 2023 year.

Green Tips

The sustainability intern contributes a “Green Tip” each month to the HDS newsletter, to encourage HDS employees to integrate sustainability actions into their daily routines. Green tips include topics from alternative transportation, sustainable gardening to reusing and repairing items.

Waste Management

The City of Fort Collins and CSU has been committed to reducing its waste impact on the environment for decades. We will continue on the road to zero waste, including increasing composting and recycling education and infrastructure, while enhancing waste management data reporting with CSU Facilities.

Waste Diversion Events

Student Move In

In August of 2021, Housing & Dining Services welcomed over 5,000 students over the course of two days when students and their families moved into campus housing. As imagined, we generated a large amount of waste during Move In, 73.78 tons of total waste from all our residence halls. However, through cardboard and styrofoam collection and recycling, HDS diverted 42% from the landfill (or 31.34 tons of material), leaving behind only 42.44 tons of waste into the landfill – see Figure 1.

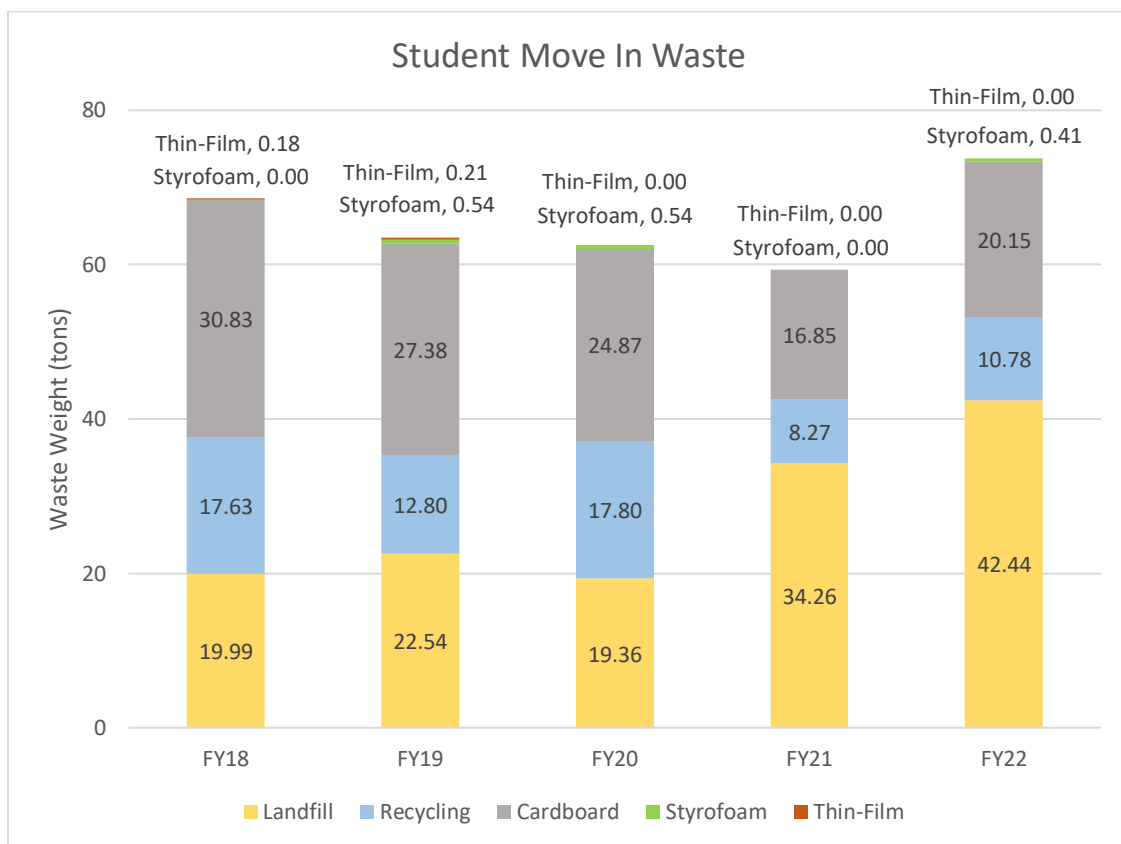


Figure 1. Student Move-In Waste by material and weight

President’s Fall Address and Picnic

In past years, HDS Dining catering this event, and the Sustainability team encouraged accurate waste sorting by being present at all waste stations. This event was cancelled in 2020 (FY21), but returned in 2021. Through dedicated volunteers and mindful food packaging, very few items from this event went into the landfill, with 91% of all waste either composted or recycled. See Figure 2 below.

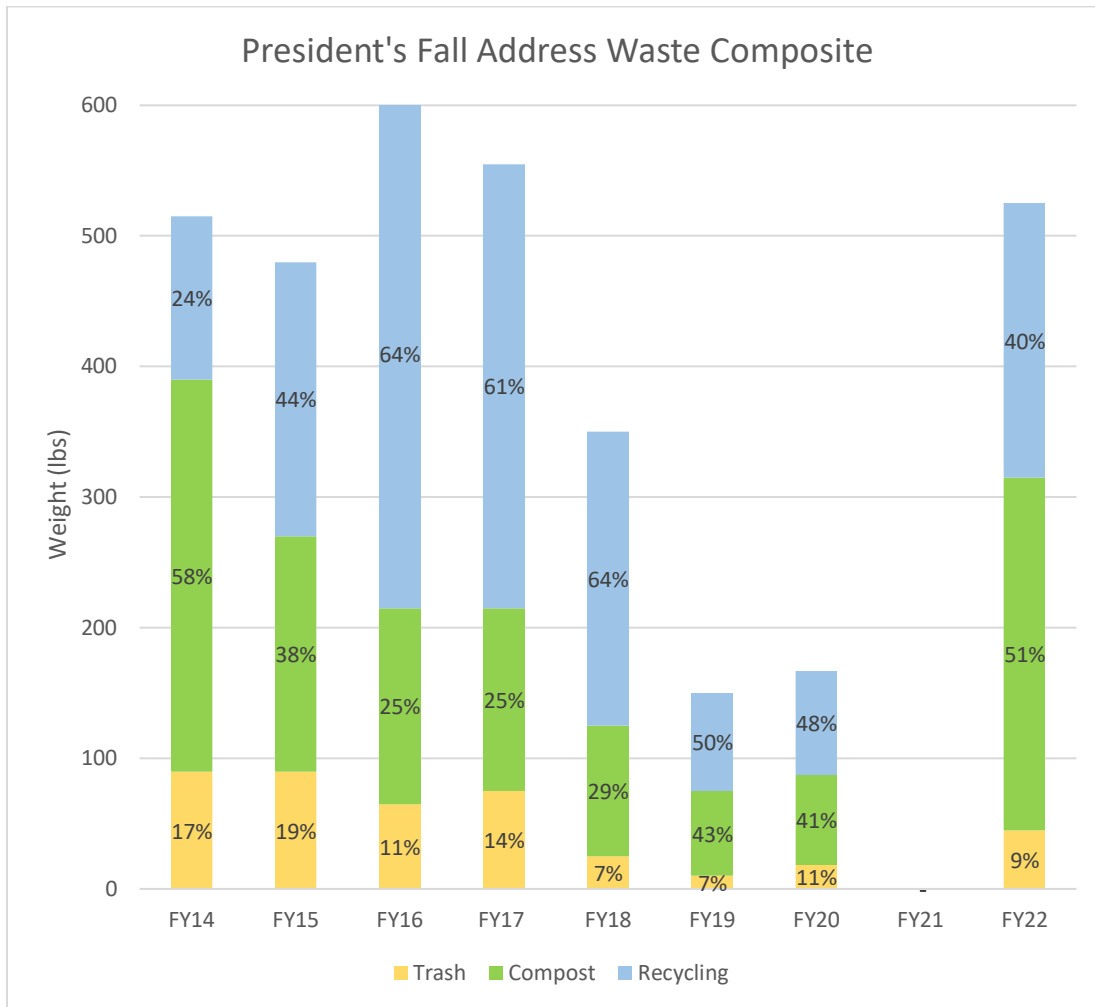


Figure 2. President’s Fall Address waste composite by waste weight, and percentage of total materials in waste stream

Student Move Out Program: Pack it, Store it, Donate it

Pack it, Store it, Donate it is a student move-out program encouraging students to either reuse or donate their gently used items as opposed to throwing items away at the end of the school year. “Pack It” encourages students to pack items and take them back home. “Store It” encourages students to store items over summer break to reuse the next year. “Donate it” encourages students to bring items to large trucks conveniently parked outside the residence halls to be donated to local agencies. The program also connects students to a local vendor to

store items over the summer. This program was redesigned in 2018 from a previous partnership with CSU Surplus to collect unwanted items from students moving out of the residence halls and hosting a community-wide sale over the summer.

Currently, the program requires HDS Sustainability volunteers and Eco Leaders to collect and pre-sort materials during finals weeks, for distribution to local charities at the end of the week. Accepted materials include clothing, bedding, school supplies, non-perishable food, and small furniture. Additionally, in 2019 HDS started a partnership with ChairTableHome LLC, a local vendor to pick up larger furniture items, which are then donated to under-served communities.

This year, HDS restructured the program and asked local charities to provide their own vehicles, while Eco Leaders or other volunteers collected and sorted donated items throughout the donation period. Participating businesses included ChairTableHome LLC, Salvation Army, Centennial Board of Cooperative Educational Services (CBOCES), and St. Francis Center.

Over the course of three days, CSU volunteers collected approximately 20,000 pounds of materials. Unfortunately, this is only an estimated datapoint as agencies did not weigh their donations after collection. See Figure 3 below historical weights of all collected donations.

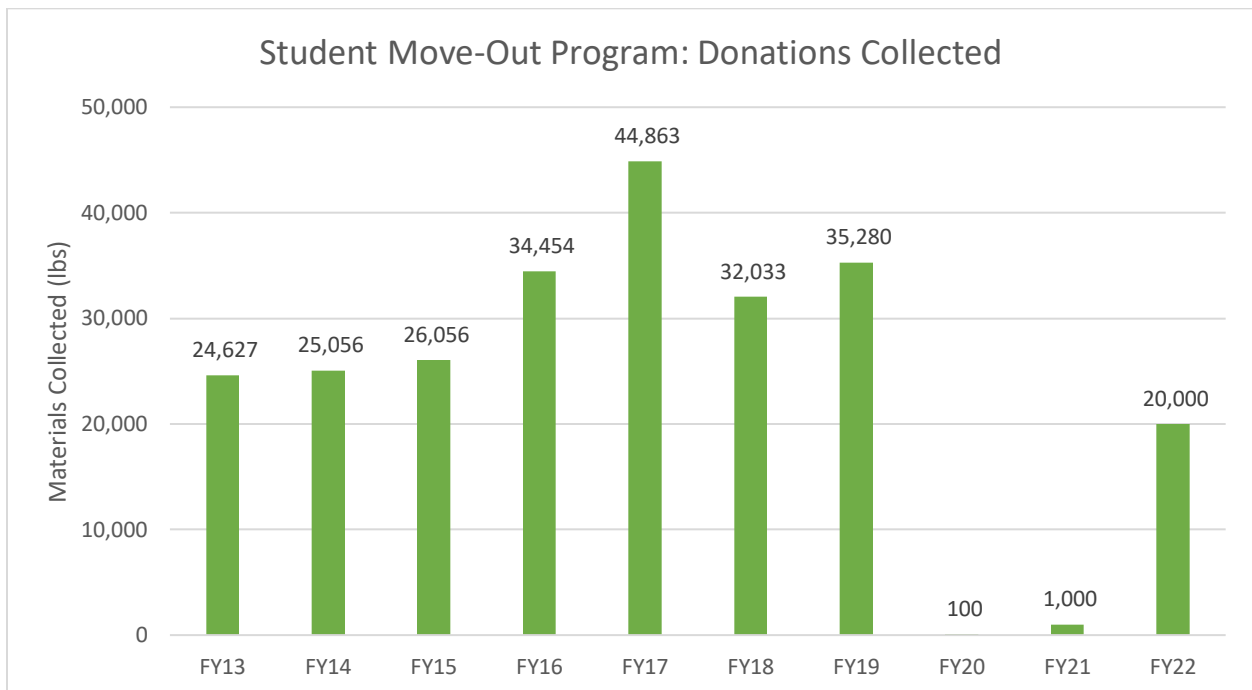


Figure 3: Amount of donations collected during the annual student move out program, this year called Pack It, Store It, Donate It, and donated to Fort Collins non-profits and charities.

Ongoing Sustainability Initiatives

Composting Initiatives

- HDS continues to utilize Oscar as a living learning lab, employing a student intern to learn, operate, and educate the community about the in-vessel composter, located at the Foothills Campus, approximately three miles west of main campus.
 - During the 2022 fiscal year, Oscar diverted 27,323 pounds of food waste, which is low compared to previous years – see Figure 4. Oscar was fully function August 2021, but broke down again in February 2022, resulting in only 6 months of usage (with extremely low inputs during student winter break).
 - Online since 2017, the windrow composting operation diverted 1,416,763 pounds of pulped food waste from the landfill this past year – see Figure 5 for the combined food waste of both Oscar and the Windrow. This seems significantly larger than in previous years, and the discrepancy is unknown. Due to a leadership change, data may have been collected differently.
- HDS continues to offer public access composting in each dining center – The Foundry, Ram’s Horn at Academic Village, Durrell, Braiden, and Allison Hall – through the three-stream Max-R bins, complete with shadow boxes and large overhead sign. The organization and maintenance of the shadow boxes is now managed by the sustainability intern. In 2019, through the HDS Sustainability Fund, we added additional Max R bins in administrative buildings including the Housing Services Center (HSC), the Palmer Center, and in each of the Durrell Center Conference rooms.
- In Spring 2021, HDS brough back the compost giveaway event! Together with Surplus Properties and Environmental Health Services (EHS) to collect electronic waste, HDS provided Oscar-processed compost through a compost collection event over Earth Week. CSU Facilities Management brought out several yards of compost at the Moby Arena Parking Lot and 128 people collected one or two 5-gallon buckets of compost. 60 individuals came out to recycle an electronic device through Surplus Properties and EHS.
- The CSU Mountain Campus continued its diversion of pre-consumer food waste in the kitchen. The specially designed bear-proof carrier on the trailer allows the bins to be brought down to the Foothills Campus for processing. This program is in its eighth year of operation, and the Mountain Campus will continue exploring options for increasing post-consumer food composting.

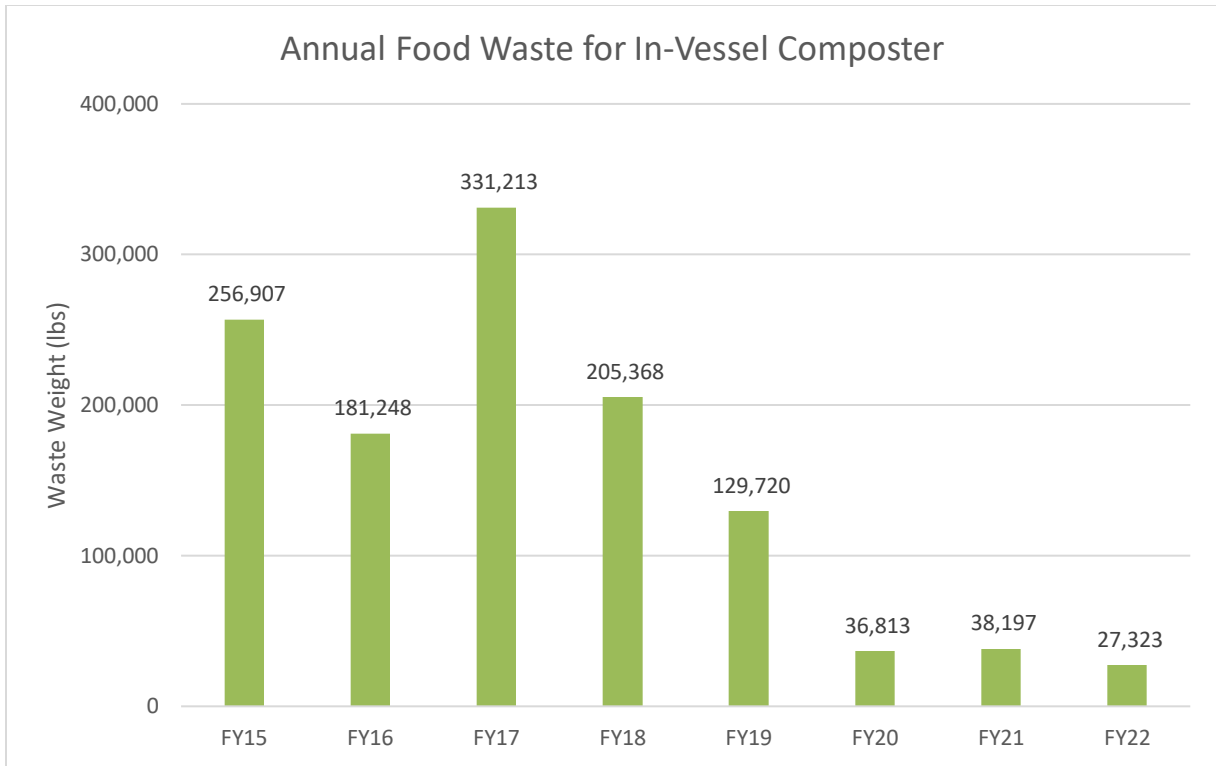


Figure 4. Total food waste each year for the in-vessel composting system (Oscar).

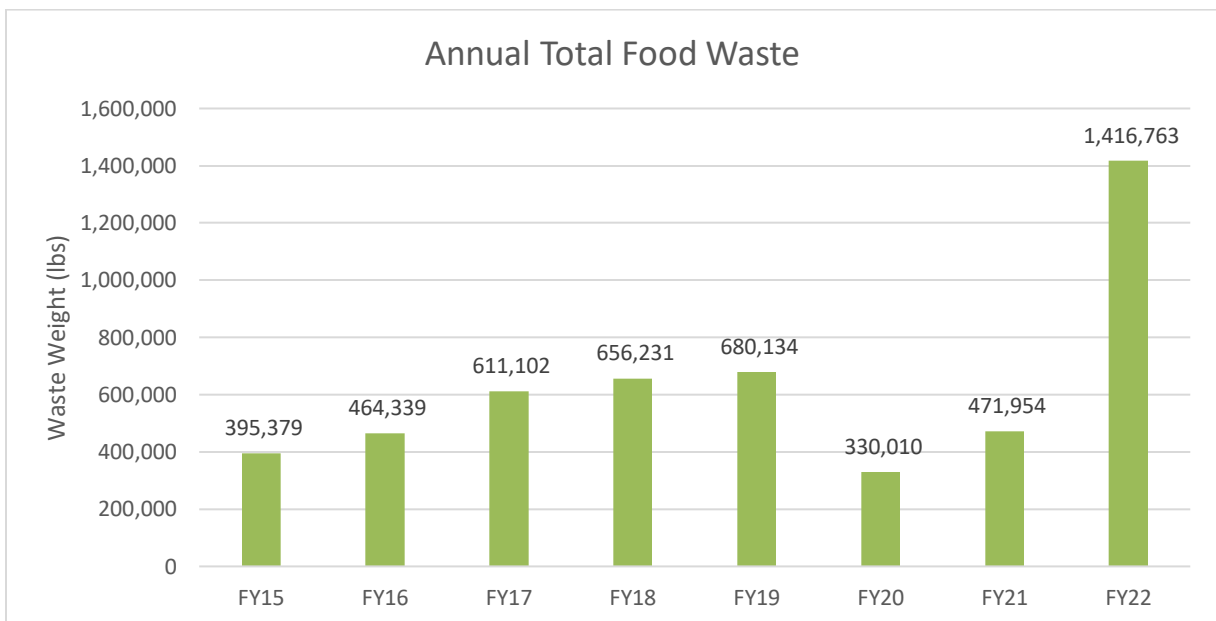


Figure 5. Total food waste processed through the in-vessel composter (Oscar) and the Windrow system.

Zero Waste Sorting Online Game

To further engage and educate students in waste management, HDS designed the Zero Waste Sorting Game, accessible online with a computer or a mobile device. This game tests a participant's knowledge of campus sorting with a drag-and-drop style game that requires them to decide if a given item should go in a landfill bin, recycling bin, compost bin, or Techno Trash bin. As part of their engagement, Eco Leaders encouraged residents to play this virtual game by providing reusable stainless-steel straws as an incentive. While anyone can participate in the game anytime of the year, the Eco Leaders provide reusable straws only this campaign in the Spring semester. During this six-week campaign, 807 residence hall students and 151 Aggie Village students played the online game, resulting in 14% of all hall residents and 17% of Aggie Village student participation. The Zero Waste Sorting Game is still accessible at [online](#) for all who would like to play. A follow-up survey is usually distributed to participants to measure impact of playing the game, but the survey was not distributed this year due to other critical pandemic communications to students.

Food and Dining

Housing & Dining Services takes pride in the sustainability initiatives in three dining centers, three marketplaces / cafes, and three express facilities. With annual events to educate diners on food options that carry a smaller environmental footprint, to ongoing education initiatives to reduce the university's waste streams, HDS will continue to integrate sustainability in its daily work.

Food Diversion Events

Environmental Eats

HDS aims to promote more sustainable food choices by sharing knowledge and information about different foods and their impacts. In its fourth year, Environmental Eats is a three-part series that takes place in The Corbett Lobby Community Kitchen throughout the year. This program is a result of feedback to create a more diverse framework to eating more sustainably, and not simply going meatless.

The three themes highlighted this year included Soul is BAACC, Campus Harvested Honey, and Lonely Legumes. The Soul is BAACC event had 119 students in participation, The Honey event had 140 students participate and lastly the Lonely Legumes event had around 57 students in attendance.

Ongoing Sustainable Initiatives

Ram Food Recovery Program

One in ten students at CSU experience food insecurity. For several years, CSU has had a strong Rams Against Hunger program that provides dining halls meals, SNAP benefits, and pocket pantries for students, faculty, and staff experiencing food insecurity, but it does not address leftover food from catered events, which is often high-value food such as fresh fruits and veggies, proteins, and balanced meals. Furthermore, campus policy had prohibited foods that had been served but not consumed (i.e., half a tray of pasta out on the line), from being donated to external entities, including our own students, faculty, and staff, due to food safety and liability concerns. With a strong collaboration between Dining Services, SLICE, Environmental Health Services, and HDS Sustainability.

In Spring 2019, these entities changed the campus policy, and founded the Ram Food Recovery Program to create a method to safely offer leftover HDS catered food to people experiencing food insecurity. After signing a waiver and agreeing to food safety guidelines, any CSU campus community member can join a list to receive a text when food is available from Dining Services Catering. Individuals have a 30-minute window to pick up leftover food by bringing their own reusable containers. In FY22, this program presented 68 events for 68 members of the CSU community to pick up food.

Other Food Donations

Prepared food that are not set out in the dining centers are distributed to the CSU Food Pantry weekly. Dining does not collect data on these food donations, but this process prevents additional food waste in the dining centers.

Sustainable & Third-Party Certified Foods

The living lab partnership with the CSU Horticultural Center is now in its fifth year. The Center began growing greens in Fall 2016 for the dining center salad bars at Durrell and Corbett, and in fiscal year 2022, produced 2,538.05 pounds of greens. In total, the Horticulture Center has produced 12,738.7 pounds of lettuce since the living lab was established.

In late FY20, Dining made a commitment to purchase all certified organic coffees after all dining halls exhaust their current supply of coffee. Dining is currently only purchasing organic coffees.

Recycled Cooking Oil

All used cooking oil from dining halls is collected and recycled as biodiesel. Dining Services partners with a local company in Denver and recycled 50,695 pounds of used cooking oil this past year. Since fiscal year 2013, Dining Services has recycled a cumulative amount of 307,656 pounds of cooking oil.

Energy & Emissions

Balancing student and building growth, while reducing energy and water consumption is one of the university's biggest challenges. While systems and equipment have become more energy and water efficient, buildings and building occupants remain the number one consumers of energy, particularly as campus continues to grow.

Energy Efficiency and Engagement Events

Eco Actions Campaign

Each fall, with the assistance from our Eco Leaders, HDS hosts an Eco Actions campaign (previously called Green Warrior), bringing public awareness to sustainable behavior choices for students living on campus. By committing to Eco Actions, students choose to take actions such as turning off lights or using alternative modes of transportation, and receive prizes to help reduce their environmental impact, such as solar power packs, and reusable sporks. For the third year, students had the option to plant trees rather than collect physical prizes. Eco Actions started in Fall 2011 with participation from only the residence halls (then only 11 halls), and in 2017, Aggie Village joining the campaign. Each year, HDS encourages all Eco Leaders to gather more pledges and engage with more residents than the previous cohort.

This campaign not only serves as a reminder to students that there are multiple ways to live sustainably on campus, but also as a benchmark for us on areas students excel in (ex. using alternative transportation and other quick behaviors), and areas students can improve on (ex. gaining valuable skills and experiences by greater involvement in the sustainable community on campus).

In Fall 2021, 15 residence halls and Aggie Village, with a total of 6,931 residents, had the opportunity to participate in Eco Actions. Through Eco Leaders, 1174 students participated in the campaign— see Figure 6. This indicates that 16.9% of the on-campus resident student population (residence halls and Aggie Village) pledged to participate in at least one sustainability action in the future, with many more students pledging to do more actions.

The top 5 residential hall student pledges in Fall 2021, with the percentage of student pledges:

1. Turn off lights and any electronics in rooms that are not in use and overnight – 95%
2. Turn off water while brushing teeth, scrubbing hands and shaving – 90%
3. Walk, bike, longboard, or ride a scooter to class – 90%
4. Only do laundry in full loads and use cold water – 89%
5. Donate unwanted items instead of throwing it away – or give to a friend – 89%

These top 5 student pledges are not surprising, as quick sustainable activities are usually low-hanging fruit for our students. New this year is our resident's willingness to share green tips with others, signifying that students are more eager to engage with others, as opposed to more individually focused behaviors.

Within the 15 residence halls, Eco Leaders engaged with 915 residents, representing 15% of the resident hall population. The highest participation rates by residential halls were Edwards (31% participation), Allison (30% participation), and Ingersoll (28% participation). Similarly, the Aggie Village Eco Leaders engaged with 259 apartment residents, or 28% of Aggie Village. The highest engagement was in the Lodgepole building with 34% engagement.

Incentives remain a large reason why students complete the pledge, but oftentimes, students choose to relinquish their prize(s) and instead plant trees. This past year, our students opted to plant at least one tree as part of their prize package, and thus planted 1,445 trees through Trees for the Future.

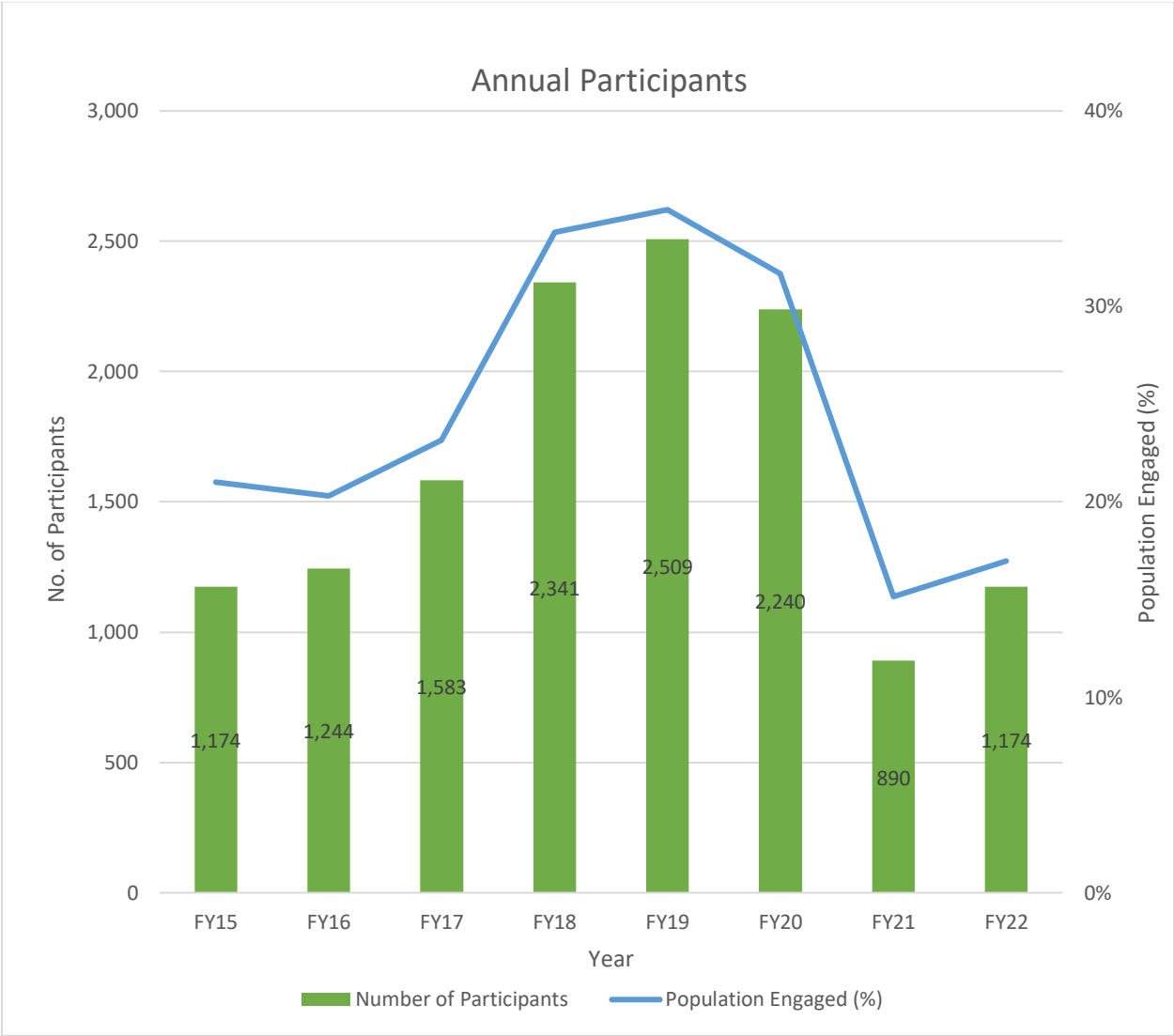


Figure 6. Total number of participants in Eco Actions, and its corresponding percentage of students engaged in all on-campus student housing.

Sustainable Living Challenge

From February 1-28, 2022, the Institute for the Built Environment (IBE) partnered with HDS in hosting its second Sustainable Living Challenge within CSU apartment communities. The challenge focused on Healthy Homes, a theme selected because of the high visibility of healthy buildings and indoor air due to the COVID-19 pandemic. Participating apartment communities included Aggie Family, International House, and University Village (1500, 1600, and 1700). Similar to Eco Actions, the main goal of this challenge was to engage apartment residents in sustainable living, through an online pledge.

For this 4-week challenge, volunteer residents and CCs engaged with 9% of all apartment residents.

Community	# of Pledges	Total Apartments/ Occupants	% Engaged
Aggie Family*	37	240	15%
International House **	24	170	14%
UV1500	15	262	6%
UV1600	22	395	6%
UV1700	14	168	8%
TOTAL	112	1235	9%

* Aggie Family and UV % Engaged based on number of apartments out of total apartments.

** International House % engaged based on number of individual residents out of total residents.

Incentives also played a role in asking residents to complete the sustainable living challenge- To maximize pledges, all participating residents were given the option to choose from a microfiber cloth or reusable straw prize. Prizes were first-come, first-serve and distributed upon completion of the Challenge. The winning community received an at-home workout kit consisting of dumb bells, resistance bands, and a yoga mat. IBE provided a coloring sheet for a sustainability coloring activity. All children who participated in the coloring activity were eligible to choose either a lunchbox or jump rope prize.

Ongoing Sustainability Initiatives

On-Site Renewable Energy

In FY22, CSU worked with Solaris and Namaste Solar to bring more on-site solar to the university. This group identified nine additional roofs with solar capabilities, and have installed solar on six of these roofs. By the end of the calendar year 2022, HDS will have rooftop solar on twelve of its buildings, totaling 1.814MW in power:

1. Braiden (2014)
2. Parmelee (2015)
3. Edwards (2015)
4. LV Alpine (2021)
5. LV Pinion (2021)

6. Parmelee South (2021)
7. AV Engineering (2021)
8. Corbett Center (2021)
9. Ingersoll Center (2021)
10. Aggie Cottonwood (2022)
11. Aggie Lodgepole (2022)
12. Aggie Walnut (2022)

The renewable energy credits from the first three HDS solar projects belong to the city of Fort Collins Utilities. While owned by a third party, the solar does feed into the City's electric grid and provides a more renewable mix of energy to the city. This allows us to support the renewable energy industry and increase the percentage of the City's renewable energy without incurring the significant financial burden of capital costs for purchasing the solar systems. The solar installations also represent a physical display of sustainability that help influence our students' sustainable behavior choices on campus. Renewable energy credits from the 2021 and 2022 projects are owned by the university. The solar projects are a collaboration between Housing & Dining Services, Facilities Management, CSU Research Foundation, City of Fort Collins Utilities, Atmospheric Conservancy Group (ACG), and Namaste Solar.

Additionally, Aspen Hall, a LEED (Leadership in Energy and Environmental Design) Gold certified residence hall, features a thermal plant with a 12.6 kW solar array, 95 percent energy efficient boilers for heating water, and an innovative thermal energy storage system. The system makes ice at night when electric rates are lowest and then reverses the process during the day to melt the ice and cool the building.

Water Management

Water reduction and efficiency is a high priority to HDS. Initiatives within the residence halls include the use of low-flow showers and toilets, as well as considering water usage when repairing/replacing equipment, renovating, xeriscaping, and building new facilities. Water management is also a subtopic in the Eco Actions Campaign, encouraging students to take shorter showers, completing only full loads of laundry, and other water reduction strategies.

Ongoing Sustainability Initiatives

Water Bottle Filling Stations

All residence halls and on-campus apartment complexes have at least one automatic water bottle filling station. Durward and Westfall have multiple water stations across multiple floors and wings. Currently, HDS has installed 31 stations to date and continue to work with the Residence Hall Association (RHA) to add more stations on more floors. HDS Facilities is also working on standardizing all water bottle filling stations across all HDS buildings.

Alternative Transportation

Every year, HDS looks to increase the percentage of students and staff using all forms of alternative transportation. As one of five institutions nationwide designated as a Platinum Bicycle Friendly University, CSU offers 18,000 bike parking spaces, hundreds of longboard parking spots, a free campus shuttle, bus passes included with student fees and faculty and staff benefits, and multiple electric vehicles charging stations. Housing & Dining Services supports the use of alternative modes of transportation for its residents and staff and supports exploring new ways to commute on and off-campus.

Ongoing Sustainability Initiatives

Bicycling

Housing & Dining Services has over 6,000 bike spaces on approximately 580 bike racks throughout the department and has committed to providing bike parking for 80% of the students who live with us to meet popular demand. This allows for convenient storage and access for bicycles at the residence halls, university apartments, and dining centers.

The overarching trend informs us that the number of on-campus residents who purchase a vehicle parking permit continues to decline, as vehicle parking becomes more limited and sustainable transportation options expand.

Services

The Spoke, a living lab operated by student mechanics in partnership with Central Receiving, had its fifth full year of operation out of the University's first LEED Platinum building, the Pavilion of Laurel Village. The Spoke is a bicycle education room built to offer free services and education to the CSU community, many of which are residents. Housing & Dining Services continues to provide some funding for Spoke operations while ATFAB provides the majority.

In 2018, the Spoke received ATFAB funding to develop and manage a pop-up mobile shop, designed to offer services and education around campus in high traffic cycling areas, particularly in the south side of campus.

In FY22, The Spoke, served its greatest number of customers – 8,357 engagements throughout the fiscal year. HDS continues to financially support The Spoke during the days of student move-in, where the student employees engage with 871 customers over the course of four days. The mobile bike shop continues to station themselves outside Ram's Horn in Academic Village throughout the warmer months to attract students living in this area. The Spoke has cumulatively provided 31,069 educational services since it opened in 2014.

Electric Vehicles

HDS has two Nissan LEAF fleet vehicles in the fleet available for employees to check out for work-related trips. To date, both vehicles have accumulated over 14,356 miles since 2016.

In FY16, Laurel Village installed the first charging station in HDS. Since then, four stations are available at International House and University Village and three at the Laurel Village parking lot. The apartment stations provided 7,391.05 kWh of electricity for residents for the academic year. The three Laurel Village charging stations provided 11,481.6 kWh of electricity to electric vehicles in FY22. All the stations have charged 48,914.52 kWh of electricity since FY16.

Collaboration

SkiSU, a shuttle service to ski resorts proposed by two Eco Leaders, launched in the 2017-2018 ski season through a partnership between Housing & Dining Services and Parking & Transportation Services. Initially funded by the Sustainability Fund, ATFAB has consequently funded SkiSU since then. During the 2021-2022 ski season and twelve weekends, 542 students rode the bus to Arapaho Basin, Eldora, Keystone, Copper Mountain, Steamboat, Breckenridge, and Winter Park ski resorts through this service. Additionally, four of the twelve weekends that SkiSU provided service, shuttles operated at 90% capacity or higher indicating students are not only utilizing, but also maximizing the service.

Sustainable Infrastructure & Operations

Housing & Dining Services is committed to building, renovating, and maintaining green buildings.

LEED Certified Buildings

To date, HDS has certified ten LEED buildings, including the first LEED EBOM building and the first LEED Platinum building on campus.

1. Academic Village: Aspen

2010: Achieved LEED Certified for New Construction – Gold.

This was CSU's first LEED Gold residence hall. A major sustainability highlight includes a thermal plant that cools the building by generating ice at night (when electricity rates are low) and melting that ice during the day. The thermal plant features solar panels that since its original installation have produced over 81 megawatts of renewable energy.

2. Durrell Dining Center

2014: Achieved LEED Certified for Commercial Interiors – Gold.

Some sustainability highlights include solar tubes, a solar-ready roof, high efficiency appliances, LED cabinets and coolers, as well as food waste pulpers. Durrell also includes low emitting materials such as adhesives, sealants, paints, coatings, wood and furniture, and was renovated using existing structural materials and recycled or regional materials.

3. Summit Hall

2014: Achieved LEED Certified for Existing Buildings: Operations & Maintenance (EBOM) – Gold

This was CSU's first LEED EBOM certification. Summit Hall is powered by both on-site and off-site renewable energy, and has installed aerators to help decrease water consumption. To achieve the certification, Summit Hall committed to protect and restore open habitat around the residence hall.

4. Laurel Village: Pavilion

2015: Achieved LEED Certified for New Construction - Platinum.

This was first LEED Platinum building at CSU and features a passive ventilating system called a katabatic tower, a green sloped roof to reduce heat island effect, and garage doors to be opened in mild weather to provide fresh air.

The Pavilion includes an interior two-story green wall, and the front desk features recycled, reused, and local materials including Wyoming driftwood fence, recycled

aluminum flecks, and recycled newspaper strips.

5. Laurel Village: Alpine and Piñon

2015: Achieved LEED Certified for New Construction – Gold.

Some sustainability highlights for Aspen Hall include local stone, recycled materials, low VOC paints, and easy access to alternative transportation. Aspen Hall also includes recycled content carpet and entryway floors made from 100% post-consumer recycled material from truck and aircraft tires. Piñon Hall contains a large classroom with an open area in the middle featuring solar tubes that provide plenty of natural light as do the large windows. Piñon hall has natural daylighting and views to the outside in 75% of the areas in the complex.

6. Aggie Village Apartments: Cottonwood, Lodgepole, and Walnut Hall

2016: Achieved LEED Certified for New Construction – Gold.

Sustainability highlights for the entire complex include high solar reflectance index asphalt roof shingles to reduce the urban heat island effect and exterior light fixtures designed to reduce light pollution. The Lodgepole lobby contains recycled wood from trees that were killed by the pine beetle, and the Walnut lobby contains recycled wood from diseased trees on campus. Cottonwood contains Folsom Point arrowheads based on those found in this area.

7. Corbett Lobby and the Foundry Dining Center

2019: Achieved LEED Certified for Commercial Interiors – Gold.

Some sustainability highlights include storage and collection of recyclable materials and well as bicycle parking and access to alternative transportation. The facility also contains efficient faucets and toilets that decrease water use by 35%, and the facility is powered by green power and included the purchase of carbon offsets.

Sustainable Purchasing Policy

HDS's Sustainable Purchasing Policy acts in accordance with CSU's Purchasing Policy, which strives to purchase the most sustainable products available, allowing for a five percent cost preference for the purchase of environmentally preferable products. The department considers a product's entire life cycle when making purchases, which includes the product's manufacturing, transportation, use, and end of life. HDS will continue to increase its purchasing of local, organic, energy efficient, non-toxic, compostable, and recyclable materials. The HDS Facilities purchasing team has been instrumental in developing and using this policy.

Sustainability Fund

The HDS Sustainability Fund was created to support environmental, economic, and social sustainability efforts within Housing & Dining Services, and to provide a funding mechanism for grassroots sustainability initiatives and related education and outreach projects.

The fund supports resource conservation efforts through large infrastructure projects, as well as small-scale education projects to promote sustainability in HDS facilities. Grassroots employee proposals are encouraged, and student proposals will be considered with an employee sponsor. While the Sustainability Fund prioritizes new initiatives, the Fund can also support cost difference between standard and sustainability items (i.e., gas cart and electric cart) and enhance existing sustainability initiatives. Project proposals are accepted year-round; however, the Committee meets approximately twice a year to approve project proposals.

The HDS Sustainability Fund was not available for the last two fiscal years, but it will return in FY23.

Areas of Focus for 2022-2023

Reinvigorate the HDS Sustainability Fund

With the return of the HDS Sustainability Fund, HDS Sustainability hopes to bring together stakeholder from each HDS area to approve and provide \$25,000 in funding to creative and impactful sustainability projects.

Expand Indoor Composting Opportunities

With the success of the indoor composting pilot in community-style bathrooms in Allison Hall, HDS hopes to expand this into more residence halls with the help of a past Eco Leader, and other funding opportunities.

Update HDS Climate Action Plan and align with 2022 CSU Climate Action Plan

CSU recently updated its Climate Action Plan (CAP), with a focus on using the United Nations Sustainable Development Goals. We hope to update the HDS CAP and contribute to the overall university climate goals.

Add Sustainability Staff in Apartment Communities

In FY19, University Housing and Sustainability collaborated to add a community coordinator focused on sustainability education and programming in the Aggie Family, International House, and University Village apartments. As the demographics of these occupants are significantly different from other on-campus residents, we are advocating for community coordinators tasked to implement sustainably programming specific to these communities. This hiring was put on hold in spring 2020 due to the pandemic and we hope to fill these positions in upcoming year.

Begin eliminating non-compostable and single-use plastics from the Mountain Campus dining hall.

The Mountain Campus still carry some items that are disposable after one use, and we will continue to identify ways to eliminate this waste product from campus.

Develop an HDS-Specific Guide on Sustainable Dining Procurement

With ever-changing criteria and definitions of ‘sustainable dining’, Sustainability and Dining will collaborate to develop and identify a procurement process that is compatible with both parties.

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