



# ANNUAL SUSTAINABILITY REPORT

ACADEMIC YEAR 2020-2021

## HIGHLIGHTS



### RAM FOOD RECOVERY

With funding from the CSU Sustainability Fund, **1,600** meals were distributed to campus community members experiencing food insecurity during spring semester.



### SUSTAINABLE LIVING CHALLENGE

Through a partnership with the Institute for the Built Environment (IBE), we launched and engaged **16%** of all HDS apartment residents in the new Sustainable Living Challenge.



### EARTH MONTH

As one of the few on-campus Earth Month events, 35 people picked up **543** pounds of compost, processed through our in-vessel composter, Oscar.



### VIRTUAL ECO ACTIONS

Despite the inability to conduct in-person engagement, **890** hall and Aggie Village residents participated in the newly branded Eco-Actions campaign.



### ENVIRONMENTAL EATS

Four in-person, grab-and-go Environmental Eats engaged **419** students. Themes focused on smaller carbon footprint meals, such as cooking with Colorado grown foods, and eating the Mediterranean diet.



### AGGIE ECO LEADERS INSTAGRAM

The Aggie Village Eco Leaders launched an Instagram account, that now has **190** followers, to promote sustainability tips, programs, and events to their residential community.

# Colorado State University Housing & Dining Services

2020-2021 Sustainability Report

## Table of Contents

Housing & Dining Services Profile .....	2
Sustainability & A Global Pandemic.....	3
Campus-Wide Sustainability Initiatives .....	4
Education & Outreach .....	6
Waste Management.....	9
Food and Dining .....	17
Energy & Emissions.....	19
Water Management.....	23
Alternative Transportation .....	24
Sustainable Infrastructure & Operations .....	26
Areas of Focus for 2021-2022 .....	29
Acknowledgements .....	29

# 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.

### Dining Services

Dining Services offers a wide range of innovative venues and services to CSU students, faculty and staff. There are currently five dining centers and two 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 located 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.

# Sustainability & A Global Pandemic

---

In early 2020, the coronavirus infiltrated the globe and forced communities to quarantine, interacting only with their immediate circle of family, friends, and coworkers. On March 23, immediately following Spring Break, all academic courses at CSU transitioned to virtual learning. While the university remained open, including HDS, the President's office encouraged all students to stay home, if possible, to prevent the spread of COVID-19.

As a result, sustainability looked very different starting from March 2020, through fiscal year 2021, and continuing into present day. The Eco Leaders program still took place through socially distanced learning and resident engagement. Large events such as Earth Month activities took place online, while our Move-Out process was stymied to only two weekends, working with only one local small nonprofit. Our annual sustainability report will look considerably different this year as we, and the rest of our community, navigate the coronavirus on campus.

Despite these significant challenges, HDS celebrated small milestones such as hosting the Eco Leaders program in a hybrid format, purchasing 100% organic coffee in Residential Dining, and hosting successful virtual events.

# Campus-Wide Sustainability Initiatives

---

Every year, HDS collaborates with both on- and off-campus community partners. It is a firm belief that we cannot create a sustainable campus culture alone and must do it in coordination with others. Not only does this create a larger community involved with sustainability, it also 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, academic and research units, 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 October of 2019, 500 Bird electronic scooters were introduced as a pilot project to CSU and the City of Fort Collins. Alternative Transportation provided scooter education such as “rules of the road”, dismount zones, renting, parking, and safety. Bird provided discounts for first-time riders, as well as offered equity pricing programs for low-income riders (first 50 rides per month, 30 minutes or less, free of charge), active-duty U.S. military service members, and veterans to ride without the initial \$1 base fee. Scooters were removed during the summer of 2020 in response to the pandemic and are anticipated to come back online for the fall semester when students arrive back on campus with a new vendor.

## Campus Grown Greens

Since its inception in 2015, the Horticultural Center has produced 10,200.65 pounds of edible greens for the dining centers. The student Horticultural Intern aids in this partnership as they are responsible for managing the hydroponic lettuce trays, as well as the microgreen cabinets at Braiden and the Foundry. A memorandum of understanding formalized this partnership and laid out responsibilities for success.

The horticulture intern produced and harvested 1,233.7 pounds of greens for the Dining Centers in FY21. This is a decrease compared to FY20, primarily due to the transition of remote learning on campus in the Spring semester. However, due to the decreased demand from our Dining Centers, the Horticulture Intern developed a partnership with FOCO Café and donated 294.72 pounds of HDS lettuce that would otherwise have gone to the Dining Centers. For several months, HDS choose to halt the lettuce production for the health and safety of our student workers, and students were encouraged to continue other parts of their work remotely, if possible.

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, Abby Lathrop-Melting, who oversees, provides training, and leads the group of practicum students.

### **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 2021, in response to the coronavirus pandemic, we chose to not participate in the intercollegiate competition and instead focus our efforts on our internal campaign with the Zero Waste Sorting Game. This online game educates players on how to accurately sort waste on campus in a fun and engaging format, facilitated by our Eco Leaders.

### **President's Sustainability Commission (PSC)**

Tonie Miyamoto from the Division of Student Affairs 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 Month.

# Education & Outreach

---

HDS prides ourselves with our engagement efforts through our large programs, notably the Eco Leaders program and annual Earth Month 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. As part of their resident engagement, Eco Leaders focus on one large 8-week campaign in the fall, Eco Actions, which is 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 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, Fort Collins, the state of Colorado, and beyond. Finally, students complete an independent project to culminate their time as an Eco Leader, and 2021 independent project topics included a Community Garden Concept, Compost Campaign, Concrete Alternatives, Plant Care Package, Plastic Waste Use in Roads, and more. Usually, students present their independent projects through a showcase at the end of the year, but this year students created an infographic for a virtual showcase presented to their peers. Infographics are also accessible through [the Eco Leaders website](#), which will be archived as future Eco Leaders develop infographics for their own projects.

The Aggie Village Eco Leaders do not have an academic component, and instead focus on engaging residents and small group discussions 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 hall Eco Leaders.

This past year, the Aggie Village Eco Leaders launched an Instagram page to further engage students at Aggie Village Apartments (@aggieecoleaders). They completed 40 posts around waste reduction, sustainable behavior choices, sustainable businesses in Fort Collins, programs and events, and healthy eats. They currently have 178 followers of their account.

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 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 Month

HDS celebrates Earth annually with the goal of increasing sustainability awareness and providing an avenue for sustainable organizations and programs to promote sustainability on campus. As events continue to multiply at this annual event, this year Earth Week was reimagined into Earth Month. Due to virtual learning in response to coronavirus, Earth Month 2021 remained online again this year and featured more than 35 campus-wide events sponsored by numerous student organizations, CSU departments, non-profits, and private enterprises in Northern Colorado. While HDS generally hosts an in-person Earth Day Festival, this year's festival was 100% virtual. The online festivities gathered 472 unique page views on the Earth Month homepage featuring documentaries, interactive games and polls, and social media outreach. Other online engagement included Instagram takeovers and posts with the main CSU Instagram account. There were 132 link clicks and 17 responses to the Eco Leaders' Q&As. Earth Month and Earth Day virtual events were the most popular links.

### Monday Eco Leader Takeover 4/19:

The takeover began with 6,472 viewers and ended with 3,072 viewers. The takeover had an average completion rate of 94%. The takeover had 8 replies.

### Thursday Eco Leader Takeover 4/22:

The takeover began with 4,891 viewers and ended with 2,704 viewers. The takeover had an average completion rate of 95%. The takeover had 4 replies.

### Instagram Posts:

4/21 "From student-managed beehives to activating state-of-the-art geothermal technology on campus, to jumping on a bike, sustainability is at the core of everything we do" 3200 likes.



4/22 CSU is one of the most sustainable universities in the world. Recognition is great. The work that got us there is even better. Happy #EarthDay 2800 likes. Parmelee solar image

4/22 “Meet Helen Obuna, #ColoradoState Eco Leader (she/her/hers)” 1200 likes. Helen picture.

4/23 “Living walls provide many benefits tied to renewal and productivity. Take time to reconnect to nature this Earth Week, Rams” 4500 likes. Picture series of 4 walls.

### 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 (NRS) Community offers students a supportive residential learning community centered around sustainable living. In FY21, 34 students participated in this learning community, located in Summit Hall. The NRS Community is co-sponsored by the Warner College of Natural Resources and University Housing. The NRS Community is only open to students enrolled in in of the Warner College’s major programs. Here are a couple of fun facts about the NRS Community Alumni who are still students at CSU:

- 1) Diego Tovar, Ecosystem Science and Sustainability senior, is currently serving as a [2021 Udall Scholar](#).
- 2) Faith Kelly, Ecosystem Science and Sustainability senior and CSU Honors Student, is leading an honors thesis project looking at Zero Waste practices on campus.

A second community, the College of Natural Sciences Learning Community (CNSLC) provides a Diversity Through Sustainability cohort for students also interested in sustainable living. These students live in Laurel Village - Piñon Hall, a LEED Gold certified building. Students in the Diversity Through Sustainability cohort explore their common interests in science, diversity, and the environment. Students collaborate with University Housing, the College of Natural Sciences, and the Chemistry department to push the boundaries of how we think about the role that energy plays in our culture, science, and the environment; they explore the ideas of global sustainability through the lens of a scientist. Students co-enroll in a 1-credit seminar, “Sustainable Energy in the Natural Sciences”, where they discuss and act on pressing local challenges, both on-campus and in the community. The Natural Science Learning Community is only open to students enrolled in in of the College of Natural Science’s major programs.

Unfortunately, this past year did not have a cohort, but there are plans to bring this back online next year.

### CAM-Unity

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. Our Horticulture Intern, Compost Intern, Sustainability Intern, and Eco Leaders also contributed content during the 2020 – 2021 academic year. Articles included Indoor Herb Gardening, A Different Holiday Experience, Sustainable Love Day, Sustainable Day in Fort Collins, Nature at Home, and more. CAM-Unity remains a success, and our interns and Eco

Leaders will continue submitting articles for the 2021 – 2022 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, to sustainable gardening, to reusing and repairing items.

## Waste Management

---

The City of Fort Collins and CSU have been committed to reducing their waste impact on the environment for decades. We 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

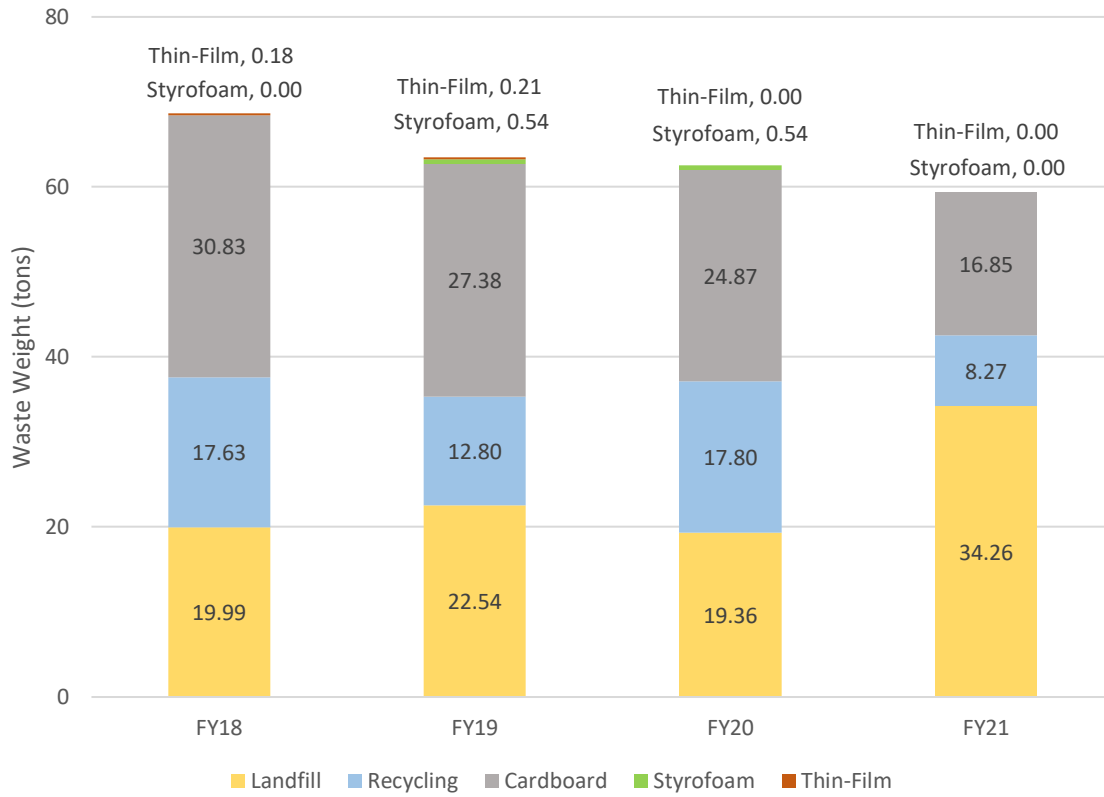
In August of 2020, HDS welcomed 4,000 students over the course of five days when students and their families moved into campus housing. As imagined, we generated a large amount of waste during Move In between cardboard boxes, plastic thin film, and styrofoam.

Since 2014, HDS has set up recycling collection stations, usually referred to as cardboard corrals, to collect recyclable materials including cardboard, Styrofoam, and thin-film plastic. In Fall 2020, HDS chose to only collect cardboard for ease of collection and budgetary reasons. Usually, Eco Leaders arrive early, receive training, and help provide recycling education by working at the corrals, but they did not arrive early nor receive training during this unique year. As a result, HDS staff volunteers became the first touchpoint for students and families to experience the University’s dedication to sustainability and waste management and learn about proper waste sorting on campus. Because volunteers were sparse and asked to cover multiple locations (as opposed to one volunteer per corral), education was limited.

In Fall 2020, Move In generated 59.38 tons of waste; however, through cardboard collection and recycling, HDS was able to divert all but 34.26 tons of landfill waste. HDS diverted 42% from the landfill (or 25.12 tons of material) – see Figure 1.

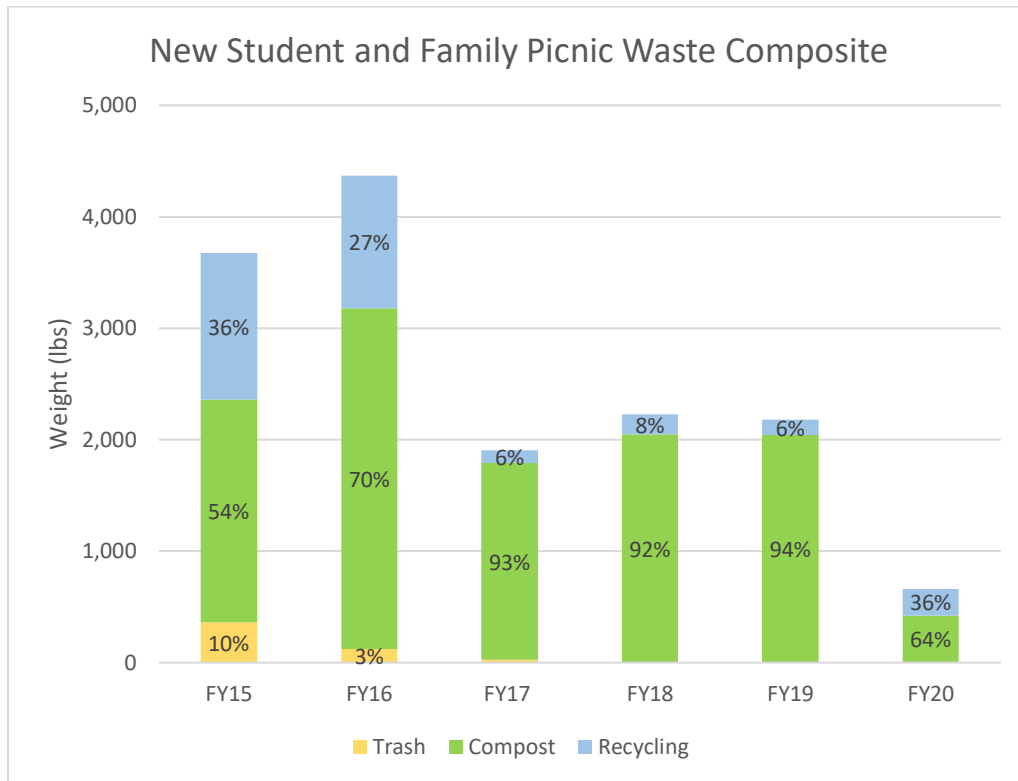
**Figure 1.** Student Move-In Waste by material and weight

### Student Move In Waste



### The New Student and Family Picnic

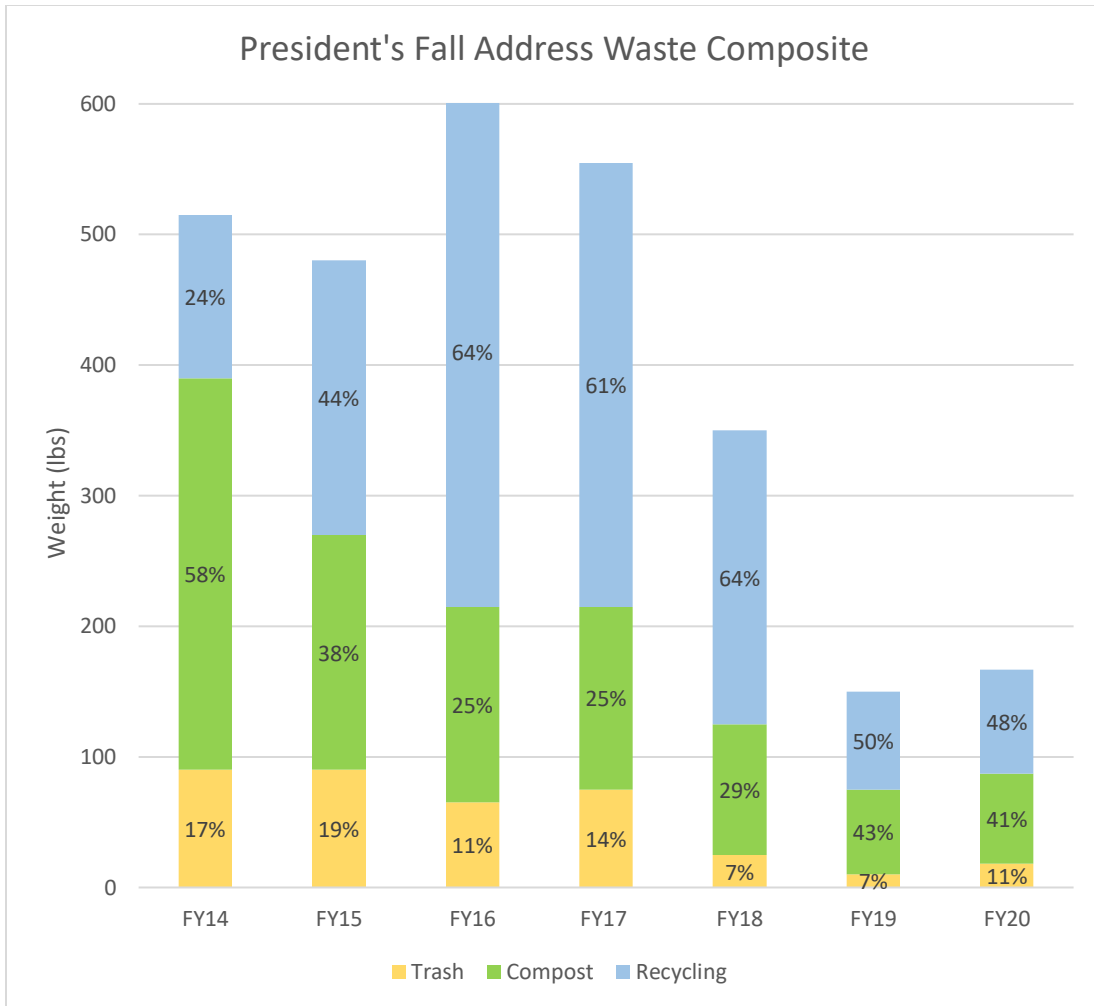
The New Student and Family Picnic held during Ram Welcome, sponsored by the Alumni Association, serves more than 8,000 students and their family members. In Fall 2020, this picnic did not take place. In previous years, Dining provided a meal with limited landfill waste and HDS Sustainability managed the waste, including compostable and recyclable materials, to ensure a near zero waste event – see Figure 2. This event may come back in future years.



**Figure 2.** New Student and Family Picnic waste composite by waste weight, and percentage of total materials in waste stream

### President’s Fall Address and Picnic

Similar to the Student and Family Picnic, this event was cancelled for Fall 2020. For posterity, the graph below indicates the waste from this event in previous years – see Figure 3. This event may come back in the future.



**Figure 3.** President’s Fall Address waste composite by waste weight, and percentage of total materials in waste stream

**Spring Waste Audit**

Every Spring since 2012, HDS has completed an annual waste audit where volunteers come together on the LSC plaza to participate and sort landfill and recycling waste randomly collected from HDS buildings by CSU Facilities Management. The goal of the waste audit is to document accuracy of sorted materials both in the waste and recycling streams. The 2021 waste audit did not occur in Spring 2021 due to the coronavirus.

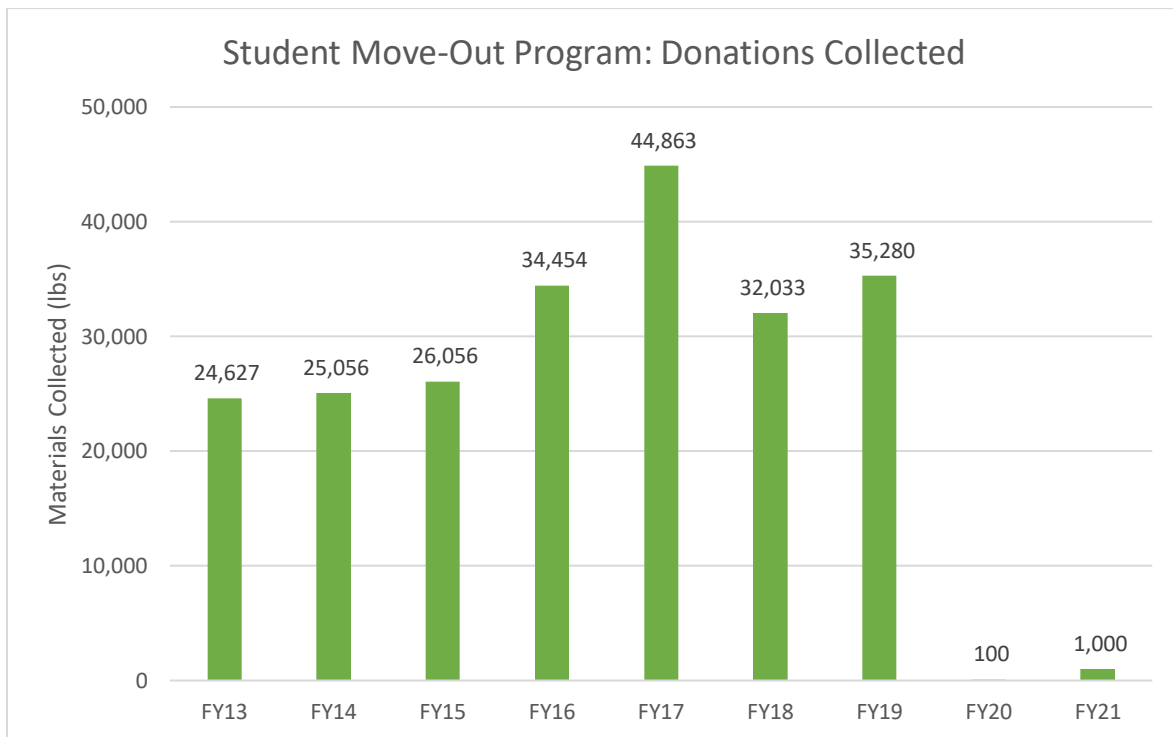
**Student Move Out Program: Pack it, Store it, Donate it**

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 with a local company over summer break and reuse them next year. “Donate it” encourages students to bring items to large trucks conveniently parked outside the residence halls, for donation to local agencies. This program was redesigned in 2018, a previous partnership with CSU Surplus in which unwanted items were collected and

sold at 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 week, for distribution to local charities through Homeward Alliance, 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 local vendor, ChairTableHome, to pick up larger furniture items that are donated to under-served communities.

Unfortunately, the program in its most robust form did not take place in May 2021 due to the coronavirus pandemic. Students moved out of the residence halls over the course of nearly two months, at scheduled times to comply with the mandatory public health guidelines. As usual, students were encouraged to take all their belongings with them when they moved out. ChairTableHome collected donations over the course of five days spanning the last two weekends of the Spring semester. ChairTableHome collected a small number of items, including a couple of futons, clothing, and mirrors, estimated to be around 1000 pounds in total – see Figure 4 below.



**Figure 4:** Amount of donations collected during the annual student move out program

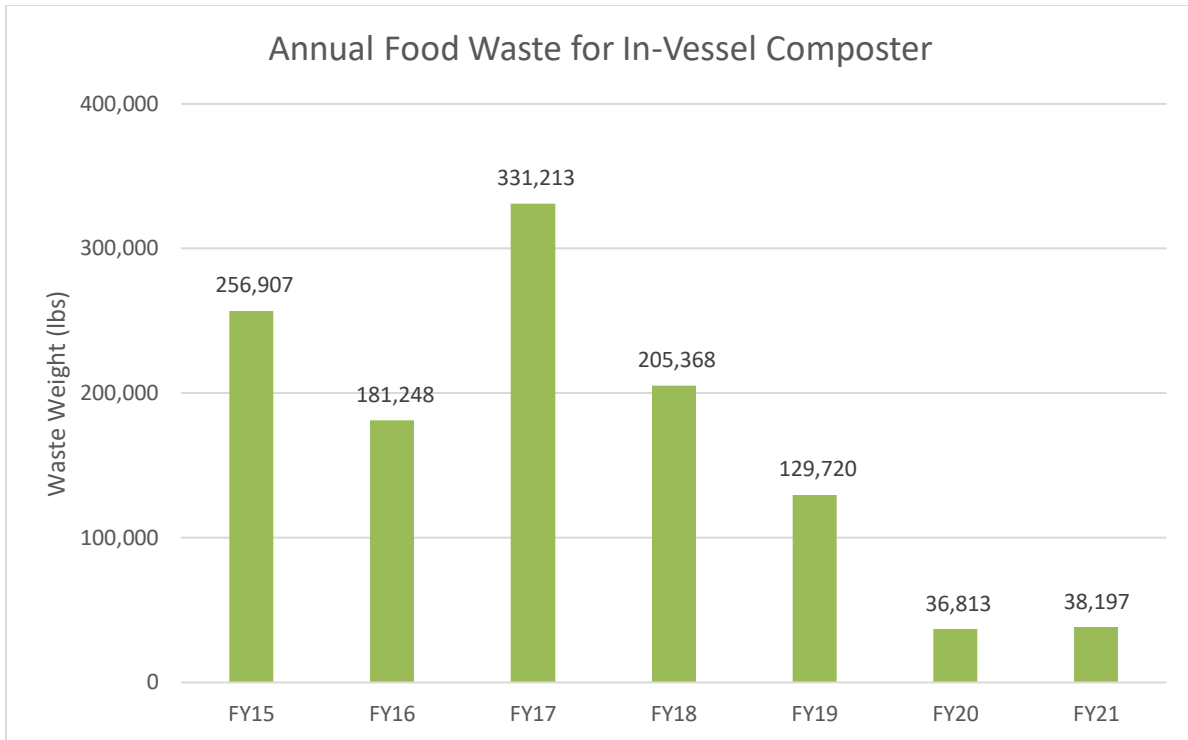
## Ongoing Sustainability Initiatives

### Composting Initiatives

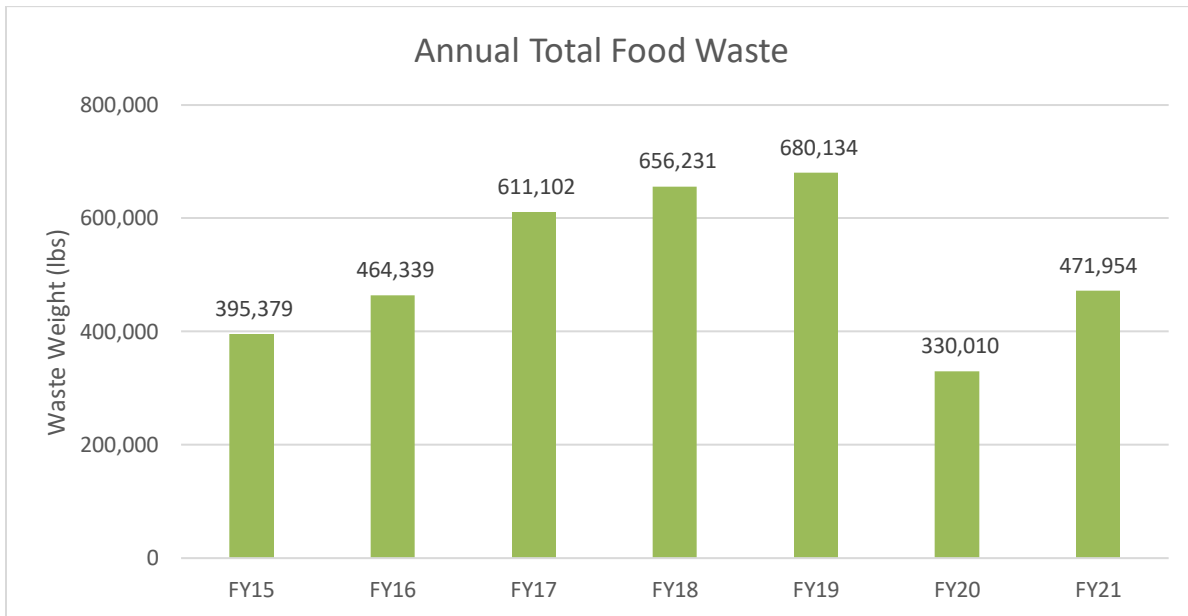
- Composting numbers for FY21 are lower than previous years, as on-campus dining was

deeply impacted from March 2020 through the end of the following fiscal year. Few students lived in the residence halls for the last quarters of the fall and spring semesters, and there was no summer conference season.

- HDS continues to utilize Oscar as a living learning lab, employing a student intern to learn to operate and educate the community about the in-vessel composter, located at the Foothills Campus, approximately three miles west of main campus.
  - During the 2021 fiscal year, Oscar diverted 38,197 pounds of food waste, which is comparable to the previous year, but low compared to previous years – see Figure 5. Oscar was fully functioning in Fall 2020, but broke in February 2022, resulting in only 7 months of usage. Less dining patrons may also have attributed to small amount of food waste.
  - Online since 2017, the windrow composting operation diverted 433,757 pounds of pulped food waste from the landfill this past year – see Figure 6 for the combined food waste of both Oscar and the Windrow.
- 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 graduate 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.
- After a Spring 2020 hiatus, HDS provided compost, processed by Oscar, through a compost collection event during Earth Month. As one of the few on-campus, in-person events, CSU Facilities Management brought out several yards of compost to the Moby Arena Parking Lot and around 35 people collected approximately 543 pounds of compost.
- 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 seventh year of operation, and the Mountain Campus will continue exploring options for increasing post-consumer food composting.



**Figure 5.** Total food waste each year for the in-vessel composting system (Oscar).



**Figure 6.** 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 reusable straws are only available during the six-week Spring semester campaign. In FY21, 446 residence hall students and 31 Aggie Village students played the online game, resulting in 11% of all hall residents and 6% of Aggie Village student participation. The Zero Waste Sorting Game is 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 the five dining centers, and two express facilities on campus. With annual events to educate diners on food options that carry a smaller environmental footprint, to ongoing education initiatives that 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 third year, Environmental Eats is a five-part series that takes place in The Corbett Community Kitchen. This program is a result of feedback to create a more diverse framework for eating more sustainably, and not simply going meatless.

For the first time, we partnered with the Eat Well program to host the Environmental Eats events. Due to public health guidelines, these events were strictly grab and go events with pre-packaged samples/meals. The three themes highlighted this year included Colorado Grown Food, Mediterranean Diet, and Alternative Protein. The Mediterranean Diet event had around 143 students in participation, The Colorado Grown Food event had 146 students participate, and the Alternative Protein event had around 130 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 residential dining meals, SNAP benefits, and pocket pantries for students, faculty, and staff experiencing food insecurity. However, CSU did 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 and the campus community due to food safety and liability concerns. With a strong collaboration between Residential 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 Residential Dining Services Catering. Individuals have a 30-minute window to pick up leftover food using their own reusable containers. This program operated for 7 months from July 2019 through February 2020, with 29 opportunities for food

recovery. The program was suspended in March due to the pandemic.

In Spring 2021, HDS applied for funding through the CSU Sustainability Fund to prepare additional pre-packaged meals to distribute to Ram Food Recovery. Under general procedure, Residential Dining prepared pre-packaged meals for students who were required to quarantine or isolate on campus due to COVID-19. With \$7,800 in additional funding, Residential Dining prepared 25 additional meals, 4 days a week, for 12 weeks of in-person learning to be distributed out of the Edwards kitchen during the lunchtime hour. Helen, an Eco Leader, aided in meal distribution. Of the 1,200 total meals available, 460 meals were picked up. Helen noticed nicer weather brought out more people, and there were several repeat customers. The 749 leftover meals were distributed to Rams Against Hunger at the end of the lunchtime period or at the end of the day. This project was a one-semester event, and we anticipate the original model of Ram Food Recovery – leftover food to be picked up from catered events – to resume in Fall 2021.

### **Larimer County Food Bank Donations**

Thousands of pounds of food are donated each year to the Food Bank for Larimer County. This year, HDS donated 7,535 pounds of food, resulting in 408,515 total pounds of food donated to the Larimer Food Bank since 2013.

### **Sustainable & Third-Party Certified Foods**

The living lab partnership with the CSU Horticultural Center is now in its fourth year. The Center began growing greens in Fall 2016 for the dining center salad bars at Durrell and Corbett, and in fiscal year 2021, it produced 1,233.7 pounds of greens. In total, the Horticulture Center has produced 10,200.65 pounds of lettuce since the living lab was established.

All dining centers continue to serve organic and/or local hand fruit instead of conventionally grown fruit. This student-driven initiative marks the first time HDS dining centers are consistently bringing organic foods to campus. In late FY20, Dining made a commitment to purchase all certified organic coffees after all dining halls exhausted their current supply of coffee. Dining is currently only purchasing organic coffees.

### **Recycled Cooking Oil**

All used cooking oil from dining centers is collected and recycled as biodiesel. Dining Services partners with a local company in Denver and recycled 30,336 pounds of used cooking oil this past year. Since fiscal year 2013, Dining Services has recycled a cumulative amount of 256,961 pounds of cooking oil.

# Energy & Emissions

While student enrollment and the HDS building footprint continues to grow, meeting sustainability goals to reduce energy and water consumption continue to be a large challenge. 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. New and creative methods to reduce energy and water use remain imperative.

## 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 second 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 through involvement in the sustainable community on campus).

In Fall 2020, 15 residence halls and Aggie Village, with a total of 5,874 residents, had the opportunity to participate in Eco Actions. Through Eco Leaders, 890 students participated in the campaign— see Figure 7. **This indicates that 15.2% 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 many more sustainability actions.**

The top 5 residence hall student pledges in Fall 2020 in percentages:

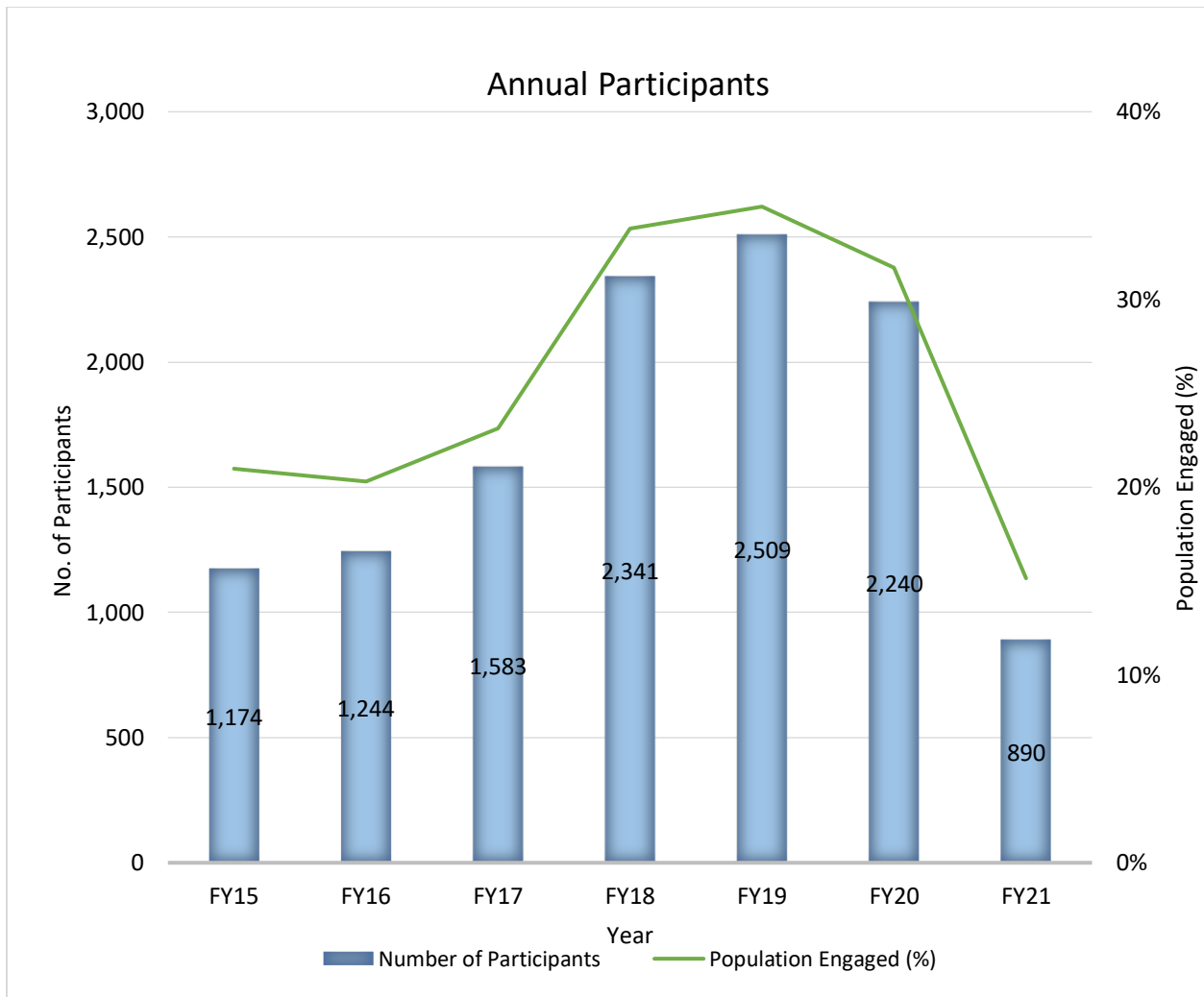
1. Turn off lights in rooms that are not in use – 98%
2. Turn off water while brushing teeth, scrubbing hands, and shaving – 91%
3. Share green tips from this pledge at a residence hall meeting – 90%
4. Walk, bike, longboard, or ride a scooter to class – 90%
5. Only do laundry in full loads and use cold water – 90%

These top 5 student pledges are not surprising, as quick sustainable activities are usually low-

hanging fruit for our students. New this year are residents’ 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 783 residents, representing 16% of the residence hall population. The halls with the highest participation were Academic Village - Honors (37% participation), Academic Village - Aspen (22% participation), and Summit Hall (22% participation). Similarly, the Aggie Village Eco Leaders engaged with 107 apartment residents, or 13% of Aggie Village. The highest engagement was in the Lodgepole building with 19% 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, students opted to plant at least one tree as part of their prize package, and thus planted 1,359 trees through the Arbor Day Foundation.



**Figure 7.** Total number of participants in Eco Actions and its corresponding percentage of students engaged in all on-campus student housing

**Sustainable Living Challenge**

Throughout March 2021, the Institute for the Built Environment (IBE) partnered with HDS to host the first-ever Sustainable Living Challenge within CSU University 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 changes was to engage apartment residents in sustainable living through an online pledge.

For this 4-week challenge, volunteer residents and CCs engaged with 16% of all apartment residents.

<b>Community</b>	<b># of Pledges</b>	<b>Total Apartments/ Occupants</b>	<b>% Engaged</b>
Aggie Family*	9	140	6%
International House **	26	194	13%
UV1500	47	150	31%
UV1600	17	200	9%
UV1700	24	80	30%
<b>TOTAL</b>	<b>123</b>	<b>764</b>	<b>16%</b>

\* 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 were also offered as part of the Challenge. The three apartment communities competed to earn the greatest percentage of engagement, in exchange for microfiber cloths for each resident in the winning community (regardless if they participated in the Challenge). Additionally, five pledgers from each community were randomly selected to choose from a Nalgene water bottle, rescuable straw, or silicone container lid.

**Ongoing Sustainability Initiatives**

**On-Site Renewable Energy**

HDS on-site solar includes 300kw installed on the roofs of Braiden, Parmelee, and Edwards residence halls, generating approximately 450,000 kWh of electricity each year. While the renewable energy credits associated with these projects are 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. The

solar projects are a collaboration between HDS, 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 for 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 of 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 University 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 that to date, which have helped divert the use of over 800,000 plastic water bottles. HDS Facilities is 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 vehicle charging stations. HDS 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

HDS 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 near 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 at 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. HDS 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 FY21, The Spoke (both the physical location and the pop-up shop) was well on its way to meeting a goal of 10,000 education services in one fiscal year. From July 2019 to December 2019, The Spoke had conducted 6,000 education services already. In total, for the 8.5 months of FY20 that the Spoke was open, 3,183 customers had received 6,716 educational engagements. The Spoke has cumulatively provided 19,352 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 11,125 miles since 2016.

In FY16, Laurel Village installed the first charging station in HDS. Since then, four stations have been made available at International House and University Village and three in the Laurel Village parking lot. The apartment stations provided 2,239.04 kWh of electricity for the academic year. The three Laurel Village charging stations provided 1,398.48 kWh of electricity for electric vehicles in FY21, which is 7,182.2kWh less than last year. This is likely due to more staff working remotely. Cumulatively, all of the stations have charged 30,041.87kWh 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 HDS and Parking & Transportation Services. Initially funded by the Sustainability Fund, ATFAB has consequently funded SkiSU since then. During the 2020-2021 ski season and twelve weekends, 188 students rode the bus to Arapaho Basin, Eldora, Keystone, Copper Mountain, Steamboat, Breckenridge, and Winter Park ski resorts through this service. Due to COVID, the buses only reserved spots at half-capacity to keep social distancing between passengers. Additionally, five of the twelve weekends that SkiSU provided service, shuttles operated at 90% capacity or higher (with half-capacity guidelines), 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 art commemorating 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.

For FY21, this budget allocation was removed.

### **Live Green Team**

The Live Green Team is a group open to HDS staff and students as well as campus partners who are dedicated to sustainable initiatives. In January, the Live Green Team, along with RamCard, invited Coca Cola representatives to discuss sustainability initiatives they implement throughout the world. This meeting also presented opportunities for HDS to explore possibilities to complete a pilot study for more aluminum vending beverage products to replace plastic bottle beverage products. Other programs the Live Green Team include identifying potential Sustainability Fund proposals and transitioning to a virtual Earth Day event.

# Areas of Focus for 2021-2022

---

## **Discover Virtual Engagement Strategies**

As local governments and health officials guide the University on best practices, we anticipate finding creative ways to virtually engage and interact with our residents and community. We'll continue to partner with other HDS areas such as University Housing for CAMunity issues, and Dining for Environmental Eats events.

## **Add Staff in Other HDS Areas**

One of the primary recommendations from the 2015 Climate Action Plan is to hire an Energy Manager to track utility use, manage reduction strategies, and train staff and students on building systems to ensure we are operating as efficiently as possible. We anticipate the Energy Manager to be housed in HDS Facilities.

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 FY22.

## **Identify Ways to Tell the Sustainability Story**

We recognize that the pandemic will change many of our annual events and programming. However, we see this as an excellent time to tell our HDS sustainability story, starting from our early beginnings of recycling in HDS in the late 1990s, the first Eco Leaders cohort in 2010, and the creation of the Live Green Team in 2005.

## **LEED ARC Certification for Braiden Hall**

This project has been stalled for over two years as HDS Facilities works with a 3<sup>rd</sup> party consultant to identify solutions to meet baseline requirements for certification. HDS Facilities has indicated that progress may be made in early 2021 and we hope to resume the project then.

# Acknowledgements

---

Tonie Miyamoto, Mary Liang, and Kirstie Tedrick like to give special thanks to everyone who helped with this report and/or contributed to any of the sustainability programs throughout the year. Your ongoing passion and commitment help us grow our sustainability efforts within the HDS Community. Thank you!