

# Colorado State University Housing & Dining Services

2019-2020 Sustainability Report

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# Housing & Dining Services Profile

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## **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

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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 from previous years during the spring semester. The Eco Leaders program transitioned to online learning through the Canvas tool with virtual Zoom meetings, normally in-person engagement events such as Earth Week had to take place through interactive activities online, and our large student move-out donation program did not take place this May. 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 several significant milestones during the 2019-2020 academic year, including being part of the CSU team that became the first in the world to achieve STARS Platinum three times. Dining committed to purchasing 100% organic coffee, and The Spoke set new records for completed bike repair services, despite the shortened year.

# Campus-Wide Sustainability Initiatives

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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 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 in response to the pandemic and are anticipated to come back online for the fall semester when students arrive back on campus.

## Campus Grown Greens

Since its inception in 2015, the Horticultural Center has produced 8,034.78 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.

This past academic year, the horticulture intern produced and harvested 1,689 pounds of greens for the Dining Centers in FY20. This is a large decrease compared to FY19, primarily due to the transition of remote learning on campus in the spring and summer. HDS choose to halt the lettuce production for the health and safety of our student workers; 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 the horticulture intern Abby Lathrop-Melting who oversees, provides training, and leads the group of practicum students.

### **Waste Management**

Each spring semester, CSU participates in RecycleMania, an 8-week intercollegiate competition focused on recycling and waste minimization. In 2020, in response to the coronavirus pandemic, the organizers of RecycleMania allowed institutions to submit results for the first six weeks and compete with other institutions who choose to compete in the six week competition. CSU ranked 13th in the Diversion category with a 60.9% recycling rate for the entire university. CSU is the only institution in Colorado that participates in the Diversion category of the competition.

In conjunction with RecycleMania, HDS hosts our own campaign focused on accurate waste sorting and waste reduction led by our Eco Leaders.

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

Tonie Miyamoto, Director of HDS Sustainability, serves as the co-chair of the commission. Mary Liang, Assistant Director of Sustainability, serves as the representative from Housing & Dining Services. Kirstie Tedrick, Sustainability Coordinator, 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

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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, Green Warrior, 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 RecycleMania 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 2020 independent project topics included the potential for bulk food dispensers at dining express centers, a sustainable cookbook, and a student survey for aluminum beverages rather than plastic bottled beverages. 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, accessible through [the Eco Leaders HDS website](#).

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 Green Warrior and waste education campaigns alongside the other hall Eco Leaders.

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. Green Warrior and RecycleMania), 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 year CSU celebrated its 150th anniversary and the 50th anniversary of Earth Day. Due to virtual learning in response to coronavirus, Earth Week 2020 was quickly and effectively moved online 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 online festivities gathered 249 page views on the Earth Day homepage featuring documentaries, interactive games and polls, and social media outreach. Other online engagement included five Instagram stories with 350 -550 people engaged with each story, four video tours featuring sustainability around campus, which accumulated to over 100 Earth Day video plays on YouTube. The most popular Earth Day post was the tree planting on the Oval honoring former CSU President Dr. Tony Frank, who is currently serving as the Chancellor of the CSU System.

### **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. In FY20, 61 students participated in this learning community, located in Summit Hall. The Natural Resources and Sustainability Community is co-sponsored by the Warner College of Natural Resources and University Housing. The Natural Resources and Sustainability Community is only open to students enrolled in in of the Warner College's major programs.

A second living 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 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 opened to students enrolled in in of the College of Natural Science’s major programs.

### **CAM-Unity**

In Spring 2019, 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. Every week for the second half of the Spring 2020 semester, the Aggie Village Eco Leaders submitted stories, such as sustainability trivia and an Earth Week recap. CAM-Unity remains a success, with student interns taking over the weekly communications after the Aggie Village Eco Leaders concluded at the end of the academic year.

### **Green Tips**

The sustainability intern contributes a “Green Tip” each month to the HDS newsletter, to encourage staff to integrate sustainability actions into their daily routines. Green tips range from visiting farmers markets to reducing single-use disposable items.



# Waste Management

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The City of Fort Collins and CSU has been committed to reducing its 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.

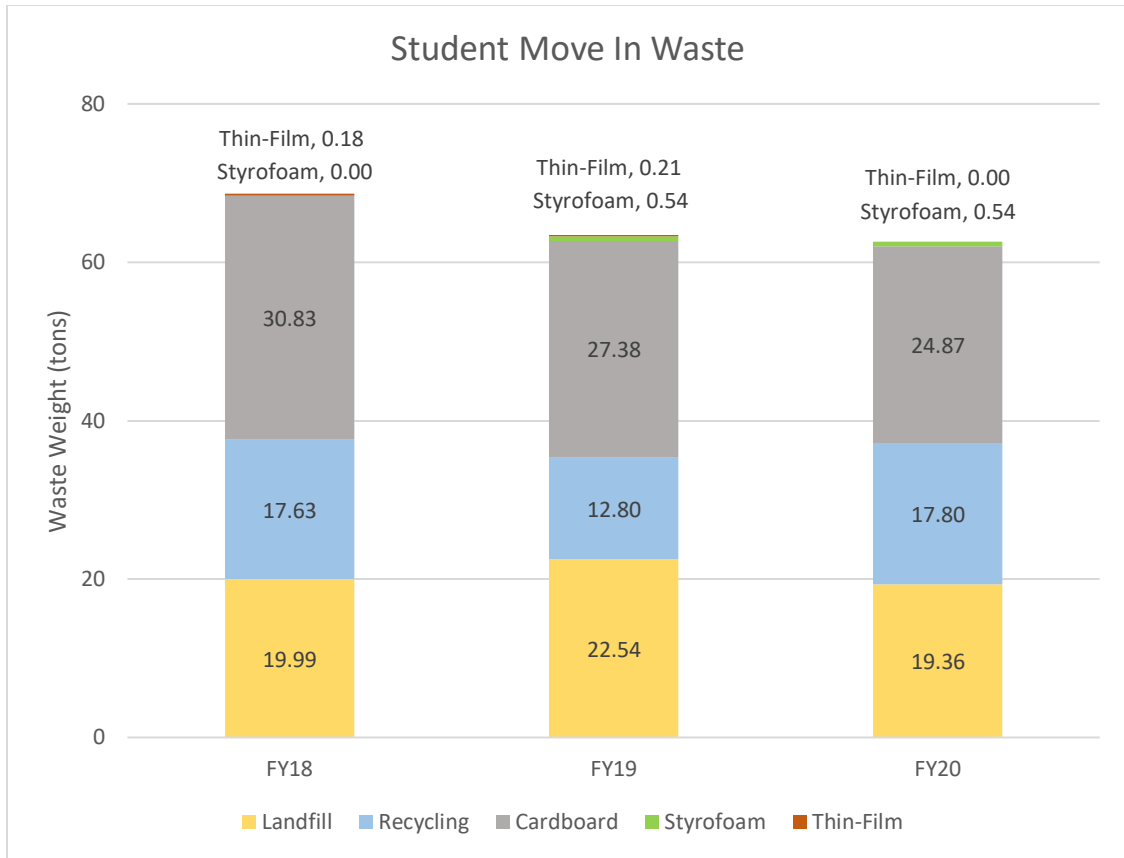
## Waste Diversion Events

### Student Move In

In August of 2019, Housing & Dining Services welcomed over 6,000 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, with empty cardboard boxes, plastic film, and styrofoam.

Since 2014, HDS has set up recycling collection stations, usually referred to as cardboard corrals, to collect recyclable materials. In Fall 2019, HDS collected cardboard, plastic thin film, and styrofoam at every residence hall. Eco Leaders and HDS staff positioned at these recycling stations not only offer collection services for thin film and styrofoam, which are normally not collected on campus, it is often the first instance where students and families can see the university's dedication to sustainability and waste management. This is also an excellent opportunity for students to learn about HDS waste management, while providing a large visual reminder that materials can be recycled as opposed to tossed in a dumpster.

In Fall 2019 student Move-In generated 62.15 tons of waste; however, through these recycling collection stations, HDS was able to divert all but 19.36 tons of landfill waste. HDS diverted 69% from the landfill (or 42.79 tons of material) – see Figure 1. These collection stations are staffed by Eco Leaders, HDS Facilities staff, and volunteers. While cardboard is collected and managed on campus by CSU's Facilities Management team, this year, collected Styrofoam and plastic thin film was transported to Eco-Cycle in Boulder, CO for recycling. HDS recovered and recycled 0.54 tons (1080 pounds) of Styrofoam. Unfortunately, although plastic thin film was collected during Move In, the stream was too contaminated from rain and labels to be properly recycled; thus, disposed of at the local landfill.



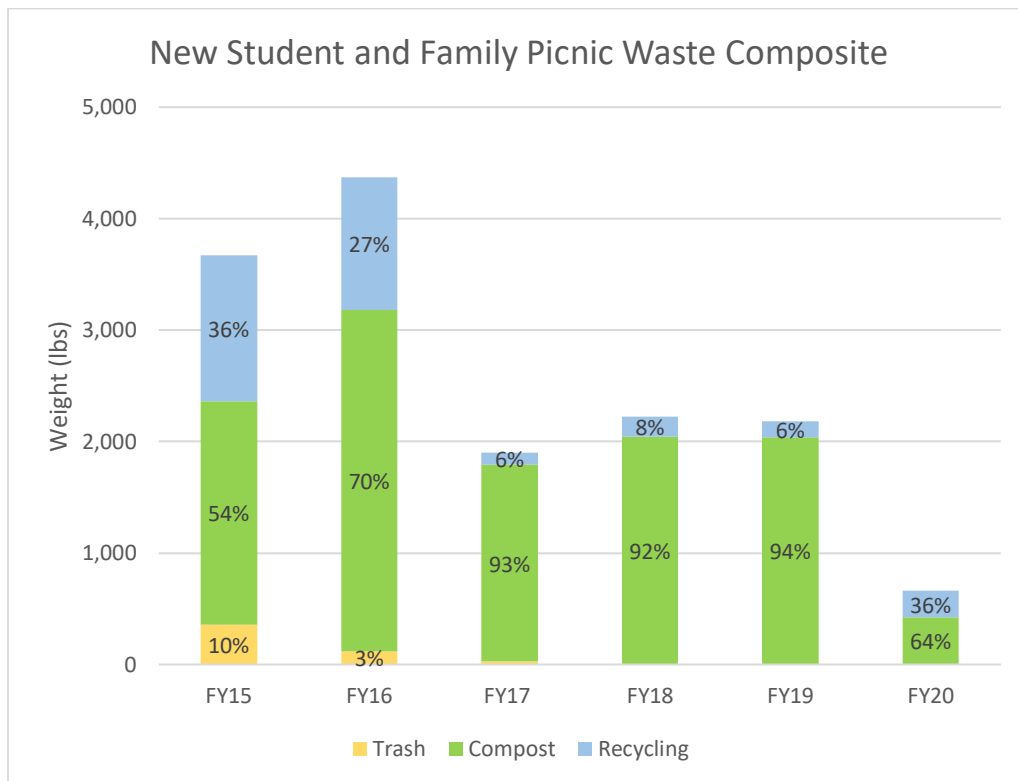
**Figure 1.** Student Move-In Waste by material and weight

### The New Student and Family Picnic

The New Student and Family Picnic held during Ram Welcome and sponsored by the Alumni Association, serves more than 8,000 students and their family members. Picnic dinners are usually packaged with compostable materials, and Dining is mindful to reduce non-compostable individual meal components. In 2019, the meal included a wrapped sandwich, wrapped cookie, and a piece of fruit, all of which were compostable. Meals also included individual bags of potato chips, which were collected and recycled through TerraCycle. Water was provided in individual plastic bottles.

With one central sorting station and over 30 dining staff members assisting in the waste sorting process, the event resulted in 240 pounds of recycling, 423 pounds of food waste, and very minimal landfill waste – see Figure 2. This year, we observed significantly less overall waste than previous years although the cause is unclear. A storm rolled in during mealtime and many families sought shelter inside; thus, waste could have been disposed of at another location, not monitored by our team.

This year, we consider this a zero-waste event, with 100% of waste either composted or recycled. HDS will continue to limit the amount of waste going to the landfill by offering compostable materials during this new student and family picnic event, as well as ongoing education on accurately sorting waste products.

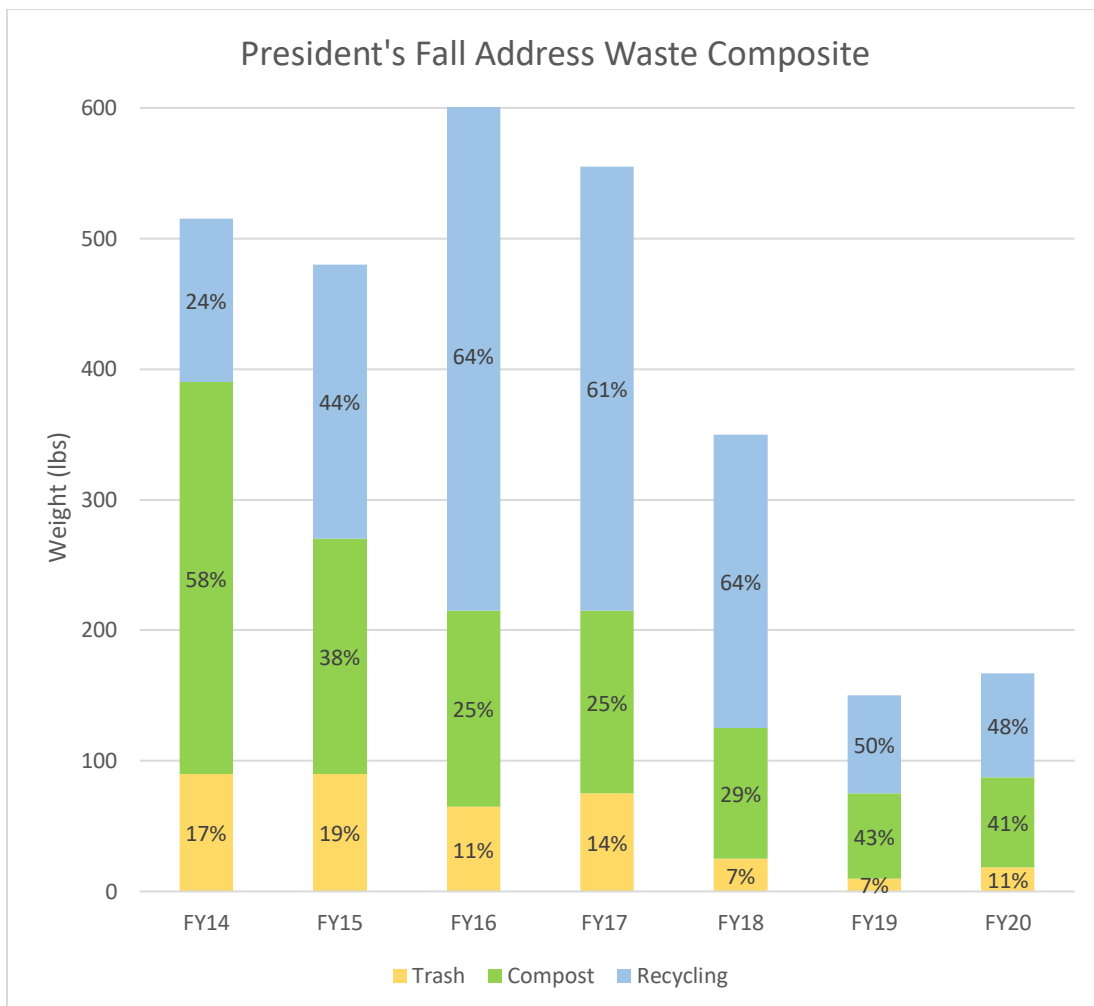


**Figure 2.** New Student and Family Picnic waste composite by waste weight, and percentage of total materials in waste stream

### President's Fall Address and Picnic

For the 14<sup>th</sup> year in a row, the President's Fall Address & Picnic took place in September to welcome students, faculty, and staff back to campus. In 2019, CSU introduced the university's new and first woman President, Joyce McConnell. The picnic lunch generally consists of a sandwich wrapped in compostable paper, an unwrapped cookie, potato chips, and beverages provided in plastic bottles. This year, the event was a near zero-waste event with an 89% waste diversion rate (48% recycling + 41% compost).

As compared to our baseline year in 2013 (FY14), the President's Fall Address & Picnic continues to reduce its waste production, through the assistance of students and staff to help sort and educate picnic attendees. The event generated 80 pounds of recycling, 69 pounds of composting, and a mere 18 pounds of trash. Dining Services provided all compostable or recyclable meals for the event, and the Eco Leaders assisted with the sorting stations. For the fourth time, approximately 150 pounds of lettuce grown at the CSU Horticulture Center was served in the sandwiches at the picnic.



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

### **Spring Waste Audit**

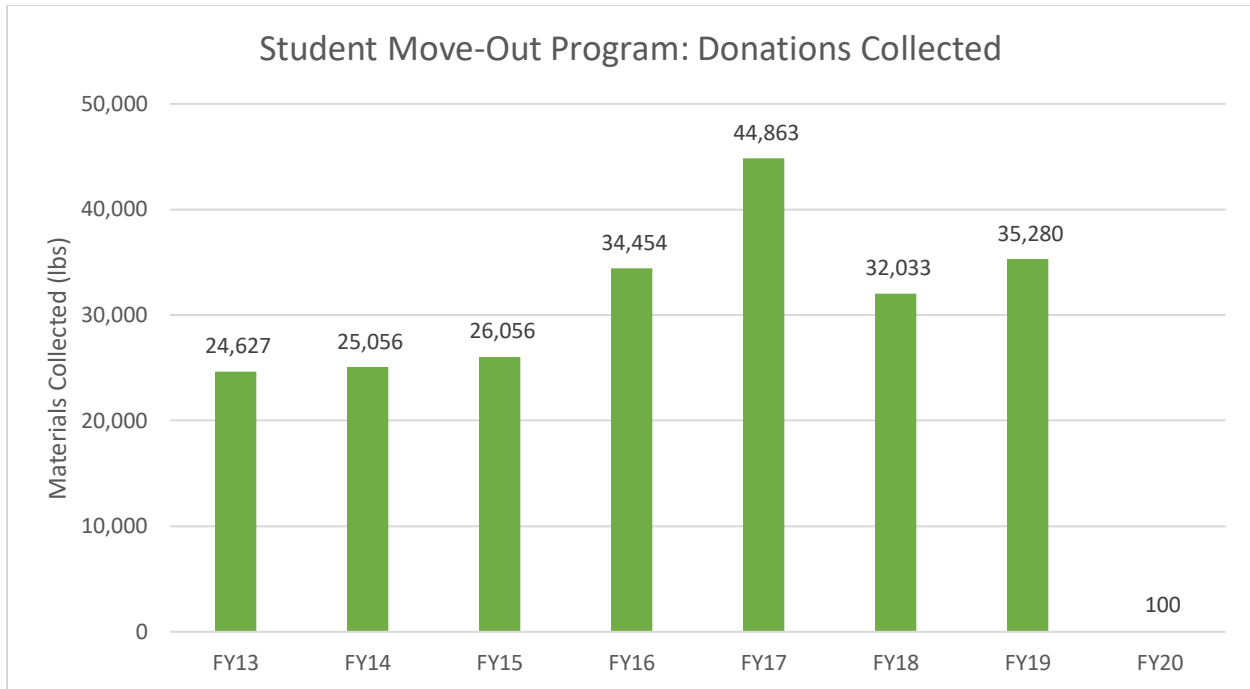
Every Spring since 2012, HDS has completed an annual waste audit where volunteers come together on the LSC plaza to participate and sort landfill and recycling waste randomly collected from HDS buildings by CSU Facilities Management. The goal of the waste audit is to document accuracy of sorted materials both in the waste stream and recycling stream. The 2020 waste audit do not occur due to the coronavirus.

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

Pack it, Store it, Donate it (previously known as Take it or Leave 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 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 worked with ChairTableHome, a local vendor to pick up larger furniture items, which are then donated to under-served communities.

Unfortunately, in May of 2020 the program did not take place 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 physical distancing guidelines set by the State of Colorado at the time. As usual, students were encouraged to take all their belongings with them when they moved out. This year, anecdotally, CSU Waste Management also saw less materials in the dumpsters, implying that students were able to take most of their items with them when leaving campus. ChairTableHome collected a small amount of donations through their own collection process and truck during the last two days of the Spring semester, to capture any items students would like to donate on their last weekend to move out of the residence halls. ChairTableHome collected a small handful of items, including a couple of futons, clothing, and mirrors, estimated to be under 100 pounds in total.



**Figure 4:** Amount of donations collected during the annual student move out program, this year called Pack It, Store It, Donate It, and donated to Homeward Alliance.

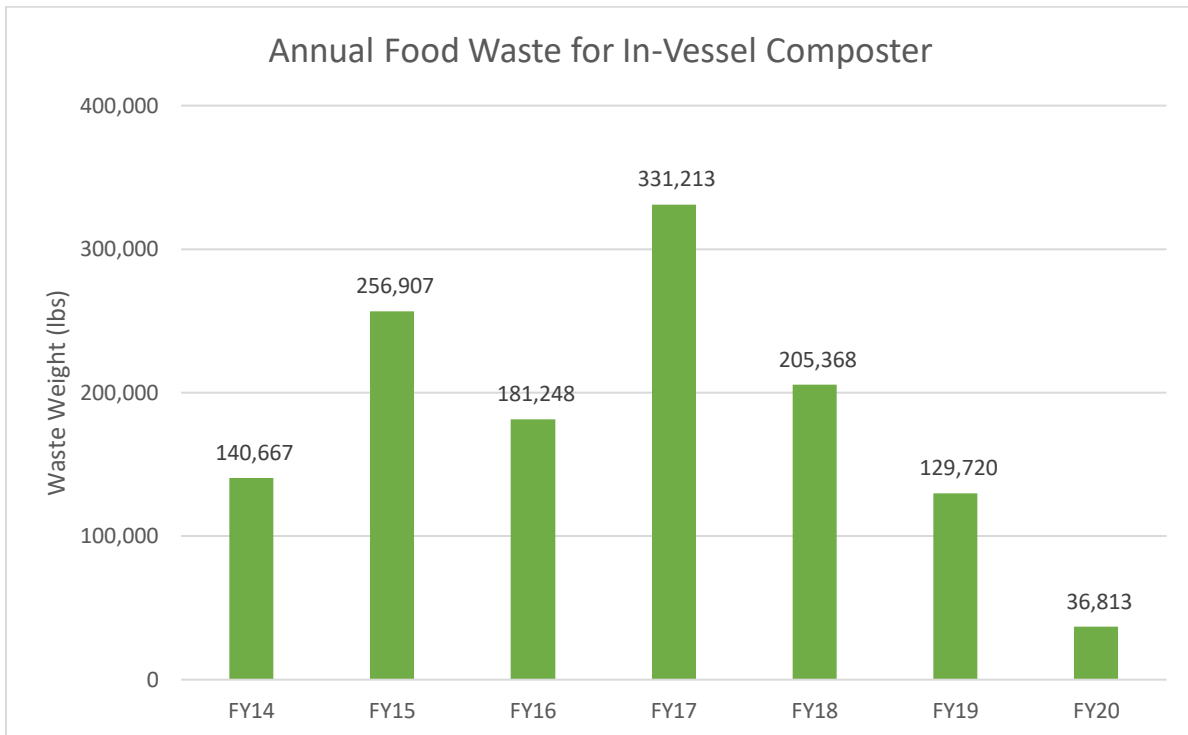
## Ongoing Sustainability Initiatives

### Composting Initiatives

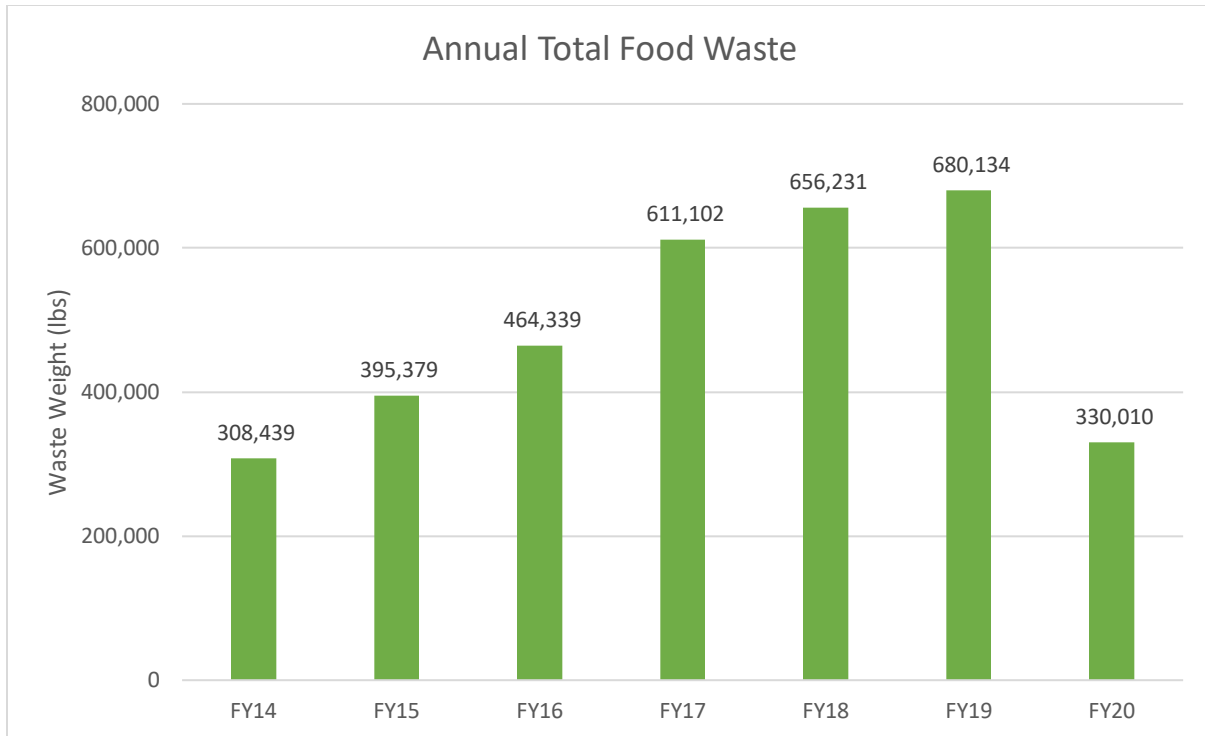
- Composting numbers for FY20 are lower than previous years as on-campus dining was deeply impacted from March through the end of the fiscal year, when the university went virtual. A small number of students lived in the residence halls for the remainder of spring semester and summer session and there was no summer conference season.
- 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 2020 fiscal year, Oscar diverted 36,812 pounds of food waste from the landfill, which is significantly less (72% decrease) than the previous year – see Figure 5. High student intern turnover, and large equipment failure accounted for the decreased volume. Food waste that would otherwise go into Oscar, was instead processed by the Windrow composting facility.
  - Online since 2017, the windrow composting operation diverted 330,010 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. This year, we added additional Max R bins in the Housing Services Center (HSC), the Palmer Center, and in each of the Durrell Center Conference rooms, through funding from the Sustainability Fund.

- Normally, compost from Oscar is distributed during Earth Week. In lieu of that, this Spring, CSU Facilities Management donated 180 bags of Windrow compost to HDS staff working on-site during the pandemic.
- 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 sixth 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 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 for only the 8-week duration of this campaign in the Spring semester. Due to COVID-19 and remote learning, campaign engagement ended after six weeks. During those six weeks, 1,018 residence hall students and 223 Aggie Village students played the online game, resulting in 17.4% of all hall residents and 26% 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.



### **Electronic Waste Recycling**

Every residence hall and apartment operated by HDS has techno trash bins located in the lobbies. The techno trash bins provide residents with a proper way to recycle batteries, CFL light bulbs, and ink cartridges. These materials can be hazardous and leach through landfill liners where they may eventually enter the water table. Techno trash bins are now a requirement in any LEED certification. Surplus property also hosts an electronic waste collection event each year in collaboration with the compost giveaway day during the Earth Week festivities. This event did not occur in Spring 2020.

### **RamCard Recycling Program**

Each student at CSU is required to have a RamCard, which serves as the student ID card and allows access to the dining centers, the Recreation Center, and the Transfort bus system. In partnership with the RamCard Office and a third party, old or broken cards are recycled into plastic benches. Each container weighs about 28 pounds. During the fiscal year 2020, the RamCard office recycled about 140.25 pounds of cards.

# Food and Dining

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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 to reduce the university's waste streams, HDS will continue to integrate sustainability in its daily work.

## Food Diversion Events

### Environmental Eats

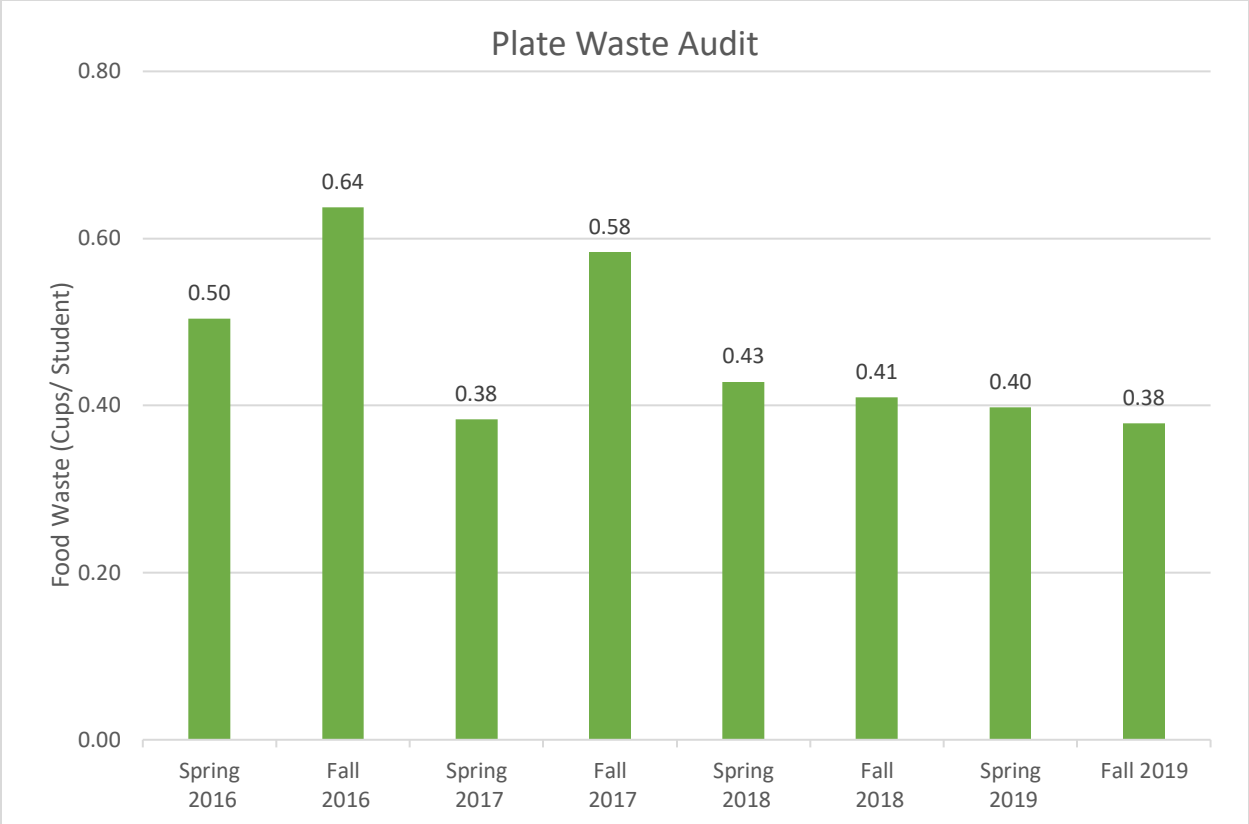
HDS aims to promote more sustainable food choices by sharing knowledge and information about different foods and their impacts. In its third year, Environmental Eats is a five-part series that takes place in The Corbett Lobby Teaching Kitchen throughout the year. This program is a result of feedback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

The five themes highlighted this year included sustainable seafood, insect diets, blended burgers, grown on-campus produce, and local honey from the Durrell hives. In FY20, the first four themes took place in-person, with a total of 408 students attending the Environmental Eats events, and over 140 students participating in the Insects event, our most popular Environmental Eats event of the year. The fifth scheduled Environmental Eats took place virtually, where the horticultural intern submitted a series of videos on HDS @CSU halls Instagram stories sharing various different plants in the horticultural center and educating viewers on different ways to prepare local produce for meals at home. This series reached 546 Instagram accounts over the course of one day.

### Plate Waste Audit

For the sixth year in a row, a plate waste audit was conducted during the Fall semester to determine food waste trends throughout the year. Across all five HDS dining halls, during the lunch time rush period (11am – 1pm), volunteers collect excess food from plates before students, faculty, or staff, deposit their plates onto the conveyor belt traveling to the kitchen. All food waste is weighed and converted to volume, which results in a metric of cups of food waste per individual dining during this audit.

The Fall 2019 plate waste audit reported 0.38 cups of food waste per student per meal, a slight decrease from Fall 2018 – see Figure 7. The Spring audit did not occur due to the pandemic. Ongoing efforts, including education on taking only necessary foods, drive the decrease of food waste seen throughout the dining centers.



**Figure 7.** Amount of food waste generated per student during HDS’s biannual plate waste audit

**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 2020, the program operated for 7 months from July through February, with 29 opportunities for food recovery. The program was suspended in March due to the pandemic.

### **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 20,449 pounds of food, resulting in 400,980 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 2020, produced 1,689 pounds of greens. In total, the Horticulture Center has produced 8,035 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 during the year. This student-driven initiative marks the first time HDS dining centers are consistently bringing organic foods to campus. In FY20, of all of Dining's food and beverage procurement, 1.8% was USDA certified organic, 0.12% was certified Fair Trade, and 0.46% Rainforest Certified products. In late FY20, Dining made a commitment to purchase all certified organic coffees after all dining halls exhaust their current supply of coffee.

### **Recycled Cooking Oil**

All used cooking oil from dining halls is collected and recycled as biodiesel. Dining Services partners with a local company and recycled 41,264 pounds of used cooking oil this past year (an increase of 13,000 pounds). Since fiscal year 2013, Dining Services has recycled a cumulative amount of 226,625 pounds of cooking oil.

### **Compostable and Reusable "to-go" containers**

In 2007, Dining Services eliminated styrofoam from all dining centers and switched to compostable to-go containers. Dining center visitors also have the option to select reusable to-go containers (as opposed to a disposable compostable containers) that can be used and returned to any dining center for washing, to further eliminate waste. To reduce disposable cup waste, all students living in the residence halls are provided a reusable water bottle at the beginning of the year to fill at dining centers and water bottle filling stations across campus.

# 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. For this section, we are evaluating data from July 2019 through February 2020, which represents months prior to COVID-19, when our residence halls were operating as normal.

## Electricity and Energy Overview

Between the months of July and February, HDS used 14,692,738 kWh (or 14,692 MWh) of electricity. This is approximately 1,755 kWh per student – see Figure 8. Considering this data is only for 8 months, or 75% of the fiscal year, this is seen as business as usual (75% of FY19 electricity use is approximately 1,911 kWh).

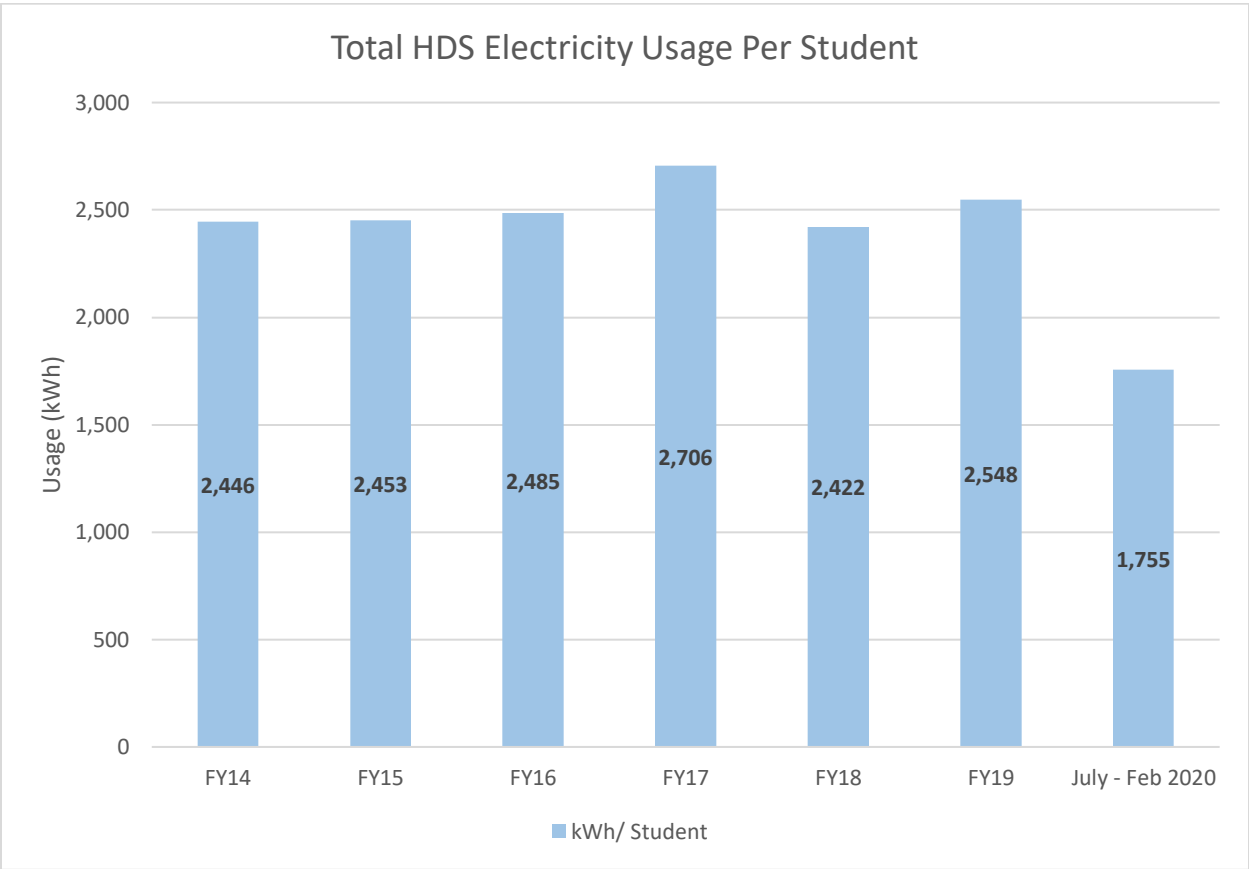
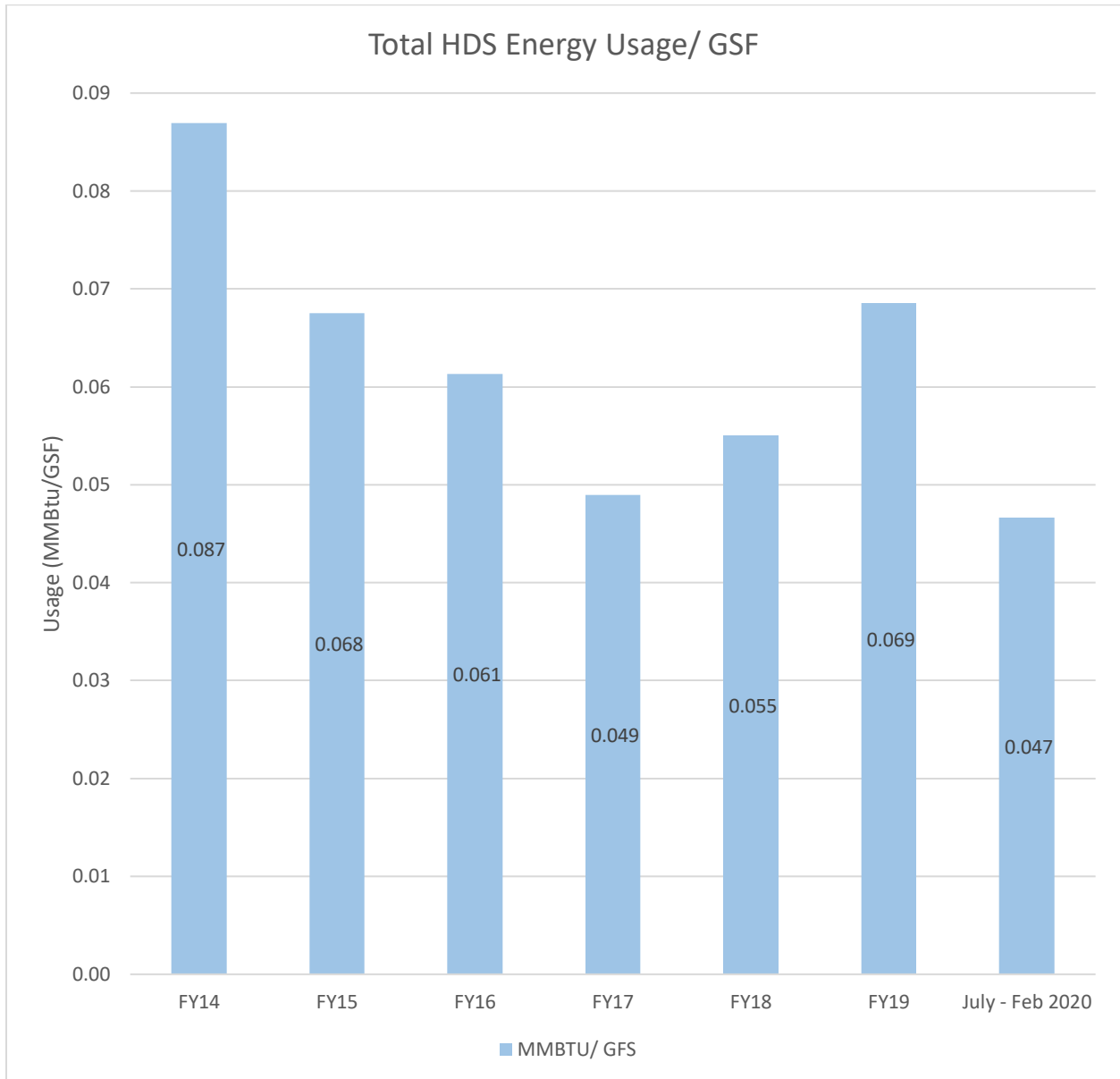


Figure 8. Total amount of electricity use per student in the residential halls

Likewise, in FY20, HDS’s energy usage for 8 months was approximately 75% of the previous years energy usage – see Figure 9. From July through February, HDS consumed 126,987 MMBtu, or approximately 0.047 MMBTu per square foot of building space.



**Figure 9.** Total amount of energy usage per HDS building gross square footage.

## Energy Efficiency and Engagement Events

### Green Warrior Campaign

Each fall, with the assistance from our Eco Leaders, HDS hosts a Green Warrior campaign, bringing public awareness to sustainable behavior choices for students living on campus. By committing to become a Green Warrior, 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, Green Warriors had the option to plant trees rather than collect physical prizes. Green Warrior 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.

The Green Warrior 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 2019, 15 residence halls and Aggie Village, with a total of 7,120 residents, had the opportunity to become a Green Warrior. Through Eco Leaders, 2,240 students participated in the campaign— see Figure 10. **This indicates that 32% 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.** 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, 1,048 students (or 46% of Green Warriors) opted to plant at least one tree as part of their prize package, and thus planted 5,746 trees through the Arbor Day Foundation.

The top 5 student pledges in Fall 2019, with the percentage of student pledges:

1. Turn off lights in rooms that are not in use – 96%
2. Bike, walk, or longboard to class – 95%
3. Turn off water while brushing teeth, scrubbing hands and shaving – 91%
4. Carry and use a reusable water bottle – 88%
5. Donate unwanted items instead of throwing it away – or give to a friend – 87%

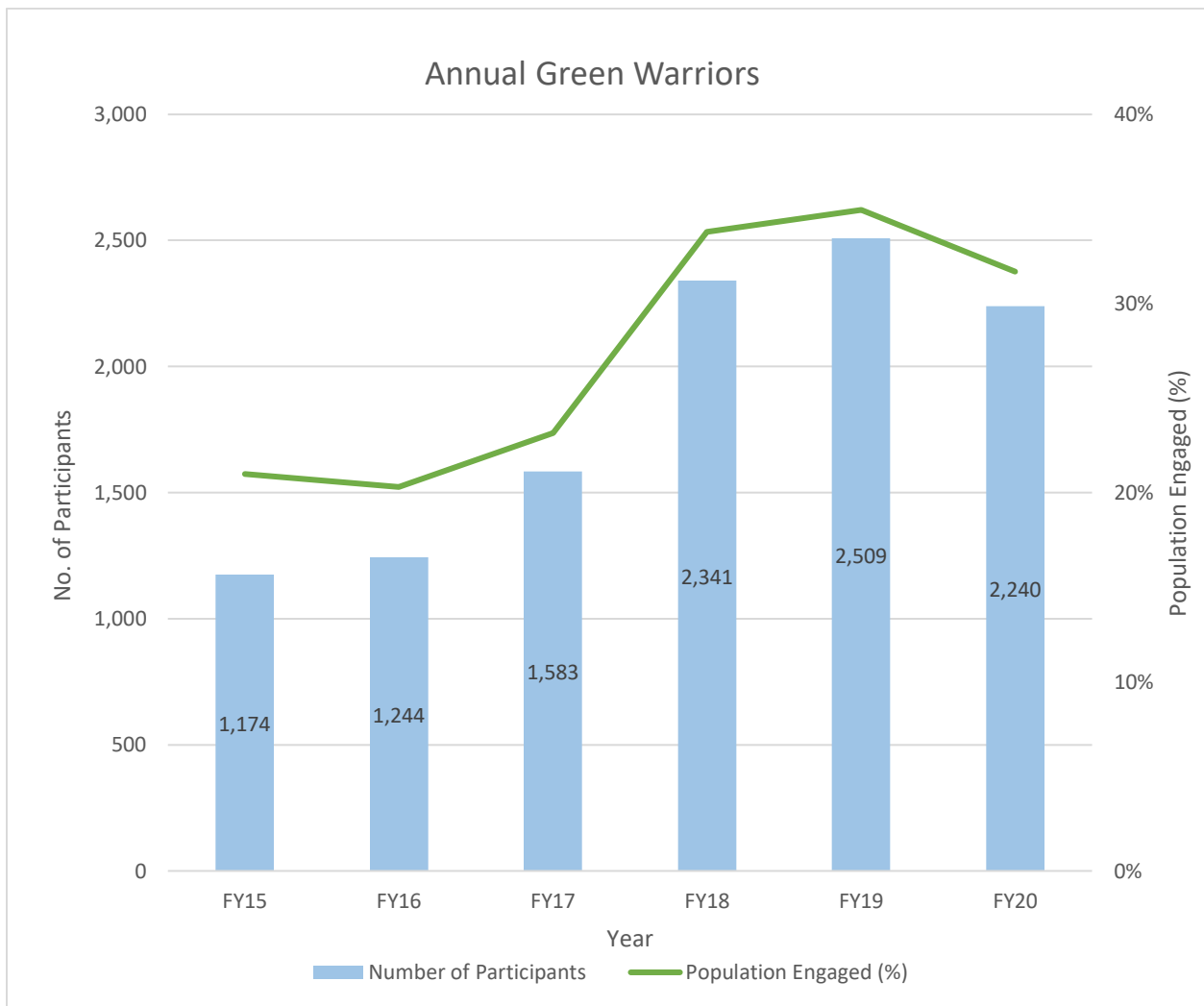
These top 5 student pledges are not surprising, as quick sustainable activities are usually low-hanging fruit for our students. Although not identical, behaviors that students currently do and/or pledge to complete through this year's campaign, were very similar to the top 5 pledges in the Fall 2018 campaign.

The bottom 5 student pledges in 2019 were activities that encouraged students to get involved, participate and attend classes, events, or meetings held on campus by departments and student groups.

Within the 15 residence halls, Eco Leaders engaged with 1,850 residents, representing 30% of the resident hall population. The highest participation rates by residential halls were Academic Village Honors (69% participation), Edwards Hall (41% participation), and Allison Hall (37% participation).

Similarly, the Aggie Village Eco Leaders engaged with 390 apartment residents, or 42% of Aggie Village, which is a 5% increase in participation from last year. The highest engagement was in the Lodgepole building with 47% engagement.

The Green Warrior campaign also helps Colorado State University move toward its target greenhouse gas (GHG) emissions goal of an 80% reduction by 2030. Without sustainable lifestyle choices by students, staff, and faculty, these GHG target goals for the university would be extremely difficult.



**Figure 10.** Total number of Green Warrior, and its corresponding percentage of students engaged in all on-campus student housing.



At the end of the 8-week campaign, HDS sends out a survey to all Green Warriors to gather program feedback, as well as ongoing behavior change due to the Green Warrior Program. Most of the participants agreed that Green Warrior had a positive influence and provide a more sustainable lens of evaluating sustainability – Table 1. We will continue to implement the Green Warrior program based on this positive feedback and success.

Statement	Resident Halls	Aggie Village
Green Warrior gave me a better understanding of sustainability from an economic, social justice and environmental lens.	87%	78%
I will continue the behaviors I pledged during Green Warrior in the long term.	97%	92%
Without prize incentives, I would still participate in Green Warrior.	30%	34%
It is important to engage students in sustainability programs.	97%	93%
Sustainability is a priority at CSU.	90%	89%

**Table 1.** Percentage of students from residence halls and Aggie Village who somewhat agree, agree, or strongly agree with the accompanying statement.

### Ongoing Sustainability Initiatives

#### On-Site Renewable Energy

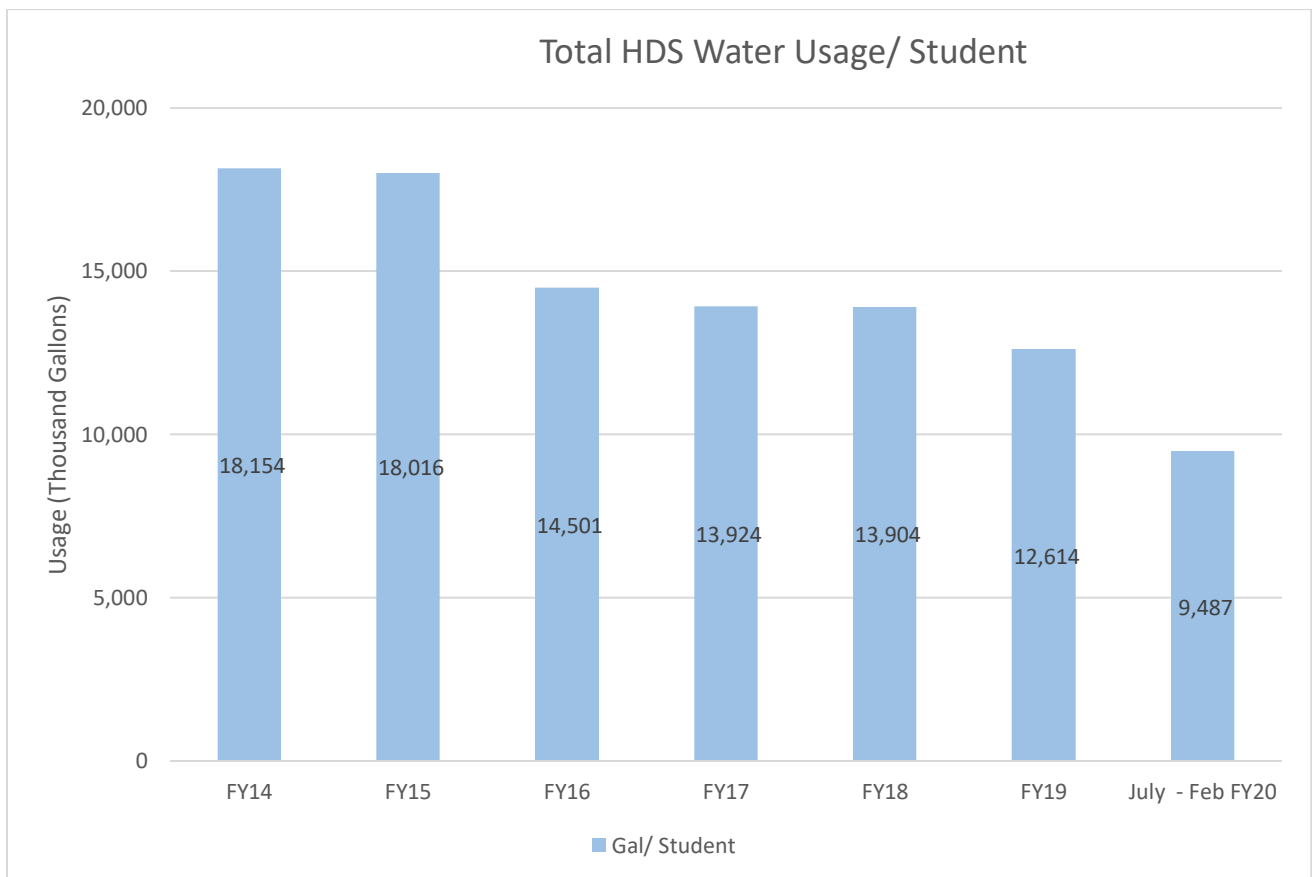
HDS on-site solar includes 300kw installed on the roofs of Braiden, Parmelee, and Edwards residence halls, generating approximately 450,000 kWh of electricity each year. While the renewable energy credits associated with these projects are owned by a third party, the solar does feed into the City’s electric 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 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 Green Warrior Campaign, encouraging students to take shorter showers, completing only full loads of laundry, and other water reduction strategies. , FY2020 data is only from July – February, when students were on campus, and prior to leaving due to COVID19.

HDS’s water usage has remained relatively stable in the last four years as seen in Figure 11. Like with the above electricity and energy data point, this year’s water usage per student is approximately 75% (or 8 months of the year between July and February) of last year’s data point. From July through February, HDS consumed 79,423,049 gallons, or approximately 9,487 per student.



**Figure 11.** Total amount of water use per student in the residential halls

## Ongoing Sustainability Initiatives

### Reusable Water Bottles

Reusable water bottles are given to incoming students as a part of their welcome package to help reduce the use of disposable plastic bottles and cups on campus. Students can also bring these bottles in dining centers and fill it up during mealtimes to be consumed inside or outside the dining centers.

### 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 that to date, have helped avoid the use of over 800,000 plastic water bottles.

# Alternative Transportation

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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. 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. In our past reports, we would collect data on the percentage of on-campus students that purchased permits in the year to showcase how many students commit to another form of transportation. However, due to the quarantine, the data would be skewed since moving to completely remote classes for the Spring Semester. Parking and Transportation services agreed to reimburse the costs of yearly permits or transfer those funds to the following year.

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 FY20, 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 10,000 miles since 2016.

Housing & Dining Services currently has one Global Electric Motorcar (GEM Car) within Conference and Event Services. The GEM car is 100% powered by electricity; thus, produces zero emissions. From FY13 to FY18, the car has logged 4,746.6 miles. Unfortunately, in Fall of 2019, the vehicle was involved in an accident, and was removed from the fleet.

In FY16, Laurel Village installed the first charging station in HDS. Two more stations were installed this past year at University Village and International House. The two stations provided 3,301.73 kWh of electricity for apartment residents for the academic year. The three charging stations combined provided 8,580.68 kWh of electricity to electric vehicles in FY20, which is 2,261.04 kWh more from last year. This is likely due to the additional stations installed in the past year. Cumulatively, the three stations have charged 23,081.95 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 2019-2020 ski season and nine weekends, 305 students rode the bus to Eldora, Keystone, Copper Mountain, Steamboat, Breckenridge, and Winter Park ski resorts through this service. There were four other weekends that the shuttle was scheduled to operate, but one was cancelled due to weather in February, another was cancelled due to low attendance and two more were cancelled due to COVID-19 in late March and early April. Additionally, four of the nine weekends that SkiSU provided service, shuttles operated at 90% capacity or higher, indicating students are not only utilizing, but also maximizing the service.

In October 2019, CSU and the City of Fort Collins introduce Bird electronic scooters throughout the city including university grounds, as another mode of alternative transportation. From October 2019 to March 2020, over 32,000 rides either started or ended on CSU campus, with almost 13,000 rides in December alone. Due to COVID-19, Bird scooter service was suspended in late March of 2020 and started back up in July 2020.

# Sustainable Infrastructure & Operations

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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. Current members of the Sustainability Fund Committee are:

Mary Liang, Communications and Sustainability, Chair  
Mike Birach, Facilities  
Karyn LeBlanc, Facilities  
Nancy Greenburg, Administrative Finance  
Tonie Miyamoto, Communications and Sustainability  
Seth Webb, Mountain Campus

As a result of project approvals from FY19, HDS installed four Max R three-stream waste stations in Durrell Meeting Room A, Durrell Meeting Room C, the Housing Services Center, and first floor of the Palmer Center to provide additional composting infrastructure and education on accurate waste sorting.

The Horticultural Center also received funding to purchase sensors to more effectively monitor the growth of plants, and heat mats to more efficiently grow plants. The Center, along with the Horticultural Intern, will manage the new equipment.

For FY21, no proposals were brought forward to the committee.

### **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 the Coca Cola representatives to discuss sustainability initiatives. Coca-Cola implements 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 2020-2021

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## **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 FY21.

## **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

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Tonie Miyamoto, Mary Liang, Kirstie Tedrick, and Danielle Backman (Graduate Sustainability Intern) would 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!