



ANNUAL SUSTAINABILITY REPORT

ACADEMIC YEAR 2018-2019

HIGHLIGHTS



PACK IT, STORE IT, DONATE IT

35,280 pounds of material was donated by students moving out and given to 50 local non-profits during 2019 move-out



GROWN ON CAMPUS

3,438 pounds of lettuce was grown for the dining centers through the Horticulture Center living lab, an increase of 37% from last fiscal year



RAM FOOD RECOVERY

During the Spring 2019 pilot program, there were 18 events for members of campus experiencing food insecurity with over **1,000** subscribers receiving text notifications



RECYCLEMANIA

With a **59%** recycling rate, CSU placed 14th in the nationwide competition's diversion category



GREEN WARRIOR

2,509 (or 1 out of every 3 students) on-campus committed to sustainable behavior choices



THE SPOKE

3,132 customers received **6,827** educational services by The Spoke this year



HDS FACILITIES

Two additional charging stations were added to the Laurel Village parking lot and use was doubled over last year



RAM WELCOME PICNIC

Held during Fall 2018, the picnic was a **zero-waste** event, meaning 100% of the waste was diverted from the landfill and either recycled or composted.



SKI-S-U

During the 2018-2019 season, 499 students rode the bus to ski resorts, an **167%** increase over last year's number of 183 students

Colorado State University Housing & Dining Services

2018-2019 Sustainability Report

Table of Contents

<i>Housing & Dining Services Profile</i>	2
<i>Campus-Wide Sustainability Initiatives</i>	3
<i>Education & Outreach</i>	4
<i>Waste Management</i>	6
<i>Food and Dining</i>	20
<i>Energy & Emissions</i>	23
<i>Water Management</i>	28
<i>Alternative Transportation</i>	29
<i>Sustainable Operations</i>	30
<i>Areas of Focus for 2019-2020</i>	32
<i>Acknowledgements</i>	32

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.

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.

Campus-Wide Sustainability Initiatives

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

Pollinator Friendly Campus

In 2018, CSU formed a Pollinator Friendly Campus Committee with representatives from Facilities Management, HDS, Environmental Health Services, the City of Fort Collins, academics, research, and students. As part of the Bee Campus USA certification HDS supported bringing three student-run hives to the Durrell Center. A bee cam with visibility from inside the dining center helped them 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.

Alternative Transportation

The Spoke, a living lab operated by student mechanics in partnership with Surplus Property, had its fourth full year of operation out of the university's first LEED Platinum building, the Pavilion. The Spoke is a bicycle education room built to offer free services and educate students living on campus around bicycle safety and mechanics. Recently, the Spoke has gone mobile with a pop-up mobile shop, designed to offer services and education around campus in high traffic cycling areas. In FY19, 3,132 customers received 6,827 educational services provided by the Spoke. This is an increase of 40 percent in customers from the last fiscal year. The Spoke has provided a total of 12,636 educational services since it opened in 2014.

Campus Grown Greens

As part of a living lab with the Horticultural Center, 3,438 pounds of greens were grown for the Dining Centers in FY19, a 37% increase from FY18. Since its inception, the Horticultural Center produced 6,346 pounds of edible greens. 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.

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 and 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

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, 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 who help raise awareness about environmental, social and economic sustainability issues and encourage environmentally-responsible behaviors using community-based social marketing techniques. There is one Eco Leader per residence hall and four at Aggie Village apartments who are trained to engage with campus residents in sustainability areas such as waste reduction, energy conservation, social responsibility, eco-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 hall program began in 2011 and was expanded to Aggie Village in 2016.

During the fall semester, Eco Leaders enroll in a one-credit course, titled “Introduction to Sustainability Engagement”, endorsed by the School of Global Environmental Sustainability. GES 180 provides the basic tools needed to engage peers in sustainability initiatives. In the spring, 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. Projects range from studying public access compost bins, to how to engage international students in sustainability concepts.

Additionally, 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 engaged with their peers by collaborating with other student organizations on sustainability initiatives, such as hosting a zero-waste event with hall council or 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 themselves. Earth Week 2019 featured more than 35 campus-wide events sponsored by numerous colleges, departments, and student organizations. CSU’s Earth Week events have expanded to well beyond a week, with events throughout the entire month of April.

On Earth Day, HDS organizes a festival that brings together sustainable student organizations, departments, non-profits, and private enterprises throughout Northern Colorado to engage the campus community. On April 22, 2019, 49 different booths were set up in the LSC sculpture garden to educate and engage with students and the community on sustainability concepts. These groups included student organizations, CSU colleges and departments, CSU committees and programs, and Fort Collins community organizations. Also, as part of the Earth Week celebrations, the Eco Leaders presented their independent projects at an open house in the Pavilion. Finally, an electronic waste recycling and compost giveaway was held in the Moby Arena parking lot, where Surplus collected electronic waste for

free (usually this is a nominal fee), and Facilities Management distributed composted from Oscar, HDS's in-vessel composter at the Foothills Campus.

Sustainability Learning Communities

For students who are passionate about living green at CSU, and aiming for a career in sustainability, the Natural Resources and Sustainability Community offers students a supportive community based on sustainable living. Currently, 60 students participate 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 College of Natural Sciences Learning Community (CNSLC) provides a Diversity Through Sustainability cohort to provide students who are interested in sustainability the opportunity to live together on one floor in Piñon Hall, a LEED certified building that provides a platform for exploring sustainability on campus. 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. Students lead a weekly Sustainability Committee that spearheads multiple initiatives. Some of the student-driven projects include designing and managing the CNSLC community garden beds, in-hall composting, and building new energy harvesting strategies with renewable resources (sunlight and wind).

Waste Management

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 2018, Housing and Dining Services welcomed over 6,000 students over the course of two days when students and their families moved into campus housing. As imagined, the waste generated during these two days was extensive, with empty cardboard boxes, plastic film, and styrofoam waste generated.

Since 2014, HDS has set up recycling collection stations, usually referred to as Cardboard Corrals, to collect recyclable materials. In Fall 2018, 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 one aspect of CSU's waste management, while providing a large visual reminder that materials can be recycled as opposed to tossed in a dumpster.

In Fall 2018 student Move--In generated 62.57 tons of waste; however, through these recycling collection stations, HDS was able to divert everything but 22.54 tons of landfill waste. HDS diverted 65% from the landfill (or 40.93 tons of material) – see Figure 1. These collection stations are staffed by Eco Leaders, HDS Facilities staff, and volunteers. For a third year, HDS provided plastic thin film recycling and collected 0.21 tons (417 pounds). Styrofoam collection services were also offered for the third year, and HDS collected 0.54 tons (1080 pounds) during student Move In.

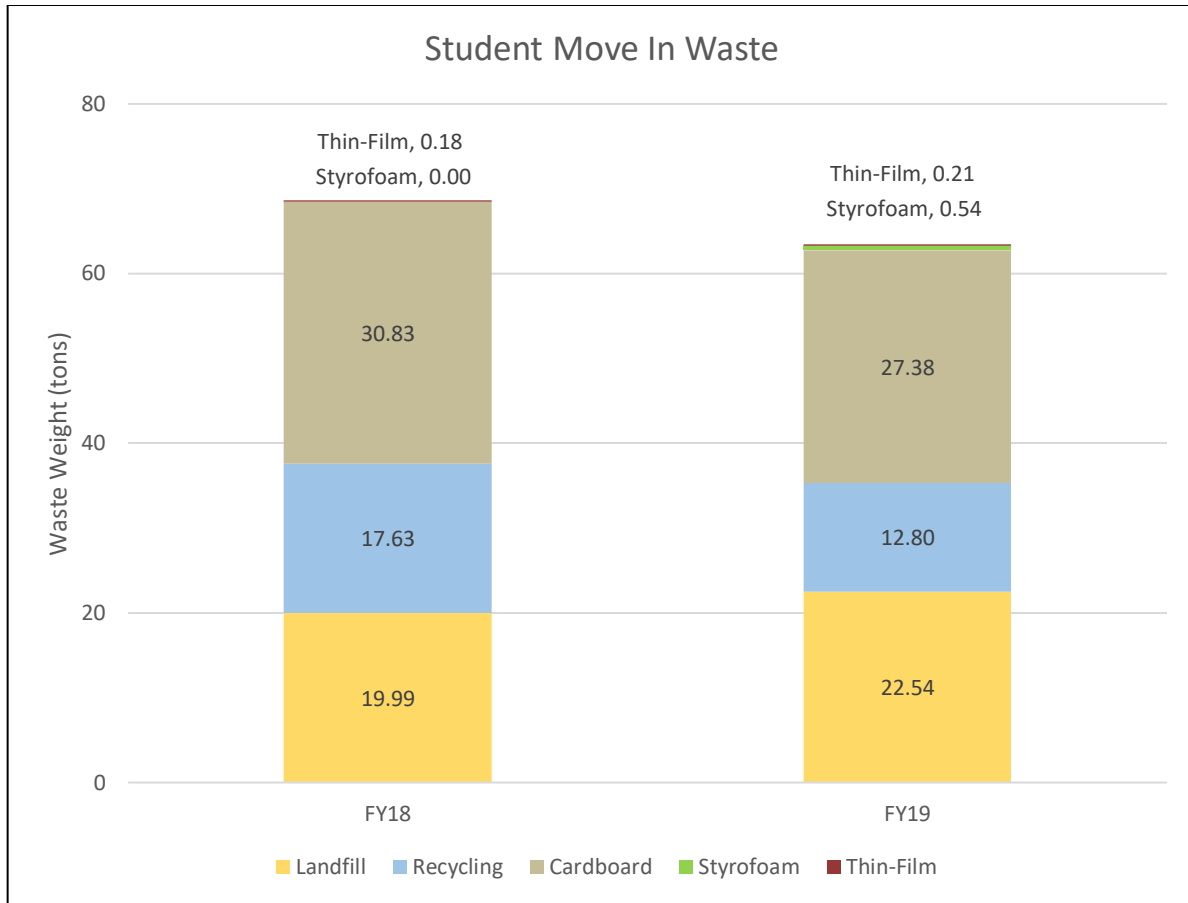


Figure 1. Student Move-In Waste by material and weight

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 to contain a nearly all-compostable meal, including the sandwich and wrapper, cookie and wrapper, and piece of fruit. Individual bags of potato chips are also provided, and the bag itself is collected to be recycled through TerraCycle. Water is provided in plastic bottles.

With one central sorting station and over 30 dining staff members assisting in the waste sorting process, the event resulted in 2,040 pounds of recycling, 140 pounds of food waste, and very minimal landfill waste – see Figure 2. 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 of waste products.

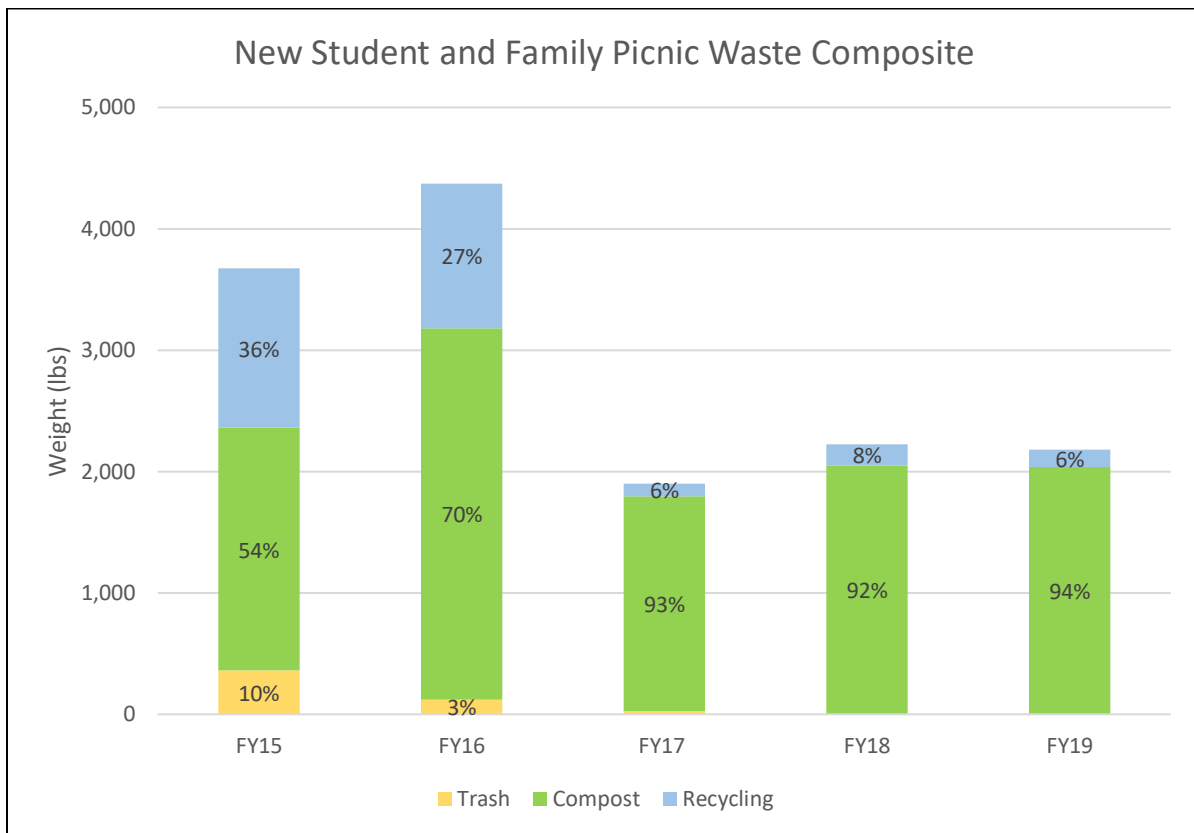


Figure 2. New Student and Family Picnic waste composite by waste weight, and percentage of total materials in waste stream

President’s Fall Address and Picnic

For the thirteenth year in a row, the President’s Fall Address & Picnic took place in October to welcome students, faculty, and staff back to campus. The picnic lunch generally consists of a sandwich wrapped in compostable paper, an unwrapped cookie, potato chips, and beverages provided in a plastic bottle. This year, the event was a near zero-waste event with a 93% waste diversion rate (50% recycling + 43% compost) and was our highest diversion rate to date for this event. As seen in Figure 3, the total amount of waste has significantly decreased over the years, with the 2018 President’s picnic generating the least amount of waste (167 pounds) for the event to date.

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 third time, approximately 100 pounds of lettuce grown at the CSU Horticulture Center was served in the sandwiches at the picnic.

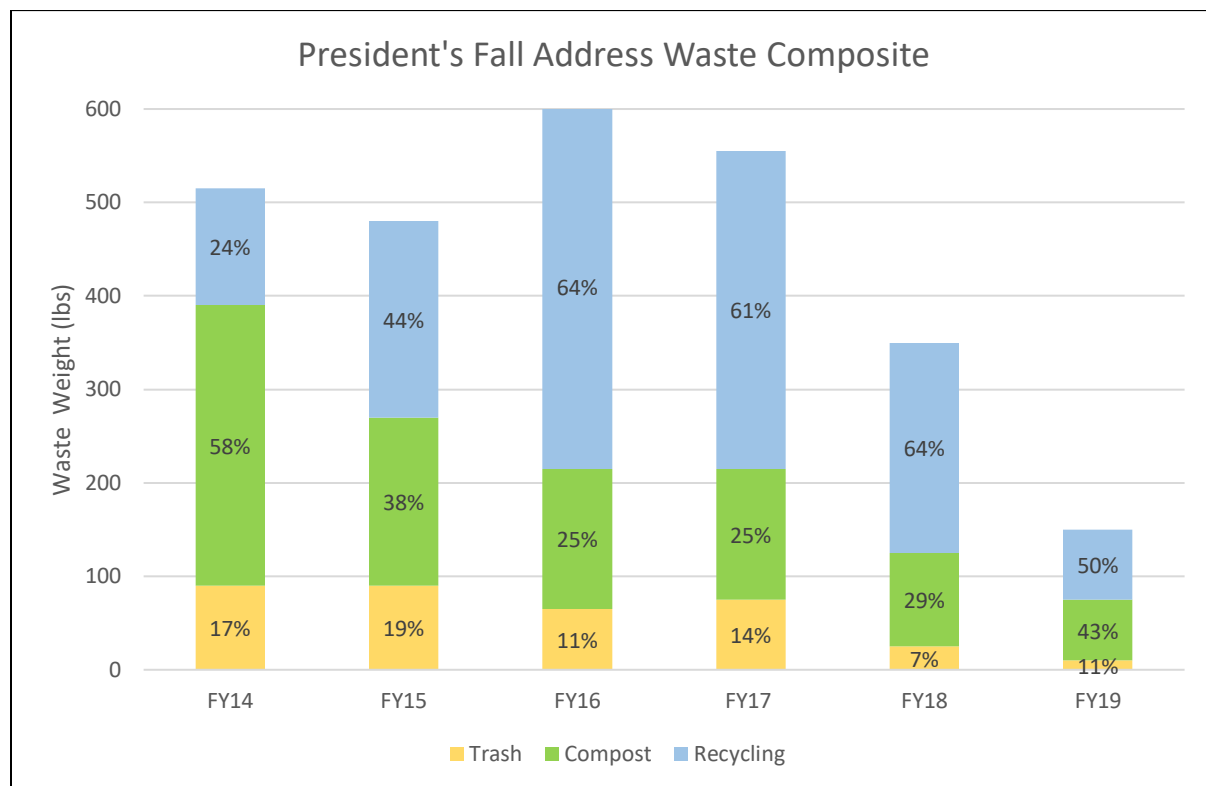


Figure 3. President’s Fall Address waste composite by waste weight, and percentage of total materials in waste stream

Spring Waste Audit

In Spring 2019, 35 volunteers came together on the plaza to participate and sort in the annual waste audit. CSU Facilities Management randomly collects landfill and recycling waste from HDS buildings the evening prior to be sorted through the waste audit. The goal of the waste audit is to document accuracy of sorted materials both in the waste stream *and* recycling stream. On March 8, over 1,000 pounds of landfill and recycling waste were on display in the middle of the LSC plaza, serving as an engaging physical demonstration and reminder to passing students that campus generates a large amount of waste, which is often sorted disposed of inaccurately. This year, for the first time, Aggie Village and Piñon were audited as individual buildings as part of the larger waste audit.

For the second year, the Aggie Village Eco Leaders created an interactive educational booth, which was set up in front of the waste sorting area. They created a trivia game where students can spin a wheel and answer questions on topics such as composting, recycling, and past waste audit data. Students could then choose prizes such as HDS reusable water bottles, CSU Facilities coffee mugs, bamboo toothbrushes, and CSU bike badges for participating. The Eco Leaders successfully engaged over 150 students during this event.

Waste Audit Results

- 1,246 pounds of waste was sorted, which is over 1,600 pounds less material than last year. It was the least amount of waste audited to date.
- The results of the landfill stream in the halls was 51.78% of accurately sorted landfill materials, 12.73% of materials that should have been recycled, and 35.48% of materials that should have been composted instead— see Figure 4. This concludes that nearly half (48%) of what was thrown away could have been recycled or composted.
- For the residence halls, the recycling stream consisted of 91.5% of accurately sorted recyclable materials, 6.70% of materials that should have been landfilled, and 1.75% of materials that should have been composted instead – see Figure 5. This equals an 8.45% contamination rate, which represents 4% lower than last year, indicating more people are accurately recycling materials.

HDS has completed an annual waste audit every Spring since 2012, and trends show that we are making progress with accurately sorting recycling over the past several years – see Figure 6. Composting remains the biggest opportunity to divert more material from the landfills.

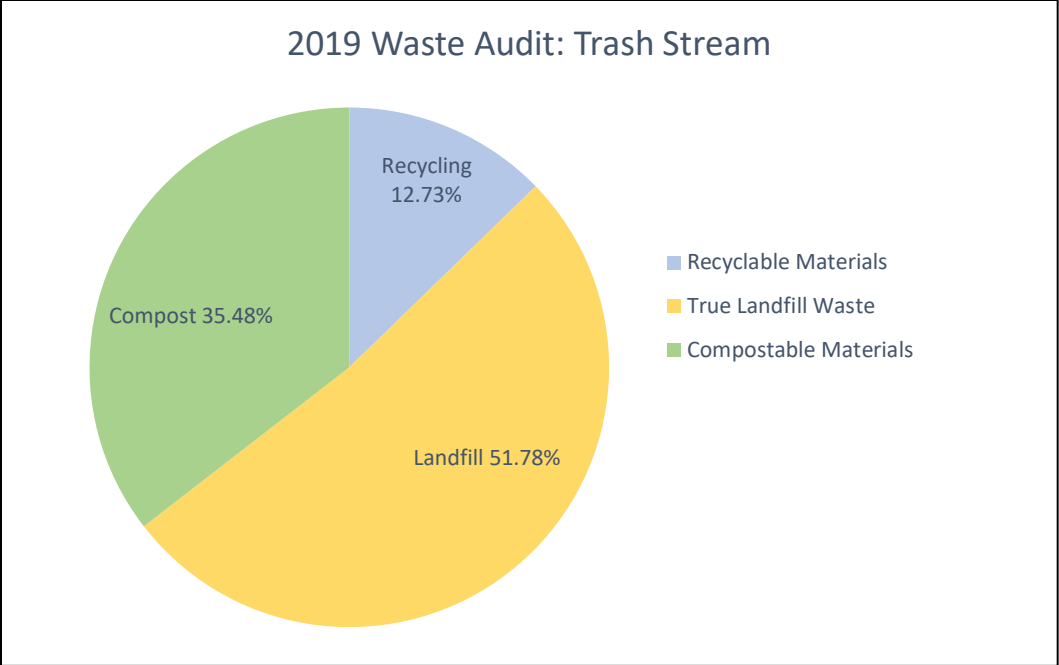


Figure 4. Percentage of materials in the trash waste stream during the 2019 waste audit

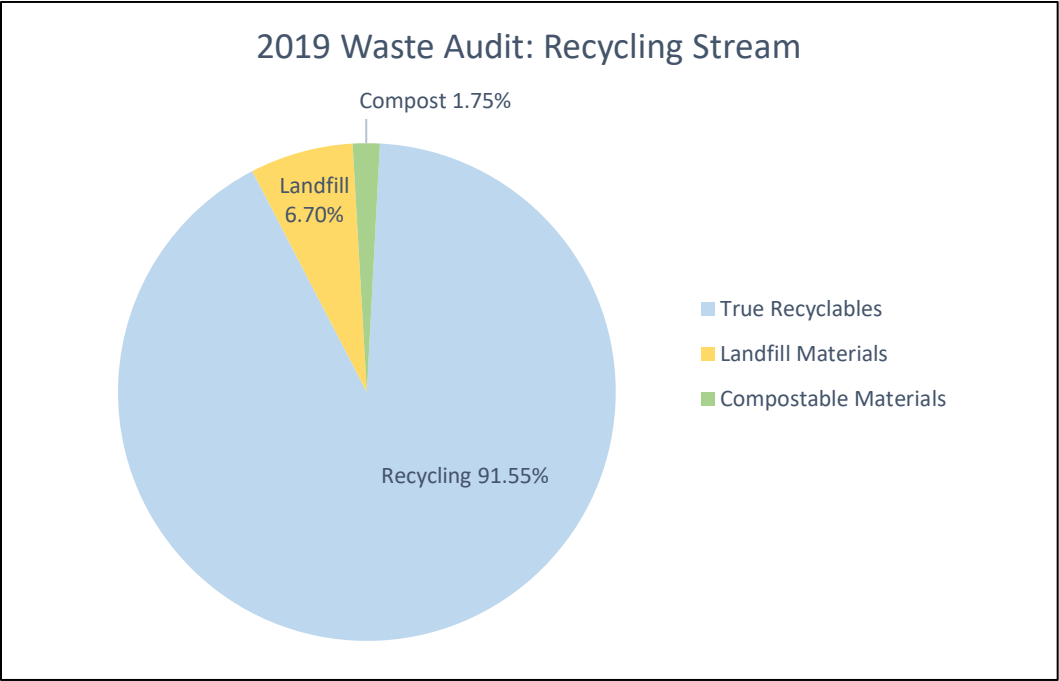


Figure 5. Percentage of materials in the recycling waste stream during the 2019 waste audit

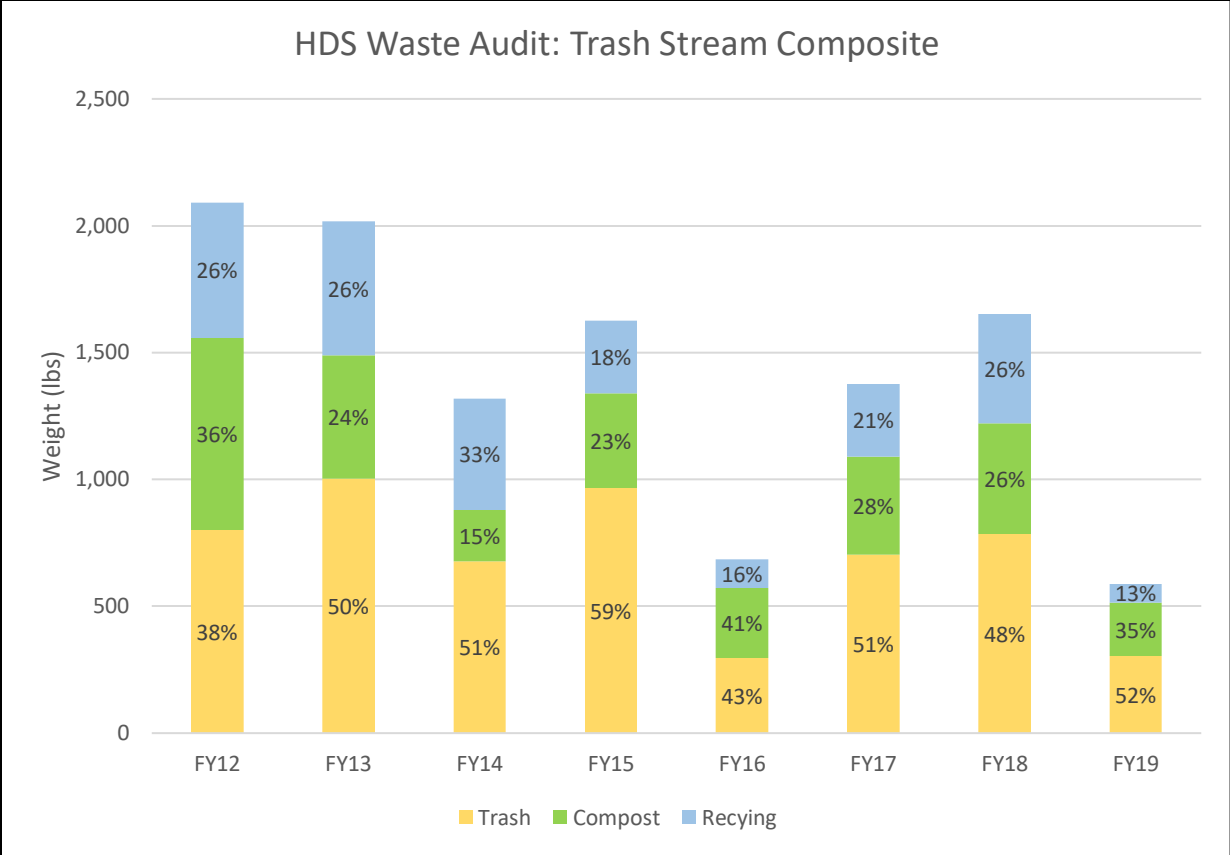


Figure 6: Trash stream waste composite by waste weight, and percentage of total materials

RecycleMania

RecycleMania is an 8-week intercollegiate competition that emphasizes recycling and waste minimization, which occurs during the Spring semester. In 2019, CSU placed number 14 in the Diversion category with a 59% recycling rate for the entire university. CSU is the only institution in Colorado that participates in the Diversion category of the competition.

During RecycleMania, HDS hosts an internal competition for the residence halls and university apartments to compete against each other. The hall and apartment community with the highest recycling rate per student wins the coveted traveling RecycleMania trophy.

Competition Results

- As seen in Figure 7, In the spring 2019 residence hall competition, Ingersoll took first place with a cumulative recycling rate of 54.11 pounds per student. In second place was Braiden with 46.32 pounds of recycling per student. In third place was Edwards with 34.11 pounds per student.
- For the apartment competition, University Village-1700 took first place for the second year in a row, with 96.44 cumulative recycling pounds per student. Aggie Family Apartments took second place with 94.03 pounds of recycling per student. In third place was University Village-1600 with 79.82 pounds per student – see Figure 8.

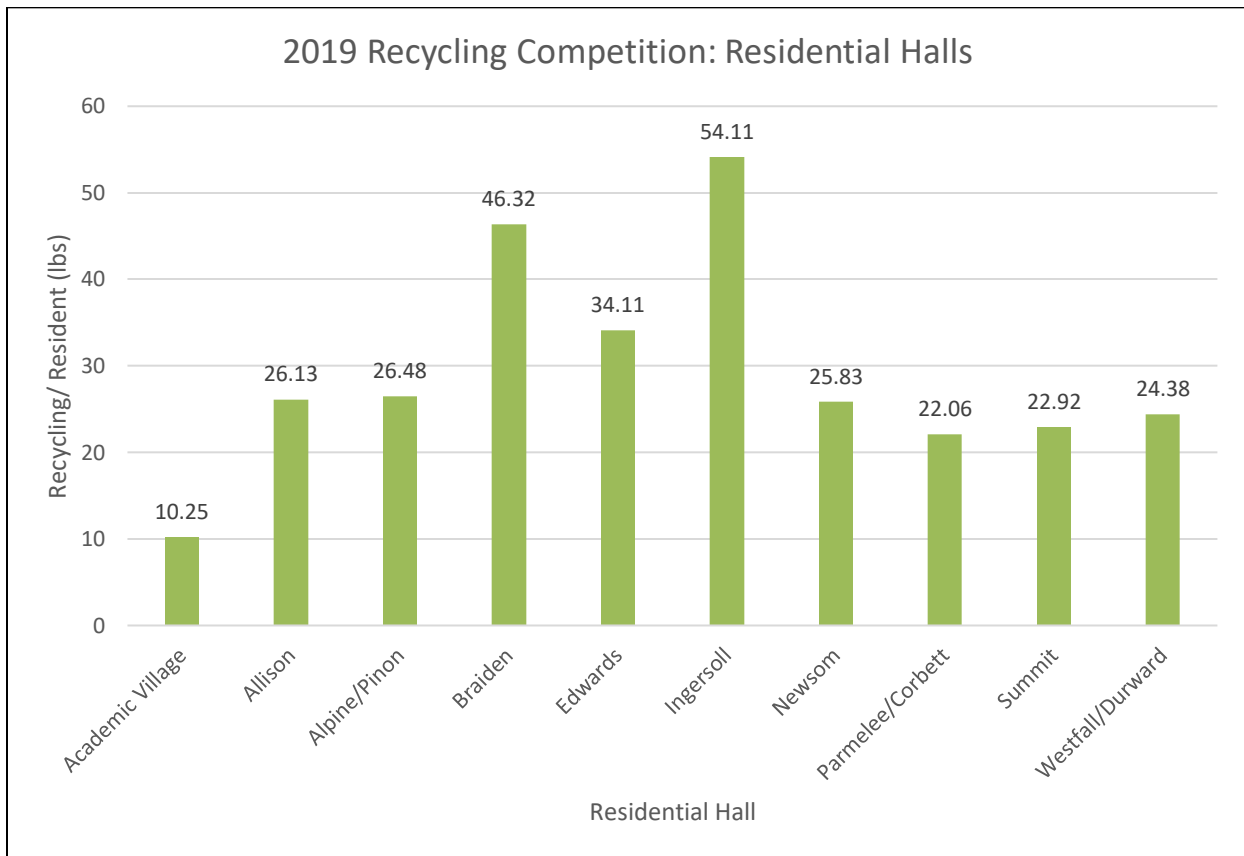


Figure 7. Amount of recycling generated per resident from HDS’s internal recycling competition between residential halls.

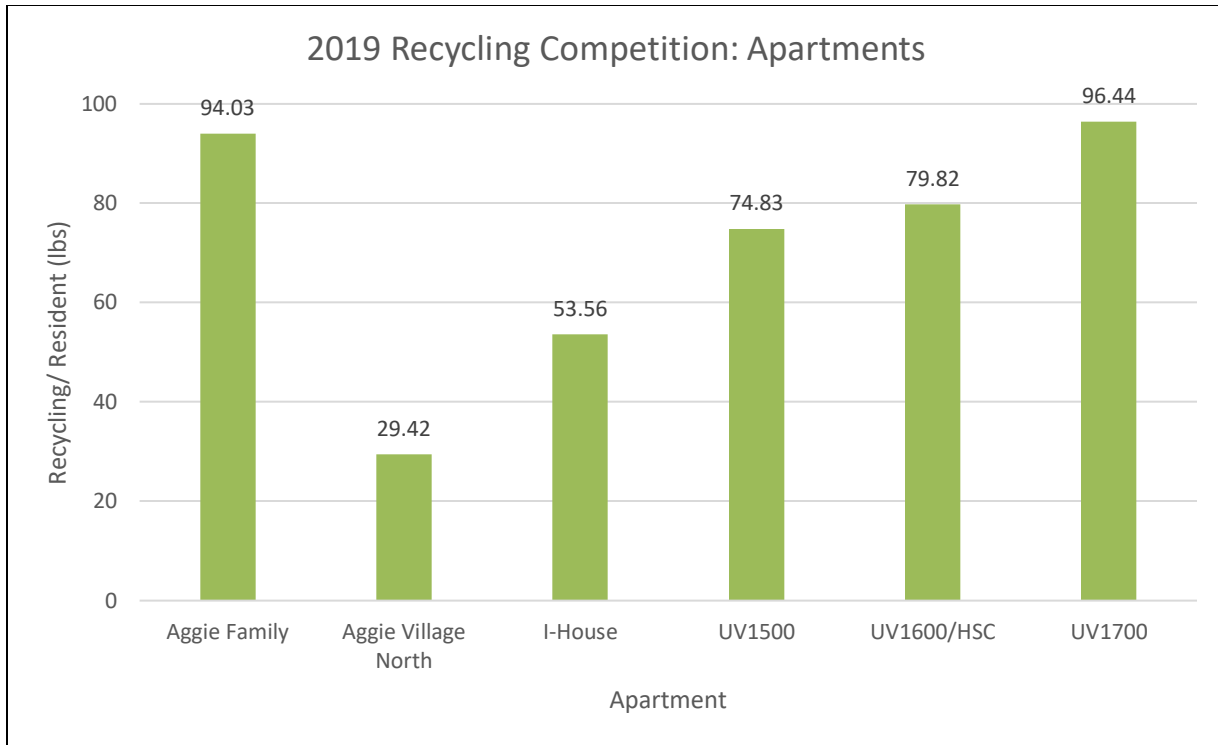


Figure 8. Amount of recycling generated per resident from HDS’s internal recycling competition between on-campus apartments.

Student Move-Out - Pack it, Store it, Donate it

Pack it, Store it, Donate it (previously called 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 them away. “Pack It” encourages students to pack items and take them back home. “Store It” encourages students to store items over summer break to reuse the next year. “Donate it” encourages students to bring items to large trucks conveniently parked outside the residence halls to be donated to local agencies. The program also connects students to a local vendor to store items over the summer.

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

Currently, the program requires HDS Sustainability volunteers and Eco Leaders to collect and pre-sort materials during finals weeks, for distribution to local charities at the end of the week. Accepted materials include clothing, bedding, school supplies, non-perishable food, and small furniture. For the first time this year, we worked with a local vendor to pick up larger furniture items.

This past May, the program collected approximately 35,280 pounds of material, an increase of 10% from Spring 2018 – see Figure 9. This figure includes 3,000 pounds of donated larger furniture items. At the end of the week, collected items were donated and distributed to around 50 local nonprofit agencies in partnership with Homeward Alliance.

Additionally, 39 microfridges and 62 microwaves were collected by Surplus Property.

Given the volume of material donated and thrown out during this student move out event, HDS continues to educate incoming students about what they bring to help reduce consumption and limit waste during Move Out.

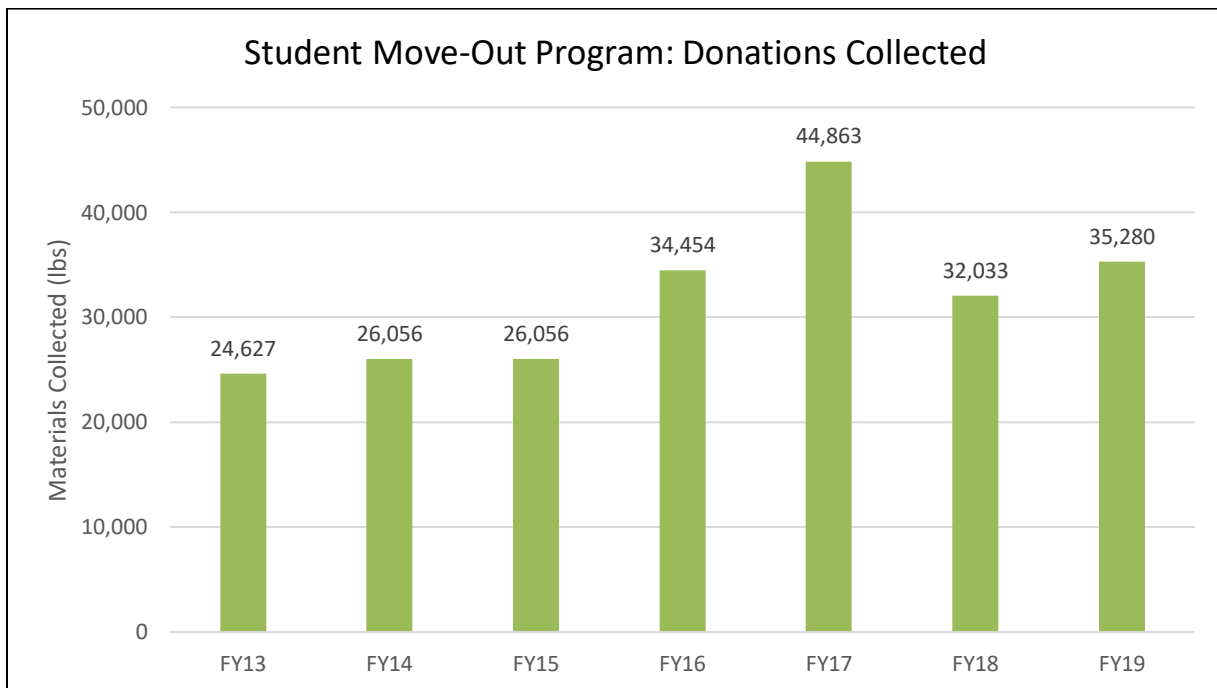


Figure 9: Amount of donations collected during the annual student move out program, this year called Pack It, Store It, Donate It, and donated to Homeward Alliance.

Ongoing Sustainability Initiatives

Food Waste Diversion

- This was our largest year yet for food waste diversion with a total of 680,134 pounds of material diverted from the landfill and composted at the Foothills Campus, approximately three miles west of main campus.
 - During the 2019 fiscal year, Oscar (our 2010 in-vessel composter) diverted 129,720 pounds of food waste from the landfill, which is 37% less food waste than last year and our lowest year ever, due to the transition of the compost intern and the growth of the windrow system - see Figure 10. As a result, a large amount of the food was diverted to the Windrows for processing.
 - In its second year of operation, the windrow composting operation diverted 550,414 pounds of pulped food waste from the landfill this past year – see Figure 11 for the combined food waste of both Oscar and the Windrows.
- 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 of the shadow boxes is now managed by the graduate sustainability intern. This year we also added a public bin in the newly renovated Corbett Lobby, and it was well-received.
- In conjunction with e-waste collection day during Earth week, HDS hosts a composting distribution event, giving away compost generated from on-campus food waste, and processed at the Foothills Campus. Individuals are encouraged to bring one or two five-gallon buckets to collect compost. This year, 75 participants collected approximately 536 pounds of compost to bring home.
- The CSU Mountain Campus continued its diversion of pre-consumer food waste in the kitchen. The specially-designed beer-proof carrier on the trailer allows the bins to be brought down to the Foothills Campus for processing. This program is in its fifth year of operation. The Mountain Campus will continue exploring options for increasing composting of post-consumer food.

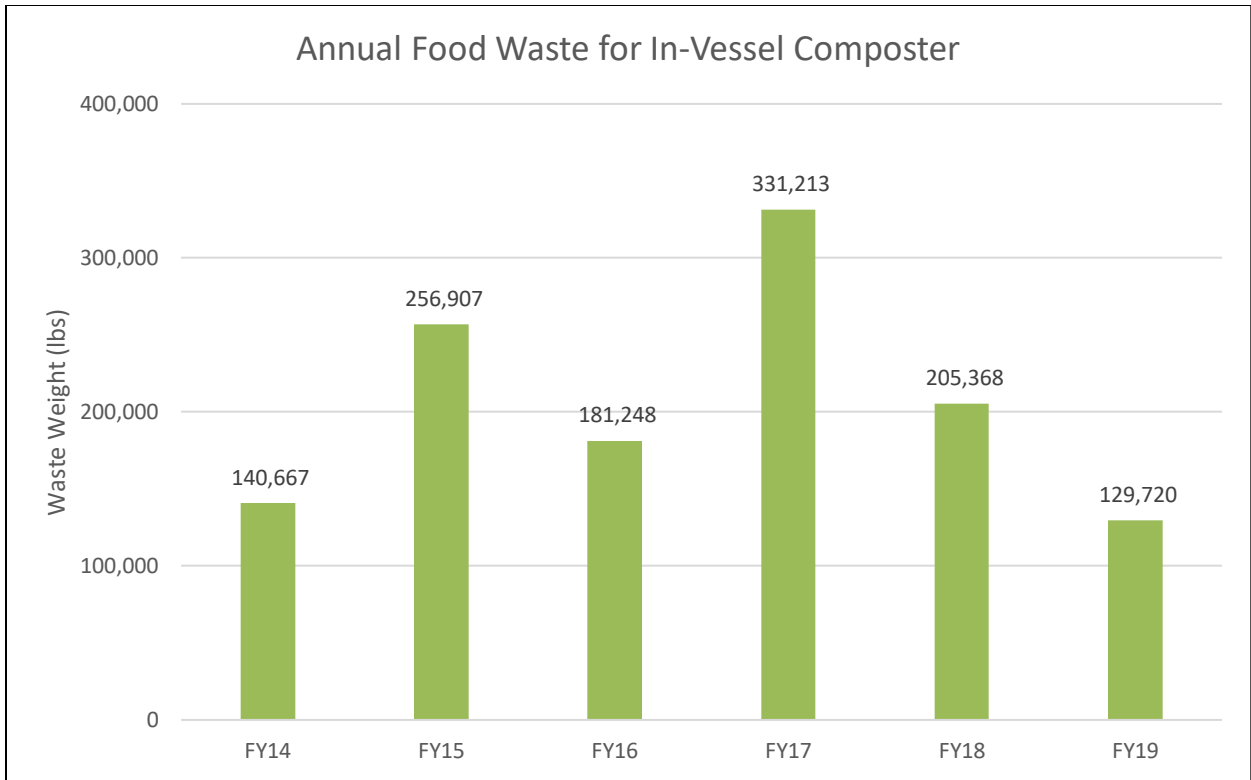


Figure 10. Total food waste each year for the in-vessel composting system (OSCAR).

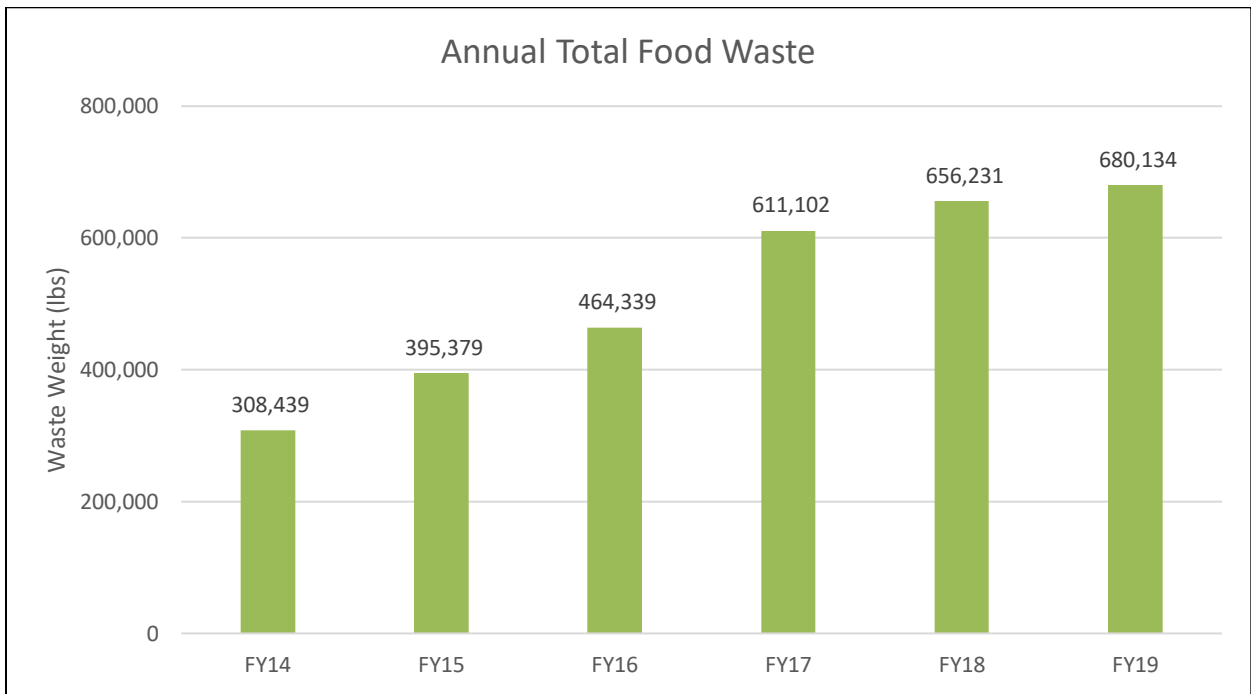


Figure 11. Total food waste processed through the in-vessel composter (OSCAR) and the Windrow system.

Zero Waste Online Game

To further engage and educate students in waste management, HDS designed the Zero Waste Sorting Game) that can be accessed 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. Bamboo toothbrushes (1,000) and bike badges (500) prizes were distributed to incentivize participation. During the eight weeks of RecycleMania, 1,228 residence hall students and 287 Aggie Village students played the online game, resulting in 20% of all hall residents and 31% of Aggie Village student participation. The Zero Waste Sorting Game is still accessible at zerowastegame.colostate.edu for all who would like to play. To measure impact of playing the game, a follow-up survey is distributed to participants.

Survey Results

- 93.4% of students agree that after playing the game they can properly sort recycling, trash, and compost.
- 97% of students said that they will continue to properly sort recycling, trash, and compost using the knowledge learned from the recycling game. This is an increase of 5% from last year.
- Only 15.1% of students would not be interested in participating in the game if there were no prize incentives. This is a decrease of almost 2% from last year.
- 100% of students agreed with the statement that proper sorting of recyclables, trash, and compost is an important skill for everyone to have.
- Nearly 92% of students agreed that HDS provides adequate recycling and landfill stations for residents.
- 78% of students believe that the recycling game is more effective in raising awareness about waste management than RecycleMania. This is the same percentage as last year.

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 our water table. Techno Trash bins are now a requirement in any LEED certification.

For the sixth year during Earth Week at CSU, Surplus Property hosted an electronic-waste collection event in collaboration with the compost giveaway day. This event invited CSU faculty, staff, and students to bring any old, broken, or unwanted electronics (within a certain size limit) to be properly disposed of or recycled at no cost. Surplus collected 467 pounds of items including computer monitors, TVs (flat screens), computers, and printers, which is a decrease from 1,152 pounds of materials collected last year. For next year, additional communication and marketing will be in place to encourage the CSU community to participate in the e-waste collection.

In fiscal year 2019, HDS diverted 17 electronic items from the landfill including computer monitors, computers, phones, servers, printers, cellphones, and laptops through on-campus e-waste recycling. This is a large decrease from 149 items from last year, signifying that HDS may be keeping electronics for longer durations, purchasing more reliable electronics, or redistributing items to other areas in need of those items first before recycling them.

Window Drape Recycling

Drape recycling is an ongoing program for HDS. In December 2018, 63 boxes or 2,835 pounds of drapes were recycled and diverted from the landfill. The drapes come from our residence halls and apartments throughout HDS.

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 as part of their student fee package. 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 2019, the RamCard office recycled about 46 pounds of cards.

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 different procedures such as composting all food waste and providing compostable take away containers, HDS will continue to drive sustainability in its daily work.

Food Diversion Events

Environmental Eats

HDS aims to promote more sustainable food choices by spreading knowledge and information about different foods and their impacts. In its second 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 5 themes highlighted this year include sustainable seafood, insect diets, blended burgers, grown on-campus produce, and local honey from the Durrell hives. In FY19, 780 students attended the Environmental Eats events, with over 200 students participating in the local honey event.

Plate Waste Audit

For the fifth year in a row, a plate waste audit was conducted in the fall and spring to determine food waste trends throughout the year. Across all five HDS dining halls, during the lunch times (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 plate waste audit reported 0.41 cups of food waste per student per meal, and the Spring audit showed a slight decrease to 0.40 cups of food waste per student – see Figure 12. Ongoing efforts, including food samples, and education on taking only necessary foods, drive the decrease of food waste seen throughout the dining centers.



Figure 12. 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 like 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 the campus policy was changed, and the Ram Food Recovery Program was founded to create a method to safely offer leftover HDS catered food to people experiencing food insecurity. When food is available, Dining Services Catering sends a text alert to individuals who have signed up to participate in the program. Individuals have a 30-minute window to pick up leftover food by bringing their own reusable containers. During the pilot period in Spring 2018, 18 food pick-up opportunities were offered, and more than 1,000 members of the campus community joined the distribution list. Catering reported that up to 50 people came to one pick-up event and food waste was drastically reduced. The pilot program was so successful that Ram Food Recovery is now a permanent program.

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 22,242 pounds of food, resulting in 380,531 total pounds of food donated to the Larimer Food Bank since 2013.

Sustainable Food – Local & Organic Options

The living lab partnership with the CSU Horticultural Center is now in its second year. The Center began growing greens in Fall 2016 for the dining center salad bars at Durrell and Corbett, and in fiscal year 2019, produced 4,075 pounds of greens. In total, the Horticulture Center has produced 7,045 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 initiative was student-driven and marks the first time HDS dining centers are consistently bringing organic foods to campus.

Recycled Cooking Oil

Cooking oil from all the dining centers is collected after use and recycled as biodiesel. Dining Services partners with a local company and recycled 28,807 pounds of used cooking oil this past year. Since fiscal year 2013, Dining Services has recycled a cumulative amount of 185,361 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 hall visitors also have the option to select reusable to-go containers (in addition to disposable compostable containers) that can be used and returned to any dining halls for washing to further eliminate waste. To reduce disposable cup waste, all students living in the residence halls are given 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.

Electricity and Energy Overview

In FY19, HDS used 21,587,852 kWh of electricity, which is a 7% increase from FY18, although the student population only slightly increased from about 8,300 to 8,400 students living in the residential halls. This is seen as business as usual. Overall, HDS’s overall electricity use per student has increased slightly from the previous year – see Figure 13.

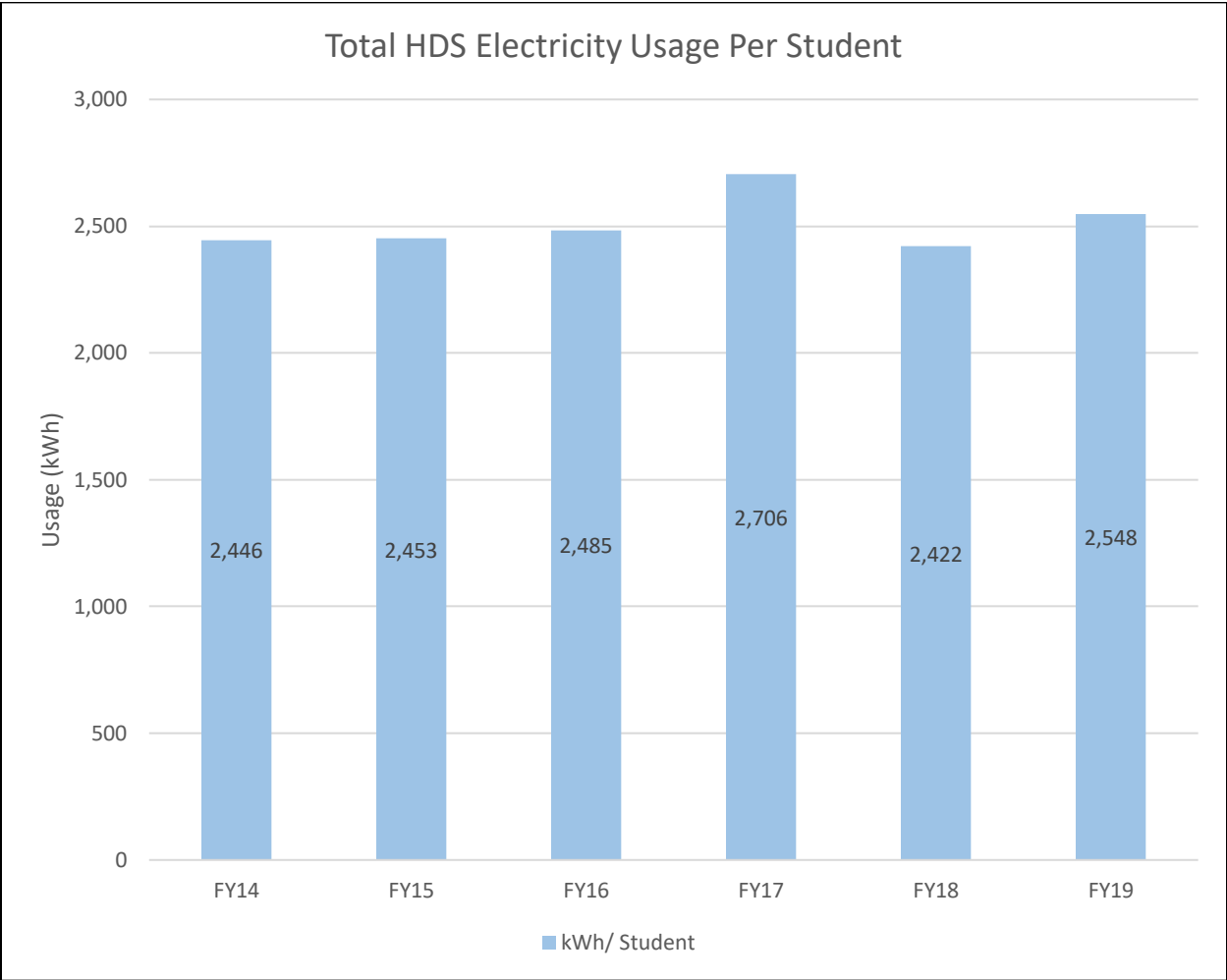


Figure 13. Total amount of electricity use per student in the residential halls

Likewise, in FY19, HDS’s energy usage increased 25% from FY18, with similar percentage increases when calculating energy use per building gross square footage – see Figure 14. This can be due to various reasons such as weather extremities, aging building conditions, and student behaviors.

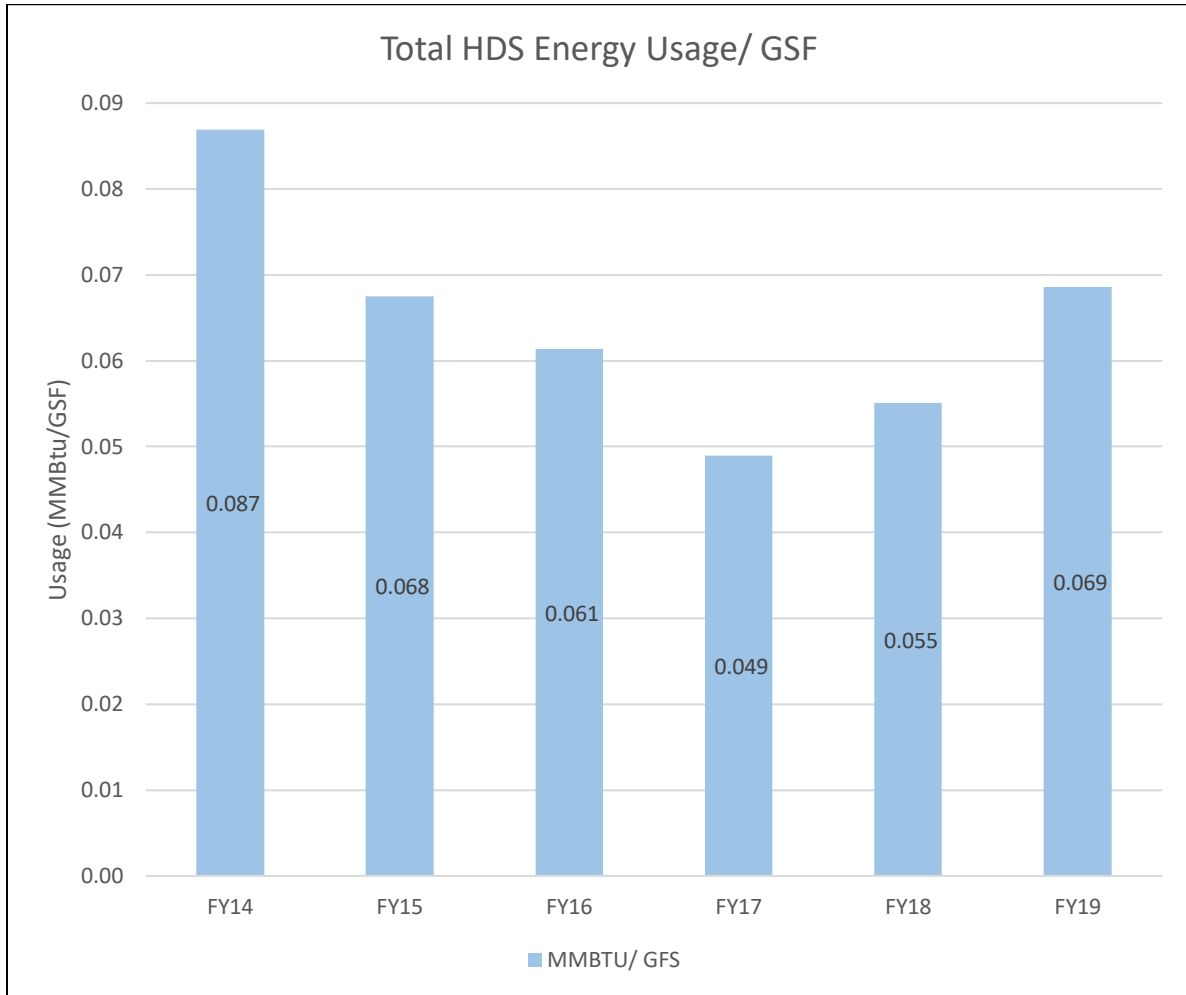


Figure 14. Total amount of energy usage per HDS building gross square footage.

Energy Efficiency and Engagement Events

Green Warrior Campaign

Each fall, with the assistance from our Eco Leaders, a peer engagement student group, HDS hosts a Green Warrior Campaign, bringing public awareness to sustainable behavior choices for students living on campus. By committing to becoming 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 first time in Fall 2018, Green Warriors had the option for students to plant trees rather than collect prizes, and as a result, 3,372 trees were planted through the Arbor Day Foundation in 2018. Green Warrior started in Fall 2011 with only residence halls (then only 11 halls), with Aggie Village joining the campaign in 2017. Each year, HDS encourages all Eco Leaders to gather more pledges and engage with more residents than the previous cohort.

In fall 2018, 15 residence halls and Aggie Village, with a total of 7,179 residents, had the opportunity to become a Green Warrior. Through Eco Leaders, 2,509 students participated in the campaign, which is an all-time high for the campaign – see Figure 15. This indicates that 35% 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 choosing to do many sustainability actions. The top 5 student pledges were:

1. Turn off lights in rooms that are not in use.
2. Turn off water while brushing teeth and shaving.
3. Carry and use a reusable water bottle.
4. Use a recycling bin in your room or apartment.
5. Do laundry in full loads and use cold water.

Within the 15 residence halls, Eco Leaders engaged with 2,165 resident, representing 35% of the resident hall population. The highest participation rates by residential halls were Academic Village: AV Honors (62% participation), AV Engineering (60% participation), and AV Aspen (52% participation).

Similarly, the Aggie Village Eco Leaders engaged with 344 apartment residents, or 37% of Aggie Village, which is a 5% increase in participation from last year. The highest engagement was in the Lodgepole building with 42.3% 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.

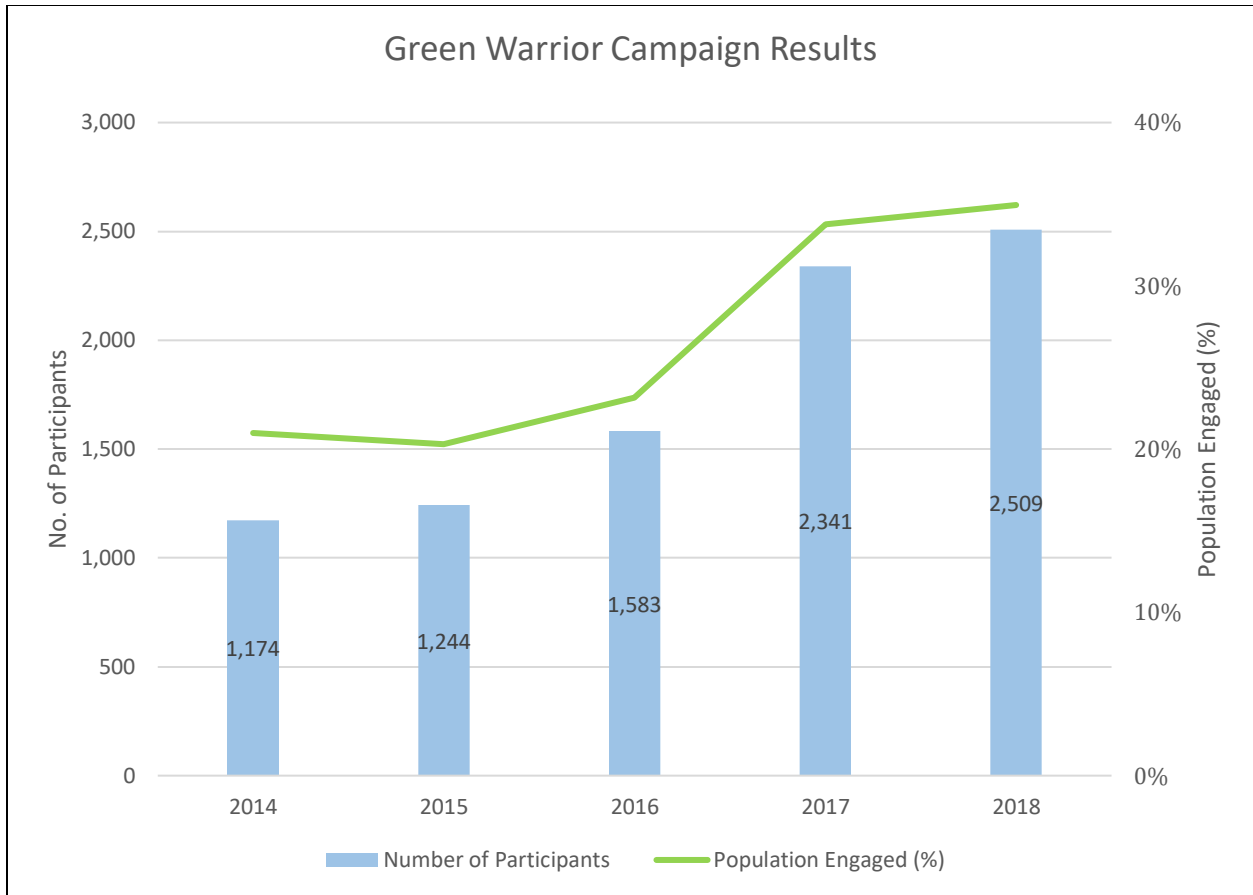


Figure 15. Total number of Green Warrior Pledges, and its corresponding percentage of students engaged in all on-campus student housing.

At the end of the 8-week campaign, HDS sends out a survey to all pledgers – Green Warriors – to gather program feedback, as well as ongoing behavior change due to the Green Warrior Program.

Green Warrior Resident Hall Survey Results

- 77% of Green Warriors agreed that the program gave them a better understanding of the definition of sustainability from an environmental, social justice, and economic lens.
- Over 95% of Green Warriors said they will continue the behaviors that they pledged to in the long-term.
- Without the incentive of prizes, roughly 63% of Green Warriors agreed they would still participate in the program.
- Over 95% of Green Warriors agreed that it is important to engage students in sustainability programs.
- About 86% of students agreed that sustainability is a priority in residence halls.

Green Warrior Aggie Village Survey Results

- About 70% of Green Warriors agreed that the program gave them a better understanding of the definition of sustainability from an environmental, social justice, and economic lens.
- Over 93% Green Warriors said they will continue the behaviors that they pledged to in the long-term, a 13% increase from last year.
- Without the incentive of prizes, over 63% of Green Warriors agreed they would still participate in the program.
- Nearly 97% of Green Warriors agreed that it is important to engage students in sustainability programs.
- Nearly 85% of students agreed that sustainability is a priority in the apartments.

Ongoing Sustainability Initiatives

Green Power

In FY19 HDS purchased 4,500 MWh of green power for all public areas of the department, including dining centers, administrative offices, lobbies, and lounges. Since 2004, HDS has consistently purchased renewable energy credits for all its public spaces.

On-Site Renewable Energy

HDS on-site solar includes 300kw installed on the roofs of Braiden, Parmelee, and Edwards residence halls, which generated 445,826 kWh of energy in FY19. Although we do not receive the renewable energy credits for the solar panels in our greenhouse gas inventory as the panels are owned by a third party, it does feed into the City's electric grid. 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 helps 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, building new facilities, or xeriscaping. Water management is also a subtopic in the Green Warrior Campaign, encouraging students to take shorter showers, and reduce water use when possible.

HDS's water usage has remained relatively stable in the last four years as seen in Figure 16.

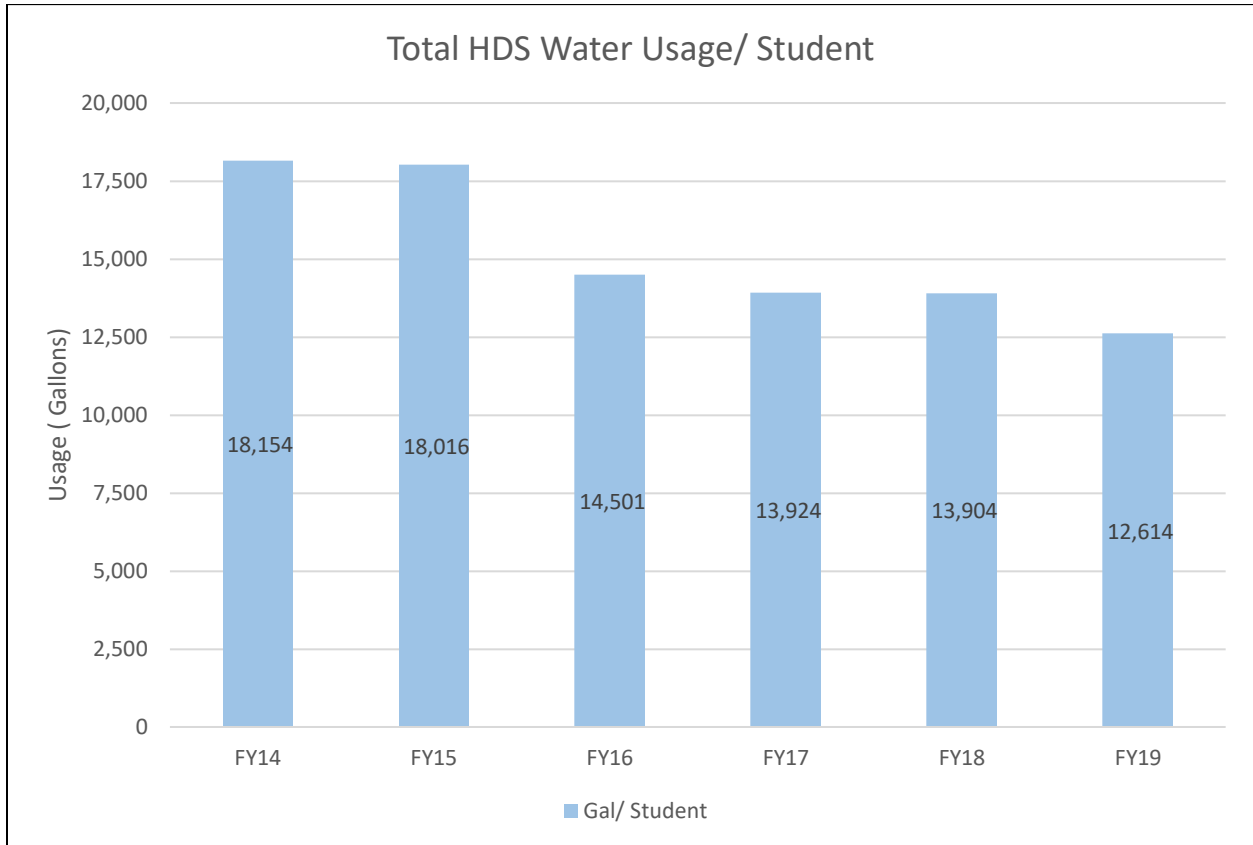


Figure 16. Total amount of water use per student in the residential halls

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.

Water Bottle Filling Stations

There are currently 31 water bottle filling stations within HDS and has filled over 153,949 bottles in the last fiscal year. To date, the water bottle filling stations have helped avoid the use of over 780,882 plastic water bottles.

Alternative Transportation

Every year HDS looks to increase the percentage of students and staff using all forms of alternative transportation. As a Platinum Bicycle Friendly University, with thousands of 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, there are numerous ways students, faculty, and staff can reduce their carbon footprint by choosing to not commute with a gas-powered vehicle.

Ongoing Sustainability Initiatives

Bicycling

Housing & Dining Services has over 7,000 bike spaces on approximately 580 bike racks throughout the department and have 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.

Fifty-seven percentage of on-campus students bought a car/ vehicle parking permit in FY19, a two percent decrease from last year. Roughly 43% of those students purchased annual parking permits, the other 57% purchased semester, monthly, or daily permits indicating a commitment to alternative transportation at least part of the year. The percentage of on-campus residents who purchase a vehicle parking permit continues to decline, as vehicle parking becomes more limited and sustainable transportation options expand.

Electric Vehicles

HDS has two Nissan LEAF fleet vehicles in the fleet available for employees to check out for work-related trips. Over the past fiscal year, the vehicles racked up a total of 9,305 miles. That's the distance of driving from CSU main campus to Brazil and back!

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.

In FY16, Laurel Village installed its first charging station, and has installed two more stations this past year. The three charging stations provided 6,319.64 kWh of electricity to electric vehicles in FY19, which is 3,291.791 kWh more (or 109% increase) from last year. This is likely due to the additional stations installed in the past year. Cumulatively, the three stations have charged 14,501.27 kWh of electricity since its 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. During the 2018-2019 ski season and ten weekends, 499 students rode the bus to Keystone, Copper Mountain, Steamboat, Breckenridge, Arapahoe Basin, Vail, and Winter Park ski resorts through this service. This is a 63% increase from the 187 students that rode the shuttle in the 2017-2018 season. Additionally, of the ten weekends SkiSU provided service, shuttles for six weekends were operated at full capacity, indicating students are not only utilizing, but also maximizing the service.

Sustainable Operations

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

LEED Certified Buildings

To date, HDS has certified 7 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.
CSU's first LEED Gold residence hall.
- 2. Durrell Dining Center**
2014: Achieved LEED Certified for Commercial Interiors – Gold.
- 3. Summit Hall**
2014: Achieved LEED Certified for Existing Buildings: Operations & Maintenance (EBOM) – Gold
CSU's first LEED EBOM certification.
- 4. Laurel Village: Pavilion**
2015: Achieved LEED Certified for New Construction - Platinum.
The first LEED Platinum building at CSU.
- 5. Laurel Village: Alpine and Pinon**
2015: Achieved LEED Certified for New Construction – Gold.
- 6. Aggie Village Apartments**
2016: Achieved LEED Certified for New Construction – Gold.
- 7. Corbett Lobby and the Foundry Dining Center**
2019: Achieved LEED Certified for Commercial Interiors – Gold.

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 energy and resource conservation efforts within Housing & Dining Services and to provide a funding mechanism for grassroots sustainability initiatives and related education and outreach projects. 75% of the fund is designated for direct energy savings/resource conservation efforts that have a high return on investment, while 25% is designated for small-scale projects that promote sustainability projects in our facilities. The sustainability fund committee votes with majority rule, to fund proposed projects. Projects must be within HDS and be novel ideas.

During this fiscal year, the sustainability fund committee allocated \$35,915 dollars to the following projects:

- Environmental Sensors for Campus-Grown Food: \$14,500
- Developing Sustainable Consumption Mindset: Design & Merchandising Educational events: \$6,115
- Max R Bins Waste Stations: \$13,300
- Aggie Village Check-Out Compost Bins: \$2,000

Live Green Team

The Live Green Team is a group open to HDS staff, and students as well as campus partners at CSU that is dedicated to sustainable initiatives. This year, the Live Green Team's programs included: RecycleMania, Composting, Pack it, Store it, Donate it and Earth Week. The Live Green Team and HDS successfully became a part of the Sustainable Purchasing Council with funding from the HDS Sustainability Fund.

Areas of Focus for 2019-2020

Hire an Energy Manager – 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.

Revamp the Sustainability Fund – The sustainability fund committee is often asked to provide feedback on potential sustainability fund projects. Oftentimes, the committee has to decline a sustainability project proposal due to an existing project (i.e. department electric fleet vehicle); however, novel projects are increasingly difficult to brainstorm and implement as HDS has successfully implemented so many projects over the years. We will explore new methods to continue supporting new projects, while also exploring ways to enhance/grow existing initiatives and provide gap funding (i.e. cost difference between a gas vehicle and an electric vehicle).

Achieve STARS Platinum – In February 2020, CSU's current Platinum STARS rating will expire. During summer and fall 2019, the President's Sustainability Commission will collect data and write narratives on the university's sustainability performance through an environmental, social, and economic lens. HDS is a critical part of this effort. The university is aiming for its third STARS platinum rating, and if successful, will be the first institution in the world to achieve this feat.

Acknowledgements

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!