



UC Santa Barbara

SUSTAINABILITY

2018-2019 ANNUAL PROGRESS REPORT

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We had yet another stellar year in sustainability accomplishments thanks to our dedicated staff, amazing students, and remarkable faculty. Some highlights from this past year include completing another 1.2 MW of solar installations, bringing the campus to 6.2MW of solar installations, which provides approximately 15% of our electrical demand. Housing, Dining, and Auxiliary Enterprises received a California Higher Education Sustainability Conference (CHESC) best practice award in sustainable food service for establishing the new Miramar Food Pantry, which offers fresh produce and other healthy food options to students in need. We also opened the Student Farm and are now growing produce that is utilized by students via the Food Pantry. Two other important accomplishments include completing the replacement of 61 soft-plumbed, single-pass cooling systems, saving approximately 2.93 million gallons of water per year, and establishing a bike share program for the campus. In this report, we have a number of important initiatives underway in 2019-2020 that will continue our improvements and promote higher standards in environmental health and quality of life for our campus and community.



BUDGET

In 2018/19 campus sustainability received funding from the following:

UNIT	ALLOCATION
Chancellor	\$88,000
Executive Vice Chancellor	\$10,000
Administrative Services	\$58,000
Housing, Dining & Auxiliary Enterprises	\$40,000
Carry Forward from 2017/18	\$22,912
TOTAL:	\$218,912

Funds were expended as follows:

ACADEMIC SUPPORT	
Chancellor's Sustainability Interns	\$14,154
Faculty Sustainability Champion	\$25,000
New-Leaf Curriculum Incentive Program	\$6,000
STAFFING	
Sustainability Director @ 25% time	\$25,613
Web Support @ 10% time	\$8,684
Intern Program Staff @ 60% Time and Academic Senate Sustainability Work Group Staff Support @ 15% Time	\$43,174
LabRATS Director @ 40% Time	\$37,712
Student Internships (LabRATS, PACES, Living Lab, Zero Waste, Undergrad Researchers)	\$28,098
Supplies for internship Program	\$5,399
CONSULTANTS & MEMBERSHIPS FEES	
Third Party Consulting for GHG emissions verification	\$6,418
STARS Reporting Tool	\$450
COMMUNICATIONS	
Communications Expenses	\$1,779
Communications Interns	\$8,878
Staff Sustainability Award	\$416
CONFERENCE AND PROJECT SUPPORT	
Central Coast Sustainability Summit	\$3,200
MAINTENANCE	
Maintenance for UC Santa Barbara Hydration Stations	\$7,827
TRAVEL	
UCOP Meetings, GCLC Meetings, I2SL, CHESC	\$16,547
TOTAL EXPENSES:	\$239,349



Campus Surveys

As part of our responsibility to track progress and trends in campus behavior, we typically conduct two annual surveys that help us gauge improvements. Survey results for 2018/19 have been completed and include:

- A transportation survey that captured how faculty, staff and students commuted to and from the campus, including Annual Vehicle Ridership (AVR). This is required by the Office of the President, and it is also vital in calculating campus Greenhouse Gas (GHG) emissions.
- A survey of student attitudes and actions towards matters of sustainability on campus. Undergraduate attitudes are surveyed on odd years and faculty, staff, and graduate students are surveyed on even years.

Awards and Rankings

- The League of American Bicyclists has recognized UCSB as a Gold Level Bicycle Friendly University (BFU). The campus has held this designation since 2011, when the award program was first launched.
- UCSB won a 2018 Best Practice Award in the

annual Energy Efficiency and Sustainability Awards contest presented at CHESC for our project to increase on-site renewable energy generating capacity tenfold through a multi-site PPA.

- UC Santa Barbara received a Two-Star EPEAT Purchaser Award from the Green Electronics Council for its leadership in the procurement of sustainable IT products. UC Santa Barbara was recognized for its purchases in two IT product categories: PCs and Displays, and Imaging Equipment.
- The campus received a Cool Planet Award from Southern California Edison (SCE) and The Climate Registry.
- UCSB won a 2019 best practice award in sustainable food service for Housing, Dining, and Auxiliary Enterprises' Miramar Food Pantry.
- Sustainability Coordinator, Katie Maynard, was awarded the UC Sustainability Champion Award at the 2019 California Higher Education Sustainability Conference.

Certifications

- University Center (UCen) Catering was re-certified with the Santa Barbara Green Business Program with support from the PACES Program.

- In 2018, the new Bioengineering building received a LEED Platinum Certification in New Construction.

Community Engagement

UCSB Sustainability hosted the following key events:

- The 8th Annual Central Coast Sustainability Summit took place at UCSB in fall 2018 –The Central Coast Sustainability Summit is an annual conference and the goals include sharing best practices and building collaborations to address complex environmental and economic issues in our region. The event brings together key stakeholders from local government agencies, elected officials, chambers of commerce, nonprofit organizations, campuses, utility companies, and private companies. The keynote speaker was Angelina Galiteva, Founder and Board Chair of Renewables 100 Policy Institute. Our focus topics for 2018 included waste management, building electrification, climate resiliency, and sustainable transportation.


Other Activities:

- The Edible Campus Program launched a

coalition of 14 campus and community gardens with support of the Santa Barbara Foundation called the Isla Vista and UCSB Garden Community.

- Edible Campus Program partnered with the University United Methodist Community Church to launch a new community garden and partnered with the St. Michael's University Church and Cafe Picasso to significantly expand an existing community garden.
- Edible Campus Program is on the steering committee of the Santa Barbara Edible Education Symposium (SBEEES), the annual meeting was held in October 2018.
- UCSB Sustainability Coordinator, Katie Maynard, is a member of the Higher Education Food Security Impact Group of the Santa Barbara County Food Action Plan where she co-writes grants and works on collaborative projects with SBCC and Allan Hancock College.
- FoodCycling at UCSB recovered 11,210 lbs of food at local gleaning events in partnership with Food Forward and donated all of the food to the Santa Barbara County Food Bank.





UCSB Sustainability hosted the following events aimed at developing and building on statewide partnerships:

- UCSB hosted the 18th annual California Higher Education Sustainability Conference in July 2019. This conference brings together the University of California, California State University, California Community Colleges, and private and independent colleges in California to share best practices and discuss statewide policy and collaborative opportunities. Almost 700 people attended including students, staff, faculty, and administrators.

UCSB Change Agent Leadership on UC wide Committees

- Co-Chair of the UC Sustainable Operations and Green Laboratory Working Group, Katie Maynard
- Co-Chair of the Best Practices in Campus Gardens and Farms Working Group, Katie Maynard
- Co-Chair of the UC Sustainable Procurement Working Group, Heather Perry
- Co-Chair of the UC Climate Change Working Group, Jewel Persad
- Co-Chair of the UC Waste Working Group, Matt O'Carroll
- Chair of the Staff Engagement and Climate Action Planning Pillar of the Global Climate Leadership Council, Jewel Persad
- Co-Chair of the UC-CSU Knowledge Action Network, Dr. John Foran
- Member of the Global Leadership Council, David Lea
- Member of the Systemwide Sustainability Steering Committee, Garry Mac Pherson

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CAMPUSWIDE SUSTAINABILITY UPDATES BY FUNCTIONAL AREAS

ACADEMICS

Accomplishments (2018/2019)

- Selected Dr. Jeffrey Hoelle, Anthropology, as the Faculty Sustainability Champion 2019-2020
- Provided financial support for Dr. Simone Pulver, as the 2018-2019 Faculty Sustainability Champion to launch the Environmental Leadership Incubator (<https://www.news.ucsb.edu/2019/019488/ideas-action>)
- 3 New Leaf Awards given out to faculty in Linguistics, Theater & Dance, and English to support them in infusing sustainability into their courses.
- Hosted tours of the Edible Campus Program Student Farm and campus gardens for 243 students in courses from departments including Anthropology, Environmental Studies, Religious Studies, and Interdisciplinary Studies.

Ongoing Initiatives

- Implementation of the UC Carbon Neutrality Initiative and UC Global Food Initiative Fellowship Programs
- UC-CSU Knowledge Action Network, a joint effort of UC and CSU educators, Co-Chaired by UCSB's Dr. John Foran to scale and intensify California students' literacy in climate change, climate justice, carbon neutrality/greenhouse gas emissions reductions, and sustainability.

Looking Forward



- First piloted in 2018-2019, the UCSB Environmental Studies Program is fully launching a new program called the Environmental Leadership Incubator (ELI) in 2019-2020. According to the overview document this will be, "...a year-long leadership experience organized around a core course with student-initiated team projects addressing local to national environmental challenges. While ELI will be housed in Environmental Studies, it will be open to any student with junior standing from any discipline. The ELI will support projects across the domains of social activism, technology development, and policy change."
- With the opening of the Edible Campus Program Student Farm in February 2019, UCSB has a new space for hands-on learning and engagement with the natural world. Throughout the upcoming year, Edible Campus Program will be launching new partnerships with faculty at UCSB, early childhood education, and K-12 programs.

ENERGY & CLIMATE

Accomplishments (2018/2019)

- In 2018, 1.2 MW of Solar was installed. There is now over 6.2 MW of Solar installed on campus.
- In April 2019, Over 22,000 faculty, staff, and students participated in the Cool Campus challenge! 7.6% of the entire UC system population successfully reduced 10,220 metric tons of CO₂e in self-reported actions. Of the 22,000 participants, 1,531 were UCSB students. In addition to the Cool Campus Challenge, UC Santa Barbara held a residential hall & apartment complex energy competition which used the campus Energy Dashboard¹ to track real-time electricity use for each building. Santa Catalina Hall took first place with over 4,194 kWh of electricity savings in April. Manzanita followed, saving 1,429 kWh of electricity and securing their position in second place.
- In 2018/2019 TGIF allocated \$112,897 towards the following energy projects:
 - CCBER NCOS Solar (\$50,000) - Funds will help construct a 24.5 KW Solar Panel system on the south facing roof of a maintenance shed currently under construction on North Campus Open Space.
 - Electric Leaf Blower (\$20,403) - The grant funding will be used to replace gas powered grounds maintenance equipment such as leaf blowers with electrical equipment.
 - Rob Gym Water Laundry Conversion (\$16,638) - Funding will be used to add an Ozone cleaning system to the two industrial laundry machines in Robertson Gym. This system will shorten wash cycles and allow all laundry to be done using cold water, significantly lowering natural gas, water, and electricity use.
 - Lighting upgrade IV Theater (\$10,635) - This project will upgrade the dimmable incandescent lighting system in Isla Vista Theater. The project will save 7,056 kWh in lighting energy, 2,328 in cooling energy, and over three metric tons of CO₂-equivalent greenhouse gas emissions, annually.
 - Reducing Energy Consumption at Valentine Reserve (5,221) - Funding will be used to replace some of UCSB's Valentine Eastern Sierra refrigerators, which are aged over 20 years old, reducing electric energy consumption. Replacing the old, inefficient refrigerators is estimated to save 8,692lbs of CO₂ emissions
 - TGIF Equipment Rebate Program (\$10,000) - TGIF is offering \$4,000 rebates (while funds last) to labs that recycle their old ULT freezers and buy an Energy Star model, and \$1,000 rebates for replacing old equipment (commercial refrigerators, washers and dryers, dishwashers, etc.) with Energy Star Models.
- Conducted a feasibility study of local projects that could be certified as offsets and submitted several projects for grant funding through the UC Carbon Neutrality Initiative. Three UCSB initiatives projects have been selected to submit extended proposals for funding of up to \$70,000.

¹ <https://engagementdashboard.com/ucsb/ucsb>



Ongoing Initiatives

- On April 25th, 2019 the California Public Utilities Commission approved the four-year, \$20 million pilot program that provides financial incentives to select CSU and UC locations to identify and implement actions to reduce greenhouse gas (GHG) emissions. UC Santa Barbara joined four other UC campuses and medical centers and two California State University campuses on this first-of-its-kind, performance-based GHG reduction program.
- Continue to implement energy efficiency actions in buildings and infrastructure systems to reduce the location's energy use intensity by an average of at least 2 percent annually.
- Continue to promote energy conservation through LabRATS, PACES, the Cool Campus Challenge, and other energy competitions.

Looking Forward

- Explore potential grant collaborations for energy storage on campus.
- Participate in the UC Systemwide program that allows non-direct access campuses to buy into large renewable energy projects at the statewide level.

FOOD

Accomplishments (2018/2019)

- 826 total students (and 459 unique students) participated in workshops on Food, Nutrition, and Basic Skills.
- 374 total students attended a workshop or class tour with the Edible Campus Program, and 352 students volunteered for the program.
- Edible Campus Program student interns knocked on 586 apartment doors to tell students about the Isla Vista and campus gardens and/or to leave a door knocker with information on how to get involved in the gardens.
- The Food Security and Basic Needs Task force, staffed by UCSB Sustainability, made 70,128 direct contacts with students over the past year and 121,908 contacts when online (website, email, and social media) contacts are added.
- The Edible Campus Program Student Farm

broke ground in October 2018 and had its soft launch in February 2019.

- Seven faculty brought their students to one of the Edible Campus Program sites for a workshop or tour.
- In FY 18/19, both UCSB Residential Dining and University Center retail operations exceeded 20% sustainable food spend. UCSB Residential Dining procured 33% sustainable food and UCSB's University Center procured 23% sustainable food.
- In FY 18/19, UCSB Residential Dining procured 23% organic produce.
- In FY 18/19, UCSB Residential Dining purchased 47% sustainable produce. 39% of the produce traveled less than or equal to 250 miles, and 30% traveled less than or equal to 150 miles from campus.

Ongoing Initiatives

- Edible Campus Program has received a multi-year grant from the Johnson Ohana Foundation to establish and grow the Student Farm and its educational initiatives.
- FoodCycling at UCSB is now an established student-led organization collecting food before it becomes waste at campus eateries, leading gleaning events in the local community, and educating students on the issue of and solutions to food waste.
- The Food Security and Basic Needs Task force, staffed by UCSB Sustainability Coordinator, Katie Maynard, has transitioned into an ongoing state funded budget giving the program consistency moving into the future.

Looking Forward

- UCSB Sustainability will be partnering with the Food, Nutrition, and Basic Skills Program to develop an environmental curriculum to infuse into each session of their introductory cooking series launching in the Fall.
- Residential Dining Services will be launching a new food recovery program at Portola Dining Commons in 2019-2020.
- The Edible Campus Program Student Farm will be hosting a grand opening in October 2019.





LANDSCAPE & BIOTIC ENVIRONMENT

Accomplishments (2018/2019)

- Two areas landscaped with the invasive *Nassella tenuissima* were replaced a native cultivar of *Leymus condensatus* known as Canyon Prince at Bren and the Student Resources building.
- North Campus Open Space Restoration was the recipient of a TGIF award to study carbon sequestration in association with biochar and perennial grasslands. In addition Cap and Trade funds are supporting a study of gas fluxes in the estuary.
- TGIF also funded the installation of solar panels on the NCOS maintenance shed which will power all of the open space area vehicles and equipment sustainable.

Ongoing Initiatives

- Residential Operations and Facilities continue to replace sprinklers with low water use types.
- CCBER Produces NCOS News a mailchimp

newsletter that promotes sustainability and information about native landscapes, wetlands, climate change and biodiversity to 620 subscribers monthly and is forwarded to the bionews list serve which reaches several 100 more biologically inclined staff and faculty.

- Residential Operations and Facilities Management continue to move towards using more electric/battery powered equipment such as leaf blowers to reduce noise and fuel use.

Looking Forward

- CCBER has submitted a proposal to convert 2.5 acres of annual grassland to perennial grassland and wetlands and to document the carbon sequestering benefits of that on some campus grasslands and has submitted a grant request to the Campus Carbon Neutrality Initiative to conduct more perennial grass restoration on campus and in collaborating partner areas.

PROCUREMENT

Accomplishments (2018/2019)

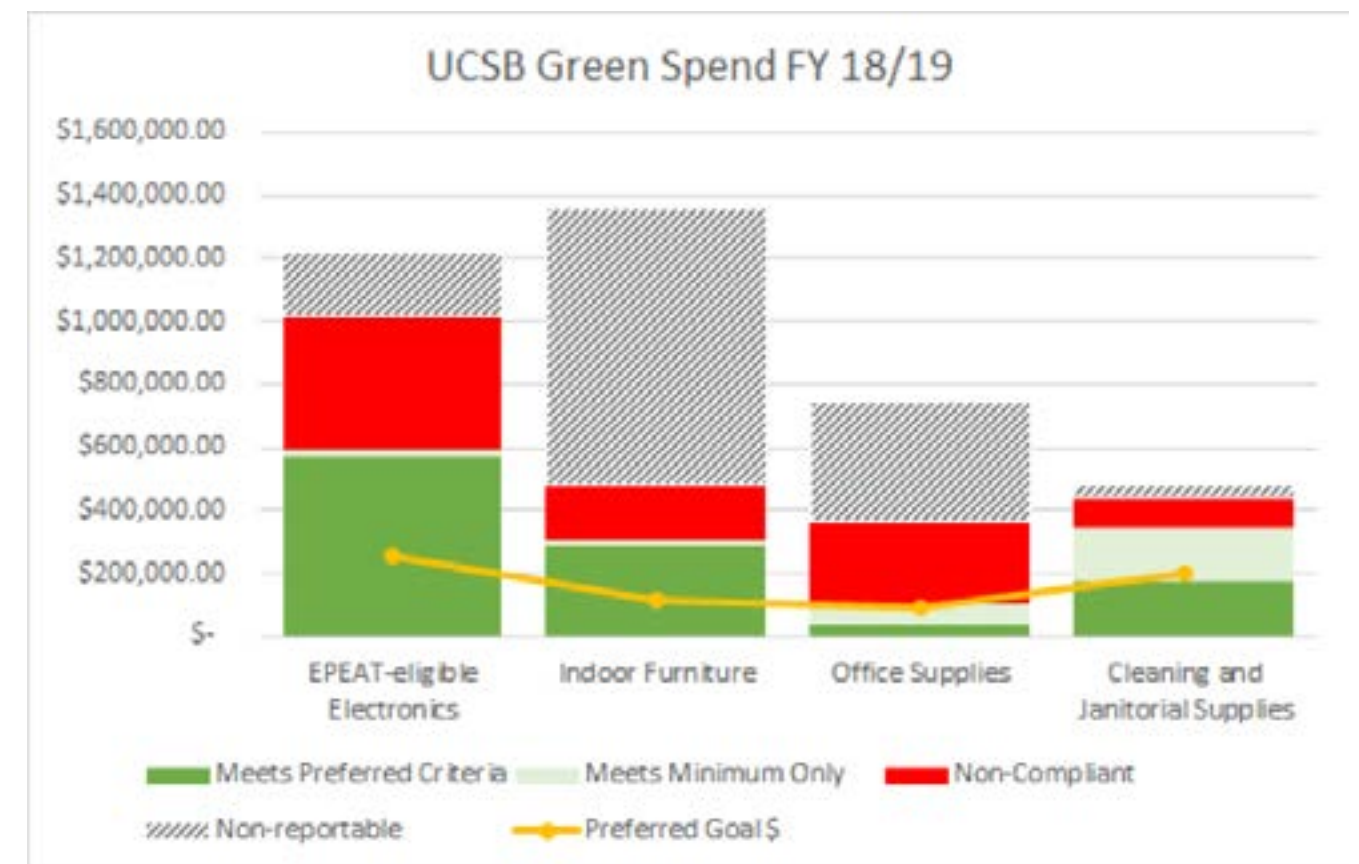
UCSB successfully completed a majority of the goals and projects discussed in last year's Annual Sustainability Report. These goals primarily relate to new requirements in the 2018 update of the UC Sustainable Procurement Policy and Guidelines, as well as new initiatives in areas of Green Cleaning and Supply Chain. In particular, the following projects were accomplished:

- Update of all internal campus forms and websites ([Sustainable Procurement](#) and [Small and Diverse Business Program](#)) to align with the new Sustainable Procurement Policy
- Development of a Sustainable Procurement Webinar Training, offered every other month through the UC Learning Center, aimed at educating department buyers on new requirements and goals of the UC Sustainable Procurement Policy and Guidelines, including goals for Minimum and Preferred Green spend, goals for spend with Economically and Socially Responsible

suppliers, and the UC foam ban.

- Active participation on the UC Sustainable Procurement Working Group (SPWG); Heather Perry, UCSB Procurement Services, became a co-chair in August 2018, and continuing to present annually at the Sustainable Procurement Leadership Council Summit, staying at the forefront of Sustainable Procurement best practices for higher education.
- Successful implementation of the 15% requirement¹ for sustainability in almost all competitive solicitations prior to the July 1st, 2019 implementation date, with the following breakdown of sustainability weights in Fiscal Year 18/19 RFPs:

¹ As of July 1st, 2019, all RFPs must allocate a minimum of 15% of the points in their Best Value evaluations to sustainability questions/criteria. Criteria may include, but is not limited to, sustainable product attributes, supplier diversity, supplier practices, contributions to health and wellbeing, and materials safety. For more information, see the UC Sustainable Practices Policy, pg. 13, Section III. G. 5. a.



- Arundo Removal (15%)
 - Arundo Treatment (10%)
 - Arundo Bird Monitoring (3%)
 - Limited Landscaping at Devereux (37%)
 - DCS Program Management Software (15%)
 - Custom Air Handling Units (10%)
- Major contributor of robust sustainability technical specifications and evaluation questions in the system wide Furniture, Flooring, and Elevator Maintenance RFPs, all of which will become national cooperative purchasing agreements.
- Surpassed Green Spend goals for categories prior to the 3-year target date.

- Microbial Based Cleaning Project Completion - Through collaboration between staff and researchers across Procurement, Grounds and Custodial Services, and The Holden Laboratory at the Bren School of Environmental Science and Management (Bren), with funding from vendors and the UC Healthy Campus Network, a study was developed and conducted to analyze the efficacy of a safer, less toxic product for restroom cleaning and disinfection. The study is based on the knowledge that human associated bacteria dominate the microbial community of the built environment (including restrooms), but common methods adapted for cleaning and disinfection of restroom surfaces are based on often hazardous chemical compounds. Recent studies have found that probiotic Bacillus-based cleaners are active in controlling surface microbial contamination and in lowering drug-resistant species (Caselli et al. 2016), but

In addition to fulfilling the above goals targeted last fiscal year, the following projects were completed:

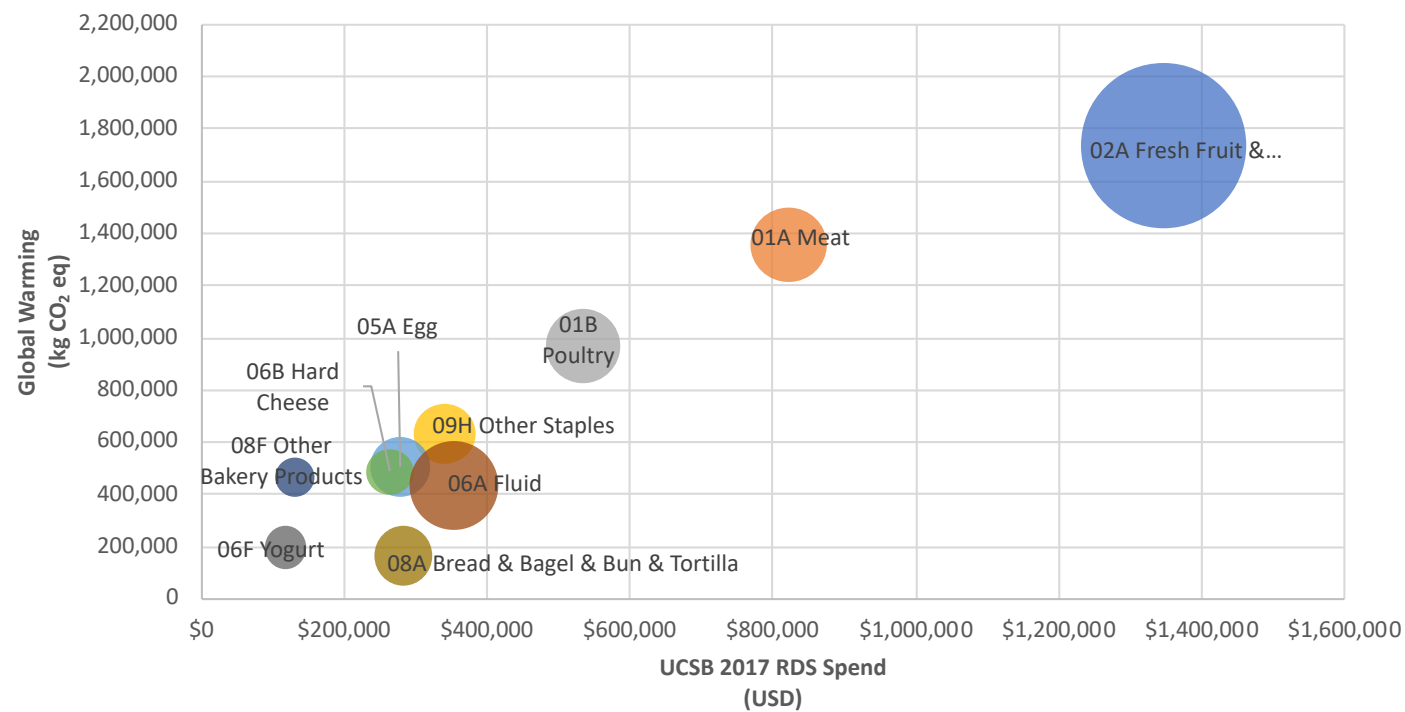


Figure 2 (above): Top 10 Climate Change Impacts from 2017 Residential Dining Purchases. The y-axis shows the global warming potential of each food category, measured in metric tons of CO₂ equivalents. The x-axis shows the amount spent on each food category. The size of each bubble is reflective of the CBORD category's weight in pounds. Note that if the CBORD category Fresh Fruit and Vegetable were split by equal parts Fruit and equal parts Vegetable, the greenhouse gas emissions from each would be 674 metric tons, less than the greenhouse gas emissions from CBORD categories Meat or Poultry.

the application of microbial based cleaning products (MBCPs) on hard surfaces as a routine cleaning procedure in public restrooms is relatively untested. This study tested the efficacy of selected MBCPs by evaluating the presence and reduction of selected microbes on restroom floors by culture-based and molecular methods. Differences in elimination of pathogens and microbial community shifts across two selected MBCPs, based on their product composition (species and concentration of Bacillus spp.) were evaluated. The following results were found:

- Significant reduction of selected bacterial populations (Staphylococcus spp.) in the selected restroom floors after the application of MBCPs
- Significant reduction of potential pathogens (16S rRNA gene - sequencing method) in selected restrooms floors after the application of MBCPs
- Differences in elimination of pathogens and microbial community shifts were similar between the two tested MBCPs
- Further studies are required to understand the prevalence of other microbes (virus, fungi)

A final published manuscript on this work is anticipated over the next year, and Procurement and Grounds and Custodial Services continue to utilize the knowledge of campus students and faculty to make informed decisions about safer, less toxic cleaning products.

- Dining Services Supply Chain Spend Analysis - Procurement, The Bren School of Environmental Science & Management (Bren School), and Residential Dining Services (RDS) partnered to conduct a supply chain spend analysis. A Bren School Graduate student funded through TGIF applied an economic input-output life cycle assessment

methodology to evaluate the environmental impacts of the \$6.3M of food purchased in 2017 by RDS. Two areas, greenhouse gas emissions and human health impacts resulting from the production of food, were chosen for the analysis based on concerns about climate change. It was hypothesized that demonstrating a food's human health impacts from production, in addition to its associated greenhouse gas emissions, might draw otherwise disinterested students into awareness and action around climate change if health was more important to them. Using the food categories defined by RDS' procurement system, CBORD, the student found that the largest categories for both food spend and greenhouse gas emissions were:

- Fresh Fruit and Vegetable with \$1.35 million in spend and 1,740 metric tonnes CO₂ equivalents
- Meat with \$821,745 in spend and 1,350 metric tonnes CO₂ equivalents
- Poultry with \$532,878 in spend and 967 metric tonnes CO₂ equivalents
- The overall impacts from food purchased in 2017 by RDS was:
 - Global warming potential - 8,236 metric tonnes CO₂ equivalent
 - Human health cancer-causing potential (from production) - 0.00809 CTU cancer
 - Human health cancer-causing potential (from production) - 0.3592 CTU noncancer
 - The analysis concluded that while the greatest global warming potential appears to be from purchases in the CBORD category Fresh Fruit and Vegetable, there is a greater opportunity to reduce emissions by lowering spend on the categories of Meat and Poultry. RDS is actively engaged in creating meals with lower carbon-emitting foods, and encourages students to choose non-meat and non-poultry options, using promotions like "Meatless Mondays." Further research into what combination

of food purchases would minimize impacts while maximizing nutrition content would be beneficial.




- EcoVadis Supplier Assessment Pilot Project - UCSB Procurement’s contribution on the EcoVadis project team were awarded the Starlight Award by UCOP Procurement Leadership Council. The award recognizes the contributions to the innovative sustainability scorecard that will help UC access scalable and accurate information on the sustainability attributes of supplier partners. These supplier scorecards can now be shared across campuses and leveraged with UC suppliers to encourage specific and measurable improvements in their corporate social responsibility practices in alignment with the UC’s sustainability goals.

Ongoing Initiatives

Several ongoing initiatives continue to make progress since last fiscal year. New tools and guides are being developed to help improve the ability for campus buyers to identify and select sustainable products and suppliers in Gateway e-procurement catalogs. These efforts are being worked on internally as well as with external partners, and include the following:

- Product Flagging - UC Green Preferred product icon that had been added to cleaning and janitorial products that meet the UC’s Green criteria. User’s can apply the Advanced Search function to filter by products that have this green leaf Custom Attribute flag. A similar Custom Attribute flag identified LED bulbs that were awarded as part of the Million LED Challenge. UCSB’s efforts initiated a system wide project team to extend these efforts and apply this attribute to other UC hosted catalogs.

- A similar flag  was created to indicate suppliers who have gone through a rigorous assessment of their corporate social responsibility practices through EcoVadis, and have scored above average across the industry. This Supplier Class flag is viewable using the Suppliers Advanced search capability in Gateway.
- Supplier Flagging - UCSB Procurement also initiated a pilot project with a third party that provides a curated shopping platform for users to search for products that meet the UC’s Required or Preferred Green criteria. This third party site allows users to find all compliant products, without having to do their own due diligence to look up or cross-check third party product attributes and certifications.
- Spend Classification - Several other Gateway enhancements are improving Sustainable Procurement capabilities at UCSB. By transitioning from Level I to Level II UNSPSC coding for commodity codes in Gateway, Procurement now has the real potential to conduct a comprehensive spend analysis following the model used in the Residential Dining Supply Chain Spend Analysis. This improved ability to capture product and service classification codes for all purchases in Gateway may allow for a future Scope III emissions inventory.
- Energy Management Routing - Recognizing that the UC’s Energy Star requirement for equipment is not always followed, a new ad-hoc routing step is being added to Gateway that allows all inventorial equipment purchases over

\$5,000 that are eligible for [Energy Star certification](#) to now be reviewed and approved by the campus Energy Manager. Lists of all Energy Star products offered by UC’s contracted lab supplies distributors are now available on the [Sustainable Procurement](#) website.

- Chemical Surplus in Gateway - Environmental Health & Safety’s Chemical Surplus catalog will soon be available to search just like any other hosted supplier in Gateway. The hope is to advertise these surplus chemicals to the campus for shoppers who may not be familiar with the program, and who would otherwise be looking to buy new chemicals. These chemicals will be available at no cost, and a purchase order will be created and sent to EH&S notifying them of the order.

Looking Forward

The Sustainable Procurement program will continue to expand and grow its ongoing initiatives in providing tools for buyers, guidance for campus, and researching and implementing best practices across the system and beyond.

- Microbiological Testing of Priority Restrooms and Athletic Facilities - Procurement and Grounds and Custodial Services plan to hire a biology student to conduct sampling in priority restrooms and athletic facilities using an NSF International program to validate facility cleanliness and cleaning processes. Results of the sampling will be used to inform any necessary changes to cleaning products or practices to maintain the highest levels of health while minimizing hazardous impacts.

- EcoVadis Local Champ Program - UCSB Procurement seeks to continue its leadership in sustainable supply chain management through an EcoVadis UC-Supplier engagement program that will involve an academic course, student internship, and train-the-trainer sessions with staff/faculty sponsors. The goal is to engage small and medium sized enterprises (SMEs) and support sustainability performance improvement.
- Small and Diverse Supplier Class Flag Overhaul - Procurement plans to utilize one of its paid student interns this year to update all of the supplier diversity flags in Gateway. Only suppliers with reputable government or nationally recognized certifications or self-certification in the federal System for Award Management (SAM) will be flagged, consistent with the Sustainable Procurement Guidelines’ criteria for “Economically and Socially Responsible” suppliers. This will aid buyers searching for small businesses to achieve the goals outlined in their federal small business subcontracting plans, as well as assist campus in achieving its Economically and Socially Responsible spend goal of 25%.
- Integration of Surplus Sales into Gateway - Procurement hopes to integrate campus surplus offerings as an internal hosted catalog in Gateway, that would be able to be searched and prioritized similar to other hosted suppliers. This would help advertise [UCSB Surplus Sales offerings](#) across campus departments to those who may not otherwise shop using the traditional Surplus marketing platforms.



SUSTAINABLE TRANSPORTATION

Accomplishments (2018/2019)

- EV Car Demo
 - Provided three venues in September for employees to learn about electric cars and see the cars on-site
- As phase one of the Central Coast Bike Share Initiative, contracted and implemented bike share at UCSB and in Isla Vista in August 2018. Worked with Public Affairs and created a bike share video to advertise the program. Worked with Financial Aid to provide funding for students in need with annual memberships. Implemented system improvements to pull in the geofencing closer to the bike parking lots, and instigated disincentives for parking out of pond. Identified the six busiest bike parking locations and approved a plan for improved signage and access to the Hoppr bikes. Connected Hoppr to Conference Services and Summer Programs so they could expand ridership to their customer base. Worked with AS BIKES to help implement a bike clearing program. Worked with the City of Santa Barbara providing them documents to assist with their RFP for bike share (planned to go live in 19/20)
- Created interim policy banning scooters from campus
- Created promotional videos highlighting alternative commuting options from the North, South, and in the immediate region

- North
- South
- Nearby

- Held a number of events to help increase bike ridership by faculty and staff that included an E-bike demonstration for faculty and staff that Ken Hiltner presented on E-bike commuting where we also brought in three E-bike vendors for faculty and staff to test ride their products. We also worked with vendors to negotiate discounts for UCSB employees. We also participated in Bike to Work Day and CycleMAYnia and had some team competitions across the campus.
- Completed new bike parking lot at Bren Hall
- Fleet improvements included an increase in both ZEV and Hybrids that now represent 62%¹ of the 2018/2019 light-duty acquisitions.

¹ Current fleet mix: 62% of annual light-duty fleet acquisitions are now ZEVs and hybrids

CURRENT FLEET COMPOSITION

26

Total light-duty fleet vehicles purchased

16

Light-duty zero emissions vehicles (ZEV) purchased

0

Hybrid vehicles (ZEV) purchased

200

Light-duty fleet vehicles

42

Light-duty zero emission vehicles

16

Hybrid vehicles (ZEV)

Ongoing Initiatives

- Continue to provide discount options on alternative vehicles for UC employees
- Assess the annual mode split survey and look for areas of improvement
- Continue to work with local vendors to provide employee discounts on ebikes

Looking Forward

With Electric Vehicle (EV) adoption rapidly increasing, EV Chargers will be added to parking lots 1, 10, 18 and 22 to better meet demand. We currently have 40 EV spaces available and by Spring 2020 an additional 50 EV spaces are planned to go into operation which will bring our total to 90 EV spaces.

- Develop a Sustainable Transportation Master Plan;
- Expand outreach efforts to commuters north and south with alternative transportation options (1 set of outreach material per quarter);
 - [Green your Ride: North County](#)
 - [Green your Ride: From the South](#)
 - [Green your Ride: Nearby](#)
- Collect email addresses from new employee orientation (monthly) and provide an introductory email with information on alternative transportation options for commuting to campus;
- Explore establishing a program with StratosShare to rent hydrogen fuel cell vehicles as car share option;

- Assess the feasibility of providing renewable diesel for campus fleet (we would see at least a 33% GHG reduction with RD);
- Assess the feasibility of installing an E-85 tank;
- Continue assessment of scooters and work with other UC's on policy modifications.
- Continue to provide bicycle safety education;
- Continue to partner with AS Bikes and CSO's on quarterly bike lot clearing program;
- By 2025, zero emission vehicles or plug-in hybrid vehicles shall account for at least 50% of all new light-duty vehicle acquisitions;
- By 2025, strive to reduce our percentage of employees and students commuting by 10% relative to our 2015 SOV commute rates;
- By 2050, strive to have no more than 40% of our employees and no more than 30% of all employees and students commuting to campus by SOV;
- Consistent with the State of California goal of increasing alternative fuel-specifically electric-vehicle usage, promote and purchase and support investment in alternative fuel infrastructure;
- By 2025, strive to have at least 4.5% of commuter vehicles be ZEV;
- By 2050, strive to have at least 30% of commuter vehicles be ZEV;
- Evaluate the feasibility of developing a travel mitigation fund similar to what was developed at UCLA.



WASTE

Accomplishments (2018/2019)

- 665 students received 1,454 articles of free clothing from the Career Clothing Closet, a campus pop-up thrift store that provides students with free clothing for job interviews and the workplace.
- FoodCycling at UCSB picked up 12,286 lbs of food that would have gone into compost and diverted it to the AS Food Bank to feed students.
- LabRATS hosted a waste audit of the Life Science Building to better understand the challenges and opportunities for recycling in research buildings. This was the first audit of Life Sciences since 2009!
- Conducted a large scale audit to determine the feasibility of an organics collection program at UCSB Library. Once results were presented to library staff, they agreed to full roll out in Fall 2019. Outreach and education will be provided for library users this fall.
- A collaboration between Associated Students Recycling, Bren School and Housing resulted in the first organics collection program in an on-campus apartment complex, San Clemente Villages. The majority of residents participated, with a waste reduction of almost 10,000

pounds in the first year. The program also included educational workshops and programming to inform residents about the importance of food waste reduction and composting. In a survey conducted of residents who participated in the program, 87 percent stated that they would continue composting after moving out of their San Clemente apartment.

- Associated Students Recycling partnered with Coral Tree Cafe to conduct a pilot program to restart the reusable clamshell program. The pilot was successful and a full launch we begin in Fall 2019.
- Associated Students Zero Waste Committee planned the 3rd Annual Zero Waste Festival in March 2019.
- Conducted workshops and placed 7 more office kitchens on campus.

Ongoing Initiatives

- PACES, UCSB's Green Certification Program for offices, events, and sports teams (Recreation and Athletic Teams) work with partners across the campus to identify ways to reduce waste and promote recycling within their operations.
- Continuing to build out the UCSB waste infrastructure with 'smart' receptacles that have the ability to report fullness in real time.
- Utilizing on-board front-end loader scales on the MarBorg trucks to identify large generators of landfill waste and focus waste management efforts on those buildings to maximize resources and make meaningful impacts.

LOOKING FORWARD

- Waste Pilot with the Library
 - Fall roll-out of the new bins/locations
 - MLT Intern-focus for the year working on Library compost project and sustainable procurement with departments as

it relates to waste generation, and reusable food packaging outreach

- Piloting the retrofit of existing waste infrastructure with capacity sensors
- Conversion from AS to Custodial on in-building composting
- Reusable Food Packaging Pilot with Coral Tree
- Formalizing San Clemente Composting Program
- Install an additional set of Hydration Station across the campus
- LabRATS is researching new options for waste reduction (such as a move back to the use of glassware over plastics where feasible) and recycling take back programs that would route directly from researchers back to the companies that they originally purchased products from. Through the 2019-2020 year, LabRATS helps to develop an implementation strategy with feedback from multiple campus stakeholders on lab waste.
- Exploring the expansion of the indoor compost infrastructure with service provided by Facilities Management custodial staff
- Piloting the use of clip-on trash cans for offices to replace the desk-size ones currently in place. New clip-on receptacles would not be lined, saving on single-use plastic consumption. Currently piloting project with Design, Facilities & Safety Services, and Anthropology.

WATER

Accomplishments (2018/2019)

- Completed the replacement of 61 soft plumbed single pass cooling systems with recirculating pumps or air condensers, saving approximately 2.93 million gallons of water/year.
- Completed an inventory of autoclaves on single pass cooling with detailed information on current water savings features.
- Updated inventory of restrooms aerators throughout campus, partnering with the Environmental Affairs Board to conduct the audit. The audit results were provided to the Facilities Management plumbing staff to replace inefficient aerators.
- Upgraded automated irrigation software to a new system that allows for the customization of plant and soil types, as well as flow rates to ensure water conservation and efficiency practices in landscaping efforts.
- Increase concentration cycles for cooling towers (Water Action Plan Goal)
- Completed a restroom fixture audit on faucets
- Completed the assessment of the of providing recycled water in Bio II Cooling Tower. . Both the cost and the space issues were not feasible for us to pursue at this time.
- Conduct annual constituent soil samples
- Created and implemented an assessment for stormwater program effectiveness assessment and an improvement plan that includes post-construction design requirements, outreach and education, labeling of existing storm drains, operating procedures, auditing of existing contract documents, design standards, policies,

and procedures to include stormwater compliance requirements. Stormwater- implement new post-construction design requirements.

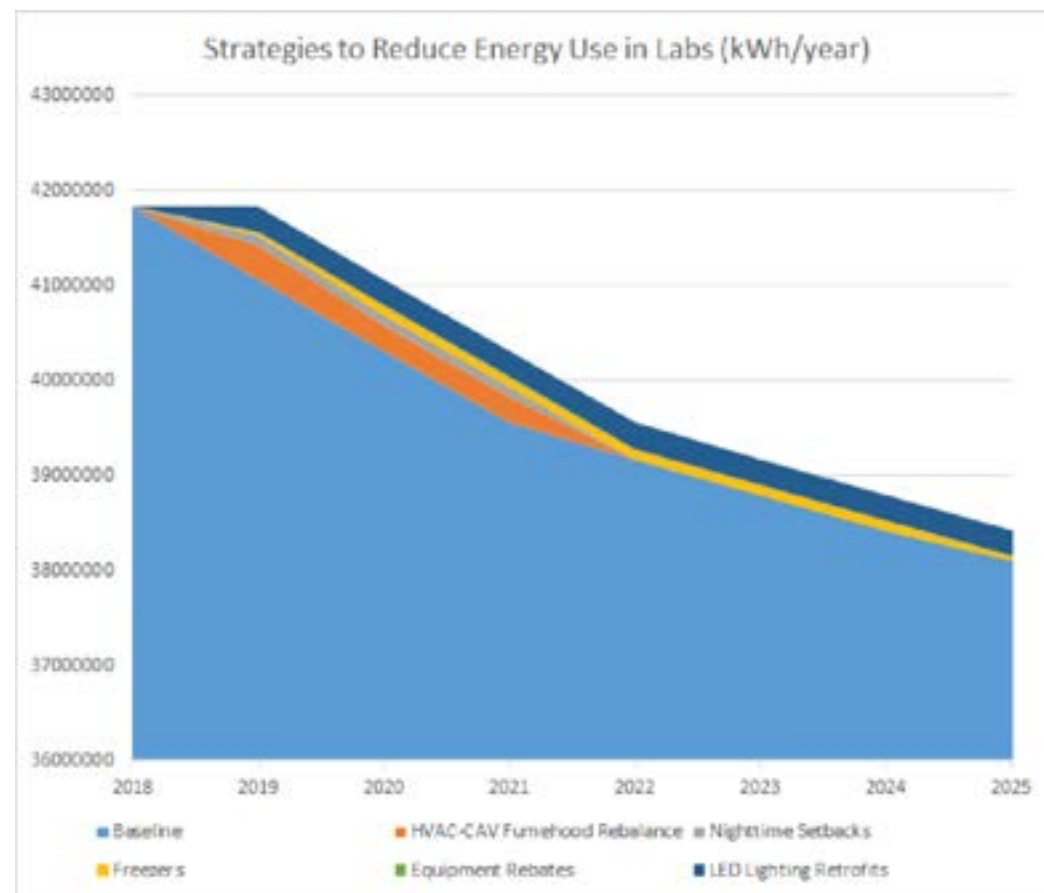
Ongoing Initiatives

- Calibration of Existing Industrial Water Meters

Looking Forward

- In 2019-2020 UCSB LabRATS will add water savings features to at least 4 autoclaves with support from The Green Initiative Fund. An implementation strategy will be developed to retrofit or replace remaining autoclaves using single pass cooling.
- Introduction of a water conservation workshop to help with the aerator retrofit project.
- Continue conversions to recycled water in areas still using potable water for landscaping.

LABS, SHOPS, & STUDIOS



Accomplishments (2018/2019)

- Completed UCSB's first Green Lab Action Plan detailing best practices and ongoing programs, areas of improvement, implementation strategies, and metrics of success.
- 579,086 kWh/year saved in Physical Science Building North (PSBN) as a result of fume hood recalibrations.
- 63,272 kWh/year saved for PSBN and the Chemistry Building total as a result of nighttime setbacks and supply air temperature resets.
- Repurposed approximately 70 student laboratory coats in a partnership with the UCSB Campus Store. In this program, donated laboratory coats are collected, washed, and resold at a lower price for incoming students.
- Please also see the waste and water sections for more accomplishments related to laboratories.



ONGOING INITIATIVES

- LabRATS offers the LabSYNC certification process which highlights what laboratories are doing well, areas of improvement, and resources to support laboratories in creating changes.
- The LabRATS team regularly partners with Purchasing and Facilities Management to review laboratory equipment purchases and make recommendations for more efficient products.

Looking Forward

- 2019-2020 will be focused on expanding on the implementation strategies laid out in the Green Lab Action Plan (GLAP). The LabRATS team will build off of the work in the GLAP to focus on high priority strategies and take the work further through feasibility assessments of specific projects, grant writing, and project development.
- Developing a white paper or peer-reviewed publication on the energy efficiency and research impact of keeping -80 freezers at -70 degrees.

Robertson Gym Water Laundry Conversion (\$16,638)

Funding will be used to add an Ozone cleaning system to the two industrial laundry machines in Robertson Gym. This system will shorten wash cycles and allow all laundry to be done using cold water, significantly lowering natural gas, water, and electricity use.

IV Theater Lighting Upgrade (\$10,635)

This project will upgrade the dimmable incandescent lighting system in Isla Vista Theater, which will provide better light quality, reduce maintenance needs, and be easier to operate for staff and faculty. The project will save 7,056 kWh in lighting energy, 2328 in cooling energy, and over three metric tons of CO₂-equivalent greenhouse gas emissions, annually.

TGIF Equipment rebate program (\$10,000)

The TGIF rebate program encourages departments considering replacing old or buying new equipment (refrigerators, washers and dryers, dishwashers, etc.) to purchase the most efficient model. TGIF offers a \$4000 rebate for replacing old Ultra Low Temperature (ULT) Lab freezers with Energy Star Models. TGIF is also offering efficiency rebate of up to \$1,000 to departments replacing other old equipment with an energy or water efficient model.

Reducing Energy Consumption at Val Reserve (\$5,221)

Funding will be used to replace some of UCSB's Valentine Eastern Sierra over 20 year old refrigerators, reducing electric energy consumption. Replacing the old, inefficient refrigerators is estimated to save 8,692lbs. (or the equivalent) of CO₂ per year.

Cambro Riser Stands (\$2,180)

TGIF funding will be used to purchase stands for Cambros, the insulated beverage containers that UC Santa Barbara uses at events where food is

catered. These stands will elevate the container so that standard reusable coffee mugs or water bottles can fit underneath, decreasing the amount of disposable cups used.

Isla Vista Trading Post (\$1,300)

The funding will provide Isla Vista Trading Post, a student run organization that hosts community trading events, with a permanent location and baskets to enable members to pick up donations on bikes as opposed to cars. This organization limits the waste produced by fast fashion and has the potential to divert over one million pounds of textile waste from the landfill.

CHESC Registration Support (\$7,560)

Funding covered costs for UCSB students to attend the California Higher Education Sustainability Conference (CHESC) July 8th-11th, 2019.

Food Cycling Program (\$1,205)

To ensure the longevity of food recovery operations, TGIF has awarded the FoodCycling program funding to cover the costs of one year of routine bike maintenance and tune-ups, and a new bike, trailer attachment, and cooler so that they can continuously expand service to additional dining locations/cafes (i.e Tenaya Market, Courtyard Café, Coral Tree Café). TGIF also awarded funding to cover the costs of a workshop series on ways to reduce food waste.

HSSB Courtyard Solar Table (\$9,119)

The TGIF grant will help the Division of Humanities and Fine Arts purchase one Sunbolt CampusXL solar tables. This tables, located outside the HSSB, will use solar energy to power student devices, reducing the campus's environmental impact and allowing students to interact with the tangible benefits of sustainable energy.

Orfalea Family Children's Center Solar WorkStation (\$8,819)

The TGIF grant will help Early Childhood Care and Education Services purchase one Sunbolt CampusXL solar table for the Orfalea

Family Children's Center. This will bring clean solar power to the children's center while creating educational opportunities in Science, Technology, Engineering, Art, and Math for the children.

Fostering a Green Generation of student Athletes (\$995)

Funding for this project will be used to support student leaders within sports programs of Recreation and Athletics to attend the PAC 12 Sustainability Conference.

Carbon Sequestration Study (\$15,195)

This grant funding would enable studies at North Campus Open Space to include an assessment of the carbon sequestration potential. This project will help sequester carbon and will empower student participants through hands-on, mentored, research experience in the newly evolving field of "carbon farming".

SSMS 2nd Floor Replacement Hydration Station (\$3,000)

This project converts an existing hydration station on the 2nd floor of Social Sciences and Media Studies to the newer model. This model is more accessible for disabled individuals and allows students to fill water bottles more efficiently, leading to fewer single use water bottle purchases.

Sustainable Tech Repair Pop-up (\$16,812)

The project creates a Sustainable Tech Repair Pop-Up service that provides minor software and hardware repairs of smartphones, tablets and computers for students. The goal is to reduce e-waste by increasing students ability to repair — rather than discard — technology, contributing to UCSB's zero waste goals.

Hatlen Theater Hydration Station (\$3,000)

Grant funding will cover the cost of installing one hydration station unit in Hatlen Theater to help students access water for their reusable containers. Installing a station in an area that currently has none will reduce that amount of single-use water bottles purchased.

Marine Biotech Lab Hydration Station (\$2,782) Grant funding will cover the cost of installing one Elkay filtered bottle filler hydration station on the first floor of the Marine Biotechnology Laboratory, limiting waste production created by single use plastic bottles.

Hydration Station for Education Build (\$3,000)

Funds will go towards the installation of a hydration station in the Education building. This would advance the plan to discontinue having a water bottle delivery service in the building, thus reducing the building's overall environmental impact.

UCen BigBelly Trio at UCen (\$3,500)

Grant funding will be used to cover part of the cost of purchasing a Big Belly Trio for the UCen lawn. By replacing the current Bertha receptacle with a Big Belly trio, it will help minimize pest scavenging and increase diversion away from landfill toward compost. In addition to having a larger capacity than the Bertha receptacle, the Big Belly uses the sun's energy to automatically compact trash at the point of disposal, decreasing the amount of disposal trips needed.