

The background of the cover is a photograph of a large, leafy tree on a grassy campus. The tree's trunk is thick and gnarled, with many smaller branches extending outwards. The leaves are a vibrant green. In the background, other trees and a few people walking on a path are visible. The overall scene is bright and sunny, suggesting a pleasant outdoor environment.

UC Santa Barbara

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# SUSTAINABILITY

2020-2021 Annual Sustainability Report

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To: Chancellor Henry T. Yang

Fm: Chancellor's Sustainability Committee

Re: Fiscal Year 2020/21 Annual Sustainability Report

## MISSION

The University of California, Santa Barbara is committed to global leadership for sustainability through education, research, and action.

## OVERVIEW & HIGHLIGHTS

The academic year 2020/2021 brought many new challenges but also some important accomplishments. These include:

1. In 2021, UC Santa Barbara achieved its fourth AASHE STARS Gold rating. Sustainability Tracking, Assessment & Rating System (STARS) is a transparent, self-reporting framework for colleges and universities to gauge relative progress toward sustainability (including its social, economic, and environmental components).
2. In 2021, UC Santa Barbara was rated No. 16 on Sierra magazine's list of "Coolest Schools." The Sierra Club's official publication recognizes over 200 colleges and universities. UC Santa Barbara also ranked No. 10 on the Princeton Review Guide to Green Colleges.
3. In the 2020 calendar year, UC Santa Barbara's total operational greenhouse gas emissions were 48% below 1990 levels.

In July 2020, UC Santa Barbara joined the UC Clean Power Program. The main campus is now powered by carbon-free electricity, dropping the campus's operational greenhouse gas emissions by 50%.

One of the silver linings to remote work and academics is that it allowed for Transportation and Parking Services and the Associated Students Bike Committee to make a series of sustainable transportation improvements while there were minimal people on campus.

These include:

- Adding additional electric vehicle charging stations. There are now 100 charging stations available for use to the campus community, up from the 23 that were available 2 years ago;
- installing parking occupancy systems; and
- improving bike paths and bike parking.

UC Santa Barbara Sustainability substantially increased our investment of staff time in supporting our students to meet their basic needs through the pandemic. The UC Santa Barbara's Edible Campus Program Student Farm (a partnership of the Associated Students Department of Public Worms, Associated Students Food Bank and the Sustainability Program) was determined to be an essential service and maintained operations through the COVID-19 pandemic. UC Santa Barbara Sustainability also partnered with the UC Santa Barbara Food Security and Basic Needs Taskforce to develop a grocery distribution program to deliver fresh produce and groceries to students who were sick, quarantined, or immuno-compromised.

## BUDGET

Description	2020/2021 Expenses
Staff for Academic Senate Sustainability Working Group and the Sustainability Internship Program Katie Maynard	\$55,694.15
Personnel/Payroll/Purchasing/Financial Staff	\$72,999.57
Chancellor/LabRATS/PACES Sustainability Interns	\$20,233.96
Communications Interns	\$5,607.83
Intern Work Study Fees	\$1,127.09
Comm Supplies & Expenses	\$1,383.39
Chancellor/LabRATS/PACES Intern Supplies & Expenses	
Third party Consultant for GHG Emissions	\$5,750.00
STARS Reporting Tool	
Santa Barbara Regional Climate Collaborative	\$1,000.00
Training/Conference Costs	\$760.50
<b>TOTAL:</b>	<b>\$164,556.40</b>

## 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 the need for improvements. Both surveys were postponed due to the ongoing Covid-19 pandemic:

- A transportation survey that captures how faculty, staff and students commute to and from the campus, including Annual Vehicle Ridership (AVR) was postponed until Spring 2022. This is required by the Office of the President and is vital in calculating campus Greenhouse Gas (GHG) emissions.
- A survey of Faculty, Staff, and Graduate Students attitudes and actions towards matters of sustainability on campus. Undergraduate students are surveyed on odd years and faculty, staff, and graduate students are surveyed on even years. Since the survey was postponed, we now plan to survey Faculty, Staff, and Graduate Students in Spring of 2022 when we survey Undergraduate Students.

## AWARDS & RANKINGS

- The League of American Bicyclists awarded UC Santa Barbara with its highest distinction: the title of [Platinum-level Bike Friendly University](#).
- In 2021, UC Santa Barbara was rated No. 16 on Sierra magazine's list of "Coolest Schools." The Sierra Club's official publication recognizes over 200 colleges and universities.
- In 2021, UC Santa Barbara achieved our fourth AASHE STARS Gold rating. Sustainability Tracking, Assessment & Rating System (STARS) is a transparent,

self-reporting framework for colleges and universities to gauge relative progress toward sustainability (including its social, economic, and environmental components).

- The San Joaquin Apartments complex, a mixed-use improvement project that transformed 15.7 acres of existing surface parking into four new residential and leisure facilities for students and staff, was certified LEED Neighborhood Development Gold, a first for the University of California system.
- The Green Electronics Council (GEC) recognized UC Santa Barbara as a [2021 EPEAT Purchaser Award Winner](#), in recognition of leadership in sustainable electronics procurement.

## COMMUNITY ENGAGEMENT

- In Spring of 2021, UC Santa Barbara began the planning process for a virtual workshop series to guide climate resilience planning on campus through a Justice, Equity, Diversity and Inclusion (JEDI) lens. The workshop series is part of a university-wide initiative to develop a first-of-its-kind framework for JEDI-centered climate resilience across all UC campuses. In Fall 2021 workshop participants (Faculty, Staff, Students, and Community members) had a chance to work closely with campus leadership and diverse stakeholders to directly inform climate resilience and equity-building actions on campus and identify opportunities for community partnerships.

### Other Activities:

- Advisory Board Member for the Santa Barbara County Food Action Network (through December 2020)
- In partnership with the AS Department of Public Worms, formed an Advisory Board for the Edible Campus Program to connect student leaders with local experts
- Member of the Santa Barbara County Regional Climate Collaborative
- Member of the Sustainable Purchasing Leadership Council

## STATE & NATIONAL LEADERSHIP

### UC Santa Barbara Change Agent Leadership on UC wide Committees:

- Co-Chair the UC Sustainable Procurement Working Group, Heather Perry
- Co-Chaired the UC Climate Change Working Group (CCWG), Jewel Persad
- Co-Chaired the UC Waste Working Group, Matt O'Carroll
- Chaired the Staff Engagement and Climate Action Planning Pillar of the Global Climate Leadership Council, Jewel Persad
- Chair the Climate & Environmental Justice Subcommittee of the CCWG, Jewel Persad
- Co-Chair the Carbon Abatement Technical Committee, Jewel Persad
- Chair the newly formed Systemwide Sustainability and Wellness working group, Katie Maynard
- Co-Chair of the UC-CSU Knowledge Action Network, Dr. John Foran
- Member, Global Climate Leadership Council (GCLC) Faculty Education and Engagement (FEE) Working Group, Dr. John Foran and Katie Maynard
- Member, Global Climate Leadership Council (GCLC) Student Education and Engagement (FEE) Working Group, Dr. John Foran and Katie Maynard
- Member, Global Climate Leadership Council (GCLC), Dr. David Lea.

- Member, UC Systemwide Sustainability Committee, Garry Mac Pherson

## CAMPUSWIDE SUSTAINABILITY UPDATES BY FUNCTIONAL AREAS

### ACADEMICS

#### ACCOMPLISHMENTS

- Hosted the Climate Justice Symposium for Transforming Education a project funded by the UC Carbon Neutrality Initiative and the UC Global Climate Leadership Council. This symposium was co-organized by California State University and University of California Faculty. During the symposium, we explored: How to integrate climate justice into higher education curriculum (including into medical school curriculum) and how to scale up these efforts; Community engagement through climate justice curricula; Just and transformative pedagogies; and the role of health in the climate crisis dialogue.
- The Environmental & Climate Justice Studies Research Hub at UC Santa Barbara's Orfalea Center for Global & International Studies with the Support of the Center for Climate Justice at UC Merced hosted the Confronting the Climate Crisis with Systemic Alternatives in the Age of Coronavirus Nearly Climate Neutral Conference (Fall 2020).

#### ONGOING INITIATIVES

- UCSB Sustainability hosts six fellows annually in partnership with the UC Carbon Neutrality Initiative and UC Global Food Initiative Fellowship Program.
- The Environmental & Climate Justice Studies Research Hub at UC Santa Barbara's Orfalea Center for Global & International Studies hosts the UC-CSU KAN NXTerra Digital Platform and Knowledge Action Network. The UC-CSU Knowledge Action Network (KAN) for Transformative Climate and Sustainability Education and Action is a collaborative effort of UC and CSU educators to scale and intensify California students' literacy in climate change, climate justice, carbon neutrality/greenhouse gas emissions reductions, and critical sustainability.
- Member of the UC Global Climate Leadership Council's Faculty Engagement and Education Working Group and the Student Engagement Working Group.
- UCSB Sustainability hosts over 30 student internships in sustainability annually.

#### LOOKING FORWARD

- Propose a Bren MESM Group Project and a Bren Eco-Entrepreneurship Group Project on Electrification of the Campus.

### ENERGY & CLIMATE

#### ACCOMPLISHMENTS

- Joined the UC Wholesale Power Program in July 2020; main campus is now powered by carbon-free electricity and Scope I/II greenhouse gas emissions have been reduced by 50%.
- Accelerated energy efficiency upgrades funded by the Campus Conservation and Reinvestment fund. Work completed and underway this year include three laboratory building ventilation optimization projects, heating system upgrades and electrification, and interior and exterior LED lighting upgrades.
- Participated in year one of the four-year Clean Energy Optimization Pilot (CEOP) with Southern California Edison & SoCal Gas. This four-year \$18 million incentive program provides incentives to CSU and UC locations to reduce greenhouse gas emissions. In the first 9 months of the program UC Santa Barbara reduced GHG emissions by ~1,600 Metric Tons CO<sub>2</sub>e.

## ONGOING INITIATIVES

- UC Santa Barbara is a participant in the Clean Energy Optimization Pilot (CEOP) with Southern California Edison & SoCalGas.
- 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. Through the Conservation and Reinvestment Fund, the campus has a mechanism for investment of savings delivered by previously implemented energy efficiency projects into additional energy efficiency upgrades.
- Continue to promote energy conservation through LabRATS, PACES, the Residential Hall & Apartment Complex energy competition, Cool Blocks, and other energy reducing programs.

## LOOKING FORWARD

- Explore potential grant collaborations for energy storage on campus.
- Incorporate justice, equity, diversity and inclusion (JEDI) focused climate resiliency and adaptation planning into the Campus Sustainability Plan.

## FOOD

### ACCOMPLISHMENTS

- Even with limited student staff due to the pandemic restrictions, 675.6 pounds of fresh produce was grown by the Department of Public Worms at the ECP Student Farm. All of that produce was then donated to the AS Food Bank for students to pick up.
- 45% of total food procured by campus dining was plant-based foods, based on AASHE STARS criteria.
- Continued our food recovery program at Portola Dining Commons in an effort to address food insecurity and food waste. This program utilizes food items that would otherwise be composted and saves them to distribute at the Miramar Food Pantry.

- The Miramar Food Pantry remained open during the Pandemic. We registered 601 students throughout the year and had 4,226 total visits. We successfully distributed 27,344 pounds of food.
- Completed all 32 raised beds, along with the Permaculture Food Forest at the Student Farm.

## ONGOING INITIATIVES

- Continue to grow seasonal fruit and vegetables in the 14 campus and community gardens on campus and in Isla Vista.
- Provide staff support to the UC Santa Barbara Food Security and Basic Needs Taskforce, helping to ensure all students have access to healthy and sustainable foods.
- Offer a garden education program for the Orfaea Family Children's Center through the Edible Campus Program.
- Offer regular workshops on sustainable food systems for college aged students.

## LOOKING FORWARD

- Expand partnerships with the Isla Vista Youth Projects and St. George's Youth Center to offer garden education.

# LANDSCAPE & BIOTIC ENVIRONMENT

## ACCOMPLISHMENTS

- Completed an Open Space Plan, this plan documents baseline conditions and defines goals and policies for land management of open space lands on campus.
- Established a Lagoon Overlook: a native-landscaped outdoor classroom on a bluff overlooking the lagoon where two dilapidated trailers once stood.
- All campus land management groups (Facilities Management (FM), Housing, Dining, & Auxiliary Enterprises (HDAE), Cheadle Center for Biodiversity & Ecological Restoration (CCBER)) successfully navigated the COVID Pandemic under minimal, physically-distanced staffing.
- CCBER was awarded a TGIF sustainability grant to purchase battery powered weed-whips for management near homes.
- FM transitioned to all electric hand tools for normal maintenance work on the main campus.
- Open Space Trails on campus provided an important refuge during the pandemic for faculty, staff, students and community members. Data shows a doubling of use from 40 to 80 users per hour at North Campus Open Space.
- Completed a prescribed burn to control invasive grasses on Lagoon Island and successful establishment of diverse native wildflowers and coastal sage scrub on the site representing local genotypes of more than 20 species of annual and perennial plants.
- Sought and received approval for UC Santa Barbara to become a Bee Campus USA certified campus.

## ONGOING INITIATIVES



- Continue to convert peripheral lawns to more sustainable landscaping, and potable to reclaimed water where appropriate.
- Continue to plant trees for educational value.
- Continue to make data on campus trees available on-line through a user-friendly database.
- Continue CCBER management of 30% of campus lands in a sustainable, low water use and high biodiversity manner.
- Return to pre-COVID levels of student involvement in campus open space areas through K-12 programming and UC Santa Barbara student research and restoration internships.

## LOOKING FORWARD

- Explore certification as a Tree Campus USA and document programming related to campus urban forest management.
- We have applied for a California Natural Resources Agency grant. If awarded, CCBER will restore Campus Point's 7 acres to a diverse array of coastal bluff scrub, dune, back dune swale, salt marsh and woodland habitats. Integrate project with honoring of Chumash legacy on campus lands with programming and/or signage regarding midden and use of coastal resources by first people.
- Complete public access amenities at North Campus Open Space including: public parking, visitor plaza and discovery trail, outdoor classroom and mesa trail.

## PROCUREMENT

### ACCOMPLISHMENTS

- Received a [2021 EPEAT Purchaser Award](#) from the Green Electronics Council (GEC), the non-profit organization that manages the EPEAT ecolabel. EPEAT allows the University to efficiently address the lifecycle impacts of electronics purchased by campus, including computers, displays, printers, copiers, mobile phones, servers, and televisions.
- During the 2020/2021 fiscal year, the UC Ecomedes (<https://uc.ecomedes.com/>) platform had 195 new California users. The platform allows staff to search products that meet the UC's Required or Preferred Green criteria.
- With the approval of the UC's [Small Business First Policy](#) aimed at supporting Small and Disabled Veteran Businesses, Procurement implemented a new Gateway requisition checkbox for buyers to track and measure campus compliance with the new policy.
- Collaborated with students from UC Santa Barbara's Program for the Assessment and Certification for the Environment and Sustainability ([PACES](#)) and Laboratory Resources, Advocates, and Teamwork for Sustainability ([LabRATS](#)) to create sustainable product shopping lists and guides for several contracted supplier catalogs on [Gateway](#).
  - Available lists and guides can be found here: <https://www.bfs.UC Santa Barbara.edu/procurement/department-buyers/your-office>
- Awarded 3 ENERGY STAR equipment rebates for ULT freezers through the TGIF equipment rebate program.

- UC Santa Barbara PACES created a set of virtual educational modules for home offices. These were released every two weeks throughout 2020-2021. This included two modules on sustainable procurement tips, resources, and information.

## ONGOING INITIATIVES

- Continue to participate in the [Sustainable Procurement Leadership Council](#) Lab Action Team to develop a Sustainable Procurement Guidance document for Lab Supplies, anticipated to be publicly available in early 2022.
- Continue the Energy Management approval step in Gateway, to ensure policy compliance with UC's Energy Star requirement. 17 requisitions for laboratory equipment totaling \$217,785.81 were reviewed and approved by Energy Management during the 2020-2021 fiscal year.
- Continue offering [free surplus chemicals](#) to labs on campus through the Gateway hosted catalog, run by the Environmental Health and Safety Hazardous Waste Program. Few chemicals were exchanged due to lab closures resulting from COVID-19.
- Continue ensuring that at least 15% of the weight in all Best Value RFP evaluations is dedicated to sustainability factors, unless accompanied by an approved exemption.
- Continue to update sustainable procurement resources for department buyers on requirements and goals of the UC Sustainable Procurement Policy and Guidelines on the [Business and Financial Services Website](#) and in [Procurement Newsletters](#).
- Continue to lead the system-wide review and update of the UC Sustainable Procurement Guidelines, an initiative of the UC Sustainable Procurement Working Group (SPWG).
- Continue to drive spend on sustainable products and with small, diverse, and/or sustainable suppliers.
- Continue to partner with other institutions and researchers on reducing waste and emissions resulting from the University's purchasing.

## LOOKING FORWARD

- Consider integrating campus surplus offerings as an internal hosted catalog in Gateway, following the model demonstrated with the UC Santa Barbara Chemical Surplus catalog. This would help advertise [UC Santa Barbara Surplus Sales offerings](#) across campus departments to those who may not otherwise shop using the traditional Surplus marketing platforms.
- Investigate adding staff and financial resources to support long term supplier partners through the [sustainability assessment program](#).
- Consider becoming recognized as an [e-Stewards Enterprise](#).

## SUSTAINABLE TRANSPORTATION

### ACCOMPLISHMENTS

- Removed hundreds of abandoned bicycles from all campus bicycle parking areas. This was done by the UC Santa Barbara Police/CSO with funding from the Associated Students Bicycle Committee.

- Removed and replaced root-damaged bicycle path paving adjacent to the Bren and Woodhouse buildings.
- Made wiring upgrades to the electric vehicle charging infrastructure in parking Lot 60 to increase reliability and charge speed.
- Added a Parking occupancy system to Parking Structure 22. This gives all 3 main campus parking structures the ability to provide user feedback on available parking spaces. This is especially useful during peak demand periods, such as inclement weather.
- The Associated Students (A.S.) Bicycle Shop replacement building project finished the design phase and was awarded a construction contract in 2021. The new shop will meet LEED platinum standards, offer adequate space for bicycle repairs, and offer increased educational space.
- The bicycle path between the bus loop and the “Red Barn/Old Gym” was funded and approved in 20-21, and constructed in July 2021.
- Worked with partner organizations on a successful grant: Sustainable Transportation Equity Program (STEP) for Isla Vista.

## ONGOING INITIATIVES

- Continue to host a Quarterly Abandoned Bicycle Sale conducted by the UC Santa Barbara Police/CSO.
- Continue to support New Employee Orientation’s (NEO’s) First-Year Experience (FYE) with ongoing “Get Moving with Transportation & Parking Services” webinars largely focused on alternatives to driving alone such as commuting by foot, bicycle, bus, carpool, vanpool, or train.

## LOOKING FORWARD

- Awaiting grant funding to expand campus electric vehicle (EV) charging infrastructure beyond our current 100 EV charger spaces to better meet the ever-increasing demand.
- Assess electrification of light, medium, and heavy duty trucks and make a plan for fleet conversion.
- Create an incentive program for biking or e-biking to campus for faculty and staff commuters.
- Continue work on the STEP grant program.

## WASTE

### ACCOMPLISHMENTS

- 2,648.36 pounds of e-waste was collected by AS Recycling.
- AS Recycling collected and sorted on campus recycling and compost.
- Drafted a UC Santa Barbara Single-Use Plastics Policy Implementation Guide.

### ONGOING INITIATIVES

- Continue to collect e-waste, recycling, and compost from on campus waste receptacles with all Covid safety measures in place.
- Prioritize moving back to reusables wherever safe during the 2021/2022 academic year. The 2020 revision of the UC Policy on Sustainable Practices incorporates the ban on a variety of single-use plastics with a timeline of full completion by 2023. This policy mainly focuses on single-use plastics used in foodservice, retail, vending, and events as these were seen to be the first steps towards becoming a completely plastic-free campus. During the covid-19 pandemic foodservice facilities on campus previously using reusables switched to single-use items in order to address safety concerns.

## **WATER**

### **ACCOMPLISHMENTS**

- UC Santa Barbara used 177,706 HCF (407 AF) of water. This is 95,235 (218 AF) less than FY 19/20. The significant savings is a result of the UC Santa Barbara campus being closed to the majority of the campus community for approximately six months due to the COVID-19 pandemic.
- At Pearl Chase Park, the University has started construction on the conversion from potable to recycle water for irrigation.

### **ONGOING INITIATIVES**

- Working to expand the recycled water infrastructure for irrigation to Girvetz Hall and the Pardall corridor.
- Continue to work on water conservation and efficiency efforts in buildings, such as retrofitting faucets, shower heads, and toilets with more efficiency fixtures.

## **LABS, SHOPS, & STUDIOS**

### **ACCOMPLISHMENTS**

- UC Santa Barbara Procurement and UC Santa Barbara LabRATS staff served on the Sustainability Review Group for the UC General Lab Supplies RFP for Manufacturers and Distributors.
- As a result of the UC General Lab Supplies RFP Sustainability Subcommittee, UC Santa Barbara and UC Davis led the development of the UC Sustainable Lab Supply Chains Subcommittee. The goal of the Lab Supply Chains Subcommittee is to: 1) provide biannual mentorship on sustainability to awarded companies, 2) check in on progress related to sustainability goals and help identify and implement future improvement actions, and 3) provide feedback about the sustainable features the UC wants to see in lab products, services and corporate operations.
- Reviewed hundreds of laboratory products and equipment from VWR, Fisher Scientific, and Neta Scientific to be potentially included in sustainable laboratory supply shopping lists through Gateway.

- Designed, launched, and implemented a virtual education program on sustainable laboratory operations with modules every two weeks.
- Completed a renovation of the UC Santa Barbara LabRATS website.

## ONGOING INITIATIVES

- Continue to conduct Sustainable Laboratory Assessments through the UC Santa Barbara LabSYNC program.

## LOOKING FORWARD

- Develop sustainable shopping lists for all laboratory supply companies listed in Gateway.
- Launch sustainability business reviews through the Lab Supply Chains Subcommittee for all General Lab Supply Companies selected in the most recent RFP.

# COMMUNICATIONS

## ACCOMPLISHMENTS

- For the 8th year in a row UCSB Sustainability partnered with the Environmental Affairs Board to host twice per week workshops for the Summer Freshman orientation program.
- Hosted two UC Santa Barbara Virtual Cool Block Teams over Winter and Spring Quarter. Participants learned how to live a more environmentally sustainable and low carbon lifestyle, build resiliency skills, get to know like-minded people, and develop leadership capabilities to take into Isla Vista and beyond.
- Produced a Quarterly Sustainability Scoop & Climate Scoop featuring stories that highlight sustainable research, operations, and leadership throughout the campus.

## ONGOING INITIATIVES

- Continue to expand the reach of our education and outreach campaign, including through social media platforms and the UCSB Sustainability website.
- Continue to ensure that when there are opportunities to give feedback on campus planning projects, underrepresented communities are asked for advice and guidance.
- When the campus resumes normal activities, continue to host annual Residential Hall and Apartment Complex Energy Competitions.
- Continue to produce a monthly newsletter highlighting sustainability programs and research across the campus.

## LOOKING FORWARD

- Strengthen our outreach efforts with graduate students, transfer students, and international students, and staff. These are communities that we have identified as having limited outreach to, in the past.
- Hold energy competitions in the Residence Halls via the Cool Campus Challenge platform.

## **OTHER INITIATIVES**

### **The Green Initiative Fund (TGIF)**

The Green Initiative Fund chose 16 projects in 2020/2021, awarding a total of \$151,620 to help make UC Santa Barbara a greener campus. See below for summaries of each project you can expect to see completed during the 2021/2022 academic year.

#### **Alternative Decking Solution (\$9,338)**

The funding will be used to purchase an alternative decking solution called Steeldeck. Steeldeck is a platforming system that is used to create stages in theaters and for dance. Steeldeck platforms are made of a metal frame topped with plywood. The platform design is modular so it can be used in many different applications and is highly versatile. This Steeldeck platforming system will reduce the use of traditional two by four framed wooden platforms and wooden triscuit decks. Steeldeck's wooden counterparts are far less durable over time and are more difficult to maintain and fix, which in turn makes them disposable. This project will save an estimated 10 tons of decking waste annually.

#### **Sustainable Restoration Equipment (\$4,748)**

Funding will be used to purchase two Oregon brand battery-powered string trimmers and extra batteries that will be recharged with the energy supplied from the solar panel system at NCOS. The electric string trimmers will significantly reduce UC Santa Barbara's environmental impact by saving energy, limiting air pollutants and greenhouse gas emissions, and reducing the noise level.

#### **Water Bottle Filling Stations for Education Building (\$9,000)**

Funding will be used to purchase and install three filtered water bottle filling stations in the Education building. The project will not only increase access to drinking water and reduce the need for single use plastic water bottles, the Department has also committed to discontinuing all of its water bottle delivery service to the building, which will in turn reduce Greenhouse Gas Emissions.

#### **Lighting the Way to Savings with LEDs at UC Santa Barbara's Early Childhood Care and Education Services (\$19,550)**

The Orfaea Family Children's Center (OFCC) on west campus is lit by its original inefficient fluorescent light fixtures. Lighting uses large amounts of energy and costs a substantial amount of money each year. Funding will be used to replace fluorescent lighting with LEDs. This project will save an estimated 16,224 kWh of electricity annually.

#### **Bren Hall Lab Corridor LED Retrofit (\$2,619)**

The proposed project will replace the existing compact fluorescent lighting (CFL) fixtures along the interior corridors of 3 floors in Bren Hall with LEDs. This project will save an estimated 6250 kWh of electricity annually.

### **Reducing Fossil Fuels and Increasing Solar Energy at UC Santa Barbara's Valentine Eastern Sierra Reserves (\$8,303)**

The proposed funding will be used to purchase and install a high-efficiency, solar-supplied heat pump water heating system at the Sierra Nevada Aquatic Research Laboratory (SNARL). The proposed system will replace a very old (~20years) propane-powered tank water heater, which will result in a ~3000 lbs reduction in annual CO<sub>2</sub>e emissions.

### **Updating Solar Infrastructure on the Santa Cruz Island Reserve (\$10,428)**

Funding will be used to replace the solar batteries and inverter used at the on-site Director's residence, which are nearly 20 years old and in desperate need of replacement. Their replacement will increase the electrical efficiency of the staff residence and decrease reliance on carbon-producing backup generators resulting in a ~2500 lb reduction in annual CO<sub>2</sub>e emissions.

### **Connecting the UC Santa Barbara Solar Grid to the Greenhouse and Garden Project (\$3,050)**

The requested funds will be used to connect the greenhouse and adjacent teaching area to the UC Santa Barbara grid via a transformer box located close to the greenhouse.

### **Comparative Analysis of Accredited Electronics Recycling Certifications (\$1,579)**

Funding will be used to hire a student for an academic quarter to do a comprehensive written analysis between the two existing accredited certification standards for electronics recyclers:

- Responsible Recycling ("R2") Standard for Electronics Recyclers
- e-Stewards® Standard for Responsible Recycling and Reuse of Electronic Equipment® ("e-Stewards®")

### **Lotte Lehmann Sustainable Lighting Initiative (\$10,009)**

Funding will be used to continue to transition the existing stage lighting in the concert hall to LED fixtures. In addition to saving approximately 3533 kWh annually, this project will also improve the quality of light, and reduce the amount of labor hours put in by the department's technical staff, as they will no longer need to work in a lift to replace color gels or lamps.

### **American Indian and Indigenous Foods Garden Project (\$7,438)**

Funding will primarily be used for one student intern to help sustain the garden (The American Indian and Indigenous Gardens Project is a garden and community space hosted by UC Santa Barbara West Campus Family Housing) (planting, watering, tending); coordinate and educate

student garden volunteers; and plan, coordinate, deliver workshops in cooperation with our Chumash relatives on indigenous gardening practices (T.E.K.).

### **UC Santa Barbara Natural Reserve System Sustainability Assessment (\$5,975)**

Funds will support a UC Santa Barbara undergraduate student intern, under the supervision of Katie Maynard, UC Santa Barbara Sustainability Coordinator and the UC Santa Barbara PACES program, to work directly with UC Santa Barbara NRS Reserve Directors and staff to carry out a “sustainability assessment” of the seven UC Santa Barbara Natural Reserves over the course of a one-year period.

### **The Sustainable Technology Repair Initiative (\$22,624)**

The Sustainable Technology Repair Initiative (STRI) strives to be an affordable, accessible, and sustainable technological repair resource in order to reduce digital inequality and e-waste on campus, launched as a pilot in 2019 with start-up funds from TGIF and the Office of Financial Aid. TGIF funding will be used for student salaries. The ultimate goal for STRI is to obtain a permanent funding source through a lock-in fee, which the student body would tentatively vote on in Spring 2023. In the interim, TGIF funding will allow STRI to continue developing from a pilot project to a fully operational permanent repair resource.

### **Isla Vista Theater 2 Lighting Retrofit (\$10,510)**

This project will upgrade the dimmable incandescent lighting system in Isla Vista Theater 2, which will provide better light quality, reduce maintenance needs, and be easier to operate for staff and faculty. The project will save ~6690 kWh in lighting energy annually. Additionally, the incandescent lighting system does not provide adequate light for note taking, or for events.

### **Energy Efficient Window Film in the Intercollegiate Athletics Building (\$16,450)**

Funds will be used to install 3M Affinity Sun Control Window Film on all South facing windows in the Intercollegiate Athletics Building. Adding the 3M Affinity Sun Control Window Film will save energy needed for HVAC.

### **TGIF Equipment Rebate Program (\$10,000)**

This year’s committee has awarded \$10,000 to the Equipment Rebate Program. The program offers \$4,000 rebates (while funds last) to labs that recycle their old ULT freezers and buy an Energy Star model. The program also offers a rebate of up to \$1,000 for replacing old equipment (commercial refrigerators, washers and dryers, dishwashers, etc.) with significantly more efficient models.

## **Sustainable Investments**

On the investment front, UC continued to reduce its holdings in fossil fuel reserves and not buy assets that own any amount of fossil fuel reserve. For several years, UC has tracked and made



public the carbon footprint of its public equities holdings. This past year, the University added corporate debt holdings into its carbon footprint metric, thereby expanding the coverage of UC's carbon footprint to roughly 78% (by dollar value) of the pension, endowment, working capital and Blue and Gold products.

As of June 31, 2021, the Weighted Average Carbon Intensity (WACI) footprint of UC's public equities/corporate debt portfolio was 124.3 tons of greenhouse gas emissions (CO<sub>2</sub>e) per million dollars of sales. Due in part to UC's de minimis holdings in fossil fuel reserve-owning assets, UC's WACI footprint was significantly lower than if UC had still owned such assets, as the vast majority of investors do. Innovative companies need access to capital in the early stages of their development. UC is proud to be an anchor funder of early stage climate tech companies, putting over \$100 million of UC's capital to work through [Congruent Ventures](#) and the [MIT Engine Fund](#). From electric vehicle (EV) fleet charging software to solar finance tools to superconducting electric transmission lines, portfolio companies in these venture capital funds are enabling and accelerating the transition to a clean, resilient energy system.

## CONCLUSION

This 20th Annual Report on campus sustainability highlights the achievements of UC Santa Barbara's comprehensive sustainability program during the 2020/2021 fiscal year. It includes progress in sustainable operations required by UC's Sustainable Practices Policy as well as sustainability achievements in education, research, and public service.

In 2020, UC Santa Barbara's total operational greenhouse gas emissions were about 50% below 1990 levels, despite a near doubling in square footage. In July 2020, UC Santa Barbara joined the UC Clean Power Program, and the main campus is now powered by carbon-free electricity, dropping the campus's operational greenhouse gas emissions by 50%. Scope 3 emissions were 30% of the prior year due to increased telecommuting.

UC Santa Barbara also has a new innovative academic program geared specifically toward undergraduates. Started by Simone Pulver, an assistant professor of environmental studies, [the Environmental Leadership Incubator \(ELI\)](#) is a nine-month program that trains students to become environmental leaders. The ELI program is organized around student-initiated projects that seek to implement positive environmental change.

The success of UC Santa Barbara's sustainability program was a result of the many on- and off-campus community partnerships that help inform and energize its work. UC Santa Barbara strives to integrate concepts of sustainability and climate justice into education, research and action. UC Santa Barbara has also invested resources into creating a representative and inclusive program.