

# SUSTAINABILITY REPORT

2021/2022



Council for  
Sustainable Futures  
STANISLAUS STATE



Jake Weigel, Art

Julia Sankey, Geology

Michele Gordon, Chemistry

Kyu Han Koh, Computer Science

Destiny Suarez, ASI & Eco Warriors

Adela Gonzalez, Associated Students Inc.

Wendy Olmstead, Sustainability Coordinator

Taylor Whittington, Health Education & Promotion

Mary Stephens, Chair, Interim VP Business & Finance

Julia Reynoso, AVP, Capital Planning & Facilities Management

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## TABLE OF CONTENTS

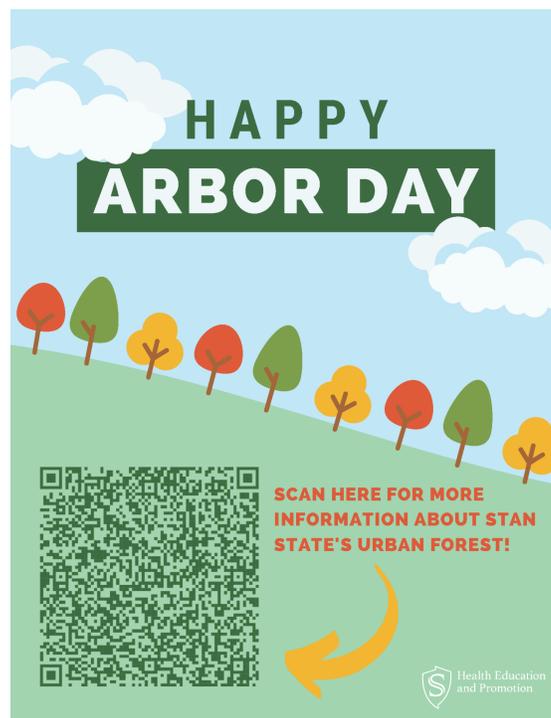
<b>Staff Representatives</b>	<b>2</b>
Michele Gordon and Taylor Whittington	2
<b>Faculty Fellows</b>	<b>3</b>
Kyu Han Koh	3
Jake Weigel	4
Julia Sankey	7
<b>Eco Warriors</b>	<b>9</b>
<b>Associated Students, Inc.</b>	<b>12</b>
<b>Capital Planning &amp; Facilities Management</b>	<b>13</b>
<b>Sustainability Program</b>	13
New Student Orientation	13
New Employee Orientation	14
Sustainability Month   October 2021	14
Earth Month   April 2022	16
Fellowships, Awards, Conferences and Presentations	19
Sustainability Collaborations	25
Workgroups	27
<b>Planning, Design &amp; Construction</b>	<b>29</b>
<b>Facilities Management</b>	<b>31</b>

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## Staff Representatives

### Michele Gordon and Taylor Whittington

During the 2021-2022 academic year, Taylor established a collaboration between the Council for Sustainable Futures, the Health Education & Promotion Office, and the Peer Health Educators (a recognized student organization) to increase awareness of the intersectionality between sustainability and health and wellness, which aligns with the Ottawa Charter for Health Promotion. During Earth Month 2022, the Peer Health Educators collaborated with the Council to raise awareness about Arbor Day by interacting with students with a QR code that directed students to a [presentation about Urban Forests](#).



During the 2021-2022 academic year, Michele focused her efforts on paper reduction in student labs and laboratory cold storage. She introduced Naraghi Hall of Science technicians to the International Laboratory Freezer Challenge, a free program that educates labs on improving energy efficiency of their cold storage, which tends to be the biggest category of energy consumption after fume hoods. Consolidation of refrigerated items in the chemistry stockroom allowed for the shut down of one large refrigerator and the planned disposal of another old refrigerator. Scheduling freezer defrosting and cleanouts will be the next phase. In addition to her work in leading sustainability initiatives in Naraghi Hall, Michele attended the AASHE Conference in October and the Chico State This Way to Sustainability Conference.



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## Faculty Fellows

### Kyu Han Koh

#### Sustainability Classes

Dedicating much of his time to researching and developing teaching strategies, curriculum designs, and educational systems, Kyu Han has utilized his expertise to disseminate the value of sustainability and sustainable futures in the Central Valley. As the first to include sustainability in the computer science curriculum at Stan State, he teaches courses with sustainability issues to strengthen students' engagement and achievement by including units that teach them how they can protect the environment within their profession and using their professional skills. This includes CS 3550 (Introduction to Computational Thinking) and CS 4800 (Software Engineering), a course that includes a unit to discuss how software developers can contribute to a sustainable environment. Students discuss how to develop energy-efficient systems to make them more usable on low-power mobile devices and help reduce the overall carbon footprint of IT equipment. Students explore how to build validation techniques for simulation systems that will be essential in predicting the extent and planning for climate change. Alternatively, students think of deleting junk emails to save the email server resources that require a cooling system that produces a carbon footprint.

Kyu Han has studied sustainable Smart Farming solutions with Stan State students using Arduino kits to help local farmers. This study is planned to be offered as an interdisciplinary course to teach Agriculture and Computer Science students at Stan State. Additionally, since the 2019 Fall semester, Kyu Han has provided all assignments, quizzes, and exams in digital format to build zero-paper classes.

#### Sustainable Environment Education Outreach

Kyu Han became interested in sustainability because many of his students come from the Central Valley, surrounded by an agricultural environment. He learned how much his students love the Central Valley and how strongly they wanted to learn how to protect this

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green region. As a result, he explored ways to respond to their passion by joining the Council for Sustainable Futures as a Faculty Fellow and by participating in the Sustainability 2.0 and Teaching Sustainability Faculty Learning Communities and in outreach activities.

Kyu Han has offered outreach activities to teach local elementary school students the value of sustainable environments and the use of technology to keep clean environments. Students learned how modern technologies, such as



drones and artificial intelligence, are used to help climate crises, wildfires, and water shortages. He has actively worked with local education organizations to foster the next generation to understand the values of sustainable futures.

## Jake Weigel

### **Sustainability and Environmental Justice Center**

During the 2020/21 and 2021/22 academic year, Jake joined five faculty in the Sustainability 2.0 FLC, a faculty learning community designed to explore ways to help faculty infuse sustainability into the curriculum and pedagogy using an approach that is interconnected and multi-disciplinary. Faculty met throughout the spring 2021 semester to research ways to build stronger connections among faculty engaged in this work, identify ways to share resources or engage in collaborative activities, and discuss the future possibilities for curriculum/academic programs. A proposal for the creation of the Sustainability and Environmental Justice Center was finalized in Spring 2022 and is currently being considered for implementation at Stan State.

### **Warrior Fab Lab**

Jake developed a proposal for the university's Warrior Digital Fab Lab and was named

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Director in May 2021 with an anticipated opening date for the 2022-23 academic year. The digital fab lab will host a variety of machines and digital processes available to the entire university community and will act as a central hub for innovation and cross-disciplinary experiential learning and other high-impact practices. Jake's vision of environmental, economic, and social sustainability is at the forefront of the Fab Lab as a centralized creative and innovation space involving students, staff, and faculty throughout the university curriculum. Educational programming and learning, with specific emphasis on equitable access to technology and STEAM education will be aligned with the United Nations 17 Strategic Development Goals that are specific to the Stan State, Turlock, and the Central Valley region.

## **Research**

### *Workshops & Conference Presentation*

As part of his research into digital fabrication methods in art with an emphasis on cross-disciplinary projects specifically on sustainability, Jake has taught online workshops that focus on fab labs past year with an accepted panel for November 2022 at the SECAC Conference, hosted by the Maryland Institute of Contemporary Art (MICA) in Baltimore, Maryland.

### *Research, Scholarly and Creative Activities Grant Cultivation of Mycelium for Object Making*

The research and creative activities involved cultivation of mycelium, the network of threads that make the vegetative mass of fungus, as a medium for various processes in art and object making. Mycelium products range from alternative leather and food to packaging and building materials that are dense but lightweight, replacing plastic, foam, plaster, and wood as materials. As a continuation of previous research in using new technology for digital fabrication of objects, some of the post-cultivation processes using mycelium included computer numerical controlled (CNC) equipment, specifically the laser cutter (two-dimensional), 3D printed molds, and a router or mill (three-dimensional) with most of these tools found in the Fab Lab. This research will be applied to the curriculum in

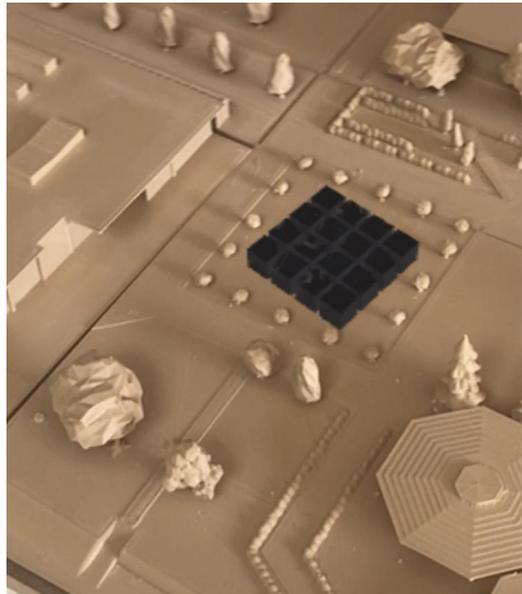
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the Art Department, and other departments if interested, as a health and environmentally friendly, biodegradable alternative to current materials.

## Events

### *Augmented Reality at Stan State: One Metric Ton of Carbon*

This project allows viewers to scan a QR code to view two different augmented reality scenarios as a visualization of individual carbon footprints. Information for viewers is provided to better understand their own and how to reduce it. A 3D printed model of the quad area of campus, including the Vasche Library, Bizzini Hall and the Student Center, generates a scaled digital model of 16 metric tons of carbon (the average American's annual footprint). As another iteration, a 27' x 27' x 27' virtual cube that is equal to one metric ton of carbon is generated with a QR code and sign that can be placed anywhere on campus.



This project was developed with assistance from Eric Greenberg, Programmer/Analyst in OIT, who created the code and system hosted by Stan State. As the first augmented reality project on campus, it continues to be developed for better user experience and for future AR projects designed by students, staff and faculty.

### *Futurefarmers: A Soil Procession Exhibition at Stan State Art Space*

Futurefarmers' co-founder Amy Franceschini grew up in



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Turlock and is now based in San Francisco and Belgium. Futurefarmers is a group of diverse practitioners aligned through an interest in making work that is relevant to the time and place surrounding us. They are artists, designers, architects, anthropologists, writers and farmers with a common interest in creating frameworks for exchange that catalyze moments of "not knowing" with emphasis on sustainability. They deconstruct systems such as food policies, public transportation, campus design and rural farming networks to visualize and understand their intrinsic logics. Through this disassembly new narratives emerge that reconfigure the principles that once dominated these systems for fresh perspectives on sustainability.

This exhibition ran from March through May 2022 at the Stan State Art Space. Futurefarmers work has been exhibited at the Whitney Museum of American Art, the New York Museum of Modern Art, Solomon R. Guggenheim, MAXXI in Rome, Italy, Sharjah Biennale, Taipei Biennale, Henie Onstad Museum, Oslo, New York Hall of Sciences and the Walker Art Center.

## Julia Sankey

In her third year as a Faculty Fellow, Julia focused on her continued work as the CEO and Chair of the Board of Directors of Turlock Community Gardens (TCG), a nonprofit corporation with an objective to help establish community gardens in Turlock, California, and on a research project on air pollution in the Central Valley and associated contributions from student commuting.



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Located on a 0.6-acre vacant lot two blocks north of CSU Stanislaus, the Turlock Community Garden plots are rented and planted by local community members, with twenty out of forty-five gardeners consisting of Stan State faculty, staff, alumni, students, and retirees. In 2021/22, a drip irrigation system was installed to conserve water in the valley's dry, hot climate for the 45 individual plots of the garden. In spring 2022, in order to educate the public, local teachers, and the Stanislaus State campus community about urban



agriculture (community and school gardens), the TCG board organized and hosted a free conference titled "Rooting for Change: Urban Agriculture in the Central Valley." Funded by a campus Innovate, Design, Excel & Assess for Success (IDEAS) grant, the conference focused on community and school gardens, food waste and composting, organic gardening, urban green space, biodiversity, and urban agriculture as part of the solution to the climate crisis and food security. The program included presentations from:

- Dr. Tyler Schafer: "Practicing Community and Committing to Place: Reflections on the Social Aspects of Urban Agriculture,"
- Dr. Rebeca Ryals: "Compost as a Climate Change Solution,"
- Anne Schellman, UCCE Stanislaus County Master Gardener Program: "Protecting Pollinators,"
- Everett Leon-Guerrero, "Supervising a Community Garden," and
- Dr. Julia Sankey, "Brief History of Turlock Community Gardens and How to Start a Community Garden in Turlock."

Small group discussions included "How To Get a Community Garden Started in Turlock" led by Dr. Julia Sankey; "School Gardens in the Central Valley: Challenges and Opportunities," with Hali Bream; "Common Garden Problems and IPM solutions" with Anne Schellman; and "Farm to Pantry Initiative: How and Where To Donate Extra Produce" with Andrea Brophy.

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Attendees participated in a field trip to Julien Elementary School, Turlock Unified School District Farm, and the Turlock Community Gardens. With 44 participants, including educators from CSU Stanislaus, Turlock Unified School District, charter schools, UC Merced, and the public, the conference was a resounding success. To provide access to those unable to attend, recordings of the sessions were made available on the TCG website at <https://www.turlockcommunitygardens.org/conference>.

During the 2021/22 academic year, in response to tremendous interest from the Stan State community in the TCG, Melissa Bean, a Stan State MBA graduate student and member of the board, was hired to provide tours. Funded by a Stan State Service Learning Grant, ten weekly one-hour tours were conducted with a virtual tour planned as an addition to the garden website in May, 2022.

Through a campus Research, Scholarship, and Creative Activity (RSCA) grant, Julia started a research project titled "Faculty and Student Research: Air Pollution, Health, and a 51 Million Mile/Year Student Commuter Campus (CSU Stanislaus) and Solutions." With the assistance of a student research assistant, Vivian Aguilar, the research focuses on air pollution in the Central Valley, a determination of how much Stan State contributes to the air pollution through student commuting, and immediate solutions the university can take to drastically reduce this environmental impact. In addition to a presentation to the CSU Board of Trustees meeting by Leslie Ponciano in January 25, 2022, Julia presented the research to the ASI Board of Directors, University Advancement & Communications, the Council For Sustainable Futures, the Eco Warriors, Business & Finance Managers, the Provost's Advisory Council, several Stan State classes, and a Modesto Junior College Environmental Science Class.

## **Eco Warriors**

The Eco Warriors, our university's student sustainability organization, serves a critical role in support of the Council for Sustainable Futures' mission to infuse



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environmental, social, and economic sustainability into campus operations, the university structure, culture, and community partnerships. The Eco Warriors volunteered on weekends during fall 2021 at Turlock Community Gardens and visited two middle school classes to promote Stan State, share their organizational mission, and to encourage the students to get involved on and off campus to build their own leadership skills and community.

At the student organization fair in October 2021, the Eco Warriors demonstrated their creativity in recruiting new members using a prize wheel featuring reusable items to adhere to the guiding mantra of zero waste—reduce, reuse, recycle—including grocery tote bags, straws, cups, pencils, toothbrushes and utensils. Their recruitment efforts, as demonstrated by a steady line to their booth for a full four hours during the event, resulted in a total of 80 members in fall 2021. They repeated this feat in March 2022, recruiting 80 additional members, bringing the total number of Eco Warriors advocating for sustainability on the Stan State campus to 160 for the 2021/22 academic year, a demonstration of exceptional perseverance given the challenges faced by student organizations in maintaining and recruiting members posed by the pandemic and campus re-population.



The Eco Warriors are an organization that enhances the quality of life for all Stan State students, quite literally through their mission to empower their peers with knowledge and resources to participate and lead within the sustainability movement. Their creativity is on full display on their table in the quad, featuring artwork intended to provide a representative, safe space. With its LGBTQ+ and transgender flags, Warrior colors, and

diversity and earth-themed art, their table is inviting to students who are not members but are often spotted sitting at the table, where they feel welcome and comfortable.

Throughout 2021/22, via biweekly meetings, the Eco Warriors collaborated with numerous other student organizations, ASI, and the Council for Sustainable Futures (CSF). In October 2021, during Sustainability Month, they led other campus teams in the People's Eco Challenge, and that same month, they supported Stan State's participation as a host campus for the Association for the Advancement of Sustainability in Higher Education's (AASHE) global conference. During the conference, the Eco Warriors attended workshops and keynote lectures for professional development and networking with students and sustainability professionals across California, the United States, and the world. Also in October, they promoted and attended Indigenous Peoples Days in support of the Indigenous Students in Activism club. In March 2022, they attended another nationally recognized sustainability conference, the This Way To Sustainability (TWTS) Conference, organized by Chico State to learn about the challenges, ideas, solutions, and resiliency in planning our sustainable future.

**EARTH WEEK**  
APRIL 26TH - APRIL 28TH

**TUESDAY**  
**CLOTHING SWAP** | 10AM-1PM | QUAD  
COME BY THE ECO WARRIORS BOOTH AND ENGAGE IN AN ACT OF ENVIRONMENTALISM BY SWAPPING A PIECE OF YOUR CLOTHING! OR BUYING AN ITEM OF YOUR CHOICE FOR \$2. PROCEEDS WILL BE DONATED TO THE PEACE COLLECTIVE.

**WEDNESDAY**  
**WARRIOR WEDNESDAY POP UP:**  
**LOVE YOUR MOTHER EARTH** | 10AM-1PM | QUAD  
JOIN US THIS WARRIOR WEDNESDAY AS WE PARTICIPATE IN SOME ACTIVITIES TO SHOW HOW MUCH WE LOVE MOTHER EARTH.

**CLOTHING SWAP** | 10AM-1PM | QUAD  
COME BY THE ECO WARRIORS BOOTH AND ENGAGE IN AN ACT OF ENVIRONMENTALISM BY SWAPPING A PIECE OF YOUR CLOTHING! OR BUYING AN ITEM OF YOUR CHOICE FOR \$2. PROCEEDS WILL BE DONATED TO THE ECO-WARRIORS CLUB.

**FACTS ABOUT EARTH** | 10AM-1PM | QUAD  
STOP BY THE QUAD TO LEARN QUICK FACTS ABOUT EARTH AND AN OPPORTUNITY TO WIN SUSTAINABLE GIVEAWAYS.

**THURSDAY**  
**CAMPUS CLEAN-UP DAY** | 1PM-4PM  
REGISTER ONLINE  
WARRIORS, SIGN UP AND JOIN US IN CLEANING UP OUR BEAUTIFUL CAMPUS IN CELEBRATION OF EARTH WEEK!

ECO WARRIORS  
Council for Sustainable Futures  
STANISLAUS STATE

5<sup>TH</sup> ANNUAL  
**INDIGENOUS PEOPLES DAY CELEBRATIONS**  
HEALING WATERS IN US AND AROUND US | A VIRTUAL EVENT

**OCTOBER 12<sup>TH</sup> 2021, 5-7PM**

REGISTER AT:  
<https://bit.ly/CoLiberate>

FUNDED BY INSTRUCTIONALLY RELATED ACTIVITIES MADE POSSIBLE BY STUDENT FEE REVENUE

LIMITED SUPPLY OF FREE INDIGENOUS CARE PACKAGES FOR REGISTRANTS  
FIRST COME, FIRST SERVE.

Queer Art Club  
Ethnic Studies STANISLAUS STATE  
ASI

Persons with disabilities who anticipate needing special accommodations or who have questions about access may email: [csandoval27@csustan.edu](mailto:csandoval27@csustan.edu) or call 209.667.3258 in advance of the event.

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During Earth Month, April 2022, the Eco Warriors partnered with other student organizations, campus departments, and the community to enhance the quality of life for people on and off campus. They co-hosted a clothing swap with ASI using donations from the Career Development Center, ASI and Student Center staff, and fundraised for the Peace Fridge, a non-profit organization in Modesto that provides food for anyone who is experiencing homelessness or food insecurity. They joined ASI for a campus clean up and with the CSF for the screening and panel discussion of the documentary: Just Eat It: A Food Waste Story.



At the 2021/22 Student Leadership awards, the Eco Warriors were honored as the Outstanding Student Organization for their consistent flexibility, initiative, creativity, quality, and perseverance in promoting sustainability to Stanislaus State and the surrounding community. Considered a role model for other student organizations on our campus, the organization was recognized for embodying the Warrior spirit through their commitment to leadership development, collaboration among groups, community service, and programmatic efforts to enhance the quality of campus life at Stanislaus State.



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## Associated Students, Inc.

In addition to conducting a Blood Drive and an ongoing social media campaign including posts about Mental Health Awareness Week and support of the campus Basic Needs program, ASI's focus on social and environmental sustainability was evident throughout 2021/22. For Sustainability Month in October 2021, they joined the Council for Sustainable Futures in sponsoring Indigenous Peoples Day celebrations. During Earth Week, they collaborated with the Eco Warriors and Council for Sustainable Futures on a clothing swap, a Love Your Mother Earth educational tabling event featuring Sustainability t-shirt and water bottle prizes, and a campus clean-up.



## Capital Planning & Facilities Management

### Sustainability Program

#### New Student Orientation

During virtual New Student Orientation in Summer 2021, incoming students were introduced to Stan State sustainability via a YouTube video that defines the concept of sustainability as meeting our human needs within the earth's capacity to provide and illustrates that concept through Stan State's campus initiatives and accomplishments in campus operations, academics and research, planning and engagement, and innovation.

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The video shows how the university conducts sustainable procurement, spotlights the redesigned external recycling program and support of the CSU single-use plastics policy while showcasing our award-winning water management system and growing solar power production as well as the campus' sustainable garden and Trans-California Pathway. The interdependence of ecological and social/economic systems is highlighted through a sharing of programming provided by the Council for Sustainable Futures in collaboration with the Warrior Cross Cultural Center and Ethnic & Gender Studies Department, as well as recommendations for personal sustainability. Online resources are provided to encourage students to learn where things come from and where they go, to understand the climate crisis, and to explore intersectional environmentalism, and they are encouraged to spend time in our campus' urban forest with our non-human friends--ducks, geese, turtles, egrets, owls, and foxes. Students are introduced to their student sustainability organization, the Eco Warriors, through an overview of the club's activities and their recruitment video.



**Sustainability**  
STANISLAUS STATE

### **New Employee Orientation**

During 2021/2022, new employees were provided with an introduction to sustainability as a concept, an overview of our campus sustainability achievements including sustainability-inclusive courses, campus operations highlighting water management and solar energy production, the urban forest and sustainable approach to landscaping, and the CSUs' single-use plastics policy as well as plans to compost campus food waste. New employees were introduced to, and encouraged to participate in, the Sustainability Home Workspace Challenge and were provided with copies of Braiding Sweetgrass as part of the Sustainability Program's ongoing efforts to create a sustainable campus culture.

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## Sustainability Month | October 2021

### The People's Ecochallenge

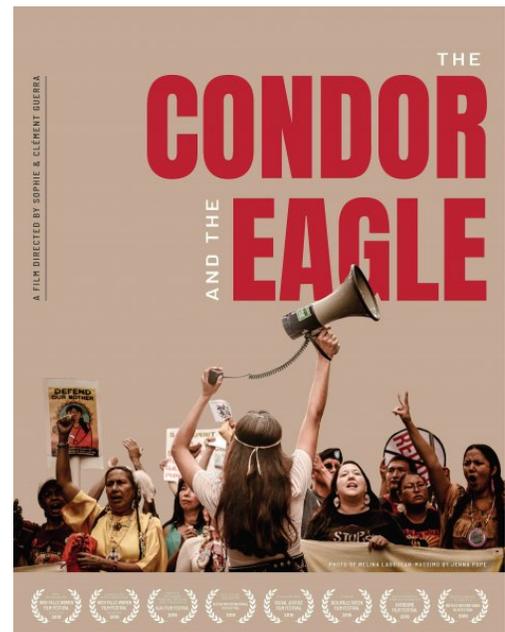
Four Stan State teams participated in the People's Ecochallenge, a learning platform provided by Eco Challenge.org, with curriculum from Project Drawdown, a research based organization that is mapping,



measuring, modeling, and describing solutions to climate change. The People's Ecochallenge offered participants over 100 actions in climate resilience, electricity, food, agriculture and land use, transportation, industry, buildings, land, coastal, ocean, and engineered land sinks, and health and education. Top participants received Stan State sustainability t-shirts and through their collective actions, Warriors saved 306 pounds of carbon dioxide, 94 disposable cups, 3,106 gallons of water, 37 pounds of food waste, and 143 plastic bottles.

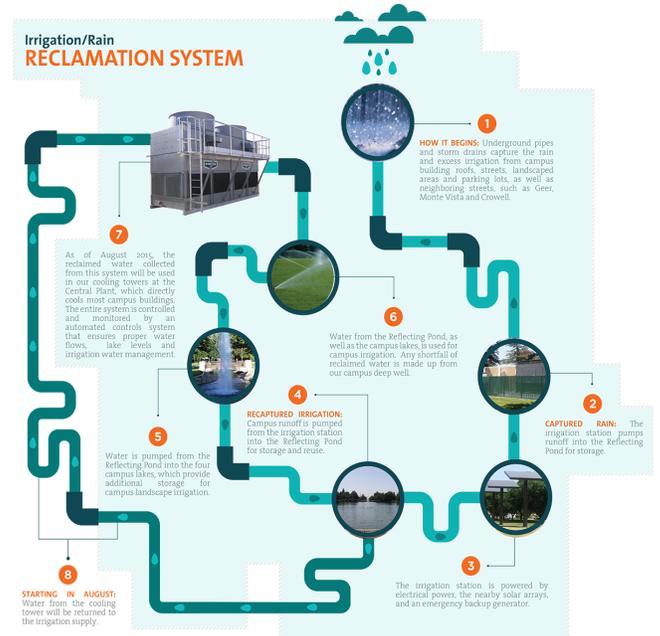
### Indigenous Peoples Days

The Council for Sustainable Futures joined the Indigenous Students in Activism, Ethnic Studies Department, and Eco Warriors in sponsoring a screening of the Condor & The Eagle, a documentary about four Indigenous women leaders who travel from the Canadian Boreal forests to the Amazonian jungle to unite the peoples of North and South America in exploring the meaning of climate justice. Using images from the burning of the Amazon, mega-fires in Australia, and global climate strikers, the protagonists reveal how connecting movements and strategic partnerships can organize around the long legacy of Indigenous resistance to colonialism and our extractive economy.



## Stan State Solar Power & Good to the Last Drop

During Sustainability Month, Stan State's Energy Manager, Geng Liu, provided an overview of the campus' solar production and Chief Engineer, Louie Oliveira, led zoom participants through an explanation of the university's water reclamation system that captures and stores stormwater and runoff in university ponds, transfers it to a filtration system, and cleans, sterilizes, and softens it for use as reclaimed water for cooling campus buildings. The university's 210 acres of managed grounds are irrigated entirely with reclaimed water.



## Fire & Flood: Queer Resilience in the Era of Climate Change

The Warrior Cross Cultural Center, Dr. Betsy Eudey, and the Council for Sustainable Futures presented a screening and discussion of *Fire & Flood*, a groundbreaking documentary that tells the story of Hurricane Maria in Puerto Rico and the fires in Santa Rosa, California, two-near simultaneous climate-related disasters in the fall of 2017, through the voices of LGBTQ people who lived through them and were part of the community response. The film explores the vulnerability of LGBTQ communities to climate disasters and also lifts up queer and trans strategies for resilience, transition, and survival.

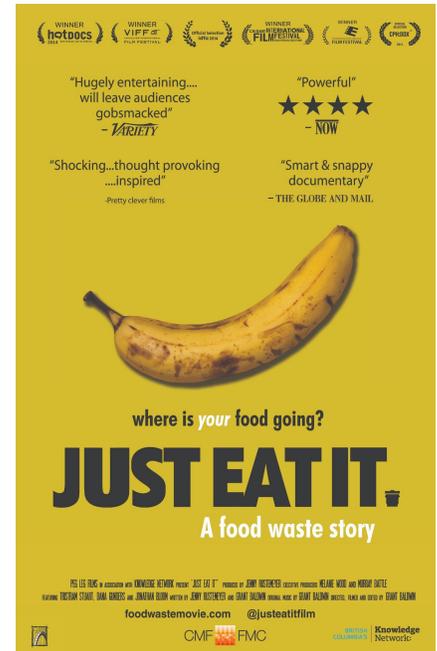


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## Earth Month | April 2022

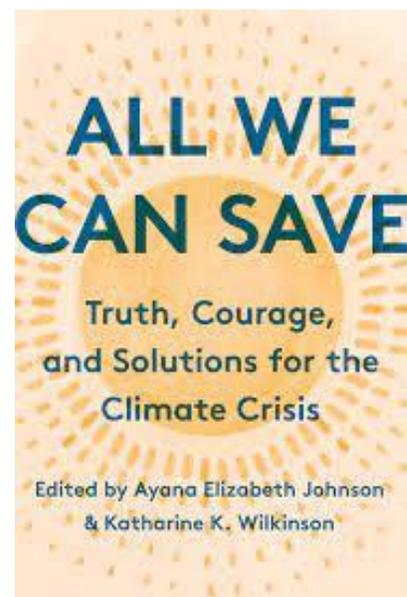
### Just Eat It: A Food Waste Story

In this 2014 documentary, filmmakers and food lovers Jen and Grant dive into the issue of waste from farms, through retail, all the way to the back of their own fridge. In a nation where one in 10 people is food insecure, the images they capture of squandered groceries are both shocking and strangely compelling. *Just Eat It* looks at our systemic obsession with expiry dates, perfect produce and portion sizes, and reveals the core of this seemingly insignificant issue that is having devastating consequences around the globe. Following the documentary screening, participants were treated to an informative panel discussion with Cassie Olavsson (Manager of Stakeholder Engagement with the Food Recovery Network), Jen Sturtevant (Program Manager of Stan State's Basic Needs program), Marissa Acosta (Zero Waste Coordinator at CSU San Marcos), and Roxane Beigl-Coryell (Manager of Energy & Sustainability at CSU Channel Islands) who shared how SB 1383, California's Short-lived Climate Pollutants Law, is requiring CSU campuses to address food waste through recovery and composting programs.



### All We Can Save Book Faculty Book Discussions

Facilitated by Dr. Betsy Eudey, Gender Studies, and Wendy Olmstead, Sustainability Coordinator, participating faculty explored *All We Can Save*, an anthology of essays, poetry and art from 60 women who are leading the climate movement through "leadership that is more characteristically feminine and more faithfully feminist, rooted in compassion, connection, creativity, and collaboration." Faculty participants were joined by Madeleine Jubilee Saito, Creative Director of



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the book and the [All We Can Save Project](#)—website, podcasts, reading circles, courses and resources, and campaigns—that grew out of the realization that by focusing so much on the how, we are overlooking the who, that is, the people who will lead the transformation towards solving climate change.

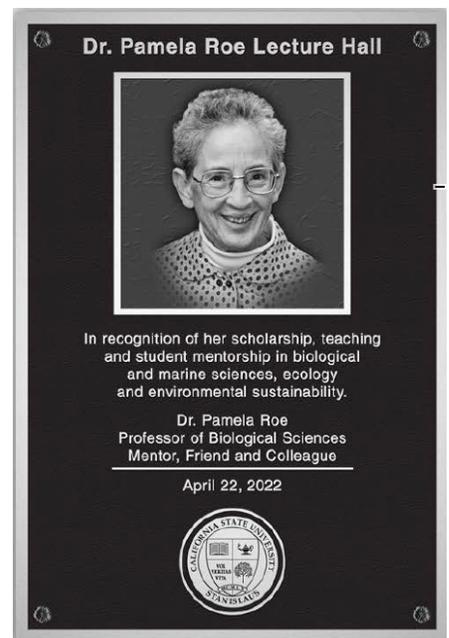
### **A Metric Ton of Carbon**

Created by Dr. Jake Weigl, Art, and Eric Greenberg, Programmer/Analyst, Office of Information & Technology, the virtually augmented experience of a metric ton of carbon represented by a 27' x 27' x 27' cube (the same weight as a great white shark) was featured at the Eco Warriors table on Warrior Wednesday during Earth Week. Viewers used a QR code to access the digital representation of the cube and a [Metric Ton of Carbon slideshow](#) explaining our human contribution to CO<sub>2</sub> and ways to reduce our personal emissions.



### **Honoring Pam Roe | Student Research Mini-Grants**

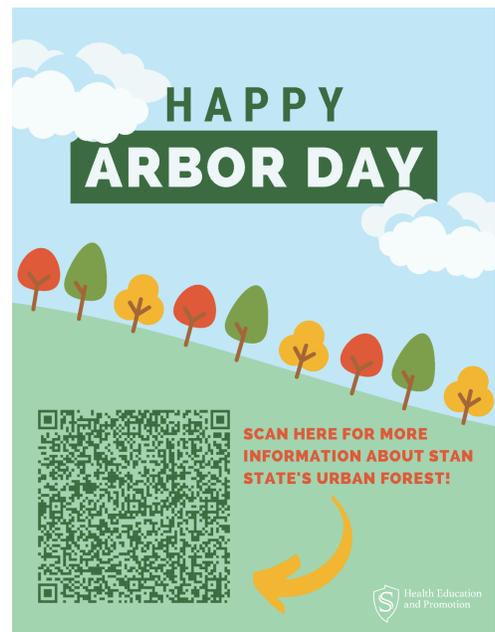
In a career spanning forty years, Dr. Pamela Roe is fondly remembered for her scholarship, teaching, guidance, and student mentorship in the Stanislaus State Department of Biological Sciences and at the Moss Landing Marine Laboratory. As an advocate and leader of sustainability efforts at Stan State, Dr. Roe founded the M.S. in Ecology and Sustainability and influenced the University's LEED (Leadership in Energy and Environmental Design) certified facility, the Naraghi Hall of Science. Dr. Roe was honored by a naming of the Naraghi Hall of Science Room 101 as the Dr. Pamela Roe Lecture Hall on Earth Day 2022.



Fundraising conducted for a plaque to commemorate the naming resulted in sufficient funds to provide mini-grants for student sustainability research with the goal of promoting student engagement in research, scholarship, and creative activity by funding project needs including equipment, materials, and supplies.

## Arbor Day Event

The first Arbor Day celebration was launched by J. Sterling Morton, Secretary of the Nebraska Territory, on April 10, 1872. It is estimated that more than one million trees were planted in Nebraska on the first Arbor Day. Today the holiday is celebrated in all 50 states, often in April, but commonly to coincide with the best tree planting weather, from January and February in the south to May in the far north. Taylor Whitehead, Health Education & Promotion, and the Peer Health Educators invited the Stan State campus community to celebrate the 150th anniversary of Arbor Day in the quad by sharing a QR code linked to a [Stan State's Urban Forests and You](#) slideshow featuring the physical and mental benefits of our campus' urban forest of over 3,300 trees.



## Earth Day Panel: DO Look Up

Sponsored by Climate Action Now!, Phi Alpha Theta, and The Council for Sustainable Futures, this Earth Day event featured a panelist of activists including Ken Boettcher, Stan State Master of History graduate, as well as Hank Pellissier, education writer and nonprofit director, and Ellen Thompson, a multi subject freelance tutor, both from Extinction Rebellion, a non-partisan movement "using non-violent direct action and civil disobedience to



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persuade governments to act justly on the Climate and Ecological Emergency.”

## Fellowships, Awards, Conferences and Presentations

### University Global Coalition 2021 Virtual Gathering | September 2021

Working as a Senior Fellow with Dr. Debra Rowe, President, US Partnership for Education for Sustainable Development, Wendy Olmstead, Sustainability Coordinator, co-presented the plenary session: *Connecting People To Real-World Sustainability Projects*, an introduction to two free global websites that increase human activity and organizational capacity for the United Nations’ Sustainable Development Goals.

[ProjectsThatMatter.org](https://www.projectsthatmatter.org) makes it easy for faculty, staff, researchers, and practitioners to find the help they need from volunteers, graduate students, and top-level undergraduate students who have the skills and are eager to assist with project planning,



implementation, management, and evaluation (locally or virtually). The partner site, [For Good](https://www.forgood.org), from the UK’s National Union of Students, connects highly motivated young people, students and graduates, through age 35, with forward thinking organizations seeking to progress sustainable development through research, projects, or placements to support the organizations in their efforts to address real-world challenges connected with social, environmental, and economic sustainability.

### AASHE 2021 Sustainable Campus Index

Stanislaus State was recognized as a top performer in the [2021 Sustainable Campus Index](https://www.aashe.org/2021-sustainable-campus-index) in the area of Well-Being and Work for associate, baccalaureate, master’s, and doctoral institutions. A publication from the Association for the Advancement of Sustainability in Higher Education (AASHE), the Sustainable Campus Index recognizes top-performing sustainable



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colleges and universities overall and in 17 impact areas, as measured by the Sustainability Tracking, Assessment & Rating System (STARS).

The Well-Being and Work category recognizes that “an organization’s character, capacity to perform and achievements are only as strong as that organization’s community. Colleges and universities bolster the strength of their communities by promoting the wellbeing of the campus community and by offering worker benefits, wages and other forms of assistance that serve to respectfully and ethically compensate workers. This section recognizes student and employee wellness programs and employee compensation, satisfaction, health and safety.”

### **Princeton Review Guide to Green Colleges | October 2021**

In its Guide to Green Colleges, 2021 edition, the Princeton Review® listed Stan State as one of the nation's most environmentally responsible colleges. The Review chose the 420 schools in its guide based on a survey of administrators at 835 colleges in 2020-21 about their institutions’ commitments to the environment and sustainability. The company's editors analyzed more than 25 survey data points to select the schools. "We strongly recommend Stanislaus State to students who care about the



environment and want to study and live at a green college," said Rob Franek, the Princeton Review's Editor-in-Chief. Stan State offers excellent academics and demonstrates a commitment to sustainability that is exemplary on many counts."

### **AASHE Global Conference Host Institution | October, 2021**

Stanislaus State joined the Association for the Advancement of Sustainability in Higher Education's (AASHE) Global Conference as a host



institution in October 2021, providing free registration for 164 members (37 staff/faculty and 127 students) of the Stan State campus community. With the theme, *The Future Is*, the conference brought together nearly 4,700 sustainability professionals, faculty, administrators, and students to listen to 10 keynote speakers, more than 190 live and on-demand educational sessions, and 30 networking and discussion groups. Dr. Suzanne Whitehead and Dr. Dianne Vargas, from Stan States' Department of Advanced Studies in Education, presented a live educational session on *Lessons of Sustainability Learned as a Disaster Mental Health Counselor*. Sustainability Coordinator, Wendy Olmstead, co-facilitated a networking discussion on *Sustainability as an Office of One* with Justin Mog, Assistant to the Provost for Sustainability Initiatives at the University of Louisville, and Roxane Beigl-Coryell, Director of Energy and Sustainability at CSU Channel Islands.

## AASHE Sustainability Awards Finalist | December 2021

The AASHE Sustainability Awards provide global recognition to the individuals and organizations leading the higher education sustainability movement. The California State University sustainability officers from Stanislaus, San Luis Obispo, Channel Islands, East Bay, Chico, Fullerton, Long Beach, Los Angeles, Northridge, Sacramento, San Marcos, Humboldt, and San Diego State were recognized as one of four finalists for AASHE's inaugural Racial Equity and Sustainability Collaborations Award for their case study: [California State University System-wide Climate Justice and Intersectional Sustainability Speaker Series](#). This collaboration, held over the 2020/21 academic year, was inspired by conversations among Sustainability Officers across the CSU about the need to infuse themes of equity, diversity, and justice into sustainability education and outreach and the need to provide virtual programming in response to the pandemic. The two-event series, titled *Climate Justice = Social Justice: Conversations Exploring the*

CSU SUSTAINABILITY MONTH 2020

# CLIMATE JUSTICE = SOCIAL JUSTICE

CONVERSATIONS EXPLORING THE INTERSECTIONS OF PEOPLE, PLANET & POWER

This series will mobilize and inspire students to help solve the many challenges our country faces—from systemic racism to climate change—through civic engagement, community organizing, and individual actions.

**KEYNOTE ADDRESS AND Q & A** **MON OCT 5 12 – 1PM**

**DR. MUSTAFA SANTIAGO ALI** is an internationally renowned thought-leader, strategist, policymaker and activist committed to the work of moving our most vulnerable communities from “surviving to thriving.” His nearly 30 year career spans work with the U.S. Environmental Protection Agency, the Hip Hop Caucus, and the National Wildlife Federation, where he currently serves as the VP of Environmental Justice, Climate, and Community Revitalization.

**WED OCT 14 12 – 1PM** **PANEL DISCUSSION AND Q & A WITH YOUNG MOVEMENT LEADERS**  
Moderator: Ere Holbert, Chico State Associated Students President

**LEANN THOMAS** is an intersectional environmental activist and eco-communicator who is passionate about advocating for and exploring the relationship between social justice and environmentalism. She uses her voice and platform as “Green Girl Leah” to encourage others to explore new places, live more sustainably and practice radical self-acceptance.

**XIUHTEZCATL MARTINEZ** is a 20-year-old indigenous climate activist, hip-hop artist, and powerful voice of a global youth-led environmental movement. He is an author, the Youth Director of the non-profit Earth Guardians, and co-founder of the company NOW that focuses on scaling climate change solutions. He is also a plaintiff in a youth-led lawsuit against the federal government for its failure to address climate change.

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- CSU Stanislaus President's Office
- CSU Stanislaus Cross-Cultural Center

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*Intersections of People, Planet & Power*, was the first of its kind, open to more than 400,000 students across the 23 campuses.

## AASHE Advisory Council | January 2022

Stan State Sustainability Coordinator, Wendy Olmstead, joined leaders from higher education, business, nonprofits and government across the globe as a member of [AASHE's Advisory Council](#). Serving a two-year term on the council, Olmstead provides advice and guidance on higher-level strategy as well as specific programs and services, including the technical development of AASHE's sustainability reporting tool, STARS, feedback related to the development and implementation of AASHE's strategic plan, and serves on one of the organization's technical committees on academics, engagement, operations, and planning and administration.

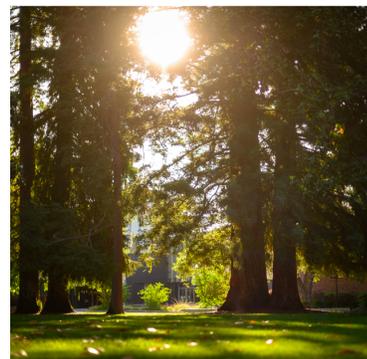


## This Way to Sustainability Conference | March 2022

Chico State's This Way To Sustainability (TWTS) Conference is a nationally recognized conference focusing on challenges, ideas, solutions and resiliency in planning our sustainable future. The conference hosts 1,400 participants each year with a variety of respected students and professionals speaking on the many aspects of sustainability. The goal of the conference is to educate students, staff, faculty, and community members by providing attendees an opportunity to network, discuss, and become more aware of pertinent environmental and social issues we all face.

### THIS WAY TO SUSTAINABILITY CONFERENCE

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This Way To Sustainability (TWTS) Conference is a nationally recognized, student-run conference focusing on challenges, ideas, solutions and resiliency in planning our sustainable future. The goal of the conference is to educate students, staff, faculty, and community members; providing attendees an opportunity to network, discuss, and become more aware of pertinent environmental and social issues we all face.

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Tracey Osborne PhD

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Held virtually this year from March 24-25th, the conference featured a keynote presentation from Robin Wall Kimmerer, author of *Braiding Sweetgrass*, followed by a panel discussion with California Indigenous faculty including Stan State Ethnic Studies lecturer and doctoral candidate in the Educational Leadership program, Stephanie Beaver-Guzman, Dr. Kaitlin Reed (Cal Poly Humboldt) and Dr. Joely Proudfit (CSU San Marcos). Stephanie wove her dissertation work around decolonizing academia and educational systems and better understanding the experiences of Indigenous women as they navigate cultural, community, and academic contexts into the panel discussion. Kimmerer's lecture and the panel discussion were coordinated by the CSU sustainability officers from Cal Poly Humboldt, Northridge, San Marcos, Cal Poly Slo, Monterey Bay, and Stanislaus State. Through funding provided by the programs involved in the coordination of the Kimmerer keynote and panel, the six CSUs received host institution status and free conference registration for all members of their campus communities.



**Stephanie Beaver-Guzman**

Tracey Osborne, Founding Director of the UC Merced Center for Climate, discussed Climate Justice & Higher Education in her keynote based on her research that focuses on global environmental governance and climate equity and justice. Osborne's keynote was responded to by a panel of faculty representing the six campuses participating in the CSU system-wide Teaching Climate



**Brandon Wolfe-Hunnicut**

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Change & Resilience Faculty Learning Community. Dr. Brandon Wolfe-Hunnicut, Associate Professor and Graduate Program Director of History, represented the ten Stan State faculty participating in this first-of-its-kind CSU system-wide faculty learning community. Dr. Wolfe-Hunnicut will be incorporating climate justice into the course: *The Contemporary United States, 1945-Present*.

## **CSU Bakersfield Sustainability Symposium | April 2022**

Wendy Olmstead, Sustainability Coordinator, shared Stan State's sustainability accomplishments and plans at the CSU Bakersfield 2022 Sustainability Symposium, the first of its kind in the Central Valley. Wendy was accompanied at the virtual symposium by Ginger Aguiar, a 2022 graduate from the Stan State's Masters in Counselor Education program. Ginger joined students from CSU Bakersfield and Fresno State on a Student Voices panel to share her knowledge of wellness and climate anxieties. Sponsored by CSUB's Faculty Sustainability Committee, Associated Students, Inc., and the Sustainability & Energy Management Department as part of their campus Earth Month celebration, the event featured sessions about climate anxiety, CO<sub>2</sub> capture, renewable energy, waste and wastewater, and indigenous relationships to the land.

## **Sustainability Collaborations**

### **CSU Sustainability Officers Affinity Group**

At the invitation of the Sustainability Program Manager in Capital Planning Design & Construction at the CSU Chancellor's Office, Wendy Olmstead, Sustainability Coordinator, will act as Vice-Chair for the CSU Sustainability Officers 2022 and 2023 affinity group meetings. Working with Chair Nikhil Schneider, CSU Northridge, and Advising Chair Ellie Perry, CSU Dominguez Hills, Wendy is responsible for coordinating and providing administrative support for meetings. In her capacity as Vice-Chair, Wendy conducted a survey of all 23 campuses to determine how the meetings can best serve the needs of the sustainability officers across the diverse campuses of the CSU system and their efforts to conduct system-wide initiatives.

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## **Sustainability 101: CSU Professional Development**

From September through December 2021, in response to the need for virtual professional development training, the CSU System-wide Human Resources Office provided the opportunity to extend classes beyond campus borders. Roxanne Beigel-Coryell, Energy & Sustainability Manager at CSU Channel Islands, and Wendy Olmstead, Stan State's Sustainability Coordinator, presented Sustainability 101: a workshop on relevant CSU policies and how to incorporate sustainability into our work and home life through interactive activities and practical tips. Participating in the cross campus collaboration were the Chancellor's Office, Channel Islands, Chico, East Bay, Fresno, Humboldt, Long Beach, Northridge, Pomona, Sacramento, San Bernardino, San Luis Obispo and Stanislaus State.

## **CSU System-Wide Teaching Climate Change & Resilience FLC**

Led by Dr. Mark Stemen from the Geography Department at Chico State, the CSU Sustainability Officers from Stanislaus State, Cal Poly Humboldt and San Luis Obispo, Monterey Bay, San Marcos, and Chico met over the summer of 2021 to plan the inaugural CSU system-wide Teaching Climate Change & Resilience faculty learning community (FLC). The FLC invited participants to learn about, and develop or modify, course curriculum with a focus on climate change, climate justice, and resilience while gaining collegial support for teaching sustainability across the disciplines, and working collaboratively to identify and design pedagogical approaches to teach students about sustainability problems paired with investigating possible solutions. With support from the Stan State Faculty Center for Excellence in Teaching and Learning and funding from the Provost's office, ten Stan State faculty met via zoom with 65 faculty from six campuses



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throughout the spring 2022 semester in sessions designed by educational staff at Strategic Energy Innovations (SEI), including Dr. Elizabeth Bagley (formerly of Project Drawdown), Sarah Ray (Cal Poly Humboldt), Daniel Fernandez (CSU Monterey Bay), and Tracey Osborne (UC Merced).

Speakers included Dr. Katharine Wilkinson, formerly of Project Drawdown, now with the All We Can Save Project, and Katherine Noble-Goodman of the Solutions Journalism Network. In addition to facilitating the recruitment of faculty to the FLC and their participation in the bi-weekly system-wide meetings for their respective campuses, sustainability officers coordinated breakout sessions on specific topics. Julie Fox, Stan State Director of Service Learning, provided an overview of community-based education and explored opportunities for local partnerships with participating faculty. Tim Overgaaw, Senior Director of Operations and Construction, presented the campus water reclamation system and Wendy Olmstead, Sustainability Coordinator, described the campus' urban forest and other opportunities to use the campus as a living lab.

### **AASHE Mentorship Program**

The purpose of the [AASHE mentorship program](#) is to match participants in the program based on goals, experience, and interests to help build supportive and mutually beneficial relationships with others in the higher education sustainability field while providing the foundation of a long-term professional relationship. Wendy Olmstead, Sustainability Coordinator, first participated in the program as a mentee with Jillian Buckholz, Director of Sustainability at Cal State East Bay in 2019/20. While a mentor to Kat Davis, Sustainability Coordinator and Environmental Compliance Specialist at Boise State University, Idaho in 2020/21, Wendy joined forces with Dr. Dave Colnic, sustainability faculty fellow, to review Boise State's first-ever STARS report, resulting in a Silver rating for the Broncos in fall 2021. In 2021/22, when AASHE added a peer collaborator dimension to the program, Wendy shared her knowledge and experience with Lori Hamilton, Chief Sustainability Officer, Georgia College in Milledgeville, GA.

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## Workgroups

### Tree Campus Advisory Workgroup

Chaired by Hugo Hernandez, Director of Landscape & Logistical Services, the tree campus advisory workgroup provides guidance for future planning, approves the campus' urban forest management plan, collaborates with the Council for Sustainable Futures to identify opportunities for education of the campus community as to the



An Arbor Day Foundation Program

benefits of the urban forest and participates in outreach to the community. The workgroup was formed by Wendy Olmstead, Sustainability Coordinator, to facilitate the campus' application for designation as a [Tree Campus USA](#), a program from the Arbor Day Foundation that recognizes that trees and green space are an integral part of the college experience, making campuses more livable, healthy, and beautiful and benefiting the campus community, public, and the environment while also providing use of the campus as a living lab. Workgroup members for the 2021/22 academic year include Hugo Hernandez (CPFM), Laurissa Hamilton (Biology), Andy Gardner (Biology), Jeff Rivero (Alumni), Stuart Wooley (Academic Affairs), Michele Gordon (Chemistry), Taylor Whittington (Peer Health Education), and Wendy Olmstead (Sustainability). Current CSU Tree Campus USA designees include Cal Poly SLO, Channel Islands, Maritime Academy, Northridge, San Bernardino, Chico, and Dominguez Hills. The application for Stan State's designation as a Tree Campus will be submitted in December, 2022.

### Pollinator Garden Workgroup

During the 2022 semester, Wendy Olmstead, Sustainability Coordinator, brought together a diverse group of campus constituents who share a common interest in establishing a campus pollinator garden in the BioAg and in adding more pollinator plants to the Trans California Pathway.



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Organized informally as a pollinator garden workgroup, participants include Carrie Sonke, Andy Gardner, and Michael Fleming (Biology); Alison McNally and Peggy Hauselt (Geography); Rotimi Odeh and Martin Hildebrandt (Agriculture); Jen Sturtevant (Basic Needs); Destiny Suarez (Eco Warriors); Erin Littlepage and Miriam Ureno Moreno (Academic Affairs); and Cueponca Moreno Sandoval (Ethnic Studies).



Once campus pollinator habitat is created and enhanced, the long term goal of the sustainability program is to submit an application to the Xerces Society, Inc. to join Northridge, Channel Islands, Chico, Sacramento, and Cal Poly SLO as a CSU campus with a [Bee Campus USA](#) affiliate designation. This will require the establishment of a formal, standing Bee Campus USA workgroup.

## Planning, Design & Construction

### Child Development Center



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A new 14,729-square-foot, sustainably designed Child Development Center is planned for the southeast section of the Stanislaus State campus between the sustainable garden and the recreation field. While it will not be certified as a Leadership in Energy and Environmental Design (LEED) building, a voluntary program designed to objectively measure how sustainable a building is, it is designed to be built to the equivalent of the LEED Gold classification. LEED standards are maintained by the U.S. Green Building Council (USGBC), a nonprofit, non-governmental, membership-based organization. The Child Development Center design was completed this year with plans for the building to include enough solar to construct a net positive building. The building's sustainability features will contribute annually to the full building's operations and will offset the carbon created by the construction of the building over time. Features include solar and water, recycling, sustainable materials, and energy-efficiency fixtures and landscaping.

### **John Burton Vasche Library**



The Vasche Library renovation, completed this fiscal year, meets all requirements of the mandatory California Green Building Standards Code (CALGreen), [Title 24, Part 11, of the California Code of Regulations](#), and is equivalent to LEED Silver. CALGreen is California's first green building code and is the first state-mandated green building code in the U.S.

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In addition to photovoltaic (PV) panels installed on the roof for renewable energy, the design of the building envelope exceeds CALGreen energy requirements by 10%. All windows were replaced with insulated glazing systems to improve daylighting to the interior of the building and the storefront system has insulating low-e glass. Reliance on lighting systems was decreased via a new clerestory, solar tubes, and skylights. Fixtures in stairwells, the lobby, amenity spaces, office areas, and common spaces have sensors that automatically dim lights to 50% when the area is unoccupied for more than 30 minutes.

Photocell sensors are provided in daylit zones for automatic dimming of lights in response to available daylight and exterior lighting has photocells for automatic on/off in response to daylight. In addition to increasing energy efficiency, new insulation in existing cavity walls inhibits sound transfers.

The mechanical system was designed to be efficient and to minimize pressure drops in the ducting and piping distribution systems as well as drops in hydronic coil pressure. All air handling units and water moving systems are equipped with variable frequency drives to adjust the speed of motors based on the system load requirements and operation schedule, resulting in a dramatic cut in energy consumption. The building is connected to the Central Plant and equipped with automated logic controls to allow remote monitoring and adjusting as needed. The system cycles in outdoor air, has filters, and independent variable air boxes throughout to provide temperature zoning.

The plumbing system was designed for efficient water usage with low-flow fixtures and flow restrictors to reduce domestic water consumption and sanitary sewer outflow inlines to reduce the campus' overall water consumption. Other sustainability features include the use of paint, adhesives, sealants, caulking, carpeting and resilient flooring consisting of materials with low volatile organic compounds. Public spaces feature multi-stream recycling containers and in offices and workstations [individual mini-bins](#) are provided to replace traditional desk-side garbage cans to encourage a culture of reduce, reuse, recycle.

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## Facilities Management

### E-Waste Recycling Program

The California Department of Resources Recycling and Recovery (CalRecycle), a department within the California Environmental Protection Agency, administers and provides oversight for all of California's state-managed waste handling and recycling programs. This includes the reporting, collection, and diversion of hazardous waste including used copier/toner cartridges and batteries. Frank Borelli, Manager of Support Services, Kellie Marshall, Director of Safety and Risk Management, and Wendy Olmstead, Sustainability Coordinator, collaborated on the design of campus e-waste recycling receptacles following best practices for recycling that include accessibility and visibility, standardization of receptacles, and ease of use. CPFM laborers, led by Michael Chavez, installed e-waste recyclers, purchased by the sustainability program, for used copier/toner cartridges and batteries in copy centers in the Library, Bizzini Hall, MSR, Naraghi Hall, Demergasso-Bava Hall, and CPFM.



### Solar Production

In Spring 2022, the final design stage for the installation of solar panels on the roof of the new Student Center was completed and the project moved on to a review of the plans with construction starting in Spring



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2022. Once completed, the 502 kW system will produce 759,557 kWh of electricity, the equivalent of 146 tons of carbon and sufficient power to run 69 households per year. Construction for the Parking Lot 4 Phase II solar project is scheduled to start in summer of 2022. To date, solar panels have been installed on the roofs of the Science I Building, Main Dining, the Student Center, Fieldhouse, Fieldhouse Annex patio, Library, at the Irrigation Station and over Parking Lot 4. Together the panels have the capacity to generate 1.86 MW with an annual production of 2,723,813 kWh. This is equivalent to a carbon footprint of 523 tons and is enough to power 248 houses.

### **LED Lighting Conversion**

During 2021/22, Energy Manager, Geng Liu, and CPFM staff, Mike Lynch, Alex Stockeland, Gill Luna, Brandon Zambelli, Chad Burdick, Andrew Wooding, and Jess Lindo, continued lighting conversions to LED in parking lots and street lighting. The retrofit of existing lighting with LED lights has resulted in a total annual savings of 2,630,377 kWh and a carbon footprint reduction of 567 tons. The savings and carbon footprint reduction by lighting types is:

Indoor: 2,129,056 kWh/459 Tons

Exterior Building: 21,681 kWh/5 Tons

Pathway: 276,385 kWh/59 Tons

Parking Lot: 124,312 kWh/27 Tons

Street: 78,943 kWh/17 Tons

### **DBH Pond Conversion**

With the demolition of the water feature of the DBH pond, the utilization of pool chemicals and one million gallons of annual potable water use were eliminated. The site is being converted into much needed outdoor study space with solar charging stations, shade covering, WiFi, water



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refill stations and various types of seating as well as accommodations for relocation of the Stan's Choice food service outlet. Completion is expected by the middle of May.

### **Library Annex Orchard**

To reduce water use, drought tolerant, low maintenance trees are being used to replace grass wherever possible across campus. With the completion of the university library renovation, and the removal of the library annex trailers, sixteen *Jacaranda mimosifolia* (Jacaranda), seven *Ulmus parvifolia* (Chinese Elm) and four *Pistacia chinensis* (Chinese Pistache) were installed by campus landscape crew members. The outdoor picnic tables, currently located in the Demergasso Bava Hall (DBH) courtyard as temporary outdoor study areas while the Library was closed, will be moved to the area in the future.



### **Landscape Conversions**

Landscaped areas at the Library, Demergasso-Bava Hall, Calaveras Circle and around the Marvelyne Hughes Reflecting Pond were converted from grass to drought tolerant and pollinator-friendly plants resulting in reduced water usage by 50% and maintenance requirements by 75%.



### **Water Refill Station Installations**

To comply with, and support, the CSU Single Use Plastics Policy in phasing out plastic water bottles by January 2023, water refill stations were installed in the Mary Stuart Rogers Gateway Building, Art Building, and Innovative Center, bringing the total number of stations

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across campus to twenty two. As of April 2022, the stations have been used to refill a total of 393,627 bottles with the highest usage in academic buildings at over 105,000 refills in DBH and 120,000 in Science I.

### **Ground Water Recharge Station Design**

The design has been completed for a groundwater recharge station and is pending construction funds. The project consists of installing a stormwater catch basin and the necessary pumps and controls to capture and store excess storm water collected by the University's storm water reclamation system. The basin will have a porous bottom allowing the stored water to seep slowly into the underground aquifers benefitting not only the University but the entire region.

### **Looking Ahead!**

Planned sustainability initiatives for campus operations in the future include:

- food waste composting in compliance with CA State regulation SB 1383, California's Short Lived Climate Pollutant Reduction Strategy
- parking lot 4 solar phase II construction
- groundwater recharge station construction
- interior recycling program improvements
- bicycle storage facility
- continuation of LED exterior lighting upgrade installations in parking lots
- Traffic Demand Management Study

