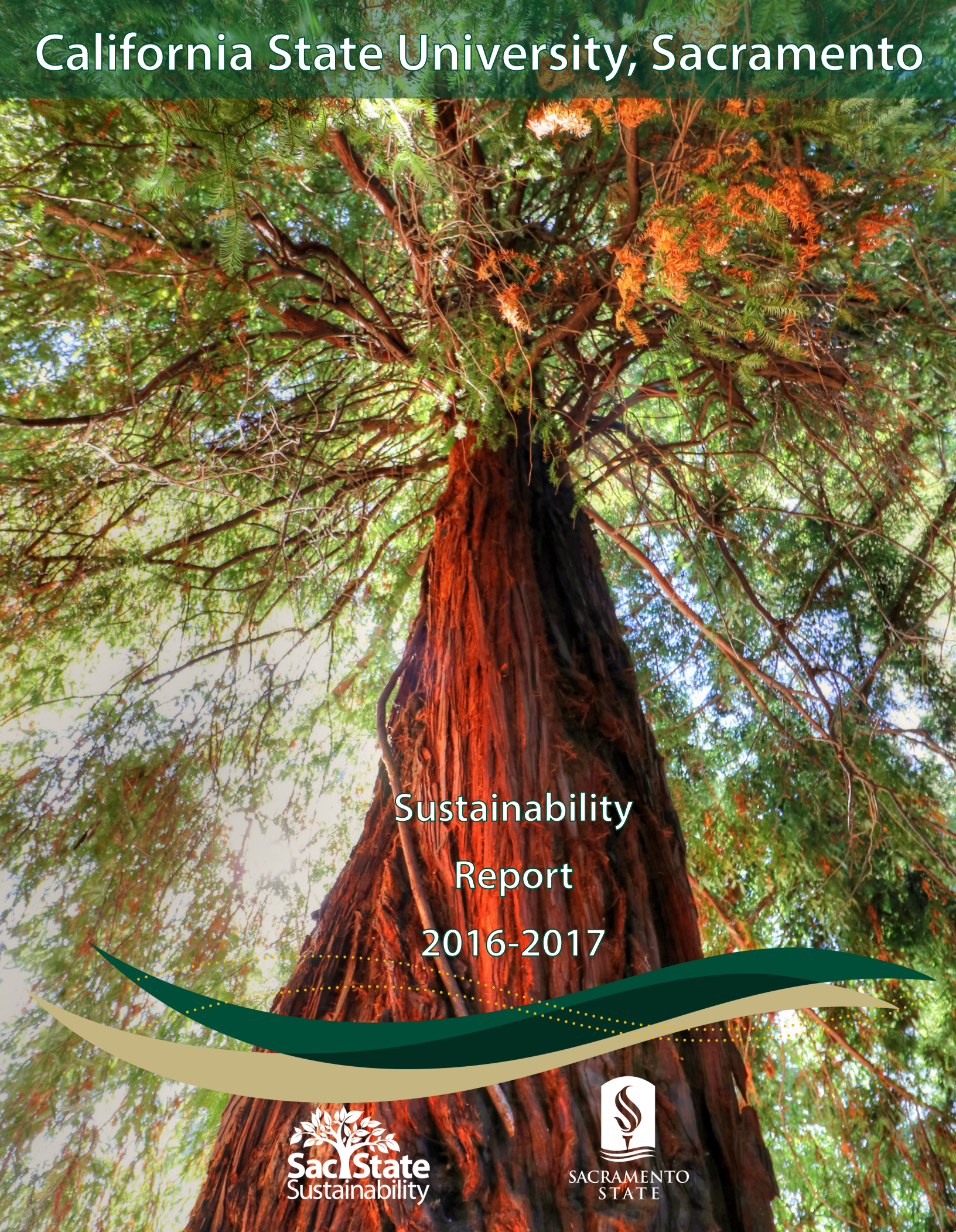
California State University, Sacramento



Sustainability Report 2016-2017

Sac State Sustainability

SACRAMENTO STATE


"When we try to pick out anything by itself, we find it hitched to everything else in the universe." - John Muir

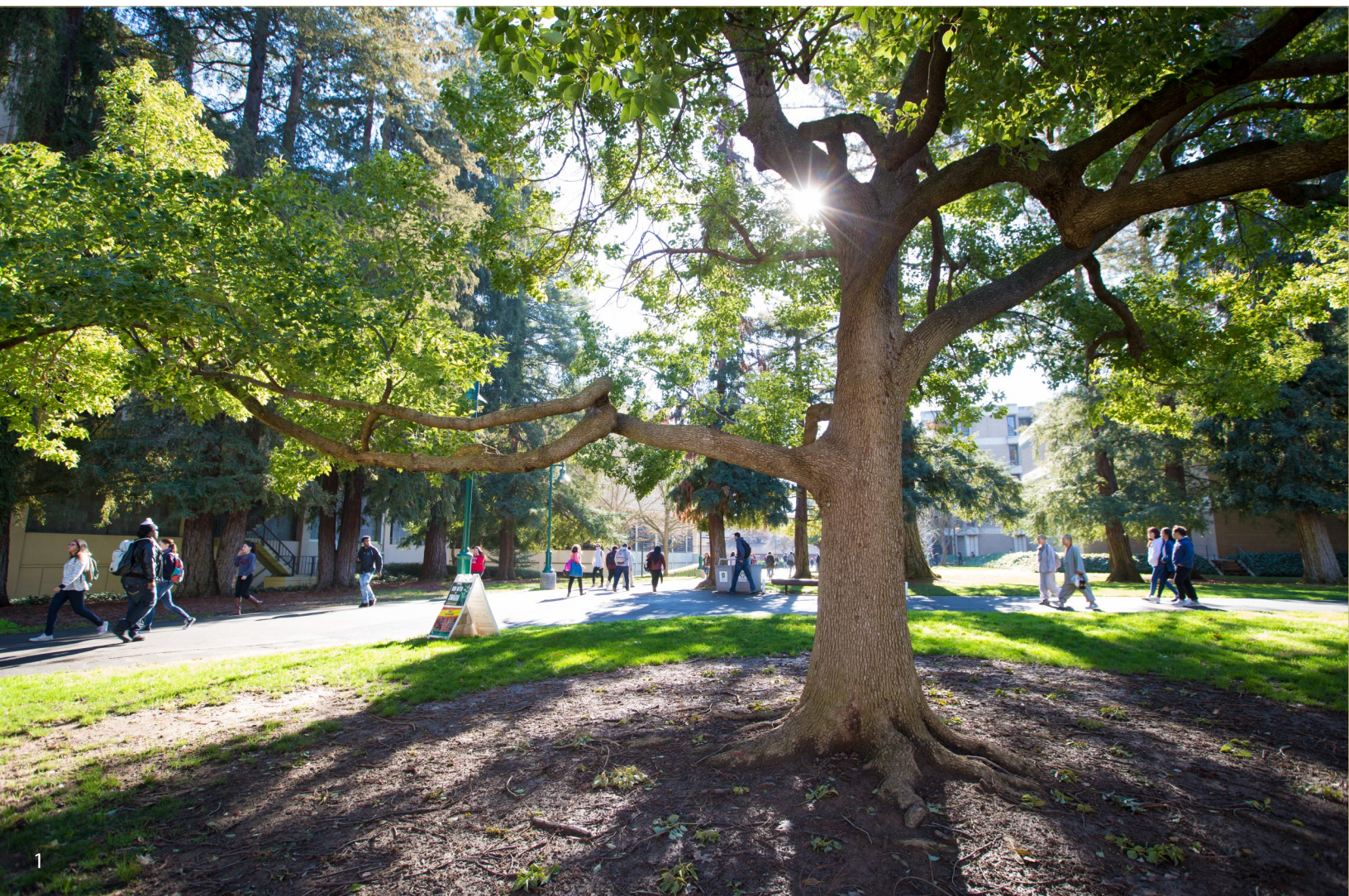
Table of Contents

Introduction	1
Message from the President	2
Academics	3
Campus Engagement	5
Community Engagement	7
BAC Yard	9
Waste Diversion	12
Grounds & Landscaping	13
Sustainable Food Systems	15
Energy	16
Grants	17
Greenhouse Gas Emissions	18
Awards & Recognition	19
What's Next	21
Acknowledgements	23

Introduction

Guided by our campus' mission, vision, and values, Sac State Sustainability strives to enhance student learning and success. We work in partnership with faculty to create an environment where students' innovative ideas produce tangible, real-world results. We decrease campus waste, water and energy consumption, and greenhouse gas emissions, while matching the high quality classroom education with a living lab for students to make a permanent impact on the University. We believe that the best way to prepare students for leadership, service, and success is by listening to their ideas and giving them an opportunity to apply what they've learned.

Sac State Sustainability has built strong partnerships on and off campus. Regular collaboration with organizations in the Sacramento community and other California universities has fueled new ideas and innovation. Most importantly, we believe that as stewards of this planet, it is the responsibility of the current generation to initiate change and prepare future generations to continue that change.



Message from the President



At Sacramento State, we hold ourselves accountable to the highest standards of environmental stewardship. Our University serves the capital region of California and is a national leader in the development of sustainability policies. In our pursuit of sustainability, we are dedicated to exploring opportunities and new initiatives for innovation and collaboration.

I believe that we, as a University and as citizens of the world, have to take responsibility for our actions today to ensure we are creating a better world tomorrow. Institutions of higher education are places where scientific advancements are made and solutions to global problems are realized. Climate change is one of the greatest issues facing our planet. Therefore, as one of the largest campuses within the California State University system, we have an obligation to not only reduce our environmental impact, but also to create an environment where sustainability becomes so engrained in our culture that it is not just what we do, but who we are.

Sac State is No. 1 in sustainability, Stinger's Up!

- Robert S. Nelsen

WE ARE STILL IN

OVER 30 CAMPUSES ENDORSE

Leadership in Action

- Nelsen joined more than 1,200 government, business, and higher education leaders in signing the "We Are Still In" statement, taking a stand against the Trump administration's decision to withdraw the United States from the Paris Climate Agreement.
- He also joined chancellors and presidents of more than 170 U.S. colleges and universities in signing an open letter on climate action directed at the then incoming Trump administration.
- And, Nelsen signed the "Put a Price on It" carbon-pricing endorsement initiative, calling on elected representatives to make carbon-intensive industries pay a fair share of the costs their pollution generates.



Academics

Campus as a Living Lab

The California State University (CSU) in 2015-16 awarded Sacramento State an $82,000 "Campus as a Living Lab" (CALL) grant, which allowed the University to integrate sustainability concepts and theories into academics.

Sac State created a hands-on, student-learning environment called the BAC (Bio-Conversion and Agricultural Collaborative) Yard, which is home to on-site composting for campus green waste and for much of the campus' pre-consumer food waste. Additionally, all campus coffee shops now divert their coffee grounds for composting at the BAC Yard.

Environmental Studies Professor Sara Kross led the efforts through ENVS 147, her course in immersive urban agricultural methods.

What the Students Built

In the Campus as a Living Lab model, students learn practical application through the use of organic waste and recycling streams, combined with vermiculture and hydroponics, to address larger topics in urban food production. Students created the following projects at the BAC Yard:

- Wicking beds, self-watering, raised garden beds with a minimal foot print that are perfect for urban settings.
- Bat boxes, which provides a secure environment for bats to nest and a safe, warm place for female bats to raise their young.
- Vertical hydroponics garden, also called a living wall, is the coolest trend in soilless food production.
- Pollinators' gardens and landscapes, which help revive the health of bees, butterflies, birds, bats, and other pollinators.

Academics

Tiny House, Big Accomplishment



Built on campus over three months by 24 students and alumni from the Mechanical Engineering, Civil Engineering, and Construction Management departments , this impressive tiny house won Best Mechanical Layout and Best Bathroom honors at a local competition.

The 184 square-foot, net-zero structure spans a mere 20 feet and boasts many sustainable features, including wood décor from reclaimed pallets, a recycled kitchen sink, and an innovative vacuum-tube solar system for plenty of hot running water.



Student-Built Solar Golf Cart

As part of a two-semester senior design project, five Mechanical Engineering students adapted a campus golf cart to utilize roof-mounted solar panels as a supplemental power source. The students not only converted the cart to run on solar power, but also built a custom frame to support the panels. This cart is used daily in campus operations.

Greenovation Grant

Led by Kylee Homecillo, executive vice president of Associated Students, Inc. (ASI), the ASI Green Team received a $2,000 Greenovation Grant for its project called “Design and Demonstration of a Post-Consumer Bio-Waste Management System.”

The 2016 purchase and construction of a state-of-the-art hoop house – built primarily by ASI students – provided a defined and shaded area for educational instruction and experimentation at Sacramento State’s BAC Yard.





Campus Engagement

Partnerships Grow at Cap Radio's Garden

Comprised of raised plant beds, bee hives, fruit trees, a bioswale rainwater capture system, and interpretive signage, Capital Public Radio's unique garden is the first of its kind at any National Public Radio affiliate. Through their Food and Sustainability Initiative, the garden exists to bring public awareness to food topics such as insecurity and sustainable food production. In a win-win partnership, Sac State Sustainability and Capital Public Radio work together to close the loop. Students collect green waste from the garden and turn it into compost at the campus Bio-Conversion and Agricultural Collaborative and return the rich soil to Cap Radio for their next growing season. The garden aids in spreading the word about food literacy throughout Sacramento and beyond, and also provides Sac State students a hands-on opportunity to learn about such topics in a meaningful and educational way.



Got Video?

In Spring 2016, with a tight deadline looming, students, professors, and staff worked with Sacramento State's Office of Public Affairs to create a video highlighting campus sustainability efforts. The video has reached audiences on and off campus and does not disappoint. This production can be viewed on Sac State Sustainability's website.



Meeting of Like-Minds

Sac State Sustainability hosted the annual system-wide Sustainability Officer's meeting in March 2017 followed by a campus sustainability tour. Sustainability professionals from the California State University Chancellor's Office and other system campuses met to share best practices and learn about what's new within the industry.

Campus Engagement

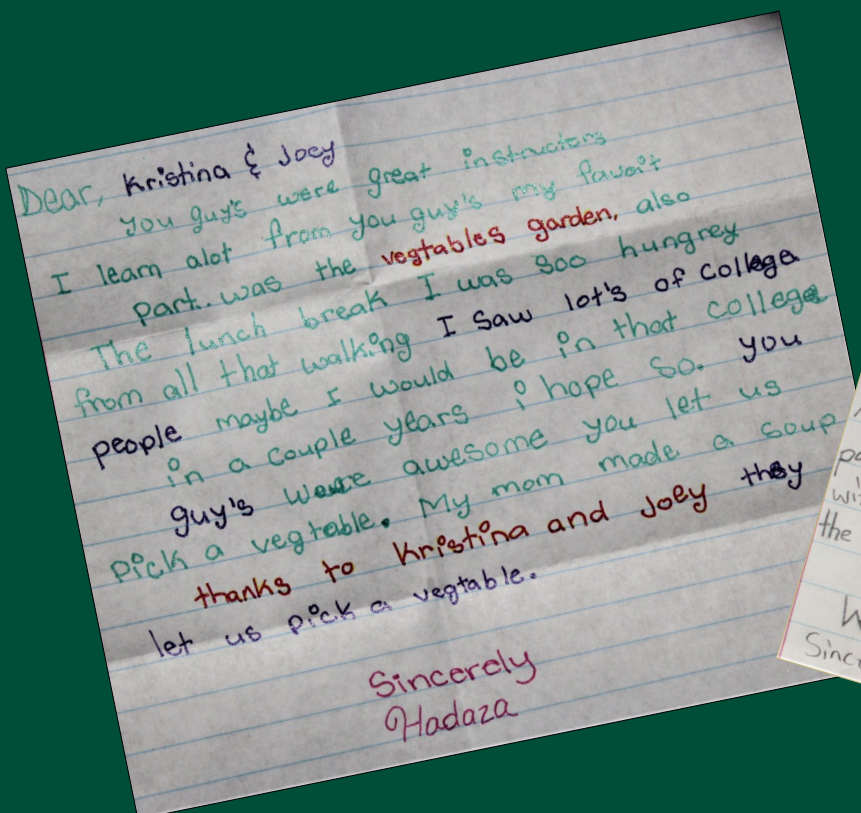
Welcome Future Hornets

Sac State Sustainability has increased its partnerships with school districts throughout the Sacramento region and beyond. Each year, K-12 students visit our campus to see sustainability in action.

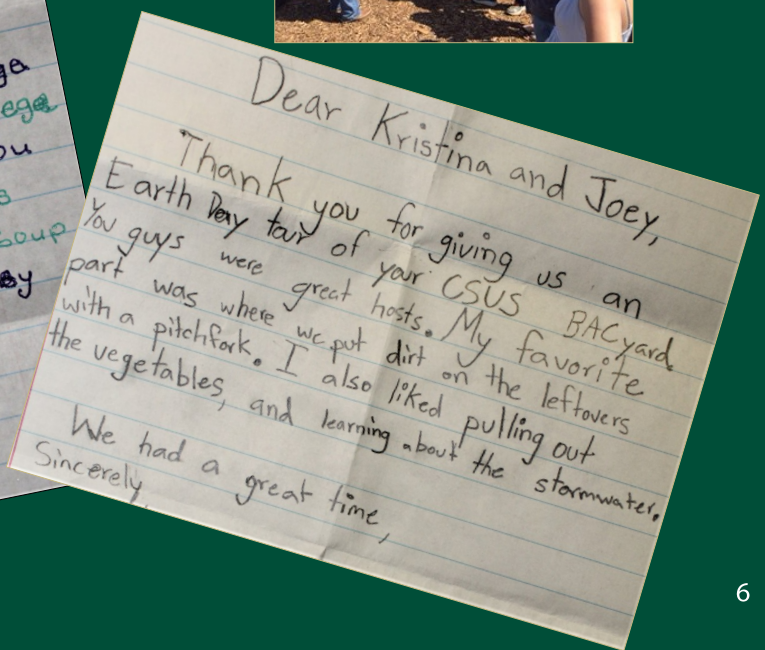


Students explore sustainability projects in varying lights on the academic spectrum while seeing sustainability in action throughout the campus. Our partnerships with these schools support President Nelsen's focus on community engagement and outreach, one of his four imperatives for Sacramento State to develop. Many of these schools serve children from disadvantaged communities. By having students particularly from disadvantaged areas visit Sacramento State, we are providing them an opportunity to consider higher education as a tangible option.




Dear, Kristina & Joey
you guy's were great instructors
I learn alot from you guy's my favorit
part. was the vegtables garden, also
The lunch break I was soo hungrey
from all that walking I saw lot's of college
people maybe I would be in that college
in a couple years I hope so. you
guy's were awesome you let us
pick a vegtable. My mom made a soup
thanks to Kristina and Joey they
let us pick a vegtable.

Sincerely
Hadaza


Dear Kristina and Joey,

Thank you for giving us an Earth Day tour of your CSUS BACyard. You guys were great hosts. My favorite part was where we put dirt on the leftovers with a pitchfork. I also liked pulling out the vegetables, and learning about the stormwater.

We had a great time,

Sincerely

Community Engagement

A Sustainable Future Fundraiser

Hosted by Keep America Beautiful at the Cap Radio Garden, local food and drinks from sustainable partners in the region and music provided by Capital Public Radio helped set the tone for the first-ever sustainability fundraiser. The event, titled 'Sac State Sustainability Presents: A Sustainable Future', raised $7,000 to fund student sustainability projects. In support of enriching students' academic experience and broadening their exposure to hands-on learning, funds from this event will support our "campus as a living lab" environment.





Green Sports Alliance and Sac State Unite

The annual Green Sports Alliance Summit was held in June 2017 at Golden 1 Center. The Summit is the world's largest and most influential gathering of the sports community to unite around sustainability. Sacramento State was a part of it in a big way this year. The Fashion Merchandising and Design Program in the Family and Consumer Sciences Department and the Student Fashion Association presented their ECOLUTION Fashion Show one evening of the Summit. Facilities Management Associate Vice President Justin Reginato helped with opening remarks for the show.

GREEN SPORTS ALLIANCE SUMMIT

Sac State Sustainability tabled at the exposition for the Summit and provided a pre-summit walking tour of Sacramento State campus sustainability highlights. Conference attendees saw the BAC Yard, the impressive LEED Gold attributes of The WELL and the award-winning low-impact development storm-water project. More than 50 summit-goers attended the tour. As part of the Summit, Sac State Sustainability also donated more than 12 yards of campus-made compost to Sacramento Unified School District for landscape revitalizations during their Green Apple Day of Service.

Community Engagement



Inaugural Farm to Fork Celebration

One of the hottest tickets in town was Sacramento State's inaugural Farm-to-Fork dinner in September 2016 on the beautiful Guy West Bridge above the American River. The dinner was a high point of the daylong "Farm-to-Fork at Sac State" event, a first-time celebration of food and healthy eating that included a festival and keynote address by Raj Patel, author and expert on world food systems.

The zero-waste bridge dinner, featuring sustainable, locally sourced ingredients, was prepared and served by Sacramento State students in Professor Kelly Thompson's Food Production & Sustainability class. They had assistance from Aaron Franco, the University Enterprises Inc. (UEI) executive chef, and his staff at the Epicure Restaurant on campus. The students planned the menu, as well.

Sharing Best Practices

Sac State Sustainability welcomed visitors from the University of California's Office of the President, as well as UC Berkeley and UC Merced, for guided tours of various sustainability initiatives on our campus. Campuses shared best practices and explored potential partnerships.

Water-Fire Impacts

Organized and convened by the Institute on Science for Global Policy, April 2016 brought the 'Water and Fire: Impacts of Climate Change Conference' to Sacramento State. The conference focused on the challenges facing our state from a changing climate and its impact on wildfires, water scarcity, potential flooding, and the loss of over 90 percent of salmon and steelhead in California rivers. Attendees included students, faculty, scientists, and academics, as well as representatives from government, the private sector, and the community at large. The conference brought wide-spanned views on climate change in California.



Bushy Lake Restoration

Led by the expert direction of professor and scientist Dr. Michelle Stevens, Environmental Studies students spent two years restoring the wetland and riparian habitat known as Bushy Lake, a 20-acre pond formed in an abandoned oxbow of the Lower American River. The Bushy Lake project was a remarkable outdoor classroom that taught research field methods and restoration ecology to both graduate and undergraduate students. On September 23rd, 2016, an unveiling of the Bushy Lake Restoration & Environmental Education Project provided the public and media a chance to take a guided tour of the repaired riparian habitat after fires devastated the area.



BAC Yard

Sac State's BAC Yard

The Bio-Conversion and Agricultural Collaborative exists to reduce waste and greenhouse gas emissions at Sacramento State through composting and sustainable agriculture methods. The BAC Yard is a partnership between students, faculty, and staff using the campus as a living laboratory. Students working at the BAC Yard practice composting and sustainable agriculture techniques and gain real world experience by using campus waste streams as an educational resource. At the BAC Yard, students are integral to reducing Sac State's environmental impact.



100 tons

Organic material diverted from the landfill each year

65 yards

Compost generated from organic waste annually

$5,000

Cost savings annually from reduced hauling fees and compost purchasing

Did You Know?

Almost all of the materials used to build the BAC Yard were from reused, recycled, or upcycled items. The hot composting corrals are the men's 3rd floor restroom stalls from a previous building remodel of Mendocino Hall. Now that's sustainable!

BAC Yard

BAC Yard Campus Partnerships

Academic Student Internships

Students from various areas of study can learn hands-on skills in composting and agriculture while earning academic credit.

Family and Consumer Sciences Lab & Garden

In a Campus as a Living Lab concept, students experiment with various agricultural and composting practices, supporting their learning objectives. Additionally, they maintain a garden producing food for the University's annual Farm-To-Fork dinner on the Guy West Bridge.

Volunteers

Students and staff excitedly and generously volunteer their time to learn hands-on practices in the art and science of composting and various urban agriculture methods. The BAC Yard thrives on the dedicated work from the many involved that keep the daily operations moving while creating a space for eager learning minds to flourish.



ASI Children Center's Garden

Growing minds growing food! Sac State's ASI Children's Center teaches the importance of healthy eating and access to organic and fresh food by enlisting little hands in the growing process. Compost from the BAC Yard is delivered to the Children Center's garden to meet their growing needs. Food waste from the Children Center's kitchen then returns to the BAC Yard for composting!

Composting Methods of the BAC Yard

In response to Assembly Bill 1826, Sacramento State now composts a significant portion of its organic waste, resulting in reduced waste-hauling fees and fewer greenhouse gas emissions. The following three methods of composting are used at the BAC Yard:

Windrow Composting

Leaves are collected in a long pile known as a windrow, watered down, and covered. Periodic watering and turning of the pile results in rich compost four months later.

Hot Composting

Hot composting is the most easily replicable method of composting at the BAC Yard. Student interns retrieve food waste from campus eateries and coffeehouses to aerobically digest food in small 1-2 yard piles above ground. This type of composting mimics most home-composting systems; add water, turn the pile, and repeat & you too could have ready compost within four to five weeks.

Vermicomposting

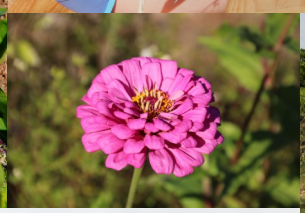
This in-vessel system differs from hot composting in that worms are introduced to break down the food waste. Students perform experiments with different types of food waste and track the data. The resulting worm castings produce a highly enriched compost within four or five months.




ASI Student Garden
at Sacramento State


WINDROW
VERMICOMPOST
HOT COMPOST











Waste Diversion

Waste Diversion by the Numbers

Sacramento State – with a student population of 30,510 and faculty and staff numbering 3,142 – is a regional leader in diverting campus waste from landfills. The University diverted 1,450.21 tons in 2016.

Additional 2016 Disposal Numbers:

Electronic Waste: 98,319 pounds or 49.16 tons diverted from the landfill

Medications: 630 pounds of unused/expired medication collected. With approximately 500 pills per pound, about 315,000 pills were disposed of responsibly and kept out of rivers and streams!

Total solid waste diversion for 2016: 77.23% diverted from the landfill





Campus Surplus Auctions

In our ongoing efforts to consider how we can divert campus waste, the Procurement Department continues to have tremendous success in holding campus surplus auctions for both the campus community and the public.

In 2016, this program diverted more than 47.616 tons of potential waste through auctions and generated approximately $118,000 !

New Signs

Sac State's Recycling team created new signage for campus waste, recycling, and compost disposal bins in an effort to help the Sacramento State community better identify which is the correct bin for their disposal needs. These signs were placed throughout campus, near eateries, with a goal to reduce waste and increase recycling and composting.







Grounds & Landscaping

Water-Saving Landscape Renovations

The $253,000 Landscape Sustainability Renovations Project, funded by the University Budget Advisory Committee (UBAC), created small parks outside Lassen and Kadema halls and the University Union. Also part of the project is new landscaping along the road adjacent to Lot 6, which saves an estimated 270,000 gallons of water each year. The mostly turf-free mini parks give students new and inviting places to congregate. The newly landscaped areas require minimal irrigation and will save an estimated total of 820,000 gallons of water annually. Among their aesthetic features are shade trees, drought-tolerant plants, decorative river rock (some arranged to simulate dry creek beds), scattered boulders, and new seating.

Project highlights:

- Turf removed: 30,000 square feet (along with an inefficient, 40-year-old spray irrigation system)
- New trees planted: 19, including mature Valley Oaks
- New in-ground plantings: 2,700 native, drought-tolerant varieties







LID Performance

Office of Water Programs continues to monitor the performance of the Low Impact Development (LID) storm-water retention devices throughout campus. Flow monitoring and sampling at Lot 10, College Town Drive, and Lot 7 focuses on total and dissolved metals, tubidity, total suspended solids, pesticides, temperature, and pH. These tests help monitor which types of devices are performing most efficiently. Conclusions are still in progress. The Campus LID Mobile Tour via a smartphone's GPS capabilities help teach about the unique performance features of all 25 campus LID locations through a self-guided tour.



Joanna Hedrick, a staff member in the Student Services Center, has embraced Sacramento State's culture of sustainability. Each fall Joanna upcycles fallen leaves into beautiful leaf art for the campus community to enjoy. Her work can typically be seen between Calaveras and Alpine halls along Ginkgo Alley.

Sustainable Food Systems

New Fruit Trees!



As part of its Community Pipeline Safety Initiative, Pacific Gas and Electric (PG&E) Company needed to remove some trees from our urban forest but agreed to replace them with the same number of trees. We chose fruit trees! Citrus trees between 3 to 5 years of age were planted near Parking Lot 10, across the street from the Eli and Edythe Broad Fieldhouse. With the addition of these trees, we encourage the Sacramento State family to help themselves and enjoy the "fruits" of our campus.

Home-Grown for the Pop-Up Pantry

Recognizing a need to create a solution for food-insecure students, the Associated Students, Inc. (ASI), Green Team of 2016-2017 created a garden at the BAC Yard to grow fruits and vegetables to supplement the campus' ASI Pop-Up Pantry. The Pop-Up Pantry is a service of the ASI Food Pantry. In an attempt to provide healthier eating options, ASI partnered with the Central Downtown Food Basket to distribute fresh produce at no cost to Sac State students in need. The Pop-Up Pantry occurs monthly throughout each semester and serves approximately 400 students. Produce grown at the BAC Yard is 'Made At Sac State' using compost created at the BAC Yard from campus food and green waste.



Energy

Lighting Saves Energy

Mendocino Hall was the pilot location for a state-of-the-art LED lighting retrofit, completed in June 2017. With advanced controls, this project has reduced lighting energy consumption by 85% and has an estimated energy savings of $22,247/year. Constructed in 1990, the building previously was retrofitted with T-8 fluorescent lamps, electronic ballasts, and simple occupancy-based lighting controls. It's representative of many campus buildings. Before the retrofit, the building had occupancy sensors in most offices and classrooms, however that left many spaces such as corridors, stairs, and restrooms with lights on 24/7. The project installed LED fixtures, recessed cans, cove lights, and three types of troffer fixtures.

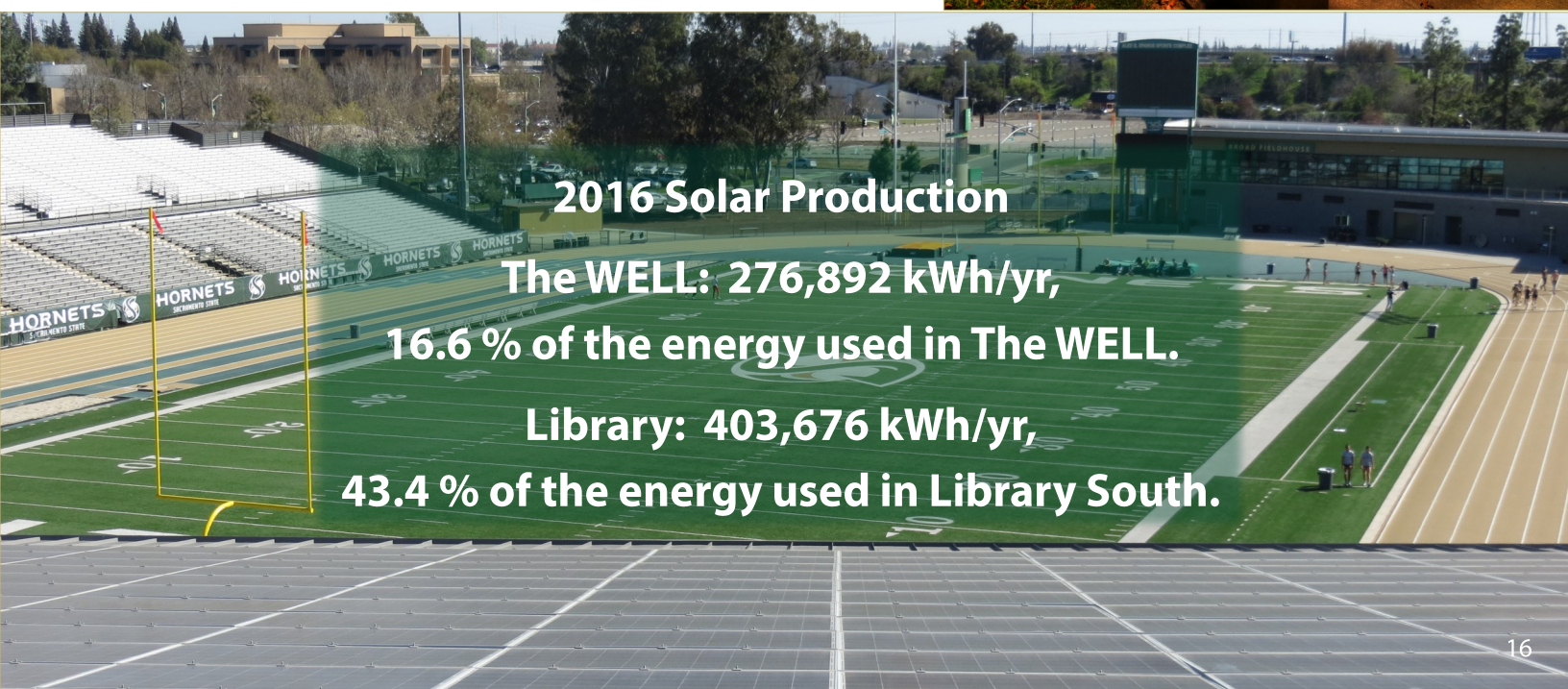
Summary of efficiency highlights:

- Replacement of 333 fluorescent fixtures with LEDs
- Advanced control system with wireless communication
- Dimming, daylight harvesting, and grouping for zone control
- Web-based graphical interface with monitoring and control to the level of individual fixtures
- Integrated sensors for occupancy, ambient light and temperature
- Integration with campus automatic demand response system

Tahoe Lights

Installed by our talented Sacramento State Electricians, Tahoe hall's exterior building perimeter received state-of-the-art LED outdoor lighting. These new lights have a two-stage sensor which allows the lights to react to motion and turn on only when needed, creating an extra energy-saving element. They also provide an extra safety feature at night since the motion detection will indicate if someone is nearby.





Grants

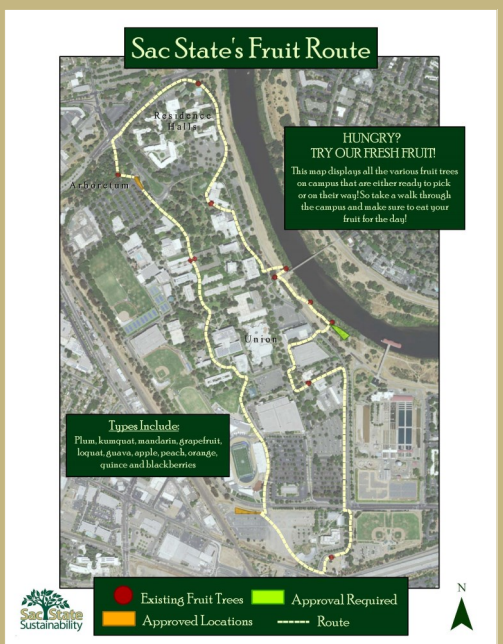
Overview

Sac State Sustainability recognizes the fiscal benefits of seeking grant funding for sustainability projects, as well as the campus and community partnerships that flourish as a result. Embracing the "campus-as-a-living-lab" mentality in the grants we seek ensures that students will benefit from the practical application of sustainable changes to the physical campus, while creating a rich learning environment.



The following is a snap-shot of our 2016-2017 grant activity:

- **Water-Energy Grant**, Department of Water Resources, Project Name: "Water-Energy Reduction", Submitted in collaboration with Facilities Management's Sustainability and Plumbing teams, Dining Services, and the CSU Chancellor's Office; **Outcome:** awarded over $600k for replacement of nearly 500 campus faucets, more than 200 showerheads, and various kitchen appliances in Dining Services. These replacements will achieve water and energy savings leading to greenhouse gas (GHG) emissions reductions.
- **Food Rescue Grant**, Cal Recycle, Project Name: "Sacramento Food Rescue Collaborative", Submitted in collaboration with Sac State Sustainability, Sacramento State Family and Consumer Sciences Professors Lynn Hanna and Kelly Thompson, and Environmental Studies Professor Christine Flowers, Cal Expo, Sacramento Conservation Corp, and the Sacramento International Airport. The collaborative aims to reduce food waste and GHG emissions by creating an app that alerts hungry students when a catered event ends and food is leftover; **Outcome:** pending award announcement.
- **Organics Grant**, Cal Recycle, Project Name: "Multi-Trophic Closed Loop System", Submitted in collaboration with Sac State Sustainability, Environmental Studies Professors Dudley Burton and Brook Murphy, and the UC Berkeley Zero Waste Team to create an aquaponics closed-loop system at the BAC Yard and the UC Berkeley campus; **Outcome:** did not receive grant award, however, a UC Berkeley and Sacramento State partnership will continue with Sac State Sustainability mentoring UC Berkeley on the creation of a vermicomposting program on UC Berkeley's campus.
- **Community Enhancement Tree Planting Grant**, Cal Fire, Project Name: "Trees for a Better Tomorrow", Submitted in collaboration with Facilities Management's Sustainability and Grounds teams, Sacramento State Food and Consumer Sciences Professor Kelly Thompson, and Sacramento State undergraduate student Amanda Baker. The proposal plans to add more fruit trees to campus creating a 'fruit route', opening job opportunities for students in nearby disadvantaged communities, and an additional food source to support the campus food pantry; **Outcome:** pending award announcement.
- **2016 Campus as a Living Lab Grant**, CSU Chancellor's Office, Project Name: "BAC Yard", Submitted in collaboration with Sac State Sustainability and Environmental Studies Professor Sara Kross; **Outcome:** awarded over $80k to create a campus composting facility known as the Bio-Conversion & Agricultural Collaborative (BAC Yard).
- **2017 Campus as a Living Lab Grant**, CSU Chancellor's Office, Project Name: "Living Building Challenge", Submitted in collaboration with Sac State Sustainability, Sacramento State Mechanical Engineering Professor Rustin Vogt and Construction Management Professor Gareth Figgess to renovate the Solar Decathlon House into a Living Building Challenge certified house; **Outcome:** awarded $60k for renovations to the Solar Decathlon House in pursuit of Living Building certification.



Greenhouse Gas Emissions

Carbon Commitment

In May 2017, Sacramento State submitted the first year requirements for the Carbon Commitment, a campus wide initiative toward carbon neutrality through Second Nature, originally signed by President Nelsen on Earth Day 2016. The first year requirements consisted of completing campus-wide greenhouse gas emissions inventories of Scopes 1, 2 & 3 emissions; a first-ever for Sacramento State. The second year reporting submission requirements will ask Sacramento State to declare a carbon neutrality date with an accompanying Climate Action Plan detailing the steps toward carbon neutrality. This submission is due May 2018. The following is a summary of the findings from the 2016 greenhouse gas emissions inventory (all data is presented in metric tons of carbon dioxide equivalent):

Total Scope 1 Emissions: 5,952 MTCO2e

Stationary combustion was the biggest contributor to Scope 1 emissions at 5,719 MTCO2e.

Total Scope 2 Emissions: 13,197 MTCO2e

Purchased electricity was the only contributor to emissions in Scope 2 at 13,197 MTCO2e.

Total Scope 3 Emissions: 5,251 MTCO2e

Commuting was the largest contributor to campus emissions in Scope 3 at 1,945 MTCO2e.



Awards & Recognition



No. 1 in Sustainability, Stingers Up!

2016 marked the completion of Sacramento State's first submission to STARS, the Sustainability Tracking, Assessment & Rating System. Overseen by the Association for the Advancement of Sustainability in Higher Education (AASHE), STARS reviews all aspects of a university's sustainability program. Sacramento State currently has the highest ranking within the 23-campus CSU. Sacramento State also was recognized by the following organizations for demonstrating leadership in campus sustainability:

- Sierra Club's Cool Schools top 100 list two years in a row (2016, 2017)
- California Higher Education Sustainability Conference – Best Practice Awards (2017) in Energy Efficiency in Existing Buildings for Lighting Design/Retrofit: Mendocino Hall Pilot LED Lighting Retrofit Project with Advanced Lighting Controls
- AASHE's Top Performers report two years in a row (2016, 2017)
- The Princeton Review's Green College Honor Roll two years in a row (2016, 2017)
- Breathe California of Sacramento – Emigrant Trails' Clean Air Award (2017) for Sac State's Closed Loop System
- This Way to Sustainability Conference Greenie Award 1st place winners – Sustainable Tiny House
- Green California Summit Leadership Award – Category of Waste Management for Sac State's Closed Loop System
- For the fifth year in a row, Sacramento State was awarded the designation of Tree Campus USA for our comprehensive tree management plan
- The California State University Facilities Management Conference – Best Practice in Sustainability Award (2016) for the Closed Loop System - A Comprehensive Organic Waste Diversion Program



Awards & Recognition

Keeping California Beautiful

Sacramento State added another 'first' to its long list of sustainable firsts: 1st college campus in the nation to be an official Keep America Beautiful affiliate. Keep America Beautiful is a national non-profit leader in bringing people together to build and sustain vibrant communities through grass-roots volunteerism and building enriching community partnerships. A press conference, led by KCRA's meteorologist Tamara Berg, was held on April 20th, 2017 at Sac State's Bio-Conversion and Agricultural Collaborative. The celebration kicked off Keep America Beautiful's Great American Cleanup and announced the winners of California's K-12 Recycling Challenge. Keep California Beautiful Board President Ray Scott and Sacramento State President Robert S. Nelsen announced the partnership that promises to provide access for student internships and volunteer opportunities. In addition, Sac State will benefit from increased engagement with the community, as well as other local and national resources.







The Following Organizations Honored Sacramento State in Achievement Awards & Recognition

BREATHE® CALIFORNIA of Sacramento-Emigrant Trails
The Clean Air and Healthy Lungs People Since 1917

CHESC — California Higher Education Sustainability Conference

This Way To Sustainability™
California State University, Chico

green CALIFORNIA
Summit and Exposition

TREE CAMPUS USA®

KEEP AMERICA BEAUTIFUL

aashe
The Association for the Advancement

The Princeton Review®

BUILDING A SUSTAINABLE FUTURE
ADAPT · LEAD · TRANSFORM
2016 CSU FACILITIES MANAGEMENT CONFERENCE

SIERRA CLUB

What's Next

Upcoming in Sustainability

Here are a few of the highlights of what to expect from your sustainable campus in the coming years.

- **Parking Structure V -** Opening in February 2018, Parking Structure V is expected to be one of the first Parksmart certified parking structures in the CSU system. Parksmart certification is the world's only certification program that defines, measures and recognizes high-performing, sustainable garages. The project touts a variety of sustainable features such as 60 electric vehicle-charging stations, heat-mapping, a solar-ready roof, and ample bike parking. This structure will add to our sustainable campus culture.







- **Science Complex -** Scheduled to be finished in Fall 2019, the Science Complex will meet the U.S. Green Building Council's LEED Gold certification standards. The terrace will be a living roof that will help insulate a section of the building and capture storm water runoff. Outdoor benches and tables, and cladding in the lobby and student alcoves, will be made from campus trees that were removed for PG&E's gas pipeline upgrade.



- **Carbon Commitment -** Sacramento State will complete its first Climate Action Plan in May 2018, setting a date for the University to reach carbon neutrality. This is part of the Carbon Commitment signed by President Nelsen in April 2016 to reduce campus greenhouse gas emissions.



- **Bee-Friendly Campus** - Sac State Sustainability is looking to expand the BAC Yard features to include our very own bee hives. Keep a look out for 'Hornet Honey' to be added to our 'Made At Sac State' sustainable commodities. We are also looking into officially becoming a bee-friendly campus though the Center for Food Safety's BEE Protective Campaign. The campaign is an initiative to encourage universities, institutions, and local municipalities to resolve to eliminate the use of bee-toxic pesticides on their grounds and to foster a healthier habitat by planting pollinator friendly plants.

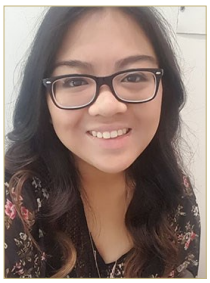


A PG&E gas pipeline upgrade required the removal of select trees throughout campus. Rather than discarding the wood, it will be sustainably reused in many different aspects of the new Science Complex. The wood here is being milled and stored at the Sacramento Tree Foundation.

Acknowledgements

Student Acknowledgements

A special thank you to the student assistants and interns who dedicated hours of their time between classes to help make sustainability happen at Sacramento State.



Melissa de Castro
Sustainability Student Assistant



Jules Blomster
Sustainability Student Intern



Evan Gallant
Sustainability Student Assistant



Alex Raya
Sustainability Student Assistant



Christian Watt
Sustainability Student Assistant



Mariah Ponce
Sustainability Student Intern



Ren Prasad
Sustainability Student Intern



Nikolas Storm
Sustainability Student Intern



Jack Canady
Sustainability Student Intern



Kenny Restivo
Sustainability Student Intern

Faculty Acknowledgements

The following faculty are receiving special acknowledgement for their commitment to sustainability and being eco-minded leaders in the lives they touch everyday:



Rustin Vogt, Ph.D.
Mechanical Engineering



Kelly Thompson, Ph.D.
Family & Consumer Sciences



Michelle Stevens, Ph.D.
Environmental Studies



Christine Flowers, MS, M.Ed.
Environmental Studies



Gareth Figgess, MBA
Construction Management



Sara Kross, Ph.D.
Environmental Studies



Lynn Hanna, Ph.D.
Family & Consumer Sciences

Acknowledgements

Sustainability Steering Committee

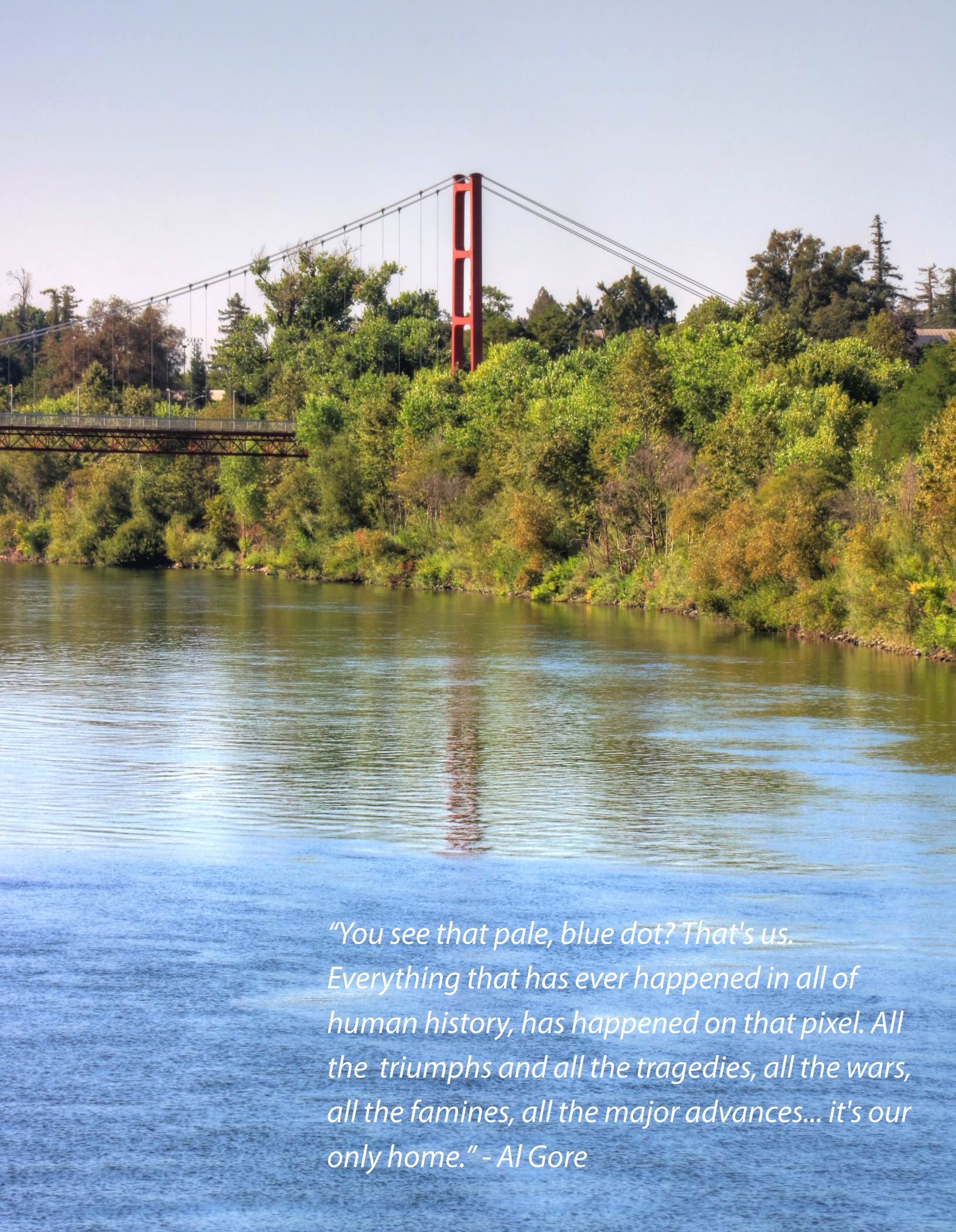
The Sustainability Steering Committee is charged with responsibility for assessing current sustainability practices for incorporation of best technology; recommending new methods/techniques for incorporating sustainability into operational activities and facilities design; partnering with the community we serve; and identifying and tracking critical performance indicators to keep sustainability practices and strategies on course. During 2016-2017, sub-working groups were formed to make tangible and progressive changes in campus sustainability in the specific areas of: Transportation, Dining/Purchasing, Academics, and Water. The strategic plan involved the sub-working groups tackling their respective sections from our latest submission of the Sustainability Tracking Assessment & Rating System (STARS) report, analyzing how we performed, identifying area(s) of opportunity, and setting at least one goal to pursue toward completion. The purpose was to improve sustainability in those areas on campus and increase our next STARS rating. These working groups are still pursuing their work. Special acknowledgment to the following who served on the Sustainability Steering Committee in official capacity during 2016-2017:

- Ryan Todd, *Sustainability Manager & Committee Chair, Representing Facilities Management - Sustainability*
- Angela Wiere, *Assistant Director of Housing Planning & Project Development, Representing Residential Life & Housing*
- Bob Anchor, *Manager - Grounds & Landscaping Representing Facilities Management- Grounds and Landscaping*
- Brian Morphis, *Manager - Grounds & Landscaping, Representing Facilities Management - Grounds and Landscaping (Current)*
- Bob Hitomi, *Environmental Specialist, Representing EH&S*
- Hunter Merritt, *US Army Corps of Engineers Sacramento District, Community Representative*
- Joey Martinez, *Recycling & Sustainability Coordinator, Representing Facilities Management - Sustainability/Recycling*
- John Guion, *Director of Procurement & Contract Services, Representing Procurement & Contract Services*
- Kristina Cullen, *Sustainability Analyst, Representing Facilities Management - Sustainability*
- Nathaniel Martin, *Energy Analyst, Representing Facilities Management - Sustainability/Energy*
- Paul Serafimidis, *Director, Sustainability & Plant Operations, Representing Facilities Management - Sustainability*
- Nicole Johnson, *Manager - Administration & Compliance, Representing University Enterprises, Inc., Dining Services*
- Tim Marbach, *Mechanical Engineering Department Assistant Professor, Representing Faculty Senate*
- Jesse Catlin, *College of Business Administration Faculty, Representing Faculty Senate*
- Kelly Thompson, *Family and Consumer Sciences Assistant Professor, Representing Faculty Senate (current)*
- Michelle Stevens, *Associate Professor, Environmental Studies Department, Representing Faculty Senate (current)*
- Aryn Fields, *Student Representative, Representing ASI*
- Rebecca McCann, *Student Representative, Representing ASI*
- Kevin Murphy, *Engineering Manager, Office of Water Programs, USA Representative*
- Tony Lucas, *Senior Director, University Transportation and Parking Services, Representing UTAPs*
- Donovan Hillman, *Campus Architect, Facilities Management - Planning, Design & Construction*
- Stephen Forseth, *Assistant Director, Facilities Services, Representing the Union & The Well*
- Lisa Rogers, *Assistant Manager, Property Services, Representing UEI*
- Tim Bair, *Manager Engineering Services, Representing Central Plant*
- Jack Vaughn, *Director of Web Communications, Representing Public Affairs*
- Rachael Dal Porto, *Student Representative, Representing ASI (current)*

Report Acknowledgements

This report was brought to you by Sac State Sustainability.

Lead Author, Layout & Design: Kristina Cullen
Contributing Writers: Dixie Reid, Ryan Todd, Joey Martinez, Nat Martin
Editing: Ryan Todd, Joey Martinez, Dixie Reid, Brian Blomster
Photography: Ryan Todd, Jessica Vernone, Robert Neep, Joey Martinez, Sacramento State Office of Public Affairs, Keep America Beautiful



"You see that pale, blue dot? That's us. Everything that has ever happened in all of human history, has happened on that pixel. All the triumphs and all the tragedies, all the wars, all the famines, all the major advances... it's our only home." - Al Gore