



**INSTITUTE FOR
SUSTAINABILITY**

YEAR IN REVIEW 2018-19



Promoting
sustainability in
our communities

Facilitating
partnerships
for research
and action

Educating
students and
professionals in
sustainability
principles and
practices

Leading
our campus and
the community
on sustainability

MESSAGE FROM THE DIRECTOR



Dr. Erica Wohldmann

The mission of the Institute for Sustainability is to promote, facilitate, and develop educational, research, and programs related to sustainability on campus and in the community. The Institute is committed to increasing interdisciplinary and cross-functional communication, education, and research among students, faculty, administration, and the broader community.

Resource use, biodiversity loss, climate change—these are some of the factors that are fundamentally changing the world as we know it. In today's world, "sustainability" guides our awareness of the footprint we are leaving behind, and has become a driving force behind economic, environmental, and social change.

California State University, Northridge is a national leader in sustainable practices. We created a comprehensive Sustainability Plan, a Climate Action Plan that guides us to climate neutrality by 2040, and pledged to achieve zero waste by 2025.

Of course, our primary responsibility is to deliver an excellent and rigorous education. With access to dozens of classes related to sustainability and social justice, our graduates will be prepared to be leaders in their fields, and advocates in their communities.

Thanks to our faculty and community partnerships and strong record of scholarship and grantsmanship, the Institute provides a broad range of research opportunities for students and faculty that serve the greater good.

In 2018, the Institute celebrated 10 years of putting best practices into action by promoting sustainability-related activities across campus.

Through our focus on curriculum, research, campus life, facilities, and community service, we have made substantial progress towards our impressive goals.

As one of the founders, it has been an honor to serve as the Interim Director for the last two years, and I am incredibly proud of its many accomplishments.

I am also pleased to welcome Dr. Natale Zappia as the incoming Director for the Institute. Nat is an environmental historian who takes an interdisciplinary approach to sustainability. He brings administrative experience from both academia and the non-profit sector in the areas of urban farming and social justice. Please stop by the Sustainability Center to welcome him to CSUN this fall.

Featured in this publication is a small sample of our recent activities and projects. We hope you will be informed and inspired to join us in our efforts to integrate environmental stewardship and social justice on campus and in our surrounding community.

Together, we will continue to innovate practical solutions for a better world.

Sustainability:

"Meeting the needs of the present without compromising the ability of future generations to meet their own needs." - Brundtlandt Report, 1987.

Sustainable practices consider environmental, economic, and social justice factors.



Dr. Natale Zappia

WHO WE ARE

Sustainability is a key priority at California State University, Northridge, integrated into all aspects of the university from operations and infrastructure to outreach, education, and research. CSUN's 10-year Sustainability Plan lays out our goals and activities in ten different functional areas.

Everyone at the university – administrators, staff, faculty and students are an integral part of these efforts. We are a proud signatory of Second Nature's Presidents' Climate Commitment and are following a Climate Action Plan that will guide us towards climate neutrality by 2040.

The Institute for Sustainability serves five primary functions:

- **Curriculum:** Lead the development of sustainability curriculum in collaboration with faculty. Promote the development of sustainability classes and programs in collaboration with faculty from across the campus.

- **Education:** Conduct outreach and education including The Footprint newsletter and social media; coordinate events such as Sustainability Day and Water Day; participate in and support relevant campus events; conduct student and staff education through orientations, workshops and tours; and provide hands-on learning opportunities.

- **Community Engagement:**

Provide opportunities for the CSUN community to participate in sustainability related activities in the community through our partners. Conduct outreach and education about sustainability related topics in the community.

- **Research & Grants:**

Solicit external funds to expand education and outreach efforts and support interdisciplinary sustainability research. Encourage and support innovation and research in climate mitigation, adaptation and resilience.

- **Leadership:**

Provide leadership on campus, regionally and nationally in sustainability. Lead climate action and resilience planning and assist in implementation. Actively participate in AASHE, Second Nature, and other national sustainability and resilience networks.



Interim Director
Professor, Psychology
Dr. Erica Wohldmann, Ph.D.

Sustainability Program Analyst
Sarah Johnson, M.S.

Sustainability Project Coordinator
Misha Kouzeh, M.S.

Garden/Compost Student Assistants

- Anthony Cabadas (Nutrition/Dietetics)
- Hector Guerrero (Biochemistry)
- Nicoletta (Nico) Stork (Geography)
- Tera Trujillo (Geography grad student)

Research Student Assistants

- Elline Deogracias (Business Law)
- Gina Gerlich (Geography grad student)
- Giancarlo (Gio) Gomez (Ecology)
- Marvin Pineda (Psychology)

Social Media/Design Student Assistant

- Stephanie Lemus (Photography)

Faculty Associates

- Dr. Mechelle Best (Professor & Chair, Recreation & Tourism Management)
- Dr. Mario Giraldo (Associate Professor, Geography) - Garden Faculty Coordinator
- Dr. David Keating (Assistant Professor, Communication Studies) -Research and Creative Activity Awardee
- Dr. Stevie Ruiz (Assistant Professor, Chicano and Chicana Studies) -Research and Creative Activity Awardee

A Message from the President

California State University, Northridge is proud to play a leadership role in the region and the higher education community on sustainability issues, beginning in 1991 when CSUN established its Campus Recycling Center. Today, sustainability is one of the university's eight strategic priorities and permeates throughout the campus from Physical Plant Management and facilities, to dining services and curriculum. We have formal climate commitments related to reducing our carbon emissions, and improving campus and community resilience. With the leadership of the Institute for Sustainability, its advisory committee and our student government, faculty, staff, students and administrators all partner to move us forward. And beyond our responsibility to be good stewards of the environment and make progress on our climate action plan, these collaborative efforts advance the university's academic mission by providing students opportunities to contribute, learn, demonstrate leadership, and even to discover new career and educational paths."

-Dianne F. Harrison, Ph.D.

Did you know...CSUN was the highest rated campus in the CSU system this year for sustainability? We earned a Gold rating from the Association for the Advancement of Sustainability in Higher Education (AASHE), on our STARS report for the second time.

Awards & Recognition



We are proud of the awards and recognition CSUN received this year for our sustainability efforts.

- We received four Best Practice awards at the 2018 California Higher Education Sustainability Conference (CHESC) in Santa Barbara last July. The awards were for the Sustainability Center LEED Platinum building, Sustainability Center composting toilets, campus sustainable food system, and Limebike program.
- Institute staff attended a three-day Climate Reality Project training in Los Angeles, hosted by Al Gore. Sarah Johnson and Misha Kouzeh became official Climate Reality Leaders and can give presentations to campus departments and classes.
- For the second year, The Princeton Review designated CSUN as one of the 399 most environmentally responsible colleges in the United States. This designation for the annual edition of its "Green Guide" is based on data from the 2018-19 survey of four-year colleges regarding schools' commitments to the environment and sustainability.

- Bees were happily buzzing as CSUN became an official "Bee Campus USA". The recognition shows the campus is committed to supporting pollinators, pollinator education, and minimizing use of pesticides that are harmful to pollinators.
- The Arbor Day Foundation awarded CSUN with the 2018 Tree Campus USA Recognition for the school's commitment to urban tree management. This is the fifth Tree Campus USA Recognition that CSUN has received.
- CSUN was one of 9 CSU's that made the Cool Schools list, ranking #71 out of 227 qualifying campuses. Scores are based on current practices in 11 areas including education, energy/water use, transportation and food.
- Institute staff member, Sarah Johnson, was recognized for her 10 years of service to CSUN at the Staff Service and Recognition of Excellence Awards.
- CSUN was a national award winner of the EPA (Environmental Protection Agency) Food Recovery Challenge. CSUN improved sustainable food management practices

- from previous years. Working with the Food Recovery Network, over 16,000 pounds of food on campus have been recovered and donated to local non-profit organizations and to CSUN students, and the Institute received the Fruitlathropist Award from Food Forward for donating over 150,000 pounds of food to their organization.
- CSUN earned a Gold rating in recognition of its sustainability efforts from AASHE. This comprehensive STARS assessment measures sustainability practices and operations of the entire campus.
- The 2018 Sustainable Campus Index recognized CSUN as a Top Performer in Diversity & Affordability, receiving ninth place on the list covering campus diversity, equity coordination and access for students, diversity recruitment and mentoring and efforts to increase faculty diversity.
- In April, CSUN received an award from Southern California Association of Governments (SCAG) for CSUN's Every Drop Counts water conservation program. This is the second SCAG award that CSUN has received since 2018.



A Decade of Achievements

2019

- During the Spring Orange Pick, 100 volunteers harvest over 3,000 pounds of oranges that were donated to the CSUN Food Pantry and SOVA
- Institute donates 548 pounds of produce from the garden to the CSUN Food Pantry during the 18-19 academic year
- CSUN receives a Gold rating from AASHE's STARS program
- CSUN launches Zero Waste Program and educational campaign

2018

- The Institute celebrates 10 years since it was founded!
- CSUN receives 4 Best Practice Awards at the annual CA Higher Education Sustainability Conference (CHESC)
- Institute receives recognition from Unified We Serve for donating 580 pounds of produce to the CSUN Food Pantry this academic year
- The Institute receives Award of Merit from Southern California Association of Governments (SCAG) for Healthy and Safe Communities
- Institute receives Food Forward Fruitantropist Award for donating over 148,000 pounds of oranges over the past 8 years

2017

- CSUN receives two Best Practice Awards at CHESC conference for water efficiency projects and for the Metro U-Pass transit subsidy program
- The Net Zero Energy Sustainability Center opens
- Annual Orange Pick yields 5,000 pounds of oranges for donation and another 600 pounds is donated during Matador Day of Service
- The Institute collaborates with Physical Plant Management (PPM) and Engineering students to build eight Solar Charging Trees
- PPM begins composting all landscape and lawn clippings on campus

2016

- CSUN receives a Gold rating for STARS; the highest rating in the CSU system at the time
- CSUN is named a Sierra Club "Cool School"
- CSUN receives Climate Leadership Award from the Hispanic Association of Colleges and Universities (HACU)
- Orange Pick yields 12,758 pounds of oranges for donation
- Composting program converts 50,000 pounds of kitchen scraps into 12,000 pounds of soil at the CSUN Sustainable Garden Education Center
- President Harrison signs Second Nature Climate Commitment, vowing to be carbon neutral by 2040
- The Institute plants 55 trees at Vaughn Elementary through grant funding

2015

- CSUN receives the U.S. EPA Food Recovery Challenge Certificate of Achievement for compost program
- Institute receives the Innovative Waste Reduction Award for its pre-consumer food waste compost program at CHESC

2014

- Composting program converts 38,000 pounds of kitchen scraps into 10,000 pounds of soil at the Sustainable Garden Education Center
- Orange Pick yields 18,554 pounds of oranges for donation
- CSUN is designated a Tree Campus USA by the Arbor Day Foundation for the first time

2013

- President Harrison signs The American College & University President's Climate Commitment (ACUPCC)
- CSUN develops a comprehensive 10-year Sustainability Plan
- The Institute expands compost program to all CSUN Dining locations

2012

- CSUN Geography students map and tag over 3,800 trees on campus for carbon sequestration project
- Sustainable Office Program is established
- Orange Pick yields 18,000 pounds of oranges for donation

2011

- AS Recycling recycles 13,097 pounds of e-waste during collection event
- Orange Pick yields 17,000 pounds of oranges for donation
- The Institute works with students to charter CSUN Bicycle Collective

2010

- The Institute establishes Food Garden and Composting Program
- CSUN begins offering Minor in Sustainability through Liberal Studies
- The Institute hosts first annual Orange Pick with Food Forward

2009

- Styrofoam is removed from all CSUN Dining facilities
- The Institute hosts first Campus Sustainability Day and Water Day

2008

- Green Core team is formed
- The Institute for Sustainability is established



C H A N G E S T A R T S N O W

Did you know...CSUN launched a Zero Waste plan to help the campus achieve 80% waste reduction by 2020 and zero waste by 2025?



Institute Events

The Institute sponsors activities and events on campus to build sustainability awareness and foster interdisciplinary collaboration. This year, the Institute participated in 42 events reaching over 6,000 people.

In 2018-19, the Institute received funding from Campus Quality Fee to host six Sustainable Living workshops to educate students on how to reduce their environmental impact on the earth.

The first workshop “Sustainability Tips for Apartment Dwellers” on September 26 focused on incorporating sustainability into everyday life with DIY cleaning products and how to limit waste when buying groceries on a budget. Speakers were Nikhil Schneider, Energy & Sustainability Coordinator, Frida Endinjok, Nutrition grad student, and volunteer Danielle Levy.

During Fall 2018, the Institute hosted an outdoor weekly Green Bag Lunch Series to connect with CSUN community members and get people outside. Participants were asked to bring their lunch and enjoyed insights by CSUN Sustainability champions who moderated the lunches. Some topics included: planet-friendly recipes, an orange pick, food choices, and campus energy use.

On September 8th, CSUN held its fourth annual Matadors Day of Service, organized by CSUN’s Unified We Serve. The Institute hosted 20 students from the National Center on Deafness and three CSUN administrators who volunteered to clean up the garden.

The second Sustainable Living workshop on October 15 was “Hosting an Eco-friendly Party”, which taught attendees how to create a welcoming event and entertain guests without creating waste.

On October 24, the Institute hosted its annual Sustainability Day event in partnership with LA Cleantech Incubator (LACI). Officials from LACI, Los Angeles Department of Water and Power (LADWP), LA County Metropolitan Transportation Authority (METRO) and the Water Resources & Policy Initiatives (WRPI) each discussed efforts toward creating a sustainable future in regards to energy and transportation. This also marked the 10-year anniversary of the Institute, which was celebrated with a reception at the Sustainability Center with our supporters over the past decade.

The third workshop, “Gardening in Small Spaces,” on November 7 taught attendees how to garden in small spaces and they received kits with everything needed to grow and make their own salsa.

On November 13th, the Institute participated in the annual America Recycles Day event, organized by Associated Students (AS). We distributed sustainable swag from CSUN Dining. Students learned about the impact of their behaviors and what the university is doing to reduce its waste footprint

On February 20th, the Institute collaborated with Africana Studies and other CSUN departments to host the “gangsta gardener”, Ron Finley, in honor of Black History Month. He spoke about how gardens are a symbol of freedom because everyone should be able to grow their own food.

The fourth workshop on March 15 was a film screening of The Revolution Generation, which involved a critical narrative about how Millennials can positively impact and mitigate environmental crises. There was a Q&A with the film’s director, Josh Tickell, and CSUN alumna and journalist Ana Kasparian, who was featured in the film.

Trained by the Climate Reality Project, Misha Kouzeh hosted a Climate Reality Workshop on April 9. Kouzeh discussed the ways in

which active change from leaders can impact the challenges currently facing the planet.

The last Sustainable Living workshop, “Make Compassion Your Fashion,” was hosted by Dr. Tracie Tung (FCS) on April 26. Dr. Tung provided insight on how resource intensive the fashion industry is and offered more sustainable options when buying clothing.

As part of Earth Month, the Institute, with Food Forward, hosted its annual Spring Orange Pick. 100 CSUN and community volunteers came together at CSUN’s historic orange grove to pick and distribute over 3,000 pounds of fresh oranges, which were donated to the CSUN Food Pantry and SOVA.

The Institute tabled at Earth Fair, hosted by AS. Attendees were inspired to live sustainably through activities and education. Students in the Sustainability 310 course gave back to the planet by planting 10 trees around campus including at the Women’s Center, Redwood Hall, and Matador Hall.

April also marked the official launch of the CSUN [Zero Waste](#) initiative. Students were invited to take a zero waste pledge, which would help the campus achieve 80% waste reduction by 2020 and zero waste by 2025.

On March 26, Water Day engaged over 400 students in discussions with five CSUN faculty members, as well as Melanie Winter from the River Project and sculptor and LA river advocate Steve Appleton. They addressed water pollution and conservation, water distribution in California and the LA River, and access to water in the region. To support water conservation on this important day, all Freudian Sips went meatless on their menus.

Thanks to everyone who made these events possible! Visit our website for future events and volunteer opportunities.



#MeatlessMonday Recipe

* By Minimalist Baker:

bit.ly/MeatlessTacoRecipe

QUINOA

1 cup tri-color, white, or red quinoa
 1 cup vegetable broth*
 3/4 cup water

SEASONINGS

1/2 cup salsa (slightly chunky is best)
 1 Tbsp nutritional yeast
 2 tsp ground cumin
 2 tsp ground chili powder
 1/2 tsp garlic powder
 1/2 tsp each sea salt and black pepper
 1 Tbsp olive or avocado oil

INSTRUCTIONS

Heat a medium saucepan over medium heat. Once hot, add rinsed quinoa and toast for 4-5 minutes, stirring frequently.

Add broth and water and bring back to a boil over medium-high heat. Then reduce heat to low, cover with a secure lid, and cook for 15-25 minutes, or until liquid is completely absorbed. Fluff with a fork, then crack lid and let rest for 10 minutes off heat.

Preheat oven to 375 degrees F (190 C). Add cooked quinoa to a large mixing bowl and add remaining ingredients (salsa, nutritional yeast, cumin, chili powder, garlic powder, salt, pepper, and oil). Toss to combine. Then spread on a lightly greased baking sheet. Bake for 20-35 minutes, stirring/tossing once at the halfway point to ensure even baking. The quinoa is done when it's fragrant and golden brown. Enjoy!



PG



JC



TT



SB



CS



CB

FACULTY & STAFF SPOTLIGHTS

This year, the Institute recognized several faculty and staff members for their commitment to CSUN's sustainability initiatives in their respective fields.

Dr. Priya Ganguli (PG), Assistant Professor of Geological Sciences and a member of the CSUN Water Science Program. She studies the transport and fate of contaminants in the environment with a focus on mercury, a neurotoxin that bioaccumulates in the food web.

Dr. Jennifer Cotton (JC), Assistant Professor of Geological Sciences provides lectures and conducts research on topics that are centered around understanding climate and environmental change on land. Her undergraduate research students use geochemical signatures from small mammals to address topics such as vegetation, urbanization, and the effects of fossil fuel emissions.

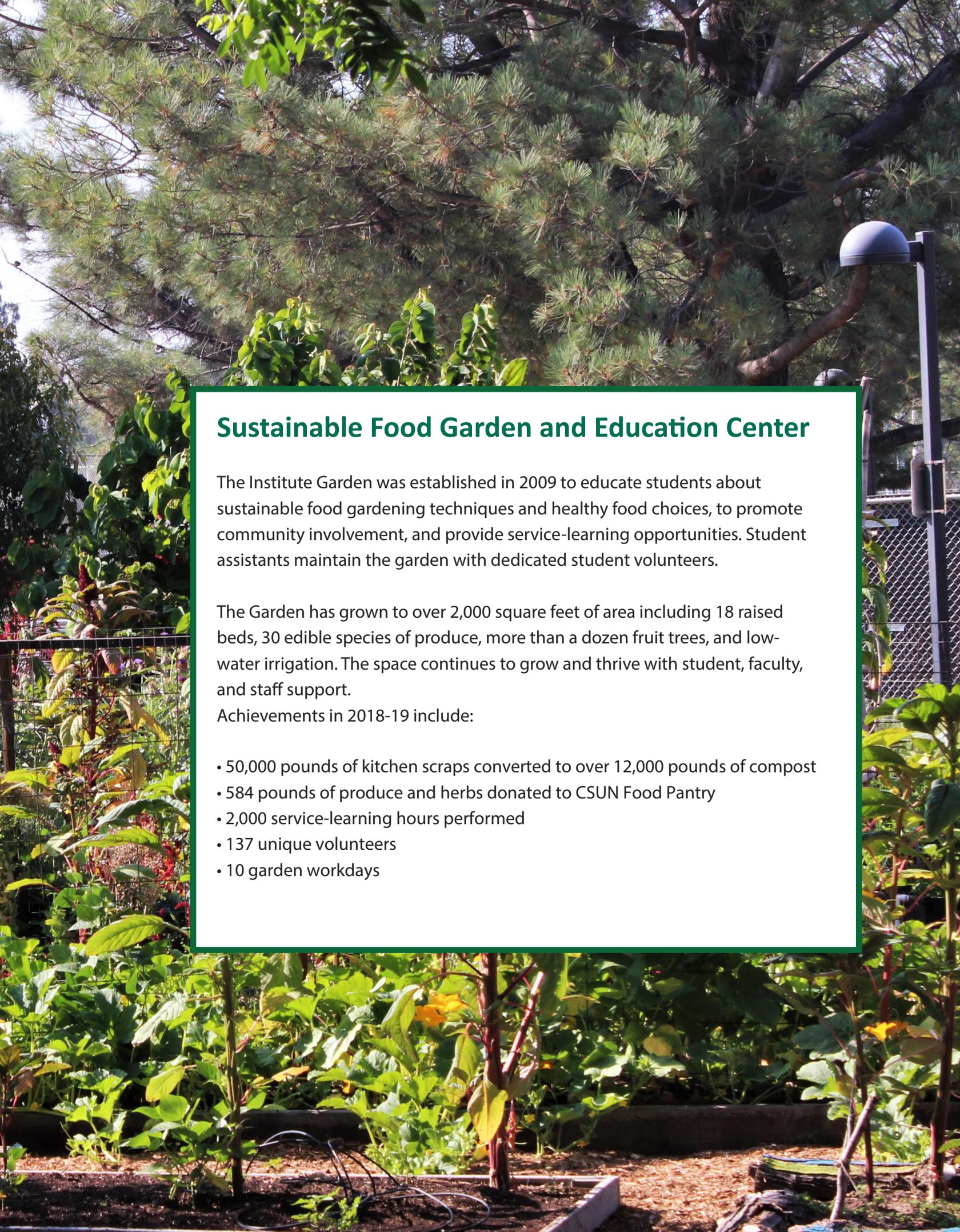
Dr. Tracie Tung (TT), Associate Professor in Family and Consumer Sciences, conducts consumer-based and marketing research to help alleviate the pollutive effects of excessive clothing production and consumption. She also hosted a workshop about sustainable fashion that equipped participants with the knowledge to shop sustainably and ethically.

Dr. Susan Belgrad (SB), Professor of Elementary Education, is elevating sustainability education by leading a NASA funded project called "Empowering California K-12 Educators to Address the Health of Planet Earth." This project teaches NASA-JPL environmental science knowledge to local school teachers

Clayton Scott (CS), Education and Outreach Coordinator at AS Sustainability & Recycling, educates students and employees about sustainable practices while overseeing projects on campus like America Recycles Day and the Sustainable Office Program.

Coleen Barsley (CB), Energy and Utilities Manager in Facilities Planning, supports CSUN's efforts in resource conservation by implementing upgrades and retrofits through solar and more efficient fixtures throughout campus.





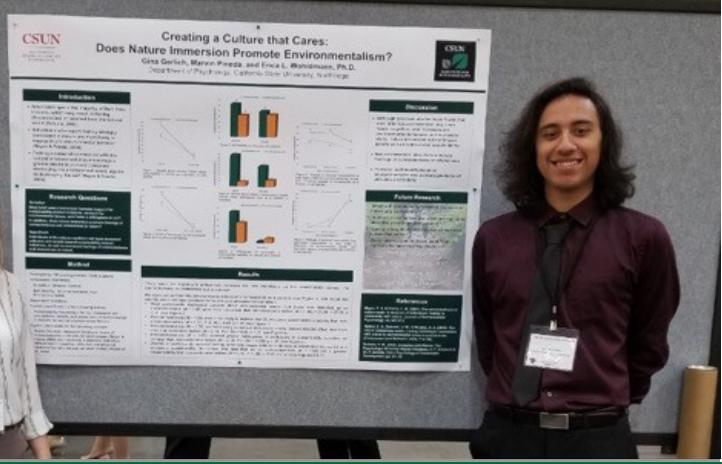
Sustainable Food Garden and Education Center

The Institute Garden was established in 2009 to educate students about sustainable food gardening techniques and healthy food choices, to promote community involvement, and provide service-learning opportunities. Student assistants maintain the garden with dedicated student volunteers.

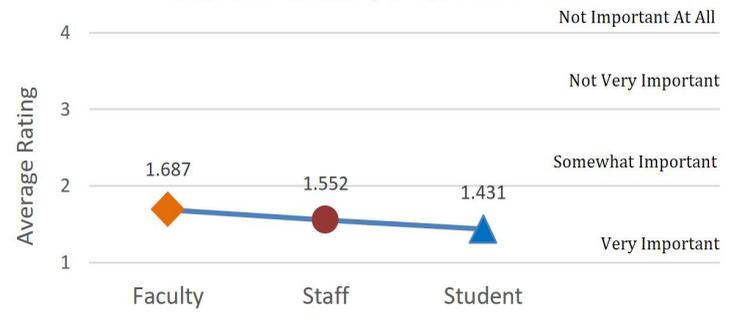
The Garden has grown to over 2,000 square feet of area including 18 raised beds, 30 edible species of produce, more than a dozen fruit trees, and low-water irrigation. The space continues to grow and thrive with student, faculty, and staff support.

Achievements in 2018-19 include:

- 50,000 pounds of kitchen scraps converted to over 12,000 pounds of compost
- 584 pounds of produce and herbs donated to CSUN Food Pantry
- 2,000 service-learning hours performed
- 137 unique volunteers
- 10 garden workdays



How important do you think it is for CSUN to add more sustainability-related courses?



Presentations

The Institute for Sustainability continues to provide sustainability leadership on-campus, regionally, and nationally. Institute staff collaborate with faculty, staff, and students to increase awareness, build strong partnerships, and support student success.

In July 2018, Sarah Johnson, Institute Sustainability Program Analyst, and Frida Endinjok, Nutrition graduate student, co-presented at the CA Higher Education Sustainability Conference at UC Santa Barbara. The presentation described the sustainable food system at CSUN including gardens, workshops, food recovery and donations, and reducing food waste. They shared program goals, successes, and challenges to provide a framework for other campuses to replicate the initiatives.

Last Fall, Institute staff also shared the CSUN Sustainable Food System presentation during a poster session at the annual AASHE conference in Pittsburgh with almost 2,000 other sustainability professionals. This is the largest venue in North America to exchange models, policies, research, and transformative actions that advance sustainability in higher education and surrounding communities.

On October 12th, Sarah Johnson and Austin Eriksson, Director of Energy and Sustainability, presented a workshop, "Hosting a Sustainable Meeting or Event" to provide tips to employees on having a successful event with less waste. This workshop was offered through the HR Personal and Professional Workshop series. Workshops like these help educate the CSUN community so we can all work together toward achieving CSUN's waste reduction goal of 80% by 2020 and 95% by 2025. The [Sustainable Event Guide](#) is available online.

CSUN staff from the Institute, Associated Students and Facilities presented at the 14th annual This Way to Sustainability Conference at CSU Chico in March. Sarah Johnson and Nikhil Schneider, Energy & Sustainability Coordinator in Facilities Planning, gave two presentations titled, "How to Advance Campus Sustainability through Strong Partnerships" and "Leveraging Data to Enhance Sustainability Initiatives".

Misha Kouzeh, Institute Project Coordinator, presented research results from a culture survey that studied the relationship between awareness of, support for, and willingness to engage in campus sustainability initiatives. Her talk was titled, "How to Create a Culture of Sustainability through Education".

Kouzeh also presented the culture survey results as a poster at the Western Psychological Association regional conference in May.

Gina Gerlich and Marvin Pineda, both Institute student assistants, presented a poster on their research with Interim Director and Psychology Professor Dr. Wohldmann. Their study looked at whether brief nature immersion increases support for sustainability related initiatives, concern for environmental issues, and fosters a willingness to act, as well as if brief immersion promoted feelings of connectedness and relatedness to nature. Marvin presented his research results at CSUNposium on March 8, 2019.

Sarah Johnson, Nikhil Schneider, and Sheila Morovati, founder of Habits of Waste, appeared on the Journalism student-run news show "On Point" on May 10th. In the interview titled, "The Final Straw" they discussed the problems with and solutions to single-use plastics and CSUN's sustainability efforts towards zero waste.

In the News: The Last Straw Covered on News Show "On Point"

In September of 2018, California Governor Jerry Brown signed a bill to reduce ocean waste by regulating the use of plastic straws in the state. The Assembly Bill 1884 limits restaurants to giving out single-use straws only upon requests from customers. It applies to full-service dining establishments, but exempts fast-food restaurants.

"Single-use plastic takes a lot of resources to make," Sarah Johnson said. "It never really goes away; it stays in the environment for hundreds of years."

California is the first state in the nation to restrict the use of plastic straws in restaurants. Several cities in California, including Malibu and San Francisco, have gone a step further, by passing outright bans on the use of plastic straws, as well as other single-use items, including plastic utensils.

There is a global effort to reduce the use of plastic, which experts say makes up as much as 80% of all marine debris. The California Coastal Commission recorded roughly 835,425 plastic straws and stirrers picked up during organized beach cleanups.

The CSUN campus has been honored for its sustainability efforts. "The Sustainability Plan on campus has really expanded CSUN's efforts for sustainability," Nikhil Schneider said. "The Institute has been instrumental in driving sustainability research and student educational and service learning opportunities."

"We still sell bottled water on campus, but it has been a culture shift," Johnson said. "It is very common now to see students carrying reusable water bottles. Every year we have a new audience of 6,000 to 10,000 students to educate and inspire."

Research

Faculty Research Awards

The Institute provided two Research and Creative Activity (RSCA) awards to provide funding for faculty members who conduct research related to sustainability. The 2018-19 recipients were:

- Stevie Ruiz, Assistant Professor, Department of Chicano and Chicana Studies. Ruiz completed the first year of his three-year project, "Environment, Migration, and the Search for Sanctuary," in an effort to expand on social justice research related to environmental justice (EJ).

Dr. Ruiz and students in his EJ course collected oral histories with EJ activists throughout Los Angeles, organized a symposium in partnership with UC Santa Barbara, and completed a poster session. Through the RSCA award, students completed archival research to find environmental activism in Chicana/o communities – some of which will make an appearance inside the travelling exhibition sponsored by Humanities Action Lab in 2021.

- David Keating, Assistant Professor, Communication Studies, conducted research titled, "Persuasive Messaging for Individuals' Water Conservation Behaviors: Testing the Effectiveness of Utility- and Value-Based Messages."

The research determined the impact of messages designed to influence behaviors and assessed methods that generate positive attitudes towards water conservation behaviors. In this study, utility-based messages promote personal usefulness of certain behaviors while value-based messages tend to promote benefits to society or the environment. The study found that, compared to the control group, utility-based messages fostered more statistically significant results in producing positive attitudes and greater intentions.

Based on these results, Dr. Keating recommends using short messages and noticeable signs that implement a mixture of value and utility-focused content, with more frequent use of utility-focused content.

- **Measuring Impact of Volunteering in Garden**

The Institute for Sustainability conducted a survey to better understand the experience of our volunteers, as well as to assess the impacts of volunteering in the garden on subsequent behavior. While 64% of respondents volunteered in the garden as part of a course requirement, the remaining 36% volunteered to learn more about gardening or because they enjoy spending time in the garden.

The majority of volunteers, 67%, do not grow food at home – at least not yet. However, almost 60% of volunteers said their experience working in the garden has made it either very or extremely likely that they will plant vegetables or herbs at home in the future.

Moreover, almost 70% of volunteers said working in the garden has made it very or extremely likely that they'll eat more fruits and vegetables at home. Overall, students enjoy working in the CSUN Food Garden. Fifty-five percent would do it again, presumably even if they do not receive course credit, and 75% would recommend the experience.

- **Campus Tree Biodiversity Assessment**

At least one million plant and animal species are at risk of extinction. That was the conclusion of the most recent Global Assessment Report published by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) in partnership with the United Nations. You might ask, why should anyone care about the loss of nature? "Biodiversity loss" is not just the disappearance of sharks and black rhinoceros. The pollinators that we depend on for 75% of our food crops could also vanish. Most troubling, is the fact that the acceleration rate in the natural phenomenon of extinction is due to human activity--farming, poaching, pollution, the introduction of invasive species and disease, and, increasingly, global warming.

To understand loss and find ways to protect rare and endangered species at CSUN, Dr. Wohldmann worked with undergraduate Ecology and Evolutionary Science major, Gio Gomez, to conduct [an assessment](#) of our campus trees. Using the campus tree inventory, campus trees were categorized as either common, threatened, rare, endangered, or invasive.

Of the species identified, 73 species (2,255 trees) are native and/or common, 15 (188 trees) are threatened, 10 (135 trees) are endangered, 2 (6 trees) are critically endangered, and 3 species (111 trees) are considered invasive.

- **Campus Commuting Practices Report**

In 2010 and 2015, the Institute conducted surveys of the commuting habits of its students, staff and faculty to understand the transportation-related carbon footprint of the CSUN campus. We conducted a third survey in March. The survey was distributed to approximately 12,300 randomly selected students and all 4,415 faculty and staff.

We found that the daily footprint of staff is highest due to the distance traveled and the number of trips made to campus per week relative to students and faculty. All groups continue to use private automobiles as the primary mode of choice, but that is changing. Overall, 51% of students and 24% of employees commute by some other means than driving alone, such as public transit, carpooling, and bicycling. The changes in commuting patterns have big impacts on the environmental footprint of CSUN.

Because of campus growth, the overall carbon footprint (from all scopes) increased from 44,519 tonnes in 2015 to 46,199 tonnes in 2018. However, our campus population grew by 17% during that same time and only experienced a 3% increase in emissions. In sum, emissions per person have decreased over the years, but there is still room for improvement. Thus, it continues to be campus priority to reduce carbon emissions associated with commuting.

- **Environmental Literacy and Campus Culture**

The Institute conducted a Culture Survey among 918 respondents (faculty, staff and students) to study environmental literacy, including pro-environmental decision-making, awareness of sustainability-related initiatives, and concern for environmental and social problems. Results demonstrated that environmental literacy was relatively low among campus members and highest among faculty members and environmentalists.

Faculty, staff and students found it important to add more sustainability related courses, with students rating it highest (see graph on page 8). The majority of respondents feel personally responsible and are willing to participate in sustainability initiatives, faculty in particular. However, respondents are mostly unaware of efforts to improve campus sustainability, mainly those that aren't visible.

Reducing waste by decreasing the amount of physical signage across campus is a double-edged sword. Signs are helpful to inform the campus community about sustainability events and initiatives, but can be wasteful, especially for one time events or printing large quantities.

Did you know...CSUN achieved a 33% campus-wide reduction in water consumption - surpassing our 2023 goal of 15%?



Grants

• Empowering Educators to Address the Health of the Planet

The Institute has been partnering with College of Education faculty, Dr. Susan Belgrad and Dr. Norm Herr (Co-PI's) on a NASA-funded project for the past year. We welcomed over 120 K-12 educators during the Summer STEM Institute in July 2018 and again this May for presentations and tours.

Participants from K-12 campuses joined to acquire awareness of the strategies and techniques for engaging students in Next Generation Science Standards (NGSS) - aligned environmental science and sustainability activities. The goal of these events was to demonstrate how K-12 schools across the state of California can apply many of the same activities, events, and initiatives as CSUN to prepare students.

• Los Angeles Cleantech Incubator

This year, the Institute established a 4-year partnership with LACI to advance and promote energy and water conservation efforts on campus and in the community.

We organized our annual Sustainability Day 2019 event in partnership with LACI, called "Successful Strategies for Addressing Energy and Transportation Issues in Disadvantaged Communities" which was open to the public.

The Institute also created an [expert directory](#) (mentioned on p. 14) to serve as a resource to identify faculty who are involved in climate change research on campus.

LACI

• Irrigation Water Conservation Research

By 2023, CSUN set a goal to reduce water consumption by 15%. In an effort to meet this goal, the Institute, through a grant from the Metropolitan Water District, sought to determine the most effective and cost-efficient methods of conserving irrigation water. This study also helped the Institute understand how to increase water retention without compromising soil health.

Student research assistants, supervised by Dr. Erica Wohldmann, collected and analyzed soil samples from three separate test plots: one injected with hydrogel, one that received multiple applications of compost, and one control plot that was not altered.

Samples measured average moisture levels and each plot's irrigation needs. Soil moisture readings, water usage data, and visual assessments showed that compost test plots had fewer dead patches, higher average moisture readings, and used less water than either the hydrogel test plot or control plot.

Thus, preliminary results suggested that compost applications were more effective than hydrogel applications in maintaining grass and soil health, for retaining moisture, and for conserving irrigation water. Moreover, compost promotes biologically healthy soil by providing food for earthworms, soil insects, and beneficial microorganisms.

Applying compost treatments is potentially more cost effective because all campus green waste is collected and composted on site by CSUN grounds and can be spread on turf. This closed loop process uses fewer resources, as new materials do not need to be purchased and delivered to campus in heavy trucks that generate emissions. This year CSUN achieved a 33% campus-wide reduction in water consumption, beating our 2023 goal of 15%.

Sustainable Living Trivia

Take the below quiz to test your knowledge about some of the sustainable topics discussed during our Sustainable Living Series workshops, funded by the Campus Quality Fee (page 6):

1. The average life span of our clothing items in our closet is _____ year(s).
 - a. 1
 - b. 3
 - c. 5
 - d. 10
2. _____ % of garment/textile waste go to thrift stores.
 - a. 15
 - b. 25
 - c. 55
 - d. 85
3. The Earth produces enough energy every hour to fill all the world's energy needs for a full year.
 - a. True
 - b. False
4. Organic gardening is growing plants, vegetables, and fruits by:
 - a. using pesticides or synthetic chemical fertilizers.
 - b. leaving them alone to take care of themselves.
 - c. avoiding the use of pesticides or synthetic chemical fertilizers (e.g. using compost) to let them grow in the best natural way.
5. Plants regularly die due to over watering.
 - a. True
 - b. False

Did you know...every person on campus generates approximately 70 pounds of waste per year?



10 Tips to Living Zero Waste

Meet Sunny the Squirrel. Sunny is calling all Matadors to become #CSUNZero. Why?

CSUN's Zero Waste Plan calls for us to eliminate 95% of all of our landfill-bound campus waste. We're calling on the campus community to step up and help us cut back. Getting to Zero Waste means using less, re-using more, recycling what we can, and re-thinking the way we do almost everything to make sure we're as sustainable as possible. It's a tough job to get to CSUN to zero waste, but we can do it if we all work together.

Here are 10 tips to start your Zero Waste journey:

- Switch to reusable bags and jars for shopping, and invest in a refillable water bottle and utensils
- Stop using disposable bags, containers, etc.
- Pack your lunch or bring your own containers for leftovers when going out to eat
- Recycle light bulbs, printer cartridges, etc.
- Compost food scraps and paper at home
- Plan ahead when shopping to reduce waste
- Buy in bulk and bring your own containers
- Think before you buy (consider biodegradable and recycled options) or make your own!
- Go digital and get rid of junk mail
- Minimize and say "no" to unwanted stuff.

Visit <https://www.csun.edu/zero-waste> for more information and to take the pledge.



Correct responses to Sustainable Living Trivia: 1) b 2)d 3) a 4) c 5) a

• California ReLeaf Social Equity

As a recipient of a 3-year California ReLeaf Social Equity grant in 2016, the Institute for Sustainability helped transform Vaughn Next Century Learning Center's G3 campus, a public charter school in San Fernando, by planting 55 trees on the campus.

This location was selected because it has been identified as one of the communities most affected by and vulnerable to pollution due to freeways, an airport, a landfill, and more than 300 industrial facilities. The grounds at Vaughn G3 were covered in concrete and only two trees existed.

In 2016, the Institute hosted a Tree Planting where over 200 community volunteers planted trees. Volunteers, campus staff, and several CSUN students were trained on proper tree planting, maintenance, and care to ensure long-term success of the trees on the campus and gave them skills to grow trees at their homes and communities.

Children now play under the cooling shade of maturing trees. Beyond reducing ambient air temperatures and direct sun exposure, the trees create a healthier environment for the children, staff and neighbors, and reduce health issues associated with poor air quality by filtering the air and water around the school. As the trees continue to grow and mature, their potential to reduce air pollutants and sequester carbon will increase, further increasing their impact.

Additional benefits include a reduction in storm-water runoff where concrete was removed to create wells for trees, reduced energy bills, and a mitigating effect on climate warming and the urban heat island effect in the long-term. In addition, the trees will attract pollinators and birds, which provide habitat and nature restoration.

• Campus as a Living Lab (CALL)

Thanks in part to the Campus as a Living Lab Grant we received from the Chancellor's Office, we were able to increase the amount of organic food grown at the garden and provide herbs such as cilantro, oregano and mint to CSUN Dining so the campus community is able to consume local produce.

This project involved collaboration between the Marilyn Magaram Center (MMC), CSUN Dining, the Institute, and Facilities Planning in an effort to improve existing campus food production with the goal of educating students and providing healthy, local food options in campus dining facilities.

• Planting Seeds to Meet Basic Needs

The Institute received a Campus Community Garden grant from the Chancellor's Office. Funds were used to enhance the Institute garden and provide resources and gardening education to CSUN's students in need.

Student assistants maintain the garden with dedicated volunteers, who receive service-learning credit. In addition to our regular weekly volunteer hours, we also hosted 10 3-hour Saturday work days.

More than 30 edible plant species grow in the garden. The food is donated to volunteers and the CSUN Food Pantry. Each week, Institute and Food Pantry volunteers harvest food for students in need.

This academic year, 548 pounds of produce were donated to the CSUN Food Pantry. The Pantry had 4,300 visits during that time. The produce we grow helps to supplement the nonperishable items and other food donations the CSUN Food Pantry distributes. Students can then learn to prepare the fresh produce and use herbs on their own.

SUSTAINABILITY RESOURCES

INSTITUTE RESOURCES

- The Institute manages an [expert directory](#) of CSUN faculty and staff who conduct research and/or hold expertise in sustainability-related topic areas. This is useful to faculty who apply for or are involved in grants and contracts.
- [CSUN Food Garden and Education Center](#) educates students about sustainable food gardening techniques and healthy food choices, promotes community involvement, and provides service-learning opportunities. Volunteers learn aspects of urban farming, including composting, soil restoration, seed planting and saving and harvesting food. Volunteers can take home what we grow. The garden is located directly between the tennis courts and baseball field, and is open all year. We also provide a ADA-compliant and Wi-Fi enabled Sustainable Outdoor Classroom for faculty to reserve throughout the academic year. Faculty members can email sustainability@csun.edu for more details.
- A Sustainability Academic Strategy Committee, chaired by the Institute, is composed of approximately 20 faculty, representing every college. The committee is open to all faculty and is focused on faculty development and increasing sustainability Student Learning Outcomes. This is helpful for faculty working to integrate sustainability into their courses.
- The Institute Resource Library includes a [database](#) of over 150 syllabi from 32 unique disciplines for sustainability-related courses taught at similar universities. The example syllabi can be used to develop new courses or modify existing courses to include sustainability related concepts and materials.

The Library also includes sustainability themed films and books that can be checked out, and equipment for demonstration and research purposes (e.g., personal energy meters, infrared thermometers, water moisture probes, and a high-tech drone).



CAMPUS RESOURCES

- [AS Sustainability & Recycling](#) collects cardboard, paper, and electronics at over 200 locations on campus. They are open from 8am-5pm at the Sustainability Center and can be reached at (818) 677 4262.
- [CSUN Dining](#) provides vegan and vegetarian dining options at participating locations on campus. These plant-based products use less water, land, and energy than animal products.
- The [CSUN Food Pantry](#) supplies students and employees with no-cost food and food program assistance. The Pantry is located next to Sagebrush Hall and is open Wednesdays during Fall and Spring semesters.
- [EV charging stations](#) are available at no cost with a valid parking permit. They promote a means for commuting that greatly reduces or eliminates pollution. There are over 40 stations around campus.
- The [Food Recovery Network](#) recovers food from CSUN dining locations that would otherwise be thrown away and deliver it to students and shelters to feed those in need. Additional free food locations can be found on this [map](#).
- The [Farmers Market](#) hosts more than 15 local vendors, offering locally grown produce, freshly made foods, and handmade crafts. The Market takes place every Tuesday during the academic year on Matador Walk 10am-2pm.
- [Water bottle refill stations](#) are available at all Dining locations as well as buildings throughout campus. There are also [5 FloWater refill stations](#) for reverse-osmosis filtered water for a nominal fee.
- The [Bike Shop](#) is a bicycle co-op operated by Associated Students that offers students, faculty, and staff affordable bike repairs, maintenance, and parts.
- [Solar Charging Trees](#) across campus and USU Power Stations located on tables with red umbrellas are available to charge devices conveniently.
- The [Oasis Wellness Center](#) offers nutrition counseling, meditation, massage, acupuncture, nap pods and wellness workshops, promoting student success.
- The [Women's Research & Resource Center](#) serves as a hub to help students and community members find resources and services to fit their needs.

In 2018, the California State University (CSU) system adopted a policy to ban single-use plastics. Plastic straws and single-use carry-out bags were eliminated on campus in 2019. This helps CSUN move toward meeting our zero waste goals.

VOLUNTEER SPOTLIGHTS



DL



JT



TT



GG



HG

STUDENT SPOTLIGHTS



ED



SL



MP



GG



NS

STUDENT & VOLUNTEER SPOTLIGHTS

The Institute provides meaningful paid and volunteer opportunities for students on campus. Through their collective efforts these students play a crucial role in the success of our activities and goals.

Eline Deogracias (ED) and Gina Gerlich (GG) help with research, outreach, and event coordination.

Stephanie Lemus (SL) incorporated her photography skills to manage the Institute's social media (@sustainCSUN), take photos, and promote events.

Marvin Pineda (MP) assisted with the garden and compost programs and collected data for an irrigation water conservation research project.

Tera Trujillo (TT) and Hector Guerrero (HG) worked in the Institute garden and compost program teaching students how to grow their own food and compost at home. They also collected all kitchen scraps from CSUN Dining locations to process into compost at the garden.

The Institute was also fortunate to work with dedicated volunteers who went above and beyond in working hard to support the Institute's mission.

Danielle Levy (DL) volunteered Summer 2018 and assisted with research, outreach, and gave a presentation on sustainable grocery shopping for our workshop series.

Giancarlo (Gio) Gomez (GG) worked on water conservation research and on a campus tree biodiversity assessment.

Joshua Turner (JT) dedicated his time to working in the food garden, sharing his passion for gardening and education.

Nicoletta Stork (NS) volunteered and worked at the garden, and advanced her work in human impact, food, and sustainability. She also worked as a paid garden assistant in the Spring.

Thank you to the students and volunteers for your hard work, and for showcasing how sustainability is related to many diverse disciplines!



WORKING TOWARDS A SUSTAINABLE FUTURE

Thank you to all of the Institute's campus and community partners
for making these achievements possible.

Want to stay updated or get involved?

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www.csun.edu/sustainability

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