

A close-up photograph of several lavender flower spikes. The flowers are a vibrant purple color, and the green foliage of the plant is visible in the background and foreground. The lighting is bright, suggesting a sunny day.

Sustainability Plan

Annual Update 2018

CSUN. | SUSTAINABILITY

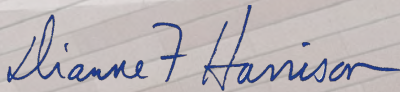
A Message from The President

At California State University, Northridge, our commitment to sustainability and climate action is embodied not only in course curricula, but also through faculty research, facility and landscape management, dining operations, student activism, university processes and leadership. Through this all-inclusive approach, CSUN has made significant strides in reducing our environmental impact.

Since adopting a formal Sustainability Plan in 2013, the University has decreased its electricity consumption by 10.7% per square foot, decreased water consumption by 19%, and increased its waste diversion rate from 20% to nearly 60%, all while increasing campus built square footage by 25%. In that time, 111 students have graduated with a minor in sustainability, and another 93 have declared a sustainability minor.

CSUN students have made indispensable contributions to campus sustainability by conducting geographic surveys of waste and water infrastructure, planting and inventorying trees, collecting and donating over 200,000 pounds of food, engaging campus and community stakeholders for resiliency planning, passing resolutions and engaging leadership through student government and countless other activities. In this way, CSUN's sustainability efforts have not only improved efficiency, conserved resources and reduced environmental impacts, but have also enriched the academic and extra-curricular experiences of our students.

As we strive to overcome new challenges, CSUN will continue to exemplify leadership and stewardship in the field of sustainability through our Climate and Resiliency Commitments. Our role as a higher education institution is not simply to educate, but to manifest the values and actualize the knowledge that we instill within our students. Through this model, CSUN not only empowers our graduates to find innovative, collaborative solutions to modern dilemmas, but also inspires our faculty and staff to engage in impactful practices and research.



Dianne F. Harrison, Ph.D.

President



SUSTAINABILITY CENTER





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Administration

To meet the ambitious objectives set forth in the Sustainability Plan, CSUN will need to create and maintain a culture of sustainable thinking on the campus and invest in sustainability infrastructure.

Main Strategies

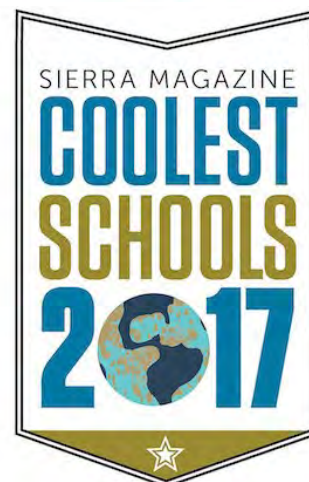
1. Incorporate the objectives defined for sustainability into established campus, division, and program planning processes
2. Improve coordination, infrastructure, data collection and record keeping in support of sustainability efforts
3. Utilize sustainability as a branding opportunity, particularly for recruitment

Objectives for 2023

1. Establish a culture of sustainability that is evident in policy and practice across the institution
2. Allocate sufficient resources to support sustainability programs
3. Coordinate sustainability efforts across campus to reduce resource use, including unification of data and data management
4. Establish and promote CSUN as a destination campus for students interested in sustainability

2017-18 Priorities and Outcomes

- **Begin implementation of managed print services**
A program analysis has been completed to determine the total costs, savings and sustainability impacts of this program. The program will be presented to the President's Cabinet over the summer for approval.
- **Begin implementation of E-Signature platform and create a minimum of 10 forms.**
DocuSign has been identified as the campus e-signature platform, and is already being used by some entities. An official deployment plan, which will include communication and form integration, is in development.
- **Expand use of OnBase across all divisions.**
Over 20 campus and auxiliary departments are currently using OnBase and over one million documents have been created to date. In addition, several high use forms have been completed including the Online Graduation Application and Payment form, which will prevent over 10,000 paper forms from being submitted, and the numerous Financial Aid forms that will prevent tens of thousands of paper copies from being submitted.
- **Overhaul division planning process and add sustainability reporting.**
While many departments generate end-of-year reports that may address sustainability progress, few have planning processes into which sustainability goals have been integrated. In the absence of clear divisional planning processes, this item will be revisited to determine how it can be applied.
- **Continue the promotion of Alternative Transportation and the Transit Center.**
In February 2018, Associated Students partnered with Police Services to host an Alternative Transportation Fair, which will hopefully become an annual event. LimeBike, Zipcar, Zimride, the CSUN Transit Center and Metro were promoted as alternative transportation options. They continue to be promoted through The Footprint Newsletter, the Human Resources Newsletter, and at various campus events. Transportation will also be the theme of the 2018 Sustainability Day.
- **Explore CSUN and CSUN Navigator programs as an opportunity for developing and promoting sustainability.**
Sustainability Staff tabled at Explore CSUN to speak with incoming students about sustainability. Conversations about how to incorporate sustainability into all campus events is ongoing.
- **Utilize Student Outreach and Recruitment Leaders, as well as University Ambassadors, to highlight sustainability projects and features during campus tours.**
Sustainability staff presented at the New Student Orientation leaders retreat on sustainability to promote campus sustainability efforts during new student orientation tours.
- **Establish a culture of sustainability that is evident in policy and practice across the institution.**
Sustainability is discussed with all new employees during their welcome orientation. Certain policies have also been identified for development or modification to increase sustainable practices and attitudes on campus. These include the Broadcast Email and Email Notification Policies, a No Idling Policy and Green Event Guide.



SUSTAINABILITY CENTER



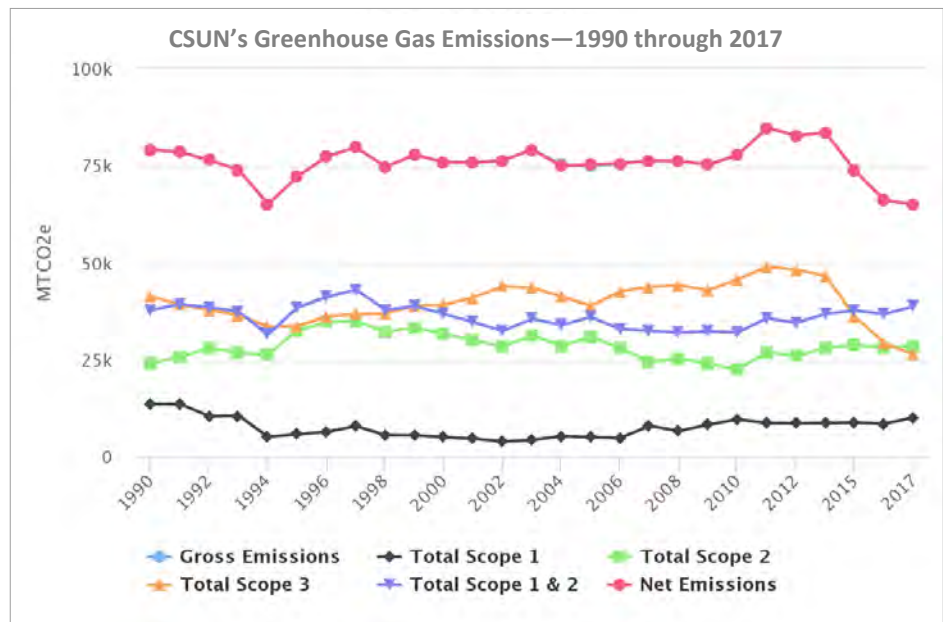
Sustainability Center Grand Opening—CSUN's first Net Zero Energy and LEED Platinum Building

Other Highlights

- 2016 and 2017 Greenhouse Gas Reports were completed this year as well as the development of a custom calculation tool within our Energy Information System Platform.
- The Institute for Community Health and Wellbeing held several Sustainability themed Walkability Wednesday events, including a campus sustainability tour and edible landscape tours.
- CSUN was listed in the Top 10 North American Sustainable Campus Index.
- CSUN was ranked among the top 3 CSU's in the Sierra Club Cool Schools Report.
- CSUN was listed on The Princeton Review's 2017 Guide to Green Colleges.
- CSUN signed onto the We Are Still In campaign.

2018-19 Priorities

- Develop a Green Events Guide and Policy.
- Research and build framework for a GHG Mitigation fund - Carbon Fund for unavoidable business travel.
- Continue implementation of E-Signature platform and track progress, savings, etc.
- Complete an assessment of the campus sustainability culture.
- Update the Campus Sustainability Tracking, Assessment & Rating System (STARS) Report.



Dining Services

CSUN's goal is to provide sustainable food choices that are healthy and delicious in its on campus food service locations.

Main Strategies

1. Increase sustainable campus food sources
2. Increase the availability of fresh, healthy vegetarian and vegan options on campus
3. Provide nutrition and sustainability information for foods from campus food services



Objectives for 2023

1. Expand sourcing of sustainable foods
 - Have 30% of total food purchases qualify as sustainable
 - Have 50% of produce be purchased from local sources
 - Have 100% of seafood purchases be Marine Stewardship Council certified, Aquaculture Certification Council certified, and/or Seafood Watch Guide "Best Choices" or "Good Alternatives"
2. Expand the selection of healthy foods
3. Provide information in all TUC-operated dining services to inform and educate the CSUN community about healthy and sustainable food choices

2017-18 Priorities and Outcomes

- **Continue implementation of compost bins in TUC Dining Locations.**
Composting bins and signage were deployed throughout the Sierra Center Dining facility. To help reduce contamination of the organics waste stream, a robust education program (signage, trainings, etc.) will be deployed, with the goal of being able to compost this material by July 1, 2018.
- **Investigate excess food waste in TUC kitchens.**
All pre-consumer food waste, as well as leftover buffet food that cannot be donated, is composted at The Institute's Sustainable Garden Education Center (not including meat and dairy products). Since July 01, 2017 The Food Recovery Network has collected and donated 9,780 pounds of leftover food from TUC locations, and will be expanding collections to recover even more material next year.
- **Analyze food nutrition and publish at TUC locations.**
Nutritional information is being calculated for each item TUC serves. Once information for all items has been determined, it will be made available online and at TUC locations.
- **Investigate opportunities for shifting advertisements to show more healthy choices.**
Data from a student-conducted marketing assessment has been analyzed to determine what advertising shifts can be made. The University Corporation is evaluating these suggestions and determining their feasibility for implementation.
- **Develop survey to investigate student's perception of water on campus.**
Students in a Sustainability 401 course surveyed 141 students on whether or not they bring a reusable bottle to campus and their beliefs on the drinkability of CSUN's water sources. These results will be used to target education efforts regarding water and water safety.



CSUN Dining food demonstration at Earth Fair

Other Highlights

- The University Corporation provided 4 food demos.
- The Institute for Sustainability was recognized by the LA Food Policy Council, Food Forward, and the Southern California Association of Governments for its work toward sustainable food systems.
- The AS Sustainability Committee used a grant from Raw Inspirations to create a garden at the AS Children's Center.
- The University Corporation hosted their first Green Week event which consisted of double discounts for reusable cups, a "Show us Your Green" – sustainable coupon concept, promotion of TUC Sustainability Initiatives, etc.

2018-19 Priorities

- Begin sourcing herbs and produce locally from campus gardens.
- Host one sustainability themed meal per semester.
- Increase percentage of expenditures on Real Food.

BYOB WATER REFILL STATIONS



Education

CSUN strives to reduce its own footprint on the environment, and to educate its students and the broader campus population on sustainable practices.

Main Strategies

1. Expand education on sustainability principles and practices to entire campus population
2. Increase formal educational offerings in sustainability
3. Increase opportunities for hands-on student learning in sustainability
4. Increase research opportunities in sustainability

Objectives for 2023

1. Participation in a sustainability office program by all campus offices/units by 2015
2. Implement university-wide sustainability education for all students by 2018
3. Offer M.A. Degree in Sustainability Practices by 2018
4. Expand service learning and internship opportunities in sustainability
5. Expand network of faculty engaging in sustainability-related research

2017-18 Priorities and Outcomes

- **Develop an interdisciplinary Master's Degree in sustainability practices.**
A committee has been formed to develop this program, and has submitted an outline for a Master's Degree in Sustainability Leadership and Policy. It will be housed in the College of Social and Behavioral Sciences, and will likely first be offered in 2021 or 2022.
- **Commission student art pieces to display at the Sustainability Center.**
Numerous student art pieces are on display in the Sustainability Center. Current pieces explore different themes relating to sustainability such as waste, reuse and repurposing, and depictions of nature.
- **Develop sustainability center tour and virtual tour video.**
17 tours of the LEED Platinum, net zero energy Sustainability Center have been given since it opened in October 2017 including tours to eight Sustainability courses, the US Green Building Council, LA Department of Water and Power, and Northridge Academy High School students. An online registration form is being created for building tours. Associated Students is developing a virtual tour that will be launched summer of 2018.
- **Explore opportunities to develop an internship program employing students from existing internship courses.**
Many internship projects and positions have been identified, and a finalized list will be created over the summer. Once the finalized list is created the list will be posted on the Sustainability webpage and the applicable departments will be made aware of these new opportunities.
- **Promote the new Sustainability Center as the hub for sustainability on campus.**
The Sustainability Center has been used for a variety of sustainability related activities, events and meetings by a wide array of campus and community members. It will continue to serve as the epicenter of sustainability efforts at CSUN, educating and inspiring action among students, staff and faculty.
- **Launch a sustainability themed film series.**
The scale of the film series will depend on funding from a Campus Quality Fee grant, and the program will be developed over the summer. The possibility of remote movie streaming with online discussions is also being explored.

Student lead on-campus climate resiliency planning workshop





Tour of the new Sustainability Center

Other Highlights

- The Institute for Sustainability hosted Sustainability Day in the Fall and Water Day this Spring and saw over 600 attendees total.
- This year there were over 370 students enrolled in the Sustainability core courses – SUST 300, 310, and 401. 93 students have currently declared a Minor in Sustainability, and since 2012 over 100 students have graduated with a Minor in Sustainability.
- Sustainability staff hosted a “Go Green –Save Green” employee development workshop in partnership with Human Resources.
- The Institute co-hosted a screening of the documentary “Plastic China” with the CSUN China Institute that was followed by a panel discussion with campus faculty.
- As part of the Climate Resilience in Urban Campuses + Communities (CRUX) initiative, CSUN hosted community partners from CSULA, CSULB, and LA Valley College to work on resilience plans, a component of the Second Nature Climate Commitment. Urban Planning masters students also received training on developing a resiliency plan for CSUN and the Northridge community.
- The Institute presented at many conferences and events including Climate Day LA, the APLU Annual Meeting, This Way to Sustainability conference, and LA Business Council Sustainability Summit.

2018-19 Priorities

- Provide faculty development on sustainability Student Learning Outcomes (SLO’s) and on how to incorporate sustainability content into courses.
- Develop and launch a sustainability internship program.
- Develop method for identifying faculty research related to sustainability and develop an online directory of faculty.
- Coordinate with film and journalism departments to encourage student films, documentaries, public announcements and articles related to sustainability. These can be screened before events, on MIND screens, and linked to webpages.

Energy & Buildings

Reduction in energy use and in the use of fossil fuels are core components of CSUN's commitment to sustainability. These reductions can be achieved in three ways – by conservation, efficiencies, and use of renewables. The proposed plan puts a priority on those actions that will lead to conservation and efficiency savings.

Main Strategies

1. Improve means to measure, report and communicate energy consumption at a building/unit level
2. Improve physical infrastructure to save energy through efficiency and conservation measures
3. Increase energy-related education and outreach to students, faculty and staff, and implement program to change behavior
4. Increase energy supplied from renewable and clean sources
5. Establish and implement strict building standards for new construction

Objectives for 2023

1. All buildings to be individually metered for gas, water and electricity
2. Complete retro-commissioning on all buildings by 2023
3. Real-time and historical energy use available online to all campus community by 2018
4. Reduction in energy intensity (energy/sq. ft.) of 15% by 2018 and 25% by 2023 over 2012
5. Generate 20% on-site by 2018, with 25% on-site generation by 2023
6. Increase investment in renewable energy: 10% from renewables by 2023
7. All new buildings to meet LEED Gold or higher standard effective 2013



Installation of new LED lighting

2017-18 Priorities and Outcomes

- **Solar Projects: B3, B5, G3.**
The development of the RFP package for a 4.4 MW Solar PV Project has been completed. The campus is currently evaluating the project cost and funding mechanisms. Construction is should begin in summer of 2019.
- **Establish a method and process to make consumption data visible.**
Through the use of the Microsoft PowerBI the campus is mining our Energy Information System to make data easily accessible.
- **Develop Dashboards for all campus buildings.**
The data being collected from the Energy Information System is being displayed through the use of dashboards on the sustainability website. Opportunities for students to use this data in an educational setting are being explored.
- **Pilot Dashboard kiosk in a campus building and a CSUN Dining location.**
The three interactive digital kiosks will be used to display building-level utility data in the Matador Bookstore, Sierra Hall lobby and The Soraya. A more detailed dashboard is being developed for the Sustainability Center, which will showcase the building's features and progress towards net zero energy.
- **Continue Implementation of LED Lighting and Lighting Controls.**
LED lighting and Enlighted lighting controls have been installed in several remodeled offices in the Reseda Annex, Jerome Richfield Hall, University Hall and Sierra Hall. The entirety of the newly completed Lilac Hall has LED lighting and Enlighted lighting controls.
- **Pilot Solar Thermal Analysis.**
Exterior thermal imagery of Jacaranda Hall, the Sierra Center, the Student Recreation Center, and the Sustainability Center will be captured via drone. This imagery will be used to identify air leaks and other conservation and efficiency opportunities.

Other Highlights

- CSUN's first Net Zero Energy Building, the Sustainability Center, was completed this year and is home to the Associated Students and the Institute for Sustainability.
- With the addition of the Sustainability Center, the campus added 24kw of Solar PV to our existing 782kw.
- Over 360 LED walkway retrofit kits have been purchased and are being installed over the summer.
- The campus energy management team worked with a supplier to identify LED alternatives to all the lamps that are stocked. The next step is determining which lamps to replace with LED's in the stock room.
- Campus Energy Management led ten tours of the Fuel Cell and Campus Plants this year.
- Lilac Hall electricity meter has been installed and added to the Energy Information System.

2018-19 Priorities

- Perform a Demand Flow Optimization on one campus building.
- Complete outdoor walkway lighting retrofits.
- Complete at least 200 indoor lighting LED retrofits or replacements.
- Assess the potential savings in energy and water from pool covers.
- Evaluate The Sustainability Center for Net Zero Achievement.
- Evaluate potential for research lab energy efficiency measures.



Commissioning new lighting controls



Existing campus solar array in parking lot E6

Environmental Quality

Factors contributing towards environmental quality include the use of chemicals and hazardous materials. It is important that the University works toward reducing the use of these products and continues to ensure their proper disposal.

Main Strategies

1. Reduce use of hazardous materials and ensure proper disposal
2. Increase awareness of issues related to hazardous materials

Objectives for 2023

1. Study effectiveness of organic fertilizers and reduce the use of synthetic fertilizers
2. Phase in more Green Seal-certified cleaning products and adopt green cleaning procedures
3. Develop a set of sustainable operations and maintenance standards
4. Complete the campus inventory of chemicals and hazardous materials

Grounds Department team member using electrified equipment



2017-18 Priorities and Outcomes

- **Continue Ground Shop Electrification.**
11 string trimmers were purchased and are being used instead of gas-powered versions. This, along with the 11 blowers purchased last summer, means that each grounds worker has an entirely electric setup.
- **Continue implementation of Sustainable Landscape Management Plan (SLMP) and increase organic compost use.**
Organic alternatives to synthetic pesticides, herbicides and fertilizers are continuously being tested. CSUN collaborated with Sacramento State University on a Department of Pesticide Regulations grant application to further develop and promote the use of Integrated Pest Management Programs.
- **Storm Water Pollution Prevention.**
“No Dumping” signs have been installed at every storm drain around campus. Environmental Health and Safety staff tabled at Water Day and Earth Fair to raise awareness about storm water pollution prevention.
- **Pilot unopened chemical reuse/storage room.**
Unused, unopened chemicals are already being stored for later use in educational labs.
- **Develop materials inventory program/process.**
There are written guidelines for the accumulation, storage and disposal of hazardous waste, though they do not address procurement of hazardous materials. It will be investigated whether sustainability goals can be integrated into these guidelines, since they primarily address safety and compliance at this point.



Application of organic compost to campus landscaping



Other Highlights

- Since the Green Cleaning Program was launched, the campus has consistently met our purchasing goal and ended 2017 calendar year at 90%.
- Two gasoline-powered trucks were replaced with electric carts, five older gasoline-powered trucks and vans were replaced with more fuel-efficient versions, one gasoline-powered cart was replaced with an electric version and three gasoline-powered trucks, two gas-powered carts, and two gas-powered mowers were eliminated from the campus fleet.

2018-19 Priorities

- Develop Goal and transition away from inorganic fertilizers.
- Identify and implement alternatives to synthetic fertilizers.
- Continue to expand stormwater pollution prevention efforts and education program.
- Look into new construction and renovation replacements of refrigeration equipment and develop standard.



New stormwater pollution prevention signage placed throughout campus

Organics

CSUN has an important role to play as an educator and responsible party in the efforts to reduce the quantity of food waste produced and the shipment of organic waste off campus.

Student working in the Sustainable Garden Education Center

Main Strategies

1. Reduce quantity of organic waste
2. Educate students and the campus community about food waste
3. Continue to develop the CSUN Organic Food Garden as an educational resource
4. Develop and manage campus grounds using sustainable practices

Objectives for 2023

1. Reduce quantity of food waste by 15% by 2015 and by 50% by 2023
2. Reduce quantity of other green waste by 50% by 2018 and 80% by 2023
3. Conduct on-site composting to generate organic fertilizer for use on campus grounds
4. Gain recognition as a Tree Campus USA
5. Re-use waste vegetable oil
6. Fully develop Organic Food Garden which provides educational and research opportunities for students, faculty, staff and the surrounding community

2017-18 Priorities and Outcomes

- **Pilot on campus ground composting using material that is currently being taken offsite.**
Since November 2017, all campus grounds material is being composted onsite near the Food Garden. As of February 2018, landscaping material from Campus Housing is also being brought to this site. An estimated 62 tons of material has been processed to date and it is expected to reach 183 tons per year.
- **Develop effective method for distributing and using Athens compost for planters and turf.**
The necessary equipment has been identified and will be purchased using grant funding received from the Metropolitan Water District 2018 Innovative Conservation Program grant.
- **Complete the construction of the Outdoor Classroom and begin holding classes there.**
The Outdoor Classroom has been built and landscaping and irrigation will be installed, as funds become available. Once complete, the space will be made available for online reservation by campus users.
- **Install work area located in the CSUN Sustainable Garden Education Center.**
An outdoor table, sink and drying rack are needed to complete the work area. Asset Management is aware of what is needed and will be setting aside any items as they become available.
- **Continue implementation of compost bins in TUC Dining Locations.**
Outdoor compost bins were installed at the Sierra Center by adding color-coded lids and vinyl wraps to existing outdoor bins, creating eight new trios of landfill, bottle and can, and compostables receptacles.



Compost from the Grounds Department's compost facility

Other Highlights

- 640 yards of mulch was delivered to the campus through a partnership with the city. This material is being used throughout the campus planters and Orange Grove to prevent water loss and weed growth.
- A Campus As A Living Lab grant was received that will allow for the expansion of the campus garden, and a partnership between the Marilyn Magaram Center and the University Corporation.
- The Institute for Sustainability held two Orange Picks this year with over 320 volunteers harvesting and donating over 11,600 pounds of food to local food banks including the CSUN Food Pantry.

2018-19 Priorities

- Pursue the Bee Campus USA designation.
- Determine feasibility of an on campus post-consumer food waste digester.
- Expand campus garden and increase production.
- Continue green waste composting on campus and begin spreading material as fertilizer.



Produce from the campus Food Garden



Furniture in the new Sustainability Center was all reused or repurposed

Purchasing & Consumption

CSUN seeks to reduce the significant impacts of its consumption by reducing the total amount of products purchased and increasing sustainable products purchased.

Main Strategies

1. Reduce overall product consumption
2. Increase the use of sustainable products
3. Increase awareness regarding sustainable purchasing and consumption

Objectives for 2023

1. Implement campus-wide environmentally preferred purchasing policy
2. Create campus purchasing reduction goal for various product categories based on baseline data to be collected
3. Reduce campus copy paper use by an amount to be determined upon consultation with appropriate entities. Proposed reduction goal of 20% by 2015, of 40% by 2020, and of 50% by 2023

2017-18 Priorities and Outcomes

- **Provide incentives for people to utilize Asset Management as a source for furniture and other office equipment.**
Asset Management has been continuously promoted by the Institute for Sustainability and Human Resources newsletters, CSUN's sustainability website and Associated Students' Sustainable Office Program. It has also been promoted at various events, most notably CSUN's Vendor Fair.
- **Continue implementation of the Environmentally Preferred Purchasing Policy.**
A CSU System-wide program was implemented through Staples to auto-substitute products with more sustainable attributes for more traditionally-purchased items.
- **Develop proposal and plan for shifting from 30% to 50% to 100% recycled content printer paper.**
Campus spend reports have been requested from Staples. Once received, an analysis will be done and a plan will be developed.
- **Pilot a Reuse Room on campus.**
After reviewing potential locations of a reuse room and the staffing that would be required it was determined to continue to use the existing Associated Students recycle listserve along with a new partnership with The CSUN Food Pantry. The Food Pantry has agreed to accept some office and school supplies and make them available to students who need them.

Other Highlights

- With the help of campus sustainability staff, Purchasing released the Environmentally Preferred Purchasing List, which is a list of everyday office supplies that align with our EPP Policy.
- CSUN's Purchasing Department facilitated and hosted the campus' first ever Vendor Fair and encouraged vendors to highlight the sustainable attributes of their products to raise awareness amongst campus purchasers.

2018-19 Priorities

- Continue implementation of the Environmentally Preferred Purchasing Policy.
- Determine the feasibility of providing spending incentives for departments to reduce spending on office equipment and supplies.
- Create campus purchasing reduction goal for various product categories.
- Research implementation of central rental/shared resource facility to reduce duplication of purchases by campus units and assess the option of stocking reusable tableware in meeting rooms.



Purchasing Department's first annual Vendor Fair

Transportation

The University is addressing the adverse consequences of being primarily a commuter campus by investing in policies to reduce commuting, by increasing use of alternative modes of transportation, and through the use of alternative energy technology.

Main Strategies

1. Reduce total number of commuting miles
2. Reduce use of single occupancy vehicles for commuting
3. Reduce emissions associated with vehicle use on campus

Objectives for 2023

1. Reduce commuting population from 95% to 85%
2. Reduce vehicle miles traveled by faculty, staff and students by 10%
3. Reduce commuting trips to campus by 10%
4. Increase share of alternatives to single-occupancy vehicles for commuting from 26% to 40%
5. Gain recognition as a Bicycle-friendly University
6. Reduce vehicle use in the campus core, with a goal of eventual elimination.
7. Reduce average emissions associated with university fleet operations (non- construction/maintenance vehicles) by 50%
8. Systematize transportation data collection



One of over 30 EV Chargers at CSUN

CSUN Sustainability Tour via LimeBike



2017-18 Priorities and Outcomes

- **Test an EV replacement vehicle for PPM trucks and vans.**
Two gasoline-powered trucks were retired and replaced with electric carts, but an electric vehicle that performs all the functions for PPM's trucks and vans has not been identified.
- **Establish a "Sustainable Transportation" parking location on campus.**
Sixteen spots have been identified for the sustainable transportation parking location. This will include four existing EV chargers and twelve for vehicles that meet the California Clean Air Vehicles requirements. These additional spaces may also receive Level 1 EV Chargers and will be properly labeled and promoted as such over the summer.
- **Implement a Parking Guidance System.**
Digital signs displaying the number of parking spaces remaining in each structure will be installed at the G3, B3 and G6 parking structures. Construction on these systems will begin over the summer.
- **Complete the Transportation Survey.**
Transportation surveys for employees and students were distributed and received approximately 3,000 and 2,000 responses respectively. This will become an annual process to help accurately measure CSUN's greenhouse gas emissions.
- **Develop a Bicycle Education Program.**
Bicycle education was conducted in conjunction with the launch of a dockless bikeshare program on campus. Proper riding practices and resources were promoted at the Alternative Transportation Fair and Earth Fair, as well as through the AS Sustainability and Institute for Sustainability newsletters and the CSUN sustainability website.
- **Improve bicycle infrastructure and signage.**
A Campus Quality Fee application was submitted to expand bike racks in critical areas across campus. Additionally, a survey of all campus and housing bike racks was conducted to map coverage, availability, and condition of bike racks.



Other Highlights

- Dockless bikeshare program Limebike was launched at CSUN with a fleet of 400 bikes. Since January 2016, CSUN's 10,300 active users have ridden over 30,000 miles using Limebikes.
- Through a Second Nature Grant, the campus purchased three EV charging units with two charging ports each. These will be installed in summer of 2018.
- The AS Ticket Office sold 4,111 transit passes for Metro and AVTA. Over 631,000 rides were taken using the Metro U-Pass.
- This year was the first time that the Metro U-Pass was made available to graduate students.
- Zip Car is currently serving over 390 active members at CSUN.
- ZimRide saw nearly 800 active users this year, which was made up of primarily students but also included staff and faculty.

2018-19 Priorities

- Conduct one unified CSUN Campus Transportation Survey for students, staff and faculty to gather data required to calculate CSUN's Greenhouse Gas emissions.
- Develop and implement a No-Idling Policy.
- Provide a lower cost housing parking permit and disallow annual housing parking permits in campus parking lots.
- Determine the feasibility of purchasing transit passes and vanpool passes under pre-tax Commute Choice benefits option.
- Pilot Level 1 EV Charging spaces.

Waste & Materials Management

Campus waste generation amounts to approximately 70 pounds per person annually. Reduction of CSUN's waste is necessary to conserve valuable natural resources, reduce environmental pollution and reduce negative social impacts.

Main Strategies

1. Reduction of total waste generated by the campus (including landfill, recycling, and other disposal methods)
2. Increase diversion of waste from landfills
3. Increase awareness of waste, recycling and related issues
4. Improve collection and access of waste related data and information

Objectives for 2023

1. Reduction of total waste per capita by 20% over current values
2. Diversion of 75% of waste from landfills by 2023
3. Expand recycling capability to a wider range of plastics and other materials

2017-18 Priorities and Outcomes

- **Begin implementation of Zero Waste Plan.**

The Zero Waste Plan has been completed, and will be presented to the President's Cabinet and Academic Affairs for approval.

- **Continue waste stream signage throughout campus and housing.**

New signage has been deployed in conjunction with new bin infrastructure in the Oviatt Library, Manzanita and Sequoia Halls, and Sierra Tower.

- **Launch a Go topless (coffee cup lids) initiative.**

This initiative was shifted into a Bring Your Own Mug program, with TUC offering a reusable coffee cup and substantial discounts for utilizing it.

- **Investigate opportunities for eliminating receipts at TUC locations.**

TUC was able to digitize one of the two receipts printed for each transaction. This eliminated 168,860 receipts in April 2018, and will eliminate 1.45 million receipts in the coming year.

- **Construct a Sustainability Center.**

The construction of the new recycling facility at the Sustainability Center has greatly increased the amount of material that is able to be processed, and made recycling operations more efficient.

- **Pilot reusable pallet wraps.**

Reusable pallet wraps are being utilized at the Shipping and Receiving center to re-wrap pallets of cleaning supplies and other stock before distributing them across campus.

Reducing plastic bottle consumption through refill stations





New Zero Waste stations at the Sierra Center

Other Highlights

- During move-out, student housing was provided with approximately 75 cardboard boxes from the Recycling Operations Center, to reduce the need for new cardboard boxes. Students were encouraged to recycle the boxes once they were done with them.
- As a means to reduce landfilled materials, cleaning supplies, plates, utensils, and other useful items were collected during move-out and will be stored at Student Housing to be given to students next semester.
- The AS Sustainability Committee received a grant to retrofit six drinking fountains with water bottle refill stations. They are working with Physical Plant Management to determine which fountains will be retrofitted.
- Freudian Sip launched a new reusable cup campaign, which includes discounts and free drip coffee on Tuesdays to encourage the use of reusable items.

2018-19 Priorities

- Develop Zero Waste Program, Marketing Materials, and begin education campaign.
- Continue deployment of Zero Waste Infrastructure.
- Decrease single-use water bottles at campus events and meetings.
- Establish a program in student housing to collect electronics, durables, appliances, clothing and cleaning supplies during move-out.
- Create an education program for the Housing Resident Assistants and a mandatory orientation for housing students on waste and recycling. Include proper recycling, composting and durables handling information in move-in and move-out procedures.



CSUN is located in a region characterized by an insufficient supply of local water to serve its population. CSUN's commitment is to be a good steward of water resources, and to conserve wherever possible.

Main Strategies

1. Improve conservation practices and reduce water consumption
2. Improve data collection, management and analysis
3. Increase awareness of water as a valuable resource and educate on water conservation principles

Objectives for 2023

1. 15% reduction in water consumption
2. Measure, record, and analyze water consumption on a facility level
3. Increase awareness of water-related issues by students, faculty, and staff

2017-18 Priorities and Outcomes

- **Utilize existing irrigation data to develop water maps of the campus.**
This project was delayed due to a software shift that made irrigation data unavailable.
- **Determine the feasibility of migrating data from the irrigation system into the campus Energy Information System—EcoVox.**
Irrigation data is being collected from the Rain Master Irrigation System and this data will be entered into the Energy Information System.
- **Identify and map locations of irrigation runoff and begin to address each location.**
This project has been developed into an internship and will include the tracking and mapping of irrigation runoff locations. This map will be used to track irrigation runoff issues over time to determine if and where common issues occur.
- **Apply hydrogels to 3 additional locations (Boot Hill, Sierra South lawn, Manzanita lawn).**
Quotes were received for the installation of hydrogels at Manzanita Lawn, Sierra South Lawn and Bayramian Lawn, however there were no funds for this year for the project.
- **Install drip irrigation in Lindley and Etiwanda rose median strips.**
The Grounds Department has provided the estimated cost to complete this project, however there were no funds this year.
- **Building level water metering.**
Alternative metering devices were researched and the campus would like to utilize clamp on meters due to the low installation costs associated with them. This project will move forward once funding is made available.
- **Sierra Center landscape renovation.**
Due to budget constraints this project was placed on hold and will be considered the following year.
- **D1 Turf removal project.**
No funding was received for this project.
- **Replacement of Sierra Center Dishwasher.**
The dishwasher was purchased, and will be installed over summer utilizing grant funding from the Department of Water Resources.



Drought tolerant Palos Verdes



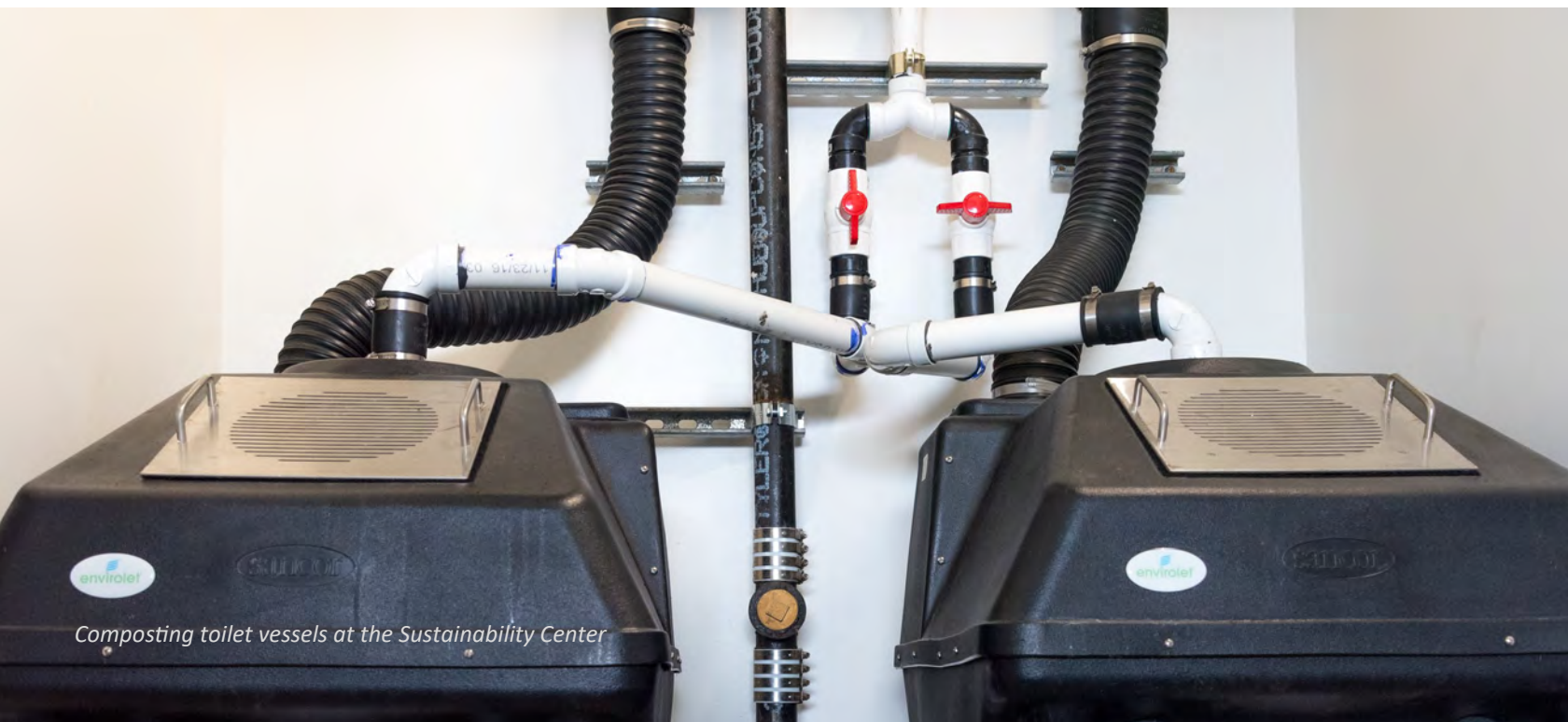
Drought tolerant landscaping and bioswale

Other Highlights

- Over **50,000** square feet of drought tolerant landscaping was completed this year including:
 - West side of Sequoia Hall
 - West side of Bayramian Hall
 - West and North side of the Education Building
 - Plummer and Darby intersection

2018-19 Priorities and Outcomes

- Complete 2 landscape renovations.
- Study potential rainwater capture opportunities for Lindley and Etiwanda streets.
- Pilot smart water metering devices.
- Examine other opportunities for water reuse including capture of condensate from campus HVAC system.



Composting toilet vessels at the Sustainability Center





Thank you to all of the sustainability working group members and campus partners for making these great achievements possible.

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