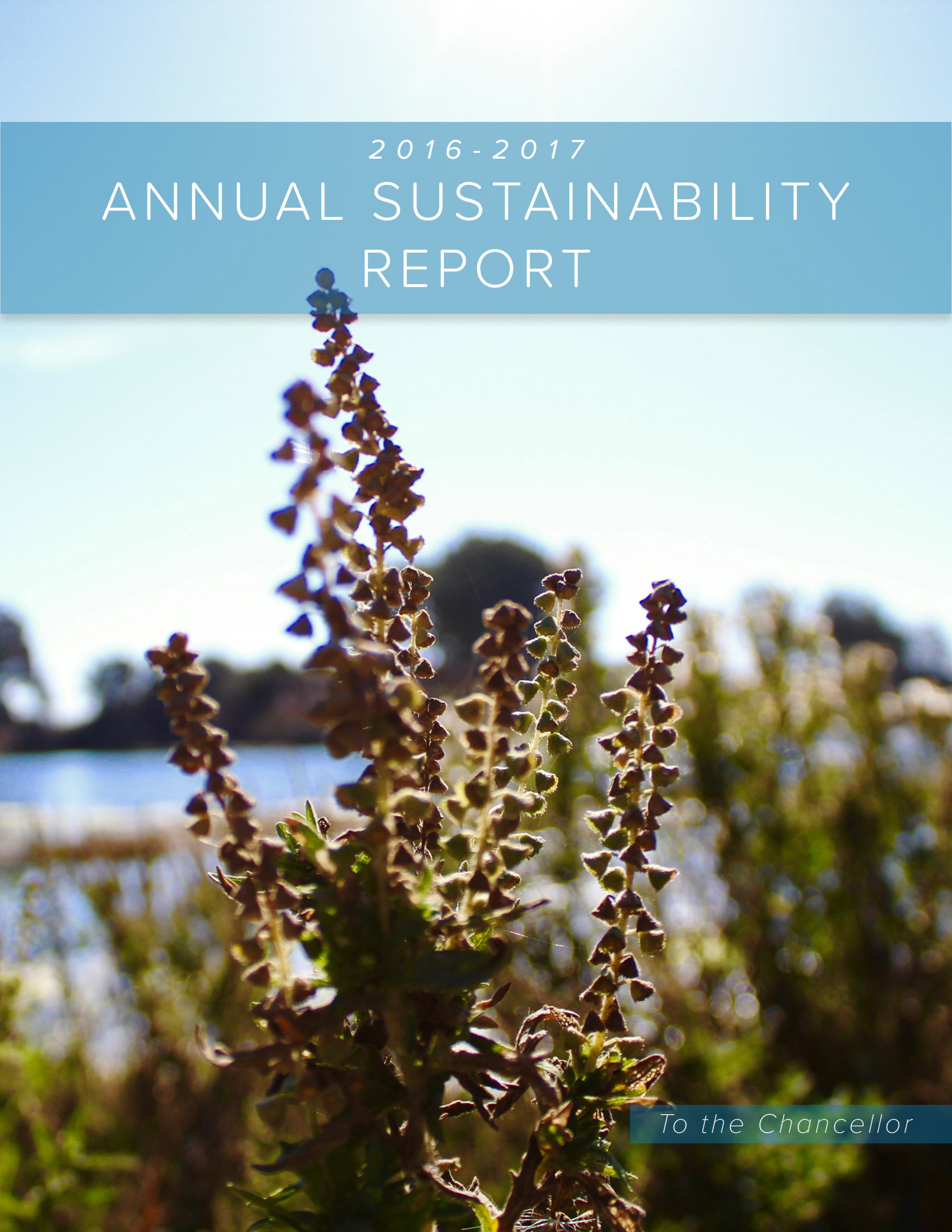
2016-2017

# ANNUAL SUSTAINABILITY REPORT



*To the Chancellor*

# Contents

October 27, 2017

To: Chancellor Henry T. Yang

Fm: Chancellor's Sustainability Committee

Re: 2016/17 Annual Sustainability Report

**MISSION**
The Chancellor's Campus Sustainability Committee (CSC) is charged with advising the Chancellor and campus administrators on matters of campus sustainability. This includes making recommendations on sustainability initiatives, prioritizing and monitoring the execution and progress of the campus sustainability plan toward our goals, making recommendations on allocations of available funding resources, and providing guidance in the creation and fostering of alliances.

## Overview

Much of the 2016/2017 academic year was spent working on Presidential Initiatives for Climate Neutrality and Food. We completed our update to the Climate Action Plan, targeting achievements we could handle within our current budget constraints, and projected a 40% reduction in our emissions by the UC climate neutrality target of 2025. Since that time, the pilot for the Utility Conservation Reinvestment Fund has been slower than originally anticipated. Once the PSB North pilot is complete, the campus will review and assess the performance before allowing us to expand the program. Realizing the 40% reduction will only be viable if we are able to reach the projected capacity of this program in academic year 2017/2018.

UCSB hosted the California Higher Education Sustainability Conference in June 2017 which included participation from all 10 of the UC's, the Office of the President, 23 of the CSU's, the CSU's Chancellor's Office, many of the private Universities in California, as well as about one-third of the City Colleges within California.

Campus Sustainability also created a new brochure highlighting many of our faculty across the campus (http://www.sustainability.ucsb.edu/wp-content/uploads/2017-Sustainability-Brochure.pdf).

The CSC also selected to reassess roles and responsibilities of its members. It was decided that all CSC members will take on roles as Chairs or Co-Chairs of each of the subcommittees. We have updated the roles and responsibilities for the Co-Chairs of the CSC Subcommittees to include the following:
a) Assess the subcommittee membership/make modifications where needed
b) Set the subcommittee meetings/agenda
c) Assess the subcommittee short and mid-term goals

d) Bring ideas forward to both the subcommittee and the CSC
e) Help build consensus on goals with the broader community
f) Confirm progress is made on goals
g) Provide verbal reports monthly to the CSC
h) Craft the subcommittee annual report

In academic year 2017/2018, we are asking that each subcommittee pick 2 to 3 projects/goals to focus on for the year. At our first CSC meeting (early October), the CSC will review the goals selected by each of the subcommittees and offer input on which goals they think should be pursued.

In 2016/2017, the CSC met eight times and had five active subcommittees, for which individual reports were submitted:

1. Energy & Climate
2. Waste
3. Transportation
4. Water
5. Food

There were also continuing Sustainability Change Agent Teams in the following functional areas, again with resulting reports:

1. Labs, Shops, & Studios
2. Landscape & Biotic Environment
3. Procurement (inactive)
4. Communications
5. Built Environment (inactive)

In addition, the Academic Senate Sustainability Working Group (SWG), completed its ninth year of work focusing on sustainability in academics and research, along with overseeing student funded initiatives, The Green Initiative Fund (TGIF), The Coastal Fund, and the Renewable Energy Initiative (REI).

## Committee Charges

**ACADEMIC SENATE SUSTAINABILITY WORKING GROUP**
Ensure that all graduates of UCSB are literate in the social, economic, and environmental aspects of sustainability and that sustainability research is supported.

**BUILT ENVIRONMENT**
Create superior places to study, work, and live that enhance the health and performance of occupants through sustainable design that incorporates human factors, construction, operations, retrofits, and biomimicry.
**ENERGY & CLIMATE**

Achieve a climate neutral campus through energy efficiency, conservation, on-site generation, and strategic procurement of clean and renewable energy.

**FOOD**
Our campus will be a community with equitable access to healthy food to nourish and sustain themselves and their families. Students, staff, and faculty will have a direct connection to their food system and we will work toward regional self-sufficiency. The campus will also actively support such practices in both the neighboring and global communities through our food choices, policies, operations, and academic programs.

**LANDSCAPE & BIOTIC ENVIRONMENT**
Increase biodiversity of the campus flora, maintain it as a living collection, enhance the utility of the campus as a classroom, protect native flora, and raise awareness about sustainable practices and self-sustaining systems, while reducing dependency on fossil fuels, extracted minerals, pesticides, and potable water.

**PROCUREMENT**
Employ efficient procurement strategies, processes, and systems for the acquisition and responsible use of resources in a manner that supports the economy, society, and environment.

**TRANSPORTATION**
Be a leader and catalyst in our region and the State, furthering human mobility and travel replacement options, advancing alternative fuels, and enabling carbon neutral vehicle deployment.

**WASTE**
Making UCSB a Zero Waste campus by ensuring waste management programs and practices effectively promote the reuse, reduction, recycling, composting, and repurposing of materials, as well as encouraging the rebuying of recycled material.

**WATER**
Assisting in protecting and conserving water resources, with an emphasis on reducing potable consumption through conservation, efficiency practices, and behavior change.

**COMMUNICATIONS**
Integrate sustainability into the daily habits of the campus community and encourage active participation and enthusiasm amongst students, faculty, and staff.

**LABS, SHOPS, & STUDIOS**
Reduce the environmental impact of laboratories, medical facilities, shops, and art studios, while also improving safety, management practices, communication, and resource sharing.

## Budget

In 2016/17 campus sustainability received funding from the following:

| Unit | Allocation |
|---|---|
| Administrative Services | $63,685.56 |
| Housing & Residential Services | $40,000.00 |
| Executive Vice Chancellor & Chancellor | $88,000.00 |
| Carry Forward from 2015/16 | $80,300.68 |
| **TOTAL:** | **$271,986.24** |

Funds were expended as follows:

| | | |
|---|---|---|
| **Academic Support** | | |
| | Chancellors Sustainability Interns | $15,101.75 |
| | Academic Senate Sustainability Work Group Staff Support @ 15% Time | $9,156.62 |
| | New-Leaf Curriculum Incentive Program | $3,000.00 |
| **Staffing** | | |
| | Sustainability Director @ 25% Time | $29,018.36 |
| | Web Support @ 10% time | $8,051.64 |
| | Intern Program Staff @ 35% Time | $21,365.50 |
| | LabRATS Director 6 months @ 40% Time (received grant for balance) | $37,313.11 |
| | Graduate Student Internships in Disciplines Where the Environment/Sustainability are Not a Typical Focus | $12,362.88 |
| | Undergraduate Student Internships in Disciplines Where the Environment/Sustainability are Not a Typical Focus | $7,465.80 |
| | Living Lab Interns | $3,437.30 |
| | LabRATS Interns | $3,730.05 |
| | PACES Interns | $6,362.70 |
| **Consultants, Memberships, Fees, and Misc.** | | |
| | Third Party Consulting for GHG Emission Verification | $5,714.76 |
| | Internship Supplies | $9,583.94 |
| **Communications** | | |
| | Communications Subcommittee Expenses | $6,025.62 |
| **Conference and Project Support** | | |
| | Central Coast Sustainability Conference | ($1,580.21) |
| | Maintenance for UC Santa Barbara Hydration Stations | $23,456.40 |
| **Travel** | | |
| | UCOP Meetings | $830.71 |
| | California Higher Education Sustainability Conference (CHESC) | $834.47 |
| | UCOP Visit to Santa Barbara | $621.63 |
| | AASHE Conference | $1,534.12 |
| | **TOTAL EXPENSES:** | $203,387.15 |

## Campus Surveys

As part of our responsibility to track progress and trends in campus behavior, we typically conduct two annual surveys that help us gauge improvements. Survey results for 2016/17 have been completed and include:

- A transportation survey that captured how faculty, staff and students commuted to and from the campus, including Annual Vehicle Ridership (AVR). This is required by the Office of the President, and it is also vital in calculating campus Green House Gas (GHG) emissions.
- A survey of student attitudes and actions towards matters of sustainability on campus. Undergraduate attitudes are surveyed on odd years and faculty, staff, and graduate students are surveyed on even years.

## Awards and Rankings

- The League of American Bicyclists has recognized UCSB as a Gold Level Bicycle Friendly University (BFU). The campus has held this designation since 2011, when the award program was first launched.
- UCSB won a 2016 Best Practice Award in the annual Energy Efficiency and Sustainability Awards contest presented at the California Higher Education Sustainability Conference (CHESC) for the Student Affairs and Administrative Services Building Advanced Lighting and Controls Project.
- In September 2017, UCSB was rated No. 49th on Sierra magazine's list of "Coolest Schools." The Sierra Club's official publication recognizes 201 colleges and universities. In 2016 UCSB was rated No. 29.
- In September 2017, UCSB was rated No. 22 on The Princeton Review Guide to 361 Green Colleges. In 2016 UCSB was rated No. 13.
- We achieved our third AASHE STARS Gold rating in November 2016.
- In July of 2017 UCSB was named as a Finalist for the 2017 Climate Leadership Awards Presented by Second Nature.

## Certifications

- UCSB KITP Residence received a LEED Platinum Certification, the highest possible rating for sustainable design under the category "LEED for Homes." UCSB is the only campus in the system with any "LEED for Homes" certifications.

## Community Engagement

UCSB Sustainability hosted the following key events:

- The 6th Annual Central Coast Sustainability Summit took place at UCSB in fall 2016 –The Central Coast Sustainability Summit is an annual conference and the goals include sharing best practices and building collaborations to address

complex environmental and economic issues in our region. The event brings together key stakeholders from local government agencies, elected officials, chambers of commerce, nonprofit organizations, campuses, utility companies, and private companies. The keynote speaker was Terry Tamminen, CEO Leonardo DiCaprio Foundation. We are currently in the process of planning our 7th annual summit, which will take place on October 11, 2017. Our focus topics for 2017 include renewable energy, water, and sustainable transportation.

## Academic Senate Sustainability Working Group

**2016/2017 MEMBERS**

Bruce Tiffney, Chair, David Lopez-Carr, LeeAnne Kryder, Eric Matthys, Eric Smith**,** Josh Schimel, Lisa Berry, John Foran, George Michaels, Ken Hiltner, Kyle Richards, David Pellow, Katie Maynard, Mo Lovegreen, Chandra Krintz, Gretchen Hofmann

**MISSION**

Ensure that all graduates of UCSB are literate in the social, economic, and environmental aspects of sustainability and that sustainability research is supported. UCSB is committed to the creation, dissemination, and assessment of knowledge on sustainable practices through classroom instruction, research, service learning, and visual and performing arts.

**ACCOMPLISHMENTS (2016/2017)**

**ONGOING INITIATIVES**

- The Academic Senate Sustainability Working Group awarded 6 faculty New Leaf Grants across four departments, selected 8 new Global Food Initiative and Carbon Neutrality Initiative fellows, and one Chancellor's Sustainability Research Intern last year.
- Led UCSB's involvement in the Climate and Sustainability Education Resource Library (CSERL) program and hosted a faculty curriculum workshop in Fall 2017 for over 20 faculty.
- The Edible Campus Program (ECP) partnered with the Gevirtz Graduate School of Education (GGSE) to develop garden curriculum for the Orfalea Family Children's Center (OFCC). ECP also developed partnerships with faculty in Computer Science, Geography, Middle Eastern Studies, and Environmental Studies who are all excited about the farm launch.

**2017-2019 SHORT-TERM IMPLEMENTATION PLAN**

1. Propose an environmental general education requirement to the Academic Senate as a special topics requirement.
2. Secure 3,000 signatures from undergraduate students, supporting a general education requirement on the environment.

3. Secure funding to continue the Faculty Climate Action Champion program (UCOP funded year one of this in 2015/16). This program is now system-wide, but was initiated by our campus.
4. Launch a student achievement award in sustainability that has the potential to recognize the work of student activists, researchers, and interns.
5. Establish the campus farm as a teaching and mentoring resource illustrating "where food comes from" and the techniques necessary to grow food locally.

**2020-2022 MID-TERM IMPLEMENTATION PLAN**

1. Identify courses on sustainability and climate change in the course catalog and the GOLD system.
2. Encourage faculty research that directly addresses regional concerns related to sustainability.
3. Launch a sustainable commons video project, which will collect and disseminate videos related to sustainability to be infused into courses in the form of supporting media/course modules.
4. Develop a climate change student peer educators' program.
5. Explore the feasibility of implementing a new minor in Environmental Justice.

**2022-2025 LONG-TERM IMPLEMENTATION PLAN**

1. Launch an Interdepartmental PhD Program in Environment and Society.
2. Create a program to support student-initiated eco-entrepreneurship at the undergraduate level. This may be an expansion of existing eco-entrepreneurship programs on campus.

**2025-2050 VISIONARY GOALS**

1. Endow the Faculty Champion, NEW Leaf, and internship programs.
2. Develop 2-3 large scale demonstration projects that engage campus researchers, link to curriculum, and set UCSB in a leadership position in relation to peer institutions.
3. Have an interdisciplinary "Center for Climate Change Studies".
4. Initiate long-term strategies to maintain and increase environmental science and climate change faculty

## Built Environment

**CAMPUS ACCOMPLISHMENTS (2016/2017)**

- UCSB KITP Residence Received a LEED Platinum certification, the highest possible rating for sustainable design under the category "LEED for Homes.
- UCSB's Bren Hall was just recertified as a Platinum building under LEED EBO&M version 4.

## CSC SUBCOMMITTEE ON THE BUILT ENVIRONMENT

This subcommittee has been inactive for the past two years and a smaller group, the lab ventilation working group, has been convened (see committee goals and accomplishments below). With several recommendations for new buildings requirements coming from the UC Report of the Carbon Neutrality Finance and Management Task Force, the CSC has decided to reactivate the subcommittee for the 2017/2018 Academic year.

## MISSION

Create superior places to study, work, and live that enhance the health and performance of occupants through sustainable design that incorporates human factors, construction, operations, retrofits, and biomimicry.

## LAB VENTILATION WORKING GROUP (LVWG)

### 2016/2017 MEMBERS

Amorette Getty, Jordan Sager, David Vandenberg, Joe Harkins, Jesse Bickley, Alex Moretto, Sandro Sanchez, Rich Dewey

### ACCOMPLISHMENTS

- Developed process with Fire Marshall for documenting 'Alternate Means of Protection' with respect to California Building, Mechanical, and Fire Codes to allow flexibility for energy efficiency measures.
- Developed Benchtop Chemical Risk Assessment with EH&S to identify labs which safely qualify for ventilation reduction measures.
- Applied Alternate Means and Benchtop Assessment processes to the Bren Building as a pilot of both procedures to validate ventilation reduction measures in Bren laboratory spaces.
- Assisted in drafting of 'Sustainability' section in the UCOP's Laboratory Safety Design Manual, and provided feedback to UCOP on other sections of the document.
- Providing consulting on ventilation schematics for lab space designed in Ellison Hall, the new Physics Building (ongoing) and Henley Hall.
- Identified major opportunity for ventilation reduction in Physical Sciences Building – North and developed specifications and funding paths for a building air rebalance to enact those reductions, with projected 10% decrease in building cooling and electrical costs, and 20% reduction in heating costs, with an anticipated payback period of 25 months for the project.

### 2017-2019 SHORT-TERM IMPLEMENTATION PLAN

1. Complete pilot programs in Physical Sciences Building North and further document campus approved measures for Laboratory Ventilation Standards.

2. Develop administrative and communications procedures for LVWG to review all ventilation designs for laboratory renovations and new construction, and to respond to incoming ventilation-related work orders.
3. Document UCSB's understanding of all code considerations relevant to laboratory ventilation to share with peers on other campuses and with design teams.

**2020-2022 MID-TERM IMPLEMENTATION PLAN**

1. Incorporate updated Lab Ventilation Management practices into additional laboratory buildings.

**2023-2025 LONG-TERM IMPLEMENTATION PLAN**

1. Establish a fully-integrated campus-wide Lab Ventilation Management program/policy.
2. Obtain, in collaboration with other UCs, a Cal/OSHA variance for the safe operation of low-flow fume hoods.

## Energy & Climate

**UCSB ACCOMPLISHMENTS (2016/2017)**

- Last academic year, 5 megawatts of onsite solar energy generation was installed. On an average day, our campus buildings require 12 megawatts of electricity
- Won a Best Practice Award in Lighting Design and Retrofits for the Student Affairs and Administrative Services Building Advanced Lighting and Controls Project from the Higher Education Energy Efficiency and Sustainability Best Practice Awards competition
- Created a public facing Energy Dashboard to provide the UCSB community with real time energy consumption information and building energy use comparisons throughout campus.
- UCSB reduced its per square foot electricity use by 39 percent since 1998.
- Completed a comprehensive Climate Action plan that included growth and emissions projections along with emissions reduction strategies that will get us closer to the 2025 Carbon neutrality goal.

**CSC SUBCOMMITTEE ON ENERGY & CLIMATE**

**2016/2017 MEMBERS**

Jordan Sager (Co-Chair), John Foran (Co-Chair), Mo Lovegreen, Jewel Snavely, Andrew Riley, Bob Wilkinson, David Auston, Robert Holland, Eric Matthys, Mark Rousseau, Maximilian Stiefel, Mel Manalis, Rena Lahn, Rebecca Claasen, Abi Pastrana

## MISSION

Achieve a climate neutral campus through energy efficiency, conservation, onsite generation, and strategic procurement of clean and renewable energy.

## 2017-2019 SHORT-TERM IMPLEMENTATION PLAN

1. The campus will strive for a total campus average energy density (kBtu/sq ft/yr) reduction of 8.0% on a five-year rolling average basis.
2. Make energy usage and cost more transparent and tangible to the individual entities (individuals, buildings, departments, etc.) in order to support a decentralized energy utility budgeting structure, where all consumers will have an incentive to reduce energy consumption through increased accountability. This includes the electrical sub metering of all buildings larger than 4,000 square feet with real-time data reporting to the Facilities Management Energy Information System and data access for the campus population.
3. Complete energy benchmarking analysis for all buildings larger than 4,000 square feet to identify current baseline building energy consumption.
4. Establish a short-term financing mechanism and identify appropriate support resources to assist individual entities (including individuals, departments, programs, etc.) in planning, funding, and implementing energy conservation projects that can demonstrate a reasonable return on investment. This may include the current TGIF grants, but should ideally include a larger pool of money for example in the form of interest-free loans.
5. Complete solar thermal installations at five existing residence halls.
6. Complete data room inventory for campus.
7. Engage the off campus community as well as students, staff, and faculty in the revision of the UCSB Climate Action Plan.
8. Develop a comprehensive understanding of energy production sites for the electrical grid in the campus' sub region. Identify what communities are most affected by those sites and what the effects are.
9. Establish a policy to divest from coal and tar sands.
10. Sign the Climate Resiliency Pledge via Second Nature.
11. Explore the possibility of divesting from all fossil fuels.

## 2020-2022 MID-TERM IMPLEMENTATION PLAN

1. Increase the campus' percentage of electricity consumption from renewable sources to 43% total electricity consumption by 2020.
2. Achieve 1990 level climate emissions reduction target.
3. Maintain trajectory of total campus average energy density (kBtu/sq ft/yr) reduction of 8.0% on a five-year rolling average basis.
4. Incorporate mitigation of sea level rise into Climate Action Plan.

**2023-2025 LONG-TERM IMPLEMENTATION PLAN**

1. Achieve carbon neutrality in Scopes I and II greenhouse gas emissions.
2. Divest from all fossil fuel companies.

**2026-2050 VISIONARY GOALS**

1. Achieve Scope III carbon neutrality

## Food

**UCSB ACCOMPLISHMENTS (2016/2017)**

- In 2016/2017, 41% of food purchases by the UCen were sustainable and 33% of food purchases by Housing Dining and Auxiliary Enterprises (HDAE) were sustainable.
- The UCEN developed a food recovery pilot program in conjunction with the Food Security Taskforce's Food Recovery Coordinator for ready-made prepared foods. HRAE is also working on several projects including recipes to reduce food waste and properly portioning menu options offered in the dining commons.
- Established a guideline for what healthy and nutritious food is. The Food, Nutrition, and Basic Skills (FNBS) program collaborated with its partners to develop a the set of guidelines. This set of guidelines was built from past work of Student Health, HDAE, and Health and Wellness.
- Developed a UCSB Food Security Action Plan.
- Developed a survey mechanism to collect annual data on food insecurity of UCSB students, institutionalizing the initial survey done in 2014- 2015.
- UCen will begin piloting CalFresh at the Arbor in 2017/2018 academic year. This and the GCFM pilot will pave the way for future expansions of CalFresh on campus.
- The Edible Campus Program (ECP) has planted 7 citrus trees as part of the Urban Orchard; installed two hydroponic vertical gardens; and has identified a location for a campus farm. The ECP also integrated students from the Graduate School of Education into gardening and farming projects on campus.
- Secured a multi-campus research grant to explore issues related to obtaining food from our oceans.
- The Healthy Campus Network (HCN) Steering Committee allocated funding to 18 projects from 14 departments including two faculty-led research projects: Healthy Progress: Assessing UCSB's Efforts to Make Our Campus the Healthiest Place to Live, Work, and Learn and Healthy Cleaning for a Healthy Campus. The full list of projects is listed below with hyperlinks to the submissions and details about each program:
    - Take the Stairs Promotion
    - Fit squad: Exercise Options for Staff and Faculty
    - Know your Numbers; Health Kiosks

- Tobacco Cessation Resources & Policy Promotion near Library
- UCSB Greenhouse and Garden Project Education Space Renovation
- Campus Farm, Edible Campus Program
- Food for Thought Lunch Series
- Home Cooking: Culinary Cultural Exchange
- Expanding Food, Nutrition, and Basic Skills Workshops to Staff and Faculty
- Wellness for All: Capturing Video of Existing Workshops (Focus on Learn at Lunch)
- Online Campus Community via OrgSync
- Sense of Belonging: Creating and Maintaining an Inclusive Campus Ecology for Underrepresented Ethnic, Racial, Biracial, and Multicultural Staff and Faculty
- Gaucho Mentor Connection (GMC) Program
- Reducing Food Insecurity for UC Employees; A Food Policy Intern
- Healthy Campus Network Forums
- Healthy Progress: Assessing UCSB's Efforts to Make Our Campus the Healthiest Place to Live, Work, and Learn
- HCN Coordinator, a Student Intern to help with HCN Steering Committee
- Healthy Cleaning for a Healthy Campus

**CSC SUBCOMMITTEE ON FOOD**

**MEMBERS**

Given the tremendous amount of work around food issues in 2016-2017, several committees were active and contributed to goals and accomplishments listed in this plan:

- Food Security Task Force
- Health Campus Network:
- Edible Campus Program
- Food, Nutrition, and Basic Skills (FNBS)
- Swipes Program
- Gaucho Farmers Market

**MISSION**

Our campus will be a community with equitable access to healthy food to nourish and sustain themselves and their families. Students, staff, and faculty will have a direct connection to their food system and we will work toward regional self-sufficiency. The campus will also actively support such practices in the neighboring and global communities through our food choices, policies, operations, and academic programs.

## 2017-2019 SHORT-TERM IMPLEMENTATION PLAN

### Sourcing and Purchasing

1. UCSB Residential Dining has a goal of purchasing 55% sustainable produce and maintaining 35% overall sustainable food purchases.

### Operations

1. Work with convenience stores on campus to assess which products have non-recyclable or excessive packaging and identify alternatives to these items. Propose those alternatives to the University Center for consideration.
2. Reduce plastic water bottle sales on campus by 20% from 2015 sales.
3. Research the feasibility of reducing the use of paper receipts in campus food service operations through an electronic receipt system or more frequently asking if a receipt is needed.
4. Collaborate with the campus refuse and recycling manager and the University Center to develop ways to better enforce the contract guidelines that restrict the use of Styrofoam in campus restaurants. (Please note: this only affects restaurants who signed leases after the new contract language was added).

### Education, Outreach, and Best Practice Sharing

1. Secure educational grants to support partnerships between the Isla Vista Food Cooperative and campus stakeholders to increase/expand co-curricular education programs.

### Health and Wellness

1. Evaluate options for and current barriers to reducing the amount of unhealthy food that is offered in campus retail food facilities.
2. Research how universities and hospitals statewide and nationally have integrated health standards into leasing contracts for their facilities. Consider whether similar contract language could be applied for leased food service locations at UCSB. Also assess whether it would be possible to give preferences to local or small-scale businesses rather than chain stores in on-campus leased spaces.
3. Increase healthy options in vending machines.

### Food Security

1. Reduce student food insecurity to less than 30%.
2. Identify low-cost sustainable snack items that could be introduced into campus convenience stores to supplement existing offerings. Once identification is done, propose to the University Center for consideration.

### Growing Food

1. Launch a student-run campus farm that has approval to produce and distribute food to students in need.

2. Produce at least 25,000 pounds of produce in the 2017-2018 academic year on campus and distribute it to students in need.

**2020-2022 MID-TERM IMPLEMENTATION PLAN**

1. The University Center seeks to purchase 20% of their food from sustainable sources (per UC Policy).
2. Ensure that 50% of meat purchases by UCSB Residential Dining (other than fish and seafood) are certified by the American Grassfed Association, are Animal Welfare Approved, meet the requirements of the Global Animal Partnership (steps 3 and higher), and/or are certified humane.
3. Identify a funding strategy that will match or exceed the student contribution to the AS Food Bank on an ongoing basis.
4. Reduce student food insecurity to less than 20%.
5. Expand the edible campus project to reach 6 total locations.
6. Determine the feasibility of getting existing fruit trees on campus approved for harvesting and distribution.
7. Increase amount of fresh produce distributed through the AS Food Bank to 50,000 pounds annually.
8. Have a WTF (What the Fruit) fruit bowl in every campus department.
9. Institutionalize the Food, Nutrition, and Basic Skills Pilot Project into a regular offering.
10. Develop new student orientation programs geared towards exposing new students to the local food system.
11. Develop an Isla Vista impact group focused on food justice.
12. Reduce plastic water bottle sales on campus by 50% from 2015 sales.
13. Launch a student-run sustainable food cart (Fall 2018).

**2023-2025 LONG-TERM IMPLEMENTATION PLAN**

1. Offer new courses focused on sustainable foods and/or food justice.
2. Reduce student food insecurity to less than 10%.
3. Expand the edible campus project to reach 10 total locations.
4. Produce at least 50,000 pounds of produce annually on campus and distribute it to students in need.

**2026-2050 VISIONARY GOALS**

1. 50% of all food purchases made by UCSB Residential Dining are sustainable.
2. 90% of meat purchases by UCSB Residential Dining (other than fish and seafood) are certified by the American Grassfed Association, are Animal Welfare Approved, meet the requirements of the Global Animal Partnership (steps 3 and higher) and/or are certified humane.
3. Develop a plan to ensure that food insecurity of UCSB students is maintained under 10%.
4. Build or secure access to a full-scale commercial kitchen that can be used for educational programs. Ideally this would be a part of the food and wellness center. This is needed for many reasons including but not limited to the reason

that existing kitchens on campus are overbooked, there is a lack of space for education in existing spaces, and existing kitchens do not meet commercial kitchen standards, limiting what can be done in those spaces.
5. Every incoming student is given a financial literacy workshop.
6. Reduce plastic water bottle sales on campus by 90% from 2015 sales.
7. Collaborate with student health to explore how campus gardens and farms could be used as a tool for mental health and healing.

## Landscape & Biotic Environment

**UCSB ACCOMPLISHMENTS (2016/2017)**

- Switched from using petro-chemical oils in small equipment to the use of environmentally friendly and safety-enhanced bio-oil.
- Mapped all stormwater features on campus – e.g., bioswales, outfalls, CDS (Continuous Deflection System) units, and rain gardens.
- Reviewed and adopted a weed management plan.
- CCBER is working with local band of Coastal Chumash and Barbareno people on integrating traditional land management practices such as grassland burning and hand digging bulbs as well as appropriate interpretive signage as part of the NCOS project. CCBER and Grounds support the Ethnobotany living garden by SSRB in conjunction with local members of Native American tribes.

**CSC SUBCOMMITTEE ON LANDSCAPE & BIOTIC ENVIRONMENT**

**2016/2017 MEMBERS**

Bruce Tiffney (Co-Chair) Lisa Stratton (Co-Chair), Jon Cook, Rachel Davis, Manuel Hererra, Mo Lovegreen, Heather Perry, Danny Mann, and Jodi Switzer, Jeff Hoelle

**MISSION**

To increase biodiversity of the campus flora, maintain it as a living collection, enhance the utility of the campus as a classroom, and raise awareness about sustainable practices and self-sustaining systems, while reducing dependency on fossil fuels, extracted minerals, pesticides, and potable water.

**2017-2019 Short-Term Implementation Plan**

1. Convert remaining areas to reclaimed water from potable water as appropriate and as funding allows (on-going).
2. Continue to incorporate bioswales and water infiltration into all projects on campus (on-going).
3. Generate report on fuel and herbicide use by different management groups, in order to measure progress on conversion to reduced herbicide use and reduced local emissions.
4. Complete conversion of low efficiency to high efficiency sprinkler heads (ongoing).

5. Assess GHG sequestration potential of campus landscapes.
6. Remove grass from bike path roundabouts to reduce water use (on-going).
7. Assess the opportunities and constraints of integrating an 'Edible Campus Program" on campus with consideration of integrated pest management issues (on-going).
8. Seek ways to support the newly formed American Indian and indigenous Gardens Alliance (AIIGA), a student group through the office of student life within the framework of other best management practices for campus landscapes (on-going).
9. Grounds and CCBER will work with CalPirg group on identifying goals for becoming a Bee Safe community.
10. Convert 15 acres of random turf plots to non-turf (e.g. mulch) to conserve resources for unnecessary turf (34% reduction)
11. Make Campus Flora and Tree inventory available to public via new App for My Tree Keeper
12. Replace Nassella tenuissima at BREN and SSRB with natives or other sustainable plants

**2020-2022 MID-TERM IMPLEMENTATION PLAN**

1. Achieve eradication of invasive species as listed below.
    a. Eradication across campus (all groups working on this goal): Bladder Flower (Araujia sericifera), Fountain Grass (Pennisetum setaceum), Mexican Feather Grass (Stipa tenuissima), Perwinkle (Vinca major), Smilo Grass (Stipa miliacea).
    b. Remove when an area is renovated or comes under funded management (e.g., in open spaces): Pampas grass (Cortaderia selloana), Cape Ivy (Delairia odorata), Bridal Creeper (Asperagus -asparagoides), Iceplant (Carpobrotus spp), Fennel (Foeniculum vulgare), Myoporum tree (Myporum laetum), Sour Grass (Oxalis pes caprae), Harding Grass (Phalaris aquatic), Castor bean (Ricinus communis), Giant Reed (Arundo) donax, Salt Cedar (Tamarix spp).
    c. Only plant non-natives where needed; remove all volunteers. Seek to manage to reduce the spread of Kikuyu grass (Pennesetum clandestinum) (used in lawns) and Canary Island Date Palm (Phoenix canariensis) as feasible; trim fruits regularly of Mexican fan palm (Washingtonia robusta)
    d. Encourage campus landscape architects not to specify these species adjacent to wetlands.
2. Develop a system where campus students, staff and faculty can more easily report irrigation system malfunctioning through social media.
3. Continue to seek strategies for reducing the use of herbicides and pesticides on campus in support of campus's integrated pest management system.

**2023-2025 LONG-TERM IMPLEMENTATION PLAN**

1. Expand signage throughout campus (similar to the lagoon signage) so that campus can build on its role as a curated botanic garden.

**2026-2050 VISIONARY GOALS**

Be a leader in landscape sustainability through diversity of programs

1. Explore the potential to balance campus greenhouse gas emissions with the ability of campus plantings to sequester greenhouse gasses within the framework of management needs
2. Develop landscapes to be used as a living laboratory and model for drought tolerant, stormwater filtering and self-sustaining, low input landscapes that also serve the functions necessary for campus activities

Protect native landscapes that preserve the natural heritage of coastal California native diversity and support wildlife and natural ecosystem functions

## Sustainable Procurement

**CAMPUS ACCOMPLISHMENTS (2016/2017)**

- 312 excess chemicals have been shared through a collaborative program built by Environmental Health and Safety and LabRATS
- UCSB exceeds the UC requirement of using a minimum of 30% recycled content in all office copy paper, with 35% of all paper purchases in FY 2015/16 being over 70% recycled, Forest Stewardship Council (FSC) Mix certified, or FSC Recycled certified.
- Over 50% of all applicable electronic purchases on campus meet the Electronic Product Environmental Assessment Tool (EPEAT) Gold registration level, certifying that these products meet the highest environmental criteria for electronics across their complete product lifecycle from design to recycling.
- Green certified products (FSC, Green Seal, UL ECOLOGO, and U.S. EPA Safer Choice) accounted for 64% ($391,855.81 of the total $614,804.50) of all janitorial cleaning products in fiscal year 2015/16.
- In 2016, Procurement collaborated with Facilities Management and Residential Services to develop a module within the Pest Management RFP that ensures sustainable bee capturing in lieu of extermination.

**CSC SUBCOMMITTEE ON PROCUREMENT**

This subcommittee has been inactive for the past two years, however the CSC has decided to reactivate the committee for the 2017/2018 Academic year.

**2017/2018 MEMBERS**

Sangwon Suh (Co-chair), Heather Perry (Co-chair), Mo Lovegreen, Rich Appelbaum, Danielle Kemp, Byron Sandoval, Matthew O'Carroll, Jewel Snavely, Daniel Hart, Jeri Mahoney, Elise Meyer, Sarah Salem, Wendy Bagnasco, Andrew Lee, Cameron Guiliano-Puzi

**MISSION**
To facilitate the acquisition of resources in an environmentally conscientious and socially responsible manner while supporting the UC education, research, and public service mission.

## Sustainable Transportation

**UCSB ACCOMPLISHMENTS (2016/2017)**

- Added MTD bus line 28 (8/17).
- Contracted and hosted a Toyota Mirai fuel cell vehicle from 9/27/16-10/25/16 for faculty and staff to test drive.
- In partnership with the City of Santa Barbara, the County of Santa Barbara, the Santa Barbara Waterfront, the Santa Barbara Chamber of Commerce, The Audacious Foundation, Santa Barbara City College, Santa Barbara City College Foundation, MTD, Santa Barbara County Association of Governments, the Community Environmental Council, and the Santa Barbara Bicycle Coalition, completed crafting the South Coast Bike Share Feasibility Report (5/17) http://www.sbbike.org/bikesharestudyrelease
- With this same partnership group, completed the Request for Information (RFI) call and are currently finalizing the selection process for a bike share vendor.
- Hosted Ojo scooter (https://www.ojoelectric.com/) demonstration for students to test for one week (5/17).
- Designed an out-of-the-box approach to travel that could significantly reduce campus Scope 3 GHG emissions from travel *and* commuting with minimal capital investment. The pilot will provide one folding electric bike for faculty and staff to check out and use on University travel (providing a multimodal option while in transit) and will be a working partnership with Campus Sustainability, AS Bike Shop, Risk Management, and Transportation & Parking Services.
- 93% of our students commute to and from the campus using alternative transportation methods.
- The campus currently has 28 electric charging stations.
- Outsourced vanpool fleet to vRide/Enterprise.
- 10% of our fleet is now ZEV/LEV.
- 5 of our 6 recent fleet purchases have been EV – our fleet mix is current 41% alternative fuel.
- 84% of our light duty trucks are alternative fuel and/or ultra-efficient vehicles.

**CSC SUBCOMMITTEE ON SUSTAINABLE TRANSPORTATION**

**2016/2017 MEMBERS**
Caroline Ackley (Graduate Student, MCDB), Rick Church (Faculty), Nestor Covarriubias (Director, Transportation & Parking Services), Richard Flacks (SUN member), Eva Inbar (SUN member), Adam Jahnke (Manager, AS Bike Shop), Kevin Jin (Undergraduate, President, AS BIKES), Mo Lovegreen (Director, Campus Sustainability), Sally MacIntyre

(Faculty), Eve Sanford (Santa Barbara Bicycle Coalition), Arjun Sarkar (Alternative Fuel Coordinator, T&PS), Sarah Siedschlag (Environmental Programs Advisor, AS), Robert Silsbee (Planning & Resources Director, Office of VC for Admin Services), Jamie Wagner (Transportation Alternatives Program Manager, T&PS), Yi Wen (Graduate Student, Bren School), Katie Wright-Dutter (MSO, Chemistry), Jewel Snavely (Sustainability Coordinator, VCadmin)

**MISSION**

Be a leader and catalyst in our region and the State in terms of human mobility options and alternatives to travel, advancing alternative fuels, and carbon neutral vehicle deployment.

**2017-2019 SHORT-TERM IMPLEMENTATION PLAN**

1. Implement Bike Share for campus.
2. Create a Campus Bicycle Master Plan.
3. Complete deployment of folding electric bike pilot program.
4. Devise and implement a Strategic Transportation Plan (STP) to get us on a path to reduce commute-related and business travel GHG emissions to 40% below 1990 levels by 2025 and 80% below 1990 levels by 2050. The STP will include the following:
    a. Decrease single occupant vehicle ridership by faculty and staff by 10% (from 15/16 baseline) by 2025.
    b. Decrease single occupant vehicle ridership by 2050, so no more than 30% of all faculty, staff, and students commute via this mode.
    c. Fleet purchases – by 2025, have 4.5% of our commuter fleet be ZEV/LEV.
    d. By 2050, have 30% of our fleet be ZEV/LEV.
    e. Expand our charging station/alternative fuel infrastructure.
    f. Expand TDM/TAP participation by 5% over the 2000 baseline.
    g. Further reduce scope 3 emissions by expanding the use of teleconferencing / web options (pursue desktop solutions to offset GHG emissions related to business-related travel.
    h. Provide faculty and staff with incentive programs for alternative fuel vehicles.
    i. Partner with our local municipalities, MTD, SBCAG, and the County of Santa Barbara to develop an integrated public transit system.
    j. Develop planning and funding for a north-south bike path, linking the Fairview Plaza – Stowe Park area to campus.
    k. Create and implement an outreach program aimed at educating faculty and staff on the importance of reducing air travel. Most faculty and staff are unaware that business air travel accounts for 30% of our campus' total emissions.
    l. Develop an incentive program for departmental purchases to encourage them to procure alternatively fueled vehicles. (We received the TGIF funds at the end of 15/16, but implementation will happen in 16/17)

m. Secure grant funding and funding strategies to accelerate fleet vehicle replacement and fueling infrastructure for low carbon / zero emission vehicle utilization.
n. Attain an alternative fuel fleet mix of 50% and a robust multi advanced fuel infrastructure. Our fleet is currently 40% alt fuel, however 20% of the fleet are E85 (flex-fuel) vehicles. Our current challenge is that E85 is not available in the Santa Barbara area at this time.
o. Utilize advanced drop-in biofuels (renewable gasoline & renewable diesel - by definition, these fuels reduce carbon emissions by more than 50%) recognized by the CA CEC to have at least a 33% GHG reduction.
p. Continue collaboration with Clean Cities and other organizations / agencies to achieve GHG reduction goals.

5. Devise and implement a Strategic Fleet Plan (SFP) in alignment with the Carbon Neutrality Initiative's goal of Carbon Neutrality of scope one emissions by 2025 by implementing the following:
    a. 75% of the light and medium duty university purchases will be alternative fuel and/or 35.5 mpg by 2016, 85% and 38 mpg by 2020, and 95% and 40 mpg by 2025.
    b. 15% Light-duty purchases to be Electric or Plug-In Hybrid by 2020, and 50% by 2025.
    c. 50% medium and heavy duty purchases to be alternative fuel and/or Electric or Plug-in Hybrid by 2020 and 75% by 2025.
    d. Leveraging advanced drop in biofuels recognized by the CA-GREET 2.0 (CAARB) to have minimally a 30% GHG reduction compared to gasoline or diesel.
    e. By 2020, zero emission vehicles or plug-in hybrid vehicles shall account for at least 50% of all new passenger and light-duty vehicle acquisitions.
    f. By 2025, zero emission vehicles or plug-in hybrid vehicles shall account for at least 95% of all new passenger, 50% of light-duty vehicles, and 75% medium and heavy-duty vehicle acquisitions.
    g. Secure grant funding and funding strategies to accelerate fleet vehicle replacement and fueling infrastructure needed for low carbon / zero emission vehicle utilization.
    h. Continue collaboration with Clean Cities and other related organizations / agencies and entities helping to achieve UCSB's GHG reduction goals.

**2020-2022 MID-TERM IMPLEMENTATION PLAN**

1. Decrease single vehicle ridership by faculty and staff by 35% from 2015/16 baseline (via the annual mode split).
2. Further increase of TAP participation by 35% - 50% (change parking pricing structure to pay as you go)
3. Complete alternative fuel infrastructure.
4. Increase training for virtual conferencing and understanding how to virtually communicate and host virtual social events

5. Reduce air travel 5% from BAU by 2020 in order to reduce emissions by 2,126 MT $CO_2e$ annually and save the campus $298,618 annually in avoided travel costs.
6. Extend bike path along Mesa road to Facilities / parking lot 31.
7. Complete bike path linking the Fairview Plaza – Stowe Park area to campus.
8. Continue collaboration with Clean Cities and other related organizations / agencies and entities helping to achieve UCSB's GHG reduction goals.

**2023-2025 LONG-TERM IMPLEMENTATION PLAN**

1. Update Strategic Transportation Plan to address new short, mid, and 2050 goals and climate neutrality with an accelerated pathway of on campus or regional projects.
2. Decrease single occupant vehicle ridership by faculty and staff by 10% (from 2015 baseline) by 2025.
3. Fleet purchases – by 2025, have 4.5% of our commuter fleet be ZEV/LEV.
4. By 2025, zero emission vehicles or plug-in hybrid vehicles shall account for at least 95% of all new passenger, 50% of light-duty, and 75% of medium and heavy-duty vehicle acquisitions.

**2026-2050 VISIONARY GOALS**

1. Reduce our commuter and business travel emissions to 80% of 1990 levels by 2030.
2. Decrease single occupant vehicle ridership, so no more than 30% of all faculty, staff, and students commute via this mode.
3. Have 30% of our fleet be ZEV/LEV.
4. Achieve Scope 3 carbon neutrality goal.

## Waste

**UCSB ACCOMPLISHMENTS (2016/2017)**

- Received a TGIF grant for the installation of over 20 hand dryers in high use restrooms.
- Residential Operations introduced composting to select residences and are evaluating the program for further expansion.
- January 2017 marked the launch of the UC system wide Zero Waste Communications Campaign, #MyLastTrash. The goal of the #MyLastTrash campaign is to change the campus community's behavior around how they handle and reduce waste. UCSB has already planned several events around monthly themes including electronic waste, compost, waste reduction, and upcycling.

## CSC SUBCOMMITTEE ON WASTE

### 2016/2017 MEMBERS

Matthew O'Carroll (Co-Chair/ Facilities Management/ Graduate Student), Bruce Carter (Environmental Health & Safety), Amorette Getty (Material Research Laboratory & LabRATS), Sue Hawkins (UCen Dining Services), Mo Lovegreen (Co-chair/ UCSB Sustainability), Byron Sandoval (Facilities Management), Jessie Schmitt (Associated Students Recycling), Mark Rousseau (Housing & Residential Services), Heather Perry (Procurement)

### MISSION

To make UCSB a Zero Waste university by ensuring waste management programs and practices effectively promote the reuse, reduction, recycling, composting, and repurposing of materials, as well as encouraging the rebuying of recycled material.

### 2017-2019 SHORT-TERM/ CONTINUING IMPLEMENTATION PLAN

1. Continue replacing paper towel dispensers with hand dryers.
2. Work with procurement to prioritize the purchase of compostable and recyclable goods in Gateway.
3. Improve waste management/ disposal procedures and protocols for student organizations and events.
4. Expand indoor and outdoor compost programs.
5. Continue to host educational workshops regarding source reduction and waste management.
6. Encourage additional research into behavioral economics of waste management.
7. Upgrade waste infrastructure at the Events Center.
8. Host first-ever Waste Reduction/ Diversion Challenge in residence halls.
9. Continue to improve waste diversion efforts.
10. Continue to map outdoor waste receptacles and eliminate unnecessary landfill receptacles where applicable, as well as look into locations where service may be difficult for staff members in an effort to reduce risk of injury.
11. Expand use of reusable hand towels and/or paper towel composting in residence halls.
12. Develop additional outreach programs including social media announcements and smartphone apps that provide information on proper waste management efforts, including composting at home, recycling efforts, and procurement tracking.
13. Continue to update campus waste infrastructure.
14. Improve education and outreach regarding UC 2020 Zero Waste Goal.

### 2020-2022 MID-TERM IMPLEMENTATION PLAN

1. Meet the UC System wide Zero Waste Goal by 2020. UC defines Zero Waste as meeting or exceed 90% diversion of municipal solid waste.
2. Reduce packaging material by 25%

3. Improve reuse/surplus programs through Central Stores.
4. Improve donation efforts for used goods.
5. Establish on-site composting facility.
6. Create a list of suggested purchasing recommendations for labs.

**2023-2025 LONG-TERM IMPLEMENTATION PLAN**

1. Eliminate single-use packaging.
2. Replace existing outdoor receptacles with up-to-date bins.
3. Standardize signage and receptacles for all new and existing buildings throughout campuses and the various entities.
4. Introduce compacting roll-offs for aggregating waste (composting, recycling).
5. Explore options to dispose of organic waste at the local sanitary district.

**2026-2050 VISIONARY GOALS**

1. Establishment of a trend of continual waste reduction per capita.
2. Aggregate/ manage materials on-site.

## Water

**UCSB ACCOMPLISHMENTS (2016/2017)**

- Water consumption for the 2016/17 academic year dropped 17% below UCSB's three-year baseline (FY2005/06, FY2007/08).
- When finished in 2017, two new 6-story Tenaya Towers at San Joaquin Apartments will be dual-plumbed with a recycled water system. This is estimated to save over 600,000 gallons of potable water per year.
- San Joaquin and Pauley Track and have been approved as new locations for recycled water use.
- Our Campus is now utilizing EnergyCAP for tracking water use tracking and reporting.

**CSC SUBCOMMITTEE ON WATER**

**2016/2017 MEMBERS**

Mo Lovegreen (Co-Chair), Matthew O'Carroll (Co-Chair), Jodi Switzer, Amorette Getty, Mark Irwin, Rachel Wright, Mark Rousseau, Jordan Sager, Jewel Snavely

**MISSION**

To assist in protecting and conserving water resources, with an emphasis on reducing potable consumption through conservation, efficiency practices, and behavior change.

**2017-2019 SHORT-TERM IMPLEMENTATION PLAN**

1. Reduce potable water consumption 12% by March 1, 2016, compared to 2013 baseline.
2. Introduce pool covers at H&RS pools.
3. Continue restroom retrofits with efficient fixtures.

4. Establish a departmental incentive program for water conservation.
5. Recycled water extension for landscaping areas.
6. Establish a fixture audit internship or class project.
7. Commit to conserving water and continuing with conservation practices in wet and dry years.
8. Continue building town and gown relationship through constructive engagement and workshops.
9. Look into waterless car wash technology.
10. Pilot the use of recycled water in cooling tower infrastructure.
11. Retrofit existing meters and install real-time metering systems.
12. Update Water Action Plan.
13. Continue the expansion of the recycled water infrastructure.

**2020-2022 MID-TERM IMPLEMENTATION PLAN**

1. Recycled water extensions into buildings.
2. Landscape conversion to mulch - Identifying turf areas that are underutilized and do not serve a functional purpose. Many lawns are identified by having a large perimeter but small surface area.
3. Install gray water laundry-to-landscape systems in residence halls.
4. Reuse Process Waste - Capturing condensate from air handling units and utilizing that water for non-potable water needs, such as make-up water for cooling towers or irrigation.

**2023-2025 LONG-TERM IMPLEMENTATION PLAN**

1. Removal of Old Gym pool.
2. Indirect and direct potable water reuse partnership with Goleta Water District.
3. Addition of Nano filtration system at Goleta Sanitary District for higher quality recycled water.

**2026-2050 VISIONARY GOALS**

1. On-site filtration system for blackwater (contains the pathogens of faeces and the nutrients of urine that are diluted in the flushwater) to allow for immediate building reuse.

## Labs, Shops, & Studio

**ACCOMPLISHMENTS**

- Assisted UC in the development of a statewide checklist for New and Renovated Laboratory Spaces. Guidelines were developed in conjunction with several other campuses and organizations. Recommendations were incorporated into the new UC Laboratory Safety Design Manual (LDSM). The LDSM is still in the vetting process led by UCOP.
- 14.2% of Principal Investigators have had their laboratory assessed and 17.4% of laboratories have been assessed through the LabSYNC program. The LabRATS program provides the LabSYNC Certification process to help campus labs assess

and document their sustainable laboratory practices and achieve recognition for the steps they've taken to be environmentally conscious while conducting their critical research.

- Collaborated with statewide Green Building Operations Working Group on Green Labs, Office, and Events to incorporate green lab language into UC Policy on sustainable practices.
- LabRATS developed a set of recommended edits to integrate sustainability into lab safety training, these are currently being reviewed by EHS.
- 3 old ultra-low temperature freezers were replaced with energy efficient freezers. Two more new freezers will be purchased that are energy efficient in Summer/Fall 2017. These two freezers will be used to evaluate the impact of reducing freezer temp to -70 instead of -80. Both projects were funded through TGIF.
- LabRATS developed a purchasing guide for fly incubators based on the best practices learned from the LabRATS TGIF Grant on incubators.

**2016/2017 MEMBERS**

Adam Law, Daniel Charrette, Amorette Getty, Andrew Chen, Katie Maynard

**MISSION**

To reduce the environmental impact of laboratories, medical facilities, shops, and art studios while also improving safety, management practices, communication, and resource sharing.

**2017-2019 SHORT-TERM IMPLEMENTATION PLAN**

1. Continue to track best practices in student health centers and clinics and support Student Health in continuing to seek new measures to improve sustainability in their operations.
2. Launch of the laboratory composting pilot. This was designed last academic year and will launch this year.
3. Develop a streamlined program for donating old lab equipment to low-income K-12 schools.
4. Enable 20% of laboratory groups at UCSB to have a LabSYNC assessment
5. Identify single pass cooling systems associated with autoclaves and develop a plan for replacement. 6 consolidated autoclaves in Bio II, Noble, and ESB were modified by EEMB staff to reduce water use.

**2020-2022 MID-TERM IMPLEMENTATION PLAN**

1. Continue to research alternative disposal methods for laboratory specific waste streams.
2. Expand recycling infrastructure in laboratory buildings.
3. Get a program in place for cost-sharing of energy-efficient replacement equipment.
4. Enable 30% of laboratory groups at UCSB to have a LabSYNC assessment.

**2023-2025 LONG-TERM IMPLEMENTATION PLAN**

1. Enable 50% of laboratory groups at UCSB to have a LabSYNC assessment.
2. Procurement standards are in place for major instrument types, such as cold storage, autoclaves, etc.

**2026-2050 VISIONARY GOALS**

1. Develop broad standards for procurement of environmentally preferable laboratory supplies and equipment at the campus and/or UC level. These standards should address energy and water efficiency, toxic reduction, waste management, durability, and fair labor practices to the extent possible.
2. Divert the majority of laboratory consumables from landfill at end of life.

## The Green Initiative Fund

The Green Initiative Fund (TGIF) Grant Making Committee is pleased to announce the selected projects for the 2016/17 funding cycle! The Committee awarded funds to 24 projects, totaling **$184,114**. Below is a summary of the projects that you can expect to see completed within the next academic year.

**UCSB Energy Dashboard ($5,011)**
Funding will be used to design a public Energy Dashboard hosted on http://energy.ucsb.edu. This dashboard will provide the UCSB community with real-time energy consumption information and will enable building energy use comparisons throughout campus.

**Campbell Hall Lighting Retrofit ($18,160)**
TGIF Funding will be used to retrofit Campbell Hall, the most widely used lecture hall at UCSB, with energy efficient, dimmable LED lights. The retrofit will include replacing 96, 100 watt incandescent well lights with 96, 31 watt LED, dimmable lights.

**Optimizing solar energy at UCSB's Valentine Eastern Sierra Reserve ($12,720)**
Funding will be used to purchase and install one active indirect solar hot water system for the dorms at the Sierra Nevada Aquatic Research Laboratory (SNARL), part of the Valentine Eastern Sierra Reserve located in Mammoth Lakes, CA.

**Scholarships for the California Higher Education Sustainability Conference ($9,212)**
This grant will provide financial support for 50 UCSB students and 15 faculty or staff to attend the California Higher Education Sustainability Conference (CHESC), June 24th to June 30th, here at our UC Santa Barbara campus. CHESC is an important gathering of key stakeholders from across the state of California who are working on UC System - wide and state-wide policies.

**Food Recovery Pilot Project ($8,003)**
The TGIF grant will be used to fund a Food Recovery Pilot Program on campus. The group's plan is to team up with a local nonprofit to conduct food pickups from the

University Center's retail operations and deliver it to their distribution partner SB Rescue Mission (a homeless shelter in downtown Santa Barbara). Funding will be used for one year to implement the pilot, including the hiring of a student intern, purchasing supplies, and reimbursing volunteer gas mileage.

**Case Study of -70°C ultra-low temperature freezers ($15,223)**
This project will fund the purchase of two highly Energy efficient ultra-low temperature (ULT) freezers that will then be run for at least one year at -70°C instead of -80°C in order to quantitatively test the quality of sample storage over that time. Turning up ULT freezers by just 10°C can decrease energy consumption by over 40% in some cases, and has been done successfully at several universities, but the evidence regarding sample safety over time is largely anecdotal. Two faculty on campus have agreed to use their existing -80°C freezers as controls and create duplicate samples for comparison in a -70°C freezer over a one year period. Following this, the old freezers will be decommissioned and a report of their results will be produced in a publication style that can be shared with UCSB Environmental Health & Safety, University of California Office of the President, and the national green labs working group.

**Greening of the UCSB's Children's Center ($14.252)**
The Greening of the UCSB's Children's Center has been awarded $6,000 for the purchase and installation of two hydration stations (to reduce single use plastic bottles) at the Children's Center, $1,500 for Curriculum materials, and $6,742 to hire a Green Curriculum Coordinator. The Green Curriculum Coordinator will be hired on a part-time basis, and will promote environmental literacy by integrating education for sustainable development to the children, staff, and families.

**Increasing Greenhouse Gas (GHG) emission reduction of the North Campus Open Space (NCOS) Wetland Restoration Project through the Application of Biochar soil amendment ($18,085)**
The NCOS Wetland Restoration Project recaptures coastal wetlands previously developed into residential and industrial areas. Reestablishing the wetland will help mitigate flooding issues and simultaneously increase the land's ability to act as a carbon sink for atmospheric greenhouse gases. TGIF funding will be used to purchase a carbon sequestering soil amendment, called biochar, thereby increasing the project's total GHG emission reduction. Biochar is a charcoal-like substance typically associated with biomass energy production.

**Increasing Diversity in Greenhouse Garden Project ($5,715)**
Funding will be used to hire a student outreach coordinator for the Greenhouse and Garden Project. The student outreach coordinator will design and manage an outreach program that encourages low income students to participate in the Greenhouse Garden Project. The coordinator will also manage a 'garden knowledge' program where students cultivate a plot at the Greenhouse and Garden Project.

**Urban Agriculture Education Series ($5,185)**
Funding will be used for an urban agriculture educational series run by the edible campus program. The series will highlight the innovative ways that our community and others are addressing issues through creative efforts to grow food in urban and suburban spaces.

**Replacing Paper Towels with Electric Hand Dryers in High Use Restrooms ($20,170)**
TGIF funding will be used to purchase 20 electric hand dryers to convert the highest use restrooms in Girvetz, Physical Sciences Building North, North Hall, and Harold Frank Hall. Electric Hand-Dryers provide a quick, sanitary, and waste-free alternative to paper towels. In addition, an electric dryer uses less water, and exudes less carbon dioxide in its lifetime than does the process of creating and disposing of paper towels.

**Replacing Paper Towels with Electric Hand Dryers in Bren Hall ($6,193)**
Funding will be used by the Bren School Sustainability Committee (BSSC) to purchase and install 4 hand dryers in the bathrooms on 2L and 4L in Bren Hall. T

**Replacing Paper Towels with Electric Hand Dryers in the Library ($5,000)**
Funding will be used to install 4 hand dryers on the first floor of the Library.

**HSSB Courtyard BigBelly ($7,410)**
Funding will be used to purchase a set of BigBelly solar powered recycling, compost and landfill bins for the outdoor courtyard by the Humanities and Social Science Building (HSSB). HSSB is a hub of activity on campus and houses events, meetings, and study space for UCSB students. Currently, the only outdoor waste receptacles are two “Bertha” four bin cluster units that contain only recycling and landfill bins serviced by A.S. Recycling. The BigBelly solar powered bins have a much larger capacity than the Bertha bins, and these bins would have a compost bin, which the Bertha bins do not have.

**Max R Trash Can ($2,603)**
Partial funding was granted for the purchase one set of Max-R waste receptacles for Bren Hall. Max-R waste receptacles offer a more efficient alternative to UC Santa Barbara's current waste management system.

**Sticker wrap waste signage for UCEN Compost, Recycling, and Trash Receptacles ($3,255)**
The UCen is about to convert its trash disposal process from a 2 bin system with commingled landfill and recycling, to a 3 bin system. Currently the risk of people putting the wrong items into containers is high because the signage is not as visible as it could be. TGIF funding will be used to purchase sticker wraps for all of the cans to make it more apparent to people using them what goes where and thereby reduce contamination and increase sustainability.

**Theory of Change research for Energy Sustainability at UCSB ($1,906)**
This project will research and develop a Theory of Change (TOC) for engaging students in the effort to achieve energy sustainability at UCSB. TGIF funding will also be used to hire a student intern to develop behavior modification strategies to enhance energy sustainability.

**Nerd Night ($2,500)**
Nerd Night is an event where faculty from UCSB give informal and engaging talks about their research in a laidback environment. In the past, locations like Giovanni's Pizza in Isla Vista have been used. Nerd Night raises student awareness of faculty who contribute towards sustainable research and strives to build meaningful relationships between faculty, students, and the local community. Funding will be used to cover the cost of these events, including the sound system.

**Replacing Dissection lamps for EEMB lab courses ($2,550)**
Three laboratory courses (EEMB 111, 112, and 116) share equipment including dissection microscopes, dissection lamps, and compound microscopes. The dissection lamps are incandescent, which are inefficient, dim, and outdated. The funds from TGIF will be used to purchase energy efficient LED dissection lamps to replace all of the old incandescent lamps.

**Nepantla Techna Calpulli Student Project ($3,700)**
The Nepantla Techne Calpulli Student Project attempts to design and optimize an open source bike-mounted phone charger. Funding would be used to buy parts and supplies for the design and production of the phone charger.

**UCSB Student Health Patient Transportation Program ($5,000)**
TGIF funding will be used to purchase an electric golf cart devoted to student transportation.
The UCSB Student Health Patient Transportation program is intended to transport sick and/or injured students seen at Student Health to their homes in Isla Vista or anywhere on UCSB campus. The golf cart will also reduce fossil fuel emissions since it is electric, not gas-powered.

**Refrigeration for A.S. Food Bank ($6,000)**
The A.S. Food Bank will use the funding to purchase and install two refrigerators within our lounge area located on the third floor of the UCen. The Goal of the Food Bank is to decrease local food insecurity by bringing healthier and more sustainable food options that are accessible for undergraduates and graduate students. Refrigeration will allow the Edible Campus Program to supply campus grown produce to the Food Bank.

**GIVE Project ($3,071)**
Funding will be used to purchase supplies for the annual GIVE Sale. GIVE responds to the problems of overflowing dumpsters, accumulated trash, arson, and discarded useful and recyclable goods by asking students to donate their reusable and useful goods The

GIVE project mitigates the impacts on the university and Isla Vista community each June as thousands of students move out of their residence halls and apartments. The donations are sold and the proceeds benefit organizations and projects that improve the quality of life in Isla Vista.

**Intercollegiate Athletics Building Hydration Stations ($3,200)**
TGIF awarded matching funding for the installation of 2 Hydration Stations in the Intercollegiate Athletics Building (ICA), which is home to roughly 500 student athletes, 80 coaches/staff, 20-30 student interns and numerous donors, fans, and community members coming through our building daily.

For a complete list of projects funded through TGIF, Visit
http://www.sustainability.ucsb.edu/tgif/

## Staff Recognition Award

This was our third year implementing the staff sustainability recognition award. It was conferred on John Lazarus, a long-standing a champion of food recovery efforts and food security. John is the Assistant Director of Dining Services, managing of the University Center kitchen and catering department. The University Center has always worked toward more sustainable purchasing and catering practices, including the current shift to compostable ware. Moreover, John has been instrumental in the UC Global Food Imitative and the food security efforts on campus including the launch of the Food, Nutrition, and Basic Skills program.