



UNIVERSITY OF CALIFORNIA,
SANTA BARBARA

CAMPUS SUSTAINABILITY PLAN 2015/2016





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OVERVIEW

The UCSB Office of Sustainability is the network for ensuring that the sustainable practices and concepts are designed, integrated, and maintained throughout the many aspects of daily academic life. In order to update this plan, UCSB Sustainability hosted a series of forums to help **generate ideas that will result in new community-driven actions and coalition efforts**. We would especially like to thank Associated Students Food Bank who co-hosted the food forums. On the climate forum, Associated Students BIKE Committee and the PowerSave Campus Program were also critical

partners. Functional area leads, with representation of staff, faculty, and students from departments and organizations across campus drafted sections of the plan, establishing the time-frame, action items, and goals for long-term comprehensive sustainability through a series of action items designed to meet specified targets in 11 functional areas of campus. The mission for each of these groups is listed below:



The main elements of the Campus Sustainability Plan (CSP) are the goals created by each of these functional working groups. It emphasizes goals that can achieve positive change or initial steps that will allow transition into future goals. The process is iterative and will progress over time to transform the campus and advance us closer to achieving a sustainable setting.

ACADEMICS

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.

COMMUNICATIONS

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

ENERGY

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 ourselves and our families. All members of the campus community will have a direct connection to their food system and we will work towards 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.

LABS, SHOPS, & STUDIOS

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

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 university by ensuring that 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.

OVERVIEW

INTRODUCTION

In 2005, Chancellor Henry Yang charged the Campus Planning Committee (CPC) to develop a comprehensive campus sustainability plan. The CPC appointed a sub-committee, chaired by the Associate Vice Chancellor of Administrative Services, and the campus had more than 80 participants attend the initial workshop. Teams were formed after the workshop, and they helped craft the first plan. In 2013, the Campus Sustainability Plan was updated and approved by campus. The 2015/2016 update includes new timelines, that align with the new presidential initiatives and integrates the three pillars of sustainability: social justice, economics, and the environment.

ORGANIZATION OF THE PLAN

The Campus Sustainability Plan is a dynamic document intended to provide a roadmap for major steps toward achieving sustainability. The timelines are consistent with the University of California Office of the President (UCOP) sustainability practices, the three Presidential initiatives, and targets for reductions within the State of California:

Short-term

July 2015 – June 2017

Long-term

July 2021 – June 2025

Mid-term

July 2018 – June 2020

Visionary

2025 and beyond



UCSB SUSTAINABILITY MISSION STATEMENT

The University of California, Santa Barbara is committed to global leadership for sustainability through **education, research, and action**. The concept of **“sustainability”** can be used in many ways, but in the Campus Sustainability Plan (CSP) it is defined as: **“Meeting the needs of the present generation, without compromising the ability of future generations to meet their own needs.”**



OVERVIEW

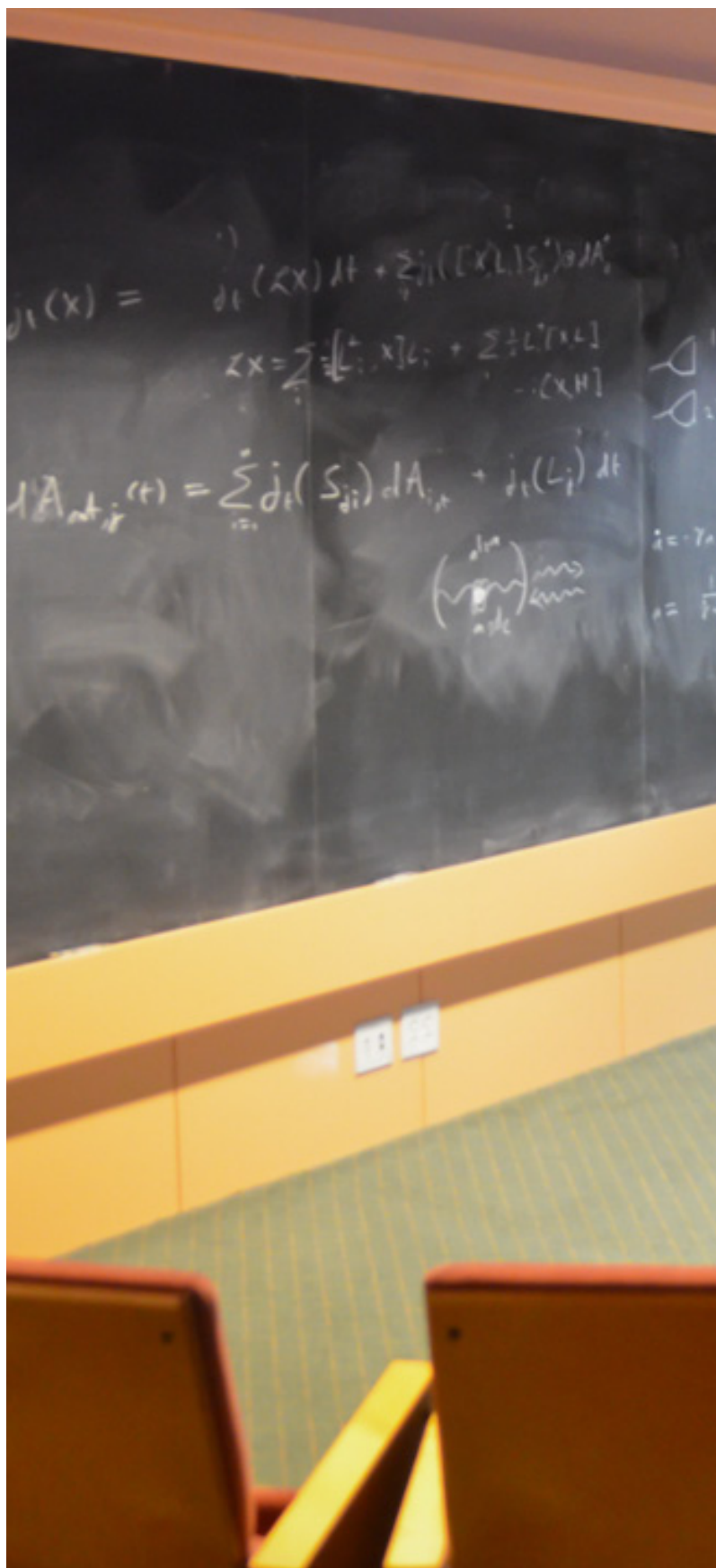
THE VISION

At the University of California, Santa Barbara, we envision a future where our activities are socially, economically, and environmentally sustainable, and everyone is engaged in efforts to realize this vision. We envision that all members of our campus community will have access to healthy foods and lifestyles and will be able to meet their needs today and in the future with minimal impact on the needs of others. We are committed to fostering a culture of sustainability through campus-wide sustainability efforts, program development, and promoting the sustainability work of staff, faculty, and students – our greatest renewable resource.

More specifically, we aim to research, create, and implement solutions for a more sustainable future. UCSB strives to capitalize on its position as an institution of higher education to ensure that all students, faculty, and staff understand the interconnectedness of environmental, economic, and social systems and to communicate that we each have a role to play in sustainability. We want all students graduating from UCSB to be motivated to integrate sustainable practices into their future professions, embedding sustainability throughout the workforce.

In addition, UC Santa Barbara continues to seek to do business with companies that are integrating sustainability into their strategic planning and operations, as well as empowering their workers in meeting their own needs. We believe that building sustainable partnerships will result in a stronger and more sustainable local economy.

In order to achieve this vision, UC Santa Barbara continues to prioritize and monitor the implementation and progress of its sustainability initiatives. We encourage and coordinate the efforts of our faculty, staff, and students who are the front line of positive change to take action today for a better tomorrow. By working with all sectors of the campus community, we look forward to helping UCSB maintain its leadership role and attain its shared vision of a sustainable future.





GOALS

Throughout this document, you will find goals regarding specific topic areas such as energy, water, and food systems amongst many other topic areas. In this section, we wish to list a few overarching goals that touch on all of these areas.

SHORT-TERM GOALS (2015-2017)

- Secure a stable operations budget for the UCSB Sustainability Program that is sufficient to ensure we can implement current UC wide and campus policies and goals for campus sustainability.
- Revise the Climate Action Plan to bring it up to date with the goal of carbon neutrality by 2025 in scope 1 and 2 emissions.

MID-TERM GOALS (2018-2020)

- Secure funding for a full-time Director of Sustainability.
- Secure funding for a full-time Sustainability Internship Manager.
- Achieve a Platinum rating in AASHE's STARS Program.
- Develop a consistent donor base to support new pilot programs.

LONG-TERM GOALS (2021-2025)

- Secure funding for a Sustainable Procurement Coordinator.
- 50% of departments are represented in the UCSB Sustainability Program through membership on one of our committees.

VISIONARY GOALS (2050+)

- 75% of departments are represented in the UCSB Sustainability Program through membership on one of our committees.

OVERVIEW

HISTORY

UC Santa Barbara has been a center for environmental movements since the 1969 oil spill in the Santa Barbara Channel. In 1970, a group of faculty calling themselves "The Friends of the Human Habitat" developed an environmental education curriculum, which became the genesis for the Environmental Studies Program at UC Santa Barbara. The Program was one of the first undergraduate Environmental Studies Programs in the United States. Today, UC Santa Barbara's Environmental Studies Program is the largest program of its type in the country, with over 800 undergraduates, more than 20 faculty and lecturers, and over 4,000 alumni.

UC Santa Barbara signed the Talloires Declaration to make a public commitment to promote sustainability. The Declaration is a ten-point action plan for incorporating sustainability and environmental literacy in teaching, research, operations, and outreach at colleges and universities. Drafted in 1990 at an international conference in Talloires, France, the Talloires Declaration has been signed by more than 300 university presidents and chancellors in over 40 countries. In 1996, the Donald Bren School of Environmental Science & Management began an interdisciplinary graduate program and professional school, offering both a Masters and a PhD in Environmental Science and Management.

Our students have also been at the forefront of the sustainability movement here at UCSB. The Associated Students Environmental Affairs Board (AS EAB) was founded in 1992. In 1994, AS EAB formed the Associated Students Recycling Program through a student lock-in fee and in 1996 helped prevent the construction of an oil platform near Devereux Slough. These were the start of many accomplishments to come in subsequent years. In 1998, AS BIKE Committee was formed (originally called the Bicycle Coalition at UCSB). The next year (1999), students created an entirely student-funded, sustainability-oriented granting organization, the Coastal Fund (at that time called the Shoreline Preservation Fund). This was supported by student lock-in fees. In later years, students created two more similar funds, The Green Initiative Fund and

the Renewable Energy Initiative to further expand funding for sustainability projects. Today, there are over 40 student organizations working on sustainability in the Office of Student Life and Associated Students.

In 2002, the Bren School completed its 85,000 sq. ft. building; the first laboratory building in the U.S. to receive a Platinum Leadership in Energy and Environmental Design (LEED) certification awarded for new construction (NC) by the United States Green Building Council (USGBC). As the direct result of a student-run campaign named "UC Go Solar" led locally in part by the Associated Students Environmental Affairs Board (AS EAB) as well as other student leaders, UC Santa Barbara adopted a green building practice of its own, requiring that Campus buildings programmed after July 1, 2004 undergo external certification by the USGBC and achieve a minimum of a LEED Silver rating. The LEED minimum rating on campus for new buildings was raised from Silver to Gold for buildings approved after July 1, 2012. The students who led the UC Go Solar campaign, founded the California Student Sustainability Coalition (CSSC) immediately after this successful campaign to continue the work of encouraging UC to be a sustainability leader. AS EAB continues to act as our local representative to the CSSC.





Soon after Bren Hall received a LEED-NC certification, the Central Campus Sustainability Committee was formed, along with the Sustainability Working Team. These groups incorporated senior administrators, faculty, staff, and students to research a campus-wide approach to LEED certification.

In 2004, the campus completed its first Campus Sustainability plan (it was approved in 2005). The campus was also an early adopter of climate reporting and has participated in third-party verification since 2004 in an effort to reduce our climate impact. UCSB also participated in the pilot version of the Sustainability Tracking, Assessment & Rating System (STARS), a transparent, self-reporting framework for colleges and universities to measure their sustainability performance. In addition to the Campus Sustainability Plan, there are three complimentary plans to support this work, the Climate Action Plan (CAP), the waste management plan, and the Water Action Plan (WAP). All three of these plans serve as support documents for the Long Range Development Plan (LRDP).

The Long Range Development Plan is a planning tool that will shape how the campus will develop to the year 2025, including changes in our academic programs and the development of additional campus

housing for students, faculty, and staff. The plan is based on a one percent annual enrollment increase to the year 2025. We recognize that our plans to accommodate increasing student demand have impacts on our neighboring communities. The LRDP process and the Campus Sustainability Plan process are designed to address community issues and concerns and environmental impacts, while allowing for manageable growth in the student population. The Campus Sustainability Plan looks further into the future and offers real solutions to potential future issues, while taking responsibility for managing new demand for housing and other services.

In 2015, UCSB was recognized as the Greenest Public University in Princeton Review's list of the top 50 Green Colleges. UCSB now has over 2 million square feet of LEED certified building space and the largest student funded solar photovoltaic project in the U.S. The UCSB sustainability community is now in full force, working towards achieving the goals laid out by the UC presidential initiatives on food and climate neutrality. UCSB is chairing or co-chairing 5 of the system-wide groups on food, in accordance with the President's Food Initiative. We are also participating in three additional committees and have formed a subcommittee of the Chancellor's Sustainability Committee solely focused on coordination efforts for the Presidential initiatives.

ACADEMICS

To ensure that all graduates of UCSB are literate in the social, economic, and environmental aspects of sustainability and that sustainability research is supported. In addition, that 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.



BACKGROUND

UCSB is highly respected for its scholarly pursuits relating to the environment and sustainability. Close to half of UCSB's academic departments offer courses on and/or host faculty who conduct research on sustainability. Further, many of its research institutes and teams focus on technological and social solutions related to the stewardship and protection of our planet and its resources. A list of these can be found on the UCSB Sustainability website. Many of UCSB's accomplishments reflect the actions of a variety of campus entities. The

Academic Senate Sustainability Work Group works to coordinate and publicize these achievements and develop goals for the short and long term.

Environmental

We believe that it is critical for all students graduating from UCSB to understand their reliance on Earth's finite resources and to recognize the connections between environmental concerns and how their own fields of study are interconnected with environmental concerns.



Social

It is impossible to effectively address environmental issues without taking an interdisciplinary approach that incorporates social concerns. For its 2025 Strategic Academic Plan, UCSB selected key areas of interdisciplinary teaching and research, three of which are critical to sustainability: the Environment, the Academy and Society, and Global Studies. Of these, the latter two in particular support development of curricula and research efforts that reinforce recognition of sustainability concepts as embedded within the context of a larger society.

Economic

We offer several programs to financially support undergraduate and graduate students to do research related to sustainability, especially in fields where sustainability is rarely addressed or where grant funding is limited or not often available to support this work. We hope to increase accessibility of research and internship opportunities through offering fair wages, partnerships with the work-study program, and openly advertising opportunities to support students in research and internships.



ACCOMPLISHMENTS

- Launched the Ph.D. Emphasis in the Environment and Society and in the first year (2014/2015) enrolled 9 students from 6 different departments.
- Launched the UCSB portion of UC Carbon Neutrality Initiative and UC Global Food Initiative Internship programs.
- Inspired UC Office of the President to fund a faculty champion program at the statewide level that is based on UCSB's Faculty Sustainability Champion program.
- Launched a sustainability literacy assessment for undergraduate students.
- Launched a summer graduate research program which supported students in Sociology and Political Science in this past year.
- Launched the Chancellor's Undergraduate Research Internship Program which supported undergraduate students to do research related to sustainability.

2015-2017 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 being launched this year.
4. Launch a speakers' bureau for UCSB faculty doing research on sustainability.
5. Institutionalize a sustainability and climate literacy assessment program which can evaluate how much students know about the concept of sustainability and the basic science of climate change.
6. Pilot a workshop series on infusing sustainability into curriculum through the UC Carbon Neutrality Initiative as an expansion of the New Leaf program.

7. Create a program such as Gaucho FYI or an online training for incoming freshman so all students possess basic skills regarding sustainable living and sustainability resources.

8. Launch a student achievement award in sustainability which has the potential to recognize the work of student activists, researchers, and interns.

9. Establish the campus garden as a teaching and mentoring resource illustrating “where food comes from” and the techniques necessary to grow food locally.

2018-2020 MID-TERM IMPLEMENTATION PLAN

1. Identify courses on sustainability and climate change in the course catalog and the GOLD system.

2. Expand faculty research that directly addresses regional concerns related to sustainability.

3. Launch a sustainable commons video project, which will collect and disseminate videos 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.

2021-2025 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.

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

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.



BACKGROUND

To ensure compliance with green building design and construction guidelines and policies, the University of California, Santa Barbara has adopted its own campus-wide policy. In 2002, UCSB adopted a campus policy stating that all new buildings commissioned after July 1, 2004, must meet a minimum of USGBC's LEED Silver certification. In 2010, the Chancellor's Sustainability Committee established a new requirement that all buildings commissioned after July 1, 2010, must meet a

minimum of LEED Gold. The CSC Sub-Committee on Built Environment oversees these practices and helps guide strategies for additional improvements in this area.

Social

We have integrated a number of elements into our standard design features that help us address social equity; they include:



- Locating a building near transit not only lowers the carbon footprint of students, staff, and faculty, but also makes it accessible to lower-income workers.

- Many green materials have a social component; several certifications and labels require some attention to and consideration of social justice.

We also have some additional new projects in the Long Range Development Plan (LRDP) that will allow us to move more staff members to campus – allowing people to live near where they work.

Economic

Using the US Green Building Council's Leadership in Energy and Environmental Design criteria allows us to integrate the economics focused on improving the built environment through the use of proven and innovative energy-efficient and renewable energy technologies. Over time, we have been able to improve the quality of buildings being delivered to the campus and reduce the operational costs for running these buildings over their lifespan.

ACCOMPLISHMENTS

Raised Sustainable Infrastructure Practice – Green Building Design for all new construction from LEED Silver to LEED Gold for buildings approved after July 1, 2012.

Certified over 2 million square feet of building space under the LEED rating system.

Implemented practices to include LabRATS representation on all building committees for laboratory buildings or buildings that include laboratory space.

Completed the first LEED for Homes project in the UC System: North Campus Faculty Housing Phase II.

Planned, organized, and successfully executed UCSB's first LEED Lab, a year-long multidisciplinary immersion course in which students facilitate the LEED Existing Buildings process on a campus building (Student Resource Building) with the goal of LEED certification.

Completed a LEED-EBOM Gold certification for the Recreation Center (its 2nd LEED-EB certification), for a total of 12 LEED-EB buildings on campus, more than any college or university in the nation (UCSB now has 83 LEED certifications in place) (EB = Existing building. NC = New construction.)

Buildings LEED certified:

Santa Rosa Residence Hall (LEED CI Gold, 2013)

Ocean Science Education Building (LEED NC Gold, 2013)

Anacapa Residence Hall (LEED CI Gold, 2014)

Recreation Center (LEED EB Gold, 2013)

North Campus Faculty Housing Phase II (37 homes LEED Homes Gold, 2014)

Sierra Madre Villages housing project received LEED Platinum. This consists of a total of 151 apartments, 36 for Faculty and Staff, and 115 apartments for student residents.



Buildings completed:

North Campus Recreation Building (tracking LEED NC Silver, 2014)

Santa Cruz Residence Hall (tracking LEED CI Gold, 2015)

SNARL Classroom (tracking LEED Gold, 2015)

Student Resource Building (tracking LEED EBOM Gold, 2015)

Planned LEED Buildings (all LEED NC unless specified):

Davidson Library
 Faculty Club
 Institute for Energy Efficiency (Henley Hall)
 Bioengineering

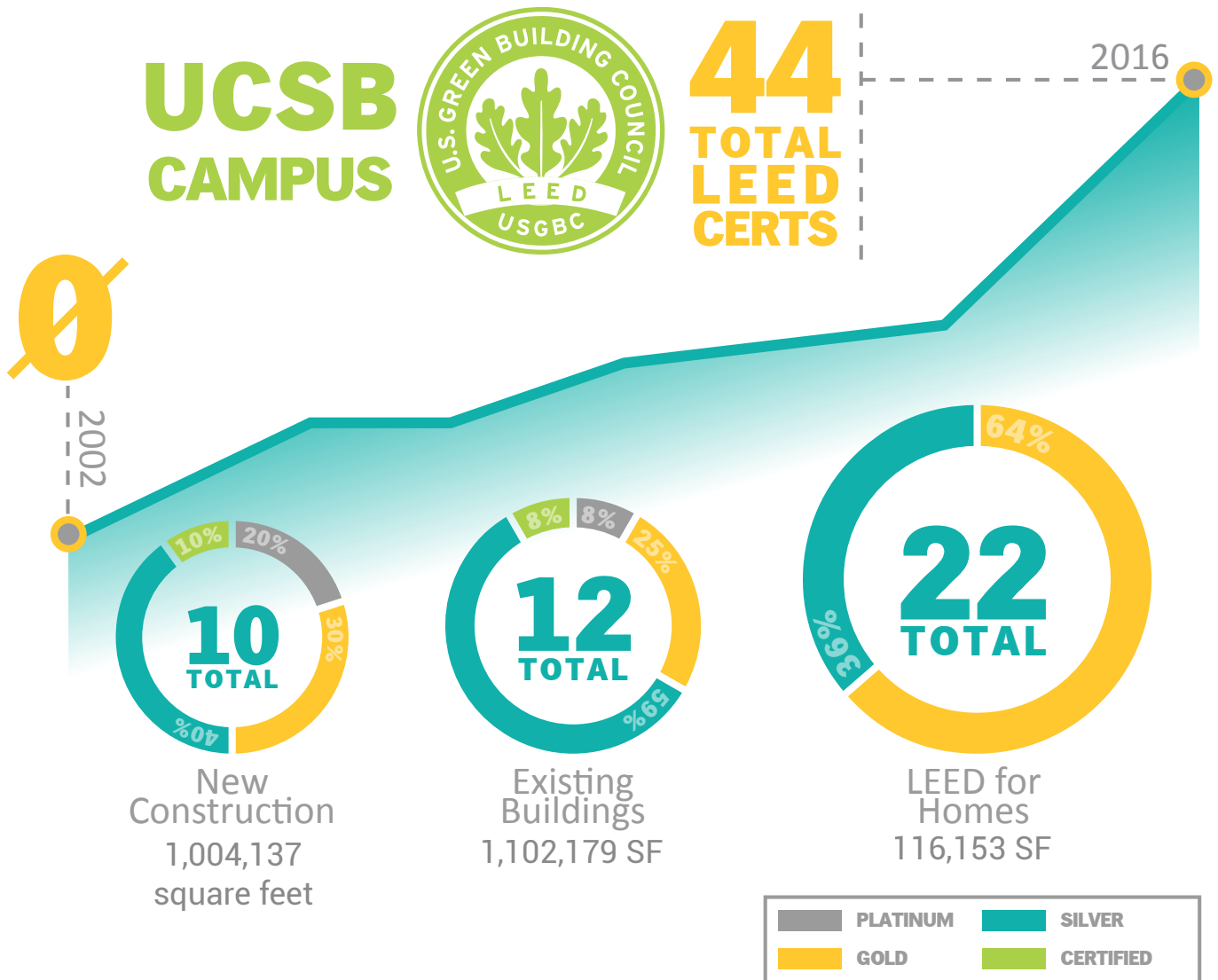
Portola Dining Commons
 North Campus Faculty Housing Phase III (Homes)
 Sierra Madre Apartments (Homes)
 San Joaquin Apartments (Homes)

SHORT-TERM GOALS (FOR 2014/15)

1. Add renovation policies to the Campus Green Building Practice.
2. Place a qualified sustainability representative on each campus committee participating in building design/construction, including the Chancellor's Campus Sustainability Committee and Departmental building committees.

MID-TERM GOALS (2015 – 2020)

1. Complete the certification of 25 campus buildings





under LEED for Existing Buildings.

2. Expand Smart Lab Ventilation Pilot to include multiple buildings, including new lab construction projects such as Henley Hall and Bioengineering.

LONG-TERM GOALS (2020 – 2025)

1. Design, construct, and operate buildings, using a closed-loop process and calling for no waste in the construction process and building operation. At this point, the main barrier to achieving these goals is limited knowledge relating to such things as life-cycle data and technology. Biomimicry is the impetus for this goal.

2. Striving for zero waste, zero pollution, and zero net habitat impact.

LAB VENTILATION SUB-COMMITTEE MEMBERS:

BACKGROUND

Approximately one half of UCSB's daily energy demand supports the operation and ventilation of campus research laboratories. The Lab Ventilation Committee is a multi-stakeholder effort on campus which works to coordinate all issues surrounding lab ventilation in order to further the development of a Laboratory Ventilation Management Plan that is well-integrated into the campus fabric and sensitive to research, maintenance, health, and safety concerns. The Committee is currently focusing on pilot programs in two buildings, the Bren Building and Physical Sciences North, to demonstrate and approve a range of ventilation-reduction measures which can then be applied to the full complement of laboratory buildings on campus. These measures include recertifying the face velocity of fume hoods and subsequently rebalancing the building; the use of chemical sensing and chemical hygiene assessments to decrease ventilation requirements in specific labs; and scheduling night-and-weekend set-backs of ventilation in laboratories which will be unoccupied overnight, with careful occupant collaboration.

ACCOMPLISHMENTS

• Developed an active multi-stakeholder Laboratory

Ventilation Working Group with representation from Administration, Facilities, Environmental Health and Safety, Fire Marshal, and Sustainability Offices to seek consensus on optimizing lab ventilation in buildings on the UCSB campus.

• Sent an 8-member team to attend UC Irvine's Smart Labs course, which outlines cutting edge solutions on their campus. Developed support relationship with UCOP's Environmental Health and Safety Center of Excellence for Smart Labs, and with David Kang, Industrial Hygienist, at UCI.

• Achieved student funding through TGIF to support coordination for the multi-stakeholder Lab Ventilation project.

• Identified the range of Lab Ventilation Optimization measures which have been implemented previously in campus buildings or are included in our two-building pilot program.

• Initiated Lab Ventilation Optimization pilot programs in Bren and PSBN Buildings.

SHORT-TERM GOALS (FOR 2015-17)

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

MID-TERM GOALS (2017 – 2020)

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

2. Expand personnel resources at EH&S and Facilities to support the safe, efficient operation of smart labs on campus.

LONG-TERM GOALS (2020 - 2025)

1. Establish a fully-integrated campus-wide Lab Ventilation Management program/policy.

2. Obtain, in collaboration with other UCs, a CalOSHA variance for the safe operation of low-flow fume hoods.

COMMUNICATIONS

Increase visibility and education to our internal and external stakeholders to promote a "culture of sustainability" which integrates sustainability into the daily habits of the campus community and encourages active participation with students, faculty, and staff.



BACKGROUND

The Chancellor's Campus Sustainability Committee (CSC) recognized a need to educate our own campus as well as the local community about sustainability with an emphasis on our campus, so they formed the Communications Subcommittee with the charge of identifying noteworthy campus sustainability information and promoting it to the campus, local community, state, and nation.

Social

The links between social justice and sustainability are intimately bound together. Environmental degradation and catastrophes disproportionately affect low-income people, people of color, and people in undeveloped regions. The communications committee seeks to better connect the environmental benefits to the social outcomes when promoting or educating the campus community about sustainability. One of the main objectives



for the 2015/2016 campaign will be to incorporate a “why” and “who” section, explaining the social implications, into all new outreach materials produced.

Economics

Despite the perception that sustainability is costly, efforts to reduce resource consumption often have a positive economic effect and can save our campus a

significant amount of money. The communications committee seeks to not only emphasize the environmental and social benefits of sustainability but to also emphasize the economic benefits and avoided externalities that often harm disadvantaged communities.

ACCOMPLISHMENTS

- Created a Public Relations Campaign for 2014-15. The campaign included DigiKnows (rotating slides displayed on digital screens in Residence Halls and Dining Commons), posters, 30-second videos shown in all local movie theaters, signage in MTD buses, A-Frame Irrigation signage, a quarterly sustainability newsletter and forum, and a series of public forums. Impressions in the context of advertising are defined as the number of times an ad is seen. The impact of a campaign is measured using the number of impressions. Repeat impressions are important in order for ads to have an impact.
- Created a set of sustainability 411 posters on food, water, research, and energy in fall of 2014 for the green message boards around campus, primarily geared towards increasing student education about sustainability on campus.
- The Communications Subcommittee continued its work with the Water Subcommittee on a drought outreach campaign. The campaign includes DigiKnows, a movie trailer, and signage on potable water reductions and recycled irrigation.
- Increased the number of movie trailers being shown in local theaters to four 30 second trailers this academic year.
- The Subcommittee participated in various local events, including Earth Day, Spring Insight, and the All Gaucho Reunion.
- In partnership with UCSB Sustainability, hosted a series of forums in spring of 2015 to discuss campus sustainability. The intention of these forums was to generate ideas that will result in new community-driven actions and coalition efforts and that will also be integrated into this version of the Campus Sustainability Plan.
- Partnered with the Community Environmental Council; the Cities of Goleta, Santa Barbara, and Carpinteria; and the County of Santa Barbara to host the 4th annual Central Coast Sustainability Summit. The event brings together elected officials, staff, faculty, and interested parties from local governments and organizations to discuss common sustainability issues, share best practices, and seek partners.



- The Subcommittee also delivered presentations on ways for new students to get involved in campus sustainability via UCSB freshman orientation groups twice per week throughout summer 2014.

- Increased our presence in the online UCSB community through weekly postings and development of our Facebook page.

- Redesigned the UCSB sustainability website in an eye-catching and user-friendly format.

- Developed a new user-friendly professional template for our quarterly newsletter.

- Developed a sustainability blog which includes monthly postings of student articles.

- Updated our logos and style guide for UCSB Sustainability.

- Launched a UCSB Sustainability Instagram.

CAMPAIGNS

UCSB SUSTAINABILITY
ADVERTISING PER
IMPRESSION

87,500

BUS ADS

COSTS \$45 PER 1,000 IMPRESSIONS

585,500

MOVIE TRAILERS

COSTS \$13 PER 1,000 IMPRESSIONS

15,000

TWITTER

17,000

FACEBOOK





2015-2017 SHORT-TERM IMPLEMENTATION PLAN

1. For 2016-2017, engage the broader community in feedback on the UCSB Climate Action Plan update.
2. Partner with the Community Environmental Council, the City of Santa Barbara, the City of Goleta, the City of Carpinteria, and the County of Santa Barbara during the Central Coast Sustainability Summit to improve sustainability in our area.
3. Share sustainability plans among local cities and larger corporations within the local area, such as the Santa Barbara Municipal Airport, City of Goleta, and Deckers. This collaboration on future sustainability plans should enhance each organization's plan and build a cohesive sustainability effort in our region.
4. Ensure that internship, educational, and funding opportunities are shared with underrepresented groups on campus.
5. Ensure that when there are opportunities to give feedback on campus planning projects, underrepresented communities are asked for advice and guidance.
6. Better address in communications materials what communities are most impacted by the issues and the positive work that they are doing.
7. Develop signs to be displayed on hybrid MTD buses, advertising campus sustainability.
8. Develop signs to be displayed on all MTD buses, advertising the partnership to expand service.
9. Continue our Facebook, Twitter, and Instagram campaign.
10. Continue collecting data for impressions of the public relations campaign.
11. Maintain and enhance the UCSB Sustainability website.
12. Through outreach efforts, obtain large scale campus participation in the next round of the Cool Campus Challenge.
13. Assess which areas of campus we can concentrate on for best practice awards for UCSB, then partner on submittals for awards.
14. Create a program to acknowledge the efforts of students in sustainability groups and social justice groups on campus.
15. Develop a UCSB Sustainability RHA internship program.
16. Continue our partnership with the Environmental Affairs Board to deliver presentations about ways for new students to get involved in campus sustainability via UCSB freshman orientation.
17. Create a program such as Gaucho FYI or an online training for incoming freshman so all students enter UCSB with at least basic skills regarding sustainable living.

2017-2020 MID-TERM IMPLEMENTATION PLAN

1. Develop an additional two more 60 second movie trailers for all the local theaters.
2. Continue partnership on the Central Coast Sustainability Summit to further sustainability efforts for our region.
3. Enhance social media presence and messaging for sustainability "action today for tomorrow" highlights.
4. Work with MTD for additional signage for new routes and campus sustainability on hybrid buses.
5. Partner with student organizations to increase the reach of campus sustainability communications.
6. Work closely with Sustainable University Now (SUN) and other local organizations to ensure information is being passed to them about campus sustainability efforts.

2021-2025 LONG-TERM IMPLEMENTATION PLAN

1. Continue to provide movie trailers and social media to support campus sustainability outreach.
2. Assess data trends to see what additional methods are needed to reach a larger campus population.

2050 VISIONARY GOALS

1. Ensure that all students graduate with a deep understanding of environmental and sustainability issues.
2. Launch a co-curricular, multi-session educational program where students can learn about sustainable practices that they can integrate into their daily life. This would be a longer-form of the proposed orientation workshop mentioned in the short-term goals and could be valuable for current students.



ENERGY & CLIMATE

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



BACKGROUND

With respect to energy, the overarching sustainability goals shall be to reduce and ultimately eliminate the use of non-sustainable sources, particularly fossil fuel based energy, in meeting UCSB's energy needs and to reduce and ultimately eliminate and/or offset all greenhouse gas emissions, primarily but not limited to CO₂, CH₄, and N₂O resulting from UCSB's operations.

The following shall be the minimum goals for UC Santa Barbara:

- reduce emissions to 1990 levels by 2020.
- achieve carbon neutrality in Scopes I and II emissions by 2025.
- achieve carbon neutrality in Scopes I, II and III by 2050.



These values are total and not normalized for population or space growth, as carbon neutrality is, by definition, an absolute goal. This shall include Scope I and Scope II GHG emissions as defined by The Climate Registry, as well as emissions associated with commuting and University-related travel as defined under the American College University Presidents' Climate Commitment (ACUPCC).

The Chancellor's Sustainability Committee's (CSC) Subcommittee on Energy & Climate allows the CSC to engage broader campus expertise, including faculty and student representatives, in addressing climate and GHG emissions reduction through energy management. The Subcommittee discusses the question of alternative energy generation on- and off- campus. Ultimately, campus solutions to energy will be multi-pronged, involving on- and off-site generation, conservation, and a degree of

reliance on fossil sources until new technologies become practical.

Planning for carbon neutrality requires coordination between multiple internal and external stakeholders. Most recently, the Subcommittee recognized the need to identify a funding source for energy efficiency and alternative energy projects that is separate from the campus Purchased Utilities Account. As the campus grows, it will be more difficult to realize energy and emissions reductions. This new financing mechanism (i.e., a green revolving fund), would allow the campus to invest the upfront capital that is needed to fund energy projects that have an acceptable rate of return and, ultimately, save the campus money.

UCSB will continue to implement energy efficiency projects under the UC/CSU/IOC Statewide Energy Partnership program through the 2016 program cycle; an increasing emphasis will be placed on reduction of onsite natural gas combustion in order to mitigate Cap and Trade compliance costs and local air quality regulatory risk.

Social

Energy justice is one of the most critical and complex concepts that the Energy Subcommittee is charged with addressing. UCSB's strong efforts to create a low carbon energy system will benefit the current and future generations of students and all California residents by playing their role in mitigating the coming impacts of climate change on all those who live on planet Earth. We will also monitor the changing short term costs of energy as we proceed, taking into account the need to be thoughtful of the cost and the potential impact of changes on low income students so as to not unduly impact the cost of education or threaten the elimination of an important sector of the campus community. UCSB has been cognizant of this approach thus far and will need to remain so in striving to achieve the 2025 target of climate neutrality. It is also critical that the campus community as a whole becomes aware of the climate justice issues raised by its energy sources and generation locales and methods, and the impacts of energy production and distribution.

Economic

The UCSB main campus electrical account is currently on a bundled service, time-of-use (TOU) rate. Southern California Edison's TOU-8-B 50KV+ tariff included relatively stable generation charges. Seasonal and time dependent demand charges, however, have risen substantially. In order to mitigate these costs, Utility & Energy Services has prioritized energy efficiency measures that reduce demand during on-peak demand pricing periods, including the campus Chilled Water Loop optimization project and upcoming multi-site solar photovoltaic project.

Electricity rates are expected to increase at a rate of approximately 3%, on average, between 2014 and 2020 for grid-purchased electricity, due in part to regulatory requirements enacted for California's Investor Owned Utilities (IOUs). Costs associated with California's enactment of Cap and Trade under State Assembly Bill 32, as well as the State Renewable Portfolio Standard, will continue to be passed through to the ratepayers of California. The decommissioning of the San Onofre Nuclear Generation Station will also result in increased generation and demand costs for the campus.

Total natural gas expenditures have decreased over the past seven consecutive years. The reduction in natural gas use and continued low historical rates contributed significantly to the campus' utility cost savings during the 2014/2015 fiscal year. The commodity cost for natural gas is anticipated to remain consistent through 2016. In 2015, UCSB became a covered entity under the State's Cap and Trade program, and compliance costs will result in marginal increases in natural gas costs for the campus.

UCSB CAMPUS ANNUAL CO2 EMISSIONS

MEASURED IN METRIC TONS



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ACCOMPLISHMENTS

- Achieved 2014 Climate Action Plan target to reduce greenhouse gas emissions to below 2000 levels, as required as signatories of ACUPCC.
- Executed contracts for a Purchase Power Agreement for five megawatts of onsite solar photovoltaic capacity, to be completed in 2016. The project will save the campus an estimated \$270K during its first year of operation and reduce Scope II greenhouse gas emissions by 10%.
- UCSB Facilities Management won the UC-systemwide 'Best Practices' in Monitoring Based Commissioning for its 2014 Chilled Water Loop Optimization project, which was the most successful SEP project completed by the campus to date:
 1. 2.1 million kWh saved annually (\$230,000/yr)
 2. \$511,000 rebate from Southern CA Edison
 3. Project cost after rebate: \$119,000
- The campus' Automated Demand Response project was implemented in order to provide our electric utility company the ability to dispatch over one megawatt of load reduction on campus. This is a collaborative effort between Southern California Edison and the campus to mitigate supply constraints on our regional electrical grid. UCSB's culture of environmental sustainability remains a driving force for continuous improvement, and Utility & Energy Services seeks to build on the efforts of the campus population by providing accurate, real-time building energy and water monitoring to facilitate the next generation of conservation campaigns at UCSB.
- Electricity use per square foot of building space has been reduced by 39% over the past 10-year period.
- Natural gas usage per square foot of building space has been reduced by over 54% over the past 10-year period.

SHORT-TERM IMPLEMENTATION PLAN

1. UCSB will continue to implement energy efficiency projects under the UC/CSU/IOC Statewide Energy Partnership program through the 2016 program cycle; an increasing emphasis will be placed on reduction of onsite natural gas combustion in order to mitigate Cap and Trade compliance costs and local air quality regulatory risk. Ten energy efficiency projects have been identified and \$990,000 has been allocated for energy efficiency projects through 2016 at the time of writing, with a goal of achieving a 15% Internal Rate of Return on the project portfolio.
2. 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.
3. 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.
4. Complete energy benchmarking analysis for all buildings larger than 4,000 square feet to identify current baseline building energy consumption.
5. 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.
6. Complete a feasibility study and economic analysis of expansion of the Hot Water Loop and construction of Phase I electrically-driven heating infrastructure.

7. Complete solar thermal installations at five existing residence halls.

8. Complete data room inventory for campus.

9. Engage the off campus community as well as students, staff, and faculty in the revision of the UCSB Climate Action Plan.

10. 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.

11. Establish a policy to divest from coal and tar sands.

12. Sign the Climate Resiliency Pledge via Second Nature.

13. Explore the possibility of divesting from all fossil fuels.

2018-2020 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.

2021-2025 LONG-TERM IMPLEMENTATION PLAN

1. Achieve carbon neutrality in Scopes I and II greenhouse gas emissions.

2. Divest from all fossil fuel companies.

2050 VISIONARY GOALS

1. Achieve Scope III carbon neutrality.



FOOD

Our vision is for a campus community in which all members of the community have access to healthy food that is good for people and the planet. This will be a system where people have a direct connection to their food system and where we work towards 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.



BACKGROUND

Environmental

There is a general consensus among scientists and practitioners that the foods that are good for our bodies, our minds, and our communities are the same foods that are good for our planet, including the climate. Our food system is intimately connected with the biophysical environment, including the climate, so food justice, environmental justice, and climate justice are intimately connected—they cannot be separated. Therefore, long-term food justice includes not only personal and community physical, emotional, and intellectual health, but environmental health as well.

We seek to build partnerships with local farmers and food producers to help us to source food that is humane, grown/raised following environmentally sound practices, and produced with respect to farm workers and other service workers. In our kitchens and restaurants, we are committed to following green business practices and continuing our participation in the Santa Barbara County Green Business Program. We also aim to ensure that our

food system operates in a closed loop where we collect compost and, as a result of that, grow more food.

Social

In this food system, all students will have access to affordable, healthy, culturally-relevant, and sustainable food options. Workers at every stage of the supply chain will have access to fair wages, working conditions, and food that nourishes their bodies and cultures. We seek to create a culture on campus that is knowledgeable and energized about food in general and in the role that food plays in our lives.

Economic

Hunger is the result of institutional challenges and barriers students face every day, whether it be the high cost of tuition, lack of access to affordable and quality housing, transportation costs, medical expenses, employment, limited class availability, and much more. In order to address food security, we must take into account the financial landscape that affects our students.



These issues need to be addressed at the individual, community, and institutional levels through partnerships that build and support new businesses and financial institutions and purchasing models which support our goals.

We will also seek opportunities through partnerships to build/support new businesses/financial institutions and purchasing models which support our goals. Historically, we have been successful in helping Harvest Santa Barbara become established, creating a business structure which enabled us to make many more local purchases.

ACCOMPLISHMENTS (2014-2015)

Please note that this requires a few highlights and not a comprehensive list of all of the great work happening in this area on campus.

Sourcing and Purchasing

- The 2014-2015 sustainable food procurement assessment for the UCSB Residential Dining calculated 35% sustainable food purchases and 49% sustainable produce-specific purchases.
- University Center dining achieved 26% sustainable

purchases in the 2014-2015 academic year.

- All UCSB Residential Dining and University Center Dining units offer fair trade coffee.
- 30% of the produce purchased by UCSB Residential Dining was organic in 2014-2015. All UCSB Residential Dining units also offer certified organic coffee, milk, soy milk, tea, and salad dressings.
- In 2014-2015, 45% of UCSB Residential Dining's total produce purchases were grown and distributed within 250 miles of campus and 37% within 150 miles of campus. All UCSB Residential Dining units also offer California grown olive oil, local honey, and local grass-fed beef.
- UCSB Residential Dining expanded sustainable tuna to all dining locations. All seafood purchased by the dining commons also meets the Monterey Bay Aquarium Seafood Watch guidelines.
- UCSB Residential Dining offers Green Mondays, where for that day the dining commons hosting Green Monday prepares meals that are 100% vegetarian. This currently affects 3 of the 4 dining





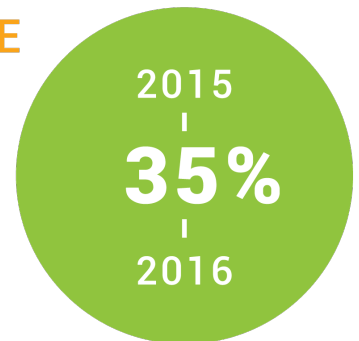
SUSTAINABLE PRODUCE PURCHASES

UCSB RESIDENTIAL DINING PERCENTAGE OF CAMPUS PRODUCE BUDGET



SUSTAINABLE FOOD PURCHASES

UCSB RESIDENTIAL DINING PERCENTAGE OF CAMPUS FOOD BUDGET



commons and the hosting of Green Mondays rotates between the 3 participating locations.

Operations

- Both the University Center and Special Events Catering serves on only compostable disposable service ware such as plates, cups, forks, etc. (when disposables are used).
- The University Center recycles all cooking oil and turns that into biodiesel.
- Ortega dining commons replaced a dish machine that used an estimated 272 gallons of water per hour with a machine that only uses an estimated 58 gallons of water per hour.

Education, Outreach, and Best Practice Sharing

- UCSB Residential Dining hosted "Chef Net: Experiencing Local & Sustainable Flavors" through

the NACUFS organization. Our program was designed to entice our participants palate and to explore innovative, local, and sustainable food.

- Some of the significant educational events sponsored by Residential Dining Services in 2014-2015 include:

- o Sustainability Week, a weeklong event that emphasizes Residential Dining's Sustainable practices, which also provides an opportunity to educate our students about sustainable practices and how they can make a difference. Menus are focused on local and climate friendly options.

- o Sustainable Seafood Day, an event that allows us to expose our customers both students and staff to our sustainable seafood program. We are committed to serving a large variety of quality seafood dishes year round that meet the standard set by Seafood Watch.

- o Nutrition Week, a weeklong event that

emphasizes the importance of a balanced diet. Menus are focused around nutritionally and environmentally friendly options.

- o Earth Day, an event that allows us to feature a climate friendly menu and education students about sustainability initiatives.

- One professional staff at Student Health trains 30-60 students each year who receive Healthy Eating and Living Certification. They influence their peers in formal and informal settings.

- In collaboration with the AS Food Bank, UCSB Sustainability hosted two public forums on sustainable foods to engage students, staff, and faculty.

- AS Food Bank, in collaboration with students and other stakeholders throughout the state, hosted the CA Higher Education Food Summit in January 2015.

- UC Global Food Initiative Fellows completed a study on effective messaging for reducing food waste in the UCSB Dining Commons.

- AS Food Bank provided consultation to California Community Colleges, California State University, and University of California on the development of food pantries and led the documentation and implementation of best practice guide for the Swipes for Us program.

Food Security

- Created a Food Security Taskforce appointed by the Chancellor.

- Collaborated with UC Agriculture and Natural Resource Division's Nutrition Policy Institute on a survey of students at all ten UC campuses to evaluate food security.

- In 2014-2015, AS Food Bank distributed 2,400 meal vouchers to students (800 per quarter) and provided 2,500 students with resource referrals, free coffee, tea, and study space, as well as non-perishable food, produce, and toiletries. 163,000 items and 25,000 lbs of fresh produce were distributed to students.

- The University Center donated pastries and shelf stable food to the AS Food Bank; the University Center also donated left over perishable food to the Food Bank for events that occurred in the University Center and where clients agreed to the donation.

- AS Food Bank worked with local agencies to provide and expand CalFresh outreach.

Growing Food

- Launched the Edible Campus Program through a coalition of UCSB Sustainability, Associated Students Food Bank, and the Department of Public Worms. The kick-off event featured Jack and Kim Johnson and was a highlight of Alumni Weekend. Approval was secured from UCSB Environmental Health and Safety to ensure that food grown through the first phase of this program (Potted Citrus Trees) can be distributed via the AS Food Bank.

2015-2017 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.

2. Develop a marketing campaign to support meatless Mondays and encourage more students to choose meatless options. Partner closely with behavioral scientists on campus to employ the most current knowledge of successful strategies for initiating a culture shift of this type.

3. 20% of meat purchases by UCSB Residential Dining (other than fish and seafood) are certified by the American Grass-fed Association, are Animal Welfare Approved, meet the requirements of the Global Animal Partnership (steps 3 and higher) and/or are certified humane.

4. Meat options that are certified by the American Grass-fed Association, are Animal Welfare Approved, meet the requirements of the Global Animal Partnership (steps 3 and higher) and/or are certified humane are highlighted as options in UCen catering and Special Events catering standard menu options.

Operations

1. Develop a strategy for identifying food waste and opportunities for redistribution of food before it is wasted.
2. Reduce plastic water bottle sales on campus by 20% from 2015 sales.
3. 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.
4. 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.
5. 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 Practices

1. Procure a mobile demonstration kitchen that can be utilized by multiple campus stakeholders for food education.
2. Launch an educational campaign to encourage students to choose more healthy and sustainable options at retail food locations on campus.
3. Launch the Food, Nutrition, Basic Skills Pilot Project with an evaluation element. This program will educate students about procuring and cooking affordable, healthy, and sustainable foods. Students will also learn about budgeting, financial planning, housing choices, and food justice.
4. Secure educational grants to support partnerships between the Isla Vista Food Cooperative and campus stakeholders to increase/expand co-curricular education programs.
5. Offer more tours for UCSB students to visit local farms, aquaculture, etc.
6. Expand on the labeling of foods in the dining commons. This should include CO2 impacts, overall environmental impact, nutrition facts, where food comes from, water use related to certain food items, and social equity issues (such as who is impacted by the food choices, and labor issues).



7. Identify a labeling system to identify sustainable items being sold in campus retail food locations. Evaluate the feasibility of aligning this labeling system with the labeling in residential dining.

Health and Wellness

1. Establish a UCSB guideline for what healthy and nutritious food is with support from multiple partners.

2. Evaluate options for and current barriers to reducing the amount of unhealthy food that is offered in campus retail food facilities.

3. Research how other 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.

4. AS Food Bank gains the ability to serve refrigerated items and can expand fresh produce distribution.

5. Increase healthy options in vending machines

6. Post calorie counts of all vending machine items prominently outside of the machine.

Food Security

1. Reduce student food insecurity to less than 30%

2. Develop a food security action plan.

3. Identify and secure a new location for the AS Food Bank and future food and wellness center.

4. Expand the number of meal swipes available to be donated to Swipes for Us

5. Develop a survey mechanism to collect annual data on food insecurity of UCSB students, institutionalizing the initial survey done in 2014-2015.

6. Offer EBT at the Gaucho certified Farmers Market.

7. Ensure that all eateries on campus can accept CalFresh.

8. Hire two part-time staff to provide outreach, advocacy, and application assistance for CalFresh to students.

9. Establish an emergency food service coalition.

10. Identify low-cost sustainable snack items that could be introduced into campus convenience stores and might supplement existing offerings. Once identification is done, propose to the University Center for consideration.

Growing Food

1. Draft an edible campus plan which identifies locations on campus where food could be grown on campus.

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

3. Develop an operating procedure for aeroponic gardening (also known as vertical gardening) in partnership with UCSB's Environmental Health and Safety.

4. Identify at least one location where aeroponic gardening could be done on campus and launch a pilot project in that location.

5. Ensure that all Edible Campus Projects are designed with ergonomics and the health of volunteers and workers who will maintain the projects in mind.

6. Integrate students from the Graduate School of Education into gardening and farming projects on campus.

7. Produce at least 25,000 pounds of produce in the 2016-2017 academic year on campus and distribute it to students in need.

Broad Partnerships

1. Secure a multi-campus research grant to explore issues related to obtaining food from our oceans.

2. Help to launch the Santa Barbara County Food Action Plan as an advisory board member. After launch, help with execution of the goals. This effort is being led by the Community Environmental Council, the SBC Food Bank, and the SB Foundation

2018-2020 MID-TERM IMPLEMENTATION PLAN

1. The University Center seeks to purchase 20% of their food from sustainable sources (per UC Policy).
2. 50% of meat purchases by UCSB Residential Dining (other than fish and seafood) are certified by the American Grass-fed 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 (strawberry guavas, etc.).
7. Have a WTF (What the Fruit) fruit bowl in every campus department.
8. Institutionalize the Food, Nutrition, Basic Skills Pilot Project into a regular offering.
9. Develop new student orientation programs geared towards exposing new students to the local food system.
7. Develop an Isla Vista impact group focused on food justice.
8. Reduce plastic water bottle sales on campus by 50% from 2015 sales.
9. Launch a student-run sustainable food cart (Fall 2018.)

2021-2025 LONG-TERM IMPLEMENTATION PLAN

1. Offer new academic programs 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.

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 Grass-fed Association, are Animal Welfare Approved, meet the requirements of the Global Animal Partnership (steps 3 and higher) and/or are certified humane.
3. A plan is developed 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 mentioned in earlier goals. 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.

LABS, SHOPS & STUDIOS

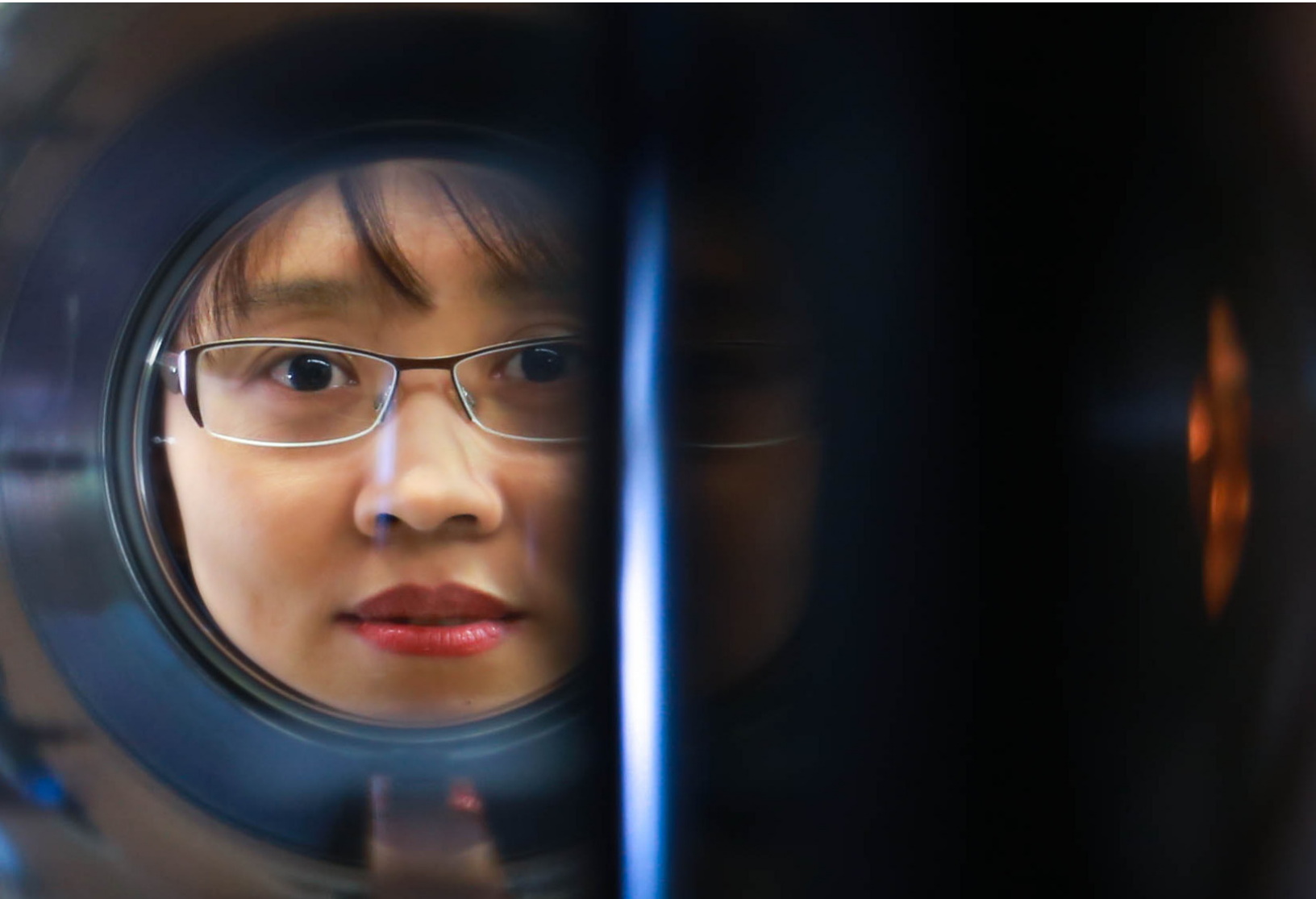
To reduce the environmental impact of laboratories, medical facilities, shops, and art studios while also improving safety, management practices, communication, and resource sharing.

BACKGROUND

Laboratories on campus are the most resource intensive building spaces and the complex nature of lab research means that every lab's needs are different, making campus wide policy and programs more challenging. It is also critical that any new initiative or change proposed for research spaces will not interfere with the experiments being operated in the laboratory or in anyway compromise the integrity of the research.

The Labs, Shops, and Studios Change Agent Team embrace the unique opportunities and challenges of reducing the campus' environmental impact in these specialty spaces where sustainability is more frequently overlooked. The expertise we gain locally is shared with groups state-wide, nationally, and internationally in developing rating and checklist programs, advising manufacturers, and coming up with procurement strategies.

Many of the programs of the Labs, Shops, and Studios Change Agent Team are facilitated by the LabRATS Program. LabRATS was established in 2006 as one of the first campus laboratory sustainability programs focused on behavioral change comprehensively across areas of energy, waste, water, and materials. The program was founded as a coalition between research staff, building managers, graduate and undergraduate students, and administrative staff. LabRATS continues to merge the creativity and idealism of students with the practical advice of staff to provide support and resources to researchers. Our program is uniquely prepared to adapt campus recycling, energy management, and sustainability practices to the unusual materials used and processes implemented in laboratories.



Environmental

Laboratory buildings have significantly lower waste diversion rates than office buildings on campus and the materials that are disposed of in laboratories is often more problematic to properly recycle or dispose of. Laboratories are also much more energy and water intensive than office buildings, making them critical to any reduction strategies.

Social

The team recognizes that the issues of safety, employee health, research effectiveness, and sustainability are fully entwined in such spaces and that any measures that we develop must result in positive outcomes for all of these issues and all affected stakeholders, especially occupants. Through our work we aim to reduce the use of hazardous materials where the research goals can be achieved with alternative chemicals and/or

processes. We seek to reduce risks for researchers, custodial staff, and anyone interacting with laboratory operations. Lastly, we promote safe and responsible laboratory management as we find that this increases resource efficiency and safety at the same time. We see this as a great opportunity to achieve multiple campus goals through integrated programs.

Economic

In order to achieve sustainability in the laboratory environment, we have to work closely with manufacturers, distributors, suppliers, etc. to identify new technologies and services that can assist researchers in meeting their goals while reducing our environmental impact. This is challenging in the research environment as the technology is so specialized that few products are third party certified.

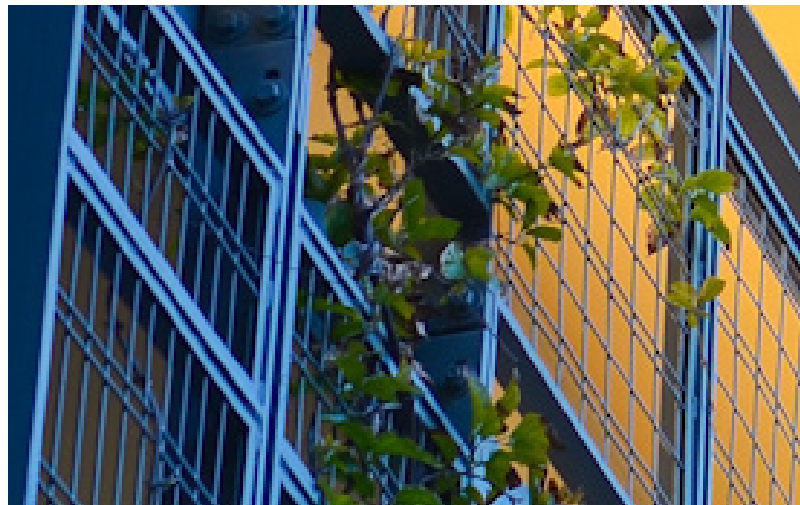
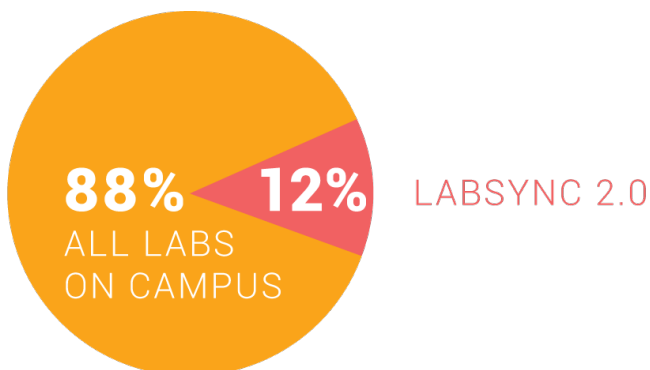
ACCOMPLISHMENTS

- Developed and launched the shared instrumentation website, a tool for allowing internal and external users to browse over 300 available instruments in 46 facilities (~13% of total) at UCSB. This will promote sharing and reduce the need for purchasing new equipment.
- In collaboration with EHS, Facilities, and the Sustainability Change Agent Waste Team, co-launched the red-lidded toter program, an effort to handle physically hazardous materials leaving campus laboratories.
- Completed applying fume hood safety labels to all Variable Air Volume fume hoods on campus.
- Developed a master slide deck and corresponding website for LabSYNC 2.0, the newly revamped LabRATS assessment process.
- Completed 8 assessments in LabSync 2.0, bringing our total campus labs assessed up to 48, 12% of approximately 390 PI-managed or shared-access laboratories on campus.
- Increased efficiency of individualized laboratory assessments by 40% with the launch of the LabSYNC program.
- Drafted text to use as a template for the "broader impacts" section of national research grants discussing the LabRATS program and shared this text with researchers.
- Designed a laboratory composting pilot program which is set to launch fall 2015.
- Gave annual presentations to undergrad and graduate students on Laboratory Building Operation and Sustainable Research practices.
- Maintained a regularly updated website that is a resource to other campuses.
- Hosted a two month webinar series on sustainability efforts in student health facilities, featuring four webinars on waste management; retro-commissioning; metrics, certifications, and software for sustainability management; and health and wellness programs.
- Became a member of Practice Greenhealth (PGH).
- Developed a network of contacts for student health professionals and clinics around the state.
- Maintained active membership in the Henley Hall building committee.

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LABS COMPLETED LABSYNC 2.0

UCSB TOTAL CAMPUS
LABS ASSESSED



2015-2017 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. Assist UC in development of a statewide checklist for New and Renovated Laboratory Spaces.
4. Develop and launch a Plug Load Monitoring Pilot Study in collaboration with Facilities Management, with possibilities for an equipment replacement program.
5. Develop streamlined program for donating old lab equipment to low-income K-12 schools.
6. Replace a significant fraction of single-pass cooling systems for laboratory condensers by assisting laboratories with funding support and sharing information.
7. Expand lab coat and PPE reuse/recycling programs on the campus, in particular targeting students in science courses.
8. Enabled 20% of laboratory groups at UCSB to have a LabSYNC assessment.
9. Collaborate with Bren School Sustainability Committee to determine the feasibility of styrofoam alternatives as well as reuse, and recycling strategies.

2018-2020 MID-TERM IMPLEMENTATION PLAN

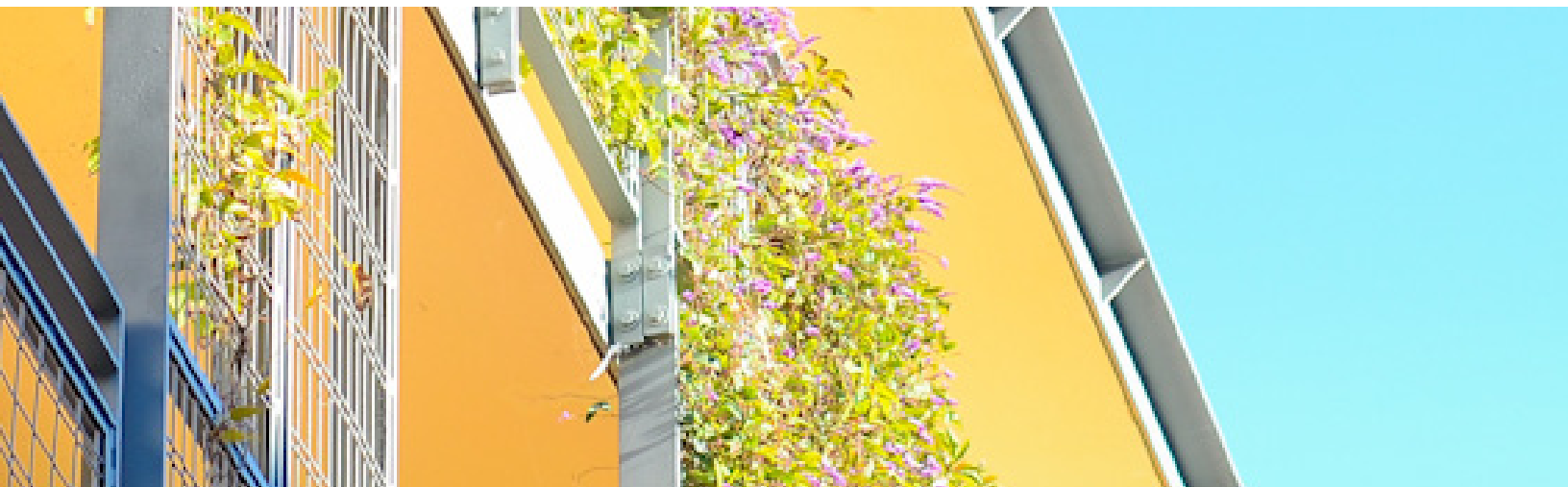
1. Continue to research alternative disposal methods for laboratory specific waste streams.
- 2.. Expand recycling infrastructure in laboratory buildings.
- 3.. Get a program in place for cost-sharing of energy-efficient replacement equipment.
- 4.. Enable 30% of laboratory groups at UCSB to have a LabSYNC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

2021-2025 LONG-TERM IMPLEMENTATION PLAN

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

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.



LANDSCAPE

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.



BACKGROUND

The University of California, Santa Barbara established the Sustainability Change Agent Landscape/Biotic Environment Team in 2004. Their mission is to make sustainability one of the key components in making decisions for grounds design and management. Sustainability includes considering all inputs to grounds relative

to their costs and benefits to the earth and the local ecosystem. Their directive is to increase biodiversity and self-sustaining systems, while reducing dependence on fossil fuels and other extracted minerals. Socially, the group seeks to facilitate student education and work and play, while supporting the staff through living wages and



local business opportunities. UCSB is also home to The Cheadle Center for Biodiversity & Ecological Restoration (CCBER). CCBER manages over 230 acres of open space on the UCSB campus in order to fulfill several goals: to preserve and enhance native plant resources and biodiversity of the region; to provide educational opportunities through signs, internships, seminars, and workshops; and to advance the understanding of restoration strategies and preservation of ecological function

in urbanized areas to retain water quality and biodiversity through research. CCBER management areas include areas that already contained portions of intact vegetation or wetlands which are protected by the Clean Water Act and Coastal Act, as well as areas that are being restored after significant human impacts: the North Bluff, Campus Lagoon, Manzanita Village, Storke Wetlands, and San Clemente.

ACCOMPLISHMENTS (2013-2015)

- Established three native landscaping projects installed on Main Campus: Ocean Science Educations Building (OSEB), East Gate Buckwheat Zone, and West Manzanita Park.
- Peripheral areas of campus continue to be enhanced in North Campus Faculty Housing (10 acres), South Parcel (5 acres), and Student housing wetlands at Sierra Madre and San Joaquin (3 acres); enhancements to other natural areas include planting 45 oak trees and enhancing campus lagoon with the help of grants.
- Large electric mower and multiple electric blowers are now in use by campus grounds to reduce noise and local air pollution. New, more sustainable & comfortable equipment is tested and brought in to use as industry develops functional, affordable options.
- Created a sustainable landscaping palette and philosophy document prepared by Housing & Residential Services (H&RS) to advise landscape architects on new building projects to avoid plantings that don't meet safety and management goals.
- Drought Response and water conservation efforts:
 - o Reclaimed and potable water irrigation is now following two day pre 6am post 8pm irrigation rules for stage II drought response irrigation restrictions
 - o We have converted potable irrigation heads to high efficiency heads and/or converted them to reclaimed water..
 - o HSSB and Psychology landscape areas converted to reclaimed water..
 - o Thirty three FM & H&RS small lawns now receive no irrigation to follow the "gold is the new green" philosophy of the state.
- Completed study of long-term impacts of reclaimed water salinity on soil EC and invested in new Electrical Conductivity probe to continue monitoring seasonality and nature of problems.
- Drones are being used to monitor lawns for broken irrigation lines.
- Weather-sensitive, computer controlled irrigation controls 65% of irrigation for FM and 75% for H&RS.
- Stormwater is managed to enhance infiltration.
- Staff were trained in filter clean-out techniques for parking lot fossil fuel filters. Streets and parking lots are swept weekly.
- Run-off points on campus are mapped, and monitoring of dry season flows is underway.
- Permeable pavers are mandated to replace impermeable surfaces when areas are disturbed by construction.
- Bioswales have been installed at new developments, including North campus faculty housing, and Sierra Madre.
- Tree and invasive species management accomplishments:
 - o A grant has been received and completed to map 18 invasive species on campus, and a management plan has been drafted and reviewed by land management groups (FM, H&RS, CCBER), and weed species goals have been agreed upon
 - o Davey Tree Software ("My Tree Keeper") is being used to manage existing trees to record loss, maintenance, replanting, and exotic and special species valued for educational purposes, as well as to provide data to study GHG sequestration values. All trees are mapped in the system, but not all are identified, and this remains a future goal
 - o A Revised Weed Management plan was reviewed by the Landscape Design Review Committee and published on the Sustainability website.





2015-2017 SHORT-TERM IMPLEMENTATION PLAN

1. Raise student awareness about landscape sustainability through H&RS information display mechanisms.
2. Complete mapping of campus run-off points and assessment of low flow and storm flow nutrient and other pollutant levels.
3. Prepare plan to replace invasive grass *Stipa tenuissima* plantings on campus (SSRB & Bren).
4. Map all stormwater features on campus – e.g., bioswales, outfalls, CDS (Continuous Deflection System) units, and rain gardens (could be a sustainability intern project), including an assessment of filtration methodology.
5. Convert at least 10 areas to reclaimed water from potable water.
6. Assess our fleet of tools and vehicles and create a plan to convert landscaping equipment to sustainable fuels and low noise and emissions equipment as industry develops new technologies (student project to do assessment of current condition and estimated emissions).
7. Continue to incorporate bioswales and water infiltration into all projects on campus.
8. Develop mechanisms to easily generate reports regarding fuel and herbicide use by different management groups in order to measure progress on conversion to reduced herbicide use and reduced local emissions.
9. Complete assessment and conversion of low efficiency to high efficiency sprinkler heads.
10. Assess GHG sequestration potential of campus landscapes.
11. Develop further educational tools, tours, etc., based on the “My Tree Keeper” software.
12. Use drones to monitor lawns for broken irrigation lines.

13. Have the weed management plan formally reviewed and adopted by campus.

2018-2020 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*), Periwinkle (*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 edulis*), Fennel (*Foeniculum vulgare*), Myoporum tree (*Myporum laetum*), Sour Grass (*Oxalis pes caprae*), Harding Grass (*Phalaris aquatica*), Castor bean (*Ricinus communis*), Giant Reed (*Arundo donax*), Salt Cedar (*Tamarix spp.*).

c. Only plant where needed and remove all volunteers and manage to reduce the spread of: Kikuyu grass (*Pennisetum clandestinum*) (used in lawns) and Canary Island Date Palm (*Phoenix canariensis*); trim fruits regularly of Mexican fan palm (*Washingtonia robusta*).

d. Encourage campus landscape architects not to specify these species adjacent to wetlands.

2021-2025 LONG-TERM IMPLEMENTATION PLAN

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

2050 VISIONARY GOALS

Be a leader in landscape sustainability through diversity of programs.

1. Work towards a balance of greenhouse gas sequestration and emissions associated with 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.

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



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.





BACKGROUND

Purchasing supports UC research, innovation, and invention of environmentally preferable systems and processes. As a research and educational institution committed to higher learning and public service, we are in a unique position to set an example and

lead others toward a more sustainable future. The University wields a purchasing power that exceeds that of entire nations on the planet—a position that demands a high level of responsibility and stewardship.

ACCOMPLISHMENTS

- Required the use of environmentally preferable modular carpet tiles.
- Established clear E-waste standards for UC Santa Barbara and system-wide application across the entire spectrum of contracts for electronic commodities.
- Enacted an interim Sustainable Furniture policy that requires green options be selected for all furniture purchases.
- Expanded organic and locally produced food options – currently, residential dining has incorporated 50.3% organics in their offerings.
- Added a 1.0 FTE Strategic Sourcing Manager position to the Purchasing staff, plus one other staffer dedicated to sustainability efforts.
- Physical Facilities and Housing & Residential Services now use Green Seal certified chemicals and 100% recycled content paper in all restrooms and kitchens.
- The campus has made Energy Star features mandatory with all new contracts for appliances,

printers, copiers, fax machines, and personal computers

- Implemented an e-Procurement system, the UCSB Procurement Gateway (Gateway)
- Created two surplus sites to decrease purchase of new materials: a surplus chemical site and a surplus equipment site
- Researched a Last Mile delivery program whereby high-volume vendors deliver to a central site, and electric vehicles complete the final on-campus delivery (decreased traffic and GHG)

2015-2017 SHORT-TERM IMPLEMENTATION PLAN

1. Participate as a pilot program with the Sustainable Leadership Purchasing Council (SPLC) to track and reduce our carbon footprint related to procurement.
2. Develop a Green Procurement Model - partner with UC Santa Cruz and UC San Diego procurement teams to: 1) identify green products and services, 2) have strategic sourcing/green vendors display priority purchase options, and 3) increase the EPP reporting options.



3. Strengthen the compliance of the UC and UC Santa Barbara policy of a minimum of 30% post-consumer waste recycled content paper, complete the phase-out of virgin paper products for all office supplies, and move toward implementation of a policy requiring 50% to 100% recycled paper.

4. Expand the use of green cleaning products and techniques throughout the campus and UC community.

5. Enhance specifications for packaging to eliminate waste streams onto campus and expand recycling and closed loop design efforts.

2018-2020 MID-TERM IMPLEMENTATION PLAN

1. Develop zero waste, closed loop systems where all inputs are either recycled, composted, or reused/reprocessed/remanufactured locally.

2. Encourage electronic commerce - catalogs (full elimination of decentralized hard copies).

3. Encourage use of e-signatures - e-signatures will be instituted for all campus forms.

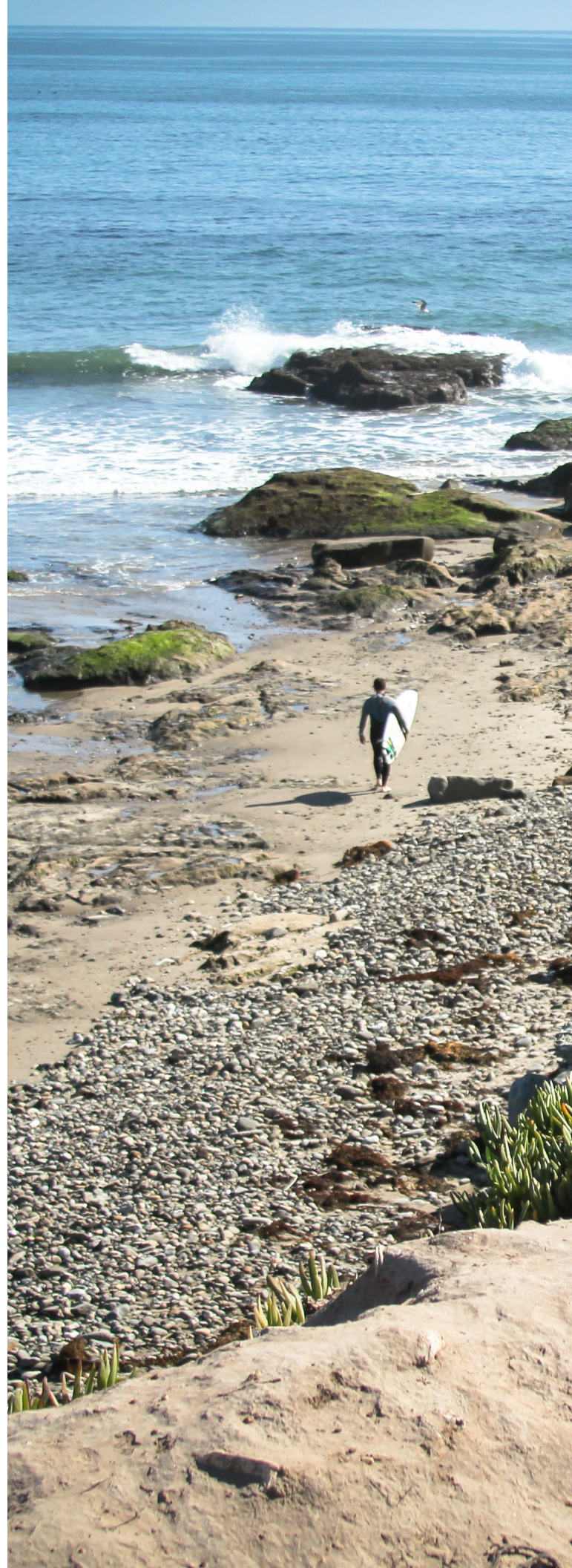
4. Increase policy/education and outreach - continuous improvement and utilization of matrix, criteria, and guidelines for more sustainable procurement with an emphasis on vendor selection/qualification. Increase quality points weighting for sustainability by a minimum of 15%.

2021-2025 LONG-TERM IMPLEMENTATION PLAN

1. Carbon neutral, zero emissions generated, through travel/transport/distribution of goods.

2. Create a tier rating system, perhaps based on the U.S. Green Building Council's LEED model that includes scientifically based, neutral oversight of standards development and effective controls for validity of environmental criteria.

3. Policy/education and outreach-100% UC wide implementation of sustainability practices in UC business and investment strategies.



TRANSPORTATION

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

BACKGROUND

The Transportation Alternatives Program (TAP) at UCSB has made enormous efforts to reduce commuter emissions by equipping students, staff, and faculty with the resources they need to reduce their GHG emissions by choosing alternative means of transportation. The Program is heavily used by staff and faculty, as well as by students that do not live on or around campus. Only 37% of the faculty and staff commute to the campus by alternative methods. Currently, 92% of students commuting to campus use alternative modes of transportation. This percentage has remained fairly stable over the past five years.

In addition, UCSB supports 11 vanpools that run throughout Santa Barbara and Ventura Counties to reduce commuter miles, gasoline consumption, and GHG emissions. Alternative campus commuters can also benefit from bike lockers, showers, and clothes lockers, as well as access to a car share program on campus. All of the efforts made by the staff, students, and faculty on campus have enabled the campus to reduce its climate impact related to transportation.

All of the efforts made by the staff, students, and faculty on campus have enabled the campus to reduce commuter miles, gasoline consumption, and GHG emissions.





Social

Since 1955, when Rosa Parks refused to obey a bus driver's order to give her seat to a white passenger, the social equity of transportation has made little progress. Since that time, the US has fewer "walkable" communities and still encourages the use of single occupant vehicles. With this plan, we strive to make UCSB more accessible and not only walkable, but more "ridable" for its students, faculty, and staff. As part of this process, we will need to partner with Isla Vista, Goleta, and Santa Barbara to strengthen our relationships to improve transport routes to and from the campus.

Economic

We will need to continue our partnership with MTD to see if we can increase ridership of the local bus system and improve routes north of the freeway. We need to identify scenarios that are both time and budget effective to improve ridership from these areas. We may also need to look at "total cost of parking" and be more realistic about what it costs the campus to provide so many single occupant vehicle spots to park. If we were able to increase the cost for parking, we could possibly expand and improve the non-car infrastructure.

2014/2015 ACCOMPLISHMENTS

- Bikes - UCSB students passed a 3 year lock-in fee specifically for bike path and bike parking improvement projects. The SAASB bike loop was completed on 7/24/15, and bike parking upgrades have been made at the Humanities and Social Sciences and Psychology Buildings to increase capacity. These funds will also be used to upgrade the SAASB and MCC bike lots this summer.
- Associated Students Recycling program was able to rebuild their fleet of recumbent bicycles, moving to a single speed design, and it added two mountain bikes with trailers. This program was in jeopardy of not continuing due to ongoing equipment issues.
- Transit - UCSB and Santa Barbara Metropolitan Transit District came together in a partnership in developing a new Goleta-Isla Vista-UCSB route – Line 38. This new bus line will be free for UCSB students, faculty, and staff with photo IDs. This bus line could be in service as early as the fall of 2016, depending upon occupancy of the proposed San Joaquin student housing project. Also, there will be enhanced service on two existing routes, the 12X and 24X, and increased service hours and reduced wait times beginning in summer 2015. UCSB is funding the enhancements and new service in response to the San Joaquin housing project.
- Electric Vehicles - In Spring 2015, UC Santa Barbara's application was selected by the Santa Barbara County Air Pollution Control District for \$34k in grant funding toward the installation of eight Level 2 electric vehicle charging stations. When installed in summer 2015, the campus Electric Vehicle Supply Equipment will include a total of twenty Level 2 (240V) and four Level 1 (120V) stations.
- Alternative Fueling Infrastructure - UCSB upgraded a second Compressed Natural Gas fueling station accommodating two vehicles to time fill. This will allow the CNG fleet to continue operation and allow for possible growth.
- Institutionalizing Sustainability - UCSB has formally dedicated a portion of staff time from an existing position in Transportation Services with the title of a Sustainable Transportation Coordinator to focus on usage of low carbon fuels, assisting with

reporting, participating with the DOE Clean Cities program, and working on the UC Carbon Neutrality goal as it relates to fleet / scope one GHG emissions.

2013/14 ACCOMPLISHMENTS

- Installed twelve Level 2 Electric Vehicle Supply Equipment (EVSE) A.K.A. Charging Stations.
- Installed four Level 1 Electric Vehicle Charging Outlets.
- Named Gold Level Bicycle Friendly University by the League of American Bicyclists.
- Developed a calculator for parking permit holders to estimate the carbon offset their monthly commute would generate (<http://tap.ucsb.edu/commuterCalculator.aspx>).
- Expanded Clean Cities to the county line in Santa Barbara. Clean Cities is a program from the US DOE that advances the nation's economic, environmental, and energy security by supporting local actions to reduce petroleum consumption in transportation. A national network of nearly one hundred Clean Cities coalitions brings together stakeholders in the public and private sectors to deploy alternative and renewable fuels, idle-reduction measures, fuel economy improvements, and emerging transportation technologies.
- Upgraded existing and installed new / commissioned CNG fueling infrastructure on campus.

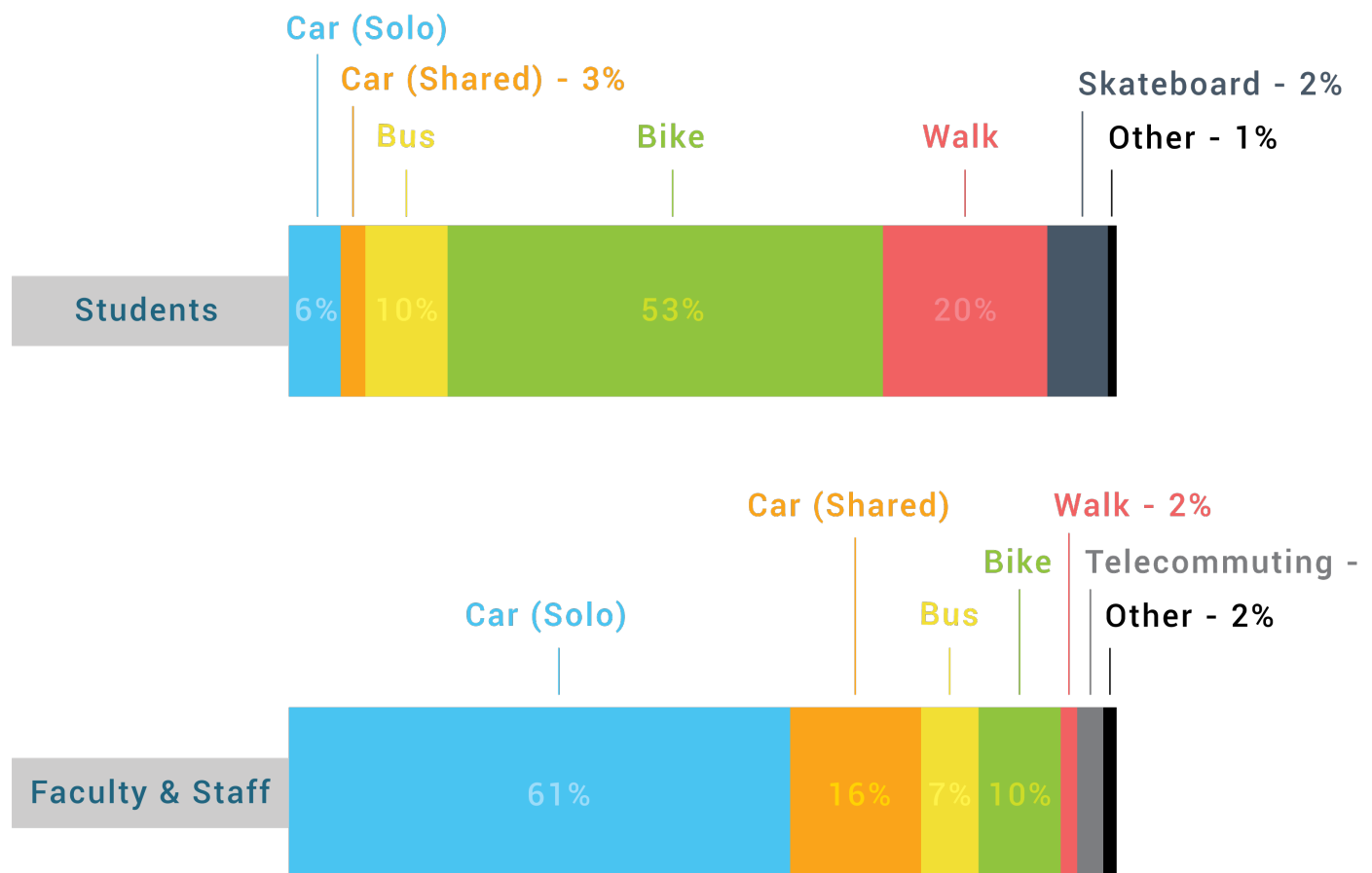
2012/2013 ACCOMPLISHMENTS

- Student ridership on MTD was increased by 10.7%.
- More than 75% of campus light duty fleet purchases were alternatively fueled and/or ultra-efficient vehicles.
- Received a Santa Barbara County Green Business certification for our garage (first garage in the county for this) in October 2012.
- Twelve level 2 Electric Vehicle Charging Stations (220 volt) were installed.



TRANSPORTATION TO CAMPUS

93% OF STUDENTS USE ALTERNATIVE TRANSPORTATION TO AND FROM CAMPUS, AS WELL AS 37% OF FACULTY AND STAFF.





- Three students serve on our Transportation Alternatives Board (TAB).
- Supported the DOE & California Energy Commission regional readiness grant submittals (which were awarded).
- Participated in the Regional Coordinating Council on developing a regional EV plan.
- Participated on the Central Coast Clean Cities Coalition (C-5).
- Received recognition from the Santa Barbara County Air Pollution District and Southern California Edison as a leader in plug-in electric vehicle (PEV) readiness in the Central Coast.

Earlier Accomplishments:

- Established a Transportation Alternatives Program (TAP) to conserve energy, reduce campus parking demand, ease traffic congestion, reduce air pollution, and reduce the campus community's contributions to global warming through alternative commuting options for UC Santa Barbara faculty, staff, and students.

- Fleet Services division became recognized as a Model Pollution Prevention Vehicle Service and Repair Facility by the California EPA.
- Provided pre-tax payroll deductions for vanpool subscriptions, regional bus passes, local bus passes, and carpool permits.
- Provided access to the Carpool Match Service twenty-four hours per day.
- Subsidized MTD bus passes - unlimited access for all students.
- Subsidized regional transit bus program for faculty and staff.
- Subsidized van pools and carpools.
- Provided access to In-Vehicle Parking Meter Technology, tailored to allow the use and accumulation of 57 courtesy hours of parking per quarter.
- Provided automatic enrollment in the "Emergency Ride Home Program."
- Provided access to bike lockers.



- Provided those who commute by foot, skateboard, scooter, bus, vanpool, or carpool with six courtesy days of parking per quarter for students living farther than two miles away from campus and that commute to campus by bike.
- Added perks to the car share program – free sign-up and waiver of annual fees for all members of TAP.
- Formalized a bicycle path/parking improvements policy that went into effect as an interim policy on 7/1/11, and was approved as a formal policy on 7/1/12 (<http://www.policy.ucsb.edu/policies/policy-docs/sustainable-bicycle-path-parking.pdf>).
- Established a skateboard lane.
- Established seven miles of class 1 bike paths with 7 bicycle roundabouts and 3 bicycle underpasses.
- Established a bike repair shop on campus.
- Established six bike repair stations with air pumps, plus an additional seven bicycle air pumps.
- Established a tire retread program that utilizes a tire recap process whenever possible to reduce waste. This is a program that takes our heavy duty used tires and retreads them to be reused in our fleet.
- Formalized an alternative fuels and ultra -efficient vehicle purchasing policy that went into effect 7/1/12 (<http://www.policy.ucsb.edu/policies/policy-docs/sustainable-procurement.pdf>).
- Established an off-road diesel powered equipment idling standard operating procedure (http://www.ehs.ucsb.edu/units/envhlth/envirhealthpdf/UCSB_Off_Road_Idling.pdf).
- Tracked and reported scope 3 emissions.
- Tracked and reported Average Vehicle Ridership.
- Transportation Services assisted in bringing together Biodiesel Industries and the Dining Commons, UCen, and Faculty Club to create a program where all the used cooking oil is converted into biodiesel. Biodiesel Industries picks up the oil from campus in a truck that runs on B100 fuel. Currently, 100% of the cooking oil is reprocessed.
- Expansion of Clean Cities C5 to the Ventura County line.
- Installed twelve level 2 car charging stations.

• In 2003, UC Santa Barbara's Transportation Fleet Services division became recognized as a Model Pollution Prevention Vehicle Service and Repair (VSR) Facility by the California EPA Pollution Prevention Program (http://www.dtsc.ca.gov/PollutionPrevention/VSR/VSR_P2Model.cfm).

2015-2017 SHORT-TERM IMPLEMENTATION PLAN

• Devise and implement a Strategic Transportation Plan (STP) to get us on a path to reduce commute-related GJG 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 2015 baseline) by 2025.



b. Decrease single occupant vehicle ridership by 2050, so no more than 30% of all employees 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 desk-top 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.

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.

o. Utilize advanced drop in biofuels 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.

2. 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 ultra-efficient vehicles by 2016.

b. 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.

c. By 2020, zero emission vehicles or plug-in hybrid vehicles shall account for at least 50 percent of all new passenger and light-duty vehicle acquisitions.

d. By 2025, zero emission vehicles or plug-in hybrid vehicles shall account for at least 65 percent of all new passenger, light, and medium-duty vehicle acquisitions.

e. Secure grant funding and funding strategies to accelerate fleet vehicle replacement and fueling infrastructure needed for low carbon / zero emission vehicle utilization.

f. Continue collaboration with Clean Cities and other related organizations / agencies and entities helping to achieve UCSB's GHG reduction goals.

2018-2020 MID-TERM IMPLEMENTATION PLAN

1. Decrease single vehicle ridership by faculty and staff by 35%.

2. Further increase of TAP participation by 35% - 50% (change parking pricing structure to pay as you go).

3. Complete alternative fuel infrastructure and achieve a vehicle fleet mix of 85% utilizing alternative fuels and 50% operating on renewable energy / fuels.

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 CO₂e 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.

2021-2025 LONG-TERM IMPLEMENTATION PLAN

1. UCSB's Strategic Transportation Plan (STP) has met the targets set for 2025.

2. Update STP in regard to the 2050 goals.

3. UCSB's Strategic Fleet Plan (SFP) has been implemented and challenges overcome.

4. Update SFP to take into account Carbon Neutrality and minimize GHG offsets with an accelerated pathway of on campus or regional projects.

2050 VISIONARY GOALS

1. By 2050, UCSB's STP is fully implemented and scope three emissions are reduced by 80% of 1990 levels.

2. By 2050, UCSB's SFP has been fully implemented and has officially achieved the carbon neutrality goal.

WASTE

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.



BACKGROUND

FY 2014-15 saw UCSB's waste diversion percentage drop from 71% to 70%. The percentage decrease this past FY can likely be attributed to that fact that Average Daily Cover (ADC) is no longer counted as a diversion method by UCOP. While the State of California still recognizes ADC as a diversion practice, it will cease to do so in 2020. Taking that into account, UCSB's waste diversion rate has appeared to have plateaued at the 70% mark. Looking ahead, UCSB will look to improve its diversion rate through continued recycling efforts and more importantly, through expanding the existing but limited compost infrastructure.

UCSB's waste management efforts are designed to eliminate the impact on the natural environment. Waste reduction and reuse efforts help to eliminate the consumption of items and materials on-campus. This effort helps to not only reduce disposal efforts, but also decreases UCSB's indirect consumption of natural resources from purchased goods. Recycling and composting allow the University to dispose of their items in a manner that either allows the material to be turned into a different, new product, or to be returned to the environment through decomposition. These aforementioned efforts are of the utmost importance to UCSB, as we aim to reduce our environmental footprint.



Social

Addressing social equity concerns regarding waste disposal and manufacturing of materials at UCSB is a priority. We strive to ensure that all waste disposal facilities utilized by the University provide socially responsible work environments. Waste management staff at UCSB work very closely with procurement teams to ensure that items purchased by the University are also sourced from companies that provide safe working conditions for employees. At UCSB, all staff members and students involved in handling waste are provided proper training and personal protective equipment to ensure safe working environments.

Economic

UCSB maintains and operates a waste management program that is not only efficient, but also cost effective. Programs and practices that reduce labor and material costs and increase waste diversion are prioritized at UCSB. Eliminating unnecessary waste management costs allows UCSB to implement more waste management programs and practices.

ACCOMPLISHMENTS

- California Higher Education Sustainability Conference – Best Practice Award for Innovative Waste Reduction: Optimizing waste management services through stakeholder engagement.
- Removed over 350 landfill receptacles through engagement with custodial staff.
- Supplied custodial staff with blue liners for recycling bins and with new carts that allow them to service the recycling waste stream easier.
- Held the Co-Chair position of the UC Solid Waste & Recycling Group.
- Introduction of indoor composting program with pilot in six buildings and plans to expand in Fall 2015.
- Food waste collection for on-site vermicomposting expanded to include Carrillo Dining Commons.
- Construction of three new 4x8 vermicompost bins.
- Launch of Edible Campus program through the Department of Public Worms.
- Re-engineered recycling collection bikes for ease of use and repair.
- Zero Waste Week Outreach Project – Students and staff carried around all waste produced in clear backpacks.
- Purchased over 20 hand-dryers to replace paper towel dispensers in buildings throughout campus.
- Purchased and introduced over 300 recycling and landfill receptacles to upgrade the indoor waste infrastructure throughout campus.
- Received funding to upgrade the Library waste infrastructure.
- Collaborated with social equity student groups in an effort to source food more responsibly.
- Piloted reusable hand towels and paper towel composting in residence halls that could not use hand dryers due to noise.

70%

UCSB
RECYCLABLE
WASTE
PERCENTAGE
BY WEIGHT



2015-2017 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 education workshops and 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 identify additional vendors that may not provide safe work environments for employees.
11. 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.
12. Expand use of reusable hand towels and/or paper towel composting in residence halls.
13. Explore the option of collecting Styrofoam for recycling with NEPCO Inc.
14. Develop additional outreach programs including social media announcements and smart phone apps that provide information on proper waste management efforts, including composting at home, recycling efforts, and procurement tracking.

2018-2020 MID-TERM IMPLEMENTATION PLAN

1. Zero Waste: For the purposes of measuring compliance with UC's zero waste goal, locations need to meet or exceed 95% diversion of municipal solid waste. Ultimately, UC's zero waste goal strives for the elimination of all materials sent to the landfill by 2020.
2. Reduce packaging material.
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.

2021-2025 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.

2050 VISIONARY GOALS

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



WATER

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

BACKGROUND

Fiscal Year 14-15 saw UCSB reduce its potable water consumption by 2.7 Mgal compared to the previous year, and, since FY11-12, UCSB has reduced its potable water consumption overall by 30%. This reduction is a major accomplishment for the campus and follows a long tradition of similar reductions and proactive water resources management. With the drought extending well into the upcoming fiscal year, UCSB also established a voluntary goal to further reduce water consumption 12% by March 1, 2016, compared to a 2013 baseline. This goal mirrors the call from Governor Brown to collectively cut urban water use by 25% and utilizes the same 12% reduction percentage that was assigned to Goleta Water District by the state.

UCSB's effort to conserve and use water efficiently, as well as to manage stormwater, reduces the University's environmental impact. California is currently experiencing one of the worst droughts on record, and with supplies throughout the state stressed, it is of the utmost importance that UCSB reduces consumption in an effort to help alleviate demand throughout the state. In addition, much of the water distributed in Southern California is sourced from elsewhere in State. With a portion of UCSB's water portfolio coming from the State Water Project, a significant amount of energy is used to move, heat, cool, and treat water; thus, reducing water consumption also results in energy savings.



Social

Water is essential to life. With California's current drought, some of California's residents are unable to receive water. Helping to reduce water consumption on-campus will alleviate the stress on local and regional water sources. In addition, education and outreach efforts regarding social issues surrounding water will help to inform the UCSB campus community of how they can become involved with efforts to reduce social inequity regarding the availability to water resources.

Economic

At UCSB, potable water rates are ever increasing. While the rate increases place a growing financial burden on the campus, it also presents an opportunity for the University to partake in more water conservation and efficiency efforts as they become more cost effective and will reduce utility expenditures. In addition, the cost of recycled water presents another cost effective scenario where the University can augment its potable water use with recycled water.

FIGURE 1

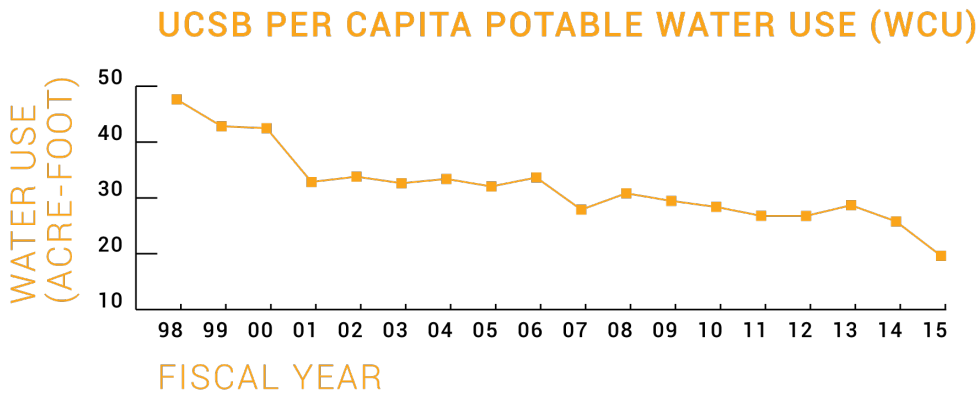


Figure 1: Weighted Campus User is a measurement of an institution's population that is adjusted to accommodate how intensively certain community members use the campus. This figure is used to normalize resource consumption and environmental impact in order to accommodate the varied impacts of different population groups. For example, an institution where a high percentage of students live on campus would witness higher greenhouse emissions, waste generation, and water consumption figures than otherwise comparable non-residential institution since students' residential impacts and consumption would be included in the institution's totals.

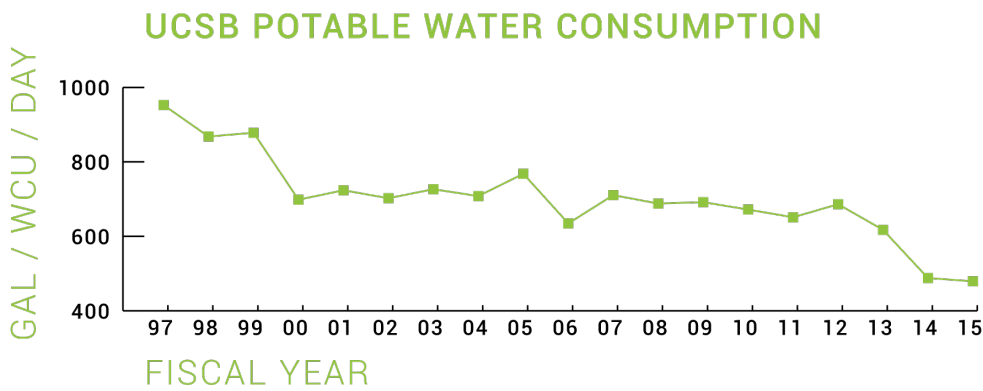


FIGURE 2

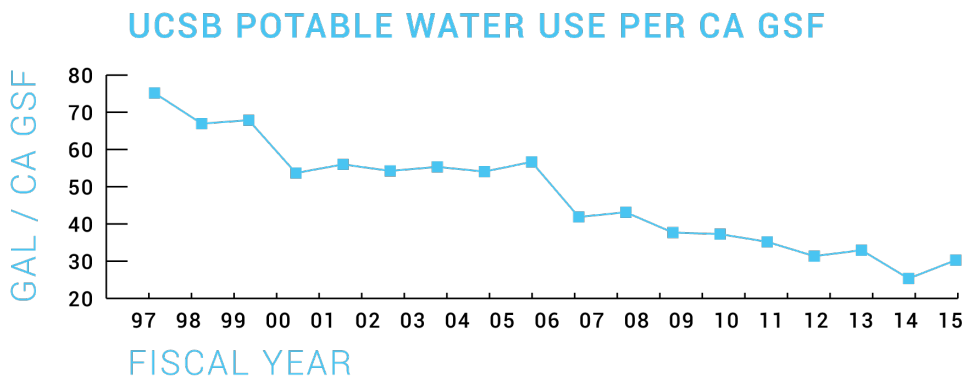


Figure 2: Pursuant of the definition in the Facilities Inventory Guide¹, gross square footage is the Outside Gross Area, or OGSF50, and equals the sum of Basic Gross Area (the sum of all areas, finished and unfinished, on all floors of an enclosed structure, for all stories or areas which have floor surfaces). + 50% Covered Unclosed Gross Area (the sum of all covered or roofed areas of a building located outside of the enclosed structure). OGSF50 is also known as "California Gross" or California Adjusted GSF.



ACCOMPLISHMENTS

- Establishment of a voluntary water reduction goal. Reduction of potable water consumption 12% by March 1, 2016, compared to the 2013 baseline.
- New recycled water irrigation signage – 40 signs.
- New water movie trailers and bus ads.
- Held water savings contest between all halls. Saved an average of over 10% in 4 week contest.
- Replaced aerators in 5 buildings, dropping average faucet use over 70% (0.5 gpm vs 2.2 gpm).
- Tested a “shower timer” in Santa Cruz hall to remind students to take a 5 minute shower. Effective initially, but hard water caused problems in units.
- Expanded reclaimed water to San Rafael lawn area.
- Brought the reclaimed water line under the UCEN road to the last part of Channel Island 5 buildings (Santa Rosa north/Creative Studies). Next step is to connect to irrigation in 2015.
- Planning for all new complexes to include reclaimed water (Sierra Madre, San Joaquin, KITP) for irrigation.
- Planning for San Joaquin to utilize reclaimed water in a portion of toilets and, potentially, in a cooling tower.
- Reduced irrigation using potable water by 50% throughout campus.
- Continued education campaign to students and staff about drought and the need to help save water by taking shorter showers, turning off water when brushing teeth, and for all residents and staff to report any leaks for signs of wasted water (irrigation overflow, timers off, etc.).
- Purchased process water cooler to close loop on water being used once and sent to drain. It will be connected in Aug. 2015 and will save approx. 1 million gallon/year.
- Eliminated all potable water irrigation in select locations.
- Participated in the 2014 Santa Barbara County Creek Week by hosting outreach events focusing on watershed protection.
- Labeled high priority storm drain inlets across campus with a pollution prevention message similar to “only rain in the drain”.
- Surveyed all storm drain outfall locations to identify, investigate, and reduce dry season flows.



UC SANTA BARBARA
**hydration
station**

REVERSE-OSMOSIS
(BLUE HANDLE)

FILTERED WATER
(WHITE HANDLE)

Helped eliminate waste from



disposable plastic bottles

2015-2017 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 group/ class.
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 carwash 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.

2018-2020 MID-TERM IMPLEMENTATION PLAN

1. Recycled water extensions into buildings.
2. Landscape conversions.
3. Gray water laundry to landscape systems in residence halls.
4. Reuse process water on-site.
5. UCOP policy: Reduce per capita potable water use 20% by 2020 (achieved).

2021-2025 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 nanofiltration system at Goleta Sanitary District for higher quality recycled water.

2050 VISIONARY GOALS

1. On-site filtration system for blackwater to allow for immediate building reuse.



UCSB Sustainability

Action today for tomorrow

Building a Sustainable Community Together

