



CHANCELLOR'S SUSTAINABILITY COMMITTEE
ADMINISTRATIVE SERVICES
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December 12, 2012

Re: 2010/11 and 2011/12 Annual Sustainability Report

Dear Chancellor Yang,

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

This report combines work from two academic years, 2010/11, and 2011/12. The Committee met eight times in 2010/11 and six times in 2011/12. Beginning in the 2010/11 academic year, the CSC formed four subcommittees, *Alternative Transportation*, *Communications*, *Transportation*, and *Water*. In 2011/12 year, we added two additional subcommittees in the areas of the *Built Environment* and *Food*. These subcommittees have allowed the CSC to engage a broader campus expertise in addressing our charge. Additionally, two new members were added to the 2011/12 committee, the Campus Librarian (voting member) and a Sustainable University Now (SUN) representative (ex-officio).

In addition to the subcommittees formed by the CSC, we continued to have the following sustainability change agent teams:

1. Energy
2. Labs, Shops, & Studios
3. Landscape & Biotic Environment
4. Procurement
5. Waste

Sustainability Interim Policies

The eight sustainability policies that we submitted to you in 2010 have been revised through campus consultation with appropriate control points and committees and, as of July first, 2012, are established as campus sustainability practices. This adopts a strategy similar to the UCOP Sustainable Practices Policy, establishing sustainable practice goals for the campus, but working within budgetary, regulatory, and programmatic constraints. In three years the CSC will review the financial and environmental impacts of these practices on our campus and make further recommendations.

These Sustainable Practices address:

- Alternative Fuel/Ultra Efficient Vehicle Use
- Bike Racks and Bike Parking
- Energy Star© Procurement
- Green Building Design
- Sustainable Furniture Purchase
- Sustainable Paper Use
- Renewable Energy

Campus Surveys

As part of our responsibility to establish baselines and trends in campus behavior, the CSC conducts three annual surveys that help us gauge improvements. Survey results for 2010/11 and 2011/12 have been completed (appendix B). The three surveys included:

- A mode split survey for transportation to capture commuting methods of faculty, staff, and students, including annual vehicle ridership. This is now required by OP and vital to calculating campus GHG emissions.
- A departmental sustainability survey of academic, administrative, and organized research units to ascertain their norms for purchasing, energy use, etc. for use in our Green Office program.
- A sustainability survey of student, staff, and faculty attitudes and actions about matters of sustainability on campus. Undergraduate attitudes are surveyed on odd years and faculty, staff and graduate students are surveyed on even years.

AWARDS AND CERTIFICATIONS

Green Business Certification

Food Service units on the campus have embraced the County of Santa Barbara Green Business certification program. The certifications assess procurement, waste, water and energy practices at each food service location. The four dining commons as well as The Coral Tree Café, UCen Catering, UCen Central Kitchen, The Arbor, The Store at Buchanan, and the Cornerstore are all now certified.

STARS Gold Rating

The Association for the Advancement of Sustainability in Higher Education (AASHE) maintains the STARS (Sustainability Tracking and Assessment Rating System), a transparent, self-reporting framework for colleges and universities to measure their sustainability performance. The STARS criteria have been developed over many years with broad participation from the higher education community. In concert with our universities, we have contributed to the ongoing refinement of this assessment system, leading towards version 2.0, scheduled to launch in 2013.

Over the fall of 2011 and winter/spring of 2012, sustainability staff gathered data for the AASHE STARS 1.2 assessment. Through participating in the STARS assessment, the campus is eligible for sustainability rankings by the Princeton Review, Sierra Club and Sustainable Endowments Institute. We hope that our

continued participation in the STARS assessment will lead to the sharing of best practices between UCSB and comparable institutions.

LEED Certifications:

This was our most productive period for LEED certifications to date. In 2010/11 we received four certifications. In 2011/12 we received two LEED-EB/OM (Existing Building/Operations and Maintenance) Gold certifications, one for San Clemente Villages and the other for Ellison Hall, both under the LEED Portfolio Program. UCSB Currently has a total of 12 LEED-EB/OM buildings on campus, more than any college or university in the nation. We also received 22 LEED for Homes certifications for 2011 North Campus Faculty Housing-Phase 1 (8 Silver and 14 Gold). UCSB now has a total of 43 LEED certifications.

Other Recognitions:

- In 2011, UCSB Received a Bicycle Friendly Business Gold Award from the League of American Bicyclists.
- In 2011 and 2012, UCSB was recognized as “Climate Efficient” as part of the Southern California Edison Cool Planet Program
- In 2012, UCSB was cited as one of the ten Most Bike-Friendly Campuses Across America by Best Colleges online <http://www.bestcollegesonline.com/blog/2012/05/29/10-most-bike-friendly-campuses-across-america/>

UC Wide Best Practice Awards (Disseminated at the CA Higher Education Sustainability Conference)

- **2011 The Water Efficiency and Site Water Quality** award was provided to UCSB's San Nicolas wetland and library mall storm drain project. The storm drain replacement is part of the campus's infrastructure construction project to replace antiquated utility lines and drains along a corridor that runs from Campbell Hall on the north to the lagoon. The project, which includes more than 20,000 square feet of permeable pavers, created a wetland adjacent to Girvetz Hall and helped with soil erosion and storm water filtration in the Campus Lagoon.
- 2011 Evanne St. Charles, CSC 2010-11 Environmental Affairs Board member, was selected as the undergraduate student speaker for the California Higher Education Sustainability Conference.
- **2012 Sustainability Innovation Award.** We received a best practice award for the Central Coast Sustainability Summit (at the time named "south coast" sustainability summit, 150 attendees) from the California Higher Education Sustainability for this groundbreaking collaboration with local cities and the County of Santa Barbara.
- **2012 Sustainable Foodservice Award.** The Root 217 restaurant in the UCen won a Best Practices Award at the CHESC conference this past June and has been featured in two trade journals, "Food Service Equipment" and "Foodservice Director's Magazine."
- **2012 Student Sustainability Program.** The student led Plastic Pollution Coalition for establishing partnerships with 19 organizations to reduce single use plastics. This program is now being replicated across the United States.

COMMUNITY ENGAGEMENT

LRDP and SUN Consultation for Community Negotiations

Over the 2010/11 academic year, the CSC was asked to comment on sections of the Long Range Development Plan, which pertained to sustainability. In concert with this, the Committee also reviewed and provided information to Senior Associate Vice Chancellor Marc Fisher on current sustainability practices to help foster a better agreement with Sustainable University Now (SUN), which was finalized in March of 2011. The final agreement with SUN provides specific commitments in the following areas addressed by the LRDP: transportation, housing, water, biology, energy and community participation. CSC will continue to monitor compliance with this agreement, once the LRDP has been fully adopted by the Coastal Commission.

South Coast Sustainability Summit

CSC envisioned the implementation the South Coast Santa Barbara Sustainability Summit, a community sustainability conference, in fall 2011. A planning committee was formed consisting of membership from the campus, the cities of Goleta, Santa Barbara and Carpinteria, the County of Santa Barbara and the Community Environmental Council. The event titled *South Coast Sustainability Summit: Collaborative Planning for a Sustainable Future* took place on October 13, 2011. This event reached approximately 150 regional administrators and business leaders and brought key players from diverse sustainability backgrounds to share best practices and discuss common issues in energy, transportation, waste, and water management. In addition to fostering dialog, the major goal was the pursuit of regional sustainability partnerships. As a consequence, partnerships have formed in Climate Action Planning, transportation through improved bus routes for students, electric vehicle charging stations and fleet manager collaborations. This first local sustainability specific conference was supported by numerous local elected officials, MarBorg Industries, South Coast Energy Efficiency Partnership (SCEEP) and garnered local media attention.

SUBCOMMITTEE REPORTS:

Alternative Energy Subcommittee

- The subcommittee began to discuss the complex question of alternative energy generation both on and off campus. This was instigated both by the student-approved development of the Student Affairs Zero Net Energy Initiative and the initiation of a discussion with a potential donor about the possibility of a wind farm on property he owns in the Tehachapi Mountains. These discussions led to a realization that the most efficient sites for solar and wind generation of electricity are distant from campus. The sense of the subcommittee is that, for educational purposes, we would like to have a visible presence of alternative energy sources on campus. Further, the true cost of going "alternative" must address conveying the power from remote sites to campus, and must underwrite the infrastructure to provide the campus with power in circumstances when wind and sunlight fail. Ultimately, campus solutions to energy will be multi-pronged, involving on- and off-site generation, conservation, and a degree of reliance on fossil sources. Planning for these advances will take place in the context of the campus's Strategic Energy Partnership with Southern California Edison and Southern California Gas.
- Student Affairs is continuing to move forward with the development of a 500 kilowatts system of on-site solar production funded by the Renewable Energy Initiative (REI). Their first photovoltaic array has been sited on top of Parking Structure 22 and is slated for completion by the summer of 2013.
- A 10kW photovoltaic array was also funded by TGIF and installed at Harder Stadium for CCBER. A second phase of this project was also funded and is in the process of being installed to expand this array.

UCSB Photovoltaic Arrays	
Location	Size
Donald Bren Hall	47kW
RecCen Multi-Activity Center	155kW
Sedgwick Reserve	30kW
Harder Stadium	10kW
Carrillo Dining	5kW
East Gate	2.5kW
TOTAL:	249.5kW

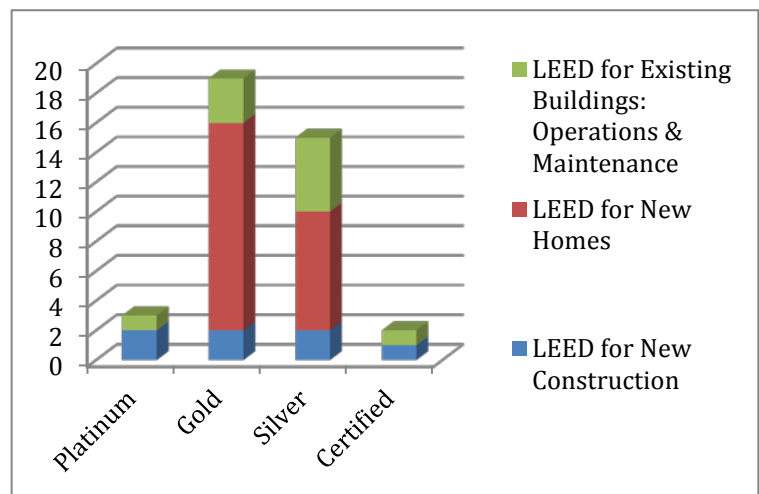
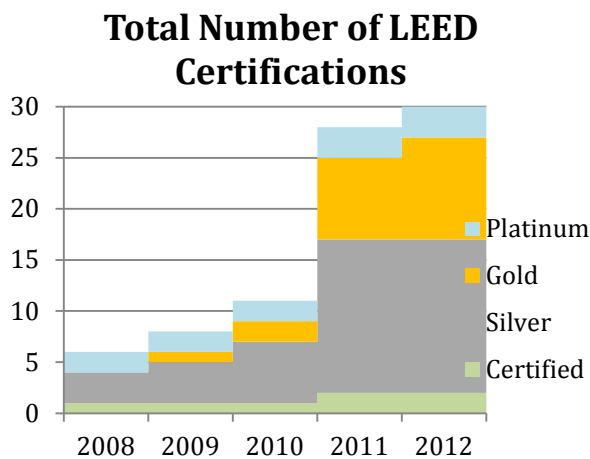
- The subcommittee evaluated a project to capture coastal methane seepage. We found that capital costs for developing a capture device are currently too high relative to the amount of methane that could be potentially captured, but may revisit it in another decade.
- The campus has been in discussions with UCOP and the Northern California Power Agency to evaluate the financial feasibility of a Power Purchase Agreement. Campus Utility and Energy Services are assessing cost implications of joining NCPA relative to continuing Direct Access through Noble Americas or buying the majority of campus energy through Southern California Edison. State renewable energy regulations will play a significant role in predicting energy cost increases in the future. Currently the campus estimates 20% of its energy consumption mix to be from renewable sources.
- The subcommittee recommended the adoption of Energy Goals to CSC, which voted to approve the internal document in June of 2011. These energy goals, which have not had broad campus consultation, reiterate our climate planning goals of reducing our energy emissions to 2000 levels by 2014, reaching 1990 levels by 2020 and achieving carbon neutrality by 2050. The adoption of these energy goals are being evaluated relative to the proposed Climate Action Plan and Renewable Energy Policy. Additionally, the CSC energy goals strive for a total campus average energy intensity reduction of 8% per five-year period. Further, the subcommittee feels that the campus should strive to procure at least 43% of its energy from renewable sources by 2020.
- Over the summer and fall of 2011 sustainability staff worked to inventory our campus' annual GHG emissions to The Climate Registry including emissions associated with electricity and gas consumption, campus fleet, commuting and business air travel. The first approved Climate Action Plan in 2009 did not include emissions from commuting and air travel. Our new draft 2012 Climate Action Plan does include this category and is currently being circulated for comment. The plan outlines our campus emissions, reduction targets and planned mitigation measures through behavior changes, energy efficiencies, renewable energy production, and transportation reductions through 2020. The plan also discusses the overall goal of climate neutrality by 2050, but lacks specific project planning beyond 2020, since planned mitigation measures are uncertain.

Built Environment Subcommittee

This subcommittee was formed in 2011-12 to evaluate green building practices on the campus. The subcommittee has met on a monthly basis to revise the Green Building Design Practice. The committee now meets on an as needed basis. The campus continues to grow our LEED program. We currently have 43 LEED certifications.

- Implemented Chancellor's Sustainability Committee (CSC) Subcommittee on the Built Environment.
- Moved from interim policy to formal practice for the UCSB Green Building, which raised the LEED minimum rating on campus for new buildings from Silver to Gold for buildings approved after July 1, 2012.

- Implemented practices to include one CSC member (or subcommittee member) on each building committee.
- Implemented practices to include LabRATS representation on all building committees for laboratory buildings or buildings that include laboratory space.
- Successful completion of the first LEED for Homes project in the UC System - North Campus Faculty Housing Phase I.
- Completed two LEED-EBOM Gold certifications: San Clemente Villages and Ellison Hall, both under the Portfolio Program, for a total of 12 LEED-EB buildings on campus, more than any college or university in the nation (note: UCSB now has 43 LEED certifications in place; see graph below).
- Appointment of Jordan Sager from UCSB as chair of the systemwide Green Building Working Group.



Communication Subcommittee

- The subcommittee assisted in the implementation of a new sustainability website. The previous version of the website did not allow multiple users to update content. The goal of the new website is to integrate all sustainability information from the campus in a format that is editable by multiple managers. The new website is in *Wordpress* and easily allows content and media to be updated. The subcommittee continually looks at how to best convey sustainability information via our website.
- The communications team has been working on social media marketing strategies through LinkedIn, Twitter and Facebook. While it is key to reach stakeholders through social media to communicate recent news and events, our website has to be current and dynamic in order to provide detailed information for those who follow the posts.
- The subcommittee created and printed 5,000 sustainability brochures highlighting information from our Campus Sustainability Plan, LEED certifications, sustainability student programming and other academic and institutional recognitions. These brochures have been distributed to key community accessible sites on the campus such as the Alumni House, Visitor Center, Cheadle Hall and Campbell Hall. These brochures were also included in the freshman packets distributed by Orientation Programs in the Resident Halls and at community sustainability events. The

subcommittee is looking to create more brochures targeted to specific audiences (such as students, donors, and local community members).

- The Communications team partnered with Orientation staff to ensure that visitors to campus are informed of our sustainability achievements.
- The subcommittee assisted with participation in various local events including the South Coast Sustainability Summit, Earth Day, All Gaucho Reunion and Spring Insight. Fliers, posters, and sustainability reusable bags have been created for promotional purposes. We hope to increase internal and external communication with our university and local community and promote our website for more detailed information. New posters have been created for the green message boards around campus, primarily geared towards increasing student education and involvement in sustainability.
- Developed reusable bags with Sustainability logo for "All Gaucho Weekend."
- UCSB Associated Students began implementation of the Green Bill within both the legal and financial codes. Student boards, committees, and commissions in AS now have sustainability policies in place.
- Communications staff worked on a sustainability PR campaign that will begin in fall 2012. For the first time in its history, this group will have a budget to support the campaign efforts.

Food Subcommittee

- The CSC decided to adopt a food subcommittee for the 2011-12 year to address communication and policy issues around promoting access to sustainable food on campus. The subcommittee now meets quarterly to discuss green business certifications, the opening of Root 217 (a natural foods eatery run by UCen Dining), the Residential Dining Strategic Plan, as well as discuss options for eliminating Styrofoam on campus and encouraging the adoption of compostable service ware at eateries on campus. The campus currently spends 41% of its food budget on local/organic food products.
- Associated Students initiated the green chef competition.
- Associated Students launched the food bank.

Residential Dining:

- STARS - During the 2011-2012 academic year, Residential Dining reported sustainable purchases for STARS. Sustainable purchases were determined by identifying items that were local (within 250 miles from campus). The following graph illustrates our sustainable purchases for the STARS report. The graph shows that 50% of total purchases are locally grown or distributed.
- All four dining commons achieved green business certification in 2011/12.
- Each dining commons now receives individual data reports on their utility usage compared to their meal counts (electric, gas, water, and waste).
- Over 78% of produce purchases are grown and distributed within 250 miles of campus. 44 sustainable farms (whose produce is grown organically and/or without sprays or pesticides) are within 150 miles of campus. Over 26% of RDS produce purchases are local and sustainable within 150 miles.

% Sustainable Food Purchases for Residential Dining Facilities



- Educational Events:
- Sustainability Week -- October 24-28, 2011
 - Activities, contests, education materials, and demos were provided over a period of five days, with a different theme each day. Menus focused on local and climate-friendly options. A seasonal calendar was used (that was developed from strategic outcomes) to incorporate seasonal foods. Topics included: water conservation and composting, climate friendly menus and sustainable seafood, local and seasonal produce, recycling and energy efficiency, alternate transportation, and green chemicals.
- Sustainable Seafood Day -- January 25, 2012
 - Activities, education materials, and demos concentrated on sustainable fish choices that specifically focused on *Monterey Bay Aquarium Seafood Watch*.
- Nutrition Week -- March 5-9th, 2012
 - Activities, contests, education materials, and demos were provided over a period of five days, with a different featured food category each day that focused on nutritious and environmentally friendly meals. Food themes were: Fruits and Vegetables, Lean Protein, Whole Grains, Low Fat Dairy, and Healthy Oils. The event corresponded with the *Academy of Nutrition and Dietetic (formerly ADA): Nutrition Month, Get your Plate into Shape*.
- Earth Day -- April 19, 2012
 - Climate friendly menus served all day at all four dining commons. Education material and demos featured in all dining commons.
- Green Mondays (three days per quarter)
 - Vegetarian menu served all day at one dining commons. Residential Dining's Environmental Interns, Residential Halls Association (RHA), and Environmental Affairs Board (EAB) tabled during each Green Monday to provide educational material and to answer any questions or concerns.
- 'DigiKnow' digital slide show presentations (multiple media screens in all dining and housing areas) and weekly postings on RDS 'Facebook' page promoted all the educational events.
- Tasting Tables- Executive Chef performed weekly tasting tables featuring sustainable and seasonal foods.

UCen Dining Services

The UCen Dining Services is a retail entity at UC Santa Barbara consisting of Central Production, Catering, nine dining units, and nine leased tenants. Statistics for UCen Dining are as follows:

- \$5.8M Operating Budget; Self-Operated;
- \$2.5M in Food Purchases.
- Facilities include: 4 Convenience stores, 5 Cafes, Campus Vending, Catering, Central Production, and 9 leased operations (Panda Express, Rice Garden, Woodstocks, Dominos, Jamba Juice, Wahoo's, two Subways, and a local German Food Concept.
- 7,000 served daily

- UCen Dining achieved 35% sustainable food and non-food purchases for fiscal year 2011/12. By category, the largest food groups that met sustainable criteria were Coffee, Produce, and Bread.
- UCen Education
 - On our prepared goods, sold in convenience stores and cafes, we note organic, cage free, natural, etc. on our labels. We also denote these items on our salad bar. The largest space for educating consumers about our food purchasing is in Root 217, our sustainable food operation. We have two slate boards on either side of the order window where we write comments as it relates to our purchasing decisions. We also have 4-foot banners outside this unit that are used for sharing photos and biographies of our local sustainable farmers and vendors.
- UCen Sustainable Operations
 - Seven of our retail units are Santa Barbara County Green Business Certified and by fiscal year end, 2013, the last two will be certified as well. We also have the distinction of having one completely sustainable operation, Root 217. A new self-op concept consisting of grass-fed beef burgers, free range chicken and sustainable caught fish, this unit sells only products that fall under the sustainable criteria. This unit won the Best Practices Award at the CHESC conference this past June and has been featured in two trade journals; "Food Service Equipment" and "Foodservice Director's Magazine."

Transportation Subcommittee

- The transportation subcommittee drafted a memo, approved by CSC in June of 2011, to encourage funding of alternative transportation (alongside parking garage debt) to be included in the next round of price increases to the campus parking rates. The subcommittee discussed the possibility of a tiered parking rate structure. It has been noted that there are various committees that oversee parking/alternative transportation planning and funding. The subcommittee encourages various transportation and parking groups to work under one umbrella committee, but withheld moving forward with this recommendation until parking rates are increased. The subcommittee did not want to exacerbate the perception that parking rate increases are solely tied to funding for alternative transportation. Consolidation of transportation groups may be pursued after parking rate increases are implemented.
- The subcommittee provided revisions to the Transportation survey administered annually each March.
- The subcommittee evaluated various videoconferencing proposals from Citrix Systems and WebEx. Encouraging the use of videoconferencing could save the campus costs in travel expense and time and would significantly help decrease our overall campus GHG emissions. Emissions from business air travel account for roughly 25% of total emissions. There were discussions of piloting "free" licenses to the Academic Senate to reduce travel to gather more data for campus-wide implementation. No formal plan has been adopted, but the continued evaluation of reducing air travel is essential in reaching our climate goals and allowing us to provide services outside normal business hours.
- During the 2011-12 year, the alternative transportation committee provided updates to the Climate Action Plan, Alternative Fuel vehicle practice, and Campus Sustainability Plan.

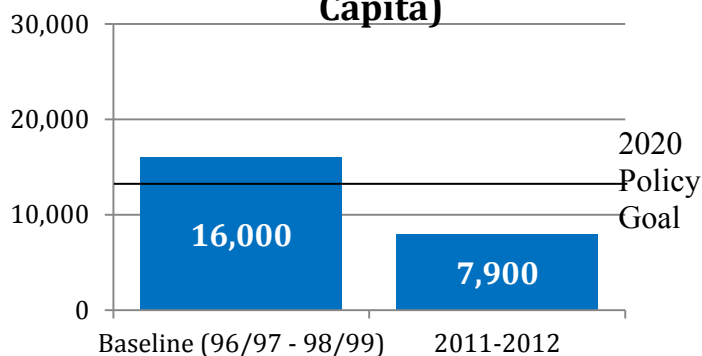
Water Subcommittee

Potable water use at UCSB during Academic Year 2011/12 decreased for the fourth year in a row, and total water use per person was the lowest on record. This trend can be attributed to a number of conservation measures, including the extension of municipally-supplied reclaimed water infrastructure. Reclaimed water now accounts for approximately 90 percent of irrigation water applied on the main campus and 23 percent of total water use. Additional water conservation measures implemented this year include installation of high-efficiency water fixtures in residence halls, dining commons and academic buildings. Initiatives in development include further reclaimed irrigation infrastructure extension, sprinkler head conversion, DI water system renovations at Engineering Sciences Building (ESB) and CNSI, replacing water fixtures in state-funded academic/administrative building restrooms, and a baseball stadium water fixture retrofit.

In FY 11-12 campus consumed 7,900 gallons of potable water per capita. This is a 51% reduction from our three year baseline, enabling us to surpass the 2020 policy goal of reducing potable water consumption by 20% below the baseline.



Potable Water Consumption (Gallons per Capita)



The water subcommittee focused on proposing and implementing five projects around the Psychology Building resulting in reduced potable water use.

- Extending the Central Irrigation Control System (\$9,000). This project will extend the central irrigation control system to cover CNSI, Life Sciences Building, the Psychology building and the Student Resource Building for more efficient irrigating. Extending the smart sprinkler system will mitigate over-watering. The project could save 2,613 gallons of water per day.
- Smart Water Use Project (\$4,500). This project will update current sprinkler infrastructure on the West Campus grounds and launch an educational campaign to inform campus staff, faculty, and students about the environmental impact of water use. The Smart Water Use Project will replace 435 Sprinkler Heads with MP Rotator heads, saving up to 30% of water used by the current sprinklers.
- Aerator Retrofit Program (\$4,136). This project will add aerators to the least efficient faucets in 14 campus buildings in order to reduce water flow and thus usage. The project will result in an estimated savings of nearly 1 million gallons of water annually.
- Recycling the Brine from Campus Reverse Osmosis Systems (\$3,555). Currently, the Reverse Osmosis (RO) system at the Engineering Sciences Building (ESB) creates reverse osmosis water and reverse osmosis process water at the ratio 1:1. At present, ESB produces around 50,000 gallons per month of RO water resulting in an equal amount of reverse osmosis process water flushed down the drain. The project aims to capture that process water in a storage reservoir and pump it back into the building, effectively recycling water. This project will save at least a half million gallons of water annually.

Additionally, three more water projects have been awarded in the 2011-12 TGIF cycle. These projects include:

- UCSB Hydration Stations (\$22,250). TGIF has funded 22 hydration stations, where students can fill their reusable bottles with filtered water. This is part of a larger effort to install 45 of these filtered water stations at locations throughout campus. By offering convenient free filtered water, this project aims to drastically reduce the need for single-use plastic water bottles on campus and yield energy savings from eliminating chillers in each water fountain.
- Water Conservation Dual Flush Valves/Low Flow Urinal (\$16,325). This water conservation project will install 200 dual-flush valves for toilets and half-flush handles for urinals in 10 student support buildings going through the LEED for Existing Buildings certification process. The efficient fixtures save up to 50% of water per flush as compared to the current valves. These new fixtures will help the campus achieve further water reduction goals.
- Water Action Plan (\$8,861). UCSB Bren students will collaborate with campus staff to develop a comprehensive Water Action Plan for the campus. Students will collect and analyze water data and provide recommendations to the campus on how to maximize water use efficiency. The plan will include total reduction targets for water use, along with mitigation measures for improvements. The Water Action Plan is intended to be a model for other universities looking to achieve water reduction targets.

ACADEMIC SENATE SUSTAINABILITY WORK GROUP

- Implemented the first group of Chancellor's Sustainability Interns (CSI). Our Campus CSI team assessed landscape types on the campus and compared their pros and cons, environmentally and economically. The students presented their work at the CHESC 2012 at UC Davis.
- The Student Sustainability Champion: This student, working with Eric Matthys, completed an educational video on energy auditing and developed a green guide to student organizations. The video will be used by PowerSave Green Campus Programs around the country.
- Completed our second round of the UCSB Sustainability Champion Program.
- Launched the Green Leaf Grant Awards Program for faculty seeking to integrate concepts of sustainability into their courses, and awarded four faculty grants.
- Developed a website highlighting the complete inventory of sustainability research at UCSB.
- Inventoried UCSB's course offerings to assess the number and breadth of sustainability courses on campus.
- Through the UCSB READS project hosted by the Library, assisted in the distribution of 2,500 free copies of *"Moby Duck, The True Story of 28,800 Bath Toys Lost at Sea and of the Beachcombers, Oceanographers, Environmentalists, and Fools, Including the Author, Who Went in Search of Them,"* by Donovan Hohn. The UCSB Reads program brought the UCSB library together with libraries of neighboring schools and our community libraries to consider the role of plastic in our environment, and particularly in the oceans.
- UCSB Economics Graduate Students partnered with Undergraduate Researchers to launch a study of which communication tactics best encouraged composting practices in UCSB Housing.
- UCSB EAOP and Sustainability launched a program to train at-risk high school students in sustainability, exposing them to green academic and career pathways. In this partnership with the La Cuesta Continuation School, 40 students were trained.

SUSTAINABILITY CHANGE AGENT TEAMS

Energy Team

Dozens of energy efficiency projects were implemented through the Strategic Energy Partnership (SEP). UCSB has committed approximately \$17 million in energy projects for the current three-year period (2010-2012). Projects focus on lighting and HVAC retrofits as well as Monitoring Based Commissioning. Since 2004, UC Santa Barbara has implemented \$22.0 million worth of energy conservation projects. Electric and natural gas utility companies which serve the campus have provided a combined \$5.8 million in incentive funding for these projects and the cumulative energy savings yielded are estimated to be \$3.0 million per year. SEP has been in place for eight years (2004 -- 2012) and the campus is working to extend the program through 2016. In 2012 the campus installed a 200-kW fuel cell (serving power to IV). In order to track usage, twelve campus buildings were outfitted with smart WHAT meters.

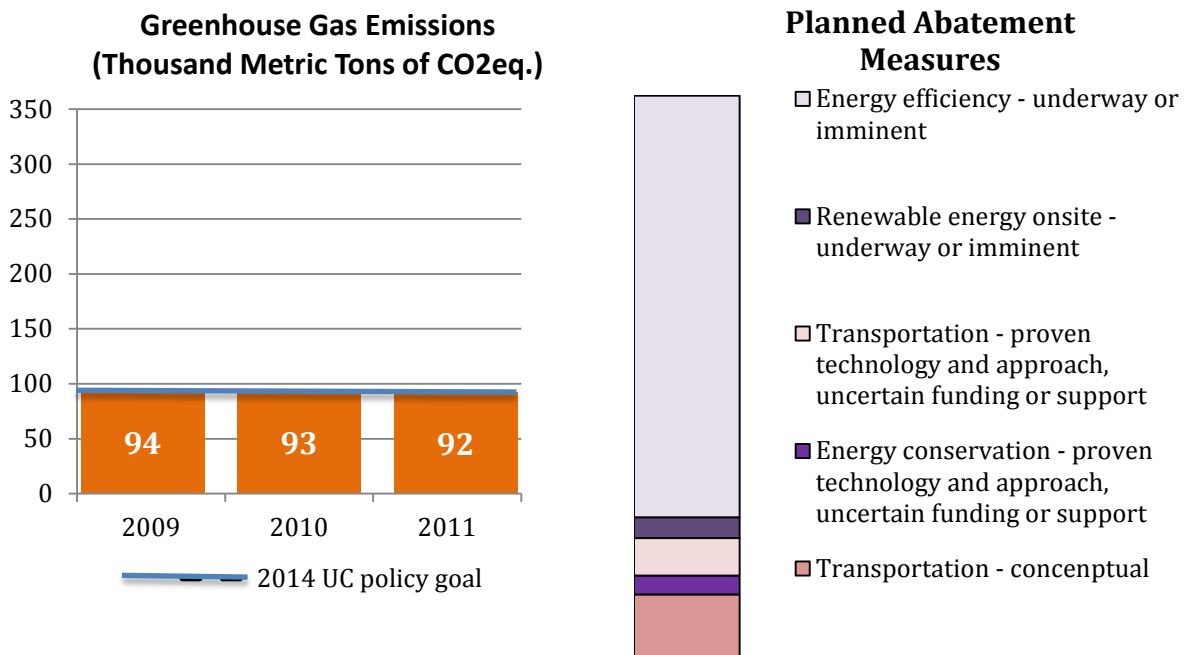
- In the 2010-11 annual energy and utility report, the campus has decreased its per-square-footage electrical consumption by 30% and its natural gas consumption by 17% since 1998. Though the campus has made great progress on a square footage basis, we have increased the campus square footage and need to address our total electrical and natural gas consumption in order to meet our greenhouse gas reduction goals.
- UCSB owns nine installed on-site solar PV systems, ranging in size from 2kW to 155 kW DC. The aggregate capacity of these systems is 255 kW DC.
- The Green Campus group, partnering with Housing and Residential Services, recently won an award for the Hall Energy Competition - "Educational Outreach" component -- from the Alliance to Save Energy.
- Achievement of 2014 GHG Reduction Target (2000 Levels); four percent reduction in total main campus electricity consumption over past two years.
- Absolute reduction in natural gas consumption over past year.

Accomplishments in 2011/12:

- Updated Climate Action Plan (CAP) with significant focus on academics and research.
- Achieved 2014 GHG Reduction Target (2000 Levels); 4 percent reduction in total main campus electricity consumption over the past two years.
- SEP highlights - \$12.5 million invested in energy projects during the current program cycle has resulted in:
 - A projected nine percent absolute reduction in electricity usage yielded by current program cycle energy projects.
 - A projected seven percent absolute reduction in natural gas usage yielded by current program cycle energy projects.
 - Over \$1 million annual utility savings yielded by current program cycle projects.
 - A four percent reduction in GHG emissions yielded by current program cycle projects.

SEP Project Summary:

- Fourteen lighting upgrade projects (total investment, approximately \$2.3m).
- Eleven HVAC upgrade projects (total investment, approximately \$7.8m).
- Eight Monitoring-Based Commissioning projects (total investment, approximately \$2.1 million).
 - Absolute reduction in natural gas consumption over past year.
 - Smart meter installations at twelve campus buildings.
 - Installation of a 200-kW fuel cell.
 - Completed design of the student funded REI solar array for parking lot 22, expanding our on-site PV generation to ~200 kWh.

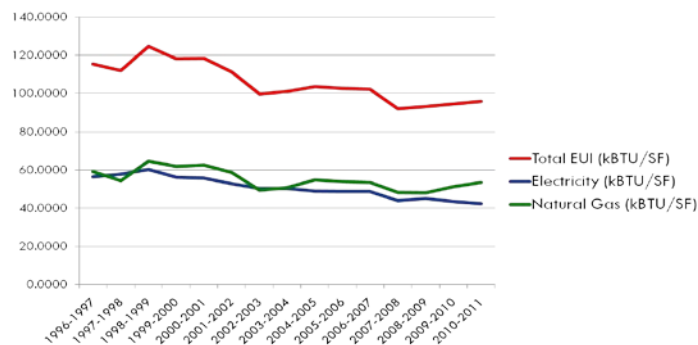


Awards/Grants:

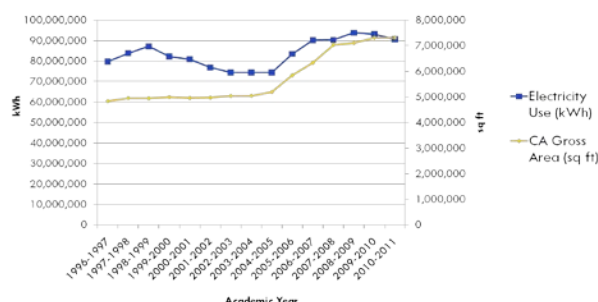
- Facilities Management collaborated with faculty member Igor Mezic of the Institute for Energy Efficiency to pilot advanced building energy modeling and visualization approaches in campus facilities.

Energy, Natural Gas and Water Historical Data

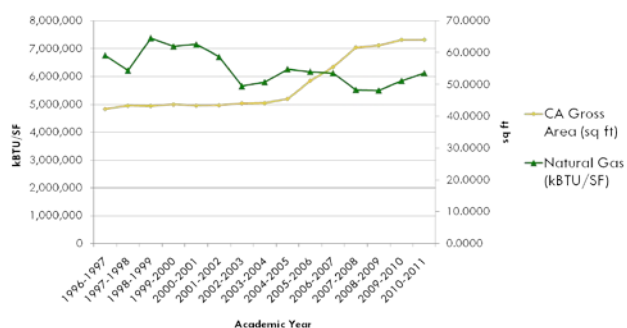
Energy Use by Type per Square Foot



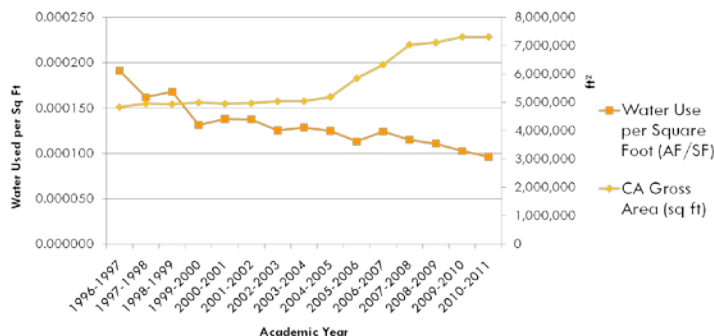
Campus Growth vs. Electrical Consumption



Campus Growth vs. Natural Gas Consumption



Campus Growth vs. Water Use per Square Foot



Labs, Shops, Studios

- LabRATS partnered with a student group from the UCSB Writing Program to develop a marketing plan for the rebranding of the assessment program and a new name for LabRATS (Laboratory Resources, Advocates, and Teamwork for Sustainability). It was decided to retain the name LabRATS and new a new logo was developed.
- Hosted a demonstration of a motion activated fume hood sash closing system. Attendees included campus stakeholders in Facilities Management, as well as researchers, lab managers, and building managers from five science/engineering departments, and the College of Letters and Sciences.
- Designed and secured stakeholder approval for a new laboratory recycling program with collaboration with Environmental Health & Safety, MarBorg, LabRATS, Custodial Services, and more than fifteen lab and building managers.
- Presented at Labs21 Conference in Oct 2011 ("Eliminating the Vicious Cycle of Uneducated Occupants").
- Presented in a special waste webinar, "Special Concerns in Recycling - Lab & Hospital Waste."
- Presented our Intro to Lab Buildings Lecture and related material to Physics, Mechanical Engineering, Materials, Electrical Engineering, and Writing Program classes.
- Featured in an article on surplus chemical programs in the Journal of Chemical Health and Safety, Volume 19, Issue 1, January--February 2012, Pages 12--22; "Secrets revealed: Chemical surplus sharing at colleges and universities."
- Initiated a partnership with Art Studio and established a list of potential campaigns and projects for the next year.
- The newly implemented UCSB Green Building practices include meeting the prerequisites for Labs21 environmental performance criteria and LabRATS representation on all building committees for laboratory buildings.

- Published paper in collaboration with The Department of Energy, Lawrence Berkeley National Laboratory, and UC Davis on fume hood sash closure stickers: "Fume Hood Sash Stickers Increases Laboratory Safety and Efficiency at Minimal Cost: Success at two University of California Campuses" http://www1.eere.energy.gov/femp/pdfs/sash_stickers_cs.pdf
- Referenced in an Article in the Scientist Magazine July 2011: "How Green Is My Lab?" <http://the-scientist.com/2011/07/01/how-green-is-my-lab/>
- Motivated a boiler replacement in the Marine BioTech building following a LabRATS assessment of the Waite lab.
- Provided advice, consultation, and/or best practices to several universities and other groups: Johns Hopkins University, HOK, Iowa State University, University of Colorado Boulder, University of Toronto, and Cornell University.
- In partnership with other campuses, increased growth of activity on the GreenLabsPlanning Google group with 126 total members (55 new in the last year), representing universities across the United States. More than 31 universities are represented and some additional institutions such as the US Army, Practice Greenhealth, the Department of Energy, and several companies.
- Organized a 1.5-day national lab management workshop in concert with the National Science Foundation and UCSB Materials Research Laboratory, with more than 30 institutions represented, and created a listserv for further collaboration among colleagues.
- Presented to the Academic Senate Council on Research and Instructional Resources (CRIR) and secured a promise of their endorsement of LabRATS to Departments and Faculty upon LabRATS rebranding.

Landscape/Biotic Environment

- Provided a presentation at the October Sustainability Summit on Water Quality Benefits associated with treatment wetlands, bioswales, etc.
- Provided a presentation at the Sustainability Conference in Davis on June 19 on North Campus Faculty Housing Stormwater management and LEED features with Jordan Sager.
- Received grants towards improving the degraded habitats interfacing between CCBER Natural areas and Campus:
 - Wetland Recovery Project Grant - \$30,000 - Northern Shore of Campus Lagoon,
 - \$36,000 towards West Campus Bluffs Restoration from Goleta Valley Land Trust,
 - \$30,000 from Coastal Fund to support student interns, signage, and restoration.
- Interpretive signs completed (soon to be installed) at San Clemente Restoration Project, Manzanita Restoration project and San Nicolas wetland projects
- TGIF Grant of \$28,000 to support installation of a second 4kW system on CCBER roof so that CCBER operations are 50% supported by the sun.
- Completed installation of the Campus Point Coastal Access Stairway - a \$300,000 project with funds from Coastal Fund, Coastal Conservancy and several campus entities.
- Partnered with Housing and Residential Services on two landscaped areas that were converted to native plants: Manzanita West (end of Ocean Road) and San Nicolas Wetland Overlook Park, adjacent to Lot 5.
- CCBER's North Campus Faculty Housing Project Phase I restoration and the San Clemente Housing Restoration Projects won awards from Goleta Valley Beautiful in June 2012 for Sustainability and Restoration Categories.
- CCBER, FM and Housing provided support and guidance for the Sustainability Interns to evaluate the sustainability of landscapes on campus, design interpretive signs, and conduct a survey of attitudes. The Sustainability Interns partnered with many other students and presented their findings at the Higher Education Sustainability Conference at UC Davis.
- Held CCBER Seminar class focused on community use and awareness about our open spaces. From those surveys, CCBER has decided to increase outreach about the Campus/CCBER commitment to management of open space areas and provide more information, and increase opportunities for internships.

- Continued with partnerships between Housing and FM to manage natural resources, access and sustainability on Campus.
- Held a strategic planning assessment meeting and will be developing a proposal to work with FM on assessing a vision for the 'Green award' through campus relative to opportunities for restoration, access, and buffers.
- Collected baseline data on:
 - Irrigation water type (reclaimed vs. potable) and use (quantity) by area type (lawn, landscaped areas, native or natural areas)
 - Energy usage (gasoline and other fuels) by Housing, FM, and the Cheadle Center for Biodiversity and Ecological Restoration (CCBER) by area (lawn, landscaped areas, native or natural areas)
- Encouraged and supported student and intern projects to evaluate sustainability of landscape practices such as turf versus artificial turf, reclaimed water benefits and impacts, total landscaping water use assessment and rainfall storage options.
- Developed and installed interpretive signage for bioswale, wetland restoration and the use of reclaimed water on campus (an ongoing project).
- Enhanced the success of native species on the campus periphery through ecological restoration.
- Created wildlife habitat for native species in the campus periphery.
- Developed an effective composting program for all campus clippings, shredded trees, etc., returning nutrients to the soil.
- Commenced a renewal of campus stormwater infrastructure (stage one) that passes central campus drainage through a centrifugal drain system before discharging the low flow filtered water into wetlands adjacent to the lagoon.
- Developed bioswales in several areas of campus soil (Manzanita, San Clemente Housing Project, Library corridor, San Nicolas wetland) to percolate water directly back into the soil.
- Established the first permeable pavement on walkways in the main axis of the campus (Library corridor).
- Developed xeriscaping or ambient water-use non-native plantings in central areas of campus.
- Reduced the use of annuals for color on campus, selecting instead water-efficient perennials.
- Reduced the presence of maintenance-intensive hedges, and as a result, made groundskeeping more ergonomically friendly.
- Upgraded information for our two weather stations.

Procurement:

Significant steps have been taken to reach the goal of implementing a procure-to-pay system that integrates campus procurement and accounting processes while offering efficient controls (Gateway and PaymentPLUS). The procurement system currently being implemented, Gateway (a SciQuest product), will expedite the procurement process and increases administrative capacity to capture data, monitor purchasing behavior, analyze business flows, and direct customers toward designated suppliers providing sustainable products. Opportunities for integrating an electronic procurement system include:

- Online vendor catalogs and web portals.
- Standardized commodity coding across campus and UC system.
- Fully integrated online systems: Campus (PeopleSoft), UCOP, vendors, etc.
- Ability to track supplies in order to insure full utilization across campus via an integrated supplies inventory system.
- Ability to direct spend to more sustainable options.
- Via funds provided by TGIF, Bren students partnered with Purchasing and departmental-level staff to work toward "Greening the Gateway."
- The Surplus Inventory Program (funded by TGIF) website is up and running, allowing unused equipment and supplies to be shared across campus <http://surplus.icess.ucsb.edu/>. This program partnered with the first Campus Cleanup Day, encouraging campus departments to recycle unwanted materials, equipment and furniture in order to both decrease the purchase of new items and to allow departments the ability to increase space utilization through purging unused items. Administrative

Services and the Executive Vice Chancellor's Office anticipate the Campus Cleanup Day will be an on-going event.

- 312 excess chemicals have been shared through a collaborative program built by Environmental Health and Safety and LabRATS <http://sustainability.ucsb.edu/LARS/programs/adopt.php>
- In keeping with the interim Sustainability policy, recycled content paper use has increased. Eighty-five percent of the paper purchases through Central Stores have 30% or more recycled content (over 7% containing 90%-100% recycled content).
- Green Seal certified products accounted for 43.5% (\$52,762 of the total of \$121,241) in chemicals the Storehouse sold (primarily to FM) in fiscal year 2010/11.

Waste:

- In December of 2010, the campus finalized a new waste hauling contract with MarBorg Industries. This includes agreements to:
 - sort all campus waste including re-sorting of mixed solid waste to capture additional recyclables;
 - collect all food scraps for industrial composting;
 - install 30 subterranean green waste bins.
- To supplement our improved waste hauling contract, CSC discussed and voted to implement a standardized campus recycling plan that will ensure consistent categories for recycling and associated signage, both outside and within buildings. One hundred new recycling bins were deployed with associated signage for landfill, recyclables, office pack and electronic waste. Student Affairs, with the support of The Green Initiative Fund is currently purchasing dozens of new recycling containers in conjunction with the LEED EB/OM certification of ten student service buildings.
- The Change Agent Team drafted a Waste Diversion Plan in the summer of 2012 that included strategies to achieve our UC system wide waste diversion targets of 75% by 2012 and zero-waste (95% or better diversion) by 2020. Campus staff has been developing a method to efficiently document all recycling and reuse efforts to capture an accurate assessment of the entire campus. There are many departments and organizations that have implemented recycling, reuse and composting programs which have yet to be documented. The campus reported diverting 62% of its waste from the landfill in 2010-11. Since the fall of 2011, recycling staff have strategized ways to increase our diversion rate, primarily through improving data collection. The previous reported numbers did not account for resorting of mixed-solid waste, a stipulation in our new waste hauling contract. Based on a new waste audit, our new diversion rate is estimated to be 71%. Our campus goal is to reach 75% by the end of 2012. We plan to reach this goal through the following strategies:
 - implement recycling programs in eleven lab buildings, which previously had none due to needle contamination concerns;
 - include cans and bottle weights collected by A.S. recycling;
 - include weights from new composting programs (seven composting programs total);
 - capture weight estimates for reused and resold items through Central Stores;
 - capture weights from campus housing move-out donation programs;
 - develop a method for capturing food reduction programs. Trayless residential dining was implemented in 2009 and led to a 54% reduction in food waste.
- The Waste Team has introduced new programs and practices:
 - "UCSB Reuses" -- Facilities Management
 - "UCSB Grounds to Grounds" -- Facilities Management Coffee recycling
 - Compost Pilot Project
 - Family Housing Compost Program
 - Plastic Pollution Coalition -- UCSB Chapter
 - The Three C's (Communication, Collaboration, and Connectivity)
 - Implemented waste management infrastructure upgrades
 - Distribution of over 40 new Office Pack Slim Jim Bins
 - New office pack signage developed specifically for Slim Jim Bins

- Four commingled and four landfill solar compactors. Pairs of one commingled and one landfill are located at The Arbor, Coral Tree Café, Courtyard Café, and The Store at Buchanan Hall
- Food waste/compost compacts will be placed with the existing commingled and landfill compactors at each of the aforementioned places
- Deployment of 12 additional cerulean blue commingled recycling bins
- Removal of 21 damaged QuickCrete landfill bins
- Received two grants:
 - TGIF Grant Compost Pilot Project (Winter 2011)
 - TGIF Grant for Compost Pilot Project -- Phase II (Spring 2012)
- In the fall of 2009, Housing and Residential Services (HR&S) piloted the De La Guerra Composting Project resulting in a 90% reduction in food waste. Since the results were exceptional, HR&S has expanded the pre- and post-consumer compost program to all four dining facilities. Beginning in the fall of 2011, the University Center has introduced post-consumer composting on the first floor. This effort was coordinated with the launch of Root 217, an in-house sustainable natural foods eatery on campus. All post consumer food and service ware from Root 217 and Wahoos Fish Tacos can be composted. The University Center will likely introduce composting to Romaine's in the coming months. Additionally, students have organized The Campus Compost Pilot launched in the winter of 2012 with the support of The Green Initiative Fund, A.S Recycling and the Plastic Pollution Prevention Coalition providing six locations on the main interior campus to throw away food scraps. The purpose of the compost pilot is to educate students about composting and support the University Center in its effort to change all eateries over to compostable service ware. In total the campus has seven composting programs: Residential Dining Services, University Center, Ellison Hall, Bren, Family Housing, Campus Compost Pilot, and A.S. Worms.

As the CSC looks to the 2012/13 academic year, we will continue to encourage and coordinate the efforts of our faculty, staff, and students who are the front line of “making a difference” by their actions and efforts. The committee will also focus on larger strategic planning goals, particularly involving energy, water and travel. Working with all sectors of the campus community, we look forward to helping UC Santa Barbara maintain its visionary leadership in developing sustainable practices on and beyond campus.

With our best wishes,

Ron Cortez

Co-chair, Sustainability Committee

Associate Vice Chancellor, Administrative
Services

Bruce H. Tiffney

Co-chair, Sustainability Committee

Dean, College of Creative Studies
Professor, Earth Science

APPENDIX A

Chancellor's Sustainability Committee Roster 2010-11

Members:

David Auston	Associate Director, Center for Energy Efficient Materials
Henning Bohn	Chair, Academic Senate, Professor, Economics
Michael Chabinye	Associate Professor, Materials
Ron Cortez (Co-Chair)	Associate Vice Chancellor, Administrative Services
Paolo Gardinali	Staff Representative; Associate Director, Social Sciences Survey Center
Steffen Gauglitz	Graduate Students Association Representative
Bruce Kendall	Associate Professor, Bren School of Environmental Science and Management
Mel Manalis	Senior Lecturer, Environmental Studies Program
Joel Michaelsen	Professor, Geography
Britt Ortiz	Staff Representative; Director, Early Academic Outreach
Constance Penley	Co-Director, Carsey-Wolf Center for Film, Television and New Media; Professor, Film and Media Studies
Bruce Tiffney (Co-Chair)	Dean, College of Creative Studies; Professor, Earth Science
Colin Twohig	Associated Students Representative (EAB)
Abby Wolff	Associated Students Representative (Green Campus Program)

Ex-Officio:

Alan J. Heeger	Professor, Physics and Materials, Nobel Laureate in Chemistry
Walter Kohn	Research Professor, Physics, Nobel Laureate in Chemistry

Advisors:

Marc Fisher	Senior Associate Vice Chancellor of Administrative Services
George Foulsham	News Director
Maureen Lovegreen	Executive Officer, Geography

Staff:

Grant Keefe	Campus Sustainability Coordinator, Administrative Services
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Chancellor's Sustainability Committee Roster 2011-12

Members:

David Auston	Associate Director, Center for Energy Efficient Materials
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Michael Chabinyc	Associate Professor, Materials
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Britt Ortiz	Staff Representative; Director, Early Academic Outreach
Constance Penley	Co-Director, Carsey-Wolf Center for Film, Television and New Media; Professor, Film and Media Studies
Denise Stephens	University Librarian
Bruce Tiffney (Co-Chair)	Dean, College of Creative Studies; Professor, Earth Science
Colin Twohig	Associated Students Representative (EAB)
Abby Wolff	Associated Students Representative (Green Campus Program)

Ex-Officio:

Darlene Chirman	SUN representative, President, Santa Barbara Audubon
Alan J. Heeger	Professor, Physics and Materials, Nobel Laureate in Chemistry
Walter Kohn	Research Professor, Physics, Nobel Laureate in Chemistry

Advisors:

Marc Fisher	Senior Associate Vice Chancellor of Administrative Services
George Foulsham	News Director
Maureen Lovegreen	Executive Officer, Geography

Staff:

Jasmine Syed	Campus Sustainability Coordinator, Administrative Services
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Appendix B

Transportation and Sustainability Survey
Mini Reports and Commuter Mode Split Data

UCSB 2012 Transportation Study

Prepared fall 2012 in collaboration with the Chancellor's Campus Sustainability Committee, the Social Science Survey Center and Benton Survey Research Lab, and the Office of Administrative Services

This report analyzes data collected through a voluntary survey that was mailed to randomly extracted samples of UCSB faculty, staff, and students (graduate and undergraduate) during April 2012. Respondents were asked to report their daily commuting behavior about the first week of Spring Quarter. Some of the graphs also utilize historical data sets from previous transportation studies. The purposes of this report include: characterizing the commuting habits of UCSB's faculty, staff, and students; help UCSB estimate Average Vehicle Ridership (AVR) for UCOP reporting purposes; and helping estimate UCSB's scope 3 GHG emissions. Over time, consistent reporting of this data will be used to assess trends in the campus' commuting behavior and to determine the effectiveness of programs encouraging the use of alternative transportation among the campus community. As UCSB progresses towards its commitment to achieve the full potential of alternative transportation, the CSC notes a slight increase in faculty and staff car usage (53%, up two points from the previous survey but in line with the 2008 measurements). This figure is well within the margin of error and is still 2% less than what was reported in the 2010 survey. In addition, Student single-occupancy vehicle use appears stable at 7%. Although this is the same as what was reported in 2011, it is a 4% decrease from the 2010 results. Faculty and staff's substantial use of alternative transportation has remained relatively stable since 2006. Students' are more likely to use alternative transportation and their percentage of use is very high (84% in 2012). The only relevant variation from 2011 is due to the tracking of the Skateboard commuter group and by the slight increase (2%) of students who did not travel to campus. UCSB continues to investigate innovative strategies for promoting alternative transportation among its faculty, staff, and students as the campus strives to reduce its carbon footprint.

For additional information regarding the methods used to collect the data presented in this report please contact the UCSB Social Science Survey Center at sssinfo@survey.ucsb.edu or (805) 893-3887.

For additional information about UCSB's alternative transportation programs, please visit sustainability.ucsb.edu or contact UCSB Sustainability Coordinator Kate Kokosinski at kate.kokosinski@vcadmin.ucsb.edu or (805) 893-8367.

2012 Results:

Survey Response Rates: Faculty – 43%; Staff – 62%; Undergraduate Students – 18%; Graduate Students – 31%

Figure 3: Faculty/Staff Mode Split 2012

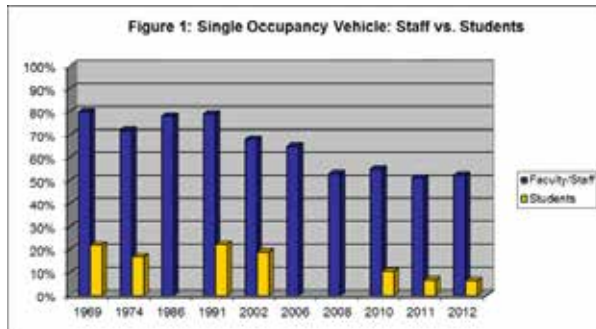
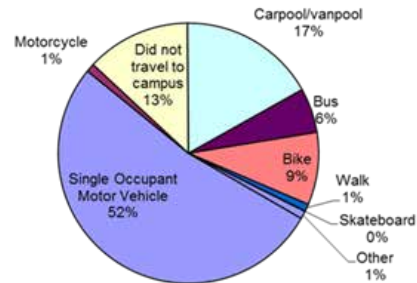


Figure 4: Students Mode Split 2012

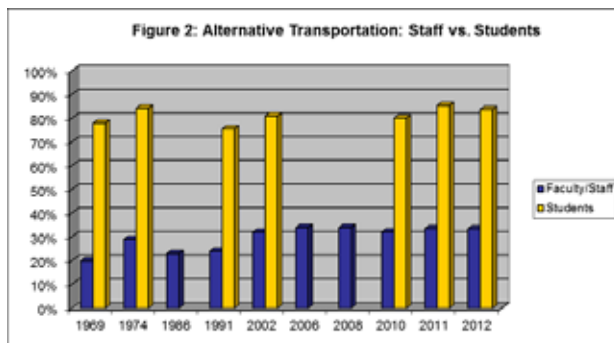
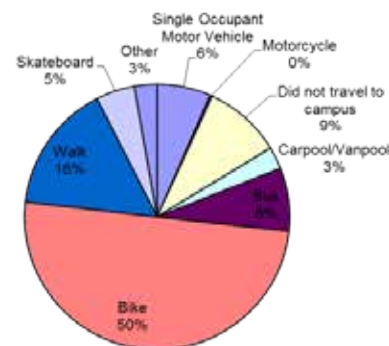


Table 2: UCSB Commuter Mode-Split Data (abridged, years 2006-2012)

Faculty/Staff	2006	2008	2010	2011	2012
Single Occupant Motor Vehicle	65%	53%	55%	51%	53%
Motorcycle	n/a	1%	1%	1%	1%
Did not travel to campus	n/a	11%	11%	15%	13%
Carpool/vanpool	17%	18%	16%	16%	17%
Bus	7%	6%	6%	6%	6%
Bike	9%	9%	10%	10%	9%
Walk	1%	1%	1%	1%	1%
Skateboard	n/a	n/a	n/a	n/a	0%
Other	n/a	3%	0%	1%	1%
Total alt transportation	34%	34%	32%	34%	33%

Students	2010	2011	2012
Single Occupant Motor Vehicle	11%	7%	7%
Motorcycle	1%	1%	0%
Did not travel to campus	9%	8%	10%
Carpool/Vanpool	4%	3%	3%
Bus	10%	7%	8%
Bike	46%	51%	50%
Walk	17%	18%	16%
Skateboard	n/a	n/a	5%
Other	4%	6%	3%
Total alt transportation	80%	85%	84%

UCSB 2012 Sustainability Study

Prepared fall 2012 in collaboration with the Chancellor's Campus Sustainability Committee, the Social Science Survey Center and Benton Survey Research Lab, and the Office of Administrative Services

This report analyzes data collected through a voluntary survey that was e-mailed to a random sample of UCSB academic members, staff, and graduate students during winter 2012. Academic members include faculty as well as post-doctoral fellows. The survey questions cover the following topics related to sustainability at UCSB: purchasing behavior, energy conservation and recycling, travel practices, landscaping preferences, and prevalence of sustainability-related research. Academic members travel the most for work, so their responses to the travel practices questions are shown below. In addition, academic members are more likely to pay more to protect the environment, than staff or graduate students. Finally, the survey questions related to research classify research related to sustainability as having sustainability as a component of a larger research project. Whereas, sustainability-focused research is classified as concentrating on a social, economic, and/or environmental dimension of sustainability or addressing sustainability challenges. In the full report, the results of this study have been compared with a previous survey, conducted in 2010, which was designed to assess and address sustainability opinions and practices.

For additional information regarding the methods used to collect the data presented in this report please contact the UCSB Social Science Survey Center at sssinfo@survey.ucsb.edu or (805) 893-3887.

For additional information about UCSB's sustainability program, please visit sustainability.ucsb.edu or contact UCSB Sustainability Coordinator Kate Kokosinski at kate.kokosinski@vcadmin.ucsb.edu or (805) 893-8367.

2012 Results

Survey Responses: 1178 respondents; 22% - academic, 50% - staff, 27% - graduate students, 1% - other

Purchasing Behavior – responding with regularly or occasionally:

- 80% used recyclable shopping bags
- 75% bought compact fluorescent bulbs
- 85% bought recycled products
- 79% bought environmentally safe household chemicals
- 64% avoided buying from harmful companies

Energy and Recycling

- 92% regularly turned off the lights when leaving a room
- 91% regularly used recycling bins
- 73% regularly used reusable drink containers
- 59% regularly turned off computers or electronics
- 55% regularly recycled electronics

- 53% regularly printed double-sided or on scrap paper

Travel practices

- 30% of academic members traveled for work about once per month
- 5% of academic members always used remote conferencing instead of travel
- 4% of academic members purchased carbon offsets when they traveled
- 38% of academic members supported policy that all air travel is charged a fee to fund teleconferencing equipment and technology

Landscape Values that should be prioritized

- 56% said campus landscaping should support native species
- 54% said campus landscaping should create healthy ecosystems
- 54% said campus landscaping should require few resources
- 44% said campus landscaping should prioritize aesthetics
- 29% said campus landscaping should prioritize recreational value

Sustainability Attitudes and Behaviors

- 27% strongly agreed that they would be willing to pay higher prices to protect the environment
- 27% strongly agreed that they would be willing to pay higher taxes to protect the environment
- 20% strongly agreed that they would be willing to accept cuts to their standard of living to protect the environment

Sustainable Food Practices

- 52% knew that reusable Eco-clamshell containers are available on campus
- 62% would be willing to pay more to purchase organic food on campus
- 30% would be willing to pay 5% more for organic food on campus
- 67% would be willing to pay more to have their food served in biodegradable packaging
- 26% would be willing to pay 6% more for biodegradable packaging

Sustainability Research and Education

- 18% of academic and graduate student respondents said they regularly conducted research related to sustainability
- 13% of respondents regularly conducted sustainability-focused research
- 51% of respondents believed it was very important for students to understand the relationship between their field of study and sustainability

UCSB 2011 Transportation Study

Prepared Spring 2011 in collaboration with the Chancellor's Campus Sustainability Committee, the Benton Survey Research Lab, and the Office of Administrative Services



This report analyzes data collected through a voluntary survey that was mailed to random samples of UCSB faculty, staff, and students during February 2011. Some of the graphs also utilize historical data sets from previous transportation studies. The purposes of this report include: characterizing the commuting habits of UCSB's faculty, staff, and students; identifying perceived barriers for utilizing alternative modes of transportation; and helping estimate UCSB's scope 3 GHG emissions. Over time, consistent reporting of this data will be used to assess trends in the campus' commuting behavior and to determine the effectiveness of programs encouraging the use of alternative transportation among the campus community. As UCSB progresses towards its commitment to achieve the full potential of alternative transportation, the CSC is pleased to note a 35% decline in faculty and staff's use of single-occupancy vehicles and a 68% decline in student use of SOVs over the past 20 years. Faculty and staff's use of alternative transportation rose 29% and students increased use of alternative transportation by 11% during the same time period. UCSB continues to investigate innovative strategies for promoting alternative transportation among its faculty, staff, and students as the campus strives to reduce its carbon footprint.

For additional information regarding the methods used to collect the data presented in this report please contact the UCSB Social Science Survey Center at ssscinfo@survey.ucsb.edu or (805) 893-3887.

For additional information about UCSB's alternative transportation programs, please visit sustainability.ucsb.edu or contact UCSB Sustainability Coordinator Jasmine Syed at jasmine.syed@vcadmin.ucsb.edu or (805) 893-8367.

2011 Results:

Survey Response Rates: Faculty – 77%; Staff – 45%; Undergraduate Students – 24%; Graduate Students – 35%

Figure 3: Students Mode Split 2011

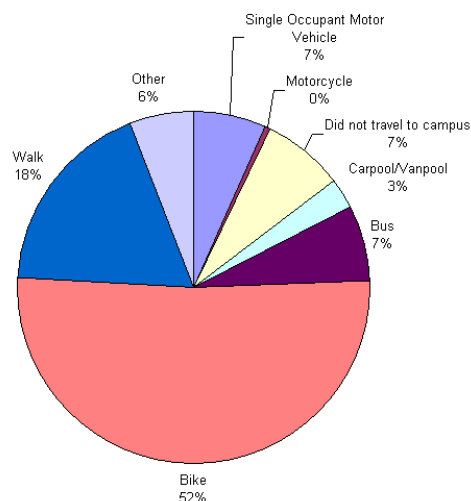


Figure 1: Single Occupancy Vehicle: Staff vs. Students

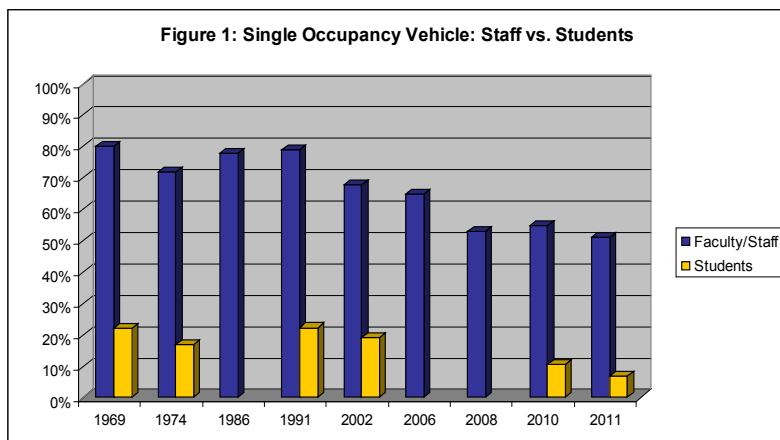


Figure 4: Faculty/Staff Mode Split 2011

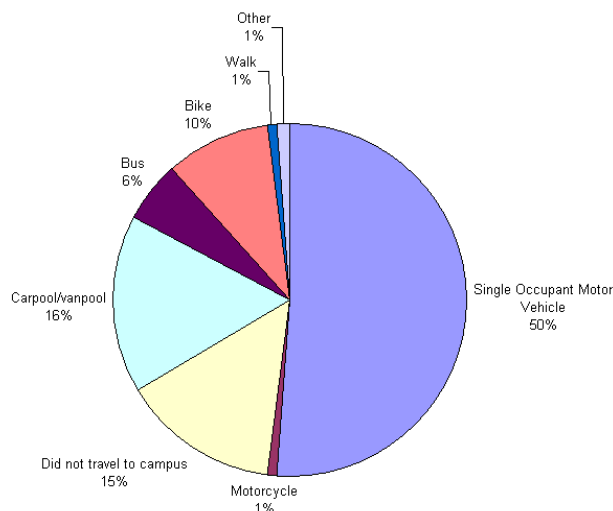
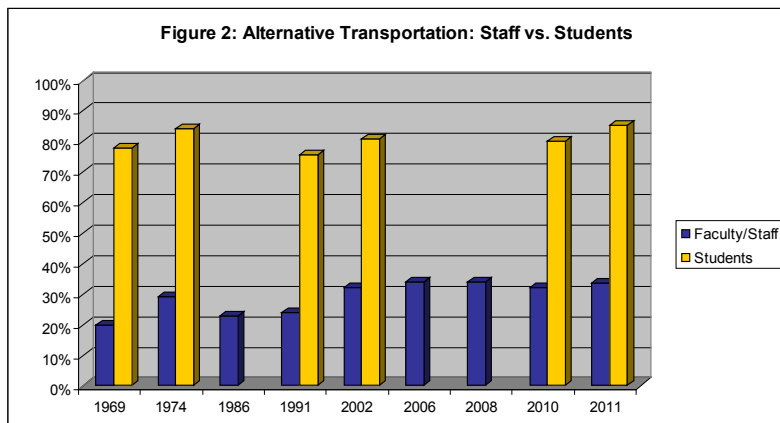


Figure 2: Alternative Transportation: Staff vs. Students



Appendix 1

UCSB Commuter Mode-Split Data : indicator data

Faculty/Staff	1986-87 (11)	1991-1992 (12)	Fall 2002 (13)	2006 (14)	2008 (18)	2010 (19)	2011 (20)
Single Occupant							
Motor Vehicle	78%	79%	68%	65%	53%	55%	51%
Motorcycle	n/a	n/a	n/a	n/a	1%	1%	1%
Did not travel to campus	n/a	n/a	n/a	n/a	11%	11%	15%
Carpool/vanpool	8%	12%	16%	17%	18%	16%	16%
Bus	4%	4%	5%	7%	6%	6%	6%
Bike	9%	6%	10%	9%	9%	10%	10%
Walk	2%	2%	1%	1%	1%	1%	1%
Other	n/a	n/a	n/a	n/a	3%	0%	1%
Total alt transportation	23%	24%	32%	34%	34%	32%	34%

Students	1991-92 (12)		Fall 2002 (17)		2010 (19)		2011 (20)	
Single Occupant								
Motor Vehicle	22%	4,130	19%	3,906		11%		7%
Motorcycle	n/a	n/a	n/a	n/a		1%		1%
Did not travel to campus	n/a	n/a	n/a	n/a		9%		8%
Carpool/Vanpool	3%	463	3%	617		4%		3%
Bus	5%	944	6%	1,234		10%		7%
Bike	53%	9,815	49%	10,074		46%		51%
Walk	15%	2,778	23%	4,729		17%		18%
Other	n/a	n/a	n/a	n/a		4%		6%
Total alt transportation	76%	14,000	81%	16,653		80%		85%

11 "Housing and Transportation Survey: Survey and Cross Tab Data." Santa Barbara, California: University of California, Santa Barbara, Office of Budget and Planning, May 1987.

12 "University of California, Santa Barbara, Student, Faculty, and Staff Housing and Transportation Survey." Ira Fink and Associates, Inc. June 1992.

13 UCSB Budget and Planning Fall 2002 Housing Survey Results for Primary Commute Mode.

14 2006 Faculty and Staff Housing Survey prepared by Institutional Research

15 To and From Campus: Changing Student Transportation Patterns. Prepared by Ira Fink. Berkeley, California: University of California, Office of the President, October 1974, p. 250.

16 University of California, Santa Barbara, Student Housing and Transportation Survey, Winter Quarter 1975, Unpublished Data.

17 UCSB Budget and Planning Fall 2002 Survey Results for Primary Commute Mode.

18 UCSB Budget and Planning Fall 2008 Housing Survey Results for Primary Commute Mode.

19 UCSB Social Science Survey Center Winter 2010 UCSB Transportation Study.

20 UCSB Social Science Survey Center Spring 2011 UCSB Transportation Study.

UCSB 2011 Sustainability Study

Prepared Winter 2011 in collaboration with the Chancellor's Campus Sustainability Committee, the Benton Survey Research Lab, and the Office of Administrative Services



This report analyzes data collected through a voluntary survey that was mailed to random samples of UCSB undergraduate students during March 2011. The survey questions cover the following topics related to sustainability at UCSB: purchasing behavior, energy and recycling, interest in sustainable food practices, interest in an environmental-related course curriculum and general opinions about the importance of campus sustainability. In the full report, the results of this study have been compared with a previous survey, conducted in 2010 by Professor Eric Smith and DR. Alisa Rod from the Department of Political Science in collaboration with the CSC, which was designed to assess and address sustainability opinions and practices.

For additional information regarding the methods used to collect the data presented in this report please contact the UCSB Social Science Survey Center at sssinfo@survey.ucsb.edu or (805) 893-3887.

For additional information about UCSB's alternative transportation programs, please visit sustainability.ucsb.edu or contact UCSB Sustainability Coordinator Jasmine Syed at jasmine.syed@vcadmin.ucsb.edu or (805) 893-8367.

2011 Results:

Survey Response Rates: 708 undergraduate respondents; 20% – freshman, 22% – sophomores, 30% – juniors, 28% – seniors

Purchasing Behavior- responding with always or occasionally:

- 81% purchased recycled paper and plastic products
- 58% purchased compact fluorescent bulbs
- 56% bought environmentally preferable detergent and cleaning solutions
- 49% avoided buying products from companies that may be harming the environment
- 47% used reusable shopping bags
- 39% have taken 1 or 2 courses related to or focused on sustainability
- 73% would support the creation of Special Subject Education Requirement for a course that includes one component for environmental and sustainability issues
- 26% indicated difficulty in finding sustainability related courses

Energy and Recycling

- 87% regularly turned off lights when leaving a room
- 52% turned off electric equipment when not in use
- 81% used recycling bins for plastic, metals, glass, paper and cardboard
- 33% regularly printed on double sided or scrap paper
- 24% recycled electronic equipment

Sustainable Food Practices

- 24% were aware of reusable containers on campus (eco clamshells), but 90% demonstrated some interest in using a reusable container
- 51% use a reusable mug or coffee container
- 54% would pay higher prices (5-10% increase) for food to be packaged in biodegradable packaging
- 54% would pay higher prices (5-10% increase) for organic food on campus

Environmental-related Curriculum

- 57% felt it is very important for students within their major to understand how sustainability relates to their field of study (only 10% claiming not important)
- 44% have never taken a course related to or focused on sustainability

Sustainability Attitudes and Behaviors

- 77% felt it is very important for the U.S.A. to address its impact on the environment
- 78% felt it is very important for CA to address its impact on the environment
- 73% felt it is very important for UCSB to address its impact on the environment
- 72% felt it is very important to address their own personal impact on the environments
- 21% strongly agreed with accepting cuts to standard of living to protect the environment
- 70% do not want to pay higher UCSB fees and tuition to help protect the environment

Media and Information

- 55% are interested in receiving updates about sustainability and environmental issues on the campus
- 51% indicated facebook as the best way for communication
- 39% indicated Daily Nexus as the best way for communication
- 24% indicated sustainability mailing list as the best way for communication

Appendix C: UCSB SEP Energy Projects and Carbon Reduction Summary: 2009 through 2012

Mark Peppers PE, 11-1-12

	SEP Financed SEP Submitted State Cost \$\$	Energy Grant \$\$	Payback Incl Grant Yr (2,3)	Total Savings Elect + Heat \$\$/YR	Electricity Saved KWH/yr	Nat Gas Saved Therms/yr	Demand Saved KW	Green House Gas Reduction CO2 Equiv. Metric Tonnes/Yr (4)
H3195 Add three 400 ton VFD Chillers at Bio2 9-30-09 Schm Design & Est from MEC 2-25-10 Form B Application to Sterret 11-1 Registered Project with SCE Online Application Tool 10-18-2011, Chiller Start-Up by March 2012 1-6-12 Chillers Installed, piped up 2-29-12 Chiller Start-Up starting monday 3-5-12. 3-6-12 Campus payment form received. 5-7-12 Bio chiller plant operating under JCI control, condenser deltaP transmitters ordered, Optimum not scheduled yet 5-22-12 At 1:40 PM Chiller plant producing 933 tons at 0.38 KW/Ton . Chiller 3 reporting 20% less compressor KW..... 6-5 \$4500 Neg Cont. to Goleta to install new CT drain pipe 8-2 P.Hasley to assist in energy results analysis 8-8 Mcquay on site this week to to adjust trip sensitivity to freon leaks from DX units & Low voltage. 10-5-12 Project Completion sent in	\$2,337,744	\$274,022	18.1	\$114,176	1,141,757	0	219	369
H4019 Santa Catalina Thermal Retrofit 9-15-10 Sent Form B for Thermal Upgrade, Elect Upgrade VFD, Thermal Solar & Boilers, Parking lot lights 11-1 Registered Project with SCE Online Application Tool 19,165 therm 41415 KWH saved 5-10-11 For Electrical upgrade: pool pump VFD's installed parking lot lights possible in 2012. For thermal upgrades pool solar thermal sytem installed, boiler in summer 2012 10-28 P Hassley lowered thermal savings 12-8-11 Notice needed by proceed by mid April 2012 1-17-12 Asked K. Brummel or energy analysis quote. 4-3-12 \$578K 2012 Est Proj Cost 10-15-12, Final report sent to Dirk	\$0 \$70,725	\$0 \$11,659	0.0 6.3	\$0 \$9,327	0 0	11,659 11,659	0 0	62 62
2012 Retrofit Financed Total	\$3,162,666	\$378,566	17.7	\$157,736	1,863,286	11,659	317	664
2012 Retrofit Submitted Total	\$3,323,478	\$458,848	14.6	\$195,656	1,863,286	11,659	317	664
"MBCx"								
H4021 Broida 10-12 MBCx 8-22-11 Campus payment form received 8-11-11 Imperial electric providing quote for HW pump & lecture Hall VFD installation. 3-12-12 \$118,000 expenditures as of 3-12 7-19-12 New motor & VFD installed on EF-3, Sndro prog 8-2 P.Hasley to assist in energy results analysis	\$465,000	\$230,815	2.4	\$96,173	961,731	0	194	311

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Mark Peppers PE, 11-1-12

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9-10-12 Project Completion to Dirk.								
H3054 Psychology 10-12 MBCx	\$184,496	\$58,513	5.2	\$24,381	243,806	0	28	79
1-25-10 Form C to Dick S., \$100K cost, 40,000 KWH/yr and 5000 therm/yr savings 2-11 \$15K Engr auth to Calif Spacecon for Insulation audit 9-22-11 S-1/RE-1 @ 60hz, 28.3/3.3 KW 12-8-11 Staring Metasys trends 3-12-12 Sandro/Dewey ordering lecture Hall p/e wireless T-stat for lecture Hall 9-11-12 Sandro/team focusing on Hot/Cold deck controls and Floor 1,2 conversion to VAV 10-4-12 Rich started CHW trends, preMBCx gas usage is erroneously low 10-26-12 Project completion to Dirk, no gas/chw savings								
H4022 Life Science 10-12 MBCx	\$176,000	\$128,789	0.7	\$69,523	364,225	41,375	42	338
8-22-11 Campus payment form received 4-7 Sandro/R Dewey making control changes. Form C: \$100K cost 250,00 KWH & 25,000 therm saved 3-12-12 Sandro wrote Neg Contract to Yjardley to recertify Phoenix zones lower minimum ventilation rate 6-5-12 Yjardley to adjust/fix Phoenix controls next week 6-18-12 MBCx work complete G/E usage trending on ltron 3 mo. trending required, starting earliest 7-15-12 9-14 Sent Project Completion to Dirk 9-28 SCE incentive check received								
H3037 Santa Rosa 10-12 MBCx	\$0	\$0	0.0	\$0	107,221	0	6	35
10-18-11 Mark S., now PM 1-17-12 Asked K. Brummel or energy analysis quote. 2-28, Bid Doc's being prepared 2-9-12 Send in Form C, \$2900 neg contract to Brummel Engr to do energy analysis 3-23-12 Form C sent to Dirk 5-7, ALRM to Diani Building 6-5 Notified housing, UCOP, AM, this is a 2013 rebate Jordan says elect meter installed, (2)gas meters installed 9-5 Mark R. sent Phillip 3yr trend of gas usage 10-30-12 Project completion to dirk, gas savings in 2013								
H3045 Ortega 10-12 MBCx	\$0	\$0	0.0	\$0	9,888	8,443	2	48
2013 report	\$85,000	\$10,816	9.6	\$7,743	9,888	8,443	2	48
9-15-11, Get meter readings submit Form C. Probably joint project with Santa Catalina 2-28, Bid Doc's being prepared								

Appendix C: UCSB SEP Energy Projects and Carbon Reduction Summary: 2009 through 2012

Mark Peppers PE, 11-1-12

\$2900 neg contract to Brummel to do energy analysis
 3-28-12 Form C sent to Dirk, \$736K est project cost
 5-16 Joint Bid with S. Cruz Received - \$961,500
 6-5 New g/e meters at boilers; bldg meters
 8-2 P.Hasley to assist in energy results analysis
 9-25-12, Project finished, **final report to be sent**
 10-5, Jordan sending P Hasley corrected meter data for missing phase
 10-31-12 Ortega post MBCX KWH > pre MBCx KWK
 Will send email to Mark R., Gas savings reported in 2013
 11-26, Week of 12-17, gas repiped to measure total bldg

SEP Financed SEP Submitted State Cost \$\$	Energy Grant \$\$	Payback Incl Grant Yr (2,3)	Total Savings Elect + Heat \$\$/YR	Electricity Saved KWH/yr	Nat Gas Saved Therms/yr	Demand Saved KW	Green House Gas Reduction CO2 Equiv. Metric Tonnes/Yr (4)
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2012 MBCx Financed Total	\$825,496	\$418,118	2.1	\$190,076	1,686,871	49,818	272	810
SEP Submitted	\$1,010,496	\$454,667	2.7	\$208,542	1,686,871	49,818	272	810
2012 SEP Financed Totals	\$3,988,162	\$796,684	9.2	\$347,812	3,550,157	61,477	589	1,474
SEP Submitted	\$4,333,974	\$913,515	8.5	\$404,197	3,550,157	61,477	589	1,474

2011 Retrofit & MBCx Projects "Retrofits"

H3008 2010 Bren Aircuity Lab Vent Upgrade 9-23 Bids \$307K vs \$127K, \$50k vs \$30K for add 2-9 LA AIR Low Bid at \$216,795 incl ext warranty bid alt 8-29-11 Form E, Proj Completion to Dirk 10-7 Resent Proj Completion to Jason Lewis, SoCalGas 12-22-11 Resent 2 days of trends to Phillip Hassley, will energy savings have improved. Project is complete	\$349,000	\$37,227	11.9	\$26,111	39,906	27,650	5	160
H3124 2011-12 Event Center Lighting Retrofit 5-10-11 Sent revised Part 8&9 to Sterret, so I can electronic submit, resigned 8-29-11, McHale signed 2 copies Program Agreement 8-31-11, McHale signed 2 copies revised Prog Agreement 10-3-11 Project completion paperwork submitted. John Rossi of EMCOR did SCE post install inspection.	\$232,903	\$63,632	6.4	\$26,513	265,134	0	30	86
H3052 2010 De La Guerra VFD Kitchen Hoods 4-15-10 Contract to Palt for \$17,250, asked Mark R for 4-21-10 Form B sent in, \$112K cost & 159,689 KWH and 3901 therm/yr save est 9-7-11 Form E, Proj Completion to Dirk 9-28 Phillip Hassley did SCE post install review. 10-7 Resent Proj Completion to Jason Lewis, SoCalGas	\$0 \$146,706	\$0 \$42,226	0.0 5.5	\$0 \$19,090	159,689 159,689	3,901 3,901	18 18	72 72

Appendix C: UCSB SEP Energy Projects and Carbon Reduction Summary: 2009 through 2012

Mark Peppers PE, 11-1-12

	SEP Financed SEP Submitted State Cost \$\$	Energy Grant \$\$	Payback Incl Grant Yr (2,3)	Total Savings Elect + Heat \$\$/YR	Electricity Saved KWH/yr	Nat Gas Saved Therms/yr	Demand Saved KW	Green House Gas Reduction CO2 Equiv. Metric Tonnes/Yr (4)
H3187 Bio 2 Heating Boilers 10-5-10 \$586K bid 1-5-10 Form B sent in 10-13-10, Told Sterret to process gas only Form B Appl 8-29-11 Form E, Proj Completion to Dirk 10-7 Resent Proj Completion to Jason Lewis, SoCalGas	\$810,000	\$70,725	13.1	\$56,580	0	70,725	0	376
H3044 North Hall Data Center Renovations 3-3-10 Form B sent 11-1 Registered Project with SCE Online Application Tool 10-18-11, CHW tie-in then next week start-up 10-11-11 Dec 2011 project completion to Dirk. 12-8-11 Sent Le Richardson of Emcor the "non UPS" amp draw, and AHU S-3 Economizer temps 1-6-12 Project SEP Complete	\$0 \$340,000	\$0 \$84,672	0.0 7.2	\$0 \$35,280	352,799 352,799	0 0	40 40	114 114
H3018 North Hall Data Center Ventilation 4-19-10, Submitted form B, Project self funded \$65K 5-3-10 SCE Energy Incentives App. Sent in by D. Sterret 10-5-10 Received SCE Incentive approval. 11-1 Registered Project with SCE Online Application Tool 1-6-12 Project SEP Complete	\$0 \$65,000	\$0 \$6,287	0.0 22.4	\$0 \$2,620	26,197 26,197	0 0	3 3	8 8
H3070 Bio 2 Lab (Cage Wash) Infrastructure Impr 3-1-10 form B Sent to Sterret, Proj self funded 9-20-11 Project Completion sent to Dirk 10-4-11 John Rossi Did SCE post install completion. 10-28-11 Send J. Rossi cost documentation.	\$0 \$50,000	\$0 \$14,581	0.0 3.6	\$0 \$9,963	18,506 18,506	10,140 10,140	2 2	60 60
H4020 Santa Catalina Electrical Retrofit 12-8-11 Dick Sterret said no incentive for pool lights be- cause work was started when EMCO inspected. I sent request for a hurry up ppre-installation in Sept 2010, did not get inspected until Jan 2011.	\$0 \$104,146	\$0 \$9,940	0.0 22.7	\$0 \$4,142	41,415 41,415	0 0	3 3	0 0
2011 Retrofit Financed Total	\$1,391,903	\$171,585	11.2	\$109,204	903,646	112,416	101	877
2011 Retrofit Submitted Total	\$2,097,755	\$329,291	9.8	\$180,297	903,646	112,416	101	877
"MBCx"								
H3023 CNSI 10-12 MBCx Original Proj Est = \$98K, Use CPP Study++ 1-25-10 Form C to Dick S., \$340K cost, 362,050 KWH/yr and 6000 therm/yr savings 7-7 Anemometer here, Kaz to review install requirements	\$570,000	\$343,932	1.5	\$150,343	1,356,546	18,361	178	536

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Mark Peppers PE, 11-1-12

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<p>9-1 \$1800 Work auth to Smith on tower instal 1-11 Enernoc Kickoff mtg; Setup 3day site audit Mid Feb Kaz to review ITRON Gas/Elect meter data 2-3, Review 2-16 CNSI courtyard lights(led)? & parking ramp lights with positive energy. 4-7 Reduced clean room fans to 55% speed, Kaz working 9-30-11 CNSI Projection Completion Forms sent to Dirk. 10-7 Resent Proj Completion to Jason Lewis, SoCalGas 3-12-12 \$12.5K PSA to Palt , FM to install clean room pariculate measuring system.</p>								
H3031 Snidecor Hall 10-12 MBCx	\$111,932	\$71,665	0.9	\$44,119	143,616	37,197	16	244
<p>Replace gas meter 1-25-10 Form C to Dick S., \$100K cost, 50,000 KWH/yr and 6000 therm/yr savings 1-11 Enernoc Kickoff mtg; Setup 3day site audit Mid Feb Kaz to verify ITRON data, M.Pelosi has billing question 4-22 Insulation contract for AHU piping to Dahl 12-1 Project Completion sent to Dirk 12-7-11 Send Dirk cost summary. 12-8-11 Sterret approve \$71K incentive. 1-17-12 J. Lewis to send incentive to UCSB</p>								
H3063 Carrillo MBCX (Electrical Savings Only)	\$0	\$0	0.0	\$0	480,983	0	55	155
<p>2-3 \$605K, 156,330KWH & 48740 therm saved 8-22-11 Campus payment form received 4-7 Bids Due 4-14 Form C: \$355K cost 156,330 KWH & 4,850 therm saved 2-9-12 \$2900 neg contract to Brummel Engr to do energy analysis 3-15 Jill waiting for BME insurance documents 4-6 Carillo/Santa Cruz meters in, Cat-5 cabling in, waiting for new emeter to collectively transmit data to Itron 6-15-12 MBCx work complete G/E usage trending on Itron 10-23-12 Project completion to dirk, gas savings in 2013</p>								
	\$381,039	\$115,436	5.5	\$48,098	480,983	0	55	155
H3050 Santa Cruz 10-12 MBCx	\$0	\$0	0.0	\$0	32,744	9,828	4	63
<p>8-22-11 Campus payment form received 4-7 bids due 4-14 Form C: \$220K cost 72,390 KWH & 7492 therm saved 2-9-12 \$2900 neg contract to Brummel Engr to do energy analysis 3-15 Jill waiting for BME insurance documents 6-15-12 MBCx work complete G/E usage trending on Itron 10-23-12 Project completion to dirk</p>								
	\$195,134	\$17,687	15.9	\$11,137	32,744	9,828	4	63

Appendix C: UCSB SEP Energy Projects and Carbon Reduction Summary: 2009 through 2012

Mark Peppers PE, 11-1-12

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2011 MBCx Financed Total	\$681,932	\$415,597	1.4	\$194,463	2,013,889	65,386	253	998
SEP Submitted	\$1,258,105	\$548,719	2.8	\$253,698	2,013,889	65,386	253	998
2011 SEP Financed Totals	\$2,073,835	\$587,181	4.9	\$303,667	2,917,535	177,802	354	1,875
SEP Submitted	\$3,355,860	\$878,010	5.7	\$433,995	2,917,535	177,802	354	1,875

2010 Retrofit & MBCx Projects Summary

SEP ID #	Description / Status								
Install Date									
H3020	Bio 2 AHU Upgrade (5) 9-9-09 Final RPCP received 1-11-10 Elect and gas Rebates to UCOP	\$516,685	\$79,844	13.1	\$33,269	332,685	0	38	107
H3003	2010 Mesa Parking Lighting 6-7-10, Form E Project Completion sent 9-23-10 10 YR warranty received....to AM, proj complete	\$0	\$0	0.0	\$0	212,430	0	24	69
		\$169,860	\$50,983	5.6	\$21,243	212,430	0	24	69
H3091	Chilled Loop , E-W Extension 1-26 Sterret to review SCE invoice requirement 1-2 Will CHW pipe protective enclosure 3-28-11 UCOP deposited \$86,322 incentive in their acct	\$500,097	\$86,322	11.5	\$35,968	359,675	0	29	116
	2010 Housing Lighting Retrofit								
H3159	San Rafael, 2x2 u-tube-to-T17 & T12 to T8 , elct ballasts	\$0	\$0	0.0	\$9,570	95,700	0	29	31
H3139	Anacapa, 2x2 u-tube-to-T17 & T12 to T8 , elct ballasts 9-1 Install complete, \$45,672 Pos Ener contract 11-4 Housing received SCE incentive, 95,500kwh/saved	\$0	\$0	0.0	\$0	0	0	18	0
		\$45,672	\$22,968	2.4	\$9,570	95,700	0	47	31
H3069	Bio 2 Monitoring Based Commissioning 9-9-09 Final RPCP received 1-11 Project complete except for Smith \$7,732 S1&2 drn pan extension & Gol plumbing bsmnt floor sinks quote. Hasley submitted his gas saving to SoCalGas 1-12 neg. contract to Palt for vivarium ahu humidification 11-29-10 Form D Completion	\$412,000	\$270,157	1.1	\$133,774	895,131	55,326	41	583
UCSB SEP Financed 2010 Total		\$1,428,782	\$436,324	4.7	\$212,580	1,895,621	55,326	179	907

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Mark Peppers PE, 11-1-12

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SEP Submitted	\$1,644,314	\$510,275	4.8	\$233,823	1,895,621	55,326	179	907

UCSB Energy Projects & Green House Gas Reduction Summary: 2009

Mark Peppers, P.E., 12-8-09

SEP ID #	Description / Status								
H3089	2009 Relo. R Cen, ICA, Kerr, Alumni Tr-form 8-25 getting requotes for late Nov Install 8-20-09 SCE & Sempra approved RPCP's to Ron Y. 12-8 Transformers replaced. 4-20-10 Cost summary to Sterret,	\$83,100	\$32,524	3.7	\$13,552	135,517	0	46	44
H3155	2009 Lighting Retrofit of State Buildings SAASB Lighting Upgrade	\$136,046	\$36,720	6.5	\$15,300	152,998	0	34	49
HX1	Central Stores Lighting Upgrade	\$25,560	\$6,276	7.4	\$2,615	26,149	0	6	8
	4-20-10 Cost summary to Sterret, Jill sent out \$28K CO#2 9-9-09 Final RPCP received work in Sept/Oct	\$161,606	\$42,995	6.6	\$17,915	179,147	0	40	58
	2009 Lighting Retrofit of Housing Buildings								
H3132	Santa Rosa, 2x2 u-tube-to-T17 & T12 to T8 , elct ballasts	\$0	\$0	0.0	\$0	0	0	0	0
H3151	San Nicolas, 2x2 u-tube-to-T17 & T12 to T8 , elct ballasts	\$0	\$0	0.0	\$0	0	0	0	0
H3140	Santa Cruz, 2x2 u-tube-to-T17 & T12 to T8 , elct ballasts	\$0	\$0	0.0	\$0	0	0	0	0
	8-30-09 Sce Grant capped at 50% of cost	\$0	\$0	0.0	\$0	93,199	0	0	30
	9-21-09 Form E Proj Completion sent to D, Sterret 11-4, RPCP recv'd & sent to Barry, 158795 KWH saved	\$45,672	\$22,368	2.5	\$9,320	93,199	0	0	30
H3191	2009 Low PD Filters, 10 AHU only 12-2-09 Sterret sent in invoice, eliminated 2006-8 4-20-10 Cost summary to Sterret,	\$0	\$0	0.0	\$0	169,795	0	27	55
		\$54,682	\$43,684	0.6	\$16,980	169,795	0	27	55
H3088	2009 Carillo Dining VFD Kitchen Hoods 9-24-09 Form E Proj Completion sent to D. Sterret 10-13 RPCP rcv'd copy to Barry 11-6-09 So Cal Gas reminder about invoice sent to Barry 4-26-10, Asked barry for H&RS invoice.	\$0	\$0	0.0	\$0	52,854	1,833	20	27
		\$46,200	\$14,518	4.7	\$6,752	52,854	1,833	20	27
H3033	2009 HSSB MBCx Application	\$116,000	\$92,800	0.7	\$31,483	301,548	1,660	15	106

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11-16-09 Updated cost summary sent to Dick Sterret...
favorably affect SCE Grant

H3011	2009 Rec Cen Pool Pump VFD	\$0	\$0	0.0	\$0	220,390	0	27	71
H3012	7-31-09 Project complete....Form B sent in.	\$151,140	\$52,894	4.5	\$22,039	220,390	0	27	71
	1-5-10 \$52,893.64 check to Jurich								
	11-24 RPCP sent in								
UCSB 2009 SEP Financed Total		\$360,706	\$168,319	3.1	\$62,949	1,152,450	3,493	175	391
	SEP Submitted	\$658,400	\$301,783	3.0	\$118,039	1,152,450	3,493	175	391
UCSB 2009 - 2012 SEP Financed Total		\$7,851,485	\$1,988,509	6.3	\$927,008	9,515,763	298,098	1,298	4,646
	2009-12 SEP Submitted	\$9,992,548	\$2,603,583	6.2	\$1,190,055	9,515,763	298,098	1,298	4,646
	Loan amount. Financed - grants	\$5,862,976							
	Authorized financed	\$9,793,391							

Notes:

1. CO2 equivalent factors based on 2012 Climate Registry General Reporting Protocol 1.1