



UCSB Sustainability
Annual Report
2005-2006

Progress to a More
Sustainable Campus

Progress to a More Sustainable Campus, UCSB 2005-2006

The 2005-2006 school year saw the completion and continuation of many aggressive sustainability initiatives. The following is a sample of the projects completed this year. UCSB continues to progress towards reaching its long term goal of becoming a sustainable campus, and remains a dynamic, exciting place to live, work, and learn.

LEED for Existing Buildings Girvetz Hall



Girvetz Hall received a LEED for Existing Building (LEED-EB) silver certification from the U.S. Green Building Council in the fall of 2005. It was the first building in the UC system to receive such an award. There were many divisions of campus that were utilized in order to make this project happen, however all the work was done in-house. Physical Facilities led the charge, but it would have not of been possible without the participation of: Girvetz Hall departments, Academic Senate, Crustal Studies, Environmental Studies, and the Writing Program. EH&S and the Transportation Department also provided much-needed assistance.

The LEED-EB program is a voluntary, consensus-based national standard for redeveloping and upgrading buildings into high-performance, sustainable ones. Buildings that have gone through the LEED-EB process maximize operational efficiency while minimizing environmental impacts by addressing exterior building site maintenance, optimizing use of water and energy, reducing waste, improving indoor air quality and by using environmentally preferred products. For a full list of the credits achieved by Girvetz Hall please see the LEED-EB checklist at <http://sustainability.ucsb.edu>.

Some highlights of the project:

Sustainable Sites

- Green Site & Building Maintenance Plan includes reduced pesticide application (Integrated Pest Management), mulching techniques, irrigation management, and animal and vegetation control.
- Received 2 credits for Alternative Transportation— used quadrant method to show shower to bike facilities usage numbers and bus access requirement.



Materials and Resources

- Piloted new recycling program. Occupants now recycle 80% of their waste—a 50% improvement over last year.
- Developed a sustainable purchasing policy to increase procurement of environmentally conscious office supplies and building renovations materials.
- Recycled 100% of demolition waste from bathroom fixture waste.

Water Efficiency

- Installed waterless urinals, which save 45,000 gallons of water per urinal per year. Received a county water rebate for the urinals to reduce the payback time to less than two years.
- Established landscape uses minimal amounts of water and requires minimal maintenance.

Energy and Atmosphere

- Received an Energy Star Rating of 98 out of 100
- Upgraded building control systems to enable Facilities Management to maintain the building at its optimal efficiency.
- Performed electronically-based commissioning to make sure all of the MEP systems were working properly.

Indoor Air Quality

- The everyday custodial cleaning reagents are Green Seal Certified
- Sustainable cleaning systems are used during the cleaning process
- Walk-off mats are in all main entryways to reduce air-borne particulate matter which improves indoor air quality.
- All restroom paper products contain at least 80% of recycled content.

In the fall, three additional campus buildings will undergo LEED-EB certification- Bren Hall, Recreational Center, and Manzanita Village.

LEED for New Construction (LEED NC)

The Marine Science Research Building has recently submitted the LEED NC documentation. The project will receive a LEED Certified level. Other buildings that are going for LEED Certification are: Student Resources Building (currently under construction and should be completed by January 2007), San Clemente Student Housing, (under construction and scheduled for completion in the fall of 2008), and Ocean Science Research Building, which is currently in design.

California Climate Action Registry



In 2005, UCSB became the second UC campus to officially document its campus greenhouse gas emissions through the California Climate Action Registry (the Registry). This voluntary program allows UCSB to track its emissions from transportation and energy use using the Registry's online reporting and calculation program. These figures are also verified by a licensed third-party consultant. All told, UCSB was responsible for the emission of 48,213 metric tons of CO₂ in 2004.

Signing up with the California Climate Action Registry has provided many benefits for the campus, including transparency of our environmental impact, assurance of accuracy, ease and standardization in calculating our emissions, and a way to track our progress towards becoming a more sustainable campus from year to year.

The project was initiated by a group of graduate students from the Donald Bren School of Environmental Science and Management. Their Master's project group, Campus Climate Neutral, sought to help provide vision and craft strategies for UCSB to reduce its overall global warming impact.



Joining the Registry solidified UCSB's position as a "climate action leader," and will provide an example for other universities and businesses around the country who realize that knowledge of our contributions to global warming is a necessary first step towards changing our actions.

Green Campus Program



For the second year, student interns for the Green Campus Pilot Program worked hard to save energy on campus through education, retrofits, and advocacy. In recognition of their hard work, two student interns, Ryan Schauland and Ashleigh Talberth, received Best Practice Awards for student-led energy conservation programs at the 2006 UC/CSU/CCC Sustainability Conference in Santa Barbara.

The mission of Green Campus is to save energy at UCSB with student-led energy conservation programs. It is administered by the non-profit Alliance to Save Energy and paid for by the ratepayers to the investor owned utilities through the California Public Utilities Commission. Green Campus takes place at nine UC and CSU campuses, and will expand to two additional campuses in the 2006-07 school year.

Collaborating with UCSB's Housing and Residential Services, interns ran a year-long Energy Conservation Competition that saved nearly \$10,000 in electricity. They helped retrofit a tour dorm room with Energy Star products and energy-efficiency information, and gave out 800 energy-efficient compact fluorescent lights in exchange for inefficient incandescent bulbs. Ashleigh Talberth worked to encourage sustainable purchasing through strategic sourcing at UC Office of the President. Ryan Schauland assisted in the documentation process for UCSB's first LEED-EB registered project, Girvetz Hall, as well as the early stages of LEED planning for other buildings. The interns also worked with other student environmental groups to pass The Green Initiative Fund in May 2006.

Sustainability Conference



UCSB hosted the fifth annual UC/CSU/CCC Sustainability Conference this year, breaking records with approximately 600 participants and over 100 students registered for the conference, and 30 companies participating in the green vendor fair. This conference has grown exponentially since it was first hosted at UCSB in 2002 with the opening of the Donald Bren School of Environmental Science and Management.

The title, "Turning the Tide: Implementing Sustainable Strategies" says it all. The conference highlights the sustainability champions throughout California campuses giving them the opportunity to share how they were able to reduce their university or college's impact on the environment, complete with the practical steps which enable participants to take the message back to their campuses. The breadth of topics included: Transportation, Green Building, Energy, Water, Institutionalizing Sustainability, Food Systems, Procurement, and Waste Management.

UCSB extended the practical hands-on approach of the conference to the actual design and implementation of the event. Approximately 90% of the food for the conference was organic, all

of the energy and gas emissions for traveling to the conference were offset by Renewable Choice Energy, and all of the food waste from the conference (pre- and post- consumer) was composted. Furthermore, we collected many ideas from conference participants on how we can make the event even more sustainable next year.

We hope that you join us at UCSB in 2007 for the Sixth Annual UC/CSU/CCC Sustainability Conference.

The Green Initiative Fund



2006 saw one of the most effective student-run environmental campaigns in UCSB's history. Seeing the need to help raise funds for resource conservation projects and to send a message that students really do support sustainability, EAB members began designing the Fund in 2005. The Fund is based on a lock-in fee of \$2.60 per quarter per student including summer. Interested parties (like Housing, Facilities, and student environmental groups) then apply for funding to support their projects that go above and beyond existing green building campus policies. Eighty percent (80%) of the money will go to conservation and twenty (20%) to education. A student-controlled committee will decide which projects to fund. The intensive campaign attracted students from EAB, Green Campus, CalPIRG and other groups and lasted throughout much of winter and spring quarter. The results proved their commitment and showed that UCSB students care deeply about the environment. Nearly 75% of undergraduate students and over 80% of graduates approved the initiative.

The Fund begins to grow in fall quarter of the 2006-07 academic year. Administrative Services will hire a grants manager to oversee and help grow the Fund, and members of the TGIF committee will apply or be appointed.

While this seed money may not revolutionize the way UCSB uses resources, it is a promising beginning. TGIF is a powerful message from students that they will put down their own money to help reduce UCSB's environmental footprint.



Campus Sustainability Plan

In the fall of 2005 the CPC sub-committee on Sustainability hired Brightworks Northwest sustainability consultant to teach 75 Sustainability Change agents (consisting of UCSB faculty, staff, and students) the principles of the Natural Step (TNS). The Natural Step provided the Campus Change agents a sustainability framework which would assist the group in developing a plan. The purpose of this plan is to promote long range campus operations in a sustainable manner.



The Natural Step- Phase I

TNS is based on four scientific principles and has been utilized by many U.S. corporations including Interface, Starbucks and Nike as a framework for developing sustainable initiatives for their companies. The four Natural Step principles are also known as "system conditions". The four system conditions are:

In a sustainable society, nature is not subjected to systematically increasing:

- *Concentrations of substances extracted from the earth's crust*
- *Concentrations of substances produced by society*
- *Degradation by physical means*
- *And in that society, human needs are met worldwide*

Workshops

All seventy-five change agents, divided into nine groups— Academics and Research, Built Environment, Energy, Water, Food, Land use/Landscape, Procurement, Transportation, and Waste— participated in the four full day workshops called the ABCD process. This four part planning process provided participants with a solid understanding of the principles of sustainability and how to implement those principles on a university campus.

Workshops Summary

The four workshops were intended to create a diverse team of individuals from all parts of the campus with the ability to guide UCSB towards full sustainability. The ABCD workshops are described below:

Workshop "A" Awareness - a training session on sustainability awareness, included the history and science of TNS sustainability framework, its application in organizations, and examples of case studies of its application; additional information was presented on other sustainability tools and frameworks including ISO 14001 and the McDonough-Braunaugh "Cradle to Cradle" Protocol.

Workshop "B" Baseline- a training session on creating a baseline understanding of UCSB's organizational processes and resource flows. The exercises included a detailed flowchart of UCSB's activities and identification of Natural Step violations that may be occurring as the result of those activities and a methodology to rate the severity of those violations.

Workshop "C" Clear and Compelling Vision- a facilitated brainstorm session to create a clear and compelling vision of a "fully sustainable UCSB". This workshop included a back-casting exercise (the opposite of forecasting) in which a fully sustainable UCSB is envisioned and participants then work backward through time to identify the steps, obstacles, and opportunities to move UCSB from where it is today to the envisioned sustainable UCSB.

Workshop "D" Direct Action- Actual implementation plan of the plan begins. The plan is crafted from the discoveries and knowledge derived from workshops A through C.

Phase II

Starting Winter Quarter (January 2006) the change agent groups started to develop their own short term (0-1 years), intermediate (1-5 years), and long term (5-10+ years) goals. These goals were developed with their associated action items, barriers, cost, and timeline. The plan is currently being finalized but will go to the CPC for approval in October of 2006.

Campus Sustainability Day

October 26th, 2005 marked the first annual Campus Sustainability Day designated by the Society for College and University Planning (SCUP). Of course, UCSB joined the festivities with our own inaugural Sustainability Day.



To celebrate the event, organizers set up a tabling and demonstration area near the Davidson library. Students, staff, faculty, and campus visitors learned about reducing energy usage in UCSB residence halls from Green Campus Interns, enjoyed fresh organic food at the Environmental Affairs Board table, learned how to make bio-diesel and calculate their emissions from the Bren School Sustainability Committee, and rode around on electric bikes from Santa Barbara Electric Bicycle Company. Other organizations included the Santa Barbara Bicycle Coalition, UCSB Transportation Alternatives Program (TAP), the Air Pollution Control District, and more, amounting to over 20 participating groups. UCSB Transportation Services sponsored a green car show featuring alternative fuel cars from our own campus fleet. Bringing out eye-catching, impressive displays to such a high-traffic part of campus caught the attention of thousands of people. Each left with a better understanding of what sustainability is and how UCSB and local groups are working to make this a better place.

Campus Sustainability Day is an annual event. This coming year we will host a SCUP telecast entitled “Where Is Your Campus on the Continuum of Integrated Sustainability Planning?” in Bren Hall on October 25 at 9:30 am. During this telecast you can hear from Leith Sharp, the founder and director of the Harvard Green Campus Initiative, an interfaculty program dedicated to the integration of campus environmental sustainability throughout Harvard University, since 2000.

Procurement

In the fall of 2005, Purchasing Department of Business Services hired a full-time Sustainable Procurement Coordinator. This position is the first of its kind in a Business Services setting anywhere in the UC system. The role of the campus Sustainable Procurement Coordinator is to encourage and implement a campus and system-wide transition towards environmentally preferable purchasing and more sustainable business practices. The University has already taken some strides towards more sustainable business operations through the procurement of products with high post-consumer waste recycled content, green and low-VOC chemicals, energy and water efficiency, and environmentally preferable modular carpet tiles, to cite a few examples. Many of these efforts are an integral part of operating green buildings, in line with UC policy to build and operate green buildings to a LEED standard.



The Sustainable Procurement Coordinator is funded through Purchasing, Business Services, and the Administrative Vice Chancellor, as well as through the UC/CSU/IOU Energy Efficiency and Conservation grant program managed by UCOP. The grant funds support an Education and Outreach program designed by the Sustainable Procurement Coordinator in the form of workshops, seminars, and presentations that are intended to increase awareness and understanding of environmentally preferable purchasing, the importance of energy efficiency and

conservation in our sustainable purchasing efforts, as well as an overview of other campus sustainability initiatives.

The Sustainable Procurement Coordinator works closely with campus departments and system-wide Strategic Sourcing Initiatives to ensure that sustainability is a central component of all system-wide RFPs and contracts. By incorporating appropriate language and specifications into these documents the University is leveraging its purchasing power toward positive market transformation, and ultimately realizing cost savings for the system. The Sustainable Procurement Coordinator has also been responsible for the development of guidelines and policies for sustainable purchasing, as well as for the coordination of various efforts across campus and the entire UC system.



Education for Sustainable Living Program (ESLP) at UCSB



The Education for Sustainable Living Program helped to support ten courses and inspire close to 75 students this past year. Courses were held in the Communications, Sociology, Law and Society, Women's Studies, and Geography Departments.

In spring 2006, Alyssa Go, a senior in the Environmental Studies Program, facilitated a course on a Santa Barbara Green Business Program, advised by Professor Kostas Goulias. Throughout the course, students researched green business programs in other cities and developed a plan for creating a green business program in Santa Barbara. At the end of the quarter, the students presented to a panel of city and county officials including Helene Schneider, Santa Barbara City Council and representatives of the Santa Barbara Green Team. That team of city and county officials will be meeting again this summer to continue the work of the students and see how to implement their recommendations.

Also in spring 2006, a group of students led by Jake Lehman, a senior in Global Studies and advised by Professor Dick Flacks of the Sociology Department, created what was soon a name all over campus and in the community, Chilla Vista. The students wanted to learn about the issues of community building and sustainable event planning. They pulled together best practices from around the country, visited other eco-friendly events, and developed a plan to bring together 3,000 people but to produce no waste. The event made a lasting impression on the campus and community, and the Isla Vista Commission is looking to use parts of the Chilla Vista Model to address social issues in Isla Vista and to encourage more alternative social programming.

Speaking Engagements for FY 2005-2006

Society for College and Urban Professionals Conference, Fall 2005, Long Beach, CA, Education for Sustainable Living Program.

Society for College and Urban Professionals Conference, November 2005, Washington D.C. Smart and Sustainable Campuses.

National Youth Service Learning Conference, Spring 2006, Philadelphia, PA, Education for Sustainable Living Program

International Facilities Management Association Conference, May 2005, Santa Barbara, CA, IFMA Green Building Meeting

Society for College and Urban Professionals Conference, Summer 2006, Oahu, Hawaii, Smart and Sustainable Campuses

4th Annual UC/CSU/CC Sustainability Conference (UCSB), June 2006, Santa Barbara, CA, Girvetz Hall: A LEED-EB Case Study

4th Annual UC/CSU/CC Sustainability Conference (UCSB), June 2006, Santa Barbara, CA, Staff Keynote address

UCSB Housing Retreat, Goleta, CA, May 2006, Sustainable Operations: How Custodial and Grounds Staff are Key to Success

University of Nevada Las Vegas, January 2006, Las Vegas, NV, Bren Hall LEED-NC Case Study

California State University Humboldt, September 2005, Humboldt, CA, Emerging Green Builders

Academic Business Officers Group, May 2006, Irvine, CA, Sustainability at UCSB