



SUSTAINABILITY NEWS BEAT

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UCSB Launches a New *Green Chemistry Initiative*

By Staff Writers

UC Santa Barbara Environmental Health and Safety and the Laboratory Research and Technical Staff (LabRATS) Program has launched a new initiative to reframe how researchers, faculty, and students approach the use of man-made chemicals. The Green Chemistry Initiative (GCI) brings together the expertise of UCSB Chemistry faculty, lab managers, and inquisitive students to reduce the ecological footprint of chemistry courses and labs on campus.

Kevin Labadie, a second-year chemistry student and intern for LabRATS, says that, "By working with professors from UCSB and other schools, we hope to restructure the labs in a manner that reduces waste and helps students to learn the importance of proper chemical disposal." UC Santa Barbara was already heading in the right direction towards Green Chemistry. In scoping out this project, LabRATS interns found that many of the undergraduate teaching labs were already using microchemistry practices in order to reduce the amount of expensive and sometimes hazardous chemicals used.

The first step of the UCSB GCI Program was to implement a Surplus Chemical Program which has, in the past few months, diverted over 80 bottles of chemicals from the waste stream. This program allows scientists, who have half-empty bottles of chemicals that they no longer need, to share the remainder with other labs rather than going directly to Environmental Health and Safety for disposal. Simultaneous to launching this program, EH&S and LabRATS launched the Mercury Thermometer Exchange Program. This program collected over 800 thermometers containing mercury and offered spirit-based thermometer replacements of as a non-toxic alternative.

With the relationships built from these early programs, LabRATS recently launched the broader Green Chemistry Initiative which looks more

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fundamentally at which chemicals we choose to use, how we use them, and what questions we are asking ourselves when making these decisions. In partnering with Petra Van Koppen, a professor in Chemistry, they learned that one of the undergraduate chemistry labs uses an experiment involving Lead Nitrate, a hazardous substance. LabRATS interns researched ecologically-preferred alternative processes and discovered that some campuses have found Zinc Nitrate to be effective. Utilizing an honors section of a Chemistry course, they tested the alternative and found that it did not meet the needs of this class. In doing so however, they were able to teach an honors section about the concepts of Green Chemistry and now have a methodology for testing alternative chemicals and processes.

For more information regarding the LabRATS and other Green Chemistry programs, visit their website at

<http://sustainability.ucsb.edu/LARS/>

SUMMER SUSTAINABILITY OPPORTUNITIES

HABITAT RESTORATION SUMMER INTERNSHIPS

Coal Oil Point Reserve

Several paid habitat restoration interns for the Summer Quarter 2008. Working with a restoration ecologist, the Reserve Steward, other interns, and volunteers assisting with the restoration of native wetland and coastal sage scrub habitats. To apply, send your resume and course schedule/available summer hours to:

Darlene Chirman: dchirman@starband.net - 692-2008, and
Tara Longwell: longwell@lifesci.ucsb.edu - 893-5092

For more events: <http://sustainability.ucsb.edu/events>

Isla Vista Gives

By Chris Darancette

The GIVE Sale in Isla Vista - an event that takes donated household items from UC Santa Barbara and Isla Vista and sells them to raise money for local charities - was held on June 21st and 22nd this year, the first time the seventeen-year old event was open for two days. Catherine Boyer, the Isla Vista/UCSB liaison spent countless hours organizing the event, which involved a widespread effort to encourage donations from Isla Vistans, including furniture pickup by A.S. Recycling volunteers.



Photo courtesy of Isla Vista GIVE

Rogelio Reyes, the local staff event coordinator, spoke on behalf of the GIVE Project sale, relating the successes of the event through the years. "We have volunteers from St. Brigid's Fellowship, UCSB organizations, and community groups helping with the fundraiser," said Reyes. GIVE is a charity event that is beginning to see more green each year: the event raised \$6,000 in 2005, \$13,000 in 2006, and nearly \$18,000 in 2008 during the two-day event. One hundred percent of the sale's proceeds are distributed to organizations and projects that benefit Isla Vista and local area projects selected by the community volunteers who spend hours sorting and organizing the donations.

"GIVE is a great way to clean up Isla Vista after graduation and make money for non-profits around town. We're just hoping the event gets bigger and bigger each year," adds Reyes.

Sponsors of the GIVE Project include: the Isla Vista/UCSB Liaison Office, A.S. Coastal Fund, A.S. Community Affairs Board, A.S. Isla Vista Community Relations Committee, A.S. Isla Vista Tenants' Union, A.S. Recycling Program, County of Santa Barbara Resource Recovery and Waste Management Division, Isla Vista Recreation and Parks District-Adopt-a-Block, Isla Vista School-After School Grant, MarBorg Industries, Society of St. Vincent de Paul, UCSB Community Housing Office, UCSB Housing and Residential Services-Energy and Environmental Office, UCSB Parking Services, UCSB Physical Facilities, and UCSB/community volunteers.

Volunteers will be needed next year as the event continues to grow. For more information on becoming a volunteer for the 2009 sale, visit www.giveiv.org.

CCBER Paves the Way to Collect Sun's Rays

By Joshua Kelley

The Cheadle Center for Biodiversity and Ecological Restoration (CCBER) is installing a solar panel array on its rooftop; this is a project that is expected to generate 30 percent of the building's energy. CCBER Natural Areas Director Lisa Stratton, who led the charge in the operation, estimates the savings at \$1,000 to \$1,200 a year.

"As a group implementing sustainable landscapes through restoration on campus, we felt it was important that our office operations be sustainable as well," said Stratton. "We wanted to be a leader and we felt we were stand-alone enough and had a good building for the use of solar panels."

CCBER sought funding for the solar array through The Green Initiative Fund (TGIF), and received the full \$55,960 amount. The size of the panels, funding for student intern involvement, and project oversight by the facilities department determined the cost of the project.

"REC Solar, our likely contractor, has also had experience on campus installing solar systems that are accessible on line for real-time monitoring," said Stratton. "They also recently installed a system at Crane School that has a real time monitor available for people to see the production and use of energy at their school."

Solar power is the best option for CCBER, as it produces no sound and can easily fit on the site. Wind power is a less viable option because the CCBER is not in a particularly windy location, as well as the fact that the wind generators would disrupt the White-tailed kites nesting adjacent to the building.

CCBER's solar project is an important step, not just for the building's energy efficiency and independence, but also for helping to achieve one of the goals outlined in the Campus Sustainability Plan: to reduce non-renewable energy consumption on campus. Even before the solar array has been installed, the CCBER is looking into future projects to become more sustainable.

"We hope by having the real time use and production monitor in our office that we will further reduce our energy use levels with the increased awareness."

For more information on CCBER and their sustainability efforts, please visit <http://ccber.lifesci.ucsb.edu>.

Children of the Corn Seeks to Shed Light on Carbon Footprint of UCSB Students

By Taylor Orr

Hair and water samples are helping a TGIF-funded project, Children of the Corn, to encourage students to reduce their carbon footprint.

Although the project's title matches that of a Stephen King horror novel, Children of the Corn pays homage to the Mayan people and their reliance on corn as a primary food source.

Robyn Clark, a Geography graduate student, said the goal of the project is to get undergraduates to think about where the food they eat and the water they drink comes from. Clark said that a high incidence of corn in the diet is a good indicator of how much processed food a person ingests. According to Geography Professor Chris Still, "Corn has a distinct carbon isotope fingerprint compared to most food grains, and thus its contribution to a human's diet can be estimated from hair samples, since 'you are what you eat' (isotopically speaking)."

"We want people to think about what they're eating. People should be asking why they're eating so much processed food and why their food comes from so far away," said Clark.

Clark recommends frequenting Santa Barbara farmers' markets for healthy food choices with a smaller fuel footprint. "Cutting out the middlemen and getting to know your local farmer is the first step in local eating."

The other component to the project is analyzing the origin and fuel footprint of bottled water on sold on or near campus. Many consumers drink bottled water because they are concerned about the safety of tap water, but recent studies show that these concerns are largely unfounded. Bottled water is regulated by the FDA, and is not tested unless there is a complaint. Tap water is regulated by the EPA, and is regularly tested. "The source of water isn't a concern for me, health-wise. What bothers me about drinking bottled water is the amount of plastic used in the packaging and the fuel used in the transportation. Water is heavy, and when you're transporting it from Italy to here in a plastic or a glass bottle, there is an amazing amount of fuel used," said Clark.

The project will analyze hair samples from students with varying diets, from meat eaters, to vegetarians to vegans. Water bottle samples will also be taken from a selection of brands sold around the campus area. Once the diet portion of the project is complete, the Geography Department hopes to hold a colloquium during fall quarter to display the findings.

For more information about the Children of Corn project, please see www.geog.ucsb.edu/corn.

INTERESTED IN INTERNSHIP OPPORTUNITIES?

The Sustainability Internship Program is consistently offering new academic credit, volunteer and even paid internships. This is a great opportunity to build your resume and see if sustainability is the field you want to work in after college. Projects range from energy and water efficiency, to environmental literacy and green chemistry. Email: kmaynard@geog.ucsb.edu

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Newsletter

UCSB's Green Campus

July/August 2008

Preview of 2008-09

This summer is one for the UCSB Green Campus record books. The SB team said goodbye to two valued interns in the Spring and has undergone a smooth transition into a quartet.

Although half of us are maintaining long-distance relationships with our beloved Santa Barbara campus, we have decided to do everything we can during fall quarter to take Green Campus to a

new level. This means larger, longer term projects, bringing on new stakeholders and striving for a high level of interaction.



Flashlights and pencils will be given out during tabling events instead of CFLs this year.

CFL exchanges are tried and true, but the times demand creativity, and Green Campus Santa Barbara is better prepared than ever to heed the call, especially after the sustainability conference's new ideas. We will be giving out pencils and flashlights to more effectively spread the cause and answer

UC Santa Barbara Green Campus by the numbers...

- 1 = Building LEED audited
- 4 = Green Campus interns
- 5 = Volunteers for CFL exchanges
- 502 = CFLs exchanged in 2008
- 3453 = CFL's exchanged in 2007
- 3729.6 = kWh/year saved through March CFL exchanges
- 372.96 = dollars saved from CFL exchanges

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Check out our blog! www.gcpucsb.blogspot.com



Newsletter

UCSB's Green Campus

July/August 2008

Stakeholder Meeting Anticipated

In an effort to build greater bonds across the university community and continue great progress toward energy efficiency, UCSB's Green Campus is gearing up for its fall Green Campus advisory meeting.

Scheduled for Friday, October 3rd, the object of this meeting is to meet with key campus stakeholders early on in the 2008-09 academic year to conduct organized project planning and prioritize energy efficiency projects for the year. The meeting will also be a great opportunity for stakeholders to network with other professionals and faculty as well as the intern team.

Green Campus plans to invite approximately 25 stakeholders to the event. Among these invitees are new Associate Vice Chancellor Ron Cortez, who attended the Energy Competition award reception in June. UCSB Green Campus is also meeting with potential faculty stakeholders this summer to brief them on projects and garner support, as well as collaborating with the student Energy Club.

After attending the Sustainability Conference, UCSB Green Campus decided to focus on large-scale energy efficiency projects this year. The team is putting together a details scope of work action plan in advance of the meeting to go over at the meeting. Project ideas include those inspired by the sessions and planning conducted at the state-wide Green Campus End of Year meeting on Saturday, August 2nd, directly following the conference.

An invitation will be sent to the list of stakeholders later this month. UCSB Green Campus anticipates great attendance so that they

New Direction

The Green Campus Team is very interested in large scale lighting retrofits, projects that will help existing buildings achieve LEED Existing Building certification, and work that will help promote energy efficiency on a campus-scale. We intend to show the University that we are not another campus club, but that we are interested in making a visible difference on our campus.

Green Campus would also like to share our vision of creating a Freshman Seminar class that focuses on energy efficiency. The course we are developing would count for a general education credit, and would be offered every quarter by Green Campus. We intend to present on energy efficiency and show how college students can adopt sustainable and efficient habits. We hope to bring in guest speakers, including professionals and facilities staff. We again hope to incorporate you, our stakeholders, in any way we can,

General Green Campus questions or comments can be forwarded to GreenCampusUCSB@gmail.com.

To receive free CFIs email: CFLswapUCSB@gmail.com.

