



Sustainability @ *UCSB Campus*

Perrin Pellegrin

**Campus Sustainability Manager
Facilities Management, UCSB**

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Sustainability at UCSB Campus

What is Sustainability?

“Meeting the needs of the present without compromising the ability of future generations to meet their own needs.”
– Washington State Department of Ecology



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UCSB Sustainability Mission

The University of California Santa Barbara is a responsible steward for our campus and community as well as a global leader for sustainability through education, research, and action.



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Brief History

- One of the first campuses in the nation to have a Environmental Studies program
- UCSB is a national leader in building green
- First UC campus to hire a sustainability coordinator
- Next steps for UCSB sustainability is to develop a overall sustainability plan



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Development of the Campus Sustainability Plan

In 2005, the CPC subcommittee on Sustainability was charged with developing a campus sustainability plan.

Campus indicators were gathered (2004-2005).

In the fall quarter of 2005, the subcommittee hired Brightworks Northwest to teach change agents **“The Natural Step Process”**.
(Change agents consist of Staff, Students and Faculty)

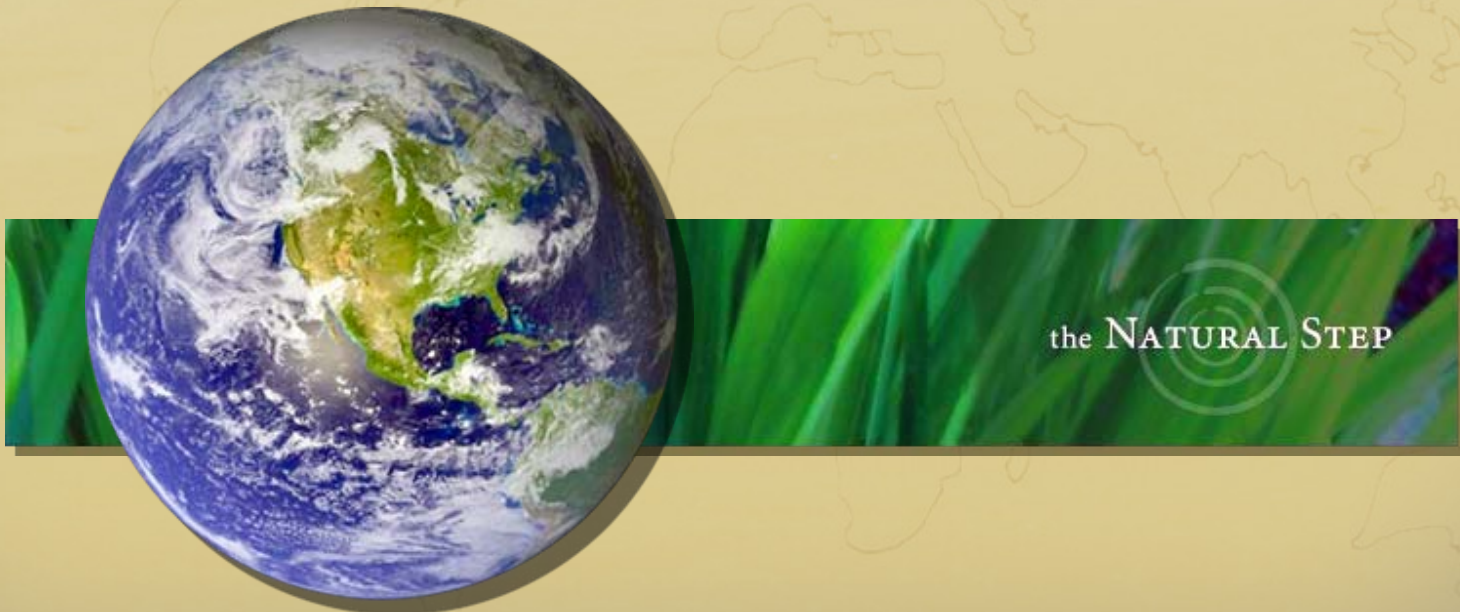


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The Natural Step System Conditions

“In a sustainable society, nature is not subject to systematically **increasing**:

1. Concentrations of substances extracted from the earth's crust
2. Concentrations of substances produced by society
3. Degradation by physical means
4. And in that society, human needs are met worldwide.”



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Development of the Campus Sustainability Plan

Phase I of the plan involved a workshop series with 75 change agents. The change agents were divided into nine groups:

- Academic and Research
- Built Environment
- Energy and Water
- Food
- Procurement
- Transportation
- Waste
- Communications
- Land use/Landscape



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The workshops

There were four full day workshops for the change agents:

Workshop A - Awareness

Workshop B - Baseline Mapping

- Organizational flow and analysis

Workshop C - Creating a full vision of Full Sustainability

Workshop D - Down into Action



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The workshops

The workshops brought the change agents to a common understanding of sustainability.

Everything coming into campus has a lifecycle and then leaves, partly as by-products in the form of emissions, trash to the landfill, recyclable materials and other waste. Things cannot continue to simply be thrown away. There is no “away”, only, perhaps, a change of form.



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Development of the Sustainability Plan, Phase II

The nine change agent groups each determined their **short, intermediate** and **long term goals**.

In phase II of the plan development, the chairs of each group meet monthly to discuss progress towards these **goals, barriers, and accomplishments**. Change agents also meet regularly.



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Built Environment

Current green building practices:

- 1 LEED NC Platinum, 3 LEED NC registered buildings
- 1 LEED EB Silver, 3 LEED EB registered buildings
- Green building policy, buildings programmed after July 1, 2004 have to meet a minimum of LEED Silver
- 5 LEED accredited professionals on campus



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Built Environment

Current green operation practices:

- Green Seal Cleaning products
- Education and outreach on sustainability to O and M staff
- Walk off mats and hepa filter vacuums
- High percentage of recycled content in bathroom paper products and bleach free
- Pesticide free landscaping
- Commissioning/Preventative Maintenance of buildings



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Built Environment Goals

- Each campus building committee have a sustainability representative
- Educate building committees on sustainable design
- Develop sustainable design standards for campus
- Building should showcase sustainable design techniques in a “Building that teaches” approach



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Energy

Current Sustainable Practices:

- Out of the 10 UC campuses, UCSB campuses uses the least amount of energy per sq. ft.
- UCSB retrofitted many HVAC and lighting systems on campus. These retrofits have save the campus: 1.4 million dollars in energy costs, equating to 12 million kWh, or 16 million lbs of CO2 emissions
- Funding for these projects came from grants and rebates



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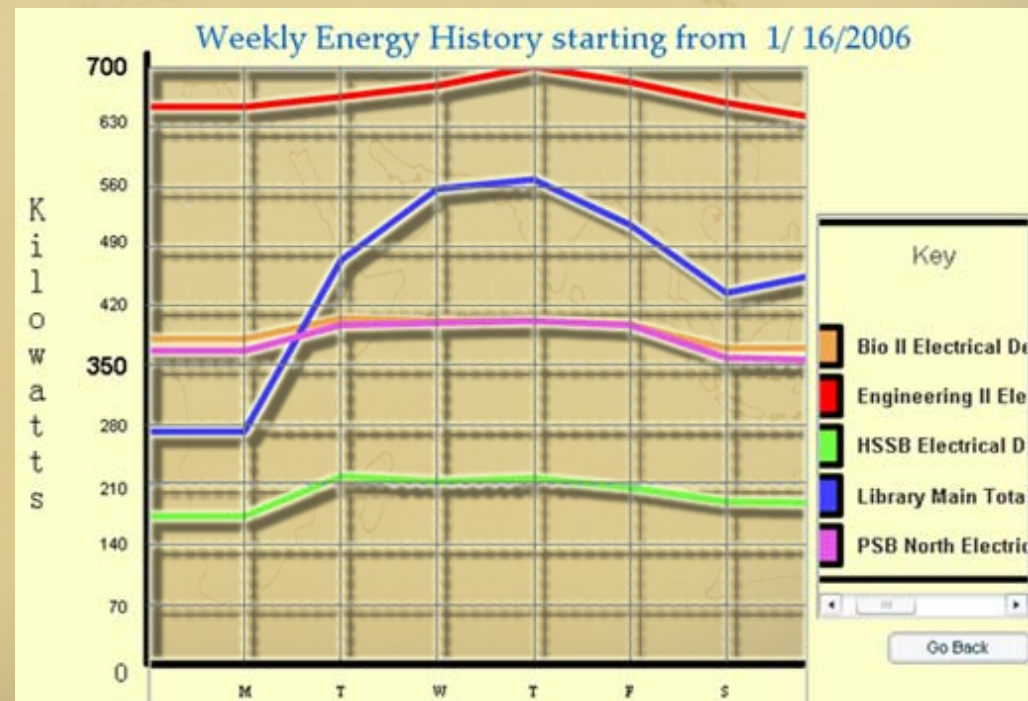
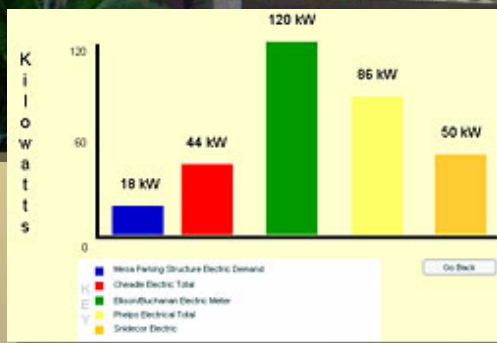
Energy Goals

By 2010, reduce electricity usage by 33%

By 2050, reduce fossil fuel usage by 80%

using campus co-generation and waste heat and

- increase photovoltaic on campus to 7% of usage
- increase wind energy procurement to 20% of usage
- increase new green technology to 6% of usage



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Landscape

Current sustainable practices:

Developed a green site maintenance plan for the campus

Sustainability efforts have already reduced the usage of “Roundup” from 26 gallons annually to 2 gallons.

Irrigate 90% of the campus with reclaimed water (at 1/5 the cost of potable water).

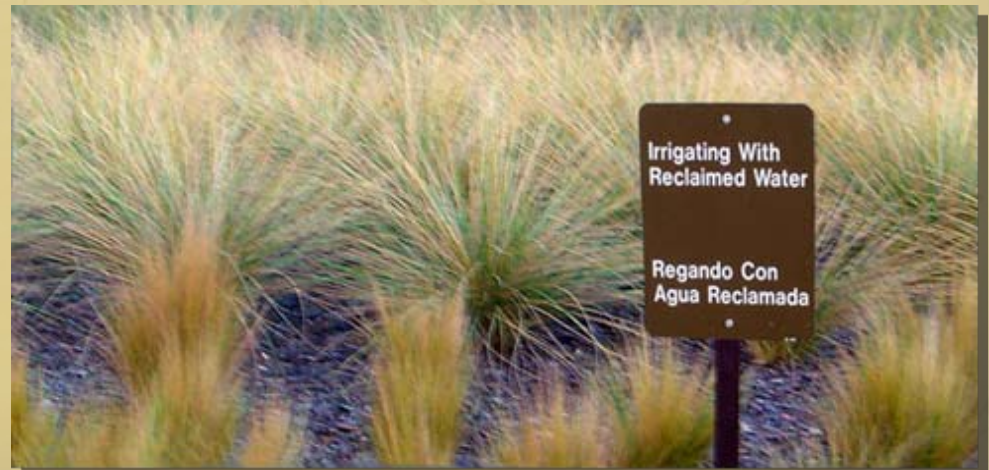
Provide grounds workers with classes on ways to care for the campus landscape in a sustainable manner.



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Landscape Goals

- Landscape the campus with xerophytic plants.
- Using GIS identify the different landscape covers and figure out the percentage of campus covered by each landscape type.
- Figure out how much fossil fuel is used for each major landscape type over the course of a year (mowing, transport of staff, weeders, blowers, etc.)



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Water

Current Sustainable practices:

Campus has installed 50 waterless urinals on campus, which save 45,000 gallons of water, and will continue to install more when feasible.

First in the county of Santa Barbara to use reclaimed water for irrigation and in toilets

- Reclaimed water is 1/5 the cost of potable
- UCSB irrigates 90% of the campus with reclaimed

Ultra low flow fixtures used for all new construction and retrofits.



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Water Goals

- Beta test all new low flow fixtures
- Continue to install the proven low flow fixtures
- Research areas where the campus can reduce water usage

TO CONSERVE WATER,
THIS RESTROOM USES
RECYCLED WATER IN
THE TOILETS AND/OR
URINALS



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Food

Current Sustainable practices:

Immediately following the Natural Step workshops, food services changed to organic dough, pizza sauce, cheese and a few veggies at the UCEN's Paterno restaurant.



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Food Goals

- Change purchasing contracts to include local and organic produce.
- Move to all biodegradable disposables.
- Composting wastes wherever possible.



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Communications Goals

All publishing and printing activities on campus will evolve to provide a much greater electronic presence, reducing paper and printing needs, while using only recyclable and sustainable papers and inks.

Developing an interactive DVD to be shown at new staff orientation.



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Purchasing

Current Sustainable practices:

- UCSB recently hired a Sustainable purchasing coordinator
- New vendor RFQ all contain sustainable language
- Outreach to departments on the importance of mandatory duplex printing, energy copiers, etc.



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Purchasing Goals

Purchasing will be examining their procurement practices and vendors to create new standards that would apply to all equipment and materials that the campus buys, e.g. packaging practices, equipment upgradeability and adherence to Energy Star standards, recyclable content.



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Transportation

Current Sustainable practices:

- Campus has a Transportation Alternative Program
- Staff/Students can ride the bus for free
- Ample bike parking and bike paths, 9% of faculty and staff ride to work
- Car Share program
- Electric cars for around campus trips
- Vanpool option for commuters



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Transportation Goals

Partnering with Transportation Alternatives Board to provide greater incentives to avoid single occupant car commutes, creation of standards for campus fleet, encouraging exploration of more affordable housing within a 5 mile radius, promotion of video and call conferencing to replace travel.



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Waste

Current Sustainable practices:

- Campus recycling program, diverts approximately 50% of the total waste
- Recycling program is student run and recyclables are picked up by bike
- Composting program for green waste



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Waste Goals

Evaluate, then reduce, campus waste with a long-term goal of zero waste.

By 2010, reduce gas heating usage by 33%, to 2.2 million therms per year.

Use waste heat from electrical cogeneration for 20% of campus heating.

Reduce direct fired gas heating to 60%.

Study other heat recovery methods, alternative fuels, heat pumps, etc.



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Academics and Outreach Goals

Provide more student internships in sustainability related projects both scientific and interdisciplinary.

Determine how many “sustainability” classes are offered at UCSB

UCSB is hosting the 5th Annual UC/CSU/CC Sustainability Conference in June, 2006.



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The Campus Sustainability Plan

The Sustainability Working Team has developed an outline for the plan. The goal is to have a draft of the plan completed by June 2006, while working with the Planning Department to incorporate the plan into the LRDP.



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What you can do:

- Mandatory duplexing for all print jobs in the office
- Have one main printer instead of individual one at the desks
- Turn your computer off when you go home
- Purchase energy star appliances and utilize the energy star application
- Keep lights turned off when not needed
- Make sure your department understands and is aware of the recycling protocols on campus
- When purchasing office supplies look for products that contain recycled content
- Don't use strip heaters, they cost the campus a \$1000 year
- Choose a sustainability coordinator in the department
- Bring a reusable cup to drink coffee
- Bring utensils to eat with, instead of plastic

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For more information on the Campus Sustainability Plan, contact:

Perrin Pellegrin, *Campus Sustainability Manager*

893-2661 ext. 2208

perrin.pellegrin@dcs.ucsb.edu

