

# BLUEPRINT FOR A SUSTAINABLE CAMPUS 2004

## Working Group Results

from the

## ANNUAL CAMPUS EARTH SUMMIT, 1/30/04

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# SUMMARY: BLUEPRINT FOR A SUSTAINABLE CAMPUS

## UNIVERSITIES AND SUSTAINABILITY

Civilization has arrived at a crucial juncture, wherein natural systems are in rapid decline. The principles, procedures, and assumptions that we have relied upon in the last century are in dire need of revision. Though the challenges we face may seem inevitable, they are accompanied by opportunities for prudent leadership and positive change.

Universities worldwide have begun taking initiative to support an equitable and sustainable future for all life forms. Increasingly, academic institutions are re-envisioning their roles in education, research, policy formation, and information exchange, and enacting these responsibly, in ways that make sustainability a viable possibility. Since 1990, over 300 institutions in 40 countries have signed the Talloires Declaration, pledging to "provide the leadership and support to mobilize internal and external resources so that their institutions respond to this urgent challenge."<sup>1</sup>

Sarah Hammond Creighton, author of *Greening the Ivory Tower*, summarizes this commitment:

Institutions of higher learning teach young people the professional and intellectual skills they need to cure disease, run businesses, lend money, and legislate policy. Universities also conduct basic research that is instrumental in understanding the natural world and our effect on it. In teaching these skills and investigating new research areas, universities and colleges have a unique opportunity, in the classroom and by the example of their physical plant, to provide students with a basic understanding of the interaction between business decisions and the natural systems on which our health and well-being depend. .<sup>2</sup>

In 2003, UC completed a Feasibility study, which resulted in a system-wide Green Building Policy. During this study, UC formulated the following definition of sustainability:

*Sustainability* refers to the physical development and institutional operating practices that meet the needs of present users without compromising the ability of future generations to meet their own needs, particularly with regard to use and waste of natural resources. Sustainable practices support ecological, human and economic health and viability. Sustainability presumes that resources are finite, and should be used conservatively and wisely with a view to long-term priorities and consequences of the ways in which resources are used.<sup>3</sup>

## UC SANTA CRUZ AND SUSTAINABILITY

In 1998, Chancellor Greenwood challenged the Millennium Committee to develop a set of guiding principles for UCSC. Consulting 700 individuals, the committee identified,

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<sup>1</sup> University Leaders for a Sustainable Future: [www.ulsf.org](http://www.ulsf.org)

<sup>2</sup> Creighton, Sarah Hammond. (1998). *Greening the Ivory Tower: Improving the Environmental Track Record of Universities, Colleges, and Other Institutions*. MIT Press, Cambridge, Massachusetts.

<sup>3</sup> <http://www.ucop.edu/facil/greenbldgs/gbfeasibility.pdf>

as one of six principles, prioritizing sustainability: UCSC will plan its growth and development with attention to sustainability and in consultation with the larger external community.<sup>4</sup>

In 2001, students at UCSC formed the Student Environmental Center (SEC); the mission of the SEC is to organize student involvement in collaboration with the University, to implement environmentally sound practices on-campus<sup>5</sup>. In Spring 2003, the SEC was instrumental in the passage of Ballot Measure 9 (Campus Sustainability Programs Fee), which created the Campus Sustainability Council (CSC). Funded by a permanent, \$3.00 undergraduate fee, the CSC ensures the campus' long term commitment to prioritize collaborative efforts towards sustainability.

Since 2002, the SEC has hosted the annual Campus Earth Summit, bringing together students, faculty, staff, administrators, and community members to discuss the state of sustainability at UCSC. Over 100 people attended the January 2004 Campus Earth Summit, featuring Chancellor MRC Greenwood, who expressed her support for the students' efforts. Other notable speakers included Assemblymember John Laird, and Student Regent Matthew Murray.

One result of the Summit is a yearly revision of the **Blueprint for a Sustainable Campus**. Collaborative discussion groups for each topic area of the Blueprint come together to define action plans for the year. The 2004 action plans are summarized below; please view the complete Summit Report in the Details section of this report. The 2004 Blueprint's topic areas are:

- Campus Food Systems
- Transportation
- Long Range Planning
- Curriculum
- Waste Prevention
- Green Purchasing
- Green Building and Renewable Energy
- Campus Ecosystem Preservation

Inspired by the 2003 Green Purchasing group's action plan, one staff member from CATS (Communications and Technology Services) led a successful campaign for instituting campus wide usage of 100% post-consumer, recycled paper in all computing labs<sup>6</sup>. Since the 2002 Summit, such continual efforts toward the goals defined in the Summit action plans have significantly increased. A number of ongoing, individual endeavors culminated at the 2004 Summit, in a number of Working Groups forming Working Groups committed to actively pursuing progress in the action plans together, throughout the year. One current highlight from the 2004 Campus Food Systems group has been collaboration with Dining and Housing Services to develop purchasing guidelines which give preferentiality to local providers, organic practices, and socially just labor policies.

Modeled after the Blueprint for a Green Campus at the University of Colorado Boulder, the Blueprint for a Sustainable Campus is a living document that describes our commitments and plans for improving the sustainability of our campus community. The collaborative nature of the Blueprint allows for a systems approach to thoughtful, responsible planning, ensuring that we have a fertile, vibrant world for generations to come, beginning with the University of California at Santa Cruz. The Blueprint for a Sustainable Campus will continue to be developed collaboratively at UC Santa Cruz in years to come.

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<sup>4</sup> <http://www.ucsc.edu/planbudg/chanc/millcom/mcmtg-980624-final-report.htm>

<sup>5</sup> <http://www.ucscsec.org>

<sup>6</sup> Greening the Labs” [http://its.ucsc.edu/newsletter/full\\_story.php?showcomments=1&id=67](http://its.ucsc.edu/newsletter/full_story.php?showcomments=1&id=67)

# INTRODUCTION

The 2004 UCSC Campus Earth Summit took place January 30, 2004 from 10:00am-2:00pm at the Bay Tree Conference Center, with approximately 100 people attending. The morning session included a number of speakers:

- Chancellor MRC Greenwood
- Assemblymember John Laird
- Student Regent Matthew Murray
- “Green” Architect Anthony Bernheim from SMWM
- Physical Plant Director Ilse Kolbus
- Student Environment Center (SEC) Co-Chairs
- Student facilitators of the afternoon Working Groups

The afternoon session involved facilitated “Working Group” sessions focused on 8 aspects of campus sustainability. This report details the results from each Working Group:

- Campus Food Systems
- Waste Prevention
- Transportation
- Green Purchasing
- Long Range Planning
- Green Building and Renewable Energy
- Curriculum
- Campus Ecosystem Preservation

The purposes of the 2004 Campus Earth Summit were:

- To bring together students, faculty, and administrators in collaboration to contribute to UCSC’s Blueprint for a Sustainable Campus.
- To define action plans for 2004 that will move the campus toward sustainability.
- To create Sustainability Working Groups for 2004 who will actively pursue those action plans.

There were three questions we wanted to explore during the Earth Summit:

1. **CURRENT STATE:** Where are we now? What are we already doing at UCSC that moves the campus toward sustainability?

To gather information on the Current State of Sustainability at UCSC prior to the Earth Summit, invitees were encouraged to submit their knowledge of “Where we are now” to the Campus Sustainability Council website: <http://sua.ucsc.edu/csc/earthsummit.cfm> These submissions were summarized by the SEC Facilitators, and presented during the morning session.

2. **OPPORTUNITIES AND SYNCHRONICITY:** How can we make use of the opportunities for change before the campus right now, to move toward sustainability?

Opportunities include: Long Range Development Plan, UC Regents green building policy and clean energy standard, Executive Budget Committee change process, WASC accreditation process, Campus information systems, Formation of Campus Sustainability Council and recognition of the Blueprint for a Sustainable Campus, Collaboration with students during spring quarter course and lecture series “Education for Sustainable Living.”

See this website for details: <http://sua.ucsc.edu/csc/opportunities.cfm>

3. **ACTION PLAN FOR 2004:** What goals and actions will move us toward sustainability during this year?

# SUMMARY OF ACTION STEPS FOR EACH WORKING GROUP

## [ 1 ] CAMPUS FOOD SYSTEMS

### Action Steps (prioritized by participants)

1. Organize students (especially younger ones) to demand socially just/local/organic food
2. Serve CAN coffee in all campus dining facilities
3. Develop guidelines (in collaboration with students, local farmers and summit participants) for food purchasing that will hopefully be adopted by UCSC dining services in 2004
4. Label food in dining halls and provide more information about where it is coming from and what it is
5. Facilitate teach-ins on campus in collaboration with organizations such as the ethnic student organizing council, E2, and Dump Sodexo organizers
6. Create informative table tents for dining halls
7. Begin to design a cropping system at CASFS (Center for Agroecology and Sustainable Farming Systems) suitable to UCSC dining halls
8. Create connections with local farmers (put a face on the food)
9. Organize faculty to integrate curriculum into efforts
10. Incorporate student representatives into the Sustainable College Farms Workgroup and initiate discussion for integration of farms into colleges
11. Bridge together groups by creating priority actions steps and timelines spanning 1-2 years and 5 years
12. Educate students during college nights in which local/organic/ socially just food is provided, allow farmers and organizations to participate, obtain student input
13. Research about local availability and sourcing (and if not available, find out where environmentally and socially sustainable food can be sourced)
14. Through ESLP link food systems to greater UC community; possibly have a convergence of interested students or an ESLP that is food systems specific; compile relevant readings for course
15. Prioritize student involvement in campus food production (through different colleges or PICA (Program in Community and Agroecology))

## [ 2 ] WASTE PREVENTION

### Action Steps (prioritized by participants)

1. Pass a Student Referendum to get a Housing Recycling Coordinator who would oversee all housing areas and work with the dining services as well as collaborate with the state person.

2. Find funding for more full-time staff and equipment to keep pace with the campus growth.
3. Include campus wide data collection (including construction) of material diverted.
4. Review business practices to reduce waste:
  - Reduce individually addressed flyers
  - Prevent campus departments from over ordering
  - Put the weekly campus newsletter on-line
  - See to it that mail addressed to old students are no longer sent to UCSC
  - Utilize department bulletin boards
5. Integrate recycling education into Freshman Orientation:
  - In the form of a newsletter to be sent out in the freshman packet before they arrive for tours
  - Make Waste Prevention a part of each college's residential life program. Establish a community to make people responsible for their environment.
  - Introduce information about recycling at the visitation stage
6. Composting- collaborate with the city on regional compost and green waste

## **[ 3 ] TRANSPORTATION**

### Action Steps (prioritized by participants)

1. LRDP! Get transportation input from faculty, staff, and students. Promote sustainable transportation.
2. Bio-diesel: getting 100% bio-diesel in all diesel campus vehicles. Setting up the on campus bio-diesel processing center and higher one or two "brewers" for monitoring the plant.
3. TAC/TOC student membership: keep the student input to the TAC TOC committee to ensure TAPS is listening and working for students.
4. Ride Share Web Site: an online centralized ride share board.
5. Bike Festival: promote bicycling with a festival and ride on campus.
6. TAPS Student Intern Position.
7. Curriculum: ENVS-transportation systems and ESLP classes for spring 04.
8. GPS Shuttle Tracking System: a web site and or screens at bus stops would show real time location of shuttles.
9. Use Bus Shelters as advertising/outreach space: use the bus shelters for public awareness and education.

## **[ 4 ] GREEN PURCHASING**

### Action Steps (not prioritized)

1. Contact the strategic sourcing personnel on campus about setting up a meeting collaboration (main contact: Stuart Davis).

2. Use the E-Procurement pages, the College 8 Web site, and the Green pages to find options for green companies.
3. Provide inserts into freshman orientation packets about green purchasing.
4. Explore options for ballot measures to cover the costs of specific green purchasing items.
5. Contact Jane Scott regarding office products.
6. Contact the UCSC point person for office supplies, Tom Tozier (459-2925), about green purchasing.
7. Encourage all departments to begin using post-consumer paper.

## **[ 5 ] LONG RANGE PLANNING**

### Action Steps (not prioritized)

1. SEC implement Task Force to actively participate and adopt Principles of the LRDP. Ongoing group understanding the power of the situation.
2. See LRDP bless the creation of a sustainability office.
3. Collaborate, cooperate, communicate. We need to make conversations more open.
4. Student projects to help develop Green Building outreach materials.
5. Increase Community communication. Link to bigger picture: Broaden our perspective to look at the State.
6. Keep pressure on Regents to make our creations policy for system-wide.
7. Team-up with outside groups to help us with expertise. Outside voice to continue to challenge us!
8. Work on student involvement. Integrate involvement incentives into the core course and transfer programs -- collaborative educational opportunities. Stewardship and internalization of academia and thinking for the Long Range.
9. Continue to collect sustainability and economic knowledge -- data measurement.
10. Figure out how to focus efforts.
11. Continue effective student input. Improve on it, too!
12. Adoption of the Kyoto Protocol.
13. Cooperation in process between the City, UCSC, the County, the State, and beyond.

## **[ 6 ] GREEN BUILDING AND RENEWABLE ENERGY**

### Action Steps (summarized post-Summit)

1. Implement life cycle analysis and finance practices that provide a whole system accounting for capital and operating budgets for buildings.
2. Implement energy metering for individual campus units for awareness and accountability.

3. Choose a pilot green building project to serve as an inspiring example.
4. Establish an ongoing, integrated, and collaborative group taking action on green building.
5. Utilize education and outreach to increase awareness and involvement.
6. Make green building a specific fundraising goal--tap new resources specifically pertinent to these funds.
7. Integrate sustainability concepts into the Long Range Development Plan. Become involved in LRDP process.

## **[ 7 ] CURRICULUM**

### Action Steps (summarized post-Summit)

1. Develop courses focused on student organic gardens, encouraging academic and experiential components.
2. Influence the LRDP Strategic Futures Committee regarding curriculum. The needs of academic sustainability and sustainability curriculum should guide plans for physical development.
3. Discover and publicize current courses and internships with a sustainability component from all departments.
4. Create new courses and research projects focused on sustainability in many departments.
5. Integrate sustainability into existing courses, particularly core courses.
6. Create/expand internships and living/learning experiences related to sustainability.
7. Revise General Education Requirements with courses providing the skills needed for a sustainable society.
8. Create ongoing working group and annual faculty sustainability assembly to strategize and take action.
9. Create community with many creative opportunities for connection--from campus to local community to global community.

## **[ 8 ] CAMPUS ECOSYSTEM PRESERVATION**

### Action Steps (highest priority)

1. Create curriculum for a fall core course series at college 8 to educate students on environmental stewardship and respect for our campus ecosystems.



# DETAILED RESULTS BY WORKING GROUP

## [ 1 ] CAMPUS FOOD SYSTEMS

### Action Steps (prioritized by participants)

1. Organize students (especially younger ones) to demand socially just/local/organic food
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13. Research about local availability and sourcing (and if not available, find out where environmentally and socially sustainable food can be sourced)
14. Through ESLP link food systems to greater UC community; possibly have a convergence of interested students or an ESLP that is food systems specific; compile relevant readings for course
15. Prioritize student involvement in campus food production (through different colleges or PICA (Program in Community and Agroecology))

### Next Steps

Campus Food Systems Working Group will meet on March 1, 2004 from 12:30 – 2 :00pm at the UCSC Farm (we are reminded to bring our own lunch). Mark Major ([Bcgecko@aol.com](mailto:Bcgecko@aol.com)) will email everyone a reminder. The focus will be on creating guidelines for campus food purchasing.

Melanie DuPuis suggested that we invite Julie Guthman to help us with the differences between standard versus process guidelines (M DuPuis volunteered to contact Guthman). We decided this meeting will be for those who attended summit (and J. Guthman), the next we will open to all interested. Over the next month we will think about what the guidelines ought to be and discuss our ideas at the meeting

Melanie DuPuis is teaching a food systems class in Spring and has invited those interested to supply relevant readings for it or the ESLP. Also there is a possibility of presenting, which Troy Henri of CAN wants to utilize.

## Participants

Co-Facilitators: Hillary Saunders, Tony LoPresti, Serena Coltrane-Briscoe

<b>name</b>	<b>UCSC affiliation</b>
Tony LoPresti	researcher; CJTC
Suzanne Langridge	ENVS grad student
Mark Major	ENVS/cmmu; CAN
Scott Berlin	As. Director dining services
Linda Wallace	sociology grad student
Jim Leap	CASFS
Nicholas Babin	porter/ global econ; CAN
Mark Oehlberg	electrical engineering
Troy Henri	CAN internship coordinator
Serena Coltrane-Briscoe	ENVS alumni/ CAFF farm to School Program
Hillary Saunders	SOS; Merrill/CMMU
Leo Grandison	Black Mens Alliance
Jose Sanchez	CUHS/ Village Grounds

## Where Are We Now?

(presentation given during the Earth Summit morning session)

Campus Food Systems focuses on sustainable food acquisition and distribution that benefits the local economy. The following describes some opportunities to introduce more local, organic, sustainable and socially just food products into campus dining facilities.

1. Last year the change in management of University Dining Services created the opening for a transition to internal purchasing by UCSC. Beginning this Spring, the university will begin to contract its own food. This will increase the amount of accountability Dining Services has to student interests. Alma Sifuentes, the Director of Dining Services has participated in informal conversations with Students for Organic Solutions, the Center for Agroecology and Sustainable Food Systems (CASFS), and local growers about the possibility of intermittently providing local produce in campus dining halls and restaurants.
2. Comercio Justo, a campus fair trade advocacy organization, successfully campaigned last year for the availability of Fair Trade coffee in dining halls and coffee carts. Likewise, the Community Agroecology Network (CAN), a network of five cooperative communities in Central America dedicated to sustainable farming research and practices, has been negotiating with campus coffee carts to supply coffee sometime next year.
3. The Center for Agroecology and Sustainable Food Systems is creating pathways for integrating academic courses and research with practical applications for the sustainability of campus food systems.
4. The Program in Community and Agroecology (PICA) and the Foundational Roots Coop, a student gardener network, have been strengthening and expanding student gardens on campus and trying to integrate organic gardening into the University's curriculum. The Foundational Roots Coop and PICA provided the salad for lunch today, and hope to be hosting a student farmers market in the Bay Tree Plaza this spring.

## Other Discussions

### Opportunities and Synchronicity

#### Campus Information Systems:

- will connect CASFS with Dining Services
- will be valuable for LRDP planning
- will provide valuable information about volume and use of food in campus dining facilities
- can allow for plaques or information at point of consumption relating/educating about where food is from

#### Independent Contracting:

- allows for greater flexibility and possibility of future contracts with local/small farmers
- will reveal how much and what food is consumed
- will allow for greater accountability to student interests and desires
- gives an opportunity to create guidelines of values for purchasing for campus food systems
- creates a just, transparent and accountable relationship between producers and consumers that lead to social sustainability and social justice
- possibility of a farmers network created with Alba and CAFF

#### WASC:

- student participation in harvesting at CASFS provides valuable hands-on education
- Education for Sustainable Living Program:
- provides an opportunity for students to work with CASFS and do research about current state of food system

#### Green Energy Policy:

- provides incentive for local procurement of food due to decreased food miles/ transportation pollution and costs
- can be incorporated into machinery use in kitchens (i.e. Low energy dishwashers, green dishware)
- ties into SEC's goal of uniting campus policies with those outlined in the Kyoto Protocol

## **[ 2 ] WASTE PREVENTION**

### Action Steps (prioritized by participants)

1. Pass a Student Referendum to get a Housing Recycling Coordinator who would oversee all housing areas and work with the dining services as well as collaborate with the state person.
2. Find funding for more full-time staff and equipment to keep pace with the campus growth.
3. Include campus wide data collection (including construction) of material diverted.
4. Review business practices to reduce waste:
  - Reduce individually addressed flyers
  - Prevent campus departments from over ordering
  - Put the weekly campus newsletter on-line
  - See to it that mail addressed to old students are no longer sent to UCSC
  - Utilize department bulletin boards
5. Integrate recycling education into Freshman Orientation:
  - In the form of a newsletter to be sent out in the freshman packet before they arrive for tours
  - Make Waste Prevention a part of each college's residential life program. Establish a community to make people responsible for their environment.
  - Introduce information about recycling at the visitation stage
6. Composting- collaborate with the city on regional compost and green waste

## Next Steps

Our follow up meeting, to define the action steps we want to take, is still being arranged. Suggested dates include: Wednesday morning, either Feb 18, 25 or March 3. Leah Walsh volunteered to communicate to the group. She later hopes to share this role with Dave Wade.

## Participants

Co-Facilitators: Leah Walsh, Rychard Bowens

<b>name</b>	<b>UCSC affiliation</b>
Paul Bianchini	College 8 Recycling
Dave Wade	Grounds- Recycling
Dean Raven	Grounds
David Saxton	SEC, ENVIS student
Rychard Bowens	SEC
Leah Walsh	SEC

## Where Are We Now?

(presentation given during the Earth Summit morning session)

Over the past year, there have been a number of improvements in waste reduction and recycling program at UCSC. Campus wide, UCSC has consolidated the 5 outside recycling categories into two. Ian Mitchell, one of the maintenance supervisors at Kresge, reports that this consolidation has simplified the recycling process and has resulted in a small increase in recycling at Kresge. In addition, double sided copying is being strongly encouraged in response to the current budget cuts.

On the college level, there have also been a number of improvements contributing to the already successful programs on campus. For example, Kresge College has hired a recycling coordinator (or resource conservationist) whose job is to educate the students on recycling, supervise composting at the college (handling the transportation to and management of the compost bin), and deal with abandoned materials around the college. College Eight, over the pas, has consistently maintained the most productive recycling and compost program. The Maintenance Shop at College Eight continues to employ one or two students a year to put up flyers and signs around the college, collect materials for the college compost program, and much more. Their long-term efforts have clearly proven successful, as College Eight has produced far more recyclables in the first half of 2003 than any other college: 26,645 lbs.

Merrill College has started an environmental program, EnviroMerrill that now allows students to recycle grocery bags, printer cartridges, fluorescent bulbs, batteries, and CDs, and is now handling compost for residents as well as the Taqueria. The Merrill program has also been distributing educational bookmarks with recycling pointers and reminders.

Finally, Stevenson has reported experimenting with adding some small recycling bins around the academic area and found that effort has been fairly successful.

Morgan Wyenn, last years Chancellor's Undergraduate Intern who worked with the grounds department also had great contributions to offer. Over the course of the year, she produced several educational documents to help expand campus knowledge of recycling and reusing, she wrote a Public Service Announcement for KZSC, the campus radio station, for promoting recycling, she worked with the Environmental Studies Department to set up an internship position for a student to receive academic credit to work with the Recycling Program in the future and encouraged the campus community to show demand for a more waste-free and sustainable environment.

## Other Ideas

- Finding a routine way that Waste Prevention information can be distributed and received
- Address e-waste problem through increased education
- Place recycling bins in places with only garage cans
- More networking with other groups pushing for some of the same goals (EnviroMerrill, CALPIRG, CUIP intern)
- Lobby for student recycling programs to be a priority
- Require new construction to submit recycling plan and submit monthly waste stream reports
- Relocate the campus compost yard
- Streamline recycling servicing processes and staff with more FTE
- Use student-staff relations and student organizations for more outreach
- Current food service uses a very high percentage of durable ware compared to other universities. Carry this over to a new UCSC operation.
- See to it that waste reduction means changed design, space, and landscape standards--changed business practices to prevent or reduce waste (EBC/LRDP)

## **[ 3 ] TRANSPORTATION**

### Action Steps (prioritized by participants)

1. LRDP! Get transportation input from faculty, staff, and students. Promote sustainable transportation.
2. Bio-diesel: getting 100% bio-diesel in all diesel campus vehicles. Setting up the on campus bio-diesel processing center and higher one or two "brewers" for monitoring the plant.
3. TAC/TOC student membership: keep the student input to the TAC TOC committee to ensure TAPS is listening and working for students.
4. Ride Share Web Site: an online centralized ride share board.
5. Bike Festival: promote bicycling with a festival and ride on campus.
6. TAPS Student Intern Position.
7. Curriculum: ENVS-transportation systems and ESLP classes for spring 04.
8. GPS Shuttle Tracking System: a web site and or screens at bus stops would show real time location of shuttles.
9. Use Bus Shelters as advertising/outreach space: use the bus shelters for public awareness and education.

### Next Steps

In light of the fact that there are already two groups working on transportation the decision to continue in these already established groups was taken. Therefore no new working group was formed. The TAC/TOC committee, Santa Cruz Center for Appropriate Technology (working on bio-diesel and more), the LRDP committee, TAPS, SEC, the METRO board, and MAC are existing routes for action.

### Participants

Co-Facilitators: Jonathan Giffard, Max Boykoff, Dave Shaw, Tim Galarneau

Name	UCSC Affiliation
Wes Scott	TAPS Director
Kingman Lim	UC Berkeley
Arthur Coulston	CSSC Organizer
Matt Murray	Student Regent
Dave Shaw	bio-fuels consultant, UCSC student
Max Boykoff	UCSC ENVIS grad student
Devin Price	TAPS driver/ UCSC student
Kyle elfrink	independent
Tim Galarneau	SEC + TAC/TOC
Mindy Leake	College 8 programs
Jonathan Giffard	SEC transportation campaign coordinator

### Where Are We Now?

(presentation given during the Earth Summit morning session)

- General
  - Forest and terrain makes road construction/expansion difficult, human powered transport more energy intensive, and restricts visibility to assist in way finding.
  - Constrained Access Routes via residential neighborhoods causes traffic problems for residents of Santa Cruz City
  - Studies including the Urbitran Comprehensive Transit Study (UCSC) and the Master Transportation Study (MTS for UCSC and regional transit) have given new data for transportation and circulation issues in and around campus.
  - Long Range plans are being developed for the City of Santa Cruz and the University. Both plans will address transportation and circulation issues.
  - Mode split steady at around 50% alternative transportation (one, if not the highest mode split for any college campus in the US).
  - Despite and addition of parking spaces available in the Core West structure vehicle trips have not increased, despite the campus enrollment growing.
- Bike and pedestrian routes
  - Incomplete networks of trails and paths leave people “stranded”
  - Bridges and scenic paths woven into campus allow breathtaking views of the campus
  - Mixed mode arteries cause traffic problems, esp. pedestrian swarms
  - 2 position bike racks on all TAPS and Metro busses
  - Very successful bike trailer program
- Personal Vehicles
  - Inadequate parking for demand (currently around 5,300 spaces)
  - Virtual spaces have been successfully implemented to maximize current lot space
  - Cost of parking and restrictions on permits forces some campus traffic to park on nearby residential streets
  - Limited auto access to campus
  - Many intersections have not been optimized and cause back ups
  - Pedestrians, bikes, narrow roadways, and buses slow flow of traffic
- Transit and Fleet Vehicles
  - Off campus residences are spread out throughout the city of Santa Cruz making mass transit difficult
  - Current diesel busses run on B20 fuel consisting of 20% bio-diesel
  - Compressed Natural Gas station planned, Biodiesel refinery also planned. Look for implementation soon on both of these. Biodiesel refinery is a culmination of 2 years of

collaboration between students, staff, faculty, and the community to process enough fuel to run the diesel portion of the fleet

- Metro ridership averages 8,200 riders per day during 2002-03 school year
- Recent improvements to Metro service include Night Owl service and bi-directional on campus routes. Both highly successful changes.
- In 2001-2002 ridership on all campus routes increased

\* An additional note that Department Of Energy (Federal) gave about \$350,000 for CNG station

## Other Ideas

- • City Share Program
- • Link with SC Transit Issues
- • Bus Bike Rack capacity increase to 3 spaces
- • Metro Bike Shuttle: can the metro run the service? would this have an effect on headways and other time issues?
- • MAC Representative: get rep. on the MAC group
- • Outreach: especially for new students, possible campus walks for orientation, create a new map with pedestrian walking times on it.
- • Bike Loaner Program
- 75% state fleet to be alternatively fueled
- note: every 450 gallons of pure bio-diesel burned is equivalent to 1 alternative vehicle purchase in the eyes of the DOE
- “Open Awareness to incoming students to where things are and how close they are”
- increase transportation when classes are getting in and out
- increase opportunities for bikers to get on campus
- bicycle loaner program and exclusive bike only paths
- carpool database
- alternative fuel conversion workshops for conventional gas vehicles, including local business service department involvement. possibly require a certain number of conversions to alcohol or Natural Gas per year
- refueling stations for alternative fuel
- relieve traffic congestion on campus
- increase bike capacity on metro and TAPS buses
- links between city and UCSC
- more bike lanes
- Education and outreach with students
- human power festival/gathering
- stop personal cars from driving on campus
- actually promote bikes
- promote bikes more than e-bikes
- reduce number of bus stops to force people to walk farther
- get the “gas” from wastes
- ride share website that is endorsed and promoted by UCSC
- Alternative Fuels, bio-diesel pump, B100 fuel for buses, ethanol for some fleet vehicles
- Alternative fuel credits for DOE use bio diesel for up to 50% of requirements
- work with the USDA agriculture cooperatives and the New Uses Council in Washington DC to develop a business structure, promoting co-op owned/ managed facilities, concentrating all waste feed stocks. This will help create a model to get bio fuel not only into campus vehicles but also into student’s vehicles
- Santa Cruz Center for Appropriate Technology (SCCAT) is focused on education and outreach, good to have student teach ins for bio-diesel basics, maybe a 101 course or work shops such as the 2 weekend bio-diesel intensive course SCCAT offers
- Dave’s class in the spring. Thursday 12 at the college 8 cafe, Tuesday night potlucks at the trailer park at 7:30, Thursday night permaculture movies
- a biofuels specific referendum on the 2004 student ballot
- working with LRDP and UCOP towards assessing the feasibility of biofuels production

- education and outreach for alternative fuels
- city wide car share, and yellow bike program
- he is willing to work on a rideshare website
- getting more services and entertainment on campus (groceries, movies, clubs, bowling alleys, etc . . ) so students don't have to leave and travel as much
- a regular transportation systems class that focuses on campus issues
- student intern for money/credit in TAPS for student outreach surveying research etc . . maybe even TAC/TOC
- Participation in LRDP, representation in TAC/TOC just get students involved
- Create an internship program in TAPS for academic credit
- explore campus cooking oil waste as a bio fuel source
- bring a city car-share program to campus for faculty staff and students (UCB has started such a program)
- Explore creating a GPS tracking system for campus shuttles to allow real time tracking of buses through devices at bus stops, internet sites, cell phones, etc . . . (student group working with equivalent of TAPS at Berkeley to explore this)

## Other Discussion

### Opportunities and Synchronicities

Additional opportunities:

- Faye Crosby is working on new Way finding maps and techniques
- BDA members for the transit
- Environmental Studies Department Bio fuels
- Transportation Advisory Committee/ Transportation Oversight Committee (TAC/TOC)
- MAC: METRO Advisory Committee (separate to METRO, but provides input from riders to METRO staff)
- Bio-Diesel Workgroup on campus (headed by Dave Shaw)
- Santa Cruz Center for Appropriate Technology

## **[ 4 ] GREEN PURCHASING**

### Action Steps (not prioritized)

1. Contact the strategic sourcing personnel on campus about setting up a meeting collaboration (main contact: Stuart Davis).
2. Use the E-Procurement pages, the College 8 Web site, and the Green pages to find options for green companies.
3. Provide inserts into freshman orientation packets about green purchasing.
4. Explore options for ballot measures to cover the costs of specific green purchasing items.
5. Contact Jane Scott regarding office products.
6. Contact the UCSC point person for office supplies, Tom Tozier (459-2925), about green purchasing.
7. Encourage all departments to begin using post-consumer paper.

### Next Steps



The participants were all interested in meeting again to pursue the Action Plan ideas. However, a follow-up meeting was not scheduled. Nik Dyer volunteered to set up the meeting.

## Participants

Co-Facilitators: Amy Stoddard, Will Parrish

<b>name</b>	<b>UCSC affiliation</b>
Silas Snyder	Merrill Maintenance Dept.
Diana Sue Miller	Central Purchasing Dept.
Nik Dyer	Alumni, ex-SEC co-chair
Amy Stoddard	SEC Co-chair
Will Parrish	SEC

## Where Are We Now?

(presentation given during the Earth Summit morning session)

As members of a consumer culture, we have many means of expressing our values, the vast majority of which are invariably represented by where we put our money. Thus, for those of us who value environmental sustainability and the well-being of both current and future generations, it is essential that we embrace green purchasing, the concept of making ecologically-sound and socially-informed purchasing decisions.

Over the past year, UCSC has been increasing the scope of its green purchasing efforts considerably. The campus' 15 Instructional Computing labs have converted their paper purchasing to 100 percent post-consumer, bleach-free recycled paper. All new computer monitors are now LCD (Liquid Crystal Display, "flat screen") monitors that emit almost no magnetic fields, contain a minimum of lead, and use 90 percent less power than Cathode Ray Tube (CRT) monitors.

The UC Office of the President has initiated a carpeting program for environmental sustainability. It includes carpets made of more recyclable and recycled material, as well as an emphasis on recycling used carpets as they are removed from UC installations. Last summer, 13,380 lbs. of carpet taken from campus installations were consolidated and recycled rather than sent to a landfill.

The Bay Tree Bookstore now carries recycled notebooks, banana paper notebooks, and tobacco paper notebooks. It also offers sweatshop-free clothing. All ink cartridges on campus are now recyclable. The dining halls now use green detergent. And of course the monumental Green Building and Renewable Energy policy adopted by the UC Regents over the summer will significantly increase our campus' use of a wide range of green materials.

Additional comments on Where We Are Now:

- Fair trade coffee at cafes and dining halls.
- LCD monitors at computing labs (4 campuses throughout UC system).
- Green detergent in dining halls.
- Recyclable carpeting throughout campus.
- Merrill College uses largest amount of fluorescent bulbs possible.
- Campus vehicle fleets include some electric cars and biodiesel.
- Express Shop has more organics.

## Other Discussion

### Opportunities and Synchronicities

- More stuff purchased through "The Crib," lobby the Executive Budget Committee to purchase more green stuff.
- Education for Sustainable Living Program action groups can do research to help purchasing departments on campus.
- Use the UCOP e-procurement pages to explore options for using green companies.

## [ 5 ] LONG RANGE PLANNING

### Action Steps (not prioritized)

1. SEC implement Task Force to actively participate and adopt Principles of the LRDP. Ongoing group understanding the power of the situation.
2. See LRDP bless the creation of a sustainability office.
3. Collaborate, cooperate, communicate. We need to make conversations more open.
4. Student projects to help develop Green Building outreach materials.
5. Increase Community communication. Link to bigger picture: Broaden our perspective to look at the State.
6. Keep pressure on Regents to make our creations policy for system-wide.
7. Team-up with outside groups to help us with expertise. Outside voice to continue to challenge us!
8. Work on student involvement. Integrate involvement incentives into the core course and transfer programs -- collaborative educational opportunities. Stewardship and internalization of academia and thinking for the Long Range.
9. Continue to collect sustainability and economic knowledge -- data measurement.
10. Figure out how to focus efforts.
11. Continue effective student input. Improve on it, too!
12. Adoption of the Kyoto Protocol.
13. Cooperation in process between the City, UCSC, the County, the State, and beyond.

### Next Steps

Three interested participants could not agree on a follow-up meeting time. We did decide that follow-up is crucial and that we should communicate via email. Matt Waxman will send out the notes and contact info to everyone so that we can stay in touch. Joey Smith will help facilitate future communication. Matt Waxman will set up a listserv (will be at lrdp@tegoforum.org unless other suggestions) and continue discussion with group that way.

### Participants

Co-Facilitators: Matt Waxman, James Sheldon

name	UCSC affiliation
Andy Schiffrin	Part time lecturer/ County of Santa Cruz

Diane Behling	Capital Planning
Dean Fitch	Campus & Community Planning
Alan Schlenger	UCSC Retiree/ City's Green Building Working Group
Dan Blunk	Environmental Programs Manager/ EH&S
Barbara Laurence	Sociology/Capitalism Nature Socialism Journal
Joey Smith	Student, 3rd Year Environmental Studies
Ilse Kolbus	Director of Physical Plant / LRDP Committee
Frank Zwart	Campus Architect/Associate Vice Chancellor, Physical Planning & Construction / LRDP Committee
Kathleen Eschen-Pipes	United Campus Christian Ministry/ FEAST
James Sheldon	Student/LRDP Committee/ Student Committee on Committees/ Crown College
Matt Waxman	Student/LRDP Committee/ Transportation Advisory Committee/ Tegoforum Architecture Club

### Where Are We Now?

(presentation given during the Earth Summit morning session)

This summary details submitted input for the Long Range Planning Working Group.

Daniel Silvernail, Architect from Soquel, CA, submitted an opinion piece concerning sustainability's importance as a key element of the 2005-2020 LRDP (Long Range Development Plan). He described the first Public LRDP meeting and felt that the committee and consultants were not expressing an understanding about the importance of sustainability and nature conservation. Mr. Silvernail expressed a belief that the LRDP needs to look back towards the 1963 LRDP as a guide for the 2005-2020 LRDP.

Daniel Silvernail also submitted an e-mail letter, sent to Amy Stoddard, Student Environmental Center Co-Chair, expressing his concerns about the LRDP not considering the massive importance of sustainability. Mr. Silvernail expressed a belief that the consultants' view of the campus through the administration is the only view being considered. He described his concern that no one local is expressing the needs of students, faculty, or the environment. Mr. Silvernail expressed a desire to question the LRDP process, as the LRDP is, in his words, "a political instrument with far-reaching impacts, and with an extremely long-term influence."

Dr. Annie Kammerer, sustainability and infrastructure LRDP project manager of Arup, provided a follow-up to Daniel Silvernail's concerns to Amy Stoddard via e-mail. Dr. Kammerer expressed her deep interest in sustainability. She explained how the LRDP Committee and consultants (Cooper, Robertson & Partners, Arup, and EDAW) believe sustainability is a very important part of our campus, community, and LRDP. She expressed an excited interest in collaborating with students, faculty, staff, the administration, the community, and the other consultants (Cooper, Robertson & Partners and EDAW), to holistically include sustainability as an integral element of the 2005-2020 LRDP. Dr. Kammerer has provided me with a draft of a Preliminary Sustainability Assessment tool for us to use, of which copies are available.

Matt Waxman, LRDP Committee Student Rep, submitted three ideas for consideration. 1) The boundary between on and off campus should be blurred to foster a sustainable relationship between campus and community. 2) The idea of a Sustainable Forestry Ethic for conservation of resources and diversity, aesthetics, and sense of place. 3) Continue fostering an understanding of how every issue of the LRDP is deeply interrelated.

I am also proud to announce that the next LRDP Public Meeting is on Sustainability. The Public Meeting will be held on Wednesday, February 25th, from 6:00pm - 9:00pm, at the UCSC Inn, Sierra Room. Also, on the 10th, Cooper, Robertson & Partners will facilitate a presentation and discussion for Students at the Student Union Assembly Meeting on February 10th, at 6:00pm in Conference Room D. Please direct input for the LRDP to: LRDP-ADMIN@UCSC.EDU. Please cc your comments for the Student Reps to: StudentComment@UCSC.EDU. LRDP comments send to "StudentComment" will be forwarded to LRDP-ADMIN@UCSC.EDU.

## Other Discussion

### Opportunities and Synchronicities

1. LRDP process
  - context for LRDP and history of LRDPs
  - Think about size, impacts, footprint
  - On and off campus growth impacts
  - Ability of community to intake impact of people
  - Sensitive Resources Study
2. How do we identify indicators for evaluating Arup's sustainability tool?
3. Recognize EIR impact during process
4. Benefit of planning UCSC LRDP and City General Plan at the same time
5. Campus Information Systems (AIS)
  - Methods of education change
  - Education Access
  - Diversity & Cultural educational relationships
6. Blueprint
  - How do guidelines affect long term decision making
  - Principle definitions
  - What does the Blueprint represent? -- Outline Principles of Blueprint
  - Opportunity for students to have impact
  - Sustain continuity and flow
  - How does campus planning influence community sustainability?
  - How does the University incorporate itself into the community in a planned, holistic process? --  
Ongoing impact
  - Need provision for UC ongoing services
  - Look for grants and other funding opportunities
  - Broaden our perspective to look at the State

## **[ 6 ] GREEN BUILDING AND RENEWABLE ENERGY**

### Action Steps (summarized post-Summit)

1. Implement life cycle analysis and finance practices that provide a whole system accounting for capital and operating budgets for buildings.
2. Implement energy metering for individual campus units for awareness and accountability.
3. Choose a pilot green building project to serve as an inspiring example.
4. Establish an ongoing, integrated, and collaborative group taking action on green building.
5. Utilize education and outreach to increase awareness and involvement.
6. Make green building a specific fundraising goal--tap new resources specifically pertinent to these funds.
7. Integrate sustainability concepts into the Long Range Development Plan. Become involved in LRDP process.

## Next Steps

A meeting was set for Friday February 27th, at 12:noon at the Arboretum. Coleen Douglas volunteered to communicate with Working Group participants, to share contact information and Summit results, and to remind about the follow-up meeting. About half of the participants were initially interested in attending the follow-up meeting.

## Participants

Co-Facilitators: Carly Memoli, Violette Ballieau, Alex Reichline

<b>name</b>	<b>UCSC affiliation</b>
Thomas Wittman	Arboretum / Farm
Anthony Bernheim	Architect, keynote speaker
Charles McIntyre	Staff/ CATS Instructional Computing
Coleen Douglas	University Relations/ information systems manager
Michael Bade	Assistant Director Design and Construction Services (UCOP Systemwide)
Patrick Testoni	Physical Plant/Energy Analyst
Rich McMillan	Physical and Biological sciences/ facilities analyst
Michelle Asire	Physical and Biological sciences/ facilities analyst
Viet Duong	Environmental studies major
Henry Hooker	Physical Planning and Construction
Carly Memoli	Kresge Intensive Psychology/ SEC
Mateo Rayes	Oakes; American Studies/Film
Alex Reichline	SEC
Heidi Lewin	College 8
Nathan Kalb	Oakes/SEC
Violette Ballieau	SEC
Jennifer Smith Grubb	California EPA
Joe Jordan	NASA-Ames, Cabrillo College, MIIS
Barry Hooper	Environmental analyst, LEED certified professional
Sharon Sarris	Green Fuse Energy Company
Dan Harder	Executive Director, Arboretum
Matthew St. Clair	Sustainability Specialist, UCOP systemwide
Ghasem Bayat	AmeriCo Energy Resources chief engineer

## Where Are We Now?

(presentation given during the Earth Summit morning session)

\* This past year a number gains have been made involving the role of Green Building and Renewable Energy in developing the campus in a sustainable manner, from the photovoltaic system proposed by the Arboretum to increased communication between the offices of Management and Finance.

The latter directly addresses the goal of incorporating life cycle costs into initial development cost analyses. On February 18, our student regent will attend a key meeting for the Committee on Grounds and Buildings, during which a presentation emphasizing the utility of such comprehensive analyses will be given.

\* A primary action step identified at the 2003 Earth Summit was the creation and implementation of policy, at the local and county levels in Santa Cruz, as well as across the UC system and the state.

\* A key manifestation of progress in this area has been the UC Regents' passing of a system-wide "Green Building Policy and Clean Energy Standard." The groundbreaking policy solidifies the Regents' commitment to adopt "principles of energy efficiency and sustainability" in all aspects of building and energy use throughout the UC system, "to the fullest extent possible..."

The vote to pass this policy followed a year-long "UC Go Solar!" campaign run by students in cooperation with community members, and Greenpeace representatives across the state.

Included in the initiative are:

- A commitment to purchase 10% of utility energy from clean energy sources, effective immediately and increasing to 20% by 2017.
- A resolution to reduce system-wide energy usage to 10% below 2000 levels by 2014.
- A pledge to implement green building guidelines in constructing the majority of all new campus buildings.

Following UC's bold commitment, students on over 50 campuses across the country committed to launch Clean Energy campaigns.

Additionally, as a result of this initiative, the nationwide production of solar power will increase by one eighth.

Another component of the initiative is a resolution to monitor progress through "an annual report to the Regents," helping to ensure the initiative's implementation. Further, the Blueprint for A Sustainable Campus, and the working groups actualizing the goals from today's event serve a crucial role in guiding such goals year round.

\* The timely passage of this groundbreaking policy has been crucial for ensuring that furthering Green Building guidelines and promoting Renewable Energy usage are prioritized within the agendas of current projects (such as the LRDP and ESLP) which are impacting such areas as development and curriculum.

## Other Ideas

### MORE DETAILS ON ACTION STEPS:

1. Implement Life Cycle Analysis and finance policies that provide a whole system look at capital and operating budgets and savings for buildings.
  - Life cycle analysis of green buildings. But this will be more valuable if compared to current building costs and energy uses, so that info needs to be provided.
  - Life cycle budgeting
  - Integrate budgets: this is a key barrier.
  - Rework budget policies, using other programs as models (Humboldt State, Berkeley, etc. for example of student tax, etc.)
  - Work with vice president of finance on how to implement new policy
2. Implement energy metering for individual campus units for awareness and accountability.
  - Energy metering
  - Provide utility/energy costs on a monthly basis to individual campus units (\$/ sq. foot, BTU/sq. foot), for awareness and efficiency of current programs.
  - Provide energy use to users.
  - Design and develop a system that would break down energy cost of the campus to the use by individual rooms, number of students and staff using rooms, and what rooms are used for (this brings accountability/awareness and leads to efficiency).
3. Choose a pilot green building project to serve as an inspiring example.
  - Create a pilot program that focuses on the next building to be built- brings the BEST integrated; TEAM: architect, engineers, etc. together to design and build. Develop a collaborative process so as not to sub optimize.

- Choose pilot project for next building.
  - finding the point where "green" building project are going wrong, educate about that point/problem to all sectors and now with a specific focus can work out how to overcome it.
4. Establish an ongoing, integrated, and collaborative group taking action on green building.
- Create Chancellor's Campus Sustainability Council
  - Continuity and action throughout the year. Communicate this to UCOP.
  - This year: create campus sustainability committee with representatives of staff, student, administrators with subcommittees for outreach (promoting best practices), green building, curriculum, awards, LRDP, etc.
  - Have an ongoing integrated group focused and taking action in this.
  - Committee could: develop metrics for campus starting with: green building, energy efficiency goals, water, indoor air quality goals
  - Establish a visible structure (cross section of university people and stakeholders); integrate/avoid duplication in existing committees (have Dr. Greenwood sanction and fund it!)
5. Utilize education and outreach to increase awareness and involvement
- Define and clarify terms used in our documents (e.g., "clean," "green" and "sustainability"; also "CO2 Sequestration.")
  - Make available information on tuition allocation.
  - Have staff and faculty who understand sustainability, and communicate/educate existing on these issues.
  - Education: get out (via website, exhibits) of what we are working on- students, staff, faculty. Use it as a way of soliciting increased involvement of the community.
  - Encourage the new electrical engineering department to focus on conservation and renewable energy

#### OTHER IDEAS:

Establish staff position of Building Coordinator and feedback loop structure for information circulation (understand how much energy we're using, require and conduct audit and feedback to increase information flow and access to info.).

Goal: energy efficiency. Use: sustainable environmental management system. Develop metrics to track energy usage.

Take the Arboretum photovoltaic project as a case study for retrofitting solar to existing UC buildings. Encourage long term thinking in the design process of new buildings, and provide incentives to keep those designs intact through the building process.

Address energy efficiency by calculating energy cost per student per room.

Work to a policy that values results over reporting. A campus exhibit. What's going on (educate and outreach (where are we now?). Create a campus energy accounting system that highlights energy use.

Acknowledge that Green Building means more than energy usage, etc. (tie in other necessary issues to make a building's construction and functioning "green" or sustainable).

Campus sustainability committee: retrofit of existing building to reduce energy use, sustainable energy production operation costs (in arboretum-case study).

At early stages education of UCSC administration, staff, students is paramount to priority and exemplifying reusable and sustainable energy policies to the greater community---arboretum as public facility for education.

Develop educational outreach program to college and high school students regarding "green buildings", sustainability definitions, etc.

Campus Sustainability Committee: Do this! Make sure it has the authority necessary to act (maybe the authority needs to come from the Chancellor?)

Increase cooperation with city on joint sustainability blueprint and planning.

Find ways to effective acknowledgment, reward and offer incentives for campus sustainability efforts- especially staff and student who go above and beyond the call of duty.

Develop procedures to make sure green building policy is included in every building project from the onset.

Collaboration between students, faculty, staff, and community; "systems" approach.

Have an integrated campus group to address the full spectrum life cycle of green building; from design through operations through curriculum and measurement; make visible and apparent how to be involved in this process and the progress we are making; transparency, involvement.

Develop a sustainable environmental management system for UCSC (and the UC system), including goals, metrics, tacking mechanisms, involve key players: staff, students, faculty, community.

## [ 7 ] CURRICULUM

### Action Steps (summarized post-Summit)

1. Develop courses focused on student organic gardens, encouraging academic and experiential components.
2. Influence the LRDP Strategic Futures Committee regarding curriculum. The needs of academic sustainability and sustainability curriculum should guide plans for physical development.
3. Discover and publicize current courses and internships with a sustainability component from all departments.
4. Create new courses and research projects focused on sustainability in many departments.
5. Integrate sustainability into existing courses, particularly core courses.
6. Create/expand internships and living/learning experiences related to sustainability.
7. Revise General Education Requirements with courses providing the skills needed for a sustainable society.
8. Create ongoing working group and annual faculty sustainability assembly to strategize and take action.
9. Create community with many creative opportunities for connection--from campus to local community to global community.

### Next Steps

- A meeting has been scheduled for February 26<sup>th</sup> at 3:00 PM. Jenny Anderson has agreed to get a room for us in the ENVS department.



- Marcia Winslade will provide Jenny with a list of e-mails of all curriculum Working Group facilitators. This e-mail list will also be used to distribute the results of the Working Group to all of the panelists.
- We ask that all panelists go the Blueprint Website and add anything that they can on the steps that they have taken toward any of the ideas that were discussed at the curriculum Working Group.

## Participants

Co-Facilitators: Alija Mujic, Marcia Winslade

<b>name</b>	<b>UCSC affiliation</b>
Jenny Anderson	Lecturer, Environmental Studies
Sylvan Cambier	Physics Dept/Kresge
Steve Gliessman	Professor, Environmental Studies
Skye Leone	Sierra Institute Co-Director
Joie Mazor	Ecopsychology + Personal Sustainability. Homes on Wheels (HOW)
Stephanie Smith	College 8 Biology (BS)
Emily Wacker	Ecopsychology/ Foundational Roots
Alija Mujic	SEC
Marcia Winslade	SEC Co-Chair

## Where Are We Now?

(presentation given during the Earth Summit morning session)

Curriculum is a particularly salient area of focus to the topic of sustainability. Ultimately, all sustainability efforts begin within the education that is presented to individuals as they move through life. The actions of all individuals are shaped and influenced by the teachings that they have been handed. By providing education to University students in the topics of sustainable living, the leaders of tomorrow will be empowered to carry sustainable practices to the greater world. The power to affect even those not directly exposed to education is perhaps the ultimate power of education.

The last two years have brought concepts of sustainability to the fore of my educational experience. This has been the result of my involvement with the Program in Community and Agroecology (PICA) here at UCSC. PICA combines concepts of localized sustainable food production with the maintenance of close knit, lasting community structures. This program promotes an ideology and value system that places emphasis upon sustained communities supporting sustainable lifestyles. It is through the efforts of individuals within this program and programs like it that UCSC will truly experience the establishment of a lasting community dedicated to the curriculum of localized sustainability.

Currently, there are two outstanding organizations at UCSC that offer credited internships for students interested in issues of sustainability and sustainable development. These organizations are the Community Agroecology Network (CAN) and the Global Information Internship Program (GIIP). CAN is a non profit organization that strives to develop a network of rural communities and consumers that work together to support self-sufficiency and sustainable farming practices. GIIP provides the unique opportunity for students to learn direct applications of information technology in both social change and sustainable global development.

Other sources of sustainability curriculum can be found within several departments on campus. Our strong programs in women's, community and ethnic studies emphasize sustainable community through an awareness of the myriad cultural worlds that make up our communities as global citizens. Issues of economic, environmental and social sustainability are also well addressed within the curriculum of the Environmental Studies program.

The upcoming lecture series and associated class entitled the "Education for Sustainable Living Program." offers an exciting new opportunity for students to engage with the UCSC community to learn about and apply principles of sustainability in our own lives and community.

In finale, let us look to our own ideas for the future. We envision the creation of an Interdisciplinary Faculty Assembly on Sustainability, that could work through the Faculty Senate to bring faculty from various departments together, annually, to discuss integration of sustainability into the curriculum at UCSC.

Additional comments on Where We Are Now:

- Sierra Institute bioregionalism course is to be offered for college credit this Summer and Fall. This course has been offered several times and addresses the question: can we live in ways that foster the health of the earth and our communities? Sustainable living is taught as a tangible and daily expression of intimacy with our place.
- Gardening Internship course (This class began at College 8). Offers students the opportunity to learn basic skills and theory of small scale organic gardening in an academic setting.
- The OPERS program and the Holistic Health Program offers students the opportunity to become certified as a holistic health professional.
- The Environmental Studies Internship program provides an array of varying opportunities to become involved with organizations interested in sustainability.
- Student Directed seminars offer students opportunities to create and teach their own sustainable curriculum.
- Independents majors have traditionally been ways for students to design their own curriculum, with many examples of sustainable curriculum having been created already.
- Physics department supports the interest of many students interested in solar energy and other sustainable technologies.

## Other Ideas

MORE DETAILS ON ACTION STEPS:

1. Develop courses focused on student organic gardens, encouraging academic and experiential components.
  - Support the development of a student gardening network that will provide education for students through internships and cooperative business participation. The Foundational Roots Food Cooperative would provide education in business, political and social ethics.
  - Develop semi permanent 42 courses in several departments taught by seniors for 194 credit, specifically for gardening and ecopsychology.
  - Start a "Day in the Garden" Program through PICA and Foundational Roots Cooperative. This program would invite students to come and participate in the student gardens.
  - Creating student organic gardens at every college/every other college, incorporate these gardens into the freshman core curriculum. Every freshman that attends UCSC will then learn where their food comes from and get their hands dirty. This is a large step toward creating ecological and sustainable awareness. This will always provide a portal for students who get interested in gardening/sustainability to pursue their interest in other sustainable programs.
  - Develop a lower division service course I Environmental Studies titled "Sustainable Living and Community: the human/environment connection through organic gardening." This course could then be followed by the college course and garden opportunities outlined in the next idea.
  - Work with Provosts at every college to develop a network of student gardens that are connected by lower division course offering that are part of core course (the College 8 Garden Internship model).
2. Influence the LRDP Strategic Futures Committee regarding curriculum. The needs of academic sustainability and sustainability curriculum should guide plans for physical development.

- RE: Long Range Development Plan (LRDP): We hear that the committee is not gathering enough info on the natural history of the campus. Suggest internships for students to do this work for the committee.
  - The D stands for Development and we should make sure that the themes of the LRDP insure that this development is sustainable. Perhaps it should be called the LRSDP. Strategic plans for the future must insure that sustainability is implemented.
  - SEC has paid internships that deal only with workings with the LRDP. Also, Education for Sustainable Living program will have faculty sponsors that will help bring the message of the program into current curriculum.
  - LRDP is very, very important. One participant worked on the committee during the 1970's and believes that the SEC should focus upon getting their influence into this document above all other things. Went on to add that a very important area of the LRDP is within its plans for future academics. The needs of academic sustainability and sustainability curriculum should guide plans for physical development.
3. Discover and publicize current courses and internships with a sustainability component from all departments.
- Develop a sustainability binder in the ES Internship Office that lists all sustainability internships on and off campus
  - Develop a list of faculty who will sponsor independent studies, independent majors and Internships
  - Ask each department: what classes in your department address issues and concepts around sustainability and use this information to create a clearinghouse listing courses that include sustainability as a topic.
  - Make resources available for students that could guide them towards education in sustainability (the Sustainability Binder for example). Perhaps these resources could be housed at the SEC.
  - Communication (Understanding where we come from): How to translate what we come up with: Art, Writing Courses. Must work for funding to bring in resources from outside this UC!
4. Create new courses and research projects focused on sustainability in many departments
- Build and create institutional support for and ongoing 2-3 unit sustainability focused course, possibly in connection with the ESLP. This is a model that has been previously outlined by GIIP.
  - Develop curriculum for an "Appropriate Technology Seminar" in conjunction with the senior thesis seminar (2 credits) through the physics department. Focus upon opportunities on campus to work with researchers already developing "appropriate technologies."
  - Use the student directed seminar "system" to teach about sustainability especially classes that have hands-on activities that will result in actions that "implement environmentally sound practices."
  - Biology Department: Study more dynamic systems and how we are related.
  - Research like: Neutralizing of Hazardous Waste Through Chemistry/Environmental Toxicology/ Environmental Health and Safety Department.
  - More "Sustainable" experimentation within the science department
  - Research into sustainable practices: transportation, agriculture, health, waste disposal with chemistry department.
  - Physics department: Research in "alternative" transportation, energy reduction etc.
  - More "Humanity in Science."
5. Integrate sustainability into existing courses, particularly core courses.
- Integrate more concepts of sustainability into the system of core courses on campus.
  - Basic ecology and food system concepts could be integrated into the system of core courses on campus.
  - Contact all core courses and offer to do a guest lecture.
  - Assist faculty in developing course components or labs for sustainability.
  - Connect our sustainability efforts with the Health Sciences Internship Program.
  - In this re-shaping of the freshman curriculum, other issues of sustainability should be incorporated as well.

- "Preventative" methods taught in health sciences and outreach programs in health sciences for students to educate the broader community.
6. Create/expand internships and living/learning experiences related to sustainability
    - Provide academic credit for on campus experiential living/learning programs like PICA.
    - Develop more 2 unit group internships like those offered through the Community Action Network (CAN)
    - Develop a Summer CUIP program focused on sustainability. House these students in the village and connect their efforts with the Program in Community and Agroecology (PICA).
    - Provide more internship opportunities for students interested in developing skills of biological observation and knowledge of place. These internships could be sponsored through the natural reserve system here on campus.
  7. Revise General Education Requirements with courses providing the skills needed for a sustainable society.
    - Add classes on sustainability into General Education Requirements.
    - Teach communication and relationship skills as General Education Requirement.
  8. Create ongoing working group and annual faculty sustainability assembly to strategize and implement action steps.
    - Create an ongoing working group to strategize how to integrate sustainability into curriculum.
    - Work with Academic Senate to create "Faculty Sustainability Assembly" to meet annually.
  9. Create community with many creative opportunities for connection from campus to local community to global community.
    - Community: is important to all aspects of life. In birthing the curriculum Working Group, we are involving the whole of the purpose at UCSC-education. Opening space for community to meet, congregate relate and grow and create-WONDERFUL! Integral aspects of the functioning of life rely upon community. We live because we are connected to each other. Let us create community.
    - Creativity and Opportunities for Connection: encourage the constant new ideas of students, staff and faculty to benefit the community: Locally->Individually->Communally->Globally.  
ENTHUSIASM!

## [ 8 ] CAMPUS ECOSYSTEM PRESERVATION

### Action Steps (highest priority)

1. Create curriculum for a fall core course series at college 8 to educate students on environmental stewardship and respect for our campus ecosystems.

### Next Steps

Set up another meeting via email.

### Participants

Co-Facilitators: Jacob Cabrera, Merrill Kruger

name	UCSC affiliation
Jacob Cabrera	Student, SEC, SUA
Roger Edberg	Grounds Services
Merrill A. Kruger	Student, SEC

## Where Are We Now?

(presentation given during the Earth Summit morning session)

- Campus Natural Reserves
  - CUIP & other student internships
  - Logging species
- Stewardship Program
  - 3 to 4 times per quarter
    - Plant Restoration and Trail Management
- Faculty projects in ENVIS and Biology classes with outdoor assignments to evaluate ecosystems
- The initial creation of a campus GIS (Geographic Information Systems) Map
  - Ex. Tracking of flowering cycles of rare plants
  - A consultant of LRDP is helping with Planning Intern
- Campus Land Use Advisory Committee
  - Becoming more regular, has worked on some pesticide policy and many other issues
- LRDP (Long Range Development Plan) have completed detailed surveys of campus to plan around most sensitive areas of campus
  - Construction works around trees, and under them, to cut down as few as possible
- Protection of many waterways and the completion of a water survey naming and cataloging all the main ones around campus
- Transportation Advisory Committee has been discussion way finding issues and pedestrian transportation including trails and erosion on campus. Possible beginnings of a protected Trail network on campus.
- Integrated Pest Management is the main direction being used for pest control
  - Prevents pests through habitat destruction and introducing predators
  - Use natural pesticides only when necessary, Use of synthetic pesticides is a last resort
- Removal of diseased and sick trees

Additional comments on Where We Are Now:

Integrated Pest Management:

- Conservative use of chemical compounds
- Conscientious storage
- Pesticide use policy defined and drafted. Potential to revise so appropriate to our UCSC ecosystem
- Environmental Health and Safety consultation and review of chemicals
- Scott loosely leading stewardship more often 2-3 times per quarter
- Optimum landscape management
- Consultation with building projects
- Living landscapes with pre existing media. Plant strength, resistance and resilience
- Continued education supporting conscientious apps. Communicating with city officials
- Grounds strategies for preventive management practices
- Water distribution system
- Predictively successful sometimes natives although not always

## Other Ideas

#### OTHER TOP ACTION STEPS:

1. Landscape Learning laboratories; for students to learn with curriculum and improve maintenance on campus.
2. Mandatory stewardship class; and an operations manual to teach students to co-exist on campus with minimal impact or positive impact.
3. Student involvement in the planning and action to reduce impact on the campus ecosystem. Communicate with students what those impacts are, and evaluate train systems protocol.

#### OTHER IDEAS:

- Ecotype specific recommendations
- Review human interaction in LRDP, integrate transportation and ecosystem
- Fleet planning
- Improve access to information sharing
- Have students be involved with the process for communication of the impacts of construction and development on the natural environment as part of curriculum
- Landscape Learning laboratories
- Draft a plan for how to develop a campus wide trail management & restoration plan that everyone can be a part of
- Create mandatory campus stewardship class that would be like an operations manual for students to function on campus with minimal environmental impact such as: why ad hoc paths degrade the forest, how to recycle, sensitivity of storm drains, out fall, etc.
- Improve education of campus community of the extensive IPM efforts currently in place

#### DISCUSSION OF SYNCHRONICITIES:

##### LRDP

Include impacts and past construction sties  
Landscape as a life lab and educational experience (ESLP and WASC)

##### Green Building

Line item on site disturbance  
Strengthen value of natural/existing environment  
Interlace with IT and Blueprint

##### ESLP

Continuity for practices and research between classes  
Prevent repetition of research from students  
Create easy modes of access for this information