

SIERRA



SIERRA MAGAZINE'S 2010 "COOLEST SCHOOLS" QUESTIONNAIRE



2007



2008



2009

EFFICIENCY
ENERGY SUPPLY
FOOD
ACADEMICS
PURCHASING
TRANSPORTATION
WASTE MANAGEMENT
ADMINISTRATION
FINANCIAL INVESTMENTS
OTHER INITIATIVES

SIERRA

Sierra, the award-winning magazine of the Sierra Club, is compiling information for our fourth annual "Coolest Schools" issue, which will rate American colleges and universities according to their environmental practices, green initiatives, and caliber of sustainability-oriented education.

Schools that score highly in these realms may be contacted for further discussion and will receive recognition in the magazine's September/October issue. Please fill out this interactive PDF as thoroughly as possible, save it with your responses as "2010_coolschools_ your school's name" and email it to cool.schools@sierraclub.org no later than **March 20, 2010**.

Note that this questionnaire will become a public document and that we will not be altering your responses before publishing them online. Please answer as thoroughly as possible. Questions left blank will receive no credit, and if a question requests a percentage, you must provide a percentage. The scoring key will be available online once the issue is published.

As the publication of the nation's oldest and largest environmental nonprofit, *Sierra* has a readership of more than 1 million engaged and educated citizens.

Many thanks for your participation.

School name: University of California, Irvine

Contact name and title: Erin Lane, Principal Administrative Analyst

Contact phone: 949-824-1925

Contact email: elane@uci.edu

School's city and state: Irvine, CA

Number of students: 27,792

HONOR PLEDGE: By completing and submitting this questionnaire, you are certifying that all statements in this document are true to the best of your knowledge.

INITIAL: E.L.

DATE: 3-19-2010

Category 1: Energy Supply

1. Please break down the energy types that your campus uses for electricity by percentage. If the school purchases its electricity from a utility company, this information should be available from that company.

<u>1.95%</u> Coal	<u>.59%</u> Wind	<u>.39%</u> Biomass
<u>80.26%</u> Natural Gas	<u>.42%</u> Solar	<u>1.76%</u> Geothermal
<u>6.86%</u> Nuclear	<u>8.04%</u> Hydro	<u>0%</u> Other_____

UCI uses a combination of electricity provided by utilities, electricity produced by a combined heat and power plant (aka cogeneration), and power from solar panels on 12 roof areas.

The campus' 18 MW, base-loaded co-generation facility supplies buildings with electrical power, chilled water, hot water, and heating.

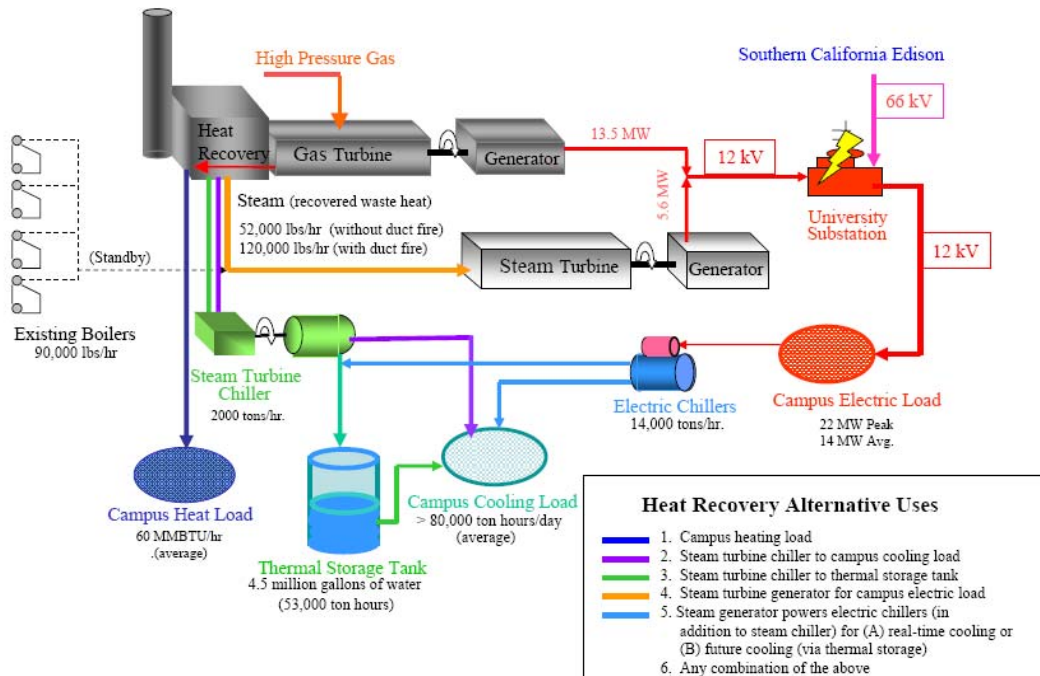
In 2008, UC Irvine signed an agreement with SunEdison to finance, build, and operate a solar energy system at the Irvine campus. In March 2009, UC Irvine began purchasing energy generated by the system, which is expected to produce more than 24 million kWh (equivalent to offsetting 25.6 million lbs. of CO₂e) over 20 years.

2. What type(s) of energy does your campus use for heating buildings (e.g., natural gas, biomass, coal)?

<u>0%</u> Coal	<u>0%</u> Biomass
<u>90%</u> Natural Gas	<u>0%</u> Geothermal
<u>10%</u> Electricity	<u>0%</u> Fuel Oil

If cogeneration, please explain.

The Irvine campus recovers heat from a combustion turbine generator that provides electricity to serve the majority of campus electrical needs. This combined heat and power (CHP) plant provides the majority of the heat supplied to main campus buildings and is supplied with natural gas. UCI has the most efficient campus energy infrastructure of any North American campus, capturing waste heat and using it (or storing it for future use) six alternative ways, maximizing the efficiency of heat recovery (see illustration below). Overall combined heat and power efficiency is greater than 60%.



[Enlarged Image](#)

Category 2: Efficiency

1. What percentage of campus buildings completed within the past three years have a LEED certification of at least silver? 90%

Note whether the certification is higher than silver.

UC completed 10 campus buildings in past three years. Nine are LEED registered and should achieve a rating of LEED Silver or above. Four have already completed the process and achieved LEED Gold.

2. What percentage of water used for campus landscaping is from recovered, reclaimed, or untreated sources? 90%

3. What percentage of campus lighting fixtures are energy-efficient (e.g., compact fluorescent, LED, or equipped with motion sensors, automatic daylight shutoff, or other energy-saving features)? 98%

4. What percentage of campus appliances are Energy Star-rated? 50%+

If an Energy Star option is available, UCI policy requires that an Energy Star model be purchased. In addition, UC purchasing agreements include Energy Star options.

5. Does the institution have underway a program of energy-efficiency retrofitting projects, such as improving building insulation or sealing heating and cooling ducts?

UCI continuously implements energy conservation projects such as HVAC efficiency upgrades, MBCx (monitoring-based commissioning), laboratory ventilation control improvements, occupancy-based ventilation in teaching labs, low pressure-drop filtration systems, and occupancy sensor and lighting efficiency upgrades. 2009 energy efficiency projects will save UCI 10.3 million kWh in electricity and 67,000 therms of natural gas annually, yielding ongoing cost savings of \$1.1 million per year. In 2010, projects are expected to save another 10 million kWh of electricity annually.

Category 3: Food

1. What percentage (in dollars) of food served at cafeterias is grown or raised within 100 miles of the campus? 6.2%

2. What percentage (in dollars) of food served at campus cafeterias is USDA-certified organic? 3%

3. Do campus cafeterias source seafood that is deemed sustainable by the Marine Stewardship Council, the Monterey Bay Aquarium's Seafood Watch Program, or a similar program? Yes

4. What percentage of entrées served in campus dining locations include meat? 70% If the meat is produced sustainably (for example, free-range or grass-fed), explain. Approximately 5% of the meat we procure is free-range or grass-fed.

5. Are nutritionally complete vegetarian and/or vegan options available at every meal? Yes

6. Is bottled water sold or distributed on campus?

Yes, small containers are sold in food service facilities and student stores. Office areas have access to coolers and larger bottles. Water Coolers are Energy Star rated.

7. Does your school maintain a campus farm or garden? Does it use organic methods? Please describe the garden and methods used.

A campus garden is in the process of being implemented and will be in place in fall 2010.

Category 4: Academics

1. Does your school offer any environmental- and/or sustainability-related majors, such as environmental studies, ecology, or sustainable agriculture? If so, please list them all.

UCI has sustainability related majors in several schools, including School of Biological Sciences, The Henry Samueli School of Engineering, Interdisciplinary Studies, the School of Physical Sciences, the School of Social Ecology, and the College of Health Sciences:

School of Biological Sciences

[B.S. in Ecology and Evolutionary Biology](#)

[M.S. and Ph.D. in Ecology and Evolutionary Biology](#)

The Henry Samueli School of Engineering

[Minor in Materials Science Engineering](#)

[B.S. Chemical Engineering](#) (specializations in Environmental Engineering and Materials Science)

[B.S. Civil Engineering with specialization in Environmental Hydrology and Water Resources](#)

[B.S. Materials Science Engineering](#)

[B.S. Environmental Engineering](#)

[B.S. Mechanical Engineering with specialization in Energy Systems and Environmental Engineering](#)

[M.S. and Ph.D. degrees in Chemical and Biochemical Engineering and Materials Science and Engineering](#)

[M.S. and Ph.D. degrees in Civil Engineering with an emphasis in Environmental Processes or Hydrology and Water Resources](#)

[M.S. and Ph.D. degrees in Environmental Engineering](#)

The Civil and Environmental Engineering Department also offers a [concurrent degree program](#) with the Department of Planning, Policy, and Design that awards both an M.S. in Civil Engineering and a M.S. of Urban and Regional Planning in either the transportation or environmental focus areas.

Interdisciplinary Studies

[Minor in Global Sustainability](#)

School of Physical Sciences

[Minor in Earth and Atmospheric Sciences](#)

[B.S. Earth and Environmental Science](#)

[B.A. Earth and Environmental Studies](#)

[M.S. and Ph.D. in Earth System Science](#)

School of Social Ecology

[Minor in Environmental Design](#)

[Minor in Urban and Regional Planning](#)

[Minor in Urban Studies](#)

[B.A. Urban Studies](#)

B.A. Environmental Analysis and Design (Admission to this program is no longer available)

[Master's in Urban and Regional Planning](#)

M.S. and Ph.D. Environmental Health Science and Policy (Admission to this program is no longer available)

[Ph.D. in Planning, Policy, and Design](#)

[Ph.D. in Social Ecology - Concentration in Environmental Analysis and Design](#)

[Ph.D. in Social Ecology - Concentration in Epidemiology and Public Health](#)

College of Health Sciences

[Minor in Public Health](#)

[B.S. Public Health Sciences](#)

[B.A. Public Health Policy](#)

[M.S. in Public Health with emphasis in Environmental Health](#)

[M.S. and Ph.D. in Environmental Toxicology](#)

For more details about UCI's academic programs, visit <http://www.sustainability.uci.edu/academic.html>.

2. Does your school offer classes about clean technologies, including topics such as energy efficiency and solar-wind energy engineering? If so, please list them all.

Yes, see <http://www.sustainability.uci.edu/committee10/2009-10SustainabilityCourses.pdf> for course descriptions:

14 Physics of Energy and the Environment
143 Energy Economics
ENGR169 Energy Systems Field Trip
ENGR2 Energy Sources, Energy Uses
ENGR20 Energy and Society
ENGR69 Energy Facilities Inspection

3. Does your school provide students with a list of environmental and/or sustainability classes to make such courses easy to identify? Please provide a link, if available.

Yes, see <http://www.sustainability.uci.edu/committee10/2009-10SustainabilityCourses.pdf>.

4. Please provide names of standout professors who work on environmental and/or sustainability issues and list their accomplishments, including awards, honors, and publications.

Yes, UCI has many well-known faculty in environmental fields, including F. Sherwood Rowland and Michael Prather.

Professor Rowland received the 1995 Nobel Prize in Chemistry for his seminal work in chlorofluorocarbons (CFCs) and their impact on the atmosphere. A specialist in atmospheric chemistry and radiochemistry, he and his colleague Mario Molina, were the first scientist to warn that CFCs released into the atmosphere were depleting the earth's critical ozone layer. Research on CFCs and stratospheric ozone eventually led in the 1970s to legislation in the United States, Canada and Scandinavia regulating the manufacture and use of chlorofluorocarbons, and in 1987 to the Montreal Protocol of the United Nations Environment Program, the first international agreement for controlling and ameliorating environmental damage to the global atmosphere. Rowland is a member of the National Academy of Sciences and the American Academy of Arts and Sciences. During 1991-1993, he served successive one-year terms as President-Elect, President, and Chairman of the Board of the American Association for the Advancement of Science.

Professor Prather has gained international recognition for research on atmospheric greenhouse gases, such as methane and ozone. In his work, he creates detailed mathematical models that simulate the physical, chemical and biological processes determining the composition of the atmosphere. With these computer models, he can predict the buildup of greenhouse gases in the atmosphere and show how different human

activities and natural factors can interact, leading to changes in the atmosphere that were not anticipated. His work has been influential in the drafting of international environmental standards such as the Montreal and Kyoto protocols. A member of the International Ozone Commission, Prather has participated in key United Nations' environmental efforts. He was lead author on a half-dozen U.N. assessments involving either ozone depletion or climate change, including the most recent reports from the influential Intergovernmental Panel on Climate Change. In addition, Prather regularly addresses both government and business groups and is a scientific participant in major global environmental summits.

Eight other faculty experts can be found at <http://www.uci.edu/climate/>.

5. Do you have environment- and/or sustainability-related centers, programs, or research institutions associated with your school? If so, please provide their names and a description.

Atmospheric Integrated Research for Understanding Chemistry at Interfaces (AirUCI)

The goal of AirUCI is to develop a comprehensive understanding of reactions at the air-water interface of atmospheric droplets and water on surfaces, and their importance in the atmosphere across a broad range of spatial and temporal scales.

California Institute for Telecommunications and Information Technology (Calit2)

Calit2 conducts research in 9 areas, one of which is environmental and civil infrastructure.

Center for Global Environmental Change Research (CGECR)

The CGECR was founded to provide a link between investigators doing research related to global environmental change at UC Irvine, other University of California campuses, and the campus-run Laboratories.

Center for Hydrometeorology and Remote Sensing (CHRS)

This center conducts research aiming to advance the knowledge of the water and energy cycle at scales ranging from the local watersheds to continental scales. Our main focus is land-surface hydrologic processes, their spatial and temporal variability, and the use of remote sensing information and computer models to improve both our understanding of these processes and our ability to model them in order to predict the impacts natural and anthropogenic variabilities on water resources.

Center for Occupational and Environmental Health (COEH)

The COEH's mission is to improve occupational and environmental health in the region we serve. The Center extends its services to government, industry, schools, health

professionals, and the general public. We strive to improve the region's awareness of occupational and environmental hazards and to prevent injury and disease.

Center for Unconventional Security Affairs (CUSA)

The center addresses the security challenges of the 21st century through innovative research and education programs that integrate experts from the public and private sectors. CUSA conducts research and provides a range of educational and public services focused on four areas related to threat and vulnerability:

- Biological Security
- Environmental Security
- Global Terrorism
- Human Security

These networks are distinct, but interactive, and pose an array of challenges to human and national security.

Center for Global Peace and Conflict Studies (CGPACS)

CGPACS is a multi-disciplinary program dedicated to promoting scholarly, student, and public understanding of international peace and conflict. CGPACS affiliated faculty (approximately 60 faculty from 7 schools across campus), guest speakers, and affiliated graduate students work on the military/ strategic, economic/ environmental, and cultural/ normative motives, processes, and consequences of both peace and conflict.

Developmental Biology Center

This center studies biological development, including environmental toxicology.

Environment Institute: Global Change, Energy, and Sustainable Resources

In 2008, UC Irvine announced the creation of an institute that will bring together scientists from across campus to conduct research specific to these areas, including how climate change will alter public health and welfare; whether people will accept the living patterns of green cities; and how new energy technologies will impact the environment. Michael Prather, professor of Earth system science and Fred Kavli chair, will be the institute's inaugural director.

Green Materials Program

UCI has been chosen to lead other California universities in a Green Materials Program that will develop nontoxic alternatives to products used in everyday life.

Institute of Transportation Studies (ITS)

Research at ITS covers a broad spectrum of transportation issues related to air quality, such as: analysis and simulation of urban traffic networks; transportation/land use interactions, particularly those which encourage alternative modes of travel; planning and evaluation of advanced public transit systems; and, energy and environmental issues, particularly demand for alternative fuels. ITS is also part of the University of California Transportation Center (UCTC), one of ten federally-designated centers for transportation research and education, and a member of the Council of University Transportation Centers, (CUTC).

National Fuel Cell Research Center

The National Fuel Cell Research Center focuses on the development and deployment of advanced power generation technology.

The School of Physical Sciences Center for Solar Energy

The School of Physical Sciences Center for Solar Energy supports research aimed at increasing our understanding of how light from the sun can be converted into electrical and chemical energy. Presently, solar energy provides an insignificant fraction ($\ll 1\%$) of our overall energy needs and fundamental scientific breakthroughs will be required to change this status quo. Research within the School of Physical Sciences Center for Solar Energy will seek to identify and solve "bottlenecks" in fundamental science that impede our ability to carry out these energy conversion processes efficiently.

Urban Water Research Center

The Urban Water Research Center advances the understanding of the distinct characteristics of the urban water environment in order to assist people and institutions in their effort to promote health, enhance the efficient use of water resources, and protect environmental values.

6. Is an environment-themed class a core curriculum requirement? If yes, please provide the name(s) of the course(s).

No. This is not a good measure. The programs summarized above have very demanding academic requirements that extend well beyond required general curricula.

7. What percentage of academic departments offer environment- or sustainability-related classes? 30%

Category 5: Purchasing

1. Does your school have a sustainable-purchasing policy? If yes, briefly explain.

Yes, we have the Policy on Sustainable Practices issued by our systemwide office. This policy covers Environmentally Preferable Procurement. We also have local policy that

requires the use of ENERGY STAR-rated products (when available) and Green Purchasing Guidelines.

2. What percentage of paper used on campus is made from at least 30% postconsumer recycled content? 50% Does your school purchase paper that is Forest Stewardship Council-certified?

Yes, but not all of what is purchased is Forest Stewardship Council-certified.

3. Does your school have a policy to purchase Electronic Product Environmental Assessment Tool (EPEAT)-certified (or similar) electronics? If yes, please describe.

Yes, EPEAT is part of our procurement specifications for University contracts.

4. Do you have packaging agreements with suppliers that minimize waste? If yes, please describe.

Yes, we request that packaging be minimized as part of our contracting effort and we have take back programs for packaging on large items like furniture.

5. Does your school specify in its purchasing contracts that products with energy-saving features be installed or delivered with these features enabled?

That is left to the individual order, but in general, energy saving features are set when software is installed and equipment is delivered and set-up by Desktop Support staff.

Category 6: Transportation

1. Does your school provide a free shuttle service around campus and town? If yes, briefly explain.

UCI operates a shuttle system that connects outer campus residential and activity areas, student-dense off campus apartment complexes, and the UC Irvine Medical Center in Orange to the academic core. UCI provides a free shuttle service on campus and to the adjacent student residential areas. UCI also provides low-cost shuttle service to select off-campus residential areas and to the city of Newport Beach. The shuttles provide more than 1.3 million passengers each year with transportation, while reducing congestion and improving air quality.

2. What has your school done to promote bicycling as a transportation method?

- Bike path network
- Bike website (www.bike.uci.edu)
- Bike education program (Bicycle Education and Enforcement Program - BEEP)

- Incentives for employees (5 occasional parking passes/month for employee cyclists)
- Free bike registration
- Bike give-aways (13 bikes in 2009)
- Bike-to-Work-Week promotion
- On-campus full-service bike shop
- 4 bike events held on campus
- Bicycle Advisory Group (BAG) which discusses and promotes issues related to campus cycling
- Bike rebates (\$50 rebate on new bike purchases, Fall 2009)

3. Does your school encourage its students and employees to use public transit, carpool, or use some other form of alternative transportation? If yes, what are the incentives?

UCI encourages every alternative mode with these incentives:

- 1) Public transit
 - "University Pass" for use of Orange County Transportation Authority (OCTA) buses. \$95/yr. (an 86% reduction over monthly passes)
 - 20% rebate on 10-day and 30-day rail passes
- 2) Carpool
 - reduced parking fees for employees (\$9/month per person instead of \$68/month)
 - preferential parking (reserved stalls)
- 3) Vanpool
 - no parking fees
 - preferential parking (reserved stalls)
 - OCTA subsidy (\$400/month)
- 4) Bike
 - 5 occasional parking passes/month for employees
- 5) Walk
 - 5 occasional parking passes/month for employees

4. Approximately what percentage of students drive to school in a car? 37%

5. Approximately what percentage of faculty and staff drive to work in a car? 46%

Category 7: Waste Management

1. What is your campus's current waste-diversion rate (i.e., percentage of campus waste being diverted from landfills)? 70%

2. Does your campus provide recycling receptacles wherever there are trash cans?

Yes. In addition, to our CRV bins next to waste bins on campus, we have commingled recycle bins in all on campus housing areas as well as at our Biological Sciences lab buildings.

3. Are recycling bins readily available at large events such as football games?

Yes. We also offer recycle bins for free when any special event rents trash bins.

4. Does your school compost? If yes, are compost receptacles available at all or most on-campus dining locations?

We compost all green waste.

5. Is your school committed to waste-reduction goals, such as zero waste? Please explain.

Yes. Our diversion rate is currently 70%, but we are required by University policy to achieve 75% by 2012 and 100% by 2020.

6. Does your campus administer a donation program for clothing and other used goods when students are moving out of student housing? If so, are bins located in every dormitory?

Yes. We have Salvation Army and Planet Aid bins in our housing areas year round. We also provide a full scale Salvation Army donation drive at the end of each school year.

Category 8: Administration

1. Is environmental sustainability part of your institution's mission statement, guiding principles, or similar document? If so, please provide the text or link.

Yes, environmental sustainability is part of UCI's Long Range Development Plan (see <http://www.ceplanning.uci.edu/finallrdp.html>). In addition, UCI is a signatory of the American College and University Presidents Climate Commitment (see <http://www.sustainability.uci.edu/policies.html>), adheres to a comprehensive sustainability policy (<http://www.universityofcalifornia.edu/sustainability/>), and has created a climate action/sustainability plan with milestones and metrics (see <http://www.sustainability.uci.edu/ClimateActionPlan.html>).

2. Does your school employ at least one person dedicated to overseeing campus environmental initiatives, such as a sustainability coordinator, or have a sustainability task force or committee? Is the coordinator position a part-time or full-time position?

Yes, UCI has a team of eight line managers and staff with assigned responsibilities for sustainability plans, projects, and coordination. In addition, the campus has a committee

consisting of staff, faculty, and students that promotes sustainability and environmental stewardship on campus.

3. Has your school made an official commitment to reducing its impact on climate change by setting goals of emission reductions by a certain date? If yes, does your school have a plan for achieving these reductions? If so, briefly explain the plan.

The UC system has committed to 2000 levels by 2014, 1990 levels by 2020, and net zero emissions as soon as possible. UCI has created a draft climate action and sustainability plan. Based on planned actions over the next six years, UCI expects to achieve 2000 emission levels by 2012. See <http://www.sustainability.uci.edu/ClimateActionPlan.html>.

4. Has your school conducted a complete greenhouse-gas-emissions audit of its campus?

Yes, UCI completes a greenhouse gas emissions inventory annually through the California Climate Action Registry (CCAR) - soon to be The Climate Registry. UCI's GHG reports are available on the CCAR website at <https://www.climateregistry.org/CARROT/public/reports.aspx>.

5. Has your school achieved a reduction in total annual carbon emissions? If yes, please explain and provide the benchmark year and percentage.

Yes, UCI has achieved a 6% per capita decrease compared to 2000 GHG emissions and is close to achieving a per capita decrease compared to 1990 GHG emissions. This is an incredible accomplishment, as UCI has more than doubled its square footage in the last two decades, adding energy intense facilities for research and a significant amount of on-campus student housing.

Category 9: Financial Investments

1. Is all information about your endowment fund publicly available? Briefly explain.

Yes, UC Office of the President publishes an annual report for the entire UC system. The last report is available at <http://www.ucop.edu/treasurer/foundation/foundation.pdf>.

2. Does your institution have an investment-responsibility committee that considers and acts on environmental issues?

Yes, we have an investment committee that considers environmental issues and it is chaired by Rick Keller, the Chairman and Founder of The Keller Group. See <http://www.ucifoundation.org/Pages.aspx/Investment>.

3. Does your school make environmentally responsible investments? If so, briefly explain what they are and whether they're made on an ongoing basis.

Yes, we try to make environmentally responsible investments as opportunities surface with energy options like solar, hydrogen fuel cells, and wind.

Category 10: Other Initiatives

1. Have any of your school's students effected positive environmental change on a campus, state, or national level? If so, please describe. (To nominate a specific student for greater attention in our coverage, please email cool.schools@sierraclub.org with his or her name, accomplishments, and contact information.)

UCI students play a critical role in campus sustainability and environmental initiatives. Student groups like Green Campus take direct action by implementing energy efficiency projects (e.g. shut the sash campaigns). Other students led efforts to create more sustainable policies, pass student referendums, and hold educational events for the campus and community. Below are a few stand out examples.

In 2009, Alexis Kim and Max Broad led The Green Initiative Fund (TGIF) campaign to provide over \$130,000 in grants each year for sustainable projects to fight global climate change and lower UCI's carbon footprint. The measure passed successfully, bringing UCI another step closer to "going green."

In 2009, Hai Vo led a Real Food initiative that led to the adoption of systemwide sustainable dining policies by the University of California. See http://www.uci.edu/uci/features/feature_vorealfood_090615.php

CLEAN Education, a UCI student group, designs grade-appropriate science lessons on climate change for elementary and middle school classrooms using everything from handheld puppets to ecosystem models made of plywood and papier-mache. See http://www.uci.edu/features/feature_cleaneducation_090519.php.

In 2009, student environmental groups at UCI joined together to hold the first ever campus Earth Week for the community. See http://www.uci.edu/uci/features/feature_earthweek_090413.php.

2. Have students participated in environmental challenges or events such as the Solar Decathlon, environmental design contests, or environmental debates? If so, which events and how did they do?

UCI student accomplishments in the area of sustainability have been recognized by the University as well as by outside organizations. Below are a few recent examples.

Yes, Bryan Le and Kyle Good won X PRIZE Foundation's first ever "What's Your Crazy Green Idea" Contest! See <http://www.xprize.org/crazy-green-idea>.

For his work in with the Real Food Challenge, Hai Vo won a 2009 Bower Youth Award. See http://broweryouthawards.org/userdata_display.php?modin=50&uid=7043.

3. Has your school set aside part of its campus as natural habitat, stipulated limited campus development, or enacted programs preserving its land? If so, please explain.

Yes. 135 acres of the campus has been set aside as an upland habitat reserve as part of the Natural Communities Conservation Planning Program (NCCP). 202 acres have been set aside as a wetland habitat reserve at the San Joaquin Freshwater Marsh. 280 additional acres are set aside as open space for parks, greenbelts, and playfields in the 2007 Long Range Development Plan.

4. Does your school adhere to an indoor air-quality policy (e.g., the mandated use of nontoxic cleaning supplies)? If yes, describe the policy.

Yes. Maintenance workers are asked to use non-toxic cleaning materials; construction managers are advised to use water based paints and other low volatile products. Prior to the start of the project they are provided with the document, "Indoor Environmental Quality During Construction Projects," which is intended to provide project managers with guidance on how to minimize the negative impacts of construction projects on indoor air quality.

5. Does your school offer outdoor- or nature-based programs, classes, or extracurricular activities to students and/or faculty? If yes, please list and describe.

Yes, UCI's Ecological Preserve is set aside for teaching, research, and use by the campus community. Additional information is available from the Office of Natural Reserves at (949) 824-6031. Publications and species lists are available at <http://nrs.ucop.edu>. The San Joaquin Marsh Reserve, one of the last remaining marshes in Southern California, is used for research and education. The Burns Pinion Ridge Reserve located near the town of Yucca Valley in San Bernardino County. The reserve has a dormitory and research station, as well as primitive camping facilities, and is used primarily for overnight field trips and research by faculty and students from the School of Biological Sciences. For more info, visit <http://nrs.ucop.edu>. The UCI Arboretum is a botanical garden developed and managed by the School of Biological Sciences. It contains areas planted with floras adapted to climates similar to those of Southern California. The Arboretum provides materials and space for research and teaching needs and its collections are also used as an educational resource for the community at large.

6. What specific actions has your school taken to improve its environmental sustainability since spring 2009? Please list all improvements.

UCI added [ZotWheels](#), which is a fully-automated bikeshare system with 4 stations on campus; only the second such system at a college in the U.S.

Initiated a free "[Holiday Shuttle Service](#)" to reduce drive-alone trips to airport and the Irvine train station for breaks.

UCI is working with the California Department of General Services to [test plug-in hybrid electric vehicle](#) technology. A refrigerator replacement program eliminated 100 old non-Energy Star refrigerators and replaced them with E-Star rated units.

UCI received LEED Gold Awards for [Bren Hall](#) and the [Anteater Recreation Center Expansion](#), making a total of five LEED Gold awards.

7. Please use this space to address any other unique or interesting sustainability initiatives that have not been previously mentioned:

Operational Awards

- 2009 [Green California Leadership Award](#)
- 2009 Best Workplace for Commuters Silver Award for sustainable transportation initiatives
- 2009 OCTA Share the Ride Challenge Award given to the three institutions in Orange County with the highest participation in OCTA's Share the Ride Challenge
- 2009 U.S. Green Building Council, LEED Gold, Anteater Recreation Center Expansion
- 2009 U.S. Green Building Council, LEED Gold, Bren Hall
- 2009 Rideshare Diamond Award
- 2009 U.S. Green Building Council, LEED Gold, Student Center
- 2009 [EPA Region 9 Environmental Achievement Award](#) for UCI's Sustainable Transportation program
- 2008 [Flex Your Power Award - Best Overall](#)
- 2008 [Governor's Environmental and Economic Leadership Award](#) for Climate Change for UCI's Sustainable Transportation program
- 2008 Clean Air Award for Innovative Transportation Projects from the South Coast Air Quality Management District
- 2008 The EPA selected UCI's Pediatric Environmental Health Specialty Unit as a Regional Children's Environmental Health Champion for creating fact sheets for pediatricians and the public to address environmental health hazards caused by the 2007 Southern California wildfires
- 2008 U.S. Green Building Council, LEED Gold, Anteater Instruction and Research Building
- 2008 UC/ CSU/ CCC Sustainability Conference, Best Practices Award, Water Efficiency/Site Water
- 2008 UC/ CSU/ CCC Sustainability Conference, Best Practices Award, Transportation Demand Management
- 2008 UC/ CSU/ CCC Sustainability Conference, Honorable Mention, HVAC Retrofit
- 2007 U.S. Green Building Council, LEED Gold, Palo Verde 2
- 2007 University of California (UC)/ California State University (CSU)/ California Community College (CCC) Sustainability Conference, Best Practices Award, Student Energy Efficiency
- 2007 UC/ CSU/ CCC Sustainability Conference, Best Practices Award, Transportation Demand Management

- 2007 UC/ CSU/ CCC Sustainability Conference, Best Practices Award, Campus Owned and Operated Transportation
- 2007 UC/ CSU/ CCC Sustainability Conference, Honorable Mention, Monitoring Based Commissioning
- 2006 Sustainability Conference, Honorable Mention, Best Lighting Retrofit
- 2006 Southern California Edison, Best Practices Award, Best Lighting Retrofit-Sustainable Operations
- 2002 Transportation Excellence Award from the Orange County Transportation Authority for ZEV-NET's exemplary efforts in improving mobility in Orange County
- 1996 NACUBO Higher Education Award, Rethinking Energy: A Comprehensive Approach

Energy Efficiency

- UC Irvine is developing a "smart lab" prototype that, if successful, will sharply reduce laboratory energy consumption and carbon emissions, and change the ventilation and control paradigm for laboratories, nation-wide. In effect, new sensor and information technologies will exploit the full, and yet-unrealized, potential of digital control systems that have become commonplace in new laboratory designs. Ventilation rates will vary from laboratory to laboratory based on whether contaminants are sensed, and the exhaust stack discharge airspeed at the roof will vary depending on whether wind conditions and sensed contaminant concentrations indicate a risk of re-entrainment. No laboratory that we know of is testing all these design features and technologies in one facility, which is what we are doing in our "smart lab" project.
- Since 1992, buildings constructed at UCI have outperformed California's Title 24 by 20+ percent, more than a decade before the Regents' adoption of this policy requirement.
- Older buildings continuously undergo energy efficiency upgrades of mechanical and lighting systems.
- UCI works with local utilities and through the Savings by Design Program to implement energy efficiency opportunities for new building construction.
- New buildings are designed to meet or exceed LEED Silver standards.
- UCI is also implementing IT energy saving measures such as CRT monitor replacements, PC power management, server virtualization, thin client PC's, and data center power utilization improvements.
- Campus operational endeavors are complimented by a variety of educational and outreach activities. UCI staff work with the Alliance to Save Energy's Green Campus program to engage students in energy efficiency initiatives.
- UCI hosts various educational events that focus on energy efficiency, including LABS for the 21st Century conferences, Earth Day, webinars on energy-efficiency pilot projects, and seminars featuring campus faculty. In addition, UCI staff have spoken about sustainability and energy efficiency at national and state-wide events.

Transportation

- Overall, UCI's comprehensive Sustainable Transportation program eliminates more than 39 million vehicles miles and 19,000 tons of greenhouse gas emissions annually.
- UC Irvine's 2009 AVR (average vehicle ridership) of 1.9 is among the highest of large employers in the Los Angeles basin.

Purchasing

All contracts being awarded by the University of California, Irvine include environmentally preferable standards. Depending on the commodity, that may include Energy Star, EPEAT, Green Seal, post-consumer recycled content, reduced and recycled packaging, take back programs, and the cradle-to-cradle concept.

Dining

- Established a system to prioritize food grown within 250 miles of campus.
- Completed a student-led sustainability audit of residential food procurement.
- Implemented an organic egg purchasing program to provide 100% certified organic, cage-free eggs in all Aramark managed locations.
- Offer organic food options in the Zot-n-Go Market and West Student Center Food Court.
- Established a certified organic salad bar at Mesa Dining Commons.
- Eliminated trans-fats from all dining locations.
- Offer Eco Grounds and Fair Trade coffee in all dining locations.
- Established a seafood purchasing program to prioritize seafood considered sustainable by the Monterey Bay Aquarium Seafood Watch.
- Implement trayless dining in residential dining locations.
- Donate leftover baked goods from residential dining locations to America's Second Harvest food bank.
- Collaborated with the undergraduate student group Green Campus interns to implement De-Light-ed Dining and reduce energy consumption in residential dining locations.
- Phase out non-recyclable and non-compostable to-go containers in retail locations and replace them with compostable or reusable containers.
- Established a system for recycling 100% of fryer grease in all dining locations.

For more information about sustainability at UCI, visit www.sustainability.uci.edu.

Please save this PDF with your answers and email it to cool.schools@sierraclub.org no later than March 20, 2010. Thank you very much for your participation.