Communication from the Sustainability Task Force
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October 13, 2008

David Gardner, MD
Chair, UCSF Academic Senate
500 Parnassus Avenue, Box 0764

Re: Recommendations for Improving Sustainability at UCSF

Dear Chair Gardner,

Thank you for appointing a Sustainability Task Force. Members of the Task Force view the increasingly dire projections about the effects of global climate change, environmental degradation and resource depletion with urgency and alarm, and believe that UCSF, as a leading health science campus, must demonstrate aggressive and visible leadership in reducing the environmental impact of all of our activities.

The Sustainability Task Force has met six times since February 2008 to discuss faculty recommendations to improve environmental sustainability at UCSF. In addition, subcommittees met to address campus-wide issues, clinical and laboratory sustainability, and a sustainability curriculum. As a result of our discussions, we make the following recommendations:

**Academic Senate Sustainability Task Force Recommendations**

1. Create a sufficiently-funded central Sustainability Office and website to propose, support, track and publicize sustainability efforts at UCSF.

2. Encourage campus leadership to *shift the culture at UCSF toward sustainability*, including mandating participation in a brief online educational module covering specific resources and behaviors to improve sustainability at UCSF.

3. Support faculty efforts to improve sustainability in all their individual activities including an Academic Senate policy that business travel should be minimized.

4. Encourage and support innovations to improve sustainability in all buildings and facilities occupied by UCSF personnel, including UCSF Medical Center, SFGH and leased space.

5. Support the inclusion of sustainability into the curriculum at UCSF

We present further information for each recommendation below:

1. **Create a sufficiently funded central Sustainability Office and website to propose, support, track and publicize sustainability efforts at UCSF.**
   
   a. We urge this immediate and substantial financial investment in improving UCSF sustainability because:
   
      i. The campus demonstrates its priorities with funding decisions. Investing in sustainability acknowledges that the work is too important to be left for the ‘free time’ of busy faculty, who have many other responsibilities.
ii. Experience at other campuses suggests that the initial investment will more than pay for itself with savings in energy and other resource use.

iii. Publicizing our efforts and successes will help our image in the community and will increase our pride in working and studying at UCSF.

b. A priority for initial funding should be an internal UCSF catalyst fund to pay for efficiency improvements (see Harvard Green Campus Loan Fund as a successful, self-sustaining example, or the more recent Cal Climate Action Fund). There should be mechanisms for part of the cost savings achieved through reduced resource use to be returned to the fund until the initial funding is restored (after which time the savings could be retained by the initiating unit), and for payment into the fund as an alternative to retail carbon offset purchase (see below), as is currently being done at UC Berkeley.

c. Include a mechanism for students, faculty and staff to make suggestions and report problems, as well as a mechanism for prioritizing, tracking and acting upon those suggestions. Examples of such suggestions include:

   i. Distribute laboratory test and imaging results via secure electronic means rather than sending paper reports.
   
   ii. Charge less for parking small cars than for parking large cars.
   
   iii. Install motion sensors or timers for light switches.

d. Provide a mechanism for members of the campus community to volunteer to participate in UCSF sustainability projects.

e. Provide a web forum or wiki to solicit and discuss sustainability ideas and to serve as a source of ideas for anyone interested in reducing work-related consumption of energy and other resources.

f. Create (or link to) training modules targeted toward specific constituencies, e.g., students, nurses, administrative staff, wet-lab researchers.

g. Increase support for videoconferencing; and implement a web-assisted conference call system that should be free across all UCSF campuses, and preferably also free for nationwide conferences.

2. **Encourage campus leadership to shift the culture at UCSF toward sustainability**, including mandating participation in a brief online educational module covering specific resources and behaviors to improve sustainability at UCSF.

   a. University leadership should send regular messages on sustainability goals and accomplishments to faculty, staff and students, as is currently done by the Chancellor and Deans for events such as appointments to the National Academy of Sciences or our NIH funding ranking.

   b. A well-produced educational module focusing on specific behaviors to improve sustainability and the resources available to help with these efforts will educate the campus community and further demonstrate the commitment of campus leadership to this issue.

   c. In addition to the campus leadership, there is a need to recruit high-profile faculty to serve as public voices promoting more sustainable clinical or laboratory practices.

   d. The campus and medical center should post signs that encourage recycling and other desired behaviors (as are currently seen in the Medical Center for hand washing) in proximity to ubiquitous recycling bins.

   e. There is precedent for this sort of cultural change. Sexual harassment, cigarette smoking, and breaches of confidentiality are examples of behaviors that were tolerated in the past and now have become culturally unacceptable. Overconsumption of resources and failure to recycle could be initial targets of cultural change.

3. **Support faculty efforts to improve sustainability in all their individual activities including an Academic Senate policy that business travel should be minimized.**

   a. Work-related travel makes the largest contribution to the carbon footprint of most faculty and many staff. A single round trip to the East Coast generates 1-2 tons of CO₂ per passenger, which is about as much as the annual per capita household electricity
use in California.\textsuperscript{1} Thus, we recommend that the Academic Senate draft a policy, to be endorsed by the Chancellor, calling on faculty to minimize business travel whenever possible. This will provide an impetus for developing alternatives to business meetings, such as web-assisted conference calls, when feasible.

b. Find and disseminate information about funding sources that pay for University-related travel that can also be used to pay to offset the climate impact of travel, preferably by donating to the UCSF Sustainability Fund. Advocate that funders allow expenditures to offset climate impact for all the travel they fund. Include in the online training (item 2.b. above) basic information about carbon offsets, including their low cost (often less than 5% of airfare, or less than the value of the frequent flyer miles).

c. Send a message to the National Institutes of Health (NIH) and other agencies with a position statement that faculty may use to support their efforts to replace NIH-related travel with video or teleconferences (similar to the institutional support provided for scholarly communications in open-access venues).

4. **Encourage and support innovations to improve sustainability in all buildings and facilities occupied by UCSF personnel. Including UCSF Medical Center, SFGH and leased space.**
   
   a. Create a UCSF green certification program for clinics, inpatient units, research laboratories and offices, using the [US Green Building Council LEED](http://www.usgbc.org) program as a model.

   b. Collaborate with others (e.g., the [Global Health and Safety Initiative](http://www.ghsi.org)) to identify the most sustainable practices, products and vendors and negotiate volume discounts.

   c. Efforts to improve sustainability in the clinical setting should include examining the services we provide, how we do so, and their dollar and environmental costs. To this end we recommend a renewed focus on efficiency, including:

   i. Resurrect the [Office of Clinical Resources Management](http://www.ucsf.edu/healthcare/administration/quality/crm) or equivalent, to support faculty in re-engineering projects for greater efficiency and sustainability.

   ii. Make the cost of services (such as laboratory tests, pharmaceuticals, imaging studies and hospital days) readily accessible to clinicians.

   iii. Popularize a tool that estimates the environmental impact of common discretionary behaviors and activities, such as travel and consumption of specific foods.

   d. Efforts to improve sustainability in research laboratories should focus on more efficient use of laboratory supplies, chemicals, and energy. Examples of such improvements include:

   i. Promote reuse of laboratory supplies through centralized dish-washing and autoclave facilities. Emphasize potential cost savings for individual labs.

   ii. Organize, standardize and promote laboratory recycling. Recycling of all plastics is allowed, but many laboratories have no access to recycling bins. Educate laboratory personnel about what can be recycled and provide standardized recycling containers and infrastructure.

   iii. Implement a functional chemical and supplies exchange program.

   iv. Identify energy-inefficient equipment such as old refrigerators and freezers and implement a program to replace such equipment.

   v. Reexamine chemical and biological waste handling to reduce unnecessary environmental impact of current procedures.

\textsuperscript{1} CO\textsubscript{2} from travel is available from a variety of Carbon Calculators (see Thomas Newman's Focus the Nation presentation, slide 22, available at: http://www.parking.ucsf.edu/transportation/focusthenation/FTN%20PDF/Acheiving%20Sustainability_Jan08.pdf.) California per capita electricity usage and resulting carbon output are from http://www.physics.ucl.edu/~silverma/actions/HouseholdEnergy.html.
5. **Support the inclusion of sustainability into the curriculum at UCSF.**
   a. Identify key sustainability topics for UCSF students (see appendix for examples).
   b. Identify components of the existing curriculum in which sustainability may be taught, such as Interprofessional Education and Pathways to Discovery.
   c. Create opportunities and infrastructure for students to participate in campus sustainability projects and teaching. Projects could be suggested by the Sustainability Office and students could work with faculty to develop solutions and improvements.

Should you have questions or need more information, please contact Co-Chairs Tom Newman (newman@epi.ucsf.edu) and Elena Fuentes-Afflick (efuentes@sfghpeds.ucsf.edu).

Sincerely,

The Academic Senate Sustainability Task Force

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Appendix: Examples of possible specific learning objectives for students

1) Knowledge
   a) Climate change
      i) Be able to summarize at least 3 lines of evidence that significant global climate change is occurring and 2 lines of evidence that human activities are a significant contributor
      ii) List at least 4 projected health impacts of global climate change
      iii) Quantify the extent to which impacts of climate change are likely to disproportionately affect poorer countries, while causation is greater from richer countries
      iv) Define and contrast ADAPTATION and MITIGATION strategies and give 3 examples of each
      v) Be able to estimate approximate contribution to greenhouse gas (GHG) footprint of individual activities including driving, flying, dietary choices and residential energy consumption
      vi) Define carbon offsets and explain reasons for wide range in pricing
      vii) Define and contrast inter-country, intra-country and intergenerational equity
      viii) Explain the concepts of Global Burden of Disease and Comparative Risk Assessment
      ix) List 3 significant projected impacts of climate change on the SF Bay Area
   
   b) Toxics
      i) List 2 major types of persistent pollutants and give 2 examples of each
      ii) Explain bioaccumulation and biomagnification of pollutants
      iii) List 3 types of adverse health effects of persistent pollutants
      iv) Explain the role and limitations of biological monitoring for human exposure to toxic chemicals
      v) Describe approaches and pitfalls associated with risk communication with individuals, groups, and the general public
      vi) Explain the concept of environmental justice and the core principles for addressing environmental injustice
      vii) List the major health effects associated with ambient air pollutants including ozone and particulate matter
      viii) List the major classes of toxic chemicals that are used in hospitals and the best available control strategies to protect workers, patients, and the environment
      ix) Explain the roles of local, state and federal health and environmental agencies, and the major laws under which they operate
   
   c) U.S. Healthcare in global context
      i) Be able to contrast individual vs. public health approaches to improving health
      ii) Understand historical, economic and cultural factors leading to greater focus on individual approaches in the US, compared with other countries
      iii) Know approximate total, % of GNP and per capita healthcare spending in the US compared with other countries
      iv) Know common measures of public health, and how the US ranks compared with other countries.
   
   d) Activism
      i) List 3 examples of health professional or scientist activism that have led to improvements in public awareness of health problems and their solutions
         Identify the activities in your specialty with the greatest environmental footprint.

2) Attitudes
   a) Appreciate the need to make significant changes in how we live and work
   b) Willingness to engage colleagues and neighbors in discussions of sustainability
   c) Sense of responsibility as a health professional to model sustainable behaviors and engage in policy discussions about sustainability
   d) Interest in considering choices about what we do clinically, as well as how we do it, in order to reduce the environmental impact of our clinical activities

3) Skills:
   a) Find and use a GHG calculator on the web
   b) Passionately but politely suggest ways of enhancing sustainability in the home and workplace
   c) Practical sustainability project: Teams of students will work with the sustainability office to select a prioritized project and form a work team to effect changes.