Office of the Academic Senate
500 Parnassus Ave, MUE 230
San Francisco, CA 94143-0764
Campus Box 0764
tel: 415/476-1308
fax: 415/514-3844

David Gardner, MD, Chair
Elena Fuentes-Afflick, MD, MPH, Vice Chair
Mary J. Malloy, MD, Secretary
Jean Olson, MD, Parliamentarian

January 7, 2009

J. Michael Bishop, MD
Chancellor and Arthur and Toni Rembe Rock Distinguished Professor
University Professor
University of California, San Francisco
513 Parnassus Avenue, S 126
San Francisco, CA 94143-0402

Re: Academic Senate Environmental Sustainability Recommendations

Dear Chancellor Bishop:

In December 2007 I created a Task Force to identify faculty-relevant infrastructure and operational issues at UCSF that have a significant environmental impact. This Task Force worked creatively and diligently throughout 2008 to prepare the attached recommendations for improving environmental sustainability at UCSF.

The Executive Committee of the Academic Senate has endorsed the findings of the task force and we hope that the Chancellor's Advisory Committee on Sustainability will work to implement these recommendations. UCSF has the opportunity to take a leadership position on sustainability because of our unique perspective as a health science campus. We believe that implementation of the task force recommendations will reduce costs, foster improved health in our communities, and reduce the impact of our activities on the environment.

The Academic Senate is eager to work with you on this important issue.

Sincerely,

David Gardner, MD
Chair, UCSF Academic Senate

Enclosure

Communication from the Sustainability Task Force
Tom Newman, MD, MPH, Co-Chair
Elena Fuentes-Afflick, MD, MPH, Co-Chair

January 6, 2009

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

Re: Recommendations for Improving Environmental Sustainability at UCSF

Dear Chair Gardner,

Thank you for appointing the 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 seven 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. We presented our initial draft report to the Coordinating Committee, and at their recommendation sought additional input from faculty councils from all schools and the Committee on Academic Planning and Budget and revised our report accordingly. The revised recommendations, approved by the Academic Senate Executive Committee on January 5, 2009, are as follows:

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 development of a brief, web-based educational module that covers behaviors to improve sustainability practices at UCSF.*
3. **Support faculty efforts to improve sustainability in all their individual activities, including an Academic Senate policy encouraging faculty to reduce business travel.**
4. **Encourage and support innovations to improve sustainability in all buildings and facilities occupied by UCSF personnel, such as 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 and staff, 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 the [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. Publicize current UCSF sustainability efforts and achievements, and ways in which they can immediately contribute to the sustainability effort (e.g. where to recycle, compost etc.)

      i.   Create a website with a ""How do I….." section.

      ii. Provide an email address where UCSF faculty and students can ask questions.

d. 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.

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

f. Assist in funding research to study ways to reduce the environmental impact of health sciences practices.

g. 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.

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

i. 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 development of a brief online educational module that covers 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. Create a well-produced, brief educational module focusing on specific behaviors to improve sustainability and the resources available to help with these efforts to educate the campus community and further demonstrate the commitment of campus leadership to this issue.

c. In addition to the campus leadership, recruit high-profile faculty to serve as public voices promoting environmentally sustainable clinical and laboratory practices.

d. Post signs throughout the campus and medical center in proximity to recycling bins to encourage recycling and sustainability practices.

e. Build on the success of previous efforts at cultural change, such as changes in attitudes about sexual harassment, cigarette smoking, and breaches of confidentiality,

which were tolerated in the past and are now unacceptable. Reducing resource consumption and encouraging recycling and composting could be initial targets of cultural change.

    f. Increase campus-wide awareness of and support for incorporating sustainability into all aspects of UCSF by including sustainability representatives on campus committees in the same model of including diversity representatives on campus committees.

3. **Support faculty efforts to improve sustainability in all their individual activities including an Academic Senate policy encouraging faculty to reduce business travel.**

    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 CO_2 per passenger, which is about as much as the annual per capita household electricity use in California.[1] Thus, we recommend that the Academic Senate draft a policy, to be endorsed by the Chancellor, encouraging faculty to reduce business travel when not necessary for achieving their professional goals. This will help raise awareness and will also be useful to faculty who can cite the policy when asking for alternatives to business meetings, such as web-assisted conference calls, when feasible.

    b. Find and disseminate information to help faculty identify funding sources that can be used by faculty who want 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 asynchronous electronic review, or video or teleconferences (similar to the institutional support provided for scholarly communications in open-access venues).

    d. To facilitate faculty participation in professional activities while reducing travel, videoconferencing and/or a web-assisted conference call system should be provided free-of-charge across all UCSF campuses, and preferably also free for nationwide conferences.

    e. As faculty strive to reduce travel that is not required for professional activities, their efforts to reduce their carbon footprint should be taken into consideration at each review for academic advancement, in particular the assessment of national and international reputation.

4. **Encourage and support innovations to improve sustainability in all buildings and facilities occupied by UCSF personnel, such as 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 program as a model.

    b. Collaborate with others (e.g., the Global Health and Safety Initiative) 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 or equivalent, to support faculty in re-engineering projects for greater efficiency and sustainability.

---

[1] CO_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.uci.edu/~silverma/actions/HouseholdEnergy.html.

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. Focus efforts to improve sustainability in research laboratories 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 currently do not have 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.

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, recognizing that adding instructional time to the existing school curricula may not be feasible.

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), or Task Force Analyst Heather Alden (heather.alden@ucsf.edu).

Sincerely,

The Academic Senate Sustainability Task Force

Elena Fuentes-Afflick, Co-Chair	Steve Hulley
Tom Newman, Co-Chair	Merlin Larson
Christian Apfel	Tim McCalmont
Peter Bacchetti	Bruce (BJ) Miller
Paul Brakeman	Norm Oppenheimer
Christine Cheng	Susan Ryan
Laura Esserman	Rossana Segovia-Bain
Gwen Essex	Arianne Teherani
Christina Foushee	Ellen Weber
Stanton Glantz	Torsten Wittmann
Paul Green	

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.