

UCSF Sustainability Baseline Assessment

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Davis Langdon

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Executive Summary

Project Overview

This Baseline Assessment is a comprehensive analysis of UCSF's current state of compliance with its sustainability goals, principally the University Office of the President's (UCOP) Policy on Sustainable Practices. This report has been developed through a process of engagement with the working groups that make up the UCSF Sustainable Steering Committee. The findings of the baseline assessment will serve as a launching pad for identifying the comprehensive set of goals and strategies that will serve as a Sustainability Action Plan for UCSF's future.

The baseline assessment will be released in two sections. The first, contained here, addresses the engagement with major stakeholders, a comparison of UCSF to other UC campuses, best practices from peer institutions, and a review of the Climate Action Plan. The second section will include a review of the administrative framework, as well as studies on how the ratings systems available to UCSF can best be coordinated and implemented to achieve simple, thorough, and robust metrics for measuring and achieving sustainability in all aspects of campus life.

Significant Findings

The initial assessment yields several key findings:

1. The sustainability initiatives at UCSF are on par with other UC campuses, and in the lead among UC Medical Centers. The medical center is in a leadership position primarily because the campus efforts undertaken across all campuses at UCSF directly benefit the medical center.
2. The sustainability efforts at UCSF are disconnected from one another, and are not consistently implemented across the institution.
3. The continued success of sustainability at UCSF will depend on the successful alignment of sustainability initiatives with the strategic mission of healthcare.
4. The greatest opportunities for improving the sustainability of UCSF lie in improved communications, education, data tracking, and continued funding of conservation efforts.

Existing sustainability commitments

The primary sustainability commitment that the university is subject to is the Policy on Sustainable Practices as issued by the University of California Office of the President (UCOP). This policy was first released in July of 2003, and has been updated three times since then: January 2006, March 2007, and September 2009. This policy has grown to include 8 target areas: Green Building Design, Clean Energy, Climate Protection, Sustainable Transportation, Sustainable Operations, Recycling & Waste Management, Environmentally Preferable Purchasing, and Sustainable Food Practices.

Of these eight categories, there are three major exemptions for certain programmatic areas. Acute care and patient care areas are not required to comply with the Sustainable Operations and Green Building Design categories.

The structure of the UCOP policy is a combination of general goals, target metrics and implementation dates, and compliance with third party standards. Thus in addition to the direct requirements of the UCOP policy, UCSF is also indirectly subject to compliance with the following third party standards: The U.S. Green Building Council's LEED Rating Systems for New Construction, and for Operations & Maintenance, Labs 21 (A joint project of the Environmental Protection Agency and the Department of Energy), Pacific Gas & Electric's Savings By Design program, the California Climate Action Registry/Climate Registry, and the American College and University Presidents' Climate Commitment.. These third party organizations will be addressed in the chapters addressing ratings systems and the climate action plan.

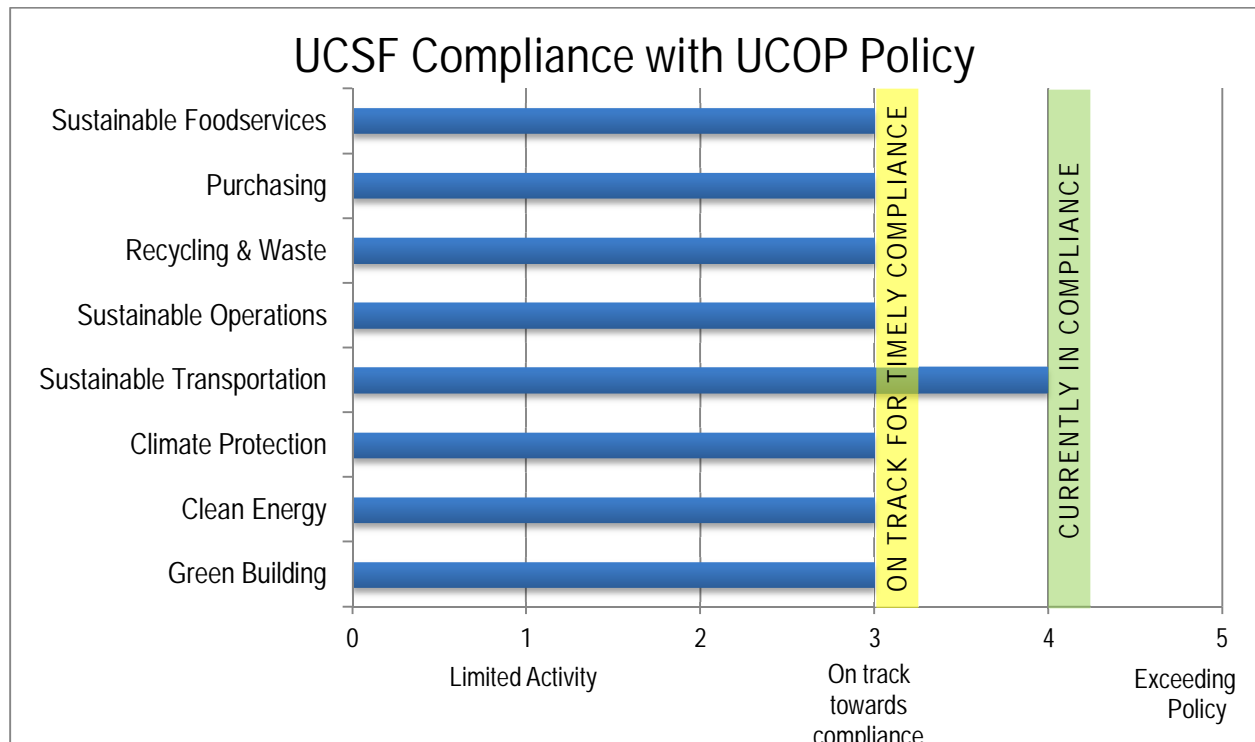
Stakeholder Groups

Following the release of the UCOP Policy on Sustainable Practices in 2003, UCSF formed the Sustainability Steering Committee (SSC) to oversee implementation of the policy at the local level. The SSC includes eight work groups directly aligned with the UCOP policy, as well as three additional work groups that are unique to UCSF. These are the Budget, Education & Communication, and Healthcare work groups. Each of the eleven workgroups is co-chaired by one campus and one medical center representative. There is currently an absence of significant collaboration between the SSC workgroups, and the primary communication tends to occur because of personal outreach.

Davis Langdon met with the co-chairs of the work groups in order to identify the current state of compliance with UCOP policy. This report includes the details of each of these meetings, including a description of the work group's relevance to UCOP policy, the details of the primary group contacts, a summary of the major findings, a comparison of how well each of the UC campuses currently complies with the UCOP policy, and comparisons with best practices at peer institutions.

Gap Analysis

The goal of this baseline assessment has been to identify the current status of UCSF's compliance with the UCOP policy on sustainability. Based on Davis Langdon's review, UCSF has already achieved compliance with the UCOP policy in one target area, and is on track towards timely compliance for the remaining seven areas. The use of the term "timely compliance" refers to the schedule of metrics and targets that have been identified within the UCOP policy. Those work groups which are listed as "on track for timely compliance" are actively pursuing strategies which will likely be in full compliance prior to the relevant due date.



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¹ This assessment was compiled by Davis Langdon, please see

The gap between current and future states of compliance is primarily a question of implementation. The fundamental structure of compliance is in place, with basic movements happening in every area of the policy. However the challenge in establishing full compliance with the policy lies in expanding all strategies to both the campus and the Medical Center, and continuing to meet the UCOP policy benchmarks by their stated due dates. Those areas which are listed as “on track” have shown significant efforts at initiating compliant practices, but either face due dates which are in the future, or have not yet achieved compliance across the UC campus. In addition, the UCOP has initiated the development of sustainability practices for acute care facilities. This policy development is on the horizon, and future compliance should be anticipated.

Finally, there are two distinct items in the UCOP policy which may prove to be unfeasible for achievement at UCSF; the goal of zero waste to landfills by 2020 and eventual carbon neutrality. The pursuit of zero waste may be achievable on the campus, but will likely be unreachable in the medical center facilities. The eventual goal of carbon neutrality will only be achievable with the purchase of carbon offsets.

Next Steps

Following the receipt of comments on this draft of the stakeholder evaluations, Davis Langdon will present the findings to the Chancellor’s Advisory Committee on Sustainability. In April of 2010, Davis Langdon will deliver the final two sections of the baseline assessment, which are the administrative structure and ratings systems chapters, to the Sustainability Steering Committee. This delivery will mark the finalization of the baseline assessment phase, and the project will move into the second phase development of the Sustainability Action Plan. The sustainability action plan will be a collaborative and engaging process centered on three primary functions:

1. To identify clear goals for sustainability at UCSF.
2. To identify actionable items that will lead to accomplishment of those goals.
3. To develop a protocol for ongoing prioritization of sustainability action items.

Following the completion of the action plan, Davis Langdon will produce a final report documenting the findings of the first two phases, and present it to the UCSF Chancellor’s Advisory Committee on Sustainability..

Stakeholder Engagement

Budget Workgroup

Davis Langdon met with the co-chairs of the SSC Budget Work Group on January 14th, 2010. The meeting was attended by the two co-chairs, David Hathaway (Assistant Director, Capital Budget-Campus) and Jody Lesko (Project manager, Decision Support Services- Medical Center) in addition to Maric Munn (Director, CPFM), Anne Nicklin (DL), Lisa Matthiessen (DL), Walker Wells (GG), Steve Guttmann (GB), Ted Tiffany (GB), and Gail Lee (Sustainability Manager, UCSF).

The primary activities of the Budget Group have been to collect and collate the annual budget requests of the SSC work groups. There has been some limited fiscal tracking of the initiatives funded, but there has not been any performance tracking to identify the success or failure of the funded items. The group does not presently address any issues of financing or fundraising, and there would need to be additional member recruitment if financing was added to the group's mission.

There is currently very little communication between the budget work group and the other SSC work groups aside from the annual budget ask, and the co-chairs have not been charged with implementing the larger SSC mission within their home departments.

The existence of a Budget Work Group is unusual within the UC system. UCSF is the only campus which has independent funding of sustainability measures (most others are funded through facilities.) There is no tracking of the total monies spent on sustainability, only those which come from the CACS.

Major Findings

The campus receives funding from the UCOP for operating costs as well as capital improvements. These two funding requests and receipts are typically separate, with a capital investment funds tied to specific project developments and operating funds allocated by square footage. In recent years there has been an agreement with the Governor that the UC system will receive a fixed amount of money independent of their demand, thereby allowing the UC system to retain any utility cost savings resulting from retrofit programs. In addition to this accruing capital, capital investment funding is also available via a Section 28 waiver. This funding mechanism allows individual campuses to fund energy conservation capital expenditures through a bond sale, and pay back the bond with the energy cost savings. This mechanism could theoretically be used for other sustainability measures, but is primarily targeted to energy conservation programs. The drivers of capital investment are:

1. Replacement Capital.
2. Infrastructure Needs.
3. Return on Investment projects.

In addition to the state funded operations budget, there is the Chancellor's Discretionary Fund, which covers approximately half of the facilities operating budget. Data from 2008 indicates that more than a quarter of the Chancellor's Discretionary Fund was directed to facilities.

The Medical Center derives all of their funding for basic construction and maintenance from the patient care income. There are occasionally joint efforts by the campus and Medical Center on facilities projects, as well as sporadic supplies of state or federal funds.

Compliance with UCOP Policy

The Budget Work Group is not specifically aligned with any portion of the UCOP Sustainability Policy.

Best Practices at Peer Institutions

Most of UCSF's peer institutions have similar budget constraints. Johns Hopkins, Oregon Health & Sciences University (OHSU), University of Connecticut, Emory University, University of Maryland Medical System (UMMS), and Legacy Health Systems all finance their sustainability projects and staff through the campus facilities department. In most cases, funds are limited and the facilities department will only fund projects with a payback of less than five years.

Some peer institutions are using innovative financing mechanisms to fund staff and projects. UC Santa Barbara pays for one half of their staff position's salary, while the other half is paid by a green fee students pay annually. The student body of UC has the ability to finance a broader range of sustainability initiatives through passing a Green Initiative Fund (TGIF) on the student fee ballot. The student body governs the fund and oversees the expenditures on sustainability separately from the sustainability office.

Johns Hopkins and Stanford are both private universities with medical centers and research labs. Johns Hopkins is beginning a new funding process in which a sum of money will be loaned to divisions for sustainability projects. This money will fund numerous retro commissioning projects, by blending 6 month and 5-8 year paybacks, ensuring all projects are addressed, not only short-paybacks. Allocating funds to departments within the budget makes it easier for Johns Hopkins to track spending on sustainability.

Stanford's Energy Management Program has created incentive-based funding mechanisms to address energy consumption on campus. The Stanford Energy Retrofit Program is an annual fund of \$1 million that is available for departments to conserve energy. Departments submit proposals to the Stanford Utility which are normally funded if they have a 5 year payback or less. The Whole Building Retrofit Program sets aside capital dollars to do more thorough systematic reviews of energy systems in buildings to make big costly changes and upgrades. The largest project to date was a \$6 million lab retrofit which changed fume hoods from constant volume to variable volume. In addition, Stanford has created the Energy Conservation Incentive Program (ECIP), a financial and behavioral incentive based program that provides financial accountability to the academic and business schools for energy use. The program establishes a department kilowatt-hours (kWh) budget for each year. The size of the budgets, which range from approximately 15,000 to 13 million kWh, are based on the amount of electricity that units have used in the past, adjusted for factors such as major renovations or program changes. If units use less than their allotted budget of electricity during that period, they are allowed to keep the value of the remaining kWh, which will be determined by multiplying the remaining kWh by the electricity rate. If units use more electricity, the Budget Office will cover the shortfall with general funds. These three programs allow Stanford to track energy efficiency spending and provide funding that address split incentive dilemmas in medical research labs.

Private healthcare systems are also developing funding mechanisms outside of facilities budgets. Legacy Health Systems has an impressive blue wrap recycling program originally funded by a Kimberley Clark grant. With Legacy's warehouse space and Kimberly Clark's funding, Legacy was able to collect and process blue wrap recycling for the whole state of Oregon. Pursuing grants for pilot sustainability projects can assist in swift implementation without having to base decision making on campus funds and priorities.

Campus Planning

Davis Langdon met with Campus Planning on November 16th, 2009, a meeting that was attended by Anne Nicklin (DL), Barbara Maloney (BMS), Kevin Beauchamp (Director of Physical Planning - UCSF), Gene Zanko (Director of Capital Planning, UCSF) and Winifred Kwofie (Associate Director of Strategic Facilities Management, UCSF). Campus Planning is represented on the CACS by Lori Yamauchi (Asst Vice Chancellor of Campus Planning), and four staff members of the SSC work groups on Budget, Climate Change, Green Building and Transportation.

Major Findings

UCSF's current Long Range Development Plan (LRDP) and its accompanying Environmental Impact Report were approved in 1997; three major amendments to the LRDP have been approved since that time. The campus is currently developing the scope of work for the next LRDP and anticipates beginning preparation in 2010 with completion targeted for 2012. An Oversight Committee and sub-committees are being formed. The LRDP is a physical master plan that describes how the anticipated space needs of the academic, research, and clinical care missions of the campus will be met over a 15-year planning horizon. How sustainability will be integrated into or treated in the LRDP is not currently determined; the Sustainability Plan has the opportunity to inform how the LRDP responds. The LRDP also needs to balance flexibility with specificity, since any major amendments to the plan, once approved require Regental review.

In preparation for the next LRDP the campus is undertaking several planning and urban design studies that will become background information for the final plan recommendations. Three planning studies are of particular note:

Parnassus Design Goals and Guidelines:

These include master plan studies and guidelines for future development at Parnassus Heights. Studies have been completed for potential housing, research, and open space improvements; initial studies have been done for the replacement of Moffitt Hospital in light of future state seismic requirements for inpatient facilities, but further study will need to be conducted in connection with the next LRDP. This material is in draft form but has not yet been finalized. The Parnassus campus is constrained by a square footage cap imposed by The Regents in 1976 that limits future development, although housing along Parnassus, Third, Fourth and Fifth Avenues and Kirkham and Irving Streets does not count towards the space cap calculation.

Mission Bay Phase Two Study:

A process is underway to review the remaining developable sites at Mission Bay and determine how they should be developed. This could result in a recommendation to seek a higher square footage entitlement for the campus than is currently in place. At the same time open space, pedestrian access, and other design issues are being reviewed. This work is anticipated to be completed in late 2010.

Physical Design Framework:

The campus is currently preparing a Physical Design Framework document that is part of a portfolio of documents along with a Capital Financial Plan and the LRDP. The Physical Design Framework is intended to provide clear design guidance for UCSF as it undertakes future capital projects. Once approved, UCSF will be able to undertake projects under \$60 million under authority delegated to the Chancellor by The Regents.. This document is scheduled to be presented to the Regents at the May meeting.

Potential Issues Common to LRDP and Sustainability Plan:

- **Housing:** Building additional housing is being considered for Mission Bay and Parnassus (the campus currently only has housing at Mission Bay). The UCOP guidelines for transportation specifically recommend the development of on-campus housing.

- Transit: While the campus already has a robust shuttle system serving many of its sites in the city, current planning is looking at additional ways to make transit more attractive and convenient to the campus population.
- Parking: Balancing the supply and pricing of parking to discourage single occupant auto use while discouraging parking in surrounding neighborhoods.
- Central Utility Plant (CUP): A high efficient CUP is being considered for block 16 at Mission Bay.

Compliance with UCOP Policy

Campus Planning is not directly aligned with any particular portion of the UCOP Sustainability Policy; rather the department bears responsibility for ensuring that future development is planned in a way that responds to the sustainability initiatives driven by the UCOP goals.

Best Practices at Peer Institutions

No other institutions were included in regards to Campus Planning.

Climate Change Work group

Davis Langdon met with the campus co-chair and a member of the SSC Climate Change Work Group on January 14th, 2010. The meeting was attended by campus co-chair Bruce Shapiro (Assistant Director, CPFM) work group member and Climate Action Plan author Paul Franke (Assistant Planner, Campus Planning) as well as Anne Nicklin (DL), Lisa Matthiessen (DL), Walker Wells (GG), Steve Guttmann (GB), Ted Tiffany (GB), and Gail Lee (Sustainability Manager, UCSF). The Med Center co-chair of the group, Dick Chan (Director, Med Center Facilities and Support Services) was unable to attend due to an unannounced Joint Commission inspection.

Major Findings

The preliminary GHG (Greenhouse Gas) emissions inventory released in 2008 was completed by student interns, and was anecdotal good first effort, but incomplete. Members of the work group have worked closely with the SSC and the UCOP to complete a new inventory which is significantly more accurate. This inventory has been released in a draft format, and is currently in the process of being verified by an independent third party. The two major achievements of are the completion of an inventory which establishes the 1990 and 2000 GHG emissions level targets, 81,950 MTCO₂e and 142,616 MTCO₂e respectively, and the completion of the Climate Action Plan. In addition, the survey has identified projections for 2014 and 2020 levels of emissions for both a “business as usual” and improved case. The 2014 reduction in GHG emissions to 2000 levels is shown to be feasible through a combination of educational programs, transportation initiatives and energy efficiency investments. However, the Climate Action Plan does not detail the concrete steps that will be needed to meet this 2014 goal. The final detailed Climate Action Plan will be dependent on Chancellor support for the 2014 targets, and an institution-wide policy on emissions reductions.

The production of the GHG emissions inventory by the Climate Change Workgroup was on an ad hoc basis, and it may not be feasible to update the annual emission inventory in this fashion. A tracking software for data collection would make the annual inventory process significantly less time consuming, and would allow for projected emissions to be used as a decision making tool. Currently, each of the 10 UC campuses has a different group at each campus responsible for preparing the inventory.

Typical reporting metrics at the UCOP level in the past were total Metric Tons of Carbon Dioxide equivalent , (MTCO₂e), MTCO₂e/student, and MTCO₂e/ft². For the 2009 Annual System-wide Sustainability Report, UCOP has updated these metrics to MTCO₂e/student+staff, and MTCO₂e/Adjusted GSF (minus parking structures).

Due to UCSF’s small student population, these updated standards are a more useful and accurate carbon intensity metric..

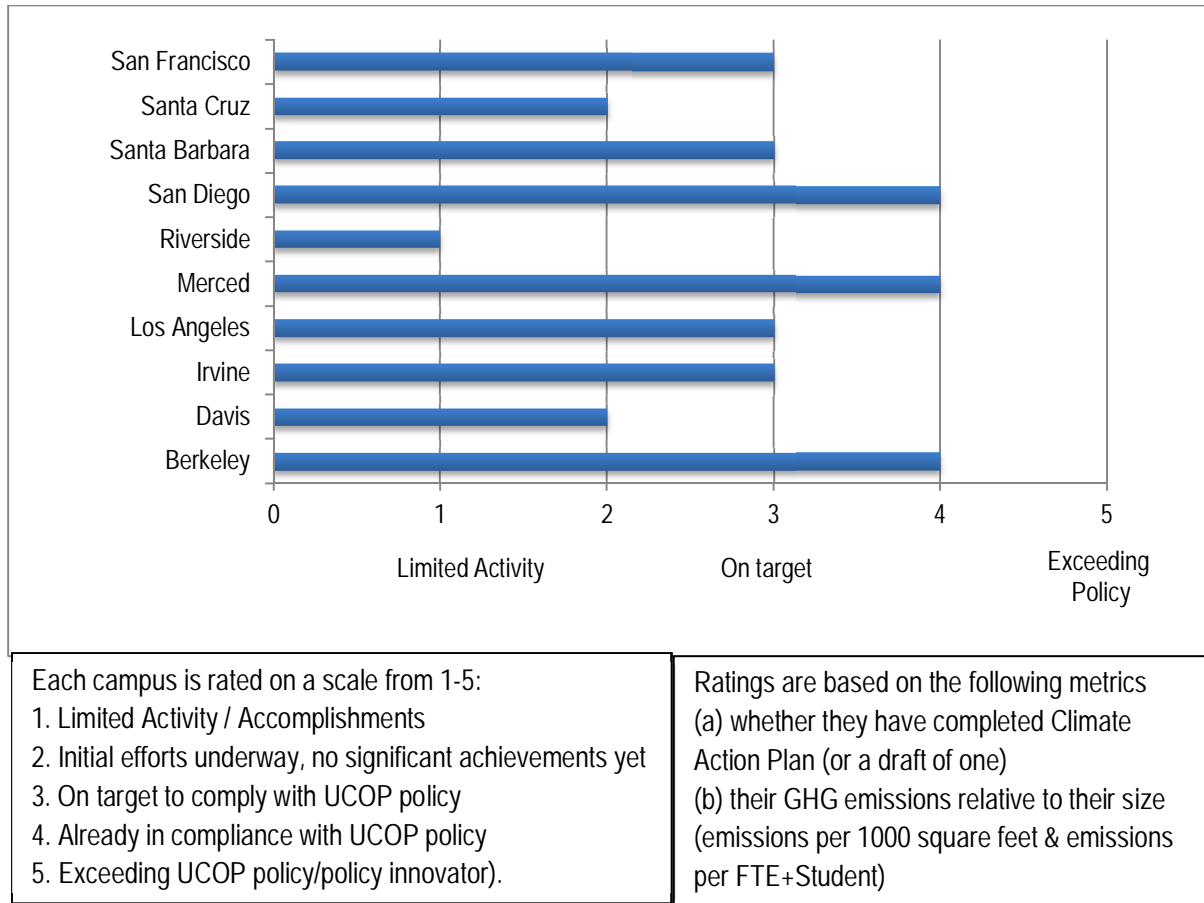
Compliance with UCOP Policy

The Climate Change Work Group is explicitly tied to the Climate Protection Practices section of the UCOP Sustainability Policy, which calls for:

1. Reduction of GHG emissions to 1990 levels by 2020.
2. Reduction of GHG emissions to 2000 levels by 2014.
3. Membership with either the California Climate Action Registry (CCAR) or The Climate Registry.
4. Completion of a GHG inventory by September 15, 2008.
5. Reporting of data through the American College & University Presidents’ Climate Commitment (ACUPCC) online reporting tool.
6. Development by December 2008 of an action plan for eventual climate neutrality.
7. Implementation of two of the seven ACUPCC actions to reduce GHG emissions by September 15, 2009.

In addition to the UCOP policy, the Climate Change group is addressing the regulation of UCSF GHG emissions by the State of California via AB32 (CARB) and CEQA (SB97), the Federal Government via the EPA, and by the local government via the BAAQMD as a significant impact organization. The GHG emissions inventories for all of these organizations must be consistently tracked and reported to avoid regulatory conflicts.

CLIMATE PROTECTION PRACTICES- UC SYSTEM COMPARISON²



[Best Practices at Peer Institutions](#)

Information regarding best practices for the climate change group has been included in the Carbon Footprint chapter.

² This assessment was compiled by Davis Langdon, please see

Education and Communication Workgroup

Davis Langdon met with the campus co-chair of the SSC Education and Communications Work Group on January 14th, 2010. The meeting was attended by campus co-chair Lisa Cisneros (Assistant Director Internal Communication, Public Affairs) as well as Anne Nicklin (DL), Lisa Matthiessen (DL), Walker Wells (GG) and Gail Lee (Sustainability Manager, UCSF). The Med Center co-chair of the group, Laurie Itow (Web/Internal Communications Manager, Med Center Marketing) was unable to attend, but did participate via later telephone conversations.

The group emerged out of the grass roots effort headed up by Steve Wiesenthal, and eventually became institutionalized as a work group within the SSC. There is no direction from the UCOP on the role of a communications work group, and there is little to no interaction between the communications work group and other SSC work groups outside of the monthly SSC meetings.

Major Findings

The current members of the work group do not have backgrounds in communications, and the co-chairs do not have the hourly capacity to host regular meetings of the work group. In addition, the co-chairs do not have a technical background in sustainability and would like to change the mission of the work group to focus only on Communications with another work group or entity taking on the educational/training portion of the mission. As both co-chairs are over capacity in their current positions, any additional efforts to facilitate articles or other communications efforts will require hiring outside staff. Additional support from the work group has been provided from Matt Sinclair with CPFM, who has developed project budgets, and filled in for meeting attendance as needed.

The communications work group has developed a comprehensive proposal for development of a sustainability website. This proposal has been partially funded during FY 2009-10, and is currently being implemented by Gail Lee.

There is an existing communications network at UCSF that could be drawn on for recruiting work group members, as well as identifying additional broadcasting venues. The Patient Care and Alumni/Fundraising Public Relations Departments have greater resources than the website and news groups.

Compliance with UCOP Policy

The Education and Communications Work Group is not explicitly aligned with any portion of the UCOP Sustainability Policy.

Best Practices at Peer Institutions

Emory University's sustainability website is an excellent example of how to connect campus sustainability goals and progress to the larger campus community. On its website Emory has created a Campus Sustainability Dashboard, which is an interactive program that allows viewers to see how Emory is performing against its targeted sustainability initiatives. The dashboard describes and depicts campus goals and the progress being made within the areas of green building, sustainable food purchases, water and energy use, recycling, alternative commuting, curriculum, and GHG emissions. The Dashboard also provides the ability for users to search recycling, energy, or water use information for a particular building or by type of use. Making this data available engages the campus community and provides transparency to the University's sustainability goals and initiatives.

UC- Santa Barbara creates buy-in from departments and administration through education and outreach. The sustainability communications committee keeps people informed about initiatives and projects through email lists, websites, and blog updates. Much of sustainability program's success is attributed to the Chancellors participation

and support. When Bren Hall became LEED platinum there was a lot of publicity surrounding the project which brought the Chancellors initial buy-in. Now they sell sustainability by publicizing costs savings.

Food Service Work Group

Davis Langdon met with the co-chairs of the SSC Food Service Work Group on January 13th, 2010. The meeting was attended by campus co-chair Jen Dowd (Manager, Vendor Services), Med Center co-chair Jack Henderson (Associate Director, Nutrition and Food Services) as well as Dan Henroid (Director, Med Center Nutrition and Food Services Med), Anne Nicklin (DL), Lisa Matthiessen (DL), Walker Wells (GG), and Gail Lee (Sustainability Manager, UCSF).

Major Findings

UCSF Food Services consist of individual restaurant vendors at multiple campus locations, as well as the centralized cafeteria, patient services, and catering provided at the Medical Center. On the campus side, a number of different initiatives have been implemented in a standardized fashion, including biodegradable silverware, the elimination of all Styrofoam, and comprehensive consumer waste sorting areas. There has been some debate about using the conditions of the vendor leases to require reporting on sustainable food purchasing, or certification with a green business program. However, the majority of the vendors are local mom and pop operations, and there is a real concern that they could not afford the additional requirements. There is not an option for reducing their rental fees, as CLS is paying down a bond for the renovation of the dining area some years ago. Jen Dowd is currently working with other UC campuses on identifying implementation technique in a vendor environment.

Composting of waste has been implemented at all food service areas, and some vendors offer reusable dishware. The composting has been challenging to implement due to cross-contamination, and green ambassadors have been recruited to help train the users on source separation. At the Medical Center Cafeteria, a centralized tray return area has been set up to ensure that the composting volume is not contaminated. At this point, composting has been implemented in all medical center food areas except for the pot wash area, where concerns about the weight of the compost bags preclude its adoption.

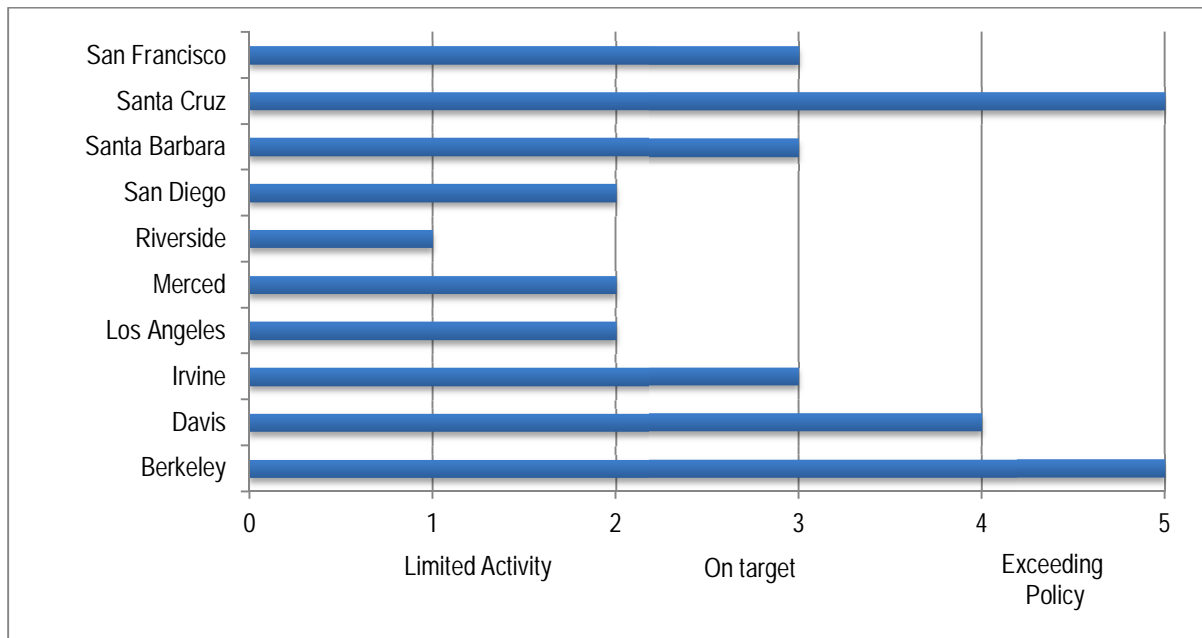
Reporting of sustainable purchases is expected to be easier at the Medical Center as they work with a centralized purchasing contract. They have committed to meeting the UCOP policy, though it is not currently clear exactly how this will be achieved. Previous attempts at serving food products such as grass fed beef have not been picked up by consumers due to the cost difference. The significant cost increase on sustainable products has been their prime constraint on purchasing, with additional concerns about product availability and consistency. Currently the medical center provides dairy products free of rBST, locally sourced hormone free beef patties, is targeting locally available produce as seasonally available, has significantly reduced the use of frozen vegetables, and is replacing farmed salmon with wild caught.

The Medical Center has launched two significant initiatives, the Balanced Menu program and the Smart Choice program. The Balanced Menu program was developed by HealthCare without Harm and has the prime objective of reducing the facilities' meat purchases by at least 20%, and thereby reducing their environmental impact. The Smart Choice program was developed by UCSF nutritionists and highlights low calorie, low fat meal choices. In addition, the Medical Center now offers bottled water to patients only if they specifically request it, greatly reducing the amount of water purchased.

Compliance with UCOP Policy

The Food Services Work Group is explicitly aligned with the Sustainable Foodservices Practices of the UCOP Sustainability Policy. This work group was added to the SSC structure following the release of the updated UCOP guidelines, and is still in the development stages. The UCOP policy calls for the development of a plan for each campus to achieve their Sustainable Foodservice Practice goals, and to provide regular reports on their progress. The Food Service work group is intending to complete this plan by the May 15th, 2010 deadline.

SUSTAINABLE FOODSERVICE PRACTICES- UC SYSTEM COMPARISON³



<p>Each campus is rated on a scale from 1-5:</p> <ol style="list-style-type: none"> 1. Limited Activity / Accomplishments 2. Initial efforts underway, no significant achievements yet 3. On target to comply with UCOP policy 4. Already in compliance with UCOP policy 5. Exceeding UCOP policy/policy innovator). 	<p>Ratings are based on the following metrics</p> <ol style="list-style-type: none"> (a) percent of sustainable food products procured by dining services (if calculated) (b) food composting programs (c) water reduction strategies (d) education & outreach (e) student and administrative support (f) green business certifications
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[Best Practices at Peer Institutions](#)

Most of UCSF's peer institutions are on the same performance level for sustainable foodservices. Oregon Health and Science University (OHSU) is a small public university similar to UCSF academic disciplines. OHSU has a sustainable foodservice program that is an ideal model for a medical institution. OHSU has created and implemented a sustainable foodservice policy in their food stores, student centers, retail operations, and patient room services. OHSU created buy-in for the program by use of a campus wide survey which showed that the OHSU community wanted more fresh, seasonal, local, and organic foods. The program used this information to promote the program to the Administration. By taking a financial approach, they argued that understanding and meeting the customers' desires helps increase satisfaction and sales. OHSU developed goals and policies using the Green Guide for Health Care Foodservice credits as a guideline. By working with other medical organizations in Portland, OHSU shares best practices and helps makes connections with local farmers. The program wants to create a system where they can set up contracts with growers for subsequent seasons. These contracts will be beneficial to both the university and

³ This assessment was compiled by Davis Langdon, please see

the local farmers by allowing them to know in advance that there will be a buyer for their produce, and in turn gives OHSU the ability to plan for deliveries and - seasonal menus.

The University of Maryland Medical System (UMMS) is a private health system connected to the University of Maryland. UMMS has created a Health and Wellness program that has been successful in bridging the gap between healthcare and the environment. Although sustainability is not tied to the UMMS mission yet, they have had success connecting environmental health and public health with their Health and Wellness Program. “Recognizing that *sustaining a healthy environment is essential to maintaining both personal and public health*, the University of Maryland Medical Center commits to promote healthy patients and communities locally and globally by safeguarding the environment”. The program began with raising awareness through education and outreach (educational seminars, signs, and information in common areas). For example, the chef at the cafeteria prepares a meal out of locally purchased food once a month and distributes the recipe and an ingredients package to buy in order to inspire people to cook and eat healthy meals. By making the broader connection to healthcare and environmental stewardship in their practice, UMMS has been able to push sustainable foodservice goals to the forefront of decision making for funding and implementation.

Green Building Work Group

Davis Langdon met with the campus co-chair of the SSC New Construction Work Group on January 14th, 2010. The meeting was attended by campus co-chair Patti Mitchell (Senior Project Manager, CPFM) as well as Anne Nicklin (DL), Lisa Matthiessen (DL), Walker Wells (GG), Steve Guttmann (GB), Ted Tiffany (GB), and Gail Lee (Sustainability Manager, UCSF). Davis Langdon later met separately with the Med Center Co-Chair Deepak Dandekar (Director, Medical Center Design and Construction).

Major Findings

The Green Building Design goals have been widely adopted by the campus Capitol Projects department, with Patti Mitchell leading the way. CPFM has identified a list baseline LEED credits to be included on all projects, with individual scorecards available for the Mission Bay, Parnassus, and Mount Zion campuses. In addition, CPFM has included sustainability requirements in their EPDA (Executive Design Professional Agreement). These tools were developed in 2004, and in 2009 Michael Bade issued the decision that all projects greater than \$5 million would seek LEED certification and all projects under \$5 million would register, but are not required to certify. There has been outreach by Capital Projects to provide a basic drawing review for all projects to identify sustainable design opportunities, and to ensure that the minimum design requirements are being met. There is not enough project coordination between Capital Projects and Facilities Management, leading to insufficient follow through on metering installation and development of M&V plans.

LEED is used consistently on all campus projects, with limited adoption of Labs21 for innovation credits. PGE Savings by Design is rarely used, and there is a question of whether or not SBD is appropriate for renovation projects. The most significant energy target is the use of fume hoods; however, CAL OSHA currently bans the use of variable volume fume hoods. There has been some success in working with lab managers to right size the total number of fume hoods that they need. CPFM has managed to reduce the costs of LEED certification to less than \$30,000 for design teams. It would be helpful if there were more sustainability consultants on the "Annual Announcement", allowing simplified hiring for any consulting contract under \$100,000.

The Design and Construction Department of the Medical Center is just beginning to formalize their compliance with the UCOP guidelines. A presentation on the design practices of the Medical Center at Mission Bay was given to the department. They have also received funding in FY2009-10 to complete a set of design guidelines, which Deepak is currently working on. Some practices, such as construction indoor air quality management, have a natural overlap with the infection control requirements of the Medical Center. They are currently pursuing a LEED Silver renovation of the Ambulatory Care Center. The Medical Center would like assistance in a material selection process that takes into account the existing materials and care standards that they must integrate with. There is currently no use of the Green Guide for Healthcare as a design or operations tool.

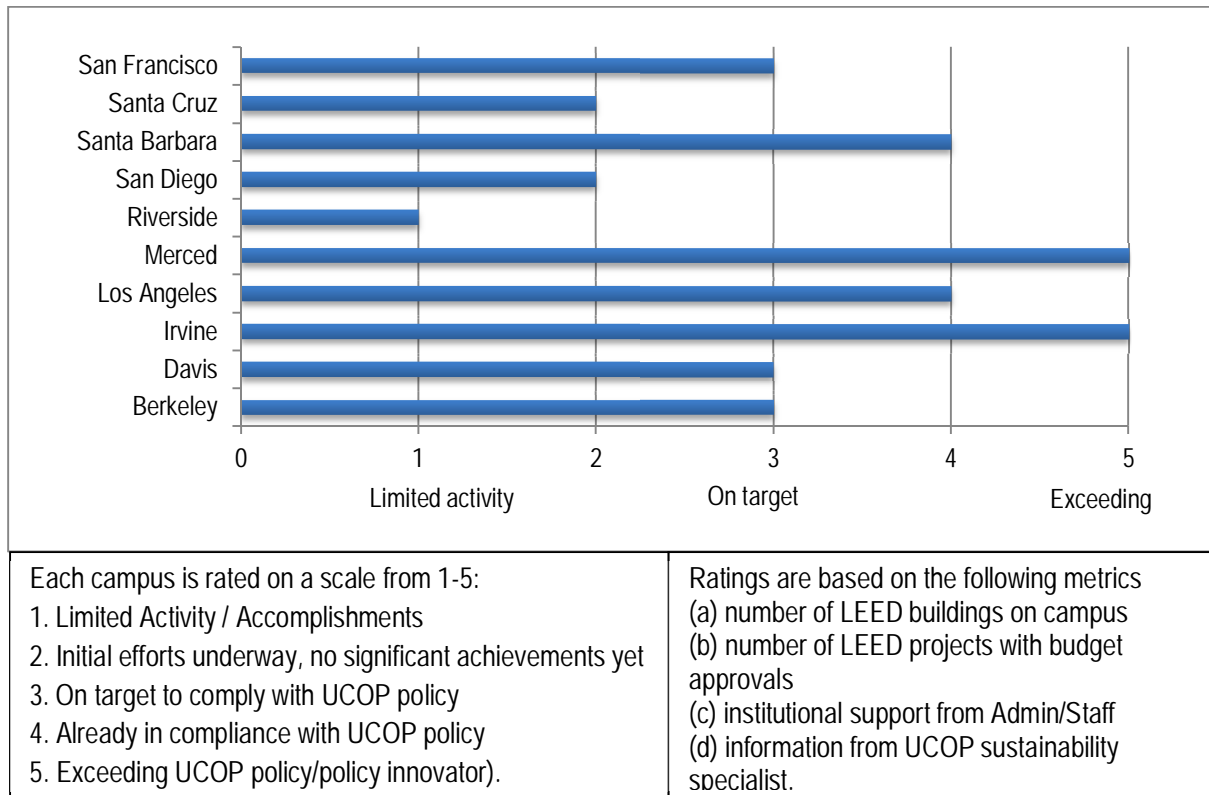
For both the campus and the medical center, a large number of design decisions are driven by the departmental end users who have final say in product selection and design, while sustainable practices are being driven by Capital Planning. An educational effort for department heads would be helpful so that the impact of design decisions on sustainability goals would be better understood.

Compliance with UCOP Policy

The Green Building Work Group is explicitly aligned with the Green Building Design section of the UCOP Sustainability Policy. This work group covers new construction as well as interior renovations, and has been an active work group since the inception of the SSC. The campus is largely in compliance with the UCOP guidelines; however, the Medical Center has been subject to some gray areas in regards to the UCOP policy. Acute Care Facilities are explicitly excluded from the UCOP policy; however, all other Medical Center new construction and

renovation projects are subject to inclusion. For both the Medical Center and the Campus, the bulk of their work is associated with renovation projects rather than new construction. There is a UCOP sponsored work group for green building design, but there is not very good involvement from the Medical Center, particularly in regards to the needed standards for acute care facilities. In addition, there is not regular connection between the efforts of the Green Building Work Group and the other SSC work groups, nor any documentation of the health benefits associated with green building. The work group rarely meets due to scheduling constraints.

GREEN BUILDING PRACTICES- UC SYSTEM COMPARISON⁴



Best Practices at Peer Institutions

No specific best practice case studies were identified for the green building work group.

⁴ This assessment was compiled by Davis Langdon, please see

Health Care Work Group

Davis Langdon met with the co-chairs of the SSC Health Care Work Group on January 13th, 2010. The meeting was attended by campus co-chair Amy Day (Director, Graduate Medical Education), the Medical Center co-chair Lisa Hartmayer (Clinical Nurse, Nursing Resource Team) as well as Anne Nicklin (DL), Lisa Matthiessen (DL), Walker Wells (GG), Steve Guttman (GB), and Gail Lee (Sustainability Manager, UCSF).

The group evolved from a grassroots greening campaign started up by the nursing staff, and was originally intended to be the primary representation of the Medical Center to the SSC. Following the move towards a Medical Center co-chair for each of the work groups, the Health Care Work Group has remained in place, but does not have a clearly defined mission or metrics. There have not yet been regular meetings of the work group, however the grassroots group continues to meet on a monthly basis.

Despite regular communication between Work Group co-chairs and Dan Henroid, SSC co-chair and Matt St. Clair at UCOP, coordination challenges remain in determining the role of the work group as an independent entity versus a collaborator with the other work groups. There has been coordination with the recycling work group.

Major Findings

A primary driver of the Health Care Work Group is the concern for staff and patient safety. In addition, the Health Care Work Group would like to contribute to making UCSF an industry leader in providing health care in the most sustainable manner.

The co-chairs have begun to identify potential future projects including the elimination of neutral quat and other toxic cleaners, training on energy conservation practices, and in-patient room recycling as well as a reduction in packaging materials provided by outside vendors and the Sterile Processing Department (SPD). In addition, there has been interest in moving towards more environmentally friendly chemicals within the Medical Center; specifically cleaning supplies as well as flame retardants which are state and federally mandated. There is a great deal of frustration on inpatient units within the Nursing Department due to the lack of clear solutions to persistent problems, such as automated repeating print-outs of floor reports each day on multiple floors. The only current solution to this problem is chasing down the relevant IT department and stopping the report print-outs. Recent accomplishments by the work group include the design of in-patient recycling posters, which are currently undergoing review and were funded during FY 2009-10. Discussed low-hanging fruit items

The co-chairs have examined the Green Guide for Healthcare as well as guidelines set forth by Practice Green Health, but there is not a clear starting point. The Alliance of Nurses for a Healthy Environment has also been an influence. Most resources that are available speak to buildings, supplies, etc and not specifically in the provision of sustainable health care.

Physicians, other health care providers, and management may be reluctant to change proven practice in the name of sustainability and obtaining buy-in will be crucial to the success of this work group.

There is also a tendency for comprehensive items to get bogged down in implementation. It would be helpful if there was a pilot process that could be easily implemented, allowing staff concerns to be addressed more quickly and proficiently.

As an academic medical institution, UCSF, and in turn the Health Care Work Group, must balance Medical Center and campus interests. Critical Medical Center metrics include length of stay, re-admissions, and medical errors. For the Schools (Medicine, Dentistry, Nursing, and Pharmacy), who oversee the education and training of students and

trainees (i.e. residents and clinical fellows), quality of educational experience is equally as important as Medical Center metrics

Compliance with UCOP Policy

The Health Care Work Group is not explicitly tied to any portion of the UCOP Sustainability Policy.

Best Practices at Peer Institutions

Legacy Health Systems in Portland, Oregon has had success in engaging stakeholders in the medical community. Tom Badrick, the former recycling manager, started green teams at every campus which allowed him to spread wealth of the process to a wider involvement. He targeted employees by mass emails and asked for a minimal commitment. Support was given logistically, in terms of scheduling meetings and conference rooms. Processes moved forward into decision making by education. Info sessions on current practices and projects allowed employees to think about new initiatives instead of re-inventing the wheel. The goal was to make his system irrelevant: the localized green teams were much more effective at getting the decisions made with the employee buy-in. They also pursued buy-in from the lowest-level (recycling and housekeeping staff) because they know the most about current practices and inefficiencies. Getting them actively involved and sitting in on green team meetings was an invaluable resource.

Natural Resources – Clean Energy Work Group

Davis Langdon met with the campus co-chair of the SSC Clean Energy Work Group on January 13th, 2010. The meeting was attended by campus co-chair Winifred Kwofie (Assistant Director, CPFM) as well as Anne Nicklin (DL), Lisa Matthiessen (DL), Walker Wells (GG), Steve Guttman (GB), and Gail Lee (Sustainability Manager, UCSF). The Med Center co-chair of the group, Joe Rios (Director, Med Center Building Maintenance) was unable to attend due to the Joint Commission visit.

Major Findings

The work group is implementing the measures identified in 2008's Strategic Energy Plan as completely as possible. All tier 1 strategies feature a payback of three years or less and are on target for implementation, while selected tier 2 and 3 measures are slated for implementation as funding becomes available. The overall goal is to reduce UCSF's energy use per sq.ft. as much as possible, through a combination of conservation training and communications, selected retrofits, monitoring based commissioning, and energy efficiency improvements. In addition to targeting an overall reduction in energy consumption, UCSF has installed on-site energy production (cogen at Parnassus, and 250 kWh of solar at Mission Bay) and is receiving energy from renewable sources in line with PGE's sourcing of renewable energy (13% in 2009.) The PPA for solar at Mission Bay was successful in terms of policy compliance, but was not from a financial standpoint. In addition, the Medical Center has taken on a large number of energy efficiency retrofits, monitoring based commissioning, and other efforts over the last fifteen years.⁵

Through the implementation of the SEP and the launch of the "Conservation is Contagious" program, the campus facilities management team has developed a comprehensive baseline consumption level for all utilities, and is tracking consumption on a monthly basis. These numbers are starting to be reported back to the building facilities managers but are not currently delivered to the building occupants. The eventual goal is to report the energy use to everyone who interacts with the building, from the facility engineers to the building occupants.

There is not currently any policy requiring the reporting of the health benefits associated with the Clean Energy activities, nor any agreed upon methodology for reporting these benefits. It is critical that the sustainability plan identify the shared goals of sustainability and advancing health worldwide in order for the effort to be truly successful.

There is currently a gap in communication between facilities management, capital projects, and campus planning in regards to building energy performance. As the scope of each of these groups address energy savings strategies, there is an apparent opportunity for collaboration, and alignment of goals.

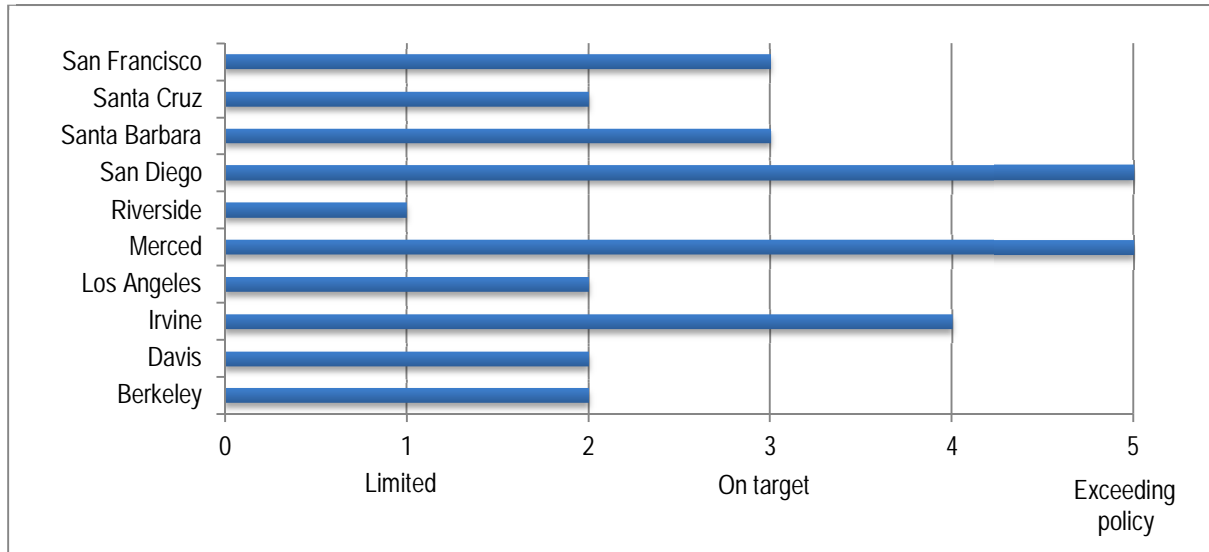
Compliance with UCOP Policy

The Clean Energy Work Group is explicitly tied to the Clean Energy Standard identified in the UCOP sustainability policy, and is on target to meet all of the items identified in the UCOP policy. In addition to the targets of the Clean Energy Standard, the Clean Energy Work Group is a significant contributor to UCSF's compliance with the Climate Protection Practices of the UCOP policy. The Clean Energy Work group is quite small, and the bulk of the work is accomplished by a resource pool available as a direct part of Winifred Kwofie's role at CPFM

In the absence of a UCOP policy on water savings, this work group is following the guidance of the San Francisco Public Utilities Commission. Alignment with the SFPUC has provided UCSF with technical support and grants for water savings initiatives.

⁵ A full detail of the Medical Center activities can be found in *The Chronological Report* by the Co*Lab, created for Facilities Support Services (FSS).

CLEAN ENERGY- UC SYSTEM COMPARISON⁶



Each campus is rated on a scale from 1-5:

1. Limited Activity / Accomplishments
2. Initial efforts underway, no significant achievements yet
3. On target to comply with UCOP policy
4. Already in compliance with UCOP policy
5. Exceeding UCOP policy/policy innovator).

Ratings are based on the following metrics

- (a) Amount of renewable energy generation or RECS
- (b) projected energy savings from SEP Energy Efficiency projects

Best Practices at Peer Institutions

Of all the peer institution case studies, Stanford has the most in-depth energy efficiency management plan. Stanford uses building level metering as the basis for all data tracking and reporting. Every major building on campus is metered for energy usage (kWh, steam, chillers), which is available on the web. Stanford uses the Itron Enterprise Energy Management software which has allowed them to make 15-minute data intervals more accessible to those in facilities operations. This technology gives monthly cost estimates for every building, allowing staff the opportunity to see which buildings are staying on track and which are using excessive energy. Metering provides the data needed to set up incentive programs. Although building metering is difficult to pay for due to the lack of explicit payback, it is the fundamental stepping stone to tracking baselines and performance.

The Energy Management team has a freezer program that aims to change lab practices and provide rebates for replacement. The program puts on medical educational seminars to get people comfortable to the idea of switching

⁶ This assessment was compiled by Davis Langdon, please see

sample DNA and RNA storage from frozen to room temperature. They began with a pilot program last year as a trial, and are now implementing it in other research labs. When there is resistance to room temperature storage, freezer rebates are provided to upgrade old equipment. A split incentive occurs in labs because researchers decide the up-front capital costs of their equipment, but they do not pay the energy bills. The freezer rebate program targets lab managers to make purchasing decisions that are financially beneficial to them.

To enhance their effectiveness with the Medical Center's large end-use customers, the Energy Management Program does outreach and education to make sure they are aware of their various financing and incentive programs. They have created stronger ties with School of Medicine through large whole-building retrofitting projects and rebate programs. The ECIP (Energy Conservation Investment Program) works as a tool to target behavioral changes in departments by forcing them to focus on behavior and purchasing appliances in order to adhere to their kWh budget. The program also works with the IT services group to tackle the tremendous growth in IT energy consumption.

Natural Resources – Recycling

Davis Langdon met with the campus co-chair of the SSC Recycling Work Group on January 13th, 2010. The meeting was attended by campus co-chair Kathryn Hyde (Recycling Coordinator, CPFM), Anne Nicklin (DL), Lisa Matthiessen (DL), Walker Wells (GG), Steve Guttman (GB), and Gail Lee (Sustainability Manager, UCSF). The campus co-chair Susan Bluestone (Recycling Coordinator, CPFM) was not able to join the meeting, and Davis Langdon met separately with the Medical Center co-chair Carl Solomon (Director, Environmental Services).

Major Findings

There is currently no single roll-up of all waste tracking information, which is a major obstacle to identifying the total amounts, costs, and environmental impacts of waste handling at UCSF. The campus recycling coordinators receive regular reports from the Waste Handler (Sunset Scavenger) for all non-regulated solid waste and report this information to the UCOP on an annual basis. The Medical Center also has solid waste pick-up from Sunset Scavenger, as well as regular disposal of regulated medical waste through SteriCyle. In addition, Environmental Health and Services (EHS) handle all hazardous waste, including some incineration. Finally, there have been significant challenges in receiving accurate and timely numbers regarding construction waste for new and renovation building projects. The individual numbers reported to the UCOP, Practice GreenHealth, and the Climate Action Plan are not currently representative of all waste generated by UCSF.

The prime strategy for the campus has been on waste diversion through increasing the availability of recycling stations and providing consistent educational interventions on good waste disposal practices. The campus co-chairs provide regular training for departments on waste sorting practices, hold the annual EarthFest celebration, and regularly post green ambassadors at Milberry Union to provide on the spot training on waste sorting. In addition, a FY2009-10 budget request has been approved to purchase a kiosk and a table top display stand, both of which will be used to advertise different recycling events and best practices. The budget request also covers the development of a mandatory training video, which is currently in development. Through the trainings, container availability, and addition of UCSF-wide composting, the campus has achieved a recycling rate of 51%.⁷

The Medical Center has implemented a combination of waste reduction and diversion measures over the past year. The most significant waste reduction measure in 2009 was implementation of reusable sharps containers throughout the Medical Center. In 2010, the Medical Center is rolling out programs for reusable pillows in all patient care facilities, as well as the replacement of blue sterile wrap with hard cases in the Sterile Processing Department.. In addition to these waste reduction practices, the Medical Center has sought to divert as much waste as possible from the landfill through the use of food and paper towel composting, as well as recycling at nurse's stations, offices, and in patient rooms. While the patient food composting efforts have resulted in an 87%⁸ reduction in food generated landfill waste, the overall reduce/reuse/recycling rate at the Medical Center is 43%.⁹ Additional opportunities for waste diversion at the surgical department include the installation of the Neptune suction canisters which have already been purchased for the Parnassus campus.

⁷ This diversion rate includes Construction and Demolition Waste (C&D), and is for FY 08-09 as reported in the 2009 UC Waste Diversion Data Summary provided 12/2009 by the UCOP. If C&D waste is excluded, the diversion rate drops to 48%.

⁸ Per Jack Henderson

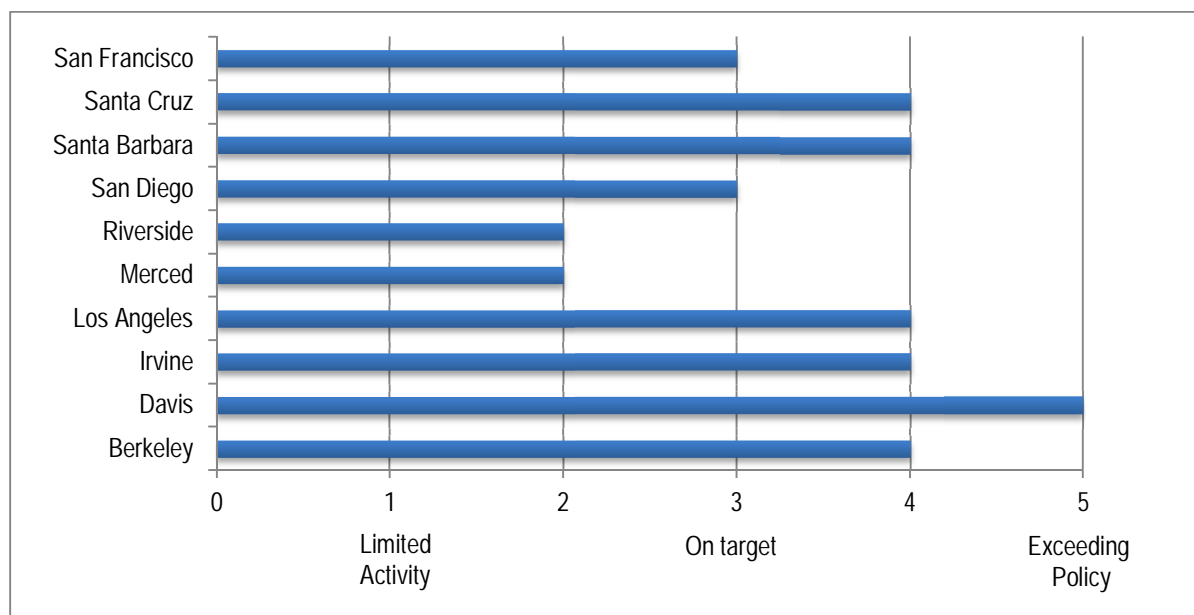
⁹ This diversion rate includes C&D waste, is for FY 08-09, and was reported in the back-up documentation (PGH app revision.xls) for the Practice GreenHealth Award Application, as supplied by Gail Lee in February, 2010. If C&D waste is excluded, the diversion rate drops to 17%.

The Campus, Medical Center, and Campus Life Services have disconnected efforts at the recycling or diversion of non-regulated hazardous wastes, electronics, furniture, and other reusable material exchanges. There have also not been any efforts to date to connect waste handling to public or personal health benefits.

Compliance with UCOP Policy

The Recycling Work Group is explicitly tied to the Recycling and Waste Management section of the UCOP Sustainability policy. The campus side of UCSF is currently in compliance with the UCOP target of 50% diversion by 2008; however, the Medical Center is not in compliance, and both entities will have difficulty meeting the 2012 goal of 75% waste diversion. There are active meetings of the workgroup throughout the year, and good communication with the other workgroups.

RECYCLING & WASTE MANAGEMENT- UC SYSTEM COMPARISON¹⁰



<p>Each campus is rated on a scale from 1-5:</p> <ol style="list-style-type: none"> 1. Limited Activity / Accomplishments 2. Initial efforts underway, no significant achievements 3. On target to comply with UCOP policy 4. Already in compliance with UCOP policy 5. Exceeding UCOP policy/policy innovator). 	<p>Ratings are based on the following metrics</p> <ol style="list-style-type: none"> (a) 08-09Y waste diversion rate (b) waste diversion improvement from 07-08Y to 08-09Y, which is used to determine progress toward goal of 75% diversion by 2012.
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Best Practices at Peer Institutions

Legacy Health Systems in Portland, Oregon was able to implement an aggressive recycling program that pays for itself. By using a large centrally located 12,000 square foot recycling center, the recycling program is able to sort and

¹⁰ This assessment was compiled by Davis Langdon, please see

recycle many materials, including plastics 1-6, blue wrap, and electronics. The key to the program is in-house processing of medical waste which keeps the disposal fees down. The program now generates \$300,000 in annual savings by avoiding disposal fees. Targets for diversion rates were based on the Practice Green Health Award applications. Apply and winning these awards put a spotlight on sustainability and helped strengthen the program.

Procurement Work group

Davis Langdon met with the co-chairs of the SSC Procurement Work Group on January 14th, 2010. The meeting was attended by campus co-chair Mike Rodriguez (Director, Strategic Sourcing), his assistant Aaron Tuch (Contracts Administrator, Strategic Sourcing), Medical Center co-chair Greg VanRiper (Manager, Medical Center Purchasing), his assistant Robert Hatkins (Systems Analyst, Medical Center Materials Management), Anne Nicklin (DL), Lisa Matthiessen (DL), Walker Wells (GG), and Gail Lee (Sustainability Manager, UCSF).

The labors of the work group are handled primarily through the daily occupations of the co-chairs, and there are not regular meetings of the work group. There is some communication with the other workgroups, primarily through personal outreach and the monthly SSC meetings.

Major Findings

At the UC system-wide level, the UCOP has a Strategic Sourcing department which negotiates large scale contracts, facilitates communications between the ten campuses, and identifies the five year system-wide strategic purchasing goals. The contract and RFP language developed by the UCOP includes a requirement that all suppliers provide information concerning their compliance with the UCOP sustainability policy. In addition, the medical centers of the UC system are part of a group purchasing organization (Novation), which is managed by Mike Thompson at the UCOP. The UCOP compiles annual summaries of the total EPP buy as reported by individual vendors in order to gauge the progress of the campuses in meeting the targets established in the UCOP sustainability policy. The most recent set of numbers does not appear to include accurate numbers for UCSF and is currently under review.

The Campus Strategic Sourcing department is responsible for setting up all of the contract relationships for the campus (including research labs) and managing the ongoing procurement. While they centrally track all of the procurement activities, most purchasing is carried out in a decentralized department by department manner. The campus strategic sourcing department is not able to mandate what each individual department purchases, and is therefore somewhat limited in eliminating non-EPP purchases. Despite this, a number of successful efforts have been implemented on the campus, primarily in regards to office equipment and supplies (computers, printers, paper), and animal care products (bedding, food). In addition to negotiating a favorable contract, the strategic sourcing department has conducted outreach to the individual departments on the financial and sustainable benefits of using the preferred vendor, leading to an increased adoption. The negotiation of contracts that factor UCOP policy, as well as total cost of ownership, is an ongoing process on the campus side, particularly in regards to equipment and purchases for the research labs.

The campus Strategic Sourcing department has been developing a warehousing program at Oyster Point that will allow them to order non-perishable items in bulk, and then ship them to the individual departments as needed. In addition to the cost savings of the bulk shipments, there will be a savings in reduced delivery traffic to the individual campuses as the deliveries will be partnered with the campus mail service, which is also housed at Oyster Point. Another significant opportunity for both the Campus and the Medical Center is the increased adoption of e-commerce. Online purchasing and ordering has the potential to foster adoption of EPP, reduce transaction costs and associated paper trails, and create a trackable history of spend.

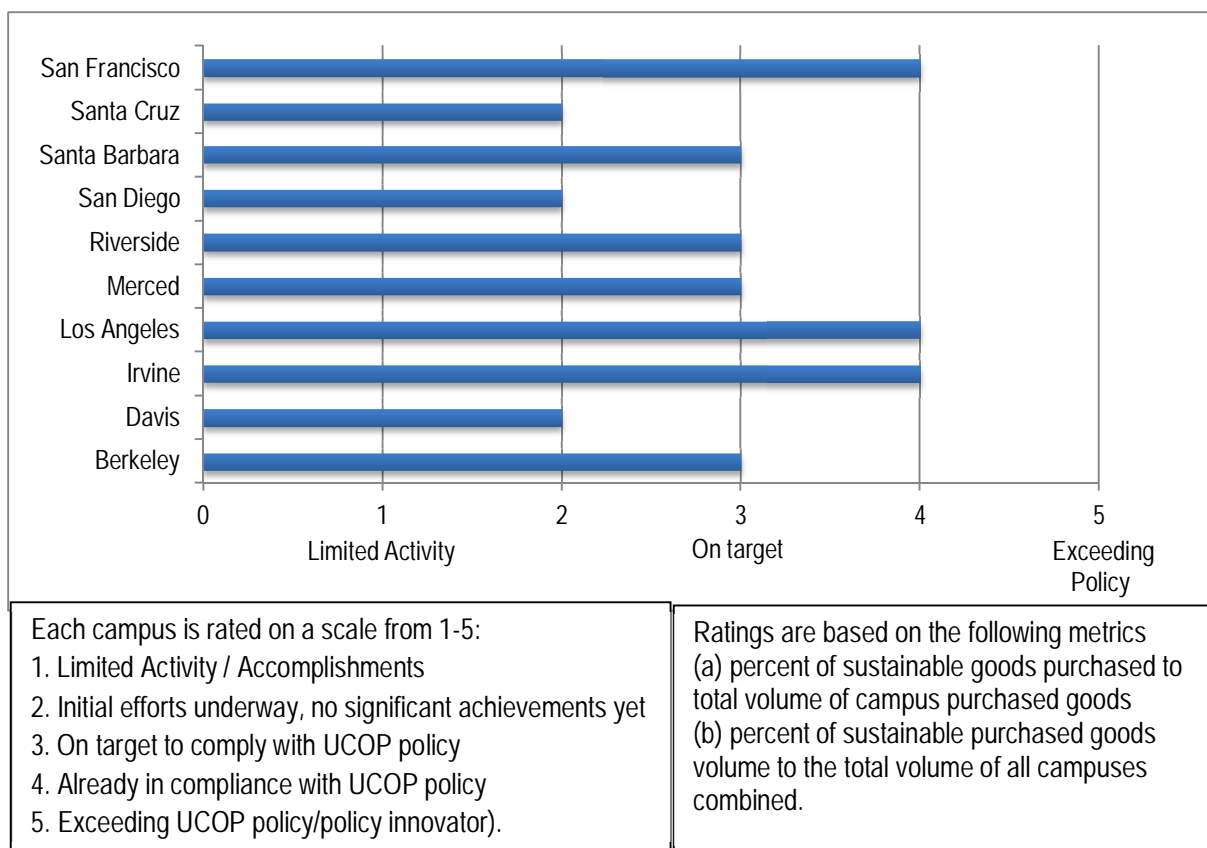
The Medical Center Purchasing Department is not as far along in meeting the UCOP sustainability goals, due to changes in the internal management of the department but is actively seeking to incorporate the UCOP goals in their activities. The med center spends 250 million per year through purchasing, and uses first cost as the primary metric. Communication with the individual medical center departments is through direct contact and meetings. The Medical Center is currently in the process of negotiating the transition to 30% recycled office paper, an effort which includes

attempts at reducing the Medical Center’s overall paper consumption, and leveraging the combined buying power of the campus and Medical Center to secure a competitive price.

Compliance with UCOP Policy

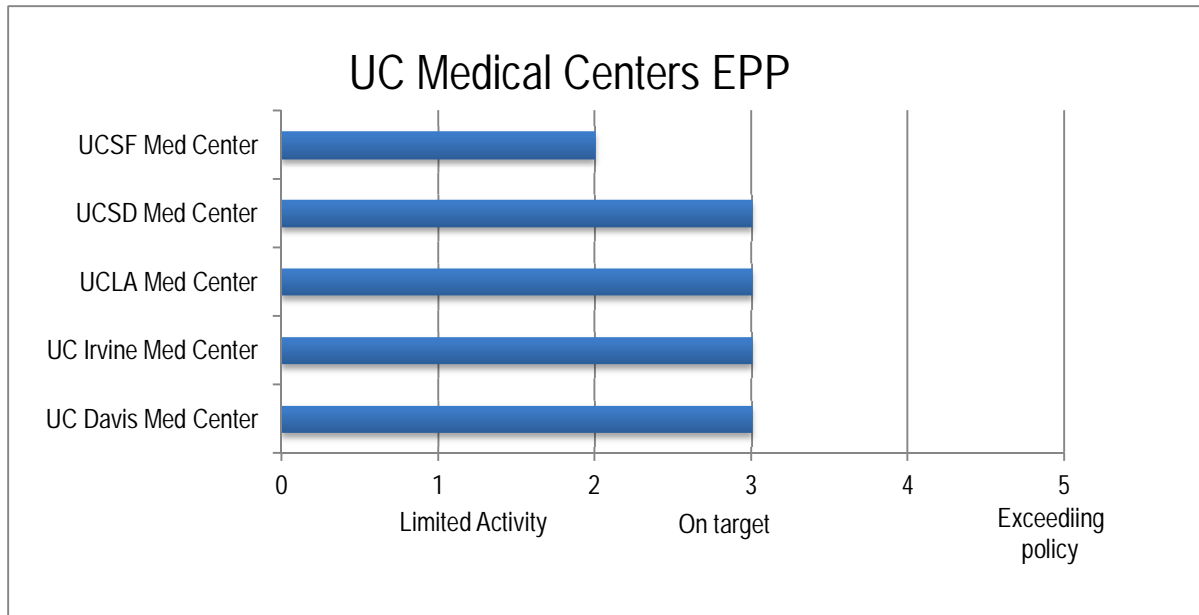
The Procurement work of the SSC is explicitly tied to the Environmentally Preferable Purchasing Practices Section of the UCOP Sustainability Policy. Compliance with the UCOP policy has been targeted at three primary levels: the UC-wide scale negotiation of contracts, the campus negotiation of EPP (environmentally preferable products) contracts, and the medical center’s negotiation of EPP contracts. The campus is currently reporting 42% EPP, while the numbers for the Medical Center are less than 10%. However, through the course of this investigation it has emerged that the numbers reported by vendors to the UCOP may not be accurate, and should be verified by the Medical Center.

Environmentally Preferable Purchasing PRACTICES- UC SYSTEM COMPARISON¹¹



¹¹ This assessment was compiled by Davis Langdon, please see

MEDICAL CENTER EPP PRACTICES- UC SYSTEM COMPARISON¹²



<p>Each campus is rated on a scale from 1-5:</p> <ol style="list-style-type: none"> 1. Limited Activity / Accomplishments 2. Initial efforts underway, no significant achievements yet 3. On target to comply with UCOP policy 4. Already in compliance with UCOP policy 5. Exceeding UCOP policy/policy innovator). 	<p>Ratings are based on the following metrics (a) percent of sustainable goods purchased to total volume of campus purchased goods (b) percent of sustainable purchased goods volume to the total volume of all campuses combined.</p>
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Best Practices at Peer Institutions

Kaiser Permanente has the most organized and thorough EPP programs in the healthcare industry. Kaiser has enormous purchasing power and has organized its procurement program into a prescribed process to comply with established EPP goals. Procurement happens through national contracts, so Kaiser has the ability to enforce compliance throughout the organization. They use a supplier disclosure tool that asks a set of questions about the chemical make-up of a product and is incorporated into the supplier bid. Products are scored on their environmental performance, which also addresses source reduction, packaging, take back programs, and corporate responsibility goals. Sourcing and standard teams operate under the National Product Council. Individuals with expertise in environmental services sit on the committee to run the process, feasibility, tests, and trials of new products being placed on the contract. The council also solicits the input of doctors to make selections in specific areas.

¹² This assessment was compiled by Davis Langdon, please see

APPENDIX C: SUMMARY OF METHODOLOGIES for full details. Please note, it has emerged that the vendor EPP numbers reported to the UCOP regarding the campus were found to be inaccurate, and the Medical Center's numbers should therefore be regarded as unfinalized.

Sustainable Operations Work Group

Davis Langdon met with the co-chairs of the SSC Sustainable Operations Work Group on January 14th, 2010. The meeting was attended by campus co-chair Carlowe Connelly (LEED EBOM Project Coordinator, CPFM), med center co-chair Diori Johnson (Manager, Medical Center Leasehold Properties), Anne Nicklin (DL), Lisa Matthiessen (DL), Walker Wells (GG), Ted Tiffany (GB), Steve Guttman (GB), and Gail Lee (Sustainability Manager, UCSF).

Communication with the other work groups is primarily through personal outreach and in the monthly SSC meetings. In addition to this horizontal communication among the work groups, there is a need for greater vertical communication from the staff up to the chancellor, with the subsequent implementation of policies on Sustainable Operations. There is not currently a UCOP level working group for sustainable operations, as it is rolled up into Green Building.

Major Findings

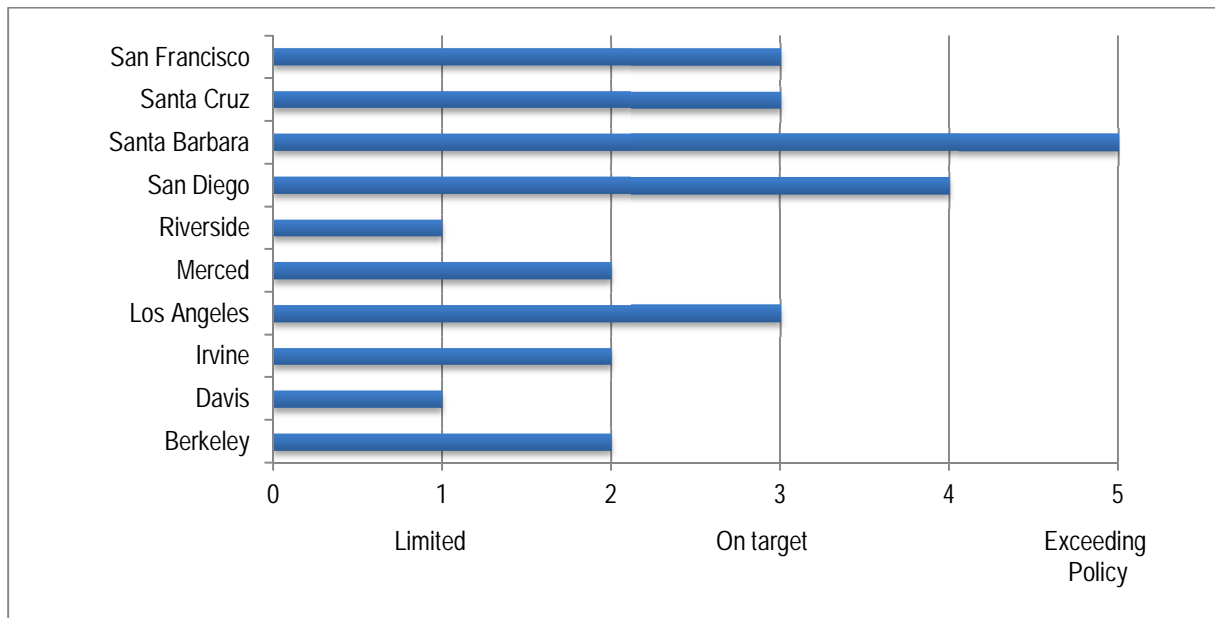
The LEED EBOM (Existing Buildings: Operations & Maintenance) certification of Rock Hall, the first at UCSF, was achieved through Carlowe Connelly's management of the certification process, work with an outside consultant (Dan Ackerstein), support from a CPFM mechanical engineer, and direct coordination with the facilities managers. Following the completion of the building certification process, the work group has continued to offer trainings for building engineers and facilities managers in anticipation of continuing LEED EBOM certifications. The workgroup has also partnered with the outside consultant to complete an EnergyStar survey of all campus buildings in order to identify those which are suitable for LEED EBOM certification. There are particular challenges in rating buildings at the Parnassus campus due to their utilities being served by an on-site cogeneration plant rather than a traditional outside utility service. There is currently an ongoing negotiation with EnergyStar in how to best quantify the savings of the cogeneration plant at the Parnassus Campus. The workgroup is in the process of identifying UCSF-wide credits for each of the campuses, and anticipates having this document in place prior to the UCOP deadline of July, 2010.

Future opportunities for the Sustainable Operations working group include expanding to include more medical center facilities, and implementing campus-wide (Mission Bay,, Parnassus, etc.) credits that would apply to all buildings, regardless of whether they are actively seeking certification. The continued concentration of the Sustainable Operations work group is in identifying implementation level members who will take responsibility for carrying out the work.

Compliance with UCOP Policy

The Sustainable work of the SSC is explicitly tied to the Sustainable Operations Section of the UCOP Sustainability Policy. Compliance with the UCOP policy is on schedule, with the first LEED EBOM certification awarded in the Fall of 2009 at the Silver Level. There are regular meetings of the workgroup, and Diori Johnson was recently identified as the medical center co-chair.

SUSTAINABLE OPERATIONS- UC SYSTEM COMPARISON¹³



Each campus is rated on a scale from 1-5:
 1. Limited Activity / Accomplishments
 2. Initial efforts underway, no significant achievements yet
 3. On target to comply with UCOP policy
 4. Already in compliance with UCOP policy
 5. Exceeding UCOP policy/policy innovator).

Ratings are based on the following metrics:
 (a) number of completed LEED-EBOM certifications
 (b) number of LEED-EBOM projects in the works
 (c) support from Admin/Facilities
 (d) any additional best practices (Campus-wide credits or extensive staff training).

Best Practices at Peer Institutions:

Johns Hopkins University Medicine (JHM) is a leader in green building and sustainable operations in pursuing LEED CI and EBOM certifications. They currently have four lab buildings registered from LEED-EBOM.. After completing one LEED project, the Director of Facilities has rolled out sustainable operations credits to multiple buildings by implementing building policies and working from the top down. The program is staffed in-house and has little input and participation from building occupants. Johns Hopkins medical sustainability program works behind the scenes, implementing practices without affecting tenants. The JHM facilities department targets the big energy users by data tracking (all buildings are metered) and using a metric called "lab intensity" which is derived from the number of fume hood per square foot of campus space. The department takes two approaches to addressing the sustainability of medical and research labs. The first is a behind the scenes approach in which the facilities department retro commissions systems and implements conservation strategies such as night setbacks, non-business hours reductions, and reductions in the number of air changes per hour based on occupancy. The second approach is through education and outreach. The campus sustainability committee has addressed the end-users by creating a website full of tips on "greening your lab", which include occupant behavioral changes such as closing

¹³ This assessment was compiled by Davis Langdon, please see

fume hood sashes when not in use. JHM uses Labs21 as tool for LEED-EB certifications. Labs21 (Laboratories for the 21st Century) is a joint venture of the Department of Energy and the Environmental Protection Agency which has developed a set of Environmental Performance Criteria intended to complement the LEED rating system in the design of laboratory projects.

Stanford is also an active participant in Labs21. The program has given them a forum to connect with other institutions that are facing similar changes in the lab arena. Labs21 presents an opportunity to share and build upon best practices so they can be adopted elsewhere. Stanford has participated in the Labs21 benchmarking program, but has found it to be only somewhat useful because most of the labs in their climate zone that they wanted to use as a benchmark comparison were their own submitted labs. Once the program grows, and other intuitions participate, the benchmarking program will be a very useful tool for assessing performance.

Stanford addresses the use of water in labs by providing financing for water retrofitting programs with money from the utility. They also target excessive users by implementing and paying for pilot retrofit programs. For example, in autoclave clenching, they changed the clench water from running constantly to only running when needed by implementing water misers. The lab occupants were accepting of the project because the miser was invisible to them, had low maintenance needs, and reduced the cost of their water bill.

The University of Maryland Medical System (UMMS) has also achieved great strides in implementing sustainable operations in their labs, most notably for green cleaning. UMMS believes that “the key is to always connect the environmental issue back to the cause of public and personal health”. With implementing green cleaning in labs or hospital rooms, the importance was not stressed on the environmental problem but rather the health benefit. Oncologists became supportive of green cleaning once they knew about the toxic and carcinogenic ingredients in the cleaning supplies. As physicians, it made no sense to them to clean a cancer patient’s room with chemicals that have been scientifically proven to cause cancer.

The University of Connecticut (UConn) has a system wide green cleaning program that was achieved through a top down approach similar to Johns Hopkins. Connecticut law forced UConn into implementing system wide because the state government instituted a law mandating the use of green cleaning products in state buildings. UConn switched to green cleaning campus wide (including labs) through implementing building policies. By making compliance with medical departments mandatory, they were able to source and implement Greenseal certified cleaning products in all labs.

UConn also has an aggressive water conservation program in place due to limited water resources in the Connecticut region. UConn has effectively conserved water in medical facilities by a system of mandatory restrictions combined with outreach and education. Outreach to building occupants is through emails with a system of water conservation advisories and alerts according to the flow rates of rivers. Emails include tips of behavioral changes occupants can make. When flow rates get low, UConn transforms its approach from voluntary measures to mandatory practices, such as setting temperature level set-points and cutting off irrigation.

Transportation Work Group

Davis Langdon met with the campus co-chair of the SSC Transportation Work Group on January 14th, 2010. The meeting was attended by campus co-chair Kevin Cox (Associate Director, Transportation Services), Anne Nicklin (DL), Lisa Matthiessen (DL), Walker Wells (GG), and Gail Lee (Sustainability Manager, UCSF).

The work group meets regularly and communicates with the other work groups as needed, particularly the climate change work group. Most work in meeting the UCOP goals is undertaken by the Transportation Service department, and is coincident with the departmental mission.

Major Findings

UCSF currently has a low rate of Single Occupancy Vehicle (SOV) ridership at 34.4%; however, this ridership produces 83% of transit related GHG emissions. The primary goals of the transit work group are to continually reduce the percent of workers, staff, students, etc., who arrive at UCSF via single occupancy vehicle. To this end UCSF provides pre-tax transit purchases program (1,590 members), carpooling incentives (50 reserved carpool stalls), online carpool matching (1,115, members), car-share vehicles (13 vehicles), vanpools (45 vanpools), commute clubs (195 members), bicycle racks (724 racks), and a comprehensive shuttle program (2.3 million annual riders).

The pre-tax transit program has been subsidized for 2,000 participants with a budget allowance for FY 2009-10. It has been very successful, and has already exceeded the projected goal. The program saves the participants up to \$400 dollars per year; however, it costs UCSF \$3.99 per month per participant in administrative fees. Another item in consideration for increasing public transit ridership is the “last mile” connection. This is the connection directly between the campus and the primary transit route, most notably BART and CalTrain connecting to Mission Bay, Laurel Heights, and Mount Zion. There has previously been last mile connections funded by the City of San Francisco, but they have withdrawn those funds with the completion of the T Muni Line. Due to the expense, the “last mile” connection is not currently in place, but future implementation would be a means for decreasing the number of SOV.

The UCSF car fleet allocated to individual departments is a combination of department owned vehicles and carshare vehicles. UCSF does not have a vehicle maintenance facility, and therefore encourages departments to utilize carsharing, as the responsibility of maintenance lies with the private carshare company. UCSF currently has 215 departmental members, including 95 new members in 2009. The carshare arrangement also has the side benefit of a free membership for all staff and students of UCSF, allowing them to check out cars both on and off campus; this incentive has resulted in 1,349 individual members, including 471 new members in 2009. Departments have also been offered the incentive of free parking if they utilize a hybrid or alternative fuel vehicle, and program participation has been highly successful.

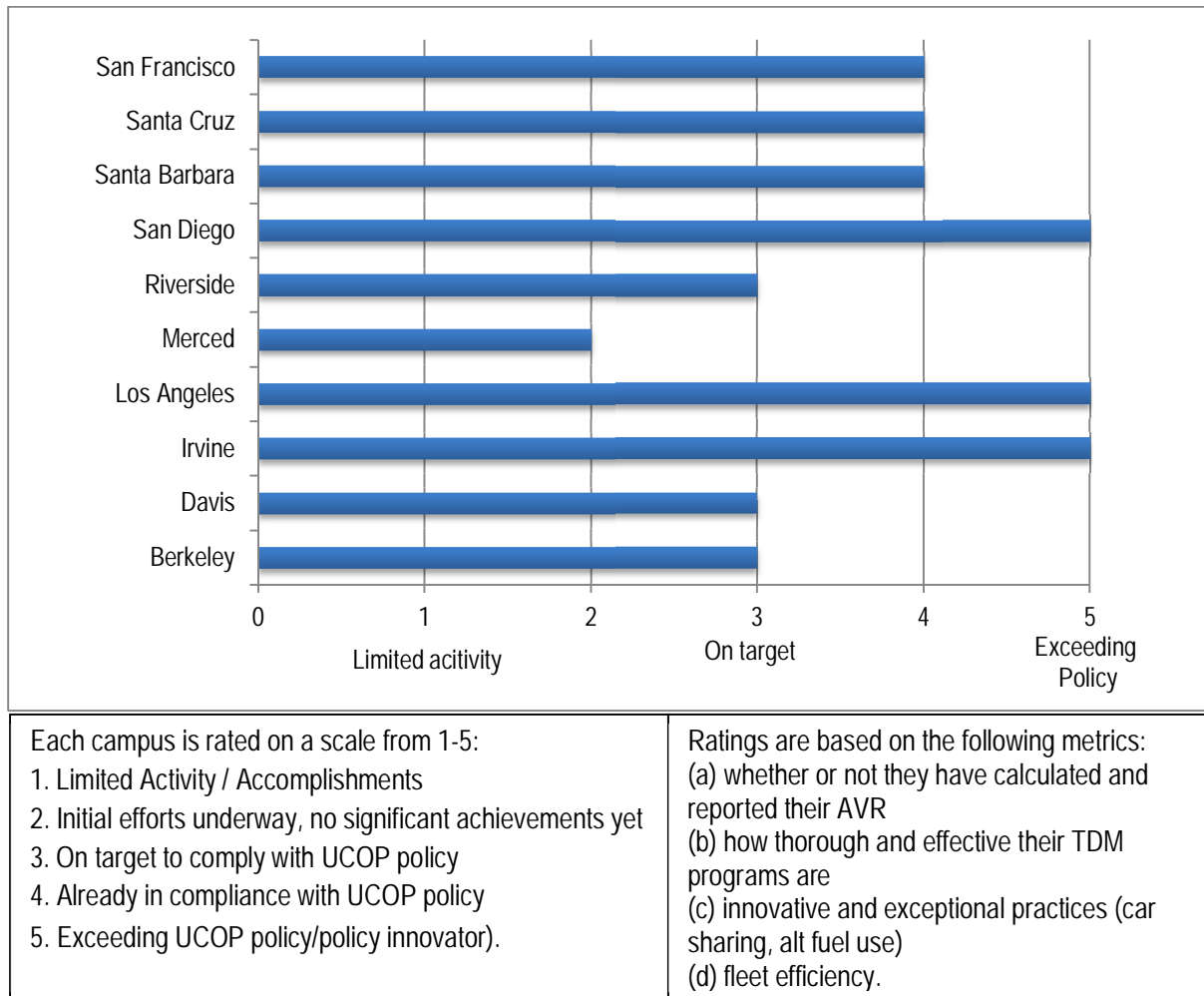
Parking is a contentious issue at UCSF, as the amount of parking in this urban environment is highly limited. The fees charged for parking currently support the costs of providing parking, but are not sufficient to fully support the shuttle service, which is supported with a \$600,000 subsidy from the Campus. Parking fees in recent years have increased 5% annually and are programmed to increase 7-8% over the next several years to cover the increasing cost of the shuttle program.

The primary needs of the Transportation work group are increased bicycle racks (there are currently 800724 racks to serve 4,700 bicyclists) and increased public knowledge of transportation options. There has not been any effort as of yet to connect transportation to specific public and personal health benefits, as it is not clear that would provide a compelling incentive.

Compliance with UCOP Policy

The Transportation Work Group is explicitly tied to the Sustainable Transportation Practices section of the UCOP Sustainability Policy. UCSF is largely in compliance with the UCOP policy; the significant exceptions are in addressing air travel and on-campus housing. Please note that the three campuses (UCSD, UCLA & IC-Irvine) showing higher levels of achievement in the chart below all have access to high levels of citation net income to fund transit subsidies.

SUSTAINABLE TRANSPORTATION- UC SYSTEM COMPARISON¹⁴



Best Practices at Peer Institutions

Best practice case studies specifically in reference to transportation were not included at this stage.

¹⁴ This assessment was compiled by Davis Langdon, please see

APPENDIX A- PEER INSTITUTION CASE STUDY BEST PRACTICES

Stanford University Medical Center

Stanford Medicine is composed of the School of Medicine, Hospitals and Clinics, and the Lucille Packard Children's hospital. The Medical Center is centrally located on the Stanford Campus, which is in a suburban setting of Palo Alto, CA. Stanford Medicine has 797 full-time faculty, 2,500 students, 2,760 staff, and \$235,192,682 of total NIH funding.

Although Stanford excels in a number of sustainability areas, the case study focused on one of their strongest and most aggressive sustainability practices: energy conservation in medical and research buildings. Below are the case study findings' topics and their relevant SSC working group, where applicable.

1. Staffing and decision making processes-
 - a. The Stanford Utilities department is an operating division within the Department of Sustainability and Energy Management. Utilities are tied closely with the sustainability team and work within the Sustainable Stanford Initiatives mission.
 - b. One full-time employee is in charge of a small group of engineers dedicated to working on energy efficiency program. The staff does not manage all energy efficiency projects, but acts like a utility, keeping track of the latest technological improvements. The Utilities program works with customers who are departments on campus (dining, housing, schools, and athletics). Their main goals are to give them information on technologies to improve the efficiency of their buildings.
 - c. Strategic decisions are made based on energy metering data that target the largest users.
Financial and incentive programs are designed to help departments save energy and money.
2. Data Tracking & Reporting- Included in Natural Resources – Clean Energy Work Group.
3. Financing Mechanisms for Conservation Program- Included in Budget Workgroup.
4. Engaging the Medical Center and Campus-Included in Natural Resources – Clean Energy Work Group
5. Sustainable Operations in Labs- Included in Sustainable Operations Work Group.

Johns Hopkins Medicine

Johns Hopkins Medicine is a private institution composed of the School of Medicine, University Hospital, and three other hospitals located within or just outside of the city of Baltimore. JHM has 2,590 full-time faculty, 1,270 part-time faculty, 12,818 employees, and 2,214 physicians. Johns Hopkins receives \$575.9 million in NIH funding per year, the most out of any university.

Johns Hopkins Medicine's most notable achievements in sustainability are in the area of sustainable operations. The case study highlights this program, their goals, and strategies for implementation. Below are the case study findings topics and their relevant CSS Stakeholder group, if applicable.

1. Decision making structure-
 - a. Sustainability projects are run through the facilities department of the medical center. The Director of Facilities represents the medical center on the Johns Hopkins Sustainability Committee.
 - b. Project decisions are made based on their energy and cost savings. There is little input from the medical community for sustainability project decisions. Most departments are not interested in being involved unless it is something very visible to them like recycling.
1. Financing and Staffing: included Budget Workgroup.
2. Sustainable Operations (LEED EBOM & CI) in Sustainable Operations Work Group- included in .
3. Energy & Water use in Labs- included in Sustainable Operations Work Group.

Oregon Health & Sciences University

OHSU is a public University composed of a medical center and school of medicine and nursing located in Portland, Oregon. OHSU has 519 medical students, 782 residents and fellows, 1750 faculty, and 9000 employees.

Although there are many other universities that have great Sustainable Foodservice programs, OHSU was chosen as a peer institution because it is a health-care specific program whose best practices are most applicable to UCSF. The findings of the case study and program highlights are included in the foodservices work group section.

Legacy Health Systems

Legacy Health Systems is non-profit organization composed of five medical centers in and around Portland, Oregon. Legacy has 9,168 employees and 993 available beds. Legacy was chosen for the peer institution case study because it has won the Practice GreenHealth Award for many years in a row. The most notable Legacy sustainability initiative is their recycling program. The case study highlights this program, their goals, and strategies for implementation. Below are the case study findings topics and their relevant CSS Stakeholder group, if applicable.

1. Sustainable Operations- Recycling: include in Natural Resources – Recycling.
2. Financing and Staffing- included in Budget Workgroup.
3. Engaging Stakeholders in the medical community- Included in the Health Care Work Group.

University of Connecticut – Farmington

The University of Connecticut Health Center is composed of the School of Medicine, School of Dental Medicine, John Dempsey Hospital, and the UConn Medical Group. It is located in the suburban/rural area about 30 miles east of Hartford. UConn has 5,000 employees and 600 interns/fellows. In 2008 UConn won the Environmental Award from Practice GreenHealth and has an excellent program in sustainable operations. The case study highlights this program, their goals, and strategies for implementation. Below are the case study findings topics and their relevant CSS Stakeholder group, if applicable.

1. Staffing and Financing- included in Budget Workgroup.
2. Sustainable Operations- Green Cleaning- included in Sustainable Operations Work Group.
3. Sustainable Operations- Water Conservation- included in Sustainable Operations Work Group.

University of Maryland Medical System (UMMS)

UMMS is a private non-profit organization located in downtown Baltimore. Since splitting off of the University of Maryland, UMMS has evolved into a multi-hospital system with academic, community, and specialty service missions. UMMS has 15,000 employees, 1,270 students, 2,300 licensed beds, and 115,000 annual patient admissions.

UMMS is used as a peer institution case study because of its notable involvement of medical staff in sustainability initiatives. The case study looks at how they connected environmental and public health in their medical community and how they support and facilitate initiatives in medical departments. Below are the case study findings topics and their relevant CSS Stakeholder group, if applicable.

1. Staffing & Financing- included in Budget Workgroup.
2. Health and Wellness Program- included in Food Service Work Group.
3. Sustainable Operations- included in Sustainable Operations Work Group.
4. Project piloting program.
 - a. The sustainability manager is a point person who takes ideas and tries to make them into projects. She organizes meeting with the green teams and keeps people involved and interested.

- b. For green team project ideas, she performs financial and feasibility analysis so it can be brought to the next level.
- c. Performs cost analysis and pay back mechanisms for ideas and presents it to the facilities department for funding proposals.
- d. Success of pilot project program is due to:
 - i. Prioritizing what you have the FTE power to do.
 - ii. Getting all of the stakeholders involved, making sure that the team is interdisciplinary .
 - iii. Doing the leg work for feasibility because everyone already has a full-time job.
 - iv. Connecting green teams with decision makers and preparing them for meetings by performing feasibility analysis and making important phone calls.

Kaiser Permanente

Kaiser is a national private healthcare system that has 167,300 employees, 14,600 physicians, 35 medical centers, and 431 medical offices. It was chosen for inclusion in the study based on its strong local and national reputation for sustainability in healthcare: it is the recipient of numerous Practice GreenHealth awards. In addition to researching its well known purchasing practices, UCSF staff with personal experience at Kaiser suggested documenting the organization's decision making structure and systems for cultivating stakeholders. Their green building program was not included in this study as it is based largely on a template model which is not applicable to UCSF.

1. Environmentally Preferable Purchasing – Included in Procurement Work group.
2. Decision Making Structure:
 - a. Kaiser structures and facilitates sustainability initiative decisions through the Environmental Stewardship council, an executive committee made up of high level administration. They council works with a group of 35 people who are the key stakeholders for implementing projects.
 - i. The council is cohesive but the actual implementation of projects is decentralized and rests with 1,000 employees. Responsibility for these projects is embedded in their work; their involvement is not considered a separate item or an add-on to their job description.
 - ii. The structure of the council makes stakeholders accountable for the outcome of projects because their senior leaders are stakeholders who ensure compliance.
 - b. Implementation of sustainability initiatives are decided annually in a 40 page work plan created by the executive committee that specifies goals. From this document they also create a one page dashboard that highlights what they want to accomplish. The dashboard allows goals to be accessible and transferable to all Kaiser employees.
 - c. Kaiser uses a risk assessment process to decide what to include in the annual action plan. The council brainstorms possible projects, with the input of all stakeholders, and then prioritizes their implementation based on risk management tools. They assess where their emissions are highest and where their exposure is highest. Risk matrixes are created to score each of these items and used to make decisions. Kaiser identified, through this assessment, their building stock as the greatest opportunity for low risk climate action.
3. Engaging Stake Holders:
 - a. Kaiser aims to engage all employees in sustainability, not only those in charge of decision making and implementation.
 - b. Green teams are groups led by passionate individuals who have a voluntary commitment to a project. Green teams have peer groups that meet regularly and also use internal social networking (Ideabook) to communicate with one another. Peer groups are where people can share ideas and ask program managers questions.

- c. The 40 page annual plan includes input from green teams.
 - d. The Environmental Stewardship Council also demonstrates how the program relates to the organization's mission and strategic imperative. The council created buy-in by informing the board of directors on environmental stewardship: explaining the plan, goals, implementation, and most of all the connection to the strategic imperative.
4. Collaboration:
- a. Kaiser attributes much of its success to collaboration with various NGOS and other health systems. It is useful to help share practices along the way and has accelerated some of their efforts. Sitting on the board of the some of the groups helps to engage and influence the organization. Access to their expertise has proven to be very valuable.

UC-Santa Barbara

UCSB is public University located in Santa Barbara, California. It is composed of 20,000 undergraduate and graduate students, 1,128 faculty, and approximately 6,000 employees. UCSB has no medical center on campus, but was included in the study due to its early and successful adoption of sustainable practices.

1. Decision Making Structure:
 - a. UCSB makes strategic decisions for sustainability through a group of Change Agents, comprised of 80 active participants organized into 11 groups with chairs, staff, faculty and students.
 - b. The change agents come up with sustainability targets the campus needs to address. They draft a policy and send it to Campus Sustainability Subcommittee and then send it to all the appropriate stakeholders. Committee reviews requests, and then sends them to the Chancellor who then supports or denies them based on available funds. He will normally not agree with any project that has more than a 5 year payback.
2. Creating Buy-In from Stakeholders- Included in Education and Communication Workgroup:

Emory University

Emory is a private national research university located in Atlanta, Georgia. Emory has a School of Nursing, School of Medicine, and the Emory Healthcare System whose total portfolio of inpatient operations includes more than 1,700 licensed beds. Emory is composed of 12,930 students, 3,777 faculty, and 19,792 staff. This university was recommended for inclusion as it was one of the few healthcare institutions included in the AASHE STARS pilot program.

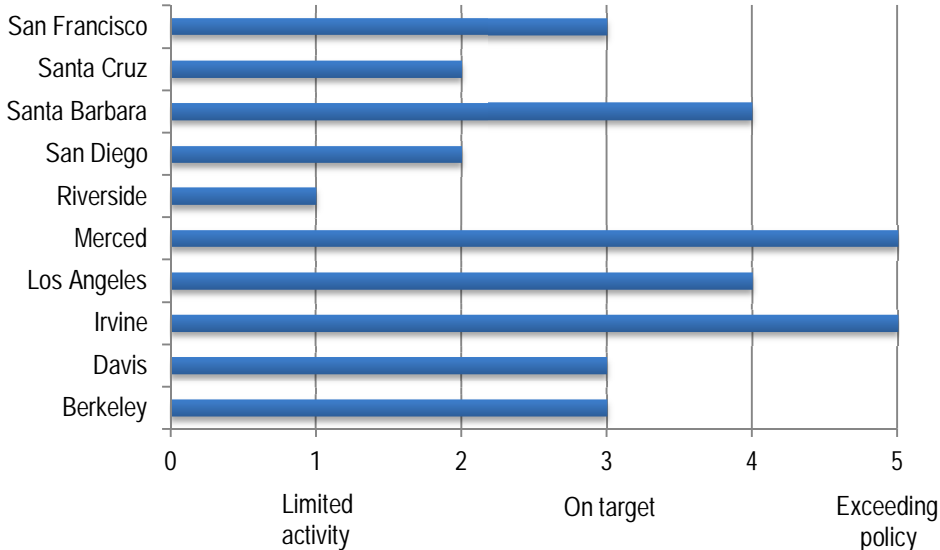
1. Website Communications – Included in Education and Communication Workgroup
2. STARS Rating System
 1. STARS is a reporting and rating system developed by AASHE to provide a framework for understanding sustainability in higher education. Emory has been using STARS for one year and was part of their pilot program.
 2. STARS is the most comprehensive assessment and reporting tool available that captures more of the operations side of campuses compared to other ratings such as the Sustainable endowment and Cool Schools. Yet for universities with medical and research facilities, STARS does not adequately cover or address these areas specifically. To address this problem, Emory is developing a hybrid approach by using GGHC and LEED for Healthcare for their research and healthcare specific settings and STARS for the general campus.

3. Emory has had mixed feelings towards their experience with STARS. It has been beneficial because it has forced thorough data tracking and accountability, allowing them to look at their progress towards sustainability goals. STARS is a one size fits all assessment tool so it does not address huge differences in campuses that relate to locate/region, size, and research. STARS also uses specific metrics, such as how many light bulbs were replaced, instead of overall energy savings, etc.
4. Emory managed the STARS pilot program in house through their sustainability office with no budget or financing. The reporting was very time consuming and labor intensive and took away from their time/money spent on actually working on projects instead of just reporting.
5. STARS has not informed any strategic decision making processes yet because the internal goals at Emory are so specific.

In the future, Emory hopes that the STARS program will pick up and the other ratings will drop off so sustainability staff will spend less time filling out applications and scorecards.

APPENDIX B: DETAILED UC SYSTEM-WIDE STUDY OF UCOP COMPLIANCE¹⁵

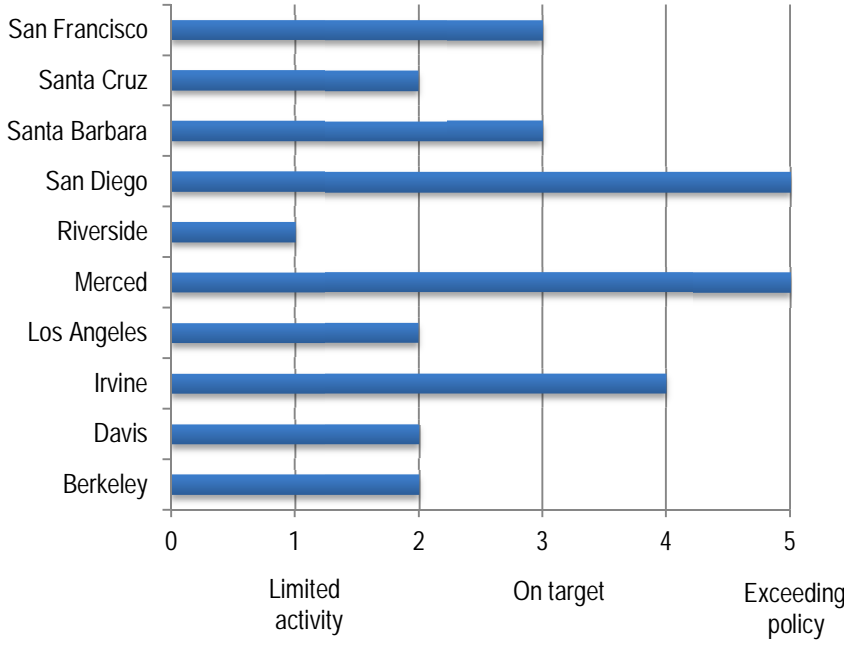
GREEN BUILDING DESIGN

<p>Each campus is rated on a scale from 1-5: 1. Limited Activity / Accomplishments 2. Initial efforts underway, no significant achievements yet 3. On target to comply with UCOP policy 4. Already in compliance with UCOP policy 5. Exceeding UCOP policy/policy innovator)</p> <p>Ratings are based on the following metrics (a) number of LEED buildings on campus (b) number of LEED projects with budget approvals (c) institutional support from Admin/Staff (d) information from UCOP sustainability specialist</p>		 <table border="1"> <caption>UCOP Compliance Ratings by Campus</caption> <thead> <tr> <th>Campus</th> <th>Rating</th> </tr> </thead> <tbody> <tr><td>San Francisco</td><td>3</td></tr> <tr><td>Santa Cruz</td><td>2</td></tr> <tr><td>Santa Barbara</td><td>4</td></tr> <tr><td>San Diego</td><td>2</td></tr> <tr><td>Riverside</td><td>1</td></tr> <tr><td>Merced</td><td>5</td></tr> <tr><td>Los Angeles</td><td>4</td></tr> <tr><td>Irvine</td><td>5</td></tr> <tr><td>Davis</td><td>3</td></tr> <tr><td>Berkeley</td><td>3</td></tr> </tbody> </table>	Campus	Rating	San Francisco	3	Santa Cruz	2	Santa Barbara	4	San Diego	2	Riverside	1	Merced	5	Los Angeles	4	Irvine	5	Davis	3	Berkeley	3
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CAMPUS	RATING (1-5)	METRICS																						
Berkeley	3	LEED Certified Bldgs: 1 LEED Projects w/ budget approvals: Silver- 11 Gold- 2 They created an Assistant Director for green buildings program to help with all the programs. That person is working directly with the campus project managers. Waiting for portfolio program to move forward. No LEED-EBOM yet, but have targeted 1-3 buildings for certification in 2010-2011. Little leadership in facilities admin.																						
Davis	3	LEED Certified Bldgs: 1 plat LEED Projects w/ budget approvals: Platinum- 1 Silver- 4 Gold- 3 Davis Med Center- Telemed Resource Center is striving for UC Silver but not LEED. Outstanding leadership (Bill Starr) which is making the campus progress. His influence is being felt at Davis- it's just taken time, and now it has succeeded.																						

¹⁵ This assessment was compiled by Davis Langdon, please see

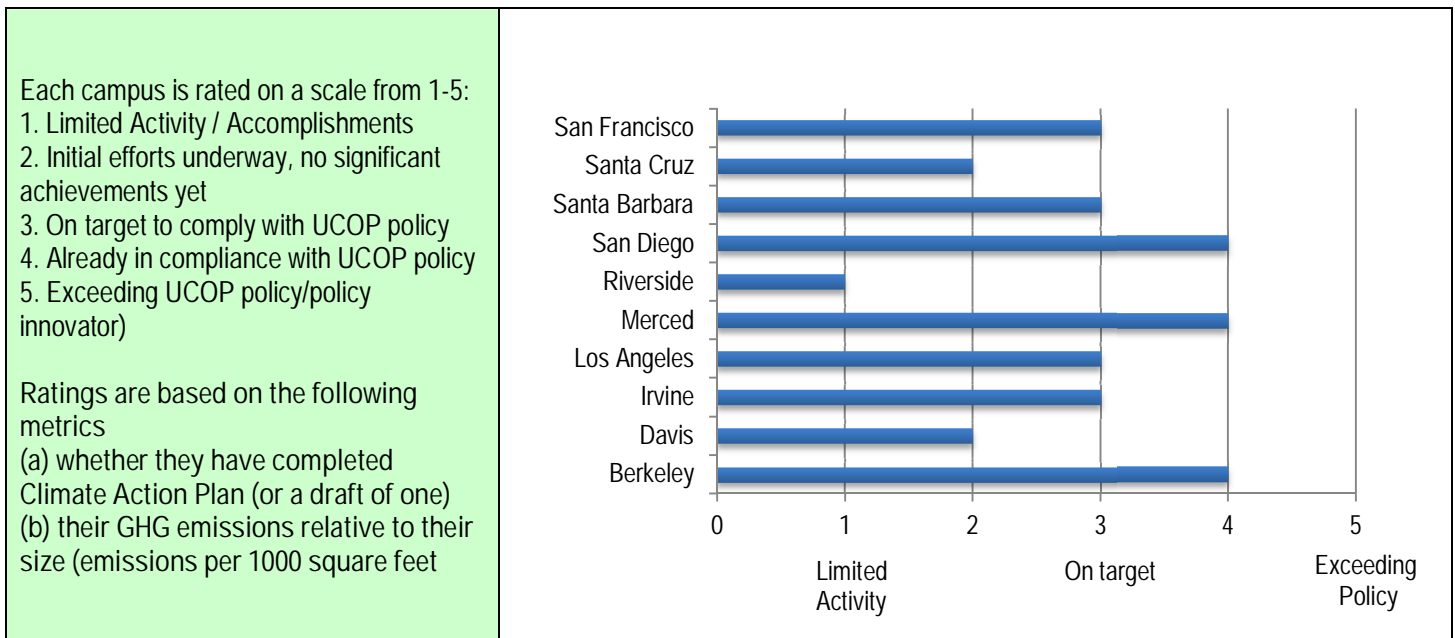
Irvine	5	LEED Certified Bldgs: 4 gold LEED Projects w/ budget approvals: Silver- 1 Gold- 8 They have surpassed SB, every new building is LEED Gold. Institutional priority, they are doing design build. Nothing on med center though.
Los Angeles	4	LEED Certified Bldgs: 1 silver LEED Projects w/ budget approvals: Certified- 1 Silver- 11 Gold- 2 They have some connection between the campus and med center.
Merced	5	LEED Certified Bldgs: 6 gold LEED Projects w/ budget approvals: Silver- 3 Gold- 1 Merced is the best of all UC campuses because they institutionalized green building and LEED gold certification early on.
Riverside	1	LEED Certified Bldgs: 0 LEED Projects w/ budget approvals: Silver- 1
San Diego	2	LEED Certified Bldgs: 0 1 UC Certified Bldg LEED Projects w/ budget approvals: Certified- 1 Silver- 5 Gold- 1
Santa Barbara	4	LEED Certified Bldgs: 4 (1 plat, 1 gold, 1 silver, 1 cert) LEED Projects w/ budget approvals: Gold- 1 Great support and leadership from Chancellor and facilities on both LEED NC and EBOM. Student support.
Santa Cruz	2	LEED Certified Bldgs: 0 LEED Projects w/ budget approvals: Silver- 4 Little achievement thus far, but a number of LEED projects are in the construction phase. Student support (ballot initiative) provides additional funds for LEED certification.
San Francisco	3	LEED Certified Bldgs: 2 CI (silver, gold) LEED Projects w/ budget approvals: Certified- 2 Silver- 3 Gold- 1 (Med Center @ Mission Bay)

CLEAN ENERGY STANDARD

<p>Each campus is rated on a scale from 1-5: 1. Limited Activity / Accomplishments 2. Initial efforts underway, no significant achievements yet 3. On target to comply with UCOP policy 4. Already in compliance with UCOP policy 5. Exceeding UCOP policy/policy innovator)</p> <p>Ratings are based on the following metrics (a) amount of renewable energy generation or RECS (b) projected energy savings from SEP Energy Efficiency projects</p>		 <table border="1"> <caption>Campus Ratings</caption> <thead> <tr> <th>Campus</th> <th>Rating</th> </tr> </thead> <tbody> <tr><td>San Francisco</td><td>3</td></tr> <tr><td>Santa Cruz</td><td>2</td></tr> <tr><td>Santa Barbara</td><td>3</td></tr> <tr><td>San Diego</td><td>5</td></tr> <tr><td>Riverside</td><td>1</td></tr> <tr><td>Merced</td><td>5</td></tr> <tr><td>Los Angeles</td><td>2</td></tr> <tr><td>Irvine</td><td>4</td></tr> <tr><td>Davis</td><td>2</td></tr> <tr><td>Berkeley</td><td>2</td></tr> </tbody> </table>	Campus	Rating	San Francisco	3	Santa Cruz	2	Santa Barbara	3	San Diego	5	Riverside	1	Merced	5	Los Angeles	2	Irvine	4	Davis	2	Berkeley	2
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CAMPUS	RATING (1-5)	METRICS																						
Berkeley	2	Few institutional resources devoted to renewable energy, PV is student funded. Admin/staff support has been appointed to oversee energy efficiency projects. Renewable Energy: 100 kW on MLK Student Union building. Energy Efficiency (SEP): 23 MBCx & retro projects with a projected savings of: 7.11 M kWh & 306 K therms.																						
Davis	2	Davis does a good job with EE, they have piloted some great lighting projects (parking structures). Renewable Energy: Davis campus is experimenting with generating electricity from landfill methane gas. Energy Efficiency (SEP): 32 MBCx & retro projects with projected savings of: 13.8 M kWh & 10.60 K therms.																						
Irvine	4	Renewable Energy: 1 MW on multiple campus rooftops Energy Efficiency (SEP): 77 MBCx & retro projects with a projected energy savings of: 19.91 M kWh & 220 K therms.																						
Los Angeles	2	(low rating b/c no efficiency data available) Renewable Energy: UCLA uses gas captured from a neighboring landfill to partly fuel the campus co-generation power plant and generate 3.48 MW of power Energy Efficiency (SEP): campus is not currently reporting SEP projects to UCOP so no data could be found.																						

Merced	5	Merced is a brand new campus with highly efficient energy and HVAC equipment. No real need for energy efficiency projects, and none planned. Renewable Energy: 1 MW
Riverside	1	Renewable Energy: none Energy Efficiency (SEP): campus is not currently reporting SEP projects to UCOP so no data could be found.
San Diego	5	San Diego is best in efficiency management and clean energy sourcing. They have utilized two or three times as many energy grants as any other campus. Major institutional support. Renewable Energy: 1 MW on multiple campus rooftops. Energy Efficiency (SEP): 15 MBCx & retro projects with projected savings of: 25.60 M kWh & 1,976 K therms.
Santa Barbara	3	UCSB has a great track record on energy efficiency; they track and manage their projects well. Renewable Energy: 155 kW Campus Recreation Center, & 81.5 kW on Bren Hall, Carillo Dining Commons, Henley Gate, and Sedgwick Reserve. Energy Efficiency (SEP): 12 MBCx & retro projects with a projected savings of: 4.0 M kWh & 277 K therms.
Santa Cruz	2	Renewable Energy: Since 2007, UCSC buys REC's equal to 100% of electricity consumption. UCSC the sixth largest campus purchaser of renewable energy in the nation, according to the EPA. Energy Efficiency (SEP): 7 MBCx & retro projects with a projected energy savings of: 1.47 M kWh & 93 K therms.
San Francisco	3	Renewable Energy- 250 kW on Mission Bay Parking Structure and Genentech Hall. Energy Efficiency: 8 MBCx & retro projects with projected energy savings of 1.30 M kWh & 201 K therms.

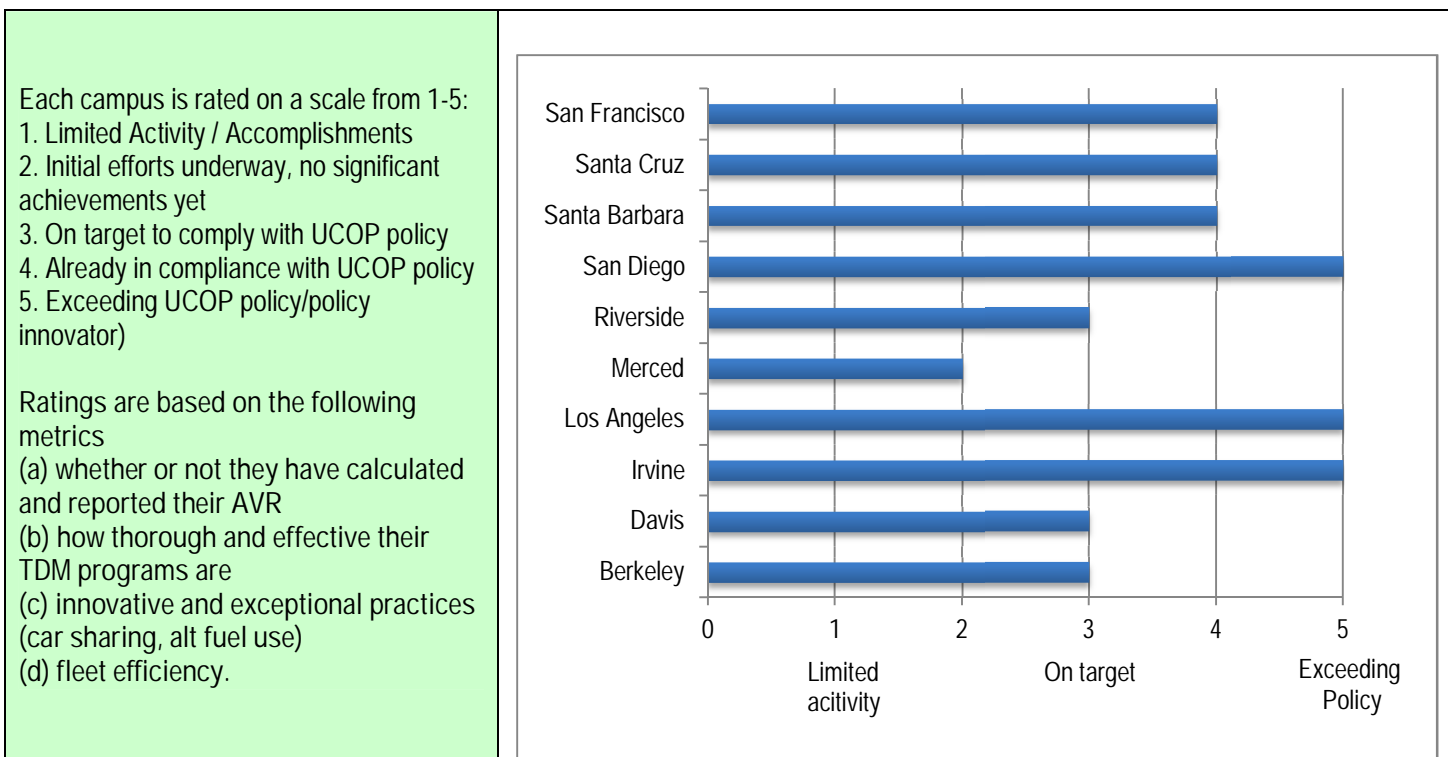
CLIMATE PROTECTION PRACTICES



CAMPUS	RATING (1-5)	METRICS
Berkeley	4	1st campus to complete CAP. UC Berkeley has committed to reducing its emissions to 1990 levels by 2014. They are implementing it- getting 3rd party verifications. They don't have good data on tracking the flights though. 2008 GHG Emissions: Total: 207,947 tons of CO ₂ e Emissions/FTE Student: 3 Emissions/1000 ft ² : 10
Davis	2	Not completed CAP yet. It will be a good product when it comes out; their sustainability office came together in 2008. They were one of the first to join and verify emissions. 2008 GHG Emissions: Total: 296,210 tons of CO ₂ e Emissions/FTE Student: 5 Emissions/1000 ft ² : 16
Irvine	3	Relatively good climate action plans, though implementation is unclear. 2008 GHG Emissions: Total: 168,836 tons of CO ₂ e Emissions/FTE Student: 3 Emissions/1000 ft ² : 12
Los Angeles	3	Relatively good climate action plans, though implementation is unclear. UCLA has committed to reducing its greenhouse gas emissions to 2000 levels by 2012. 2008 GHG Emissions: Total: 361,286 tons of CO ₂ e Emissions/FTE Student: 5 Emissions/1000 ft ² : 14

Merced	3	UC Merced has committed to becoming carbon neutral and becoming a zero net energy user by 2020. Zero net energy means that UC Merced will produce enough energy from onsite renewables to satisfy campus demand. 2008 GHG Emissions: Total: 14,971 tons of CO ₂ e Emissions/FTE Student: 2 Emissions/1000 ft ² : 8
Riverside	1	Has not completed CAP yet. 2008 GHG Emissions: Total: 166,902 tons of CO ₂ e Emissions/FTE Student: 4 Emissions/1000 ft ² : 13
San Diego	4	UCSD's climate action plan establishes campus goals of 2000 emissions levels by 2013, 1990 levels by 2020, and climate neutrality by 2025. They also have good transportation record, and they were a founding member of the CCAR. The institutional structure is a bit looser. 2008 GHG Emissions: Total: 271,065 tons of CO ₂ e Emissions/FTE Student: 4 Emissions/1000 ft ² : 13
Santa Barbara	3	Completed CAP in 2009. Campus goals of 2000 emissions levels by 2014, 1990 levels by 2020, and climate neutrality by 2050. 2008 GHG Emissions: Total: 84,801 tons of CO ₂ e Emissions/FTE Student: 2 Emissions/1000 ft ² : 8
Santa Cruz	2	CAP not completed December 2008 draft- goals of 2000 emissions levels by 2014, 1990 levels by 2020, and climate neutrality by 2050. 2008 GHG Emissions: Total: 71,925 tons of CO ₂ e Emissions/FTE Student: 2 Emissions/1000 ft ² : 7
San Francisco	3	CAP completed. They have identified feasible options for the 2014 goal, but are not on track for the 2020 or climate neutrality goal without the purchase of offsets. The survey is complete, but the action plan for the 2014 goal has not been finalized. 2008 GHG Emissions: Total: 162,713 tons of CO ₂ e Emissions/FTE Student: 6 Emissions/1000 ft ² : 17

SUSTAINABLE TRANSPORTATION PRACTICES



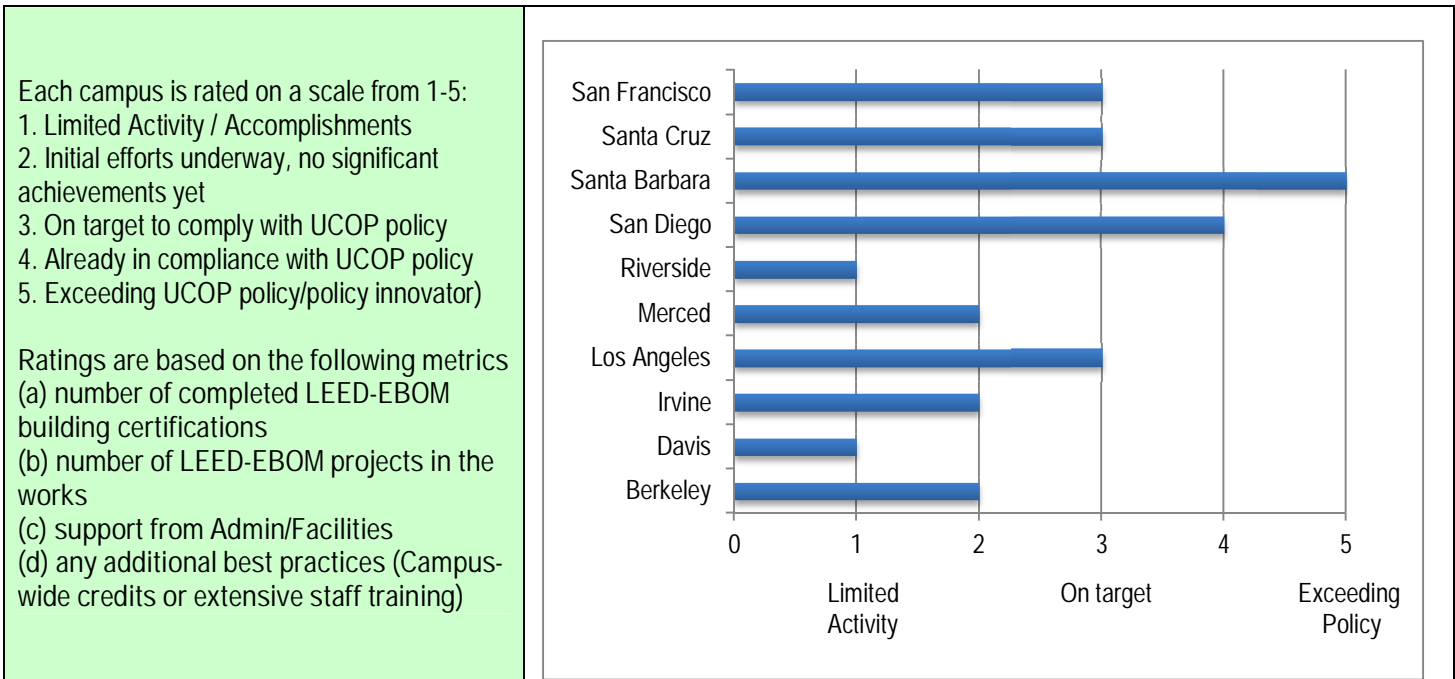
CAMPUS	RATING (1-10)	METRICS
Berkeley	3	AVR: N/A Nothing exceptional, normal good practice- subsidized bus practices, staff and faculty bus program. Some bike works. They have a good mode split, have limited parking. Public Transit: Subsidized or pre-tax employee unlimited ride transit pass; mandatory fee unlimited transit ride pass students. Campus shuttles: Extensive day and night services. Carpool: Discounted carpool permits for staff, faculty and students. Vanpools: Privately operated w/ ~30 participants. Bike: Extensive bicycle parking including secure facilities; bicycle racks on campus shuttles. Carshare: Carshare for fac/staff and students. City Carshare, ZipCar, and U-CarShare on campus. Parking Restrictions: Parking restrictions also for commuting students living within 2 miles of the central campus. Flex/Telecommute: None Incentives: Discounted carpool parking permits for faculty, staff and students; free parking for vanpools.

Davis	3	<p>AVR: Student AVR = 4.76. Employee AVR = 1.72. Total combined AVR = 3.87. They have fantastic bike transit- best in the country; they run their own bus system for the campus and the city. They have just launched carpool/vanpool and launched a marketing program, goClub incentives and resources. Public Transit: Discounted transit passes. Campus shuttles: Shuttle to UCDHS; Shuttle to UC Berkeley. Carpool: Discounted carpool permits for Staff, Faculty and Students residing outside of Davis. Reserved carpool parking spaces. Vanpools: 2 vans w/33 participants. Reserved parking space, discounted parking permit. Bike: Extensive bicycle infrastructure on campus. Carshare: NONE Ridematching: Ridematching through AlterNetRides.com. Parking Restrictions: No parking for students in residence halls. Flex/Telecommute: NONE Incentives: Discounted parking permits for carpool, vanpool.</p>
Irvine	5	<p>AVR: 1.74 in-window AVR and an AVR of 1.88 with off-peak credits (1.74 certified for 2007) Winner of 2008 Sustainable Transportation award for "Project Greenlight". An integrated series of programs to reduce vehicle emissions. Just launched a bike share program, at 100% biodiesel, and timing traffic signals. Public Transit: Bus, train - 20% subsidy;"U-Pass" free ride bus pass, unlimited rides Campus shuttles: intra-campus, to surrounding neighborhoods. Carpool: Discounted carpool permits for Fac/Staff & Graduate Employees, reserved carpool parking. Vanpools: 20 vans w/ 141 participants; reserved vanpool parking &no charge for permit. Bike: Extensive bike parking on campus; racks on campus shuttles; "ZotWheels" Bike share Program. Carshare: Zipcar - 9 vehicles . Parking Restrictions: NONE Flex/Telecommute: NONE Incentives: Moderate</p>
Los Angeles	5	<p>AVR: Spring 2007 AVR: 1.6 employees; 2.03 students GHG emissions from fleet and commute transportation are below 1990 and 2000 greenhouse gas levels now because of expanded TDM program. UCLA vanpool program is amazing- great mode split for being in the city of LA. Public Transit: Minimum 50% subsidy for all transit passes or rides. Campus shuttles: Extensive Campus Express shuttle, employee shuttle between UCLA MC and Santa Monica sites. Carpool: discounted permits Vanpools: ~150 vans w/ 1,500 participants. Bike: Bike lockers, shower & locker room for fac/staff commuters. Carshare: UCLA Car Share w/ Zipcar, has 11 vehicles on-site or adjacent to campus. Parking Restrictions: yes Flex/Telecommute: NONE Incentives: Discounted carpool permits for fac/staff & students, partially subsidized transit passes.</p>

Merced	2	<p>AVR: N/A UCM is a brand new campus so it is still developing its transportation services. Public Transit: subsidized bus pass for students & faculty Campus shuttles: NONE Carpool: Discounted carpool permits available for students, faculty and staff. Vanpools: NONE but planned. Bike: NONE (bike racks). Carshare: NONE but planned. Parking Restrictions: NONE but planned. Flex/Telecommute: NONE but planned. Incentives: NONE but planned.</p>
Riverside	3	<p>AVR: April 07: 1.51 Public Transit: UPASS: All Students Ride any RTA route at any time for free; Staff and faculty can purchase a 31-day pass at a 50% discount. Campus shuttles: 3 routes operating fall, winter and spring quarters. Carpool: Carpool spaces are reserved until 10:00am. Vanpools: 25 vans with 225 participants. Bike: 2242 of bike racks; shower & locker room for fac/staff. Carshare: NONE Parking Restrictions: NONE Flex/Telecommute: NONE Incentives: Each person in a two person carpool pays one-quarter the normal permit rate; vanpool fare rate is subsidized.</p>
San Diego	5	<p>AVR: N/A BEST FLEET Public Transit: Subsidized regional passes for faculty, staff, students, and unlimited free rides on all bus routes serving UCSD. Campus shuttles: 10 routes carrying approx. 24,000 riders daily. Carpool: Dedicated spaces, GRH, OU parking passes, free car sharing hours. Vanpools: 51 vans w/ 341 participants. Bike: TritonBike bike share program, Pedal Club bicycle commuter program. Carshare: 14 Zipcars available on campus. Parking Restrictions: no Flex/Telecommute: yes Incentives: yes</p>
Santa Barbara	4	<p>AVR: N/A Great Bikes, good fleet. Public Transit: Students Pay a \$13.13/Qtr lock-in fee to get unlimited bus usage. Campus shuttles: Carpool: Free Parking Perks to Student Carpools. Vanpools: 13 Vans with 140 participants. Bike: 10,000+ Bike Racks, 40 Bike Lockers, Perks to Bike Commuters: Free Showers in two locations on campus. Carshare: Currently 3 zipcars on campus. Parking Restrictions: Flex/Telecommute: NONE Incentives: 50% discount on carpool parking permits for Fac/Staff and graduate.</p>

<p>Santa Cruz</p>	<p>4</p>	<p>AVR- Observed AVR = 1.81 Good bus shuttle system, including bike shuttle, most headway in car share Public Transit: Subsidized SCMTD transit pass for faculty & staff (about 70% subsidy in 08-09), mandatory subsidized pass for students. Campus shuttles: On-campus Day and Night Shuttles transported ~2.1 million passengers . Carpool: Discounted carpool permits for staff, faculty and students, Vanpools: 22 vans transport 250 participants, primarily staff and faculty. Bike: Commuter Shower Program, Bike Shuttle uphill to campus, bike racks on shuttles and buses. Bike Shuttle transports ~200 riders/day. Carshare: As of March 2009, more than 700 active members using 9 cars. Parking Restrictions: Residential frosh/soph prohibition w/ exceptions through appeal process. Flex/Telecommute: Informal arrangements for some staff, many faculty. Incentives: Discounted carpool parking permits, subsidized vanpools and faculty/staff bus passes.</p>
<p>San Francisco</p>	<p>4</p>	<p>AVR: completed survey Public Transit: Pretax Transit program Campus shuttles: 16 shuttle bus routes annually transport 2.2 mil Carpool: Discounted (shared cost) and pretax carpool parking permit available at all campus locations for students, staff, & faculty. Vanpools Operating 45 shuttles that carry an average of 404 passengers daily. Bike: Have bike program at all major campus sites. Facilities include both outdoor and caged facilities. Car share: City Careshare provides 14 vehicles at all campus sites. Parking Restrictions:yes. Flex/Telecommute: yes Incentives: Discounted (shared cost) and pretax carpool parking permits. Vanpool drivers are not charged any fares.</p>

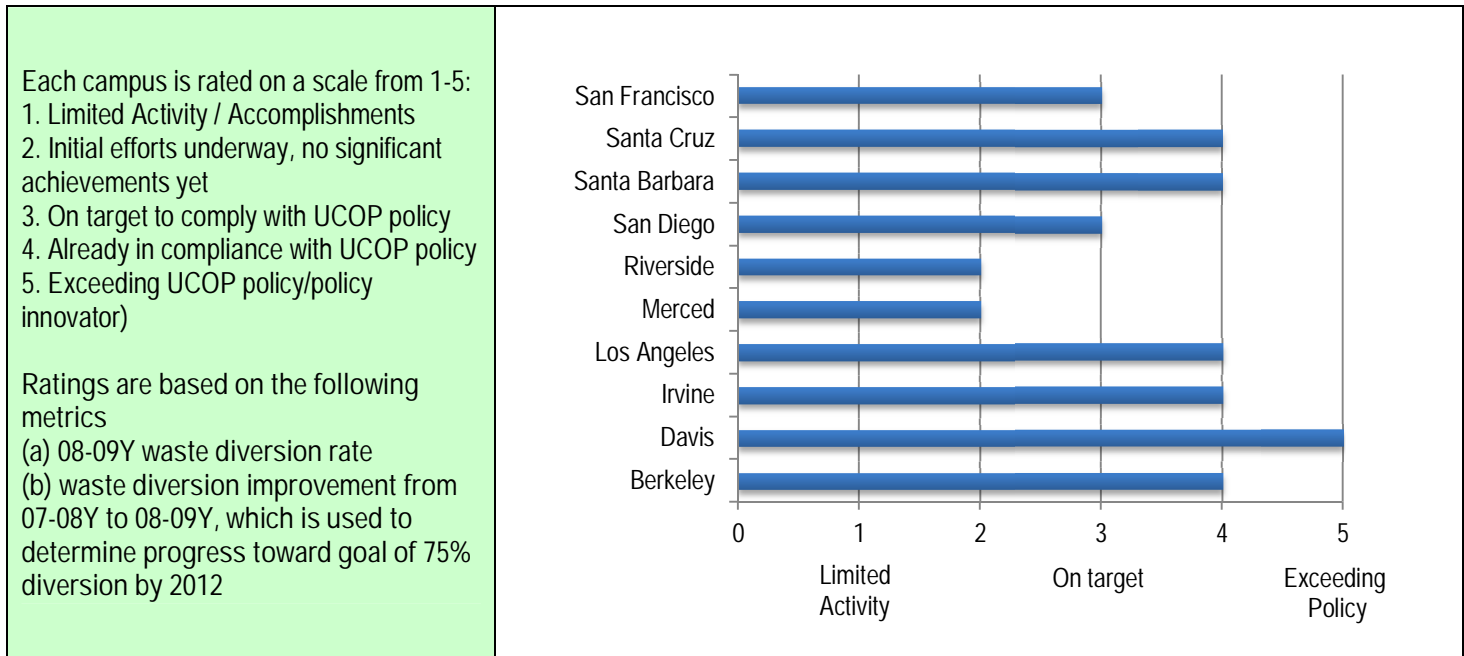
SUSTAINABLE OPERATIONS



CAMPUS	RATING (1-5)	METRICS
Berkeley	2	LEED-EBOM- University Hall project still in progress They have good sustainable documentation where they document their accomplishments. The sustainability office has a good newsletter that distributes information, their asst director for green building is the main shared information resources. The Office of Environment, Health & Safety and Facilities Services offered training on LEED EBOM June and July 2009.
Davis	1	UCD has not certified any LEED EBOM projects. Has selected a few buildings for certification but it having trouble getting funding and approval from admin. A little bit of green cleaning, a bit of recycling.
Irvine	2	UC Irvine registered Croul Hall as its first building to undergo certification under the LEED for Existing Building program.
Los Angeles	3	Achieved EBOM goal. Campus is evaluating the Andersen School of Management for next LEED-EBOM project (which is 5 buildings in total) LEED-EBOM Buildings: 1 Public Affairs Building (2009, silver)
Merced	2	The Merced campus is planning to certify all campus buildings through the LEED-EBOM program. No current head-way and no urgent needs as all buildings are new and efficient.
Riverside	1	UCR is very far behind on sustainable operations. Facilities admin presented a proposal to the Chancellor on how sustainability functions could be organized and funded on the UCR campus. Thus far, they have not begun a LEED-EBOM project.

San Diego	4	Doing well, starting to move forward. Planning to pursue LEED-EBOM certification for Sverdrup Hall, Started work on a LEED-EBOM project in Geisel Library. LEED-EBOM Buildings: 1 Campus Services Complex (2009, silver)
Santa Barbara	5	By far the best campus on LEED EBOM, and implementation. Has achieved 29 campus-wide and certified two buildings through the portfolio program so far. Has four concurrent LEED-EBOM projects underway this quarter: -Marine Sciences Research Building -Life Sciences Building -North Hall -Music Building LEED-EBOM Buildings: 3 Bren School (2009, Plat) Rec Center (2008, Sil) Girvetz Hall (2005, Sil)
Santa Cruz	3	No progress thus far after initial LEED-EBOM building certification. UCSC is not currently pursuing additional LEED-EBOM certifications at the moment. They are waiting for the Portfolio program to roll out, in order to streamline the process (certifying multiple buildings by campus wide credits). LEED-EBOM Buildings: 1 UCSC Engineering 2 (2009, silver)
San Francisco	3	UCSF is becoming a leader in Sustainable Operations. Plans to certify 3 additional LEED-EBOM projects. Conducting trainings for facilities staff and integrating LEED-EBOM project management duties into job descriptions for facilities managers. LEED-EBOM Buildings: 1 Rock Hall (2009, silver)

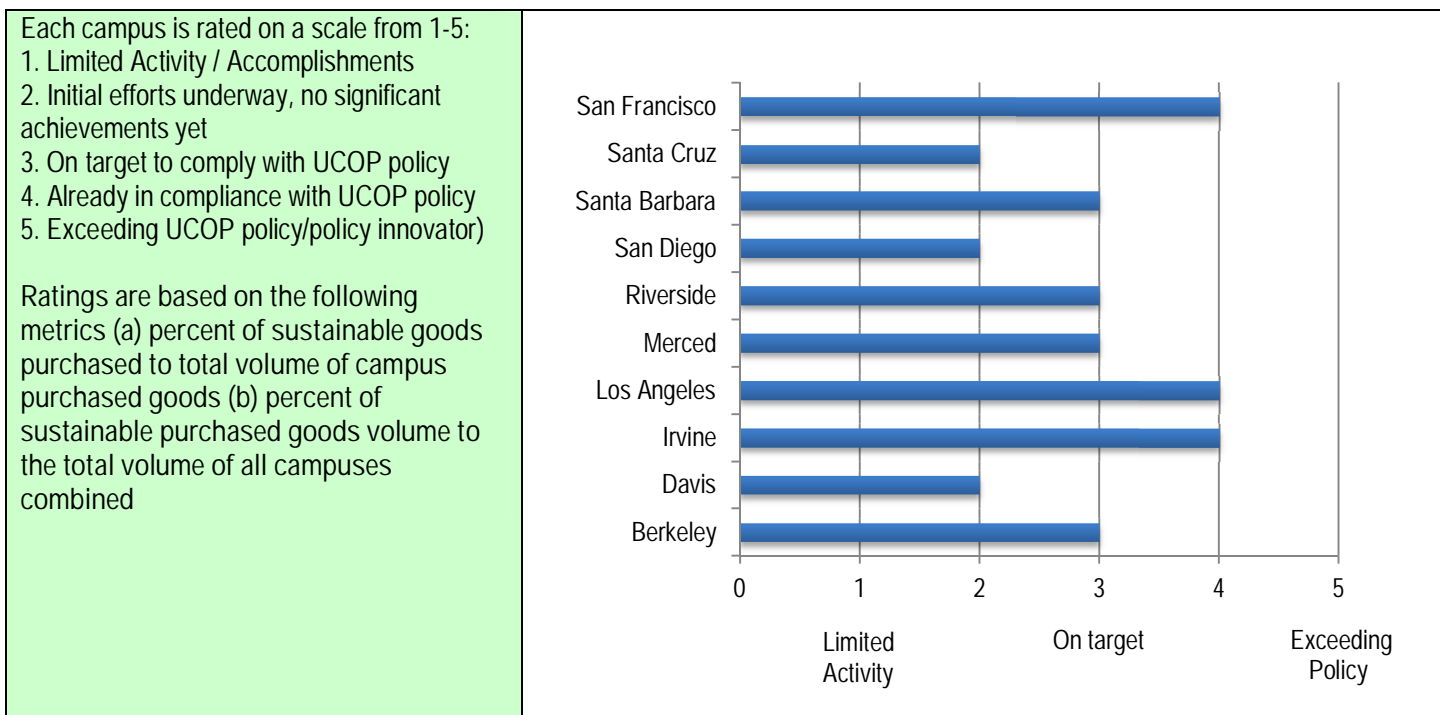
RECYCLING AND WASTE MANAGEMENT



CAMPUS	RATING (1-5)	METRICS
Berkeley	4	They have reasonable good but not stellar program for recycling and waste diversion. They are doing composting in the dining halls. CWM is improving. Their standout is surplus salvage and reuse center- that is their great program. They are also doing building materials to some extent. Waste Diversion Rates: 08-09 w/ C&D: 95% 08-09 w/o C& D: 33% Waste Diversion improvement: 07-08 to 08-09: 67% difference
Davis	5	They have the best program in the system. R4 (re-buy program) uses student employees, though they are losing some from budget cuts. They started a zero waste program a few years ago, their stadium is zero waste. Waste Diversion Rates: 08-09 w/ C&D: 76% 08-09 w/o C& D: 65% Waste Diversion improvement: 07-08 to 08-09: 10% difference
Irvine	4	Waste Diversion Rates: 08-09 w/ C&D: 65% 08-09 w/o C& D: 59% Waste Diversion improvement: 07-08 to 08-09: 20% difference Irvine Med Center- diversion rates have not been reported.
Los Angeles	4	Waste Diversion Rates: 08-09 w/ C&D: 60% 08-09 w/o C& D: 57% Waste Diversion improvement: 07-08 to 08-09: 15% difference

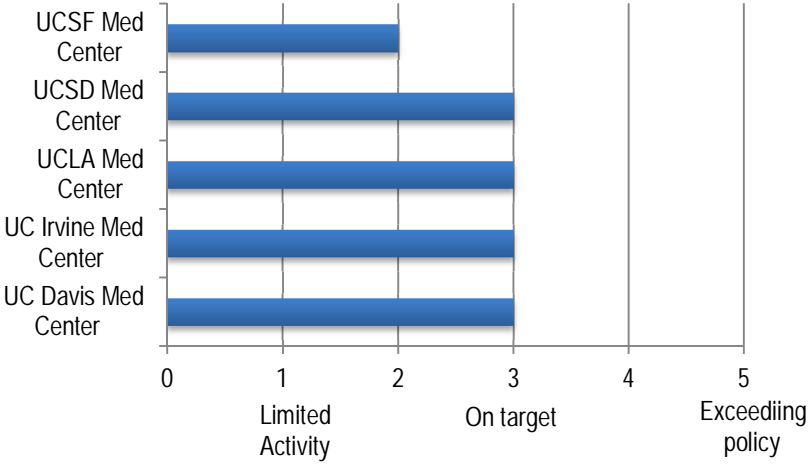
Merced	2	Waste Diversion Rates: 08-09 w/ C&D: 50% 08-09 w/o C& D: 26% Waste Diversion improvement: 07-08 to 08-09: -6% difference
Riverside	2	Waste Diversion Rates: 08-09 w/ C&D: 46% 08-09 w/o C& D: 46% Waste Diversion improvement: 07-08 to 08-09: 21% difference
San Diego	3	Waste Diversion Rates: 08-09 w/ C&D: 51% 08-09 w/o C& D: 28% Waste Diversion improvement: 07-08 to 08-09: -24% difference San Diego Med Center: 10% w/o C & D waste
Santa Barbara	4	Pretty good system Waste Diversion Rates: 08-09 w/ C&D: 69% 08-09 w/o C& D: 68% Waste Diversion improvement: 07-08 to 08-09: 6% difference
Santa Cruz	4	Waste Diversion Rates: 08-09 w/ C&D: 71% 08-09 w/o C& D: 53% Waste Diversion improvement: 07-08 to 08-09: 54% difference
San Francisco	3	Waste Diversion Rates: 08-09 w/ C&D: 51% 08-09 w/o C& D: 48% Waste Diversion improvement: 07-08 to 08-09: 16% difference SF Med Center 10% w/o C & D waste

ENVIRONMENTALLY PREFERABLE PURCHASING PRACTICES

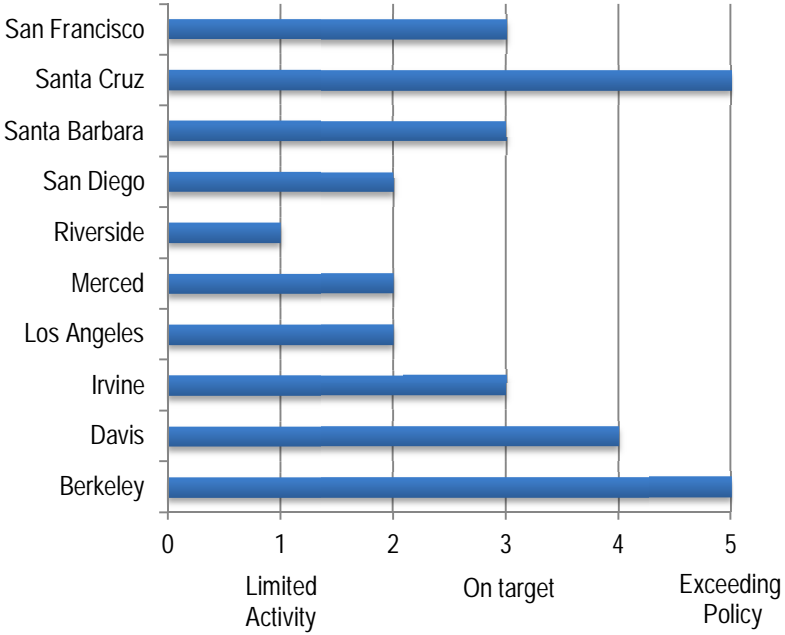


CAMPUS	RATING (1-5)	METRICS
Berkeley	3	Percent of Sustainable Volume to Total Volume (%): 11.2% Percent of Location Sustainable Volume to Total (%): 9.1% Everywhere they have a lot to be desired. They have done some EPP stuff in the physical plant with janitorial practices. They have done a good job on 30% recycled paper. They have not gone beyond the system wide contract (EPEAT) for IT, energy star.
Davis	2	Percent of Sustainable Volume to Total Volume (%): 9.5% Percent of Location Sustainable Volume to Total (%): 8.5% Med center: 17.2%, 2.6% They had some good leadership from their purchasing dept, driven in part by their R4 program. They have had some good luck in reducing their packaging. They are doing the HP thing, and refrigerators, got people to transition to Recycled content papers.
Irvine	4	Percent of Sustainable Volume to Total Volume (%): 19.1% Percent of Location Sustainable Volume to Total (%): 10.2% Med center: 15.7%, 1.5%
Los Angeles	4	Percent of Sustainable Volume to Total Volume (%): 21.6% Percent of Location Sustainable Volume to Total (%): 38.8% Med center: 14.1%, 1.8%

Merced	3	<p>Percent of Sustainable Volume to Total Volume (%): 12.1%</p> <p>Percent of Location Sustainable Volume to Total (%): 1.1%</p> <p>They have been a leader, piggybacking off of their LEED commitment. It has been institutionalized well.</p>
Riverside	3	<p>Percent of Sustainable Volume to Total Volume (%): 12.4%</p> <p>Percent of Location Sustainable Volume to Total (%): 3.6%</p>
San Diego	2	<p>Percent of Sustainable Volume to Total Volume (%): 7.5%</p> <p>Percent of Location Sustainable Volume to Total (%): 8.7%</p> <p>Med Center: 18.3%, .6%</p>
Santa Barbara	3	<p>Percent of Sustainable Volume to Total Volume (%): 12.1%</p> <p>Percent of Location Sustainable Volume to Total (%): 3.0%</p> <p>They had a good position, but lost funding.</p>
Santa Cruz	2	<p>Percent of Sustainable Volume to Total Volume (%): 8.1%</p> <p>Percent of Location Sustainable Volume to Total (%): 1.6%</p> <p>They have created a position (1/3 of someone's job) they have gotten it into everyone's job description. Great job on food sourcing.</p>
San Francisco	4	<p>Percent of Sustainable Volume to Total Volume (%): 42%</p> <p>Percent of Location Sustainable Volume to Total (%): NA</p>

<p>Each campus is rated on a scale from 1-5: 1. Limited Activity / Accomplishments 2. Initial efforts underway, no significant achievements yet 3. On target to comply with UCOP policy 4. Already in compliance with UCOP policy 5. Exceeding UCOP policy/policy innovator)</p> <p>Ratings are based on the following metrics (a) percent of sustainable goods purchased to total volume of campus purchased goods (b) percent of sustainable purchased goods volume to the total volume of all campuses combined</p>		<h3>UC Medical Centers EPP</h3> 
MEDICAL CENTER	RATING (1-5)	METRICS
UC Davis Med Center	4	Percent of Sustainable Volume to Total Volume (%): 17.2% Percent of Location Sustainable Volume to Total (%): 2.6%
UC Irvine Med Center	3	Percent of Sustainable Volume to Total Volume (%): 15.7% Percent of Location Sustainable Volume to Total (%): 1.5%
UCLA Med Center	2	Percent of Sustainable Volume to Total Volume (%): 14.1% Percent of Location Sustainable Volume to Total (%): 1.8%
UCSD Med Center	5	Percent of Sustainable Volume to Total Volume (%): 18.3% Percent of Location Sustainable Volume to Total (%): 0.6%
UCSF Med Center	1	Percent of Sustainable Volume to Total Volume (%): 6.5% Percent of Location Sustainable Volume to Total (%): 1.3%

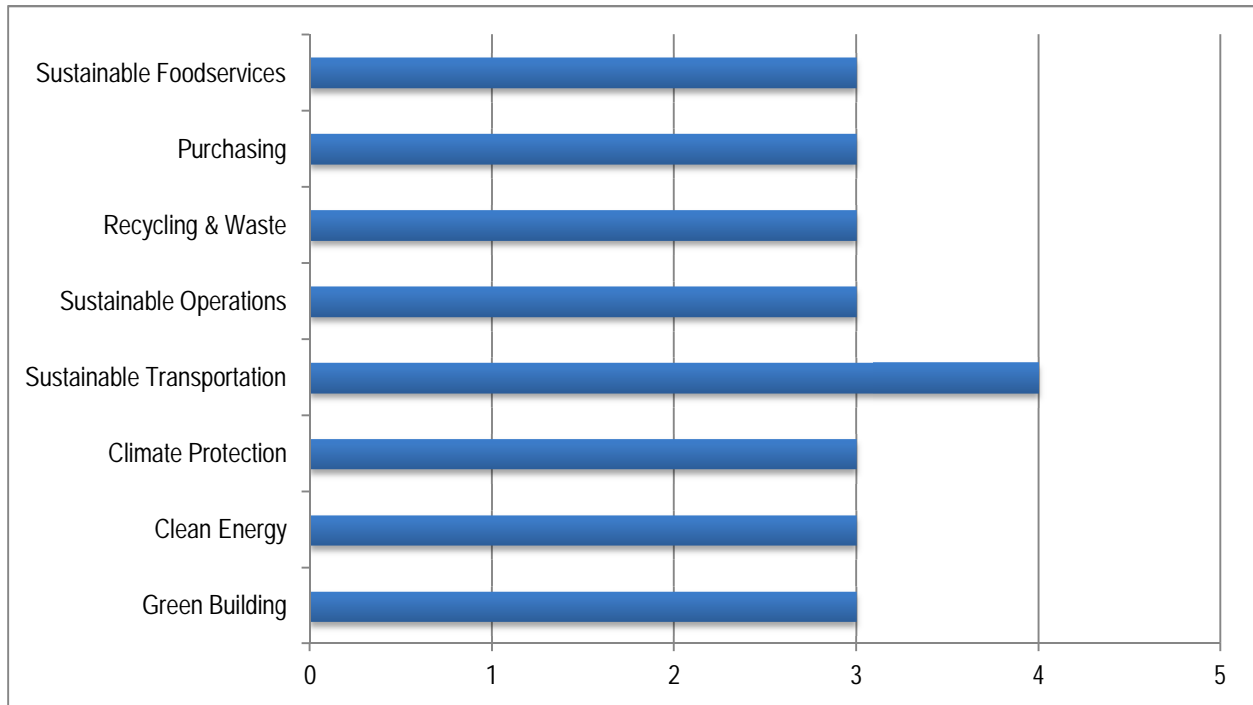
SUSTAINABLE FOODSERVICE PRACTICES

<p>Each campus is rated on a scale from 1-5: 1. Limited Activity / Accomplishments 2. Initial efforts underway, no significant achievements yet 3. On target to comply with UCOP policy 4. Already in compliance with UCOP policy 5. Exceeding UCOP policy/policy innovator)</p> <p>Ratings are based on the following metrics (a) percent of sustainable food products procured by dining services (if calculated) (b) food composting programs (c) water reduction strategies (d) education & outreach (e) student and administrative support (f) green business certifications</p>		 <table border="1"> <caption>Sustainability Ratings by Campus</caption> <thead> <tr> <th>Campus</th> <th>Rating</th> </tr> </thead> <tbody> <tr><td>San Francisco</td><td>3</td></tr> <tr><td>Santa Cruz</td><td>5</td></tr> <tr><td>Santa Barbara</td><td>3</td></tr> <tr><td>San Diego</td><td>2</td></tr> <tr><td>Riverside</td><td>1</td></tr> <tr><td>Merced</td><td>2</td></tr> <tr><td>Los Angeles</td><td>2</td></tr> <tr><td>Irvine</td><td>3</td></tr> <tr><td>Davis</td><td>4</td></tr> <tr><td>Berkeley</td><td>5</td></tr> </tbody> </table>	Campus	Rating	San Francisco	3	Santa Cruz	5	Santa Barbara	3	San Diego	2	Riverside	1	Merced	2	Los Angeles	2	Irvine	3	Davis	4	Berkeley	5
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CAMPUS	RATING (1-5)	METRICS																						
Berkeley	5	Leader in campus-run sustainable dining services. Organic & Local: 24% + real food- exceeding UCOP goals. Compost: yes, all dining halls Water: reduced the size of the tray and dishware to reduce waste Education: great program- Real food challenge Student support: excellent Admin support: good Green Business cert: Yes-County of Alameda certification																						
Davis	4	UCD Dining is run by Sodexo. Organic & Local: good program with aggressive goals (30% local by 2010). Yet, from purchasing data, only 8% sustainable. Compost: good program that has been running for years- in dining halls, retail & stadium Water: trayless dining Education: great educational and outreach programs to students Student support: great Admin support: good Green business cert: NONE																						

Irvine	3	<p>UCI dining is run by ARAMARK. Organic & Local: 9.58% real food Compost: NONE Water: trayless dining Education: good outreach to students with signage etc Student support: good w/ students pushing for Aramark to source more sustainable food. Admin support: decent Green Business cert: NONE</p>
Los Angeles	2	<p>Run by UCLA Dining Services Organic & Local: little hard data, but very low % Compost: yes- pilot phase Water: pilot trayless in 1 dining hall Education: okay Student support: good- student campaigns Admin support: FSWG Green Business cert: NONE</p>
Merced	2	<p>Only 1 dining hall, LEED certified building. Organic & Local: very little percentage of budget- 3% Compost: yes Water: efficient fixtures and dish room but no trayless Education: poor Student support: NONE Admin support: NONE Green Business cert: NONE</p>
Riverside	1	<p>UCR dining services run by Sysco. Organic & Local: very little- oranges. Sysco does not track this data. Compost: NONE Water: trayless dining Education: poor Student support: NONE or very little Admin support: NONE Green Business cert: NONE</p>
San Diego	2	<p>Organic & Local: no real data available, less than 10%. Compost: pilot project 10% Water: NONE Education: NONE Student support: moderate Admin support: very little Green Business cert: NONE</p>

<p>Santa Barbara</p>	<p>3</p>	<p>Self Operated- UCSB Dining Services Organic & Local: 10% Compost: yes- good program Water: trayless dining Education: all right, more campaigns starting Student support: yes, strong Admin support: good (food team) Green Business cert: NONE</p>
<p>Santa Cruz</p>	<p>5</p>	<p>Self-Operated UCSC Dining Services Organic & Local: approx 25% Compost: yes, all dining halls Water: trayless dining Education: excellent outreach and demonstration projects Student support: excellent student support pushing for higher goals Admin support: The best- FSWG, center for Agroecology, Green Business cert: achieved "Green Certification" for 9 of 14 Dining Halls (through the City of Santa Cruz and Monterey Green Business Program)</p>
<p>San Francisco</p>	<p>2</p>	<p>UCSF has done more than most for retail. Organic & Local: No hard data but very little -uses local fruits and vegetables where possible since April 2007. Introduced Niman Ranch burgers at grill, in March 2007 Compost: yes, but not system wide Water: NONE Education: very little Student support: NONE Admin support: formed health care work group in CACS to work on food, not much progress thus far. Green Business cert: NONE</p>

UCSF Overall Ratings



SUSTAINABILITY AREA	RATING (1-5)
Green Building	3
Clean Energy	3
Climate Protection	3
Sustainable Transportation	4
Sustainable Operations	3
Recycling & Waste	3
Purchasing	3
Sustainable Foodservices	3

APPENDIX C: SUMMARY OF METHODOLOGIES

The Baseline Assessment includes three basic elements: stakeholder engagement, UCOP compliance, and best practices from peer institutions. Included here is a summary of the methods and materials used to develop the first two sections.

Stakeholder Engagement

During the initial phases of the project (Fall, 2009) Davis Langdon worked closely with the co-chairs of the SSC to identify appropriate stakeholders for participation in the assessment. In keeping with the existing structure in place at UCSF, the Davis Langdon team met with the co-chairs of each of the eleven working groups of the SSC. In addition, the Davis Langdon team also pursued interviews with Campus Planning, Environmental Health and Safety, the Academic Senate, and the University of California Office of the President. In total, the report included engagement with fifteen stakeholders. These interviews followed a general set of questions, with some modifications as appropriate for each group. The basic outline addressed:

- Are the activities and accomplishments of the group being accurately recorded/represented in the annual sustainability report?
- How does the effort of this group contribute to the overall UCSF sustainability effort?
- To what extent does UCOP policy drive the focus of the group? What UCSF specific priorities or issues influence the group's policy?
- Is there appropriate representation within the work group? Are the right technical skills and department connections in place?
- How do the actions of the work group get communicated and coordinated with the other work groups? How are initiatives adopted at UCSF, both the campus and the medical center?
- What are the short-term actions, or low hanging fruit items that are available?

Both before and after the meetings with each stakeholder group, the Davis Langdon team solicited information on the group's history, including annual reports, missions statements, and meeting minutes. The baseline assessment for each group is a reflection of the information gathered during the stakeholder interviews, document review, and additional follow-up conversations.

Compliance with UCOP Policy

The effort to determine compliance with the University of California Office of the President's Policy Guidelines on Sustainable Practices featured two levels. The first level is focused on compliance only at UCSF. The second level of analysis sought to assess the levels of compliance of all ten UC campuses, in order to understand where UCSF stands relative to others in the UC system.

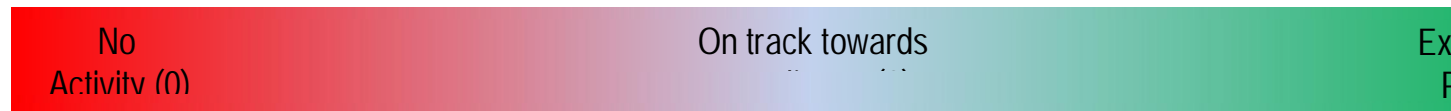
UCSF compliance with UC policy

Of the eleven work groups of the SSC, eight are explicitly aligned with the UCOP policy, and their activities were evaluated for compliance with the policy. This assessment involved a three step process:

1. Itemizing the relevant section of the UCOP policy in order to distill specific strategies or goals that are contained within the policy.

2. Through a process of document review, stakeholder engagement, and additional follow up, the compliance of the work group with each line item of UCOP policy was evaluated. In addition to the documents provided from UCSF, the UCOP provided documents highlighting the accomplishments of UCSF as well as the other UC campuses. These documents included: Waste Diversion Data Summary, Sustainable Transportation Highlights, UC Green Building List, Fleet Fuel Consumption Data, Campus GHG Data, SEP Partnership Update, System-wide Green Purchases and UC Campus Sustainable Transportation Goals.

3. Based on the level of compliance with the individual items, an overall score was determined for the specific policy areas. This score ranged from zero (no activity) to five (exceeding policy). A score of three indicates that the group is on track towards achieving compliance. All of the policy areas include performance targets that are spread over time, and represent a requirement for continued, rather than one-time compliance.



Example: Transportation Work Group

Itemized Policy Measures	Compliant?
Implement an efficient and effective economic and environmental strategy for campus fleets.	Y
Collect data on Average Vehicle Ridership (AVR) of commuters.	Y
Develop emission reduction goals for transportation and report annually on progress toward achieving the goals.	Y
Work with regulatory agencies and other entities.	Y
Collect and report fuel consumption annually to the Office of the President beginning in 2005-06.	Y
Facilitate the purchase and use of Low Emission Vehicles (LEV), Zero-Emission Vehicles (ZEV), and alternative fuel vehicles.	Y
By January 2009, implement a pre-tax transit pass program.	Y
Pursue the expansion of Transportation Demand Management (TDM) programs	Y
Develop a business-case analysis for any proposed parking structure projects.	Y
Participate in Transportation Sessions at the annual UC/CSU/CCC Campus Sustainability Conference.	Y

Rating:

Currently in

UC-wide compliance with UCOP Policy

In order to assess the performance of the other nine UC campuses, a set of compliance metrics were developed based on the scope of information available in the documents provided by the UCOP and on publicly available websites. It was not feasible to conduct the depth of research that took place on the UCSF campus, and thus the compliance metrics of the other UC campuses are indicators of estimated compliance levels. These ratings have been developed only for the purposes of comparing UCSF to other UC institutions, and should not be taken as an exhaustive survey of compliance at the individual UC campuses. The metrics used are:

Green Building

- Number of LEED Buildings on campus
- Number of LEED projects with budget approval
- Institutional support from Admin/Staff
- Conversation with UCOP analyst (12/18/09)

Natural Resources: Clean Energy

- Quantity of on-site renewable energy generation, or RECs
- Project energy savings from SEP projects

Climate Protection

- Completion of Climate Action Plan
- GHG emissions (CO₂e/1000ft²)

Transportation

- Calculation and reporting of AVR (Average Vehicle Ridership)
- Effectiveness of TDM (Transportation Demand Management Programs)
- Innovative and exceptional practices (car sharing, alternate fuel use, etc..)
- Fleet efficiency

Sustainable Operations

- Number of completed LEED EBOM certifications
- Number of LEED EBOM projects in process
- Support from Admin/Facilities

Natural Resources: Recycling

- 2008/09 waste diversion rate

- Rate of improvement from 07/08 to 08/09, this rate is used to determine progress towards 2012 goal of 75% diversion.

Procurement

- Percent of sustainable goods purchased out of total volume of campus purchased goods.
- Percent of sustainable goods purchased out of the total volume of all campuses combined.

Food Services

- Percent of sustainable food products purchased (if available)
- Food composting programs
- Water reduction strategies
- Education and outreach
- Student and administrative support