14th ANNUAL
California Higher Education Sustainability Conference
JULY 20th–24th, 2015
Can We Change Fast Enough?
Hosted by
San Francisco State University
We’ve helped some of the most influential green-minded organizations reduce their environmental impact and we’re ready to do the same for your university. No matter what size your school is, or what your green goals may be, we have the expertise and the solutions that are right for you.

Sustainability - We passed that class.

Proud to be a Silver Sponsor of the 2015 California Higher Education Sustainability Conference
San Francisco State University is proud to host the California Higher Education Sustainability Conference, and it is my distinct pleasure to welcome you. We are very excited to share our campus and our city with you as you engage the challenging questions that this conference will pose.

This year's theme—"Can We Change Fast Enough?"—resonates here at SF State. We recently completed a university-wide strategic plan, and throughout the process, the urgency of sustainability and resilience were recurring themes. As we face big challenges like reducing water use, the impacts of climate change, and reducing our reliance on fossil fuels, colleges and universities should be at the forefront of the national dialogue on sustainability. We are well-positioned to make a true difference.

This conference is a wonderful opportunity for California's colleges and universities, along with industry experts, to share information and best practices that will help us create more resilient, sustainable, and equitable communities. The relationships that begin here can be the seeds that enable sustainable practices to grow and thrive.

Thank you for attending and sharing your sustainability commitment and insights with your colleagues. We hope your stay is both enjoyable and inspiring.

Sincerely,

Les Wong, President
Sponsors

Gold Sponsor

UCSB Sustainability
Action today for tomorrow
Building a Sustainable Community Together

Silver Sponsors

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FLOWATER
Seamlessly integrated lighting and control solutions bring flexibility, function and savings to the classroom.

Smart Lighting Solutions That Simply Work

Visit acuitybrands.com/education to learn more.
## Schedule at a Glance

### Monday, July 20th, 2015

<table>
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<tr>
<th>Time</th>
<th>Activity</th>
<th>Location</th>
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<tbody>
<tr>
<td>7:00am - 8:00pm</td>
<td>Registration</td>
<td>West Campus Green</td>
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<tr>
<td>8:00am - 6:00pm</td>
<td>Pre-Conference Workshops and Field Trips (Pre-Registration Required; Please Visit the Registration Desk to Add an Event.)</td>
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<tr>
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<td>Concurrent Session Group A: Panel Presentations</td>
<td>Various Locations</td>
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<tr>
<td>11:45am - 12:15pm</td>
<td>Mid-Day Keynote with UC President Janet Napolitano (sponsored by SunPower)</td>
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<td>12:15pm - 2:00pm</td>
<td>Awards Banquet Lunch</td>
<td>West Campus Green</td>
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<tr>
<td>2:00pm - 3:15pm</td>
<td>Concurrent Session Group B: Panel Presentations</td>
<td>Various Locations</td>
</tr>
<tr>
<td>2:00pm - 5:00pm</td>
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<tr>
<td>3:15pm - 5:45pm</td>
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<tr>
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<td>Afternoon Networking Break</td>
<td>West Campus Green</td>
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<td>4:00pm - 5:15pm</td>
<td>Concurrent Session Group C: Panel Presentations</td>
<td>Various Locations</td>
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### Wednesday, July 22nd, 2015

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<td>Registration</td>
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<td>8:00am - 9:15am</td>
<td>Concurrent Session Group D: Panel Presentations</td>
<td>Various Locations</td>
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<td>9:15am - 10:15am</td>
<td>Morning Networking Break</td>
<td>West Campus Green</td>
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<td>9:15am - 2:00pm</td>
<td>Exhibit Hall Open to All Attendees</td>
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<td>10:15am - 11:30am</td>
<td>Concurrent Session Group E: Panel Presentations</td>
<td>Various Locations</td>
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<tr>
<td>11:45am - 12:15pm</td>
<td>Lunch</td>
<td>West Campus Green</td>
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<tr>
<td>12:30pm - 1:30pm</td>
<td>CSU Sustainability Officers Discussion (By Invitation-Only)</td>
<td>Nob Hill Room, Seven Hills Conference Center</td>
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<tr>
<td>12:30pm - 1:30pm</td>
<td>UC Global Climate Leadership Council Engagement Discussion</td>
<td>Rm. 108, Humanities Building</td>
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<tr>
<td>1:45pm - 3:00pm</td>
<td>Concurrent Session Group G: Panel Presentations</td>
<td>Various Locations</td>
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<tr>
<td>3:15pm - 4:00pm</td>
<td>Concurrent Session Group H: Taking Action! Sessions</td>
<td>Various Locations</td>
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<tr>
<td>4:15pm - 5:15pm</td>
<td>Closing Keynote: Sustainability and Resilience – Two Movements in Convergence (sponsored by OfficeMax/OfficeDepot)</td>
<td>Knuth Theater, Creative Arts Building</td>
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<tr>
<td>5:30pm - 7:30pm</td>
<td>Private Bean-to-Bar Chocolate Factory Tour at Dandelion Chocolate (Pre-Registration Required; Please Visit the Registration Desk to Add This Event.)</td>
<td>Meet at 19th and Holloway</td>
</tr>
<tr>
<td>5:30pm - 8:20pm</td>
<td>Sustainability Officers’ Dinner (Invitation Only; Pre-Registration Required; Please Visit the Registration Desk to Add This Event.)</td>
<td>Meet at 19th and Holloway</td>
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<tr>
<td>8:00am - 2:00pm</td>
<td>Student Convergence</td>
<td>Rm. 147, Gymnasium Building</td>
</tr>
<tr>
<td>8:00am - 5:00pm</td>
<td>Post-Conference Workshops and Field Trips (Pre-Registration Required; Please Visit the Registration Desk to Add an Event.)</td>
<td>Various Locations</td>
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As a leading global provider of solar energy with more than 30 years of experience, SunPower delivers a comprehensive portfolio of renewable energy solutions, along with top-notch customer service and innovative financial solutions. Stop by our booth to learn how SunPower is helping California colleges and universities achieve their goals with some of the most powerful solar technology available under the sun.

sunpower.com

We’re proud to partner with California colleges and universities. And the sun.
## Conference Calendar

### Monday, July 20th, 2015

Pre-registration is required for many of the pre-conference workshops and field trips. Please visit the registration desk at West Campus Green to add any of these events to your registration. Some events on Monday may be sold out.

<table>
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<tr>
<th>Time</th>
<th>Event Description</th>
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<td>Breakfast for Attendees Staying On-Campus Only</td>
<td>City Eats Dining Center</td>
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<tr>
<td>8:00am - 12:00pm</td>
<td>Sustainability Officers’ Workshop (Invitation-Only)</td>
<td>Seven Hills Conference Center</td>
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<tr>
<td>8:00am - 12:00pm</td>
<td>UC Solid Waste &amp; Recycling Working Group Meeting (Invitation-Only)</td>
<td>Cesar Chavez Student Center, Rosa Parks F</td>
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<tr>
<td>9:00am - 10:30am</td>
<td>CHESC Student Orientation: Networking for Impact</td>
<td>Cesar Chavez Student Center, Rosa Parks F</td>
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<tr>
<td>9:00am - 3:30pm</td>
<td>LEED™ Building, Solar Farm, and Campus as a Living Lab Tour</td>
<td>Meet at 19th and Holloway</td>
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<tr>
<td>11:00am - 4:00pm</td>
<td>Exhibitor Booth Set-Up</td>
<td>West Campus Green</td>
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<tr>
<td>11:00am - 6:00pm</td>
<td>PowerSave Campus Summer Forum (Invitation-Only)</td>
<td>Jack Adams Hall, Cesar Chavez Student Center</td>
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<tr>
<td>12:00pm - 4:30pm</td>
<td>University of California Global Food &amp; Carbon Neutrality Initiatives Fellows Symposium (Invitation-Only)</td>
<td>Rm. 147, Gymnasium Building</td>
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<tr>
<td>1:00pm - 5:00pm</td>
<td>California Collegiate Recycling Council’s (CCRC) Zero Waste Workshop</td>
<td>The Annex 1</td>
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<tr>
<td>1:00pm - 3:30pm</td>
<td>Green Government: The SFPUC’s LEED™ Platinum Headquarters in San Francisco</td>
<td>Meet at 19th and Holloway</td>
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<tr>
<td>1:00pm - 5:00pm</td>
<td>San Francisco City Bike Tour</td>
<td>Meet at the Bike Barn</td>
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<td>1:00pm - 5:00pm</td>
<td>Be a Friend to the Friends of Alemany Farm!</td>
<td>Meet at 19th and Holloway</td>
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<tr>
<td>1:00pm - 5:00pm</td>
<td>Food Service Technology Center Tour</td>
<td>Meet at 19th and Holloway</td>
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<td>8:10pm - 10:00pm</td>
<td>CHESC Steering Committee Dinner</td>
<td>Meet at 19th and Holloway</td>
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Lighting is only the beginning.

Partnering to make sustainability a reality for California educational institution buildings.

**Winner**

“Top Project of the Year Award”
—Environmental Leader Product & Project Awards

“Best Practice Award for Lighting Design/Retrofit”
—California Higher Education Efficiency & Sustainability (CHESC) --2014 and 2015.

Learn more:
www.enlightedinc.com

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**CSU Dominguez Hills Lighting Sensor Platform Installation**

Enlighted was installed at CSU Dominguez Hills’ campus in four buildings, saving the university 201,436 kWh and $26,289 annually. Additionally, Southern California Edison issued a rebate of $51,565 for the campus energy savings. Further installations are expected to save the university 245,496 kWh and $30,483 in energy cost annually, in addition to earning the campus another rebate from Southern California Edison.
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<td></td>
<td>Cooperative Curriculum for a Resilient Future</td>
<td>Nob Hill Room, Seven Hills Conference Center</td>
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<td>Large-scale Campus Energy Efficiency and Net Zero Energy Projects</td>
<td>Rm. 226, Burk Hall</td>
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<td>Navigating the STARS 2.0 Experience: From Data Collection to Strategic Planning</td>
<td>Rm. 1, Burk Hall</td>
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<td>Greening Food Franchises and Integrating Student-Grown Food in Dining</td>
<td>Rm. 193, Fine Arts Building</td>
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<td>Practical Tools and Strategies to Transform Campus Stormwater Systems</td>
<td>Rm. 408, Humanities Building</td>
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<td>Student Engagement through Blending Climate Education, Co-Curricular, and Curricular Methods</td>
<td>Rm. 108, Humanities Building</td>
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<td>Rethinking Waste: Innovative and Integrated Approaches to Waste Diversion</td>
<td>Rm. 236, Burk Hall</td>
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<td>Sustainability Programming for Campus Housing: Teaching Conservation and Behavior Change</td>
<td>Rm. 217, Humanities Building</td>
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<td>Self-care and Holistic Health Initiatives for Staff, Faculty, and Yourself</td>
<td>Rm. 237, Burk Hall</td>
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<td>How to Build a Sustainability Initiative from the Ground Up with Customizable Templates</td>
<td>Nob Hill Room, Seven Hills Conference Center</td>
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<td>Best Practices in Overall Sustainable Design</td>
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<tr>
<td>2:00pm - 3:15pm</td>
<td>Implementing Deep Sustainability in Recreational Buildings</td>
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<td>Moving Sustainability to the Core of Strategic Sourcing</td>
<td>Rm. 193, Fine Arts Building</td>
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<td>Getting Started with ‘Campus as a Living Lab’</td>
<td>Rm. 408, Humanities Building</td>
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<td>Fossil Fuel Divestment and Reinvestment: How To and What's Next</td>
<td>Rm. 108, Humanities Building</td>
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<td>Management By Fact, Getting the Data to Make Good Water Choices</td>
<td>Rm. 236, Burk Hall</td>
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<td>Worlds Collide: Campuses and Communities Collaborate to Increase Bicycle Ridership</td>
<td>Rm. 217, Humanities Building</td>
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<td>Eliminating Plastics from Food Service and Understanding Where Our Plastics Go</td>
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<td>Student Engagement and the UC Carbon Neutrality Initiative Fellowship Program</td>
<td>Nob Hill Room, Seven Hills Conference Center</td>
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<td>Best Practices in HVAC Design/Retrofit and Energy Transmission</td>
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<td>Student-Led Energy Efficiency Efforts in Housing, Labs, and the Restructuring of Financial Incentives</td>
<td>Rm. 1, Burk Hall</td>
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<td>Managing Local Landscapes through Education and Related Application</td>
<td>Rm. 193, Fine Arts Building</td>
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<td>Hands-On Experiences for Future Green Building Professionals through Coursework</td>
<td>Rm. 408, Humanities Building</td>
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<td>Resiliency, Strategic Planning, and Campus-Community Partnerships</td>
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<td>Evaluating and Re-envisioning Student Food Security and Sustainable Food Resources</td>
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<td>Emergence and Growth in Fuel Cell and Electric Vehicle Programs</td>
<td>Rm. 217, Humanities Building</td>
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<td>Integrating Sustainability into Procurement and Contract Negotiations</td>
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<td>Exploring Offset Options for UC Air Travel</td>
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<td>Green Career Panel</td>
<td>Rm. 226, Burk Hall</td>
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<td>Monitoring-Based Commissioning (MBCx) Plus Continuous Commissioning Equals Persistent Savings</td>
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<td>Transforming the Built Environment at Scale - Prototypes for Sustainable Development</td>
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<td>Indoor Composting in Campus Residence Halls</td>
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<td>Linking Institution and Curricular Practices in Sustainability Education</td>
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<td>Best Practice Winners for Water Conservation</td>
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<td>Campus Workplace Engagement through Green Office and Lab Programs</td>
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<td>Climate Change and Health Care: Lessons for Universities</td>
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<td>Campus Presidents Speak on Fossil Fuel Divestment</td>
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<td>Dashboards, Feedback, and Incentives — Data-Driven Sustainability</td>
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<td>Lighting Retrofit Successes: Low-Tech to High-Tech</td>
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<td>Beyond Silos: Sustainability across the Curriculum in Diverse and Interdisciplinary Contexts</td>
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<td>Lessons Learned from Changing Roles in the Sustainability Profession</td>
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<td>Purchasing Practices and Policies to Source Real Food</td>
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<tbody>
<tr>
<td>10:15am - 11:30am</td>
<td>Concurrent Session Group E: Panel Presentations</td>
<td>Various Locations</td>
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<tr>
<td>Acheivements and Lessons Learned in Water Saving Programs</td>
<td>Rm. 236, Burk Hall</td>
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<tr>
<td>New Research: Improving Transportation Demand Management (TDM) and Pedestrian and Bike Safety</td>
<td>Rm. 217, Humanities Building</td>
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<tr>
<td>Meet Your New Partner: Broadening Opportunities through Cooperative Action that includes Campus Recreation</td>
<td>Rm. 237, Burk Hall</td>
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<tr>
<td>San Francisco State University Waste Tour</td>
<td>Meet at the Registration Desk at West Campus Green</td>
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<tr>
<td>11:45am - 12:15pm</td>
<td>Concurrent Session Group F: Stand-Alone Presentations</td>
<td>Various Locations</td>
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<tr>
<td>Mendables: A ReUse Community Project</td>
<td>Nob Hill Room, Seven Hills Conference Center</td>
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<tr>
<td>The Renewable Energy Initiative; A Student Fee-Funded 425kW Solar Array</td>
<td>Rm. 226, Burk Hall</td>
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<td>Sustainability Knowledge and Program Assessment at California State University, Northridge</td>
<td>Rm. 1, Burk Hall</td>
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<tr>
<td>UC Santa Barbara Public Relations Campaign</td>
<td>Rm. 193, Fine Arts Building</td>
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<td>Brown’s: A California Café at Cal Berkeley</td>
<td>Rm. 408, Humanities Building</td>
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<td>Translating the Value of Campus Gardens to Decision Makers</td>
<td>Rm. 108, Humanities Building</td>
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<tr>
<td>Campus Water Reuse: How Emory Learned from SF Public Utilities Commission and Cut Water Use by 35%</td>
<td>Rm. 236, Burk Hall</td>
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<tr>
<td>California’s Groundwater and the Path to Sustainability</td>
<td>Rm. 217, Humanities Building</td>
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<td>Optimizing Outreach through Collaboration</td>
<td>Rm. 237, Burk Hall</td>
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<tr>
<td>12:15pm - 1:30pm</td>
<td>Lunch</td>
<td>West Campus Green</td>
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<tr>
<td>12:30pm - 1:30pm</td>
<td>CSU Sustainability Officers Discussion (Invite-Only)</td>
<td>Seven Hills Conference Room</td>
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<tr>
<td>12:30pm - 1:30pm</td>
<td>UC Global Climate Leadership Council Engagement Discussion</td>
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<tr>
<td>1:45pm - 3:00pm</td>
<td>Concurrent Session Group G: Panel Presentations</td>
<td>Various Locations</td>
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<tr>
<td>Saving Water on Campus: Reducing by 25% or More</td>
<td>Nob Hill Room, Seven Hills Conference Center</td>
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<td>Local Transformers: A Tale of Two Projects and Their Energy Shifts</td>
<td>Rm. 226, Burk Hall</td>
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<td>Turning Data into Energy Projects: Innovative Approaches to Gather Actionable Data for Savings</td>
<td>Rm. 1, Burk Hall</td>
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<tr>
<td>Sustainable Communities: University and Community Partnerships for Sustainability Education Experiences</td>
<td>Rm. 193, Fine Arts Building</td>
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### Wednesday, July 22nd, 2015 contd.

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<tr>
<th>Time</th>
<th>Concurrent Session Group G: Panel Presentations</th>
<th>Various Locations</th>
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<tr>
<td>1:45pm - 3:00pm</td>
<td><strong>Concurrent Session Group G: Panel Presentations</strong></td>
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<td></td>
<td>Best Practice Award Winners in Waste Management</td>
<td>Rm. 408, Humanities Building</td>
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<td>Sustainable Asset Reallocation: The University of California and Fossil Free Investments</td>
<td>Rm. 108, Humanities Building</td>
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<td>Increasing Healthy Eating through K-12 Partnerships, Local Produce, and Strategic Educational Programming</td>
<td>Rm. 236, Burk Hall</td>
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<td>Curricular Inroads to Advanced Vehicle Technologies and Carbon Footprint Reduction</td>
<td>Rm. 217, Humanities Building</td>
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<td>Engaging Students through Student Government, Entrepreneurship, and Student Organizations</td>
<td>Rm. 237, Burk Hall</td>
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<td>Fuel Cell Tour</td>
<td>Meet at the Registration Desk at West Campus Green</td>
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<tr>
<td>2:00pm - 6:00pm</td>
<td><strong>Exhibitor Booth Break-Down</strong></td>
<td>West Campus Green</td>
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<tr>
<td>3:15pm - 4:00pm</td>
<td><strong>Concurrent Session Group H: Taking Action Sessions</strong></td>
<td>Various Locations</td>
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<td>Implementing Statewide CSU Real Food Policy on Campus</td>
<td>Nob Hill Room, Seven Hills Conference Center</td>
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<td>Taking-Action Regarding New California Water Policy</td>
<td>Rm. 226, Burk Hall</td>
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<td>Creating Green Construction and Renovation Standards for Sustainable Universities</td>
<td>Rm. 1, Burk Hall</td>
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<td>Keeping UC Sustainable Transportation Policy on Track — A Look Back and Ahead</td>
<td>Rm. 193, Fine Arts Building</td>
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<td>The Internet of Thing: Turning One Meter into Many Meters</td>
<td>Rm. 408, Humanities Building</td>
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<td>Sustainability Blitz for a Rapid Diffusion across the Curriculum</td>
<td>Rm. 108, Humanities Building</td>
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<td>Cultivating a Zero Waste Culture on Campus</td>
<td>Rm. 236, Burk Hall</td>
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<td>Building Partnerships and Programs that Connect Campus Diversity and Sustainability</td>
<td>Rm. 217, Humanities Building</td>
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<td>Student Activism and Expanding the Definition of Sustainability at UC</td>
<td>Rm. 237, Burk Hall</td>
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<tr>
<td>4:15pm - 5:15pm</td>
<td>Closing Keynote: Sustainability and Resilience — Two Movements in Convergence (sponsored by OfficeMax/OfficeDepot)</td>
<td>Knuth Theater, Creative Arts Building</td>
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<tr>
<td>5:15pm</td>
<td>Deadline for Poster Presenters to Reclaim Their Posters</td>
<td>West Campus Green</td>
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<tr>
<td>5:30pm - 7:30pm</td>
<td>Private Bean-to-Bar Chocolate Factory Tour at Dandelion Chocolate (Pre-Registration Required; Please Visit the Registration Desk to Add This Event.)</td>
<td>Meet at 19th and Holloway</td>
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**Wednesday, July 22nd, 2015 contd.**

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>5:30pm - 8:20pm</td>
<td>Sustainability Officers’ Dinner (Invitation Only; Pre-Registration Required; Please Visit the Registration Desk to Add This Event.)</td>
<td>Meet at 19th and Holloway</td>
</tr>
<tr>
<td>5:00pm - 7:00pm</td>
<td>Dinner for Attendees Staying On-Campus Only</td>
<td>City Eats Dining Center</td>
</tr>
<tr>
<td>6:30pm - 8:30pm</td>
<td>Sustainability Student Soiree</td>
<td>Rm. 147, Gymnasium Building</td>
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</table>

**Thursday, July 23rd, 2015**

Pre-registration is required for many of the post-conference workshops and field trips. Please visit the registration desk at West Campus Green to add any of these events to your registration. Some events on Thursday may be sold out.

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>7:00am - 9:00am</td>
<td>Breakfast for Attendees Staying On-Campus Only</td>
<td>City Eats Dining Center</td>
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<tr>
<td>7:15am - 9:30am</td>
<td>Registration</td>
<td>West Campus Green</td>
</tr>
<tr>
<td>7:30am - 5:00pm</td>
<td>Campus-Community Partnerships for Advancing Sustainability</td>
<td>Seven Hills Conference Center</td>
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<tr>
<td>8:15am - 11:15am</td>
<td>Edible School Yard Tour</td>
<td>Meet at 19th and Holloway</td>
</tr>
<tr>
<td>8:00am - 12:00pm</td>
<td>What’s Old is Green! Green Building + Sustainability at the Presidio - A New Kind of National Park</td>
<td>Meet at 19th and Holloway</td>
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<tr>
<td>8:00am - 1:00pm</td>
<td>Romburg Tiburon Center Green Labs Assessment</td>
<td>Meet at 19th and Holloway</td>
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<tr>
<td>8:00am - 3:00pm</td>
<td>Joint UC/CSU Energy Managers’ Meeting (Invitation-Only)</td>
<td>The Annex 1</td>
</tr>
<tr>
<td>8:00am - 4:00pm</td>
<td>CHESC Greening Healthcare Workshop; Preventing HealthCARE from Becoming HealthHARM</td>
<td>UCSF Mission Bay Campus, 1855 4th St. (Shuttle from SFSU at 7:15am; return at 4:45pm. Meet at 19th and Holloway for the shuttle)</td>
</tr>
<tr>
<td>8:00am - 5:00pm</td>
<td>CSU Living Lab Workshop (Invitation-Only)</td>
<td>Jack Adams Hall, Cesar Chavez Student Center</td>
</tr>
<tr>
<td>8:00am - 2:00pm</td>
<td>Student Convergence</td>
<td>Rm. 147, Gymnasium Building</td>
</tr>
<tr>
<td>8:00am - 5:00pm</td>
<td>Post-Conference Workshops and Field Trips</td>
<td>Various Locations</td>
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<tr>
<td>9:30am - 11:30am</td>
<td>California Academy of the Sciences Green Building and Architecture Tour</td>
<td>Meet at 19th and Holloway</td>
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<tr>
<td>9:30am - 12:00pm</td>
<td>AT and T Park Sustainability Tour</td>
<td>Meet at 19th and Holloway</td>
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<tr>
<td>2:00pm - 5:00pm</td>
<td>Hands-On Waste Audit Workshop</td>
<td>Meet at West Campus Green</td>
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<tr>
<td>5:00pm - 7:00pm</td>
<td>Dinner for Attendees Staying On-Campus Only</td>
<td>City Eats Dining Center</td>
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**Friday, July 24th, 2015**

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<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>7:00am - 9:00am</td>
<td>Breakfast for Attendees Staying On-Campus Only</td>
<td>City Eats Dining Center</td>
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Program Labels

The CHESC team has developed a labeling system to help registrants choose which sessions to attend. Please see below for more detail:

Jargon

Level 1 (General Audience): Limited or no jargon will be used in this session. Presenters will define acronyms before using them. This session is a great fit for a wide variety of people, ranging from those new to sustainability to more experienced attendees.

Level 2 (Interdisciplinary Talk): Attendees of this session are assumed to be broadly familiar with the field of sustainability. Attendees may, however, be from many different job backgrounds and areas of expertise. Accordingly, some jargon and common acronyms will be used; however, these will be terms used widely in the sustainability field.

Level 3 (Specialized Talk): Attendees of this session are expected to have expertise specifically related to the topic covered in the session or have done work related to this topic specifically. This session is not, however, restricted to professional staff, and a student leader who has been working closely with professionals in the field on this topic for some time may find value in this session.

Low-Hanging Fruit vs. Deep Green

Campuses attending the conference range from stakeholders who are just starting their first sustainability project to stakeholders that have been in the field and have been working on these issues for many years. We hope to ensure that there are some presentations which will help new-comers to get started, while still providing new ideas to the campuses that have continued to attend our event for many years and are constantly developing new initiatives.

Level 1 (Low Hanging Fruit): Practices and initiatives highlighted in this presentation could be implemented by campuses just getting started or campuses that have been around for a while. Return on investment for these projects is generally fairly quick, and the practices are not too difficult to implement (at least at a pilot level).

Level 2 (Ripening Efforts): For those campuses that have already implemented most of the low hanging fruit and who want to start reaching a little higher, this will be a great session. The practices highlighted will be challenging to implement, and the returns won’t be as quick, but they are well worth the effort.

Level 3 (Deep Green): Attendees who have attended many conferences and implemented several programs on their campuses will be excited to hear about the fresh new ideas in this session. These practices are ambitious and rare amongst campuses throughout the state. These practices will be difficult for a campus new to sustainability to adopt.
Passport Prize System

This year, we are launching a new platform to encourage meaningful interaction in the exhibit show, the CHESC 2015 Passport. You and other CHESC attendees have the opportunity to earn prizes by engaging with exhibitors and learning how their company can support your work in campus sustainability.

There are over 60 exhibitors at this year’s conference, representing a wide variety of commodities and services including, but not limited to, vehicle manufacturers, energy consultants, office supplies, energy efficient lighting and equipment providers, custodial and maintenance supplies, green building products, architects, contractors, water efficient technologies, foodservice suppliers, non-profit agencies, graduate schools, and more!

To participate, visit any booth in the exhibit hall, talk with the exhibitor, take some time to view their demonstrations, and you will be rewarded with some great information and a stamp for your passport!

You can get a “stamp” through your electronic program or through collecting stamps next to the descriptions in the exhibitor section of this program. Once you have collected 10 stamps from different exhibitors, come visit us at the registration booth to choose one of this year’s prizes. For every additional ten stamps you collect, you may receive one additional item. All prize options are in limited supply and are on a first-come, first-serve basis. The prizes available include: a clock powered only by water, shower timers, bamboo thumb drives, and led reading lights!

When collecting stamps from exhibitors, please be respectful by spending time interacting with the booths and asking questions before asking for a stamp. We hope you have a fun and engaging time at this year’s Exhibit Hall.

CAN WE CHANGE FAST ENOUGH?
Welcome to the 14th annual California Higher Education Sustainability Conference.
San Francisco State University is proud to share its sustainable campus with you. Some of our highlights include:

- SF State divested from coal and tar sands in 2013.
- We published our first Climate Action Plan in 2010, setting targets to reduce greenhouse gas emissions below 1990 levels 25% by 2020 and 40% by 2030.
- SF State currently purchases 20% of its energy from renewable resources. Our goal, as stated in our Climate Action Plan, is to increase renewable energy procurement to 33% by 2020.
- 80 percent of the SF State population commutes to campus via sustainable transportation (transit, walking, biking, carpooling), according to our 2014 transportation survey.
- SF State has a 73% waste diversion rate and a goal of reaching zero waste by 2020.
- The Eco Students group maintains the Sol Patch, an on-campus vegetable garden located behind the Mary Park residence hall.
- SF State offers a BA and BS in environmental studies and an MBA with an emphasis in sustainable business.
- All SF State students are required to complete a course that qualifies for a sustainability overlay in order to graduate.

- SF State’s water saving efforts include a 12,000 gallon capacity rainwater harvesting system that is powered by solar power, rain gardens and bioswales that divert 35,000 gallons of stormwater from storm drains, and over 30,000 square feet of landscape planted with native, drought-tolerant plants.
- We are currently constructing our first planned LEED certified building—the 119,000-square-foot Mashouf Wellness Center—to be completed in 2018.
- The Cesar Chavez Student Center grades its food vendors according to sustainability criteria. The program is administered by Associated Students Sustainable Initiatives.
- SF State’s Power to the Pedal program provides bicycle education and free tune-ups to campus bike commuters.
- We have installed 9 electric vehicle charging stations.
- SF State’s Office of Sustainability has two full-time staff and a team of student assistants.
- The University Park North residential area includes a demonstration urban fruit orchard.
2015 Higher Education Energy Efficiency and Sustainability Best Practice Award Winners

Overall Sustainable Design

CSU Long Beach, LA234 Renovation Project

The renovation of Liberal Arts 234’s buildings and site address water and energy efficiency while improving seismic safety and classroom space. The design factored in building envelope improvements with HVAC upgrades to provide better thermal comfort and reduced cooling demand. All lighting fixtures were replaced with LEDs with integrated smart controls. Combined, these strategies resulted in the project performing an estimated 33% better in terms of energy use compared to a Title 24 baseline. The award committee was also impressed with the project’s 52% reduction in irrigation water use, which was achieved by removing significant areas of turf.

Presentation: Tuesday, July 21st, 2015, 2:00pm-3:15pm in Burk Hall, Room 226, “Best Practices in Overall Sustainable Design”

UC Berkeley, New Campbell Hall

Campbell Hall sits facing one of UC Berkeley’s most significant historical plazas. The design lexicon for the new building is at once respectful of the neighboring historic structures and also reflective of the university’s mission for student-faculty interaction and sustainable design. The committee appreciated how the building process showcased best practices with respect to user engagement during design and move in, including education regarding building features, as well as a commitment to conduct a user survey six months post occupancy. The results of the survey will be provided to facilities, along with a corrective action plan for any concerns it may raise.

Presentation: Tuesday, July 21st, 2015, 2:00pm-3:15pm in Burk Hall, Room 226, “Best Practices in Overall Sustainable Design”

(Honorable Mention) UC San Diego, Marine Ecosystem Sensing, Observation and Modeling building

The Marine Ecosystem Sensing, Observation and Modeling building at the Scripps Institution of Oceanography is the first certified LEED Platinum laboratory building at UCSD. The building combines research and education in marine ecosystems, climate variability, and marine ecosystem forecasting. The design leverages the mild San Diego climate by utilizing natural ventilation and passive heating in non-lab spaces, as well as exposed thermal mass to reduce energy used for thermal comfort. In addition, FSC certified exterior wood slats allow for extensive daylight and views while limiting solar heat gain. The building also includes a 61 kilowatt rooftop photovoltaic system.
HVAC Design and Retrofit

San Jose State, San Jose State University Chiller Plant Improvements

The chiller plant retrofit project addressed the anticipated load growth on campus, as well as increasing the operational efficiency of the plant. The major measures that were implemented in this retrofit included replacement of the electric chillers with new variable speed versions, conversion of the primary chilled water pumping from constant to variable flow, modification of the piping to improve efficiency, optimization of the sequence of operations, and a new controls system. These changes add up to an average annual saving of almost $320,000.

(Honorable Mention) CSU Long Beach, Molecular Life Science and Chemistry Lab HVAC Controls Retrofit Project

The retrofit and overhaul of the existing Molecular Life Science and Chemistry Lab HVAC control system enhanced lab safety, improved building comfort, and captured energy savings while minimizing the impact on building occupants. The installation of a new monitoring and controls system enables setbacks on air change rates, based on occupancy as well as active sampling of air within each of the 54 labs. The retrofit was completed in less than nine months without any disruption or complaints from occupants, and energy cost savings are estimated at more than $125,000 annually.

Lighting Design and Retrofit

CSU Dominguez Hills, Honeycomb Ceiling

Representing a different architectural era, honeycomb concrete structures are fixtures of many California campuses. Their geometry makes them particularly challenging for lighting, given that much of the useful light gets lost in the flanges of the honeycomb. CSU Dominguez Hills tackled this issue by collaboratively developing an LED fixture that could be retrofitted into this type of structure. Facilities worked with a local manufacture to develop a prototype and then with students to assess fixture and energy savings. The project replaced 441 existing fluorescent fixtures with 179 LED fixtures, saving over 100,000 kWh annually.
**Presentation**: Wednesday, July 22nd, 2015, 10:15am-11:30am in Burk Hall, Room 1, “Lighting Retrofit Successes: Low Tech to High Tech”

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**UC Irvine, Student Center Interior Lighting Upgrade**

The UCI Student Center is a 400,000 SF facility that serves as the main hub for the campus community. There are a variety of spaces, including a bookstore, eating facilities, ballrooms, and offices. The project addressed all interior lighting, replacing 3,200 fluorescent fixtures with LEDs and dimming controls. Results include energy savings of more than 970,000 kWh and over $125,000 in energy costs, as well as improved color rendering, lighting consistency, and brightness.

**Presentation**: Wednesday, July 22nd, 2015, 10:15am-11:30am in Burk Hall, Room 1, “Lighting Retrofit Successes: Low-Tech to High-Tech”

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**Innovative Waste Reduction**

**CSU Northridge, Integrating Waste Diversion and Organic Gardening into a Learning Opportunity**

A coordinated effort between the Institute for Sustainability and CSUN dining services resulted in diverting all pre-consumer waste from campus dining areas and coffee shops to go to composting and organic gardening. Closing the loop between these previously independent activities provides cost savings to the university, advances a zero-waste agenda, and fosters a culture of sustainability among the University community. The program provides a facility where the community can learn principles of sustainability and engage in practical efforts to implement changes. It also provides work experience for students employed by the Institute to run the compost and food garden operations.

**Presentation**: Wednesday, July 22nd, 2015, 1:45pm-3:00pm in the Humanities Building, Room 408, “Best Practice Award Winners in Waste Management”

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**UC Santa Barbara, Optimizing Waste Management Services through Stakeholder Engagement**

A pilot custodial staff engagement program developed by UCSB improved waste management practices and decreased the workload required from custodial staff to service the indoor waste infrastructure. Facilities managers walked 10 buildings on campus with custodial staff to identify underutilized and outdated containers, as well as locations where new containers and signage were needed. Waste collection practices were improved through a collaborative approach to understanding the needs of custodial staff, resulting in reduced contamination of recyclables, use of fewer bin liners, and less time required to service receptacles. The program also fostered feedback amongst custodial staff and management.
Presentation: Wednesday, July 22nd, 2015, 1:45pm-3:00pm in the Humanities Building, Room 408, “Best Practice Award Winners in Waste Management”

(Honorable Mention) UC Davis, Gravel Washing/Recycling System

The gravel that lines the pens at the California National Primate Research Center at UC Davis used to be thrown out after use, accounting for roughly 25% of campus waste. While many options had been studied through the years, it took a new employee’s innovative concept of using recycled water from the wastewater treatment plant, a cement mixer, and gold mining equipment to effectively clean the gravel for reuse. This single project has increased the campus diversion rate from 66% to 76%, and the net costs to run the system, including the amortized system cost, are lower than landfill disposal.

Presentation: Wednesday, July 22nd, 2015, 1:45pm-3:00pm in the Humanities Building, Room 408, “Best Practice Award Winners in Waste Management”

Sustainable Foodservice

San Diego State University, Dining Certified Green Restaurant® Excellence

SDSU Dining has systematically implemented sustainable operational practices across each of its 33 foodservice locations to earn Green Restaurant certification on individual restaurants, catering, residential dining, centralized production, concessions, the Faculty/Staff Club, and even convenience stores. Building level actions included installing photovoltaic panels, retrofitting lighting, and improving water efficiency. Operational changes included expanding recycling and composting, switching to environmentally preferable products, and collecting used cooking oil for biofuel production. The food itself is also more sustainable, with vegetarian options available at all locations and local and organic products used as much as possible.

Presentation: Tuesday, July 21st, 2015, 10:15am-11:30am in the Fine Arts Building, Room 193, “Greening Food Franchises and Integrating Student-Grown Foods in Dining”

UC Davis, Aggie Grown – Harnessing the Hyper-Local

The UC Davis Russell Ranch Sustainable Agriculture Research Facility is home to a 100-year study comparing growing methods of wheat and tomatoes. In 2011, students working with Russell Ranch and Dining Services saw an opportunity to connect the thousands of pounds of tomatoes and wheat produced each year to campus food services. Since then, students and staff have worked to develop a campus-based food system supply chain. From production planning and price setting to navigating campus regulations, recipe development, and student engagement, Russell Ranch provides an example of maximizing educational opportunities associated with efforts to serve sustainably-sourced food.
**Presentation:** Tuesday, July 21st, 2015, 10:15am-11:30am in the Fine Arts Building, Room 193, “Greening Food Franchises and Integrating Student-Grown Foods in Dining”

### Sustainable Transportation

**CSU Los Angeles, Hydrogen Research and Fueling Facility**

When it opened in May 2014, the research and fueling hydrogen station at CSU Los Angeles became the largest such facility on any university campus in the United States. The station is capable of using renewable sources such as solar and wind power for hydrogen production via electrolysis. Hydrogen powers zero-emissions fuel cell vehicles (FCVs), actively serving motorists in Los Angeles and Southern California. The hydrogen facility provides key research data on fueling performance and station operations to the U.S. Department of Energy and National Laboratories, as well as to state agencies such as the California Energy Commission and the California Air Resources Board.

**Presentations:** Tuesday, July 21st, 2015, 4:00pm-5:15pm in the Humanities Building, Room 217, “Emergence and Growth in Fuel Cell and Electric Vehicle Programs” & Wednesday, July 22nd, 2015, 1:45pm-3:00pm in the Humanities Building, Room 217, “Curricular Inroads to Advanced Vehicle Technologies and Carbon Footprint Reduction”

### Water Efficiency and Site Water Quality

**Cal Poly San Luis Obispo, Drought Response**

Cal Poly convened a Drought Planning Group consisting of a broad base of campus stakeholders. The group conducted a comprehensive investment grade audit of water conservation opportunities in both buildings and landscape and developed a Drought Plan, identifying high priority projects and setting a goal of reducing water use by 10% by 2016. Immediate measures included installing low flow fixtures, replacing dining equipment, reducing cooling tower blowdown, and improving landscape irrigation efficiency. With a payback of less than a year, these measures save 39 million gallons annually and helped the campus achieve their 2016 goal a year early.

**Presentation:** Wednesday, July 22nd, 2015, 8:00am-9:15am in Burk Hall, Room 236, “Best Practice Winners for Water Conservation”

### UC Santa Cruz, UCSC Drought Planning

This project highlights the effectiveness of collaborative relationships in meeting seemingly impossible goals. When the City of Santa Cruz mandated a 25% curtailment of water usage due to extreme drought, UC Santa Cruz was prepared with ten years of drought planning already
in practice. Due to the preparation of the campus, the collaboration between the University and City of Santa Cruz, and the effective execution of a drought plan, the campus was able to successfully meet this demanding target. Water efficiency projects, web based water management, and extensive campus engagement resulted in 27.8 million gallons being saved in eight months.

**Presentation:** Wednesday, July 22nd, 2015, 8:00am-9:15am in Burk Hall, Room 236, “Best Practice Winners for Water Conservation”

(Honorable Mention) **CSU Long Beach, Water Action Plan Projects**

In 2014, CSULB developed a campus Water Action Plan to reduce overall water consumption as a response to the California drought emergency. As part of the plan, a series of water conservation projects were identified, funded, and implemented to make an immediate impact. These projects represent the first of a series of phases that will be implemented over the next 3 years. Phase one projects included fixture and equipment replacements and are anticipated to save more than 20 million gallons annually.

**Presentation:** Wednesday, July 22nd, 2015, 8:00am-9:15am in Burk Hall, Room 236, “Best Practice Winners for Water Conservation”

(Honorable Mention) **UC Los Angeles, Campus High-Purity Water Management**

Prior to bringing high-purity water management in-house, UCLA annually used 24 million gallons of water to produce 7 million gallons of high-purity water and spent $400,000 in preventive maintenance services. UCLA Utilities Department of Facilities Management proposed a strategy to shift the preventive maintenance services to in-house mechanics backed by an independent water consultant to save water through improved maintenance practices, to improve documentation that water quality standards were being achieved, and to reduce preventive maintenance costs through process optimization and standardization. This strategy reduces water waste by 40% and saves $168,000 per year in combined water and maintenance costs.

**Presentation:** Wednesday, July 22nd, 2015, 10:15am-11:30am in Burk Hall, Room 236, “Achievements and Lessons Learned in Water Saving Programs”

**Student Energy Efficiency Program**

**CSU Chico, Wildcat Sustainability Showdown/Campus Conservation Nationals**

The Wildcat Sustainability Showdown is CSU Chico’s answer to the nationally coordinated energy conservation program Campus Conservation Nationals. For the third consecutive year, the two week competition between residences resulted in significant energy savings and increased
awareness about individual impacts on energy use. Energy savings have improved consistently each year, and CSUC has regularly topped the competition rankings in California and nationally. Over the three years, campus staff and student representatives have engaged more than 1,200 student residents in the comprehensive education campaign.

**Presentation:** Tuesday, July 21st, 2015, 10:15am-11:30am in the Humanities Building, Room 217, “Sustainability Programming for Campus Housing: Teaching Conservation and Behavior Change”

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**UC Berkeley, LED Microscope Retrofits**

At UC Berkeley, there are 110 different university-endorsed research units, many of which include microscopes. Most microscopes are lit by high-intensity discharge (HID) metal halide bulbs, which have many disadvantages in terms of energy use, lifespan, and research safety. The LED Microscope Lighting Retrofit Project alleviated a large part of these inefficiencies by replacing metal halides with thermally stable and efficient LED lamps. In addition to energy, maintenance, and safety improvements, the student-led project had the benefit of engaging researchers in a conversation about sustainability in laboratories.

**Presentation:** Tuesday, July 21st, 2015, 4:00pm-5:15pm in Burk Hall, Room 1, “Student-Led Energy Efficiency Efforts in Housing, Labs, and the Restructuring of Financial Incentives”

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**Student Sustainability Program**

**CSU Fullerton, Campus Wide Sink Audit & Aerator Retrofit**

In an effort to educate about water use and identify water saving opportunities, the Alliance to Save Energy PowerSave Campus interns at CSU Fullerton worked with facilities staff to audit every sink on campus. Students measured flow rates and catalogued 543 sinks in 17 different buildings to determine which could be replaced with 0.5 GPM aerators. The project quickly and efficiently saved 1.8 million gallons and provided an important learning opportunity for students and staff. It is an excellent example of how students can work with facilities to accomplish high-impact projects that facilities staff would otherwise not have time to do.

**Presentation:** Wednesday, July 22nd, 2015, 10:15am-11:30am in Burk Hall, Room 236, “Achievements and Lessons Learned in Water Saving Programs”

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**UC Los Angeles, Sustainable Living Community**

UCLA’s Sustainable Living Community gives a deep sustainability experience to a small group of students and provides an education and outreach tool to show how the rest of the 12,000
on-campus residents can live more sustainably in their everyday life. The co-curricular living and learning environment brings together students with interests in sustainability to participate in specially designed programs that cater to their academic, social, and personal needs. This creates a living-learning environment that facilitates the development of sustainability leaders.

**Presentation:** Tuesday, July 21st, 2015, 10:15am-11:30am in the Humanities Building, Room 217, “Sustainability Programming for Campus Housing: Teaching Conservation and Behavior Change”

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**Monitoring-based Commissioning**

**San Diego State University, Arts and Letters Building**

The Arts and Letters Building at SDSU combined commissioning and retrofit project included revision of air handler and fan coil schedules, adjustment of supply air temperature reset, modification of chilled water and hot water pump sequences, implementation of static pressure reset for fan control, and optimization of economizer control, as well as addition of CO2 sensors for demand-controlled ventilation in lecture halls. Measured energy savings include 21% of electricity use, 25% of chilled water use, and 55% of steam use. A systems manual and operations and maintenance plan were created to complement staff training intended to help achieve persistent savings.

**Presentation:** Wednesday, July 22nd, 2015, 8:00am-9:15am in the Burk Hall, Room 1, “Monitoring-Based Commissioning (MBCx) Plus Continuous Commissioning Equals Persistent Savings”

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**UC Santa Barbara, Chilled Water Loop Optimization**

The Chilled Water Loop Optimization project at UCSB connects chiller plants in eight buildings, totaling 5,700 tons of capacity and serving 3 million gross square feet of floor area, a large fraction of which is laboratories. The project increased the accuracy of chilled water energy measurements and system analysis, which enables more optimal selection and staging of chillers and peripheral equipment. This resulted in a measured decrease of 31% in the total energy used and a decrease of 21% in peak electric demand for production and distribution of chilled water.

**Presentation:** Wednesday, July 22nd, 2015, 8:00am-9:15am in the Burk Hall, Room 1, “Monitoring-Based Commissioning (MBCx) Plus Continuous Commissioning Equals Persistent Savings”
Sustainability Innovations

Cal Poly San Luis Obispo, Creative Energy Project Finance

Campuses face similar challenges of growing deferred maintenance backlogs and limited access to capital for energy conservation projects. Low/zero interest loan programs offer a solution to this problem. Cal Poly SLO utilized PG&E’s on-bill finance program in conjunction with a low interest loan from the California Energy Commission to implement $4 million in energy efficiency projects, which will result in annual savings of $282,000 in utility costs and $21,000 in maintenance. This project significantly improves the quality of campus learning and working environments, achieves substantial utility and maintenance savings, and impressively reduces campus greenhouse gas emissions.


UC Santa Barbara, Public Relations Campaign

The goal of UCSB’s Public Relations Campaign is to increase visibility and education of internal and external stakeholders about the University’s achievements in sustainability and its goals for the future. The campaign is also designed to encourage behavioral changes and collaboration between UCSB Sustainability and the broader community. Last year, the multi-media campaign focused on drought and water issues and included outreach to the university and Santa Barbara communities with strategies such as informative posters, public bus ads, social media posts, movie trailer videos, and a public event and lecture series.

Presentation: Wednesday, July 22nd, 2015, 11:45am-12:15pm in the Fine Arts Building, Room 193, “UC Santa Barbara Public Relations Campaign”

Sustainability in Academics

Cal Poly San Luis Obispo, Cal Poly Sustainable Environments Minor

The Sustainable Environments minor offers students in any major an opportunity to shape their own education, informed by principles of sustainable environmental design with global, regional, and local perspectives. The minor includes a required two-quarter, two-course, team-taught interdisciplinary sequence and completing courses selected from a variety of departments in almost every college. The committee appreciated the program’s long-standing history of success as a model of high-impact curricular engagement that offers students real-world experience based on lessons learned in the classroom. To date, over 1,400 students have graduated with the Sustainable Environments minor, becoming influential sustainability leaders in their fields.
Presentation: Wednesday, July 22nd, 2015, 10:15am-11:30am in the Fine Arts Building, Room 193, “Beyond Silos: Sustainability across the Curriculum in Diverse and Interdisciplinary Contexts”

UC Los Angeles, Education for Sustainable Living Program

The Education for Sustainable Living Program enrolls over 100 students each year from more than 30 different majors. Each fall, students attend a Speaker and Film Series, and in winter and spring, students partner with campus stakeholders in Action Research Teams (ARTs). ARTs research and tackle UCLA’s sustainability challenges, specifically in recycling, energy efficiency, water conservation, purchasing, food systems, and facilities. As of 2014, over 240 students have been engaged, completing 40,000 hours with 46 campus stakeholders. As such, the committee valued the program’s ability to transcend disciplinary boundaries and connect students with real life projects on their own campus.

Presentation: Wednesday, July 22nd, 2015, 10:15am-11:30am in the Fine Arts Building, Room 193, “Beyond Silos: Sustainability across the Curriculum in Diverse and Interdisciplinary Contexts”
Posters

UC Carbon Neutrality Initiative Fellows’ Posters

Education and Empowerment of Student Leaders & Broadening our Movement

This poster will cover the efforts that two UC Carbon Neutrality Initiative fellows took to engage students in the Initiative. Our goals were to inform students and allow them to give input on the endeavor. This poster will describe efforts to engage environmental and non-environmental student organizations. We will discuss the use of community forums, informal meet and greet style events, and coalition building strategies. We will also discuss a visual aid that we developed which sparked conversation on the scope and values defining the initiative. Through all of these efforts, we helped empower students to have a voice in the UC Carbon Neutrality Initiative.

Unique Vance, Undergraduate Student, Global Studies; UC Carbon Neutrality Initiative Fellow; Environmental Justice Chair, Associated Students Environmental Affairs Board, UC Santa Barbara

Characterizing carbon in California forests: adapting GHG inventories to climatic stress and rising mortality

This project examines how standing dead trees impact the pools and fluxes of carbon in California mixed conifer forests. The work is based primarily on an extensive dimensional analysis of standing dead trees, describing their patterns of carbon density through detailed measurement of wood density and carbon content. The research will be used to improve the accuracy and completeness of forest carbon accounting and greenhouse gas budgets for California’s changing forests. It turns field-based information into knowledge useful for environmental policymaking, industry planning, and investment in ecosystem services markets.

Stella Cousins, Graduate Student, Ecology, Department of Environmental Science, Policy, and Management; UC Carbon Neutrality Initiative Fellow, UC Division of Agriculture and Natural Resources

Conservation through Creation

The concept of bringing awareness to climate change through art is implemented by the idea of letting a section of grass at UC Irvine return to its natural state. This project involves shutting off sprinklers between Humanities Gateway and the Bioscience Library. Over the time frame of this one-month project, until the grass fully dies, the amount of water used for irrigation (5040 gallons per week), will be updated weekly on the signage visible to the audience. Hopefully, this will bring awareness to climate change by bridging the gap between art and science.

Kathleen Deck, Undergraduate Student, Art; UC Carbon Neutrality Initiative Fellow, UC Irvine

Updating UC Merced’s Climate Action Plan

UC Merced is working towards its goal of Zero-Net Energy, and it will be documented in a compilation called the Climate Action Plan. This project represents UC Merced’s campus culture of sustainability and energy efficiency, while creating a comprehensive report of faculty’s efforts to provide the infrastructure to do so. Additionally, by learning about areas where students are willing to improve, fellows at UC
Merced can collaborate to bring more events to the campus to increase students’ interest regarding environmental stewardship.

Adriana K. Gomez, Undergraduate Student, Earth Systems Science; UC Carbon Neutrality Initiative Fellow, UC Merced

My2025UCLA

My2025UCLA campaign involves taking pictures of students holding up whiteboards with a description of how they see a more sustainable future. The success of this project rests in the diversity and uniqueness of UCLA and its students, each bringing a different background and story to their vision of a carbon neutral 2025. The campaign plans to use the pictures to combine video montages and interviews into a campaign video, which will be showcased through various social media platforms, in order to direct more attention to diversity and individual stories.

Sam Hirsch, Undergraduate Student, Communication Studies; UC Carbon Neutrality Initiative Fellow, UC Los Angeles

Austin Park, Undergraduate Student, Civil and Environmental Engineering; UC Carbon Neutrality Initiative Fellow, UC Los Angeles

Parker Wells, Graduate Student; UC Carbon Neutrality Initiative Fellow, UC Los Angeles

The efficient use of Inhaled Anesthetics to reduce Greenhouse gas emission

Efficient use of fresh gas flow with inhaled anesthetics can decrease costs and impact medical greenhouse gas emissions at UCSF. The goal of this project is to decrease volatile agent consumption and resultant purchasing costs. Inhaled anesthetics are greenhouse gases routinely used for general anesthesia. Total fresh gas flow used to administer anesthetic gases determines the proportion of inhaled gases that enter the atmosphere. In order to promote the efficient use of inhaled gases, data must be collected on current practice patterns. This information is now incorporated into UCSF’s electronic medical record.

Nicole Jackman, Professional Studies, Anesthesiology; UC Carbon Neutrality Initiative Fellow, UCSF Medical Center

Student Sustainability Network

Coordinating groups and organizing individuals are vital in creating change. Through engagement with fellows at UC Irvine and across California, the author will be building a student sustainability network and climate action platform. This infrastructure will be the foundation upon which future initiatives and campaigns can be built – giving students at UCI an easy way to get engaged with their campus and their communities. What climate education needs is a platform, through which the public can get engaged, rather than relying on data presented in reports.

Cody Lee, Undergraduate Student, Social Ecology; UC Carbon Neutrality Initiative Fellow, UC Irvine

Energy Management for Carbon Neutrality

Operational building efficiency is a key component of the Berkeley Lab’s efforts to meet deep efficiency targets and support carbon neutrality. This project will expand on a completed pilot to establish regular energy management capability for Berkeley Lab. This established a set of key buildings, representing 90% of the buildings-related greenhouse gas emissions of Berkeley Lab, in an internet-based building energy information software system. The project involves learning about the operation of
Berkeley Lab buildings, configuring buildings in the energy information software system, and developing a standard operational process for identifying energy saving opportunities in buildings.

Christine Li, Undergraduate Student, Civil and Environmental Engineering, Minor in Computer Science; UC Carbon Neutrality Initiative Fellow, Lawrence Berkeley National Laboratory

Quantifying methane emissions via ebullition in restored California wetlands

This project investigates emission rates of the greenhouse gas methane from restored wetlands in the Sacramento Delta, California. Unlike many other wetland studies, the research focuses on methane emissions via bubbling events (ebullition) that are episodic and, therefore, hard to quantify. Using a highly replicated sampling campaign, the study aims to produce statistically robust estimates of weekly, seasonal, and annual wetland methane ebullition and to understand their spatial dynamics. The findings will inform protocols for optimal carbon management in wetlands.

Gavin McNicol, Graduate Student, Environmental Science, Policy and Management; UC Carbon Neutrality Initiative Fellow, UC Berkeley

Colin Mickle, Graduate Student, Climate and Energy Policy; UC Carbon Neutrality Initiative Fellow, UC Davis

How cool is UCI?

UC Irvine was ranked the #1 “Cool School” by Sierra Magazine in 2014. Although UCI has made significant reductions in potential greenhouse gas (GHG) emissions from new building space, reduction in existing buildings is still a major constraint. The primary purpose of this project is to perform a feasibility study of “cool roofs” for the existing on-campus buildings in order to develop a proposal for cool roofs implementation for the Office of Sustainability. The core of this research is to utilize the campus as a living laboratory for reducing greenhouse gas emissions by retrofitting the existing building envelope.

Asiya Natekal, Doctoral Student, Planning Policy and Design; UC Carbon Neutrality Initiative Fellow, UC Irvine

Selective Dissolutions

This project will determine which chemical species, Iron (Fe) or Aluminum (Al) oxides, contribute the most to terrestrial carbon sequestration. They are nanoparticles that are found in soil. These oxides are reactive,
forming important associations with organic matter (OM). Soil erosion can remove both oxides and OM from soil – affecting carbon sequestration or the potential of the terrestrial soil mass to remove carbon from the atmosphere. For this project, a series of selective dissolutions are used to extract the nanoparticles iron and aluminum oxides from soil.

Alexander Newman, Undergraduate Student, Earth Systems Science; UC Carbon Neutrality Initiative Fellow, UC Merced

Austin Park, Undergraduate Student, Civil and Environmental Engineering; UC Carbon Neutrality Initiative Fellow, UC Los Angeles

UC Reserves for Energy Efficiency Learning (UC REELs)

The UC Reserves for Energy Efficiency Learning (UC REEL) program assists the UC Natural Reserve System in becoming a beacon of energy efficiency by connecting student groups with their local Reserves and providing detailed energy audits. These audits will note potential infrastructure changes that can be implemented to save energy and aid the system in becoming carbon neutral. Each Reserve with research or lodging facilities is receiving an energy audit and recommendations for energy conservation. As campus staff, faculty, students, and community members visit the Reserves, they will be introduced to concepts of energy efficiency.

Hope Pollard, Graduate Student, Master’s of Urban and Regional Planning; UC Carbon Neutrality Initiative Fellow, UC Irvine

Best Practices for Carbon Neutrality at the University of California, Santa Barbara

Sustainability stakeholders at the University of California, Santa Barbara (UCSB) recruited two Carbon Neutrality Initiative (CNI) Fellows during Spring 2015 to research best practices for achieving campus carbon neutrality by 2025. Best practices entail innovative technology, policy, and design. Fellows were tasked with composing a list of potential best practice options for UCSB. From this preliminary investigation the fellows selected key projects towards which they completed further research. This included expert interviews, literature review, and localized implementation analysis to determine the benefits, costs, risks, timeframe, and feasibility of best practices at UCSB.

Maximilian Salvador Stiefel, PhD Candidate, Geography; UC Carbon Neutrality Initiative Fellow, UC Santa Barbara

Claire Dooley, Recent Graduate, Masters Program, Bren School of Environmental Science & Management; UC Carbon Neutrality Initiative Fellow, UC Santa Barbara

Carbon Free Cal

The Carbon Neutrality Fellows at UC Berkeley worked on reducing carbon emissions by focusing on decreasing student and staff energy use and increasing fleet fuel economy. This entails analyzing and improving different programs’ accessibility and usability for faculty members. Fellows also used surveys and presentations to reach over 100 students and discovered that they have a low level of knowledge about the carbon neutrality initiative, despite a high level of concern for environmental issues. Therefore, fellows recommend improving marketing, including branding, outreach events, and collaboration with other student groups.

Sarah Strochak, Undergraduate Student, Urban Studies, Economics; UC Carbon Neutrality Initiative Fellow, UC Berkeley

Mikela Topey, Undergraduate Student, Environmental Sciences; UC Carbon Neutrality Initiative Fellow, UC Berkeley
Climate Neutrality Initiative: Student Communications

The Student Communications Fellow’s goal is to raise awareness of sustainability opportunities on campus and to inform students about UC San Diego’s Climate Action Plan and UC’s Carbon Neutrality Initiative. The primary method of outreach is through writing blogs and short articles about various aspects of UCSD and the UC system’s efforts towards environmental awareness and climate neutrality. Topics include highlights of particular campus organizations, climate neutrality research projects, recaps of policies, and suggested legislation at the UC level. The posts are available through UCSD’s Sustainability Resource Center online blog.

Linda Tong, Undergraduate Student, General Biology; UC Carbon Neutrality Initiative Fellow, UC San Diego

Climate Communications: Innovative and Creative Student Engagement Strategies

This project seeks to develop new and innovative forms of student engagement regarding climate change. To network the endeavors of the UC schools, a system-wide climate resource website and social media campaigns will be created to enhance students’ interest and engagement in UC climate action resources. Also, through collaboration with the UC Irvine Department of Dance, a screendance captured at various drought-stricken locations near UC schools will be created and showcased in May of 2016. This project is meant to reach far beyond the scope of UC students.

Amelia Unsicker, Graduate Student, Dance; UC Carbon Neutrality Initiative Fellow, UC Irvine

Real-time Source Apportionment for Single Particle Mass Spectrometers

A real-time source apportionment product concept was developed as part of the UC Climate Initiative, an analysis tool that enhances the online usability of the single particle mass spectrometer. This solution leverages a unique opportunity to establish rare and valuable scientific relationships with Chinese atmospheric scientists. Since China is now the world’s biggest user of single particle mass spectrometers for emissions source characterization, this product will be the focal point of collaboration between UC San Diego and Chinese atmospheric scientists.

Charlotte Beall, Graduate Student, Climate Science; UC Carbon Neutrality Initiative Fellow, UC San Diego

Quality Carbon: Investigating the Potential for Localized Carbon Offsets for the University of California

The Carbon Neutrality Initiative commits the UC system to zero carbon emissions by 2025. While UC campuses are implementing energy efficiency projects and looking to increase the percentage of renewable energy in their electricity portfolios, a zero-net-carbon goal will also require the purchase of carbon offsets. Therefore, this project aims to determine if the UC’s can purchase “local offsets” that support individual campuses by localizing funds to a specific campus. If such an administrative structure could not yield high-quality offsets, this research looks for what process of evaluations the UC’s should deploy to decide what offsets to buy.

Colin Mickle, Graduate Student, Climate and Energy Policy; UC Carbon Neutrality Initiative Fellow, UC Davis
Rufus Reduces

The goal of this project is to raise awareness of the UC Carbon Neutrality Initiative. The Rufus Reduces program aims to communicate the sustainability goals of the UC system and the Global Climate Leadership Council (GCLC) to students and faculty on campus. This is done by linking existing sustainability programs and ensuring a central form of communication between all programs. Once linked, information will be centralized and will be used to encourage student engagement in taking action towards climate change.

Gabriel Morabe, Undergraduate Student, Ecology & Evolutionary Biology; UC Carbon Neutrality Initiative Fellow, UC Merced

LED Retrofit

The LED Retrofit plan aims to replace all current lighting fixtures with energy-efficient LED technology. The LED lighting fixtures will help UC Riverside reach the desired level of MTCO2e emissions by 2020, while setting the campus on the path for carbon neutrality by 2025. This project will not only benefit UCR, but can also be implemented at other campuses as well. This plan will suggest the best approach to change out fixtures across the campus that will reduce installation costs and achieve the best return on investment, while, at the same time, reducing carbon emissions.

Salvador Ulloa, Undergraduate Student, Mechanical Engineering; UC Carbon Neutrality Initiative Fellow, UC Riverside

Effects of Precipitation and Invasion Regimes on Decomposition Rates and Carbon Storage Potential

California is predicted to face a climate change-induced rainfall regime, characterized by increased periods of drought punctuated by high rainfall years. Shifting rainfall often precedes invasion by non-native grasses into historically shrub-dominated systems, which could potentially alter ecosystem-level carbon storage capabilities, and impact both productivity and decomposition processes. This research is conducted at four UC Natural Reserve sites to study plant decomposition rates across a natural precipitation gradient. The author is also experimentally altering precipitation at another site to get a greater mechanistic understanding of how altered precipitation affects decomposition and production rates.

Ellen Esch, Graduate Student, Ecology; UC Carbon Neutrality Initiative Fellow, UC San Diego

UC Global Food Initiative Fellows’ Posters

Can Altering Messaging Change Consumer Food Waste Behavior?

With an ever-growing population, there is increasing discussion about the World Food Crisis. Currently, a third of food waste produced in the United States occurs at the consumer level. At UCSB, the dining commons are buffet-style, meaning there is no financial loss associated with wasted servings. Our project aims to determine effective messaging to elicit behavior change in students. We chose two treatment signs, one based on social validation and one as a control environmental message. Our presentation discusses our methods for data collection, messaging tactics, and results. We hope to expand our results to other buffet-style facilities.

Emilie Wood, Undergraduate Student, Environmental Studies; UC Global Food Initiative Fellow, UC Santa Barbara

Kate Parkinson, Undergraduate Student, College of Creative Studies Biology; UC Global Food Initiative Fellow, UC Santa Barbara
Inclusive Food Systems: Immigrants, Indigeneity and Innovation

This project aims to build a more sustainable and equitable food system that is inclusive of indigenous and immigrant communities. It consists of an assessment of existing research and practices, as well as an engagement of UC Irvine undergraduate students collecting oral histories relating to food from immigrants and/or indigenous elders in Orange County. These histories are documented and archived to foster relationships with like-minded sustainable food advocates and to co-create an understanding of common concerns and issues to shape future learning activities and an expanded project of collecting oral histories.

Victoria Lowerson Bredow, Graduate Student, Planning, Policy and Design; UC Global Food Initiative Fellow, UC Irvine

Got Food?: Characterizing Student Food Insecurity and Related Factors Throughout UC

Food insecurity can negatively impact academic achievement and health. This project analyzes issues related to food access and food insecurity among UC students. A Food Insecurity module, consisting of questions adapted from validated tools and new questions informed by cognitive interviews, is being administered UC system-wide to a random sample of students. The estimated response rate at each campus is 15%, which amounts to roughly 20,000 students in total. Data will be analyzed to characterize food insecurity and how UC can better support student access to sustainable and healthful foods.

Jacqueline Chang, Undergraduate Student, Nutritional Sciences - Dietetics; UC Global Food Initiative Fellow, UC Division of Agriculture and Natural Resources

Eat Local! Eat Fresh!

“Eat Local! Eat Fresh!” is a campaign that encompasses UC Merced’s commitment to source local food to students. It actively promotes the benefits of local food through transparency, design, and education. This project sets out to integrate a food education subsection in the first-year general education curriculum Core 1 at UC Merced. By combining this new subsection with Core 1’s comprehensive approach towards an interdisciplinary educational experience, students can garner a deeper appreciation of California’s Central Valley, the breadbasket of food, and gain a new perspective on sustainability.

Hoaithi Dang, Undergraduate Student, Applied Mathematics Environmental Emphasis; UC Global Food Initiative Fellow, UC Merced

Growing Connections Between UC Student Farms and Gardens

The UC system contains a vast diversity of student-led farm and garden initiatives, but some student garden coordinators are unaware of the work being done across the UC campus, often-times struggling with problems that other campuses have already solved. With this in mind, this project aims to construct a website through which garden coordinators can learn from each other and connect. Topics that garden coordinators will discuss include: planting techniques, water efficiency, leadership logistics, funding, working with administration, encouraging student involvement, and more.

Ian Davies, Undergraduate Student, Environmental Science; Minors in GIS, Geography; Environmental Studies; UC Global Food Initiative Fellow, UC Los Angeles

Steven Eggert, Undergraduate Student, Geography; Environmental Studies; UC Global Food Initiative Fellow, UC Los Angeles
Microbial Fuel Cells for Food Waste

Microbial fuel cells (MFCs) are an emerging biotechnology that directly converts organic wastes into electricity through the use of electron-producing bacteria. This leads to bioenergy generation, wastewater remediation, and opportunities for reusing treated water for irrigation. Current research focuses on short-term, translatable technologies instead of foundational research that could advance the field. Thus, this research will improve basic knowledge of the physical mechanism of electron transfer utilized by exoelectrogenic bacteria, as well as push the boundaries of the technology towards readiness for California food processors. This research has high potential impact at a time when food and water security are of primary importance.

Forrest Ryan Dowdy, Graduate Student, Food Science; UC Global Food Initiative Fellow, UC Davis

Evaluation of the Mobile Grocery in Merced County

“Produce on the Go” is a mobile grocery truck that seeks to address the lack of access to fresh foods in rural, low-income communities in Merced County. More than half the county’s residents are Latinos, and they suffer from high rates of obesity, hypertension, and diabetes. Several communities in Merced County have been identified as food deserts, where residents are unable to purchase fresh, nutritious foods. This project aims to evaluate the effects of improved access on dietary behaviors, knowledge of nutrition, and attitudes toward healthy diet, as well as to collect data that will inform the development of a nutrition communication intervention.

Erendira Estrada, Recent Graduate, Psychology; UC Global Food Initiative Fellow, UC Merced

Leveraging Research for Policy Change

Relationship is the key to connecting research to policy; research gets more attention with the support of government agencies or nonprofit organizations. The goal of this project is to interview and profile faculty and researchers at UC Berkeley who have impacted food and agriculture policy. This can help identify best practices and common challenges for academics who are working to inspire decision making and to guide or assess policy implementation. Case studies range from soil ecology and school lunches to pesticides and pollinators.

Miranda Everitt, Professional Studies, Public Policy; UC Global Food Initiative Fellow, UC Berkeley

Food Pantry Initiative

This project focuses on eradicating food insecurity at UC Irvine by establishing food pantries and programming events that raise awareness about food insecurity. UCI fellows partnered with the UCI Student Outreach & Retention Center and the Associated Students of UC Irvine (ASUCI). 1,025 undergraduate and graduate students have signed a petition to support the establishment of the food pantry. The petition was presented to UCI Student Affairs, and its Vice Chancellor accepted the liability of the risk management issue. Other than establishing food pantries, fellows also aim to educate students to eat healthy in affordable ways.

Alexander Fung, Undergraduate Student, Business Administration; UC Global Food Initiative Fellow, UC Irvine
Local Food Access and Advocacy: Cultivating Town and Gown Synergies

This project seeks to engage students and the community with food systems, access, and research in and around UC Irvine. Inspired by the relocation of the most successful farmer’s market in the county that serves the UCI community, this project conducts a stakeholder assessment before and after the move. Fellows hosted a public forum about concerns and opportunities in the new location and held a workshop on Cultivating Food Research Community at UCI. They also compiled a brief on how universities can link learning with federal programs to improve financial access to food at farmer’s markets.

Sally Geislar, Graduate Student, Planning, Policy, and Design; UC Global Food Initiative Fellow, UC Irvine

The Psychosocial Effects of a Gardening Intervention

This project is theory-based research, to understand when, how, and why gardening may be a unique intervention that may successfully address a variety of issues in a variety of populations. The case study involves randomly assigning people to garden or to take a nutrition education class and then measuring personality and health variables a week before and a week after the activity. Result show that gardeners increased their self-rated health and their willingness to eat new fruits and vegetables. This suggests that gardening enhances behaviors and pro-environmental behaviors, and encourages positive development.

Dietlinde Heilmayr, Graduate Student, Psychology; UC Global Food Initiative Fellow, UC Riverside

University of California Global Food Initiative Food Hub Workgroup

The UC Global Food Initiative workgroup seeks to describe the current state of the food system within Los Angeles, with a focus on food hub structures, distributions, and market demand in Santa Monica. The group seeks to provide baseline descriptive research for stakeholders to identify market opportunities and guide future research areas. They also recommend creating additional government funded subsidies and grants for small and mid-sized farmers, incentive programs for large scale institutions to source from food hubs, and educational campaigns for farmers, buyers, and policy-makers to locally source food within food hubs.

Lucie Dzongang, Graduate Student, Business Law; UC Global Food Initiative Fellow, UC Los Angeles

Participatory Design

This project examined the design and possibilities of food forests in Southeastern San Diego, an area considered a “food desert.” The purpose of the study was to find ways in which the community can partake in creating better, locally-grown, organic, produce through the use of urban gardens. Based on the understanding that people are usually more willing to invest themselves in something that they have invented, a participatory design process was used. A professional designer led a charrette and then translated diverse community needs into a synthesized and achievable plan. Case studies from other communities will also be discussed.

Jane Kang, Undergraduate Student, Urban Studies & Planning; UC Global Food Initiative Fellow, UC San Diego
Experiential Learning in Food Systems Education within the UC System

The GFI Subcommittee on Experiential Learning is working to analyze experiential learning opportunities in food systems education within the University of California system. This poster will highlight 4 projects including: (1) the development of an online database of courses and programs featuring experiential learning components, (2) an assessment of the current state of experiential learning across UC campuses, (3) a video series highlighting outstanding programs at each campus, and (4) a conference and workshop series to forge a stronger future for experiential learning in the UC system.

Kate Kaplan, Undergraduate Student, Sustainable Urban Ecology, Society and Environment; UC Global Food Initiative Fellow, UC Berkeley

Connecting Graduate Students to UC Cooperative Extension

Graduate students at UC Berkeley are often looking to partner with the community while doing applied research. However, students are often isolated from the best entity to facilitate these collaborative projects, i.e. the Cooperative Extension (UCCE). This is a loss for both sides, as many graduate students are interested in doing applied research, and UCCE academics could often use help. This Global Food Initiative project was designed to strengthen the connection between UCCE and graduate students at UCB, as well as to facilitate skill building workshops to help prepare students for Cooperative Extension.

Kevi Mace-Hill, Graduate Student, Environmental Science, Policy, and Management: Agricultural Entomology; UC Global Food Initiative Fellow, UC Division of Agriculture and Natural Resources

Another World is Possible: Food Sovereignty, Agroecological Networks, and Rural Development in Central Haiti

This qualitative research project examines the political role of local ecologies in a new global transition from agroindustrial to sustainable food systems. Transnational peasants’ movements like La Via Campesina (LVC) have recently rallied around the claim “another world is possible,” and smallholders in the movement are drawing increasing policy attention to sustainable small production. While recent studies have often located the power of peasants’ movements in their affiliation with transnational oppositional politics, this project bridges scholarship in postcolonial science and technology studies, political ecology, and peasant studies to focus on the micro-political practices that connect people, plants, and animals in the transition to a sustainable food system.

Sophie Moore, Graduate Student, Cultural Studies; UC Global Food Initiative Fellow, UC Davis

Turn Things Around: Obesity Preventions at the Grassroots

Turn Things Around is a short documentary about a new initiative to intervene in childhood obesity in Los Angeles County. In an effort to confront obesity in her community, Stefani Gilmore, an African-American single-mother of five in Pasadena, California, works with other parents to formulate local policies that will protect their children from the adverse effects of food marketing. She and other parents from Pasadena are photographing unhealthy food advertisements in their neighborhood for a group dialogue about making changes in local food policies.

Kayee Liu, Undergraduate Student, Human Biology and Society; UC Global Food Initiative Fellow, UC Los Angeles
Fostering Equity and Inclusion: Food Security Efforts at UCSC and Beyond

This poster will describe two projects of a UC Global Food Initiative Fellow. Ms. Owings served as a key organizer for the inaugural California Higher Education Food Summit (CAHEFS) and is active with the UCSC Food Security Task Force. The CAHEFS aimed to strengthen partnerships between UC’s, CSU’s, CCC’s, and community partners while sharing best practices and experiences to inform action steps toward fostering food access, equity, and justice for all. Outcomes of GFI Food Security and Access subcommittee sessions held at the CAHEFS include securing more funding per UC campus and activating food security task forces at each campus. UC Santa Cruz is working to harness our current resources and partnerships while initiating food security-based research labs in order to develop a holistic food security center to serve students.

Crystal Owings, Food Systems Working Group Co-Chair; Real Food Calculator Project Coordinator; Undergraduate Student, Environmental Studies; Latin American and Latino Studies; UC Global Food Initiative Fellow, UC Santa Cruz

Modeling the Environmental Impact of Agricultural Systems

Life cycle assessment is a modeling technique used to estimate the environmental impacts of agricultural systems. Ankita Raturi investigates how methods are customized, how data are structured, and how software supports modeling. Three essential difficulties are identified: it is difficult to capture the complexity of agricultural systems, to capture change data, and to capture contextual information. By drawing on software modeling theory, Miss Raturi explores the design of complementary modeling languages and tools.

Ankita Raturi, Graduate Student, Informatics, Software Engineering; UC Global Food Initiative Fellow, UC Irvine

UC Food Pantries Program Evaluation

This project evaluates the efficacy of two UC Food Pantries by using a survey distributed only to students using these pantries. This survey was created using the RE-AIM program evaluation model, the USDA Food Insecurity Module, and the UC Statewide Food Insecurity Survey. The resulting comprehensive survey evaluates the quality of food, service, and resource referral provided by UC food pantries. It also highlights the difficulties students face in accessing enough food and asks them to indicate where they regularly get their food from. The USDA food insecurity module was used as a group of indicator questions that specifically identify food insecure individuals.

Rachel Rouse, Undergraduate Student, Biopsychology; UC Global Food Initiative Fellow, UC Santa Barbara

Reinterpreting Nutrition Facts: A mobile app to inform consumer choices in the short term, and food policy in the long term

Nutri Sense is a mobile Android application designed to make the caloric information on Nutrition Facts labels more tractable to the average consumer. To achieve this, the app allows the user to convert caloric amounts into physical activity equivalents (minutes running, minutes swimming, etc.) to give users a better understanding of the energetic consequences of the foods they eat.

Jonathan Schor, MD, PhD, Neuroscience (Grad School); Medicine (Med School); UC Global Food Initiative Fellow, UC San Francisco
Stories from the Field - Global Food Initiative

Research and program experts were identified across California with the goal of disseminating their professional stories through an online portal and social media to showcase the University of California Agriculture and Natural Resources (UC ANR) efforts statewide. The main objective was to identify the agriculture, food, and nutrition work of UC ANR and to uncover the scientists and advocates behind the work. With direction from advisor Constance Schneider, PhD, and communications team members, the GFI fellow developed interview questions for experts in the fall of 2014 and began interviews during the spring of 2015.

Samantha Smith, Professional Studies, Public Health; UC Global Food Initiative Fellow, UC Division of Agriculture and Natural Resources

Updating Genomic Annotations of Transposable Elements in Maize

Transposable elements were discovered in maize in the 1940’s as unstable loci, apparent when certain genetic crosses yielded kernels with unexpected purple speckles. DNA derived from transposable elements makes up over 85% of the corn genome, and transposable elements have been shown to impact the response of plants to environmental stress. This researcher used computational methods to identify transposable elements in the maize genome. The researcher’s annotation of transposable elements provides novel data for predicting response of plants to agriculturally stressful environments.

Michelle Stitzer, Graduate Student, Population Biology; UC Global Food Initiative Fellow, Lawrence Berkeley National Laboratory

UC Global Food Initiative Higher Education Food Security Project

The UC Global Food Initiative (GFI) Food Security project aims to develop an institutionalized, system-wide model that will proactively alleviate hunger and provide holistic nutrition security on university campuses. In line with existing efforts led by the UC Berkeley Food Security Committee, the author is supporting all aspects of project implementation centered on food access and equity. Specifically, she is conducting an analysis of existing food security models, including institutional, programmatic, student, and community efforts, and contributing to a best practices toolkit. Additionally, she is overseeing emerging partnerships with local organizations to develop certified ‘nutrition pantries’ at higher education institutions.

Vanessa M. Taylor, Graduate Student, Master of Development Practice - Sustainable Agriculture & Food Systems; UC Global Food Initiative Fellow, UC Berkeley

Hydrologic Response of Managed Aquifer Recharge on Agricultural Fields During Prolonged Drought, Scott Valley, CA.

This project tests the feasibility and potential hydrologic response of using agricultural fields for managed aquifer recharge in the Scott Valley during a simulated prolonged (5 year) drought. The Scott Valley Integrated Hydrologic Model will be used to examine differences between two scenarios: 1) current agricultural and water management practices, and 2) conjunctive use management. Differences in late summer streamflow between the two scenarios will be compared to determine if managed aquifer recharge will have a significant benefit to the hydrologic system.

Douglas Tolley, Graduate Student, Hydrologic Sciences; UC Global Food Initiative Fellow, Lawrence Berkeley National Laboratory
Using genomics to guide management of a major crop pest, the Spotted Wing Drosophila

The Spotted Wing Drosophila (SWD) is a vinegar fly that was introduced to California in 2008 and has since become a major invasive pest in the United States and other regions of the world. This insect uses a serrated ovipositor to slice through the skin of fresh fruit and lay its eggs inside, where the larvae feed until maturation. The author is sequencing transcriptomes from various populations of SWD in order to identify insecticide resistance in this species and also to determine invasion history.

Jessica West, Undergraduate Student, Biochemistry and Molecular Biology; UC Global Food Initiative Fellow, UC Davis

The Lunch Tray Food Project

Through this project, undergraduate students use media production to explore the infrastructure, politics, culture, and economics that shape the production of school food. While this case study centered on school food in the LA Unified School District and its symbiotic relationship to food systems at UCLA, the presenters also make room to consider alternative means of food production in connection to sustainability initiatives and health education programs for families in the Los Angeles region more broadly.

Robert Penna, Undergraduate Student, American Literature and Culture; Film Minor; UC Global Food Initiative Fellow, UC Los Angeles

Environmental impacts of atrazine reductions

Water pollution from the herbicide atrazine impacts public health worldwide. As atrazine is used extensively and is a common water contaminant. This research investigates how restrictions on atrazine have led to changes in water quality, farming practices, and farmer decision-making in two case studies. The first case study is on the complete ban of atrazine in Italy. The second case study is on atrazine application rate restrictions and prohibition areas created in Wisconsin. Interview data, surveys, water quality analysis, and archival research were used. Results show that atrazine pollution has improved through use reductions, yet it remains a problematic water contaminant and its alternatives pose their own risks. This poster includes a discussion of strategies to reduce pesticide use in agriculture and protect water quality. In addition to this graduate research, this poster has information about the topic of food equity and education and outreach activities conducted through the Global Food Initiative.

Joanna Ory, Graduate Student, Environmental Studies; UC Global Food Initiative Fellow, UC Santa Cruz

CHESC Posters

RESOURCE: Exploring Cutting Edge Renewable Energy Technologies with Elementary Students

RESOURCE (Renewable Energy Systems Opportunity for Unified Research Collaboration and Education) is a NSF GK-12 fellowship program at UC Davis where engineering graduate students studying renewable energy technologies teach Sacramento-area 4th, 5th, and 6th graders. RESOURCE’s philosophy is that if a graduate student can communicate his or her research to an elementary student, it can be communicated to anyone. RESOURCE also aims to improve local and national education in renewable energy research through hands-on activities inspired by in-person lessons and lesson publication. Elementary students are taught about RESOURCE fellows’ research areas,
including solar panel design, wind turbine blade engineering, and algae biofuel production.

Laura Jabusch, Fellow, Renewable Energy Systems Opportunity for Unified Research Collaboration and Education (RESOURCE); Chair of the Board of Directors, California Student Sustainability Coalition; Student, Biological and Agricultural Engineer

How Can We Increase Environmental Awareness on Campus?

UCSB’s current strides towards a more sustainable campus have been phenomenal, and the Residence Halls Association has been assisting in the execution and success we have seen so far. The creation of a multi-layered hierarchy that consists of Environmental Ambassadors, Environmental Awareness Chairs, and the Head Environmental Awareness Chair Coordinator has been instrumental in RHA reaching out to residents about current environmental topics that concern our campus, our community, and Earth. Through this program, we have molded students to take on leadership roles in the Residence Halls, promoting sustainability, activism, and genuine care for the environment around them.

Sydni Baker, Residence Halls Association Environmental Awareness Chair Coordinator; Undergraduate Student, Environmental Studies, UC Santa Barbara

Planning for a Commuter’s Campus: A study on Transportation Preferences and Commuting Behavior

The majority of California State University, Northridge (CSUN) students, faculty, and staff commute to campus. In an effort to understand the carbon footprint of current commuting and to examine more sustainable options for the future, a survey of CSUN commuting patterns was carried out in the spring of 2015. A similar survey was made in 2010. CSUN made several changes to the transportation infrastructure between the 2010 and 2015 survey period. This research examines the effects of the newly provided transportation facilities in encouraging modal shift for a trip to and from campus.

Andrew Somers, Undergraduate Student, Department of Urban Studies and Planning, California State University Northridge.

Hamik Hartounian, undergraduate student, Department of Urban Studies and Planning, California State University Northridge

Mintesnot Woldeamanuel, PhD, Associate Professor of Urban Studies and Planning, CSU Northridge

Helen Cox, PhD; Director, Institute for Sustainability; Professor, Geography, CSU Northridge

Tiny House in My Backyard

The THIMBY project is an interdisciplinary collaboration of UC Berkeley students designing and building a zero net energy tiny (<400 ft2) house. We plan to build the house for visiting students and faculty at the proposed UC Berkeley Global Campus. Our tiny house will be a model for additional units, with our long-term goal of scaling up to a community of carbon-neutral housing. In order to engage the student body in working toward the UC Carbon Neutrality by 2025 initiative, we will host educational workshops during the construction of our pilot tiny house unit.

Kenneth Gotlieb, PhD Candidate, Graduate Group in Applied Science and Technology, UC Berkeley

Chris Detjen, Master Candidate, Architecture, UC Berkeley
Sustainability in My Career

A major part of the college career track is internship and professional work opportunities. Out of all the possible branches students may choose, this aims to promote a career with sustainability influence. Sustainability in My Career provides students with case studies about current and nearby projects and companies related to the diverse range of majors at the university’s campus. By teaming up with our campus’ Career Center, this project has been able to reach students.

Jomel Bautista, PowerSave Campus Project Coordinator, Student, Civil Engineering, Cal Poly Pomona

Thesis: Achieving Low-Carbon Urban Transport in the Middle East & North Africa

The high-shift analysis prepared by UC Davis projects the costs of increased urban transit infrastructure around the world. It considers what could be if the policies and investments currently in place in the nations with the most efficient urban transport were replicated throughout the world. This analysis delves into the results for the MENA region, and its implications. Increased transit not only means better mobility for all groups in the region but could improve air quality and reduce GHG emissions. The revenue from eliminating fuel subsidies in each country are compared to the costs of developing the High-Shift scenario.

Duaa Ahmed Gettani, Masters Candidate, Transportation Technology and Policy, Institute of Transportation Studies, UC Davis

Green Workplace Assessment and Certification Program

PowerSave Campus (PSC) started the Green Workplace Assessment Certification Program (GWACP) program in Fall 2011. GWACP is designed to raise awareness to the Humboldt State University faculty and staff community regarding energy efficiency and sustainable practices that can be implemented in their offices. This program aims to create a balance between the work and natural environment through energy improvements and behavior modification. It also aims to motivate campus members to initiate innovative, new solutions to reduce our energy consumption.

Delia Bense-Kang, Undergraduate Student, Environmental Studies; PowerSave Campus Team Manager, Humboldt State University

Student Research Projects on the Asian Citrus Psyllid

The purpose of our study was to incorporate students as the primary staff members to conduct research projects dedicated to better understand the Asian Citrus Psyllid (ACP), a vector of a deadly disease of citrus. Students were trained in research methods, statistical analysis, and presentation of their results. Students presented the results of their research at Cal Poly Pomona in 2014 and 2015 to an invited group of scientists, growers, research board members, and faculty. The results of several of the students' projects have been incorporated into industry control strategies, and many have gone on to seek higher education.

Anna Soper, Research Scientist, Plant Sciences Department, Cal Poly Pomona
The Development of an Institute for Sustainability at Fresno State

As part of a university-wide innovation initiative, this project team has developed a mission, an organizational structure, and proposals for action for a campus Sustainability Institute, which will serve as a central hub for promoting synergies among sustainability-related learning, scholarship, teaching, and practice. The interdisciplinary and interdepartmental team consists of members from Facilities Management, Auxiliary Services, the student body, and faculty. We will present the steps involved in developing the institute from a campus-wide summit that engaged key stakeholders in Fall 2014 through a formal presentation of the Institute structure and mission to the university President’s Cabinet in May 2015.

Jake Ward, Plant Operations, CSU Fresno

UC Sustainable Purchasing for Fifteen Campuses: Carpet and Flooring

Strategic purchasing contracts are powerful tools to get quality at the best price, and “sustainability” is being woven into these contracts. Flooring (manufacturing and installation) was reviewed in 2014, with bid awards to several manufacturers in winter, 2015. Procurement leaders collaborated with sustainability officers, and the request for proposals (RFP) included questions about source materials, GHG emissions, manufacturing, certifications, performance, and recycling options. Manufacturers for these products often gave detailed answers. Previous RFP responses were unprepared for sustainability questions. Contract awards in 2015 generally reflected sustainability performance.

Allen Doyle, MS, CEM, LEED AP, Sustainability Manager, Environmental Stewardship and Sustainability, UC Davis

Environmental Restoration at CSU Channel Islands

Habitat mitigation and tree planting activities help to restore and improve the local environment for the benefit of students, campus faculty, and staff, as well as the community, farmers, and wildlife. The trees planted will not only beautify the campus, but upon maturity of the trees, they will provide an additional 25% shade cover to the campus and help alleviate heat islands, as well as improve the air quality and provide additional habitats for local wildlife.

Coleen Halloran Barsley, Sustainability and Operations Analyst, CSU Channel Islands

Capstone Course Yields Actionable Recommendations for Facilities Management

The Environmental Science and Policy Capstone Course was designed to give students real-world work experiences that can be leveraged after they graduate and pursue careers in sustainability and environmental management. The class was centered around energy and building construction, with the goal of helping students see how the two themes are inextricably linked and how the work they did in auditing the current status can become actionable projects for the facilities group on campus.

Mackenzie Crigger, Energy and Sustainability Manager, Chapman University
Food Security and Food Justice in the Student Community

Over the weekend of January 16th-18th, UCSB hosted the first California Higher Education Food Summit, a conference centered on the exploration of the issues of food justice and food security as they pertain to university students. Speakers, panelists, and workshop leaders helped to facilitate conversation among students, staff, and faculty regarding how to raise awareness of and address hunger throughout the state, particularly within the student community. In our presentation, we hope to continue this conversation and encourage all institutions of higher learning to get involved. The summit owes its success to the collaboration of diverse individuals and organizations driven by a common passion, and the more people we have on board, the greater our potential to make a difference.

Katie Freeze, Associated Students, Food Bank Committee Chair 2014-2015 Academic Year; Recent Graduate, Environmental Studies, UC Santa Barbara

Erick Lankey, Associated Students, Food Bank Committee Vice-Chair 2014-2015 Academic Year; Recent Graduate, Economics and Accounting, UC Santa Barbara

Climate and Energy Strategy

This poster will describe two projects: 1) an effort to enhance communication with the student body about climate change and carbon neutrality and 2) a revolving loan fund financing proposal for energy efficiency projects. The presenter facilitated a student seminar on climate action organizing. In the seminar, the students read, discussed, and created a ‘zine’ to share with students regarding the root causes of climate change and what each person can do to help stop it. The presenter also wrote a proposal for financing carbon neutrality at UC Santa Cruz with a revolving loan fund and internal carbon fee. The components would serve to incentivize conservation among departments on campus, along the lines of the Berkeley Energy Incentive Program and the forthcoming Yale Carbon Tax, as well as provide a sustainable source of capital to pursue cost-effective energy efficiency retrofits and renewable energy installations.

Alden Phinney, Organizer, Fossil Free UC; Undergraduate, Economics; UC Carbon Neutrality Initiative Fellow, UC Santa Cruz
Monday, July 20th, 2015
Pre-Conference Workshops

Sustainability Officers’ Workshop (Invitation-Only)
8:00am-12:00pm | Seven Hills Conference Center
$52 Registration Fee

This workshop provides peer-taught professional development for sustainability officers. This year's workshop will offer concurrent sessions on Facilitation and Management. The Facilitation session will train participants on how to facilitate groups in establishing plans/goals and completing tasks, covering traditional facilitation techniques and innovative web-based tools. It will explore how and why people learn in the workplace and how this can inform efforts to grow a culture of sustainability. The Management session will cover the best management practices needed to bring an office of sustainability up to the caliber of other high-functioning campus departments. Topics will include project management, managing up, and managing a team.

This event is only open to campus staff whose job is 100% dedicated to sustainability.

CHESC Student Orientation: Networking for Impact
9:00am-10:30am | Cesar Chavez Student Center, Rosa Parks E
6:00pm-7:30pm | Rm. 108, Humanities Building

The California Student Sustainability Coalition will facilitate a peer-to-peer orientation for students to share their campus work and determine what support each of us needs to realize our sustainability initiatives. We’ll be practicing the fundamentals of relational networking for effective impact with the goals of cultivating the new relationships and securing support and resources to advance and refine our projects, campaigns, and programs.

University of California Global Food/Carbon Neutrality Initiatives Fellows Symposium (Invitation-Only)
12:00pm-4:30pm | Gym 147
Free to Invited Attendees

The Symposium will convene undergraduate and graduate Fellows of two major Presidential initiatives at the University of California where student engagement is key.
The UC Global Food Initiative addresses the critical issue of how to sustainably and nutritiously feed a world population expected to reach eight billion by 2025, with 54 Fellows engaged in projects such as urban agriculture, sustainable campus landscapes, and biological pest control.

The UC Carbon Neutrality Initiative is responding to the growing environmental crisis by committing to the goal of emitting net zero greenhouse gases by 2025, with 37 Fellows engaged in projects that include research aimed at scientific advances, policy analysis, and communications.

**PowerSave Campus Summer Forum (Invitation-Only)**

11:00am-6:00pm | Jack Adams Hall, Cesar Chavez Student Center, San Francisco State University  
Free to Invited Attendees

PowerSave Campus is a student-driven energy efficiency education program that promotes careers in the field, generates actual energy savings, increases awareness of the importance of energy efficiency, and encourages academic infusion of sustainability concepts on college campuses. The annual PowerSave Campus Summer Forum brings together program participants for a day of energy efficiency trainings, informational sessions, and fun. Hosted by the Alliance to Save Energy, this convergence is one of the program’s key events to inspire student leaders to make a difference on their campus.

**California Collegiate Recycling Council’s (CCRC) Zero Waste Workshop**

1:00pm-5:00pm | The Annex, San Francisco State University  
$50 Registration Fee

Organized by the California Collegiate Recycling Council (CCRC), this workshop will showcase Zero Waste practices from different entities and provide an opportunity for interaction among individuals with different backgrounds, knowledge, and experience in practices and topics relating to Zero Waste. Come join us to hear presentations given by individuals who are highly involved in waste reduction and Zero Waste.
Monday, July 20th, 2015
Pre-Conference Field Trips

LEED Building, Solar Farm and Campus as a Living Lab Tour

9:00am-3:30pm | Meet at 19th and Holloway, SFSU (at 9:00am)
$59 Registration Fee | Lunch Included

San Mateo County Community College District is a national leader of sustainability in higher education. Join this tour to see a few of the innovative approaches the District is taking, including a large solar panel installation, EV charging stations, LEED Buildings, a house within a house, and much more. Joe Fullerton, Energy and Sustainability Manager for the District, will lead an engaging tour of the facilities and discuss ways in which SMCCCD is using those facilities to serve students and the community as living laboratories. Joe will be highlighting the past, present, and future of sustainability at the District.

Please plan for a lot of sun touring Cañada’s solar farm in the south of the county but expect temperatures to be much cooler at Skyline College in the north. Bring a sweater or jacket, sunscreen, shades, and a thirst for knowledge!

Green Government: The SFPUC’s LEED Platinum Headquarters in San Francisco

1:00pm-3:30pm | Meet at 19th and Holloway, SFSU
$39 Registration Fee

The headquarters of the San Francisco Public Utilities Commission (SFPUC) are a model of sustainability in San Francisco and one of the greenest government buildings in the United States. The building’s on-site wastewater treatment system, the “Living Machine,” reclaims and treats all of the building’s wastewater to satisfy 100% of the water demand for the building’s low-flow toilets and urinals. It treats 5,000 gallons of wastewater per day and reduces per-person water consumption from 12 gallons (normal office building) to 5 gallons. This tour will not only cover the “Living Machine” process but will also cover solar and wind power, lighting, recycled materials, climate control, and employee benefits, such as on-site bike parking and showers.
San Francisco City Bike Tour

1:00pm-5:00pm | Meet at the Bike Barn
$20 Registration Fee

Join a relaxed-pace bicycle ride around San Francisco. The tour will highlight challenges and opportunities for accessing SF State University by bicycle, while also emphasizing the tremendous potential for increasing the bicycle mode share to campus. Attendees of this tour will be given a complimentary bike rental and helmet for the length of the tour. Please note that attendees will have to return the bike at the end of the tour. If you are interested in a bike rental for the duration of the event, you can sign up for an extended bike rental on the registration page.

Be a Friend to the Friends of Alemany Farm!

1:00pm-5:00pm
Meet at 19th and Holloway, SFSU
$29 Registration Fee

Come visit us at the Alemany Farm, a 3.5 acre organic farm ecosystem in southeast San Francisco. Friends of Alemany Farm is a volunteer group that manages the horticulture, volunteer, and educational programs at Alemany Farm. We grow food security and educate local residents about how they can become their own food producers. We strive to increase ecological knowledge and habitat value and to sow the seeds for economic and environmental justice. The visit will include a 40 to 60 min tour, followed by 3 hours of work tasks and then a harvest. Please bring a water bottle, hat, sturdy shoes, jacket with layered clothing underneath, sunscreen, and snacks.

Food Service Technology Center Tour

1:00pm-5:00pm | Meet at 19th and Holloway, SFSU
$39 Registration Fee

Take a trip across the Bay Bridge and tour the world’s leading research and education facility for commercial foodservice—the FSTC. During your guided tour, you will receive a brief history of the research facility and be able to witness laboratory testing used to collect energy data. Learn of the FSTC’s greatest successes from the past 30 years and see what the most advanced cooking equipment can do. At the end of the tour, enjoy a French Fry Tasting from a battery of energy efficient and non-energy efficient fryers. You will leave feeling like you can open your own restaurant!
Monday, July 20th, 2015

Program

VIP and Best Practice Winner Reception (Invitation-Only)
5:15pm-6:15pm | Coit Lounge, Seven Hills Conference Room

The goal of this event is to celebrate the best practice award winners and create a space for our most esteemed guests to network. The invitation list includes the executive leadership of the campuses in attendance. Representatives of our highest level sponsors, steering committee members, and of course the award winners are also invited.

Opening Reception
West Campus Green | 6:00pm-9:00pm

Please join us at West Campus Green for a celebration of the fourteenth annual conference. Hors d’oeuvres will be served as registrants see sustainable demonstrations, view posters created by students and campus stakeholders, and meet business leaders who are providing products and services which can help our campuses become more sustainable.

During the opening reception, poster presenters will also be standing by their posters to answer questions and engage with conference attendees. We are especially excited to welcome the UC President Napolitano’s UC Global Food Initiative and UC Carbon Neutrality Initiative Fellows, who will be presenting on the work of their fellowships.
Tuesday, July 21st, 2015
Opening Keynote

(Sponsored by Green Commuter)
8:00am-9:30am | McKenna Theater, Creative Arts Building

During the opening, attendees will be welcomed to the conference by several local leaders. Following these remarks, we will hear from our keynote speaker, Van Jones.

VAN JONES


Van’s hard work has been acknowledged by a number of prestigious institutions and publications. His awards and honors include being named to Rolling Stones’s “12 Leaders Who Get Things Done” in 2012, TIME magazine’s “100 Most Influential People in the World” in 2009, and Fast Company’s “12 Most Creative Minds on Earth” and Essence Magazine’s “25 Most Inspiring African Americans” in 2008. Van also served as a distinguished visiting professor at Princeton University and a Senior Fellow at the Center for American Progress and American Progress Action Fund.

Van is also the founder of Green For All, a national organization working to bring green jobs to disadvantaged communities. He was the main advocate for the Green Jobs Act. Signed into law by George W. Bush in 2007, the Act was the first piece of federal legislation to codify the term “green jobs.” Under the Obama administration, it has resulted in $500 million for green job training nationally.

While best known as a pioneer in the environmental movement, Van has been hard at work in social justice for nearly two decades, fashioning solutions to some of urban America’s toughest problems. He is the co-founder of two social justice organizations: the Ella Baker Center for Human Rights and Color of Change.

Van also finds the time to serve on the board of several organizations and non-profits, including the National Resource Defense Council, the Presidio Graduate School, and Demos. Van currently splits his time between Los Angeles and Washington D.C.
Welcoming Remarks by

Sue V. Rosser, Provost; Vice President, Academic Affairs, San Francisco State University

Dr. Sue Rosser has served as the Provost and Vice President for Academic Affairs at San Francisco State University since August, 2009. Previously, as the first female dean at Georgia Institute of Technology, she served for 10 years as the dean of Ivan Allen College, where she held the endowed Ivan Allen dean’s chair of Liberal Arts and Technology. She is the author of 13 books and over 130 journal articles on theoretical and applied aspects of women, science, health and technology. Her most recent book is Breaking into the Lab: Engineering Progress for Women in Science, published by NYU Press in 2012. She has held several grants from the National Science Foundation and served on the Executive Board of the American Association for the Advancement of Science from 2010-2014. Dr. Rosser received her Ph.D. in Zoology from the University of Wisconsin-Madison.

D. Miguel Guerrero, Recent Graduate, Environmental Studies; Student Sustainability Coordinator, Office of Sustainability, San Francisco State University

Miguel Guerrero is a Bay Area native and is majoring in Environmental Studies with an emphasis in Environmental Sustainability and Social Justice. Through his work with Sustainable Initiatives at the Student Center, Guerrero was part of a team that secured a $10,000 grant to increase bike culture on campus. During the 2013-14 academic year, he served as the College of Health & Social Sciences representative on the Associated Students Board of Directors and acted as the student representative on SF State’s Strategic Planning Coordinating Committee where he focused on maximizing student success. Most recently, Guerrero was awarded the Outstanding Student Leader Award at the 2014 Annual Dean of Students Leadership Awards for his ongoing commitment to student representation and leadership. After graduating, he plans on pursuing a career in government relations and city planning where he looks forward to continuing his work as a champion for sustainability and social justice.

Gustavo Occhiuzzo, Chief Executive Officer, Green Commuter

Gustavo Occhiuzzo has been an entrepreneur since the age of 18. Mostly in the service industry, he has developed vast management skills and strategic planning knowledge. With 23 years of experience as head of multiple companies, he is currently CEO of Green Commuter, the first Zero Emission Vehicle vanpool service that is in the process of reshaping how Californians commute to and from work, all while improving mobility options through a car share and fleet replacement component of the system.
Moderator: Caitlin Steele, Director of Sustainability & Energy, Administration & Finance, San Francisco State University

Caitlin Steele serves as San Francisco State University's Director of Sustainability & Energy. Her responsibilities include overseeing the Office of Sustainability, the Grounds Shop, the Energy Program, and the Work Control Center in the Facilities Department. Caitlin is a founding member of the campus wide Sustainability Committee and the Transportation Committee. She completed her MBA with an emphasis in Sustainable Business in 2013.

Morning Networking Break

9:30am-10:15am | West Campus Green

We welcome attendees to join us for coffee, tea, and light snacks after the keynote in our exhibit show. The CHESC Exhibit Show is an essential component of the conference where attendees can learn about the newest technologies and solutions for campus sustainability.

We encourage you to keep an eye out for our “innovative” booths. This is a new category of booth, where the booth attendants will include at least one person from the research and development team of the company. Also, these companies have new products or services that are not quite on the market yet, which they would like to talk with our attendees about.

This is also an excellent opportunity to visit the SFSU Bookstore booth to pick-up a copy of one of Van Jones' books or to browse the books written by SFSU faculty and/or other CHESC speakers.

Innovative booths include: All Industrial Supply, Badger Meter, BYD Motors, Flow Control Industries, Forbo Flooring Systems, Ingenium, Johnson Controls, MAMAC, MechoSystems. SmartWatt, Stirling Ultracold, SupplyWorks, and ZON.
Concurrent Session Group A (Panel Presentations):

10:15am-11:30am

Cooperative Curriculum for a Resilient Future

Topic Areas: Curriculum, Social Equity, Local, and Interactive
Low Hanging Fruit
Jargon Level: General Audience
Nob Hill Room, Seven Hills Conference Center

The cooperative business model and cooperative economics are not taught as subjects in most U.S. undergraduate programs. To address this systemic lack of awareness, our workshop will explore how to launch innovative student-initiated and academically-sponsored courses on the history and significance of co-operatives and how they can be tools for building sustainable, resilient, and socially just communities. We will identify the obstacles and opportunities to establishing these programs on college campuses and create the space for participants to work together in identifying new ways to embed co-operative education into university curriculum.

Roberta Giordano, Development Associate, Student Environmental Resource Center (SERC), UC Berkeley

Zen Trenholm, Core Member, USA Cooperative Youth Council

Jeff Noven, Education Associate, Student Environmental Resource Center, UC Berkeley

Megan Svoboda, Operations Manager, Berkeley Student Food Collective

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Large-scale Campus Energy Efficiency and Net Zero Energy Projects

Topic Areas: Energy and Climate Action
Deep Green
Jargon Level: Interdisciplinary Talk
Rm. 226, Burk Hall

This session features two presentations on energy efficiency partnerships. Best Practice Winner in Sustainability Innovations, Cal Poly San Luis Obispo, partnered with Chevron to construct approximately $7 million in conservation measures. They will discuss the economic obstacles they faced and how they overcame them using creative financing solutions. Cerritos Community College worked with Harley Ellis Devereaux to develop an integrated energy master plan funded by Southern California Edison. This session will provide insights into partnering, funding, deploying large-scale energy efficiency projects, and achieving significant energy and GHG reductions.

David El Fattal, PhD, Vice President, Business Services, Cerritos Community College District

Bharat Patel, PE, CEM, LEED™ AP, Senior Vice President, Harley Ellis Devereaux

Dennis Elliot, PE, CEM, Associate Director, Energy, Utilities, and Sustainability, Facility Services, Cal Poly Pomona

Moderator: John Barnes, Campus Architect; Assistant Vice Chancellor, Physical Planning & Construction, UC Santa Cruz
Navigating the STARS 2.0 Experience: From Data Collection to Strategic Planning

Topic Areas: Institutionalizing Sustainability Ripening Efforts
Jargon Level: Specialized Talk
Rm. 1, Burk Hall

Stanford University, the University of California, Santa Barbara, and Santa Clara University have all submitted STARS 2.0 reports and received Gold ratings. Presenters from these universities carry unique perspectives on how institutions can successfully navigate the rigorous STARS 2.0 framework, ranging from data collection strategies to project management. All presenters will elaborate on how STARS 2.0 helped them learn about their campus sustainability performance and identify opportunities for improvement. Finally, each presenter will discuss his/her institution’s continued engagement with STARS after submission, from sharing results with the community to informing institutional strategic planning efforts.

Moira Hafer, Sustainability Analyst, Sustainability & Energy Management, Stanford University

Lindsey Kalkbrenner, MBA, Director, Center for Sustainability, Santa Clara University

Mo Lovegreen, Director, Campus Sustainability, UC Santa Barbara

Garrison Yang, STARS Assessment Intern, Sustainability Program; Undergraduate Student, Environmental Studies, UC Santa Barbara

Greening Food Franchises and Integrating Student-Grown Food in Dining

Topic Areas: Food Systems Ripening Efforts
Jargon Level: General Audience
Rm. 193, Fine Arts Building

UC Davis, San Francisco State University, and San Diego State University will share their best practices in measuring and evaluating sustainable food operations while also connecting students with their food system and community resources. This session will give concrete examples of how to use the Green Restaurant Association’s Certified Green Restaurant® standards as a state-of-art certification for the foodservice industry. The session will also showcase an example of how to create a food system supply chain with processors in the immediate area as well as outline a program for food vendors concerning sustainable practices.

Caitlyn Morrell, Senior Policy & Project Development Intern, Sustainable Initiatives, ASI, San Francisco State University

Jessica Barlow, PhD, Professor of Speech, Language, and Hearing Sciences; Director of the Sage Project, San Diego State University

Ben Thomas, Sustainability Manager, UC Davis Dining Services

Moderator: Maggie Iba, Sustainability & Marketing Coordinator, Dining Services by Sodexo, Westmont College
Practical Tools and Strategies to Transform Campus Stormwater Systems

Topic Areas: Green Building New Construction and Renovations; and Water and Landscape Ripening Efforts
Jargon Level: Specialized Talk
Rm. 408, Humanities Building

Many campuses are required to manage their stormwater discharges in accordance with California’s National Pollutant Discharge Elimination System (NPDES) permit for small municipal separate stormwater systems (MS4s). These permits require implementation of Low Impact Development (LID) design standards and Best Management Practices to effectively reduce runoff and pollutants. This session highlights the groundbreaking work accomplished by Sacramento State’s Office of Water Programs to plan and implement LID actions on campus, including an introduction to their innovative LID design tool. In addition, this session will cover how University of California Davis assessed and addressed pollutant hotspots on campus.

Brian Currier, PE, Research Engineer, Office of Water Programs, CSU Sacramento
Kevin Murphy, PE, MS, Research Group Engineering Manager, Sacramento State Office of Water Programs
Lisa Moretti, PE, QSD, Environmental Specialist, Environmental Health & Safety, UC Davis

Student Engagement through Blending Climate Education, Co-Curricular, and Curricular Methods

Topic Areas: Institutionalizing Sustainability Low-Hanging Fruit
Jargon Level: Interdisciplinary Talk
Rm. 108, Humanities Building

This session highlights three campuses’ efforts to promote sustainability successes and awareness. CSU Fullerton aims to efficiently communicate and amplify sustainability measures through partnerships with the Student Affairs’ Outreach division. UCI and UCLA’s Climatepedia chapter increases access to climate knowledge and transparency of faculty research, serving as a platform for faculty and students to directly support climate education efforts outside of an academic institution. At Foothill College, a team of students is trained to spread energy awareness throughout the community. They also learned to use new software tools for energy monitoring and management, hoping to contribute to Foothill College’s 5% electrical use reduction goal.

Tamara Wallace, LEED™ Green Associate, Sustainability Projects Coordinator, Facilities Operations and Management, CSU Fullerton
Sam Geldin, Recent Graduate, Environmental Science; Geography, Honors, UC Los Angeles
Kimberly Duong, Graduate Student, Civil and Environmental Engineering, UC Irvine
Roberta Cormia, Professor, Engineering, Foothill College

Moderator: Donald Strauss, PhD, Chair, Core Faculty, Urban Sustainability Program, Antioch University Los Angeles
Rethinking Waste: Innovative and Integrated Approaches to Waste Diversion

Topic Areas: Green Building Operations and Maintenance; and Waste Reduction and Recycling
Ripening Efforts
Jargon Level: General Audience
Rm. 236, Burk Hall

Meeting aggressive zero waste targets often requires significant operational shifts. Perhaps more challenging for the practitioner, however, is institutionalizing a culture of sustainability and developing a community of active participants in campuses’ zero waste programs. This session highlights three campuses that have effectively engaged students, faculty, and staff in waste reduction efforts. UC Berkeley utilized waste diversion behavior change as the context for learning in videography and marketing techniques. UC Santa Barbara overcame logistical challenges and increased participation in post-consumer food waste collection in campus buildings. Lawrence Berkeley National Laboratory engaged stakeholders and implemented a holistic approach to increase building waste diversion rates by 10-15%.

Talitha McAdams, Admission Ambassador, College of Environmental Design; Undergraduate Student, Sustainable Environmental Design, College of Environmental Design, UC Berkeley

Jonathon Fong, Freelance Photographer and Videoproducer; Alumnus, UC Berkeley

Sarah Siedschlag, Environmental Programs Advisor, Associated Students, UC Santa Barbara

Erin Claybaugh, MESM, Sustainability Program Manager, Sustainable Berkeley Lab, Lawrence Berkeley National Laboratory

Moderator: Charlotte Strem, 2013 UC Sustainability Champion; Assistant Director Physical and Environmental Planning, UC Office of the President

Sustainability Programming for Campus Housing: Teaching Conservation and Behavior Change

Topic Area: Student Affairs and Auxiliaries
Deep Green
Jargon Level: General Audience
Rm. 217, Humanities Building

Energy competitions have become an important tool used by campuses to teach their residents about energy conservation and to develop long-term conservation behavior. In this session, CSU Chico will discuss how they developed their Wildcat Sustainability Showdown program into a best-practice model for residential energy competitions. During competitions, Chico has achieved an average 20% reduction in electricity usage in participating buildings. Learn about the student coordination strategies, educational programs and materials, and campus partnerships that have helped CSU Chico win the CSU/UC PowerSave Campus League competition three years in a row.

Fletcher Alexander, Campus Sustainability Coordinator, Institute for Sustainable Development, CSU Chico

Jordan Alm, Team Manager, PowerSave Campus Program, CSU Chico
Vivian Li, Resident Assistant; Student, Environmental Science; Architecture, UC Los Angeles

Sarah Dahnke, BA, Global Studies, African and Middle Eastern Studies, Resident Assistant, UC Los Angeles

Sharon Daraphonhdeth, Coordinator, the Green Initiative Fund and Sustainability Initiatives, UC Berkeley

Moderator: Joshua Morejohn, PE, CEM, Energy Manager, UC Davis

Self-Care and Holistic Health Initiatives for Staff, Faculty, and Yourself

Topic Area: Health and Wellness
Ripening Efforts
Jargon Level: Interdisciplinary Talk
Rm. 237, Burk Hall

Health and wellness are key to sustainability and resilience – in ourselves, culture and nature. Allen will discuss work-life imbalance, then quantifying wellness in Green Workplace assessments. Shari and Carolyn will present a wellness model in which faculty and staff – often with “no time to eat” can make self-care a priority at work and in their personal lives. Kenn will describe the emerging Eco-Mind – a shift from fear and scarcity into creative engagement with Seven Challenges Facing Humanity, supported by self-care skills and new forms of activism. Tools for personal wellness and community assessment will be provided.

Shari Tarver Behring, PhD, Chair, Educational Psychology and Counseling, CSU Northridge

Carolyn Jeffries, PhD, Professor, Educational Psychology and Counseling, CSU Northridge

Ken Burrows, Professor, Holistic Health Studies, San Francisco State University

Allen Doyle, MS, CEM, LEED AP, Sustainability Manager, Environmental Stewardship and Sustainability, UC Davis

Moderator: Fahmida Ahmed, Director, Office of Sustainability, Stanford University

Campus Bike Tour

Topic Area: Transportation
Ripening Efforts
Jargon Level: General Audience
Meet at the SFSU Bike Barn

Between sessions, come join a leisurely-paced ride to two nearby BART stations. This tour will address the challenges and opportunities for increasing the mode share for bicycling from 4% to 10% or 20% of trips to and from campus for students, faculty, and staff. The route will include minor hills, but will be accommodating to slower cyclists. Dress casually and with layers. Bicycles and helmets will be provided to tour participants.

Jason Henderson, Professor, Geography and Environment, San Francisco State University
Midday Keynote

(Sponsored by SunPower)
11:45am-12:15pm | West Campus Green

Janet Napolitano, President, University of California

Janet Napolitano was named the 20th president of the University of California on July 18, 2013, and took office on Sept. 30, 2013. She leads a university system with 10 campuses, 5 medical centers, 3 affiliated national laboratories, and a statewide agriculture and natural resources program.

As UC president, she has launched initiatives to stabilize and freeze tuition for the next three years, enhance community college transfers, provide financial support for undocumented students to put them on equal financial-aid footing with other students, achieve carbon neutrality across the UC system by 2025, speed translation of UC research into products and services, focus UC resources on local and global food issues, and strengthen engagement with Mexico. In 2014, she was appointed a tenured faculty member of UC Berkeley’s Goldman School of Public Policy.

Napolitano is a distinguished public servant with a record of leading large, complex organizations. She served as Secretary of Homeland Security from 2009-13, as Governor of Arizona from 2003-09, as Attorney General of Arizona from 1998-2003, and as U.S. Attorney for the District of Arizona from 1993-97.

Napolitano earned a BS degree (summa cum laude in Political Science) in 1979 from Santa Clara University, where she was Phi Beta Kappa, a Truman Scholar, and the university’s first female valedictorian. She received her law degree in 1983 from the University of Virginia School of Law. In 2010, she was awarded the prestigious Thomas Jefferson Foundation Medal (Law), the University of Virginia’s highest external honor.

Opening Remarks by

Kari Smith, Director of Policy and Market Development, SunPower Corporation

Kari has over 25 years of experience advocating policy in support of renewable market expansion at the federal, state and local level. Kari co-founded the Solar Alliance and serves on the Board of Directors for the Solar Energy Industry Association (SEIA) and the Renewable Energy Markets Association (REMA). Prior to her work with SunPower, Kari represented the California Independent Energy Producers (IEP), the Center for Energy Efficiency and Renewable Technology (CEERT) and the Natural Resources Defense Council (NRDC). She also served as Project Director
with the California Energy Commission (CEC), where she led California’s first interagency climate change study and greenhouse gas inventory. During this time she was awarded professional fellowships with the California Executive Fellowship Program and the German Marshall Fund. Kari holds a Masters in Public Policy from the University of Colorado, Boulder, and a Bachelors in Political Science and German Literature from the University of California, Santa Barbara.

**Moderator: Caitlin Steele, Director of Sustainability & Energy, Administration & Finance, San Francisco State University**

Caitlin Steele serves as San Francisco State University’s Director of Sustainability & Energy. Her responsibilities include overseeing the Office of Sustainability, the Grounds Shop, the Energy Program, and the Work Control Center in the Facilities Department. Caitlin is a founding member of the campus wide Sustainability Committee and the Transportation Committee. She completed her MBA with an emphasis in Sustainable Business in 2013.

**Awards Banquet**

12:15pm-2:00pm | West Campus Green

Please join us in celebrating the winners of the Higher Education Energy Efficiency and Sustainability Best Practice Awards. During this banquet, winners of the Sustainability Champion Awards for UC, CSU, and private college campuses will also be announced.
Concurrent Session Group B (Panel Presentations):

2:00pm-3:15pm

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How to Build a Sustainability Initiative from the Ground Up with Customizable Templates

Topic Areas: Institutionalizing Sustainability, Local, and Interactive
Ripening Fruit
Jargon Level: General Audience
Nob Hill Room, Seven Hills Conference Center

Learn how to create and implement sustainability programs on your campus from San Mateo County Community College District and Skyline Community College. San Mateo’s Energy Management Coordinator will discuss his strategy for creating a comprehensive Sustainability Initiative, increasing learning opportunities and efficiency, reducing risks, and promoting resiliency. Skyline College will present on a Sustainability Plan “Templates” (a roadmap and toolkit for colleges to independently pursue leadership in environmental, economic, and social sustainability). Presenters will offer recommendations on how to utilize the Sustainability Template to create a customized plan for any education institution, including CCCs, private colleges, K-12 schools districts and public agencies.

Joe Fullerton, LEED® AP, Energy Management Coordinator, Facilities Planning, Maintenance, and Operations, San Mateo County Community College District

Carina Anttila-Suarez, PhD, Faculty, Environmental Science and Biology, Skyline College

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Danielle L. Moultag, Project Manager, Newcomb Anderson McCormick

Speaker/Moderator: Ann L. McCormick, PE, LEED® AP, Principal, Newcomb Anderson McCormick

Best Practices in Overall Sustainable Design

Topic Area: Green Building New Construction and Renovations
Deep Green
Jargon Level: Interdisciplinary Talk
Rm. 226, Burk Hall

This session covers projects that display excellence in overall sustainable design. UC Berkeley’s New Campbell Hall takes advantage of natural ventilation and the existing campus steam system to reduce the size of the mechanical system by 50% and it demonstrates resilience by an innovative structural system that will help the building survive an earthquake. CSU Long Beach’s LA234 Renovation features a seismic, building envelope, HVAC, and lighting upgrade and interior renovation for re-use. Honorable Mention goes to UC San Diego’s MESOM building, the campus’ first LEED Platinum laboratory building.

Mark Zakhour, CASp, LEEDTM AP (BD+C), Manager of Construction Services, CSU Long Beach

V. Allan Palmer, Project Manager, Construction & Design, Real Estate Division, UC Berkeley

Kevin R. Crossman, AIA, LEED® AP, Associate Principal, Studios Architecture

Jamie Bohannan, Assistant Project Manager, Facilities Design & Construction, UC San Diego
Implementing Deep Sustainability in Recreational Buildings

Topic Area: Energy, Health and Wellness, and Student Affairs and Auxiliaries
Ripening Efforts
Jargon Level: Interdisciplinary Talk
Rm. 1, Burk Hall

In this session, three campuses will focus on strategies, practices, and lessons learned in ensuring sustainability and energy efficiency in an unconventional building type: recreation buildings. San Francisco State will describe the development of their Mashouf Wellness Center, currently tracking to earn LEED Platinum. UC Santa Barbara will illustrate their process of incrementally retrofitting the existing campus recreation center with the goal of reaching zero net energy for the facility. UC Los Angeles will focus on how daylight and ventilation modeling influenced the design of their proposed gym and warehouse buildings in order to meet the new Title 24 building requirements.

Wendy Bloom, MLA, Director, Campus Planning, San Francisco State University
Pam Su, Director, Campus Recreation, San Francisco State University
Mitch Fine, LEED™ AP, AIA, Partner, WRNS Studio
Jim Stickley, ASLA, LEED™ AP, Principal, WRT Design

Moving Sustainability to the Core of Strategic Sourcing

Topic Area: Procurement and Business Services
Deep Green
Jargon Level: General Audience
Rm. 193, Fine Arts Building

Sustainability has been a long-standing topic in procurement. However, sustainability has often been treated as an add-on topic that is pursued in addition to and sometimes in conflict with the core mission of the organization. While this has produced some success, it has also led to stagnant project lists, disjointed execution, and frustration. This session will explain how the University of California is incorporating sustainability into its core methodologies to ensure that sustainability is addressed in every project that it pursues. We then provide two detailed case studies of sustainability in action in the case of food and solar power.
Justin Sullivan, Director, Strategic Sourcing Center of Excellence, University of California

Moderator: Matthew Burke, Lead Buyer, Purchasing, UC Riverside

Getting Started with ‘Campus as a Living Lab’

Topic Areas: Curriculum and Institutionalizing Sustainability
Ripening Efforts
Jargon Level: General Audience
Rm. 408, Humanities Building

This session will explore the early implementation of Campus as a Living Lab (CALL) courses at three institutions. CSU Long Beach created a learning community of faculty, staff, students, and community members to develop the foundation of campus sustainability in the curriculum, and it will share progress to-date. CSU Monterey Bay will present two courses, ‘Sustainability Systems’ and ‘Infrastructure Systems,’ recently introduced into the Environmental Studies program, giving students real world learning opportunities. Academic and operational staff from Portland State University will reflect on its Living Lab program, including student learning outcomes, lessons learned, the multi-step application process, and the important role of the ‘broker’.

Christine Whitcraft, Associate Professor, Biology, CSU Long Beach

Wesley Woelfel, Assistant Professor, Design, CSU Long Beach

Daniel M. Fernandez, PhD, Professor, Division of Science and Environmental Policy; Chair, Campus Sustainability Committee, CSU Monterey Bay

Fletcher Beaudoin, MPA, Assistant Director, Institute for Sustainable Solutions, Portland State University

Moderator: Meaghan C. Smith, LEED™ AP, Principal Planner; Project Manager, Capital Planning, Design and Construction, CSU Office of the Chancellor

Fossil Fuel Divestment and Reinvestment: How To and What’s Next

Topic Areas: Social Equity, Climate Action, and Institutionalizing Sustainability
Deep Green
Jargon Level: General Audience
Rm. 108, Humanities Building

To date, over $50 billion has been divested globally from the fossil fuel industry. What if universities led the way in tripling that number, leading the way in investing in a low-carbon and just economy? This panel will feature students, members of Boards of Trustees, faculty, and staff from De Anza and Foothill Colleges, the University of California, and San Francisco State University. Panelists will share their rationale for divestment, where their institution stands in the spectrum of divestment, and their strategies for how to divest from fossil fuels. In addition, the panel will discuss what types of reinvestment strategies will work for a campus considering fossil fuel divestment. Panelists will offer a rich and varied perspective on this international movement, and discuss how it will grow on the road to the UN Climate Conference in Paris in December 2015.

Cynthia Kaufman, Director, Institute of Community and Civic Engagement, De Anza College
Alden Phinney, Organizer, Fossil Free UC; Undergraduate, Economics; Carbon Neutrality Fellow, UC Santa Cruz

Philip King, PhD, Associate Professor, Economics, San Francisco State University; Chair, Finance and Investment Committee; Member, SFSU Foundation Board

Tanvi Pradhan, MBA Graduate, Beta Gamma Sigma, College of Business, San Francisco State University; PGDCM, IIM Calcutta

Dan Tichenor, CFA, Senior Strategy Associate, UBS Institutional Consulting

Moderator: Silver Hannon, Fossil Free Campaign Director, California Student Sustainability Coalition

Management By Fact, Getting the Data to Make Good Water Choices

Topic Areas: Green Building Operations and Maintenance; and Water and Landscape Ripening Efforts
Jargon Level: Specialized Talk
Rm. 236, Burk Hall

The drought in California has brought into focus the need to reduce water use and conserve this vital resource. However, gathering information and data on water use on a building-by-building basis is challenging. In order to track and monitor water consumption, you need “real” water data, the facts. This data needs to come from meters and meters are a costly endeavor. These presentations will provide examples that illustrate how to get the facts and make better water use choices through unique metering approaches and community engagement. UC Santa Barbara will also share how they saved water through eliminating single pass water cooling systems.

David Trombly, PhD, Associate Engineer, Utilities, UC Davis

Joshua Morejohn, PE, CEM, Energy Manager, UC Davis

Amorette Getty, PhD, Co-Director, LabRATS, UC Santa Barbara

Arriana Rabago, Undergraduate Student, Environmental Studies; LabRATS Coordinator, UC Santa Barbara

Heather Pohl, Project Manager, Water Department, San Francisco Public Utilities Commission

Moderator: Austin Eriksson, Sustainability Program Manager, Facilities Planning, Design, and Construction, CSU Northridge

Worlds Collide: Campuses and Communities Collaborate to Increase Bicycle Ridership

Topic Area: Transportation
Low-Hanging Fruit
Jargon Level: General Audience
Rm. 217, Humanities Building

This session will explore San Jose State’s service learning efforts with the City of San Jose in the development of Urban Villages—walkable, bikeable, transit-connected, mixed-use developments that align with the City’s environmental goals. UCLA will share its strategy to improve its Bicycle Friendly University designation. The strategy covers five categories to improve cycling conditions on and around campus: enforcement, education, engineering, evaluation, and encouragement. San Francisco State will
update its progress with Power to the Pedal, a campus program funded by the Crocker Trust and staffed by students. The program runs bicycle maintenance workshops, establishes relationships with students and local organizations, and hosts guest lectures.

**Dayana Salazar,** Professor, Urban and Regional Planning Department, San José State University; Executive Director, CommUniverCity San José.

**Katherine Kao Cushing,** PhD, Associate Professor, Environmental Studies Department, San José State University; Associate Director, CommUniverCity San José

**Penny Menton,** Director of Communications and Commuter Services, Events and Transportation, UC Los Angeles

**Liana Derus,** Undergraduate Student, Environmental Studies, Sustainability Manager, Associated Students, San Francisco State University

**Caitlyn Morrell,** Senior Policy & Project Development Intern, Sustainable Initiatives, ASI, San Francisco State University

**Christopher Larson,** Senior Sustainability Policy and Project Development, Sustainable Initiatives, AS, BA, Political Science and BA, Urban Planning, San Francisco State University

**Moderator: Jason Henderson,** Professor, Geography and Environment, San Francisco State University

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**Eliminating Plastics from Food Service and Understanding Where Our Plastics Go**

**Topic Areas:** Food Systems; and Waste Reduction and Recycling

**Ripening Efforts**

**Jargon Level:** General Audience

**Rm. 237, Burk Hall**

UC Berkeley explores the role campuses, communities, cities, commercial districts, policies, and regulations play in accomplishing change in the way restaurants can make “quick-serve” food more sustainable. In a separate presentation, Berkeley shares the goals of their Plastic Disclosure Project, which discloses the campuses’ plastic footprint, making it the first University to publicly reveal this information.

**Jennifer McDougall,** MA, Principal Planner, Real Estate Division, UC Berkeley

**Sharon Daraphonhdeth,** Coordinator, The Green Initiative Fund and Sustainability Initiatives, UC Berkeley

**Moderator: Mike Carey,** Environmental Sustainability Coordinator, Orange Coast College
Tuesday Afternoon Field Trips
Please note that the following tours are overlapping with concurrent sessions B and C

Enhancing Learning Environments through Lighting and Controls Solutions
(Sponsored by Acuity Brands Lighting)
2:00pm-5:00pm | Meet at 19th and Holloway

Lighting accounts for up to 44% of a school’s energy use. Choosing the right lighting and controls solutions reduces energy consumption and creates learning environments that meet the needs of students, teachers, and administrators. These solutions increase student performance, enable the teachers with flexibility based on the task at hand, and provide safer outdoor environments.

This field trip provides the opportunity to experience quality lighting solutions for educational facilities. At the Acuity Brands Berkeley facility, you will interact with lighting and controls experts that will discuss and demonstrate the trends and challenges of lighting schools and the solutions and technologies that drive energy savings, create quality lit spaces, and provide occupant control.

Pacific Energy Center Tour
3:15pm-5:45pm | Meet at 19th and Holloway

Attendees will get a tour of the PG&E Pacific Energy Center (PEC) in downtown San Francisco, a rate payer funded center which for the past 22 years has trained a wide variety of people on energy efficiency, demand response, and other sustainability measures. Speakers will give overviews of a number of pertinent PG&E programs, including rebates and on-bill financing, and they will be available to answer questions. The PEC is an excellent resource with free classes and an extensive tool-lending library, and it offers educational programs, design tools, advice, and support to create energy efficient buildings and comfortable indoor environments.

Afternoon Networking Break
3:15pm-4:00pm | West Campus Green

We welcome attendees to join us for coffee, tea, and light snacks. This is an excellent opportunity to mingle with fellow attendees and exhibitors alike. Each year we hear from attendees that the most valuable part of our event is the relationships created and strengthened through open times like this.
Concurrent Session Group C (Panel Presentations):

4:00pm-5:15pm

Student Engagement and the UC Carbon Neutrality Initiative Fellowship Program

Topic Areas: Climate Action; Student Affairs and Auxiliaries; and Interactive Low-Hanging Fruit
Jargon Level: General Audience
Nob Hill Room, Seven Hills Conference Center

This presentation will describe the process of establishing the UC Carbon Neutrality Initiative Fellowship program and will highlight the works of several student engagement efforts by Fellows. Campus Fellows and the Student Representatives to the Global Climate Leadership Council will discuss their successes and lessons learned in engaging students within single campuses and across the UC system. The presentation will be followed by an exchange with attendees to discuss their experiences and ideas about engaging students with campus and university-level sustainability goals and to brainstorm future efforts for student engagement opportunities.

Ashley Payne, PhD Candidate in Earth System Science, UC Irvine; Graduate Student representative, UC Global Climate Leadership Council

Alden Phinney, Organizer, Fossil Free UC; Undergraduate, Economics; UC Carbon Neutrality Initiative Fellow, UC Santa Cruz

Cody Lee, Student Assistant, Global Sustainability Resource Center; Carbon Neutrality Fellow; Undergraduate, Social Ecology, Informatics, UC Irvine

Best Practices in HVAC Design/ Retrofit and Energy Transmission

Topic Areas: Energy; and Green Building Operations and Maintenance Ripening Efforts
Jargon Level: Interdisciplinary Talk
Rm. 226, Burk Hall

This session will focus on highlighting best practice projects in campus energy and mechanical systems, made more economically feasible with available incentive programs. San Jose State University will present their award-winning chiller plant improvement project, giving the system a higher capacity and higher efficiency. CSU Long Beach will describe their complete overhaul of the HVAC controls for their Molecular Life Science and Chemistry Lab, a space type with notoriously high energy usage and limitations as a result of sensitive research. UC San Diego will discuss the implementation, benefits, and applicability of their campus fuel cell power plant microgrid.

Chris Nordby, Associate Director of Utility Operations, Facilities Development and Operations, San Jose State University

Robin Liu, Senior Energy Engineer, EnerNOC

Paul Wingco, CEM, LEED™ AP, Energy and Sustainability Manager, CSU Long Beach

Kevin Norris, Associate Engineer, Building Commissioning and Sustainability, UC San Diego
**Student-Led Energy Efficiency Efforts in Housing, Labs, and the Restructuring of Financial Incentives**

**Topic Area:** Energy 
**Low-Hanging Fruit** 
**Jargon Level:** General Audience  
**Rm. 1, Burk Hall**

Learn more about student-led energy efficiency efforts from UC Berkeley and UC Santa Barbara. Best Practice Award Winner UC Berkeley will present on how they reduced energy consumption by 235 kWh/y by retrofitting microscopes with LED lights. UC Santa Barbara in conjunction with PowerSave, won the California Campus Conservation Nationals and will discuss their experience and lessons learned. UCSB’s Bren School will present on the UCSB Operational Effectiveness: Energy Management Initiative, a program that rewards departments with a portion of energy savings and influences behavior change through a strategic messaging campaign.

**Danielle Burns,** Project Coordinator Intern, Alliance to Save Energy  
**Emma Olin,** Undergraduate Student, Environmental Studies; Project Coordinator, PowerSave Campus Program, UC Santa Barbara  
**Ian Creelman,** Masters Candidate, Bren School of Environmental Studies & Management, UC Santa Barbara

**Stephanie Harris,** Masters Candidate, Bren School of Environmental Studies & Management, UC Santa Barbara

**Grace Vasiknanonte,** Undergraduate Student, Materials and Engineering; Team Manager, PowerSave Campus Program, UC Berkeley

**Moderator:** **Krista Mays,** Sustainability Manager, Housing, Dining, & Hospitality, UC San Diego

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**Managing Local Landscapes through Education and Related Application**

**Topic Areas:** Curriculum; and Water and Landscape Ripening Efforts  
**Jargon Level:** Interdisciplinary Talk  
**Rm. 193, Fine Arts Building**

We are overexploiting and destroying the environment at an unprecedentedly rapid pace. As many people believe, it is up to the younger generations to fix the problem - and what better way for college students to take that first step than through education and experience? Several Californian universities, such as Cal Poly San Luis Obispo and UC Santa Barbara, offers classes on restoring nature and about hands-on opportunities to apply such knowledge. Each speaker discusses the specific course and action his or her campus provides to students.

**Gary Clay,** PhD, Professor, Landscape Architecture, Cal Poly, San Luis Obispo  
**Lisa Stratton,** PhD, Director of Ecosystem Management, Cheadle Center for Biodiversity and Ecological Restoration (CCBER), UC Santa Barbara
Hands-On Experiences for Future Green Building Professionals through Coursework

Topic Areas: Curriculum; and Green Building New Construction and Renovations Ripening Efforts
Jargon Level: Interdisciplinary Talk
Rm. 408, Humanities Building

How can you engage students in green building? UC Santa Barbara and CSU Fullerton presents two approaches to LEED® Lab™. This presentation will explore two approaches to guiding students through the evaluation of existing buildings on campus and will explain some of the best practices and lessons learned in engaging students in a rigorous certification process. Cal Poly San Luis Obispo will present on how they transformed an instructional space and roof into a lab facility that features radiant floor cooling that is fed by night sky-exposed roof collectors. This project was planned by students in an Architecture course.

Brandon Kaysen, LEED™ AP (O+M), Masters Candidate, Corporate Environmental Management & Eco-Entrepreneurship, Bren School of Environmental Science & Management, UC Santa Barbara

Cassidy Green, LEED™ AP (BD+C), LEED Program Coordinator, Facilities Management, UC Santa Barbara

Megan Moscol, LEED™ AP (BD+C) (O+M), Sustainability Programs Manager, Facilities Operations, CSU Fullerton

Angsar Killing, MS, Architecture, Cal Poly San Luis Obispo

Barry Williams, MS, LEED™ AP, RA, Architecture, Cal Poly, San Luis Obispo

Moderator: Todd M. Lynch, AIA, NCARB, LEED™ AP (BD+C), Principal Project Planner, Capital Programs; Planning & Finance, UC Los Angeles

Resiliency, Strategic Planning, and Campus-Community Partnerships

Topic Area: Institutionalizing Sustainability Ripening Efforts
Jargon Level: Interdisciplinary Talk
Rm. 108, Humanities Building

Three colleges share their methods in successful strategic planning. Pasadena City College (PCC) will share their new Campus Master Plan. PCC will highlight to show how their three sustainable benchmarks that serve as guiding principles to create a resilient campus that responds to current and future energy needs. San Francisco State University will present on values driven Strategic Plan released in early 2015 and identify the five core values responsible for making it successful. UC Santa Cruz, will speak to their GreenWharf program that started as a partnership between the City of Santa Cruz and the University to foster the integration of innovative technology and sustainability concepts into the Santa Cruz Wharf’s infrastructure and operations.

Rueben Smith, Executive Director, Facilities & Construction Services, Pasadena Area Community College District

James Matson, AIA, HGA Architects and Engineers
Evaluating and Re-envisioning Student Food Security and Sustainable Food Resources

Topic Areas: Food Systems; and Social Equity
Low-Hanging Fruit
Jargon Level: Interdisciplinary Talk
Rm. 236, Burk Hall

In recent years, there has been a growing need for more programmatic support for student food security and sustainable food resources. This presentation will include three programs that demonstrate on-campus demand for reliable infrastructure for student food access, as well as off-campus student options of communal food plans, sustainable food sources, and food waste solutions. Attendees will learn of the UC Food Pantries Food Program at UC Santa Barbara, collaboration through the UC Global Food Initiative’s Food Security & Access Subcommittee, and the Santa Barbara Student Housing Cooperative (SBSHC) as a case study.

**Patrick Thibaudeau**, CSI, CCS, LEED™ AP (BD+C), ILFI, Vice President, Sustainable Design, HGA Architects and Engineers

**Douglas Miguel Guerrero**, Recent Graduate, Environmental Studies; Student Sustainability Coordinator, Office of Sustainability, San Francisco State University

**Shawn Whalen**, Chief of Staff, Office of the President, San Francisco State University

**Trevor Getz**, PhD, Professor, Department of History, San Francisco State University

**Chrissy Thomure**, LEED™ AP, AICP, Climate Action Manager, Sustainability Office, UC Santa Cruz

**Tiffany Wise-West**, PE, LEED™ AP, PhD, Climate Action Outreach Coordinator, Planning and Community Development Department, City of Santa Cruz

**Moderator: Tony Ichsan**, ARM, CEFP, LEED AP, Dean, Facilities Planning & Operations, Santa Rosa Junior College, Sonoma County Junior College District

**Tim Galarneau**, Food Systems Education & Research Specialist, Center for Agroecology & Sustainable Food Systems, UC Santa Cruz

**Ruben E. Canedo**, Research & Mobilization Coordinator, Centers for Educational Equity & Excellence, UC Berkeley

**Tuyen Nguyen**, Food Bank Coordinator, Associated Students, UC Santa Barbara

**Hayley Weddle**, Advisor and Daily Operations Manager, Associated Students, UC San Diego

**Rachel Rouse**, AS Food Bank Student Coordinator; UC Global Food Initiative Fellow; Recent Graduate, Biopsychology, UC Santa Barbara

**Amanda Becerra**, Resident, Merton House, Santa Barbara Student Housing Cooperative; Undergraduate Student, Environmental Studies, UC Santa Barbara

**Moderator: Jessica Foster**, Student Coordinator, Department of Public Works, Associated Students, UC Santa Barbara
Emergence and Growth in Fuel Cell and Electric Vehicle Programs

Topic Areas: Climate Action and Transportation
Ripening Efforts
Jargon Level: Interdisciplinary Talk
Rm. 217, Humanities Building

Quickly emerging electric and fuel cell technologies and use practices for fleet and personal vehicles are presenting opportunities and challenges for Universities. While substantial savings to budget bottom lines and carbon emissions are possible, issues around how these technologies will ultimately affect universities' operations are not yet clear. In this session, three campuses will discuss their efforts to understand and implement these technologies. Each will discuss the growth of their implementations and the successes and challenges they are facing.

Cheryl L. Ney, PhD, Associate Provost; Professor, Chemistry, CSU Los Angeles

David Blekman, PhD, Professor, Department of Technology, CSU Los Angeles

Michael G. Dray, Hydrogen Station Manager and Technical Operations Manager for the College of Engineering, Computer Science and Technology, CSU Los Angeles

John Elliot, Chief Sustainability Officer, CEM, Chief Sustainability Officer, Lawrence Berkeley National Laboratory

Ward Thomas, Transportation Operations Manager, Land and Building Operations, Stanford University

Moderator: Ramon Guillermo Zavala, Sustainable Transportation Supervisor, Transportation Services, UC Irvine

Integrating Sustainability into Procurement and Contract Negotiations

Topic Areas: Procurement and Business Services; and Waste Reduction and Recycling
Low-Hanging Fruit
Jargon Level: Specialized Talk
Rm. 237, Specialized Talk

This session aims to dispel the misconception that sustainability considerations cannot be incorporated in the cost-driven public sector procurement process. It will draw upon publicly posted procurements at SF State, including Dining Services, Managed Print Services, the SF State Shuttle Bus Program, Pouring Rights partnership, Public/Private development partnerships, and contracting for CHESC. This session will also go over the goals and profit motives that help maximize a campus' relationship with their vendors, and touch on how to ensure transparency in waste diversion strategies, accuracy with reporting, and how to align zero waste goals with a waste hauler. The panel will also include a representative from the UC Office of the President who will give insight into the Biorad agreement.

Stephen Smith, Director, Procurement, San Francisco State University

Valerie Vergara, Life Sciences Category Manager, University of California

Kevin Mattson, LEED™ AP (BD+C), Sustainable Waste Management Specialist, Facilities Operation, CSU Fullerton

Moderator: Pam Meyer, CPM, Buyer V, Contracting Services, UC Davis
Wednesday, July 22nd, 2015

Concurrent Session Group D (Panel Presentations):

8:00am-9:15am

Exploring Offset Options for UC Air Travel

Topic Areas: Climate Action, Transportation, Local, and Interactive
Deep Green
Jargon Level: Interdisciplinary Talk
Nob Hill Room, Seven Hills Conference Center

How can we achieve carbon neutrality by 2025? This project outlines options for the UC system to offset air travel emissions and forecasts optimal design for cost, emissions reduction, and participation rate. The model is developed within the UC context of air travel purpose and funding sources, so session attendees will walk away with an understanding of emissions reduction barriers and benefits of various solutions.

Ron Hightower, MBA in Sustainable Management Candidate, Presidio Graduate School

Susan McMullan, JD, MBA in Sustainable Management Candidate, Presidio Graduate School

Veena Patel, MBA in Sustainable Management Candidate, Presidio Graduate School

Green Career Panel

Topic Areas: Energy; and Student Affairs and Auxiliaries
Low-Hanging Fruit
Jargon Level: General Audience
Rm. 226, Burk Hall

Featuring professionals in the sustainability field, career seekers of all levels are encouraged to attend and learn from the triumphs and challenges of those who have gone before them. Attendees will have the chance to ask these experts targeted questions.

Ann L. McCormick, PE, LEED™ AP, Principal, Newcomb Anderson McCormick

Eric Eberhardt, Associate Director, Energy Services, University of California Office of the President

Eric Veium, Energy and Sustainability Analyst, Cal Poly San Luis Obispo

Wes Morgan, CEM, Lead Solutions Engineer, EnerNOC, Inc.

Moderator: Taylor McAdam, Senior Associate, Alliance to Save Energy
Monitoring-Based Commissioning (MBCx) Plus Continuous Commissioning Equals Persistent Savings

Topic Areas: Energy and Green Building Operations and Maintenance
Ripening Efforts
Jargon Level: Interdisciplinary Talk
Rm. 1, Burk Hall

Hear from best-practice award winners in MBCx. San Diego State’s MBCx project at Arts and Letters reduced energy use drastically in a building that at first glance looked like a terrible candidate for MBCx. UCSB decreased 31% in the total energy used and 21% in peak electric demand for production and distribution of chilled water through optimized measurements and system analysis. In addition, UC San Diego will present its pilot project in Data-Driven Continuous Commissioning, developed in partnership with EnerNOC, which eliminated $56,000 per year of energy waste.

Kazimir Gasljevic, PhD, Senior Engineer, Facilities Management, UC Santa Barbara

Richard Dewey, Associate Engineer, Automation, Facilities Management, UC Santa Barbara

Sandro Sanchez, Associate Engineer Supervisor; Building Automation Manager, Facilities Management, UC Santa Barbara

David Klug, PE, Mechanical Engineer, P2S Engineering

Anna Levitt, PE, CEM, Assistant Energy Manager, Facilities Management, UC San Diego

Grace Jungé, LEED™ AP, Project Engineer, EnerNOC

Moderator: Lindsey Rowell, Director, Energy Management & Utility Services, CSU San Marcos

Transforming the Built Environment at Scale - Prototypes for Sustainable Development

Topic Areas: Green Building New Construction and Renovations; and Institutionalizing Sustainability Deep Green
Jargon Level: Interdisciplinary Talk
Rm. 193, Fine Arts Building

For sustainable construction beyond individual projects, business-as-usual development models must be redirected toward proven strategies to save water, energy, air quality, and natural landscapes. The flexible net-zero home designed by Cal Poly San Luis Obispo’s Solar Decathlon Team proposes a new module for market-rate housing. Tercero Student Housing at UC Davis is a standout example of large-scale sustainable construction developed with a design/build team. In dialogue, these projects show how attention to sustainable outcomes can transform all phases of development.

Jill Tomczyk, LEED™ AP (BD+C), Assistant Director of Project Management, UC Davis

Leah Marthinsen, AIA, LEED™ AP (BD+C), Associate, EHDD
Dave Downey, LEED™ AP, Preconstruction Project Manager, Employee Owner, Sundt Construction

Sandy Stannard, Architect, LEED™ AP, Professor, Architecture, Cal Poly San Luis Obispo

Moderator: Bert Malasig Bitanga, Professor, Applied Sciences, College of the Desert

Indoor Composting in Campus Residence Halls

Topic Areas: Food Systems; Waste Reduction and Recycling; and Student Affairs and Auxiliaries
Ripening Efforts
Jargon Level: General Audience
Rm. 408, Humanities Building

Learn about integrating composting in campus residence halls from UC Irvine, UC Berkeley, and Stanford University. These presentations will focus on how to collaborate with facilities and housing to coordinate participation and infrastructure with financing and maintenance, and they include a SWOT (strengths, weaknesses, opportunities, and threats) analysis of one of the pilot programs, as well as a discussion of the challenges; the lessons learned throughout development, design, and implementation from both an operational and education perspective; and the methods employed to encourage better composting habits.

Paul Caporaso, Undergraduate Student, Urban Studies; International Studies, UC Irvine

Carley Halsey, Project Coordinator, Campus Recycling and Refuse Services, UC Berkeley

Kristin Parineh, Housing Sustainability and Conservation Programs Manager, Residential & Dining Enterprises' Student Housing, Stanford University

Moderator: Steve McKenzie, Associate Director, Housing, Humboldt State University

Linking Institution and Curricular Practices in Sustainability Education

Topic Areas: Curriculum and Institutionalizing Sustainability
Low-Hanging Fruit
Jargon Level: General Audience
Rm. 108, Humanities Building

It has become evident over the last decade that sustainability is a pervasive concern, not just one to be considered when economic times are good and to be ignored when resource constraints become tight. Sustainability is becoming institutionalized into the analysis of investment projects for both the public and the private sectors. As governments and firms continue to seek expertise in this area, it is critical that universities lead by developing programs that train the next generation of analysts, practitioners, and decision makers. This session includes talks on various curricular and institutional practices that can be employed to create sustainability course catalogs, evaluate sustainability views on campus, and innovate sustainability-related teaching techniques.

Gerri McNenny, PhD, Associate Professor, Chapman University

Pamela Ezell, Director, Broadcast & Digital
Best Practice Winners for Water Conservation

Topic Areas: Institutionalizing Sustainability; and Water and Landscape
Low-Hanging Fruit
Jargon Level: General Audience
Rm. 236, Burk Hall

Want to help your campus survive the drought? This session includes award-winning strategies to save water with presentations from Cal Poly State University, San Luis Obispo, University of California, Santa Cruz, and CSU Long Beach. How did they do it? Mainly, by skillfully prioritizing and implementing projects campus-wide, as well as launching campaigns to influence campus behavior. Together, these campuses are now saving over 90 million gallons of water per year. Come learn from the leaders.

Dennis Elliot, PE, CEM, Associate Director, Energy, Utilities, and Sustainability, Facility Services, Cal Poly Pomona

Holli Fajack, Sustainability Coordinator, Physical Planning & Facilities Management, CSU Long Beach

Moderator: Camille Kirk, Assistant Director of Sustainability, Environmental Stewardship and Sustainability, UC Davis

Campus Workplace Engagement through Green Office and Lab Programs

Topic Areas: Green Building Operations and Maintenance and Institutionalizing Sustainability
Ripening Efforts
Jargon Level: General Audience
Rm. 217, Humanities Building

Green office and lab programs provide an excellent strategy for engaging higher education workplace occupants in campus sustainability efforts, and four universities will share their programs in this session. Stanford will highlight the evolution of their green office program and its design for flexibility, while UC Davis will discuss the achievements and lessons learned with their green office and labs program, the campuses’ main sustainability engagement tool for staff. UC Santa Barbara and UC Santa Cruz will both present their green labs checklists and the successes and challenges with each program.

Moira Hafer, Sustainability Analyst, Sustainability & Energy Management, Stanford University

Allen Doyle, MS, CEM, LEED™ AP, Sustainability Manager, Environmental Stewardship and Sustainability, UC Davis

Ron Liu, Undergraduate Student, Environmental Studies and Management; Green Office Student Coordinator, UC Davis
Climate Change and Health Care: Lessons for Universities

Topic Areas: Climate Action; and Health and Wellness
Low-hanging Fruit
Jargon Level: Interdisciplinary Talk
Rm. 237, Burk Hall

Climate change is the greatest health challenge of the 21st century, threatening our food, air, water, shelter, and security. This partnership presentation will outline how effectively responding to the challenges of climate change are interlinked between institutions of higher learning, governments, and health care providers. Our speakers will outline how institutions must consider the full ecological and human health costs of our energy choices, while showcasing opportunities in climate action approaches and healthcare curricula that also function as health promotion strategies with the potential for very significant improvements in population health.

Anya Desai, Student, UC San Francisco

Kathy Gerwig, MBA, Vice President, Employee Safety, Health and Wellness, and Environmental Stewardship Officer, Kaiser Permanente


San Francisco State University Landscape Tour

Topic Areas: Water and Landscape
Low-hanging fruit
Jargon Level: General Audience
Meet at the Registration Desk at West Campus Green

We will view residential landscape renovations in which 25% of the lawns were removed and replaced with floriferous plant material. As we continue through main campus we will see various native California geographic biomes. Then, we will visit residential garden units, where the Grounds department collaborated with Friends of the Urban Forest to install a pair of Fruit Groves. We will also discuss a recent installation of subsurface drip irrigation. Finally, we will stop at Lake Merced, a National Waterfowl Refuge that is scenically located along the Pacific Coast Migratory Bird Flyaway, and highlight the methods used to integrate and support this natural habitat.

Linda Jo Morton, Gardening Specialist, University Property Management, San Francisco State University
Morning Networking Break

9:15am-10:15am | West Campus Green

We welcome attendees to join us for coffee, tea, and light snacks at the exhibit show. The conference organizers thank you for spending time engaging the CHESC exhibitors as their contribution is critical to covering the event costs and allowing us to offer as many scholarship as we did this year. Remember to use your passport (available in electronic and print formats) to earn prizes as you visit the booths.

Concurrent Session Group E (Panel Presentations):

10:15am-11:30am

Campus Presidents Speak on Fossil Fuel Divestment

Topic Areas: Social Equity, Climate Action, and Institutionalizing Sustainability
Ripening Efforts
Jargon Level: General Audience
Nob Hill Room, Seven Hills Conference Center

To push for action on climate change, institutions around the world are divesting their holdings in fossil fuel (coal, oil, and natural gas) companies. California colleges and universities have been leaders in divestment. Five college and university Presidents will discuss why their campuses decided to divest their endowments from fossil fuels, the key challenges they faced, and what advice they would give those on other campuses considering fossil fuel divestment.

Brian Murphy, PhD, President, De Anza College

Brian Murphy is President of De Anza College in Cupertino, California. He was Director of the San Francisco Urban Institute at San Francisco State University, after serving as Chief Consultant to the California State Legislature’s Review of the Master Plan for Higher Education in the late 80’s. Murphy taught political theory at the University of California, Santa Cruz, Santa Clara University, and San Francisco State, and has served on city Commissions and non-profit Boards in San Francisco. He received a B.A. (Williams College), and M.A. and Ph.D. degrees (University of California, Berkeley), all in Political Science.
Lisa A. Rossbacher, President, Humboldt State University

Lisa A. Rossbacher began her tenure as the seventh President of Humboldt State University in summer 2014. She was previously the President of Southern Polytechnic State University in Marietta, GA. She has also worked for the U.S. Geological Survey, NASA, a geothermal exploration company, and National Public Radio, in addition to serving as a faculty member and administrator at Cal Poly Pomona, Whittier College, and Dickinson College. She was the first woman geologist to become a university president in North America. President Rossbacher graduated from Dickinson College (Geology, summa cum laude), received masters degrees from the State University of New York at Binghamton and Princeton University, and earned her Ph.D. (Geological and Geophysical Sciences) at Princeton University. Her bimonthly column has appeared in the magazine Geotimes (renamed Earth in 2008) since 1988, and she has authored books on geology, science, and the media. Her research interests focus on the role of water and water ice on the planet Mars. In 1984, she was a finalist in NASA’s astronaut selection process.

Thomas Poon, President, Pitzer College

Thomas Poon has been appointed by the Board of Trustees for Pitzer College to serve as interim president during the 2015-16 academic year. Poon, a professor of chemistry, formerly served as associate dean and senior associate dean of faculty from 2008-2013, accreditation liaison officer to WASC from 2011-2014, and acting president for Pitzer College in fall 2014. Poon received his B.S. from Fairfield University and Ph.D. from UCLA. He joined the faculty of the W.M. Keck Science Department in 2000 and currently holds concurrent tenured appointments at Claremont McKenna College, Pitzer College, and Scripps College, three of the seven independent institutions within the Claremont Colleges Consortium.

Leslie E. Wong, PhD, President, San Francisco State University

Dr. Leslie E. Wong serves as president of San Francisco State University, one of the nation’s premier urban comprehensive universities. Dr. Wong is committed to providing SF State students with an exceptional educational experience forged in the intellectual energy of one of the world’s most innovative cities and fostered by the diversity, creativity and dedication of SF State’s faculty, staff, students and alumni. SF State’s distinguished alums can be found in virtually every walk of life. Their accomplishments include 10 Pulitzer prizes, 15 Oscars, the invention of the microprocessor, and (jointly with SF State faculty) the discovery of the first exo-planets beyond the solar system. Dr. Wong co-chaired the recently completed strategic planning process that produced a value driven roadmap to advance the university’s goals. He also
launched SF State’s first comprehensive fundraising campaign. Early campaign success contributed to new scholarship funds, the renovation of the SF State gym and the revitalization of the athletics program. Dr. Wong holds a bachelor’s degree in Psychology from Gonzaga University, a master’s degree in Experimental Psychology from Eastern Washington University, and a Ph.D. in Educational Psychology from Washington State University. He maintains research interests in educational technology, academic assessment, and the role of underrepresented minorities in the academy.

Paul J. Zingg, PhD, President, CSU Chico

CSU Chico is a comprehensive; four-year University whose motto “Today Decides Tomorrow” guides 16,000 students through their undergraduate and graduate education. Prior to being named president at CSU Chico, Dr. Zingg was provost and senior vice president for Academic Affairs at California Polytechnic State University, San Luis Obispo from 1995 to 2004. Before that he served as the dean of the College of Liberal Arts at Cal Poly, 1993-1995. Dr. Zingg served as dean of the School of Liberal Arts at Saint Mary’s College of California from 1986-1993. Previously, he spent several years at the University of Pennsylvania, 1978-1983, serving as executive assistant to the president and as vice dean of the School of Arts and Sciences. He has held professorships in history at all the institutions he has served. Dr. Zingg received his PhD in history in 1974 from the University of Georgia, Athens; an MA in history in 1969 from the University of Richmond, VA; and a BA in history in 1968 from Belmont Abbey College, North Carolina. He has published twelve books and nearly 100 articles on American higher education, student learning, educational leadership, sports history, and intercollegiate athletics. He has also acted as a sports history consultant to several presses, the media, museum curators, and on Ken Burns’ acclaimed television documentary series, Baseball, in 1994.

Moderator: Carlos Davidson, Professor, Environmental Studies, San Francisco State University

Dashboards, Feedback, and Incentives – Data-Driven Sustainability

Topic Areas: Green Building Operations and Maintenance; and Energy ripening efforts
Jargon Level: Interdisciplinary Talk
Rm. 226, Burk Hall

Quantifying energy and utility usage is a hugely complex task. Delivering useful feedback to motivate diverse populations to adopt conservation actions requires integrating reams of data across numerous meter points and multiple systems, all delivered through an effective human interface. This session gathers three successful approaches. Stanford’s UMBRS systems initiative unifies utility data, billing functions, analytics, and sustainability metrics to support a user interface portal. At SFSU, data collection technology has enabled Monitoring-Based Commissioning, HVAC retrofit projects, and real-time operational analytics. At UC Berkeley, the Energy Incentive program
allowed significant energy upgrades and fine-tuning of Stanley Hall’s remodeled laboratories and classrooms.

Fahmida Ahmed, Director, Office of Sustainability, Stanford University

Kevin Ng, PE, CEM, Assistant Energy Manager, Energy Office, UC Berkeley

Harry Stark, Director, Facilities and Engineering, QB3 Institute, UC Berkeley

Charles A Meyer, Senior Director, Facilities & Service Enterprises, San Francisco State University

Micah Remley, Senior Vice President of Product Strategy, Higher Education Development, EnerNOC

Moderator: Thomas E. Lollini, FAIA, LEED AP, AUA, Senior Associate Vice President, Physical Planning & Development, San Francisco State University

Lighting Retrofit Successes: Low-Tech to High-Tech

Topic Areas: Energy; and Green Building Operations and Maintenance
Low-hanging Fruit
Jargon Level: General Audience
Rm. 1, Burk Hall

Two best practice award-winning “high-tech” lighting retrofits will be highlighted, as well as a “low-tech” delamping lighting scheme designed by students in an environmental studies course. UC Irvine will discuss a project that replaced approximately 3,200 light fixtures and lamps with new “dimming ready” LED troffers, linear LED light bars, and LED replacements for compact fluorescent lamps. CSU Dominguez Hills will describe a creative solution to retrofitting lights in a dated honeycomb ceiling, using a custom LED fixture and smart controls. SF State will present a successful, collaborative approach to delamping that is delivering a quick return on investment and is easy to implement. All three projects are generating significant energy savings and reducing maintenance (relamping) costs.

Joseph Fleshman, PE, Project Manager, Facilities Management, UC Irvine

Vicky Do, Energy Analyst, Facilities Management, UC Irvine

Kenny Seeton, Manager, Central Plant; Energy Manager, Facilities Services, CSU Dominguez Hills

Cain Buckler, Undergraduate Student; Sustainability Intern, Office of Sustainability, San Francisco State University

Moderator: Jordan Sager, LEED™ AP, Energy Manager, Facilities Management, UC Santa Barbara

Beyond Silos: Sustainability across the Curriculum in Diverse and Interdisciplinary Contexts

Topic Areas: Curriculum and Institutionalizing Sustainability
Ripening Efforts
Jargon Level: General Audience
Rm. 193, Fine Arts Building

This session highlights both the interdisciplinary and across-the-curriculum potential of sustainability education. This session wil
illustrate the potential of curricular innovation in multidisciplinary contexts, from empowering students to shape their own education informed by principles and problems of sustainable environmental design to a faculty-led systematic curriculum transformation. All three presentations highlight the value of interdisciplinary curricula to provide students with the knowledge and abilities needed to integrate concerns for ecology, social equity, and economics within the context of human and natural resource systems and the built environment.

**John S. Farnsworth**, MFA, MLA, PhD, Senior Lecturer, Environmental Studies and Sciences; Provost’s Faculty Associate for Curriculum Development and Transformation, Santa Clara University

**Lindsey Kalkbrenner**, MBA, Director, Center for Sustainability, Santa Clara University

**Nurit Katz**, MBA, MPP, LEED AP, Chief Sustainability Officer, Executive Officer, Facilities Management, UC Los Angeles

**Cully Nordby**, PhD, Academic Director, Institute of the Environment and Sustainability; Chair, Sustainability Committee, UC Los Angeles

**Jonathan Reich**, Professor; Fulbright Scholar, Architecture, Cal Poly, San Luis Obispo; Architect

**Joseph Ragsdale**, Associate Professor, Landscape Architecture, Cal Poly San Luis Obispo; Landscape Architect; Rome Prize winner

**Moderator: Mark Gold**, Associate Vice Chancellor for Environment and Sustainability, UC Los Angeles

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**Lessons Learned from Changing Roles in the Sustainability Profession**

**Topic Areas:** Institutionalizing Sustainability and Interactive

**Low-hanging Fruit**

**Jargon Level:** General Audience

**Rm. 408, Humanities Building**

As more schools hire and retain sustainability professionals to coordinate programs, incumbents for new or vacant positions are joining teams with diverse backgrounds from within and outside higher education, allowing for an exciting cross-pollination of experience and practice. Five sustainability professionals will discuss their experience of recently starting in new positions at their respective CSU campuses and share their knowledge on changing Carnegie classifications, shifting from the non-profit world to higher education, starting from the ground up to entering established programs, and building relationships while navigating political structures.

**Meaghan C. Smith**, LEED™ AP, Principal Planner; Project Manager, Capital Planning, Design and Construction, CSU Office of the Chancellor

**Juliana Goodlaw-Morris**, Sustainability Manager, Safety, Risk and Sustainability, CSU San Marcos

**Coleen H. Barsley**, Sustainability and Operations Analyst, Facilities Services, CSU Channel Islands

**Speaker/Moderator: Jillian Buckholz**, Director of Sustainability, Academic Affairs, CSU East Bay
Purchasing Practices and Policies to Source Real Food

Topic Areas: Food Systems; and Procurement and Business Services

Ripening Efforts
Jargon Level: Interdisciplinary Talk
Rm. 108, Humanities Building

Learn how to source real food by bettering your purchasing practices and policies from UC Santa Cruz, UC Riverside, and UC Davis. UCSC will focus on their Real Food Calculator, a food budget assessment tool that assesses social and environmental responsibility in food sourcing on campuses. UCR and UCD will present on the value of partnering with vendors. UCR will discuss how they partnered with Java City/ecoGrounds coffee to make a positive impact within communities producing campus food while reducing operational costs. UCD will present on how they partnered with the Yolo County Department of Agriculture and others to bring in more real food within local food systems.

Crystal Owings, Food Systems Working Group Co-Chair; Real Food Calculator Project Coordinator; Undergraduate Student, Environmental Studies; Latin American and Latino Studies, UC Santa Cruz

Matthew Burke, Lead Buyer, Purchasing, UC Riverside

Katrina Benedicto, Key Accounts Manager, Sales, Java City/ecoGrounds Coffee

Ben Thomas, Sustainability Manager, UC Davis Dining Services

Kiko Barr, Aggie Grown Coordinator, UC Davis Dining Services in partnership with Sodexo; Student, Sustainable Agriculture and Food Systems, UC Davis

Moderator: Lesley Clark, Commodity Manager, Procurement Services, UC Office of the President

Achievements and Lessons Learned in Water Saving Programs

Topic Areas: Water and Landscape

Ripening Efforts
Jargon Level: Interdisciplinary Talk
Rm. 236, Burk Hall

Honorable Mention Award Winner UCLA will speak to their strategy and goals to shift preventive maintenance services to in-house mechanics backed by an independent water consultant. Best Practice Award Winner CSU Fullerton will present on their sink auditing project with the goal to determine which buildings are under-performing and will share their two phase implementation plan. UC Santa Barbara will present on their investigation of the effects of reclaimed water usage on campus soils and the extent to which the soil may become too saline for plant growth in the future. Reclaimed water provides for over 90% of irrigation on UCSB’s campus.

Rachel Scarlett, Chancellor’s Sustainability Research Intern; McNair Scholar; Undergraduate Student, Environmental Studies; Geography, UC Santa Barbara

Jasreen Brar, Undergraduate Student, Civil Engineering; PowerSave Campus Project Coordinator, CSU Fullerton

Colleen Butterfield, Project Manager, Alliance to Save Energy

Gene Mataya, Manager, Utilities, Facilities Management, UC Los Angeles
Chris Bellizzi, General Manager, Economic Alternatives, Inc.

Moderator: Dennis Elliot, PE, CEM, Associate Director, Energy, Utilities, and Sustainability, Facility Services, Cal Poly Pomona

New Research: Improving Transportation Demand Management (TDM) and Pedestrian and Bike Safety

Topic Areas: Local, Transportation, and Research
Jargon Level: General Audience
Rm. 217, Humanities Building

Improving the effectiveness and reach of campus Transportation Demand Management (TDM) programs requires creative analysis. Panelists from Stanford, UC Berkeley, and Skyline College will discuss survey tools used to inform and tailor TDM programs and a comparative study of three university campuses designed to improve pedestrian and bicycle safety. Included are a new suite of survey questions to gain insight into travel choices, patterns, and behavior; use of GIS and population sampling surveys; and examination of crash data (both police reported and self-reported) from three Californian universities.

Bridget Thrasher, PhD, Transportation Programs Analyst, Parking and Transportation Services, Stanford University

Offer Grembek, PhD, Co-Director, Safe Transportation Research and Education Center, University of California, Berkeley

Aditya Medury, PhD, Postdoctoral Scholar, Safe Transportation Research and Education Center, University of California, Berkeley

Richard Hsu, MS, Sustainability Coordinator (former), Skyline College

Carina Anttila-Suarez, PhD, Faculty, Environmental Science and Biology, Skyline College

Moderator: Steve Lohr, EdD, Chief of Land Use Planning and Environmental Review, CSU Chancellor’s Office

Meet Your New Partner: Broadening Opportunities through Cooperative Action that Includes Campus Recreation

Topic Areas: Health and Wellness; and Student Affairs and Auxiliaries
Jargon Level: Interdisciplinary Talk
Rm. 237, Burk Hall

Campus Recreation Departments have been a growing force for the past decade. By providing a vital component of the college campus experience for students, campus recreation professionals are understanding have learned how to leverage their position on campus to more fully serve in the educational mission for students. Learn what is happening at the national leadership level, through its higher education association, NIRSA: Leaders in Collegiate Recreation. Leave with ideas on how to utilize campus recreation programs, services, and facilities to create outreach to students, to facilitate alignment with public health goals, and to bring about change through the student experience.
**Pam Su**, Director, Campus Recreation, San Francisco State University

**Janice DeMonsi**, Director of Recreation, Santa Clara University

**Krista Smith**, Director of Recreation, Associated Students Inc., Cal Poly Pomona

**Brigitte T. Lossing**, Associate Director, Recreational Sports, UC Berkeley

**Moderator: Gary Jurich**, Director, Recreation Center, UC Santa Barbara

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**San Francisco State University Waste Tour**

**Topic Areas:** Waste Reduction and Recycling

**Low-hanging Fruit**

**Jargon Level:** General Audience

Meet at the Registration Desk at West Campus Green

This will be a guided tour of SF State’s efforts to become a Zero Waste campus. We will follow common waste items from the point of sale to where they are picked up by Recology, the campuses’ waste hauler. We will view different disposal set-ups in academic buildings, outdoor areas, and food preparation areas and discuss how SF State has worked with custodial managers to adjust to compost as an additional waste stream. We will discuss recycling and compost training programs for custodial staff, kitchen staff, and students. We will also talk about procurement strategies that support our Zero Waste goal.

**Nicholas Kordesch**, Sustainability Coordinator, Office of Sustainability, San Francisco State University

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**Concurrent Session Group F (Stand-Alone Presentations):**

**11:45am-12:15pm**

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**Mendables: A ReUse Community Project**

**Topic Areas:** Local and Waste Reduction and Recycling

**Low-hanging Fruit**

**Jargon Level:** General Audience

**Nob Hill Room, Seven Hills Conference Center**

This session focuses on the presentation of opportunities and projects to revalue discarded textile products, viewing them as a resource and, hence, reducing their disposal into landfills. Attendees will be given an opportunity to learn about Mendables, a community event designed to sell and mend damaged merchandise from a local manufacturer, Levi Strauss, which were donated to Goodwill Industries and then sold and mended on our San Francisco State campus by students in the Apparel Design & Merchandising program. This interactive presentation will introduce the challenges and opportunities of textile waste and reuse, and attendees will leave with tangible best practices to enact on their campuses.

**Russell Esmus**, Master Student, San Francisco State University

**Constance Ulasewicz**, Professor, Apparel Design & Merchandising, Consumer/Family Studies Department, San Francisco State University
The Renewable Energy Initiative; A Student Fee-Funded 425kW Solar Array

Topic Areas: Climate Action and Student Affairs and Auxiliaries
Deep Green
Jargon Level: Interdisciplinary Talk
Rm. 226, Burk Hall

UC Santa Barbara’s Students responded to the need to bring renewable energy to the campus and put the idea out to referendum, proposing a six dollar per quarter lock-in fee over a ten year period. The vote passed in 2010 with nearly 70 percent of the students supporting the initiative. In this project, the students remained engaged throughout the process, up to and including the construction of the array. Students were able, with research and some external consulting, to parameterize the array in such a way as to be sure to meet the mission statement to bring renewable energy and innovation to the campus.

Andrew Riley, MESM, CEM; Sustainability Specialist, Student Affairs, UC Santa Barbara

Patrick Callery, PhD Candidate, Bren School of Environmental Science & Management, UC Santa Barbara

Sustainability Knowledge and Program Assessment at California State University, Northridge

Topic Areas: Curriculum and Research
Low-hanging Fruit
Jargon Level: General Audience
Rm. 1, Burk Hall

To improve sustainability knowledge of undergraduates, CSUN has added course offerings in sustainability in recent years. In order to assess the baseline knowledge of the general student population and the effectiveness of our programs, a sustainability knowledge questionnaire was employed which was based on a combination of one developed by OSU using Item Response Theory and program specific questions. The test was administered to students in sustainability and general education courses during 2013/14 and 2014/15. Results from the first two years will be presented, assessing knowledge among students by discipline, gender and year in school, and the effectiveness of program elements.

Helen Cox, PhD, Director, Institute for Sustainability; Professor, Geography, CSU Northridge

Kiana Lucero, Research Assistant, Institute for Sustainability; Undergraduate, Marine Biology, CSU Northridge

Moderator: Jillian Buckholz, Director of Sustainability, Academic Affairs, CSU East Bay

UC Santa Barbara Public Relations Campaign

Topic Areas: Institutionalizing Sustainability
Low-hanging Fruit
Jargon Level: General Audience
Rm. 193, Fine Arts Building

UCSB Sustainability has recognized a need to educate our own campus as well as the local community about sustainability. The goal of UCSB’s Public Relations Campaign is to increase visibility and education about the University’s achievements in sustainability and goals for the future to our internal and external stakeholders, as well as to encourage behavioral changes and
collaboration between UCSB Sustainability and the broader community. The campaign aims to promote a “culture of sustainability” which integrates sustainability into the daily habits of the campus community members and encourages active participation with students, faculty, and staff. Through this campaign, we have been successful in actively engaging the local community of Santa Barbara, an audience that was not previously targeted in past communication efforts.

Jewel Snavely, Sustainability Coordinator; TGIF Grants Manager, Administrative Services, UC Santa Barbara

Mo Lovegreen, Director, Campus Sustainability, UC Santa Barbara

Brown’s: A California Café at Cal Berkeley

Topic Areas: Food Systems and Local Ripening Fruit
Jargon Level: General Audience
Rm. 408, Humanities Building

Living in the environmentally conscious environment that is the Bay Area, the typical student at UC Berkeley is no stranger to the concept of sustainable food. However, what this means to each student varies greatly and may be inaccurate. As a higher education dining service, we are uniquely poised to educate and dispel myths surrounding food sustainability through action supported by evidence-based science. Brown’s: A California Café intends to demonstrate food sustainability by providing a menu focused on foods that are both sustainable and nourishing, specifically by using ingredients that are local, seasonal, minimally-processed, and plant-based. Additionally, we will highlight other sustainable traits of our foods, such as fair trade and antibiotic-free, as well as educate our guests about these factors. At our presentation, we will discuss methodology, challenges, anticipated set-backs, and next steps for this project.

Shawn LaPean, Executive Director, Cal Dining, UC Berkeley

Kristen Rasmussen, MS, RDN, Lecturer; Culinary and Food Sustainability Consultant, Cal Dining, UC Berkeley

Sarah Atkinson, Sustainability Coordinator, Cal Dining, UC Berkeley

Translating the Value of Campus Gardens to Decision Makers

Topic Areas: Food Systems and Institutionalizing Sustainability Ripening Efforts
Jargon Level: Interdisciplinary Talk
Rm. 108, Humanities Building

We all know gardens are important, but how can we nurture administrative support while building an on-campus garden? Learn how to translate the value of your campus farm or garden through specific strategies that have been successful at Santa Clara University. Housed within the Center for Sustainability, the Forge Garden is a small ½ acre campus garden. Each quarter, over 1,500 students visit the garden, roughly 15 unique courses use the garden for classes or labs, and 2,000 pounds of the garden’s produce are distributed to the community. We’ll share models for developing relationships, tracking engagement, recruiting volunteers, and connecting with the larger community. This replicable and scalable model can be accomplished by one staff person and doesn’t require a strong agricultural department. The presentation focuses on techniques for...
establishing regular, individualized communication with faculty, student clubs, and customers and learning how to broaden your reach through workshops, special events, and social media.

Rose Madden, Farm Facilities and Production Coordinator, Stanford Educational Farm, Stanford University

Campus Water Reuse: How Emory Learned from San Francisco Public Utilities Commission and Cut Water Use by 35%

Topic Areas: Water and Landscape
Deep Green
Jargon Level: Interdisciplinary Talk
Rm. 236, Burk Hall

When the San Francisco Public Utilities Commission designed its new headquarters its objective was to create the greenest office building in the world and generate long-term cost savings for the city. SFPUC explored many concepts on how to process all sanitary waste generated by building’s occupants, and to reuse reclaimed water to flush all toilets. The success of the building-based reclamation system was noted by Emory University who challenged themselves to create a large-scale, campus-wide water reuse system. The result is the WaterHub at Emory University, reducing the campus water footprint by over 35%.

John Scarpulla, Program Manager, San Francisco Public Utilities Commission
Scott Nelles, LEED™ AP, Director of Business Development at Sustainable Water LLC, Glen Allen, Virginia

California’s Groundwater and the Path to Sustainability

Topic Areas: Water and Landscape
Low-hanging Fruit
Jargon Level: Interdisciplinary Talk
Rm. 217, Humanities Building

Groundwater basins provide cost-effective local water storage and, if well managed, will make communities more resilient to droughts and climate change. Other regions do not manage groundwater sustainably, resulting in problems such as overdraft and land subsidence. Thirty million Californians rely on groundwater for some of their supply, and annually, it provides about 40 percent of the state’s total water supply. Additionally, groundwater serves as a buffer against drought and climate change. The Sustainable Groundwater Management Act is the most significant water law in 100 years and will put California on the path to sustainable management of all its water resources.

Chris Bonds, Senior Engineering Geologist, California Department of Water Resources (DWR)

Optimizing Outreach through Collaboration

Topic Areas: Procurement and Business Services; and Institutionalizing Sustainability
Low-hanging Fruit
Jargon Level: General Audience
Rm. 237, Burk Hall

UC San Diego PowerSave Campus joined forces with the Small Business Development Office on campus to create a holistic
program aligned with both organizations’ goals, and benefiting local small businesses. PowerSave Campus is a student-based organization sponsored by UCSD Facilities Management and The Alliance to Save Energy, which aspired to perform energy efficiency assessments for small businesses in the San Diego area. The Small Business Development Office is a functional group within UC San Diego’s Business & Financial Services department, which strives to create opportunities for emerging and underutilized small and diverse businesses. Forming a partnership between the two campus organizations was inevitable. This presentation will address the opportunities and challenges faced when collaborating between two already-established campus groups, as well as the methodologies and best practices employed to make the partnership successful.

Anthony Singleton, Manager, Chief Small Business Officer, Integrated Procure-to-Pay Solutions, Small Business Development Office, UC San Diego

Moderator: Lesley Clark, Commodity Manager, Procurement Services, UC Office of the President

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Lunch Discussions

How to engage the UC community in the Carbon Neutrality 2025 Initiative

Rm. 108, Humanities Building | 12:30pm -1:30pm

President Napolitano has called on UC to be carbon neutral in the next decade. In the coming year a series of activities are being planned to outreach to and engage faculty, staff, and students in the initiative and taking action to reduce our footprint. The lunch will begin with a brief overview of the upcoming engagement programs followed by a discussion about how we can maximize the reach of these activities. This lunch is open to anyone from UC that wants to get more involved with making our campuses carbon neutrality. Up to 30 people can be accommodated on a first-come, first-serve basis.

CSU Sustainability Officers’ Lunch

Nob Hill Room, Seven Hills Conference Center | 12:30pm -1:30pm

This lunch is invitation-only.
Concurrent Session Group G (Panel Presentations):

1:45pm-3:00pm

**Saving Water on Campus: Reducing by 25% or More**

Topic Areas: Water and Landscape; Institutionalizing Sustainability; and Interactive Ripening Efforts

Jargon Level: Interdisciplinary Talk

Nob Hill Room, Seven Hills Conference Center

In January of 2014, prior to Governor Brown’s 20% water reduction mandate, San Mateo County Community College District Chancellor Ron Galatolo declared a 25% water use reduction goal. Fast forward to present: SMCCCD as a whole has reduced usage by 23% and is in the process of cutting District-wide water use by 50% from a 2013 baseline. The SMCCCD Facilities Team will highlight the challenges and successes of implementing a comprehensive Water Efficiency Program. Presenters will use lessons learned from SMCCCD campuses to help others develop successful water efficiency strategies for their own campuses. Using a design-thinking approach, presenters will facilitate a workshop to help identify water conservation opportunities, set goals, and arrive at tangible solutions.

Joe Fullerton, LEED AP, Energy Management Coordinator, Facilities Planning, Maintenance and Operations, San Mateo County Community College District

Carmela Gaspar, Sustainability Specialist, Facilities Planning Department, San Mateo Community College District

**Local Transformers: A Tale of Two Projects and Their Energy Shifts**

Topic Areas: Climate Action; Energy; and Local Deep Green

Jargon Level: Interdisciplinary Talk

Rm. 226, Burk Hall

A large-scale retrofit of an existing commercial building used for training apprentices and journey-level electricians aptly transformed the building from being an “energy hog” to a Zero Net Energy Center. A campus-scaled infrastructure project replaced a Central Energy Facility, retired a cogeneration plant, electrified the campus energy system, and converted the campus from steam to hot water. How were these large projects able to galvanize their key stakeholders to undertake such big shifts, and how did they get done quickly? Come learn about these projects from talks delivered by the Alameda County Electrical Joint Apprenticeship and Training Committee and Stanford.

Fahmida Ahmed, Director, Office of Sustainability, Stanford University

Byron Benton, Training Director, Alameda County Electrical Joint Apprenticeship and Training Committee, Zero Net Energy Center

Moderator: David Trombly, PhD, Associate Engineer, Utilities, UC Davis

**Turning Data into Energy Projects: Innovative Approaches to Gather Actionable Data for Savings**

Topic Areas: Energy; Green Building Operations and Maintenance

Ripening Efforts

Jargon Level: Interdisciplinary Talk

Rm. 1, Burk Hall
This session focuses on innovative ways to collect pertinent data in a campus environment and translate the information into real projects and energy savings. Lawrence Berkeley National Lab will present their progress in capturing building performance data to identify and implement energy savings initiatives. UC Davis will demonstrate how they used their campus portal to collect thermal comfort feedback from students, and how this drives action. Stanford will present on how they developed an inventory of the campus-wide plug loads, how their findings contributed to a nationwide study on laboratory plug loads, and how the results of the two studies directed energy reduction programs, both on-campus and state-wide.

Deirdre McShane Carter, PE, Energy and Sustainability Manager, Lawrence Berkeley National Laboratory

John Elliott, Chief Sustainability Officer, CEM, Chief Sustainability Officer, Lawrence Berkeley National Laboratory

Kiernan Salmon, Project Manager, Campus Energy Feedback System, Facilities Management Energy Conservation Office, UC Davis

Jessica Blizard, UX/Visual Designer, Facilities Management Energy Conservation Office, UC Davis

Liz Shigetoshi, Applications Developer, Facilities Management Energy Conservation Office, UC Davis

Rashmi Sahai, Assessments Program Manager, Sustainability & Energy Management, Stanford University

Moira Hafer, Sustainability Analyst, Sustainability & Energy Management, Stanford University

Allison Paradise, Executive Director, My Green Lab

Moderator: Eric Eberhardt, Associate Director, Energy Services, University of California Office of the President

Sustainable Communities: University and Community Partnerships for Sustainability Education Experiences

Topic Areas: Curriculum; Research; and Institutionalizing Sustainability Ripening Efforts
Jargon Level: General Audience
Rm. 193, Fine Arts Building

The two-year-old San Diego State Sage Project and the incipient Sustainable City Year Program at CSUMB are both modeled after the award-winning Sustainable City Year Program (SCYP) at the University of Oregon. These programs integrate sustainability-oriented city projects into the curriculum of existing university classes. Both university faculty and city staff ensure that project goals are aligned to fit within the scope of curricular learning outcomes. This creates unique partnerships between the city and the university and provides added opportunities for students to gain valuable experience in the public sector, leading to potential internships and employment opportunities.

Daniel M. Fernandez, PhD, Professor, Division of Science and Environmental Policy; Chair, Campus Sustainability Committee, CSU Monterey Bay

Jessica Barlow, PhD, Professor of Speech, Language, and Hearing Sciences; Director of the Sage Project, San Diego State University

Laura Bloch, MS, DEnv; United States Environmental Protection Agency (EPA), Region 9 Sustainability Advisor
Best Practice Award Winners in Waste Management

Topic Areas: Waste Reduction and Recycling
Ripening Efforts
Jargon Level: Interdisciplinary Talk
Rm. 408, Humanities Building

This session will include two Best Practice Winners and an Honorable Mention for the Waste Management category. One presentation will outline the effort to improve waste management practices and decrease the workload required from custodial staff to service the indoor waste infrastructure with an innovative approach taken by staff and faculty members. While others will speak to the process of closing the loop between these previously independent activities while providing cost savings to the university, advancing a zero-waste agenda and fostering a culture of sustainability amongst the university community.

Matthew O’Carroll, Refuse, Recycling & Water Efficiency Manager, UC Santa Barbara

Helen Cox, PhD, Director, Institute for Sustainability; Professor, Geography, CSU Northridge

Michael Fan, Senior Engineer; Supervisor, Utilities, UC Davis

Moderator: Matthew Hirota, Waste Reduction & Recycling Coordinator, Facilities Management, UC Merced

Sustainable Asset Reallocation: The University of California and Fossil Free Investments

Topic Areas: Social Equity and Institutionalizing Sustainability
Ripening Efforts

General Audience
Rm. 108, Humanities Building

$50 billion have been divested globally from the fossil fuel industry. What if the UC joined the trend, and what if the UC led the way in investing in the low-carbon just economy? This session will employ a world café to discuss the purpose and efficacy of the fossil fuel divestment campaign and then take one step further to explore sustainable reinvestment options and strategies. Participants will discuss the role of investments in the UC’s Carbon Neutrality Initiative, the potential of signing the Divest-Invest pledge, and how these efforts may solidify the UC’s role in the UN Climate Conference in Paris in December 2015.

Alden Phinney, Organizer, Fossil Free UC; Undergraduate, Economics; Carbon Neutrality Fellow, UC Santa Cruz

Increasing Healthy Eating through K-12 Partnerships, Local Produce, and Strategic Educational Programming

Topic Areas: Food Systems; and Health and Wellness
Ripening Efforts
Jargon Level: General Audience
Rm. 236, Burk Hall

UC Davis and UC Santa Cruz share their strategies to increase healthy eating through both campus and community. UC Santa Cruz will give insights to working with high school youth empowerment projects, public schools, and businesses to enact healthier built environments and increased farm to school projects in the Central Coast. UC Davis will present on combining sustainability and nutrition education programs in the residence halls to streamline and coordinate messaging, as well
as discussing opportunities for UC campuses to partner with local organic farmers and why it is important to create relationships with locals who produce and consume sustainably grown organic food.

**Tim Galarneau**, Food Systems Education & Research Specialist, Center for Agroecology & Sustainable Food Systems, UC Santa Cruz

**Lisette Lawler**, Undergraduate Student; K-12 Research and Education Intern, Center for Agroecology & Sustainable Food Systems, UC Santa Cruz

**Samantha Lubow**, Sustainability Coordinator, UC Davis Dining Services by Sodexo

**Jenni Porter**, LEED™ AP, Sustainability Coordinator, Student Housing, UC Davis

**Moderator: Kate Parkinson**, Undergraduate Student, College of Creative Studies Biology; UC Global Food Initiative Fellow, UC Santa Barbara

**Curricular Inroads to Advanced Vehicle Technologies and Carbon Footprint Reduction**

Topic Areas: Climate Action; Transportation; and Curriculum

Ripening Efforts

Jargon Level: General Audience

Rm. 217, Humanities Building

California is a national leader in the reduction of GHGs and a commitment to low emission vehicles, and yet 96% of California vehicles are still petroleum-based and produce 38% of GHGs. Understanding advanced vehicle technology is necessary to achieve energy and environmental goals and will require an educated and skilled workforce. This session provides examples of academic efforts to advance hydrogen fuel cell, hybrid, and electric vehicle technologies through curriculum, laboratory experiences, and program implementation. Also highlighted is a classroom experience requiring carbon footprint analysis of real world situations, providing the next generation with a better understanding of the relationship of policy and advanced technologies.

**Susan Cholette**, PhD, Professor, Decision Sciences, San Francisco State University

**David Blekhman**, PhD, Professor, Technology, CSU Los Angeles

**Michael G. Dray**, Hydrogen Station Manager and Technical Operations Manager for the College of Engineering, Computer Science and Technology, CSU Los Angeles

**Fred Barez**, PhD, Professor, Mechanical Engineering, San Jose State University

**Moderator: Ronnie Lipschutz**, PhD, Professor, Political Science, UC Santa Cruz

**Engaging Students through Student Government, Entrepreneurship, and Student Organizations**

Topic Area: Student Affairs and Auxiliaries

Ripening Efforts

Jargon Level: General Audience

Rm. 237, Burk Hall

In this session, UC Santa Barbara, UC Merced, and UC Santa Cruz will discuss their approaches to engaging students
through student government, entrepreneurship, and organizations. UCSB will present on the challenges and lessons learned from the Associated Students Green Bill, which codifies certain sustainability-focused practices into A.S. law. UC Merced, in collaboration with PowerSave, will present on their Entrepreneurial Seminar and Pitchfest, a 24-hour innovation challenge where students deliver pitches based on sustainability prompts. The Student Environmental Center and the Education for Sustainable Living Program at UCSC will review the best practices of the organizations and share methods on the student-driven agency model.

Sarah Siedschlag, Environmental Programs Advisor, Associated Students, UC Santa Barbara

Gabriel Morabe, Team Manager; Project Coordinator, PowerSave Campus Program; Fellow, UCOP Sustainability Student Fellowship Program; Undergraduate Student, Ecology and Evolutionary Biology, UC Merced

De Ette Silbaugh, MA English, Lecturer, Professional Writing, Merritt Writing Program, UC Merced

Julie Rachel Foster, Co-Chair, Student Environmental Center; Representative, California Student Sustainability Coalition; Facilitator, Education for Sustainable Living Program; Coordinator, Bike Library; Student, Environmental Studies, UC Santa Cruz

Jordan Le, Collaboration and Networking Organizer, Education for Sustainable Living Program; Transportation Coordinator, Student Environmental Center; Student, Astrophysics, UC Santa Cruz

Moderator: Angela Schmiede, PhD, Dean of Academic & Professional Success, Menlo College

Fuel Cell Tour

Topic Area: Energy Ripening Efforts
Jargon Level: Interdisciplinary Talk
Meet at the Registration Desk at West Campus Green

Welcome to Pacific Gas and Electric’s San Francisco State University Fuel Cell Facility. The facility consists of two differing fuel cell technologies totaling 1,600 KWs of electrical output. They were installed in 2011 in a cooperative effort between PG&E and San Francisco State University to demonstrate fuel cell technology. In addition to providing an environmentally-friendly source of electrical energy for the PG&E grid, the larger of the 2 fuel cells converts hot exhaust gas to useful thermal energy to be utilized by the University.

Charles A Meyer, Senior Director, Facilities & Service Enterprises, San Francisco State University

Joshua Valdez, Solar Technician, Pacific Gas & Electric
Concurrent Session Group H

Taking Action Sessions
3:15pm-4:00pm

This year CHESC is introducing a new session type, Taking Action Sessions. The goal of these sessions is to translate the best practice sharing of the conference into clear next steps and to set goals. We will do this by encouraging attendees to:

• Reflect on what they have learned, the relationships they have developed, and the ideas they heard about throughout the conference;

• Consider how they will translate that information and those experiences into action; and/or

• Empower attendees with skills that will enable them to take the next step towards change on their campuses and in their home communities.

We were inspired by the CA Higher Education Food Summit who used a similar model in their January 2015 event.

Implementing Statewide CSU Real Food Policy on Campus

Topic Areas: Food Systems; Procurement and Business Services; and Student Affairs and Auxiliaries
Ripening Efforts
Jargon Level: Interdisciplinary Talk
Nob Hill Room, Seven Hills Conference Center

This presentation will focus on reviewing the newly developed real food guidelines in line with the the CSU Sustainability Policy commitment to 20% real food by 2020. These best practice guidelines were made in collaboration with the Chancellor’s Office and the student group Real Food for CSUs. In this session, we will create a space for attendees from the CSUs and other campuses to gain insight into how the guidelines were developed. This session will give attendees the opportunity to have a better understanding of the guidelines while also having a chance to ask questions to speakers involved in the development of it.

Jessica Gonzalez, Co-founder; Lead Organizer, Real Food for CSUs campaign

Stephanie Yee, Undergraduate Student, Environmental Studies, CSU Monterey Bay

Moderator: Fortino Morales, R’Garden Manager, Sustainability, UC Riverside

Taking-Action Regarding New California Water Policy

Topic Area: Water and Landscape
Ripening Efforts
Jargon Level: General Audience
Rm. 226, Burk Hall

To quote Warren Olney of KCRW’s To the Point., “19th Century laws and 20th Century Practices have created a 21st Century water crisis in California.” For years, building departments and health departments have found many ways to say no to new water conserving systems. This session will present new and bold water policy ideas to a panel of experts who will speak briefly to the regulatory impediments and benefits of new water policy before engaging the audience in an up or down vote on each new policy idea.

Chester A. Widom, FAIA, California State Architect
CAN WE CHANGE FAST ENOUGH?

Doug Wildman, Program Director, Friends of the Urban Forest

Joel Cesare, Sustainable Building Advisor, City of Santa Monica

Moderator: Mark Gold, Associate Vice Chancellor for Environment and Sustainability, UC Los Angeles

Creating Green Construction and Renovation Standards for Sustainable Universities

Topic Areas: Climate Action; and Green Building New Construction and Renovations Ripening Efforts
Jargon Level: Interdisciplinary Talk
Rm. 1, Burk Hall

The Construction and Design department at UC Berkeley has worked with a student organization, Building Sustainability at Cal (BS@C), to create new guidelines for green building and renovation projects on campus. This checklist encourages projects of all sizes and budgets to consider and adopt more sustainable measures throughout the design, construction, and occupancy phases. UC Berkeley students and staff are hosting a workshop to encourage other universities to brainstorm and kickstart environmental standards for green building that they can implement on their campuses.

Janika McFeely, AIA, LEED AP BD+C, Sustainability Specialist, Energy + Sustainability, UC Office of the President

Lydia Yiu, LEED Green Associate, Building Sustainability at Cal Intern; Undergraduate Student, Civil/Environmental Engineering, UC Berkeley

Anthony Hall, Building Sustainability at Cal Intern; Undergraduate Student, Environmental Science, UC Berkeley

Greta Gardner, Intern, Sustainability, UC Berkeley

Rosanna Ren, LEED GA, Intern Coordinator, Building Sustainability at Cal; Graduate, Environmental Science; Environmental Economics and Policy, UC Berkeley

Speaker/Moderator: Ellen Owens, AIA, LEEDTM AP (BD+C), Project Manager, Team Manager, Construction & Design, Real Estate Division, UC Berkeley

Keeping UC Sustainable Transportation Policy on Track – A Look Back and Ahead

Topic Areas: Transportation Deep Green
Jargon Level: Interdisciplinary Talk
Rm. 193, Fine Arts Building

The University of California’s Sustainable Practices Policy established goals in nine areas of sustainable practices, including transportation. Its most recent update was in 2013. Given the shifting sands of time and the UC President’s elucidation of the goal for UC to be carbon neutral by 2025—which does not include Scope III commute emissions—it is time to revisit the Policy and discuss its evolution. What Policy aspects have worked well? What should be added, or removed, or recast? How have UC fleets responded to the Policy, and how have campus parking offices responded? Join us in an interactive discussion of the transportation elements of the UC Sustainable Practices Policy and where we are headed from here.

Charlotte Strem, 2013 UC Sustainability Champion; Assistant Director Physical and
Environmental Planning, UC Office of the President

**Todd Henry**, Planner, Physical & Environmental Planning, UC Berkeley

**Larry Pageler**, Director, Transportation & Parking Services, UC Santa Cruz

**Moderator: Renee Fortier**, Executive Director, Event & Transportation, UC Los Angeles

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**The Internet of Thing: Turning One Meter into Many Meters**

Topic Areas: Green Building Operations and Maintenance
Deep Green
Jargon Level: Specialized Talk
Rm. 408, Humanities Building

Installing meters and sensors at the increasingly fine scale needed to solve complex energy and water problems entails substantial costs, and existing residential technologies are unlikely to perform well in systems with many diverse loads. UC Davis, in collaboration with Microsoft and OSISoft, is using a large parking structure with a single electric meter as proof of concept for developing a method to process a complex signal with machine learning algorithms and discover in real time which loads are on and their energy usage. This provides virtual metering of loads and precludes the need for sub-metering. This talk will describe how we gathered data about the system, summarize the methods we are using, show examples of how the method will be used to save energy and water, and propose other systems where a similar approach could be used.

**David Trombly**, PhD, Associate Engineer, Utilities, UC Davis

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**Sustainability Blitz for a Rapid Diffusion Across the Curriculum**

Topic Areas: Curriculum; and Local Low-hanging Fruit
Jargon Level: General Audience
Rm. 108, Humanities Building

In its second year, the ‘Blitz’ has proven to be a successful approach to infusing sustainability across departments, faculty, and students at Skyline College. This model, born out of a partnership between the college and Climate Corps Bay Area, pairs faculty with emerging sustainability professionals to collaboratively design classes that incorporate sustainability instruction into a diverse range of courses. Faculty benefit from accessing tailored instructional material that they can adapt for future terms. Session leads will review the Blitz approach and outcomes and lead participants in a discussion on the model that can be translated to other campuses and settings.

**Stephen Miller**, Deputy Director, Strategic Energy Innovations

**Carina Anttila-Suarez**, Professor, Environmental Science, Skyline College

**Christopher Koh**, Sustainability Coordinator, Workforce Development, Skyline College

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**Cultivating a Zero Waste Culture on Campus**

Topic Areas: Waste Reduction and Recycling Ripening Efforts
Jargon Level: General Audience
Rm. 236, Burk Hall

Student Projects Redefining Our University’s Trash, Sustainably (SPROUTS) was founded with the simple mission of changing
the campus community’s relationship with waste and its interaction with waste bins in terms of zero waste practices. Zero waste is not achievable without a strong educational presence to foster a culture of responsible waste practices. This presentation will highlight the lessons learned in our wide array of projects on how to effectively communicate to the public and encourage sustainable practices, particularly on college campuses. Our goal is to use our methods to foster a discussion on zero waste issues.

Carley Halsey, Project Coordinator, Campus Recycling and Refuse Services, UC Berkeley

Nicole Cuellar, Project Coordinator, Campus Recycling and Refuse Services, UC Berkeley

Building Partnerships and Programs that Connect Campus Diversity and Sustainability

Topic Areas: Social Equity; and Institutionalizing Sustainability
Jargon Level: General Audience
Rm. 217, Humanities Building

As diversity and sustainability become more embedded into a campus culture, the connections between diversity and sustainability become more apparent and critical to create a thriving campus. This discussion will first demonstrate the effort at California State University East Bay to build partnerships between diversity and sustainability programs and then discuss the challenges and barriers to achieving a more equitable, sustainable culture. The benefits of aligning campus diversity and sustainability initiatives will be explored and some ideas on how to create collaborations will be shared. Individuals looking to learn more about building the bridge between diversity and sustainability on their campuses are encouraged to attend.

Dianne Rush Woods, PhD, University Diversity Officer, CSU East Bay

Jillian Buckholz, Director of Sustainability, Academic Affairs, CSU East Bay

Student Activism and Expanding the Definition of Sustainability at UC

Topic Areas: Social Equity
Low-hanging Fruit
Jargon Level: Interdisciplinary Talk
Rm. 237, Burk Hall

As hyper-globalization complicates and disconnects the production of the clothes we wear from our everyday shopping experience, consumers, and brands in the developed world benefit from the exploitative conditions women in the developing world face. Our presentation will offer an introduction to the status of the collegiate apparel industry, how the UC maintains compliance with decent labor standards and where it falls short. Specifically, we will be discussing what students at the UC’s are doing to hold their institutions accountable and the current status of student, faculty, and chancellor collaboration to enact change at the UC level to change industry practices.

Dana Patterson, Undergraduate Student, Global Studies; Labor Studies, UC Santa Barbara; Activist, United Students Against Sweatshops

Brandon Yadegari, Undergraduate Student, Global Studies, UC Santa Barbara; Activist, United Students Against Sweatshops
Closing Keynote Talk: Sustainability and Resilience – Two Movements in Convergence

(Sponsored by OfficeDepot/OfficeMax)
4:15pm-5:15pm
Knuth Theater, Creative Arts Building

Since the publishing of the 1987 Brundtland Report, the Sustainability movement has grown rapidly and become embedded into the everyday workings of non-profit organizations, for-profit companies, campuses, government institutions, and more. Recently some of the dialogue has shifted towards adaptation and addressing current crises in addition to planning for our future and mitigating impacts. The emerging resilience field brings together emergency response, community preparedness and climate change adaptation. Resiliency engages communities and aims to build community-driven leadership that is ready for new challenges. How can we as professionals in resilience and sustainability work together to ensure that the communities we are building are healthy, sustainable, thriving communities that can respond to uncertainty? What lessons and best practices can be shared between the movements? Are there trade-offs we face in planning for resilience and sustainability? This session will discuss current examples of sustainability and resilience collaboratives such as the Alliance for Resilient Campuses and the Los Angeles Regional Collaborative for climate action and sustainability, as well as explore how we can build future partnerships. This session will be structured as a dialogue between practitioners. The moderator will guide the speakers in an initial dialogue and then the conversation will be opened up to the audience.

Nurit Katz, MBA, MPP, LEED AP, Chief Sustainability Officer; Executive Officer, Facilities Management, UC Los Angeles

JUCLA’s first Chief Sustainability Officer, Nurit Katz works to foster partnerships among academic, research, and operational departments to further the goals and initiatives of sustainability at UCLA. As Executive Officer for Facilities Management, Nurit provides strategic support to make UCLA more operationally efficient and coordinates with Emergency Management on resilience planning. Nurit is also an Instructor for UCLA Extension’s Sustainability Certificate Program. She holds an MBA from the UCLA Anderson School of Management, a Masters in Public Policy from the UCLA Luskin School of Public Affairs, and a BA in Environmental Education from Humboldt State University.
Daniel Homsey, Director of Neighborhood Resilience, City Administrator’s Office, City and County of San Francisco

A fourth generation San Franciscan who has a degree in Political Science from San Francisco State University, Mr. Homsey has spent the last 25 years as a communications professional in both the private and public sector. After a long stint in the technology field, Mr. Homsey was appointed Director of The Mayor’s Office of Neighborhood Services in 2004. In January 2008, he became the Director of Neighborhood Resilience in the City Administrator’s office. Currently, Mr. Homsey is an alumnus of the Presidio Institute’s Inaugural Class of Cross Sector Leadership Fellows and is on the Steering Committee for the United Nations Making Cities Resilient Campaign. A primary role for Mr. Homsey is being program manager for the Neighborhood Empowerment Network initiative which is a coalition of residents, community supported organizations, non-profits, academic institutions, and government agencies with the mission to empower residents with the capacity and resources to build, and steward, strong sustainable communities. For more information, visit www.empowersf.org.

Opening Remarks

Moderator: Shawn Whalen, Chief of Staff, Office of the President, San Francisco State University

As the chief of staff in the Office of the President at San Francisco State University, Mr. Whalen is focused primarily on the implementation and progress of the president’s vision and priorities. Mr. Whalen serves as a member of San Francisco State’s senior leadership team and he advises the president on matters related to strategic planning, academic policy and student achievement. He also maintains active involvement in issues of importance to the president including state budget appropriations, university partnerships, legislative initiatives, the implementation and assessment of curricular programs, and accreditation.
July 22nd, 2015
Wednesday Evening Activities

Private Bean-to-Bar Chocolate Factory Tour at Dandelion Chocolate

Dandelion Chocolate Company | 740 Valencia St, San Francisco, CA 94110
5:30pm - 7:20pm

Dandelion Chocolate is a bean-to-bar chocolate factory in the Mission District of San Francisco. We roast, crack, sort, winnow, grind, conch, and temper small batches of beans. Then we mold and package each of our bars by hand. By sourcing high-quality cacao and carefully crafting tiny batches of chocolate, we can bring out the individual nuances of each bean. On the tour, we will guide the students through our small-batch bean-to-bar chocolate factory while we discuss and taste our way through each step of our chocolate making process. The group will taste cacao pulp (or the fruit that surrounds the beans inside the pod), whole roasted beans, and liquid chocolate from our melangers (or stone grinders that refine our chocolate) during the tour.

The price includes the workshop as well as shuttle transportation to and from the event. The shuttle will leave the West Campus Green at SFSU at 5:30pm and will arrive at Dandelion at 5:50pm. The shuttle will pick up attendees from Dandelion at 7:00pm and return to West Campus Green at 7:20pm.

Sustainability Officers’ Dinner

Tacolicious | 741 Valencia St., San Francisco, CA 94110
5:30pm - 8:20pm

This is a networking event open to campus staff whose job is 100% dedicated to sustainability. The dinner will be at Tacolicious in the Mission District. The menu will highlight a variety of tacos featuring local and organic ingredients, as well as some exciting side dishes.

The price includes the meal as well as shuttle transportation to and from the event. Drinks will need to be purchased separately by attendees. The shuttle will leave the West Campus Green at SFSU at 5:30pm and will arrive at Tacolicious at 5:50pm. The shuttle will pick up attendees from Tacolicious at 8:00pm and return to West Campus Green at 8:20pm.
Thursday, July 23rd, 2015
Post-Conference Workshops

Student Convergence
Thursday, July 23rd, 2015
8:00am-2:00pm | Gym 147, San Francisco State University
$35 Registration Fee (Includes Lunch)

The student convergence is a half day event that will be highlighting new student campaigns, upcoming projects, and skill-sharing workshops. Students will have a chance to network, discuss, and cross silos with other student leaders looking to better their campuses and communities from California Community Colleges, California State Universities, Universities of California, and private campuses throughout the state.

Campus-Community Partnerships for Advancing Sustainability
Thursday, July 23rd, 2015
8:00am-5:00pm | Seven Hills Conference Center, San Francisco State University
$42 Registration Fee (includes breakfast, lunch, and light refreshments)

Organized by the United States Environmental Protection Agency (EPA), this workshop is designed to introduce university and local government representatives to tools for advancing sustainability, including net zero energy, water, and waste strategies and approaches, and a successful Campus-Community Sustainability Partnership (CCSP) model where these tools and strategies can be applied. CCSP programs help universities build capacity by providing resources including, ready-made experiential learning projects. Universities provide their students with hands-on experience in assisting local governments with sustainability projects identified in the local government’s own work plans.

This workshop will cover:

- A Campus-Community Sustainability Partnership (CCSP) model, calendar, logistics, and benefits;
- A view from partner cities: presentation and Q & A with city leaders and university partners who have participated in CCSP programs;
- Guidance on setting-up a pilot year;
- Tools for advancing sustainability (e.g., Net Zero Energy/Water/Waste Strategies, EPA tools to advance Green Infrastructure, and the National Stormwater Calculator and Climate Assessment Tool);
- Table exercises/structured conversations, including an opportunity for participants to suggest issues they would like to hear more about; and
- Tool demonstrations. Tool demonstrations will be set up from 7:30-8:30 am, during the lunch session, and from 5:00-5:30 pm
CHESC Greening Healthcare Workshop; Preventing HealthCARE from Becoming HealthHARM

Thursday, July 23rd, 2015
8:00am-4:00pm | UCSF Mission Bay Campus
$15 Registration Fee
Shuttle pick-up at SFSU 7:15am and drop-off at 4:45pm
Shuttle pick-up location: 19th and Holloway, SFSU

This workshop will identify connections between the environmental impacts of healthcare and its effects on human health. Join us to learn what healthcare professionals can do to make a difference. Presentation topics include the impact of climate change on health, how healthcare organizations are taking action to reduce their environmental impact, environmental hazards to pregnant women and children, and the health implications of antibiotic use in meat. Breakout sessions will focus on practical actions and sharing of best practices, such as sustainable food, hospital waste, reprocessing of single used devices, reusable linens, green teams, and a tour of the new LEED-gold medical center at Mission Bay.

CEUS offered to RNs, Social Workers - $50 for processing, Free to UCSF staff
Free CEUS offered to REHS, and RDs

Joint UC/CSU Energy Manager’s Meeting (Invitation-Only)

Thursday, July 23rd, 2015
8:00am-3:00pm | The Annex, San Francisco State University
This is a free workshop, however please note the restrictions on attendance in the description below:

The Joint UC/CSU Energy Manager’s Meeting is an in-depth workshop for Energy Managers of Colleges and Universities in California. The focus will be an interactive session for participants to share best practices, lessons learned, and practical advice, followed by breakout sessions on topics of interest. Agenda items also include the state of the current UC/CSU/IOU Partnership Program and Program updates. This event is only open to utility representatives and people who fill the role of Energy Manager (or the equivalent) for a college or university campus, unless specifically/personally invited as a speaker by UCOP or the CSU Chancellor’s Office. This event is open to UC, CSU, CCC, and private college Energy Managers.

CSU Living Lab Workshop (Invitation-Only)

Thursday, July 23rd, 2015
8:00am-5:00pm | Jack Adams Hall, Cesar Chavez Student Center, SFSU
Free to invited attendees
July 23rd, 2015
Post-Conference Field Trips

What’s Old is Green!
Green Building + Sustainability at the Presidio - a New Kind of National Park

Thursday, July 23rd, 2015
8:00am - 12:00pm
Leaving from and Returning to 19th and Holloway, San Francisco State University
$39 Registration Fee

Join Presidio Trust staff for a behind the scenes tour of the Public Health Service District, the first Presidio neighborhood to receive the U.S. Green Building Council’s Leadership in Energy and Environmental Design for Neighborhood Development (LEED-ND) certification and the first LEED-ND neighborhood in the United States that is also an historic landmark district. The district once housed medical facilities to serve mariners from around the world. Today, it is a “green” neighborhood with homes, office space, a pre-school, an historic printing press, trails, scenic overlooks, and 25 acres of open space and native habitat. While LEED typically applies to new construction, the Presidio Trust is showing that green materials and techniques can be used when historic buildings are preserved. The tour will also showcase other Presidio sustainability techniques, including its innovative composting and salvage programs.

Romburg Tiburon Center Green Labs Assessment

Thursday, July 23rd, 2015
8:00am - 1:00pm
Leaving from and Returning to 19th and Holloway, San Francisco State University
Free!

Join us for a trip to the beautiful Romburg Tiburon Center (RTC) just north of the city. RTC’s mission is to advance understanding of the world’s complex marine and estuarine environments through research, education, and outreach, with a focus on San Francisco Bay. The researchers at RTC are really excited about the number of sustainability experts coming into town for CHESC, and they want to get your advice on how they can green their research facility! We are looking for attendees with experience in green lab assessments and/or green building practices. If that describes you, then please sign up here! This event will start with a tour by RTC researchers of their space, and then the event will “flip” and we will ask the attendees to assess the space (essentially leading the workshop).

Since attendees are providing a service to RTC, we have made this event free of charge!
Edible Schoolyard Tour

Thursday, July 23rd, 2015
8:15am-11:15am
Leaving from and Returning to 19th and Holloway, San Francisco State University
$49 Registration Fee

Come take a tour of the Edible Schoolyard Berkeley, a one-acre organic garden and kitchen classroom for urban public school students at Martin Luther King, Jr. Middle School! At ESY Berkeley, students participate in all aspects of growing, harvesting, and preparing nutritious, seasonal produce during the academic day and in after-school classes. Students’ hands-on experience in the kitchen and garden fosters a deeper appreciation of how the natural world sustains us and promotes the environmental and social well-being of our school community.

Cal Academy of the Sciences Green Building and Architecture Tour

Thursday, July 23rd, 2015
9:30am-11:30pm
Leaving from and Returning to 19th and Holloway, San Francisco State University
$39 Registration Fee

Our building is an exhibit in itself! Spend an hour going behind the scenes to learn what makes us the greenest museum on Earth. Discover what makes our Living Roof so green (hint: it’s more than plants), what makes our building’s construction so special, and how even our collections are maintained in a sustainable way. What’s included: One-hour guided tour, behind-the-scenes access, express entry into the building, VIP entrance to the Osher Rainforest, express entry into the Earthquake simulator, and a reserved space in the Planetarium.

AT and T Park Sustainability Tour

Thursday, July 23rd, 2015
9:30am-12:00pm
Leaving from and Returning to 19th and Holloway, San Francisco State University
$55 Registration Fee

AT&T stadium is the first ballpark in the nation to install a solar energy system, which provides renewable energy for PG&E’s customers in San Francisco. AT&T Stadium is also the first Major League ballpark to receive LEED Silver Certification for Existing Buildings, Operation and Maintenance. This tour will focus on what leads to AT&T park’s LEED certification and its recent Gold LEED certification. You will have a chance to visit and learn how the garden and recycling center fit in with the park’s green practices. Come learn about the fascinating green design of the AT&T ballpark!
Sponsors and Exhibitors

Gold Sponsor

UCSB Sustainability

At the University of California, Santa Barbara, we are committed to fostering a culture of sustainability through campus-wide sustainability efforts, program development, and promulgating the sustainability work of staff, faculty, and students – our greatest renewable resource. UCSB strives to capitalize on our position as an institution of higher education to ensure that all students understand the interconnectedness of environmental, economic, and social systems and to communicate that we each have a role to play in sustainability.

www.sustainability.ucsb.edu

Silver Sponsors

Acuity Brands

Acuity Brands, Inc. is a North American market leader and one of the world’s leading providers of lighting solutions for both indoor and outdoor applications. With fiscal year 2014 net sales of over $2.4 billion, Acuity Brands employs approximately 7,000 associates and is headquartered in Atlanta, Georgia, with operations throughout North America, and in Europe and Asia. Our innovative lighting solution covers both conventional fixtures and advanced solid-state technology that can seamlessly integrate with powerful digital controls and daylighting to create greater energy efficiencies and a higher quality of light.

http://www.acuitybrands.com/about-us

Green Commuter

Green Commuter is a privately held, minority owned, benefit corporation incorporated in the state of California which has developed an innovative system that will utilize a fleet of 100% zero emission vehicles to provide a combined service of vanpool and car share/fleet replacement. Green commuter offers the most comprehensive program to reduce greenhouse gas emissions and traffic congestion, all while reducing commuting costs to passengers.

greencommuter.org

OfficeMax/OfficeDepot

Office Depot OfficeMax, is a leading provider of products, services, and solutions for Colleges and Universities. Our resources allow us to deliver additional value to Higher Ed purchasing: more cost effective products, a wider set of services, the latest technology, furniture, technology and print management tools. Office Depot OfficeMax also provides a range of industry-leading solutions to support campus sustainability initiatives including greener purchasing programs, STARS and Zero Waste efforts. Beyond offering solutions, Office Depot OfficeMax is a recognized Corporate environmental leader, having ranked as America’s #1 Greenest Large Retailer in America by Newsweek Magazine in 2010, 2011 and 2012.

business.officedepot.com
SunPower Corporation

SunPower Corporation (Nasdaq: SPWR) designs, manufactures and delivers the highest efficiency, highest reliability solar panels and systems available today. Residential, business, government and utility customers rely on SunPower’s 30 years of experience and guaranteed performance to provide maximum return on investment throughout the life of the solar system. Headquartered in San Jose, Calif., SunPower has offices in North and South America, Europe, Australia, Africa and Asia.

www.sunpower.com

Green Sponsors

Enlighted

One of the business world’s biggest expenditures represents its biggest missed opportunity – the commercial building. A lack of real data has business leaders making decisions about their buildings in the dark. Enlighted, Inc. is showing the way by taking the abstract enterprise Internet of Things vision and making it real in commercial buildings. Using its highly adaptive sensors that provide granular data on lighting, temperature and motion, Enlighted has designed a smarter way for business leaders to interact with their buildings. Enlighted’s comprehensive solution – which not only collects data but also synthesizes it into insights – is already making buildings more efficient and productive. Companies are reaping the benefits with millions saved in energy costs. For more information, visit: www.enlightedinc.com

enlightedinc.com

Pharos Systems

Pharos Systems has been in the business of mindful print solutions for over 23 years, helping customers identify ways to eliminate unnecessary, wasteful, expensive and often unnoticed print habits while improving print access to mission critical documents. Now the only Certified B Corp in the print solution space, Pharos leads the way with new tools to build sustainable print strategies for the collegiate enterprise. Join the global movement to reduce print volumes across your entire campus today!

http://pharos.com

Waxie Sanitary Supply

Everything You Need To Clean When You Want To Go Green!

WAXIE’s Green Partner Support TM (GPSTM) Program guides you to more sustainable cleaning solutions that can contribute to cleaner and healthier learning environments for your campus facilities. With Inventory Centers strategically located throughout the Western United States, LEEDTM Accredited Professionals on staff to assist you, and UCOP contracted pricing, WAXIE is your complete green cleaning solutions provider.

waxie.com/

Community Sponsors

Aircuity

Aircuity is the smart airside efficiency company, providing building owners with sustained energy savings through its intelligent measurement solutions. Aircuity’s solution provides continuous
monitoring of indoor environmental quality (IEQ) while optimizing building ventilation rates based on changing occupancy or activity in a facility. Classrooms, labs, libraries, student centers, and even sports facilities can use Aircuity to lower operating costs while improving the safety and comfort level for building occupants.

aircuity.com

BioCoTech Americas LLC

BioCoTech Americas is the exclusive licensed agent of the Biospeed product M2 and M18. The company is using unique new environmental technologies to cut costs for businesses and reduce biological waste, thereby drastically reducing the amount of landfill waste in the Americas. Waste is increasing at an alarming rate in the Americas, zero waste initiatives are being introduced, and companies must have a green thumb to keep the proper public image. BioCoTech Americas is a potential solution to these important problems.

biocotechamericas.com

EnerNOC

EnerNOC is a leading provider of cloud-based energy intelligence software (EIS) and services to hundreds of higher education customers and utilities globally. EnerNOC’s EIS solutions for higher education customers improve energy productivity by optimizing how they buy energy, how much they use, and when they use it. EIS for higher education includes budgeting and procurement, utility bill management, facility optimization, visibility and reporting, project tracking, demand management, and demand response.

http://www.enernoc.com/

FuelCell Energy

FuelCell Energy is an integrated fuel cell company that manufactures, installs, operates, and services stationary fuel cell power plants. Our Direct FuelCell (R) plants utilize a variety of fuels, including renewable biogas and clean natural gas to produce power electrochemically (without burning fuels), making them environmentally-responsible, affordable alternatives to the combustion-based generation. Located in over 50 locations worldwide, FuelCell Energy’s fleet has generated over 3 billion kilowatt hours of electricity, equivalent to powering more than 245,000 average-size U.S. homes for 1 year.

www.fuelcellenergy.com

Java City/ecoGrounds Coffee

Java City is a specialty coffee roaster and wholesaler headquartered in Sacramento, California. Our coffee is served at over 3,000 retail and wholesale locations worldwide. We source high quality Arabica beans from farms that practice sustainable farming techniques and compensate workers fairly. Our beans are hand roasted and air cooled, creating the intricate flavor profiles and smoothness our coffee is known for. Java City’s ecoGrounds coffee is a full line-up of certified Rainforest Alliance, Organic, Direct Relationship, and/or Fair Trade.

ecogrounds.com

Recology

Recology is a national leader in recycling and composting collection programs. Our goal is to help the city of San Francisco achieve Zero Waste by 2020 by
making recycling and composting convenient for residents and businesses. We offer collection, recycling, and disposal services for everything from residential food scraps to construction and demolition debris. Recology is 100% employee-owned and supports bay area businesses by purchasing goods and services locally.

www.recologysf.com

UC/CSU/IOU Energy Efficiency Partnership Program

The University of California (UC), California State University (CSU), and Investor-Owned Utility (IOU) Energy Efficiency Partnership is a unique, statewide energy efficiency program, achieving cost-effective immediate and persistent peak energy and demand savings. Established in 2004, the Partnership is celebrating a decade of energy savings, having established a model framework for sustainable, long-term, comprehensive energy management at the UC and CSU campuses served by California’s four large IOUs (PG&E, SDG&E, SCE and SoCalGas).

www.uccsuiouee.org

WEBCOR Builders

WEBCOR BUILDERS

Founded in 1971 and operating continuously in California since, Webcor is known for its innovative approach to construction, wide range of experience, cutting edge technology, skill in concrete construction, and expertise in building iconic projects. In 2014, Webcor earned ISO 9001:2008 certification and was ENR California’s Contractor of the Year.

webcor.com

Seedling Sponsor

Sustainable Stanford

Sustainable Stanford is a university-wide effort to reduce our environmental impact, preserve resources, and show sustainability in action. We are determined to lead in researching, teaching, and practicing environmental sustainability. Our vision: create a healthier environment now and richer possibilities for generations to come. That vision drives our commitment to incorporating sustainability practices and thinking into every aspect of campus life.

sustainable.stanford.edu

In-Kind Sponsors

Ray Morgan Company

Sponsor of the Conference Business Center at West Campus Green, SFSU. Established in 1956, the Ray Morgan Company has grown to be Canon’s largest independent dealer in the western United States. Headquartered in Chico, California, RMC also has two Regional Headquarters located in Roseville and Fresno, as well as 13 branch offices located throughout California, Nevada, and Oregon. This, combined with annual revenues in excess of $45 million, gives our organization financial stability, extensive geographic coverage, and the resources to meet the ever changing needs of our customers.

www.raymorgan.com
www.proitrmc.com
FloWater

FloWater is passionate about revolutionizing the kind of water people drink, while simultaneously eliminating plastic water bottle waste. Our premium performance water is dispensed through an innovative Refill Station design using state-of-the-art purification to deliver the most hydrating water into your reusable bottle.

myflowater.com

Exhibitors

Acuity Brands, Inc and W. W. Grainger

Partnering with W. W. Grainger, Acuity Brands, Inc. is a North American market leader and one of the world’s leading providers of lighting product solutions for both indoor and outdoor applications. Our innovative lighting systems cover both conventional fixtures and advanced solid-state technology that can seamlessly integrate with powerful digital controls and daylighting to create greater energy efficiencies and a higher quality of light.

www.acuitybrands.com

All Industrial Supply

All Industrial Electrical Supply is an electrical parts and lighting distributor based in Burlingame, California. Our products include LED lamps, dimmer switches, signs and work lights; our distributors include GE, Philips, RAB, Lunera, Lutron, and Dialight. We also sell Littelfuse’s solar electrical parts and components. We work to educate our customers on the most energy- and cost-efficient LED solutions for their businesses, and we educate them on the latest standards and rebate programs.

www.aies.com

Ameresco

As a leading independent provider of energy efficiency and renewable energy services in North America, Ameresco has a long history of partnering with commercial, industrial, local, state, and federal government, K-12 education, higher education, healthcare, and public housing sectors to provide comprehensive energy efficiency, renewable energy, and sustainability solutions. Projects are designed to maintain both fiscal responsibility and environmental stewardship.

www.ameresco.com

Applied Power Technologies

Applied Power Technologies Inc. is a locally owned business since 1994 providing technology solutions to manage energy usage for utility, industrial, campus and commercial power systems. APT offers energy metering and services for cost allocation, power quality, advanced monitoring systems, and consulting on energy system optimization.

apt4power.com

Badger Meter

Badger Meter is a leading innovator, manufacturer, and marketer of flow measurement and control products, service water and gas utilities, municipalities, and industrial customers worldwide. Measuring a variety of liquids, products from
Badger Meter are known for accuracy, durability, and providing valuable measurement information to customers.

www.badgermeter.com

Overseas Student Program (OSP)
Ben-Gurion University of the Negev

Ranked #24 in the world in the UI GreenMetric World University Ranking, Ben-Gurion University of the Negev (BGU), through the Overseas Student Program (OSP), offers students the opportunity to experience a unique study abroad program that combines academic excellence and cultural immersion. Through the Sustainable Development and Environment semester track, students are given the opportunity to experience first hand the challenges of sustainable development in the Middle East, and their implications in other parts of the world, while being guided by top professors and researchers in the field.

http://www.bgustudyabroad.org/

Borrego Solar

Established in 1980, Borrego Solar is the nation’s largest privately owned group of financiers, designers, developers, and installers of commercial and utility-scale solar power systems. Borrego Solar has completed over 60 MW of solar PV for educational facilities across the US. A partial list of CA higher education customers includes: UCSD, Peralta CCD, San Diego CCD, Barstow CCD, Kern CCD, and Sierra CCD. Its photovoltaic systems are efficient, reliable, and cost-effective. With more than three decades of experience and more than 1,100 solar power installations completed—totaling over 150 MW—Borrego Solar offers a complete line of solar system design and installation services throughout North America.

borregosolar.com/

BYD Motors Inc.

BYD Motors Inc. is an American manufacturing company and a wholly-owned subsidiary of BYD Company Ltd., the largest domestic auto-manufacturer and electric-bus manufacturer in China. BYD’s “Three Green Dreams” are the mass deployment of affordable high-efficiency photovoltaic solar systems, safe and long-lasting energy storage stations and electrified trucks, buses, and cars. BYD believes these key product areas will work in unison to build a cleaner, quieter, and safer tomorrow.

http://byd.com/

California Student Sustainability Coalition

The Mission of the California Student Sustainability Coalition is to unite and empower the California community of higher education to collaboratively and nonviolently transform ourselves and our institutions in accordance with our inherent social, economic, and ecological responsibilities.

www.sustainabilitycoalition.org

Cal Recycle

CalRecycle’s purpose is to protect the environment and preserve resources by empowering Californians to reduce, reuse, recycle, and compost. Their vision is to inspire and challenge Californians to achieve the highest waste reduction,
reuse, and recycling goals in the nation through innovation and creativity, sound advancements in science and technology, and efficient programs that improve economic vitality and environmental sustainability. Grants are available to universities for rubberized pavement, tire-derived aggregate, and other tire-derived products.

calrecycle.ca.gov

CleanRiver Recycling Solutions
For 25 years, CleanRiver Recycling Solutions has been helping organizations meet their environmental goals by providing customized recycling and waste management solutions made from the highest grade of recycled plastic available. We design and manufacture innovative containers to specifically suit your needs and then help you implement facility-wide programs that achieve your waste diversion goals and generate recycling program ROI.

www.cleanriver.com

DC Solar Freedom
DC Solar Freedom, a California Benefit Corporation provides portable solar generators, light towers, electric car charging stations and charging kiosks on campuses nationwide. Such accessible and highly visible technology immediately furthers institutional sustainability goals and enhances the quality of life for the community and our world. Through an underwriting process these solar stations are offered to the school for use at no cost and provide free power for members of the university community, promoting freedom from fossil fuel dependency.

http://www.dcsolarsolutionsmfg.com/

Dynamic Green Products
DGP is a dedicated and passionate team, committed to providing our customers the best available bio-based lubricants, cleaners and absorbents. Our products use renewable plant based ingredients that reduce pollution and reliance on petroleum sources while eliminating exposure to toxic chemicals. We are pioneering the SAFERUSE experience. To be considered a SAFERUSE product it must be bio-based, readily biodegradable, independently certified and Made in America.

www.saferuse.com

Elkay Manufacturing

For the past 30 years, Flow Control has manufactured the DeltaPValve®, a precision control valve for the heating and cooling of commercial buildings. What sets the DeltaPValve® apart from other control valves on the market is the scientific proof to confidently guarantee system stability, diversity, and performance at an unparalleled level of accuracy. The DeltaPValve’s unique and patented design has helped save Flow Control clients millions of dollars in annual energy savings, reduced operating costs, and avoided capital costs.

www.flowcontrol.com

Flow Control Industries, Inc.
Forbo Flooring Systems

Forbo Flooring Systems is the global market leader in commercial floor covering solutions. Marmoleum, our flagship brand, owns a global linoleum market share of over 60%, while Flotex dominates the rapidly growing flocked flooring market with over 90% global market share. In addition to linoleum-based products, Forbo develops, manufacturers, and markets a diversity of high quality vinyl and textile floor coverings and Coral & Nuway entrance system solutions.

www.forboflooringna.com

Green-e | Center for Resource Solutions

Green-e | Center for Resource Solutions is a non-profit organization that provides certification of renewable energy purchase programs (PPAs) and green power purchasing programs, and drives renewable energy policy in CA and beyond. Public institutions seek Green-e certification of their direct power purchase transactions and to accurately make marketing claims that are consistent with FDA Green Guides and CA Legislation. For more information, visit the website below or call 415-561-2100.

www.green-e.org

High Sierra Showerheads®

High Sierra Showerheads® manufactures its own brand and one-of-a-kind design of high efficiency “Green” shower heads. Each of its shower heads is fitted with a patented “Full Coverage Spray” nozzle that delivers an amazingly strong and full spray of large droplets from only 1.5 gpm or 1.8 gpm. And, unlike all other “low flow shower heads” minerals in the water will not clog the nozzle so maintenance is practically non-existent. Made with real brass and stainless steel in the USA.

www.highsierrashowerheads.com

Ingenium

At Ingenium, we pride ourselves on being the industry leader in providing sustainable hazardous waste management solutions. We go beyond the traditional transportation and disposal with a commitment to being a responsive and accountable partner to our clients by working together to increase sustainability, and reduce cost and liability in every possible area. Ingenium started in 2006, and our vision has grown to encompass a broad approach to waste management, along with a redoubled focus on achieving sustainable solutions in support of zero landfill.

pureingenium.com

Intellilum, Inc

Intellilum designs, produces and markets high-performance smart LED lights for educational, institutional and commercial facilities. LED lights with sensors and controls provide a typical pay-back within 1.5 to 3 years by cutting light energy costs up to 91%. U.S. made LED lights are available for retrofit or new applications, and are fully compliant with current safety codes. Full turnkey solutions and financing are available.

Intellilum.com

Johnson Controls

We’re in the business of
creating healthier, more productive environments for colleges and universities around the world. From modernizing the equipment and systems in your buildings, to optimizing your infrastructure, reducing your energy spend, and addressing your on-going maintenance needs, we can help transform your campus operations. Our experts will share the latest building innovations, technologies, and funding options, ranging from performance-based contracting with energy savings guarantees, to large scale energy efficiency building retrofits and predictive cost optimization.

MAMAC Systems, Inc.

MAMAC Systems is a 34 year global manufacturer of HVAC sensors for temperature, humidity, pressure, and web-enabled, real-time, metering, monitoring, and control appliances. Maverick appliance applications include metering of KWH, gas, water and steam, as well as controlling multi-stage air handler and heat pump thermostats and remote sensor alert and data logging with graphics. MAMAC offers live demonstrations of Utility Consumption sub-metering at the lowest installed cost. Maverick Appliances offer easy, user-definable, remote access, scheduling, data logging, sub-metering, and HVAC control all with alerts to your cell phone and email account without proprietary software or monthly subscription costs. The MAMAC Mavericks are a new approach to facility management, featuring ease of operation with no monthly fees and no complicated programming. Anyone who can surf the web can take advantage of the real-time Maverick Appliances.

Max R

Max-R manufactures innovative waste & recycling solutions made of 97% pure recycled plastic - milk jugs in fact! Max-R has reclaimed over 60 million milk jugs since the company’s founding and have set out to save 100 million by 2014. As an EPA Green Power Partner half of Max-R’s energy needs are met using renewable energy.

http://www.max-r.net

MechoSystems

MechoSystems is the world’s leading designer and manufacturer of manual, motorized, and automated solar-shading systems for the architectural and design communities. The company provides contemporary WindowManagement® solutions for today’s design challenges. If offers a wide range of shading systems with more than 200 different shadecloths. A range of control solutions, and various hardware configurations. Products are designed to meet the challenges of sustainability, effective daylighting, and energy efficiency.

www.Mechosystems.com

MuV Technologies

MuV Technologies is the next generation of ride-share in the palm of your hand. MuV is committed to providing an innovative solution to the transportation crisis. It understands the challenges associated with getting from one place to another and the need to implement strategies to reduce the environmental impact of single-occupancy private vehicles used for commuting. MuV has developed a mobile iOS and Android application to connect
commuters for shared travel, and it provides a safe, reliable, and affordable way for users to connect and commute together.

www.muvtogether.com

P2S Engineering

P2S Engineering is a full-service mechanical, electrical, and technology engineering firm offering feasibility, design, commissioning, and energy services. P2S has served the higher education market since our inception in 1991 and is actively involved in a variety of international professional organizations. We are dedicated to helping facility owners and operators maximize building performance. Our comprehensive engineering and commissioning services cover everything from simple retrofits to advanced systems designs to monitoring-based commissioning for optimized performance. We understand the unique requirements when it comes to campus utility infrastructure. We focus special attention on efficiencies and leverage our experience to provide sustainable solutions that are both innovative and cost-effective.

www.p2seng.com

PCR America

Established in 1988, Print Cartridge Recycle collects all ink and toner cartridges for the purpose of domestically remanufacturing all items into new compatible cartridges. We are a family-owned business that pays cash for cartridges, coordinates and pays for all product pick-ups, and provides comprehensive reporting that includes waste diversion reporting. Our goal is to support all recycling and sustainability programs with universities and major businesses by keeping cartridges out of our local landfills and generating incremental revenue for our partners.

www.PCRAmerica.com

Presidio Graduate School

Presidio Graduate School educates and inspires a new generation of skilled, visionary, and enterprising leaders to transform business and public policy and create a more just, prosperous, and sustainable world. Through innovative MBA, MPA, dual degree, and certificate programs in Sustainable Management, PGS activates students and professionals across a range of disciplines, industries, and sectors to bridge the gap between commerce and the common good. To learn more visit:

presidio.edu

Priorclave North America

Priorclave North America sells and services energy efficient lab autoclaves for the education, life science, industrial, government, and food and beverage markets. Priorclave’s exclusive Biomaster Protected® antimicrobial steam sterilizers are available to suit most any small to medium-sized application - from 40 liter benchtop to 500 liter BSL-3 pass-thru. Priorclave’s research grade, medium-sized products reduce water use by 87% and reduce energy use by 75% over the best technology currently available on the market.

www.priorclavena.com

Proterra, Inc.

Proterra is a world leader in the design and manufacture of zero-emission,
battery-electric vehicles that enable bus fleet operators to reduce operating costs and deliver clean, quiet transportation to the community. The world’s most fuel-efficient bus, the Proterra CATALYST™, features en-route, fast-charge technology that enables infinite range.

www.proterra.com

Rubbermaid Commercial Products, LLC

Rubbermaid Commercial Products, headquartered in Winchester, Va., is a manufacturer of innovative, solution-based products for commercial and institutional markets worldwide. Since 1968, RCP has pioneered technologies and system solutions in the categories of food services, sanitary maintenance, waste handling, material transport, away-from-home washroom, and safety products. Rubbermaid Commercial Products continues to expand into product categories where brands matter and customers place a premium on innovation.

www.rubbermaidcommercial.com

SageGlass®

SageGlass® is advanced dynamic glass that can be electronically tinted or cleared to optimize daylight and improve the human experience in buildings. SageGlass manages the sunlight and heat that enter a building, significantly reducing energy consumption while improving people’s comfort and well-being. It can reduce a building’s cooling load by 20% and HVAC requirements up to 30%. With SageGlass, you can control sunlight and glare without blinds or shades while maintaining the view and connection to the outdoors. The company was founded in 1989 and is a wholly owned subsidiary of Saint-Gobain of Paris, the world’s largest building materials company.

www.sageglass.com

San Francisco Conservation Corps.

The San Francisco Conservation Corps partners with volunteers, public agencies, and other non-profits to achieve our goals of resource conservation, improved environmental sustainability, and advocacy. The Energy Upgrade California, a State initiative to educate residents and small businesses about managing their energy use, helps us achieve those goals. The initiative helps Californians take action - now - to save energy, conserve natural resources, reduce demand on the electric grid, use clean energy options, and make informed energy management choices at home and at work.

www.sfcc.org

San Francisco State University’s Bookstore

The SF State Bookstore is your on-campus resource for SF State apparel, merchandise, and gifts. We exclusively serve the students, faculty, and staff of the SF State community. Come see our selection of sustainability-themed books, selected by our faculty and staff. We feature books by SF State authors and conference speakers.

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http://www.bkstr.com/sanfranciscostatestore/home/
Sustainability at San Francisco State University

Sustainability-focused student groups and departments from San Francisco State University will share highlights of recent campus sustainability projects and initiatives. Featured organizations will include Associated Students Sustainable initiatives program, the Power to the Pedal bicycle education program, the Real Food Challenge, and Eco Students. The booth will be staffed by members of these groups throughout CHESC.

http://sustain.sfsu.edu/

SCA Americas

The Tork brand offers professional hygiene products and services to customers ranging from restaurants and healthcare facilities to offices, schools and industries. Products include dispensers, paper towels, toilet tissue, soap, napkins, and industrial and kitchen wipers. Through expertise in hygiene, functional design and sustainability, Tork has become a market leader. Tork is a global brand of SCA, and a committed partner to customers in over 80 countries.

torkusa.com

SCS Global Services (SCS)

SCS Global Services (SCS) has been providing global leadership in third-party environmental and sustainability certification, auditing, testing, and standards development for three decades. Programs span a cross-section of industries, recognizing achievements in green building, manufacturing, food and agriculture, forestry, and more. SCS is a Certified B Corporation™, reflecting its commitment to socially and environmentally responsible business practices.

www.scsglobalservices.com

Sika Sarnafil

With more than 15 billion square feet of roofing and waterproofing installed and 50 years of outstanding performance, Sika Sarnafil is a worldwide leader in sustainable roofing and waterproofing. Offering state of the art systems including Energy Star rated reflective roofing, green roofs, and photovoltaic ready systems, all exceeding critical Green Globes, LEED, C.H.P.S, and Title 24 criteria, Sika Sarnafil is the standard for education owners requiring extended watertight performance, low maintenance, and a long life cycle.

http://usa.sarnafil.sika.com

SmartWatt Energy

SmartWatt Energy is a unique energy-efficiency firm, providing turnkey solutions for colleges and universities. SmartWatt works with educational clients throughout the United States to design and install integrated energy-efficiency projects that include elements such as retrocommissioning, SmartLighting, energy management systems, HVAC, renewable energy systems, and more. It’s transparent design-build approach provides large-scale savings through energy auditing, engineering, project management, and installation services.

smartwattinc.com
Student Environmental Resource Center, UC Berkeley

The Student Environmental Resource Center (SERC) at UC Berkeley cultivates a collaborative space to strengthen the collective effectiveness of the sustainability community, and provides resources for students to actualize their visions of a more equitable, socially just, and resilient future. The SERC exhibitor booth will feature the student-focused and student-initiated programs, projects, and campaigns supported by SERC, including TGIF projects, Words of the Watershed Journal, Nature Village, and the Zero Waste Research Center.

http://serc.berkeley.edu

Supply Works (CleanSource)

CleanSource’s goal is to make your buildings healthier, safer, and more sustainable while lowering your total cost of facility maintenance. CleanSource is a leading national facility maintenance supply distributor, providing expertise in janitorial/sanitation solutions as well as facility maintenance supplies. We provide comprehensive facility surveys in order to identify opportunities for cost savings and optimal product selection to meet your needs. In addition, we look for productivity enhancing tools/equipment, followed by bilingual training, and, finally a quality assurance program/reporting to measure results!

supplyworks.com

Stirling Ultracold

Stirling Ultracold develops and manufactures a new generation of environmentally friendly ultra-low temperature freezers which operate at or below -80°C. These freezers do not use compressor-based or cascade refrigeration systems, using a patented free-piston Stirling engine technology developed for critical energy, aerospace, and industrial applications. Offering unsurpassed sustainability benefits, this ULT storage solution uses less than half the power of leading cascade ultra-low freezers and uses 100% natural refrigerants. Stirling Ultracold ultra-low freezers are sold worldwide to life science, pharmaceutical, biomedical/clinical and biotechnology customers.

www.stirlingultracold.com

Sustainable Water

Sustainable Water is a leading provider of water reclamation and reuse solutions. Utilizing the world’s leading technologies, we recycle water for heating, cooling and irrigation, bringing customers annual savings on operations costs year after year. Sustainable Water’s ecologically-driven projects bring together teams of experts comprised of seasoned water industry veterans, world-class design engineers, and award winning commercial contractors who have built hundreds of high-profile, first-of-their-kind, multimillion dollar projects. Our turnkey development services begin with comprehensive feasibility studies and continue through design, permitting, construction, and operation.

sustainablewater.com
Zipcar

Zipcar, the world’s leading car sharing network, has operations in urban areas and college campuses throughout the United States, Canada, the United Kingdom, Spain, and Austria. Zipcar offers more than 30 makes and models of self-service vehicles by the hour or day to residents and businesses looking for smart, simple, and convenient solutions to their urban and campus transportation needs. Zipcar is a subsidiary of Avis Budget Group, Inc. (Nasdaq: CAR), a leading global provider of vehicle rental services.

zipcar.com

Zon

The Powersol from ZON is engineered using a standard 9’ quality patio umbrella equipped with secure solar panels and a smart battery hub which provides a convenient, affordable and sustainable mobile device charging solution for campuses. Electricity from solar energy continuously charges a powerful rechargeable lithium ion battery in a weatherproof case, providing charging power for students outdoors 24 hours a day. The Powersol can charge 3 USB devices at a time - as fast as a wall outlet! The Powersol fits existing patio tables or stands alone and requires no special, costly installation.

www.zon-technology.com

Green Charge Networks

Green Charge Networks delivers intelligent energy storage solutions that are the easiest way for commercial and industrial businesses, municipalities, and schools to save energy costs. Our award winning solution delivers industry-leading savings, up to 50% of demand charges on monthly energy bills. We provide risk-free, financed energy storage and software that shifts the time of power use, and optimizes electric vehicle charging, solar, and energy efficiency measures.

GreenCharge.Net
We would like to acknowledge and thank our steering and host committees, which helped us immensely in designing an inspiring program and conference.

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San Francisco State University and the event management team for the California Higher Education Sustainability Conference would like to extend our appreciation for the many people that made this event possible:

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Aircuity is typically the most significant energy conservation program on a college campus; reducing energy consumption, lowering GHG emissions, while maintaining a safe, comfortable and productive learning environment. An airside efficiency program can provide a foundation to any university’s carbon action plan. Aircuity can be easily implemented in a variety of buildings across campus providing low risk, high return projects with deep energy savings. Installations in critical spaces, such as science or laboratory facilities, can deliver a 50% reduction in HVAC energy costs while implementation in other variable occupancy buildings such as classroom buildings, student unions and theaters can deliver 15–30% savings.

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Contact us to learn more about Aircuity’s solutions:
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