

Pastures

Green



Green Campus Interns surround the "Energy Hog" during the Housing Energy Competition Kick-off on October 19th. The competition is now in full swing inside the dorms.

Cal Poly Pomona Green Campus Program



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Don't be an Energy Hog, "Buck the Juice"!

By Elaine Dulay

Hey Cal Poly Pomona residents and staff! Thank you for making the "Buck the Juice" Residence Hall Energy Competition Kick-off event a success! On Monday, October 19th, Green Campus and Housing staff tabled on the steps of Los Olivos Dining Commons between 11am and 1pm. Green Campus interns shared their enthusiasm about saving energy with students by dressing up for the occasion. The Alliance to Save Energy's energy villain, "Energy Hog" (played by intern Brandon Ro), along with "Energy Hog Busters", Elaine Dulay and Andrew Coyne, and "Buck the Juice" t-shirt clad, Shannon Nowell, greeted residents and staff who were heading into the dining hall for lunch. Students and staff who came by were amused and in some cases a bit frightened, by the Energy Hog's presence, but it got their attention and was a great photo opportunity for all. Interns invited students to participate in an energy trivia game with a chance to win prizes that included light dimmers, and Green Campus "Buck the Juice" T-shirts. Congratulations to those winners!

The primary purpose of the event was to educate students about the importance of saving energy and to inform residents about the month long energy competition starting Oct 19th through November 20th. The competition is between the six Cal

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NEWS FLASH!

Don't forget to take our online sustainability pledge!

Please visit:
www.greencampuscpp.org/sustainabilitypledge.htm

October Energy Savings

EVENT	QUANTITY	ENERGY	WATER	CO2 EMISSIONS	\$\$\$
Interior Lighting Audit-College of Letters, Arts and Social Sciences	n/a	82,700 kWh	n/a	89,600 lbs	\$11,300
Buck the Juice Pledge*	74 pledges	108,159 kWh	369,540 gal	336,006 lbs	\$29,464
Yearly Projected Savings	n/a	190,859 kWh	369,540 gal	425,606 lbs	\$40,764
Total Projected Savings since 2007	n/a	686,943 kWh	594,480 gal	1,155,962 lbs	\$123,428

*Projected Savings

Greening the Lights at the College of Letters, Arts and Social Sciences

By Brandon Ro

Lighting systems can either waste or save tremendous amounts of energy. This is important to know because energy directly relates to carbon emissions. During the latter part of the summer, the Green Campus program performed an interior lighting audit to verify the energy efficiency levels within building 5, also known as the College of Letters, Arts and Social Sciences. The purpose of the audit was to take an inventory of all the current lighting fixtures throughout the entire building and access what measures could be implemented to reduce energy consumption.

Green Campus interns measured lighting levels and recorded the quantity of luminaires, number of bulbs, diffuser types, and fixture types. Possible energy saving opportunities were also noted, such as natural daylighting. After completion of the lighting audit, the Energy Services Unit within Facilities Management and Planning used the information collected by Green Campus to produce recommendations for more energy efficient lighting. These retrofit recommendations were implemented during the month of September. These simple lighting improvements will help save an annual 82,700 kWh of energy and

an astounding \$11,300. This is the equivalent of preventing 89,600 lbs of CO2 emissions from entering the atmosphere or taking seven and a half passenger vehicles off the road for a whole year! Greening the lights is important for the entire Cal Poly Pomona campus.

Stay tuned for updates on our next lighting audit of the College of Engineering this November!



Interns Shannon Nowell and Andrew Coyne perform a lighting audit in a classroom in Building 5.

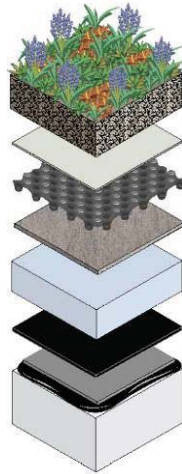
GREEN ROOF 101: Green Roof Construction

By Shannon Nowell

Welcome to Green Roof 101!

In the August issue of Green Pastures we discussed the energy and environmental benefits of green roofs. Here's a quick review:

- Green roofs increase the thermal resistance of buildings and help mitigate the Urban Heat Island (UHI) effect.
- Increased Life Expectancy of the Roof
- Storm Water Retention
- Reduction of Pollution Levels



Now that you have an idea of some of the benefits, let's take a look at how it all comes together:

Membrane

First, the roof assembly needs to stay dry. Therefore, a waterproof membrane is applied to the roof before any type of plant material is added. There are many membranes out there; however, one with a good track record and longest history is Hydrotech's MM6125 monolithic membrane. This has been used in pools and fountains and never really forms a solid, but remains somewhat rubberized and tacky. While hot, it is poured over an approved substrate and left to cool, and thus, congeal.

Types of Green Roofs:

Intensive

This is probably the easiest way to apply a green roof to an existing building. They are typically installed via modular units that can come prepackaged with engineered soil or in a soilless, nutrient-rich growing

medium. These types of roofs have a minimal amount of maintenance and are the least costly. For retrofit projects, these are the type of green roof typically installed.

Growing Medium Depth: max 4"- 6"

Type of Plants: Sedums

Extensive

An extensive green roof is typically one that incorporates trees or larger plant material. Generally speaking, they are incorporated into the design of the building, or parking lot, at conception as they require additional engineering for live loads and water weight. However, there are retrofits out there. For example, the green roof on Chicago's City Hall building was a huge retrofit project that jumpstarted a prolific urban landscape of green roofs throughout the downtown area- most being retrofit projects.

Growing Medium Depth: 8-36"

Type of Plants: Hardy plants, shrubs and trees

Hybrid

A hybrid green roof combines both the extensive and intensive green roof styles into a comprehensive design. Building roof tops that are meant to be visited by patrons will typically use this style of design.



National Academy of Sciences, San Francisco, CA

Shannon Takes On Chicago and L.A.'s Light Show West!

By Shannon Nowell

As Green Campus interns, we strive to save energy by promoting energy savings technology and utilizing passive energy savings techniques, such as daylighting. Our ultimate goal is to promote the conservation of valuable resources, such as energy and water, therefore, it is important to go beyond the avenues of compliance, such as recycling programs and Leadership in Energy and Environmental Design (LEED) certification, and take a deeper look into projects that promote restorative enterprise and sustainability. This is one of the many reasons we continue to educate ourselves about sustainability and emerging technologies used to conserve energy. This month, Green Campus Intern, Shannon Nowell, traveled to Chicago and Los Angeles to gain more insight on recent developments in Landscape Architecture, Architecture, and lighting.

ASLA Annual Meeting and Expo

Each year the American Society of Landscape Architects (ASLA) hosts an Annual Meeting & Expo. This year ASLA members convened in Chicago to discuss the theme, "Regenerating Places and People." Ms. Nowell attended the conference on scholarship and toured a few of the green roof projects throughout the city. She also attended workshops on urban agriculture, sustainable solutions for water resources and the ecology of water revisited, 3D modeling technology, and more. However, the most valuable experience was diving head first into the public transit system- a myriad of subway, commuter trains and light rail lines unmatched by Los Angeles' attempt at public transit! When trying to jump-start programs to reduce the amount of energy consumption on-campus, through transportation, it is important to understand existing successful systems.

Light Show West

Ms. Nowell was able to attend the Light Show West in



Millennium Park, Chicago, IL.



The showroom of the Light Show West convention.

Courtesy of: www.lightshowwest.com

Los Angeles, CA on October 21st and 22nd. This was a convention with lighting professionals and new hot-off-the-production-line LED products! She also attended some educational sessions on Daylighting Solutions and Lighting and Architecture. These sessions gave great insight on products, concepts, and rebate programs available through local utility companies. In fact, Facilities Manager, George Lwin says we are using these already! Learning about some of the current products available is just in time for Green Campus' on-going Interior and Exterior Lighting Audits. Building 9 and Parking Lots M & J are next for this Green Campus team!

Next month: GC Intern Brandon takes on the GreenBuild Convention!

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Poly dorms, Aliso, Alamitos, Encinitas, Montecito, Cedritos, and Palmitas. Energy savings tips were announced on a loud speaker as well as in saving tips fliers. It is hoped that the residents will use some of these tips during the competition, resulting in some big savings for University Housing. During last year's competition, there was a total savings of 121,875 kWh or \$17,062.50.

Thanks again to those who joined us at the kickoff event!! Students keep conserving energy! A weekly energy reading on each of the buildings will be taken and posted on the housing website along with an email sent to all the residents. So be sure to check and see if your dorm is in the lead! Remember, the winning dorm will be rewarded with a pizza party and a raffle prize in November!

Rideshare Tabling Event

By Andrew Coyne

Green Campus was invited to take part in the Rideshare tabling event on October 8th at University Hour, just outside the Marketplace. The event was hosted by Parking and Transportation Services and involved organizations that assist students in making sustainable transportation choices. Interns, Andrew Coyne and Brandon Ro, engaged students by promoting the "Buck the Juice" sustainability pledge and talking about the Green Campus program. Similar to the outcome of Bronco Fusion, a number of students expressed interest in participating in team projects. Students signed the sustainability pledge form to receive our monthly newsletter and information about volunteering.

Although transportation is not our focus, Green Campus was invited because our work on energy efficiency complements their efforts to encourage the campus community to choose more sustainable alternatives such as public transportation or carpooling. Thank you Parking and Transportation Services for graciously inviting us to participate in the event. We hope to continue this trend of collaborating with other campus organizations in promoting sustainability.



Shannon Nowell takes the microphone at the Energy Competition Kick-off.



The Energy Hog greets students at the Kick-off event.



The Alliance to Save Energy's Green Campus Program is funded by the rate-payers of California under the auspices of SCE, PG&E, and Sempra Energy.

Contact Us!

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