



District Academic Senate Sustainability Institute

Fall 2015 Newsletter

September 1, 2015

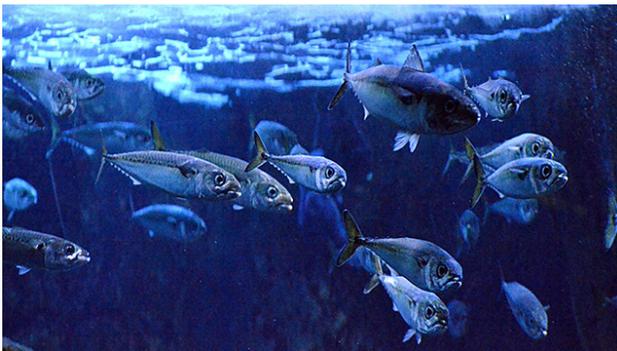
Volume 1, Number 1

Welcome

Welcome to Volume 1 and Number 1 of the Sustainability Institute's Newsletter. We hope to make this a part of the regular communications we have with our faculty and friends. This newsletter gives us the opportunity to inform you about our various projects and in way that you can contribute to sustainability efforts in the nine-campus district. In this issue we have updates on local events that cover environmental issues and various campus level events and programs of interest. We are working on a webpage that will be hosted at the [District Academic Senate](#), where the SI is located.

LACCD Joins the SCMI

Progress in the membership of the LACCD in the [Southern California Marine Institute](#) (SCMI) passed a major hurdle in August as the Chancellor's Office announced its financial support for our SCMI membership. This timely move allows the District to play a role in the design and resources of the new [AltaSea](#) marine research station currently being built at the old [City Dock One in San Pedro](#). SCMI are the first anchor tenants of this multimillion-dollar facility partially funded by the Annenberg Foundation.



UCLA IoES

The SI is currently seeking funding for the District's presence at the marine lab. We are hoping to interest faculty in marine biology, oceanography, geology, geography, life sciences, social sciences, and other disciplines to help us make the most of this membership. The opportunities offered include job training and academic course support for the applied sciences. Students transferring to four-year degree programs will find this field experience helpful in their science majors. Currently the consortium includes UCLA, USC, regional campuses of the California State University System

representing the [Ocean Studies Institute](#) (Channel Islands, Dominguez Hills, Fullerton, Long Beach, Los Angeles, Northridge, Pomona, San Bernardino and San Marcos), as well as Occidental College. We will be the first community college district to join the SCMI.

Among the many resources to which we will have access is a research vessel berthed at Terminal Island. This vessel carries out research trips in the California Bight (the coastline between Point Conception to San Quintin in the Baja Peninsula). Catalina Island is close by and various marine ecology projects are already underway, including ocean acidification (see next story). The LACCD will have storage facilities there and classroom space. Courses can be taught there and the facility is open for field trips. What SCMI has to offer are a Lab and Educational Facilities

- Oceangoing Research Vessel
- Wet and Dry Laboratory
- Flowing Seawater System
- Classroom and Meeting Rooms
- Microscopes and Video Microscopes
- Machine Shop
- Warehouse and Staging Area
- Waterfront Berthing Space
- State-of-the-Art Scientific Gear and Equipment

We will update you on our role at the SCMI as soon as we have formal signing of our membership.

UCLA IoES series on water and climate change.

Tuesday, August 25, 2015: The [Institute for the Environment and Sustainability](#) (IoES) at UCLA hosted another in the series of talks on climate change and water. This excellent series is free and mostly held at the Billy Wilder Theatre of the Hammer Museum in Westwood. Last night we heard from [Dr. Richard E. Feely](#), a renowned scientist who has spent thirty years studying [ocean acidification](#) (OA). Of all the facets of anthropogenic climate change being studied today, ocean acidification is one of the most vexing and presents some of the more long-term impacts. Dr. Feely presented scientific data that has been gathered by him and his colleagues whereby the impacts of carbon dioxide absorption by the oceans are being measured and used to provide a prognosis for the future.

Our logo: The District learning tree is embedded in the "triple bottom line" of sustainable development: social justice, political equality and environmental sustainability. The SI endorses this approach to environmental education.



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The presentation given to the audience showed the alarming rate of CO₂ absorption and its physical, chemical and biological consequences. Dr. Feely lamented that OA is not on most people's radar despite the fact that 1 in 7 people on earth depends on protein sources from the oceans. This food source is now threatened as the food chain is disrupted from its very base—the level of plankton and microscopic biota that support the food chain—all the way up to whales and people. The problem is concentrated in some parts of the global ocean more than others. California's coastal cold-water upwelling actually adds CO₂ to the surface, adding to the direct absorption by surface waters. Runoff adds to this such that oxygen starved waters are also acidifying waters. The first to feel this impact are benthic life forms and shell producing creatures creating calcium carbonate. We have seen the pH of ocean water move from 8.2 to 8.1 on average. In some "hot spots" the pH is closer to 7.7. Marine species are very sensitive to this change in pH. For tropical coral reefs this spells a death knell.

Dr. Feely was not hopeful for any geo-engineering "solution" to the problem. We would need to dump hundreds of tons of sodium bicarbonate into the oceans on a daily basis, which, he says would not make a dent. When asked if he supported putting a price on carbon, Dr. Feely had to avoid the question since he is now a federal government scientist for the [NOAA Carbon program](#).

Water Policy and Challenges to Los Angeles

On Friday, August 21st, a special breakfast at LA Valley College hosted by [Assemblymember Adrin Nazarian](#) benefitted from a panel of experts and officials from water agencies to discuss Los Angeles challenges and [the specific role of the San Fernando Valley](#) in making up future shortfalls in LA water supplies. Much of our groundwater in the Valley is contaminated with dangerous chemicals. The Assemblymember called attention to the need for "brownfields remediation" to safeguard the SFV aquifer, a major contributor to the region's water supply.

On Saturday, August 22nd Loyola Marymount University (LMU) hosted a water conference and expo in conjunction with the Westchester-Playa Democratic Club. LMU has dedicated resources to

[water policy](#) studies and applies these to their own campus. While there were a few elected officials, including Congressmember Maxine Waters, the audience heard from various water policy experts and advocates on the particular challenges facing Los Angeles and Southern California in general. [David Nahai](#) provided some background on where LA gets its water and the implications for future sources. His experience at the LADWP and formerly at the Water Board provide for an expertise that was appreciated by the attendees.



Getty Images

The LMU conference was also a mini-course in hydrology and climate change facilitated by two LMU professors who discussed precipitation and water budgets. Dr. Jeremy Pal, professor of environmental engineering, pointed out that water conservation can provide the equivalent what we now get from the Colorado River. Dr. John Dorsey, professor of environmental sciences, made a case for wastewater recycling while pointing out the many problems of desalination.

Attendees also heard from [Food & Water Watch's](#) Brenna Norton, who opposes the technology of oil and gas extraction called "[fracking](#)" and also the twin tunnels proposed by Governor Brown as a peripheral canal to the Bay Delta.

The one who stole the show was Orange County's [Michael Marcus](#) who detailed the years of experience in Orange County in [retreating wastewater to potable standards](#) and pumping this water to replenish groundwater aquifers from which the OC extracts 30% of its water. This is known as indirect reuse. While the misnamed technology known as "toilet to tap" has a "[yuck](#)" factor, Marcus



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was able to show the audience that this technology has already worked in water scarce countries like Israel and Namibia, and is held to a higher standard than tap water. In Southern California we will ultimately need to modify our water portfolio to obtain water directly from recycling and indirectly from replenished aquifers.

California State University system to advance a minor in Sustainability

Earlier this year, faculty from several CSU campuses held an all-day conference at Sacramento State University on the progress being made in creating a system-wide minor in Sustainability. This effort requires close coordination with the California Community College system in order to facilitate a seamless transfer to CSU campuses by students already considering a sustainability component in their four-year degree. The LACCD's Sustainability Institute attended and we were happy to hear a report from Helen Cox at CSUN that Pierce College

has already articulated its [environmental program with Cal State Northridge](#).

This minor is relatively easy to implement in the 23-campus system but will require that each District campus find ways to articulate courses to the CSU minor. The

legislation that allows for automatic transfer from a CCC to a CSU is SB 1440. Transfer Model Curricula are applied to the 35 pathways now in place at CSU. CSU started an environmental curriculum in "Campus as a Living Lab".

Many CSU campuses already have sustainability minors. The CSU system has 400,000 students; there are over 2 million CCC students in 72 districts. At the campus level the connection to CSU has to be coordinated. Coordination is not an alternative to articulation, but our campuses will need to devise a way to identify course offerings with significant environmental components across many disciplines. The CSU hopes to use online classes as one way to have CC students work on the minor.



Cal CC System offers a Sustainability "listserv"

For a few years now the Chancellor's Office of the CC system has hosted a sustainability listserv that any faculty in the system can join. The http://listserv.cccnext.net/scripts/wa.exe?A0=CCCS4_SUSTAINABILITY list provides the opportunity to communicate throughout the CCC system with faculty working on sustainability issues across the state. To join, send e-mail to CCCS4SUSTAINABILITY-request@LISTSERV.CCCNEXT.NET

In our next Issue:

- Update on Gold Creek Ecological Reserve, an interview with Rob West
- Update on the SCMI membership
- Student Environmental Organizations in the LACCD