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LACCD Membership in the Southern California Marine Institute and Alta Sea

New opportunities have emerged in the City of Los Angeles to expand and advance the academic and workforce development projects of the LACCD. In past years, (since 1993) individual faculty from various campuses have worked with the then Ocean Studies Institute of the Cal State University system located in San Pedro¹. The OSI grew as a consortium and joined various institutions of higher learning to create the Southern California Marine Institute at Terminal Island.

The Southern California Marine Institute (SCMI) consortium represents a strategic alliance of 12 major universities in Southern California, nine universities from 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) and the combined marine resources of the University of Southern California, Wrigley Institute for Environmental Studies, University California Los Angeles, and Occidental College. There is a high interest in joining this consortium by faculty in the District. The opportunities for us are timely and to our advantage.

Specifically the SCMI facility at Terminal Island offers us an ideal work space for students, faculty, and researchers. SCMI has the following resources available:

- Research Vessel Yellowfin (available for research and college and university education)

- Small vessels for coastal research

- Vessel storage and maintenance

- Warehouse

- Machine and Wood Shops

- Dive Locker with compressor

- 10,000 square feet of deep harbor space with a working docks and wharf

- Seawater circulating filtration systems to maintain living marine specimens (various tank sizes 200-4000 gallons)

- Scientific gear and state-of-the-art equipment

- Research laboratories (254 square feet equipped with fume hood and sinks)

- Offices and meeting spaces (160 square feet with water front views)

- Classrooms (accommodates 40 students and equipped with microscopes)

The Southern California Marine Institute is committed to providing marine expertise and hands-on experience to students at all levels, to achieve the highest

¹ For a history of the OSI and the SCMI see: <http://www.scmi.net/the-history-of-scmi/>

and most efficacious level of research, to monitor the marine environment and to increase public awareness. The range of opportunities for the LACCD begin with field support for our academic programs in the sciences and technical fields. The research conducted by other institutions can greatly improve student success in a transfer program. And we have yet to explore the possible two year degrees that could be conferred.

There are many ways in which a SCMI I membership would benefit students and faculty. Chief examples include:

Research

SCMI supports various marine science research projects and programs which include water quality monitoring in the Port of Los Angeles and NOAA Ship of Opportunity Program (SOOP). Member campuses conduct a multitude of research projects aboard the Research Vessel the R/V Yellowfin and in its laboratories. To facilitate research efforts SCMI provides equipment, vessels, and personnel to perform the tasks necessary to achieve the highest and most efficacious level of research. This includes access to coastal sampling vessel with trawling capability for our extensive outreach to underrepresented groups. With greater access to harbor facilities (*i.e.* a place to leave water sampling equipment), this would permit possible expansion of work looking into emerging contaminants, *etc.*

Education

SCMI provides marine science expertise and research field experience to students at all levels. SCMI offers hands-on science education programs taking the students out of the textbook and straight into the marine environment. SCMI's demonstration cruises on the R/V Yellowfin offers university and college students career level experience in marine science. SCMI also offers K-12 programming in its classrooms, laboratories, and wharf.

Employment Opportunities

Employment opportunities at SCMI can be found on California State University Long Beach employment page. Temporary/On-Call positions for demonstration technicians and captains are listed under the Ocean Studies Department.

Volunteer Internships

SCMI offers high school, college, and university student volunteer internships year round.

AltaSea

The timing is critical for our participation because the LACCD has already expressed an interest in becoming port of AltaSea, the very large scale marine laboratory being built at City Dock One. AltaSea at the Port of Los Angeles is a \$750 million project (over the next twenty years) with research and education goals to help understand

the marine environment. The LACCD is listed as an interested institution, but it is not yet a member of the Southern California Marine Institute through which participation may be channeled.

AltaSea is the new proposed marine research campus in the Port of Los Angeles. This 35-acre campus will be a collaboration of marine research, education, business, government, and the community. SCMI is the proposed first tenant in this innovative marine research facility. The planned facility will include 4,100 linear feet of waterfront dock and wharf space, deep draft berths to accommodate large research vessels, circulating seawater and marine life support system, research and teaching laboratories, and an interpretive center. AltaSea's vision is to develop a world class urban marine research and innovation center and offer a sea of opportunity to the community.²

AltaSea will provide research and learning opportunities in:

Atmospheric and Marine Science: ocean currents, wave formation, tidal impacts, air and water quality.

Biology: aquaculture, fisheries, harmful algal blooms, coral reefs, kelp forests, tide pools.

Computer Science: underwater robotics, maritime technologies.

Energy: renewables, thermodynamics, physics.

Engineering: civil, coastal, electrical, environmental, maritime, mechanical, structural.

Environmental Science: urban influences, climate change, coastal geology, soil and water chemistry.

Maritime Policy: shipping, goods movement, seaport design.

Sociology: maritime and port communities.

Our contribution to the SCMI and AltaSea

The LACCD is a large system that is perhaps the most demographically diverse system of higher education in the state. Our contribution to the SCMI is both in our students and our faculty. Some examples of the academic areas that can make a direct contribution to the Institute are

Oceanography

Biology

Chemistry

Applied Physics

² See: <http://www.scmi.net/city-dock-no-1-project/>

Environmental Science

Geography

Geology

Anthropology

In the areas of workforce development there are new opportunities for all campuses but especially Harbor and Trade Tech. These include

maintenance of scientific equipment

marine engines

vessel maintenance

vessel use

tech assistant

lab assistant

The immense diversity of our student body will improve the relationship of the Institute with the community and bring the issues of coastal environmental quality and the Port to communities historically under-represented. For many of our students participation will be their first time at the urban coast.

For the SCMI, the District has facilities that are of some interest to researchers, such as the Gold Creek reserve that is located in the LA River watershed and is an open outdoor classroom.

For more information about the SCMI and AltaSea, see these sites:

SCMI: <http://www.scmi.net/>

AltaSea: <http://www.altasea.org/>

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