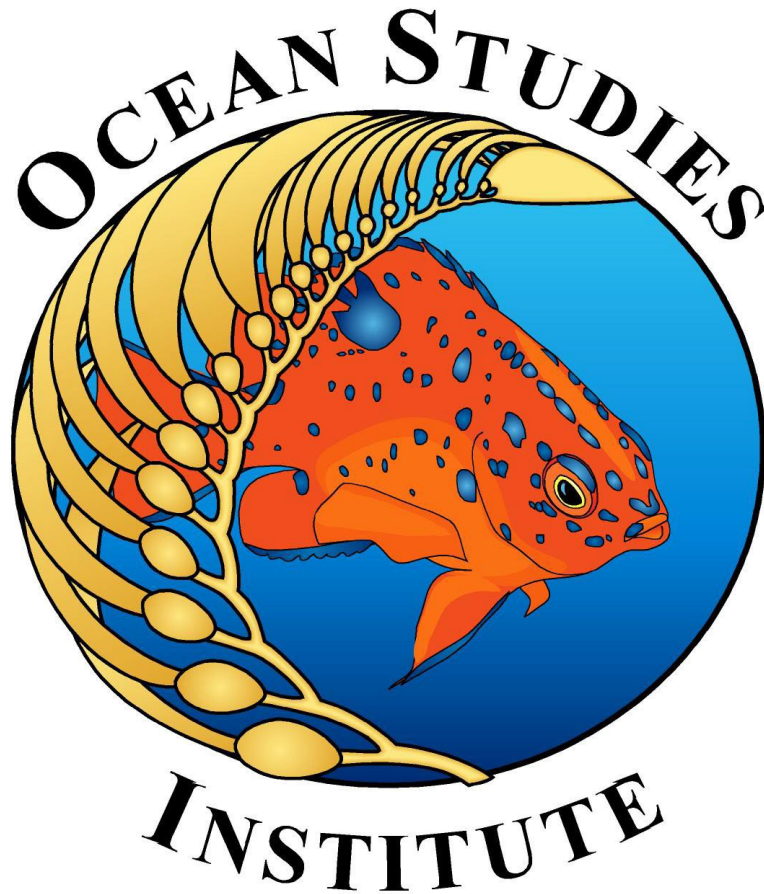


Ocean Studies Institute



Annual Report 2019-2020

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Mission

The **Ocean Studies Institute** is a consortium of *nine* California State Universities who decided to pool their resources to explore the ocean and coastal regions more effectively. OSI currently consists of California State University Dominguez Hills, Fullerton, Long Beach, Los Angeles, Northridge, Pomona, San Bernardino, San Marcos, and Channel Islands. OSI became a founding member of larger consortium of the **Southern California Marine Institute (SCMI)** in 1994.

The mission of the Southern California Marine Institute (SCMI) is to foster marine research and education, focusing on urban impacts of the greater Los Angeles region on the coastal ocean. We seek to improve scientific understanding and the development of solutions that will enable coastal waters and watersheds to thrive, adapt and become resilient to ongoing environmental stressors.

Director-Coordinator's Message

Wow! What a crazy year. As you'll see in this report, despite the unprecedented circumstances, **OSI-SCMI** is doing very well. During the height of the pandemic, we completed the construction phase, permitting and monitoring of the largest project in our history. SCMI is now the proud lease holder of 31.5 acres of newly restored rocky reef habitat on the Palos Verdes Peninsula. Our researchers have already begun a variety of in-depth studies on this new restoration habitat. None of this would have happened without the dedication of our staff and consortium teams that quickly adapted to the new COVID protocols. As you know, we have always been committed to safety and I am happy to report that we have continued to support essential services at the facility and the *R/V Yellowfin* while keeping everyone healthy. SCMI is fully prepared to address the challenges of the pandemic. When the virus rates start easing, we are ready to scale up our operations. We will continue to provide the support for the exceptional research and educational activities you have been accustomed to having. Stay safe and healthy, we will see you in 2021!

Introduction

The **Ocean Studies Institute-Southern California Marine Institute (OSI-SCMI)** has had a unique and unprecedented year. The year started off strong with a busy research season over the summer that utilized our small vessel fleet. SCMI assisted in research collaborations with Wood Environmental & Infrastructure Solutions, USC Earth Sciences, CSU Northridge, and CPP graduate research. CSUN's Dr. Larry Allen's Giant Sea Bass Acoustic Study had a successful release of the three giant sea bass. The fished were tagged by Dr. Chris Lowe's Shark Lab and can be tracked as they swim up and down the coastline. Construction on the Palos Verdes Restoration reef began this year and SCMI staff got a

first-row seats to the construction stationed on the rock barge as Marine Mammal Observers. This Fall 2019 saw a successful CSU Marine Biology Semester on Catalina Island with five CSU participating and 12 students attending. Before the COVID-19 shutdowns in March 2020 the *R/V Yellowfin* was booked solid during the Fall semester with educational cruises supporting over 1200 students and researchers. The *R/V Yellowfin* had its regularly scheduled hall out this year in January, and she continues to be in tip top shape. SCMI was fortunate to have a busy fall semester that helped weather the storm of the coronavirus shutdown and move to remote learning. Safety has always been SCMI highest priority and we are thankful for the guidance of our member campuses and institutions to safely provide services under these unprecedented times. Although there are a lot of unknowns coming into the next fiscal year SCMI is prepared to offer the same level of support to all our members and continued to fulfill our mission to foster marine research and education.



What's New?

COVID-19 Response

In the wake of the novel coronavirus pandemic SCMI staff worked diligently to create a safe environment for our members and continue to provide support safety and remotely. Starting in mid-March a majority of the SCMI staff began working remotely to reduce the number of people at the facility. We have a key group of staff working on site to maintain the seawater aquarium animals and support operations. The staff that work on site follow all the safety procedures for CSULB. Masks are required to be worn throughout the facility and all visitors and staff must fill out a COVID-19 symptom questionnaire before arriving at the facility. We developed COVID-19 safety protocols for the facility, vessels, dive locker, and dive and boat safety programs. We added hand sanitizer dispensers throughout the facility and stencils ground markers for students/researcher to line up and social distance while waiting to board their vessel. We applaud the SCMI staff for their fast action and adaptation to this new work environment. Creating and following the COVID-19 Safety protocols allowed our facility to continue to run and provide needed research support for our members. No one in our community has been infected.

Service Goals

Facility Improvements

This year OSI-SCMI has worked hard to meet the service goal to provide and grow the facility for our member institutions to carry out their educational and research activities. Safety has been our highest priority for our staff and visiting members. Along with the safety improvements for COVID-19 SCMI has continued to improve the building and repair the parking lot surfaces.

The *R/V Yellowfin* had its regular scheduled maintenance haul out this year. The hull was hydro blasted to remove any marine growth and the bottom paint was redone. The crew widened and adjusted the aft deck hatch for easier access out of the below cabins during an emergency. Denis Mahaffy, OSI's Vessel Engineer worked diligently to add an additional hand washing station on the deck to ensure researchers and students have access to frequent hand washing facilities. Safety is always our highest priority on the *R/V Yellowfin* and the crew worked hard to create a safe environment on the research vessel during these unprecedented times.

This year OSI-SCMI added a drone to our fleet of scientific equipment. The DJI Mavic 2 Pro drone is a compact drone that has a 30-minute flight time and high-resolution video recording capabilities. This drone will be a valuable tool for recording educational and researcher cruises on the *R/V Yellowfin*. We hope to record many of the educational cruises for use in remote learning.

OSI-SCMI's SeaBird CTD 25 Sea logger had its regular scheduled calibration and maintenance midway through the year. The Seabird 25 CTD is now in tip top shape and is being used regularly on the USC SPOT cruises each month. The CTD is reaching its 25 years in operations and we will continue to maintain the CTD while working on getting a replacement.

OSI AAUS Research Dive/Boating Program

Dive Operations: We currently have 102 Scientific Divers on our roster. 62 Scientific Divers logged dives totaling 1736 dives for fiscal 2019/2020. Two AAUS Scientific Diver courses were offered – one during the Winter and one during the Summer – the Summer course, normally conducted during June was canceled due to COVID lockdown. A total of twelve new divers received training, and cohorts were comprised of candidates from CSUN, CSULB, OSU, and Pitt. AAUS Scientific Diver courses remain on-hold for the foreseeable future. COVID mitigation protocols that would allow us to resume diving and emergency response courses are still awaiting administrative approval.



Boat Operations: We secured contracts with the California Department of Fish and Wildlife, and the Cabrillo Marine Aquarium for training of their personnel. We conducted four Motorboat Operator Training Courses (MOTC) for a total of twenty-two participants. Cohorts were comprised of candidates from CSULB, CSUF, CSUN, CPP, CDFW and CMA. Four more courses scheduled through May of 2020 were canceled due to COVID lockdown. Over the past year we have continued to build our inventory of PFDs, exposure suits, rescue dummies and safety gear required to teach the course. MOTC courses remain on-hold for the foreseeable future. COVID mitigation protocols that would allow us to resume the courses are still awaiting administrative approval.



Educational Goals

CSU Marine Biology Semester on Catalina Island

The Catalina Semester provides a unique opportunity for CSU students to experience hands-on marine biology and guide them to careers in marine science. The 15-week program is based at the Wrigley Marine Science Center (WMSC), located on Santa Catalina Island, 26 miles from Los Angeles, CA. The CSU Marine Biology Semester on Catalina fall 2019 was hosted by CSU Long Beach and taught by CSULB professors: Dr. Chris Lowe and Dr. Bengt Allen and CPP professor Dr. Jayson Smith. There was a total of 12 students from 4 different CSU's and one non-CSU university. The Fall 2020 semester was going to be hosted by CSU Northridge. Unfortunately, the Fall 2020 semester was canceled due to the COVID-19 pandemic. There was a total of 17 students that applied from four different CSUs. The semester was going to be instructed by CSUN professors. Dr. Peter Edmunds was going to instruct Marine Invertebrate Zoology, Dr. Nyssa Silbiger and Dr. Larry Allen were going to instruct Marine Ecology, and Dr. Kerry Nickols was going to instruct Marine Conservation Biology. Despite the dynamic COVID-19 situation OSI-SCMI is working with USC Wrigley and the CSUs to develop a safety protocol and layout for the next 2021 Fall Catalina Semester.



CSU Marine Biology Semester on Catalina Fall 2019			
University	# Students	Professors	Courses
CSU Fullerton	1	Dr. Jayson Smith	Marine Phycology
CSU Long Beach	6	Dr. Christopher Lowe	Marine Ichthyology
CSU Northridge	1	Dr. Bengt Allen	Marine Ecological Processes
Cal Poly Pomona	2		
CSU Channel Islands	1		
Non-CSU (Oberlin College)	1		
Total # Students	12		
Total # Schools	5		

Demonstration Yellowfin Cruises

Our Yellowfin demonstration cruises have continued to be a valuable resource for students to experience hands on marine science. With the help of our Captain, Vessel Engineer, and the on-board Demonstration Techs we can offer classes a unique experience using real-world equipment and techniques such as VanVeen grabs, plankton tows, biological dredges, otter trawls, and our new handheld CTD. This year we were only able to operate cruises up till March 9th due to the COVID-19 shutdown. There were 82 demonstration cruises on the *R/V Yellowfin* that supported over 1148 students from southern California colleges and universities this year. Some of the highlighted trips include the IKMT with Dr. Franklin from CSUN, multicore with Dr. Berelson from USC, and rock dredge with Dr. Pernet from CSULB.



Research Goals

OSI-SCMI has provided vessel support, equipment, and expertise to researchers from member and non-member institutions. This year OSI-SCMI has assisted researchers from University of Southern California, Occidental College, University California Los Angeles, California State University, Northridge, Long Beach, and Los Angeles, Cabrillo Marine Aquarium, Aquarium of the Pacific, NOAA, Ports of Los Angeles, and Woods Environmental & Infrastructure Solutions.



Giant Sea Bass Acoustic Study Update

Dr. Larry Allen's Giant Sea Bass Acoustic study is still on going at OSI-SCMI. The three Giant Sea Bass were successfully released back to the ocean on September 25, 2019. Before their release Dr. Chris Lowe's Shark Lab at CSULB tagged the three fish and are tracking their journey as they swim up and down the coastline.

OSI-SCMI has had the pleasure of helping to raise some of the juvenile Giant Sea Bass from the spawning events that occurred last year at OSI-SCMI. It is a real sight to see these tiny fish grow and into little giants. We currently have six juveniles that are roughly 2-3 inches in length. These lively little predators are all doing very well, displaying normal behavior, and growing at a healthy rate. These fish could be used for potential future research or released by CDFW to help rebound the Giant Sea Bass population in our local waters.



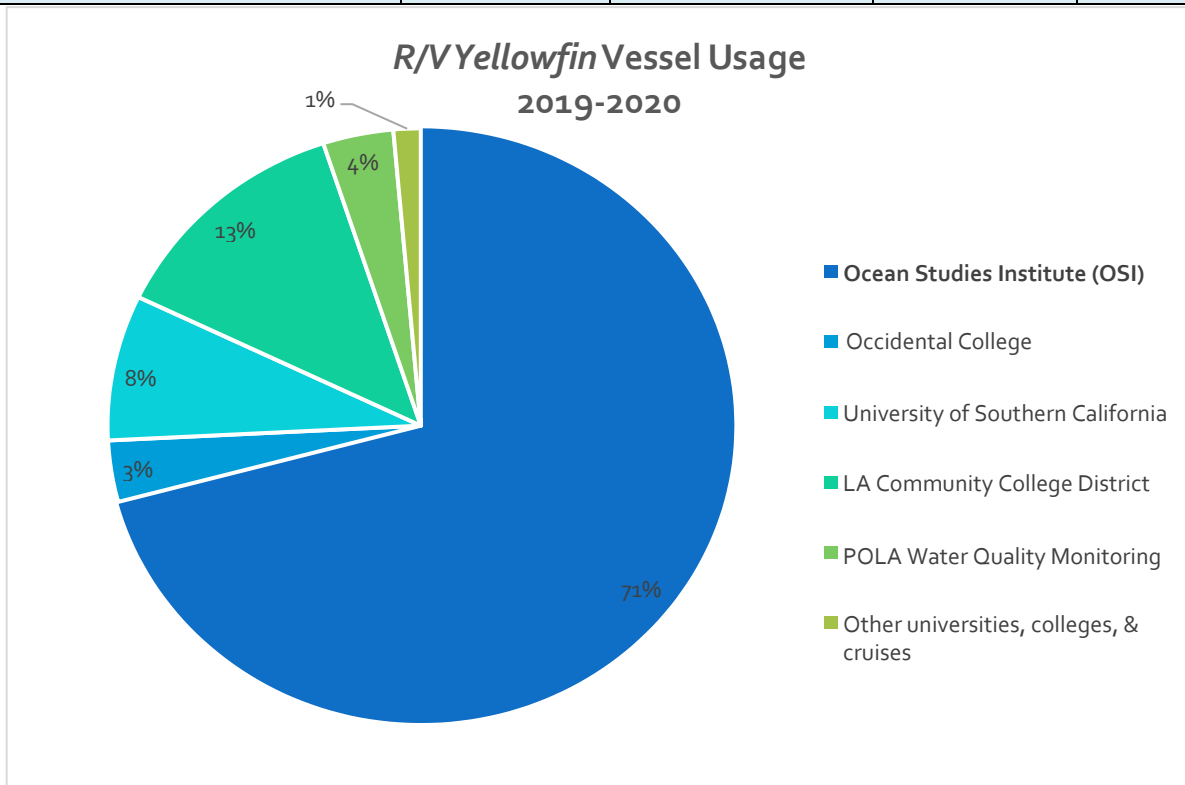
Vessel Use

R/V Yellowfin Usage by Institutions

This year, the *R/V Yellowfin* logged approximately 572 hours of vessel use. The trips were significantly reduced due to the COVID-19 pandemic. The trips consisted of a combination of class laboratories, graduate and university research, and contracted research. OSI-SCMI will continue to work CSULB, our administrative campus, to develop safety protocols to implement when it is safe to resume college and university trips on the *R/V Yellowfin*. OSI-SCMI's goal is to continue increasing vessel usage among OSI-SCMI member institutions and to broaden vessel usage to other institutions and disciplines.



Institute Name	Total # of Students	Total # of Faculty/Researchers	Total Hours of Vessel Use	Total # of Cruises
Ocean Studies Institute (OSI)	677	52	241	40
Occidental College	143	22	62	10
Port of Los Angeles	0	17	67	8
University of Southern California	76	26	146	19
Other Universities and Colleges	31	3	14	2
Los Angeles Community College District	221	11	42	11
Yearly Total	1148	131	572	90





Ocean Studies Institute Budget

Ocean Studies Institute FY Budgets 2013/2014 through 2019/2020

Fund Description	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Revenue					
Salaries and Wages ⁽¹⁾	\$481,698	\$492,443	\$557,411	\$528,809	\$ 554,099
Benefits	\$214,827	\$250,093	\$321,836	\$317,532	\$ 320,305
OSI Member Contributions ⁽²⁾	\$76,500	\$76,500	\$76,500	\$76,500	\$ 76,500
OE&E ⁽¹⁾	\$63,964	\$88,324	\$116,702	\$48,233	\$ 63,481
Misc Revenue and User Fees ⁽⁴⁾	\$66,390	\$82,265	\$48,756	\$77,436	\$ 50,891
Total	\$903,379	\$989,625	\$1,121,205	\$1,048,510	\$1,065,275
Expenditures					
Salaries and Wages	\$448,147	\$490,658	\$614,598	\$552,822	\$ 565,225
Benefits	\$214,827	\$256,605	\$321,905	\$317,532	\$ 320,305
Operating Expenses ⁽³⁾	\$199,344	\$194,857	\$165,549	\$121,621	\$ 93,957
Accounting Charges	\$2,863	\$2,106	\$1,799	\$3,609	\$ 1,044
Total	\$865,181	\$944,226	\$1,103,850	\$995,583	\$ 980,532
End-of-Year Balance	\$38,198	\$45,399	\$17,355	\$52,926	\$ 84,744

⁽¹⁾ In FY 2015-16, Revenue includes CO augmentation for Dive and Boating Safety Officer at \$115,000 (\$75,000 for Salary and \$40,000 for Other Expenses)

⁽²⁾ OSI Members contributions are received annually and vary among the nine OSI institutions based on historic patterns of facilities and service use

⁽³⁾ Operating Expenses include contractual services, supplies, minor boat repairs, and diving related

⁽⁴⁾ Miscellaneous OSI Revenue comes from indirect cost returns from external grants; user fees are associated with use of the R/V Yellowfin. This revenue source varies from year to year



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