

FIELD TRIPS RELATED TO THE OCEAN SCIENCES

Kindergarten through Grade Twelve



COSEE-West Program
Center for Ocean Sciences Education Excellence-West

Supported by the National Science Foundation

Available as a PDF file with active web links at
<http://www.usc.edu/org/cosee-west/resources.html>

INTRODUCTION

This compilation of field trips and resources related to the ocean sciences is designed for student, teacher and parent use.

The Guide includes
Field trip sites between San Diego and Santa Cruz
Appendix A: “California Environmental Organizations and Programs”
Appendix B: “Wetlands of California.”

The enclosed list of field trip organizations, contacts and brief descriptive summaries should be used as an overview. Interested field trip participants must contact the field trip organizations to obtain cost of visit, hours of operation, specific location, availability of programs and instructional materials as well as appropriateness to individual, small groups, or class involvement.

NOTE: On a PC, access any web site by pressing the “Ctrl” key at the same time you click on its address. On a Mac the links are active simply by clicking on the address if the file is opened with “Acrobat.”



For an extensive guide to California sites farther north, visit the Habitat pages on the Lawrence Hall of Science’s MARE web site, <http://www.lawrencehallofscience.org/mare/oiresources/index.html>.



Please contact the COSEE co-Directors, Ms. Peggy Hamner at phamner@ucla.edu or Dr. Judith Lemus at jdlemus@usc.edu, to comment on this Guide, to add (or correct) information concerning these field trips, or to suggest additional sites/organizations.

Periodically visit our web site, www.usc.edu/org/cosee-west, to download the newest version of the Guide as it is improved with feedback from our users. The revision date will be at the bottom of the Guide’s cover.



Grateful acknowledgement is expressed to Gayle Adler for preparation of the initial entries and to all those who have added information to the Guide.

COSEE-West Staff
University of California Los Angeles
Dr. William Hamner
Dr. Peggy Fong
Ms. Peggy Hamner
Dr. Sid Sitkoff
Ms. Gwen Noda

University of Southern California
Dr. Anthony Michaels
Dr. Linda Duguay
Dr. Judith Lemus
Ms. Lynn Whitley
Ms. Jane Lee

COSEE-West is a joint UCLA-USC program funded by the National Science Foundation, Awards No. OCE-0215497, OCE-0215506 and OCE- 07-53224.

FIELD TRIPS RELATED TO THE OCEAN SCIENCES
FOR STUDENTS, TEACHERS AND PARENTS

ORGANIZATION & ACTIVITY SITE(S)	CONTACT	DESCRIPTIVE INFORMATION
American Cetacean Society San Pedro	www.acs-LA.org Educational Programs: 310-548-6279 Whalewatch Reservations/Lectures: 310-548-8397 L.A. Chapter P.O. Box 1208 San Pedro, CA 90733	Whale watching trips: Grades K-12 Free in-class lecture with whale watch field trip Free curriculum and teaching materials: www.acsonline.org Meeting on last Tuesday of each month at Cabrillo Marine Aquarium to present educational programs
American Heritage Marine Institute Long Beach (Tall Ship)	http://www.americanpride.org/ (714) 970-8801 Fax (714) 970-8474 theamericanpride@aol.com Rainbow Harbor, Dock 3 Long Beach, CA	Whale watching, overnight marine science programs to Catalina Island, summer camps, public sails and aritime historical programs aboard the historic Tallship <i>American Pride</i> . K-College
Aquarium of the Pacific Long Beach	www.aquariumofpacific.org 562-951-1630 888-826-7257 Fax: 562-951-1629 100 Aquarium Way Long Beach, CA 90802	Public lectures and exhibits Various grade level programs on site "Aquarium on Wheels" takes marine life with hands-on exploration directly to schools
Aquatic Adventures San Diego	http://www.aquaticadventures.org/ 858.488.3849 Fax: 858.488.4265 Aquatic Adventures Science Education Foundation 1010 Santa Clara Place San Diego, CA 92109	Elementary & middle school programs (free to low income schools); student mentoring programs; summer camps community volunteer programs
Birch Aquarium La Jolla	http://aquarium.ucsd.edu/ (858) 534-FISH fax: (858) 534-7114 aquariuminfo@ucsd.edu Birch Aquarium at Scripps 2300 Expedition Way, La Jolla, CA 92037	School programs (pre-K12) Summer camps Teacher workshops Public exhibits

COSEE-West Guide to Field Trips

ORGANIZATION & ACTIVITY SITE(S)	CONTACT	DESCRIPTIVE INFORMATION
<p>Boojum Institute</p> <p>Channel Islands National Park</p> <p>Elkhorn Slough</p> <p>Point Reyes National Seashore</p>	<p>www.boojum.org Jeff Baierlein, Executive Director Phone (760) 228-2311 x11 Fax (760) 228-1994 info@boojum.org P.O. Box 711 Pioneertown, CA 92268</p>	<p>multi-day outdoor education programs for school groups and other organizations. Students explore marine and terrestrial environments through sea kayaking, hiking, camping, field science investigations and more. Participants develop life skills and environmental citizenship through experiential education.</p>
<p>Cabrillo High School Aquarium Lompoc</p>	<p>http://cabrilloaquarium.org/ Head Curator Mark Rapoza, e-mail:sharkboy111@hotmail.com (805)-742-2888</p>	<p>Exhibits of live marine organisms, presentations at local schools on various habitats; online virtual tour (Students in the Tourism course at the School manage most of the Aquarium's activities.)</p>
<p>Cabrillo Marine Aquarium</p> <p>San Pedro</p>	<p>www.cabrilloaq.org 310-548-7562 Fax: 310-548-2649 3720 Stephen White Dr. San Pedro, CA 90731</p>	<p>Dedicated to promoting appreciation, knowledge and conservation of marine life: Grades K-12 "Sea Search" marine workshops: Grades preK-adult "Ocean Outreach" classroom programs: Grades preK-8 Aquarium tours Whale watching trips</p>
<p>California Science Center (California Museum of Science and Industry)</p> <p>Los Angeles</p>	<p>www.californiasciencecenter.org 323-SCI-ENCE Group trip info: 213-744-2019 Educational Programs: 213-744-7444 I-Max: 213-744-7400 Explore Store: 213-744-7422 700 State Dr. L.A., CA 90037</p>	<p>Educational exhibits with hands-on learning in science, math and technology: Grades K-12 Summer camp programs: Grades K-12 I-Max (large screen films)</p>

COSEE-West Guide to Field Trips

ORGANIZATION & ACTIVITY SITE(S)	CONTACT	DESCRIPTIVE INFORMATION
<p>California Coastal Commission</p> <p>Various locations, including Upper Newport Bay</p>	<p>www.coastforyou.org 800-COAST-4U Education Dept: 415-904-5200 (voice) Fax: 415-904-5216 Education Coordinator: 415-597-5888 Call for program fees (949-640-0286)</p> <p>Public Education Department email: Coast4u@coastal.ca.gov 45 Fremont St., Ste. 2000 San Francisco, CA 94105</p> <p>Upper Newport Bay Habitat Matthew J. Yurko Restoration Education Coordinator 949-640-0286 myurko@coastal.ca.gov</p>	<p>State agency to protect California's coastal marine resources Teaches children to be stewards of our beaches and oceans Teaches curricular materials: Gr 3-8</p> <p>Activity guide, "Waves, Wetlands and Watersheds," can be ordered online at no cost. Upper Newport Bay Habitat: Grades 6-12 State Science Standards emphasized. Native plant restoration – any age Kayaking trips, scientific lectures, bird-watching: Grades 6-12</p>
<p>Catalina Island Marine Institute (CIMI)</p> <p>Catalina Island</p>	<p>www.guidediscoveries.org/cimisite/school.htm 800-645-1423 909-625-6194 P.O. Box 1360 Claremont, CA 91711</p>	<p>Outdoor educational program, operated by guided discoveries. Students explore the marine and terrestrial environments using hands-on learning, laboratory activities, field equipment, snorkeling excursions, flat-top boat cruises, kayaking and ecology hikes: Grades 4-12</p>
<p>Center for Marine Science Studies at Fort MacArthur</p> <p>San Pedro</p>	<p>www.mar3ine.org/centerformarinestudies.htm Jeanine Mauch 310-547-9888 E-mail: jmauch@lausd.k12.ca.us</p> <p>Fort MacArthur, San Pedro, CA</p>	<p>educational partner of the Marine Mammal Care Center at Fort MacArthur Hands-on activities in classroom laboratory, grades 4 & up Tours of the marine mammal and seabird rescue centers, preK-university:</p>

COSEE-West Guide to Field Trips

ORGANIZATION & ACTIVITY SITE(S)	CONTACT	DESCRIPTIVE INFORMATION
<p>Channel Islands National Marine Sanctuary</p> <p>Santa Barbara & Ventura</p>	<p>http://channelislands.noaa.gov Julie Bursek Ventura/Oxnard Education Coordinator 805.382.6149 ext. 101 e-mail: Julie.Bursek@noaa.gov Laura Francis, Santa Barbara Education Coordinator 805.966.7107 ext. 473 e-mail: Laura.Francis@noaa.gov Visitor Center 113 Harbor Way, 4th floor Santa Barbara, CA. 93109 805-884-1475</p>	<p>Classroom materials and online K-12 educational activities whale watching cruises diving cruises professional development workshops for educators, ranging from rocky intertidal monitoring to building Remotely Operated Vehicles (ROV) Various educational programs</p>
<p>Crystal Cove State Park</p> <p>Laguna</p>	<p>www.crystalcovestatepark.com/ e-mail: crystalcv@fea.net off Pacific Coast Highway between Corona del Mar and Laguna Beach</p>	<p>Educational programs for school groups, "drawing from the areas of Science, Ecology, History, Social Studies, and Physical Education" (no cost, except for tidepool walk); docent led tours</p>
<p>Fort MacArthur Marine Science Program</p> <p>San Pedro</p>	<p>Jeanine Mauch (310) 547-9888 e-mail: jmauch@lausd.k12.ca.us</p> <p>Stephanie Rizzi (310) 3936263 Ext. 23</p> <p>Henry Ortiz (310) 390 2441 E-mail: Henry.Ortiz@lausd.net</p>	<p>3- day, 2- night residence program; classroom marine science exercises tidepool/beach activities boat trip Cabrillo Marine Aquarium wet lab activities Grades 4-12 Free only to LAUSD classes Fee-based, other Districts</p>
<p>Friends of Ballona Wetlands</p> <p>Marina del Rey</p>	<p>www.ballonafriends.org Kelly Rose, Programs Director (310) 739-8613 e-mail: ecorestitution@verizon.net</p>	<p>Educational and service-learning programs on site at the last remaining coastal wetland in Los Angeles Programs focus on salt marsh and coastal dunes ecology, unique habitats, cultural history, and environmental stewardship. Can be tailored to fit coursework goals.K-12 through college classes</p>

COSEE-West Guide to Field Trips

ORGANIZATION & ACTIVITY SITE(S)	CONTACT	DESCRIPTIVE INFORMATION
<p>Friends of the Elephant Seal Elephant seal sanctuary at Piedras Blancas (near San Simeon)</p>	<p>http://www.elephantseal.org 805-924-1628 fes@elephantseal.org 250 San Simeon Ave. Suite 3B San Simeon, CA 93452</p>	<p>Call the FES office in advance to have docents on hand to assist school groups. Informal visits: Docents available to answer questions. Vista point has educational and interpretive signs</p>
<p>Eaton Canyon Pasadena</p>	<p>http://www.ecnca.org/ 626-398-5420 1750 North Altadena Drive Pasadena, California 91107</p>	<p>Watershed programs Children 5 years & up</p>
<p>Hyperion Treatment Plant Playa del Rey</p>	<p>http://lacity.org/san/htp-tours.htm 310-648-5363 Nancy Carr</p>	<p>Tour of sewage water treatment process (free): Grades 4-12</p>
<p>Inside the Outdoors Orange County</p>	<p>www.insidetheoutdoors.org TEL (714) 708-3885 FAX (714) 649-0162 200 Kalmus Dr. P.O. Box 9050 Costa Mesa, CA 92628 insidetheoutdoors@ocde.us</p>	<p>Full day and half day field trips to 13 sites around Orange County. Gr. K-7: In-class 1- hour Traveling Scientist programs; Gr. 5-6: Week long Outdoor Science School programs in San Bernardino Mountains. Pre and post trip teaching materials available online. Funding available for qualified schools.</p>
<p>Island Packers Oxnard & Ventura</p>	<p>http://islandpackers.com (805) 642-1393 Fax (805) 642-6573 E-mail: info@islandpackers.com Ventura Harbor 1691 Spinnaker Dr. Ventura, CA 93001 and Channel Islands Harbor 3600 S. Harbor, Oxnard, CA 93035</p>	<p>School field trips to the Channel Islands Whale watching cruises Special charters</p>

COSEE-West Guide to Field Trips

ORGANIZATION & ACTIVITY SITE(S)	CONTACT	DESCRIPTIVE INFORMATION
Key to the Sea Los Angeles area	www.healthebay.org/key2sea/ 800-heal-bay	Classroom activities about watershed stewardship, stormwater pollution prevention and marine conservation; field trip to marine science center; Free advance training for teachers along with standards-based curriculum Grades K-5
Leo Carrillo State Beach Malibu	(818) 880-0350 (general information) 805-488-1827 (school groups) 35000 W. Pacific Coast Highway Malibu, CA 90265	Tidepool workshops for teachers Field trips for classrooms: Grades K-9
Long Beach Marine Institute Long Beach	www.longbeachmarineinst.com/ (562) 431-7156 email: info@longbeachmarineinst.com Box 281, 6475 E. Pacific Coast Hwy. Long Beach, CA 90803	Field trips aboard ship, to Catalina, school programs, summer camps. Preschool to adult
Los Angeles Co. Office of Education Long Beach & Malibu	For both, contact Gary Widdison, Consultant, Outdoor and Marine Science tel. 562-922-6889; e-mail: widdison_gary@lacoedu Fax: 562-401-5405 9300 Imperial Highway, Clarke Bldg Downey, CA 90266	<u>Floating Lab Boat Program</u> : shipboard program for schools Departs from Rainbow Harbor, Long Beach <u>L.A. County Outdoor Science School – Malibu</u> outdoor science school in Little Sycamore Canyon, n. of Malibu: lessons on riparian and intertidal ecosystems
Los Angeles Dept. of Water and Power Los Angeles	www.ladwp.com 213-367-1342 Walter Zeisl Fax: 213-367-1434 111 N. Hope St. L.A., CA 90012	Tree planting and educational programs, green LA poster and multimedia contest, science bowl, learning about water, energy and the environment Teacher workshops covering science and technology related to water, energy and environmental issues, Adopt-a-school field trips, intern programs, etc: Grades K-12
Los Angeles Maritime Institute San Pedro	www.lamitopsail.org/index.asp (310)-833-6055 Berth 84, Foot of 6th Street San Pedro, CA 90731	Square rigged sailing ships; day sails, overnight trips for schools, public; Volunteer program

COSEE-West Guide to Field Trips

ORGANIZATION & ACTIVITY SITE(S)	CONTACT	DESCRIPTIVE INFORMATION
Los Angeles Maritime Museum San Pedro	www.lamaritimemuseum.org/ 310-548-2900 Berth 84, Foot of 6th Street San Pedro, CA 90731	“creates an awareness & appreciation of the maritime history of coastal California, with an emphasis on the people and institutions of the port city of Los Angeles.” Public exhibits; no formal education programs Tours in English & Spanish
Los Angeles Oiled Bird Care & Education Center at Fort MacArthur San Pedro	www.ibrrc.org/so_cal_center.html (310) 514-2573 Fax: (310) 514-8219 E-mail: so_cal_center@ibrrc.org 3601 S. Gaffey Street San Pedro, 91006 <i>US mail:</i> PO Box 2816, Fort MacArthur Station San Pedro, CA 90731	One of the country’s largest oiled wildlife treatment facilities; Two large classrooms with lab & computer capability; Visitors view animal care and a seabird treatment demonstration with stranded seabird species; staff & volunteers provide information. Tours arranged through the Center for Marine Studies (see CMS entry).
Los Angeles Zoo and Botanical Gardens Griffith Park, Los Angeles	www.lazoo.org/ (323) 644-4211 for reservations E-mail: webmaster@lazoo.org 5333 Zoo Drive Los Angeles, CA 90027-1498	Exhibits include marine animals Self-directed field trips Docent guided field trips Public and school programs
Malibu Lagoon Malibu	www.rcdsmm.org Resource Conservation District of the Santa Monica Mountains (310) 455-1030 ext. 103 122 N. Topanga Blvd. Topanga CA 90290	Students monitor water quality, use binoculars to observe birds and their feeding strategies and examine fish and bird structure adaptations to the estuarine environment Microscopes are used to study plankton and sediments. Students learn about the human impact on wetlands. The site can accommodate wheelchairs: Grades 3-12

COSEE-West Guide to Field Trips

ORGANIZATION & ACTIVITY SITE(S)	CONTACT	DESCRIPTIVE INFORMATION
<p>Marine Mammal Care Center at Fort MacArthur San Pedro</p>	<p>http://www.mar3ine.org/aboutmmcc.htm (310) 548-5677 Group tours: 310-547-9888 Fax: 310-548-6394 E-mail: FortMacCLs@aol.com 3601 S. Gaffey Street San Pedro, CA 90731</p>	<p>Hospital for ill, injured and orphaned marine mammals; treats & releases rescued CA sea lions, northern elephant seals, harbor seals and northern fur seals Visitors view animal care; staff & volunteers provide information. Tours are arranged through the Center for Marine Studies (see CMS entry).</p>
<p>Monterey Bay Aquarium Monterey</p>	<p>www.mbayaq.org/ school field trip applications – on line 831-648-4850 886 Cannery Row Monterey, California 93940</p>	<p>Mission: to inspire conservation of the oceans. Free field trips with planning guides, grades K-12 teacher workshops online educational materials</p>
<p>Monterey Bay National Marine Sanctuary Monterey</p>	<p>http://montereybay.noaa.gov Dawn Hayes, Education Coordinator 831.647.4256 299 Foam Street Monterey, CA 93940</p>	<p>Classroom materials and online K-12 educational activities Professional development workshops for educators Various educational programs</p>
<p>Natural History Museum of Los Angeles County Los Angeles</p>	<p>www.nhm.org 213-763-3333 323-342-1342 900 Exposition Blvd. Los Angeles, CA 90007</p>	<p>Displays of dinosaurs, marine life, mammals, birds, insects, minerals and gems Field trips, lectures, workshops and summer programs Mobile labs that come to LAUSD middle schools: "Earth," "Sea" and "Sky" mobile labs Grades K-12, adult</p>
<p>Ocean Futures Society Catalina Island & Santa Barbara</p>	<p>http://oceanfutures.org/ Santa Barbara, CA For "Catalina Island Family Camps" www.catalinaislandcamps.com/ 800-696-CAMP E-mail: info@catalinaislandcamps.com for "Ambassadors" program www.aote.org (805) 899-8899, x 113 Contact: Holly Lohuis <hlohuis@oceanfutures.org></p>	<p>"Catalina Island Family Camps": residential & outdoor school programs, grades 4-12 (CELP Camp, www.celp.net/), summer resident camp for boys and girls entering grades 3 through 11 "Ambassadors of the Environment" program promotes sustainable living and ties in kelp forests, coral reefs, etc with multi-day camps for school groups, families at El Capitan Ranch, N of Santa Barbara</p>

COSEE-West Guide to Field Trips

ORGANIZATION & ACTIVITY SITE(S)	CONTACT	DESCRIPTIVE INFORMATION
<p>Ocean Institute Dana Point</p>	<p>www.ocean-institute.org/ 949-496-2274 e-mail: oi@ocean-institute.org 24200 Dana Point Harbor Dr. Dana Point, CA 92629</p>	<p>preK-12 student & teacher programs, public programs exhibits overnight field trips shipboard labs online lesson plans</p>
<p>Pacific Marine Mammal Center Laguna Beach</p>	<p>www.pacificmmc.org/ (949) 494-3050 To schedule group presentation, e-mail tours@pacificmmc.org 20612 Laguna Canyon Rd. Laguna Beach, CA</p>	<p>Field trips include a guided tour of the animal care facility, a slide show presentation of the typical animals and medical conditions treated, and an opportunity to visit animals being rehabilitated in outdoor pools. Summer day camp for children aged 8-12. Guest speakers for schools</p>
<p>Page Museum Los Angeles</p>	<p>www.tarpits.org 323-857-6300 ext. 112 Fax: 323-933-3974 5801 Wilshire Blvd. Los Angeles., CA 90036</p>	<p>Exhibits display Los Angeles 40,000 years ago. Emphasizes the animals and birds of that era Students explore the Museum laboratory and learn about paleontology Online teacher's guide</p>
<p>Roundhouse Marine Studies Lab and Aquarium, Oceanogr. Teaching Stations., Inc. (OTS) Manhattan Beach</p>	<p>www.roundhousemb.com/ 310-379-8117 Fax: 310-937-9366 e-mail: roundhouse.aquarium@verizon.net PO Box 1 Manhattan Beach, CA 90266</p>	<p>Hands-on exhibits of local marine organisms Classes for K-12. On site & field studies. Summer Camp programs in July & August. Open to the public, free, M-F, 3-sunset; S&S, 10- sunset (See website or call for more details.)</p>
<p>San Elijo Lagoon Conservancy Encinitas</p>	<p>www.sanelijo.org/index.htm/ Education Director: 760-436-3944 e-mail: mab4@sanelijo.org 760-436-3944 Fax: 760-944-9606 P.O. Box 230634 Encinitas, CA 92023</p>	<p>Docent-led walks tailored to teachers' needs. Topics: wetlands, watersheds, water quality, bird life and migration, rare & endangered species, sensitive habitats, plants, and the Kumeyaay. Primarily for elementary school but also can be tailored to middle and high schools</p>

COSEE-West Guide to Field Trips

ORGANIZATION & ACTIVITY SITE(S)	CONTACT	DESCRIPTIVE INFORMATION
<p>Santa Barbara Maritime Museum</p> <p>Santa Barbara</p>	<p>www.sbmm.org/ (805) 962-8404 education program: sgriesmer@sbmm.org 113 Harbor Way Suite 190 Santa Barbara, CA 93109</p>	<p>Tours, instructional classes, active participation in the Jason Program (an interactive, science-based, educational experience for students and teachers)</p>
<p>Santa Monica Pier Aquarium</p> <p>Santa Monica</p>	<p>www.healthebay.org/smpa/ 310-393-6149</p>	<p>Exhibits of local marine organisms Hands-on marine science activities at the Center and on the beach: Public & pre-K-grade 12 (classes emphasize grades 1 - 8)</p>
<p>SEA Lab</p> <p>Redondo</p>	<p>www.lacorps.org/Index_SEALAB2.html School group programs: 310-318-7438 Volunteer opportunities: 310-318-7458 1021 North Harbor Drive Redondo, CA 90277</p>	<p>School field trips touch tank tours, beach explorations, etc: downloadable lesson plans "Traveling Tidepool" school-site program Grades preK-12</p>
<p>Sea World San Diego</p> <p>San Diego</p>	<p>www.seaworld.org/education-programs/swc/index.htm 800-380-3203 Fax: 619-226-3834 500 Sea World Drive San Diego, CA 92109</p>	<p>Educational program to introduce students to marine life Pre- and post-field trip instructional materials that are "activity" based; resident camps and teacher's guides Grades K-12</p>
<p>r/v Sea World UCLA (UCLA's ship)</p> <p>Marina del Rey</p>	<p>www.ioe.ucla.edu/seaworld/ e-mail: seaworld@ioe.ucla.edu 310-267-5352 Institute of the Environment UCLA</p>	<p>"Cruising Classroom" - Ship-board ocean lab with hands-on activities, based at Marina Del Rey: Grades 4-12, college, organizations</p>

COSEE-West Guide to Field Trips

ORGANIZATION & ACTIVITY SITE(S)	CONTACT	DESCRIPTIVE INFORMATION
<p>Sepulveda Basin Wildlife Area</p> <p>Van Nuys</p>	<p>www.rcdsmm.org Resource Conservation District of the Santa Monica Mountains 310-455-1030 ext. 103 122 N. Topanga Blvd. Topanga CA 90290</p>	<p>Students learn about the basin's newly created wetland which receives reclaimed water for wildlife</p> <p>Students monitor water temperature, pH, etc. from inlet to outlet. Binoculars are provided to observe migratory and resident birds</p> <p>Students use microscopes and hand lenses to study planktonic life in the lake. Ecology "walks" are suitable for wheelchairs</p>
<p>Seymour Center at Long Marine Lab</p> <p>Santa Cruz</p>	<p>http://seymourcenter.ucsc.edu/ (831) 459-3800 (School Youth Programs) 100 Shaffer Road Santa Cruz, CA 95060</p>	<p>K-12 student & teacher programs, public programs</p> <p>"Organized around the process of how scientists do their work, the aquarium exhibits look like a working marine laboratory with exposed seawater pipes and valves. Many of the tanks are laboratory-like, not habitat tanks."</p>
<p>Southern California Marine Institute</p> <p>Terminal Island</p>	<p>http://www.scmi.us/ 310-519-3172 Fax: 310-519-1054 Carrie Wolfe, Programs Director cwolfe@csulb.edu</p> <p>820 South Seaside Ave. Terminal Island, CA 90731</p>	<p>Demonstration cruises aboard marine research boat followed by hands-on laboratory classes. Oceanographic equipment available, e.g. fish trawl, water quality testing equipment.</p> <p>A small aquarium is set up for students not able to go on boats.</p> <p>Students in grade 5 & higher</p>
<p>Tall Ship Expeditions</p> <p>Various locations</p>	<p>800-645-1423</p>	<p>Sail training, marine biology and oceanography: Grades 4-12</p>
<p>Tijuana Estuary Visitor Center</p> <p>Imperial Beach</p>	<p>www.tijuanaestuary.com/visitors_center.asp 619-575-3614 Fax 619-575-6913</p> <p>301 Caspian Way Imperial Beach, CA 91932</p>	<p>interactive, hands-on, thematic, bilingual, environmental education; free visits to K-12 school groups & other youth groups; free programs for ages 7-12; evening public speaker series</p>

COSEE-West Guide to Field Trips

ORGANIZATION & ACTIVITY SITE(S)	CONTACT	DESCRIPTIVE INFORMATION
<p>Ty Warner Sea Center</p> <p>Santa Barbara</p>	<p>www.sbnature.org/seacenter/ 805-682-4711 211 Stearns Wharf Santa Barbara, California, 93105</p>	<p>Marine exhibits and aquariums K-12 school programs volunteer program</p>
<p>Research Experience and Education Facility (REEF) Santa Barbara</p>	<p>http://www.msi.ucsb.edu/ email to: outreach@msi.ucsb.edu with the subject line reading SUBJECT: REEF Request or call 805-893-8765. <u>Mobile REEF program:</u> Program Manager, Scott Simon, 805-893-8765 or simon@msi.ucsb.edu Marine Science Institute UC Santa Barbara</p>	<p>Aquarium & touch tank tours; Mobile REEF program</p>
<p>USC Wrigley Marine Science Center</p> <p>Catalina Island</p>	<p>http://wrigley.usc.edu/education/ Katie Boutillier 310-510-4015 e-mail: boutilli@usc.edu</p>	<p>Various marine biology excursions and activities, including snorkeling, kayaking and lab investigations for grades 4-12. Retreats and workshops for teachers Online "Island Explorers" curriculum for grades 4-5 available at http://www.usc.edu/org/seagrant/IELessons/IELessons.html</p>



Appendix A. California Environmental Organizations and Programs*

* most entries are from Waves, Wetlands, and Watersheds: California Coastal Commission Science Activity Guide

The following is a brief list of organizations that offer many environmental education programs related to the coast and ocean. They may provide tours, field trips, workshops, informational material, expert advice and more. While they are organized by region, most provide resources of interest to educators throughout the state. Check out their websites or call for information. For an up-to-date, more extensive list of organizations, along with detailed information about their programs, visit the California Coastal Commission's "Marine, Coastal & Watershed Resource Directory" at www.coastforyou.org.

STATEWIDE

Adopt-A-Watershed
P.O. Box 1850
Hayfork, CA 96041
(530) 628-5334
www.adopt-a-watershed.org

Algalita Marine Research
Foundation
148 Marina Drive
Long Beach, CA 90803
(562)598-4889
www.algalita.org

American Cetacean Society
P.O. Box 1391
San Pedro, CA 90733-1391
(310)548-6279
www.acsonline.org

California Academy of Sciences
55 Concourse Drive
Golden Gate Park
San Francisco, CA 94118
(415)321-8000
www.calacademy.org
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219
(800)Coast-4U
www.coastforyou.org

California Coastkeepers
Alliance
Linda Sheehan
Executive Director
P.O. Box 3156
Fremont, CA 94539
(510) 770-9764
www.cacoastkeeper.org/

California Department of
Conservation
California Geological Survey
801 K Street, MS 12-30
Sacramento, CA 95814
(916)445-1825
www.consrv.ca.gov/cgs

California Department of Fish
and Game
1416 Ninth Street, 12th Floor
Sacramento, CA 95814-5511
(916)445-0411
www.dfg.ca.gov/coned/index.html

California Department of Water
Resources
1416 Ninth Street
Sacramento, CA 95814
(916)653-5791
www.dwr.water.ca.gov

California Integrated Waste
Management Board
Office of Integrated Education
1001 I Street, MS #14A
P.O. Box 4025
Sacramento, CA 95812-4025
(916)341-6000
www.ciwmb.ca.gov/schools
California Native Plant Society
2707 K Street, Suite 1
Sacramento, CA 95816
(916)447-2677
www.cnps.org

California State Parks
1416 Ninth Street
Sacramento, CA 95814
(800)777-0369
www.parks.ca.gov

California State Parks
Foundation
800 College Avenue
P.O. Box 548
Kentfield, CA 94914
(415)258-9975
www.calparks.org

California Regional
Environmental Education
Community (CREEC) Network
www.creec.org/

Keep California Beautiful
3914 Murphy Canyon Road,
Suite A-218
San Diego, CA 92123
(858)505-9936
www.keepcaliforniabeautiful.com

National Marine Sanctuaries:
LiMPETS
NOAA's National Marine
Sanctuaries
735 State Street, Suite 617
Santa Barbara, CA 93101
Phone 805.963.3341

Claire Johnson, Program
Manager, Email
claire.johnson@noaa.gov
<http://limpets.noaa.gov/welcome.html>

California Environmental Organizations and Programs

River of Words
2547 8th Street, Suite 13B
Berkeley, CA 94710
(510)548-7636
www.riverofwords.org

Surfrider Foundation
P.O. Box 6010
San Clemente, CA 92674-6010
(949)492-8170
www.surfrider.org

The Marine Mammal Center
Marin Headlands
1065 Fort Cronkhite
Sausalito, CA 94965
(415)289-7325
www.marinemammalcenter.org

The Ocean Conservancy
1725 De Sales Street, NW, #600
Washington, DC 90036
(202)429-5609
www.oceanconservancy.org

U.S. Geological Survey
Marine and Coastal Issues
345 Middlefield Road, MS 999
Menlo Park, CA 94025
(650)329-5042
<http://walrus.wr.usgs.gov/>

Water Education Foundation
717 K Street, Suite 317
Sacramento, CA 95814
(916)444-6240
www.watereducation.org

NORTH COAST

Friends of the Dunes
P.O. Box 186
Arcata, CA 95518
(707)444-1397
www.friendsofthedunes.org

Mattole Restoration Council
P.O. Box 160
Petrolia, CA 95558
(707)629-3514
www.mattole.org

Mendocino Environmental
Center
106 West Standley Street
Ukiah, CA 95482
(707)468-1660
www.mecgrassroots.org

Northcoast Environmental
Center
575 H Street
Arcata, CA 95521
(707)822-6918
www.necandconews.to

Stewards of the Coast and
Redwoods
P.O. Box 221
Duncan Mills, CA 95430
(707)865-0180
www.stewardsofslavianka.org

SAN FRANCISCO BAY AREA

Aquarium of the Bay
Embarcadero at Beach St.
San Francisco, CA 94133
(888)SEA-DIVE
www.aquariumofthebay.com

The Watershed Project
Richmond Field Station
1327 S. 46th St. #155
Richmond, CA 94804
(510)231-5655
www.thewatershedproject.org

Tiburon Audubon Center
376 Greenwood Beach Rd.
Tiburon, CA 94920
(415)388-2524
www.tiburonaudubon.org

Bay Model Association
2100 Bridgeway
Sausalito, CA 94965
(415)332-1851
www.baymodel.org

City of Berkeley
Shorebird Nature Center
160 University Ave.
Berkeley, CA 94710
(510)644-8623
www.ci.berkeley.ca.us/marina

Community Resources for
Science
1375 Adg St.
Berkeley, CA 94702
(510)645-6433
www.crscience.org

Cordell Bank National Marine
Sanctuary
P.O. Box 159
Olen, CA 94950
(415)663-0314
www.cordellbank.noaa.gov

Coyote Point Museum for
Environmental Education
1651 Coyote Point Dr.
San Mateo, CA 94401
(650)342-7755
www.coyoteptmuseum.org

Crissy Field Center
603 Mason at Halleck
The Presidio
San Francisco, CA 94129
(415)561-7690
www.crissyfield.org

Don Edwards San Francisco
Bay National Wildlife Refuge
P.O. Box 524
Newark, CA 94560
(510)792-0222
www.fws.gov/pacific/desfbay/

East Bay Regional Park District
P.O. Box 5381
Oakland, CA 94605
(510)562-PARK
www.ebparks.org

Environmental Education
Council of Marin
1005 A St. Suite 202
San Rafael, CA 94901
(415)485-4908
www.eecom.net

California Environmental Organizations and Programs

Environmental Volunteers
3921 East Bayshore Rd.
Palo Alto, CA 94303
(650)961-0545
www.evols.org

Farallones Marine Sanctuary
Association
The Presidio
P.O. Box 29386
San Francisco, CA 94129
(415)561-6625
www.farallones.org

Gulf of the Farallones National
Marine Sanctuary
Fort Mason, Bldg. 201
San Francisco, CA 94123
(415)561-6622
www.gfnms.nos.noaa.gov

Headlands Institute
GGNRA, Bldg. 1033
Sausalito, CA 94965
(415)332-5771
www.yni.org/hi

Kids for the Bay
1771 Alcatraz Ave.
Berkeley, CA 94703
(510)985-1602
www.kidsforthebay.org

Lawrence Hall of Science
Marine Activities Resources and
Education (MARE)
UC Berkeley
Berkeley, CA 94720
(510)642-5008
www.lawrencehallofscience.org/MARE/

Literacy for Environmental
Justice
6220 Third St.
San Francisco, CA 94124
(415)508-0575
www.lejyouth.org

Marine Science Institute
500 Discovery Parkway
Redwood City, CA 94063
(650)364-2760
www.sfbaymsi.org

Point Reyes Bird Observatory
4990 Shoreline Highway
Stinson Beach, CA 94970
(415)868-0655
www.prbo.org

Save the Bay
350 Frank H. Ogawa Plaza Suite
900
Oakland, CA 94612
(510)452-9261
www.savesfbay.org

CENTRAL COAST

Camp SEA Lab
100 Campus Center, Bldg. 42
Seaside, CA 93955
(831)582-3681
www.sealabmontereybay.org

Central Coast Salmon
Enhancement
P.O. Box 277
Avila Beach, CA 93424
(805)473-8221
www.centralcoastsalmon.com

Coastal Watershed Council
903 Pacific Ave., Suite 207A
Santa Cruz, CA 95060
(831)426-9012
www.coastal-watershed.org

Dunes Center
1055 Guadalupe St.
Guadalupe, CA 93434
(805)343-2455
www.dunescenter.org

Ecology Action
333 Front St. Suite 103
Santa Cruz, CA 95060
(831)426-5925
www.ecoact.org

Elkhorn Slough National
Estuarine Research Reserve
1700 Elkhorn Rd
Watsonville, CA 95076
(831)728-2822
www.elkornslough.org

Environmental Center of San
Luis Obispo
1204 Nipomo St.
San Luis Obispo, CA 93401
(805)544-1777
www.ecoslo.org

Marine Advanced Technology
Education (MATE) Center
Monterey Peninsula College
980 Fremont St.
Monterey, CA 93940
(831)645-1393
www.marinetech.org

Monterey Bay Aquarium
886 Cannery Row
Monterey, CA 93940
(831)648-4800
www.montereybayaquarium.org

Monterey Bay National Marine
Sanctuary
299 Foam St.
Monterey, CA 93940
(831)647-4201
www.mbnms.nos.noaa.gov

Morro Bay National Estuary
Program
601 Embarcadero, Ste 11
Morro Bay, CA 93442
(805)772-3834
www.mbnep.org

O'Neill Sea Odyssey
2222 East Cliff Drive #6B
Santa Cruz, CA 95062
(831)465-9390
www.oneillseaodyssey.org

Pacific Cetacean Group
UC MBEST CENTER
3239 Imjin Rd. #122
Marina, CA 93933
(831)582-1030
www.pacificcetaceangroup.org

Save Our Shores
345 Lake Ave. Suite A
Santa Cruz, CA 95062
(831)462-5660
www.saveourshores.org

California Environmental Organizations and Programs

Seymour Marine Discovery Center
Long Marine Lab
100 Shaffer Rd.
Santa Cruz, CA 95060
(831)459-3800
seymourcenter.ucsc.edu/

Watershed Institute
CSU Monterey Bay
100 Campus Center
Seaside, CA 93955
(831)582-3689
watershed.csumb.edu/

SOUTHERN CALIFORNIA

Aquarium of the Pacific
100 Aquarium Way
Long Beach, CA 90802
(562)951-1603
www.aquariumofpacific.org
Aquatic Adventures Science Education Foundation
1010 Santa Clara
San Diego, CA 92109
(858)488-3849
www.aquaticadventures.org

Bolsa Chica Conservancy
3842 Warner Ave.
Huntington Beach, CA 92469
(714)846-1114
www.bolsachica.org

Boojum Institute for Experiential Education
P.O. Box 711
Pioneertown, CA 92268
Ph. Fax (760) 228-1994
www.boojum.org

Cabrillo Marine Aquarium
3720 Stephen White Dr.
San Pedro, CA 90731
(310)548-7562
www.cabrilloaq.org
Channel Islands National Marine Sanctuary
3600 S. Harbor Blvd. Suite 217
Oxnard, CA 93035
(805)382-6151
www.cinms.nos.noaa.gov

Chula Vista Nature Center
1000 Gunpowder Point Dr.
Chula Vista, CA 91910
(619)409-5900
www.chulavistanaturecenter.org

Community Environmental Council
930 Miramonte Dr.
Santa Barbara, CA 93109
(805)963-0583
www.communityenvironmentalcouncil.org

COSEE-West
phammer@ucla.edu
jdlemus@usc.edu
www.usc.edu/org/cosee-west

Crystal Cove State Park
8471 North Coast Highway
Laguna Beach, CA 92651
(949)494-3539 (Main)
(949)497-7647 (Interpretive)
www.crystalcovestatepark.com

Earth Resource Foundation
230 E. 17th St. #208
Costa Mesa, CA 92627
(949)645-5163
www.earthresource.org

El Dorado Nature Center
7750 East Spring St.
Long Beach, CA 90815
(562)570-1471
www.ohwy.com/ca/e/eldonace.htm

Heal the Bay
3220 Nebraska Ave.
Santa Monica, CA 90404
(800)HEAL-BAY
www.healthebay.org/

Heal the Ocean
P.O. Box 90106
Santa Barbara, CA 93190
(805)965-7570
www.healtheocean.org/

I Love A Clean San Diego
4891 Pacific Highway Suite 115
San Diego, CA 92110
(619)291-0103
www.ilacsd.org

Malibu Foundation for Environmental Education
1471 S. Bedford St. #3
Los Angeles, CA 90035
(310)652-4324
www.malibufoundation.org

Natural History Museum of Los Angeles County
900 Exposition Blvd.
Los Angeles, CA 90007
(213)763-3348
www.nhm.org

Newport Bay Naturalists and Friends
600 Shellmaker
Newport Beach, CA 92660
(949)640-6746
www.newportbay.org

Ocean Institute
24200 Dana Point Harbor Dr.
Dana Point, CA 92629
(949)496-2274
www.ocean-institute.org

Orange County Coastkeeper
441 Old Newport Blvd. Suite 103
Newport Beach, CA 92663
(949)723-5424
www.coastkeeper.org

Resource Conservation District of the Santa Monica Mtns.
122 N. Topanga CA 90290
310-455-1030 ext. 103
www.rcdsmm.org/

San Diego Bay Keeper
2924 Emerson St. Ste 220
San Diego, CA 92106
(619)758-7743
www.sdbaykeeper.org

California Environmental Organizations and Programs

San Dieguito River Park
18372 Sycamore Creek Rd.
Escondido, CA 92025
(858)674-2270
www.sdrp.org

Santa Catalina Island
Conservancy
P.O. Box 2739
Avalon, CA 90704
(310)510-2595
www.catalinaconservancy.org

Santa Monica Bay Keeper
P.O. Box 10096
Marina del Rey, CA 90295
(310)305-9645
www.smbaykeeper.org

Santa Monica Pier Aquarium
1600 Ocean Front Walk
Santa Monica, CA 90401
(310)393-6149
www.healthebay.org/smpa/

University of Southern
California
Sea Grant Program
University Park, 209
Los Angeles, CA 90089-0373
(213)740-1961
www.usc.edu/org/seagrant/

University of Southern
California Wrigley Institute for
Environmental Studies
University Park, AHF 232
Los Angeles, CA 90089-0371
(213) 740-7680
e-mail: wies@wrigley.usc.edu
wrigley.usc.edu



Appendix B. Wetlands of California*

* from Waves, Wetlands, and Watersheds:
California Coastal Commission Science Activity Guide

Wetlands are among California's most diverse habitats. They support a food web that includes large mammals and predatory birds, provide habitat for diverse terrestrial and aquatic plants and animals, protect shorelines from erosion, and control sediment and naturally treat toxic substances that wash down from stream and rivers. Wetlands are also valuable to humans for recreation, research, education, harvestable plants, and historical significance. This appendix contains a partial list of wetlands throughout California. Visit a wetland near you!

NORTH COAST

Big River State Park
This brand new park includes a 50 mile stretch of the river and its tributaries, and more than 1,500 acres of coastal wetlands. The 8.3-mile estuary is the longest undeveloped estuary in northern California.
(707)937-5804
www.mendocinolandtrust.org
www.parks.ca.gov

Humboldt Bay National Wildlife Refuge
This refuge exists primarily to protect and enhance wetland habitats for migratory waterbirds using the Bay. In the winter, it is not unusual for over 100,000 birds to use the Bay as a feeding or resting site. Humboldt Bay Refuge is adjacent to Highway 101, near the cities of Arcata and Eureka.
<http://pacific.fws.gov/humboldtbay>

MacKerricher State Park
This park, near the town of Fort Bragg, encompasses nearly 2,300 acres, of which 454 offshore acres are designated as an underwater park. The MacKerricher Visitor Center contains interpretive displays on terrestrial and ocean ecology.
www.mcn.org/1/macpark/macpark.htm
www.parks.ca.gov

SAN FRANCISCO BAY AREA

Bolinas Lagoon Preserve
Bolinas Lagoon Preserve contains 1,100 acres of tidal estuary supporting a rich biodiversity, with several rare, threatened and endangered species. It is located along the San Andreas Fault, 15 miles northwest of the Golden Gate Bridge on Hwy 1.
www.bolinaslagoon.org

Don Edwards San Francisco Bay National Wildlife Refuge
The Refuge spans 23,000 acres of open bay, salt pond, salt marsh, mudflat, upland and vernal pool habitats located throughout south San Francisco Bay. A Visitor Center is near the east end of Dumbarton Bridge and the Environmental Education Center is on Zanker Road in Alviso.
<http://desfbay.fws.gov>

Palo Alto Baylands
This 2,100 acre preserve has a large resident population of birds, and is a major migratory stopover on the Pacific Flyway. The preserve, which includes an interpretive center, is north of Highway 101, and can be reached from the southeast from Shoreline at Mountain View Park.
www.city.palo-alto.ca.us/ross/naturepreserve/baylands.html

Wetlands of California

CENTRAL VALLEY

Cache Creek Nature Preserve
This preserve is a 130 acre property in the lower Cache Creek corridor. Reservations are needed prior to visiting the preserve, which offers tours and activities for all ages. It is located west of Woodland, and north of Winters and Davis.
www.cachecreekconservancy.org

Cosumnes River Preserve
The Cosumnes floodplain is home to migratory waterfowl, greater sandhill cranes, rare reptiles and mammals such as the giant garter snake and the river otter. Teachers are required to attend a teacher workshop prior to scheduling a field trip to the Visitor Center. The preserve is about midway between Stockton and Sacramento.
www.cosumnes.org

San Luis National Wildlife Refuge Complex
This 26,609 acre refuge is a mixture of seasonal and permanent wetlands, riparian habitat, and native grasslands, alkali sinks and vernal pools. The Refuge, located in the San Joaquin Valley, hosts interpretive wildlife observation programs.
<http://sanluis.fws.gov/map.htm>

Vic Fazio Yolo Wildlife Area
This wildlife area contains 3,700 acres of restored wetlands and other associated habitats. It is home to the educational program, "Discover the Flyway." The Wildlife Area is located on Interstate 80 at the Yolo Causeway between Davis and Sacramento.
www.yolobasin.org

CENTRAL COAST

Elkhorn Slough National Estuarine Research Reserve
This 1,400 acre reserve hosts many programs that promote education, research and conservation of the slough. There is a visitor center and five miles of trails through oak woodlands, tidal creeks and freshwater marshes.
www.elkhornslough.org

Morro Bay Estuary
Morro Bay, a small estuary of 2,300 acres, is fed by Chorro and Los Osos Creeks and is protected from the Pacific Ocean by a lengthy sand spit. The Estuary has a Visitor Center and a Volunteer Center.
www.mbnep.org

Pescadero Marsh Natural Preserve
This preserve is a popular spot for bird watchers and other naturalists. It is a refuge for blue heron, kites, deer, raccoons, foxes and skunks. The Preserve is located 14.5 miles south of Half Moon Bay on Highway 1.
www.parks.ca.gov

Watsonville Sloughs
The Watsonville sloughs cover about 800 acres adjacent to the city of Watsonville. From Highway 1, most of the sloughs are hidden. Access points are not marked on most maps, which makes them difficult to find. Most are in private ownership, but a few roads cross the many fingers of the sloughs.
www.watsonvillewetlandswatch.org

LOS ANGELES AND ORANGE COUNTIES

Ballona Lagoon Marine Preserve
This 16.3 acre tidal wetland is a nursery and habitat for marine and mudflat creatures and a refuge for migrating birds. The lagoon is located in the City of Los Angeles on the Silver Strand Peninsula, adjacent to the Marina del Rey harbor.
www.blmp.org

Bolsa Chica Wetlands
The Bolsa Chica Ecological Reserve extends along the east side of Pacific Coast Highway in the city of Huntington Beach. The Interpretive Center is located at the southeast corner of Warner Avenue and Pacific Coast Highway. The Center organizes educational and volunteer programs.
www.amigosdebolsachica.org

Upper Newport Bay
This estuary in Newport Beach is home to nearly 200 species of birds, as well as numerous species of mammals, fish and native plants. A variety of educational programs are available.
www.newportbay.org
www.coastal.ca.gov/publiced/UNBweb/restore.html

Wetlands of California

SAN DIEGO COUNTY

Batiquitos Lagoon

This coastal wetland is 30 miles north of San Diego between the cities of Carlsbad and Encinitas. The Lagoon encompasses 600 acres with a visitor center and hiking trail along the north shore.

www.batiquitosfoundation.org

San Elijo Lagoon Ecological Preserve

This preserve encompasses 900 acres of coastal strand, salt marsh, freshwater marsh, riparian scrub, coastal sage scrub, and mixed chaparral, with five miles of hiking trails open to the public.

The Nature Center is located at 2710 Manchester Avenue in Encinitas.

www.sanelijo.org

Sweetwater Marsh National Wildlife Refuge

The 316 acre Sweetwater March is located in San Diego Bay approximately seven miles south of downtown San Diego. The Chula Vista Nature Center provides interpretive and interactive exhibits.

www.chulavistanaturecenter.org

Tijuana River National Estuary Research Reserve

The reserve, which includes a visitor center, is located near Imperial Beach on the Mexican border. It encompasses 2,500 acres of beach, dune, mudflat, saltmarsh, riparian, coastal sage and upland habitats.

www.nerrs.noaa.gov/TijuanaRiver