



**THE CALIFORNIA COASTAL COMMISSION'S
PUBLIC EDUCATION PROGRAM**

2017 ANNUAL REPORT



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Cover art:

My Big Sur
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Grade 6, San Francisco

Introduction

The California Coastal Commission is dedicated to protecting, restoring and enhancing California's coastal and marine resources through implementation of the California Coastal Act. The Commission regulates land development; participates in a land-use planning program with coastal cities, counties, and ports; promotes public access to the shoreline; and carries out a public education program. This report briefly describes the activities of the Commission's Public Education (PE) Program for the calendar year 2017.

The Commission's PE Program supports the agency's mission by helping to build a knowledgeable and engaged constituency that understands, supports, and contributes to the protection, restoration, and enhancement of the coast.

As the California Legislature declared in the California Coastal Act, "an educated and informed citizenry is essential to the well-being of a participatory democracy and is necessary to protect California's finite natural resources, including the quality of its environment" (Section 30012 (a)). The Coastal Act directs the Commission to "carry out a public education program that includes outreach efforts to schools, youth organizations, and the general public for the purpose of promoting understanding of, fostering a sense of individual responsibility for, and encouraging public initiatives and participation in programs for, the conservation and wise use of coastal and ocean resources" (Pub.Res.Code, Section 30012(b)(1)).

The Commission's PE Program is dedicated to providing Californians of all ages, ethnicities, and income levels, whether they live along the coast or inland, in urban or rural environments, the opportunity to learn about and connect with California's remarkable coastline. Our program activities provide students and others with firsthand experience of the coast, cultivate ecological understanding, and inspire stewardship. We involve the general public, schools, scouts, families, clubs, civic groups, and businesses in coastal stewardship activities.

The Commission also supports other organizations in providing education and coastal stewardship

opportunities. To this end, the Commission staff provides curricula and other educational materials, grant funding, training, and technical support to a wide range of organizations and individual educators. We seek to promote ocean literacy, and an understanding of important issues influencing the health of the coast such as marine debris, ocean pollution, and habitat restoration.

The main funding source for the Commission's education programs is the Whale Tail® License Plate. Corporate contributions support the Coastal Cleanup Day Program through our partner, the California State Parks Foundation. And since 2014, the Protect Our Coast and Oceans tax check-off box has raised additional funds for Whale Tail® grants.



Coastal Cleanup Day

Following Oregon's lead and beach cleanup efforts on California's north coast, California organized its first Coastal Cleanup Day in 1985. Since then, the idea for the event has spread throughout the nation and internationally. California is now part of the International Coastal Cleanup, organized by Ocean Conservancy, with participation by 45 states and over 100 countries.



The event is the Commission's largest public event, was recognized as the world's largest beach cleanup in 1993, and is the state's largest single-day volunteer event. In 2017, 63,707 volunteers took part at one of 1,006 cleanup sites around the state in 55 of California's 58 counties, the second year in a row that the cleanup has achieved its largest geographic reach.

In addition to its strong support in coastal counties, the Cleanup Program recruits participants from inland areas to clean creeks, rivers, and lakes. These volunteers illustrate one of the event's messages – that we are all connected to the coast and ocean by our rivers, streams, and storm drains. In 2017, 20,933 people, about 1/3 of the total volunteers, cleaned inland rivers and waterways, removing 486,996 pounds of debris.

Combined with the amount collected in the state's coastal counties, Coastal Cleanup Day volunteers removed a total of over 800,000 pounds of debris from the state's coast and inland shorelines. More than 40,000 pounds of this debris were recycled.

Reviewing the history of the Coastal Cleanup Day Program helps highlight the cumulative benefit of this program to the health of our coast and ocean. Since the program's inception in 1985, over 1.5 million volunteers have helped remove more than 24 million pounds of debris from California's coast, ocean, and inland shorelines.

Event Messages Reach Millions

In addition to educating participants, the event messages reach a large and diverse audience through extensive television, radio, newspaper, and web coverage, as well as social media. This was made possible in part through a partnership with San Francisco advertising agency Argonaut, which worked pro bono to develop the 2017 Coastal Cleanup Day artwork. Posters (one example is shown here), postcards, and bus back banners. T-shirts with a customized flat graphic design were printed to illustrate the impact trash has on coastal and marine life no matter where it may have originally been lost to the environment. The campaign messaging was informed by our annual survey of volunteers, which consistently rates concern over impacts to wildlife as the top reason volunteers participate in the cleanup.

The event was extensively covered by local TV news crews in many locations. Millions of television viewers are reached by the image of thousands of volunteers spending the day cleaning their beaches, and moved by interviews with event organizers who help drive the pollution prevention message home. Newspaper readers and radio listeners also learned about the impact of the event, which was covered in over 200 newspaper and magazine articles, along with radio pieces and thousands of social media posts that helped bring volunteers out and educate them about the results.



Corporate Partners in CCD

The Coastal Cleanup Day Program has strong support from corporate partners, which enhance event outreach efforts. A key, ongoing partner is CG Roxanne, producers of Crystal Geysers Natural Alpine Spring Water. In addition to financial support, CG Roxanne provided free water, primarily in large, gallon-size containers, to 30 regional coordinators, helping local coordinators and volunteers immensely.

The Program received continuing support from Oracle, Union Bank, the Whale Tail® License Plate, along with first-time support from Amcor, and an array of in-kind and media support from partners around the state.

BYO for CCD

The Commission launched a program in 2010 that has expanded each year since, known as “BYO for CCD.” In recognition of the need to reduce the amount of waste created by the event itself, the Coastal Cleanup Day Program asks volunteers to bring their own reusable cleanup supplies from home, rather than using the single-use disposable plastic items available at cleanup locations. Whenever possible, local organizers provide reusable supplies like buckets and gardening gloves for volunteer use.

Commission staff estimates that over half of all cleanup participants brought at least one reusable item from home or had access to reusable items at their cleanup

location in 2017. And as a result of the success of the BYO for CCD initiative, the Commission was able to order 200,000 fewer trash bags over the past four years than it otherwise would have. The initiative helps reduce the environmental footprint of the cleanup while educating volunteers about simple lifestyle changes that cumulatively can have enormous, positive benefits for our coastal and marine environments.

Who are our Volunteers?

With assistance from local coordinators, the Commission conducts an annual survey of Coastal Cleanup Day participants to gain information about volunteers and their cleanup experience (e.g. how they heard about the event, whether participating in the event raised their awareness, and how they expect the experience to affect future behavior regarding the environment). The survey is also a way for volunteers to provide feedback and suggestions.



In 2017, 313 volunteers took the on-line survey. Since it was not a random sample, it is important to consider these caveats: not everyone heard about the survey (depending on local site coordinator communication), and not everyone is inclined to take an online survey. That said, some general trends can be discerned from the survey results. For example, almost all survey respondents (90%) report that participating in the event motivated them to take additional actions to protect the environment, such as educating others, picking up street and beach litter, and reducing use of single-use disposable items.

In addition, the survey showed that participation in the cleanup was educational. 89.7% of respondents

considered themselves either “knowledgeable” or “very knowledgeable” about the causes of marine debris after the event, as opposed to 72% before the event, an almost 18% increase. Looking at survey responses over a period of years shows a steady increase in the baseline knowledge of participants regarding the causes of marine debris.)



The Commission provides Beach Managers with promotional materials, garbage and recycling bags, latex gloves, data cards, and pencils. In addition, the Commission maintains a free video loan library, and provides curricula, activities, posters, and other materials to help educate Adopt-A-Beach groups about the importance of keeping our water clean.

Adopt-A-Beach®

Over the past more than 20 years, tens of thousands of California schools, civic groups, businesses, scout troops, families and friends have adopted beaches throughout California. In 2017 alone, over 72,000 people participated in an Adopt-A-Beach Cleanup, bringing the total of 2017 beach cleanup volunteers to well over 135,000. The Adopt-A-Beach Program offers groups an easy way to care for the coast. Volunteers pledge to clean their beach three times over the course of one year. School groups can fulfill the obligation with one cleanup.

All 15 coastal counties, plus Alameda and Contra Costa Counties, participate in the program. The Commission coordinates 49 Beach Managers from 36 Adopt-A-Beach partner organizations who run the program locally (see Appendix A for organization list). Beach Managers give participants cleanup supplies and educational materials, provide instruction, arrange for trash pickup, and sometimes deliver supplemental educational programs and public recognition. Some hold regular “drop-in” cleanups that anyone may attend.

Coastweeks

Coastweeks is a national celebration of our coastal resources. As the California coordinator for Coastweeks, the Commission maintains an on-line calendar and publicizes Coastweeks events. For three weeks (kicked off by Coastal Cleanup Day on the third Saturday in September) the public is encouraged to take part in activities that celebrate our coast and water resources, such as volunteer restoration days, beach hikes, ocean festivals, and scientific lectures. In 2017, our on-line calendar included 400 events.

Check-off Box for the Protect Our Coast and Oceans Fund



Beginning in 2014, California taxpayers had the opportunity to

check a box and make a donation to the Protect Our Coast and Oceans Fund in the voluntary contributions section of the state tax return. These donations support marine and coastal education and stewardship, through the Whale Tail® Grants Program.

In 2017, the fund received \$204,558 in donations from 14,803 individuals. This amount is much lower than would be expected based on past years' contributions (35% less than in 2016). The reason is that TurboTax, a popular online tax preparation service, made changes to its software program that made it much less likely a taxpayer would see the option of donating to the voluntary contribution funds. As a result, all of the Voluntary Contribution Funds on the State tax form saw a sharp decrease in donations.

For those funds, such as the Protect Our coast and Oceans Fund, that have a minimum contributions threshold they must meet to remain on the tax form, the situation put them in jeopardy of not meeting the threshold. In response, the California Legislature passed AB111, which made the minimum contributions threshold zero dollars for donations made during 2017 (2016 tax year).. In addition, the Legislature passed SB503, which extends the Protect Our Coast and Oceans fund through January 1, 2025.

The 2017 “Check the Coast” marketing campaign featured well-known Californians from various sectors, such as Luna Blaise (actress, singer), Ron Finley (ecolutionary), William McNulty and his dog Okie, (US Marine Veteran); Alysia Reiner (actor, activist); Nik Sharma (food writer, cook, photographer); and Tiffany Shlain (filmmaker, author). Photography was donated by Mark Leibowitz and Dan Escobar.

The campaign ran between February and May of 2017 and included “out of home” and online components. Check the Coast ads were seen in San Francisco BART stations and trains, as well as on buses in Marin, San Francisco, and Santa Monica. On-line ads were geo-targeted and selected based on performance in past campaigns. Ads ran on Surflin.com, The Inertia, OC Weekly, LA Weekly, Google AdWords, Facebook, Instagram, and Twitter. www.checkthecoast.org

In addition to staff posting extensively about the campaign on PE program’s social media platforms, many of the well-known Californian’s who were featured used their own platforms to share images and champion the coast and ocean and encourage donations to the fund. In addition, numerous partner organizations posted on social media on behalf of the campaign, which greatly extended its reach.



Whale Tail® License Plate

2017 marked the 20th anniversary of the Whale Tail® License Plate, which supports coastal and marine education throughout California, as well as programs of the state's Environmental License Plate Fund (ELPF).

Drivers purchased 5,899 Whale Tail Plates in 2017, and total revenue for the year (sales and renewal fees) was over \$5 million. Of this total, \$1.3 million went to the California Beach and Shoreline Enhancement Account (CBCEA), which funds the PE Program, and the remaining \$3.7 million to the ELPF, which funds a range of environmental conservation projects.

Each year, the legislature appropriates funds from the CBCEA to the Commission to carry out Coastal Cleanup Day, Adopt-A-Beach, and other coastal and marine education programs, including Whale Tail® grants to schools, nonprofits, and local agencies. The CBCEA also funds projects of the State Coastal Conservancy.



In total, since 1997, the Whale Tail License Plate has contributed \$98 million to environmental programs in California, including \$28 to the CBCEA and \$70 to the ELPF.

Over the 20 years of the Whale Tail Plate's history, sales and renewals have provided a steady source of income to these programs. However, in the past few years, annual plate sales have declined, reducing the overall revenue available. A number of factors likely contributed to waning sales, including the length of time the plate has been on the market and competition from other specialty license plates (for example, the

California "Legacy" plate is extremely popular, with over 325,000 plates purchased in the 2 ½ years since its release).

Staff is working to improve sales through marketing and publicity. The 20th anniversary was an opportunity to celebrate the Whale Tail Plate and publicize its accomplishments through media stories. Staff worked with Heal the Bay and a public relations consultant in hosting a 20th anniversary celebration as part of the Nothin' But Sand Beach and Creek Cleanup in Playa Del Rey on October 21, 2017. The event attracted over 700 participants, who cleaned the beach and were treated to Whale Tail cookies, a raffle, and other prizes. Numerous newspapers, radio shows, and television morning programs covered the Whale Tail License Plate anniversary, in the LA media market and in both English and Spanish media outlets.

In addition, the Commission continued the "Do the Whale Tail" campaign in the summer of 2017, which includes a Public Service Announcement in the form of a "tongue in cheek" instructional dance video featuring actor Jeremy Sisto. The PSA was run in select movie theaters in coastal areas of Orange County, Los Angeles County, San Luis Obispo, Santa Cruz, and San Francisco, during July 2017. Advertisements ran on the Santa Monica Big Blue Bus and Golden Gate Transit in the Bay Area, and on-line ads ran on Surfline, The Inertia, Google, Twitter, Facebook, and Instagram. In addition, PE social media platforms helped to spread the word as did partner organizations.



Whale Tail® Grants

The Whale Tail® Grants Program awards funds to schools, nonprofit organizations, and public agencies for projects that teach California's children and the general public to value and take action to improve the health of the state's marine and coastal environments. The grants support fostering environmental stewardship and cultivating knowledge of, and enthusiasm for, marine science, with an emphasis on reaching communities that are poorly served in terms of coastal and marine education.

Funding for these grants comes from the sales and renewals of the Whale Tail® License Plate and from voluntary contributions to the Protect Our Coast and Oceans Fund on the state tax return form.

The funding is provided for the following three categories: 1) Adopt-A-Beach programs; 2) Youth programs; 3) Programs for the general public. There is also a special subcategory for projects addressing climate change, sea level rise, or ocean acidification.

The need for Whale Tail® Grants consistently exceeds the available funds. In Fiscal Year 2016/2017, for its competitive grants program, the Commission received 102 grant applications for a total of \$3,045,664 and awarded 27 grants totaling \$522,220.

In addition, the Commission awarded fifteen targeted grants totaling \$345,780. Since 1998, the program has awarded \$12.1 million in grants to a wide range of organizations (see Appendix B for a table showing recently awarded grants).

Examples of projects funded in 2017 included: an ocean literacy outreach program using tidepool animals in Orange County; stormwater runoff education and prevention in Eureka; fishermen teaching children about their jobs, the ocean, and the importance of sustainable seafood in Monterey; outreach about climate change resilience in Long Beach; and coastal recreation and stewardship outings for teens in southern San Diego County.



Boating Clean and Green



The Boating Clean and Green Program (BCGP), which began in 1997, promotes environmentally sound boating through education and by working with marinas and local governments to increase availability of environmental services for boaters. The Commission implements the program jointly with the California State Parks Division of Boating and Waterways.

Through the Dockwalker Program, staff provides volunteers with clean boating kits, training, and tools to conduct face-to-face boater education and distribute the kits. In 2017, the staff conducted 13 statewide Dockwalker volunteer workshops, training more than 200 new volunteers. These volunteers distributed 8,100 boater kits to the public.



Boater Kit

In addition, staff directly connected with over 1,000 boaters through boat shows and boating events, and by conducting six clean boating seminars.

With support from the BoatUS Foundation, the BCGP has installed 243 monofilament fishing line recycling stations throughout the state since 2009. To date, 1,480 pounds of fishing line have been collected and recycled. Stretched out, this line would stretch from San Francisco, California to Westfield, Massachusetts!



In partnership with the Greater Farallones and Monterey Bay National Marine Sanctuaries, staff expanded its onboard fishing line recycling program. This program began as a pilot in 2014, in partnership with Santa Barbara Harbor and Stardust Sportsfishing. To date, more than 30 pounds of fishing line have been collected onboard the Stardust charter boat. Based on this pilot project, staff and partners from the National Marine Sanctuary program expanded the program to the Bay Area and beyond. To date, the program has worked with 14 charter companies, installed 18 onboard fishing line collection containers, and 61 pounds of fishing line have been collected and recycled by the On-Board Fishing Line Recycling Program.



Staff and partner organizations continued to produce the Changing Tide, a quarterly publication of the three chapters of the California Clean Boating Network – a forum of members from the boating industry, government agencies, and environmental groups. The newsletter focuses on trends in clean boating practices and environmental services for boaters. Three issues were developed and distributed in 2017.

In 2017, staff, Office of Spill Prevention and Response, and California Governor's Office of Emergency Services conducted a workshop for boating facilities in Marina Del Rey to introduce the *Marinas and Yacht Clubs Spill Response Communication Packet*, which was developed by a working group led by staff. Since 2014 more than 180 facility operators have attended BCGP spill response workshops.

In order to increase awareness about the impact of aquatic invasive species (AIS) and prevent their spread, staff and partner organizations offered three workshops in Discovery Bay, Stockton, and Benicia, attended by 61 people. Participants learned how to prevent the spread of AIS by inspecting and cleaning equipment and watercraft. The workshops were co-hosted by California Department of Fish and Wildlife, U.S. Fish and Wildlife Services, the Smithsonian Environmental Research Center, and UC-Davis Romberg Tiburon Center.

Boater involvement increased this year, with twice as many boating facilities and almost triple the number of volunteers participating in Coastal Cleanup Day increased. Sixty-four boating facilities participated, involving 1,966 volunteers, who cleaned 90.5 miles and collected 26,375 pounds of trash and recyclables on land and 258 using kayaks, canoes, and dinghies.



In 2016, Staff launched an online Clean Boating Quiz to educate boaters in the San Joaquin Delta about clean boating practices. The success of the pilot quiz spurred an eight-week statewide campaign from June 26th to August 20th, 2017.

The goal of this online clean boating quiz is to increase awareness among California boaters of the importance of implementing clean boating practices related to oil, fuel, hazardous waste, sewage and marine debris and regulations associated with these potential sources of boat pollution. In addition, the program wanted to reach out to boaters who don't attend boat shows and boating events, or those who boat in areas not yet served by Dockwalkers.

Children's Art & Poetry

Open annually to California students in kindergarten through 12th grade, this contest's goal is to encourage youth to reflect on the beauty and spirit of California's beaches and ocean, and inspire a greater sense of stewardship for these natural places. Every year, judges select five winners each in art and poetry, and around 40 honorable mentions. Since 2003, students from all over California have submitted 31,304 entries to the contest. The total number of entries in 2017 was 2,793.

Each year's winners and honorable mentions are shown in a traveling exhibit at venues up and down the coast. The 2017 contest exhibit locations were Point Reyes National Seashore's Bear Valley Visitor Center in Marin County, the Ford House Museum in Mendocino, Channel Islands National Park Visitor Center in Ventura, and the Seymour Center in Santa Cruz. Selections from past contests were displayed in front of the Governor's office at the State Capitol in Sacramento and at the San Leandro Main Library. The winning poetry was highlighted in the May issue of Chapman University's *TAB – Journal of poetry and Poetics*. See the Coastal Art & Poetry Contest winners and honorable mentions at www.coastal.ca.gov/publiced/poster/poster.html.



Crystal Smith, 6th Grade, La Crescenta



Rohan Kanchana, Kindergarten, Fremont



Claire Zhang, 11th Grade, Irvine



Jennifer Shi, 8th Grade, Los Altos

Kids' Ocean Day Beach Cleanup and School Assemblies

Since 1993, the Commission has worked with nonprofit partners to conduct the Kids' Ocean Day Beach Cleanup and School Assembly Program. The assembly presentation teaches children about marine life, the ocean, recycling, and how to prevent ocean pollution. The students are then given the opportunity to experience the beach firsthand and take positive action by participating in a beach cleanup with other schools. This program focuses on underserved schools and provides grants to assist classes with the costs of the beach trip.

In 2017, Kids' Cleanups were held in May and early June leading up to World Oceans Day (June 8th). Approximately 8,000 students participated at six sites (and even more attended a school assembly): South Mission Beach in San Diego (750), Huntington State Beach in Orange County (1,300), Dockweiler State Beach in Los Angeles County (4,500), Ocean Beach in San Francisco (550), Humboldt Bay (900), and Municipal Beach in Monterey (130 students from Fresno).

In most locations, after the cleanup, the students formed giant images and messages in the sand that were photographed from the air. In 2017 this aerial art featured a "Come Together" message. The following photos show students sitting in formation in Huntington Beach, San Diego, and Humboldt County.

Photos of all the aerial images can be viewed at www.oceanday.net



Curriculum Resources

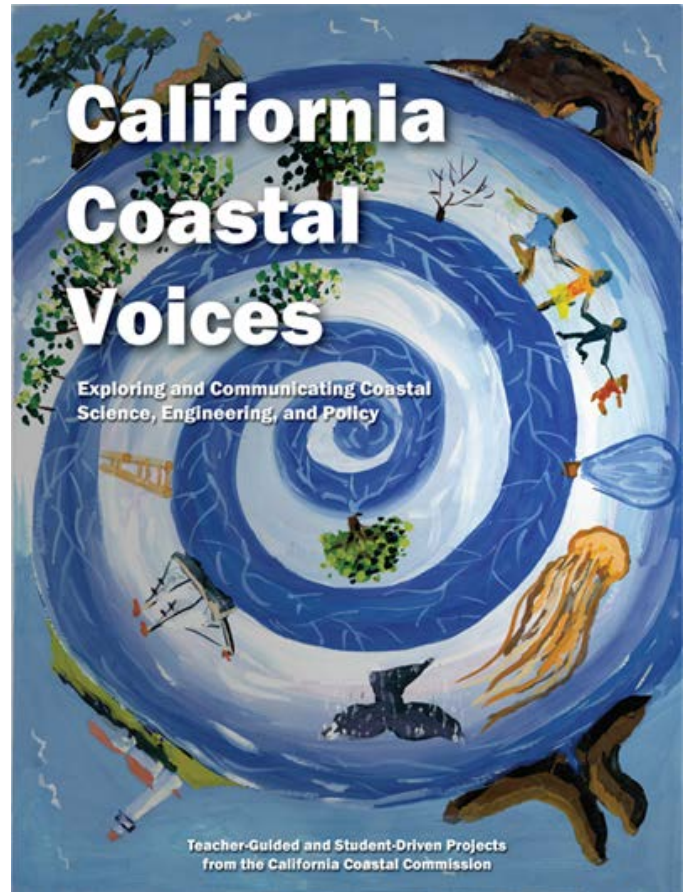
The Commission supports teachers in educating students about California's coast and ocean through free resources in print and online, teacher training workshops, and other programs. The Commission's webpages specifically for teachers received more than 146,000 pageviews in 2017.

In 2017, staff launched *California Coastal Voices*, a curriculum for middle and high school teachers, focusing on coastal science, policy, and management in the context of issues facing the California coast. The project-based learning units are aligned to the Next Generation Science Standards and Common Core State Standards and encourage students to get involved in issues of importance to their community. The six-unit book is available as a PDF along with associated web pages containing extensive online resources such as slide shows, data sets, and videos. Teacher workshops on *California Coastal Voices* have been presented in Sacramento, Palm Springs, Ventura, Hayward, Seaside, Newport Beach, and San Diego.

Waves, Wetlands, and Watersheds is a science activity guide for teachers that addresses topics such as endangered species, marine debris, coastal geology, water use, and water quality. This popular guide was created for third through eighth grades. The book is available free to California educators, both online and in hard copy, with student handouts in Spanish if needed. Since first published, 17,212 hard copies of the book have been distributed (including 5,000 printed and distributed by the City of Los Angeles). Teacher workshops highlighting *Waves, Wetlands, and Watersheds* were presented in 2017 by Commission staff in Richmond and Santa Rosa.

The Schoolyard Cleanup Program provides support to teachers and school groups to do cleanups on their school grounds. Schools unable to take a field trip to the beach or river for Coastal Cleanup Day or an Adopt-A-Beach event (or those who want to expand their efforts) are encouraged to do the important work of preventing litter at the source. Teachers sign up for the program on the Commission's website, which includes related lessons and teacher resources, detailed cleanup instructions, and post-cleanup analysis guidance. The

activities of planning and carrying out the cleanup, collecting and analyzing the data, and communicating and acting on the results are directly aligned to the Next Generation Science Standards and support Common Core State Standards as well. Teacher workshops on the Schoolyard Cleanup Program were presented during 2017 in Santa Rosa and in Sacramento at the California Science Teachers' Association conference. Since the program's launch in fall 2014, teachers have reported 10,137 students taking part.



Ocean and Coastal Photography Contest

The Commission held its annual online contest featuring imagery of the California's scenic coast and ocean, people at the California coast, and California ocean and coastal wildlife.

Fairmont Hotels & Resorts of California donated overnight stays at luxury hotels for the prize winners, which included first through third place winners selected by a panel of expert judges, and a "Viewers' Choice" winner based on online voting. 2017's winning photographs, along with 11 honorable mentions, were selected from 600 entries, and are featured on the contest website, mycoastalphoto.com.

The Commission has a traveling exhibit of a selection of winning photographs from over the years. In 2017 the collection was displayed at the State Capitol Building, Sol Treasures Arts and Cultural Enrichment Center in King City, and public libraries in Stockton, San Leandro, and Petaluma.





Community-Based Restoration and Education Program

The Commission staff continued its work on the Community-Based Restoration and Education Program (CBREP) at Upper Newport Bay, begun in 2001. To date, the program has engaged over 24,800 volunteers, who together have restored more than 15 acres of coastal salt marsh, riparian and coastal sage scrub habitats. Volunteers have planted over 26,600 native plants (the vast majority of which were propagated in an on-site native plant nursery) and removed over 51 tons of invasive plant material (not including material left on site).

2017 programming worked on maintaining and expanding current restoration sites. Volunteers who attended restoration events represented schools, community groups, and corporations through such varied groups as Chapman University, Saddleback College, UC Irvine, Newport Bay Conservancy, Master Gardeners, First Church of Christ, Army Corps of Engineers, Corona del Mar High School, and the Girl Scouts.



Staff continued to recruit and train college interns, who act as leaders for community habitat restoration events.

Students from diverse backgrounds receive training in volunteer event management, environmental education, and ecological restoration techniques. In 2017, CBREP mentored 15 interns from UC Irvine Center for Environmental Biology, Chapman University, and Saddleback College. The recruitment and training of these student leaders increases the program's capacity to act as a resource for engaging the community with their local environment and ways they can protect and restore it. The students receive real world experience as environmental leaders in their community.



Program staff continues to monitor and report on the last five years of data collected on the current active work site, called Newport Valley. Annual reports share details about the successes and challenges of this restoration work, and detail native and invasive plant coverage as well as the evidence of wildlife, human impacts, and soil quality. Report findings are used to adjust restoration plans as needed to improve future success.

Through a partnership with UC Irvine Center for Environmental Biology, staff continues to conduct an ecological experiment studying the effectiveness of planting seeds versus seedlings in the coastal sage scrub ecosystem. In conjunction with the ecological experiment, the experience of volunteers was recorded throughout the experiment. In fall 2017, staff began working with Chapman University students and faculty (as well as university laboratory resources) to examine carbon and nitrogen cycling through the Newport Valley restoration site. This deeper examination of the site will provide further evidence to the success of the program's restoration effort and inform future

restoration actions. Partnerships like these benefit both CBREP and the universities' efforts to educate students and build knowledge about our coastal ecosystems and their human inhabitants.

Staff distributed CBREP high school curriculum, called *Our Wetlands, Our World*, which focuses on the history and ecology of Upper Newport Bay; the effects of urbanization, invasive species and loss of biodiversity; and the importance of restoration and stewardship. Staff continued to make available *Our Wetlands, Our World* activity kits to allow teachers to borrow materials needed for each activity, and to support use of the curriculum in the classroom and at the Upper Newport Bay.

The CBREP also continued to distribute *Digging In: A Guide to Community-based Habitat Restoration*, which explains the basic steps of information gathering, site selection, project implementation, monitoring, maintenance, and working with volunteers.

Beach Wheelchairs

The Commission's beach wheelchair program aims to ensure that these chairs, which have wide, balloon tires that are able to move across soft sand, are widely available for public use. To this end, the Commission has awarded over \$135,000 to a variety of jurisdictions up and down the coast for the purchase of beach wheelchairs. 107 California beaches now have beach wheelchairs that can be borrowed by members of the public, and the Commission has provided funding for 44% of those. The Commission also maintains a webpage that shows the location of beaches with



wheelchairs available for use by the public.

www.coastal.ca.gov/access/beach-wheelchairs.html

Marine Debris Policy and Coordination

Research conducted by the Algalita Marine Research Foundation (AMRF) and others has demonstrated that plastics are present on beaches and in coastal and ocean waters in alarming quantities. In a groundbreaking 2000 study, AMRF found that degraded plastic pieces outweigh surface zooplankton in the central North Pacific by a factor of six to one (six pounds of plastic for every pound of zooplankton). Another AMRF study (2002) showed the average mass of plastic was two and a half times that of plankton on the surface of the coastal waters near Long Beach, California.

These findings prompted the Commission to join with AMRF and other stakeholders to develop a statewide plan: "Eliminating Land-based Discharges of Marine Debris in California: A Plan of Action from the Plastic Debris Project." In 2007, the California Ocean Protection Council (OPC) passed a resolution based on the Plan of Action regarding the prevention of marine debris, and set up a Steering Committee chaired by Commission staff to develop an Implementation Strategy, which the OPC adopted in 2008.

The Implementation Strategy has been the basis of a number of subsequent policy efforts including legislation, such as state and U.S. laws banning plastic microbeads in personal care products passed in 2015.

In 2016, the OPC launched a new effort to revise and update the Implementation Strategy. Commission staff was asked to serve on the steering committee for this new effort, undertaken in cooperation with NOAA's Marine Debris Program. Planning for this effort began in mid-2016, and continued throughout 2017 with a series of workshops and expanded participation from additional state agencies, NGOs, and representatives of industry. After a public comment period, the draft strategy will be brought to the Ocean Protection Council for adoption at their April, 2018 meeting.

In 2006, Governors of Washington, Oregon, and California entered into an agreement to work together

on ocean issues of mutual concern, called the West Coast Governors' Agreement on Ocean Health (WCGA). Commission staff chaired the Marine Debris Action Coordination Team (MDACT), which was charged with establishing baseline estimates of marine debris and derelict gear along the West Coast and supporting state and federal policies that achieve marine debris reduction goals (see MDACT's strategy at: www.westcoastoceans.org). To this end, the MDACT created the West Coast Marine Debris Database, which compiles historic data from existing databases as well as receives new data directly, and will help to establish baseline estimates of marine debris and derelict fishing gear.

In 2014, the MDACT officially transitioned to a new organization known as the West Coast Marine Debris Alliance (The Alliance), with a greatly expanded membership. While still under the auspices of the WCGA, the Alliance will work with greater independence than the MDACT.

The Alliance is designed to act as the entity that will carry forward the work suggested in the Marine Debris Strategy in the years to come. In 2017 the Marine Debris Alliance continued its vital work of enabling enhanced communication and collaboration among entities working on marine debris along the West Coast.

Key Partnerships

Partnerships are essential to the PE staff's work. They enable staff to leverage resources and extend the impact of PE programs. These partners are listed in Appendix A.

In addition, PE staff coordinates with other agencies conducting environmental education programs by participating in the California Environmental Education Interagency Network (CEEIN). CEEIN is a state government consortium of environmental educators representing departments, boards and commissions of the California Department of Education, California Environmental Protection Agency, and the Natural Resources Agency of California.

Other Ways We Reach the Public

A key aspect of the Commission's public education programs is spreading the word about what opportunities are available, and using these same channels to raise awareness and encourage stewardship. In addition to sending out press releases about upcoming events and other newsworthy activities, here are some other ways the PE Program keeps the public informed.

Educational Fairs and Events

Each year staff hosts educational booths at a variety of events encouraging coastal stewardship, environmental awareness, and marine education. This year we introduced several new activities bringing together creativity, science, and new ways to think about coastal issues such as ocean acidification and plastic pollution.

This year staff attended 16 events and spoke to 2,642 people. Our 2017 list of events includes Monterey WhaleFest, Santa Barbara Earth Day, Ventura County Office of Education Educators, Salesforce Ocean Day, Sunset Elementary Water Fair, Community Resources for Science Teachers in Oakland, CSUEB STEM Career Fair in Berkeley, CSUEB STEM Career Fair in Hayward, Los Angeles Sanitation District's Earth Day, San Diego County Fair Whole Life Festival, San Diego Creative Youth STE(A)M Fair, California State Fair Whale Tail exhibit, Santa Clara Arbor Day, State Scientist Day at the State Capitol, California Science Education Conference in Sacramento, California's 50th Annual Native American Day.



Social Media and Coast4U.org

The Commission's website for its public education programs, coast4u.org, describes all of the programs, contests, and resources that are offered to the public, including a Spanish language web page. In 2017, the PE website received 430,259 page views.

Commission staff connects with the public through Facebook, Twitter, Instagram, our Tumblr blog, and our electronic newsletter. Our followership across these platforms stands at over 70,000 people.

Using tools like *FB Events* and our electronic newsletter, staff notifies volunteers of new developments such as when the annual posters and postcards become available, when our statewide cleanup site map is updated, and to encourage Bring-Your-Own efforts to foster good coastal stewardship practices.

Through these avenues, staff engages in conversations with members of the public, other organizations, and agencies about volunteer opportunities, visiting and enjoying the coast, and ways to protect our coastal resources through everyday activities.

Website: www.coast4u.org
Facebook: facebook.com/CaliforniaCoast
Twitter: twitter.com/TheCACoast
Instagram: instagram.com/thecaliforniacoast
Tumblr: thecacoast.tumblr.com

Partner Organizations

Note: If you are aware of an omission or correction, please contact us.

Coastal Cleanup Day

Current Local Coordinators:

Accelerated Achievement Academy
Adopt-A-Highway CALTRANS
Maintenance Program
Aeolian Yacht Club
Alameda County Resource
Conservation Department
Alameda Marinas
Alameda County Clean Water Program
American River Parkway
Foundation (Sacramento)
Ballena Bay Yacht Club
Ballena Isla Marina
Benicia Water Education Program
Big Bear Marina (San Bernardino)
Bridgeport Elementary School (Mono)
Butte Environmental Council
Cache Creek Conservancy
Calaveras Big Trees State Park
California State Parks
City of Berkeley Shorebird Park Nature Center
City of Fremont
City of Livermore Water Resources Division
City of Long Beach El Dorado Nature Center
City of Milpitas
City of Oakland Watershed Improvement Program
City of Pleasanton
City of Redding – Community Creek
Cleanup Action Group
City of San Leandro
COASTWALK

ECOSLO
Environmental Health Institute
Explore Ecology
Grand Marina
Golden Gate National Parks Conservancy
Golden Gate National Recreation Area
Heal the Bay (Los Angeles County)
I Love A Clean San Diego
Lake County Department of Water Resources
League to Save Lake Tahoe
Literacy for Environmental Justice
Mendocino Land Trust
Napa Resource Conservation District
Northcoast Environmental Center (Humboldt)
Oakland Marinas
Oakland Yacht Club
Orange County Coastkeeper
Orange County Volunteer Services
Port of Oakland
Premier Mushrooms
Putah Creek Council
Salmon River Restoration Council
San Francisco Department of Public Works
San Joaquin County Public Works
San Joaquin River Parkway &
Conservation Trust, Inc.
San Mateo Countywide Water Pollution
Prevention Program
Santa Clara Valley Water District
Save Our Shores (Santa Cruz & Monterey
Counties)

Sierra Nevada Conservancy
Silverwood Lake SRA
Solano County RCD
The EcoMedia Compass (Imperial County)
The Watershed Project
Community Creek Cleanup Action
Group (Redding, Shasta)
County of Orange/OC Parks Volunteer Services
County of Santa Barbara, Public Works
Department, Resource Recovery & Waste
Management Division
Del Norte Unified School District,
Crescent Elk M.S.
Delta Conservancy
East Bay Regional Park District
Trails 4 All
U.S. Army Corps of Engineers - Bay Model
Visitor Center (Marin County)
UC Merced
U.S. Forest Service Orleans Ranger District
(Siskiyou)
Ventura County Coalition for Coastal
& Inland Waterways
Yuba County Dept. of Environmental Health

Other Coastal Cleanup Day Partners:

California State Parks Foundation
Channel Islands National Marine Sanctuary
Gulf of the Farallones National Marine Sanct.
CG Roxane Crystal Geyser Spring Water
Whale Tail® Ecoplate
Oracle
Salesforce
Amcor
Union Bank
Argonaut
Ocean Conservancy

Cordell Banks National Marine Sanctuary
Monterey Bay National Marine Sanctuary
Marine Mammal Center

Whale Tail® License Plate

Department of Motor Vehicles
State Coastal Conservancy

Adopt-A-Beach®

Año Nuevo State Reserve
California State Parks
Center for Natural Lands Management
Channel Islands Beach Community
Service District
City of Berkeley Shorebird Park Nature Center
City of Huntington Beach
City of Long Beach El Dorado Nature Center
City of Newport Beach
City of San Leandro
City of San Mateo
City of Santa Barbara, Creeks Division
City of Ventura, Partners in Progress
for a Beautiful Ventura
Coastwalk
East Bay Regional Park District
Eco Warrior Foundation
Golden Gate National Recreation Area
Heal the Bay
San Diego
La Conchita Community Organization
Marin County Parks and Open Space
Northcoast Environmental Center
National Parks Service
Oosurf.com

Pacifica Beach Coalition
Point Reyes National Seashore
Santa Barbara County Parks Department
Santa Cruz County Parks
Save Our Beach
Save Our Shores
Sonoma County Regional Parks
Surfrider Foundation
The Watershed Project
Vandenberg Air Force Base
Ventura County Parks

Boating Clean & Green Campaign

CA Division of Boating and Waterways
CalRecycle
Contra Costa County Public Works
The Bay Foundation
SF Bay Conservation and Development Commission
Northern CA Marine Association
Southern CA Marine Association
Pacific States Oil Spill Prevention Education Team
Marine Recreation Association
Pacific Inter Yacht Club Association
San Joaquin County Department of Public Works
Save Our Shores
Southern CA Yachting Association
The US Coast Guard Auxiliary
The US Power Squadrons
The State Water Resources Control Board
The Boat US Foundation
SF Estuary Project
The US Coast Guard Marine Safety Offices
Recreational Boaters of California

CA Port Captains and Harbormasters Association
CA Department of Fish and Game - OSPR
Monterey Bay National Marine Sanctuary
Lake Berryessa Partnership
Marinas and harbors (approximately 20)
Morro Bay National Marine Sanctuary
San Francisco Dept. of the Environment
Seabird Colony Protection Program (National Marine Sanctuaries-Gulf of the Farallones)

Kids' Adopt-A-Beach School Assemblies and Ocean Day Cleanup

Malibu Foundation for Environmental Education
I Love A Clean San Diego
Marine Science Institute
Orange County Coastkeeper
Fresno Chaffee Zoo
Friends of the Dunes
National Fisheries Conservation Center

Restoration Education

Tides Center
Orange County Parks
City of Newport Beach
Newport Bay Conservancy
Orange County Coastkeeper
Endemic Environmental Services, Inc.
Department of Fish and Game
U.C.C.E. Master Gardeners Program
U.C. Irvine Center for Environmental Biology
Society for Conservation Biology, Orange County Chapter
Institute for Conservation Research and Education
Chapman University

Saddleback College

Teacher Workshops

Water Education Foundation

Hayward Area Recreation and Park District

Return of the Natives

US Geological Survey

Sonoma County Regional Parks

Cal Recycle

Marine Debris Policy and Statewide Coordination

California Ocean Protection Council

CalRecycle

Department of Conservation

Department of Toxic Substances Control

California State Parks

California Department of Public Health

State Water Resources Control Board

State Coastal Conservancy

California Department of Environmental Protection

Environmental Protection Agency Region IX

Environmental Protection Agency Region IX

Caltrans

West Coast Governors' Agreement on Ocean Health Marine Debris Alliance

Oregon Department of Fish & Wildlife

Washington Department of Natural Resources

NOAA Marine Debris Program

NOAA Coastal Services Center

Surfrider Foundation

Port of Seattle

Heal the Bay

California Ocean Protection Council

Monterey Bay National Marine Sanctuary

Pacific States Marine Fisheries Commission

Northwest Straits Commission

Sea Grant Extension

Stillaguamish Tribe

Sea Doc Society / UC Davis

Oregon Fishermen's Cable Commission

Environmental Protection Agency Region IX

Protect Our Coast and Oceans Tax Check-off Box and Whale Tail Plate Marketing Partners

Action Network

Amigos de Bolsa Chica

LA Waterkeeper

Thank You Ocean

Algalita

Bay.org/Aquarium of the Bay

Community Resources for Science

Crystal Cove Alliance

Environmental Traveling Companions

Environment California

Friends of the Dunes

Golden Gate Audubon

Humboldt Redwoods Interpretive Assn.

Los Angeles Maritime Institute

Malibu Foundation

Marine Science Inst.

Monterey Bay Aquarium

Museum Foundation of Pacific Grove

Natural History Museum of LA County

Noyo Center for Marine Science

Ocean Connectors

Orange County Coastkeeper
San Diego Audubon
San Elijo Lagoon Conservancy
Santa Barbara Channelkeeper
Santa Barbara Museum of Natural History
Save the Bay
The Marine Mammal Ctr
The Watershed Project
Turtle Island Restoration Network
WILDCOAST
O'Neill Sea Odyssey

Appendix B – Recent Whale Tail® Grants

Fiscal Year	Targeted Grants	Competitive Grants
<p>2015/2016</p> <p>\$753,000 Total</p> <p>Funds avail. for targeted grants: \$321,713</p> <p>Funds avail. for competitive grants: \$431,287</p> <p>Requests received: 106 totaling \$2,654,284</p>	<p>Adopt-A-Beach School and Kids' Assembly Program and Cleanup Program \$97,713</p> <p>Heal the Bay Adopt-A-Beach Program \$30,000</p> <p>I Love A Clean San Diego Adopt-A-Beach Program \$29,640</p> <p>Tides Center for School-Based Marine Education Program \$103,000</p> <p>Beach Wheelchair Purchases \$5,760</p> <p>California Exposition & State Fair "Beach Buddy Adventure" \$50,000</p> <p>California State Parks Foundation for unrolling a high school curriculum on coastal science and policy \$5,600</p>	<p>Rural Human Services for students to raise salmon and steelhead trout in Del Norte County classrooms and then release them into the wild \$9,995</p> <p>Friends of the Dunes for updating the Bay to Dunes education program, incorporating Wiyot cultural elements, and aligning it with new state standards \$9,975</p> <p>Action Network for providing the "Coastal Connections" program to underserved youth in northern Sonoma and southern Mendocino counties \$17,250</p> <p>Stewards of the Coast and Redwoods for operating educational programs out of the Sonoma Coast Mobile Marine Van \$9,527</p> <p>Sierra Streams Institute in Nevada City for a year-long environmental education program focusing on migrating salmon and the effects of climate change \$35,000</p> <p>Friends of the Napa River for taking youth from the Boys and Girls Clubs kayaking to learn about the estuary and about pollution prevention \$9,995</p> <p>Pacifica Beach Coalition for the Adopt-A-Beach program and other public programming in San Mateo County \$20,000</p> <p>Vida Verde Nature Education for providing overnight coastal environmental education programs for urban, underserved Bay Area youth \$30,000</p> <p>O'Neill Sea Odyssey for bus transportation to attend an environmental stewardship program aboard a 65-foot catamaran and at an educational center on land \$9,800</p> <p>Museum Foundation of Pacific Grove for Central Valley students to take part in the LiMPETS program collecting and sharing data on sand crabs \$25,000</p> <p>Camp Ocean Pines in Cambria for building a marine touch tank to use as a teaching tool for all student visitors \$8,700</p> <p>Santa Barbara Channelkeeper for the on-the-water Seafari Program onboard Channelkeeper's research vessel exploring life in the kelp forest \$6,500</p> <p>Santa Barbara Museum of Natural History to share climate change science and solutions through public programming at the Museum and the Sea Center \$40,708</p> <p>Parkview Elementary School for the "Ocean Ambassadors" project for fourth-grade students in Port Hueneme to take a series of marine education field trips \$9,992</p> <p>Algalita Marine Research and Education in Long Beach for students to assess the health of near-shore waters and launch projects to reduce plastic waste \$9,890</p> <p>Children's Maritime Foundation for 4th-graders to study an environmental science</p>

Appendix B – Recent Whale Tail® Grants

<p>2015/2016 (continued)</p>		<p>curriculum and then sail aboard the <i>American Pride</i>, a tall ship in Long Beach \$9,500</p> <p>Palos Verdes Peninsula Land Conservancy for the Junior Naturalist Program for underserved Los Angeles area children at the White Point Nature Preserve \$9,975</p> <p>Sierra Club Foundation for leading a marine stewardship program for at-risk teens in the Inspiring Connections Outdoors (ICO) program in Los Angeles County \$6,480</p> <p>Amigos de Bolsa Chica for strengthening a citizen science program for adult volunteers and youth to analyze ocean and wetland water quality \$30,000</p> <p>Los Angeles Waterkeeper for the Native American Coastal Youth Ambassadors Program involving students at Sherman Indian High School in Riverside \$25,000</p> <p>San Elijo Lagoon Conservancy for a 3-year wetlands, watersheds, and conservation program for elementary students in Escondido \$20,000</p> <p>The Ocean Foundation for the “Ocean Connectors” program for children in National City, San Diego County, focusing on conservation of migratory ocean species \$8,000</p> <p>WiLDCOAST for Marine Protected Area (MPA) citizen science cruises in South La Jolla, for youth to contribute data to MPA monitoring projects \$20,000</p> <p>International Documentary Association to produce new videos about segments of the California Coastal Trail in Monterey, Santa Cruz, and San Mateo counties \$50,000</p>
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