

## CALIFORNIA COASTAL COMMISSION

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# F-6

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To: Commissioners and Alternates

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RE: 2011 Public Education Program Update

At the Coastal Commission meeting of December 9, 2011, the staff of the Public Education Program will update the Commission on program activities and accomplishments for the past year. This memo provides a summary of these activities and accomplishments.

In 2011, the Public Education Program continued to carry out its mission to *“protect and restore California’s coast and ocean by teaching, inspiring, and empowering the public to take environmentally positive action.”* Working collaboratively with a wide-range of non-profits, government entities, educational institutions, citizen groups and businesses, the Program continued to work on expanding its reach to educate and involve Californians of all ages, ethnicities, and income levels, whether they live along the coast or inland.

In addition to reaching the public directly, the Program provided educational resources, grants, and technical support to local programs and teachers to cultivate public education efforts on marine debris, ocean pollution, habitat restoration, climate change, ocean literacy, and other marine and coastal topics.

## Program Activities and Accomplishments 2011

### New Whale Tail® License Plate

We launched the new Whale Tail® License Plate design on August 2, 2011 with three simultaneous press conferences in San Francisco, Santa Monica, and Dana Point. The press conferences announced and honored the winners of our art contest who collaborated on the new design, painter Elizabeth Robinette Tyndall of Bethel Island on the California Delta, and graphic designer Bill Atkins of Laguna Beach.

In addition, we announced a “whale of a deal” - \$25 off the purchase price, which was offered to the public on [www.ecoplates.com](http://www.ecoplates.com) between the August 2<sup>nd</sup> launch and California Coastal Cleanup Day, on September 17<sup>th</sup>. This deal was made possible by our Stewards of the Coast sponsor team, described below.

The launch garnered extensive media coverage. We also placed countertop displays in DMV offices and northern California Whole Food Markets, and heavily promoted the license plate in conjunction with the Coastal Cleanup Day event.

In addition to underwriting the “whale of a deal,” Stewards of the Coast sponsors provided Coastal Cleanup Day participants with the chance to win getaways to beautiful California destinations or a \$1,000 gift certificate to Whole Foods Market. The Stewards of the Coast sponsor team was spearheaded by Anaheim/Orange County Visitor and Convention Bureau, and included the following additional major sponsors: the City of Dana Point and its partners the County of Orange, Dana Point Harbor Association, and Dana Point Chamber of Commerce; Santa Monica Convention and Visitors Bureau and its partners Pier Restoration Corporation, Pacific Park, and Office of Sustainability and the Environment, City of Santa Monica; SeaWorld San Diego; and Waste Management WM EarthCare.

Supporting sponsors included Huntington Beach Marketing and Visitors Bureau (Surf City USA®), Laguna Beach Visitors and Conference Bureau, Long Beach Convention and Visitors Bureau, San Francisco Travel, Santa Barbara Conference and Visitors Bureau, Santa Cruz County Conference and Visitors Council, Sonoma County Tourism Bureau, Visit Newport Beach Inc., Aquarium of the Bay in San Francisco, Aquarium of the Pacific in Long Beach, SEA LIFETM Carlsbad Aquarium at the LEGOLAND® California Resort, and Whole Foods Market.

We also have partnered with AdVantageTec, a marketing company that places video screens in auto dealerships. The video displays devote 85% of the screen to live TV and use the remaining 15% for marketing and informational purposes. AdVantageTec’s automotive dealership TV network is displaying the new specialty license plate in 80 showrooms and waiting areas throughout California, visually showing the new design on TVs while describing the benefits to our environment.

**Sales Results.** During the period of the Stewards of the Coast promotion, sales of the Whale Tail® License Plate more than doubled. This statistic is even more impressive in light of the fact that the DMV temporarily suspended an important source of advertising for the plate - the special license plate flyer - during this period of time (the DMV will insert the flyer, which advertises six specialty plates, in registration renewal packages provided it does not add to the postage cost, and during this period they had additional items in the packet.) Past experience with the DMV flyer, which goes out to about 2.5 million people each month, has shown that it accounts for one-third to one-half of our plate sales.

As of October, 2011, more than 200,000 California drivers had purchased the Commission’s Whale Tail® License Plate, and sales and renewal fees had raised \$62.6 million for environmental programs - \$18.3 million to the California Beach and Coastal Enhancement Account (CBCEA) and \$44.2 million to the Environmental License Plate Fund (ELPF). Each year, the legislature appropriates funds from the CBCEA to the Coastal Commission to carry out

Coastal Cleanup Day, Adopt-A-Beach, and other coastal and marine education programs, including grants to nonprofits and local agencies. The CBCEA also funds projects of the State Coastal Conservancy. The ELPF funds a variety of state environmental programs.

## **Whale Tail Programs for the General Public**

### **California Coastal Cleanup Day (CCD)**

Over the past several years, the Commission staff has expanded outreach and significantly grown the participation in the annual California Coastal Cleanup Day event. The results of this expanded outreach have been spectacular – in 2011, the Coastal Cleanup Day program enjoyed strong turnout and remained the state’s largest single-day volunteer event. 71,398 volunteers took part at one of over 800 cleanup sites around the state, one of the highest turnouts ever. The Cleanup Program continues to focus on recruiting participants from inland areas to clean creeks, rivers and lakes. These volunteers help to 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 2011, 23,895 volunteers cleaned inland rivers and waterways, removing 839,000 pounds of debris, far exceeding the amount of trash recovered at coastal locations. Combined with the coastal counties of the state, Coastal Cleanup Day volunteers removed over 1.3 million pounds of debris from the state’s coast and inland shorelines. Perhaps most exciting about these numbers is that over 40 percent (more than 550,000 pounds) of the debris was recycled – the Cleanup Program’s highest total of recycled material by far. This points to a strengthening of our local coordinators’ relationships with their trash haulers and recyclers, and that the Program’s year-round messaging about the need for greater recycling and reuse is taking hold.

Since the Coastal Cleanup Day Program’s inception in 1985, over 1.1 million volunteers have helped remove over 18 million pounds of debris from California’s coast, ocean, and inland shorelines. The Program has proven to be of enormous benefit to the health of our coast and ocean.

**Corporate Partners in CCD.** The Coastal Cleanup Day Program has enlisted strong corporate partners, which have greatly assisted our outreach efforts. We continued our key, ongoing relationship with Crystal Geyser Alpine Spring Water. In addition to their financial support, Crystal Geyser provided water to 53,000 volunteers in 33 different counties. This is a crucial benefit that helps local coordinators immensely, especially during the 2011 Cleanup when the day of the event was quite warm in most parts of the state. The Coastal Cleanup Day Program also enjoyed continuing support from Whole Foods Market, Oracle, the Whale Tail® Ecoplate, Natracare, See’s Candies, KPMG, Fairmont Hotels & Resorts, and an array of in-kind and media support from partners around the state.

**CCD Influence on Business Practices.** An additional benefit of establishing Coastal Cleanup Day relationships with corporate partners is our ability to positively influence their business practices. One example of this is Whole Foods Market’s move in 2008 to eliminate the use of plastic grocery bags at their stores, a decision at least partially influenced by their participation in Coastal Cleanup Day. Another exciting example is one introduced in 2010 by Crystal Geyser -- a completely recyclable bottle cap that stays attached to the water bottle, with no plastic parts that need be completely removed. Crystal Geyser developed this bottle cap as a direct

response to their involvement with Coastal Cleanup Day and at the urging of Commission staff, in recognition of the large contribution plastic bottle caps make to our overall marine debris problem and the impact they have on our environment.

**BYO for CCD.** The Commission staff launched a new program in 2010 that was expanded significantly in 2011, 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 began asking volunteers to bring their own reusable cleanup supplies from home, rather than using the single-use disposable plastic items available at cleanup locations. The initiative has been an enormous success, as over one-quarter of all cleanup participants brought at least one reusable item from home to the Cleanup in both 2010 and 2011. As a result, the Commission was able to order 30,000 fewer trash bags for the 2011 event, and expects to lower those numbers even further in 2012. The initiative is helping to reduce the environmental footprint of the Cleanup while educating volunteers about simple lifestyle changes that cumulatively can have enormous, positive benefits to our coastal and marine environments.

**CCD Survey.** In 2011, the Coastal Cleanup Day Program again surveyed Cleanup participants to gain information about our volunteers 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. We used an on-line survey tool, as well as person-to-person surveys in some locations, to collect over 1,500 survey responses. Results from the survey indicate that our volunteers are about 2/3 female, and about 2/3 Caucasian. The survey consistently shows that the event increases participants’ awareness of the causes of and impacts of marine debris, and almost all participants (94% both years) report that participating in the event motivated them to take specific actions to protect the environment, such as educating others, picking up street and beach litter, reducing their use of single-use disposable items, etc.

The survey also showed that the participation in the Cleanup dramatically increases volunteers’ assessment of their knowledge of the causes and impacts of marine debris. 87% of respondents considered themselves either “knowledgeable” or “very knowledgeable” about the causes of marine debris after the event, as opposed to only 61% before the event, a 26% increase. Similarly, 80% of all survey takers considered themselves “knowledgeable” or “very knowledgeable” about the impacts caused by marine debris after the event, as opposed to 63% before the event, an increase of 17%. This confirmed that, although the Program strives to bring year-round education about marine debris to Californians, the Cleanup is a powerful educational tool in and of itself.

### **Adopt-A-Beach Program**

The Commission staff has continued to improve the Adopt-A-Beach Program, connecting volunteers with the resources they need to organize their own cleanups and become environmental stewards. Throughout the years, the program has had active participation in all 15 coastal counties, plus Alameda County in the San Francisco Bay Area. In 2011, we recruited The Watershed Project to develop an Adopt-A-Beach program in Contra Costa County, further expanding the reach of the program into the bay area. Each of our 48 beach managers assists groups in conducting at least three cleanups per year at their “adopted” beach. CCC staff has continued to collect data on each cleanup. Based on reports from Los

Angeles, San Diego, Orange, San Mateo, San Francisco, Marin, Monterey and Santa Cruz Counties, nearly 39,000 people volunteered during one of the 415 Adopt-A-Beach Cleanups, contributing over 53,500 volunteer hours.

**Recognition for Beach Adopters.** Each group that participates in the Adopt-A-Beach program is recognized on our website as an official adopter. Currently, there are 91 adopting groups listed on our website. In addition to receiving web recognition, each adopting group is mailed a certificate in the mail recognizing their participation in the program and thanking them for their contribution.

**Adopt-A-Beach Advisory Council.** Commission staff continued to meet quarterly with its Adopt-A-Beach Advisory Council, a group of Adopt-A-Beach Managers, to discuss publicity, outreach, and new ways to engage volunteers.

**Adopt-A-Beach Regional Workshop.** Commission staff continued its recent practice of organizing an Adopt-A-Beach Regional Workshop. This year, the workshop was held in Berkeley on April 26, 2011 and was attended by nine Bay Area Adopt-A-Beach Managers. Staff used this opportunity to engage other groups organizing cleanups in the area and recruited them to be Beach Managers in the Adopt-A-Beach program. One such organization, Sea Scavenger, attended the workshop in this capacity. Beach Managers shared Best Management Practices for successful Adopt-A-Beach programs and discussed regional collaboration on Cleanups. Topics discussed included the importance of data collection, successful publicity efforts, and successful volunteer management and organization. In addition, the group identified local sites in need of cleanups and coordinated how best to go about covering those areas.

## **Coastweeks**

Commission staff serves as the California coordinator for Coastweeks. California celebrates Coastweeks starting on Coastal Cleanup Day and over the following three weeks. The staff creates an online calendar of events throughout the state that are connected to the ocean, coast, waterways, or water in general. The public can access the events by date or by the county in which they take place. In 2011, our on-line calendar listed 231 events.

## **Community-Based Restoration and Education Program (CBREP)**

The Commission staff continued its work on the Community-Based Restoration and Education at Upper Newport Bay, begun in 2001. To date, over 16,800 volunteers have planted over 19,600 native plants (over 3/4 of which have been propagated in an on-site native plant nursery) and removed nearly 35 tons of invasive plant material (not including material left on site). In the process, volunteers have restored over fourteen acres of coastal salt marsh, riparian and coastal sage scrub habitats. In 2011, we worked on maintaining and expanding current restoration sites. Volunteers attending our restoration events represented schools and corporations through such varied groups as Chapman University Resident Advisors, Master Gardeners-in-Training, Fireman's Fund Insurance Company, and JP Morgan Chase. We reached out to the community by making public presentations which promoted habitat restoration and our program to groups, including the Chapman University Environmental

Science Seminar, the Orange County Natural History Lecture Series, and the City of Newport Beach Coastal/Bay Water Quality Committee,

**CBREP High School Curriculum.** Staff continued to distribute the CBREP high school curriculum, called *“Our Wetlands, Our World”*. The curriculum is aligned to the State Science Content Standards, and 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. We 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. Staff held a workshop at the Upper Newport Bay to promote the curriculum and activity kits to teachers and docents participating in the Newport Bay Conservancy’s outrigger canoe tour program.

**Digging In Guide and Workshops.** The CBREP also continued to distribute “Digging In: A Guide to Community-based Habitat Restoration.” The Guide explains the basic steps of information gathering, site selection, project implementation, monitoring, maintenance, and working with volunteers. In 2011, staff held workshops based on the Guide to cultivate the field of community-based restoration in San Pedro, Imperial Beach, and Santa Barbara.

### **Coastal Stewardship Pledge**

The Coastal Stewardship Pledge is an online program that encourages Californians to make a commitment to taking specific personal actions to protect our coast and ocean. Once they have followed through on their commitment, they receive a certificate of participation and a free canvas tote bag. The goal is to encourage people to consider the health of the coastal environment in all their choices throughout the day. The Pledge can be reached through the Commission’s Public Education website at [www.coastforyou.org](http://www.coastforyou.org). More than 1,700 Californians have taken the pledge online. A special pledge is available for classes and youth groups that include teacher background for each action. Participating student groups are featured on the Commission’s web site.

### **Seafood Watch Campaign**

For the past eight years, the Commission has been a regional partner with the Monterey Bay Aquarium in its Seafood Watch Campaign. The Commission staff distributed 38,500 Seafood Watch pocket guides in 2011 through its public programs and events. The pocket guide is a convenient reference for making sustainable seafood choices.

### **Coastal Photography Contest**

In 2011 the Commission completely revamped the annual amateur coastal photography contest. In partnership with the Thank You Ocean Campaign of the Natural Resources Agency, the contest was held entirely online with digital images, a shift that doubled public participation. Fairmont Hotels & Resorts of California donated overnight stays at luxury hotels for all the winners, which included a “Viewers’ Choice” winner for the first time, based on online voting. A panel of judges also selected three prize-winning photographs from over 1,400 entries. The winning photographs, along with 13 honorable mentions, are featured on the new contest

website, <http://mycoastalphoto.com> . Also for the first time, we were invited to display contest images in a public exhibit, which is now showing at the nonprofit Pacific Grove Art Center and will travel to southern California in the future.

## **General Outreach**

**[WWW.COAST4U.ORG](http://WWW.COAST4U.ORG)**. The Commission's web site for its public education programs describes all of the programs, contests, and resources that we offer to the public, including a Spanish language web page. In 2011, the Public Education website received almost 65,000 page views.

**Google Maps**. In 2011 the Public Education website was enhanced to include four interactive maps. A Google map was created to plot the location of every Whale Tail Grant distributed to date, including data on dollar amounts awarded and brief descriptions of each funded project. A second Google map shows the locations of all beach wheelchairs available for the public to borrow in California and lists phone numbers for each site. A third map shows the locations of fishing line recycling stations. And a fourth map shows the locations and provides contact information for all of the Adopt-A-Beach sites.

**COAST4U Quarterly**. Commission staff produced four issues of our quarterly on-line newsletter, which includes information on upcoming events, news, quizzes, and coastal destinations. The newsletter is distributed to 11,000 subscribers.

**Environmental Fairs and Events**. Each year, we attend a number of environmental fairs and events, where we staff an educational booth, hand out materials, and talk to attendees. In 2011, we attended 10 fairs, reaching over 1,680 people.

## **Whale Tail Programs for Schools and Educators**

### **Waves, Wetlands and Watersheds**

"Waves" is a science activity guide for teachers that the Commission staff developed in 2003 addresses issues such as endangered species, marine debris, coastal geology, water use, and water quality. The guide is aligned to the California State Science Content Standards for third through eighth grades, and includes Community Action lessons adaptable for all ages up to and beyond grade 12. Copies of *Waves* are available free to California educators. The book can also be downloaded from our website, as can Spanish translations of the student handouts. Between its publication date in 2003 and November 2011, 15,586 hard copies of the book have been distributed (including 5,000 printed and distributed by the City of Los Angeles). The Coastal Commission staff has held a total of 73 workshops, directly reaching 1,457 educators. In 2011, staff held workshops in Redding, Novato, Suisun City, Santa Cruz, and Pasadena, in partnership with California State Parks, San Francisco Bay National Estuarine Research Reserve, California Science Teachers Association, Project WET (Water Education Foundation), and Project WILD (California Department of Fish & Game). Activities from the book have been adapted for numerous other publications and audiences, and *Waves* has been incorporated into many educator workshops held by other organizations.

## **Marine, Coastal and Watershed Resource Directory**

The Commission continued to maintain this on-line directory, which contains detailed information on organizations that address the California coast and its watersheds. Included in each entry is the mission statement of the organization; contact information; a link to the organization's website; and descriptions of educational materials, programs, internships and volunteer opportunities offered. The directory is one of the ways the Commission encourages Californians to become involved with the coast at a local level. More than 400 organizations are included.

## **Coastal Art & Poetry Contest**

This contest is open annually to California students in kindergarten through 12th grade. By encouraging youth to reflect on the beauty and spirit of California's beaches and ocean, we hope to inspire a greater sense of stewardship for these natural places. Every year, five winners each in art and poetry are selected, and around 30 honorable mentions are recognized. Since 2003, 16,854 entries have been received from students from throughout California. Following each contest, the winning and honorably mentioned pieces are exhibited at venues up and down the coast. The contest has been exhibited at Point Reyes National Seashore, the Moorpark Art Festival, the Sanchez Art Center in Pacifica, Coyote Point Museum in San Mateo, the San Francisco Bay Model in Sausalito, the San Mateo County Office of Education, the Muth Interpretive Center in Newport Beach, and the Ford House Museum in Mendocino. The exhibit is currently on display at Cabrillo Marine Aquarium in San Pedro, and will move to the Channel Islands National Park Visitor Center in Ventura in January. Artwork from the Coastal Art & Poetry Contest is used in many Commission publications and throughout the Commission's website.

## **Kids' Ocean Day Adopt-A-Beach Cleanup**

This program took place in six locations in 2011— San Diego, Huntington Beach, Los Angeles, Monterey (where students were bused from Fresno), San Francisco, and Humboldt. In all of the locations, the emphasis of this program is on involving students from underserved schools. The Program includes a school assembly on marine debris and other ocean threats as well as the beach cleanup event. Approximately 9,000 students participated in the 2011 cleanup event, and even more saw the assembly. This year, as part of our "BYO" theme, a portion of the students in each city brought their own reusable cleanup supplies instead of depending on plastic trash bags. Aerial art images created in the sand by the students at the event featured pictures of fish with words coming out of their mouths, such as "Clean seas please," "Turn the tide," and "Kelp us!" Photos of the aerial images can be viewed at [www.oceanday.net](http://www.oceanday.net).

## **Whale Tail Grants Program**

As of June 2011, the Whale Tail Grants Program has awarded \$7.2 million in grants to 433 different projects. Whale Tail Grants fund schools, nonprofit organizations, and local governments to conduct a wide variety of coastal and marine education projects. The program targets children and the general public with an emphasis on reaching underserved communities. In Fiscal Year 2010/2011, the Commission awarded \$586,500 to 28 different projects.



Examples of funded activities included: transporting underserved students on field trips to the coast; starting new Adopt-A-Beach programs; promoting ocean-friendly gardens to homeowners and landscapers; studying and dissecting giant frozen Humboldt squid; learning about watersheds; restoring wetland habitat; monitoring the populations of key indicator marine species; and bringing coastal education to remote and rural schools.

## **Programs for Specific Audiences and Multi-agency Efforts**

### **Boating Clean and Green Program**

This program is a partnership with the Department of Boating and Waterways, which educates boaters and provides technical assistance to marinas and local governments to increase availability of environmental services for boaters. In 2011, the program developed and distributed 5,250 boater kits and conducted 7 statewide Dockwalker volunteer trainings where more than 150 new volunteers were trained to conduct face-to-face boater education about clean and safe boating practices.

**Boater Survey.** In July 2011, the Boating Program, in partnership with the Santa Monica Bay Restoration Foundation, and Keep the Delta Clean Program (partners), released the 2007 – 2009 California Boater Survey Report, which queried motorized boaters about their attitudes, opinions, and knowledge of boating related environmental issues. A total of 5,735 surveys were completed. Considering the survey results, Partners plan to focus future education and outreach efforts on preventative engine maintenance, use of pollution prevention tools and recognition of the used oil collection center and sewage pumpout logos, and sewage discharge regulations.

**Fishing Line Recycling Stations.** Staff continued to set up monofilament fishing line recycling stations in areas with the highest recreational fishing activity in the state, an effort that was launched in 2008, in partnership with the Boat US Foundation. Thirty-nine new stations were installed in 2011.

**Clean Boating Map for SF Bay.** The staff distributed 10,000 copies of the San Francisco Bay Area Clean Boating Map at boat shows and boating events. Due to its popularity, a new updated map will be printed in 2012. This free map features locations of marina-based pollution prevention services.

**Changing Tide Newsletter.** The Changing Tide is the quarterly publication of the three chapters of the CCBN (California Clean Boating Network – a forum of members of from the boating industry, government agencies, and environmental groups). In 2011, we distributed three issues (11,000 copies each). The newsletter focuses on new trends in clean boating practices and environmental services for boaters.

**Boatyard Best Management Practices.** The staff is working with the Department of Toxic Substances Control, Office of Pollution Prevention and Green Technology, representatives from the boatyard industry, the Sea Grant Extension Program, and others to develop a guide to Best Management Practices for boatyards.

**Marine Expired Flares Working Group.** Staff is working with the California Department of Toxic Substances Control, CalRecycle, California EPA, CalEMA, San Francisco Department of Public Health and the Coastal Commission's Water Quality Unit, and Orion (the biggest marine flare producer in California) to explore options for the boating community on where to properly dispose of expired flares. With an estimated 174,026 out-of-date flares generated annually by boaters in California, it is essential to find proper and convenient disposal options for boaters in California.

**Marinas and Yacht Clubs Oil Spill Preparedness Working Group.** The staff continued leading this group, which is comprised of representatives from OSPR, the Coast Guard, Cal EMA, the Office of Emergency Services, the Port Captains and Harbormasters Association, Marina Recreation Association, the Clean Marinas Program, Pacific Inter-Yacht Club Association and the San Francisco Bay Conservation and Development Commission. This working group will develop a list of involved agencies and their contact procedures, and make this list and other resources available to marinas and yacht clubs. A long term goal for this group will be to plan a future oil spill drill for marinas and yacht clubs on the Bay. In partnership with the US Coast Guard, the group held a free 8-hour HAZWOPER training at the Bay Model in Sausalito, which was attended by 50 marina and yacht club operators. A second 8-hour HAZWOPER training will be conducted on March 1<sup>st</sup>, 2012 at the Vallejo Public Library.

**America's Cup 34 Task Forces.** Staff has been participating in America's Cup 34 task forces to identify ways to encourage boaters and marine facilities to utilize environmentally sound practices for the expected increase in business surrounding the events.

**Coastal Cleanup Day for Boating Facilities.** Staff conducted a pilot program partnering with two Yacht Clubs (Port Royal in Redondo Beach and Sequoia Yacht Club in Redwood City) during coastal Clean Up Day 2011. The purpose was to collect information on how the program can be expanded in the future to involve more boating facilities. Combining the efforts from both yacht clubs, 63 volunteers collected 1,267 pounds of trash and recyclables. Staff is currently developing a Toolkit for marinas and yacht clubs that will assist these facilities in planning and organizing their participation in Coastal Cleanup Day and the Adopt-the Beach Program.

**NOAA Marine Charts.** Staff is working with the NOAA Marine Chart Division with the NOAA Marine Chart Division on including clean boating information in the California NOAA full-size print on demand charts and Pocket charts. A second component of this partnership involves staff developing a clean boating section for NOAA's Coastal Pilot Book, which covers the entire Pacific region. For the last 12-month period, people have downloaded the Coastal Pilot Book 8,084 times. In addition, 4,552 Coastal Pilot Book books are printed and distributed throughout the year. Distribution includes sales to the public, the military and government agencies.

### **Marine Debris Action Coordination Team (MDACT)**

Commission staff continued to chair the Marine Debris Action Coordination Team for the West Coast Governors' Agreement on Ocean Health, which is working as a region on marine debris issues of common concern. The MDACT held two successful workshops in 2011, the first on land-based debris in San Francisco in February, and the second on the completion of the West Coast Marine Debris Strategy and the formation of a West Coast Marine Debris Alliance in

Portland, Oregon in October. The workshops were supported by a grant of \$100,000, awarded by the Executive Committee of the WCGA, which will also support the creation of a Marine Debris database. The database will help standardize marine debris data collection across the west coast, establish a baseline of marine debris levels, and allow for evaluation of future efforts to address marine debris in the region.

The West Coast Marine Debris Strategy is nearing completion, with a draft ready for public comment through the Governors' offices of the three states. Once finalized, the Strategy will become the document that a future West Coast Marine Debris Alliance will help implement in the coming years.

### **Ocean Awareness and Literacy Action Coordination Team (OALACT)**

Commission staff is also co-chair of the Ocean Awareness and Literacy Team of the West Coast Governors' Agreement on Ocean Health, which is developing a plan to better integrate marine science and ocean literacy principles into state science curricula, and to foster increased ocean awareness and conservation generally. In 2011, the OALACT worked with Lawrence Hall of Science to conduct interviews and analyze a needs assessment study of educators in the tri-state region, to determine obstacles to and opportunities for integrating ocean literacy in schools. Although teachers are very enthused about teaching ocean science overall, many are stymied by the limitations of the required curriculum and by inadequate preparation. The OALACT is working toward addressing these obstacles, including participating with the Departments of Education in each of three states to help guide development of the new Next Generation Science Standards, to ensure that these new standards incorporate ocean literacy.