



ORANGE COUNTY
COASTKEEPER®

CELEBRATING 10 YEARS

COASTKEEPER MISSION STATEMENT

To Protect and Preserve the Region's Watersheds and Marine Habitats Through
Education, Advocacy, Restoration, Research and Enforcement



Advocacy: Through a collaborative, watershed-based approach, we work with government agencies and the private sector to develop water quality solutions that meet the needs of both the environment and the community. Our main focuses are eliminating polluted urban runoff, ensuring healthy watersheds and marine habitats, and maintaining a stable water supply.

Education: Coastkeeper cannot accomplish our mission without an educated, concerned and active public. We engage thousands of K-12 students in hands-on watershed education and service through the WHALES Program and Kids Ocean Day. Our website and Coastkeeper Magazine raise general public awareness of local coastal issues.

Restoration: To preserve critical habitat and species, Coastkeeper has worked to restore kelp and eelgrass beds off the coast and in Newport Bay. We are currently launching a new eelgrass project and pursuing abalone and oyster restoration.

Research: Coastkeeper has trained employees and volunteers to conduct scientific research projects involving both sediment and water quality analysis in local waterways and harbors. Our scientific reports are utilized by governmental agencies at every level to create policy and regulations that address water-related challenges.

Enforcement: The goal of this program is to enforce compliance to State clean water laws and to the Federal Clean Water Act. Coastkeeper identifies polluters, collects evidence and litigates in Federal Court to ensure compliance. We collaborate with industries to develop more effective practices to reduce sources of pollution.



WHO IS COASTKEEPER?

The Orange County Coastkeeper commenced full-time operation on March 1, 1999, with two employees. Our first office was a single room upstairs in Lido Village in Newport Beach. Within one year, we moved onto Old Newport Blvd in Newport Beach, where we grew into and out of our space within the five-year lease period. Our third and present location is on Airway Avenue in Costa Mesa, and the office is bustling with ten employees, and countless interns and volunteers!

Inland Empire Waterkeeper: To face the challenge of protecting the inland portions of the Santa Ana River Watershed, Coastkeeper initiated Inland Empire Waterkeeper (IEWK) in 2005. The mission of IEWK is to enhance and protect the water quality of the Upper Santa Ana Watershed and other waterways of the Inland Empire. IEWK's jurisdictional boundaries extend to the headwaters of the Santa Ana River in the San Bernardino National Forest to the north, and the Cleveland National Forest to the southeast. Today, Inland Empire Waterkeeper's Riverside office has 3 employees and a small army of committed volunteers.

For our 10th anniversary, we have assembled a list of Coastkeeper's involvement and accomplishments since 1999. Many of our activities are complex; and the average "person on the street" often is not aware that certain issues, processes or regulations even exist. Therefore, it is difficult to explain the time and effort we've invested, as well as the significance of our consistent involvement—but we're going to try!

The entire staff of Coastkeeper is proud of our accomplishments and particularly grateful for the support from friends, foundations, business partners and governmental agencies. Without their essential participation, the following would not have been possible.

Learn more and get involved at www.coastkeeper.org

COASTKEEPER AT 10 YEARS

Orange County Coastkeeper Staff:

Garry Brown, Ellen Brown, Ray Hiemstra, Briana Madden, Amanda Bird, Peter Pham, Colin Kelly, Zehava Purim-Adimor, Austin Brown, Sharon Koch

Inland Empire Waterkeeper Staff:

Autumn DeWoody, Rachael Hamilton, Eric Emerson

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Jim Parkhurst, Chief Executive Officer, Newport Bay Hospital
Sean M. Sherlock, Partner, Snell & Wilmer L.L.P
Frank Tolerico, Consultant





DVOCACY

Alliance to Rescue Crystal Cove (2001): When we heard that California State Parks approved a project to replace the historic cottages at Crystal Cove with a luxury hotel, Coastkeeper joined the Alliance. In the end, our efforts led the State to purchase the land for \$2 million and restore the historic cottages, which today are used for overnight rentals and educational programs.

Orange County Sanitation District (2002-present): Coastkeeper had concerns about OCSD's plan to increase the amount of primary treated sewage discharged to the ocean and seek another 5-year waiver from full- secondary treatment. We sponsored meetings with OCSD to learn more about the issue. Dr. Jan Vandersloot attended a meeting and subsequently founded the Ocean Outfall Group. Working with the Ocean Outfall Group led to the radical change in OCSD policy, as they voted to end the waiver and move to full secondary treatment. Coastkeeper worked with Orange County Sanitation District to obtain the commitment for \$400 million to upgrade to full secondary treatment for all ocean discharge. We continue to participate on oversight and advisory panels for bio-solids, construction timelines, and the Ground Water Replenishment System.



Garry Brown and the Founder of Santa Monica Bay Keeper, Terry Tamminen

Clean Water Act:

Once-Through Cooling: A State Water Board study estimates that 20 billion larval fish and 70,000 pounds of adult fish are killed each year at coastal power plants. As intake pipes pull in ocean water for cooling purposes, marine life can be sucked into the system (entrainment) or trapped against screens (impingement). Section 316(b) of the CWA requires that the location, design, construction and capacity of cooling water intake structures reflect the best technology

available for minimizing adverse environmental impacts. Coastkeeper has worked closely with the State Water Board to create statewide policy that mandates the phasing out of OTC in coastal power plants. We have also written comment letters to the California Energy Commission and legislators to encourage this shift in policy.



Coastkeeper has successfully advocated for stricter requirements to prevent storm pollution

MS4 Permits (2002-present): In 2002, Orange County and its incorporated cities were renewing the 5-year Stormwater Permit from the Santa Ana Regional Water Quality Control Board. In the permit process, no environmental stakeholders were invited to participate. At the approval hearing, Coastkeeper protested this exclusion, and the process came to a halt. Then Coastkeeper, Defend the Bay and NRDC

joined meetings, and in the end a better permit was produced. In 2009, Coastkeeper called for an entire paradigm shift for the new permit. After coordinating several meetings with stakeholders, the result was a permit that strengthened the requirements for Low Impact Design in both new and re-developments, including a new watershed-based approach.

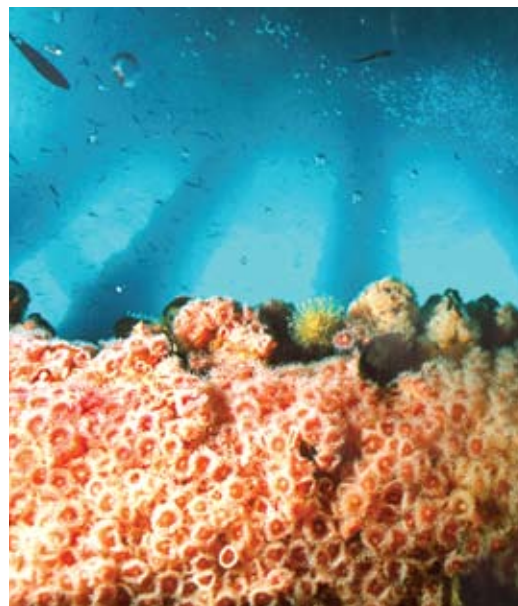
Impaired Water Bodies, 303(d) Listings: Through our water quality data and work with the Regional Board, Coastkeeper has participated in the process to list local channels on the “impaired water bodies” list, part of the Clean Water Act. By being added to 303 (d) List, water bodies are be highlighted for their pollution issues, and become a higher priority for agencies to take action to address those issues with more urgency. Coastkeeper’s research and advocacy efforts specifically contributed to the following nine listings:

- Anaheim Bay - Chlordane, Lead, Sediment Toxicity
- Bolsa Chica Channel - Ammonia
- Borrego Creek - Ammonia
- Buck Gully - Fecal and Total Coliform
- East Garden Grove Wintersburg Channel - Ammonia
- Huntington Harbour - Sediment Toxicity
- Los Trancos - Fecal and Total Coliform
- Peters Canyon - pH
- Serrano Creek - pH

Rigs to Reef (2007): Should dry oil and gas platforms be left as part of a viable marine ecosystem? To address this question, Coastkeeper hosted the first ever Rigs to Reef Conference in Huntington Beach. The conference brought together educators, government agencies, researchers, and other stakeholders to discuss emerging information on the issue of artificial reefs. In a stirring keynote address, “Sturgeon General” Dr. Sylvia Earle brought Rigs to Reef into the context of the big picture--our oceans. The Rigs to Reef Conference was an exciting step in a cooperative effort to address soon-to-be obsolete oil platforms off the California Coast. Coastkeeper will continue to follow this issue closely, and plans to host Rigs to Reef II in Spring of 2010.



Buck Gully Creek, Corona Del Mar



Over time, many oil rigs become artificial reefs teeming with life

Foothill South Toll Road (2007-present):

Coastkeeper was closely involved in the campaign against the proposed route of the 241 Toll Road extension project, part of which would run through San Onofre State Park. We considered TCA's water quality plans unacceptable and expressed our concerns at the February 2008 Coastal Commission hearing and September 2008 Commerce hearing. As a part of the Save San Onofre Coalition, we saw victories at the Coastal Commission and Commerce Department. TCA is currently exploring alternatives for the project.



Commerce Department Hearing, September 2008



California sheephead: a crucial species in the kelp forest ecosystem

MLPA- Marine Life Protection Act (2008-present): With Associate Director Ray Hiemstra as a member of the Regional Stakeholder group, Coastkeeper has worked to design MPA draft maps and conducted an extensive outreach campaign. We have provided elected officials and the public with facts necessary to participate in the process and make the appropriate decisions on Marine Protected Area locations and levels of protection. Coastkeeper will continue to be involved with the MLPA process for the South Coast through 2010.

Measure M, Environmental Cleanup Allocation Committee

(2005-present): Coastkeeper was integral in securing 2% of Measure M revenue (estimated to be \$237.2 million), which will be used to help local agencies clean up highway and street runoff and meet Clean Water Act standards. As Chairman of the Environmental Clean-up Allocation Committee, Coastkeeper Garry Brown will assist the Committee in making recommendations through a competitive funding process to implement street- and highway-related water quality improvement projects.

OWOW- One Water, One Watershed: Coastkeeper is a member of the OWOW Steering Committee, which carries out Integrated Regional Watershed Planning for the Santa Ana River Watershed. The Committee will make funding recommendations on public works projects that will address climate change, continuing drought in the Colorado River, San Joaquin Delta vulnerability, and population growth and explosive development.

Storm Water Task Force: Led by SAWPA, the Santa Ana Watershed Project Authority, this task force will make recommendations to the Regional Board for regulations dealing with bacteria standards for the recreational use of waterways throughout the Santa Ana Watershed.

Nitrogen-Selenium Management Program: Coastkeeper has participated for 5 years on the working group to develop a Total Maximum Daily Load (TMDL) regulation to reduce the discharge of water with high concentrations of nitrogen and selenium to the upper Newport Bay. The goal of this effort is to reduce the detrimental impacts of nitrogen and selenium to wildlife throughout the Newport Bay Watershed.

Laguna Bluebelt Coalition: Coastkeeper participates regularly to develop Marine Life Protected Areas (MLPA) recommendations for the Orange County coastline.

Central Orange County IRCWM Plan Management Group: Coastkeeper participates with Countywide stakeholders to develop and carry out the Integrated Regional Coastal and Watershed Management Plan (IRCWMP).

Newport Bay Stakeholder Committee/ Upper Newport Bay Executive Committee: Collaborative work to address watershed issues and policy decisions in Newport Bay.

Newport Bay Fecal Coliform Technical Advisory Committee: Coastkeeper assists in scientific review of the progress of the Newport Bay Fecal Coliform Study (UCI).

Aliso Creek Stakeholders Group: Collaborative work to address water quality issues in Aliso Creek.

Port of LA/Long Beach Harbor Safety Committee:

Coastkeeper has been appointed to serve a third 3-year term on the Port of LA/Long Beach Harbor Safety Committee. This committee deals with any oil spills and safety issues in the combined harbors. Coastkeeper is the environmental representative to the committee.



Newport Bay: one of few coastal wetlands left in California, and a special focus of Coastkeeper



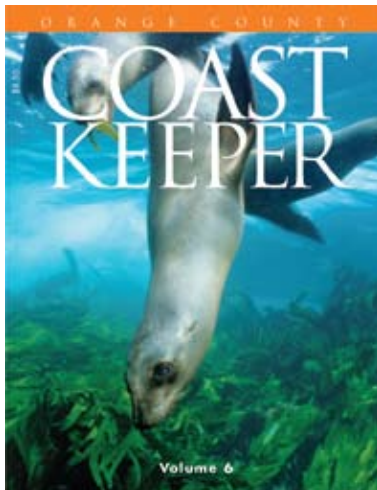
EDUCATION

Kelp (1999-2005): We have taught 1500 students how to grow kelp in their classrooms, and educated more than 50,000 people about the importance of kelp forests along our coasts. The project was also featured on a National Geographic special.

WHALES Program (2005-present): The WHALES Program (Watershed Heroes- Actions Linking Education to Stewardship) has provided hands-on field experiences and class activities for over 1,500 junior high and high school students in the region. By connecting our students with public agencies and giving them firsthand science experiences, Coastkeeper aims to empower students to become active stewards of their local environment. Our students have toured wastewater treatment plants, collected water samples, restored coastal habitats, surveyed marine life and conducted beach cleanups. Classes that participate in the year-long WHALES Program design community action projects and present their findings to local experts. We look forward to expanding WHALES in the years to come, by reaching more students and finding new ways to promote environmental careers and education pathways.



High school students explore wildlife of Upper Newport Bay



Coastkeeper Magazine, Volume 6

Citizen Watershed Monitors of Orange County (CWMOC), 2003-present: Through CWMOC, Coastkeeper has created a forum for sharing information and technology between several groups concerned with water quality in Orange County. Coastkeeper and CWMOC members have held over a dozen citizen water testing events for the public, including the annual Snapshot Day and World Water Monitoring Day.

Public Outreach: Through community events such as the OC Children's Water Festival and Earth Day, Coastkeeper has educated thousands of students and adults on the importance of water quality and the impacts of urban runoff.

Coastkeeper Magazine (2003-present): We have published 7 editions, educating over 50,000 citizens and elected officials about regional environmental issues and coastal resources.

Cleanup Events: Coastkeeper has hosted dozens of cleanup events at Huntington Harbor, the Santa Ana River mouth, Newport Back Bay, Bolsa Chica, and San Diego Creek. Through these events, volunteers from local businesses, schools and the general public learned how pollution can reach the coast through urban runoff, and left our creeks and beaches much cleaner!

Kids Ocean Day (2008-2009): As the local coordinator of this statewide event for the past 2 years, Coastkeeper brought elementary students to Bolsa Chica State Beach for cleanup and aerial art projects. Through this program, over 1,200 Orange County students from inland, low-income schools have learned how urban neighborhoods are connected to the ocean, and how they can protect the coast at home.

Newport Harbor Nautical Museum (2001-2005): Coastkeeper sponsored a watershed education program for fifth graders, where Coastkeeper Garry Brown's son, Austin, dove with live video equipment to show students the rich sea life just below the floating steamboat replica. Students at the Museum could ask questions of the diver and get answers while he was underwater. Coastkeeper also constructed and maintained a live touch tank at the Museum as an educational tool to students and visitors.



Ocean Day 2009: 750 students, Bolsa Chica State Beach



ESTORATION

Eelgrass Restoration (2003, 2008-present): In partnership with the Army Corps of Engineers, City of Newport Beach, OC Conservation Corps and Coastal Resource Management Inc., Coastkeeper conducted an eelgrass restoration project in Newport Bay. Unfortunately, intense rainfall after the transplanting caused widespread loss of the transplanted (and natural) eelgrass in the Bay. Coastkeeper is currently launching a project at the Back Bay Science Center to explore ways to grow eelgrass in the lab, with the ultimate goal of restoration in the Upper Bay. The Back Bay Eelgrass Project will also raise public awareness about the value of eelgrass in the Bay.

Caulerpa Investigation (2001): Caulerpa Taxifolia is an invasive plant from the tropics that can quickly overtake all native species in ocean environments. Orange County Coastkeeper formed a survey team of volunteer divers and searched Newport Bay for Caulerpa. Luckily none was found.

Kelp Reforestation Program (1999-2005): Kelp began to disappear from Orange County more than 20 years ago. Since then, fish populations have drastically diminished and some ocean wildlife in the area has almost vanished. To address this problem, Coastkeeper started growing kelp in our regional laboratory and in portable eco-cart aquaria in classrooms. Through a collaborative project of the California Coastkeeper Alliance, students grew kelp and our volunteer divers planted it on reefs and offshore waters. Today, the community, along with countless species of marine life, can now enjoy kelp canopies along Little Corona and the Newport coast.

- We trained 130 volunteer divers to plant kelp and monitor the reefs.
- We removed over 14,000 sea urchins from the reefs
- We planted 5,000 tiles, and transplanted 140 kelp plants on 9 reefs in Crystal Cove, Little Corona and Laguna Beach



Eelgrass Restoration Project: Newport Bay, 2003



Kelp Project: Kelp is grown and planted on tiles



RESEARCH

319h- Santa Ana River Citizen Monitoring Project (2000-2003):

Through a Clean Water Act 319 (h) grant, we monitored 27 sites in the Counties of Orange, Riverside, and San Bernardino. This project was an important study of our watershed, as many of the 27 sites had little or no data when we began this project. The data and analysis from this project was submitted to the Santa Ana Regional Water Quality Control Board to be used in their decision-making.



Citizen Water Monitors sampling for Santa Ana River Project

Newport Dunes Swimmer Shedding Study (2000-2001): As part of the effort by the City of Newport Beach and the County of Orange to deal with high bacteria counts in Upper Newport Bay, Coastkeeper collected water samples from Newport Dunes beaches. To determine the contribution of swimmers to high bacteria levels, Coastkeeper collected water samples from areas with and without swimmers. The results suggested that swimmers are not a significant source of bacteria contamination in the bay- sediment is a more probable source.

Anaheim Bay/Huntington Harbour Toxicity Study (2001-2003): A combined effort of Coastkeeper, the Regional Water Board and the Southern California Coastal Water Research Project (SCCWRP), this study was the largest sediment and water quality monitoring project to date in the Anaheim Bay / Huntington Harbor complex. In 2006, State Board staff utilized this study to add Anaheim Bay and Huntington Harbor to the 303(d) List for sediment toxicity. The data also supported the listing of Huntington Harbor for lead and total chlordanes.



Coastkeeper intern samples water in Bolsa Channel

Orange County Coastal Watershed Monitoring Project

(2003-2006): Through a grant from Proposition 13, the 2000 "Safe Drinking Water, Clean Water, Watershed Protection and Flood Protection Act," Coastkeeper created awareness and involved citizens in our effort to protect our coastal water quality. After over two years of testing water quality at 16 sites, we compiled a terrific source of information on our coastal water pollution problems and trends. The Santa Ana Regional Water Quality Control Board has utilized our data in revising the 303 (d) list of local impaired water bodies.

Vessel Waste Disposal Study (2003): Coastkeeper evaluated the potential pollution from leaks and improper use (or lack of use) of vessel waste disposal facilities (pumpout stations). Inspections of the existing stations in Newport Harbor, Huntington Harbor, and Dana Point Harbor found that many were inaccessible, inoperable, or in need of repair. With Coastkeeper's assistance, the State Water Resources Control Board created a new set of statewide rules to mandate the number of pump stations in harbors, and to create a clear responsibility for their maintenance.

Buck Gully Diversion Project (2004): Coastkeeper partnered with the City of Newport Beach to set up a test facility that would collect runoff from Buck Gully Creek. This water that would normally flow into the ocean at the Little Corona tidepools was filtered to an acceptable level for reuse as irrigation water at a nearby golf course. Since there were no facilities in place to deliver the water to the golf course, the filtered water was diverted to the Orange County Sanitation District via a nearby sewer connection. After working to receive permits from six different agencies to get the project going, Coastkeeper ran the pumps and filters for a year.

Rhine Channel (2004-2006): In this study on Newport Harbor's Rhine Channel, Coastkeeper partnered with Anchor Environmental to take sediment cores, assess pollution loads, and recommend methods of remediation. While several studies have documented contamination in the channel, Coastkeeper's study was the first to fully identify the spatial extent of the contamination, and to specify cleanup options and costs. We continue to advise the City of Newport Beach in their efforts to address contamination in the Channel.

Newport Bay Marina Metals Project

(2006-2007): This study investigated the contribution of copper from copper-based boat paints to the water and sediment in the marinas of Lower Newport Bay. Water and sediment samples were collected from 8 marinas and the adjacent channels in the Lower Newport Bay, and analyzed for copper and other metals such as nickel, chromium, lead, arsenic, nickel, tin, cadmium, and zinc. While copper exceeded acceptable levels in every water and sediment sample collected, dissolved copper levels were higher in marinas than in channels. These results suggest that copper boat paints are a significant source of copper contamination in Lower Newport Bay.



Sediment core sampling in the Rhine Channel

Lower Newport Bay Metals Stormdrain Study (2007-2009): Coastkeeper investigated the metal loading to Lower Newport Bay from stormwater and dry weather runoff. Through 3 years of monitoring, we collected 264 samples at 20 stormdrain sites. By

identifying the major sources of metals that drain into the Bay, we can target the highest contributors to ultimately reduce the amount of metals entering the Bay. The final report for this project will be available in early 2010.

San Mateo/Cristianitos Creek Baseline Water Quality Monitoring Project (2007-2009): Coastkeeper initiated this study to collect baseline data for the creeks that could be threatened by the construction of the proposed Foothill South Toll Road. As TCA continues to explore alternative routes in light of the Coastal Commission and Commerce Department rejections, we expanded the project to include sites along San Juan Creek for 2009.



San Mateo Creek flows to San Onofre State Park

Orange County Nurseries Water Quality Improvement Project (2007-2009): The purpose of this monitoring and outreach project was to identify pollutant issues and reduce runoff at nursery operations across Orange County. Coastkeeper conducted monthly monitoring at 112 nursery locations, and collected 175 runoff samples. At the same time, Coastkeeper contracted with the University of California Cooperative Extension (UCCE) to provide free best management training to nurseries that enrolled in the program. Our analysis of water samples over the project period found improvements in water quality in sediment, nutrients, and some pesticides, as a result of education and outreach.

Newport Bay Copper Reduction Project

(2009-2012): This project is a 4-year public campaign to encourage boaters to switch from copper paint to non-toxic alternatives. The outcome will be reduced copper loads and improved water quality in the Bay, and a situation where the use of non-toxic bottom paints is common and is the preferred choice for boaters.



Reducing water runoff at nurseries across Orange County



NFORCEMENT

Coastal Protection:

California Ocean Plan (1999-present): Coastkeeper was the first organization to enforce the ASBS (Area of Special Biological Significance) provisions, which prohibit degrading discharges in the 30 year-old California Ocean Plan. Our actions caused Cease and Desist Orders to be issued to The Irvine Company, Cal Trans, and State Parks. As a result, new Water Quality Management Plans were set in place for coastal development and construction of a vegetated swale along PCH in Newport Coast. Coastkeeper successfully prevented the State from abolishing ASBS provisions in the Ocean Plan in 2004, and currently the State is enforcing the law.

Desalination (2006-present): Coastkeeper is committed to ensuring that desalination plants are designed with improved technologies to obtain the salt water, such as beach wells. In 2006, Coastkeeper filed an appeal with the California Coastal Commission (CCC) of the proposed Poseidon desalination plant in Huntington Beach, which would use the AES power plant intake pipes as its water source. The issue has yet to be heard at a CCC meeting. We will continue to discourage the use of power plant intake pipes in desalination plants, and encourage better technology that reduces impacts to marine life.

Clean Water Act (2005): Co-plaintiff on litigation upholding the standards of the San Diego Stormwater Permit, and paving the way for a numeric standard based permit for the Orange, Riverside and San Bernardino County permits on the next round of NPDES permit renewals.

Raising development standards: Coastkeeper has played a key role in establishing design goals for state-of-the-art water quality plans for major Orange County developments over the past decade. Higher development standards for water quality have helped to ensure better coastal protection. Coastkeeper has participated in water quality management planning for the following projects:

- Crystal Cove, Pelican Hill- Newport Coast
- Montage- Laguna Beach
- Brightwater- Huntington Beach
- Pacific City- Huntington Beach
- Santiago- East Orange
- Headlands- Dana Point
- Marbelhead- San Clemente



Newport Coast: Slotted curbs allow runoff to flow into parking lot planters, where it can soak into the ground instead of draining to the ocean.

Litigation: Coastkeeper identifies polluters, collects evidence, and litigates where necessary to enforce compliance with the Federal Clean Water Act and state laws that govern individual and corporate behavior relative to clean water and the reduction of water pollution.

Development Projects: Coastkeeper has litigated in Orange County and the Inland Empire for violations of the Statewide Construction Permit for Water Quality, and illegal discharges to the ocean. As a result, each developer has implemented a suite of Best Management Practices (BMPs) to prevent polluted runoff from reaching local waterways.

Industrial Dischargers: Inland Empire Waterkeeper settled with six industrial dischargers located in the City of Corona for violating their pretreatment permits with excessive discharges of heavy metals and other toxics that was illegally authorized by the City. Settlements required dischargers to either comply with their existing pretreatment permit or stop their discharges altogether; and defendants had to pay penalties to repair damages done to the watershed.

Scrapyards: Since 2005, Coastkeeper has led a campaign to reduce polluted water discharges from the industry. Through investigations, we have found missing or ineffective Best Management Practices (BMPs); which have allowed the discharge of pollutants to local waterways. After eight lawsuits with local scrapyards, these companies have corrected their problems, built systems to capture and infiltrate runoff, and in one case redesigned their entire facility. Coastkeeper will continue to monitor local scrapyards, and work with scrapyard owners to develop industry-wide BMP standards.



Sewage Spills: Coastkeeper closely follows sewage spill events, especially those that lead to beach postings or closures. After we filed a lawsuit with a local city that had seen an increase in overflows and spills, that city raised sewer rates and created a fund to repair and inspect the sewer system.

Investigations: Coastkeeper found scrap yards with uncovered metal and dirt lots

Protection of Coastal Wetlands: Coastkeeper litigated the California Coastal Commission to reverse their approval of the destruction and building on the “Little Shell” wetland in Huntington Beach. The wetland was restored to a functioning coastal wetland. In another case, Coastkeeper helped to fund a delineation study on the neglected and degraded Cabrillo Wetland in Huntington Beach. This enabled the Coastal Commission to enforce regulations and prevent a developer from illegally developing the wetland.

Municipalities: A crucial priority of Coastkeeper's enforcement program is to make sure that local government agencies are enforcing environmental laws such as the Clean Water Act, Coastal Act and CEQA (California Environmental Quality Act). In cases where agencies have approved projects without enforcing these laws, we have litigated when necessary to ensure that environmental laws are carried out in the region.

Supplemental Environmental Projects (SEPs): Coastkeeper does not accept a penny of penalty monies from our litigation efforts. We donate the SEP funds to projects that benefit our local watersheds. Here are some of the achievements made through our SEPs:

Santa Ana River Recreation Map, \$50,000 (2005): for the development of a wall map containing the many recreational opportunities located adjacent to the Santa Ana River.

Baldwin Lake/Shay Creek Restoration Project, \$25,000 (2007): to complete the first stage of a plan to remedy habitat loss of the endangered unarmored three-spined stickleback fish.

Lake Elsinore Wetland Restoration and Rearing Pond Construction, \$25,000 (2007): to establish more stands of emergent aquatic vegetation in the back basin of Lake Elsinore that will provide structure and habitat value for a variety of aquatic species.

Temescal Creek Native Fish Restoration and Enhancement Program, \$140,000 (2008): to expand Riverside-Corona Resource Conservation District's project to augment native fish populations into the Lee Lake Conservation Easement area of Temescal Creek.

Hills For All, \$25,000 (2008): protection of parkland and ensuring compliance to environmental laws.

WACO, \$25,000 (2008): to support inland projects in waterways and creeks.

Orange County/Inland Empire Public Interest Green Fund held at the OC Community Foundation (2008) - \$135,000: Coastkeeper established this fund through the Orange County Community Foundation for nonprofit organizations to hire experts when needed to protect watershed resources.

Construction BMP Outreach: A developer produced a Bilingual training video for construction workers, distributed through the BIA of Southern California. Two developers created employee training materials and training sessions for field supervisory employees



A Public Resource: Santa Ana River Watershed Map



INNOVATION:

CONSERVING WATER AND REDUCING RUNOFF

Coastkeeper strives to promote and use emerging technologies that can reduce our impact on local watersheds.

Coastkeeper Gardens (2007-present): Our first 2-acre Coastkeeper Garden is located at Santiago Canyon College in the City of Orange. The Garden hosts plants from six southern California native habitats and California Friendly® plants from around the world. In addition to showcasing water saving irrigation technology, the Garden also features six vignettes- “backyard” landscapes that show homeowners how they can conserve water and reduce runoff in their own yards.

With the help of dedicated volunteers, we have planted hundreds of trees and plants. In December 2009, Coastkeeper broke ground on the vignettes and the public amphitheatre.

As an urban park and an educational center, the Garden aims to show residents how they can have beautiful landscapes that conserve water and reduce runoff.



Low Impact Design (LID) Project: Low Impact Design is an approach to managing stormwater and urban runoff at the source. Through the LID Project, Coastkeeper helped 10 local homeowners become LID pilot homes, where rainwater can be filtered onsite, soak into the ground or be reused for landscaping. By providing ways in which residents can reconfigure their property (using simple and cost-effective techniques), this project empowered residents and developed a new market for sustainable landscape design and construction. These LID homes will have an estimated 89% reduction of runoff from their properties.

Southern California Edison: Landscape 20/20 (2009-2012): Coastkeeper is partnering with Southern California Edison to plan, design, install, and maintain the large landscape on their Villa Park Sub-Station (on Tustin Ave., City of Orange). By transitioning from 1970's typical landscape, this project will introduce a California Friendly® and resource efficient landscape. In addition to the landscape, Coastkeeper will conduct a 2-year study to see if the project reaches our resource-saving goals: a reduction of water use by 50%, the elimination of urban runoff, a significant reduction in generated green house emissions, and a reduction in the cost to maintain the landscape by at least 40%. The purpose of this cutting-edge project is to show how institutional landscapes can be redesigned to increase resource efficiencies, eliminate runoff, and lower the cost of long-term maintenance.

Coastkeeper has assembled a team of landscape architects, landscape contractors, and media professionals to make this project happen and tell the story.

Stay tuned for Coastkeeper's 2nd Decade

Coastal Conservation Network, Rigs to Reef Conference II,
Landscape 20/20, Eelgrass & Oyster Restoration in Newport Bay,
Abalone Restoration off the coast, and much more!

www.coastkeeper.org



ORANGE COUNTY
COASTKEEPER®

Thanks to all of our supporters for keeping us on the water!



www.coastkeeper.org

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