

THE STATE OF YOUR WATER

**ORANGE COUNTY COASTKEEPER'S
22 YEARS OF DEFENDING CLEAN WATER**



ORANGE COUNTY
COASTKEEPER®



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PART 1

ACCOMPLISHMENTS IN THE LAST 22 YEARS



MISSION

To protect the region's water resources so they are swimmable, drinkable and fishable for present and future generations.



Purpose

Orange County Coastkeeper intends to create a **20-year visionary capital plan for Coastkeeper aligned around our water quality programs**. This document is intended to assist the Board in developing its 20-year visionary capital plan. Part I of this document summarizes Coastkeeper's successful history of accomplishments over the last 22 years.

History

For the last 22 years, Orange County Coastkeeper and its affiliate programs, have worked to protect the region's water resources so they are swimmable, drinkable and fishable for present and future generations. It works collaboratively with regional stakeholders—including policy makers, businesses and community members—to defend and restore our oceans and waterways across **Orange County, the Inland Empire and the Coachella Valley**. It's improving local water quality with innovative and effective programs in education, advocacy, enforcement, research, restoration and conservation.

In numbers, Coastkeeper has accomplished the following over the last 22 years:

- **40,000 students** across the region connected with their environment through hands on field trips at no cost to schools or students
- **7 marine protected areas (MPAs)** established through advocacy efforts and mobilizing volunteer researchers across Orange County
- **Recommended allocations of \$64 million** to install storm water capture systems in streets across Orange County, thanks to its work with the Orange County Transportation Authority through a program Coastkeeper worked to establish

- **\$3.5+ million** contributed to environmental restoration projects through legal enforcement
- **100 industrial sites** stopped from illegally discharging polluted runoff through Coastkeeper's clean water enforcement
- **8 streams** gained protected status and earned funds for restoration projects, due to data Coastkeeper collected and published on local water quality
- **1,280 sq. meters** of planted eelgrass, which currently have grown to almost 1 acre of eelgrass beds, and improving Newport Bay Ecosystems
- **130 volunteer divers** trained to plant kelp and monitor reefs in Crystal Cove, Little Corona, Upper Newport Bay and Laguna Beach



Education

Coastkeeper's education programs have grown into a comprehensive set of initiatives that introduce students from across Orange County, the Inland Empire and the Coachella Valley to the problem of water pollution in our environment and how they play a role in stopping it. In the past 22 years, Coastkeeper has reached over 40,000 students through the following programs:

- **Kids Ocean Day:** Through a series of assemblies, a beach cleanup and an aerial art display, elementary students are empowered with the notion that their actions incite change
- **W.H.A.L.E.S.:** Watershed Heroes—Actions Linking Education to Stewardship program reaching thousands of junior high and high school students with in-class exercises and field trips at no cost to schools or students
- **D.R.O.P.S.:** Drought Response Outreach Programs for Schools-in partnership with the State water Resources Control board, Climate Resolve and Garden Grove Unified School District Coastkeeper turned high school hallways into water-wise gardens—estimated to capture 4.5 million gallons of water per year
- **Kids Care:** Elementary education program on marine debris, reaching over 2,000 students
- **Cleanup OC:** Uniting local communities through monthly beach cleanups, removing more than 100,000 pounds of thrash throughout waterways in the region
- **River K.A.T.S.:** Kids Activism Through Science watershed education program in Inland Empire
- **RiverCamp:** Inland Empire nature-based camp serving over 200 students each summer
- **Little Seedlings:** Nature Preschool program connecting children to nature in the Inland Empire
- **Clean Camp Coalition:** Waterkeeper led the way in addressing the epidemic of homelessness and impacts on water through coalition building
- **Crest to Coast:** Over 155,000 pounds of trash removed from the Upper Santa Ana River Watershed

In the past 22 years,
Coastkeeper has reached
over **40,000 students**
through our programs.





Advocacy and Enforcement

Since Coastkeeper's inception in 1999, speaking up at moments that matter continues to be an instrumental tool to create change for clean and abundant waters. Regional planning boards and city government meetings, statewide and national efforts regulating or creating policies, and one-on-one meetings or strategically placed opinion pieces to influence decision makers—these have been at the core of what makes Coastkeeper and its programs effective advocates for our region's waters.

Our goal is to improve water quality by enforcing state and federal clean water environmental laws. Today, Coastkeeper is the only regional organization using litigation to improve water quality across the regions that it serves. Its enforcement program has improved the discharge of more than 100 facilities, thereby reducing the concentration and amount of polluted water illegally discharged into our streams, rivers, bays and ocean. We have required companies to contribute more than \$3.5 million to support other organizations doing work on the ground to improve regional water quality.

Research and Restoration

Since 1999, it has been Coastkeeper's duty to help our marine habitats in its regions thrive, through the following research and restoration efforts:

- **Upper Newport Bay Living Shorelines:** Program that places natural materials to create eco-friendly buffer protecting shorelines from erosion and restores habitat for marine life
- **Eelgrass Restoration** to protect critical eelgrass habitat in Newport Bay
- **Native Oyster Restoration and research** in Newport and Alamitos Bay, with demonstration projects to educate students
- **Kelp Restoration** from Big Corona to Dana Point
- **Green Abalone Restoration and research**
- **Marine Protected Areas (MPA) Watch program:** Since 2012, our MPA Watch program has collected data on human uses of OC's MPAs. Nearly 140 volunteers have conducted more than 3,600 surveys to document 208,000-plus activities in the county's MPAs.



PART 2

WHERE ARE WE NOW



Purpose

Part II of this document will establish the state of the water in the region. Coastkeeper serves to illustrate that although its programs have positively impacted the region's watersheds, there is a great deal more work to be done by Coastkeeper in protecting our water resources so they are swimmable, drinkable and fishable for present and future generations.

Orange County

Our water resources will never be declared "cleaned." Protecting water quality has been for the past 22 years, and will be more years to come, an **ongoing and continuous process**. The process requires vigilance, expertise, strength as an organization, and the capacity to use the tools of collaboration, advocacy and litigation to protect the region's water resources.

Water flows through our region via creeks and waterways to the harbors and to the coastal waters. In addition, there is the Santa Ana River and coastal creeks that flow directly to the ocean. These are all designated as impaired for multiple pollutants. Discharges from industrial sites devastates water quality with an array of metals, oils & grease and toxins. Pesticides, bacteria and nutrients from fertilizers on lawns, golf courses, parks and landscapes are present in all of our waterways. Now, overlay trash, debris and plastics. Our storm drain system delivers pollutants and trash to our waters 24/7. Has water quality improved over the past two decades? Yes. Are there still health concerns related to water quality? Yes. Is our water clean for recreation uses? Absolutely not.

Coastkeeper's vital and essential work must be increased to meet the challenges of adapting to changing conditions, to meet the impacts of unhoused community members

camping on the river banks, to hold industrial polluters accountable and to continually advocate for higher water quality regulations. Coastkeeper is the only NGO actively confronting these issues in Orange County.

Millions of people would love to be able to live here in "paradise." Corporations spend far more money to operate from here. Residents pay excessive amounts to own a home here. Why? Our harbors, and coastline and weather is the attraction and the value. Coastkeeper is protecting not only our water but the integrity of our communities to ensure they are not devalued due to pollution.

Water Quality

- Santa Ana River
Description—Mountains to the Sea, SAR Reaches, Prado Dam
- Inland Waterways and creeks
- Coastal Creeks
- Three Harbors, Huntington, Newport and Dana Point
- Coastal Waters

Water Quality Issues

- Lack of timely deadlines contained in permits to improve water quality and a minimum level of enforcement to violators
- Lack of access to recreate in inland waters such as the Santa Ana River
- CAFOs and Waste Haulers contributing large amount of nutrient and bacterial runoff into surface waters
- Issues with drinking water supply and alternative sources, such as desalination
- Promote capture and reuse of all water—support recycling projects and oppose ocean desalination due to impacts and expense



Inland Empire

The inland Empire is home to the largest river in Southern California, the Santa Ana. **This river stretches over 100 miles, and its respective watershed, the Santa Ana River Watershed, has over five million residents.** The Santa Ana River Watershed Regional Water Quality Control Board approved its last 303(d), a list of waters not meeting water quality standards, in 2010—although required to be updated every three years. In its 2010 update, Chino Creek and the Santa Ana River was listed for bacteria, pathogens, and nutrients due to dairy and agriculture activity in the area.



Coachella Valley

Under the Clean Water Act Section 303(d) adopted in 1972, states are required to create a list of impaired and threatened waters. States are required to submit these lists to the EPA for approval every three years. For each water body listed, the state identifies the pollutant causing impairment, when known. These water bodies stay on this list until total daily maximum loads (TMDLs) are developed, which has not been done.

The Coachella Valley desert is limited in surface water by nature. **The Valley's precious few waterbodies, however, have nearly all found themselves on California's 303(d) list.** The Salton Sea and its tributaries including the Alamo, Whitewater (Coachella Storm channel), New River and San Felipe Creek are all listed as impaired waterbodies. The Colorado River, which is used for irrigation and aquifer recharge in the Coachella Valley, is also on the 303(d) list. When searching for information on local surface water quality in the Coachella Valley, it becomes apparent that there is a gap in available data. For instance, the waterboard has not produced a water quality report on the Salton Sea since 2014. TMDL development for the Salton Sea is estimated for 2030.

Along with surface water, the Valley and its residents also face issues with access to potable water and groundwater contamination. In the aquifer nearing the Salton Sea, "naturally occurring arsenic is commonly found in ground water in communities like Mecca, Oasis, and North Shore, at levels higher than current state and federal drinking water standards." These historically disadvantaged communities lack access to municipal water infrastructure, and therefore rely on small public or private drinking water systems or wells, which are mostly unregulated and untreated.

The State Water Board in conjunction with the Colorado River Basin Regional Water Quality Control Board, issues National Pollutant Discharge Elimination System (NPDES) permits to industries that discharge into waters of the United States, which helps protect and restore the water quality in California. In Region 7 Riverside and Imperial Counties, there are 22 active NPDES permits. In other Regional Board jurisdictions there are far more NPDES permits issued. This indicates there are many dischargers operating illegally without permit coverage.





PART 3

20-YEAR VISION



Purpose

Orange County Coastkeeper (OCCK) intends to create a 20-year visionary capital plan to advance its work aligned with water quality. This document is intended to assist the Board in developing its 2040 water quality plan with strategic initiatives.

Goals

Coastkeeper will acquire permanent building for offices and education purposes. In addition, Coastkeeper will acquire specialized satellite facilities in the region to conduct specialized programs. Specifically, fundable projects such as a building in a park for childrens' education, a Kiosk to provide public information, a beach station to coordinate coastal programs, such as water monitoring, beach cleanups and education programs.

Programmatic Goals

- Coastkeeper's foundational work is vigilance to protect and promote water quality. In addition to land-generated pollution that contaminates our coastal water, related issues are adaptation to sea level rise, harmful algal blooms and changing weather patterns (drought and flooding), etc. These and other issues will impact our region and Coastkeeper will take a prominent role in research, education and advocacy.
- A major Coastkeeper goal is to transition the Santa Ana River into a top beneficial resource in the watershed from the mountains to the sea. We propose to restore and work toward a multi-use paradise providing protected wildlife habitat, wildlife viewing areas, kayaking and active public recreation areas.

People would be able to park and access the river and tributary creeks, while feeling safe to wade and swim.

- A major Coastkeeper initiative is to significantly reduce trash in our waterways, harbors and coastal waters. Through our efforts, we will go beyond trash pickups to advocacy and collaboration with packaging manufacturers to compel them to significantly reduce/eliminate and initiate collection/reuse programs of materials before getting into the waste stream.
- Water quality and Marine habitats in our harbors and coastal waters will be vastly improved and rarely will there be any exceedance of water quality standards. Newport Bay, Huntington Harbour and Dana Point will be model multi-use areas of excellent water quality fostering a multitude of recreational and aesthetic benefits. Coastkeeper will collaborate with the LA Waterkeeper to expand programs and enforcement in Long Beach and the Ports of LA/LB.
- Orange County Coastkeeper will continue to manage the work of the Inland Empire Waterkeeper and the Coachella Valley Waterkeeper programs. Both programs will implement developed work plans that reflect the issues of the areas they serve. Education, Advocacy and Enforcement will be the major initiatives.

- Coastkeeper will have a documented membership base of 20 thousand members throughout Orange County, Riverside and San Bernardino Counties. Through constant communications on social media platforms and Coastkeeper Websites, there will be forty thousand or more followers. Coastkeeper will build a video library for broad promotional and educational uses.
- Coastkeeper will expand the utilization of boats to perform water sampling and monitoring. Initiate water tours for supporters, students, donors and media. It will display a presence on the water in all three harbors.

- Coastkeeper will:

- establish an environmental law firm
- employ a development/fundraising staff
- expand our professional staff to include community engagement and outreach
- employ a policy and advocacy director
- employ a staff scientist
- employ a physical engineer
- employ additional educators as needed



Community Engagement and Identity

Create a Community Engagement Program staffed by OCCK, responsible for all public events and activities including:

- Fundraising events
- Social events
- Community science workshops
- Political engagements to the extent allowed by IRS Codes for 501(c)(3)

Investment in Coastkeeper's Identity

- Design attractive, eco-friendly, branded products to sell directly to the public
- Partner with local businesses to promote Coastkeeper brand
- Give members and selected colleagues a recognizable logo and brand that they are proud to wear, use and otherwise advertise to their friends and family
- This staff person would coordinate efforts with other Coastkeeper development and program staff



Watershed Education

WHALES

- Curriculum: To keep ahead of current education trends and curriculum requirements, Coastkeeper will undertake a complete curriculum revamp by updating each module's learning objectives to include current events and issues of emerging concern as well as developing additional lessons for follow-up activities
- Water District Partnerships: Coastkeeper conducts our WHALES watershed education classes in middle and high schools in the areas served by the Moulton Niguel Water District (MNWD). The district contracts with Coastkeeper to fund this program. Coastkeeper will model this MNWD/Coastkeeper partnership and promote similar programs with other water districts.
- MNWD Development:
 - Work with additional groups including homeschool groups in the area
 - Create separate lessons specifically for 6th, 7th and 8th grades to provide more in-class lessons and field trips
- Develop follow up lessons either in-person or utilizing virtual meeting platforms to conduct more in-depth evaluations of program effectiveness such as interviews, surveys, focus groups and to follow up on any questions on assignments
- Work with more groups on youth-led, environmental research studies to gain a better understanding of the needs, concerns and interests of the students and communities we serve

We aim to undertake a **complete curriculum revamp** by updating each module's learning objectives to include current events and issues of emerging concern.



Kids Ocean Day (California Coastal Commission Program)

- This is an annual one-day event where 1,500 students, after having an in-school assembly on ocean stewardship conducted by Coastkeeper, come to a beach with their classes and teacher to pick trash from the beach, pose for an aerial art message and have lunch.
 - Gift each student a Reusable Resource Kit including a reusable water bottle, reusable utensils and plastic pollution fun fact card
 - Have learning stations at the beach run by Coastkeeper staff and partners to create a festival-type event
 - Partner with LA Waterkeeper to host Kids Ocean Day events in Long Beach

Kids Care (Elementary Students Watershed Education)

- Create a module series like WHALES with multiple locations each one with the purpose of teaching how pollution, especially plastic, affects humans and the natural world.

- Currently: Marine Debris Assembly and Beach Cleanup Field Trip
- Potential Additional Locations and Virtual Follow Up Activities:
 - Pacific Marine Mammal Center
 - Bolsa Chica Wetlands
 - Tide pools
 - Local Channel near their school
 - Virtually-led School Cleanup
 - Gift each student a Reusable Resource Kit including a reusable water bottle, reusable utensils, and plastic pollution fun fact card

Adult Workshops

- Coastkeeper will conduct community forums on topics of interest and topical issues the public should know more about with provided take-home or QR code downloadable resources (how to recycle right, composting at home, sewer vs. storm drain system, how to reduce urban runoff, the impacts of contaminants such as PFAS, alternatives to the use of plastics, etc.)
- Climate Resiliency Workshops in communities at high risk of

- infrastructural damage from the negative impacts brought about by climate change
- Litterati—Ultimate vision would be for the Waterkeeper Alliance to create a database for all of our organizations to input trash data that tracks amount, types and even brands (We can utilize this data for policy and advocacy)

Cleanup Programs

- Coastkeeper will host and promote both corporate and public cleanups
- Corporate cleanup: Coastkeeper will host a cleanup with a corporation's employees participating. The coordination and managing, licensing, tools and materials, record keeping and other service options will be provided by Coastkeeper.
- Public cleanups: Weekly cleanups at various creeks and beaches throughout the County utilizing a team of highly trained designated volunteers
 - Laminated signage with QR codes to directly donate to Cleanup OC
 - Laminated signage with QR codes to signup & become a Coastkeeper member

- Laminated signage with QR codes to signup for training to become a committed volunteer ("OCCK Keepers Team")
- Track data generated from trash types, volumes and utilize it for policy and advocacy
- Create signage and social media posts from our data for education & outreach
 - Signage on a changeable surface such as a designated whiteboard, updated weekly with our cleanup stats for volunteer engagement (similar to Palos Verdes gray whale census)
- Have a downloadable "Plastic-Free July" guide for our community to access to year-round on our website
 - Highlight brand products on Coastkeeper's online boutique; will be products that are sustainably produced, offer a smarter way to conduct daily life and will be state-of-the-art (each will be delivered with a Coastkeeper logo or brand)

We aim to conduct community forums on **topics of interest and topical issues** the public should know more about.

Legal Advocacy

Coastkeeper operates a multi-tier advocacy program. Through collaboration, Coastkeeper's positions on issues and perspectives are advocated in board and conference rooms, through meetings, workshops, and public hearings. **Our advocacy is backed by documented facts and science.** Coastkeeper promotes clean water laws and rigorous compliance. The second tier is to investigate non-compliance and illegal discharges from industrial sites and public facilities throughout Coastkeeper's jurisdiction. Evidence is collected, management is advised of non-compliance issues and asked to voluntarily remediate on-site problems. The third tier is Coastkeeper filing legal actions in federal court for Federal Clean Water Act violations.

Establish A Waterkeeper Law Firm:

- Create a law firm to represent Coastkeeper and its associated programs public interest litigation and other environmental NGOs
- Open locations in each region, including Orange County, Inland Empire, and Coachella Valley
- Expand specialty practice areas to include Safe Drinking Water Act litigation, Resource Conservation and Recovery Act and public access issues, including Coastal Act litigation in addition to Clean Water Act litigation
- Establish an environmental law clinic in partnership with local law schools that work exclusively with Keepers

Environmental Sciences and Engineering

Staff Scientist

Create a staff position for an environmental scientist to assist in:

- Developing policies on pollution source reduction issues;
- Consulting with legal department on environmental effects of pollution;
- Consulting with the advocacy and policy department to ensure Coastkeeper position is consistent with modern science.

Staff Engineer

Create a staff position for an engineer to assist in:

- Consulting with litigation department to make sound pre-litigation recommendations for Clean Water Act litigation
- Work with policy and advocacy department on green infrastructure initiatives
- Assist with comment letters on flood control projects, California Environmental Quality Act (CEQA) and National Environmental Protection Act (NEPA) project alternatives, other development projects
- Assist with all Keeper GIS needs, which may include:
 - Detailed mapping of industrial polluters
 - Mapping pollution in the context of identifying disadvantaged communities
 - Produce materials for Coastkeeper's advocacy of drinking water supplies and groundwater contamination



Marine Restoration

Restoration—expand habitat restoration projects via collaborating partnerships that are doing different types of restoration in OC, such as kelp forest (Get Inspired), dune habitat (OC Habitat), coastal sage scrub/ riparian (Laguna Canyon Foundation) and coastal wetlands (Tidal Influence)

- Conduct more monitoring of our restoration sites to track progress and demonstrate the ability of seagrass and oyster restoration to buffer from effects of ocean acidification and shoreline erosion, e.g. GIS, continuous data loggers and in water sondes; which would collect information on water chemistry (temperature, pH, dissolved oxygen, etc.)
- Begin collaborative, coast-wide oceanographic monitoring for ocean acidification and harmful algal blooms (we have written a proposal with other Keepers for a joint program to conduct monthly open ocean monitoring)
- Collaborate with Orange County Sanitation, SCCWRP, City of Newport and others on Newport Bay wide monitoring of oyster populations, eelgrass and water quality

- Increase our capacity to conduct more open ocean work—promote a volunteer diver effort to track and restore giant kelp; potentially through urchin removal efforts, invasive sargassum removal and partnering with local dive operators
- Promote more in water marine debris removal, volunteer SCUBA underwater cleanups and kayak and paddle board volunteer cleanups
- Develop a long-term oyster shell recycling effort with local restaurants and become a source for recycled oyster shell for restoration projects in Southern California
- Expand restoration efforts to include more programmatic, entire watershed efforts (i.e. larger oyster restoration sites in more areas, include stream and riparian restoration, partner to work upland to promote native plant restoration, potentially add beach and dune restoration)





PART 4

HOW WE'LL GET THERE



Purpose

Orange County Coastkeeper needs to carry out the actions below to achieve its goals for the next 20 years.



Goals

With a strong foundation built, Coastkeeper can reach the goals outlined in the State of Your Water report.

Board of Directors' Diversification

- The diversity of the Board of Directors should reflect the region served
- The Board will grow to an appropriate number of members to effectively govern and benefit the organization
- Board members should reflect the demographics of the region Coastkeeper and its programs serve including:
 - Geographic diversity
 - Racial/ethnic/gender diversity
 - Professional diversity, e.g., scientists, engineers, CPAs, attorneys



Why does Orange County Coastkeeper have such a proactive and aggressive agenda to protect and restore our waterways, harbors, and coastal waters?

We view our role as essential in making Orange County, Inland Empire and Coachella Valley healthy and desirable places in which we all reside, work and recreate.

Through our education programs, we teach students environmental stewardship, especially for our natural water resources.

Our marine restoration programs bring back habitats previously lost to pollution and harmful human activity.

Our advocacy and clean water enforcement programs keep the bar high for dischargers that can and sometimes do pollute our waterways.

Our water conservation program demonstrates how we can all be smarter water users in our home landscaping and daily lives.

We can point out our work's benefits in terms of a strong and vibrant economy, a beautiful place to live, a destination for corporations to locate, and numerous recreational opportunities. Our work is not about saving a few fish or birds or trees, or picking up trash from our beaches. It's so much more than that.

Our work is about restoring and preserving our communities' integrity for our children, our future generations and all of us.

In clean water,



Garry Brown
Founder & President





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