CLEAR THE COAST

A BAND OF PASSIONATE CALIFORNIANS IS FIGHTING TO KEEP CRUCIAL WATERWAYS CLEAN

BRUNO NAVASKY JOURNEYS UP THE SHORELINE WITH THE WATERKEEPERS

For a map of the California coast featuring these 10 crusaders, pictured here at the Portuguese Bend Beach Club, in Rancho Palos Verdes, see page 87.

PHOTOGRAPH BY DANIEL MÅNSSON

The Tijuana River is a temporary river, which is to say that at times it runs dry. But when the rains come, it runs near bursting. After a healthy spring storm, tires and bottles litter the muddy banks. A refrigerator door reclines, half submerged in gray sediment. What looks like an old bathrobe hangs from the trees amid varicolored shreds of plastic bags, uninvited markers of high water. A bright yellow boom, broken free from a network of battens intended to snag larger flotsam, lies idle at the side of a catch basin in Goat Canyon. "I wouldn't necessarily touch anything here," cautions Matt O'Malley, executive director of San Diego Coastkeeper. He and 10 like-minded advocates run grassroots environmental organizations stationed up and down California's shorelines. The Waterkeepers, as these crusaders call themselves, are the closest thing to aquatic superheroes that the Golden State's got.

A mile upstream stands the border wall, arcing over Monument Mesa down to Imperial Beach, and from there into the Pacific Ocean, where it heads off roughly in the direction of Hawaii. To see the glorified fence wading out into the sea is to contemplate absurdity. The day after O'Malley's Tijuana River tour, Donald Trump arrives to squat on the mesa, crow about border-wall prototypes, and poke at California governor Jerry Brown on Twitter. Brown @'s back coolly, "Thanks for the shout-out. But bridges are still better than walls."

The Tijuana River couldn't care less about the wall. It moves freely across the border, unencumbered by anything except pollutants. The only way to deal with a problem like the Tijuana River is through cooperation. Mexico won't pay for Trump's wall, but the country does chip in for pump stations and a treatment plant to remove the worst of the contaminants before the river discharges into the ocean.

Although Governor Brown tries to keep the door open to comity, it often seems as if the president has, bafflingly, declared war on California. "Trump and [Enviromental Protection Agency head Scott] Pruitt are waging an all-out attack on the institutions and laws that protect our air, land, and water," says Jared Blumenfeld, who during the Obama administration ran the E.P.A.'s Pacific Southwest United States region, home to 50 million people. "In normal circumstances, California and the federal E.P.A. are partners. Today, California is working to defend environmental laws and values from a targeted attack led by Trump's E.P.A. and Department of the Interior."

As Trump makes his way to a fund-raiser in Beverly Hills, O'Malley and Sara Aminzadeh, the executive director of the California Coastkeeper Alliance, take me on a tour of the San Diego harbor. Aminzadeh represents 10 Waterkeeper organizations, including O'Malley's: four in Southern California, two on the Central Coast, and four in the northern part of the state. Members of the state alliance also belong to the international Waterkeeper Alliance, a network of not-for-profit water advocates—lawyers, scientists, educators, and activists—who patrol and protect more than 2.5 million square miles of rivers, lakes, and coastal waterways on six continents, each supported primarily by local contributions and grants. Aminzadeh has helped plot a journey for me, to be led by representatives of the California groups, up hundreds of miles of rivers and shoreline in a state that prides itself on leadership in our climate crisis. "You cannot be active in California and not be involved in the water-supply issue," says O'Malley.

Pollution is only one problem amid a toxic eco-system of threats to California's nearly 40 million residents (plus visitors), and to the most diverse proliferation of plant and animal species in the United States. About 20 percent of the electricity in California goes directly toward the treatment, conveyance, and use of water. This puts Southern California in a bit of a bind: there's not enough of it to drink, but to augment the supply through imports or desalination burns a massive amount of energy. So officials have to be creative about capturing and conserving stormwater. That water can be directed to new green space, put back in the ground, or—in a big green dream—recycled into potable water.

The latter may be closer to possible than many people imagine. Orange County Coastkeeper executive director Garry Brown, whose organization is another member of the alliance, advised on the planning and construction of the Groundwater Replenishment System, which turns wastewater into 100 million gallons of clean water each day, using it to refill sand and gravel basins in the Anaheim aquifer, indirectly providing drinking water and acting as a barrier to seawater intrusion. The system won the Stockholm Industry Water Award, a sort of Nobel Prize for water-conservation projects, in 2008. In O'Malley's district, the Pure Water Project is in its initial stages at the Point Loma Wastewater Treatment Plant. It is the largest wastewater-recycling project of its kind in the country, and he hopes it will eventually allow San Diegans to go Orange County one better and obtain up to one-third of their drinking water directly from the plant. Brown says that his county and others are working on wastewater recycling as well. "There's competition now, and it's going to be a race to see who's first." These are just a few of the measures Orange County is taking to secure its water supply for residents and wildlife. To foster fish habitats in Upper Newport Bay, Brown's team has planted eelgrass and oyster beds, which serve as water filters.

Such projects are crucial to Southern California's 23 million residents, almost half of whom live in Greater L.A. "Los Angeles is just a beast," says Bruce Reznik, executive director of Los Angeles Waterkeeper, noting that its population is bigger than that of all but a handful of states. Reznik compares his work to treating a patient: "The first step is triage—identify the problem and stop the bleeding. Then you nurse the patient back to health. But the most important thing is changing the behaviors that got you there in the first place. So a lot of what we focus on is trying to stop the flow of pollution." Reznik spends much of his time advocating for stricter discharge permits, suing violators for releasing toxins into the water, and hounding local agencies to enforce existing laws against polluters.

Reznik and his colleagues to the south preside over heavily urban environments and by necessity look inland, at industrial polluters and other contributors to filthy storm runoff, but they also employ a variety of staff and volunteers to monitor and restore local marine habitats. The value of this work becomes intensely apparent as you work your way up toward the Central Coast. Santa Barbara Channelkeeper executive director Kira Redmond explains that the amazing diversity of local marine life is courtesy of a transition zone between a cool northern current and a warm southern one, making the channel a unique and nationally recognized home to numerous endangered or threatened species, including blue, gray, and humpback whales.

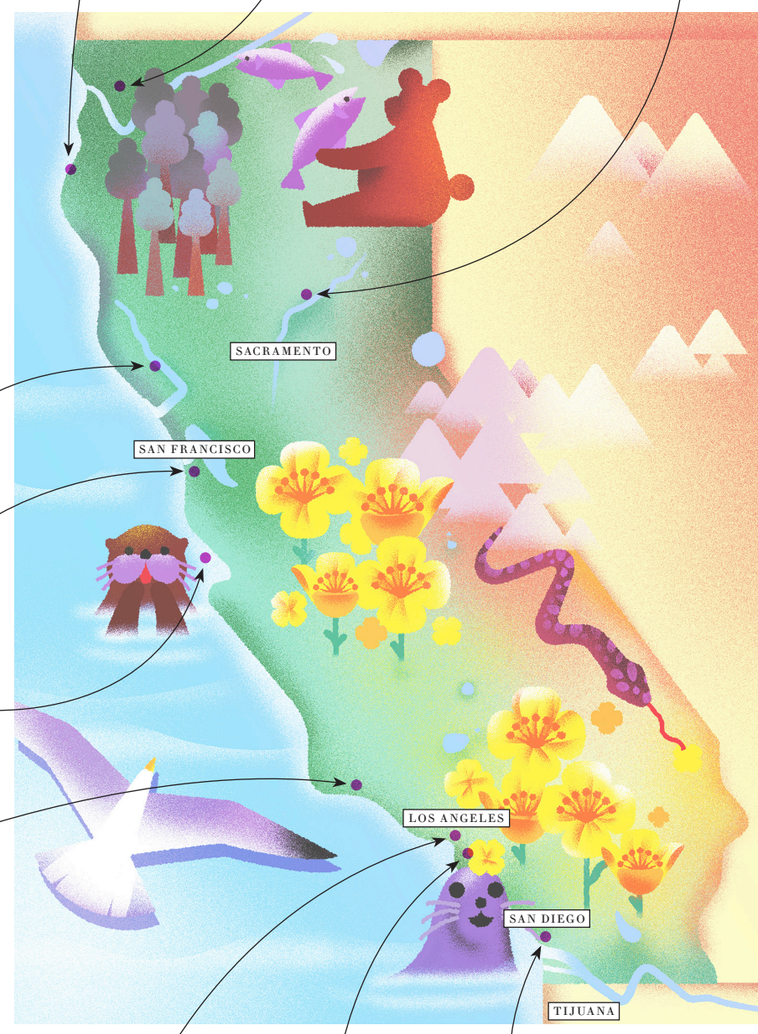
Redmond takes me out on a boat with Ben Pitterle and Penny Owens, directors of Santa Barbara Channelkeeper's marine and education programs. As we pass an oil rig, the ocean smells like a gas station. But it turns out that the fumes are from raw petroleum, which occasionally seeps up naturally from the seabed. Another challenge for Redmond and her Channelkeeper colleagues: Santa Barbara is a historically oil-rich area.

In 1969, national outrage over a massive oil spill off the Santa Barbara coast led to the creation of the E.P.A., the Clean Water Act, the Endangered Species Act, and other laws that the alliance relies on. Recognizing that the government might not have the resources to identify or prosecute polluters, the Clean Water Act allowed for citizens to sue offenders if their local waters were directly affected by pollution, and to be reimbursed for legal fees if they won. This provided a baseline for the work of the first Waterkeeper organizations.

At the upper end of California's Central Coast, Steve Shimek, founder of Monterey Coastkeeper and chief executive of the Otter Project, is putting animals to work. Otters in the eco-system make everything better. The whiskery creatures eat about a quarter of their body weight every day—they're naturally fidgety but svelter than seals and sea lions, so they need to burn a lot of calories to stay warm. A favorite carnivorous delicacy: sea urchins, which in

STATE OF CHANGE

California's Cast of Keepers



PAGES 84–85: STYLED BY JILLIAN ATUN; HAIR, MAKEUP, AND GROOMING BY DAVIA MATSON; SET DESIGN BY ROBERT DORAN; PRODUCED ON LOCATION BY ANNEE ELLIOT; FOR DETAILS, GO TO VF.COM/CREDITS

MAP BY SIMONE NORONHA

SAN DIEGO
Sea lions bask in San Diego's La Jolla Cove.

POINT LOMA
A wastewater-treatment plant is situated west of San Diego.

THE PACIFIC
The Klamath River empties into the ocean.

KLAMATH
Toxic algae blooms flourish behind a Klamath River dam.

"California is working to defend environmental laws from a targeted attack led by Trump's E.P.A."

turn eat kelp. No otters means too many urchins and not enough kelp. When the kelp goes, the little fish follow—it's their shelter from predators—and the big fish go where the little fish do. Put the otters back in the equation and the sea-urchin population drops, the kelp re-grows, the little fish come back, the big fish behind them, and you have an eco-system that's not only a thing of beauty and wonder, but one that sustains commercial and recreational fisheries.

But agricultural runoff poses a major problem for sea otters. Pesticides and fertilizer flow from fields into drainage channels to the ocean, where they compromise otter immune systems and nourish toxic algae blooms. Shimek led a coalition including Santa Barbara Channelkeeper, the Stanford University Environmental Law Clinic, and environmental and fishermen's organizations in a lawsuit that forced the state of California to regulate agricultural runoff. Another lawsuit, against Monterey County, to force proper collection and treatment of water, is ongoing. Shimek says he's more interested in working toward systemic change than in suing polluters. He is also fighting for controlled shipping lanes to avoid oil spills in protected areas, for timely and enforceable accountability for spills, and to restrict development of oil rigs in potential otter areas. Shimek, who has been doing this work for 20 years, is proof that anger can be a catalyst. "I was winding down," he says, "but Mr. Trump can be quite an energizing force."

Farther north, I meet back up with Sara Aminzadeh, the alliance director. Aminzadeh's office is in San Francisco, but she spends much of her time in Sacramento, California's capital, tracking legislation or policy developments for her members. Today she's seeking sponsorship for a resolution to establish a "vision for state action on coastal and ocean adaptation measures" in preparation for a climate-change conference this September. She also drops by the office of Kip Lipper, a chief adviser to the California Senate leader, Democrat Kevin de León, to track progress on Senate Bill 49, introduced by de León, which would implement clean-air-and-water protections at the state level as a firewall, in case federal regulations are rolled back. The Coastkeeper Alliance worked with de León's office and the indispensable Natural Resources Defense Council to draft the bill, which has passed the state senate and is now being considered by the assembly.

If Southern California worries about water supply, Northern California worries about water demand. The region holds the vast majority of the in-state freshwater resources for the entire population—and everybody wants some. What's more, the need for drinking water throughout the state is dwarfed by the thirst of agriculture. Dams that were created to generate hydroelectric power now serve to hold the water in place, so that it can be negotiated over and shipped out. The map of diversions on rivers and creeks looks like a child's first macramé project. In terms of pollution, mining and the timber industry are the big offenders.

Russian Riverkeeper executive director Don McEnhill and Melinda Booth, who runs the Yuba River Waterkeeper project, are both involved in riverbank restoration with gravel-mining companies. Mining has channelized California's Russian River, destroying fish habitats, floodplains, and groundwater resources, while re-introducing older mining pollutants such as mercury to popular recreational and fishing waters. After years fighting to revoke violators' mining permits, McEnhill, who grew up swimming in the Russian River in Healdsburg, north of San Francisco, is now working with a former polluter to remediate the damage. In Nevada City, where the Yuba River Waterkeeper project is based, Booth is getting ahead of the game by partnering with mining companies. Though that relationship may seem adversarial, both parties have found benefits. The Waterkeepers want the gravel removed in order to restore floodplains and fish habitats; the mining companies remove it gratis, and sell the gravel for cement.

The Russian River is a weekend destination for San Franciscans; a branch of the Yuba, in the foothills of the Sierra Nevadas, is one of California's official "Wild and Scenic" rivers. Encouraging healthy use is important to their caretakers. McEnhill helped create Riverkeeper Stewardship Park, an educational green space with ecological displays, a teaching area, and a riverside walking path; the Great Russian River Race gets locals competing in canoes, kayaks, and stand-up paddleboards—a party to celebrate the river; the Yuba Riverkeepers send out River Ambassadors to welcome recreational visitors with information about the river and watershed.

A few hours north, Humboldt Baykeeper director Jennifer Kalt runs tours of the bay by boat or kayak, and promotes the local sustainable oyster farm Hog Island. "I know people feel really overwhelmed, but if they just focus on the one issue they really care about they can make so much of a difference," says Kalt. "And hopefully kids will learn that kind of grassroots advocacy where you can become an expert on one place, or one type of organism, and really advocate for that, whatever it is, whether it's abused dogs or butterflies."

I don't see that any more clearly than on a visit to Requa, California, where the Klamath River exits into the Pacific Ocean after running 253 miles down from Upper Klamath Lake, in Oregon. Crossing the river near its mouth, you enter Yurok land, signified by a welcome sign and majestic golden bears flanking the bridge. The Yurok are one of several tribes with ancestral lands in the Klamath River Basin. Konrad Fisher, a former executive director of Klamath Riverkeeper, has invited me to dinner with Ashia Grae Wolf Wilson, a member of the Klamath, another tribe, from Chiloquin, Oregon, on the upper end of the river. Wilson is co-founder and chair of the Klamath Tribal Youth Leadership Council, where she organizes educational and cultural programs as well as community-service projects. Wilson was born in 2002, the year that tens of thousands of salmon, along with other fish, died in the Klamath River due to insufficient water flows from dams. The resultant outcry sparked a movement, still in progress, to undam the river. "I was always taught that a healthy river equals a healthy community," Wilson says. The Klamath tribe call themselves E'ukskni, which means "people of the lake." She continues: "I never knew the Klamath River while it was healthy enough for our traditional fish and animals to be able to be supported and thrive in it."

Wilson holds dear traditions like the *c'waam* ceremony. The *c'waam* (pronounced "chwahm") is a type of sucker fish—found in the Sprague River, part of the Klamath watershed—that carries spiritual significance. "Those are our ancestors," says Wilson. "They're our people, our spirits." Annual ceremonies used to feature racks of thousands of *c'waam*—Wilson's father told her the river once ran purple with them—which tribes would bless and then smoke, feasting on them through the winter. In a recent ceremony three fish were brought in, two returned to the water, and one cremated as an offering. "They're most likely not going to make it," Wilson says, moved almost to tears. "But the fact that salmon are going to be able to return gives me hope."

Salmon need fast, cold water flows to survive. Dams slow the water and warm it, and also create breeding pools for toxic algae blooms. A group of community stakeholders—representing native people; commercial and recreational fishermen; environmental organizations; agricultural interests; the two states the river runs through, California and Oregon; and even the dam operators themselves—eventually came to an agreement on water sharing and dam removal that seemed to offer at least the possibility of a restored Klamath River. When the Republican-led U.S. Congress declined to support the removal by the agreement's 2015 deadline, the governors of California and Oregon stepped in to commit the necessary funds. But in a complicated approval process, the new agreement unyoked the issues of dam removal and water supply. The Trump administration is now pushing a plan to prioritize water for agriculture in California's Central Valley, leaving an impending battle over water rights that will endanger all the careful work of local stakeholders.

Dale Ann Frye Sherman, a Yurok elder, is Wilson's partner in this fight. Their tribes are from opposite ends of the river, a day's drive apart, Sherman here in Requa, and Wilson across the border in Oregon. They speak different native languages and have different traditions, but share a connection with the river and its creatures. Place matters deeply to the Klamath Riverkeepers, and to all of the members of the California Coastkeeper Alliance. The work they do is defined and driven by community needs. At the same time, the nature of water issues seems to require that they regularly take the larger view, tracing the water flow up into the watershed, to state lines, or even across international borders. And this in turn demands that they take on leadership roles within their communities: not just on pollution but on water conservation, on climate change, and on a just approach to water rights. As Jerry Brown reminded Donald Trump, sometimes bridges are better than walls. □

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