TROUT

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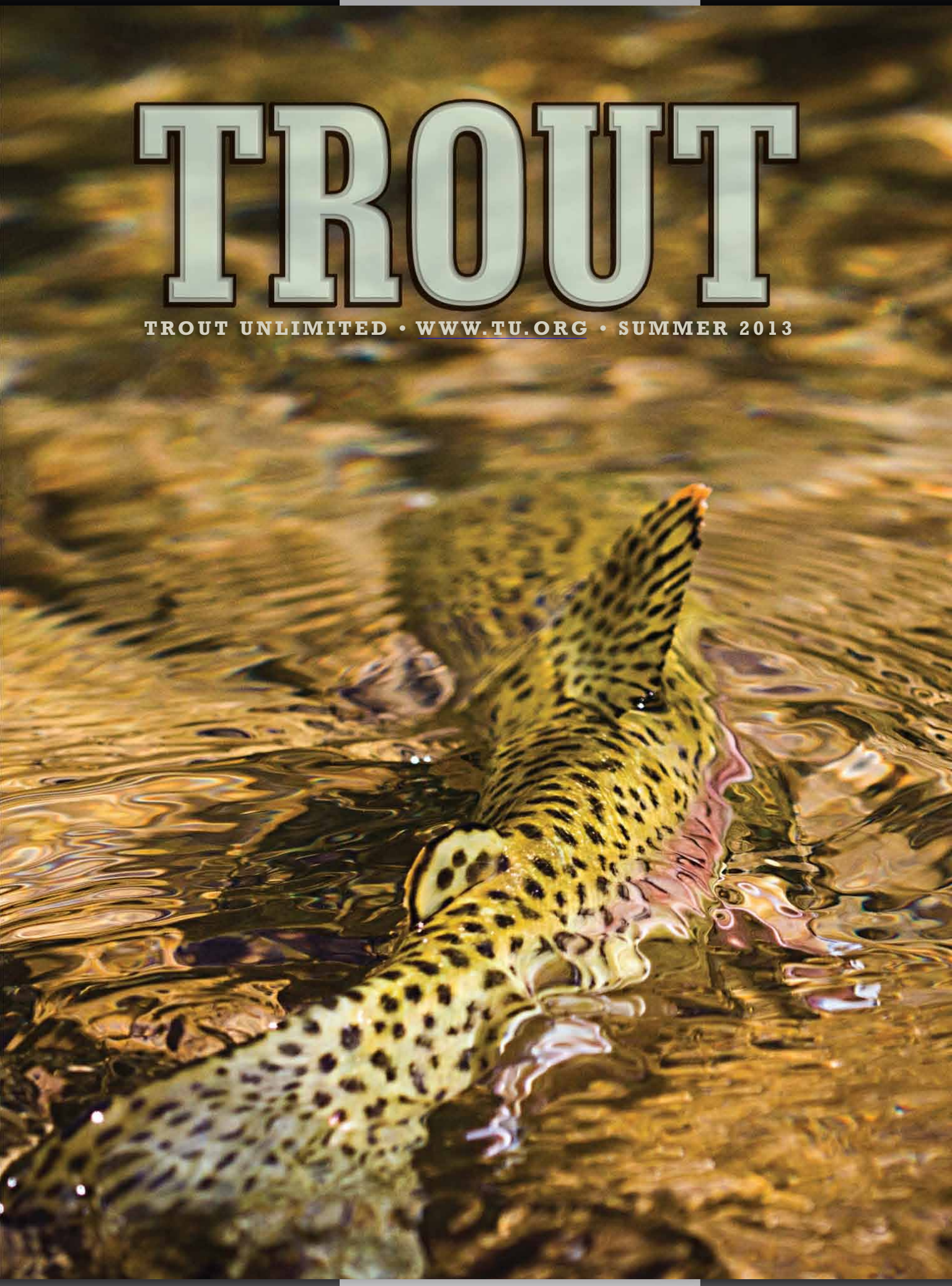

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Wine, Water, Fish and People

In California, They Go Well Together.

BY DAVE STALLING

John Mazzera's grandfather started farming along the banks of Grape Creek, high above California's Russian River, in 1948. John took over in 1960 at the age of 16. At first they grew apples, prunes and kiwis, but grapes eventually became more profitable. John continues to grow zinfandel and merlot.

"In the 1950s and 1960s I used to sit beside the creek and watch steelhead jumping up over the waterfall," John recalls.

Like many farmers in the area, the Mazzeras used a flashboard dam in the creek to store and divert water for irrigation and frost protection. For most of the farm's existence, it wasn't an issue. That was before Central California Coast coho salmon were listed as endangered under the federal Endangered Species Act and the Central California Coast steelhead trout were listed as threatened. It was before state and federal agencies were required by law to figure out ways to keep more water in creeks for salmon and steelhead and the needs of fish often became pitted against the needs of farmers. It was before water diversions from creeks to protect crops from spring frost became front page news, and before such water use became a contentious, sometimes bitter and litigious issue.

But John Mazzera took a different approach.

With assistance from the Russian River Coho Water Resources Partnership and the California State Coastal Conservancy, he had a pond built that fills up partly by winter rains but mostly by pumping water from the ground, storing enough water to meet his needs while eliminating the need for removing water from the creek. The project also included streambank and wetlands restoration.

"I had to do it," John says, "but I like it a lot better."

As with most projects of such magnitude, the effort received support from a long list of partners, including Sotoyome Resource Conservation District, Center for Ecosystem

Management and Restoration, Gold Ridge Resource Conservation District, Occidental Arts and Ecology Center's WATER Institute, University of California Cooperative Extension/ California Sea Grant, National Oceanic Atmospheric Administration, California State Coastal Conservancy, Natural Resources Conservation Service and their Environmental Quality Assistance Program, U.S. Fish and Wildlife Service, Sonoma County Water Agency, and National Fish and Wildlife Foundation. The coalition crafted a 10-year investment "business plan" approach that has measureable outcomes based on the best science.

The project is part of a larger, collaborative effort to test approaches that break through the stalemate and distrust that regularly characterize water diversion, water rights, and streamflow in coastal streams by identifying and developing high priority and technically and socially feasible projects that benefit fish and people. The Russian River watershed was a good place to start.

At 110 miles long, the Russian River begins in the north coastal Laughlin Range near Redwood Valley, runs south into the wine country of Sonoma County, and then makes a sharp bend westward towards the Pacific where it joins the ocean between Jenner and Goat Rock Beach about 60 miles north

LEFT: COREY KRUITBOSCH, ABOVE: JIM YUSKAVITCH

Central California Coast coho salmon were listed as endangered under the federal Endangered Species Act and the Central California Coast steelhead trout were listed as threatened.

of Golden Gate. The Southern Pomo called it "Ashokawna," meaning "water to the east" and "Bidapte," meaning "big river." Archeological evidence of native fishing camps exist throughout the Russian River watershed, including along the banks of Grape Creek. The river got its current name after Russian explorer Ivan Aleksandrovich Kuskov traveled up the river in 1809 and later established the Fort Ross Colony which drew numerous settlers to the fertile soils, seals, beaver and sea otters.

And fish. There were lots of fish.

Coho salmon and steelhead were abundant. But by 2001, coho salmon had dwindled to less than four returning spawners per year, serving as a catalyst for the Russian River Coho Salmon Captive Broodstock Program—a recovery effort in which coho salmon are bred from local genetic stock and are released into the river. By 2013, an estimated 496 adult coho returned to the Russian River watershed during the rainy season.

Grape Creek is among several creeks considered "high priority" for ongoing recovery efforts and low streamflow is considered a critical limiting factor in the survival of salmon and steelhead in the Russian River watershed. While typical winter rains swell up the rivers and creeks enough for salmon and steelhead to reach their spawning grounds and return to the ocean, summers are dry and often enough water is drawn from the rivers during the dry season to make it difficult, if not impossible, for growing salmon to survive. Keeping water in the river is no easy task.

California's complicated system of water right administration frequently fails to protect water users as well as salmon and steelhead, and it discourages innovative efforts to restore and protect stream flows. As a result, the system often pits various interests against each other and breeds conflict and contention.

A 2012 report summed it up this way: "The topic is emotionally charged

Below: A man-made holding pond for collecting groundwater and rainfall.

Right: Grape Creek.

Far Right: The mouth of the Russian River.

MICHAEL CARL

and technically complex and it is not for the faint of heart." Fortunately, the landowners along Grape Creek are not faint of heart.

"Grape Creek serves as a working model of how a neighborhood can come together to restore, reconnect and sustain wild salmon, steelhead and their watersheds," says Mary Ann King, who heads up the Water and Wine program for TU in California. "Through their commitment and leadership, and with a lot of help from sound science, we've been able to develop solutions that address water and streamflow issues and produce major benefits for fish and water users. In California, that's no small feat."

Much of the Russian River's floodplain includes vineyards, and in 1983 a significant part of the Dry Creek area, including Grape Creek, was approved as an American Viticultural Area, a federally designated wine and grape growing region distinguishable by geographic features. That's the same year Gio Martorana's family first purchased vineyards along Grape Creek—a business that has since grown into the Martorana Family Winery. He was nine years old at the time.

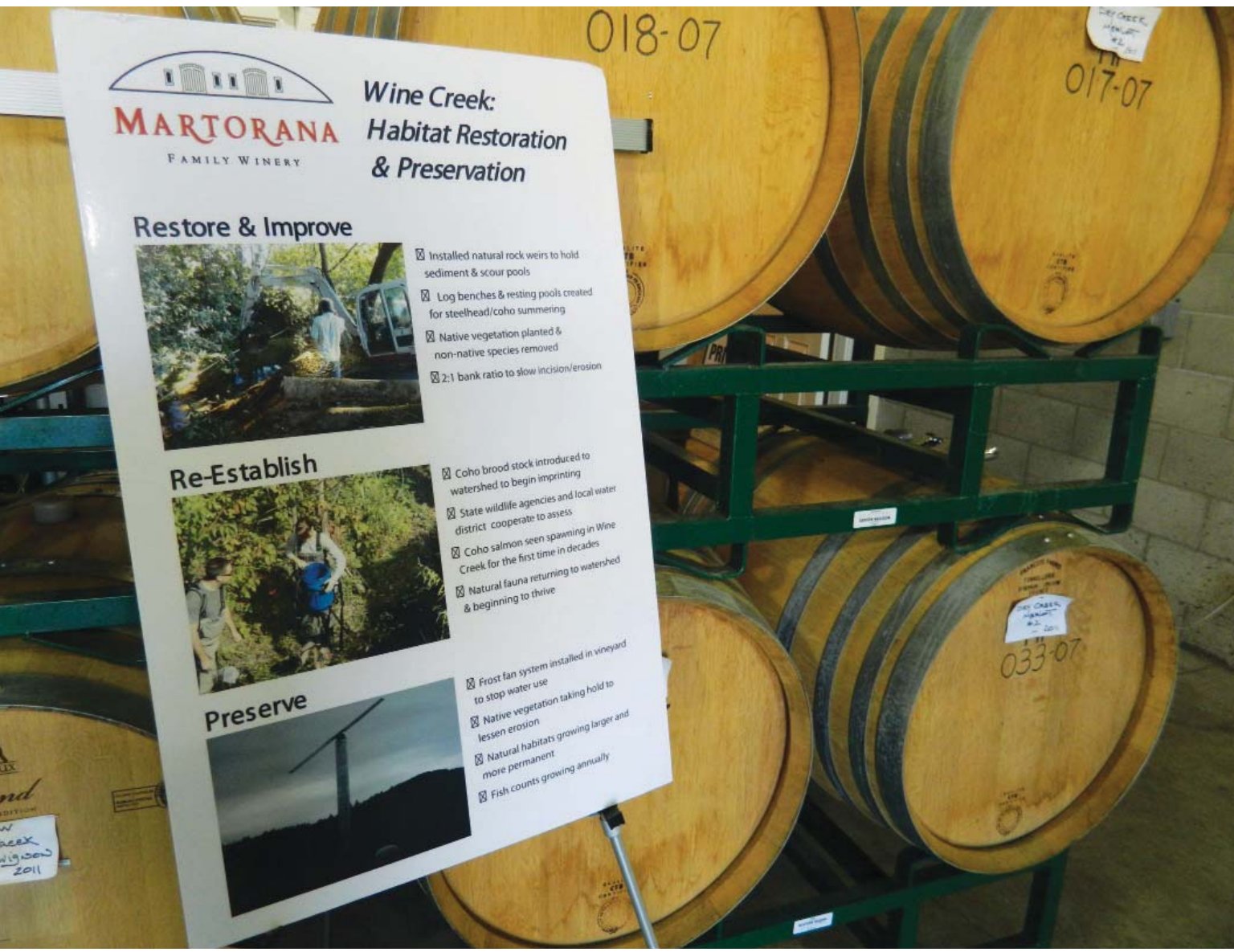
"My mom and dad used to picnic up at the end of Dry Creek," Gio recalls.

California's complicated system of water right administration frequently fails to protect water users as well as salmon and steelhead, and it discourages innovative efforts to restore and protect stream flows.

"They liked it here so much they bought land and started growing grapes." Gio remembers spending a lot of his childhood days playing in the creek, catching fish, and seeing crawfish and turtles. "There seemed to be everything," he said, "and then it all slowly but surely went away, and so I started paying more attention to what was going on in the creek and what we could do about it." He said he decided to make changes in management methods that would be "better for the creek and better for people" because "it's the right thing to do."

Like many of his neighbors, it's an altruistic attitude Gio has brought into his family's land management and efforts to improve the creek for salmon and steelhead, working cooperatively with organizations and agencies to conduct stream and streambank enhancement projects, establish fish and water monitoring projects, remove barriers that used to block fish migrations, and find ways to keep more water in the creek during critical times of year. One of his efforts includes construction and use of a large fan (put in place with assistance from the Coho Water Resources Partnership and National Fish and Wildlife Foundation) that keeps air moving around his vineyard to prevent spring frost damage to grapes instead of using water drawn from the creek to spray the vines. "The fan works great for frost protection," Gio says, "and we haven't seen any damage in these first years of use."

The efforts are paying off. "I've seen a lot more fish these past few years," Gio says. "And we get a lot of people stopping by our winery and our tasting room, particularly fishermen, thanking us for what we do, and telling us they really appreciate it." Gio himself is an avid angler, and has fished in Argentina and Baja but loves searching for trout in the Sierra.



Like John Mazzera, the Rowans also had a pond put in with assistance from NRCS and their Environmental Quality Assistance Program. Water used to fill the pond comes from rainfall and groundwater. While this more reliable source of water relieves Mike of some economic worries, he's also enthused by the fish he often sees. "It's common to see steelhead fry in the creek, and sometimes coho," he says. Recently he watched a large female steelhead attended by a male during spawning season.

Mike and his wife Mary Pat like fish and fishing so much that they take their vacation each year to fish for trout in and around Yellowstone National Park in Montana and Wyoming. "Trout fishing takes you to the most beautiful places in the world, and you meet the greatest people," Mike says. It's a connection and appreciation that drives his management of his land along Grape Creek: "Whatever potential this creek has for salmonids, it's still there; we're doing what we can to bring it back and keep it that way."

Grape Creek is just one of 10 coastal California watersheds that TU is working in to test the belief that it is, indeed, possible to improve streamflows in a way that benefits fish and landowners in this collaborative manner.

Of course, landowners can only be altruistic to a point. "This is something we certainly do out of belief, but we also have to pay the mortgage," says Mike Rowan, who moved to Sonoma County in 1958 and, along with his wife Mary Pat, has been growing his own grapes in the Grape Creek watershed since 1978. "But we are seeing a whole general shift in consciousness, a whole different mindset. There was a time we thought things were abundant and always would be, but now we know that's not the case and so we're developing a better sense of respect for the land and awareness about the native flora and fauna around us. A collective effort has emerged."

And the Mazzeras, Martoranas and Rowans are not alone. "We have a diversity of neighbors from all walks of life and from every point of view pitching in," Mike says. These efforts include allowing access for streamflow gauges, installing roof antennas to allow internet access, habitat restoration, marketing efforts, tourist days with wine tasting and fish genetics, broodstock reintroduction and monitoring, posting YouTube videos of fish spawning, bank layback and road projects, riparian planting, winery water conservation, frost fan installation, culvert modification projects, retrofitting bridge crossings, and changing water infrastructure and how diversions are managed. Some, like Quivira Vineyards, downstream from the Rowans, were so inspired by their restoration efforts they created a wine celebrating the work. The label reads:

"... This wine honors the commitment to restore the steelhead and salmon habitat on our estate. ... We hope that Wine Creek will once again be home to thriving populations of steelhead and coho salmon."

Grape Creek is just one of 10 coastal California watersheds that TU is working in to test the belief that it is, indeed, possible to improve streamflows in a way that benefits fish and landowners in this collaborative manner. They span from Humboldt County to the Russian River to the San Mateo Coast to San Luis Obispo. And TU is one of a handful of organizations working with a growing number of landowners—farmers, winemakers, flower and alfalfa growers, homeowners, and summer camps—to make a difference for fish.

These relatively quiet, behind-the-scenes efforts rarely make news headlines like divisive, contentious battles often do—but they do result in critical, on-the-ground (and in-the-river) changes that benefit salmon, steelhead, landowners and businesses.

"We can find meaningful and durable solutions for fish when communities are motivated and engaged in the conservation issues and work," says King. "We are very fortunate to be working with so many dedicated landowners, and as people see what others have accomplished, I hope more and more folks want to get involved. That's good for all—people and fish."