Forest & River News

Grassroots Conservation & Restoration in the Redwood Region
Trees Foundation
Summer 2022

Living in Harmony

Small Actions Can Make Big Impacts

- Revitalizing Wailaki Cultural Practices
- The Little Things Matter Most: Preparing Your Home for Embers from Wildfires
- A Tree Canopy for Every Park, School, and Yard
- 24th Annual Coho Confab on the SF Eel River

Editor's Note

Summer is finally here, and with an abundance of warmth and sunlight comes a time of vigorous growth from what were once humble beginnings. We are delighted to bring you many stories of our partner groups and their projects that, despite their recent inceptions, have blossomed into full fledged organizations and movements here in the redwoods of northern California and southern Oregon.

In these turbulent times, it is vital to recognize that every movement starts with a small determined group of people, eager to make a difference. But above all, it takes a willingness to learn, an openness to perspectives both new and old, and an infectious enthusiasm that stimulates growth and nurtures longevity.

In this issue you will find news from new groups like ReLeaf Petaluma, which has already planted hundreds of native trees in its first year, to the efforts of established organizations like EPIC and Sanctuary Forest to defend and restore river habitat for native fish. While it is increasingly clear that our places in which we live are struggling, what is less clear is a vision of what a thriving community of people and land together looks like. Fortunately, there are many answers to this question, just as there are many groups striving to make them a reality. Each group and author featured here is attempting to solve one small part of the greatest puzzle of our time, how to live in harmony.

We hope that these stories of successes and struggles will instill in you a sense that community is not just a gathering of people or a place, but how we interact with that place as a people. We each have a responsibility to our community, a duty to leave our place better than we found it, and in the process we enrich our own lives as well.

For the wild,

Jeri Fergus, Mona Provisor, Kerry Reynolds, and Mitchell Danforth

Cover photo: Participants enjoying a day of hands-on learning and skill sharing at the Plant Walk and Ancient Skills workshop organized by Native Health in Native Hands on June 2nd at Tooby Park in Garberville. See page 12 for details.
Photo by Kerry Reynolds

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"Stacking" Restoration Strategies for Greater Impact on Water Flows in the Mattole

Understanding the Complicated Relationship of Hydrology and Geology

By Anna Rogers, Sanctuary Forest, Inc.

Since 2002, when the community called upon Sanctuary Forest to help address low-flow problems in the upper Mattole, we've been busily applying ourselves, trying different strategies to reduce the effects of drought and legacy impacts. We've worked closely with the community over the years to reduce direct human impacts on water use through our growing Storage & Forbearance Program, officially launched in 2007. Our participants now number 34, and they store approximately 2 million gallons annually, and there are also many community members who participate unofficially. When conserving the water above the surface wasn't enough, we realized that we must also try to improve the water we don't see—the groundwater. What goes on beneath the surface is inextricably related to the river and all that we see above the surface.

A completed log weir (left) and beaver dam analog (right) in the South Fork of Lost River.
All photos this article courtesy SFI, unless noted

Groundwater is just that—water in the ground. For something that is invisible, we depend on it a lot: 51% of drinking water for the U.S. population comes from groundwater, and 99% of the rural U.S. population relies on groundwater for their drinking supplies.[1] If you get your water from a spring or an aquifer, you're using groundwater. But sometimes groundwater gets depleted from overuse or being unable to "refill" due to drought, and the conditions that normally retain some of that sponginess can affect how well the ground recovers. This is what we see in the Mattole River watershed: the capacity of the land to hold water has been deeply affected by legacy land-use impacts such as logging, road building, and the removal of wood from the streams. The loss of wood in the river has caused streambeds to become incised (downcut to bedrock) and disconnected from floodplains. All of this affects the way that water moves across the landscape and at what speed. For groundwater recharge to occur, "we need to teach running water how to walk," to paraphrase Jasper Oshun, Assistant Professor of Geology at Cal Poly Humboldt.

Groundwater recharge is a term we use a lot around the Sanctuary Forest office. In order to recharge groundwater levels and restore salmonid habitat, we have been adding wood back into the streams. Unanchored and anchored log structures, log and boulder weirs, and beaver dam analogs help to slow down the movement of the water, raise the level of the water, and spread it out onto the historic flood plain where it can sink into the groundwater. We have also been using another strategy to help improve groundwater storage—off-channel ponds that are lined with a mixture of clay and native soil so that the water naturally seeps out throughout the dry season.

Big Things start with Small Steps

The thing about accomplishing big things is that it almost always starts with small steps. For Sanctuary Forest, we've found success in our restoration projects by implementing what are called "pilot projects." These are small-scale projects that are used to show how effective a particular strategy might be on a larger scale. We monitor the effectiveness of the project, weigh the success, and make

1 Source: *www.groundwater.org*

Tasha McKee and Bryce Howe measure pools in the North Fork of Lost River.
Photo by Ash Brookens

changes based on adaptive management needs. Of course, we want to implement projects that are going to be effective, but more importantly, we want to make sure that we are aiding the natural processes already in place, and when possible, assessing how the landscape might have looked before. If a historic floodplain can be reconnected to the stream by raising the level of the water and associated groundwater level, then we're repairing a natural system that is already in place—and we're more confident of the success of the project.

We've completed several pilot projects in Lost River, and in Baker and McKee Creeks, and have seen small successes. But what we're attempting now is what we're informally referring to as "stacking"—using multiple strategies in one project in order to have a bigger impact. The North Fork Lost River Flow and Habitat Enhancement Project, funded by the Wildlife Conservation Board for $2 million, does just that. This project will utilize two important strategies: 1) increased runoff detention and groundwater storage, providing streamflow benefits that mimic the natural hydrologic cycle, improving late spring and early summer flows; and 2) increased surface water storage with metered flow to augment late summer flows. Increased groundwater storage is achieved through raising the streambed and connecting floodplains. A total of 3,055 linear ft. is designed with channel-spanning structures, including beaver dam analogs and log and boulder weirs, with the objective of increasing groundwater storage in the streambed and banks, increasing pool depth and area, and generally enhancing habitat complexity.

Flow augmentation is achieved through construction of two terrace ponds with metered flow directed to the creek during the critical dry months (August through October). The ponds will be sealed to minimize leakage through installation of a clay keyway in the berm that also extends below the berm, connecting with a natural subsurface restrictive layer of blue clay or bedrock. They will be filled by surface runoff and retention of shallow groundwater, and water will be diverted to the creek via a siphon pipe and valve.

Several of the strategies planned for this project are ones we've used before, but two are new: the use of Stage 0 ("zero") and the use of ponds with metered release into the creek.

Stage 0 is a fairly new restoration concept, described as "a valley-scale, process-based approach that aims to reestablish stream depositional environments to maximize connectivity at base flows and facilitate development of dynamic, self-formed, and self-sustaining wetland-stream complexes."[2] So, what does that mean? Basically, we are aiming to create a wider floodplain with complex, multi-channel conditions. Realizing Stage 0 conditions can be a complex journey, and it can be achieved in different ways. The project designer, Joel Monschke of Stillwater Sciences, has tailored the design of the project to fit the planned site. He writes: "This site offers a low-risk opportunity to experiment with a modified Stage '0' channel restoration approach. This

2 Executive Summary, River Restoration to Achieve a Stage 0 Condition Workshop, Oregon Watershed Enhancement Board, Institute for Natural Resources at Oregon State University.

approach is different than the Stage 0 approach utilized in Oregon where entire wide valleys have been reshaped. Instead we are proposing to reshape narrower valleys extending from the base of one hillslope to the opposite side, generally 15'–70' in width, filling the existing incised channel and adding a combination of grade control and roughness that will direct flows along a more sinuous route."[3] Because we have extreme dry seasons and can't rely on snow melt here in the Mattole watershed, we must incorporate subsurface clay barriers into the weir design so that the flow doesn't immediately go subsurface.

Using ponds with metered water release is also a relatively new approach to assisting streamflows in the dry season. Unfortunately, the need for it underlines the severity of the drought. Initially, upslope groundwater recharge ponds were planned for this site—similar to the groundwater recharge ponds we implemented upslope of Baker Creek. But the dry seasons of 2020 and 2021 taught us "that for instream flow-enhancement projects to be successful in extreme drought years, a significant incoming source of water with some pressure head is needed. Options with enough pressure head to provide flow into the stream include upslope instream and off-channel ponds as well as piping directly from upslope springs."[4] The total groundwater storage for both the instream and terrace ponds project is estimated at 2.65 million gallons (1.65 million from groundwater storage and 1 million from pond surface water storage).

An example of an incised channel in the North Fork of Lost River.

Thank you to our community, our watershed partners, collaborating organizations, and the state agencies and foundations who have taken these small steps with us as we learn how to store more water on and in the landscape—for fish, people, and wildlife. Using stacked strategies and a larger-scale approach, we're hopeful this project can be a model for how to make a big impact to improve the water shortage problem in the Mattole River watershed and beyond.

For more information*:*
sanctuaryforest.org

Upslope Terrace Pond Site

3 Stillwater Sciences. 2020. Basis of Design Report for North Fork Lost River Streamflow and Habitat Enhancement Project. Prepared by Stillwater Sciences, Arcata, California, for Sanctuary Forest, Whitethorn, California.

4 Stillwater Sciences. 2020. Basis of Design Report for North Fork Lost River Streamflow and Habitat Enhancement Project. Prepared by Stillwater Sciences, Arcata, California for Sanctuary Forest, Whitethorn, California.

Living with Fire

The Little Things Matter Most: Preparing Your Home for Embers from Wildfires

The Next Step in Maintaining Defensible Space

By Mitchell Danforth, Community Fire Resources Coordinator, Trees Foundation

Summer is here, and as we all know, so is wildfire season. Often wildfires are depicted as an indomitable force that sweeps across the landscape, leveling all in its path like a lava flow, and the homes left standing are just lucky. However, there are many things that can be done to improve a home's chances of survival, and most of them are quite small. It is said that "fortune favors the prepared"—this holds true for wildfire season. We need to set ourselves up for success independent of whether homes are defended or not. Decades of study and research have shown that the little things are actually the biggest factors in determining how resilient a home is to wildfire. The tiny details of home construction and property maintenance matter more than the construction materials themselves and become the Achilles' heel if not addressed properly. The main threat is also tiny: embers.

Embers, though small, have enormous potential to cause fires. Often overlooked, these little pieces of burning material can travel up to a mile and still pack enough heat to start a fire where they land. While seemingly innocuous on their own, embers are generated by wildfires in such great numbers that they are often referred to as an "ember storm." In a mass their heat output is quite high. Unfortunately, these embers can travel far from the main front of a wildfire, jumping containment lines and fuel breaks, starting spot fires and threatening homes. Often embers threaten a home long before the actual flames of a wildfire get there. So what can be done?

An example of a well-prepared 0-5 foot Ember Resistant Zone. The area is made of noncombustible material and kept clear of debris. However, the 5-30 foot zone is problematic: notice how the groundcover connects the bushes and trees? Horizontal and vertical discontinuity between fuels is key to reducing fire behavior."
Photo Source: https://www.formlainc.com/resources/catch-fire-with-trees/

The particularly vulnerable areas for a structure are the roof (especially gutters, exposed rafters, and roof-to-wall intersections) and the space 0–5 feet out from the base of walls, as this is where embers tend to accumulate in the greatest quantities. Ensuring that these areas are adequately prepared is not only vitally important but relatively easy to accomplish. Many of the actions that can help your home in a wildfire fall into the category of common-sense routine maintenance that prevents things like rot and water damage. Not coincidentally, embers prey on many of the same areas of poor design or deteriorating material that are susceptible to damage in heavy rain.

Of the three "Defensible Space" zones, the 0- to 5-foot zone—also known as the "Ember-Resistant Zone"—has been identified as the most important for wildfire preparation. Combustible materials left next to a structure are typically more vulnerable than the structure itself and pose a much greater risk than embers alone. Leaf litter, vegetation, stored materials, and combustible furniture are some of the biggest culprits here, but fortunately all of them are easy to deal with.

A few tools and a little time can go a long way toward getting ready for the season. Following are some simple and low-cost things you can do to prepare

Burning material, especially vegetation, gives off an immense amount of embers. Individually, these embers are relatively harmless (as demonstrated by the man in the foreground), but together they start spot fires wherever there is readily combustible material.
Photo source: https://pix11.com/ap-science/un-climate-report-atlas-of-human-suffering-worse-bigger/

for embers this wildfire season. Note: This material does not cover all aspects of wildfire preparation. This is not intended to be used as a comprehensive guide. For specific recommendations, look up the UC Cooperative Extension Publications, visit the CAL FIRE website, or consult your local wildfire safety and preparedness experts.

Clean Your Roof and Gutters

This is no longer just a fall-time activity! The leafy debris on your roof and in your gutters is a huge fire risk in the summer. Gutters, eaves, and roof-to-wall intersections are especially vulnerable; ignition of materials there can spread under your roof or siding. Even noncombustible roofing materials like metal or tile can be rendered ineffective if flames from the gutter get into the attic underneath. A leaf blower or garden hose are easy ways to get rid of debris; also consider installing noncombustible gutters and gutter guards.

Move Flammable Materials Away from Structures

Most of us have some clutter stacked up next to the walls of our house, garage, or shed. Not only is this unsightly, it's actually a major liability. While even plywood walls are resistant to embers; direct flame and radiant heat from a burning pile of lumber, for example, is enough to compromise virtually any material. Make sure that your 0- to 5-foot zone is clear of anything that could combust, and store that stuff indoors where embers can't get to it. That includes furniture, fuel, chemicals, toys, tools, grills, firewood, arbors, trellises, and practically anything made with wood or plastic. Lastly, your wooden fence acts like a fuse when it combusts, providing an uninterrupted pathway for flames to travel down. Cut the fuse before it reaches a structure by replacing that final 5 feet of wooden fencing or gate with metal.

Remove Dead, Woody, and Large Vegetation Within the 0- to 5-Foot Zone

Research has shown that plants immediately adjacent to your house are a major concern in a wildfire, even potted plants (especially in a plastic or wooden container). Plants located

next to openings such as windows and doors are particularly problematic. New recommendations are to reduce vegetation to small, low to the ground, widely spaced, and well-watered plants with "hardscape" (non-combustible material such as rock or gravel) in between. Organic mulch (such as wood chips or straw) can readily ignite from embers and is no longer recommended within 5 feet of any structure. Mature trees are considered OK as long as they are clear of ladder fuels and pruned back from chimneys and roof edges. Finally, just like the roof, leaves and needles need to be cleaned up from the ground near structures on a regular basis.

Create and Maintain Defensible Space

This tried and true strategy for increasing the resiliency of your property remains vitally important. The objective here is not to stop a fire but to reduce its intensity, slow its rate of spread, and give firefighters a chance to defend the structures. Breaking up continuity of fuels vertically and horizontally is key to reducing intensity. Defensible space can prevent a wildfire from knocking on your door, but it doesn't protect against embers landing in vulnerable spots. Additionally, make sure your yard is easy to access and maneuver through—this is important for all kinds of emergencies. Once established, maintaining defensible space is pretty easy.

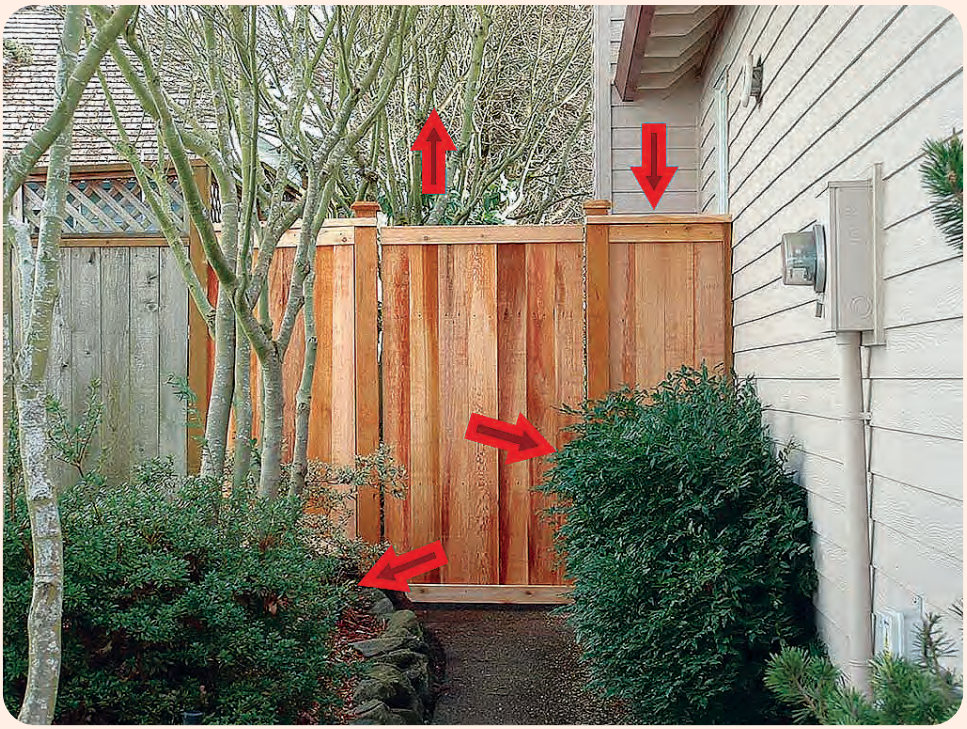
Roof-to-wall intersections are especially susceptible to accumulating debris and moisture, causing rot, which is more combustible than material in good condition. Ensure your roof is constructed properly with at least 6-inch metal flashing along the walls and is kept clean. Good roof care is important all year round! Photo source: https://joegooderoofing.com/wood-gutters/

Caulk and Plug Gaps Greater than 1/8 Inch in Siding and Eaves

Embers are often driven by strong winds and can find ways to lodge themselves in tiny spaces, causing fires in particularly vulnerable areas, such as cracks in siding and trim. A little time with a caulk gun can remedy this and ready your home for winter all at once. While you are at it, be on the lookout for signs of rot, as rotten material is more susceptible to ignition. If you have exposed rafters, seal up any gaps around them and the blocking; later on, consider enclosing your eaves with soffits.

Install Skirting Around the Base of Structures

If the base of your house is open—as is common in post and pier construction—enclosure or "skirting" needs to be a top priority because embers can easily find their way underneath if unimpeded. Even plywood skirting is preferable to none at all, though noncombustible material such as metal roofing is recommended. Wood lattice (a.k.a. "decorative kindling") does not count! The bottom 6 inches or more should be a noncombustible material, which will also help prevent rot. In the very short term, make sure the area underneath your house is cleared of all combustible materials down to mineral soil. If you have a deck or stairs, make sure the area underneath is also cleared down to mineral soil.



This is an example of what makes a home vulnerable to embers. From top middle proceeding clockwise: 1) Tree canopies are too close together and too close to the roof edge. 2) Wooden gate attached directly to the wall allows high intensity fire to burn right up to the structure. 3) A woody shrub with dead material adjacent to the wall and the wooden fence could easily catch embers and spread flames to the home. 4) Another woody shrub with dead material, this time underneath trees, a textbook example of a ladder fuel. Also, the woody mulch would likely burn in an ember storm and spread to the shrub and the wooden fence.

Photo source: *http://fitzpatrickfenceandrail.com/wood-gates/*

Make Sure Vents and Chimneys Are Properly Screened

While vents are necessary for your house, they also represent potential pathways for embers to get into your attic or crawl spaces. Make sure your screens are metal and have at least ⅛-inch or smaller openings or are otherwise rated to stop embers. Move combustible materials away from vents inside the home in case some embers do make it through. Your chimney should also have a metal screen, sometimes called a "spark arrestor," with openings between ⅜ inch and ½ inch in size. Close your flue during fire season when not in use.

Have an Evacuation Plan Established before a Fire Starts

This one is very easy to put off, but it's actually easy to do as well. Evacuation is unpleasant to think about, but the better prepared we are, the more time we will have to get to a safe place safely and leave behind a home that has a better chance of survival. Have a game plan, create a checklist (examples are available online), know where to go, and have multiple ways to get there. Also, make sure you know where to get official information in an emergency and that you are enrolled in emergency alert programs. Keep in mind that evacuation orders are given strategically to avoid bottlenecks and ensure that everyone has enough time to make it to safety; and know that embers cause spot fires that make a wildfire's progress difficult to predict and contain. If there is an active fire in your area, be prepared to evacuate.

Finally, Support Your Local Fire Departments and Volunteer Organizations

Many Fire Departments, especially in small towns and rural areas, are staffed by volunteers and have a severely limited budget. Despite limited resources, these departments are relied upon heavily as the first responders for all sorts of emergencies, not just fire and medical. Community support and appreciation are vital for their continued operation. Donate, volunteer, and attend your local pancake breakfast or BBQ—every bit helps! Also, vote to support measures that fund your fire department, such as district formations and special taxes: consistent funding is key for long-term planning and investing in the things that really help VFDs best serve their communities. Also, your local volunteer organizations do important work in educating and preparing the community for wildfires. Fire Safe Councils and Firewise Communities are prime examples of organized groups—get in touch with them and help in their efforts.

For more information:
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My name is Mitchell Danforth. I have been a resident of Humboldt County since 2010 and a member of the greater Garberville community since 2015. My interest in wildfire began in 2007 when I worked as a seasonal wildland firefighter on a hand crew for several years. The experiences I had on the fire lines showed me the need for all of us to reevaluate how our communities interact with the land on which they reside. This is why I recently chose to join the Trees Foundation as their Community Fire Resources Coordinator, to help my community and others become more prepared for and acquainted with wildfire.

Annual Pikeminnow Dive Provides Insight into Health of South Fork Eel River

By Eel River Restoration Project

The seventh annual Eel River Recovery Project pikeminnow survey of a key reach of the South Fork Eel River took place on June 28th and 29th. It was determined that despite the population of this non-native predator remaining high, there were a surprising number of salmon and steelhead juveniles and signs of ecological resilience. Once again, the University of California, Berkeley, dive team proved strategic partners. Post-doctoral researcher Phil Georgakakos led a dive team that included undergraduates Michael Schweiker and Stella Stein.

Steelhead juveniles Photo by Phil Georgakakos

The two-day survey extends from the Hermitage at the mouth of Rattlesnake Creek to Standish Hickey State Park. The mid-point of the survey is Cedar Creek at the Gomde Monastery. Where the first day's dive ends, the second leg of the survey starts. Divers form a line as they swim through runs and pools and count as a team. Only pikeminnow over four inches in length are counted, with fish of different sizes recorded: 4–8", 8–12", 12–16", and greater than 16 inches. The larger the fish, the more likely that it predates upon juvenile native fish, including salmon and steelhead.

Pat Higgins (left to right) of ERRP, Phil Georgakakos, Michael Schweiker, and Stella Stein at the start of Day 2 at Gomde Monastery. Photo by Peter Wood

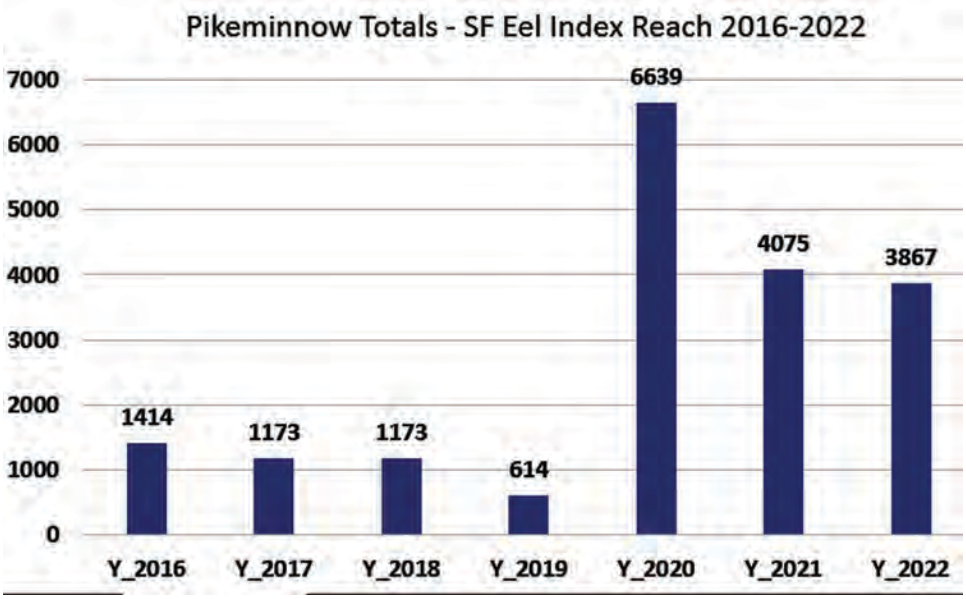
The total number of pikeminnow over four inches in 2022 was 3,867, down from the previous two years when there were 6,639 in 2020 and 4,075 in 2021. The first four years of the survey (2015–2019) found an average of 1,094 pikeminnow. The drought of 2020 and 2021 and mild winter this year seems to be fostering an up-swing. One quarter of the pikeminnow were over 8", and many will grow to greater than 16" in the next few years, leading to greater predation pressure on native fish.

The most surprising part of the dive was the number of juvenile steelhead, with several age classes and fish up to 10 inches long, which could also be native rainbow trout. Because of high flows this year, divers could swim much of the way, knocking insects off rocks while navigating plunging waters. This created a feeding frenzy, and coming out of the bubbles divers saw schools of panicked trout within inches of their masks. Similar to early 2022 surveys, juvenile Chinook were numerous and seen along the entire survey route, and even incidental coho salmon were observed.

After two years of drought, including the fifth and second driest years in recent California history, we expected to see few trout and not many of larger size because of the decrease in habitat. The presence of numerous fish despite the 2020–2021 drought indicates that they were able to find refugia that exist within the SF Eel River ecosystem.

The abundance of Chinook salmon juveniles lingering to feed in freshwater is likely indicative of a large 2021–2022 brood as a result of early rains for spawners to travel and subsequent light winter rains with no scouring flow during incubation. Most Chinook salmon juveniles head for the estuary immediately after emergence from the gravel, so lots of fish exhibiting somewhat rare river life history means many thousands more likely already fed in the estuary and are fattening in the ocean. Since jack salmon can return after just a few months of ocean feeding, we will likely see a high percentage of jacks with this fall's run and a potential for the population to rebuild. There are indications that coho salmon are resurging in the SF Eel River and also regionally, which is curious since ocean productivity has been inconsistent.

Phil Georgakakos gets ready for plunge into deep high gradient riffle with Stella Stein trailing him.
Photo by Pat Higgins



Pikeminnow over 4" long in SF Eel index reach from 2016 to 2022.

While there are signs of resilience, some native fish species like suckers remain at very depressed levels, likely in part as a result of predation by pikeminnow. Although ERRP was turned down for a California Department of Fish and Wildlife permit to remove adult pikeminnow using trained spear fishermen, the Department is planning to allow removal using a weir to catch them when they migrate seasonally. The Wiyot Tribe, their consultants Stillwater Sciences, and UCB are partners in removal efforts that are slated to take place in spring 2023.

For more pictures of the dive survey, see the ERRP Facebook page, and look for the full study at *www.eelriverrecovery.org*. Call 707/223-7200 if you want to be involved in future dive surveys.

Native Health in Native Hands
Revitalizing Wailaki Cultural Practices

By Kerry Reynolds, Organizational Development & Partner Support, Trees Foundation

In late 2021, an email came into Trees Foundation that asked about our mapmaking services. That was nothing unusual—GIS mapmaking is one of our most popular services. Little did I know then, that we had just made contact with Perry Lincoln, a versatile change agent who has been the quiet catalyst for events that are revitalizing Wailaki culture in Southern Humboldt. Through his organization, Native Health in Native Hands, he is empowering Natives and non-Natives alike to engage in ancient ways of connecting to and caring for the land.

Unexpectedly, Perry would be there to save me a few months later, when I found myself unprepared and in need of a radio guest. Trees Foundation recently became host of the 5th Tuesday Environment Show on KMUD Community Radio, and I had forgotten to mark my calendar. When I got a reminder just a few hours before show time, I called Perry and he immediately agreed to be my featured guest.

Below you can read a partial transcript of that radio interview, followed by transcripts describing two other groundbreaking events that Native Health in Native Hands put into motion—a prescribed fire training for Indigenous youth that prepared them to join the crew of the Southern Humboldt Prescribed Burn Association, and a historic collaboration to build and return Indigenous redwood canoes to the Eel River.

Perry Lincoln Describes Ancient Skills Workshop offered by Native Health in Native Hands

This is a partial transcript of a live interview on The Environment Show, KMUD Community Radio, on May 31, 2022.

Perry Lincoln: My name is Perry Lincoln, and I'm a member of the Round Valley Indian Tribes down in Covelo, California. But my ancestral homelands are in the Wailaki areas of Garberville, Alderpoint, Hettenshaw Valley, and the Mattole River. All through those areas are my ancestral homelands. And so I have a group called Native Health in Native Hands, and basically, our focus is cultural revitalization, traditional land-use practices, and modern land-use practices [as they relate to] restoration. Right now, we're working on language, plant identification, and we are collaborating with Six Rivers National Forest, California State Parks, and private landowners. RFFI [Redwood Forest Foundation, Inc.] is one of the private landowners that we're working with. Eel River Canyon Preserve is also a new collaborator. They just bought some land over on the main stem of the Eel River, south of Alderpoint.

Participants enjoying a day of hands-on learning at the Plant Walk and Ancient Skills workshop organized by Native Health in Native Hands on June 2 at Tooby Park in Garberville. From left to right: Ollie Weber, Ben Schill, Richard Gienger, Diana Totten, Perry Lincoln, John Elgin, Susan Wesley, Brian Dykstra, Quentin Elgin, Tamara Wilder.
PHOTO BY KERRY REYNOLDS

We're trying to get the Eel River Sovereign Wailaki group going again. They were active a few years ago, and we're hoping to get them active again in some restoration projects. We have some youth that are going to come and do some basket-weaving demonstration, and we're going to talk about the plants that are in the area and how we can preserve and restore some of the plants, like dog-bane.

Everyone is welcome to come [to the workshop that was in June], and maybe even share knowledge. We really feel that it's important for the native knowledge that we have to be shared. People ask all the time, "Well, what did the native people do in the forest?" And we want to share that so that everybody has a really good idea of how can we work together to make a healthier forest, and understand some of the things that have helped the forest to not be so healthy. Now we have these devastating fires every year, and we need to bring more awareness about why those things are and what we can do as a community—not just one group here and one group there—but as a community. How can we address these issues that are right at our back door? I have relatives over in Hettenshaw Valley and other areas that really were devastated with that August [Complex] fire. They had to do everything they could to save their homes, and with people working together, they did it. A lot of people lost a lot. But working together and having the knowledge is the most important thing.

Kerry Reynolds: It's so true. Southern Humboldt is definitely categorized as a high-risk, high-hazard area for fire, and bringing back cultural fire and trying to bring back more of the Wailaki culture is so important right now. It's really exciting, the work that you're doing. Your ancestors are from the Alderpoint area?

Lincoln: Yeah, Dobbyn's Creek, Alderpoint, and Hettenshaw Valley, all the way over to South Fork. South Fork Mountains is my ancestral homeland. My grandmother came from Dobbyn's Creek, and then we have ancestry down on Kikawaka and further south on the main stem of the Eel River down to the North Fork of the Eel River. Native people lived all along the rivers and along where there was water. We lived along the rivers everywhere there was a flat area that we could have a village site at, and in the summertime, we went to the mountains.

Ernest Lincoln, on the far left, holds a canoe paddle and sits in the canoe that he and other Wailaki are building as a renewal of an ancient cultural tradition. To his right is Erin Gates, the Deputy District Superintendent for California State Park's North Coast Redwood District, along with other participants and supporters of the redwood canoe project. **See page 17.** Photo by Michael Furniss

Reynolds: We're using names that were created in the last 150 years by settlers. I know that restoring and supporting the cultural return of the Wailaki language is also a passion of yours.

Lincoln: We've been working on the language for about 10 years. Ben Schill, he's really been working in that area on language, and we have a linguist at Cal Poly Humboldt now that's a Hupa speaker and also helping us revive the language. She's worked with the school in Round Valley, so I think it's been about three years now that we've had language classes for the first time in Round Valley at the high school and the grammar school. Then we have a linguist from Davis, who's also helped with our language revival...so people have been working on it diligently.

Reynolds: And are you familiar with any cultural fire practices?

Lincoln: Yeah, I'm familiar. We burned in the fall, and we burned sometimes in the spring, when there was a really wet spring, for basket materials that made the material stronger and it helped for bugs and it help for invasives and other plants. It just made the ground a lot more healthy—we needed that fire. Since we haven't had fire, there's a lot of brush that is fuel when there is a fire. Basically we were burning around village sites so that if there was a major fire, it wouldn't just come raging through our village sites. But it also helped the plants that we use as food, like our bulbs, it helped them to grow better too. All of this is

documented. There's a lot of written material nowadays on how fire does help plants in their resiliency.

Reynolds: Great, so we did have a caller who did not want to go on the air, but they wanted to mention the Condor Project and ask if you were a part of that now. I've been watching it, and it's really exciting. It's a project of the Yurok tribe to reintroduce condors.

Lincoln: We weren't able to go when they released the condors, but we have some pictures. It's a great undertaking for that tribe…We're hoping that one day we can have condors down in our area. It takes the support of people, like I said before, it won't be just native people, it would be people willing to take care of and have a place in the mountains that they could have a housing [habitat] area. And I think at some point, we're going to try to have condors. I don't want to say just on the Eel River, because there's so many waterways in that area, I would say Southern Humboldt.

Reynolds: Yes, that's a wonderful vision to bring back condors in Southern Humboldt.

Lincoln: It is.

Reynolds: Absolutely, and I'm really excited to learn more about the Eel River Sovereign Wailaki group. It sounds like an impo rtant group because the history of so many Wailaki survivors being forcefully relocated to Round Valley, and taken from Southern Humboldt, is deeply tragic and traumatic. For the Wailaki community members that still live here in Southern Humboldt to start to reconnect and revitalize culture is something that is so important. The environmental movement and cultural restoration movement, I think, need to be hand-in-hand, because people are a part of the ecology that is so ancient here. It goes so much deeper and older than the arrival of settlers, and the genocide that occurred. I think we're all in a time of understanding more, and learning and healing from that past. It is really exciting that you're helping to bring folks back together and to talk about what we can do, because we all can do something to help.

Participants at a Prescribed Fire and Cultural Fire training at the Piercy Community Center in July, 2022. Photo courtesy Diana Totten

Restoring Balance through Cultural Fire

Training Indigenous Youth for Controlled Burn Crews in Southern Humboldt

The following is a transcript of Diana Totten introducing the topic of Prescribed Fire at a training held on July 7th at the Piercy Community Center. The training was co-organized by Native Health in Native Hands, with the goal of preparing Indigenous youth to join Southern Humboldt fire crews on controlled burns. [Editor's note: As we go to print on July 19, six Wailaki are among the crew conducting a burn in Briceland.]

Introduction

Thank you for coming. My name's Diana Totten, I'll be working with you today. My job will be to give you a little bit of an outline of prescribed fire; then I'll be going over a lot of what we do in a regular fire class, which I've been doing for about 40 years. Teaching fire to firefighters is something I have a passion for. Switching gears and teaching fire for prescribed burning is a little bit different, so bear with me as I try to do that. Also, a component of this prescribed-burn training is going to be cultural burning.

I was raised by a Wintu grandmother. I'm pretty blonde, but that blood runs strong through my veins pretty hard and it feels good. I was born in Garberville in 1955, and I've been here all my life. It has changed a little bit over the years and I want to talk about that, but before we go any further—I introduced myself, let's go around the room and find out who everyone else is.

[The room of about 20 people introduced themselves, including co-organizer Perry Lincoln of Native Health in Native Hands; co-instructor Kai Ostrow of the Southern Humboldt Prescribed Burn Association and Briceland Volunteer Fire Department; several Indigenous Wailaki and Wintu youth, a representative of the Cahto tribe, representatives of Redwood Forest Foundation and Piercy Fire District, and Volunteer firefighters from Piercy and Bell Springs.]

Fire as the Fourth Element

When I was younger in the '60s and '70s, there was a band called Earth, Wind and Fire, and that's where I'm going start. You know, we have the Earth that we're living on and all of our ancestors, no matter where you're from, have lived on the Earth. Like Perry [Lincoln] said, we've learned, over thousands of years, to coexist with the Earth. In doing so, it provided our home, our clothing, our food, everything we needed. And through the generations, it was managed in a way that kept providing those things. And so we've come to a place where now, the Earth is different to most people. It still provides these things, but it's managed in a different way. So we have the earth and we have the wind…

The wind—the air, the oxygen—we can't really change a lot about the air. We can't change the air temperature. We can't change how hard the wind blows, but it's essential for everything we do.

The water—water is the key to everything in life. For a lot of us, water comes right out of the ground and then comes through the kitchen sink, which is pretty cool. But in a lot of places, people don't even know if they can drink the water that comes from the ground. It goes through a process to get all the germs out of it and make it to where basically there's no life in it. And the sky has water in it, the air around us right now has water. We have a lot of water inside of us. Water is life, and that's a key ingredient.

And then…the fourth element is fire. And if you say "fire," all of a sudden, a lot of people are triggered. Their adrenaline glands just opened up because fire is a scary and dangerous thing. And everyone has visions of what they see in the media, whether it's TV or the newspaper, of a catastrophic wildfire and towns are burning. I mean, the Walmart in Santa Rosa burned, how does that happen? It's all concrete, right? So these things are happening around us now more and more and more.

And I think back to when I was young here, and I told you I was born in 1955. And so I remember [when I was] five and six years old, I remember lots of meadowland through all of Southern Humboldt, all the way to the ocean. And my grandmother would come into town every once in a while, and we'd go with her to town. And the great sport was going back out to Four Corners and she would stop so that we could count the deer in the meadows—50, 60, 70 deer in the meadows. And now, I don't even know where the meadows are. They're not there.

So…Whitethorn is all different, and I'm not even 70 years old yet. So step back **700 years** and think about what it looked like. I drive down the freeway and I see all the trees that I'm older than. I'm older than a lot of stuff. And yet I look, and I try to take that vision back to our ancestors and what it looked like here, and…we lost the balance.

…Like was said earlier, we have landslides; we have floods; we have hurricanes and strong winds that blow things over; and we have fires that wipe out entire communities. We can't really do too much about the floods. They're going to happen when the rains come at the perfect time and lots of it. We can't do much about the hurricanes, other than get on the other side of the hill so it doesn't blow so hard. And we can't do a whole lot about Mother Earth and the landslides and the earthquakes. But the one thing we can have an influence with, to help bring the balance back, is fire. And that's the reason we're here, is to start thinking more like that.

Influencing the Environment Through Fire

Think about how each day the headlines are about climate change, and we're passing lots of laws and we're doing lots of things. And I'm not sure that's the perfect direction to go, but I don't know how we change the climate. What we can change is our local environment. And if we just start small right here where we live, we could start to change that, and we could do it by prescribed fire. We could do it like our ancestors did and have more of a balance in our local communities. You start to create a mosaic. And so I live at Benbow, I have 13 acres over there. And my kids are there and it's kind of like the rest of this area where, "Oh geez, I should go cut that. I got other things to do."

So the kids decided to take it to the next level. They just drew a map of the 13 acres, and they take one year, one acre and they manage that to what it needs to be for fire management. Then I also started raising animals. And that started keeping down the brush. The goats eat the brush, but then we eat the goats and drink the milk. And so instead of looking at the 13 acres, we could start seeing these little tiny pieces of patchwork and then put the patches together. But it's probably not us that'll be doing it. It's these people, the young people. And so if we could open that door for the young people, that's the goal—is to pass on a little bit of what we're thinking. And now we're seeing what the agencies have started to see. The August Complex fire was a perfect example, guys, like, oh, that's not what was on the program! [laughter]

*[**Editor's Note**:* According to Wikipedia, "The August Complex was the single-largest wildfire and the largest fire complex in recorded California history. The complex originated as 38 separate fires started by lightning strikes on August 16–17, 2020. By the time it was extinguished on November 12, the August Complex fire had burned a total of 1,032,648 acres, or 1,614 square miles, about 1% of California's 100 million acres of land.]

So for 150 years, we've been stopping every fire because it's dangerous, right? And it became a way of living. And that's what I've made a living doing—a big part of my life has been stopping wildfires. And it hasn't worked.

When I was young, growing up here, a 5,000-acre fire was unheard of. We didn't have 5,000-acre fires. I can remember just outside of Garberville, going up Alderpoint road, there was a cattle guard right by the CAL FIRE station. From there, all the way to Trinity County, were sheep and cattle. And in the summertime, the grass along the road was this high [indicates a few inches with hand]. I went up there yesterday, it's this high [showing several feet high with hand]. Something has totally changed. And this is invasive grass. It's not native. And so...how do we fix that? If a fire starts up there now it's going to be very big and it will be hot all of a sudden. We stayed out of the timberlands and yet we watched the timberland get nuked. And in some places the August Complex burned so hot it burned everything into the ground.

And this is something that culturally our people were able to see that it's not just the trees that burn, or the grass—it's the nutrients that are underneath the top of the soil. And when that burns, it gets too hot. Then it can't support any life for a while. And how many of you remember seeing a fire along the road somewhere and you see a big patch then in the middle of August, it burns four or five acres. Two weeks later, you drive by and there's little green shoots coming up. It didn't rain, nothing happened. So you see automatically stuff starts to regrow. And when that happens, that's kind of like the cultural burning thing, it's more than just taking the fuels out. It renews what's underneath. But if you burn it too hot, it kills those little things. So in prescribed fire, we learned to burn a cold fire and a slow fire instead of too hot."

Lessons from Fighting the August Complex

At the July 7th prescribed-burn workshop, Diana went on to describe her work on the August Complex and how it highlighted the ways the landscape is out of balance. It was lost on this audio recording, but later she explained it in an email:

I was a Division Supervisor on the August Complex with the job of trying to stop the fire before it crossed the Eel River. I worked from the Lake Mountain Road, all around what is known as the Lone Pine Ranch and Stewart Ranch to the town of Kettenpom. That is a big country. And at the time we had very few resources due to the size of this fire and others in the state. These were, at one time, ancestral lands and they were quite populated when the first White settlers came into the area. In fact one of the reasons the White man came there was to kill the deer for their hides. There were thousands of deer. The land was, and still is, a lot of oak woodland. I believe it burned regularly either by lightning or by cultural burning. The deer hides were dried and taken to Red Bluff to a tannery where they made leather goods for the gold miners. Thousands of deer were killed. Most were skinned just for the hide, and the meat was eaten by predators or birds.

The success of keeping the August Complex from crossing the river wasn't all about the fire-fighting effort. As I discussed in a simple way earlier, the elements have something to do with everything. At the time the fire roared out of the Yolla Bollys ("Yolla Bolly" is a Wintu word meaning "snowy peak"), thousands of acres of old-growth forest burned with intense heat. Then it got to the Lone Pine ranch and got into the grassland and rangeland. Hundreds of head of cattle had eaten the grass so it was pretty short. The winds slowed a bit. Once the fire intensity decreased, we were able to start making progress on containment of the front of the fire. We used old roads and created fire lines with dozers and hand tools. And yes, we backfired some areas which helped to stop the fire.

So looking back, there is a combination of things that stopped the fire. Fuel type changed, wind slowed down, and we took advantage of this. We need to start somewhere. Standing in front of a million acre wildfire and using the land and fuels,

Ginuh Lincoln, Perry Lincoln, and John Elgin work on the Wailaki redwood canoe in Richardson Grove State Park, June, 2022. Photo by Kerry Reynolds

the weather, and a few trained firefighters to help slow it and eventually to stop it is a humbling experience. How about we start with an acre at a time.

Building Traditional Redwood Canoes for the Eel River

A Historic Collaboration with California State Parks and Local Tribes

The ancient cultural tradition of redwood canoe crafting was nearly lost for the Wailaki and Wiyot tribes, but it is being revived thanks to a collaboration between Native Health in Native Hands and California State Parks. State Parks provided a redwood log for a Wiyot canoe and a Wailaki canoe. Volunteers from each tribe have been crafting them at Richardson Grove State Parkon weekends from the start of June until July 16th, when the canoes were loaded and moved to Wiyot land.

The following is a partial transcript of Wailaki and Wintu participant John Elgin speaking with Tonya Horlik in June. The full interview aired on KMUD's Local Public Affairs program on June 30 and can be heard at http://tinyurl.com/redwoodcanoes.

From left to right: Ernest Lincoln, William Lincoln, Redcloud Lincoln, and Ginuh Lincoln stand beside the Wailaki redwood canoe that they are helping to build from redwood provided by California State Parks. Photo courtesy of Native Help in Native Hands

John Elgin: Perry Lincoln, he got this organized with the State [Parks], and this is the first time in 100 years that this has been done, where they are allowing the Native Americans to come into the old growth to be able to do our traditional practices. They actually got the wood for us.

With the groups that are here, a lot of people don't realize that they were actually used to eradicate each other. We've got over 100 years of turmoil, even though a lot of people think that this was just an overcoming between the tribes and the state—this is an overcoming of even the tribes against the tribes...They were used to hunt each other throughout the time period that the White people utilized them to eradicate each other. So for years, it was also a heavy turmoil between the tribal groups. They wouldn't even be seen on the same small spot.

So when this all came together, we invited everybody. There's been a lot of prayers and a lot of education through being able to have lunch with some of these people. Through conversation, come to find out that, through some of the original Native Americans who were full bloods who stood in line and got their number at the beginning of the reservations, most of the guys here are technically related. We're second, third, fourth cousins, five times removed. We've got the same original full-blood ancestry. Without this [canoe project], none of that would have even been known. It came out in conversation. Without the peacefulness of these canoes and the interaction with the State [Park], the healing between the people wouldn't have happened.

Preparing to Craft Traditional Redwood Canoes

So now we start here with prayer. We start with asking for forgiveness within our own hearts, and then we go to work. So that, when we're standing at our canoe, we don't want to bring any bitterness into that wood. It's kind of like the basket weavers. They say a prayer with every woven knot, and they have to be within forgiveness, so that not one of those knots in the basket has remorse or animosity, so that they can give it away with a good heart.

We're very similar to this. We start our day with a prayer of forgiveness and blessing for everybody that comes, as well as the ones that are here and who are all in different stages. In another month we're probably going to take these up and go someplace else, because Bob, the original Yurok educator, his time is limited before he has to go do other things. He's gonna get us all laid out in the basic designs of it all, and we'll end up finishing it. But once these are all done, we're going to qualify to go into the rivers.

Preparing the Redwood Canoes for the Ocean and Rivers

We will go basically from Fort Bragg, north. We'll be able to interact with the streams as well as the oceans and the

Salmon prepared at Richardson Grove State Park on July 16 to celebrate the redwood canoe project. Photo by Lauren Schmitt

animals that are there, so that we can identify what needs help, what needs interaction, and do what we've done for thousands of years. This has basically been the beginning of not just, like I said, us working with the State [Park], but us working with each other. We're going to have a canoe race where there's at least eight of these canoes and we're going to have a yearly invitational where we race down the river, that's something else. That's never been done, except for pre-white incursion.

We've got a lot of things planned that are social interaction for children, both for our own tribes and bringing more tribes together. We're going to be able to do this all the way to Washington in the Nisqually, where they have thousands of canoes and where we've got cousins up there. This is the beginning of something that is more than just a canoe, it's also going to be a healing of a community within the hierarchies of the tribes. For example, the Wiyot, their board members are here doing this. It's just not a small group of people on the side. It's actually board members.

John Elgin: We've been doing this for about two months so far, and it started in a whole other log yard. We started splitting them and making them smaller, then we haul them here. And now we come down on the weekends, and we're open to all Native American families. And this is what's called a dry camp. Even if someone spends the night, there's no alcohol, no drugs. It's a camp where children get to come and learn. It's a place where the children get to speak and help us laugh and be human and interact in the same way our elders used to interact before the sadness came into our lives. And so even during lunch, we throw grapes at each other and we have fun and we laugh and we tell jokes. And this has been a really good healing thing for the whole Native American community.

Celebrating the Redwood Canoes as they Leave Richardson Grove

On July 16, dozens gathered to mark the occasion of the redwood canoes departing Richardson State Park in order to be completed further north on Wiyot land. KMUD News Director Lauren Schmitt interviewed several people there for a KMUD News special that can be found at www.kmud.org.

The following is a portion of her interview with Erin Gates, Deputy District Superintendent for California State Park's North Coast Redwood District. The interview is edited for space and clarity.

Erin Gates: I work under Victor Bjelajac, helping to support his efforts in managing over 22 State Parks across three counties. I also work directly with Redwood National and State Park Superintendent Steve Mietz.

This is an incredible honor and an opportunity to have ancestral lands be used for cultural practices again after decades of that not happening, in part because we didn't make space for that to happen. To know that we are forming healthy relationships with our tribal communities, and that they have trust in us to want to practice their cultural practices on State Park lands, this is one of the most meaningful experiences that we have had a chance to have. I'm speaking on behalf of myself and Victor Bjelajac.

These are their ancestral lands that they've been protecting for millennia, and we've only been protecting them for the last 100 years. In order to best protect these amazing places, [we need] to go back to the Traditional Ecological Knowledge of the people that have been here for millennia. We also need to have healthy relationships established so that they can come to parks and feel welcome to practice their cultural traditions that they have been practicing since time immemorial.

For more information: *Facebook.com/NativeHealthNativeHands*

Diggin' In
The Richard Gienger Report

The record October 2021 rains are a distant memory, but those rains seemed to have triggered some very good coho spawning numbers in many North Coast streams. Then we had basically no rain from January 1st through March, and we started getting frantic. April and May rain came as a real blessing and changed our outlook. Good numbers of steelhead that had moved into the lower Mattole and were holding in pools had a chance to move upstream into good spawning areas. And around the July 4th weekend, we actually had a half inch of rain! More, more! Is climate change going to change us into a temperate zone, rather than the Mediterranean climate we have had? Will we have more rains in the summer like the west side of Vancouver Island?

Looking upstream in Anderson Creek to riffles and pools and large wood, as the sun shines on a small part of the extensive and vital flood pain network for survival and recovery of Coho salmon.
Photo by Maceo Gienger

Board of Forestry, CAL FIRE, PG&E All Off Course: System Reform Still Needed

Of course, the overall situation still looks perilous with drought and fire conditions. Earlier this season the attempt to reduce catastrophic fire conditions with prescribed fire by the Forest Service "backfired" (so to speak) into New Mexico's largest and most destructive wildfire. This is bad on many levels, one being the probable setting back of the kind of "good fire" so important to restoring good forest management—before over-cutting led to huge areas of overstocked catastrophic fire-prone forests. This disaster-prone situation includes not only forests but also other types of fire-ecology landscape types under drought conditions, bad overdevelopment, and fire-prone structure designs and surroundings.

In my previous columns I have ranted about California's short-sighted panic responses. One droll suggestion is to use these billions being spent (at least a large part) to subsidize emigration out of the State that would get California's population down from 40 to 20 million—and still be over carrying capacity. How are we going to realistically cope? There are all these earnest funded programs being put out there, and some provide short-term important benefits for some. The reality-connected implementation of conservation ethics that can meet material expectations while abiding by environmental and social needs is even more difficult than surviving drought and fire. In the aftermath of the Camp Fire in Paradise, the newly appointed head of forests and forestry for the California Natural Resources Agency pointed out to the Board of Forestry that the only way California would be able to address the situation was to transcend jurisdictions and ownerships.

With all that's come about in the past few years, topped off with the latest—the Wildfire and Forest Resilience Task Force—some would claim that transcendence is happening. It could appear that way, with liberal use of smoke and mirrors. For an introduction go to *wildfiretaskforce.org*.

From my experience so far, it seems like the whole intense history and reality of implementation of AB 1492 has been lost. Becoming law in 2012, AB 1492 was supposed to bring a whole new level of public transparency and participation—specifically, to achieve ecological performance measures, attain basic credibility of evaluation and response to cumulative impacts, and facilitate watershed and forest restoration/recovery. The engine to make all this happen in the law is the Timber Regulation and Forest Restoration Fund/Program. What

Tree with roots intact added in spawning reach of Anderson Creek to create habitat complexity that includes spawning gravel, pools, and cover.
Photo by Richard Gienger

it has done instead is fund government personnel in a variety of related/unrelated endeavors and streamline exemptions and approvals for logging operations. It also put a cap on liability for forest fires. The big deal was that the Fund/Program was paid by taxes/fees on retail lumber products, absolving permit costs for industry. A comprehensive study and report for reforming forest policy in California sunsetted without being implemented, and the annual reports are years behind.

Here's a Mandatory BoF Bit:

The Board of Forestry continues, in general, to respond to industry directives with the added panic responses to the catastrophic wildfires. True, long-term standards for forest stewardship seem further away than ever. The mantra of stepping up the pace and scale of thinning and prescribed burning is heard everywhere, with the successor of the Forest Management Task Force, the Wildfire and Forest Resilience Task Force, taking over.

Summer drying and dried-up lower aggraded reach of Usal Creek with much of the aggradation provided by upstream landslides and debris torrents.
Photo by Richard Gienger

Of course, CAL FIRE is still the "big dog" leading the charge. Coupled with this sad state of affairs is the willy-nilly cutting actions of PG&E to "reduce risk" from power lines. They are giving lessons to CAL FIRE on exemptions from adequate (or any) consideration of adverse impacts. A recent article from CapRadio & KQED highlights problems with CAL FIRE actions but fails to summarize how bad things really are in terms of forest stewardship and an accurate historical record about that failure, and the essential deep-rooted changes that are necessary. Link: *https://www.kqed.org/science/1979560/cal-fire-fumbles-key-responsibilities-to-prevent-catastrophic-wildfires-despite-historic-budget*

Real reform needs to start with separating the forest management/stewardship function from the firefighting/emergency response functions of CAL

FIRE. Link: *https://digitalcommons.law.ggu.edu/cgi/viewcontent.cgi?article=1153&context=gguelj*

Some recent BoF actions include: reverting back to earlier Fire Safe Regulations (a victory for the public and professional fire personnel); passing the Meadows and Wet Area Amendments that ignored the public and Water Quality and Fish & Wildlife agencies; changing Class II-L Determination Amendments, an extremely rare case of science-based common sense.

A group of Sierra Club members and allies continues to support almost ancient proposals that nonetheless remain valid necessary changes regarding the BoF: having top-tier multi-disciplinary persons on the Board, i.e., fisheries biologists, geologists, or biologists of any type, and providing public administrative appeal of approved THPs, rather than being forced to litigate. THP submitters can administratively appeal approved THPs.

Looking North to the Sinkyone Wilderness Coast across the confluence of Usal Creek with the Pacific Ocean. Photo by Richard Gienger

The BoF met in Scotts Valley, Santa Cruz County, July 12-14, with a highlight/lowlight tour of devastating fires in the region on the 13th. To keep on top of specific Board actions go to: *https://bof.fire.ca.gov/business/2022-monthly-board-binder-materials-workshop-archives/* And for the BoF in general: *https://bof.fire.ca.gov/*

A 'hover' of Steelhead during spawning in North Fork Usal Creek.
Photoc courtesy Richard Gienger

Jackson Demonstration State Forest

Many new and continuing developments are happening in the struggle over the present and future JDSF. Here's a worthwhile bit from the recent past:

On March 8th at a Northern Mendocino virtual Town Hall meeting, State Senator Mike McGuire underlined the validity of the JDSF issues championed so strongly by the public and the Tribes. What follows is a transcribed section of his comments: [This is a reprint from my last column, and it remains pertinent.]

"Look, here is my bottom line on the Jackson State Demonstration Forest and I look forward to hearing from all of you:

#1 I believe the model for Jackson Demonstration State Forest is antiquated.

#2 In these modern times, I'm not exactly sure what the forest is demonstrating to the State of California.

#3 I firmly believe that JDSF must have a focus on climate and fire resiliency, which currently it does not

100 yard long log aggregation/jam from multiple floods, extreme tractor clearcutting logging impacts, including earlier instream/streamside railroad trestles in Anderson Creek (1979). Photo courtesy Richard Gienger

have a significant focus on those two critical issues that are impacting our community and our planet.

And I am a firm believer that this State needs to advance a[nd] revamp the management plan early. So, we already know that the CNRA [California Natural Resources Agency] will move up their review and revamp of the management plan 5 years early. It's actually gonna kick off this year.

And I am also a firm believer that we need to have an interim plan. Because to complete that management plan starting this year it's probably going to take 24 to 36 months to complete.

So, I believe we need to have everything on the table for this interim plan. And we need to have a serious conversation about what we want the future of the JDSF truly to be.

And candidly it's beyond time. I'm grateful to so many in this community who have stepped up—Chairman Hunter [Tribal Chairman of the Coyote Valley Pomo] by the way, being the leader on this issue—and I look forward to robust dialogue as we move forward. I'll be honest that I'm a firm believer that we shouldn't be cutting these large trees in the Jackson Demonstration State Forest any longer.

And I will tell you that the Natural Resources Agency is working hard on this issue. I want to say how grateful I am to Secretary Crowfoot who is the Secretary for Natural Resources for the State of California. He has involved himself through thick and thin on this issue. He is meeting with us collaboratively working with CAL FIRE on this issue."

There have been rallies in Ukiah and Sacramento led by Pomo Landback, and benefits jointly sponsored by the Coalition for Jackson State Forest, Mendocino Trail Stewards, and Pomo Landback; and multiple tours of places in JDSF have been led by Coyote Valley Tribal Chairman Michael Hunter, CAL FIRE, and others. There are five past approved THPs that are "strategically paused" by CAL FIRE, with intense negotiations relative to Tribal co-management and active or potential "civil defense" of critical areas. In June, CAL FIRE withdrew three THPs for JDSF that were in preparation, stating that this move was made in conjunction with Co-Management negotiations. There has been a lot of push-back from contractors and industry over the five approved THPs that are in various stages of operation. The most well known is "Caspar 500."

At a CAL FIRE/Jackson Advisory Group (JAG) workshop and tour on May 2nd, a whole set of documents was presented pertaining to JDSF management, science, preparation of a new management plan, some hypothetical conditions for constraints on operations in the Caspar 500 THP (with broader implications), and a report by the JAG Tribal Relations subcommittee. The documents related to putting together a new management plan seemed to be more of an interim type referred to by Senator McGuire, and that plan is intended to be constrained by JAG/CAL FIRE/BoF control. The hypothetical constraints for Caspar 500 featured PETs (Potential Enduring Trees), having 2, 4, or 6 per acre, depending on location in the plan. CAL FIRE is hoping that this approach will be endorsed by famous redwood canopy scientist Steve Sillett. CAL FIRE also hopes this will be approved by the Tribes, but the agency especially stressed its desire for a solution that would end motivation for forest civil defenders.

One of the most important things to come out of the May 2nd workshop and tour was the "Management Plan Review and Recommendations" written by the JAG Tribal Relations SubGroup. This document provides an overview, background, and summary (including extensive sets of laws, regulations, policies, and proclamations) that lay out the basis for the "Evaluation of existing JDSF Management Plan relative to tribal consultation, access, and co-management."

The report sets out lines of reasoning, with 16 recommendations and several additional important changes, and notes that significant time will be necessary for adequate implementation. On the face of it, large parts of this report are applicable for statewide policy and implementation. The report was presented to the BoF Management Committee June meeting, but it was not in the set of documents available before that meeting. Another important document—again, both for JDSF and broader application—is a letter written by Priscilla Hunter, Tribal Historic Preservation Officer, Coyote Valley Band of Pomo Indians, regarding concerns prior to CAL FIRE proposed amendments to the Soda Gulch THP in JDSF. These concerns are basic for a credible consultation process and adequate standards of respect and protection for Native American Cultural Heritage.

It is worth noting that it was September 2021 that former CAL FIRE Director Thom Porter requested that the JDSF management issues be brought before the BoF Management Committee. It wasn't until June 2022 that it finally appeared on the Management Committee agenda, and only in a very limited scope. It is not on the agenda for the BoF or Management Committee meetings in July. The issue may come up as part of the Director's Report on July 14th or a discussion of priorities on July 12th in the Management Committee.

It behooves the public and public trust organizations to pay attention to this issue, as it may be the last chance to have the leverage to reform forest practices in California, not only in Jackson. For more information go to:

- *www.pomolandback.com*
- *savejackson.org*
- *www.mendocinotrailstewards.org*

Some or all of the documents cited above can be forwarded to you by request from me at *rgrocks@humboldt.net*

24th Annual Coho Confab

I strongly urge you to link to the Salmonid Restoration Federation (SRF) at *calsalmon.org* and register for the 24th Annual Coho Confab. It will be wonderfully local in Northern Mendocino County this year. It goes from September 9th to 11th. The agenda: *https://www.calsalmon.org/sites/default/files/Confab_Agenda_2022.pdf*

I am excited, especially about the Anderson Creek tour (9/10), serious Chinook, steelhead, and special coho refugia. I am also prejudiced, having done survey and restoration work there with a hella crew in 1979. Anderson and Usal Creek (9/11 tour) are special parts of Redwood Forest Foundation's Usal Redwood Forest.

Please help out where and when you can on *all the issues* before us. Check out the work and other information for Sanctuary Forest, the Institute for Sustainable Forestry (ISF), EPIC, Forests Forever, and Redwood Forest Foundation, Inc. Thank you, Trees Foundation! – rg

Some of the special coho habitat in Anderson Creek. This is why Anderson Creek is one of the most important refugia in the South Fork Eel river watershed. Photo by Maceo Gienger

To Get Involved

Richard Gienger
rgrocks@humboldt.net
707/223-6474

EPIC
wildcalifornia.org

Forests Forever
www.forestsforever.org

Mendocino Trails Stewards
mendocinotrailstewards.org

Pomo Land Back
www.pomolandback.com

Redwood Forest Foundation, Inc.
www.rffi.org

Sanctuary Forest
sanctuaryforest.org

Save Jackson Coalition
savejackson.org

Since arriving in the Mattole Valley of Humboldt County in 1971, Richard Gienger has immersed himself in homesteading, forest activism, and watershed restoration. Richard's column covers a range of issues including fisheries and watershed restoration and forestry, plus describes opportunities for the public to make positive contributions in the administrative and legislative arenas as well as in their own backyards.

PLANT NOTES

BLACK OAK, WHITE OAK

A Succinct Guide to Distinguishing the Two Species

California is home to more than 20 species of oaks, 10 of them occurring here in the Northwest corner of the state. Of these 10, six are evergreen and four are deciduous, losing their leaves in the fall. Two of our most beautiful species are deciduous: black oak, *Quercus kelloggii*, and white oak, sometimes called Oregon oak, *Quercus garyanna*. At a glance, the two species of oaks are somewhat similar in appearance, but there are differences you can look for to tell the two apart. Leaves of both species are lobed, but black oak leaves have a sharp spine at the tip of each lobe while white oak leaves do not. White oak leaves are more deeply lobed, with the innies, called sinuses, cutting closer to the center vein of the leaf. Bark on black oaks is smooth and grey in youth, becoming rough, narrowly fissured and dark, hence the common name black oak. Bark on white oaks is light in color, and not as rough or deeply fissured. Acorns of the black oak are big, up to 1½ inches long, dark brown when ripe, and the cup, or hat, covers about a third of the nut; whereas white oak acorns are no larger than 1¼ inches long, ripen to light brown and bulge out from a small cup. Black oak trees grow up to about 80 feet, noticeably taller than white oaks, which can grow up to about 60 feet, although there are outliers of both species growing even taller.

Black oak leaf, on the left showing the spiny tip on each lobe. White oak leaf on the right.
ALL PHOTOS THIS ARTICLE BY CHERYL LISIN

New leaves of black oak emerge from dormancy in a beautiful red color.

Oak trees provide habitat to large numbers of caterpillars, which in turn are eaten by other animals in the food web or mature into pollinating moths and butterflies. Oaks are thus considered Keystone Species: species that have an outsized impact in supporting the ecosystems in which they are found.

Acorns provide food for many creatures and are sought by deer, bears, rodents, and birds. The nutritional value of acorns is high, providing needed fats, protein, carbohydrates, and many essential amino

Black and white oaks leafing out in spring in a mixed forest.

Dormant black oak and white oak growing side by side in winter. Black oak is the taller of the two.

acids as well as vitamins A and C. Since time immemorial, acorns were a primary food source for many of California's indigenous people, black oak and tan oak being the preferred species, and many people continue the labor-intensive practice of processing acorns for food.

White oak is found from southern British Columbia through mountain ranges south to Los Angeles County, with the largest individuals in Oregon's Columbia River region. In California it occurs most predominantly in the North Coast Range. Black oak is found from Southwestern Oregon through mountain ranges south to San Diego County, occurring most predominantly in the North Coast Range and the Sierra Nevada. Oaks are in the beech Family, along with chestnut and chinquapin.

Cheryl Lisin is a native plant enthusiast, landscape designer, and President of Friends of the Lost Coast, whose mission is to inspire passion for nature in the Lost Coast region. She is currently working on a native plant garden and nursery at the King Range BLM office for the education and enjoyment of all. You can contact her at Cheryl@lostcoast.org.

The Disquiet Report:
Missives and Musings from Chad Swimmer

Public Records Requests and the Maintenance of Democracy
A Jackson Demonstration State Forest Case Study

Implicit in a democratic process is the notion that government should be accountable for its actions. In order to verify accountability, individuals must have access to government files. Such access permits checks against the arbitrary exercise of official power and secrecy in the political process.

(California Supreme Court: Register Div. Of Freedom Newspapers Inc. v. County of Orange, 158 Cal. App. 3D 651, (1984))

In 1968, the California Public Records Act (CPRA) was passed by the legislature and signed by then-governor Ronald Reagan. Since then, the CPRA has been a powerful scaffold to the 1967 Federal Freedom of Information Act and is seen as crucial to the maintenance of democracy.

The California Department of Forestry and Fire Protection, known since 2007 as CAL FIRE, has long tried to shield its forestry operations from public scrutiny. Notices for timber harvest plans on public lands are placed in nearly unnoticeable corners of local newspapers. Until recently, meetings open to the public took place with few announcements and even fewer citizens in attendance. Notably, a year and a half ago, ex-Deputy Director of Resources Helge Eng declared to the Board of Forestry that, with the destructive wildfires of the preceding years, CAL FIRE had complete social license, that they no longer had to argue about forest management practices with the public. (Reported by Richard Gienger, *Forest & River News*, Fall 2020.) All California state forest management in 2022, regardless of its original intent, is now framed as fuels management or wildfire risk mitigation to fend off criticism.

Lear Assets Management Founder and Chief Security Officer Paul Trouette filming protesters last January in the Red Tail THP with JDSF Timber Sales Officer Jason Serna in the background. Trouette is known for besieging an activist in a tree-sit for over a month with no food and water in the Rainbow Ridge protests, and for heavily-armed raids on pot gardens in Mendocino and Humboldt Counties. Photo by Mama Tree Mendo

What Eng didn't realize was that a movement was brewing in response to the planned Caspar 500 THP, a movement to question the legitimacy of the last thirty years of the management of Jackson Demonstration State Forest (JDSF). The activist and concerned public of Mendocino County raised the alarm about large redwood trees marked for cut in people's backyards. An outcry arose over Brown Act violations, an inadequate management plan operating under an outdated Environmental Impact Report, and CAL FIRE's blatant disregard of the very popular Mendocino County Measure V, which had banned the controversial process of leaving herbicide-killed trees standing for more than 90 days. A broad coalition turned Eng's statement to the Board of Forestry on its head, demonstrating that, in fact, timber harvest on ostensibly public, unceded tribal lands had no social license at all.

Starting in April of 2021, direct activists put up a tree sit, blockaded gates and roads, and put their bodies in the way of the active harvest, saving hundreds of large trees and thousands of smaller ones. Within days, logging operations in the Caspar 500 timber harvest plan (THP) were put on hold. However, private security guards from Armorous Security (a Santa Rosa-based firm) appeared on the scene, posted 24 hours a day, collecting license plate numbers and photographing

INVOICE

ARMOROUS

RECEIVED
JUL 19 2021
MENDOCINO UNIT

REMIT TO
Armorous
1360 19th Hole Drive
Windsor, CA 95492
707-387-4400
eric@ armorous.com

INVOICE NUMBER:	1176
INVOICE DATE:	06/22/2021
DUE DATE:	06/29/2021
TERMS:	Net 7
CUSTOMER ID:	1113

BILL TO
Cal Fire Mendocino Unit
17501 N. Hwy 101
Willits, CA 95490

Amount Enclosed: $_____
AMOUNT DUE: $27,725.50

Period	Description	Qty.	Unit Price	Total
06/15-06/21	Emergency / Short-term Unarmed Guard Services: Un-Armed Security Night Shift (42 items) Service Location: Cal Fire - Caspar Caspar Orchard Road / Fern Creek Road Caspar CA 95420	252	$55.00	$13,860.00
06/15-06/21	Emergency / Short-term Unarmed Guard Services: Un-Armed Security Day (21 items)	252.1	$55.00	$13,865.50

One of the documents released by CAL FIRE in response to the author's August, 2021 request: an invoice for six days of private security in the Caspar 500 THP.

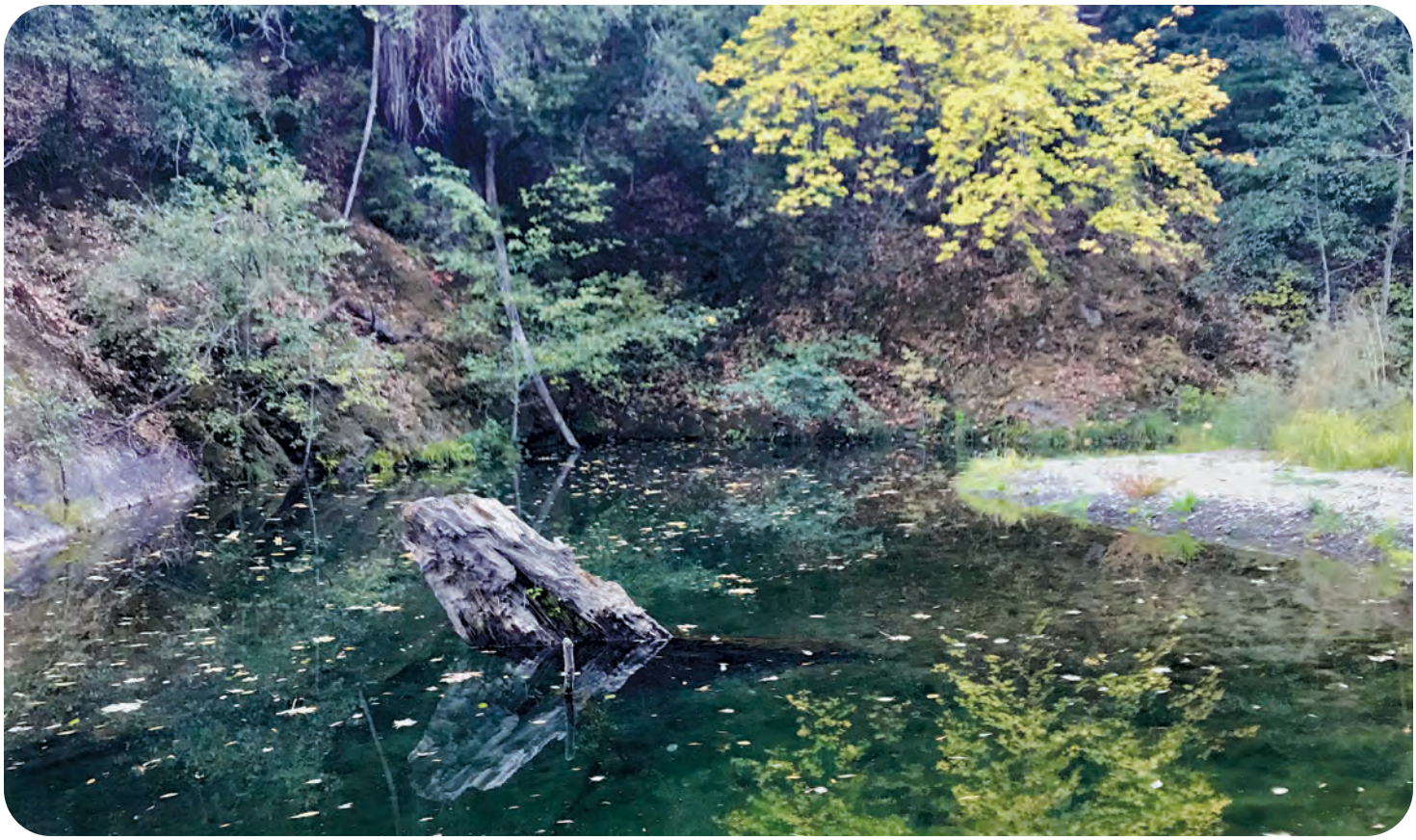
the faces of peaceful activists, all while guarding a quiet, locked road with no chainsaws in sight. To all intents and purposes, this appeared to be a case of private security being employed by a public agency to protect public land from the general public.

To get to the bottom of this, I filed a CPRA request for all related documents and invoices. Agencies are supposed to respond within ten business days of the official request but can obtain an extension, which CAL FIRE received. Nearly a month later, with the extension running out, I sent an email stating that I was considering litigation if the records weren't released promptly. Two days later a substantial number of documents were sent, though not nearly all that we were looking for.

What was made clear from the disclosure was that Mike Powers, the Forest Manager at the time, had requested and been approved for over $900,000 to contract private security, in order to allow the approximately $2,000,000 Caspar 500 timber sale to be logged. How much of this money was actually spent isn't clear, as the receipts and invoices didn't cover the whole 75-day time period that Armorous was deployed, but it appears to have been over $700,000. This astronomical sum needs to be understood in light of the fact that JDSF's annual operating budget is $4,000,000.

A few months later, after activists showed up to stop the Soda Gulch THP in Eastern JDSF, another private security firm made its presence known. Lear Assets Management, the personal project of right-wing mercenary Paul Trouette, presented a whole different story than the laid-back guards of Armorous. Lear's agents, reported to be employed by the Mendocino Redwood Company, presented themselves as 'safety officers' to get around CAL FIRE's internal prohibition on timber operators or mills hiring their own security on this public land. Their behavior was dangerous and provocative, endangering the lives of many activists. Later, in the disputed Red Tail THP, Trouette was videoed coaching loggers to engage in citizens' arrests.

I filed another CPRA request which was fulfilled within a week. CAL FIRE released a grand total of one email from their legal counsel Bruce Crane to Conrad Forest Products, Two Brothers Logging, and H & M Logging. This legal opinion was a form



The Big River, a salmonid bearing class 1 watercourse whose forests shelter Northern Spotted Owls and possibly Marbled Murrelets. An EPIC PRA request revealed that CAL FIRE had hidden the original text of CDFW comments on the Little North Fork Big River timber harvest plan, then released a watered down version to the public. Photo by Chad Swimmer

of cease and desist letter, which made it clear that Lear's actions were actually false arrest, and possibly false imprisonment. However, an undisclosed number of other documents were declared exempt from release. These, we surmise, constituted internal communications within the agency and externally with the mills and licensed timber operators that hired Lear. We unfortunately have no recourse for the release of these documents.

Over the last year, my colleagues at the Environmental Protection Information Center (EPIC) in Arcata have also filed a number of CPRA requests. There is so little information publicly available about the management of JDSF that EPIC needed to use the CPRA to request basic information concerning the extent of herbicide use in the forest, whether activists were having files on them compiled, and documents concerning the legal review of the current management plan. Each time, CAL FIRE took months to respond. One request, submitted over 10 months ago, to date has only been partially responded to.

Whether the CPRA requests have forced a change in the agency's actions, we cannot be sure. It is clear, however, that soon after my first request, Armorous Security unexpectedly departed, leaving bags of trash for the ravens to strew about and a port-a-potty that has been widely appreciated. Lear has backed off as well, though it is unclear what will happen if CAL FIRE attempts to resume logging in JDSF—on hold due to the combined efforts of all the members of the Coalition to Save Jackson, including but not limited to the Coyote Valley Band of Pomo, the Mendocino Trail Stewards, Mama Tree Mendo, EPIC, the Mendocino County Youth for Climate, and Redwood Nation Earth First!. In the meantime, this act of California law has allowed for a modicum of transparency—a bit more insight into the operations of an agency many of us see as the bully in the schoolyard.

For more information on these public records releases, and how to submit your own PRA request, contact the author at *cswimmr@gmail.com* or *epic@wildcalifornia.org.*

Chad Swimmer is an activist, educator, naturalist, musician, and gardener who has lived on the unceded land known as the Mendocino Coast since 1986. He co-founded the Mendocino Trail Stewards, the Coalition to Save Jackson, APAN-Mendo Needle Exchange, Touchstone Soup Kitchen, and is now the Chief Organizer of Disquiet Media, with three monthly radio shows originating from KZYX, Listener-Powered Community Radio for Mendocino County and Beyond. All of his radio shows can be accessed at www.disquietmedia.blue

Bill Lemos: The Passing of a True Eco-Warrior

From Wild Classrooms to Helping Save Marine Life and Jackson State Forest

By Mendocino Trail Stewards

It was with great surprise and sadness that people of the Mendocino Coast learned of William (Bill) Edward Lemos' departure from this world on June 2, 2022. Just a couple of months before, he was visibly hale, walking six miles of forest paths with no signs of fatigue or illness; but, on a cellular level, he had been fighting a long battle. In the end, Bill passed away with grace, surrounded by family and the forest that had stewarded his life's journey.

Bill was born in 1949, a fourth-generation Mendocino County resident, descended from immigrants from the Azores. A loving son, brother, uncle, husband, father, and grandfather—a true family man—he was equally a tireless beacon of his community. His courage, creativity, presence, and gift for humorous storytelling made all our lives more meaningful.

As a teacher at Mendocino High School from 1973 to 2008, Bill introduced the Wild Classrooms program, preparing and leading many students into the wilderness for seven- to fourteen-day backpacking trips. In 1999 Bill and his long-time friend and colleague Robert Jamgochian received a grant from the State of California to start the advanced placement and eco-literacy course, School of Natural Resource (SONAR), at Mendocino High School.

Bill joined the Mendocino Trail Stewards after his 11-year-old grandchild, Ravel Gauthier, became a climate activist, focusing on the movement to save Jackson State Forest. He joined the Stewards' board and was its Co-Chair until one month before his passing, but this was not his first effort to preserve the natural heritage of his beloved Mendocino County.

In the words of Robert Jamgochian, "He was a true Eco-Warrior." He was involved in the Headlands Consortium, Mendocino Abalone Watch, and California Reef Check. In 2002, he was a founding member of the Mendocino Land Trust's Big River committee, which sought to provide stewardship for Big River, one of California's longest undeveloped river estuaries. Ultimately, through his activism and fundraising, 12 square miles of private timberlands became the Mendocino Headlands State Park Big River Unit, which includes the famed Fritz Wonder Plot, one of the three places where Sequoia sempervirens were demonstrated to be the most effective carbon-sequestering organism on Earth. In 2009, the Natural Resources Defense Council contracted with Bill to help create a unified community proposal for marine conservation areas in Northern California by serving on the North Coast Regional Stakeholders group for the Marine Life Protection Act.

An avid outdoorsman and capable craftsman, Bill was a true renaissance person: a commercial and sport fisher, carpenter, plumber, electrician, author, poet, musician. He was a master consensus-builder, someone who could get things done by convincing you that the way forward that he envisioned was the way you wanted to go. On a deeper level, he lived all his days in awe of his good fortune and magical life.

All of us who knew Bill were enriched by his friendship, easy smile, gentle ways, and kindness. To hear Bill's voice, go to *www.mendocinotrailstewards.org/media-links* and click on "Trail Stewards Radio Hour: A Celebration of the Life of Bill Lemos."

EPIC and Friends of the Shasta River Challenge NMFS Move to Protect Landowners not Salmon

Dire Conditions in the Shasta River Call for Meaningful Federal Action, Not a Mockery of the Endangered Species Act

Environmental Protection Information Center

The Shasta River is recognized by the Pacific Fishery Management Council as "the most important salmon-producing tributary of the Klamath River," with annual juvenile production estimates sometimes greater than the entire production of Chinook fry from the Iron Gate Hatchery. However, the Shasta watershed is in the midst of an ecological crisis. Agricultural practices impair the land and the river. In summer months, irrigators periodically leave the river with 10% or less of its natural flow.

Despite this severely degraded state, in 2021, the National Marine Fisheries Service has rewarded the bad behavior of large, powerful landowners along the Shasta River by granting them immunity from the Endangered Species Act through a little-used portion of the law called the "safe harbor program." In general, this program is supposed to encourage landowners to restore lands to encourage endangered species to return. Applied here, the Safe Harbor Program gives legal immunity to water diverters and a dam owner for harming protected species in exchange for scant stewardship practices on private lands. The recovery target for coho salmon returning to the Shasta is in the thousands, but fewer than 50 are returning each year, and the safe harbor program will not recover coho.

But never fear—EPIC and Friends of the Shasta River are here! In June, EPIC and the Friends filed suit in federal court to challenge the application of the program. The groups are represented by Pete Frost and Sangye Ince-Johannsen of the Western Environmental Law Center.

The groups allege that NMFS violated the Endangered Species Act (ESA) by allowing water diverters and a dam owner to harm threatened coho salmon through "enhancement of survival permits" evaluated under unlawful and scientifically incorrect biological opinions. NMFS's decision to issue the permits despite these flawed foundations violates its duty not to jeopardize threatened coho salmon or adversely modify their habitat. NMFS's Shasta River safe harbor agreements are purportedly intended to address the historic decline in coho salmon in the Shasta. While these agreements with 14 permittees are intended to provide a "net conservation benefit," they let landowners off the hook for the damage they cause to coho. The cumulative benefit of all 14 agreements, even if all are successfully implemented, will fall far short of halting the spiraling decline, much less ensure that salmon recover.

Shasta River drying up. Photo by Nick Joslin

"The National Marine Fisheries Service had a real opportunity to meaningfully improve conditions in the Shasta River," said plaintiffs' attorney Sangye Ince-Johannsen. "Instead, the agency gave the irrigators carte blanche to continue the very same practices that so deteriorated coho habitat. These so-called 'enhancement of survival' permits lock in an untenable status quo for at least 20 more years—by which time coho may no longer swim up the Shasta. The use of safe harbor here makes a mockery of the Endangered Species Act."

"Shasta River salmon are at imminent risk of extinction, and we need to do everything in our power to stop that from happening," said Tom Wheeler, executive director of EPIC. "The safe

Juvenile coho salmon PHOTO COURTESY EPIC

harbor agreements fail to prevent the taking of coho salmon in the river—a very basic minimum if we want to recover the species. We need real solutions and not handouts to landowners."

"We seek a restructuring of how much-needed federal and state assistance for restoring the Shasta River is conceived and implemented," said Bill Chesney, retired California Department of Fish and Wildlife fisheries biologist and Friends of the Shasta River board member. "Agencies first need to recommend and implement science-based flow and temperature standards sufficient to recover coho in the Shasta River. That needs to come first—not just as an afterthought once the safe harbor participants get immunity for their destructive practices."

Irrigators pay $1,600 per year to participate in the safe harbor program and receive millions of dollars in taxpayer-funded infrastructure work on their properties as well as immunity from the law for harming threatened coho salmon. Billionaire Red Emmerson, the third largest landowner in the country and owner of Sierra Pacific Industries, is among the participants.

For More Information:
wildcalifornia.org

Nurturing Nature: Adventures of the Friends of the Van Duzen River

Friends of the Van Duzen River

By Sal Steinberg

Special thanks to the rain gods for bringing the Van Duzen and Eel Rivers back to a much healthier state of being this spring.

Friends of the Van Duzen River (FOVD) spent several busy spring months working with five schools—Bridgeville, Hydesville, Loleta, Scotia, and Trillium Charter—and conducting two water-monitoring projects in the Eel River, at Scotia and at Worswick between Fortuna and Fernbridge.

Connecting Elementary School Kids to their Inner Scientific Self

There is a certain beauty working with elementary school kids and teaching them about nature in the classroom and in the field while connecting them to their inner scientific self. At Loleta, Kurt Rasmussen's first-grade class was a delight! Working closely with Loleta's staff artist, Abby Perrott, and Kurt's aide, Luz Espinosa, students learned botany by drawing leaf structures brought to them to study, and then going out into the field at Loleta School to sketch flowers. We followed this up with salmon lessons. When presented with an 11x14" outline of a salmon, students did a wonderful job coloring it. We brought the experience to life by going to the Scotia Aquarium, concentrating on counting and understanding fins and their structure, and then doing the Salmon Dance. This can be viewed at the FOVD website *www.fovd.org*

FOVD had a similar experience with the K-2 class at Bridgeville Elementary where students learned about water and salmon, and originated the Salmon Dance, in which they learned to move their bodies like fins. Be The Fish!! They also experienced the Scotia Aquarium. Special thanks to Mike Connich, Humboldt Redwood Company, for maintaining and keeping alive the aquarium as an educational medium.

Working closely with Rachel Riggs' combo third/fourth-grade class at Hydesville, we studied the nature of water, the concept of a watershed, and the natural history of salmon. We also did a study of plants that culminated in viewing and experiencing the trillium blossoming in the redwood forest. On

Sal Steinberg studying the Mad River with Loleta students. Photo courtesy FOVD

our field trip to the Van Duzen River in March, students combined science and art by drawing the beautiful trillium. Working with Barbara Domanchuk on Geology, and with Tony Westcamper on Insects, students had a great field trip. In April FOVD joined these students at Pamplin Grove for Barbara's annual Save the Redwoods field trip experience.

Training Young Scientists

FOVD is dedicated to preserving the salmon run and to training young scientists. In the third/fourth-grade class at Loleta Elementary, students participated in the Humboldt County project of raising salmon eggs in the classroom. In mid-year, teacher Sarah Strauss transferred schools and Emily Parshall took over the class and the project. I collaborated with her in maintaining the tanks, teaching about steelhead, and transferring the fingerlings to the Mad River for the annual fish release. It is always a memorable experience to raise and release living things back into their environmental homes. While watching them grow, students would "adopt" one of the 25 as their own. This process is always a wonderful time for kids, allowing them to be a vivid part of the life process of another organism.

It is always exciting to teach in a new school in Humboldt, and recently FOVD had the opportunity to teach at the Trillium Charter School, in Katie Dunn's second- to fifth-grade classroom. Students learned about water, salmon, and how to test the river for temperature and pH. They did salmon illustrations and wrote acrostic poetry. They were very creative and an excellent learning group.

FOVD has specialized in water monitoring in the Van Duzen and Eel Rivers since receiving the nonprofit group's first major California Fish and Wildlife grant in 2007. Maintaining a healthy river system is essential to preserving the cyclical salmon and steelhead runs. The severe drought this past fall and winter posed a huge problem to the life cycle of these endangered species. Fortunately,

Hydesville students study leaf structure at Pamplin Grove. Photo by Sal Steinberg

as our testing showed in May, sections of the Eel and the Van Duzen have returned to a better state of health.

In Mark McCuen's sixth-grade class at Scotia, and Heather Nyberg's fifth- and sixth-grade combo class at Loleta, FOVD did extensive training with students in the use of water-monitoring equipment for temperature, pH, turbidity, and dissolved oxygen. These are all important components and indicators of river quality. Using YouTube videos to help explain these concepts, discussions about optimal conditions for salmon in local streams, and testing their school water and other water samples, students learned the major concepts of water-quality monitoring and how to use the equipment in their classrooms.

Then it was time to go into the field. For many kids, just being by the river is a wonderful event and an important part of their learning experience. On May 16th in the Eel River near Scotia, we divided into two groups with Mark working with nets, river exploration, and macroinvertebrates. They found the following: 2 water pennies, 1 crayfish, 20 mayfly, 3 planarian, 3 scud, 6 riffle beetles, clam shells, and snails. On the other side, the intern Brian Feurman from Academy of the Redwoods helped gather test results that showed perfect pH between 7.2 and 7.8, turbidity water quality ranging between 2 and 10 which was very clear, and water temperature at a healthy range between 59 and 61. It was a fun day!

For our Loleta field study on May 20th we investigated the Eel River at the Worswick hole between Fortuna and Fernbridge. We were joined by five members of the Fortuna Creeks Project (FCP), a nationally renowned environmental group from Fortuna High School led by Mark Thom, Jacey Spies, and Gloria Valdez. Brian Feurman again joined us, this time to make a movie of the field trip. This site was a bit marshier than the Scotia site. Once again pH ranged between 7.2 and 7.8, turbidity between 2 and 9, and water temperature was higher at 64. FCP added nitrate and phosphorus testing, with results between 0-2 showing no fertilizer runoff. Dissolved oxygen ran from 4 to 7 with 7-8 being optimal.

Being out in Nature is the ultimate environmental learning experience for students! FOVD is proud to be a part of this process.

For More Information: *www.fovd.org*

"South Sacramento" Timber Sale Proposed Near Castle Lake and Castle Crags

Can the Forest Service take a New Approach with this Project?

Klamath Siskiyou Wildlands Center

By George Sexton, Conservation Director

The Shasta-Trinity National Forest has released preliminary plans for a large project located in the popular and scenic forests just north of the Castle Crags Wilderness Area in the Sacramento River watershed. The timber sale contains important habitat for a pair of Northern spotted owls that has successfully fledged owlets—an increasingly rare occurrence throughout the region. Portions of the project are located in wild unroaded forests that have never been subjected to logging before.

Meadows need fire: young conifers encroaching on a botanical hotspot.
Photo courtesy KS Wild

Fire has been here before: KS Wild's Michael Dotson stands beside an old fire scar on a cedar in the South Sacramento timber sale planning area. Photo courtesy KS Wild

A Mixed Bag?

While locals and conservation advocates are concerned about the initial widespread logging proposal, there are several aspects to the South Sacramento project that seem promising. In particular, the Forest Service is contemplating investments in the area's recreational infrastructure that would improve campgrounds and establish additional hiking trails. The proposals to restore meadows and riparian areas are also a welcome change in focus from the Forest Service.

Dry Forests and Fire Exclusion

The mixed conifer forests located in the South Sacramento timber sale area have been significantly altered by decades of fire exclusion in what were once fire-evolved and fire-dependent forest stands. The question of how to carefully and effectively get these forests back in balance with fire is a tricky one. Will widespread commercial logging with its attendant logging roads, log landings, and yarding corridors do more harm than good? Can the Forest Service successfully implement prescribed fire treatments over time? Is the agency committed to dealing with "activity slash" created by its logging activities? So far the Forest Service track record on these issues is spotty at best.

Important Values at Stake

The wildlife habitat and the recreational, botanical, and hydrological values present in the South Sacramento timber sale area are off-the-charts high, and it is a place that is known and loved by thousands. The Forest Service, and all who care about these public lands, have a lot riding on the "agency getting it right." If you want to advocate that Forest Service planners implement measures to protect habitat, recreation, and botanical values in the South Sacramento project area, the way to get involved and track the project is through the web page located at: *www.fs.usda.gov/project/?project=61863*

For More Information: *www.kswild.org*

Reviewing a Community Event Series

Defining and Working Toward Forest Health, Utilizing Wood When It's Cleared, and Regenerating Community

Northern Mendocino Ecosystem Recovery Alliance

By Cheyenne Clarke

The Eel River Recovery Project and Northern Mendocino Ecosystem Recovery Alliance have concluded their Spring

community event series, which was made possible by the Trees Foundation Cereus Grant. Here's what happened:

Forest Health and Fire Resilience Workshop

On April 3rd we kicked it off at Tan Oak Park with hugelkultur and biochar demonstrations, community conversation, and ceremony offered by Wailaki Elder, Ron Lincoln, Sr. As our friends at Happy Day Farms would say, the event was a great success! We were grateful for Ron Lincoln's blessing—it felt like an ancestral omen for the work we are doing, the alliance we are building, and the mission we are serving. Our kick-off event filled our sails with wind and set the course for the events that followed.

The ongoing question of this series was, "What do we do with the wood?" When we perform forest health work and fuel reduction there is a tremendous amount of wood material to utilize. Hugelkultur, biochar, fir pole harvest, and mushroom logs are all creative ways to utilize forest material, stack functions, and reawaken our relationship to the nutrient cycle.

Thinning and Skinning

On April 10th we held an event in Leggett, "Thinning and Skinning", where we explored the process of selecting, falling, and peeling poles in tandem with fuel-abatement work. Poles can be used for furniture, tipi poles, and frame building. At this event the participants invoked our collective responsibility for long-term forest management.

A Buddhist Perspective and Mushroom Culture Workshop

On April 23rd we gathered at Gomde California with Fungaia Farm for a mushroom log presentation and workshop. Gathering at the Gomde Buddhist center brought our focus to the concept of interconnectedness of the forest and community. We recognize that the work we do within, and the work we do in the forest, are both vitally important to serving our mission.

Innoculating mushroom logs at Gomde California. Photo by Cheyenne Clarke

Planning for Fire: A Community Organizing Event

On May 14th we gathered in Woodman Canyon to discuss defensible space and shaded fuel breaks with the focus of community organizing. This event continued to broaden our network and reminded us that our goal of building a forest health workforce is central to our regenerative vision.

Forest Health Management

On June 11th we visited a forest health project on Lower Ten Mile River, with neighbors who are united and hold landscape-wide Forest Health Management Plans. Having a Forest Health Management Plan is an important tool for goals, implementation, and long-term vision, along with being an essential tool for financial grant assistance. At this event we witnessed the strength of working as a neighborhood team, and saw the difference between managed and unmanaged forest.

Forest Health Best Practices

On June 18th we gathered at Harwood Hall for a Forest Health Best Practices

Tan Oak Park circling up with Ron Lincoln to close the day. Photo by Cheyenne Clarke

event. This was the culmination of the series and a collaboration with other organizations in our region dedicated to regeneration. We continue to ask, what is forest health? Are we doing harm or are we doing good? We continue to learn through action and observation, through conversation and adaptation.

Healthy Forests Need Healthy Communities

We want to give special thanks to all our hosts, presenters, and of course all the guests and participants who made this series fruitful.

Throughout this series of events, we felt the vibrancy, concern, and resilience of our community. I hear the words of Jeff Hedin echo, "Healthy forests need healthy communities caring for them."

We are focused on forest health, watershed function, fire prevention, and perhaps most importantly, community well-being. It is the interconnectedness of all these facets that regenerates our local biosphere and cultivates resilience in uncertain times.

As our organization gains our legs, our strength, and upholds our vision, we hope that you will join us. This is a call to anyone who wants to join our movement and participate in our committee work in the areas of education, outreach, grant writing, and administration.

- Reach out, or stay in touch by signing up for our email list at *nm-era.org*

A Tree Canopy for Every Park, School, and Yard

With a Goal of Creating an Urban Native-Plant Oasis, ReLeaf Petaluma Hits the Ground Planting

ReLeaf Petaluma

As a new organization we are making rapid progress planting native trees in our city. People are wanting to take personal action against climate change, and this action is generating lots of support among both citizens and city staff. The goal of ReLeaf Petaluma is to increase our urban canopy by 10% by adding 10,000 native

ReLeaf Petaluma planting 15 oaks at the entry of Petaluma High School with the Environmental Club, Jan 2022. Photo courtesy ReLeaf Petaluma

trees to our parks, schools, riparian corridors, and housing with lower income. Native trees, especially oaks, have high carbon sequestration capacity and provide food and shelter to many types of birds and insects. Trees also have many benefits for city dwellers, including safer and slower streets, cleaner air, reduced electric bills, waking up to bird song, and improved overall health and socialization.

From the group's beginnings among a handful of enthusiastic experienced volunteers, we started small and were awarded grants working with the schools and city of Petaluma in Sonoma County. Our breakthrough moment occurred one fine day in 2021—also the 150th anniversary of Arbor Day—when we planted 150 trees, mostly native oaks, with recycled water along a popular walking path in a local park. More than 200 people showed up, and trees were in the ground in 5 hours. We received grants for 300 more trees in parks with recycled water sources and two schools with a groundwater source. We helped the city get a CAL FIRE grant for developing an Urban Forest Plan. We amazed even ourselves by getting this much done in less than two years from our start time.

ReLeaf Petaluma planted 152 trees along a trail at Wiseman Park with 175 volunteers in April 2022. Photo courtesy ReLeaf Petaluma

How did this work out so well? In large part, it was the right people in the right place at the right time.

In November 2020, a group of dedicated native-plant advocates began a conversation about how to get more native trees in every park, farm, and backyard in Petaluma. The first meeting included Wendy Jacobs, Lendri Purcell, Moira Sullivan, Taryn Obaid, Bonnie Allen, and Katherine Sky. Then John Shribbs, chair of the Petaluma Tree Advisory Committee, City Councilor D'Lynda Fischer, and community leader David Powers got involved. They brought others to the conversation, and the group coalesced around a name, vision, and mission statement.

Several of the original team spoke up at various city council and committee meetings and got the attention and support of staff and civic activists. Some local landscape experts jumped on board to assist with technical details. We got to know California ReLeaf, a state-wide advocate for urban forestry, which provided advice and fiscal support. A search for a fiscal sponsor found Trees Foundation, which gave us insurance, financial accounting, and federal nonprofit status. Local nonprofit organizations showed up to add volunteer access. Through all this we had leadership and people management from Wendy Jacobs, who had recently moved to Petaluma from the East Coast with accounting acumen and 8 years' experience running a tree program.

ReLeaf developed ideas about where to plant and how to raise funds for trees. Our volunteers created a listing of local trees and shrubs from authoritative

sources and posted it on our new website, a volunteer effort by local photographer Lance Kuehne, together with John Shribbs. Grants were applied for and won, including a grant that we wrote for the city of Petaluma that won $226,000 for urban forest planning. We were granted fiscal sponsorship from Trees Foundation. Before the end of its first year, ReLeaf had planted almost 200 trees. You can see our trees at Petaluma High School (out front) and at Wiseman Park (everywhere). We have over 500 trees to put in the ground this coming planting season 2022–2023 despite the severe drought. We presented the goal of 10,000 trees to the community and received supportive feedback.

Entering our second planting season, we have a full slate of volunteer planting events and will plant nearly 500 trees, maybe more. We have strong partnering arrangements with the city of Petaluma and with Rebuilding Together Petaluma.

We have a new Teen Tree Corps internship program, thanks to help from our partner Petaluma Peoples Service Center.

Together we can bring our vision of a Petaluma native-plant oasis to life. Wouldn't you like to see more birds in your backyard?

For More Information:
www.releafpetaluma.org

24th Annual Coho Confab on the South Fork Eel River

Evolving Strategies to Enhance Coho Salmon Habitat

Salmonid Restoration Federation

September 9–11, 2022

Salmonid Restoration Federation (SRF) is coordinating the 24th Annual Coho Confab that will take place September 9–11 on the South Fork Eel River in Mendocino County. This year's Coho Confab will be held at the Rangjung Gomde Buddhist Retreat Center, which is nestled in the forests where the spectacular Cedar Creek enters the South Fork Eel River. This is the ideal tranquil location to safely meet outdoors while we continue to be mindful and practice COVID protocols. This will largely be an outdoor event, and we are requiring proof of vaccination and booster shots / recent test results. Due to the uptick in COVID cases in Humboldt and Mendocino counties, we will strongly encourage all Confab registrants to get tested prior to the event.

The Coho Confab is a field symposium to learn about watershed restoration and techniques to restore and recover coho salmon populations. The Confab provides an opportunity to network

The Coho Confab will be held at the confluence of Cedar Creek and the South Fork Eel. Cal Trout is leading a fish passage barrier removal project on Cedar Creek that will open up nine miles of habitat. Photo courtesy SRF

with other fish-centric people and to participate in field tours that highlight innovative salmon restoration practices. This year, SRF is collaborating with several groups to produce this educational event, including Cal Trout, the Eel River Critical Observatory Zone, Redwood Forest Foundation, Pacific Watershed Associates, NOAA Fisheries, CDFW, Trout Unlimited, and other restoration partners.

The Coho Confab will open Friday evening, September 9, with a community dinner and inspiring orientation presentations. Gabe Rossi, PhD, UC Berkeley Post-doctorate, and David Dralle, PhD, Research Hydrologist, will co-present Understanding and Recovering the Drivers of Salmon Productivity and Resilience in the South Fork Eel River. This co-presentation will draw from their vast experience doing research in Elder Creek in the Angelo Reserve in Branscomb. Darren Mierau of Cal Trout will also give a keynote presentation titled How Many Coho Salmon Did, Does, Could the South Fork Eel River Produce?

On Saturday, there will be three full-day tours including a rugged tour of Anderson Creek led by Tom Leroy of Pacific Watershed Associates highlighting paired road decommissioning and wood loading. This tour is not for the faint of heart, and will include strenuous hiking in the Anderson Creek watershed to see various phases of wood loading.

Gabe Rossi and David Dralle will lead a full-day tour of the Angelo Reserve Eel River Critical Observatory, base of a multi-disciplinary research collaborative that studies hydrologic processes from the treetops to bedrock. This tour will "focus on watershed hydrology—following a raindrop through the critical zone, and showing folks with tree and vadose zone monitoring equipment at the Reserve—and it ends with a discussion of the 'consequences' of that hydrology on salmon," according to Rossi.

The South Fork Eel River near the Rangjung Gomde Buddhist Retreat Center.
Photo source *gomdeca.org*

The third tour option on Saturday will be an Upper South Fork Coho Restoration Variety Tour led by Anna Halligan of Trout Unlimited and Isaac Mikus of Eel River Watershed Improvement Group to visit a variety of restoration projects in the upper reaches of the South Fork Eel.

The Open Forum on Saturday evening will describe work of the Salmon Habitat and Restoration Prioritization Program (SHaRP) that has primarily focused on the South Fork of the Eel River. This forum will include presentations by Coho Recovery Coordinator Julie Weeder, and CDFW SHaRP representatives Allan Renger and Kaydee Bouzel, as well as a lively group discussion.

The last day of the Confab will offer a tour of the Cal Trout Cedar Creek Barrier Removal project that will be under construction and will open up nine miles of Chinook, coho, and steelhead habitat in this significant cool-water refugia creek. Additionally, Gabe Rossi and Stillwater Sciences will lead a workshop and tour on Pikeminnow and Salmonids in the South Fork Eel that will explore interactions, ecology, and management, including a visit to the Indian Creek weir. The final tour will be of Usal Creek Watershed with Redwood Forest Foundation, Pacific Watershed Associates, and Trout Unlimited.

To register for the Confab or to view the full agenda, please visit this website: *www.calsalmon.org*

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Deb Haaland, U.S. Secretary of the Interior

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